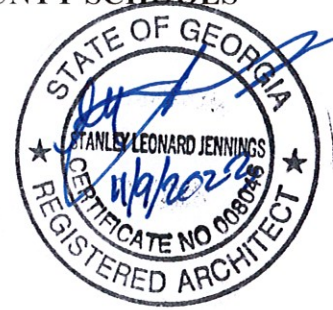


ADDENDUM NO. 1
FOR
ROSENWALD RENOVATION – CLAYTON COUNTY SCHOOLS

DATE: November 09, 2023
TO: All Prospective Contractors
FROM: J.W. Robinson & Associates, Inc.
1020 Ralph David Abernathy Blvd., SW
Atlanta, GA 30310
RE: Rosenwald Renovations



Seal

THIS ADDENDUM is hereby made a part of the Bidding Document prepared by J.W Robinson and Associates, Inc. entitled Rosenwald Renovations located in Jonesboro, GA supersedes all similar referenced heretofore mentioned. The following items are issued to delete, add, to modify, and to clarify. These items shall have full force and effect as the Contract Documents and cost involved shall be included in the bid quotations. Please acknowledge receipt of the Addendum on Bid Form. This addendum consists of 10 pages including this form.

PERTAINING TO SPECIFICATIONS

Section 282300

Please delete the original section 0282300 – Video Surveillance in its entirety and replaced with the attached Section 0282300 – Video Surveillance.

PERTAINING TO DRAWINGS

N/A

PERTAINING TO QUESTIONS

N/A

END OF ADDENDUM NO. 1

SECTION 28 2300
VIDEO SURVEILLANCE

PART 1 - GENERAL

1.1 SUMMARY

- A. This system shall provide all digital IP video surveillance, using cameras at the locations shown on the plans, from a central and remote monitoring stations.
- B. The central monitoring station shall include recorders, monitors, system power supplies and other related items as specified or required.
- C. The system shall be capable of recording minimum twenty (20) pictures per second per camera in twenty-four (24) hour mode and shall be adjusted initially for the twenty-four (24) hour mode.

1.2 DEFINITIONS

- A. AGC: Automatic gain control.
- B. CCD: Charge-coupled device.
- C. UPS: Uninterruptible power supply.

1.3 SUBMITTALS

- A. Product Data: For each type of product indicated, including dimensions and data on features, performance, electrical characteristics, ratings, and finishes.
- B. Shop Drawings: Detail assemblies of standard components that are custom assembled for specific application on this Project.
 - 1. Functional Block Diagram: Show single-line interconnections between components for signal transmission and control. Show cable types and sizes.
 - 2. Dimensioned plan and elevations of equipment racks, control panels, and consoles. Show access and workspace requirements.
 - 3. Wiring Diagrams: Power, signal, and control wiring, and grounding.
 - 4. Certifications: Provide letters of certification indicating that the equipment supplier is a factory authorized representative and the personnel involved in installation have undergone factory-required training.
- C. Equipment List: Include every piece of equipment by model number, manufacturer, serial number, location, and date of original installation. Add pretesting record of each piece of equipment, listing name of person testing, date of test, set points of adjustments, name and description of the view of preset positions, description of alarms, and description of unit output responses to an alarm.
- D. Operation and Maintenance Data: For cameras, power supplies, infrared illuminators, monitors, network video recorders, and control-station components to include in emergency, operation, and maintenance manuals. In addition to items specified in Division 1 Section "Operation and Maintenance Data," include the following:
 - 1. Lists of spare parts and replacement components recommended to be stored at the site for ready access.
 - 2. Service Centers: Provide list of authorized service centers where spare parts and repair services may be obtained. Include name, address and telephone number of nearest service representative responsible for warranty service.
 - 3. Certifications: Provide letter from manufacturer's authorized representative certifying that the installation was reviewed and has been installed and is functioning in accordance with these specifications, manufacturer's instructions and applicable codes.
- E. Warranty: Special warranty specified in this Section.

1.4 QUALITY ASSURANCE

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- B. Comply with NECA 1.
- C. Comply with NFPA 70.
- D. Installer Qualifications:
 - 1. The installer shall be an Avigilon certified company.
 - 2. A company with minimum of five years of experience in installing video surveillance systems in educational buildings.
 - 3. The company shall be located within one hundred miles of the project sites.
- E. Acceptable Prequalified Installers:
 - 1. NetPlanner Systems – Atlanta, GA
 - 2. Wachter Inc. – Suwanee, GA

1.5 PROJECT CONDITIONS

- A. Environmental Conditions: Capable of withstanding the following environmental conditions without mechanical or electrical damage or degradation of operating capability:
 - 1. Control Station: Rated for continuous operation in ambient temperatures of 60 to 85 °F and a relative humidity of 20 to 80 percent, non-condensing.
 - 2. Interior, Controlled Environment: System components, except central-station control unit, installed in temperature-controlled interior environments shall be rated for continuous operation in ambient temperatures of 36 to 122°F dry bulb and 20 to 90 percent relative humidity, non-condensing. NEMA 250, Type 1 enclosures.
 - 3. Interior, Uncontrolled Environment: System components installed in non- temperature-controlled interior environments shall be rated for continuous operation in ambient temperatures of 0 to 122°F dry bulb and 20 to 90 percent relative humidity, non-condensing. NEMA 250, Type 3R enclosures.
 - 4. Exterior Environment: System components installed in locations exposed to weather shall be rated for continuous operation in ambient temperatures of minus 30 to plus 122°F dry bulb and 20 to 90 percent relative humidity, condensing. Rate for continuous operation when exposed to rain as specified in NEMA 250, winds up to 85 mph. NEMA 250, Type 3R enclosures.

1.6 EXTRA MATERIALS

- A. Furnish extra materials described below that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
 - 1. Fixed Dome Cameras: Quantity five (5).
 - 2. 360 Degree Cameras: Quantity five (5).

1.7 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of cameras, equipment related to camera operation, and control-station equipment that fail in materials or workmanship within specified warranty period.
 - 1. Warranty Period: Five years from date of Final Acceptance.
 - 2. Contractor shall provide routine maintenance, adjustments and repairs during the five (5) year warranty period.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Provide equipment manufactured by Avigilon. Each major component of this system i.e. head end equipment, cameras, monitors, video recorders, shall be of a single manufacturer. Multiple manufacturers of a major component shall not be permitted.

- B. The basis for equipment provided under this Specification is Avigilon.

2.2 SYSTEM REQUIREMENTS

- A. All electrical items shall be UL listed and installed in accordance with its listing and manufacturer's recommendations.
- B. Surge Protection: Protect components from voltage surges originating external to equipment housing and entering through power, communication, signal, control, or sensing leads. Include surge protection for external wiring of each conductor entry connection to components.
 - 1. Minimum Protection for Power Connections 120 V and More.
 - 2. Minimum Protection for Communication, Signal, Control, and Low-Voltage Power Connections.
- C. All equipment shall be provided by an authorized manufacturer's representative who shall be capable of providing maintenance and service on all equipment provided. Contractor shall be permitted to perform the actual installation but only under the direction of the representative and the installation must be reviewed by the manufacturer's representative.

2.3 FIXED DOME CAMERAS

- A. The semi-flush-mounted vandal resistant digital signal processing (DSP) Super Dynamic Full HD mini dome color CCD cameras shall be an Avigilon model 6.0C-H6A-D1-IR and 6.0C-H6A-DO1-IR, as shown with minimum 4GB SD card. The camera shall incorporate a 1/1.8" Progressive Scan CMOS. The cameras shall have a sensitivity of 001 lux (with IR on) with a clear dome.
- B. The camera shall use a Dual Streaming Codec with Motion JPEG, H.264, and H.265 Video Compression. Camera shall be capable of streaming up to 60ips.
- C. The camera's imager and lens assembly shall rotate on a three-axis hinge for optimal camera positioning. The camera shall be able to be semi-flush mounted on a wall or ceiling using a standard double-gang electrical box. The camera shall feature a rugged weatherproof exterior housing with an advanced dehumidification device, base and body as independent structures, and that meets IP66 rating. The vandal resistant camera shall feature a local monitor output jack for picture and positioning adjustments.
- D. The camera's Super Dynamic III CCD shall be charged with long and short charges, creating both standard shutter speeds and fast shutter speeds simultaneously, on a single image field. The Super Dynamic III CCD shall automatically apply each exposure pattern to bright and dark areas. The Super Dynamic III CCD shall feature images with a dynamic range of up to 128 times.
- E. The camera shall feature a body-based vandal automatic back focus mechanism for automatic and remote back focus adjustment. The automatic back focus adjustment (ABF) shall engage and reposition the imaging assembly for optimal focus position on automatic or manual switchover from Day to Night Mode and on manual activation at the camera or remote from the camera using a System Controller.
- F. The camera shall incorporate a CS-mount, 1/1.8", automatic iris, variable focal lens with a focal length of 24.4 -9.3mm. The lens shall be suitable for use in areas where there is a varying light source. The lens shall have a maximum aperture of F1.4. The unit shall have an angular field-of-view of 47 degrees telephoto and 111 degrees wide (horizontal), and 26 degrees telephoto and 57 degrees wide (vertical). G. The power source shall be PoE (IEEE802.3af Class 3) or PoE+ (IEEE802.3at Class 4), which includes the operation of optional heater unit for exterior cameras.

2.4 360-DEGREE DOME CAMERAS

- A. The semi-flush-mounted vandal resistant digital signal processing (DSP) Super Dynamic Full HD mini dome color CCD cameras shall be an Avigilon model 12.0W-H5A-FE-DO1-IR with minimum 4GB SD card. The camera shall incorporate a 1/2.3" interline transfer Progressive Scan CMOS. The cameras shall have a sensitivity of 0.19 lux (with DNR on) with a clear dome.
- B. The camera shall use a Dual Streaming Codec with Motion JPEG, H.264, and H.265 Video Compression. Camera shall be capable of streaming up to 30ips.
- C. The camera's Super Dynamic III CMOS shall be charged with long and short charges, creating both standard shutter speeds and fast shutter speeds simultaneously, on a single image field. The Super Dynamic III CCD shall automatically apply each exposure pattern to bright and dark areas. The Super Dynamic III CCD shall feature images with a dynamic range of up to 128 times.
- D. The camera shall feature a body-based vandal automatic back focus mechanism for automatic and remote back focus adjustment. The automatic back focus adjustment (ABF) shall engage and reposition the imaging assembly for optimal focus position on automatic or manual switchover from Day to Night Mode and on manual activation at the camera or remote from the camera using a System Controller.
- E. The camera shall incorporate a CS-mount, 1/3", automatic iris, 1.6mm fixed lens. The lens shall be suitable for use in areas where there is a varying light source. The lens shall have a maximum aperture ratio of 1:1.4 (wide), 1:1.8 (telephoto). The unit shall have an angular field-of-view of 35 degrees telephoto and 73 degrees wide (horizontal), and 26 degrees telephoto and 53 degrees wide (vertical). The camera shall also accept specific 1/3", vari-focal, auto iris lenses with varying focal lengths while continuing to allow the vandal automatic back focus mechanism to engage and reposition the imaging assembly for optimal focus position on automatic or manual switchover from Day to Night mode, and on manual activation at the camera or remote from the camera using a system controller.
- F. The power source shall be PoE+ (IEEE802.3at Class 4)

2.5 CAMERA ACCESSORIES

- A. All indoor ceiling mounted cameras shall be provided with embedded ceiling mount bracket.
- B. All exterior mounted cameras shall have heater unit.
- C. All exterior corner mounted cameras shall be mounted with vandal-resistant corner mount bracket.

2.6 NETWORK VIDEO RECORDERS

- A. The Avigilon recorders shall be capable of connecting to up to 64 network cameras each without extra license fees and their images can be recorded simultaneously. Provide multiple recorders to accommodate all the cameras shown on the drawings plus ten (10) spare cameras.
- B. The recorders shall be equipped with minimum 94TB HDDs.
- C. They shall allow up to 94TB HDD storage to be installed in the main units.

- D. The total system shall have minimum 94TB HDD storage capacity.
 - 1. The HDD storage capacity shall allow minimum thirty-five days of record time for all the cameras connected to each recorder at an optimal rate of 20 frames per second with continuous 24/7 recording setting.
 - 2. The recording schedule shall be set for continuous 24/7 recording for all the cameras.
- E. The recorder shall be the equipment with an embedded real-time operating system and shall not be based on a Microsoft Windows OS. The OS must reside completely in the hardware and not be installed on the hard disk drives. Installed disk drives must be dedicated to recording videos.
- F. The recorders shall support H.264 and JPEG multi format.
- G. The recorders shall provide Various Recording Mode: Manual, Schedule, Event (Pre/Post), Emergency, and External Timer. It shall have the capabilities to control: Pan/Tilt, Zoom, Focus, Brightness and Preset Positions. It shall be able to search using: Time & Date, Event Type and Camera number.
- H. The recorders shall have up to 8 recording programs including individual recording mode for each camera, and 6-time schedules per day.
- I. The recorders shall have up to 64 audio capabilities and can be recorded and played back at G.726 (ADPCM) 32 kbps.
- J. The recorders shall have 2x built-in Gigabit network interfaces (10Base-T / 100Base-TX / 1000Base-T) for camera recording and client access.
- K. The recorders shall have the quick discovery and IP setup function for network cameras.
- L. The recorders shall have the capabilities to transfer recorded images to FTP server upon alarm and/or live image periodically. Images recorded in the SD memory card in the i-Pro network cameras can be transferred to the recorder automatically even when the recorder is in recording status.
- M. The recorders shall have User/Host authentication, 4 programmable user levels, 16 user priorities and User-Camera View/Control partitioning setup for sophisticated user management. It shall be capable of up to 32 user registrations.
- N. The recorders shall have Alteration detection and recorded data encryption for data security.
- O. The recorders shall be viewable from any properly connected PC using Google Chrome and Fire Fox.
- P. The recorders shall provide user authentication and support different user privileges based on logon ID. From the client the user should (with proper authentication) be able to do the following:
 - 1. Setup cameras
 - 2. Define live viewing, recording rates and quality settings
 - 3. Define recording programs and schedules
 - 4. View live video in either single or quad views
 - 5. Search and playback recorded video
 - 6. Download selected recorded video
 - 7. Control connected PTZ cameras
- Q. Supported protocols: TCP/IP, UDP/IP, HTTP, FTP, SMTP, DHCP, DNS, DDNS, NTP, SNMP
- R. The power source shall be 120VAC, 60Hz at approx. 170W
- S. Unit shall be mounted (EIA 19" standard) either with mounting brackets or rack shelf.

2.7 CONTROL STATIONS

- A. Heavy-duty, freestanding, four-post, modular metal furniture units arranged to house standard *mounting electronic equipment*. *Coordinate video surveillance component arrangement and wiring with components and wiring of other systems*. The station shall include integrated work surface, pull out shelves for system keyboard and mouse. Basis of design is a minimum 7 feet high unit by Chatsworth Product Inc (CPI).
- B. Equipment Mounting: Standard 19-inch rack complying with EIA 310.
- C. Provide an AC outlet power strip containing a minimum of six outlets mounted vertically near the rear of the cabinet. Power strip shall be provided with a six-foot power cord rated for 20 amps at 120 volts. The strip shall be fused or have a circuit breaker as over-current protection. The power strip shall be MOV protected in three modes: L-N, N-G, L-G with a 300V clamping level. Each outlet shall be rated for 15 amps.
- D. Power Continuity for Control Station: Batteries in power supplies of central-station control units and individual system components shall maintain continuous system operation during outages of both normal and backup ac system supply.
 1. Batteries: Rechargeable, valve-regulated, recombinant, sealed, lead-acid type with nominal 10-year life expectancy. Capacity adequate to operate portion of system served, including audible trouble signal devices for up to 4 hours and audible and visual alarm devices under alarm conditions for an additional 10 minutes.
 2. Battery Charger: Solid-state, fully automatic, variable-charging-rate type. Charger shall recharge fully discharged battery within 24 hours.
- E. Annunciation: Indicate a change in system condition and switching of system or component to backup power.

2.8 CABLES AND CONNECTORS

- A. All cables and connectors shall be in compliance with Division 27 "Voice and Data Communication Cabling."
- B. All cables shall be plenum rated.
- C. All cables shall be in conduit to and from cable tray system.
- D. Provide weatherproof cables or weatherproof sleeving or conduit in exterior locations.

PART 3 - EXECUTION

3.1 VIDEO SURVEILLANCE SYSTEM INSTALLATION

- A. Install cameras level and plumb.
- B. Install cameras with 84-inch-minimum clear space below cameras and their mountings. Change type of mounting to achieve required clearance.
- C. Set final camera position and to obtain the field of view required for camera. Connect all controls and alarms and adjust.
- D. Install power supplies and other auxiliary components at control stations, unless otherwise indicated.
- E. Avoid ground loops by making ground connections at only the control station.
- F. Identify system components, wiring, cabling, and terminals according to Division 26 - "Electrical Identification."
- G. Provide device identification label on each camera. The label shall be printed on laminated label tape.
- H. Cameras shall be grouped for display on video surveillance monitors in accordance with the Owner's direction on each individual monitor.
- I. Provide 10 feet of extra cable at each camera, coiled above ceiling.

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- J. Provide corner mount brackets for all exterior cameras shown to be corner mounted.
- K. Contractor shall relocate cameras up to 10 feet after original installation per Owner's request at no increase in contract price.
- L. Exterior camera horizon line shall be maximum 5% sky and interior camera horizon line shall be at a center focal point of approximately 7'.
- M. All interior cameras shall be secured to the camera housing and the ceiling frame with safety cable.

3.2 FIELD QUALITY CONTROL

- A. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect field-assembled components and equipment installation and supervise pretesting, testing, and adjusting of video surveillance equipment.
- B. Inspection: Verify that units and controls are properly installed, connected, and labeled, and that interconnecting wires and terminals are identified.
- C. Pretesting: Align and adjust system and pretest components, wiring, and functions to verify that they comply with specified requirements. Conduct tests at varying lighting levels, including day and night scenes as applicable. Prepare video surveillance equipment for acceptance and operational testing as follows:
 - 1. Prepare equipment list described in Part 1 "Submittals" Article.
 - 2. Verify operation of auto-iris lenses.
 - 3. Set back-focus of fixed focal length lenses. At focus set to infinity, simulate nighttime lighting conditions by using a dark glass filter of a density that produces a clear image. Adjust until image is in focus with and without the filter.
 - 4. Set back-focus of zoom lenses. At focus set to infinity, simulate nighttime lighting conditions by using a dark glass filter of a density that produces a clear image. Additionally, set zoom to full wide angle and aim camera at an object 50 to 75 feet away. Adjust until image is in focus from full wide angle to full telephoto, with the filter in place.
 - 5. Set and name all preset positions; consult Owner's personnel.
 - 6. Set sensitivity of motion detection.
 - 7. Connect and verify responses to alarms.
 - 8. Verify operation of control-station equipment.
- D. Test Schedule: Schedule tests after pretesting has been successfully completed and system has been in normal functional operation for at least 14 days. Provide a minimum of 10 days' notice of test schedule.
- E. Operational Tests: Perform operational system tests to verify that system complies with Specifications. Include all modes of system operation. Test equipment for proper operation in all functional modes.
- F. Remove and replace malfunctioning items and retest as specified above.
- G. Record test results for each piece of equipment.
- H. Retest: Correct deficiencies identified by tests and observations and retest until specified requirements are met.
- I. Upon completion of installation of all components and at substantial completion, repair or replace all damaged items. Surface scratches in painted enclosures shall be painted over. Deep scratches in metal enclosures or damage or defects in other items shall be replaced.

3.3 ADJUSTING

- A. Occupancy Adjustments: When requested within 12 months of date of Substantial Completion, provide on-site assistance in adjusting system to suit actual occupied conditions and to optimize performance of the installed equipment. Tasks shall include, but are not limited to, the following:
 - 1. Check cable connections.

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2. Check proper operation of cameras and lenses. Verify operation of auto-iris lenses and adjust back-focus as needed.
3. Adjust all preset positions; consult Owner's personnel.
4. Recommend changes to cameras, lenses, and associated equipment to improve Owner' utilization of video surveillance system.
5. Provide a written report of adjustments and recommendations.

3.4 CLEANING

- A. Clean installed items using methods and materials recommended in writing by manufacturer.
- B. Clean video surveillance system components, including camera-housing windows, lenses, and monitor screens.
- C. Clean all camera-housing windows and lenses nine (9) months after substantial completion of the construction. Coordinate with the Owner.

3.5 DEMONSTRATION

- A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain video surveillance equipment.
 1. Train Owner's maintenance personnel minimum of 32 hours on procedures and schedules for troubleshooting, servicing, and maintaining equipment.
 2. Demonstrate methods of determining optimum alignment and adjustment of components and settings for system controls.
 3. Review equipment list and data in maintenance manuals. Refer to Division 1 Section "Operation and Maintenance Data."
 4. The contractor shall coordinate the date of the training with the owner, in writing, a minimum of 15 days prior to final acceptance.
 5. At the end of the five-year warranty period, the manufacturer's representative shall, within 30 days of the expiration of the warranty period, provide up to eight hours of instruction in the operation and maintenance of the system to the owner's personnel.
 6. The owner shall be permitted to make a video and/or audio tape of the training sessions.
- B. Contractor and installer shall provide a letter certifying that the installation meets the applicable codes, plans and specification and was installed in accordance with manufacturer's instructions.

END OF SECTION