

ADDENDUM ACKNOWLEDGMENT

ADDENDUM NO. 3

Dated: February 19, 2026

NOTICE

It is the sole responsibility of the bidder to ensure that it has received any and all Addenda and the Philadelphia Redevelopment Authority may in their sole discretion reject any bid for which all Addenda have not been executed and returned.

RFP FOR
Russo Park
IS AMENDED AS FOLLOWS:

1. Addenda will be posted in <https://phdcphila.org/rfps-rfqs-sales/construction-rfps/> . Each Bidder shall ascertain prior to submitting a proposal that Bidder has received all Amendments issued, and shall acknowledge their receipt in their proposal submission.
2. BID OPENING DATE: POSTPONED FROM Thursday, February 17th TO Tuesday, February 24th.
3. Attached are responses to bidders' questions.
4. Use new Specification Sections:
 - a. 282300 Video Surveillance

Bidder must acknowledge receipt of Addenda in their proposal submission.

Bidder Signature / Date

Russo Park RFP

Questions/RFIs:

37. On Project Plan E-000 General Notes and Abbreviations, under Security Symbols, It indicates symbols for a Multi-Sensor 180 degree camera and a 360-degree camera with a PTZ camera. The specifications indicate a dome camera and a PTZ both being 3 Megapixel. Which camera are we to price for the project?

Response:

Please refer to drawings for camera locations and type. Provide Multi Sensor camera for 180 degree and 360 degree with PTZ.

Provide camera manufactured by VIVOTEK or approved equal as noted by specification. Camera shall be rated for outdoor use and vandal proof. Both camera types shall be Pole Mounted.

Multi Sensor V Series IB9389 – EH – V2 with fixed lens.

PTZ camera 360 degree viewing SD9368-EHL

(Alternate manufacturers, as allowed by Philadelphia Parks and Recreation Standards include Genetec, Axis Communication and DVTTEL).

See also updated Specification Section 282300 Video Surveillance.

Head end equipment to be provided for video surveillance and recording. (See response #38)

38. Is the contractor required to furnish and install any VMS and or network equipment in the specified electrical room?

Response:

Head-end equipment shall include a video surveillance system to act as the central processing control:

- **Collect video from cameras**
- **Record / store footage**
- **Provide live monitoring**
- **Stored data shall be available for playback**

Provide new head end equipment. Contractor to furnish and install system racks and a lockable cabinet within *the electrical room*. The system shall include a network video recorder, video management system and storage system. The video display shall be located in the recreation center manager's office. Control equipment (microphone or alarm) is not required.

39. Is the contractor required to furnish and install a wall / floor rack within the electrical room? If not, is there room on the existing rack to terminate all fiber optic cabling

Response:

Provide new rack system in the *electrical room*. (A previous system was terminated in the manager's office). Refer to response to Question #38 for equipment to be provided.

Russo Park RFP

Questions/RFI:

40. Within the pole mounted camera equipment enclosure, it indicates for the contractor to install a 5-port POE switch with a SFP port. Would it be more cost-effective to install a POE media converter since we are installing (1) camera per box. Please advise

Response:

Install per the contract documents.

The system shall include 16 ports, power input of 115 VAC with max power at 30w per port. The system shall be provided with a 19" mountable rack.

Video system monitor shall be up to 2 DVI and manufactured by NEC, Samsung, Sharp, LG or TATUNG (security monitor only, not TV).

Video recorder equipment shall be by Genetic. Recording equipment shall have the capability of storing data at 2MP for 30 days with 20% capacity remaining, 30 fps record on motion.

41. The specifications and/or drawings do not indicate the terminations required within the electrical room. Is the contractor to furnish and install fiber optic termination hardware within the electrical room?

Response:

Contractor to furnish and install fiber optic termination hardware in the *electrical room*.

48. Dwg# E-602 shows pole camera equipment enclosure. However location for this enclosure is NOT shown.

Response:

Camera equipment enclosure to be mounted 1 foot below the camera on opposite side of the pole.

49. Dwg # E-602 Is this enclosure required for each camera? Total number of required enclosures are NOT clear.

Response:

Enclosure is required for each camera location and located on the pole. See response #48.

50. Dwg # E-602 shows 5 port switch and did NOT provide model # ? provide more details and part/model # for this.

Response:

Drawing indicates that the components shall be installed in a weather proof locking enclosure manufactured by "Hoffman." Components include duplex receptacle, surge protector, power converter and a 5 port POE Switch. Switch may be by Intellinet, Omada, Tycon or similar.

Russo Park RFP

Questions/RFIs:

51. Camera schedule is NOT listed in drawings. Do have camera schedule (for total # of cameras) and model numbers for each camera?.(Spec also did NOT give specific model #)

Response:

Refer to #37 for basis of design camera schedule. Contractor to provide quantities based on camera locations on part plan drawings.

52. Is all headend equipment existing? to connect all new camera equipment. There is NO single line diagram.

Response:

There is no existing head end equipment – all head end equipment including racks, cabinets, enclosures, recording and data storage is new. Previously existing equipment has been removed. New equipment to be furnished and installed in *electrical room*.

53. Who will be integrating new cameras to existing headed equipment (configuration and testing with head end equipment)?

Response:

Contractor to provide a new, complete system with components typical for recreation center sites and per Parks and Recreation standards.

54. What exactly are the MBE/WBE goals for this project? The Rebuild Contract Participation excel form shows goals of 30-35% MBE and 15-20% WBE, but I don't see anything about MBE/WBE goals in the contract documents. Please confirm.

Response:

There are no there are no MBE/WBE goals for this project.

SECTION 282300

VIDEO SURVEILLANCE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes a video surveillance system consisting of cameras, network video recorder, data transmission wiring, and a control station with its associated equipment.
- B. Video surveillance system shall be new. Existing system is disconnected and removed from the recreation center.

1.3 DEFINITIONS

- A. AGC: Automatic gain control.
- B. BNC: Bayonet Neill-Concelman -type of connector.
- C. B/W: Black and white.
- D. CCD: Charge-coupled device.
- E. FTP: File transfer protocol.
- F. IP: Internet protocol.
- G. LAN: Local area network.
- H. MPEG: Moving picture experts group.
- I. NTSC: National Television System Committee.
- J. PC: Personal computer.
- K. PTZ: Pan-tilt-zoom.
- L. RAID: Redundant array of independent disks.
- M. TCP: Transmission control protocol - connects hosts on the Internet.
- N. UPS: Uninterruptible power supply.

O. WAN: Wide area network.

1.4 PERFORMANCE REQUIREMENTS

- A. Seismic Performance: Video surveillance system shall withstand the effects of earthquake motions determined according to ASCE/SEI 7.
1. The term "withstand" means "the unit will remain in place without separation of any parts from the device when subjected to the seismic forces specified."

1.5 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated. Include dimensions and data on features, performance, electrical characteristics, ratings, and finishes.
- B. Shop Drawings: For video surveillance. Include plans, elevations, sections, details, and attachments to other work.
1. Detail equipment assemblies and indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of each field connection.
 2. Functional Block Diagram: Show single-line interconnections between components for signal transmission and control. Show cable types and sizes.
 3. Wiring Diagrams: For power, signal, and control wiring (if provided).
 4. Network Bandwidth Requirements and Fiber Optic Channel Link-Loss Budgets.
- 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

1.6 INFORMATIONAL SUBMITTALS

- A. Seismic Qualification Certificates: For video surveillance, cameras, camera-supporting equipment, accessories, and components, from manufacturer.
1. Basis for Certification: Indicate whether withstand certification is based on actual test of assembled components or on calculation.
 2. Dimensioned Outline Drawings of Equipment Unit: Identify center of gravity and locate and describe mounting and anchorage provisions.
 3. Detailed description of equipment anchorage devices on which the certification is based and their installation requirements.
- B. Field quality-control reports.
- C. Warranty: Sample of special warranty.

1.7 CLOSEOUT SUBMITTALS

- A. Operation and Maintenance Data: For cameras, power supplies, infrared illuminators, monitors, digital video recorders, video switches, and control-station components to include in emergency, operation, and maintenance manuals.

1.8 QUALITY ASSURANCE

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- B. Comply with NECA1.
- C. Comply with NFPA70.

1.9 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 50 to 95 deg F and a relative humidity of 20 to 80 percent, noncondensing.
 - 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 deg F dry bulb and 20 to 90 percent relative humidity, noncondensing. Use NEMA 250, Type 1 enclosures.
 - 3. Exterior Environment: System components installed in locations exposed to weather shall berated for continuous operation in ambient temperatures of minus 30 to plus 122 deg 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 (137 km/h) and snow cover up to 24 inches (610 mm) thick. Use NEMA 250, Type 4Xenclosures.

1.10 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: Three (3) years from date of Final Acceptance by the City.
- B. Warranty Requirements: Contractor shall warrant DPP (or PPR) that the equipment will be free and clear of any lien or encumbrance on the final acceptance date. Contractor shall further warrant for a period of three (3) years from the date of Substantial Completion that the Security System will, under normal use and service, be free from defects and faulty workmanship except as set forth below:
 - 1. Contractor's obligation under this warranty is to repair or replace defective equipment, parts, and associated labor thereto at its expense. Contractor shall warrant that replacement or repaired equipment furnished hereunder and labor shall be in accordance with current industry standards.
 - 2. PPR is granted a nontransferable fully paid license (Genetec) to use all software furnished by the Contractor as part of furnishing the security system equipment provisions under terms established by the software manufacturer. The Authority will be provided with a copy of all applicable licenses. Contractor shall warrant that it has the right to grant such licenses.
 - 3. A copy of Contractor's standard warranty agreement must be provided and must match or exceed manufacturer's warranty, minimum of 3 years.

4. Upgrade of software during warranty period.
5. Provide Service for three (3) years after substantial completion, includes all labor and material cost associated with the repair, with the exception of third party negligence or acts of vandalism.
6. Contractor's personnel shall respond to all system failures within four (4) hours of the occurring event. All failure shall be corrected within eight (8) hours of the arrival on site of Contractor's personnel.

PART 2 - PRODUCTS

2.1 GENERAL SYSTEM REQUIREMENTS

- A. 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's entry connection to components.
- B. Tamper Protection: Tamper switches on enclosures, control units, pull boxes, junction boxes, cabinets, and other system components shall initiate a tamper-alarm signal when unit is opened or partially disassembled. Control-station, control-unit alarm display shall identify tamper alarms and indicate locations.
- C. Compatibility: Video Management Software must be compatible with IP video equipment. The contractor, if submitting components from different manufactures must submit with either shop drawings, or product data, statements of compatibility from each manufacturer guaranteeing IP video components are compatible with the IP video management software submitted.

2.2 IP VIDEO SYSTEMS

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 1. Genetec
 2. Vivotek
 3. Axis Communications
 4. DVTEL
- B. Description:
 1. System shall provide high-quality delivery and processing of IP-based video, audio, and control data using standard Ethernet-based networks.
 2. System shall have seamless integration of all video surveillance and control functions.
 3. Graphical user interface software shall manage all IP-based video matrix switching and camera control functions, two-way audio communication, alarm monitoring and control, and recording and archive/retrieval management. IP system shall also be capable of integrating into larger system environments.

4. System design shall include all necessary compression software for high-performance, dual-stream, MPEG-2/MPEG-4 video and H.264 video. Unit shall provide connections for all video cameras, bidirectional audio, discreet sensor inputs, and control system outputs.
5. All camera signals shall be compressed, encoded, and delivered onto the network for processing and control by the IP video-management software.
6. Camera system units shall be ruggedly built and designed for extreme adverse and urban environments, complying with NEMA Type environmental standards. Where required provide vandal proof exterior camera housings.
7. Encoder/decoder combinations shall place video, audio, and data network stream that can be managed from multiple workstations on the user's LAN or WAN at the same time.

2.3 STANDARD IP CAMERAS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 1. Genetec (AutoVu SharpV)
 2. Vivotek
 3. Axis Communications
 4. DVTEL

- B. Network Outdoor Dome Camera, HD/ (3) Megapixel: Assembled and tested as a complete manufactured unit.
 1. Image Sensor - 1/3" Progressive scan CMOS
 2. Lens – 2.7-9mm Motorized Verifocal
 3. Minimum Illumination/Light Sensitivity (lux) 0.5 color, 0 black and white
 4. Maximum Resolution (pixels) - 2048x1536 (3MP)
 5. Video Compression - H.264/MPEG4/M-JPEG
 6. Frames per Second -30
 7. Intelligent Alarm
 8. Network Protocol - TCP/IP, HTTP, DHCP, DNS, DDNS, RTP, RTSP, PPPoE, SMTP, NTP, SNMP, HTTPS, FTP, 802.1x, Qos
 9. Power - PoE
 10. Outdoor Use – Outdoor Ready
 11. Vandal Resistant -Yes
 12. Digital Pan/Tilt/Zoom
 13. 20M IR LED
 14. Heater - Integrated with housing
 15. Mounting:
 - a. Outdoor Wall Mount(VandalProof)
 - b. Outdoor Wall Mount on Pole Mount Adapter, Min. Three Clamps(Vandal Proof)

- C. Network Outdoor PTZ Camera HD/ (3) Megapixel: Assembled and tested as a complete manufactured unit.
 1. Image Sensor - 1/3" Progressive scan CMOS

2. Lens - 2.7-9mm Motorized Verifocal
3. Day/Night Sensor -Auto
4. Minimum Illumination/Light Sensitivity: 0.05LUX at (F1.6, on color), 0.01LUX at (F1.6, on black and white)
5. Maximum Resolution (pixels) - 2048x12536 (3MP)
6. Video Compression - H.264/MPEG4/M-JPEG
7. Frames per Second min-30
8. Alarm Inputs/Outputs -7/2
9. Network Protocol - TCP/IP, HTTP, DHCP, DNS, DDNS, RTP/RTSP, PPPoE, SMTP, NTP
10. Power - PoE or DC Input
11. Vandal Resistant -Yes
12. PTZ Function: 360deg. Endless pan range and -20deg to 90der. Tilt range
13. 20M IR LED
14. Mounting:
 - a. Indoor Ceiling Mount (VandalProof)
 - b. Wall Mount (VandalProof)
 - c. Outdoor Wall Mount on Pole Mount Adapter, Min. Three Clamps(Vandal Proof)

2.4 VIDEO DECODERS

- A.
 1. Network - IPv4 orIPv6
 2. Power - PoE,DC
 3. Monitor Support - Up to 2 DVI or Analog
 4. Network Configurable
 5. Camera Viewing capability only, no control

2.5 POWER SUPPLIES

- A. Low-voltage power supplies matched for voltage and current requirements of cameras and accessories, and of type as recommended by manufacturer of camera and lens.
- B. Enclosure: NEMA 250, Type3.
- C. Input - 115VAC
- D. Output - 16 fuse protected outputs:
 1. 12VDC or 24VDC
 2. 4A total continuous supply
 3. 3.5A rated outputs
- E. Temperature Operating Range - 32 to 120 Degrees F
- F. Input/Output LED Indicators
- G. On/Off Switch

H. Locking Enclosure

2.6 EQUIPMENT CABINET

A. Furnish and install a EIC Solutions S722436-RM Air Conditioned Cabinet or similar for electric room for mounting miscellaneous electronic components.

2.7 CAMERA-SUPPORTING EQUIPMENT

A. Manufacturers: Subject to compliance with requirements of:

1. Genetec

B. Minimum Load Rating: Rated for load in excess of the total weight supported times a minimum safety factor of two.

C. Mounting Brackets for Fixed Cameras: Type matched to items supported and mounting conditions. Include manual pan-and-tilt adjustment.

D. Protective Housings for Fixed Cameras: Steel enclosures with internal camera mounting and connecting provisions that are matched to camera/lens combination and mounting and installing arrangement of camera to be housed.

1. Tamper switch on access cover sounds an alarm signal when unit is opened or partially disassembled. Central-control unit shall identify tamper alarms and indicate location in alarm display.

2. Camera Viewing Window: Polycarbonate window, aligned with camera lens.

3. Duplex Receptacle: Internally mounted.

4. Alignment Provisions: Camera mounting shall provide for field aiming of camera and permit removal and reinstallation of camera lens without disturbing camera alignment.

5. Built-in, thermostat-activated heater units. Units shall be automatically controlled so the environmental limits of the camera equipment are not exceeded.

6. Sun shield shall not interfere with normal airflow around the housing.

7. Mounting bracket and hardware for wall or ceiling mounting of the housing. Bracket shall be of same material as the housing; mounting hardware shall be stainless steel.

8. Finish: Housing and mounting bracket shall be factory finished using manufacturer's standard finishing process suitable for the environment.

2.8 MONITORS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. NEC Display (security monitor not TV)

2. Samsung (security monitor not TV)

3. Sharp (security monitor not TV)

4. LG (security monitor not TV)

5. TATUNG (security monitor not TV)

- B. Monitors shall be sized per the drawings. If size is not specified, the size shall be 26" to 32" minimum.
- C. Monitors shall be mounted within a see through vandal proof enclosure. Vandal proof enclosure shall be lockable and wall mountable.

2.9 NETWORK VIDEO RECORDERS/VIDEO SERVERS

- A. Manufacturers: Subject to compliance with requirements, provide products:
 - 1. Genetec
- B. Internal 12 TB min hard disk.
 - 1. Contractor shall provide storage calculations based on quantity of cameras and recording parameters, 40TB shall be the minimum size NVR acceptable, contractor shall increase size based on number of cameras maintaining 20% spare capacity for recording and expansion.
 - 2. Video and audio recording over TCP/IP network.
 - 3. Video recording of MPEG-2 and MPEG-4 streams.
 - 4. Video recording up to 48 Mbps for internal storage and up to 100 Mbps for external storage.
 - 5. Duplex Operation: Simultaneous recording and playback.
 - 6. Continuous and alarm-based recording.
 - 7. Full-Featured Search Capabilities: Search based on camera, time, or date.
 - 8. Automatic data replenishment to ensure recording even if network is down.
 - 9. Digital certification by watermarking.
 - 10. Internal RAID storage of up to 40TB.
 - 11. Full integration with LAN, Intranet, or Internet through standard Web browser or video management software, see next section.
 - 12. Integrated Web server FTP server functionality.
 - 13. Network video recording/storage devices shall be sized to store video at 2MP for 30 days with 20% capacity remaining, 30 fps, record on motion. Multiple storage devices shall be required as necessary. At a minimum, one storage device per facility will be required.
- C. Minimum Device Requirements:
 - 1. OS Windows 10 Enterprise LTSC.
 - 2. Intel Core i5-8500 3.00GHz
 - 3. RAM 16 GB DDR4
 - 4. Onboard 1GB Network adapter
- D. Each NVR shall be supplied with a keyboard and mouse for IP camera control at the viewing station. The Keyboard shall be connected directly to the NVR. The keyboard shall allow user logon, display selection, monitor configuration and camera control.
- E. Contractor shall configure all new cameras for each building or each specified location for viewing, recording and playback on the NVR. Each NVR setup will be unique and configuration will be determined by the Department of Public Property. Contractor shall submit NVR and recording setup and configuration of cameras for review and approval.

- F. NVR shall be mounted with a vandal proof enclosure. Vandal Proof enclosure shall be lockable and mountable.

2.10 POWER OVER ETHERNET (POE) POWER INJECTORS

- A. Minimum Device Requirements:
 1. Ports - 16 (min.) actual device quantities on drawings, use 24 port if necessary.
 2. Power Input - 115VAC.
 3. Max Power - 30W per port, Total Power 300W.
 4. 19" Rack Mountable

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine pathway elements intended for cables. Check raceways and other elements for compliance with space allocations, installation tolerance, hazards to camera installation, and other conditions affecting installation.
- B. Examine roughing-in for LAN, WAN, and IP network before device installation.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 WIRING

- A. Comply with requirements in Division 26 – Raceways and Boxes for Electrical Systems. If Division 26 is not provided, install wiring per below.
- B. Wiring Method: Install cables in raceways unless otherwise indicated.
 1. Except raceways are not required in accessible indoor ceiling spaces and attics.
 2. Except raceways are not required in hollow gypsum board partitions.
 3. Conceal raceways and wiring except in unfinished spaces.
- C. Wiring within Enclosures: Bundle, lace, and train conductors to terminal points with no excess and without exceeding manufacturer's limitations on bending radii. Provide and use lacing bars and distribution spools.
- D. Splices, Taps, and Terminations: For power and control wiring, use numbered terminal strips in junction, pull, and outlet boxes; terminal cabinets; and equipment enclosures. Tighten electrical connectors and terminals according to manufacturer's published torque-tightening values. If manufacturer's torque values are not indicated, use those specified in UL486A-486B.
- E. For LAN connection and fiber-optic and copper communication wiring, comply with Section 271500-1.4 "Horizontal Cabling Description."
- F. Grounding: Provide independent-signal circuit grounding recommended in writing by manufacturer.

3.3 VIDEO SURVEILLANCE SYSTEM INSTALLATION

- A. Install cameras and infrared illuminators level and plumb.
- B. Install cameras with a 12'-0" minimum clear space below cameras and their mountings to the finished grade. Change type of mounting to achieve required clearance. For exterior camera mount cameras on steel poles to match exterior lighting system poles.
- C. Set pan unit and pan-and-tilt unit stops to suit 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. Install tamper switches on components indicated to receive tamper switches, arranged to detect unauthorized entry into system-component enclosures and mounted in self-protected, inconspicuous positions.
- F. Avoid ground loops by making ground connections only at the control station.
 - 1. For 12- and 24-V dc cameras, connect the coaxial cable shields only at the monitor end.
- G. Identify system components, wiring, cabling, and terminals.

3.4 FIELD QUALITY CONTROL

- A. Testing Agency: Engage a qualified testing agency to perform tests and inspections.
- B. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect, test, and adjust components, assemblies, and equipment installations, including connections.
- C. Perform tests and inspections:
 - 1. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect components, assemblies, and equipment installations, including connections, and to assist in testing.
- D. Tests and Inspections:
 - 1. Inspection: Verify that units and controls are properly installed, connected, and labeled, and that interconnecting wires and terminals are identified.
 - 2. Pre-testing: 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:
 - a. Prepare equipment list described in "Informational Submittals" Article.
 - b. Verify operation of auto-iris lenses.
 - c. 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.
 - d. 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

(17 to 23 m) away. Adjust until image is in focus from full wide angle to full telephoto, with the filter in place.

- e. Set and name all preset positions; consult Owner's personnel.
 - f. Set sensitivity of motion detection.
 - g. Connect and verify responses to alarms.
 - h. Verify operation of control-station equipment.
3. 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.
 4. 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.
 5. Video surveillance system will be considered defective if it does not pass tests and inspections.
 6. Prepare test and inspection reports and submit to PPR for review.

3.5 LABELING OF CAMERA DEVICES AND CONTROL SYSTEMS

- A. Contractor to provide a recommended Labeling System to Project Coordinator prior to camera installation.

3.6 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. Provide up to two visits for this purpose at 6 months and 12 months. Tasks shall include, but are not limited to, the following:
 1. Check cable connections.
 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's use of video surveillance system.
 5. Provide a written report of adjustments and recommendations.
 6. Cleaning per Section 3.7

3.7 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.

3.8 DEMONSTRATION/TRAINING

- A. Provide a minimum of 8 hours of training to Owner's maintenance personnel to adjust, operate, and maintain video-surveillance equipment.

END OF SECTION 282300