

SECTION 01321 – 4K FIXED STREAMING LOW-LIGHT CONSTRUCTION CAMERA SYSTEM

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes: Construction camera system to include live streaming video, archived photos, and time-lapse videos of project site during construction duration.
- B. Products and services supplied by System Vendor and installed under this Section:
 - 1. 4K Fixed Streaming Low-light Construction Camera. Includes all-weather camera with 4G LTE cellular modem, power supply, and mounting brackets.
 - 2. Hosting Services:
 - a. Ability to view live video stream from construction camera from Internet-connected devices.
 - b. Automatic capture and storage of job site photos from construction camera, viewable from Internet-connected devices.
 - c. On-demand time-lapse movies
 - d. Edited project-end time-lapse movie
- C. Products supplied and installed by Contractor:
 - 1. 120v AC power at camera mounting location or solar power kit
 - 2. Poles, foundation systems, and guy systems for camera mounting
- D. Related Sections:
 - 1. Project Management and Coordination Section for administrative requirements for coordination and project meetings.
 - 2. Construction Progress Documentation Section for reports
 - 3. Photographic Documentation Section for project pictures
 - 4. Quality Requirements Section for Special Inspections
 - 5. Temporary Facilities Section for temporary telephone or broadband utilities and security
 - 6. Division 16 Sections for 120v AC power
 - 7. All equipment shall be covered under Owner's and Contractor's project insurance policies

1.02 SUBMITTALS

- A. Reference Submittal Procedures Section to submit the following items:
 - 1. System Vendor shall submit product data for low- light-sensitive 4K streaming construction camera and hosting services.
 - 2. Architect shall provide project site plan showing proposed mounting location for camera.

1.03 QUALITY ASSURANCE

- A. Overall Standards:
 - 1. Contractor shall maintain quality control program on all equipment.
- B. System Vendor Qualifications:
 - 1. Experience in producing construction camera systems of the type specified.

1.04 DELIVERY, STORAGE, AND HANDLING

Follow System Vendor's instructions. All freight shall be included in Contract Price.

1.05 WARRANTY

- A. Time Period: System Vendor's lifetime warranty.
- B. Conditions: System Vendor's standard warranty conditions.

1.06 CONTRACTOR'S INSTRUCTIONS

- a. Maintenance and Testing:
 - 1. Clean window of camera enclosure as required.
 - 2. Power cycle communication modem/router as required.
- b. Project Closeout:
 - 1. Contractor shall notify System Vendor 14 days prior to the project's completion.
 - 2. Contractor shall remove camera system. Contractor shall carefully package system and ship to destination as directed by Owner (if purchased by Owner) or to System Vendor (if rented).
 - 3. All freight shall be included in Contract Price.

PART 2 - PRODUCTS

2.01 SYSTEM VENDOR

- A. iBEAM Construction Cameras
 - 5320 W Morris Hill Rd
 - Boise, Idaho 83706
 - Tel: (800)403.0688 (208) 344.8002
 - E-mail: sales@ibeamsystems.com
 - Web site: <http://www.ibeamsystems.com>
- B. Approved Equal as determined by the Architect.

2.02 PERFORMANCE REQUIREMENTS

- A. 4K Fixed Streaming Low-light Construction Camera
 - A. Streaming web camera
 - a. 3840x2160 (network), 1920x1080 (cellular) live image stream
 - b. 4/3" back-illuminated color CMOS sensor, 10 megapixels
 - c. Auto focus
 - d. Auto day/night mode
 - e. Canon 12-48mm lens with fish-eye correction and 90° horizontal field of view
 - f. Camera access restrictions
 - B. IP66- and NEMA 4X-rated casing
 - C. Pole mounting bracket
 - D. Operating temperature: -22°F to 122°F
- B. Hosting Services
 - 1. Project photos shall be captured daily at 10-minute increments throughout a designated 12-hour time period
 - a. 3840x2160 pixels (8.3 megapixels), 16:9 widescreen aspect ratio
 - b. JPEG format
 - c. Date/time stamp
 - 2. Project photos shall be uploaded to and stored on a distributed cloud server
 - 3. Web-based access to archived photos
 - a. Password-protected access
 - b. Photos searchable by date and time
 - c. 500% zoom magnification
 - d. Download, print, and email capability
 - e. Link to live camera
 - 4. Web-based access to live video stream
 - a. Password-protected access
 - 5. Web-based access to time-lapse movies
 - a. Password-protected access
 - b. User can select date and time range of time-lapse movie
 - c. User can select frame rate of movie
 - d. Downloadable in .mp4 format
 - i. Include timestamps
 - ii. 4K Ultra HD, 1080p HD and 720p HD resolution
 - 6. System Vendor shall provide an edited and post-processed start-to-finish 4K Ultra HD time-lapse movie in .mp4 format at the end of project
 - 7. Cellular data service shall be provided by System Vendor
 - 8. Customer shall retain all copyrights to project photos and time-lapse movies

2.03 COMPONENTS

- A. 4K Fixed Streaming Low-light Construction Camera shall be an iBEAM Fixed 4K Premier Construction Camera or approved equal
- B. Hosting services shall be iBEAM hosting service as developed by iBEAM Construction Cameras or approved equal.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Contractor shall install 4K Fixed Streaming Low-light Construction Camera system in accordance with System Vendor's installation instructions.
- B. Position Construction Camera system for optimal view of project accounting for terrain, vegetation, and construction phases.
- C. Contractor shall provide all necessary permits, licenses and inspections.

3.02 FIELD QUALITY CONTROL

- A. Contractor shall test 4K Fixed Streaming Low-light Construction Camera in accordance with System Vendor's startup test procedures.
- B. Contractor shall maintain all components in good condition.

3.03 EXAMINATION

- A. Contractor shall periodically examine camera enclosure window to insure optical clarity.

3.04 CLEANING

- A. Reference System Vendor's cleaning recommendations.

END OF SECTION 01321