

SECTION 01321 – HD PTZ STREAMING CONSTRUCTION CAMERA SYSTEM

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes: Construction camera system to include live streaming video, remote-control pan-tilt-zoom (PTZ), 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. HD PTZ Streaming Construction Camera. Includes camera, 4G LTE cellular modem, all-weather enclosure, power supply and mounting bracket.
 - 2. Hosting Services:
 - a. Ability to view live video stream and control construction camera from Internet-connected devices.
 - b. Automatic capture and storage of job site photos from construction camera, viewable from Internet-connected devices.
 - c. Online 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
 - 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 remote-control construction camera, project monitoring and automatic photo archiving 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 dome of camera enclosure 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 leased).
 - 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. HD PTZ Streaming Construction Camera
 - 1. Remote-controllable web camera
 - a. 1920x1080 live image stream
 - b. 1/2.8" progressive scan RGC CMOS
 - c. Autofocus and auto-iris
 - d. Auto day/night (color/b&w) mode
 - e. Image stabilization
 - f. 256 preset positions
 - g. 20 simultaneous viewers
 - h. Camera shall be remote controllable from an Internet-connected device
 - i. 360° pan
 - ii. 180° tilt
 - iii. 58.3° horizontal field of view
 - iv. 35.5° vertical field of view
 - v. 32x optical zoom
 - vi. Still image capture
 - 2. Camera enclosure:
 - a. 1P66-, NEMA 4X- and IK10-rated
 - b. Aluminum casing
 - c. Clear polycarbonate dome
 - 3. Power/communication enclosure and mounting bracket of cast aluminum
 - 4. 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. 1920x1080 pixels, 16:9 widescreen aspect ratio
 - b. JPEG format
 - c. Date/time stamp
 - d. Photos shall be captured of multiple views if necessary to adequately document construction
 - 2. Project photos shall be uploaded to and stored on a secure, redundant 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 with pan-tilt-zoom control
 - 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. 1080p HD and 720p HD resolution
- 6. System Vendor shall provide an edited and post-processed start-to-finish 1080p HD time-lapse movie in .mp4 format at 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. HD PTZ Streaming Construction Camera shall be an iBEAM PTZ HD Construction Camera or approved equal
- B. Hosting Services shall be iBEAM hosting service as developed by iBEAM Systems, Inc. or approved equal.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Contractor shall install HD PTZ Streaming Construction Camera in accordance with System Vendor's installation instructions.
- B. Position 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 HD PTZ 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 dome to insure optical clarity.

3.04 CLEANING

- A. Reference System Vendor's cleaning recommendations.

END OF SECTION 01321