Florida Department of Transportation

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605 Suwannee Street
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STEPHANIE KOPELOUSOS
SECRETARY

January 22, 2009

Monica Gourdine
Program Operations Engineer
Federal Highway Administration
545 John Knox Road, Suite 200
Tallahassee, Florida 32303

Re: Office of Design, Specifications
Section 782
Proposed Specification: 7820102 Intelligent Transportation Systems – Video Equipment

Dear Ms. Gourdine:

We are submitting, for your approval, two copies of the above referenced Supplemental Specification.

This change was proposed by Gene Glotzbach for clarification of design requirements.

Please review and transmit your comments, if any, within four weeks. Comments should be sent via Email to ST986RP or rudy.powell@dot.state.fl.us.

If you have any questions relating to this specification change, please call Rudy Powell, State Specifications Engineer at 414-4110.

Sincerely,

Signature on File

Rudy Powell, Jr., P.E.
State Specifications Engineer

RP/ft
Attachment
cc: Gregory Jones, Chief Civil Litigation
Florida Transportation Builders' Assoc.
State Construction Engineer

INTELLIGENT TRANSPORTATION SYSTEMS–VIDEO EQUIPMENT.
(REV ~~11-15-06~~*1-22-09*) ~~(FA 1-29-07) (7-07)~~

SUBARTICLE 782-1.2.1 (of the Supplemental Specifications) is deleted and the following substituted:

782-1.2.1 Camera: Furnish a CCTV camera that is compatible with the current version of the Department's SunGuide℠ Software System, and any other camera operating software indicated on the plans or in the contract documents. Ensure that the CCTV camera allows remote control of camera pan, tilt, and zoom functions via the Department's SunGuide℠ Software System user interface. Use either a dome-type or external positioner-type CCTV camera assembly. Ensure that the appropriate type is used at the location(s) shown on the plans. *Use only equipment and components that meet the requirements of these minimum specifications, and are listed on the Department's Approved Product List (APL).*

Ensure that the camera produces National Television System Committee (NTSC) composite video output of 1 volt peak-to-peak (Vp-p) at 75 ohms (Ω). In addition, ensure the camera provides the following features and capabilities:

1. Day (color)/night (monochrome) switchover and iris control, with user-selectable manual and automatic control capabilities.
2. Minimum resolution of 470 horizontal and 350 vertical TV lines.
3. Ability to produce clear, detailed, and usable video images of the areas, objects, and other subjects visible from a roadside CCTV field site. Ensure that video produced by the camera is true, accurate, distortion free, and free from transfer smear, oversaturation, and any other image defect that negatively impacts image quality under all lighting and weather conditions in both color and monochrome modes.
4. User-selectable automatic gain control (AGC) that is peak-average adjustable to 30 decibels (dB).
5. A minimum signal-to-noise ratio of 50 dB.
6. Automatic color balance that references the white areas of the scene through the lens.
7. An automatic electronic shutter that is user selectable from 1/60 to 1/10,000 of a second.
8. A digital signal processor that provides a minimum 10x digital zoom.
9. Programmable azimuth and compass display with ability to display pan and tilt position with a 1 degree resolution.

Furnish a CCTV camera that provides titling and masking features, including, but not limited to, programmable camera title, programmable preset titles for each preset position, and programmable privacy zones. Ensure that programmable titles are a minimum of 18 characters per line.

SUBARTICLE 782-1.2.8 (of the Supplemental Specifications) is deleted and the following substituted:

782-1.2.8 Environmental Specifications: Ensure that the CCTV camera performs all required functions during and after being subjected to an ambient operating temperature range of -30º to 165º F as defined in the environmental requirements section of the NEMA TS 2 standard. Verify that the CCTV camera manufacturer certifies its device has successfully completed environmental testing as defined in the environmental requirements section of the NEMA TS 2 standard.

Ensure that the housing protects the camera and other internal components from rain, dust, corrosive elements, and typical conditions found at a roadside environment. ~~Verify~~ *Ensure* that the CCTV camera, mounting hardware, and any other camera-related material that is exposed to the environment can withstand ~~sustained wind of 110 mph with a 30% gust factor~~*150 mph wind speeds and meet the requirements of the Structures Manual, Volume 9*.

SUBARTICLE 782-1.3 (of the Supplemental Specifications) is deleted and the following substituted:

782-1.3 Installation Requirements: Install the CCTV camera in the field on a prestressed concrete or steel ~~strain~~ pole at a roadside location. Design, furnish, and install the pole according to the requirements of Section *785*~~641 or Section 649~~, as depicted in the Design Standards, and as shown in the plans.

Furnish and install the power supplies, local control equipment and any other camera-related field electronic equipment, and transient voltage surge suppressors within a pole- or base-mounted, lockable cabinet as shown in the plans and in accordance with Section 676. Ensure that the cabinet protects these electrical and electronic devices from rain, dust, dirt, and other harmful elements of nature.

Furnish and install all power, video, and data cables necessary to provide connection points for camera video and PTZ control signals within the cabinet. Furnish and install any and all ancillary equipment required to provide a complete and fully operational CCTV camera. Verify that all wiring meets NEC requirements where applicable.

Permanently mount the CCTV camera to the camera pole or other support structure as shown in the plans. Ensure that data and video cables from the pole or support structure to the camera are routed inside the mounting hardware and protected from exposure to the outside environment.

Coat the exterior of the dome-type enclosure’s lower half with a clear, rain repellant product prior to final acceptance.

INTELLIGENT TRANSPORTATION SYSTEMS–VIDEO EQUIPMENT.
(REV 1-22-09)

SUBARTICLE 782-1.2.1 (of the Supplemental Specifications) is deleted and the following substituted:

782-1.2.1 Camera: Furnish a CCTV camera that is compatible with the current version of the Department's SunGuide℠ Software System, and any other camera operating software indicated on the plans or in the contract documents. Ensure that the CCTV camera allows remote control of camera pan, tilt, and zoom functions via the Department's SunGuide℠ Software System user interface. Use either a dome-type or external positioner-type CCTV camera assembly. Ensure that the appropriate type is used at the location(s) shown on the plans. Use only equipment and components that meet the requirements of these minimum specifications, and are listed on the Department's Approved Product List (APL).

Ensure that the camera produces National Television System Committee (NTSC) composite video output of 1 volt peak-to-peak (Vp-p) at 75 ohms (Ω). In addition, ensure the camera provides the following features and capabilities:

1. Day (color)/night (monochrome) switchover and iris control, with user-selectable manual and automatic control capabilities.
2. Minimum resolution of 470 horizontal and 350 vertical TV lines.
3. Ability to produce clear, detailed, and usable video images of the areas, objects, and other subjects visible from a roadside CCTV field site. Ensure that video produced by the camera is true, accurate, distortion free, and free from transfer smear, oversaturation, and any other image defect that negatively impacts image quality under all lighting and weather conditions in both color and monochrome modes.
4. User-selectable automatic gain control (AGC) that is peak-average adjustable to 30 decibels (dB).
5. A minimum signal-to-noise ratio of 50 dB.
6. Automatic color balance that references the white areas of the scene through the lens.
7. An automatic electronic shutter that is user selectable from 1/60 to 1/10,000 of a second.
8. A digital signal processor that provides a minimum 10x digital zoom.
9. Programmable azimuth and compass display with ability to display pan and tilt position with a 1 degree resolution.

Furnish a CCTV camera that provides titling and masking features, including, but not limited to, programmable camera title, programmable preset titles for each preset position, and programmable privacy zones. Ensure that programmable titles are a minimum of 18 characters per line.

SUBARTICLE 782-1.2.8 (of the Supplemental Specifications) is deleted and the following substituted:

782-1.2.8 Environmental Specifications: Ensure that the CCTV camera performs all required functions during and after being subjected to an ambient operating temperature range of -30º to 165º F as defined in the environmental requirements section of the NEMA TS 2 standard. Verify that the CCTV camera manufacturer certifies its device has successfully completed environmental testing as defined in the environmental requirements section of the NEMA TS 2 standard.

Ensure that the housing protects the camera and other internal components from rain, dust, corrosive elements, and typical conditions found at a roadside environment. Ensure that the CCTV camera, mounting hardware, and any other camera-related material that is exposed to the environment can withstand 150 mph wind speeds and meet the requirements of the Structures Manual, Volume 9.

SUBARTICLE 782-1.3 (of the Supplemental Specifications) is deleted and the following substituted:

782-1.3 Installation Requirements: Install the CCTV camera in the field on a prestressed concrete or steel pole at a roadside location. Design, furnish, and install the pole according to the requirements of Section 785, as depicted in the Design Standards, and as shown in the plans.

Furnish and install the power supplies, local control equipment and any other camera-related field electronic equipment, and transient voltage surge suppressors within a pole- or base-mounted, lockable cabinet as shown in the plans and in accordance with Section 676. Ensure that the cabinet protects these electrical and electronic devices from rain, dust, dirt, and other harmful elements of nature.

Furnish and install all power, video, and data cables necessary to provide connection points for camera video and PTZ control signals within the cabinet. Furnish and install any and all ancillary equipment required to provide a complete and fully operational CCTV camera. Verify that all wiring meets NEC requirements where applicable.

Permanently mount the CCTV camera to the camera pole or other support structure as shown in the plans. Ensure that data and video cables from the pole or support structure to the camera are routed inside the mounting hardware and protected from exposure to the outside environment.

Coat the exterior of the dome-type enclosure’s lower half with a clear, rain repellant product prior to final acceptance.