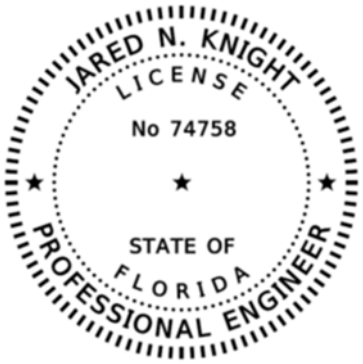
TECHNICAL SPECIAL PROVISION
FOR
ITS DEVICE INTEGRATION AND TESTING

Financial Project ID: 441616-1-52-01

The official record of this Technical Special Provision has been electronically signed and sealed using a Digital Signature as required by Rule 61G 15-23.004, F.A.C.



Jared N Knight

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Date: 2020.03.02 16:21:48 -05'00'

Prepared by: Jared N. Knight, PE
Fla. License No.: 74758
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Certificate of Authorization: 3932
Date: February 28, 2020

T612 – ITS DEVICE INTEGRATION AND TESTING

T612-1 General.

Perform ITS device integration and testing based on the construction project milestones in accordance with the Contract Documents. All test equipment used shall have valid calibration certifications in accordance with the manufacturer's recommendations, notwithstanding modification required for integration. The Department's active and tested ITS device configuration settings, firmware versions, and Sunguide configurations will be provided to the contractor by the Department and may be provided within the following website: www.cflsmartroads.com.

The Contractor shall be responsible for conducting and documenting the test results. All equipment required for conducting tests shall be supplied by the Contractor. The test shall be conducted with manufacturer-supplied software or SunGuide® software as required. Provide qualified personnel to support the diagnosis and repair of system equipment during the tests as required. These personnel shall be available for this support during tests. A Department representative will witness the test and sign the test results documentation at the end of each test confirming proof of attendance and concurrence with testing results. The Department reserves the right to postpone any test for up to seven days; such postponement shall not be grounds for extension of completion time. The Department may waive its right to witness certain tests. Neither witnessing of the test(s) by the Department nor the waiving of the right to do so shall relieve the contractor of the responsibility to comply with the contract documents. Such actions by the Department or approval of any test results by the Department shall not be deemed as acceptance of the equipment or system tested until the successful completion of the 30-Calendar Day Operational Test Period.

Failure of any item to conform to the requirements for any test shall be counted as a defect, and the equipment under test shall be subject to test failure as determined by the Department. The Contractor may offer previously failed equipment for retest provided all areas of non-compliance have been corrected and retested, and evidence thereof is submitted and acceptable to the Department.

T612-2 ITS Device Integration and Testing Coordination.

The Contractor shall provide to the Department all devices requiring integration 60 days prior to field implementation for the Department to review compatibility with Sunguide. If the device has a posted configuration setting, firmware versions, and Sunguide configurations on the www.cflsmartroads.com website, then the 60-day requirement shall be waived. The 60-day requirement may also be waived at the Department's discretion.

The Contractor shall schedule a pre-integration meeting at least 14 calendar days prior to starting integration. The Contractor is responsible to provide all required information at the meeting. In the event the information is incomplete or inaccurate the meeting shall be rescheduled with corrected information. Integration cannot proceed until a minimum of 14 calendar has elapsed following the complete and accurate submittal of required documents at a pre-integration meeting.

After all ITS devices of the same type are ready for testing, submit a written request to the Department's representative at least 14 calendar days prior to the proposed testing date. Conduct all tests in the presence of a Department representative. Testing shall take place only on weekdays, unless Department allows the test to be conducted and/or continued on weekends and Department non-working days.

After all ITS devices within each sub-system satisfactorily pass the required tests, submit a PDF document of the completed test with the documented test results, including signatures, to the Department for review within 14 days following completion of the tests.

T612-3 ITS Device Integration.
ITS components installed under the Project shall be integrated by the Contractor. At the pre-integration meeting, the Contractor shall provide a spreadsheet via native electronic file for all ITS device formatted as shown in Exhibit D burned on compact disk (CD).

Orange County will add the project IP addressing scheme by device. The Contractor shall adhere to the scheme when integrating ITS devices. All ITS devices shall use a version of the NTCIP protocol compatible with the existing SunGuide® software platform. Ensure all ITS device protocols for each sub-system to be integrated with the SunGuide® Software are compliant with the protocols listed online at: http://sunguidesoftware.com/. The use of translators and/or protocol converters shall not be allowed.

Perform any and all ITS device configuration changes/firmware upgrades required for the successful integration of all ITS devices installed with the existing communications system, Local Hubs, Master Hub Ethernet switches, and the SunGuide® Software. Provide the vendor equipment software for all types of ITS devices installed in the Project to the Department via disk with all applicable licensing. The contract period shall not be extended for time loss or delays related to integration or testing. Any integration or testing of the ITS components shall be considered part of the component's installation. No additional compensation shall be made.

T612-4 ITS Device Field Acceptance Testing (FAT).
Subject all ITS devices to a Field Acceptance Test (FAT) to demonstrate and document all stand-alone (non-network) functional operations of the ITS device and ancillary components, including accuracy as required. Perform all FAT tests and record all FAT results utilizing the Department approved testing procedures included in Exhibit A. FAT tests are to be performed for each ITS device type installed; at a minimum this shall include: Local Hub Ethernet Switch (LHES), Uninterruptable Power Supply (UPS) and Closed-Circuit Television (CCTV). FAT shall be completed prior to before any device is connected to the network.

If any ITS device or ancillary component fails to pass the FAT more than twice, it shall be replaced with a new ITS device or ancillary component of same make and model, and the entire FAT shall be repeated until proven successful.

T612-5 ITS Device Sub-System Acceptance Testing (S-SAT).
Subject all ITS devices to a Sub-Systems Acceptance Test (S-SAT) to demonstrate and document device operability from the nearest Department Master Hub via an Ethernet connection to the full layer 3 network switch. Perform all S-SAT tests and record all S-SAT results using the Department approved testing procedures. S-SAT tests are to be scheduled and performed for each ITS device sub-system (CCTV, ADMS, etc.) after successful completion of the FAT for that sub-system, and after successful integration to the network.

At a minimum SAT test shall be performed for the following ITS device sub-systems: CCTV sub-system.

T612-6 ITS Device System Acceptance Testing (SAT).
Subject all ITS devices to a Systems Acceptance Test (SAT) to demonstrate and document device operability from the SunGuide® Software and/or Regional Traffic Management Center (RTMC) workstation. Perform all SAT tests and record all SAT results using the Department approved testing procedures included in Exhibit B. SAT tests are to be scheduled and performed for each ITS device sub- system (CCTV, ADMS, etc.) after successful completion of the FAT and S-SAT for that sub-system. At a minimum SAT test shall be performed for the following ITS device sub-systems: CCTV System. The SAT shall exhibit full functionality of the ITS deployment in the SunGuide® software.

T612-7 30-Day Operational Test Period.
After successful completion of all required FAT, S-SAT, and SAT tests for all sub- systems, subject all ITS Devices to a 30-Calendar Day Operational Test Period (OTP), during which time the contractor shall perform any and all maintenance required to maintain a fully functional ITS system.

The Contractor shall notify the Department in writing of the scheduled start date of the OTP 14 calendar days prior to the commencement of the OTP. The OTP shall not be performed without prior written approval from the Department. The 30-Day OTP shall consist of the monitoring of all ITS devices and ancillary components to ensure continuous operation without failure of any sub-system, ITS device, or ancillary component.

In the event of a sub-system, ITS device, or ancillary component failure causing a System Shutdown, the OTP Test shall be terminated for purposes of testing and correcting identified deficiencies causing the System Shutdown. System Shutdown is defined as any condition which, due to work performed by the Contractor and/or its designee, results in the ITS device or ancillary component thereof to cease operation.

For each period of System Shutdown, and after the identified deficiency has been corrected and met all applicable tests, the OTP shall be restarted for a new 30 consecutive calendar days starting upon confirmation the deficiency is resolved.

If the total number of System Shutdowns exceeds three due to the same sub-system, ITS device, or ancillary component, the Contractor shall remove and replace the sub-system, ITS device or ancillary component with a new and unused unit subjecting it to all required tests including the FAT, S-SAT, and SAT. Upon written approval from the department, the restart the 30-day OTP will begin.

The OTP steps described herein shall be repeated as many times as deemed necessary by the Department to satisfy the requirements of these Technical Special Provisions. The Contractor shall not be granted time extensions to perform the OTP due to any failures as described herein. Correct any and all failures required to resume the OTP at no additional cost to the Department.

In the event a problem is discovered for which it is uncertain whether the cause is hardware or software related, the 30 calendar-day OTP shall restart and repeat, unless otherwise directed by the Department. However, the OTP shall not be deemed to have been successfully completed until the problem has been corrected.

All software required for diagnosing malfunctions of hardware and software/firmware shall be supplied by the Contractor and approved by the Department prior to use. A copy of all diagnostic software shall be submitted to the Department with full documentation within 14 days of deficiency resolution. Submit Failure Report Logs in demonstration that error rates are within requirements set herein.

T612-8 Physical Site and Network Access

Contractor shall complete any and all required security access request forms formally requesting security clearance for physical site and network access to secure Department ITS hubs and networks. Site and network access will be required for all contractor and subcontractor personnel that need access to existing department ITS hubs and/or the ITS network for construction and testing, or other purposes. It is the contractor's responsibility to complete and submit the required security access request forms no less than 45 calendar days prior to needing access. The 45-calendar day security access request review period is required for Department review and related background security checks. The Department reserves at its sole discretion to grant or deny access to any software, hardware, site, etc.

T612-9 Basis of Payment

Price and payment for all work specified in this Technical Special Provision will be incidental to the ITS device pay items for which the testing is required.

No additional payment will be made.

DISTRICT FIVE

DEPARTMENT APPROVED

ITS DEVICE
FIELD ACCEPTANCE TEST (FAT)
TEST PROCEDURES

(EXHIBIT A)

Prepared by: Jared N. Knight, PE
Fla. License No.: 74758
Firm Name: Vanasse Hangen Brustlin, Inc.
Firm Address: 225 East Robinson Street, Suite 300
City, State, Zip Code: Orlando, FL 32801
Certificate of
Authorization: 3932
Date: February 13, 2020

Exhibit A Field Acceptance Test Procedures (FAT)

Utilize the following Department approved ITS device FAT testing procedures.

Exhibit A Section-1 CCTV Sub-System

Exhibit A Section-2 Uninterruptible Power Supply (UPS)

Exhibit A Section-3 Local Hub Ethernet Switch

Exhibit A Section-4 Cellular Modem

Exhibit A Section-5 Wireless Radio

Exhibit A Section 1

1. Closed Circuit Television Camera (CCTV)

Field Acceptance Test (FAT)

Field Acceptance Test (FAT)
CCTV Name: _____Local Hub: _____Station: _____
CCTV Voltage Reading: _____
Product Manufacturer's Name: _____
Product Make: _____
Product Model: _____
Product Serial Number: _____
Product Firmware Version Number: _____
Product IP Address: _____
Product Gateway: _____
Product Subnet Mask: _____

#	Pass	Fail	Test Operation
1	□	□	**Verify that power supplies, local control equipment, and transient voltage surge suppressors are securely mounted in Device Cabinet.**
2	□	□	**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.**
3	□	□	**Verify that physical construction of pole and conduit inside pole has been completed per plans and that conduit (if applicable) is securely fastened.**
4	□	□	**Verify that the CCTV composite cable is fastened to the strain relief.**
5	□	□	**Verify the quality and tightness of ground and surge protector connections.**
6	□	□	**Verify CCTV power supply voltage output is within CCTV operating voltage.**
7	□	□	**Verify that the video signal from the camera is present and of consistent quality at all connection points between the camera, the cabinet and any video devices therein. Test fails if video is not viewable and clear via laptop at CCTV cabinet.**
8	□	□	**Verify that pan control is possible through laptop control software and that continuous pan "left" and pan "right" create a 360 degree field of view.**

9	□	□	**Verify that tilt is possible through laptop control software and that continuous tilt "up" and tilt "down" create a 110 degree field of view.**

1. Closed Circuit Television (CCTV) Cameras (Continued)

#	Pass	Fail	Test Operation
10	□	□	**Verify that zoom is possible through laptop control software and that continuous zoom "in" and zoom "out" create a functional picture free of distortion.**
11	□	□	**Verify that the appropriate CCTV video tags are configured per plans.**
12	□	□	**Verify that "auto iris" is set correctly through laptop control software and that view of dark and light areas auto adjust to correct iris settings.**
13	□	□	**Verify that Camera Lowering Device (CLD) lowers and raises without issue. If no CLD, then Check N/A □**
14	□	□	**Verify that the Stainless Steel Aircraft Cable is installed or adjusted to the proper length as defined in the MG2 manual. Verify that there are no bents or kinks in the cable. If no CLD, then Check N/A □**
15	□	□	**After the lowering device test is complete verify that lower cable is attached to the parking stand. If no CLD, then Check N/A □**

Field Acceptance Test Witness Signatures

Technician Name: _____ Technician Signature:_____

Date: _____ Device Serial Number:_____

Test Start Time: _____ Test Finish Time: _____

Test anomalies and comments (if applicable)_____

Department Rep. Name: _____ Department Rep. Signature:_____

2. Uninterruptible Power Supplies (UPS)

Field Acceptance Test (FAT)

UPS Device Name: _____ Local Hub:_____ Station:_____
UPS Voltage Reading: _____
Product Manufacturer's Name: _____
Product Make: Product Model: _____
Product Serial Number: _____
Product Firmware Version Number: _____
Product IP Address: _____
Product Gateway: _____
Product Subnet Mask: _____

#	Pass	Fail	Test Operation
1	□	□	Verify UPS is installed per the plans and in compliance with the NEC.
2	□	□	Verify all LED lights on the front panel interface are operational.
3	□	□	Verify proper voltage is provided from each output port.
4	□	□	Perform Self-Test on the UPS and verify there are no errors reported.
5	□	□	Verify proper voltage continues through output ports following disconnection from constant power source.
6	□	□	Verify that UPS is accessible through the web interface via Ethernet connection.
7	□	□	Verify UPS IP Address, Gateway, and Subnet Mask Match Approved IP List(Yes/No). IP Address:_____ Gateway:_____ Subnet Mask:_____
8	□	□	Verify that UPS has been configured with proper location name and system information.
9	□	□	Verify with a digital multi-meter the voltage of UPS batteries and compare with UPS display of battery voltage. Bat.#1:_____ Bat.#2:_____ Bat.#3:_____ Bat.#4:_____
10	□	□	Turn off commercial power breaker in cabinet and verify that UPS power supports the functionality of all devices. Actual Time in Hours/Minutes: _____

2. Uninterruptible Power Supplies (UPS) (Continued)

Field Acceptance Test Witness Signatures

Technician Name: _____ Technician Signature:_____

Date: _____ Device Serial Number:_____

Test Start Time: _____ Test Finish Time: _____

Test anomalies and comments (if applicable)_____

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Department Rep. Name: _____ Department Rep. Signature:_____

3. Local Hub Ethernet Switch (LHES)

Field Acceptance Test (FAT)

LHES Device Name: _____ Local Hub: _____ Station: _____
LHES Voltage Reading: _____
Product Manufacturer's Name: _____
Product Make: _____
Product Model: _____
Product Serial Number: _____
Product Firmware Version Number: _____
Product IP Address: _____
Product Gateway: _____
Product Subnet Mask: _____

#	Pass	Fail	Test Operation
1	□	□	Ensure that all wiring complies with NEC requirements and standards.
2	□	□	Verify all connections, including correct installation of communication and power cables.
3	□	□	Verify Device Voltage is within operating voltage.
4	□	□	Verify CLI (Command Line Interface, Serial) and GUI (Graphic User Interface, Ethernet) are responding through Serial and Ethernet ports.
5	□	□	Verify System Identification Information matches approved scheme as specified on www.cflsmartroads.com *
6	□	□	Verify layer 3 license is activated.
7	□	□	Verify that standard port assignment convention is followed and all ports are labeled accordingly.
8	□	□	Verify LHES IP Address, Gateway, and Subnet Mask Match Approved IP List (Yes/No). IP Address: Gateway: Subnet Mask:
9	□	□	Verify firmware is same as specified on www.cflsmartroads.com *
10	□	□	Verify that correct VLAN's have been configured as directed by and coordinated with the department. *
11	□	□	Verify that correct IGMP multicast group has been configured as directed by and coordinated with the department. *

12	□	□	Verify SNMP and RADIUS or TACACS+ settings are as specified on www.cflsmartroads.com *

3. Local Hub Ethernet Switch (Continued)

#	Pass	Fail	Test Operation
13	□	□	Verify communication to each device directly connected to LHES by initiating a ping.

*If Applicable

Field Acceptance Test Witness Signatures

Technician Name: _____ Technician Signature:_____

Date: _____ Device Serial Number:_____

Test Start Time: _____ Test Finish Time: _____

Test anomalies and comments (if applicable)_____

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Department Rep. Name: _____ Department Rep. Signature:_____

4. Cellular Modem

Field Acceptance Test (FAT)

Cell Modem Device Name: _____ Local Hub: _____ Station:_____
Cell Modem Voltage Reading: _____
Product Manufacturer's Name: _____
Product Make: _____
Product Model: _____
Product Serial Number: _____
Product Firmware Version Number: _____

#	Pass	Fail	Test Operation
1	□	□	Ensure that all wiring complies with NEC requirements and standards.
2	□	□	Verify all connections, including correct installation of communications, antenna and power cables.
3	□	□	Verify Device Voltage is within operating voltage.
4	□	□	Verify communications are available through the ethernet and SDLC ports through loopback testing or similar methods.
5	□	□	Verify cell modem is obtaining a signal to the cellular network
6	□	□	Verify the cell modem can receive a communications link to the Orange County traffic management center servers and IP communications are enabled to each port of the modem.
7	□	□	Verify that standard port assignment convention is followed and all ports are labeled accordingly.
8	□	□	Verify Cell Modems IP Addresses and Subnet Mask ID's Match Approved IP List (Yes/No). IP Address: Subnet Mask:

Field Acceptance Test Witness Signatures

Technician Name: _____ Technician Signature:_____

Date: _____ Device Serial Number:_____

Test Start Time: _____ Test Finish Time: _____

Test anomalies and comments (if applicable)_____

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Department Rep. Name: _____ Department Rep. Signature:_____

5. **Wireless Radio**

Field Acceptance Test (FAT)

Wireless Radio Device Name: _____ Local Hub: _____
Station:_____
Wireless Radio Voltage Reading: _____
Product Manufacturer's Name: _____
Product Make: _____
Product Model: _____
Product Serial Number: _____
Product Firmware Version Number: _____
Product IP Address: _____
Product SSID: _____
Product Gateway: _____
Product Subnet Mask: _____

#	Pass	Fail	Test Operation
1	□	□	Ensure that all wiring complies with NEC requirements and standards.
2	□	□	Verify all connections, including correct installation of communications, antenna and power cables.
3	□	□	Verify Device Voltage is within operating voltage.
4	□	□	Verify that frequency scanning is enabled to allow the units to obtain the most suitable frequency to establish a communications link.
5	□	□	Verify Line of Site between access point and subscriber unit is achieved
6	□	□	Verify the access point can receive a communications link to the Orange County traffic management center servers
7	□	□	Verify that WPA2-PSK or similar encryption technique is enabled
8	□	□	Verify that Access Point is in bridge mode
9	□	□	Verify Access Point Wireless Radio IP Address, Gateway, and Subnet Mask Match Approved IP List (Yes/No). IP Address: Gateway: Subnet Mask:

5. Wireless Radio (Continued)

Field Acceptance Test Witness Signatures

Technician Name: _____ Technician Signature:_____

Date: _____ Device Serial Number:_____

Test Start Time: _____ Test Finish Time: _____

Test anomalies and comments (if applicable)_____

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Department Rep. Name: _____ Department Rep. Signature:_____

DISTRICT FIVE

DEPARTMENT APPROVED

ITS DEVICE
SUB-SYSTEM ACCEPTANCE TEST (S-SAT)
TEST PROCEDURES

(EXHIBIT B)

Prepared by: Jared N. Knight, PE
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City, State, Zip Code: Orlando, FL 32801
Certificate of
Authorization: 3932
Date: February 13, 2020

Exhibit B Sub-System Acceptance Test Procedures (S-SAT)
Utilize the following Department approved ITS device S-SAT testing procedures.

Exhibit B Section-1 CCTV System
Exhibit B Section 2 Wireless Radio System
Exhibit B Section-3 Local Hub Ethernet Switch

Closed Circuit Television (CCTV) Cameras
Sub-System Acceptance Test

CCTV Name: _____Local Hub: _____Station: _____
CCTV Voltage Reading: _____
Product Manufacturer's Name: _____
Product Make: _____
Product Model: _____
Product Serial Number: _____
Product Firmware Version Number: _____
Product IP Address: _____
Product Gateway: _____
Product Subnet Mask: _____

#	Pass	Fail	Test Operation
1	□	□	**From an Ethernet connection at a connected Master Hub layer 3 network switch, verify that CCTV video can be displayed on a lap top by capturing and decoding the multi-cast stream. Test fails if video is not viewable and clear.**
2	□	□	**Verify that pan control is possible through laptop control software and that continuous pan "left" and pan "right" create a 360 degree field of view.**
3	□	□	**Verify that tilt is possible through laptop control software and that continuous tilt "up" and tilt "down" create a 110 degree field of view.**
4	□	□	**Verify that zoom is possible through laptop control software and that continuous zoom "in" and zoom "out" create a functional picture free of distortion.**

Sub-System Acceptance Test Witness Signatures

Technician Name: _____ Technician Signature:_____

Date: _____ Device Serial Number:_____

Test Start Time: _____ Test Finish Time: _____

Test anomalies and comments (if applicable)_____

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Department Rep. Name: _____ Department Rep. Signature: _____

Wireless Radio Sub-System Acceptance Test
Sub-System Acceptance Test

Wireless Radio Name: _____ Local Hub: _____ Station: _____
Wireless Radio Voltage Reading: _____
Product Manufacturer's Name: _____
Product Make: _____
Product Model: _____
Product Serial Number: _____
Product Firmware Version Number: _____
Product IP Address: _____
Product Gateway: _____
Product Subnet Mask: _____

#	Pass	Fail	Test Operation
1	□	□	**From an Ethernet connection at a connected Master Hub layer 3 network switch, verify that communications can be established with the wireless radio unit by pinging it and receiving a reply**
2	□	□	**Verify that video and data communications can be established with the subscriber unit and video images and control meet the criteria set forth in the CCTV sub-system acceptance test.**
3	□	□	**Verify data to and from devices communicating through the Subscriber Unit are capable of being controlled through the local maintenance software licenses which will be provided on an Orange County Maintenance Laptop for these testing purposes.**

Sub-System Acceptance Test Witness Signatures

Technician Name: _____ Technician Signature:_____

Date: _____ Device Serial Number:_____

Test Start Time: _____ Test Finish Time: _____

Test anomalies and comments (if applicable)_____

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Department Rep. Name: _____ Department Rep. Signature: _____

3. Local Hub Ethernet Switch (LHES)

Sub-System Acceptance Test (S-SAT)

LHES Device Name: _____ Local Hub: _____ Station: _____
LHES Voltage Reading: _____
Product Manufacturer's Name: _____
Product Make: _____
Product Model: _____
Product Serial Number: _____
Product Firmware Version Number: _____
Product IP Address: _____
Product Gateway: _____
Product Subnet Mask: _____

#	Pass	Fail	Test Operation
1	□	□	**From an Ethernet connection at a connected Master Hub layer 3 network switch, verify that communications can be established with the LHES unit by pinging it and receiving a reply**
2	□	□	**Verify that video and data communications can be established with the LHES unit and video images and control meet the criteria set forth in the CCTV sub-system acceptance test through the LHES from the Layer 3 Master Hub Switch.**

Sub-System Acceptance Test Witness Signatures

Technician Name: _____ Technician Signature:_____

Date: _____ Device Serial Number:_____

Test Start Time: _____ Test Finish Time: _____

Test anomalies and comments (if applicable)_____

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Department Rep. Name: _____ Department Rep. Signature:_____

DISTRICT FIVE

DEPARTMENT APPROVED

ITS DEVICE
SYSTEM ACCEPTANCE TEST (SAT)
TEST PROCEDURES

(EXHIBIT C)

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City, State, Zip Code: Orlando, FL 32801
Certificate of
Authorization: 3932
Date: February 13, 2020

Exhibit C System Acceptance Test Procedures (SAT)

Utilize the following Department approved ITS device SAT testing procedures.

Exhibit C Section-1 Closed Circuit Television Camera (CCTV)

Exhibit C Section 1

Closed Circuit Television (CCTV) Cameras

System Acceptance Test (SAT)
CCTV Name: _____ Local Hub: _____ Station: _____
CCTV Voltage Reading: _____
Product Manufacturer's Name: _____
Product Make: _____
Product Model: _____
Product Serial Number: _____
Product Firmware Version Number: _____
Product IP Address: _____
Product Gateway: _____
Product Subnet Mask: _____

#	Pass	Fail	Test Operation
1	□	□	**Verify that CCTV video can be displayed on both SunGuide workstation monitors and video wall.**
2	□	□	**Verify that pan control is possible through SunGuide control software and that continuous pan "left" and pan "right" create a 360 degree field of view.**
3	□	□	**Verify that tilt is possible through SunGuide control software and that continuous tilt "up" and tilt "down" create a 110 degree field of view.**
4	□	□	**Verify that zoom is possible through SunGuide control software and that continuous zoom "in" and zoom "out" create a functional picture free of distortion.**

System Acceptance Test Witness Signatures

Technician Name: _____ Technician Signature:_____

Date: _____ Device Serial Number:_____

Test Start Time: _____ Test Finish Time: _____

Test anomalies and comments (if applicable)_____