Meeting Notes

Change Management Board

June 17, 2014 – 1:30 to 4:30 p.m.

Version 1.0 - Final

Prepared for:
Florida Department of Transportation
Traffic Engineering and Operations Office
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List of Acronyms

APL ....Approved Product List

AVI ....Automated Vehicle Identification

C2C... Center-to-Center

CCTV .... Closed-Circuit Television

CFX..Central Florida Expressway Authority

CMB ....Change Management Board

CO..Central Office

ConOps..Concept of Operations

CPR .... Consistency Predictability Repeatability

DMS .... Dynamic Message Sign

DPA.. Data Processing Application

DTN...Data Transmission Network

DTOE .... District Traffic Operations Engineer

EM..Emergency Management

EOC .... Emergency Operations Center

FDOT .... Florida Department of Transportation

FHP..Florida Highway Patrol

FHWA .... Federal Highway Administration

FL-ATIS or 511 .... Florida's Advanced Traveler Information System

FTE .... Florida's Turnpike Enterprise

HD ....High Definition

HEFT.. Homestead Extension to Florida's Turnpike

ID ....Identification

IDS... Information Dissemination System

IE.. Internet Explorer

IP..Internet Protocol

ITS ....Intelligent Transportation Systems

MDX .... Miami-Dade Expressway Authority

MPO..Metropolitan Planning Organization

MUTCD .... Manual on Uniform Traffic Control Devices

Florida Department of Transportation
CHANGE MANAGEMENT BOARD MEETING NOTES
Tuesday, June 17, 2014
1:30 to 4:30 P.M
Rhyne Building, Room 330 Tallahassee, Florida

Attendees:

Gene Glotzbach, CO	Josh Reichert, D2	Steve Johnson, D5
Elizabeth Birriel, CO	Tanesha Sibley, D2/Metric	Tushar Patel, D5
Clay Packard, CO/Atkins	Craig Carnes, D2/Metric	Javier Rodriguez, D6
Randy Pierce, CO	Ryan Crist, D2/Metric	Joe Snyder, D6
Derek Vollmer, CO	Jason Summerfield, D2/Metric	Mark Laird, D6/AECOM
Kelli Moser, CO/Atkins	Donna Danson, D2	Chester Chandler, D7
Brian Ritchson, CO/MCG	Pete Vega, D2	Dave Howell, D7/HNTB
Frank Deasy, CO/Telvent	Mark Nallick, D3	Terry Hensley, D7
Jo Ann Oerter, CO/Atkins	Lee Smith, D3	Tyler Matthews, D7
John Glowczewski, CO/Telvent	Dong Chen, D4	Charlie Keasler, D7/HNTB
David Heupel, CO/Telvent	Dee McTague, D4	Romona Burke, D7
Chris Lewis, CO	Melissa Ackert, D4	Greg Reynolds, D7
James Barbosa, CO/IBI	Jim Miller, D5	Eric Gordin, FTE
Chris Birosak, D1	Josh Sibley, D5	Wang Lee, MDX
Scott Robbins, D1/HNTB	Manny Rodriguez, D5	Corey Quinn, CFX
Robbie Brown, D1	Jeremy Dilmore, D5	Roger Strain, CO/SwRI
Vincent Lee, D1/Lucent	Rick Morrow, D5	Tucker Brown, CO/SwRI

Purpose: The purpose of this meeting was to review and vote on statewide issues and requirements, and review footprint issues.

Welcome and Charter Review: Change Management Board (CMB) Chairman D. Vollmer opened the meeting at 1:35 p.m. Due to a notification email from P. Vega (FDOT D2), D.Vollmer felt it important to verify the voting members in the Charter and identify alternate voting members for absent members.

Results from Charter Review (changes/additions in red):

<u>Voting Members</u>

1. District 1 – Chris Birosak (Alternate – Robbie Brown)
2. District 2 – Josh Reichert (Alternate – Donna Danson)
3. District 3 – Lee Smith (Alternates – Mark Nallick and Kenny Shiver)
4. District 4 – Dong Chen (Alternate – Dan Smith)
5. District 5 – Jeremy Dilmore (Alternate – Tushar Patel)
6. District 6 – Javier Rodriguez (Alternate – Rory Santana)
7. District 7 – Chester Chandler (Alternate – Terry Hensley)
8. Florida's Turnpike Enterprise – Eric Gordin (Alternate – John Easterling)
9. Central Office – Gene Glotzbach, Derek Vollmer, and Randy Pierce
10. Miami Dade Expressway Authority – Ivan Del Campo (Alternate – Wang Lee)

Non Voting Members

1. Federal Highway Administration – Kris Milster
2. City of Tallahassee – Wayne Bryan
3. Central Florida Expressway Authority – Corey Quinn

Call for Quorum and Review of Agenda: A quorum was established. D. Vollmer discussed in the event that a quorum is not present, the CMB Charter does not specify how to proceed when a vote is needed. He inquired if voting electronically occurred or if the vote would wait until the next meeting and whether this had occurred in the past. G. Glotzbach informed the group it had occurred and the voting was done via email. D. Vollmer inquired if voting ever occurred in between meetings. G. Glotzbach could not recall if this had happened. P. Vega said it had occurred before: a quick teleconference meeting was scheduled, and the voting done was during the teleconference. D. Vollmer briefly reviewed the meeting agenda.

Previous Meeting Recap and Action Item Review

1. **Districts to send top five prioritized SunGuide® software enhancement requests to D. Vollmer.**
2. **CO to further investigate/evaluate the operator map out of IE. (Table Item)**
3. **D. Vollmer to follow-up with Districts on ITS architecture workshop needs.**
4. **D. Vollmer to follow-up with Districts about closed versus blocked DMS) messages. (Open Action Item, Voting today)**
5. **Districts 3 and D7 to determine desired SunGuide software installation dates. (Open Action Item)**
6. **D5 will get in touch with CO to discuss ITS WAN) connectivity. (Open Action Item)**
7. **FTE to prepare white paper to document their efforts and findings on WWD. (Open Action Item)**
8. **CFX to prepare email for distribution to all Districts on findings of latest deployment effort. (Open Action Item)**

AGENDA ITEMS

ITS Telecommunications Update
F. Deasy presented slides on the ITS WAN update. There is a major project going on in District 3 in the Tallahassee area. J. Glowczewski and D. Heupel have been working on it for quite some time. It is comprised of about six minor projects including providing connectivity at the TERL, the State EOC, the Rhyne Building, the new TMC for the City of Tallahassee, and the FHP station on US 90 where FDOT has a microwave system that is a major hub site. When those connectivity projects are completed, FDOT will buy some equipment to light that fiber and install it in the fall. Great headway is being made there. FDOT had a couple of meetings, but connectivity isn't finished yet in Pompano. There have been some access issues and coordination between ITS FTE and FTE Tolls is taking some time. There is a lot of progress on the multicast re-addressing with the Districts. That will be discussed more with the 511 update. Work began on FL-ATIS and VAS with IBI Group and Logic Tree as well as all the Districts involved. Finally, FTE Tolls has a separate initiative to enhance their middleware connection

between themselves and District 6 and move that over to Layer 3; thereby, making it available to other Districts in the future as managed lanes opportunities become available and they start working with FTE Tolls. J. Dilmore in District 5 inquired if it was a requirement to do the multicast or if unicast could be done. J. Glowczewski responded multicast is the standard for routing video traffic in the Districts today. Most codecs on the APL have both multicast with unicast capabilities built-in. Unicast could be used in a District; however, when traffic is passed to the EOC or another District multicast would be required. L. Smith in District 3 inquired regarding the Tallahassee work to see if after the connectivity projects are completed whether a connection to District 5 would be completed. J. Glowczewski confirmed that there would be a connection to District 5 incorporated in the District 3 project discussed earlier. L. Smith in District 3 asked to see high-level topology on that connectivity project. J. Glowczewski agreed that could be provided. F. Deasy confirmed that they should have the materials to control what occurs in their District and it would be supported. C. Quinn at CFX asked if the ITS WAN cameras shared between FTE and other agencies could be tested soon. F. Deasy responded that he was unsure if every connection was in place and they need to wait until fiber sharing discussions between CFX and District 5 are finalized and they agree on when to use the internal District connectivity versus the WAN. C. Quinn at CFX said there is currently a fiber connection between the CFX TMC and District 5. F. Deasy confirmed there is a single connection between them now, but a second or third connection with physically diverse paths is needed and that is what they are trying to put in place; this would prevent running on collapsed rings in the future. C. Quinn at CFX said he would coordinate with J. Dilmore in District 5. F. Deasy said he would coordinate with him too and suggested they all meet together. J. Dilmore in District 5 said he would set up a meeting with CFX. F. Deasy offered to help where he could and be in the call between CFX and District 5.

SunGuide Software Update
D. Vollmer presented slides on the status of SunGuide software Release 6.0 upgrades. Most Districts have upgraded to 6.0. The Districts that have upgraded should be on patch 2, which includes 14 hotfixes. It may be time to create a new installer so individuals won't have to keep applying a lot of hotfixes. D. Vollmer said he would add that as an action item for himself to look into. SunGuide Release 6.1 is still being worked on and is scheduled for testing in September. Some of the new features include overhauling the installation process, switching to SAA which is a new authentication application similar to Windows that allows selecting device groups in relation to specific people. It will also include the RWIS development that was done for the I-75 Fog Smoke Project, which includes fog smoke detectors and the beacons subsystem. It will also include some of the WWD devices, specifically the Wavetronix Click 512, which interfaces with the Wavetronix HD devices to detect wrong-way drivers on the roadway. The SunGuide software web site was updated to reflect the additional enhancements that will be included in Release 6.1. This includes the ONVIF protocol for cameras, The Activu driver was modified to support multiple video walls and turn lanes. Small enhancements will be included and the BlueTOAD module from District 4 will be ported into the SunGuide base code. District 6 and some of the other Districts have provided prioritized enhancements. In a typical incident scenario for discontinuous lane blockages when an incident occurs on a freeway, there is a lane closure; the incident is moved to the shoulder; the lane is reopened (possibly occurring during peak hours to get traffic flowing again) at a later time; the tow truck arrives to remove the vehicle and the lane is closed again. In this scenario, the way the lane closure is currently calculated in

SunGuide software is from the time of the first lane closure to the time of the second lane closure opening. The Districts suggested creating a secondary event and closing the first event when the lane is cleared the first time. D. Vollmer posed the question about what should happen when the responder remains on the scene and then asked if this had previously occurred to any of the Districts and how they handled it. S. Robbins from District 1 hasn't experienced it, but would not create a secondary event if it did occur. J. Reichert in District 2 noted if the responder remained on the scene, they would leave the event open. However, if the vehicle is moved off the road or if the responder departs, it would be closed out if it is not impeding the flow of traffic; then they would create a secondary event and link it to the initial primary event. D. Vollmer clarified that if the responder remains on the scene the event would remain open for the entire duration and would give a long lane closure time. J. Reichert in District 2 agreed and mentioned it would allow an accurate capture of the responder notification arrival and departure times. L. Smith in District 3 thinks the responder on scene is the trigger, but would need to confirmation. D. McTague in District 4 feels SunGuide software should accurately calculate the actual lane blockages. District 5 noted they operate the same as District 2 in this scenario. District 6 agreed with District 4 that SunGuide should accurately calculate the actual lane blockages. District 7 handles them the same as Districts 2 and 5. E. Gordin from FTE creates another event and ties it back to the original, but he would need to confirm that with the FTE operators. W. Lee at MDX agrees with District 6 but would need to confirm that with the MDX operators. C. Quinn with CFX confirmed they are handled the same as Districts 2, 5, and 7. D. Vollmer reiterated that in the event that the responder remains on the scene, the lane blockage is being calculated inaccurately. He will look into an effort associated with making this change in SunGuide software so lane blockages are calculated accurately without having to create a secondary event. The scope and cost estimate will be discussed at the next CMB meeting. The remaining enhancements received from District 6 and other Districts will be discussed at the next SSUG meeting in a few weeks. Several issues were found with SunGuide software Release 6.0 reports and occasionally the report template and the view provided by SunGuide software. SQL Server Native client 11.0 must be installed (for all nodes in cluster) on District servers containing the Reporting Subsystem for the reporting function to work. There have been issues with parameters requiring changes in both SunGuide software and report templates where identification (ID) numbers were shown instead of names. This has been fixed on a number of reports. B. Ritchson interjected that when the switch to IDs happened in the database, some of the parameters coming into the templates also got switched to IDs, which is why it wasn't caught during testing. This was causing the report to be blank when a run was attempted using any filter or parameter, but run normally when the report did not use filters. An example of this is that Road Ranger reports being narrowed down to a single driver would be blank, but when run with no filters would show all the information properly. D. Vollmer started discussing Footprint issue 2764, which causes events to be discarded from performance measures if responder departure is null. He asked for an update from J. Summerfield in District 2 to see if it was still a problem or if it had been resolved. J. Summerfield thought the last update to that Footprint may have been captured in one of the hotfixes. However, he was unsure of how historical data will be affected by applying the hotfix. D. McTague in District 4 commented that they are not on SQL Server and experienced the same issue when they first upgraded, but it has been resolved. D. Vollmer and B. Ritchson stated it is not limited to SQL Server users only. B. Ritchson updated everyone on the Footprint issue, explaining details on when the error occurred. When an event was entered into SunGuide software Release 5.1.1 and there was no departure time, the

software would set the departure time to null when it was empty for calculations. In Release 6.0 it sets the departure date to a dummy value, such as January 1, 0001, so when the performance measure report was looking for a null value it read a valid date. This is what broke the report. FDOT is working with SwRI to fix this issue. J. Summerfield inquired if the hotfix for the issue in District 4 was the same as this Footprint issue. D. Vollmer asked T. Brown if he knew if they were the same issue. T. Brown thought they were different issues and is fixable and is also back fixable. D. Vollmer notified J. Summerfield that it was in the works, but not yet fixed. D. Vollmer continued presenting SunGuide software issues. Road Ranger Reports have had issues, which were first reported by District 5. When a specific driver or vehicle ID was selected, it would return a blank report. This has been resolved with hotfix 14 and the new report templates. B. Ritchson stated hotfix 14 must be used with the new report templates or the reports will not work. D. Vollmer stated that the need to use hotfix 14 and the new report templates together would be sent out as an email. D. Vollmer informed everyone that EM and 511 reports are still having issues. Hotfix 14 fixed the Incident Management Monthly Reports, but confirmation of the fix is still pending on District response. The Event Level Report missing "Lanes Cleared Date" is still being investigated. C. Carnes from District 2 asked what "too many secondary incidents" meant regarding the Incident Management Monthly Report. B. Ritchson responded the view the report depended upon was showing every single event in the report as a secondary event. Since this report only counts events, it was showing every event as secondary in that count. The hotfix changed the way that events are calculated to only consider it a secondary event if it has a corresponding primary event ID. D. Vollmer continued presenting the report issues with Regional Floodgate Messages that were fixed using hotfix 13 to better show when floodgates are deleted. FDOT is still investigation why Secondary Crash and Secondary Event Reports not being generating. The DMS Messages Report issue of the EXCEL version not sorting was resolved. The DMS Usage Report was fixed in hotfix 14, but FDOT is still awaiting confirmation from the Districts. The Speeds at Detector Report and Traffic Volumes Report were both having issues, returning results for devices with a SunGuide software ID greater than 999; both have been resolved. There are several other reports that are running slowly or not producing data. These reports are being investigated as time allows, but the focus is on higher priority reports and reports with functionality issues. The list of reports still needing investigation and the corresponding issues are shown below:

- CCTV Report – Report generates slowly
- DMS Report – Report generates slowly
- TSS Report – Report generates slowly
- Detector Data Detail – Report empty
- Segment Average Speed Line Graph – Report generates slowly
- Speeds at Detector – Report empty
- Suspect Data Report – Report empty
- Total Volume by Direction at Detector – Report empty
- Traffic Volumes Report – Report empty
- Typical Volumes at Detector – Report fails to run
- Segment Average Travel Time Line Graph – Report generates slowly
- Segment Travel Time Detail for Last Hour – Report empty
- QAR DMS Safety Message Campaign – Certain date ranges not returning data

- Secondary Crash Report – Failed to generate report
- Secondary Event Report – Failed to generate report
- Basic Safety Messages – Report empty
- Traffic Advisory Message – Report empty

D. Vollmer noted that District 5 did a lot of great work to improve performance on their database. When that was done, they noticed some areas in SunGuide software that might have some performance issues. D. Vollmer would like to discuss this at the SSUG meeting. He suggested possibly forming a group to help identify sections of the SunGuide software that are having performance issues and try to investigate those issues. D. Vollmer checked to see if there were any questions before moving on. No questions were presented.

FL-ATIS Migration to ITS WAN
J. Oerter presented slides on the FL-ATIS Migration to ITS WAN. J. Glowczewski met with the Districts to discuss the upcoming transition from the leased lines, currently hosted by IBI, to FDOT's ITS WAN. The reconfiguration will allow SunGuide software data to populate the FL-ATIS project. One of the reasons for this change is to save close to $400,000 annually, which allows funding to be cut from the FL-ATIS project. The contacts for the FL-ATIS portion of the transition are James Barbosa (FL-ATIS/IBI Group), Gene Glotzbach (FL-ATIS/FDOT CO), and John Glowczewski (ITS WAN). Direction was provided for the transition to be completed by the end of June 2014, but with the progression and items that need to happen after this CMB Meeting, the transition has been split into two phases. Phase 1 will be completed by the end of June 2014, and Phase 2 by the end of July 2014. The FL-ATIS contract is due for renewal at the end of August 2014, so transition has to be completed before the end of August in order to move forward with the new contract. The Phase 2 dates will be coordinated with each District for the best time in July to transition. Phase 1 includes IP configuration changes. The ITS WAN team provided the IP range for FL-ATIS approximately two years ago. The range requires SunGuide software configuration file changes, and change a single entry in a Windows-host file for flatis-c2c. J. Barbosa continued with the presentation. This has been discussed with the relevant Districts. In Phase 1, the IP addresses have been modified to better align with the ITS WAN IP scheme. Phase 2 will have network routing altered to utilize the ITS WAN and transfer data to FL-ATIS instead of the lead circuit. Changes need to be made to configure SunGuide software and at the networking level to support communicating with the FL-ATIS IPs. There are three communication links with FL-ATIS affected. The first is between the SunGuide software subscriber and the C2C command receiver. To support that, configuration changes will need to be made to the config.xml file. The second is to the status data connection. The Districts need to initiate it by making a change to an entry in the host file on their server to allow it to send updates to the other system. The third communication link component is with the c2c publisher and possibly the extractor that initiates connection with the provider to obtain all of the floodgates in each of the SunGuide software deployments. The SunGuide software reconfiguration is relatively simple and detailed instructions will be sent via email. There will be variances across the Districts depending on how the system is configured, but those changes should be straightforward. The date for the switch-over to the new IP address will be coordinated with the Districts. The date of the switch will have to occur at the same window for all Districts. J. Barbosa asked if there were any questions on Phase 1. B. Ritchson noted there

is a program that accesses information via a host name from a third-party data feed and puts it on Twitter B. Ritchson asked if the transition would have any ill impact on the Twitter data feed. J. Barbosa responded that during the maintenance window, it would be interrupted. While the IP is being changed, the servers would be unavailable, but only during that period. No configuration changes would need to be made on the program's end since it accesses it via a host name instead of an IP address. The public IP that provides access to web sites isn't changing. J. Barbosa continued presenting Phase 2. This phase will be completed on a District-by-District basis. This involves reconfiguring network components on both ends to support use of the ITS WAN. Phase 2 will be scheduled immediately after successful completion of Phase 1. J. Barbosa asked if there were any questions. A District asked how much notice would be given between Phase 1 and 2 and how much time would be allocated. J. Barbosa responded it would be scheduled on a District-by-District basis and would be dependent on the availability of the relevant District personnel. The notice would vary since the transition is occurring one District at a time, but it wouldn't be unilaterally either. The maintenance window for each transition should be approximately a few hours. D. Vollmer asked who would be coordinating the transition scheduling. J. Oerter confirmed that she or G. Glotzbach would be sending out an email for Phase 1 to be scheduled. She also noted that Phase 1 would need to occur on a weekend or after hours and the majority would need to decide on the date. J. Barbosa noted that several Districts preferred doing the transition on a weekend and that could be accommodated. D. Vollmer asked when this email would go out. J. Oerter said it would go out by the end of the week and D. Vollmer commented that responses would be needed quickly.

RITIS Update
D. Vollmer presented slides on the RITIS update. The contract was finalized and signed; funding is in place for RITIS. There was a project kick-off meeting for the two Task Work Orders. One of the Task Work Orders is for RITIS support. If there are issues with RITIS, please email B. Ritchson and K. Moser and copy C. Packard and D. Vollmer. An email went out a few weeks ago with their contact information and instructions. There will possibly be some correspondence back and forth to get additional details on any issues so they can be identified and duplicated. Those details will be provided to the RITIS team at UMD. The other Task Work Order is to incorporate HERE data and some probe data into the RITIS site Live Map and the VPP Suite Tool. An email went out giving a timeline on when that data should be populated. The historical data will take significantly longer than the live data to be available on RITIS. RITIS training is typically from 10 a.m. to noon and the dates listed on the web site at http://www.matoc.org/?q=node/55 are:

- Friday, June 27: Advanced Features
- Friday, July 25: RITIS 101
- Friday, August 29: Advanced Features
- Friday, September 26: RITIS 101
- Friday, October 24: Advanced Features
- Friday, November 21: RITIS 101
- Friday, December 19: Advanced Features

For additional information, email: training@matoc.org. Closer to the training date, the site will be updated with information on accessing the training.

If additional training is desired after attending some of the training offered at this site, it can be provided and coordinated so FDOT personnel can all attend one session. The Enhancement Schedule for the HERE and probe data is:

Date	Item
7/7	HERE real-time data on RITIS website
8/4	HERE real-time data with VPP Suite tools
9/15	FDOT Probe real-time data on RITIS website
11/10	FDOT Probe real-time data with VPP Suite tools
12/22	HERE 3-year archive incorporated
1/5/2015	FDOT Probe data archive incorporated

One of the high priority RITIS issues is a detector name mismatch that occurred when upgrading to SunGuide software Release 6.0 from 5.1.1. We have provided detector name and ID mapping for several of the Districts that upgraded. We still need to provide Districts 1 and 3. There are also issues with missing detectors, which are believed to be related to the detector name mismatch. District 7 brought up the issue of the zone volume sum and the lane volume sums not being equal. D. Vollmer asked if there were any questions on the update. C. Chandler in District 7 mentioned that the Waze Briefing Meeting had a discussion regarding Waze data being incorporated into RITIS and asked if CO was in talks with UMD regarding integrating that data into the system. E. Birriel responded that the action item is for Waze to look into UMD. Waze has to find out what is done with the data on the UMD side. The Waze contract is written such that FDOT must ensure Waze data is not used by third-party providers including HERE and INRIX; RITIS is a similar system to them. FDOT has to ensure that, if the Waze data goes to RITIS, that Waze is comfortable with it. C. Chandler asked if FDOT will be requesting an update from Waze in the future. D. Vollmer and E. Birriel agreed it was on the radar to get an update from Waze. J. Dilmore in District 5 noted that that the AVI for Google Traffic allows public entities to capture their data feed free of charge if it is used within certain guidelines so it may be another data set for FDOT to look into including.

Closed versus Blocked (vote)

D. Vollmer presented slides on the Footprint 2579 Closed vs. Blocked issue, which is a voting item. Feedback was received from most of the Districts regarding this issue. Currently, SunGuide software emails and DMSs are not matching when all lanes are blocked and shoulders are open; the DMS reads "Closed" and the SunGuide software email reads "Blocked." However, when all lanes are closed including the shoulders, the DMS reads "Closed" and the SunGuide software email reads "Closed." Some Districts were already manually editing the DMS response plan to reflect that appropriate language was being used for each scenario. To ensure statewide consistency, a vote is needed to determine what language will be used, both in SunGuide software and on the DMS. The consensus received from the Districts and the statewide recommendation was that both should say "Closed" when all lanes and shoulders are blocked and should say "Blocked" when all lanes are blocked, but the shoulders remain open. D. Vollmer reviewed the results from the District input and discussed the proposed change up for a vote. The cost for the change is negligible, at about $1,000 and 8 hours of work to complete. The change would be in SunGuide software Release 6.1. D. Vollmer confirmed that everyone understood the voting item. This was followed by voting.

Voting results: D1-yes; D2-yes; D3-yes; D4-yes; D5-yes; D6-yes; D7-yes; FTE-yes; MDX-yes. Rick Morrow in District 5 noted that the DTOEs should be made aware of changes to messages to the public, but that the DTOEs were already aware and in support of the change. D. Vollmer noted that since a quorum was present, the vote passed and it will be included in SunGuide software Release 6.1.

Waze

G. Glotzbach presented slides on Waze Incident Data Agreement. Toward the beginning of the year, Waze visited the Secretary to talk about a data sharing agreement. Waze would share data that they are collecting with FDOT and FDOT would share data with Waze. An agreement has been executed to share and utilize data between FDOT and Waze. When FDOT posts data obtained from Waze, the data must be attributed as coming from Waze and vice versa. FDOT has already provided data access to Waze via a third-party data feed, but FDOT is still working with Waze on how to access their data and do an analysis of the data to see how that access can help FDOT to provide information to the public in the future. Last week there was a large meeting at the Turnpike with Waze and FDOT. There was a lot of discussion and information sharing. Each group is attempting to determine what action items are for both sides from that meeting. The action items will be discussed in detail at the ITS Working Group meeting. E. Birriel reiterated that the Secretary gave a 30-day deadline for these action items whether they are related to Waze or not. She mentioned that some decisions need to be made to meet the 30-day deadline then asked if there were any comments or questions. G. Glotzbach said to bring any questions to the ITS Working Group meeting. J. Dilmore in District 5 asked if there was any information that could be provided prior to the ITS Working Group meeting so he could better prepare. E. Birriel said they would discuss the DMS signage regarding whether or not FDOT will use the District 4 process and use National Weather Service to post severe weather warnings or rely on the DTN feed provided by 511. The meeting will also discuss severe weather and the DMS policy. The DMS policy priorities need to be evaluated in the meeting. The operational items brought up at the Wave meeting at the Turnpike will need to be addressed within the 30-day deadline. FHWA will need to be consulted on the means used to

attribute Waze and any issues with the possibility of using DMS for that purpose. J. Dilmore in District 5 mentioned the data feed for closures and using what District 6 has or another mechanism. E. Birriel responded that she would need to set up a meeting for her, Gene Glotzbach, and Mark Wilson with Dick Kane. The construction information needs to reside with the PIO through Dick Kane and they put it into 511. The policy part needs to be worked on and to reflect that the PIO is taking care of that portion of construction. District 6 has a spreadsheet or a database that tracks all lane closures, whether they are construction or not. In the Waze meeting, the Secretary made a comment to use what District 6 is using. E. Birriel stated she already requested a copy of that spreadsheet/database. To make the 30-day deadline and for CPR purposes, it needs to be looked at to see if it is feasible for all Districts to use that tool. FDOT can then provide and external feed to get data to Waze. E. Birriel opened up for comments or questions. L. Smith in District 3 asked if the Waze data would be put into SunGuide software or if there were any preliminary thoughts on that right now. E. Birriel responded that there were not and Waze was asked that question. That will be a separate conversation to see how FDOT will accept/receive/consume data from Waze. It is a concern since it is a free exchange of data, but if a large enhancement to SunGuide software is involved it will cost FDOT money. Since the Waze data has not been provided yet, FDOT is unsure what will need to be done to use the data. G. Glotzbach suggested the Districts provide feedback on how they want to receive the data. J. Dilmore in District 5 suggested we table the conversation for the ITS Working Group Meeting. E. Birriel and G. Glotzbach agreed and wanted to better prepare them for tomorrow's meeting. Everyone agreed with this comment and had no further questions.

The meeting break started at the end of the Waze update and lasted for 10 minutes.

Color DMS for Express Lanes
D. Vollmer presented slides on the use of color DMS for express lanes. There will be a memo going out soon on DMS and imbedded DMS (the smaller signs that fit on the static panels) and express lanes. What is driving this is that FHP was not comfortable enforcing "CLOSED" since the color of the letters was not formatted as per the *MUTCD*. The original color of the lettering on the signs that went out was amber. The *MUTCD* diagrams show white lettering on DMS messages. FHP is concerned the citations may not be held up in court. The memo will require that the DMS used on express lanes will be full color, full matrix. This will allow the use of white letters when displaying the word closed so FHP can enforce it. If amber was wanted for the prices for readability it is possible, but closed still needs to be in white lettering. There is a possibility of allowing larger, full color, full matrix, 20mm pitch (for example) sign within that static panel so there will be a fairly large sign taking up the previous static text that might have been there. It is important to point out that this will be effective September 1, 2014, and all existing signs must be brought into compliance by July 1, 2015, or an approved alternate schedule by the Chief Engineer. Some of the suggested messages were displayed and D. Vollmer stated that SunGuide software is currently unable to produce any of the messages shown in that format. Two fonts on the same page, multiple graphics/shields with text on each side and having both left and right justified text are all issues for SunGuide software to display. If these message formats are approved, significant changes to the DMS system in SunGuide software on how graphics and messages are approached on the signs will be needed. D. Vollmer wanted to reach out to the Districts and asked how many are planning on deploying

high resolution DMS in the near future such as the 20mm, full color signs. D. Vollmer clarified that for the messages to be legible, a minimum of a 20mm resolution would be needed, but it is not specified in the memo. Multiple graphics on signs with less resolution would make the letters on the graphics illegible. C. Birosak in District 1 responded they have a DMS Replacement Project planned for 2017 for Collier and Lee Counties, but a decision on full color has not been made. J. Reichert in District 2 plans to add full color DMS, but the high resolution has not been discussed at this point. D. Chen in District 4 responded that the new deployment in Broward County on I-95 and I-75 are full color, but not high definition. T. Patel in District 5 responded that in the managed lane section, they are deploying the full color DMS, but the recent replacements are not the 20mm. The express lanes and managed lanes are 20mm. The reason they are using the lower resolution for the areas outside of the express and managed lanes is to have more competition and better pricing since so few vendors are approved for the higher resolution, they are more expensive, and the life-span is unknown. J. Rodriguez in District 6 responded that there will be a retrofit project in the near future for the DMS in the express lanes, but the details on color and resolution have not been decided. G. Reynolds in District 7 responded that 35 miles going north out of downtown Tampa of new deployments will be 20mm, high resolution, full color DMS. It will require modified structure and additional power. There is a legacy project of 50-60 miles of planned managed lanes. It is only in the planning stages, but Planning has been notified it will need to be totally revamped for ITS pushing the signs to be upgraded to 20mm full color DMS. The issue was not for the color, but because the structure needs to be rebuilt due to the managed lane effort. T. Hensley from District 7 commented that 20mm, full matrix are the signs of the future, not just for traffic, but for the commercial market. Daktronics is putting the vast majority of their efforts towards this. Since FDOT is transmitting information to the public, the signs should be able to use any icon, color or text, that is approved and the more versatility they have, the better. Everything FDOT can engineer now can only help in the future. E. Gordin from FTE responded that they are starting designs on a replacement project for six DMSs on Sawgrass and maybe a few arterial DMS. They have informed the design team to get full color, full matrix, but will now make sure they get the 20mm. There are three sets of managed lanes projects. E. Gordin was unsure what was specified for the Veteran's Express Lanes Project and the HEFT Express Lanes Project. The Beach Line West Express Lanes Project has not been defined so FTE will be able to specify the type of DMS used. W. Lee from MDX responded that in the next year or so full color, full matrix DMSs will be implemented, but didn't know further details. C. Quinn from CFX responded that they have some 20mm, full color DMSs installed and all future signs on the CFX system will be that as well. A study was done with UCF to poll central Florida drivers and residents to determine if they preferred to see written text instead of toll shields and symbols. Seventy to 80 percent of the few thousand people polled, preferred the state road shields and icons instead of the text. Additionally, since there are a lot of international tourists in Orlando, the symbols are helpful to non-English speaking tourists to find their way. CFX tested some images with SwRI to do travel times and can provide the image if anyone is interested in seeing it. D. Vollmer suggested setting up a Technical Review Committee to discuss the types of message formats to use and find out from SwRI the level of effort to see what it would take to get modifications implemented. Discussions are needed to determine if multiple fonts are wanted and multiple shields on the same page. This committee would determine what level of DMS messaging and configuration abilities through SunGuide software are desired. J. Rodriguez from District 6 suggested the Districts nominate someone to serve on the committee and mentioned Mark Laird has done a paper on

the subject and should be included in the discussion since their District has been leading this effort. D. Vollmer responded that he would reach out to the Districts to determine who they want to appoint to serve on the committee. It was asked if the enforcement issue was due strictly to the color or if it was the font or size of the characters too, and what details needed to be considered. D. Vollmer responded that initially it has only been the color that was related to the enforcement issue. Moving forward, the future capabilities need to be reviewed and determined. L. Smith in District 3 asked if all DMSs need to be changed out by July 2015 or if he misunderstood. D. Vollmer clarified it was strictly for express lanes and managed lanes and asked if he was getting any new full color, 20mm DMSs. L. Smith in District 3 responded that the new project they are working on has full color DMSs. P. Vega from District 2 interjected that Mark Wilson wants any future DMS deployments to be color and that the difference in price to have color is about an extra $11,000 per sign and to include that when budgeting. D. Vollmer noted that power consumption will increase as well. Someone asked if a red background with white lettering would be enforceable since it has to be formatted per the *MUTCD*. D. Vollmer responded it would be enforceable as long as the lettering is white from what he has seen on the *MUTCD* diagrams. The amber coloring for the letters is not enforceable, but the white letters are.

Arterial Probe Data Algorithm
D. Vollmer presented slides on the arterial probe data algorithm. The desire is to modify the current SunGuide software probe algorithm to be more usable on arterial lanes. Currently, the SunGuide software probe algorithm is designed specifically for highways and not necessarily considering arterials, which have longer stops at traffic lights. There needs to be more emphasis on moving toward arterial management. Some Districts are already looking into deploying Bluetooth devices on their arterials. Some of these devices are the BlueTOAD™, which are more service based and do not give you access to the direct tag reads, but instead the finished product such as speeds and volume. C. Chandler in District 7 asked if Bluetooth receivers are still needed when Waze data and HERE data are included, since paying for the Bluetooth is expensive and there isn't a budget for continuing it. D. Vollmer said some of the Districts are still planning on deploying Bluetooth readers to get more accurate data and asked for P. Vega's input since he has concerns about the quality of the HERE data on arterial roads. P. Vega responded that Bluetooth is a cost for FDOT, but the main reason District 2 decided to go with Bluetooth was so they could control the data. District 2 compared the accuracy of Bluetooth with HERE data, Google data, and INRIX data for the bridge closure and people in probe vehicles validating it. Bluetooth data was more accurate, especially when there were anomalies such as police and accidents. District 2 spoke with INRIX to learn the deficiencies with their system and it is in all the systems. District 2 utilizes Bluetooth for the origin destination data for the Planning office. At one time, CO was considering funding this in Planning, but P. Vega isn't sure where that is at right now. The biggest benefit to Bluetooth data is that it not only collects speeds and travel times, but also provides where vehicles are traveling to and from so Planning can address congestion management requirements that FHWA will have for MPO regions in the future. T. Hensley in District 7 asked if alternatives and the impact to the system should be looked at prior to making major investments in new technology or renewed technology. Additionally, T. Hensley in District 7 asked since there are $20M worth of MVDS between Districts and most are in need of replacement, should they be replaced or should alternative technologies and sources for data be looked at. There is a high level of effort needed for planning, but it can't be a five-year project

to complete. He stated the Secretary made the comment to replace 511 with something like Waze in the future and that needs to be planned for instead of reacting after the fact. L. Smith in District 3 agreed with T. Hensley. D. Vollmer continued presenting slides. He suggested allowing additional Bluetooth manufacturers that do not have service contracts, but instead provide raw data. Having two probe algorithms is being considered, one for highways and one for arterials that takes into account the other attributes of arterial roads. Currently, there are probe detectors that pair up to form links and the links group together to form travel time links, but the technologies of TSS links cannot be mixed (but they can be mixed for travel time links.) SunGuide software Release 4.1 introduced the original probe algorithm, which was later modified by CFX in Release 5.1.1 to improve it. CFX's algorithm improves how certain probe information is tossed out. Arterials present more variance in traffic flow and stoppage. Additional configurability and filters for outliers are needed for arterial probe data. Some of the parameters already exist and could be repurposed. The system already has the link configurable as freeway or arterials. Some of the existing parameters may need to be changed in what they mean and some will need to be converted from system-wide to per-link since this will be more important for the arterial links. Support for additional probe devices is desired. There are manufacturers that provide data without requiring the service plan. For example, the Iteris Vantage Velocity provides tag reads, but our algorithm is strictly for freeways. Another manufacturer is BlueMAC, but they don't currently provide raw data; but we could work with them to get it. If the arterial feature was available, maybe other manufacturers would provide the raw data instead of having this complete package concept. Additional operational concepts would include the ability to backfill missing data with historical data and notify operators when data is not available for travel time links. This would allow the operator to determine what to post. D. Vollmer asked what the Districts think about modifying the probe algorithm to include arterial roads. Some Districts are already using the BlueTOAD devices so this would give them more options in the future. J. Dilmore interjected that looking at the reoccurring cost for the Work Program going to BlueTOAD service was anywhere from two to three times more and that isn't including new deployments. With FDOT controlling the matching algorithm, it would give FDOT ownership of the data to manipulate it as needed and re-distribute as desired instead of limiting the flexibility of distribution. It seems to be cost-effective where the return on investment for District 5 would be very short and very reasonable considering the evolution that will eventually take place. C. Quinn at CFX mentioned FDOT has MVDSs such as Wavetronix, and RTMS which have been in the market a lot longer. He thinks that as the Bluetooth market evolves it will be similar to the VDS and have a subsystem that addresses Bluetooth and whatever device it communicates with (BlueTOAD or BlueMAC, etc.) as just an end device. If the standards of what FDOT wants and how the vendors produce the data is established then that can be generated in SunGuide software and continue to develop the algorithm. C. Quinn at CFX agrees that there needs to be different type of algorithm for arterials with the stop and go and amount of data for turning on side streets. CFX is looking to develop an algorithm that incorporates their Wavetronics data with the probe data. Using two technologies allows checking the accuracy of another to have confidence in the data and allows for built in redundancy for equipment needing to be replaced or repaired. D. Vollmer thanked everyone and noted the change to the algorithm needs to be investigated further and possibly distributing a ConOps for review, comment, and probably voting at a later time. D. Vollmer asked for thoughts on finalizing a ConOps, reviewing it, and developing requirements including a cost estimate and voting on it at a later date. All Districts were in favor. D. Vollmer will continue to investigate what modifications would need to be made

to the algorithm and getting the ConOps out to everyone for review and comment. He suggested reviewing it at the SSUG meeting since that would be more appropriate.

Open Discussion
D. Vollmer opened the floor for open discussion, but there were no comments or questions.

Review Action Items

- **Closing Action Item from last time Closed vs. Blocked since it was voted on and approved.**
- **WAN Team to provide high-level topology to District 3. – Completed.**
- **J. Dilmore will set up a meeting with the WAN group to discuss redundancy. – Completed.**
- **Look into creating an installer since there are 14 hotfixes for SunGuide software Patch 2.**
- **CO to create a scope and cost estimate for discontinuous lane blockage item and provide more information.**
- **Send out email on hotfix 14, that it has to be installed in conjunction with using the new report template.**
- **Identify SunGuide software performance issues at the next SSUG meeting.**
- **CO (G. Glotzbach and J. Oerter) to coordinate Phase 1 of the FL-ATIS migration to the ITS WAN by sending an email by the end of the week (quick responses needed.)**
- **Look into getting Bluetooth data into RITIS.**
- **Distribute a ConOps for the arterial probe algorithm.**
- **Reach out to Districts for appointments to the Technical Review Committee to review DMS displays and SunGuide software capabilities.**
- **CO to follow-up on Google Traffic data possibilities.**

Meeting adjourned at 4:16 p.m.