Changes to 2010 UAM References:

Std Index 307, Miscellaneous Utility Details
The UAM now references the entire standard rather than just conflict structures.
(See Below)

Std Spec 425-6.7
Added to prohibit concrete aprons around manhole lids.
(See below)

Std Spec 555-4.3 through 555-4.4
Added to clarify relation of bore (reamer) diameter to product size
and to exclude hazardous materials from drilling mud.
(See Below)

Std Spec 556-2
Removed product material specifications.
(See Below)

SAE J845:
2010 UAM referenced the May 1997 version.
The 2013 UAM will reference the December 2007 version.
(See Below)
http://standards.sae.org/j845_200712

SAE J595:
This is a new standard that replaced SAE J1318.
http://standards.sae.org/j595_200811

Revisions to FDOT's MOT Training Procedure:
The procedure was revised from the "g" edition (effective date of December 6, 2007) to the "h" edition (effective date of August 6, 2010).
(See Below)

Revisions to the 2010 Design Standards:

Std Index 600, Sheets 1 through 13
Numerous changes to the 2010 Index are summarized below.

Std Index 602
Revised Distance Between Signs table and deleted General Note 2.
(See Below)

Std Index 603, Sheet 2
Removed experimental use of AFAD Notice and added new notes 1 and 5.
(See Below)

Std Index 607
Updated signing and arrow panel display in accordance with 2009 MUTCD changes.
(See Below)

Std Index 612
Symbols text was corrected.
(See Below)

Std Index 613, Sheet 1
Duration Notes were revised.
(See Below)

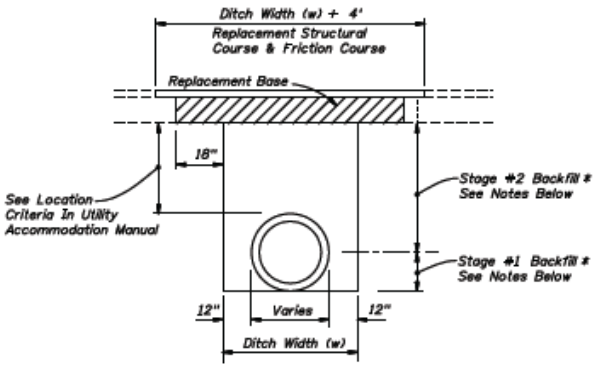
Std Index 616, Sheet 1
Duration Notes were revised.
(See Below)

Std Index 615
Correction to merging traffic sign direction.
(See Below)

Std Index 616, Sheets 1 and 3
Revised Symbols, Duration Notes and General Notes.
(See Below)

Std Index 635
Added Buffer Space Table and note.
(See Below)

Std Index 660
Added Pedestrian LCD to Symbols and revised directions of signs.
(See Below)



FLEXIBLE PAVEMENT NOTES

PAVEMENT REMOVAL AND REPLACEMENT

Pavement shall be mechanically sawed.

The replacement asphalt shall match the existing structural and friction courses for type and thickness.

The new base materials shall be either of the same type and composition as the materials removed or of equal or greater structural adequacy (See Index No. 514).

BACKFILL

COMPACTED AND STABILIZED FILL OPTION

Backfill material shall be placed in accordance with Section 125 of the Standard Specifications.

In Stage #1, construct compacted fill beneath the haunches of the pipe, using mechanical tamps suitable for this purpose. This compaction applies to the material placed beneath the haunches of the pipe and above any bedding.

In Stage #2, construct compacted fill along the sides of the pipe and up to the bottom of the base, with the upper 12" receiving Type B Stabilization. In lieu of Type B Stabilization, the Contractor may construct using Optional Base Group 3.

* FLOWABLE FILL OPTION

If compaction can not be achieved through normal mechanical methods then flowable fill may be used.

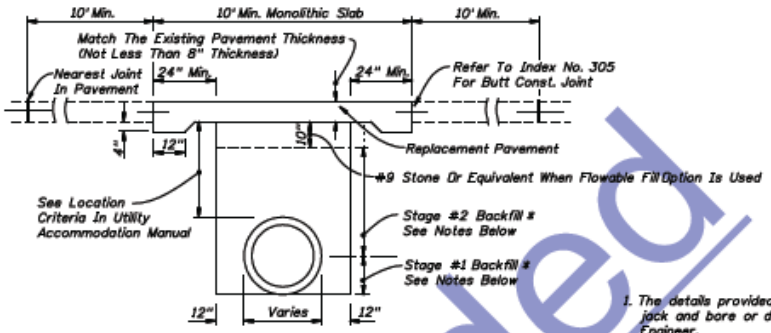
Flowable fill is to be placed in accordance with Section 121 of the Specifications, as approved by the Engineer.

Do not allow the utility being installed to float. If a method is provided to prevent flotation from occurring, Stages #1 and #2 can be combined, if approved by the Engineer.

In Stage #1, place flowable fill midway up on both sides of the utility. Allow to harden before placing Stage #2.

In Stage #2, place flowable fill to the bottom of the existing base course.

FLEXIBLE PAVEMENT CUT



RIGID PAVEMENT NOTES

PAVEMENT REMOVAL AND REPLACEMENT

High early strength cement concrete (3000 psi) meeting the requirements of Standard Specification 346 shall be used for rigid pavement replacement.

Pavement shall be mechanically sawed and restored to conform with existing pavement joints within 12 hours. (See Index No. 305)

GRANULAR BACKFILL

Any edgedrain system that is removed shall be replaced with the same type materials. Any edgedrain system that is damaged shall be repaired with methods approved by the Engineer.

Fill material shall be placed in accordance with the Standard Specifications. Fill material shall be special select soil in accordance with Index No. 505.

In Stage #1, construct compacted fill beneath the haunches of the pipe, using mechanical tamps suitable for this purpose. This compaction applies to the material placed beneath the haunches of the pipe and above any bedding.

In Stage #2, construct fill along the sides of the pipe and up to the bottom of replacement pavement.

* FLOWABLE FILL OPTION

If mechanical compaction can not be achieved through normal mechanical methods then flowable fill may be used.

Flowable fill is to be placed in accordance with Section 121 of the Specifications, as approved by the Engineer.

Do not allow the utility being installed to float. If a method is provided to prevent flotation from occurring, Stages #1 and #2 can be combined, if approved by the Engineer.

In Stage #1, place flowable fill midway up on both sides of the utility. Allow to harden before placing Stage #2.

In Stage #2, place flowable fill to the bottom of the stone layer.

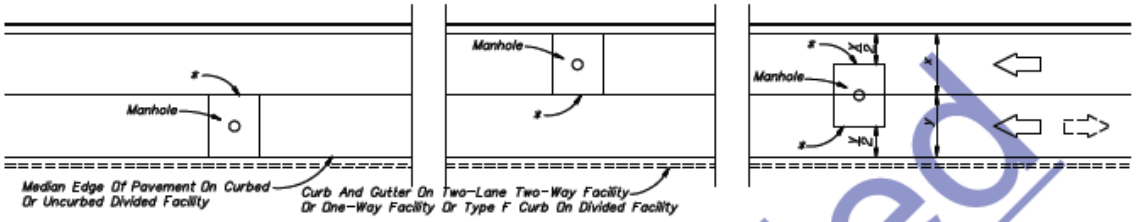
RIGID PAVEMENT CUT

GENERAL NOTES

1. The details provided in this standard index apply to cases in which jack and bore or directional boring methods are not required by the Engineer.
2. Flowable fill shall not be placed directly over loose, or high plastic, or muck material (see Index 505) which will cause settlement due to fill weight. Where highly compressible material exists, the amount, shape and depth of flowable fill must be engineered to prevent pavement settlement.
3. These details do not apply to utility cuts longitudinal to the centerline of the roadway which may require the additional use of geotextiles, special bedding and backfill, or other special requirements.
4. Method of construction must be approved by the Engineer.
5. Some pipe may require special granular backfill up to 6" above top of pipe. Geotextiles may be required to encapsulate the special granular material.
6. Where asphalt concrete overlays exist over full slab concrete pavement, the replacement pavement shall have an overlay constructed over the replacement slab. The overlay shall match the existing asphalt pavement thickness. The replacement friction course shall match the existing friction course, except structural course may be used in lieu of dense graded friction course.

   Existing broken and seated pavements shall be treated as flexible pavements.
7. All shoulder pavement, curb, curb and gutter, and their substructure disturbed by utility trench cut construction shall be restored in kind.
8. The use of flowable fill to reduce the time traffic is taken off a facility is acceptable but must have prior approval by the Engineer. Flowable fill use is allowed only when properly engineered for pavement crossings, whether straight or diagonal, and shall not be installed for significant depths or lengths. The maximum length shall be fifty (50) feet and a maximum depth of six (6) feet unless supported by an engineering document prepared by a registered professional engineer that specializes in soils engineering. The engineering document shall address the evaluation of local groundwater flow interruption and settlement potential.
9. Excavatable flowable fill is to be used when the flowable fill option is selected.
10. When approved by the Engineer, in lieu of the pavement and base, non-excavatable flowable fill may be used for manhole stabilization and ring and cover adjustments. Excavatable flowable fill shall not be used within the limits of the pavement and base.

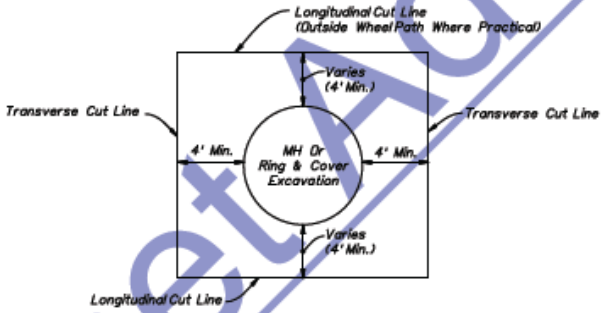
TRENCH CUTS AND RESTORATIONS ACROSS ROADWAYS



#Longitudinal Cut Lines For Both Curbed And Uncurbed Facilities Must Coincide With A Regular Seam Or Midlane Point In Order To Be Outside The Wheel Path

PLAN VIEW

FOR TWO OR MORE LANES (TWO LANES SHOWN)



PARTIAL CUTS FOR RING AND COVER ADJUSTMENTS

NOTES

1. No irregular seams are permitted. All seams must be clean sawed.
2. Pavement cut seams for underground utility structures in rigid pavement are the same longitudinally, but the transverse seams shall extend to the nearest existing joint.
3. See Sheet 1 for replacement pavement.

NONTRENCH PAVEMENT CUTS FOR UNDERGROUND UTILITY STRUCTURES IN PAVEMENT

425-6.7 Adjusting Existing Structures: Cut down or extend existing manholes, catch basins, inlets, valve boxes, etc., within the limits of the proposed work, to meet the finished grade of the proposed pavement, or if outside of the proposed pavement area, to the finished grade designated in the Plans for such structures. Use materials and construction methods which meet the requirements specified above to cut down or extend the existing structures.

The Contractor may extend manholes needing to be raised using adjustable extension rings of the type which do not require the removal of the existing manhole frame. Use an extension device that provides positive locking action and permits adjustment in height as well as diameter and meets the approval of the Engineer.

When a three-piece adjustable frame and cover is installed, make adjustments using the inner frame in accordance with the manufacturer's installation recommendations so the inner frame and cover meet the grade and slope of the pavement surface opened to traffic.

555-4.3 Product Bore Hole Diameter: Minimize potential damage from soil displacement/settlement by limiting the ratio of the bore hole to the product size. The size of the back reamer bit or pilot bit, if no back reaming is required, will be limited relative to the product diameter to be installed as follows:

Maximum Pilot or Back-Reamer Bit Diameter When Rotated 360 Degrees	
Outside Pipe Diameter Inches*	Maximum Bit Diameter Inches
<8	Diameter + 4
8 to 24	1.5 x Diameter
>24	Diameter + 12
*Use manufacturer's recommendation for pipe with restrained joints.	

555-4.4 Drilling Fluids: Use a mixture of bentonite clay or other approved stabilizing agent mixed with potable water with a minimum pH of 6.0 to create the drilling fluid for lubrication and soil stabilization. Do not use any other chemicals or polymer surfactants in the drilling fluid without written consent from the Engineer. Certify to the Engineer in writing that any chemicals to be added are environmentally safe and not harmful or corrosive to the facility. Identify the source of water for mixing the drilling fluid. Any water source used other than a potable water source may require a pH test.

556-2 Materials.

Select materials approved for installation within the right-of-way based on their suitability for the construction method as defined in Table 556-2.1. After determining product suitability, individual material standards as contained in Table 556-2.2 apply.

Table 556-2.1 Product Suitability by Construction Method		
Type	Pipe/Casing Installation Mode	Suitable Pipe/Casing
Jack and Bore	Jacking	Steel, Plastic
Micro tunneling	Jacking	DI, FRPM, PC, PCCP, RCCP, RCP, Steel

Table 556-2.2 Material Standards Acceptable for J&B and MT Installations		
Material Type	Non-Pressure	Pressure
Ductile Iron (DI)	AWWA C150/C151 ASTM A716, A747	AWWA C150/C151
Fiberglass Reinforced Polymer Mortar (FRPM)	ASTM D 3262	ASTM D 3517 AWWA C950
Polymer Concrete (PC)	DIN 54815-1 & 2	N/A
Prestressed Concrete Cylinder Pipe (PCCP)	N/A	AWWA C300
Reinforced Concrete Cylinder Pipe (RCCP)	N/A	ASTM C361
Reinforced Concrete Pipe (RCP)	ASTM C 76	ASTM C361 AWWA C300/C302
Steel	ASTM A139 Grade B(1) API 2B(2)	AWWA C200 API 2B(2)
Polyvinyl Chloride (PVC)	ASTM D 1785	N/A

Polyethylene (PE)	ASTM D 2447 ASTM D 2513 FOR GAS > 3 Inches	N/A
Polybutylene (PB)	ASTM D 2662	N/A
Cellulose Acetate Butyrate (CAB)	ASTM D 1503	N/A
Acrylonitrile Butadiene Styrene (ABS)	ASTM D 1527	N/A
Reinforced Thermosetting Resin Pipe (RTRP)	ASTM D 2296 OR ASTM D2997	N/A
(1) No hydrostatic test required (2) Dimensional tolerances only		

Unless otherwise tested and approved by the Department, only use encasement pipe or uncased carrier pipe material that is new and has smooth interior and exterior walls.

556-2.1 Steel Pipe Casing and Welds: In addition to meeting or exceeding the conditions contained in Tables 556-2.1 and Table 556-2.2, meet the following requirements:

(a) The size of the steel casing must be at least 6 inches larger than the largest outside diameter of the carrier.

(b) The casing pipe must be straight seam pipe or seamless pipe.

(c) All steel pipe may be bare inside and out, with the manufacturer's recommended minimum nominal wall thicknesses to meet the greater of either installation, loading or carrier requirements.

(d) All steel casing pipe must be square cut and have dead-even lengths which are compatible with the J&B equipment.

Use steel pipe casings and welds meeting or exceeding the thickness requirements to achieve the service life requirements noted in the Department Drainage Manual Chapter 6. For purposes of determining service life, ensure that casings installed under roadways meet or exceed cross drain requirements and casings under driveways meet or exceed side drain pipe requirements. For purposes of material classification, consider steel pipe casing structural plate steel pipe. Ensure that steel pipe casing of insufficient length achieves the required length through fully welded joints. Ensure that joints are air-tight and continuous over the entire circumference of the pipe with a bead equal to or exceeding the minimum of either that required to meet the thickness criteria of the pipe wall for jacking and loading or service life. A qualified welder must perform all welding.

556-2.2 Reinforced Concrete Pipe Casing: In addition to meeting or exceeding the conditions contained in Tables 556-2.1 and Table 556-2.2, meet the following requirements:

Ensure that concrete pipe complies with the following minimum requirements:

(a) 5,000 psi concrete compressive strength

(b) Class III, IV, or V as required by load calculations, with a C wall
(c) Full circular inner and/or outer reinforcing cage
(d) Multiple layers of steel reinforcing cages, wire splices, laps and spacers are permanently secured together by welding in place
(e) Straight outside pipe wall with no bell modification
(f) No elliptical reinforcing steel is allowed
(g) Single cage reinforcement with a 1 inch minimum cover from the inside wall
(h) Double cage reinforcement with a 1 inch minimum cover from each wall
(i) Joints are gasket type
(j) Additional joint reinforcement
Upon installation, the Engineer may, at his discretion, require the Contractor to perform concrete wiping or injection of the joints if it is believed the joints have not maintained their water tightness during the jacking operation. No additional payment will be made for this operation.
556-2.3 Plastic Pipe Casing: Plastic pipe may be jacked and bored if its physical properties are sufficient, and it is rigid such that when supported or suspended at mid point it maintains a straight alignment. If plastic pipe is Jacked and Bored it may not be used as a pressurized carrier. Plastic pipe casing installed by the jack and bore method requires the use of an auger. Open end jacking without the use of an auger for continuous cleanout of the bore as the pipe is advanced is not permitted. Closed end jacking is not permitted.
556-2.4 Pipe Couplings and Joints: In addition to meeting or exceeding the conditions contained in Tables 556-2.1 and 556-2.2, to minimize potential for bore failure, couplings must not project at right angles from the casing diameter by more than 3/4 inch.
(a) Steel Pipe Coupling and Joints:
1. Welds must comply with 556-2.1(d) when couplings are not used or when the coupling thickness is less than the casing thickness.
2. When couplings are used the casing joint needs only to be tack welded. Couplings must have a full bead weld such that the thickness, when measured at an angle of 45 degrees to the casing and coupling interface, must be no less than the casing thickness.
(b) Plastic Pipe Couplings and Joints:
1. Must meet or exceed all ASTM strength and composition standards established for the casing material to which they are being attached.
2. Joints must be made sufficiently strong to withstand the pressures of jacking. All chemical welds must be completely set and cured before any jacking is attempted.

SAE J845 Changes:

1. Various editorial changes were made to harmonize the language with that used in other warning lights and devices standards.
2. Multiple flash patterns and cyclic patterns have been added. End users have increasingly been requesting non-repetitive flash patterns to prevent complacency.
3. Light source definition has been added.
4. Light pulse and flash definitions have been revised.
5. Optical power has been defined.
6. Multiple flash patterns that are user adjustable must be rated as the lowest performance mode.
7. Flash Rate was added to Section 5, “Tests”.
8. Test Voltage – In conformance with other optical warning device reports, a tolerance has been added to the test voltages, and requirements added for 36 volt systems.
9. Environmental tests for flash rate were revised.
10. Photometric performance has been changed from flash energy to meeting a specified optical power and peak intensity. Advances in laboratory instrumentation have made it practical and cost effective to directly measure the optical power generated by an optical warning device. The direct measurement of peak intensity also is readily done with current technology.
11. The redefinition of the white boundary toward blue was added in anticipation of a change to the SAE J578 specification to harmonize color boundaries with the ECE standard.
12. New markings for selective coverage devices were added to provide a marking distinction between omnidirectional devices and devices with selective coverage.

MOT Training Procedure Revisions (625-010-010)

Revised from the "g" edition (effective date of December 6, 2007) to the "h" edition (effective date of August 6, 2010).

Many grammatical and punctuation changes were made throughout the document.

Purpose:
Added "/Maintenance of Traffic Committees" after Department.
Changed "for qualification as" to "to become a qualified provider".
Changed "approved course list" to "list of Approved Providers and Courses".

Scope:
Removed reference to section 8.4 of the UAM.

1. (B) (4), changed "Provide documentation of instructor qualifications" to "Provide resumes and current valid certification as documentation of instructor qualifications".
1. (B) (7), requires a wallet size card be provided to students after successful completion of the training course.
1. (B) (8), requires training provider to retain records of all students and added types of records to be kept (year course given and Provider ID#).
1. (B) (9), added types of information (year course given and Provider ID#) to be included in the required yearly report to FDOT. Removes requirement for provider to report all students trained during the last 4 years. Requires the report to be provided following completion of training.
1. (B) (10), changed form number to record student's training. Replaced documenting student's training in TRESS system with Course Roster.
1. (B) (11), requires provider to file and retain each student's evaluation form and to provide it to the MOT Committee upon request.
3.1, revised FDOT's web site that lists approved courses, addresses, and instructors.
3.3, 3.4, 3.5, changed "approved course list" to "list of Approved Providers and Courses".
5.1 (B), removed limitation of applicable Design Standards Indexes to 2006 edition and added Index 625.
5.3, removed "by retesting".
5.4, changed "reflecting" to "containing".
6.1, changed order of occurrence of "test records" and "evaluation forms". Requires provider to develop, submit and implement a policy to require documentation of each student's wallet card prior to taking a refresher course.
6.2, replaced "resumes" with "instructor qualification documentation" and added a "policy for retesting".
6.2 (B), revised FDOT's web site that lists administrator and contact information.
6.6 (5), replaced "and have kept their certification current by retesting from an approved provider" with "and holds a current valid and verifiable wallet card" and added "and valid" after "current".

6.7.1, added “computer based training” to types of basic training.

6.7.2, removed limitation of applicable Design Standards Indexes to 2006 edition and added Index 625.

6.7.5, removed requirement of refresher course test to contain 25% of test questions related to recent changes.

6.7.5, added “Training for refresher courses may be either class room instruction or Computer Based Training (CBT). Course submittals shall be approved in accordance with this procedure. Students shall be tested at a proctored test center identified by the approved Provider. If the Provider elects to provide CBT, the Provider must submit a two part policy on proctored testing with their course submittal. Part one will contain the Provider’s policies and procedures on choosing proctored testing sites, the handling and security of the test and a review process by the Provider of the testing procedure put in place by the Provider’s policy. Part two shall be provided to the students and should include at a minimum:

o Notifying the students that they are required to complete the training by taking a proctored test prior to the date the student’s current certificate expires and that failure on the part of the student to assume this responsibility will result in a certificate not being issued.

o Proctored testing locations.

o Policy for scheduling the testing date and time.

o Process for rescheduling and or cancelling a testing date and time.

o Identify the acceptable forms of student ID and that failure to provide proper ID and documentation of current valid certification will result in the student not being allowed to take the test.”

6.8.1, added “on the test” after …a passing score of 70% or greater.

6.10.1, replaced “Document all students’ course training by providing: student name, course category, course date, course location, provider’s name, instructor's name, pass/fail status and date when training or a refresher course is required. Provide documentation to the MOTC upon request.” with “Document and retain records of all students trained. These records should contain the following information: year course given, course category, Provider name, Provider ID #, students name, course date, date when training or refresher course is required, instructors name, pass/fail status, and location where course was given.”

6.10.2, changed form number to record student’s training. Replaced documenting student’s training in TRESS system with Course Roster.

7.1, revised FDOT’s web site that lists the entire procedure.

8.1, changed form number to record student’s training. Replaced documenting student’s training in TRESS system with Course Roster and added web site for the form.

DESIGN STANDARDS MODIFICATIONS

From Year 2010 - Effective Date 7/1/1010 to Year 2013 - Effective Date 1/1/2013

Index No. 600 (Sheet 1 of 13), “CONTENTS”, sheet numbers changed to reflect revised location of index.

Index No. 600 (Sheet 1 of 13), “GENERAL INFORMATION FOR TRAFFIC CONTROL THROUGH WORK ZONES”, “ABBREVIATIONS”, changed description of “TMA” to read: “Truck/Trailer Mounted Attenuator”.

Index No. 600 (Sheet 1 of 13), “GENERAL INFORMATION FOR TRAFFIC CONTROL THROUGH WORK ZONES”, ABBREVIATIONS, changed “VECP Value Engineering Change Proposal” to “CSIP Cost Savings Initiative Proposal”.

Index No. 600 (Sheet 2 of 13), “TEMPORARY TRAFFIC CONTROL DEVICES”, was changed to require all temporary traffic control devices to be on FDOT’s Qualified Products List (QPL) or FDOT’s Approved Product List (APL) and requires the QPL or APL number to be permanently marked on the device. The note was also changed to require a temporary traffic control device to be placed at each corner of a trailer mounted device when it is in use.

Index No. 600 (Sheet 2 of 13), “SIGHT DISTANCE”, added sentence to end of “Intersections”: “Construction equipment and materials shall not restrict intersection sight distance.”

Index No. 600 (Sheet 3 of 13), Temporary Rumble Strips, added sign “Rumble Strips Ahead”, changed title of detail to “Removable Polymer Rumble Strip Set”, added detail for “Molded Engineered Polymer Rumble Strip Set”, added detail “Typical Placement of Temporary Internally Ballasted Rumble Strips”, and added table “Distance Between Signs”.

Index No. 600 (Sheet 3 of 13), “SUPERELEVATION”, Changed the title of the table from “Minimum Radii for Normal Cross Slopes” to “Minimum Radii for Normal Crown”.

Index No. 600 (Sheet 4 of 13) “High Visibility Safety Apparel” was changed to allow the updated ANSI/ISEA standard 107-2010.

Index No. 600 (Sheet 5 of 13), “INTERSECTING ROAD SIGNING”, replaced “highways, roads, and streets” with “crossroads” and replaced last sentence “Under no condition will intersecting leg signing be less than a Road Work Ahead sign.” with “If work operations exceed 60 minutes, intersection leg signing will be no less than the Road Work Ahead sign.”

Index No. 600 (Sheet 5 of 13), “SIGN PLACEMENT”, removed entire note.

Index No. 600 (Sheet 5 of 13), “END ROAD WORK SIGN”, changed sign from “G20-2A” to “G20-2”.

Index No. 600 (Sheet 6 of 13), “GENERAL NOTES:”, added note 2, “If post mounting criteria cannot be achieved and a barrier or traffic railing exists, use Index 11871.”

Index No. 600 (Sheet 6 of 13), “POST MOUNTED SIGN NOTES:”, replaced note 1 with “Use only approved systems listed on the Department’s Qualified Products List.”

Index No. 600 (Sheet 6 of 13), “POST MOUNTED SIGN NOTES:”, replaced note 2 with “Manufacturers seeking approval of U-Channel and steel square tube sign support assemblies for inclusion on the Qualified Products List (QPL) must submit a QPL application , design calculations (for square tube only), and detailed drawings showing the product meets all the requirements of this Index.”

Index No. 600 (Sheet 6 of 13), “POST MOUNTED SIGN NOTES:”, added text to the end of note 3, “or a minimum section modulus of 0.34 sq in for 80 ksi steel”.

Index No. 600 (Sheet 6 of 13), “POST MOUNTED SIGN NOTES:”, added text to the end of note 4, “or 80 ksi steel”.

Index No. 600 (Sheet 6 of 13), “POST MOUNTED SIGN NOTES:”, replaced note 5 with “U-Channel posts shall conform with ASTM A 499 Grade 60, or ASTM A 576, Grade 1080 (with a minimum yield strength of 60 ksi). Square tube posts shall conform with ASTM A 653, Grade 50, or ASTM A 1011, Grade 50.”.

Index No. 600 (Sheet 6 of 13), “POST MOUNTED SIGN NOTES:”, changed text in note 7 from “3 sq ft” to “5 sq ft”.

Index No. 600 (Sheet 6 of 13), “POST MOUNTED SIGN NOTES:”, deleted note 12.

Index No. 600 (Sheet 6 of 13), “2 POST SIGN SUPPORT MOUNTING DETAILS”, added “(Single Post Similar)” to description of detail.

Index No. 600 (Sheet 6 of 13), “POST AND FOUNDATION TABLE FOR WORK ZONE SIGNS”, added “120x60*” to “Rectangle Sign Size”, added “4*” to “Rectangle Sign, Number of Steel U Channel Posts”, added note, “* Use 4 lb/ft U-Channel sign post with a mounting height of 7’ min. and 8’ max. Attach sign panel using Z-bracket detail on Sheet 7.”, added note 3, “For both 3 lb/ft and 4 lb/ft base or sign posts installed in rock, a minimum cumulative depth of 2’ of rock layer is required.”, added note 4, “The soil plate as shown on the QPL vendor drawing is not required for base posts or sign posts installed in existing rock (as defined in note 3), asphalt roadway, shoulder pavement or soil under sidewalk.”

Index No. 600 (Sheet 6 of 13), “3 POST SIGN SUPPORT MOUNTING DETAILS”, added note “See Index No. 17355 for MOT Sign Details”, added allowance for 60” width, “Where W = 60”, a = 1’ – 9” ($\pm$ 1”)”.
Index No. 600 (Sheet 6 of 13), “SIGN ATTACHMENT DETAIL”, added “(without Z-Bracket)” to detail title.

Index No. 600 (Sheet 7 of 13), “4 POST SIGN SUPPORT MOUNTING DETAIL”, removed “5’ Min*” detail illustration and associated note, added detail illustration and note, “Optional Splice: See Index 11200 for Backing Strip Details”.

Index No. 600 (Sheet 7 of 13), “TYPICAL FOUNDATION DETAIL”, removed entire detail.

Index No. 600 (Sheet 7 of 13), “PROJECT INFORMATION SIGN DETAIL”, replaced detail with 2 details, “Project Information Sign Detail 45 MPH or Less” and “Project Information Sign Detail 50 MPH or Greater”.

Index No. 600 (Sheet 7 of 13), “SIGN ATTACHMENT DETAIL”, added “(With Z-Bracket)” to detail title.

Index No. 600 (Sheet 7 of 13), “PROJECT INFORMATION SIGN”, added “PROJECT INFORMATION SIGN NOTES:” 1 through 4, “1. Road designation should be the most common designation (ie. I-Interstate, SR-State Road or US.) 2. See sheet 6 for POST AND FOUNDATIONS TABLE FOR WORK ZONE SIGNS. 3. See sheet 6 for TYPICAL FOUNDATION DETAILS. 4. Payment for Project Information Sign shall be included in Lump Sum MOT.”

Index No. 600 (Sheet 8 of 13), Added RUMBLE STRIPS AHEAD (MOT-18-10) and BE PREPARED TO STOP (W3-4) signs, changed designation of WORKERS sign to (W21-1) for the symbol sign and (W21-1A) for the word message sign, added Graphic sign with motorcycle (W8-15P) under GROOVED PAVEMENT AHEAD (MOT-15-06) and LOOSE GRAVEL (W8-7) sign, changed (W22-1) sign from BLASTING ZONE 1000 FT to BLASTING ZONE AHEAD.

Index No. 600 (Sheet 9 of 13), “CHANNELIZING AND LIGHTING DEVICES”, delete the second Paragraph, “Approved devices are listed on the Department’s Qualified Product List.”

Index No. 600 (Sheet 9 of 13), “TRUCK MOUNTED ATTENUATORS”, change heading to: “TRUCK/TRAILER MOUNTED ATTENUATORS”, and change first sentence of text to read, “Truck/trailer mounted attenuators”.

Index No. 600 (Sheet 9 of 13), “REMOVING PAVEMENT MARKINGS” delete the existing text and replace with the following: “Existing pavement markings that conflict with temporary work zone delineation shall be removed by any method approved by the Engineer, where operations exceed one daylight period. Painting over existing pavement markings with black paint or spraying with asphalt shall not be accepted as a substitute for removal or obliteration. Full pavement width overlays of either a structural or friction course are a positive means to achieve obliteration.”

Index No. 600 (Sheet 9 of 13), “STANDARD ORANGE FLAG”, added note “Standard orange flags are not to be used on portable sign supports except enhance the SURVEY CREW AHEAD sign where dual orange flags shall be used at all times.”

Index No. 600 (Sheet 9 of 13), “WARNING LIGHTS, Flashing”, added note “Type B High Intensity Flashing Warning Lights are not to be placed on temporary portable sign supports.”

Index No. 600 (Sheet 9 of 13), “ADVANCE WARNING ARROW PANELS”, changed to “ADVANCE WARNING ARROW BOARDS” and all references to “panels” in the notes were changed to “boards”.

Index No. 600 (Sheet 9 of 13), “SIGNALS”, remove last sentence of second paragraph, “The plans should identify the intersections where Temporary Traffic Detection is required.”

Index No. 600 (Sheet 10 of 13), in the Note beneath the “DROP-OFF PROTECTION REQUIREMENTS” table, change reference from “Index No. 600 sheet 2” to “Index No. 600 sheet 3”.

Index No. 600 (Sheet 10 of 13), Add to Sheet, “PEDESTRIAN AND/OR BICYCLIST WAY DROPOFF CONDITION NOTES”
1. A pedestrian and/or bicyclist way drop-off is defined as:

a. a drop in elevation greater than 10 inches that is closer than 2 feet from the edge of the pedestrian or bicyclist way

b. a slope steeper than 1:2 that begins closer than 2 feet from the edge of the pedestrian or bicyclist way when the total drop-off is greater than 60 inches.

2. Any drop-off adjacent to a pedestrian or bicyclist way shall be protected with warning devices, temporary barrier wall or approved handrail.”

Index No. 600 (Sheet 10 of 13), “SHOULDER TREATMENT NOTES”, Note 3 change “VECP” to “CSIP”.

Index No. 600 (Sheet 11 of 13), “PLACEMENT OF BUSINESS ENTRANCE SIGNS AND CHANNELIZING DEVICES AT BUSINESS ENTRANCE”: Note 1deleted. Note 2 revised by adding the first sentence: “For single business entrances, place one 24” x 36” business sign for each driveway entrance affected.”, changing “should” to “shall” in the second sentence, and adding “Standard” to the beginning of the third sentence. Note 3 replaced with: “When several businesses share a common driveway entrance, place one 24” x 36” standard BUSINESS ENTRANCE sign according with Index 17355 at the common entrance.” Note 4 replaced “as to not interfere with providing sight distances for the driveway user” with “but shall not restrict sight distance for the driveway user”. Added Note 5: “Business entrance signs are intended to guide motorist to business entrances moved/modified or disturbed during construction projects. Business entrance signs are not required where there is minimal disruption to business driveways which is often the case with resurfacing type projects.”

Index No. 600 (Sheet 11 of 13), “TEMPORARY LANE SEPARATOR”: Note 1, added third and fourth sentences: ”Tubular Markers, Vertical Panels and Opposing Traffic Lane Divider panels shall not be intermixed within the limits where the temporary lane separator is used. The connection between the channelizing device and the temporary lane separator curb shall hold the channelizing device in a vertical position.” Note 2, added second sentence: “Furnish channelizing devices having retroreflective sheeting meeting the requirements of Section 990.” Note 3, replaced with “12” openings for drainage shall be constructed in the asphalt and portable temporary lane separator at a maximum spacing of 25’ in areas with grades of 1% or less or 50’ in areas with grades over 1% as directed by the Engineer.” Note 4, replaced with “Tapered ends shall be used at the beginning and end of each run of the temporary lane separator to form a gradual increase in height from the pavement level to the top of the temporary lane separator.” Note 5, replaced with “The Contractor had the option of using portable temporary lane separators containing fixed channelizing devices in lieu of the temporary asphalt separator and channelizing devices detailed in this sheet. The portable temporary lane

separator shall come in portable sections that can be connected to maintain continuous alignment between the separate curb sections. Each temporary lane separator section shall be 36 inches to 48 inches in total length. Portable temporary lane separators shall duplicate the color of the pavement marking. Portable temporary lane separators shall be one of those listed on the qualified Products List." Note 6, deleted the first sentence.

Index No. 600 (Sheet 12 of 13), "CHANNELIZING AND LIGHTING DEVICE NOTES": Note 1 deleted. Note 2 deleted. Note 5, changed "barricade type and barricade" to "channelizing devices" (3 places). Note 6, added "LCDs," before "drums". Added new note 10: "Spacing for longitudinal channelizing devices when placed singly shall be the same as Type I or Type II barricades or drums." Added new note 11: "For longitudinal channelizing devices (LCDs) less than 32" in height, the LCD shall be supplemented with approved fixed (surface mounted) channelizing devices (tubular markers, vertical panels, etc.) along the run of the LCD, at the ends, at 50' centers on tangents, and 25' centers on radii. The cost of the fixed supplemented channelizing devices shall be included in the cost of the LCD. LCDs less than 32" in height shall not be used for speeds greater than 45 mph." Added new note 12, "For pedestrian longitudinal channelizing devices, the device shall have a minimum of 8" continuous detectable edging above the walkway. A gap not exceeding a height of 2" is allowed to facilitate drainage. The top surface of the device shall be a minimum height of 32" and have smooth connection points between the devices to facilitate hand trailing. The bottom and the top surface of the device shall be in the same vertical plane. If pedestrian drop-off protection is required, the device shall have a footprint or offset of at least 2', otherwise the device must be at least 42" in height above the walkway and be anchored or ballasted to withstand a 200 lb lateral point load at the top of the device."

Index No. 600 (Sheet 12 of 13), "LONGITUDINAL CHANNELIZING DEVICE", added the detail (3 drawings).

Index No. 602, "GENERAL NOTES", deleted note 2, "WORKERS sign to be removed or fully covered when no work is being performed."

Index No. 602, "DISTANCE BETWEEN SIGNS" Table, replaced note at bottom of table, "500' beyond the ROAD WORK AHEAD sign or midway between signs whichever is less" with "Midway between signs"

Index No. 603 (Sheet 2 of 2), removed the notice: "Notice: The Florida Department of Transportation has received approval from FHWA to experiment with the use of the automated flagger assistance devices (AFAD). AFAD's shall only be used when called for in the plans that include the appropriate pay item and developmental specification or approved by the State Roadway Design Office."

Index No. 603 (Sheet 2 of 2), "AUTOMATED FLAGGER ASSISTANCE DEVICES (AFAD) NOTES", added new note 1, "AFAD's shall only be used in situations where there is only one lane of approaching traffic in the direction to be controlled.", added new note 5, "Only qualified flaggers who have been trained in the operation of the AFAD may operate the AFAD. When in use, each AFAD must be in view of and attended at all times by the flagger operating the device. Use two flaggers and one of the following methods in the deployment of AFAD:
Method 1: Place an AFAD at each end of the temporary traffic control zone.
Method 2: Place an AFAD at one end of the temporary traffic control zone and a flagger at the opposite end.

A single flagger may simultaneously operate two AFAD (Method 1) or may operate a single AFAD on one end of the temporary traffic control zone while being the flagger at the opposite end of the temporary traffic control zone (Method 2) if all four of the following conditions are present:
a. The flagger has an unobstructed view of the AFAD(s);
b. The flagger has an unobstructed view of approaching traffic in both directions; and
c. For Method 1, the AFAD's are less than 800 ft apart. For Method 2, the AFAD and the flagger are less than 800 ft apart
d. Ensure two trained flaggers are available on-site to provide normal flagging operations should an AFAD malfunction."

Index No. 607, "SYMBOLS", added Advanced Warning Arrow Board symbol and label.

Index No. 607, "WORK ON SHOULDER", added the "Advanced Warning Arrow Board" symbol to the Advance Warning Vehicle.

Index No. 607, "WORK IN TRAVEL WAY", removed the "ONE LANE ROAD" sign from the Work Vehicle, changed ARROW "PANEL" to ARROW "BOARD" in the drawing label and in the note, and added the "Advanced Warning Arrow Board" symbol to the Advance Warning Vehicle and to the Shadow Vehicle.

Index No. 612, corrected SYMBOLS text for Sign with 18" X 18" (min.) Orange Flag.

Index No. 613 (Sheet 1 of 2), "DURATION NOTES", note 1, changed "3 days" to "3 consecutive calendar days". Note 2 was replaced with new notes 2 and 3:
"2. For work operations up to approximately 15 minutes, signs, channelizing devices, arrow board and buffer space may be omitted if all of the following conditions are met:
a. Speed limit is 45 mph or less.
b. No sight obstructions to vehicles approaching the work area for a distance equal to the buffer space and the taper length combined.
c. Volume and complexity of the roadway has been considered.
d. The closed lane is occupied by a class 5 or larger, medium duty truck(s) with a minimum gross weight vehicle rating (GWVR) of 16,001 lb with high-intensity, rotating, flashing, oscillating, or strobe lights mounted above the cab height and operating.
3. For work operations up to 60 minutes, arrow board and buffer space may be omitted if conditions a, b, and c in DURATION NOTE 2 are met, and vehicles in the work area have high-intensity, rotating, flashing, oscillating, or strobe lights operating."

Index No. 615, corrected merging traffic sign direction in “SIGNALIZED” drawing.

Index No. 616 (Sheet 1 of 3), “SYMBOLS”, changed Arrow Panel to Arrow Board.

Index No. 616 (Sheet 1 of 3), “DURATION NOTES”, delete the existing text and replace with the following:
“1. For work operations up to approximately 15 minutes, signs, channelizing devices, and arrow board may be omitted if all of the following conditions are met:
a. Speed limit is 45 mph or less.
b. No sight obstructions to vehicles approaching the work area for a distance equal to twice the taper length.
c. Volume and complexity of the roadway has been considered.
d. The closed lane is occupied by a class 5 or larger, medium duty truck(s) with a minimum gross weight vehicle rating (GWVR) of 16,001 lb with high-intensity, rotating, flashing, oscillating, or strobe lights mounted above the cab height and operating.
2. For work operations up to 60 minutes, the arrow board may be omitted if conditions a, b, and c in DURATION NOTE 1 are met, and vehicles in the work area have high-intensity, rotating, flashing, oscillating, or strobe lights operating.”

Index No. 616 (Sheet 3 of 3), Note 1, changed “significant right turning movements” to “significant left turning movements”.

Index No. 635, Added Buffer Space Table and note below it “When Buffer Space cannot be attained due to geometric constraints, the greatest attainable length shall be used, but not less than 200 ft.”

Index No. 660, “SYMBOLS”, added Pedestrian LCD.

Index No. 660,”MID-BLOCK SIDEWALK CLOSURE WITH TEMPORARY WALKWAY”, replaced Channelizing Device with Pedestrian Longitudinal Channelizing Device and corrected direction of “PEDESTRIAN WALKWAY” sign.

Index No. 660, “CORNER SIDEWALK CLOSURE WITH TEMPORARY SIDEWALK”, added “PEDESTRIAN CROSSWALK” description to sign symbol, and corrected direction of “PEDESTRIAN CROSSWALK”, “SIDEWALK CLOSED CROSS HERE” and Pedestrian Symbol signs.

Index No. 660, “MID-BLOCK SIDEWALK CLOSURE”, corrected direction of “SIDEWALK CLOSED” and “SIDEWALK CLOSED AHEAD CROSS HERE” signs