



Florida Department of Transportation

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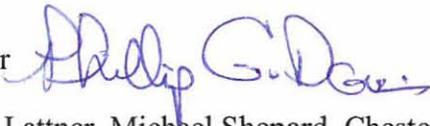
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ESTIMATES BULLETIN 14-05

DATE: August 25, 2014 8-27-14: See update to 650-1-AB

TO: District Design Engineers, District Estimates Engineers, District Traffic Operations Engineers

FROM: Phillip "Greg" Davis, PE, State Estimates Engineer 

COPIES TO: Trey Tillander, Alan El-Urfali, Mark Wilson, Tim Lattner, Michael Shepard, Chester Henson, Ron Meyer

SUBJECT: Removal of Signalization Items and Related COPS changes

BACKGROUND

Section 690 of the specifications, *Removal of Existing Traffic Control Signals and Devices*, combines requirements for removal of many different types of signalization items. With the ongoing Consolidation of Products and Specifications (COPS) effort, Section 690 and related 690 pay items were reviewed. Rather than keeping many different removal items in one section, the COPS team has recommended returning the removal operations to the applicable section for each item. Keeping all operations together for a given pay item group is consistent with how other non-signalization pay items are currently structured.

As of January 2015, Section 785 of the specifications, Intelligent Transportation Systems Infrastructure, will no longer exist. Content has been moved from this section to the applicable sections in the 600s. Grounding and Equipment shelters were previously moved to 620 and 677, respectively. Poles and lowering devices are now being moved to the 641 Prestressed Concrete Poles and 649 Steel Poles. Field Cabinets is being moved to 676. Details on specific items are shown below.

Additional background on the COPS effort is available in [Estimates Bulletin 12-12](#).

IMPLEMENTATION PLAN

Effective with the January 2015 lettings, pay items will be moved from Section 690 to the appropriate section(s) for the pay item group. Additional notes applicable to a specific pay item group are included below, based on changes to measurement and/or payment within the specification.

The following pay items are valid through December 2014:

650- A-BCD Traffic Signal- assembly.

653-ABC Pedestrian Signal- assembly.

680-ABB- System Control Equipment

A = Operation

1 (Furnish & Install)

3 (Install) Item furnished by local agency

BB = Item As Described

06 (Communications Interface)

11 (Roadside Master)

15 (Autodial/Answer Ext Communications Modem)

16 (Fiber Optic, FSK Modem)

690- 10- Remove Traffic Signal Head Assembly - each.

See 650-1-60 for removal operation

690- 20- Remove Pedestrian Signal Assembly - each.

See 653-1-60 for removal operation

690- 31- Remove Signal Pedestal - each.

See pole/pedestal items in 641 through 649 for removal operation.

690- 32- Pole Removal Shallow - each.

See pole/pedestal items in 641 through 649 for removal operation.

690- 34- Pole Removal Deep - each.

See pole/pedestal items in 641 through 649 for removal operation.

690- 50- Remove Controller Assembly - each.

See 670-5-600 for removal operation.

690- 60- Remove Vehicular Detector Assembly - each.

See 660 items for removal operation.

690- 70- Remove Pedestrian Detector Assembly - each.

See 665 items for removal operation.

690- 80- Remove Span Wire Assembly - each.

See 634-4-600 for removal operation.

690- 90- Remove Cabling and Conduit - per intersection or interchange.

See 630-2-AB for conduit removal operation. See 632-7 for signal cable removal operation

690-91- Remove Interconnect Cable, per LF

See 632-7- A for removal operation.

690-100- Remove Miscellaneous Traffic Control Signals and Devices - per site.

See removal operations for each item.

785-1-AB ITS Pole- each.

See pole items in 641 through 649 for new items.

785-2- ITS Field Cabinet- each.

See 670-5- and 676 for new items.

The following pay items will be available, effective with the January 2015 letting:

630- 2- AB Conduit, LF

The specification and guidance has changed as follows; no separate payment will be made for removal of aboveground conduit. It will be incidental to the removal of the pole or other attachments.

Removal only for ~~aboveground~~ and bridge mount option; above ground conduit will be incidental to pole or equipment removal. All other belowground conduit will remain in place, or be incidental to clearing and grubbing.

A= 6 (Remove) B= 4 or 5 only

632- 7- A Signal Cable

Removal per intersection; tabulate each location in the plans.

Removal per linear foot: tabulate "outside of intersection" length in the plans. Note: the LF item is intended for use with removal of signal cable used between a controller and flashing beacon sign(s).

A= 6 (Remove- Intersection) PI
7 (Remove- Outside of Intersection) LF

633-1-ABC Fiber Optic Cable, LF

Payment is made for the removal of a length of cable, regardless of the number of fibers.

A= 6 (Remove) C=0

633-4- A Twisted Pair Cable, LF

Removal payment is made for the plan quantity length of conduit; no additional payment is made for multiple cable(s) or the number of twisted pairs.

A= 6 (Remove)

633-8- A Multi-Conductor Communication Cable, LF

Removal payment is made for the length of cable. Note: This pay item replaces "interconnect cable".

A= 6 (Remove)

634-4-ABC Span Wire Assembly, PI

Payment is made per intersection and includes the removal of all attachments (messenger wire, signal heads, signs, etc.) No separate payment will be made when poles are to be removed; pole removal includes "all attachments" and accessories.

A= 6 (Remove Assembly, poles to remain) BC=00

635- 2- AB Pull and Splice Box, EA

No change; removal is normally included in clearing and grubbing.

635- 3- AB Junction Box, EA

No change; removal is normally included in clearing and grubbing.

639-1-ABC Electrical Power Service, AS

A= 6 (Remove) C=0

639-2-A Electrical Service Wire, LF

Detail quantities, by location, in the plans.

A= 6 (Remove)

641-2-AB Prestressed Concrete Pole, EA

All pedestal and service poles are to be removed completely. Payment includes the removal of all attachments (pedestrian signal, pedestrian detector, etc.) Removal of span wire and span wire attachments will be paid separately.

A= Operation

6 (Complete Removal- Pedestal/Service Pole) B=0

7 (Shallow Removal- Poles 30' and greater) B=0

8 (Complete Removal- Poles 30' and greater) B=0

641- 3- ABB Concrete CCTV Pole, EA

Payment includes the removal of all attachments (camera, lowering device, etc.)

A= Operation

1 (Furnish & Install, without lowering device)

2 (Furnish & Install, with lowering device)

3 (Install) BB=00

7 (Shallow Pole Removal) BB=00

8 (Complete Pole Removal) BB=00

BB = Pole Height (defined in Design Standard 18113)

63 (63')

69 (69')

75 (75')

80 (80')

86 (86')

643-ABB- Wood Strain Pole, EA

All wood poles are to be removed completely. Payment includes the removal of all attachments. Removal of span wire and span wire attachments will be paid separately.

A= 6 (Remove) BB=00

646-1-AB Aluminum Signals Pole, EA

Valid for aluminum pedestals and pedestrian detector posts only. Aluminum poles, pedestals, and detector posts are to be removed completely. Payment includes the removal of all attachments (pedestrian detector, pedestrian signal, etc.)

A= 6 (Remove) B=0

649-1-AB Steel Strain Pole, EA

Steel poles are normally attached to a drilled shaft foundation. Payment includes the removal of all attachments (pedestrian detector, pedestrian signal, etc.) The removal details need to indicate whether the pole only, partial foundation, or complete foundation are to be removed.

A= 6 (Remove)

B= Removal Details

1 (Pedestal or service pole) complete removal

2 (Type PS poles; foundation remains)

3 (Shallow, Bolt on Attachment)

5 (Deep, Bolt on Attachment)

649-2-ABB Steel CCTV Pole, EA

Steel CCTV poles are normally attached to a drilled shaft foundation. Payment includes the removal of all attachments (camera, lowering device, etc.). The removal details need to indicate whether the pole only, partial foundation, or complete foundation are to be removed.

- A= Operation
 - 1 (Furnish & Install, without lowering device)
 - 2 (Furnish & Install, with lowering device)
 - 3 (Install) BB=00
 - 6 (Remove) see remove options below
- BB= Pole Height, A=1-3
 - 50 (50')
 - 55 (55')
 - 60 (60')
 - 65 (65')
 - 70 (70')
- BB= options for Remove, A=6
 - 01 (Pole only, entire foundation remains)
 - 03 (Shallow, Bolt on Attachment)
 - 05 (Deep, Bolt on Attachment)

649-1A-BBB Steel Monotube Assembly, EA

Steel poles are normally attached to a drilled shaft foundation. Payment includes the removal of all attachments (signals, signs, etc.). The removal details need to indicate whether the pole only, partial foundation, or complete foundation are to be removed.

- A= 6 (Remove)
- B= Remove Options
 - 1 (Pole only, entire foundation remains)
 - 3 (Shallow, Bolt on Attachment)
 - 5 (Deep, Bolt on Attachment)

649-3A-BCC Steel Mast Arm Assembly, EA

Removal includes the signals, signs, and any other attachments. The removal details need to indicate whether the pole only, partial/shallow foundation, or complete/deep foundation are to be removed.

- A= 6 (Remove)
- B= Remove Options
 - 1 (Pole only, entire foundation remains) CC=00
 - 3 (Shallow, Bolt on Attachment) CC=00
 - 5 (Deep, Bolt on Attachment) CC=00

650-1-ABC Vehicular Traffic Signal, AS

Payment for a Traffic Signal assembly "includes the mounting brackets, drop-pipe, disconnect hangers, backplates, visors, LED modules, labor, and materials necessary for a complete and accepted installation." When poles are to be removed, payment for "all attachments" to be removed are included with the poles.

See pay item 650-2 for adding sections to an existing assembly.

A = Operation

- 1 (Furnish & Install)
- 2 (Install) B=0. Signal furnished by FDOT or Maintaining Agency.
- 5 (Relocate) B=0. DO NOT USE for MOT activities.
- 6 (Remove) B=0, Poles to remain

B= Type

- 1 (Aluminum)
- 2 (Polycarbonate with Aluminum Top Section)
- 3 (Polycarbonate)
- 4 (Programmable)

C= Sections, Ways

- 1 (1 Section, 1 way)
- 2 (1 Section, 2-4 ways)
- 3 (2 Section, 1-2 ways)
- 4 (3 Section, 1 way)
- 5 (3 Section, 2-4 ways)
- 6 (4 Section, 1 way)
- 7 (4 Section, 2-4 ways)
- 8 (5 Section- straight, 1 way)
- 9 (5 Section- cluster, 1 way)

8-27-14: Please refer to updated pay item structure in the BOE. 650-A-BCD will continue to be valid through June 2015, to allow for a transition period.

650-2-ABB Vehicular Signal Auxiliaries, EA

No separate payment for new signal assemblies. This item is valid for repair/replacement or retrofit applications only. See new 659 specification and pay items for hangers.

A= Operation

- 1 (Repair/Replace/Retrofit- Furnish & Install) NOT for use with new signal assemblies
- 3 (Repair/Replace/Retrofit- Install) Item furnished by local agency

BB= Item

- 01 (Backplate – Black)
- 02 (Backplate – Black with Retroreflective Border)
- ~~03 (Disconnect Hanger)~~
- ~~04 (Pivotal Hanger Assembly)~~
- 05 (Tunnel Visor)
- 06 (12" LED Module – Standard)
- 07 (8" LED Module – Emergency Signal)
- 08 (Add section to existing assembly)

653-1-AB Pedestrian Signal, AS

Payment for removal of the pedestrian signal is included with the removal of the pole/pedestal. Separate payment for the removal of the pedestrian signal is made only when the pole/pedestal is to remain.

A= Operation

- 1 (Furnish & Install LED Countdown)

- 3 (Install) B=0
- 4 (Relocate) B=0
- 6 (Remove Pedestrian Signal; pole/pedestal to remain) B=0

B= Ways

- 1 (1 way)
- 2 (2 ways)

659-1-ABB Mast Arm, Span Wire, and Pole Mounting Assemblies, EA

No separate payment for new signal assemblies. This item is valid for repair/replacement or retrofit applications only.

A= Operation

- 1 (Repair/Replace/Retrofit- Furnish & Install) NOT for use with new signal assemblies
- 3 (Repair/Replace/Retrofit- Install) Item furnished by local agency

BB= Component

- 01 (Mast Arm Mounting Assembly)

660-3- AB Vehicle Detection System- Microwave

A= 6 (Remove) B=0

660-4- AB Vehicle Detection System- Video

A= 6 (Remove) B=0

660-5- AB Vehicle Detection System- Wireless Magnetometer

A= 6 (Remove) B=0

660-6-ABC Vehicle Detection System- AVI

A= 6 (Remove) BC=00

663- 1-ABC Signal Priority and Preemption System, EA

A= Operation

- 1 (Furnish & Install)
- 3 (Install)
- 6 (Remove)

B= Type

- 1 (Optical)
- 2 (GPS)
- 3 (Radio Frequency)

C= Components

- 0 (Complete System)
- 1 (Cabinet Electronics)
- 2 (Detector)

665- 1- AB Pedestrian Detector, EA

No change- pay item structure includes removal option

670- 5-ABC Traffic Signal Controller, AS

*Includes the Controller, Cabinet, and Traffic Controller Accessories shown in the plans.
DO NOT use separate pay items to pay for the cabinet or controller accessories.*

A = Operation

- 1 (Furnish & Install)
- 3 (Install) BC=00; FDOT furnished
- 4 (Modify) BC=00; DO NOT USE with a new controller
- 5 (Relocate Controller & Cabinet) BC=00
- 6 (Remove Controller & Cabinet) BC=00

B = Cabinet with Controller Type

- 1 (NEMA)
- 2 (Model 170)
- ~~3 (Special) Valid through 12-31-14~~
- 4 (Model 2070) Effective 1-1-14
- 5 (ATC) Effective 1-1-14

C = Special Features

- 0 (None)
- 1 (One Preemption Plan)
- 2 (Two Preemption Plans)

671- 2- AB Traffic Controller (without cabinet), EA

*DO NOT USE this item for controllers in a new cabinet; use pay item for traffic
Controller assembly for Controller with Cabinet.*

A = Operation

- 1 (Furnish & Install- replace controller in an existing cabinet)
- 3 (Install)
- 4 (Modify)

B = Type

- 1 (NEMA)
- 2 (170)
- 4 (2070)

676-1-ABB Traffic Cabinet, EA

*NOTE: The Cabinet is typically included with the Traffic Signal Controller Assembly for new
installation, pay item 670-5-ABC. DO NOT USE WITH 670-5-ABC.*

A= Operation

- 1 (Furnish & Install cabinet without controller)
- 3 (Install) BB=00
- 4 (Relocate) BB=00
- 5 (Adjust /Modify) BB=00
- 6 (Remove) BB=00

BB= Function, Type/Size

Wired cabinet, without controller

- 11 (NEMA Traffic Signal Controller Cabinet , Type/Size 1, 16'' W x 24'' H x 12'' D)

- 12 (NEMA Traffic Signal Controller Cabinet , Type/Size 2, 20" W x 32" H x 14" D)
 - 13 (NEMA Traffic Signal Controller Cabinet , Type/Size 3, 24" W x 40" H x 15" D)
 - 14 (NEMA Traffic Signal Controller Cabinet , Type/Size 4, 24" W x 40" H x 15" D)
 - 15 (NEMA Traffic Signal Controller Cabinet , Type/Size 5, 30" W x 48" H x 16" D)
 - 16 (NEMA Traffic Signal Controller Cabinet , Type/Size 6, 44" W x 52" H x 24" D)
 - 17(NEMA Traffic Signal Controller Cabinet , Type/Size 7, 44" W x 72" H x 24" D)
 - 21 (170 Traffic Signal Controller Cabinet 332, 24"W x 66"H x 30"D)
 - 22 (170 Traffic Signal Controller Cabinet 333, 44"W x 62"H x 28"D)
 - 23 (170 Traffic Signal Controller Cabinet 552, 26"W x 55"H x 22"D)
 - 24 (170 Traffic Signal Controller Cabinet 662, 26"W x 66"H x 22"D)
- Sizes 1-4 typically used for repair/replacement of school zone flashers and similar.

UNWIRED cabinet, without controller

- 31 (NEMA Cabinet- unwired , Type/Size 1, 16" W x 24" H x 12" D)
- 32 (NEMA Cabinet- unwired , Type/Size 2, 20" W x 32" H x 14" D)
- 33 (NEMA Cabinet- unwired , Type/Size 3, 24" W x 40" H x 15" D)
- 34 (NEMA Cabinet- unwired , Type/Size 4, 24" W x 40" H x 15" D)
- 35 (NEMA Cabinet- unwired , Type/Size 5, 30" W x 48" H x 16" D)
- 36 (NEMA Cabinet- unwired , Type/Size 6, 44" W x 52" H x 24" D)
- 37 (NEMA Cabinet- unwired , Type/Size 7, 44" W x 72" H x 24" D)
- 41 (170 Cabinet- unwired, 332, 24"W x 66"H x 30"D)
- 42 (170 Cabinet- unwired, 333, 44"W x 62"H x 28"D)
- 43 (170 Cabinet- unwired, 552, 26"W x 55"H x 22"D)
- 44 (170 Cabinet- unwired, 662, 26"W x 66"H x 22"D)

676-2-ABC ITS Cabinet, EA

This cabinet is typically used to house traffic control devices and other electronics associated with Intelligent Transportation Systems. For unwired cabinets, use 676-1.

A= Operation

- 1 (Furnish & Install)
- 3 (Install) BC=00
- 4 (Relocate) BC=00
- 5 (Adjust /Modify) BC=00
- 6 (Remove) BC=00

B= Description

- 1 (ITS Cabinet, pole mount)
- 2 (ITS Cabinet, pole mount w/sunshields)
- 3 (ITS Cabinet, base mount)
- 4 (ITS Cabinet, base mount w/sunshields)

C= Type and Size

- 1 (336, 24"W x 36"H x 20"D)
- 2 (336S, 24"W x 46"H x 22"D)
- 3 (334, 24"W x 66"H x 30"D)

676-3-ABC Small Equipment Enclosure, EA

This item is intended for use when a small equipment enclosure is needed and not included in another pay item as a component of another assembly.

A= Operation

- 1 (Furnish & Install)
- 3 (Install) BC=00
- 4 (Relocate) BC=00
- 5 (Adjust /Modify) BC=00
- 6 (Remove) BC=00

B= Description- Function, Type and Size

- 1 (Small Equipment Enclosure)

C= Description- Size

- 0 (Less than 10"W x 13"H x 11"D)

677- 1- AB Equipment Shelter, EA

A= Operation

- 1 (Furnish & Install)
- 3 (Install)
- 6 (Remove)

B= Size- building exterior dimensions

- 1 (up to 120 ft2)
- 2 (121-170 ft2)
- 3 (171-250 ft2)
- 4 (Greater than 250 ft2)

678-1-ABB Controller Accessories, EA

*No separate payment for new installations/new traffic controller assemblies.
This items is intended for the replacement of components in an existing cabinet.*

A = Operation

- 1 (Furnish & Install)
- 3 (Install)

BB = Type Of Controller Accessory

- 01 (Type 3 Conflict Monitor)
- 02 (Type 6 Conflict Monitor)
- 03 (Type 12 Conflict Monitor)
- 04 (Load Switch)
- 05 (Type 1 Flasher)
- 06 (Type 3 Flasher)
- 07 (Type 1 Time Switch)
- 08 (Type 2 Time Switch)
- 09 (Type 3 Time Switch)
- 10 (Type 4 Time Switch)
- ~~11 (Power Reduction Assembly)~~ valid through 6/30/2014

12 (Master Clock Unit)

680- 1-ABC System Control Equipment, EA

Intended for Adaptive Signal Control System. Location of system components must be detailed in the plans.

A= Operation

- 1 (Furnish & Install)
- 3 (Install) BC=00
- 4 (Relocate) BC=00
- 5 (Adjust/Modify) BC=00
- 6 (Remove) BC=00
- 9 (Diagnostic and Misc. Repair) BC=00

B= System Type

- 1 (Adaptive Signal Control System - NEMA)
- 2 (Adaptive Signal Control System - 170)

C= Component

- 1 (Complete System)
- 2 (Cabinet Equipment)
- 3 (Above Ground Equipment)

685-ABB- System Auxilliaries, EA

Tech Spec required.

A = Operation

- 1 (Furnish & Install)
- 3 (Install)

BB = Item As Described

- 06 (Uninterruptible Power Source)
- ~~20 (Telemetry Transceiver)~~
- ~~27 (Telephone Connection Box)~~
- ~~28 (Interface Panel)~~
- ~~40 (Fiber Optic, Modulator/Demodulator)~~

Specifications: Specifications will be available with the January 2015 workbook.

If you have any questions, please contact Melissa Hollis, Melissa.Hollis@dot.state.fl.us or 850-414-4182.