ORIGINATION FORM

Date**: 8/20/12**
Originator**: Charles Boyd**
Contact Information: **414-4275**

Specification Title**: 960**
Specification Section, Article, or Subarticle Number: **960 -2.1, 2.2.2.1 and 2.4.3**

Why does the existing language need to be changed? **Further enhancements to the new 960 spec based on recent construction experiences and PT vendor comments**

Summary of the changes: **Added vent holes to wedge plate, added minimum size to vent hole in anchorage cap, changed grade of anchorage cap bolts.**

Are these changes applicable to all Department jobs? **No**
If not, what are the restrictions? **Jobs with PT only**

Will these changes result in an increase or decrease in project costs? **None**
If yes, what is the estimated change in costs?

With who have you discussed these changes? **Robert Robertson**

What other offices will be impacted by these changes? **Construction**

Are changes needed to the PPM, Design Standards, SDG, CPAM or other manual? **No**

Is a Design Bulletin, Construction Memo, or Estimates Bulletin needed? **No**

Contact the State Specifications Office for assistance in completing this form.
Frances Thomas 850-414-4101 frances.thomas@dot.state.fl.us
Debbie Toole 850-414-4114 deborah.toole@dot.state.fl.us
Andy Harper 850-414-4127 clifton.harper@dot.state.fl.us

Florida Department of Transportation

RICK SCOTT
GOVERNOR

605 Suwannee Street
Tallahassee, FL 32399-0450

ANANTH PRASAD, P.E.
SECRETARY

M E M O R A N D U M

DATE: October 11, 2012

TO: Specification Review Distribution List

FROM: Trey Tillander, State Specifications Engineer

SUBJECT: Proposed Specification: **9600201 Post-Tensioning Components.**

In accordance with Specification Development Procedures, we are sending you a copy of a proposed specification change.

This change was proposed by Charles Boyd of the State Structures Design Office to add vent holes to wedge plate, add minimum size to vent hole in anchorage cap, and change grade of anchorage cap bolts based on recent construction experiences and Vendor comments.

Please share this proposal with others within your responsibility. Review comments are due within four weeks and should be sent to Mail Station 75 or to my attention via e-mail at SP965TT or trey.tillander@dot.state.fl.us. Comments received after **November 9, 2012,** may not be considered. Your input is encouraged.

TT/cah
Attachment

POST-TENSIONING COMPONENTS.
(REV 9-26-12)

SUBARTILCE 960-2.1 (Pages 1073 – 1074) is deleted and the following substituted:

960-2.1 Anchorage Assembly:

(a) Construct anchorages from ferrous metal per ASTM A536 Grade 65-45-12 minimum.

(b) Anchorage shall develop at least 95% of PT steel guaranteed ultimate tensile strength (GUTS) when tested in an unbonded state, without exceeding anticipated anchor set.

(c) Average concrete bearing stress shall be in compliance with AASHTO LRFD Bridge Design Specifications and "AASHTO LRFD Bridge Construction Specifications."

(d) Test anchorage with typical local zone reinforcement shown in system drawings.

(e) Anchorages with grout outlets shall be suitable for inspection from either top or front of anchorage. Anchorage may be fabricated to facilitate both inspection locations or may be two separate anchorages of the same type, each providing singular inspection entry locations.

(f) Geometry of grout outlets must facilitate access for endoscope inspection directly behind wedge plate using a straight 3/8 inch diameter drill bit. *Place vent hole(s) of 3/8 inch minimum diameter through wedge plate to allow for passage of grout and inspection.*

(g) Ferrous metal components of an anchorage that are to be embedded in concrete shall be galvanized in accordance with Section 962. Other anchorage assembly components, including wedges, wedge plates, and local zone reinforcement need not be galvanized.

(h) All anchorages shall have a permanent vented anchorage cap bolted to anchorage.

SUBARTICLE 960-2.2.2.1 (Page 1078) is deleted and the following substituted:

960-2.2.2.1 Anchorage Caps:

(a) Provide permanent anchorage caps made of stainless steel, nylon, polyester, or Acrylonitrile Butadiene Styrene (ABS).

(b) Seal Anchorage cap with "O"-ring seals or precision fitted flat gaskets placed against the bearing plate.

(c) Place a vent *hole of 3/8 inch minimum diameter* suitable for grout venting and inspection of the content inside the anchorage cap from the top or front of the anchorage cap as appropriate (e.g. anchorage caps not accessible after grouting must have a vent at the top of the cap). Anchorage caps may be fabricated to facilitate both inspection locations.

(d) Anchorage caps shall have a minimum pressure rating of 150 psi.

(e) Stainless steel bolts shall be used to attach cap to anchorage.

(f) Certified test reports documenting steel chemical analysis shall be provided when stainless steel anchorage caps are used.

SUBARTICLE 960-2.4.3 (Page 1079) is deleted and the following substituted:

960-2.4.3 Stainless Steel:

Conforms to the following:

(a) ASTM A240 Type 316 - for metallic components other than bolts.

(b) ASTM A*593*~~193 Grade B8M~~ Type 316 - for bolts.