



## Florida Department of Transportation

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January 14, 2011

### **ROADWAY DESIGN BULLETIN 11-03**

### **DCE MEMORANDUM 02-11**

*(FHWA Approved: 1/12/11)*

**TO: DISTRICT DESIGN ENGINEERS, DISTRICT CONSTRUCTION ENGINEERS, DISTRICT TRAFFIC OPERATIONS ENGINEERS**

**FROM:** David C. O'Hagan, P.E., State Roadway Design Engineer  
David A. Sadler, P.E., Director Office of Construction

**COPIES:** Tim Lattner, Robert Robertson, Duane Brautigam, Mark Wilson, Tom Bane, District Utilities Administrators/Engineers, Chris Richter (FHWA), Bob Burlison, Brian Blanchard, Chad Thompson, Abraham Scott, Robert Petithomme

**SUBJECT: OSHA RULE (29 CFR Part 1926) CRANES AND DERRICKS IN CONSTRUCTION**

A new OSHA Rule (29 CFR Part 1926) Cranes and Derricks in Construction went into effect on November 8, 2010. The new regulations control equipment operations in the vicinity of overhead electrical facilities. Contractors performing work within the Departments right of way in the vicinity of overhead electric lines with voltages of 50 kV or greater may be impacted by the new regulations. The OSHA Rule has a 20 foot "trigger distance." If the contractor's equipment will be within 20 feet of the overhead electric facilities, there are three options available:

- Option 1: Having the power lines deenergized and visibly grounded.
- Option 2: Maintain a minimum distance of 20 feet of clearance for voltages up to 350kV and 50 feet of clearance for voltages more than 350 kV.
- Option 3: Determine the line voltage and provide clearance in accordance with Table A of the rule.

The Department's policy is to use Option 3, unless the utility work schedule requires something different.

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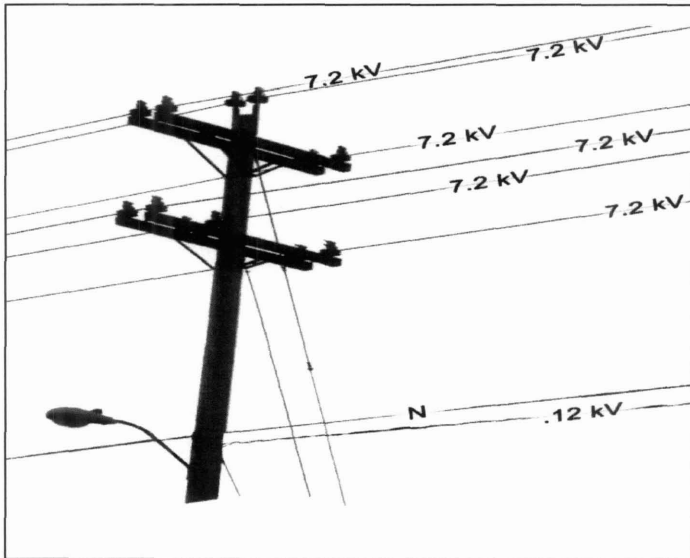
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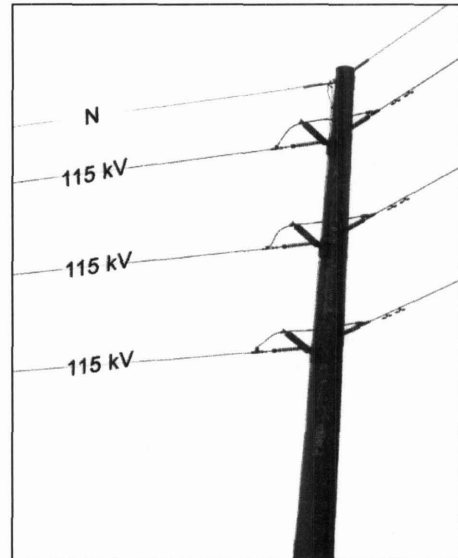
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**DESIGN IMPLEMENTATION:** It was determined that labeling of the voltage for overhead electric lines would provide the information necessary for the contractor to determine the operating clearance for his equipment to bid the project. Currently labeling of the line voltage of existing overhead electric lines may not be consistent. Design Index 002 shows labeling of the line voltage for overhead electric facilities. The most common practice, however, has been to use only the “OE” line style that is propagated using standard FDOT software.

For all projects with a letting date after July 1, 2011, all overhead electrical facilities shall be labeled with the line voltage. Utility owners will be required to furnish the line voltages at the coordination phase. Multiple lines with different voltages may be found on a common pole line. For labeling purposes only one line should be shown even if there are multiple lines with different voltages. For poles with multiple lines and multiple voltages which do not exceed the 50kV threshold (see Example 1), the line should be shown in the plans as -----OE (< 50kV)-----.



Example 1



Example 2

For poles with multiple lines and multiple voltages which exceed the 50kV threshold (see Example 2), the line with the greatest vertical clearance will be labeled first, separated by a slash mark, and followed by the next voltage as you move down the pole. If multiple voltages exist at

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the same height, the highest voltage should be labeled. In Example 2, the line should be shown in the plans as -----OE (115kV/115kV/115kV)----- or -----OE (All lines 115kV)-----.

For projects with letting dates between now and June 30, 2011, where possible, the electrical facilities should be evaluated. After evaluating, if all the voltages are less than 50kV the voltages do not need to be labeled in the plans. In the special notes and requirements of the “Transmittal of Plans, Specifications, and Estimates Package” provide the following statement for posting in the advertisement; “All of the overhead utilities shown in the plans are less than or equal to 50kV.” However, if there are some voltages greater than 50kV, and there is insufficient time to revise the plans, provide the following statement in the special notes and requirements for posting in the advertisement. “There are overhead utilities shown in the plans that exceed 50kV.”

If you have any questions concerning design implementation, please contact Chester Henson at 850-414-4117.

**CONSTRUCTION IMPLEMENTATION:** For all active contracts, require the contractor to comply with OSHA Rule 1926. The Department’s policy is to use Option 3 of the rule, which is to determine the line voltage and provide clearance in accordance with Table A. Refer to Table A below to determine minimum clearance distances. For contracts let prior to July 2011, this may involve contacting the utility companies to determine the overhead electric facilities voltage. Coordinate any changes to the utility work schedule and any information requests from the utility companies with the District Utilities Office.

TABLE A—MINIMUM CLEARANCE DISTANCES

Voltage (nominal, kV, alternating current)	Minimum clearance distance (feet)
up to 50 .....	10
over 50 to 200 .....	15
over 200 to 350 .....	20
over 350 to 500 .....	25
over 500 to 750 .....	35
over 750 to 1,000 .....	45
over 1,000 .....	(as established by the utility owner/operator or registered professional engineer who is a qualified person with respect to electrical power transmission and distribution).

Note: The value that follows “to” is up to and includes that value. For example, over 50 to 200 means up to and including 200kV.

If you have any questions concerning construction implementation, please contact Stefanie Maxwell at 850-414-4314.

DS/mw