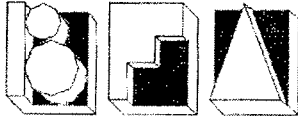


DLA09-DEC-269



**BHAMANI, FORD & ASSOCIATES, INC.**  
CONSULTING ENGINEERS & PLANNERS

EB0004228

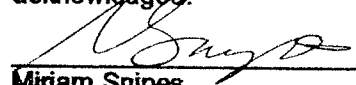
July 21, 2009

Florida Building Commission  
c/o Paula Ford, Agency Clerk  
Florida Department of Community Affairs  
2555 Shumard Oak Drive  
Tallahassee, FL 32399-2100

**Re: Petition for a Declaratory Statement  
From the Florida Building Commission  
Regarding Voltage Drop for Feeders FBC  
13-413.1 ABC 1.1**

Thomas H. Ford RA  
Bhamani, Ford, & Associates, Inc.  
4900 SW 74<sup>th</sup> Ct.  
Miami, FL 33155  
Office: 305-663-1964  
Fax: 305-667-5083  
[bfai@bellsouth.net](mailto:bfai@bellsouth.net)

**FILING AND ACKNOWLEDGEMENT  
FILED, on this date, with the designated  
Agency Clerk, receipt of which is hereby  
acknowledged:**

  
**Miriam Snipes**      **7/22/09**  
**Deputy Agency Clerk**      **Date**

I am a designer and am using the National Electrical Code and the Florida Building Code to design parking lot lighting for a large shopping center. There is a difference in the percent voltage drop allowed in feeders between the NEC article 215.2(A) FPN no. 2, page 98, NEC 2005 Handbook and the FBC 13-413.1 ABC 1.1

**NEC  
Feeders  
215.2 (A)  
FPN No. 1  
Page 98 NEC 2005  
Handbook**

**FBC  
Feeders  
13-413.1 ABC 1.1**

FPN No. 2: Conductors for feeders as defined in Article 100, sized to prevent a voltage drop exceeding 3 percent at the farthest outlet of power, heating, and lighting loads, or combinations of such loads, and where the maximum total voltage drop on both feeders and branch circuits to the farthest outlet does not exceed 5 percent, will provide reasonable efficiency of operation.

Feeder conductors shall be sized for a maximum voltage drop of 2 percent at design load

**Branch Circuits**

See 210.10 (A)  
FPN No. 4  
Page 82 NEC 2005  
Handbook

FPN No. 4: Conductors for branch circuits as defined in Article 100, sized to prevent a voltage drop exceeding 3 percent at the farthest outlet of power, heating, and lighting loads or combination of such loads, and where the maximum total voltage drop on both feeders and branch circuits to the farthest outlet does not exceed 5 percent, provide reasonably efficiency of operation.

**Total:** Branch Circuit and Feeder = 5% max

Is the voltage drop of 2 percent as stated in 13-413.1 ABC 1.1 intended as such or is it a scrivener's error?

Why is the FBC so restrictive for the feeder conductor voltage drop at 2 percent and why is it not in agreement with the NEC?

Sincerely,

**Bhamani, Ford, & Associates Inc.**



Thomas H. Ford, R.A.  
Florida R.A. License No. 8401

C.C.: Mo Madani, CBO, Technical Unit Manager  
Building Code and Standards  
Florida Department of Community Affairs  
2555 Shumard Oak Blvd.  
Tallahassee, FL 32399-2100

**Branch Circuits**

13-413.1 ABC 1.2

Branch circuit conductors shall be sized for a maximum voltage drop of 3 percent at design load.

**Total:** Branch Circuit and Feeder = 5% max