

# FORM FOR COMMENT FOR 2014 NATIONAL ELECTRICAL CODE®

## INSTRUCTIONS — PLEASE READ CAREFULLY

Type or print **legibly**. Use a separate copy for each comment. Limit each comment to a **SINGLE** section. All comments **must be received by NFPA by 5 p.m., EDST, Wednesday, October 17, 2012**, to be considered for the 2014 National Electrical Code. Comments received after 5:00 p.m., EDST, Wednesday, October 17, 2012, will be returned to the submitter.

**For technical assistance, please call NFPA at 1-800-344-3555.**

## FOR OFFICE USE ONLY

Log #: \_\_\_\_\_

Date Rec'd: \_\_\_\_\_

Please indicate in which format you wish to receive your ROP/ROC  electronic  paper  download  
(Note: If choosing the download option, you must view the ROP/ROC from our website; no copy will be sent to you.)

Date 10/15/12 Name Rick Maddox Tel. No. 702-365-0167

Company Retired Email ramaddox@cox.net

Street Address 6812 War Eagle Circle City Las Vegas State NV Zip 89108

**\*\*\*If you wish to receive a hard copy, a street address MUST be provided. Deliveries cannot be made to PO boxes.**

Please indicate organization represented (if any) \_\_\_\_\_

1. Section/Paragraph 310.15(B)(3)(c)

2. Comment on Proposal No. (from ROP): 6-37

3. Comment recommends (check one):  new text  revised text  deleted text

4. Comment (include proposed new or revised wording, or identification of wording to be deleted): [Note: Proposed text should be in legislative format; i.e., use underscore to denote wording to be inserted (inserted wording) and strike-through to denote wording to be deleted (~~deleted wording~~).

Delete 310.15(B)(3)(c) and Table 310.15(B)(3)(c)

5. **Statement of Problem and Substantiation for Comment:** (Note: State the problem that would be resolved by your recommendation; give the specific reason for your Comment, including copies of tests, research papers, fire experience, etc. If more than 200 words, it may be abstracted for publication.)

This proposal should have been accepted to delete this requirement. There have been no documented failures of conductor insulation due to sunlight exposure. I have seen conductors fail due to overloading, physical damage, poorly done connections and splices, etc., but not due to sunlight exposure on a rooftop.

I have been searching locally for some evidence of conductor failure on rooftops. You would think that with the high temperatures experienced in the Southern Nevada area that we would be likely to see some quite a bit of evidence of failures if the proposals submitted by the Copper Development Association were valid. Instead, I have found numerous examples of conductors pulled out of conduits after years and decades that show no deterioration at all. I'm including photos of several of these installations with this proposal.

It appears likely that the methodology used by the Copper Development Association led to exaggerated temperatures that are not experienced in actual installations on rooftops. While UL came in and witnessed the Copper Development Association consultant, Travis Lindsey, again perform testing in his backyard in Las Vegas, there was still no showing of real installations, insulation failure, etc. The Southern Nevada Chapter of IAEI sponsored a study to test the temperatures of conductors in conduit on a real roof in Las Vegas, and the results show that the temperatures experienced in actual installations come nowhere near what the Copper industry has been reporting for the past few code cycles.

Research that does not reflect the real world should not be used to write Code. People depend on the Code-Making Panels to identify safety concerns and address them in the most reasonable and economical way possible. This section of the code does not increase safety, it just makes more money for wire manufacturers while making installations more expensive for building owners and more complicated for installers and inspectors.

## 6. Copyright Assignment

(a)  I am the author of the text or other material (such as illustrations, graphs) proposed in the Comment.

(b)  Some or all of the text or other material proposed in this Comment was not authored by me. Its source is as follows:  
(please identify which material and provide complete information on its source)

I hereby grant and assign to the NFPA all and full rights in copyright in this Comment and understand that I acquire no rights in any publication of NFPA in which this Comment in this or another similar or analogous form is used. Except to the extent that I do not have authority to make an assignment in materials that I have identified in (b) above, I hereby warrant that I am the author of this Comment and that I have full power and authority to enter into this assignment.

Signature (Required) \_\_\_\_\_

PLEASE USE SEPARATE FORM FOR EACH COMMENT

Mail to: Secretary, Standards Council · National Fire Protection Association  
1 Batterymarch Park · Quincy, MA 02169-7471 OR  
Fax to: (617) 770-3500 OR Email to: [proposals\\_comments@nfpa.org](mailto:proposals_comments@nfpa.org)

10/18/2012

## Garret's Furniture, East Flamingo, Las Vegas, NV

This facility has been in business since the 1970s and had several rooftop runs. Several of these runs were sampled in 2010, during recent construction work on site. Please note the names on the conductors from manufacturers who no longer use those names or have ceased operations. Please note the aluminum conductor is THW type insulation.

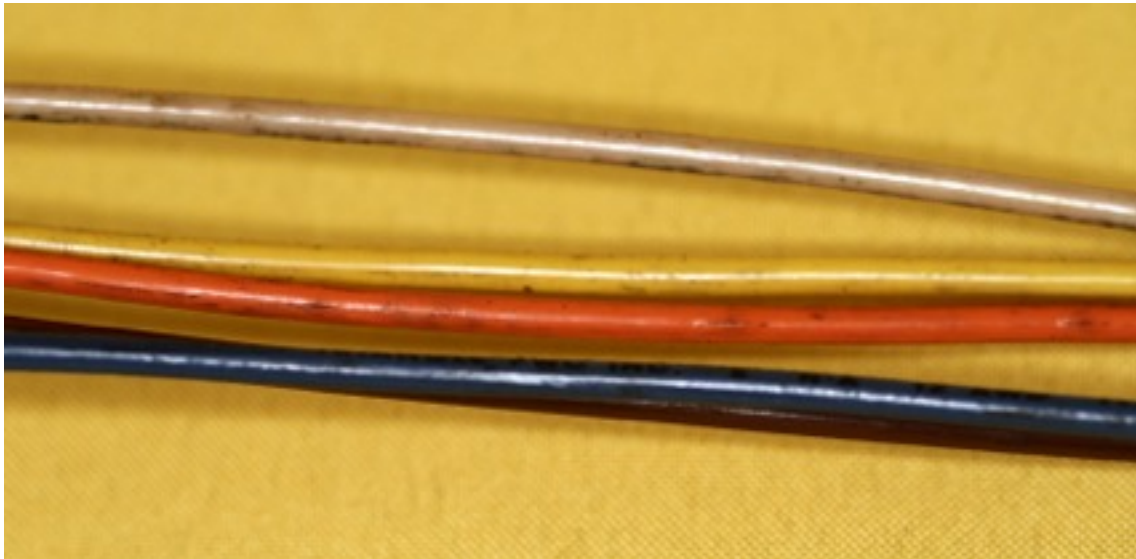
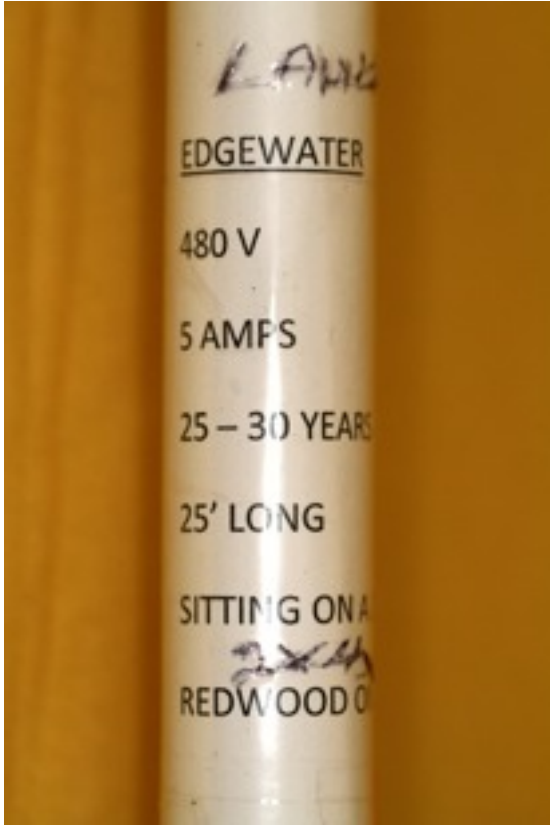






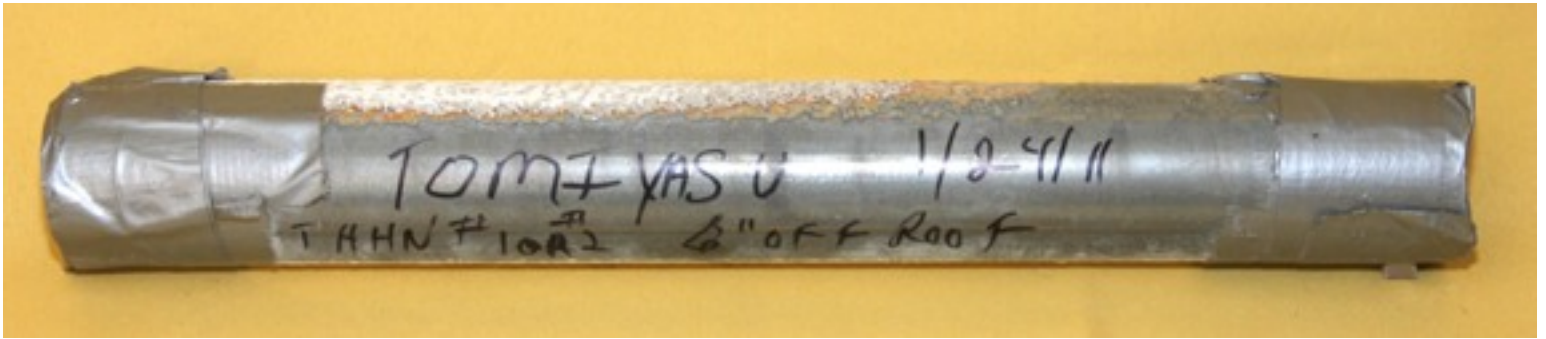
## Edgewater Hotel, Laughlin, NV

Conduit  $\frac{3}{4}$ " installed approximately  $1\frac{1}{2}$ " above the roof on 2x4 redwood blocks laid flat. Installation age over 25 years, load was 480 volts, 5 amp load. Total length of run 25".



# Tomiyaso Elementary School, Las Vegas, NV

Trade size 1 1/2 EMT with 3 2 AWG THHN and a 6 AWG THHN installed 6" above the roof. This installation had been in place for about 8 years.





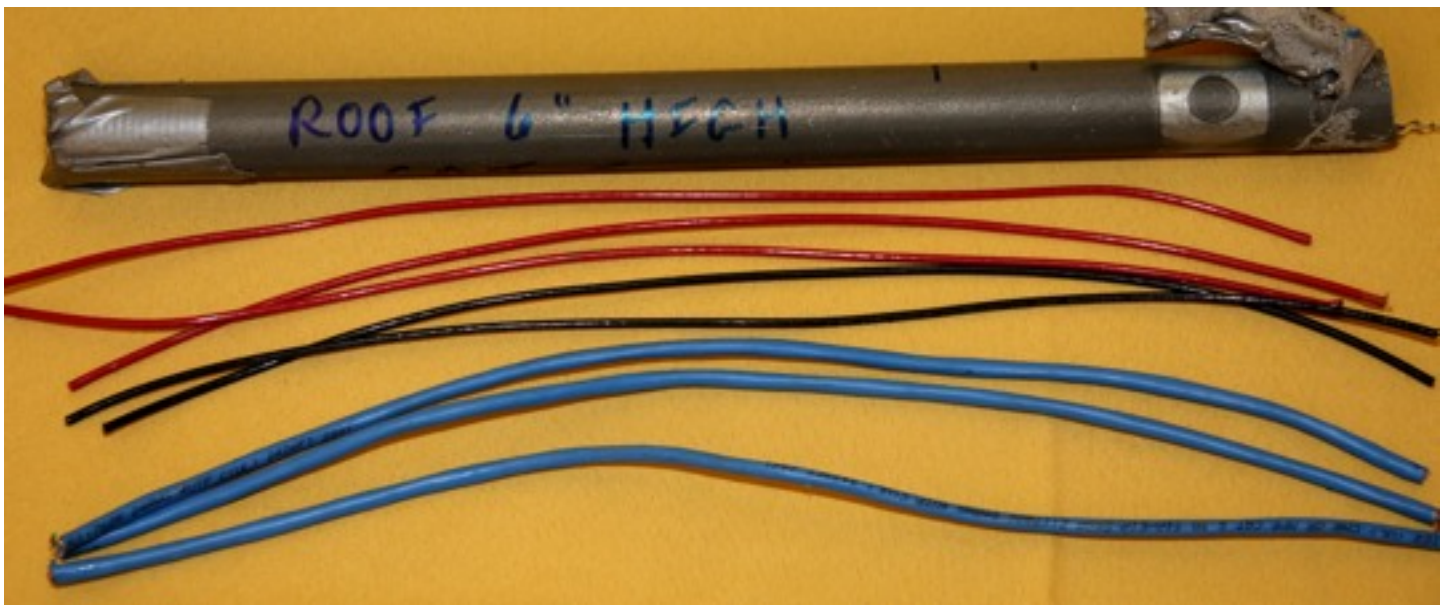


## Heard Elementary School, Las Vegas, NV

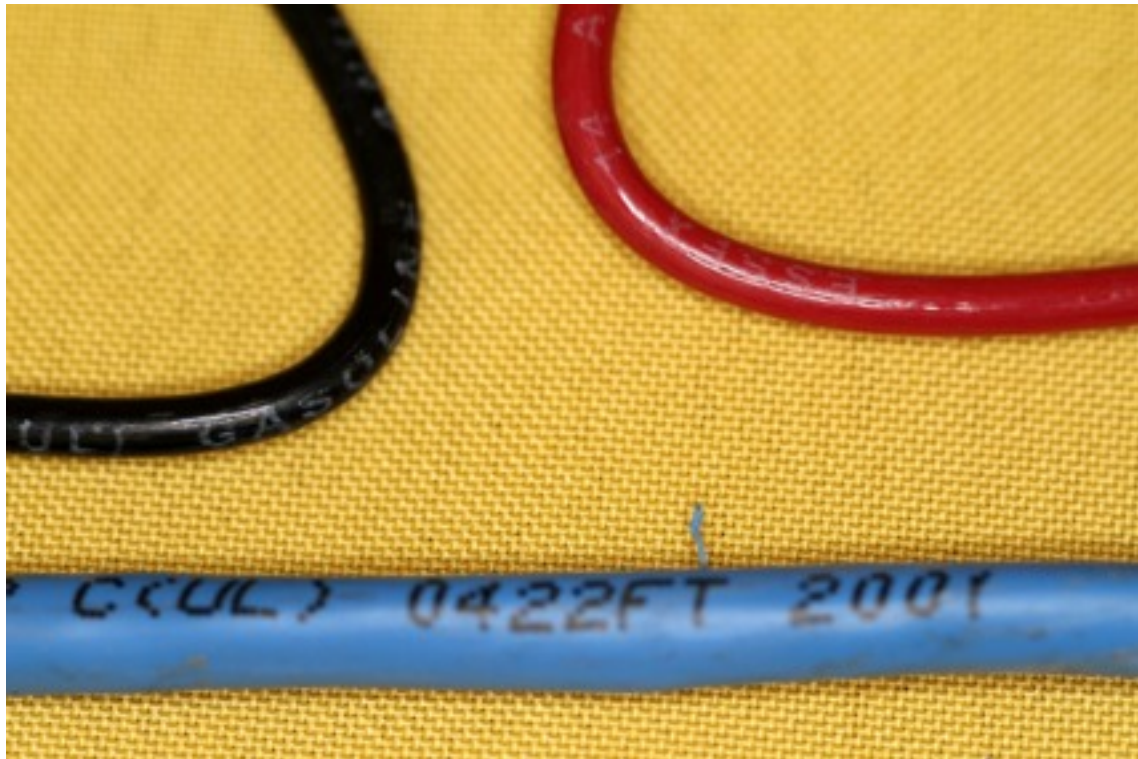
During recent remodel work performed at the school, sections of conduit with conductors still inside were harvested. The installations have been in place for close to 10 years.

### Sample 1

Trade size 3/4" conduit supported 6" above the roof containing 3 Cat 5 cables and 6 14 AWG THHN conductors.







Sample 2

Trade size 3/4" EMT with a single 25 pair phone cable. Installed 3" above the roof surface.

