



DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER)
 BOARD AND CODE ADMINISTRATION DIVISION
NOTICE OF ACCEPTANCE (NOA)

MIAMI-DADE COUNTY
 PRODUCT CONTROL SECTION
 11805 SW 26 Street, Room 208
 Miami, Florida 33175-2474
 T (786) 315-2590 F (786) 315-2599
www.miamidade.gov/economy

Elco Construction Products, Div. of Infastech
 1304 Kerr Drive
 Decorah, IA 52101

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County RER-Product Control Section to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Section (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. RER reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Section that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the Florida Building Code, including the High Velocity Hurricane Zone.

DESCRIPTION: Ultracon Concrete & Masonry Anchors

APPROVAL DOCUMENT: Drawing No. 14-1821, titled "Elco Ultracon Concrete and Masonry Anchors", sheets 1 through 3 of 3, dated 03/07/2011, with last revision dated 09/29/2014, prepared by Engineering Express, signed and sealed by Frank L. Bennardo, P.E., bearing the Miami-Dade County Product Control renewal stamp with the Notice of Acceptance number and expiration date by the Miami-Dade County Product Control Section.

MISSILE IMPACT RATING: None

LABELING: Each box/container of the smallest quantity shall bear a label with the manufacturer's name or logo, city, state and following statement: "Miami-Dade County Product Control Approved", unless otherwise noted.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA **renews NOA # 15-0226.08** and consists of this page 1, evidence pages E-1 and E-2, as well as approval document mentioned above.

The submitted documentation was reviewed by **Carlos M. Utrera, P.E.**



[Handwritten Signature]
 05/16/2016

NOA No: 16-0216.04
 Expiration Date: January 8, 2021
 Approval Date: May 26, 2016
 Page 1

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

A. DRAWINGS “Submitted under NOA # 15-0226.08”

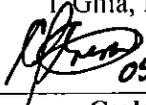
1. Drawing No. 14-1821, titled “Elco Ultracon Concrete and Masonry Anchors”, sheets 1 through 3 of 3, dated 03/07/2011, with last revision dated 09/29/2014, prepared by Engineering Express, signed and sealed by Frank L. Bennardo, P.E.

B. TESTS “Submitted under NOA # 11-0406.01”

	<u>Test Report No.</u>	<u>Standard</u>	<u>Date</u>	<u>Signature</u>
1.	HETI-08-A402	ASTM E488-96	08/12/08	Candido F. Font, P.E.
2.	HETI-08-A406	ASTM E488-96	08/12/08	Candido F. Font, P.E.
3.	HETI-08-A407	ASTM E488-96	08/12/08	Candido F. Font, P.E.
4.	HETI-08-A410	ASTM E488-96	08/20/08	Candido F. Font, P.E.
5.	HETI-08-A412	ASTM E488-96	08/20/08	Candido F. Font, P.E.
6.	HETI-08-A414	ASTM E488-96	08/20/08	Candido F. Font, P.E.
7.	HETI-08-A416	ASTM E488-96	08/20/08	Candido F. Font, P.E.
8.	HETI-08-A417	ASTM E488-96	08/20/08	Candido F. Font, P.E.
9.	HETI-08-A428	ASTM E488-96	08/22/08	Candido F. Font, P.E.
10.	HETI-08-A429	ASTM E488-96	08/22/08	Candido F. Font, P.E.
11.	HETI-08-A430	ASTM E488-96	08/22/08	Candido F. Font, P.E.
12.	HETI-08-A432	ASTM E488-96	08/20/08	Candido F. Font, P.E.
13.	HETI-08-A434	ASTM E488-96	08/20/08	Candido F. Font, P.E.
14.	HETI-08-A438	ASTM E488-96	08/22/08	Candido F. Font, P.E.
15.	HETI-08-A442	ASTM E488-96	08/22/08	Candido F. Font, P.E.
16.	HETI-08-C104	ASTM C39-05	09/11/08	Candido F. Font, P.E.
17.	HETI-08C107B	ASTM C39-05	09/11/08	Candido F. Font, P.E.

“Submitted under NOA # 07-0425.01”

1.	HETI-01-5013	ASTM E488	06/01/01	H. M. Medina, P.E.
2.	HETI-01-5069	ASTM E488	09/17/01	H. M. Medina, P.E.
3.	HETI-03-C600	ASTM C39	08/13/03	R. D. Seda, P.E.
4.	HETI-03-C601	ASTM C39	12/19/03	R. D. Seda, P.E.
5.	HETI-03-1127	ASTM E488	12/02/03	R. D. Seda, P.E.
6.	HETI-03-1136	ASTM E488	12/02/03	R. D. Seda, P.E.
7.	HETI-03-1153	ASTM E488	12/23/03	R. D. Seda, P.E.
8.	HETI-03-1159	ASTM E488	12/02/03	R. D. Seda, P.E.
9.	HETI-03-1161	ASTM E488	12/02/03	R. D. Seda, P.E.
10.	HETI-03-1164	ASTM E488	12/12/03	R. D. Seda, P.E.
11.	HETI-03-1165	ASTM E488	12/12/03	R. D. Seda, P.E.
12.	HETI-03-1173	ASTM E488	12/12/03	R. D. Seda, P.E.
13.	HETI-03-1175	ASTM E488	12/12/03	R. D. Seda, P.E.
14.	HETI-03-1177	ASTM E488	12/12/03	R. D. Seda, P.E.
15.	HETI-05-1501	ASTM E488	08/31/05	I. Ghia, P.E.

 05/16/2016

Carlos M. Utrera, P.E.
Product Control Examiner
NOA No 16-0216.04

Expiration Date: January 8, 2021
Approval Date: May 26, 2016

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

C. CALCULATIONS *"Submitted under NOA # 11-0406.01"*

1. Anchor allowable load calculations, prepared by Engineering Express, dated 11/16/2011, signed and sealed by Frank L. Bennardo, P.E.

D. MATERIAL CERTIFICATIONS

1. None.

E. QUALITY ASSURANCE

1. Miami-Dade Department of Regulatory and Economic Resources (RER)

F. STATEMENTS *"Submitted under NOA # 15-0226.08"*

1. Statement letter of code conformance to the 5th edition (2014) FBC issued by Engineering Express, dated 09/29/2014, signed and sealed by Frank L. Bennardo, P.E.

"Submitted under NOA # 11-0406.01"

2. Statement letter of code conformance to 2007 and 2010 FBC, issued by Engineering Express, dated 11/10/2011, signed and sealed by Frank L. Bennardo, P.E.
3. Statement letter of no financial interest issued by Engineering Express, dated 04/04/2011, signed and sealed by Frank L. Bennardo, P.E.



05/16/2016

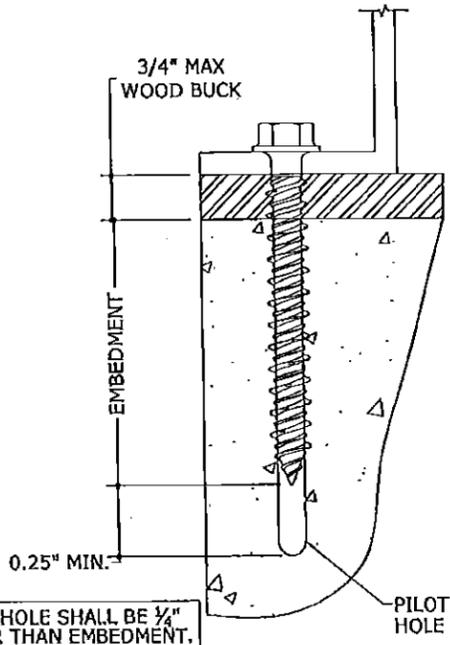
Carlos M. Utrera, P.E.
Product Control Examiner
NOA No 16-0216.04
Expiration Date: January 8, 2021
Approval Date: May 26, 2016

ELCO ULTRACON

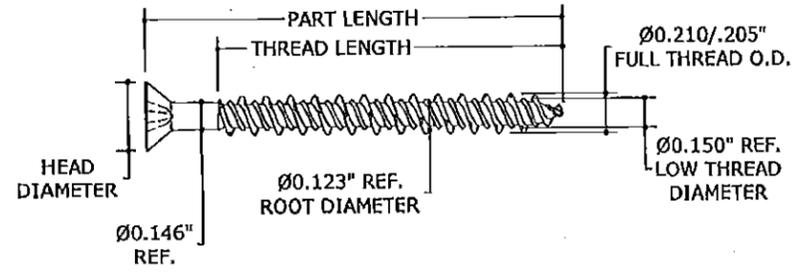
CONCRETE & MASONRY ANCHORS

GENERAL NOTES:

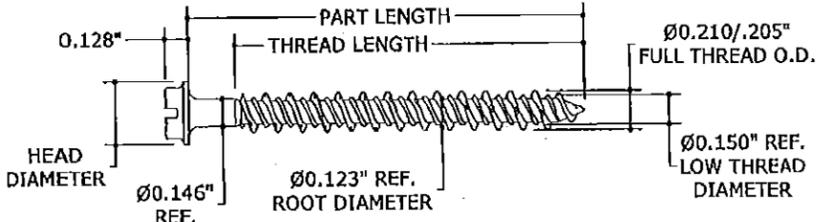
- THIS PRODUCT HAS BEEN DESIGNED & TESTED IN ACCORDANCE WITH THE STRUCTURAL PROVISIONS OF THE 2010 FLORIDA BUILDING CODE AND THE FBC FIFTH EDITION (2014) FOR USE WITHIN AND OUTSIDE THE HIGH VELOCITY HURRICANE ZONE.
- ANCHOR INSTALLATION SHALL BE MADE IN ACCORDANCE WITH MANUFACTURER'S PUBLISHED INSTALLATION INSTRUCTIONS AND THIS NOTICE OF ACCEPTANCE.
- CONCRETE SHALL CONFORM TO ACI 301 SPECIFICATIONS, WITH STRENGTH PROPERTIES AS SPECIFIED HEREIN. HOLLOW AND GROUT-FILLED CONCRETE BLOCK SHALL CONFORM TO ASTM C-90.
- ELCO ULTRACON IS A CORROSION RESISTANT MASONRY AND CONCRETE FASTENER FINISHED WITH STALGARD COATING.
- HEAD MARKINGS: ELCO ULTRACON MASONRY FASTENERS ARE IDENTIFIED WITH EITHER THE ELCO LOGO, OR FOUR DOTS IN THE CASE OF THE PHILLIPS PAN HEAD. TRIMFIT FASTENERS HAVE THE ELCO LOGO ALONG WITH 1 DOT (1/4" DIAMETER) OR 2 DOTS (3/8" DIAMETER). 3/8" DIAMETER HEX WASHER HEAD ULTRACON FASTENERS HAVE ELCO LOGO AND "5" INDICATING THE 5/8" DIAMETER.
- ALLOWABLE LOAD SHOWN=ULTIMATE LOAD DIVIDED BY 4.0 FOR SOLID NON-CRACKED CONCRETE SUBSTRATES, 5.0 FOR HOLLOW BLOCK & GROUT FILLED BLOCK SUBSTRATES. NO ALLOWABLE STRESS INCREASE HAS BEEN USED IN PREPARATION OF THIS DOCUMENT.
- ANCHOR YIELD STRENGTH $F_y=155$ KSI, ANCHOR ULTIMATE STRENGTH $F_u=177$ KSI.
- ANCHOR EDGE DISTANCES, EMBEDMENTS, AND SPACINGS BELOW THOSE SHOWN IN DESIGN TABLES HEREIN ARE NOT ACCEPTABLE.
- ALLOWABLE LOAD CAPACITIES TO SUBSTRATES THAT ARE NOT SHOWN IN THE DESIGN TABLES LISTED HEREIN ARE OUTSIDE THE SCOPE OF THIS CERTIFICATION AND SHALL BE DETERMINED BY A LICENSED PROFESSIONAL ENGINEER.
- ANCHOR INSTALLATION SHALL BE MADE IN ACCORDANCE WITH THE MANUFACTURER'S PUBLISHED INSTALLATION INSTRUCTIONS AND THIS MIAMI-DADE COUNTY, NOTICE OF ACCEPTANCE.
- DRILL HOLES AT LEAST 1/4" DEEPER THAN THE ULTRACON EMBEDMENT.
- SEE DRILL BIT TABLE TO DETERMINE APPROPRIATE DRILL BIT DIAMETER CORRESPONDING TO FASTENER DIAMETER.
- CLEAN HOLES OF DEBRIS AND DUST BEFORE INSTALLATION OF ANCHOR.
- ANCHORS SHALL NOT BE INSTALLED BEFORE THE CONCRETE HAS DEVELOPED ITS DESIGN STRENGTH.
- ANCHORS SHALL NOT BE INSTALLED IN CRACKED CONCRETED SUBSTRATES, AS DEFINED IN ACI 355.2.
- ANCHOR VALUES LISTED HEREIN ARE DETERMINED THROUGH TESTING REPORT DATA AND CHECKED FOR CONSISTENCY WITH EACH TEST PERFORMED.
- REFERENCE THE FOLLOWING TEST REPORTS:
 HURRICANE ENGINEERING & TESTING, INC.
 #HETI-01-5013 (06/01/2001) & ADDENDUM (06/21/02)
 #HETI-01-5069 (09/17/2001)
 #HETI-03-1127 (12/02/2003)
 #HETI-03-1136 (12/02/2003)
 #HETI-03-1153 (12/23/2003)
 #HETI-03-1159 (12/02/2003)
 #HETI-03-1161 (12/02/2003)
 #HETI-03-1164 (12/12/2003)
 #HETI-03-1165 (12/12/2003)
 #HETI-03-1173 (12/12/2003)
 #HETI-03-1175 (12/12/2003)
 #HETI-03-1177 (12/12/2003)
 #HETI-03-C600 (08/13/2003)
 #HETI-03-C601 (12/19/2003)
 #HETI-05-1501 (01/21/2011)
 #HETI-08-A402 (08/12/2008)
 #HETI-08-A405 (08/12/2008)
 #HETI-08-A407 (08/12/2008)
 #HETI-08-A410 (08/20/2008)
 #HETI-08-A412 (08/20/2008)
 #HETI-08-A414 (08/20/2008)
 #HETI-08-A416 (08/20/2008)
 #HETI-08-A417 (08/20/2008)
 #HETI-08-A428 (08/22/2008)
 #HETI-08-A429 (08/22/2008)
 #HETI-08-A430 (08/22/2008)
 #HETI-08-A432 (08/20/2008)
 #HETI-08-A434 (08/20/2008)
 #HETI-08-A438 (08/22/2008)
 #HETI-08-A442 (08/22/2008)
 #HETI-08-C104 (09/11/2008)
 #HETI-08C107B (09/11/2008)



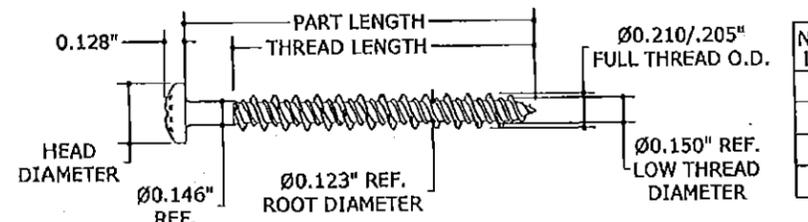
A TYPICAL SECTION
1 1'-0" = 1'-0"



C 3/16" PHILIPS FLAT HEAD (PFH)
1 1'-0" = 1'-0" SIDE VIEW



D 3/16" SLOTTED HEX WASHER HEAD (HWH)
1 1'-0" = 1'-0" SIDE VIEW

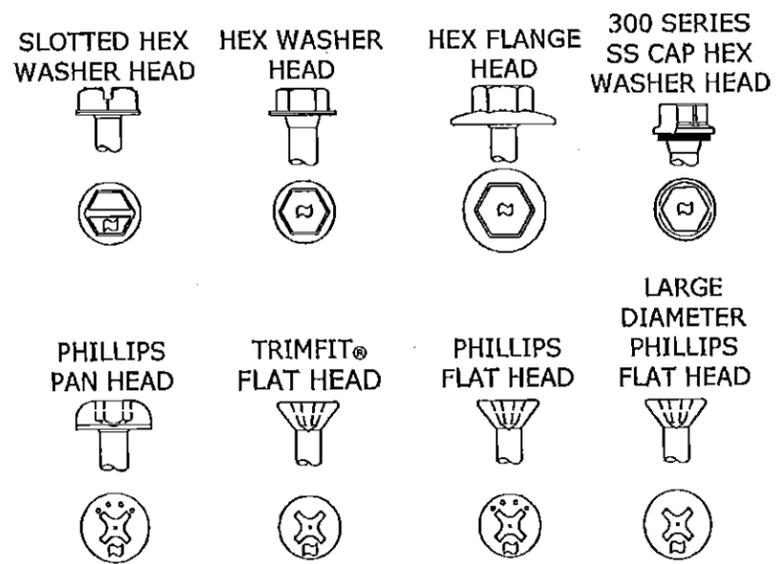


E 3/16" PHILLIPS PAN HEAD (PPH)
1 1'-0" = 1'-0" SIDE VIEW

NOMINAL LENGTH	PART LENGTH	THREAD LENGTH
1-1/4"	1.250"	0.875"
1-3/4"	1.750"	1.313"
2-1/4"	2.250"	1.750"
2-3/4"	2.750"	1.750"
3-1/4"	3.250"	1.750"
3-3/4"	3.750"	1.750"
4"	4.000"	1.750"

NOMINAL LENGTH	PART LENGTH	THREAD LENGTH
1-1/4"	1.250"	1.000"
1-3/4"	1.750"	1.500"
2-1/4"	2.250"	1.750"
2-3/4"	2.750"	1.750"
3-1/4"	3.250"	1.750"
3-3/4"	3.750"	1.750"
4"	4.000"	1.750"

NOMINAL LENGTH	PART LENGTH	THREAD LENGTH
1-3/4"	1.750"	1.500"
2-1/4"	2.250"	1.750"
2-3/4"	2.750"	1.750"
3-1/4"	3.250"	2.000"



B HEAD STYLES
1 N.T.S.

FRANK L. BERNARDO, P.E.
 LICENSE #1006
 09/30/2014
 No. 46549
 STATE OF FLORIDA
 PROFESSIONAL ENGINEER
 EXPRESS
 160 SW 12th AVENUE, #1006
 DEERFIELD BEACH, FL 33442
 Ph: (954) 354-0660 FAX: (954) 354-0643
 WWW.ENGGEXP.COM
 CERT. OF AUTH. #885
 A FRANK L. BERNARDO, P.E., INC. INDEPENDENT

ELCO
 ELCO CONSTRUCTION PRODUCTS, DIV. OF INFASTECH
 1304 KERR DRIVE
 DECORAH, IA 52101
 ULTRACON CONCRETE ANCHORS
 MIAMI-DADE NOTICE OF ACCEPTANCE

REMARKS	DRWN	CHKD	DATE
INIT ISSUE	CSL	KL	08/07/11
REV. PER BNC	CSL	KL	10/20/11
REV. FOR 2010 FBC	CSL	KL	11/10/11
ADDITIONAL COMMENTS	KL	FLB	07/20/12
2014 FBC	RYAN	TSB	08/29/14

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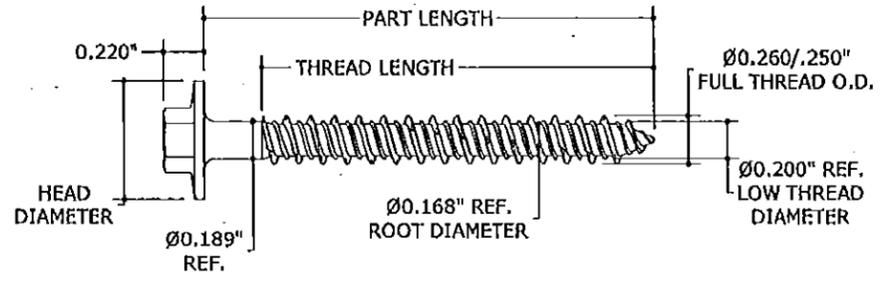
PRODUCT RENEWED
 as complying with the Florida Building Code
 Acceptance No. 16-0216.04
 Expiration Date 01/08/2021
 By: *[Signature]*
 Miami Dade Product Control

PRODUCT REVISED
 as complying with the Florida Building Code
 Acceptance No. 15-0226.08
 Expiration Date 01/08/2021
 By: *[Signature]*
 Miami Dade Product Control

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 SCALE: _____
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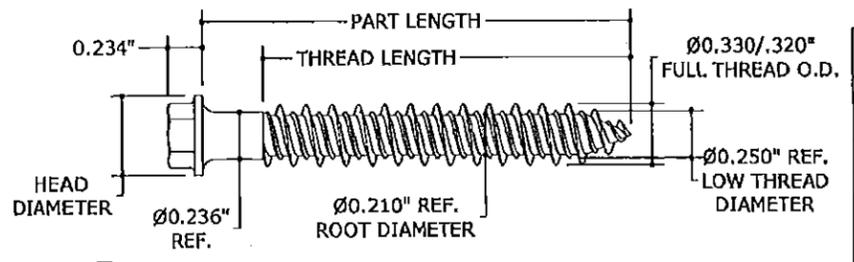
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 09/30/2014 - 9:37am
 nclm

09/30/2014 - 9:37 am rtkn V:\Projects\14-1821 ELCO NDA Renewal-Ultrason Conc and Masonry Anchor\WP\14-1821a Renew 11-0405_01 Ultrason Concrete Anchor (NOA) FBC 2014.dwg



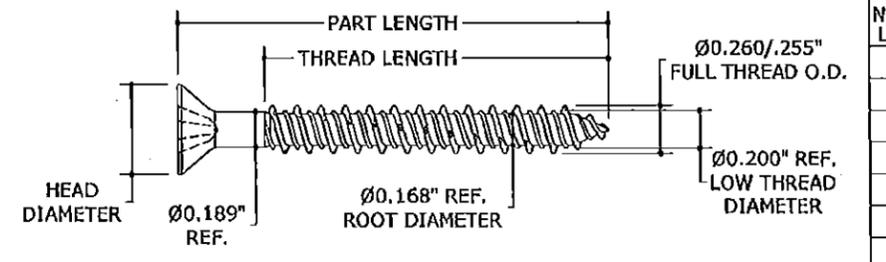
A 1/4" HEX FLANGE HEAD (HFH)
 2 1'-0" = 1'-0" SIDE VIEW

NOMINAL LENGTH	PART LENGTH	THREAD LENGTH
1-3/4"	1.750"	1.500"
2-1/4"	2.250"	1.750"
2-3/4"	2.750"	1.750"
3-1/4"	3.250"	1.750"



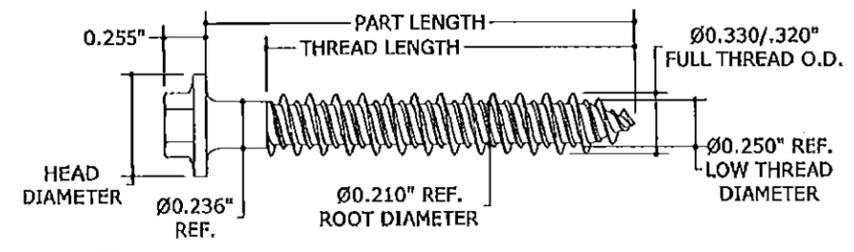
E 5/16" HEX WASHER HEAD (HWH)
 2 1'-0" = 1'-0" SIDE VIEW

NOMINAL LENGTH	PART LENGTH	THREAD LENGTH
2"	2.000"	1.750"
2-1/4"	2.250"	2.000"
2-3/4"	2.750"	2.000"
3"	3.000"	2.000"
3-1/4"	3.250"	2.000"
4"	4.000"	2.000"



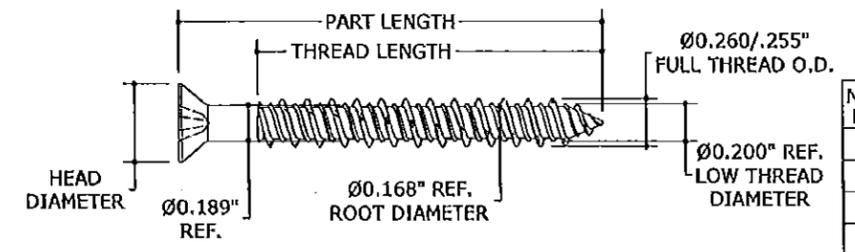
B 1/4" PHILLIPS FLAT HEAD (PFH)
 2 1'-0" = 1'-0" SIDE VIEW

NOMINAL LENGTH	PART LENGTH	THREAD LENGTH
1-1/4"	1.250"	1.000"
1-3/4"	1.750"	1.500"
2-1/4"	2.250"	1.750"
2-3/4"	2.750"	1.750"
3-1/4"	3.250"	1.750"
3-3/4"	3.750"	1.750"
4"	4.000"	1.750"
5"	5.000"	1.750"
6"	6.000"	1.750"



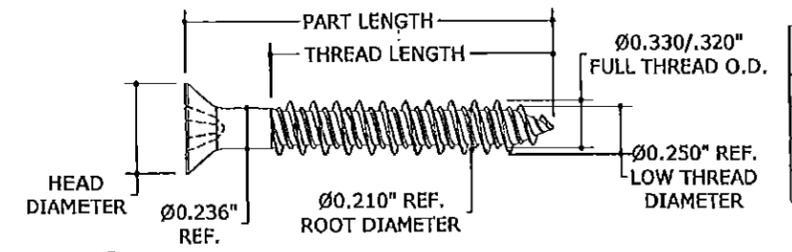
F 5/16" HEX FLANGE HEAD (HFH)
 2 1'-0" = 1'-0" SIDE VIEW

NOMINAL LENGTH	PART LENGTH	THREAD LENGTH
2"	2.000"	1.750"
2-1/4"	2.250"	2.000"
2-3/4"	2.750"	2.000"
3"	3.000"	2.000"
3-1/4"	3.250"	2.000"
4"	4.000"	2.000"



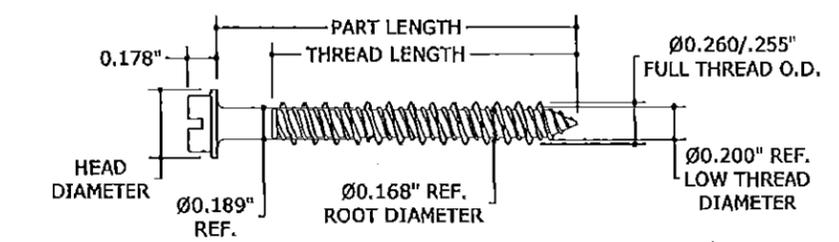
C 1/4" TRIMFIT
 2 1'-0" = 1'-0" SIDE VIEW

NOMINAL LENGTH	PART LENGTH	THREAD LENGTH
1-3/4"	1.750"	1.313"
2-3/4"	2.750"	1.750"
3-1/4"	3.250"	1.750"
3-3/4"	3.750"	1.750"



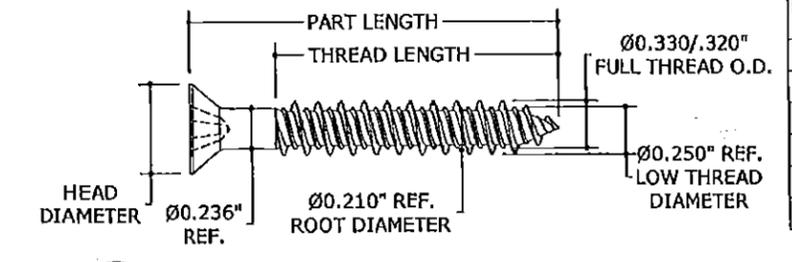
G 5/16" PHILLIPS FLAT HEAD (PFH)
 2 1'-0" = 1'-0" SIDE VIEW

NOMINAL LENGTH	PART LENGTH	THREAD LENGTH
3"	3.000"	2.000"
4"	4.000"	2.000"
5"	5.000"	2.000"
6"	6.000"	2.000"



D 1/4" SLOTTED HEX WASHER HEAD (HWH)
 2 1'-0" = 1'-0" SIDE VIEW

NOMINAL LENGTH	PART LENGTH	THREAD LENGTH
1-1/4"	1.250"	1.000"
1-3/4"	1.750"	1.500"
2-1/4"	2.250"	1.750"
2-3/4"	2.750"	1.750"
3-1/4"	3.250"	1.750"
3-3/4"	3.750"	1.750"
4"	4.000"	1.750"
5"	5.000"	1.750"
6"	6.000"	1.750"



H 5/16" TRIMFIT
 2 1'-0" = 1'-0" SIDE VIEW

NOMINAL LENGTH	PART LENGTH	THREAD LENGTH
2"	2.250"	1.750"
2-3/4"	2.750"	2.000"
3-1/4"	3.250"	2.000"
3-3/4"	3.750"	2.000"
4"	4.000"	2.000"
5"	5.000"	2.000"

PRODUCT RENEWED
 as complying with the Florida Building Code
 Acceptance No 16-0216-04
 Expiration Date 01/08/2021
 By *[Signature]*
 Miami Dade Product Control

PRODUCT REVISED
 as complying with the Florida Building Code
 Acceptance No 15-0226-08
 Expiration Date 01/08/2021
 By *[Signature]*
 Miami Dade Product Control

FRANK L. BERNARDO
 LICENSE # 16666
 No. 46549
 09/30/2014
 ENGINEERING EXPRESS, P.C.
 STATE OF FLORIDA
 160 SW 12th AVENUE, #106
 DEERFIELD BEACH, FL 33442
 PH: (954) 354-0660 FAX: (954) 354-0493
 WWW.ENGPX.COM
 CERT. OF AUTH. #9885
 A. FRANK L. BERNARDO, P.E., INC. 10650 VETERAN

ELCO
 ELCO CONSTRUCTION PRODUCTS, DIV. OF INFASTECH
 1304 KERR DRIVE
 DECORAH, IA 52101
 ULTRACON CONCRETE ANCHORS
 MIAMI-DADE NOTICE OF ACCEPTANCE

REMARKS	DRWN	CHKD	DATE
INIT ISSUE	CSL	KL	03/07/11
REV. PER BNC	CSL	KL	10/20/11
REV. FOR 2010 FBC	CSL	KL	11/10/11
AUT. REVIEWER COMMENTS	KL	FLB	01/30/12
2014 FBC	FRVN	TSB	03/29/14

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