



**MIAMI-DADE COUNTY**  
**BUILDING AND NEIGHBORHOOD COMPLIANCE DEPARTMENT (BNC)**  
**BOARD AND CODE ADMINISTRATION DIVISION**

**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/building](http://www.miamidade.gov/building)

**NOTICE OF ACCEPTANCE (NOA)**

**DuCool USA, Inc.**  
**20900 NE 30<sup>th</sup> Avenue, Suite 715**  
**Aventura, Florida 33180**

**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 BNC-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. BNC 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 High Velocity Hurricane Zone of the Florida Building Code.

**DESCRIPTION: Steel Roof-Curb for Rooftop Units**

**APPROVAL DOCUMENT:** Drawing No. 10-DUC-0001, titled "Rooftop curb units", sheets 1 through 5 of 5, prepared by Engineering Express, dated October 22, 2010, last revision dated May 27, 2011, signed and sealed by Frank L. Bennardo, P.E., bearing the Miami-Dade County Product Control Approval stamp with the Notice of Acceptance number and the approval date by the Miami-Dade County Product Control Section.

**MISSILE IMPACT RATING: None**

**LABELING:** Each roof-curb shall bear a permanent label with the manufacturer's name or logo, North Miami Beach, FL, and the following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

**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 consists of this page 1, evidence submitted page E-1 as well as approval document mentioned above. The submitted documentation was reviewed by **Helmy A. Makar, P.E., M.S.**



*Helmy A. Makar*  
 06/23/2011

**NOA No. 10-1123.01**  
**Expiration Date: 06/23/2016**  
**Approval Date: 06/23/2011**

**NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED**

**A. DRAWINGS**

1. *Drawing No. 10-DUC-0001, titled " Rooftop curb units ", sheets 1 through 5 of 5, prepared by Engineering Express, dated October 22, 2010, last revision dated May 27, 2011, signed and sealed by Frank L. Bennardo, P.E.*

**B. TESTS**

1. *None.*

**C. CALCULATIONS**

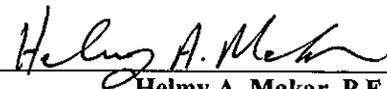
1. *Calculation titled " Roof Top Curb Units ", dated November 02, 2010, sheets 1 through 35 of 35, signed and sealed by Frank L. Bennardo, P.E.*

**D. QUALITY ASSURANCE**

1. *By Miami-Dade County Building and Neighborhood Compliance Department.*

**E. MATERIAL CERTIFICATIONS**

1. *None.*



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**Helmy A. Makar, P.E., M.S.**  
**BNC, Product Control Unit Supervisor**  
**NOA No. 10-1123.01**  
**Expiration Date: 06/23/2016**  
**Approval Date: 06/23/2011**

# DuCool USA, Inc.

## ROOFTOP CURB UNITS

FRANK L. BENNARDO, P.E.  
#RE0046549

05/27/2011

**MAXIMUM DESIGN CAPACITY:**  
**+65 PSF / -65 PSF**

### DESIGN NOTES

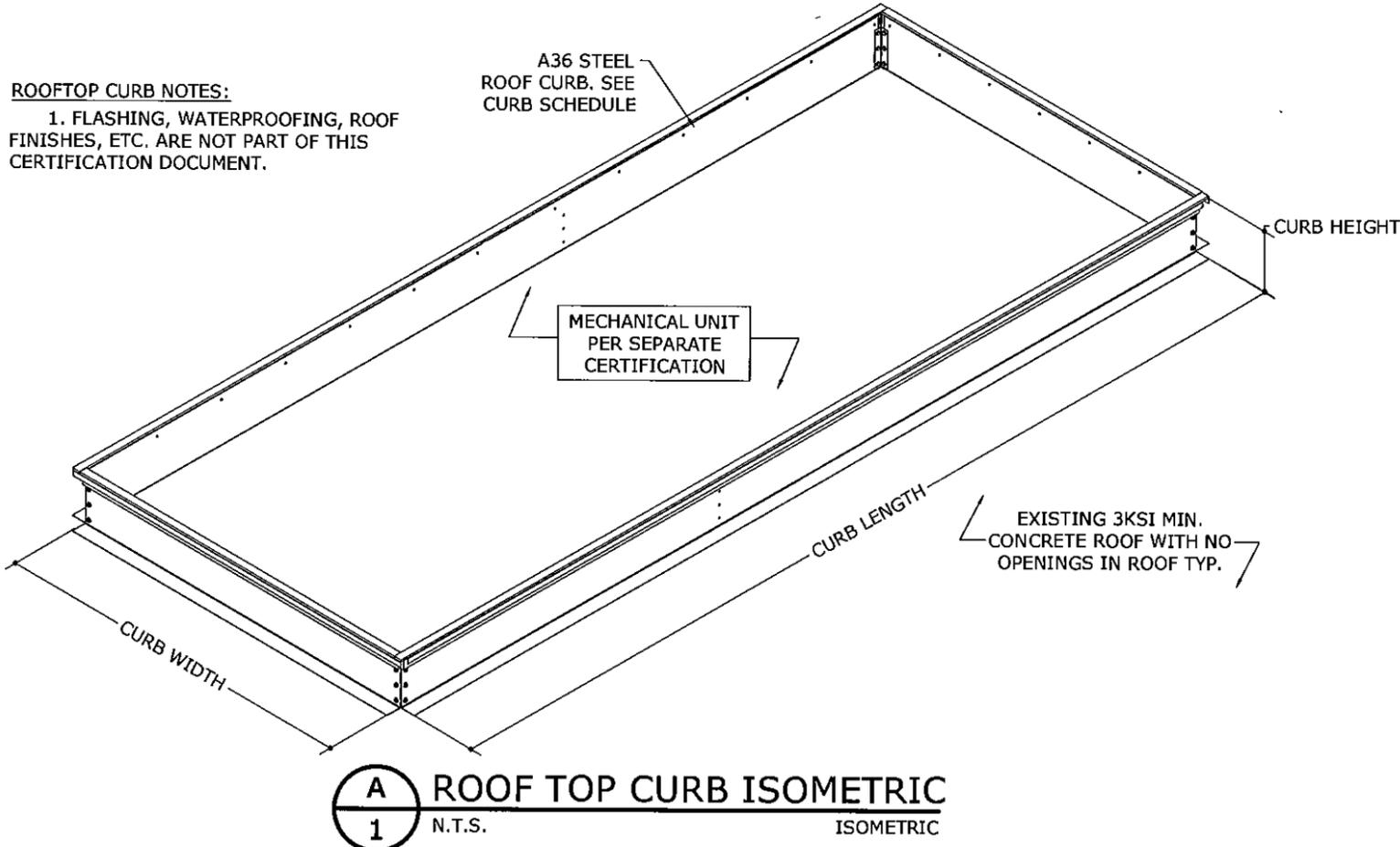
DESIGN PRESSURE CAPACITY: +65PSF/-65PSF  
(POSITIVE AND NEGATIVE DESIGN PRESSURES CALCULATED FOR USE WITH THIS SYSTEM SHALL BE DETERMINED BY OTHERS ON A JOB-SPECIFIC BASIS IN ACCORDANCE WITH THE GOVERNING CODE. SITE SPECIFIC PRESSURES SHALL BE LESS THAN OR EQUAL TO THE LISTED POSITIVE OR NEGATIVE DESIGN PRESSURE VALUES FOR THE PRODUCT AS SHOWN.)

### GENERAL NOTES

- THIS SYSTEM HAS BEEN DESIGNED AND SHALL BE FABRICATED IN ACCORDANCE WITH THE REQUIREMENTS OF THE 2007 FLORIDA BUILDING CODE WITH 2009 SUPPLEMENTS.
- MAXIMUM DIMENSIONS AND WEIGHT OF MECHANICAL UNIT SHALL CONFORM TO SPECIFICATIONS STATED HEREIN.
- ALL FASTENERS TO BE #10 X 3/4" OR GREATER SAE GRADE 5, ASTM A 449 STAINLESS STEEL. WEDGE BOLTS REFERRED TO HEREIN SHALL BE POWERS BRAND, TO 3 KSI MIN CONCRETE.
- ALL MEMBERS SHALL BE ASTM A36 FOR SHAPES OR A653 FOR SHEET STEEL (GRADE 33 MIN) WITH Fy = 36 KSI OR BETTER.
- THE CONTRACTOR IS RESPONSIBLE TO INSULATE ALL MEMBERS TO PREVENT ELECTROLYSIS.
- ELECTRICAL GROUND, WHEN REQUIRED, TO BE DESIGNED & INSTALLED BY OTHERS. ALL MECHANICAL SPECIFICATIONS (CLEAR SPACE, TONNAGE, ETC.) SHALL BE AS PER MANUFACTURER RECOMMENDATIONS AND ARE THE EXPRESS RESPONSIBILITY OF THE CONTRACTOR.
- ENGINEER SEAL AFFIXED HERETO VALIDATES STRUCTURAL DESIGN AS SHOWN ONLY. USE OF THIS SPECIFICATION BY CONTRACTOR, et. al. INDEMNIFIES & SAVES HARMLESS THIS ENGINEER FOR ALL COST & DAMAGES INCLUDING LEGAL FEES & APPELLATE FEES RESULTING FROM MATERIAL FABRICATION, SYSTEM ERECTION, CONSTRUCTION PRACTICES BEYOND THAT WHICH IS CALLED FOR BY LOCAL, STATE, & FEDERAL CODES & FROM DEVIATIONS OF THIS PLAN.
- THE ARCHITECT/ENGINEER OF RECORD SHALL BE RESPONSIBLE FOR THE INTEGRITY OF ALL SUPPORTING SURFACES TO THIS DESIGN WHICH SHALL BE COORDINATED BY THE PERMITTING CONTRACTOR.
- THE SYSTEM DETAILED HEREIN IS GENERIC AND DOES NOT PROVIDE INFORMATION FOR A SPECIFIC SITE. FOR SITE CONDITIONS DIFFERENT FROM THE CONDITIONS DETAILED HEREIN, A LICENSED ENGINEER OR REGISTERED ARCHITECT SHALL PREPARE SITE-SPECIFIC DOCUMENTS IN CONJUNCTION WITH THIS DOCUMENT.
- EXCEPT AS EXPRESSLY PROVIDED HEREIN, NO ADDITIONAL CERTIFICATIONS OR AFFIRMATIONS ARE INTENDED.
- ALL WELDING MUST BE DONE BY AN AWS CERTIFIED WELDER OR SHALL CONFORM TO AISC STEEL CONSTRUCTION MANUAL 13TH ED AS INSPECTED AND VERIFIED BY OTHERS. MIN. WELD IS 3/16" FULL FILLET WELD. WELDED CONNECTIONS SHALL UTILIZE E70 SERIES ELECTRODES.
- WATERTIGHTNESS OF EXISTING ROOF FINISH SHALL BE THE FULL RESPONSIBILITY OF THE INSTALLING CONTRACTOR, INCLUDING ROOF-TO-CURB FLASHING AS NEEDED. CONTRACTOR SHALL ENSURE THAT ANY REMOVED OR ALTERED WATERPROOFING MEMBRANE OF ROOFING SYSTEM IS RESTORED AFTER FABRICATION AND INSTALLATION OF STRUCTURE PROPOSED HEREIN. THIS ENGINEER IS NOT RESPONSIBLE FOR ANY WATERPROOFING OR LEAKAGE ISSUES WHICH MAY OCCUR AS WATERTIGHTNESS SHALL BE THE FULL RESPONSIBILITY OF THE INSTALLING CONTRACTOR.

#### ROOFTOP CURB NOTES:

- FLASHING, WATERPROOFING, ROOF FINISHES, ETC. ARE NOT PART OF THIS CERTIFICATION DOCUMENT.



**A** ROOF TOP CURB ISOMETRIC  
1 N.T.S. ISOMETRIC

### ROOFTOP CURB SCHEDULE:

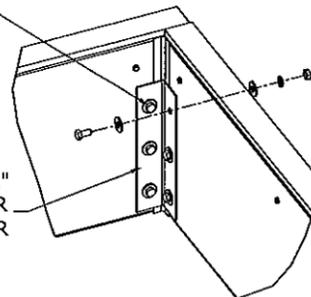
CURB TYPE	CURB DIMENSIONS			MECHANICAL UNIT (PER SEPARATE CERTIFICATION)			
	MAX HEIGHT	MAX WIDTH	MAX LENGTH	MAX HEIGHT	MAX WIDTH	MAX LENGTH	TYPICAL UNIT WEIGHT
HEAVY DUTY CURB	1'-0"	5'-6"	7'-4"	5'-3"	5'-6"	7'-4"	1520 LBS
STANDARD CURB	1'-0"	3'-3"	3'-10"	3'-8"	3'-2"	3'-10"	800 LBS

### ANCHOR SCHEDULE: (CURBS TO CONCRETE ROOF STRUCTURE)

- ALL CURBS TO BE SECURED TO 3 KSI MIN CONCRETE ROOF STRUCTURE WITH 1/2" Ø POWERS WEDGE BOLTS WITH 2" MIN EMBED INTO 3" MIN CONC. THICKNESS, 6" EDGE DISTANCE, WEDGE BOLTS SHALL BE SPACED AS SHOWN ON PLANS A/2 & A/3. WEDGE BOLTS SHALL NOT BE SPACED CLOSER THAN 6" TOGETHER TYP. (EXISTING CONCRETE STRUCTURAL INTEGRITY BY OTHERS)

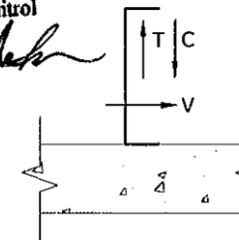
(3)-3/8" Ø THRU BOLTS TO EACH CURB (3 PER LEG, 6 TOTAL PER CORNER), WITH NUT, WASHERS, & LOCK-WASHER AS SHOWN

(1) 2"x2"x10"x0.062" STEEL BRACKET PER CORNER



**B** CURB CONNECTION DETAIL  
1 N.T.S. DETAIL

Approved as complying with the Florida Building Code  
Date 06/23/2011  
NOA# 10-1123-01  
Miami Dade Product Control  
By *Heinz A. Mehn*



ENGINEER OR ARCHITECT OF RECORD TO CONFIRM HOST CAPACITY TO RESIST REQUIRED REACTIONS BELOW. THE 12 GA CURB IS APPROXIMATELY 8LB/FT, 18 GA SHEET METAL IS APPROXIMATELY 2LB/FT^2

REQUIRED REACTIONS:  
T=C= 156 LBS/FT  
V= 132 LBS/FT

**C** CURB REACTIONS  
1 N.T.S. DETAIL

**ENGINEERING EXPRESS®**  
160 SW 12th AVENUE, #106  
DEERFIELD BEACH, FL 33442  
Ph: (954) 354-0660 Fax: (954) 354-0443  
WWW.ENGEXP.COM  
CERT OF AUTH #9985  
A FRANK L. BENNARDO, P.E., INC. INNOVATION

**DuCool USA, Inc.**  
19591 NE 10th Ave. Bay D  
N. Miami Beach, FL 33179  
PHONE: (305) 503-0446

Roof Top Curb Units  
MIAMI-DADE NOTICE OF ACCEPTANCE

DRWN	CHKD	DATE
CSL <td>FLB <td>10/22/10</td> </td>	FLB <td>10/22/10</td>	10/22/10
CSL <td>TSS <td>06/27/11</td> </td>	TSS <td>06/27/11</td>	06/27/11

10-DUC-0001  
SCALE: 1/2"  
PAGE DESCRIPTION: 02

05/27/2011

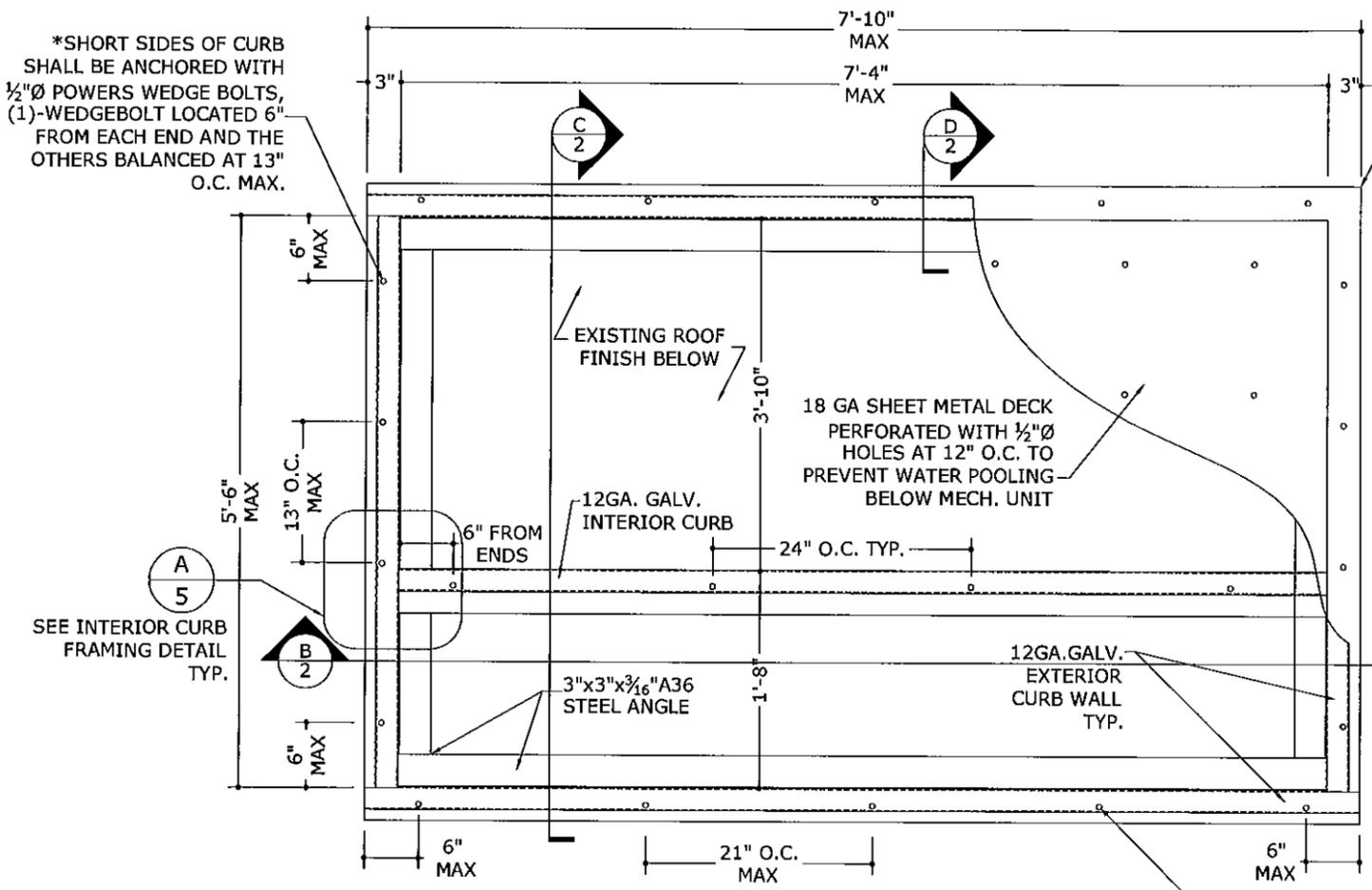
**ENGINEERING EXPRESS**  
160 SW 12th Avenue, #106  
Deerfield Beach, FL 33442  
Ph: (954) 354-0660 Fax: (954) 354-0443  
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CERT OF AUTH #9885  
A FRANK L. BENNARDO, P.E., INC. INNOVATION

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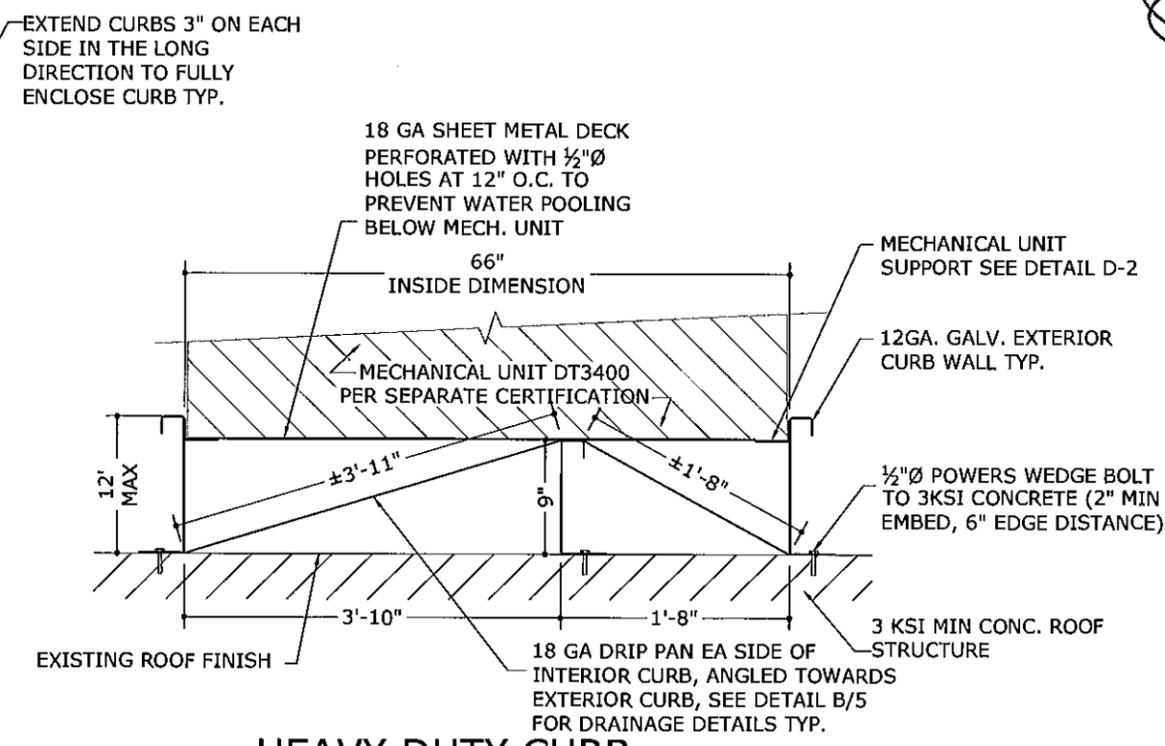
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INIT ISSUE	10/22/10	CSL	FLB
ADDRESS BNC COMMENTS	05/27/11	CSL	TSB

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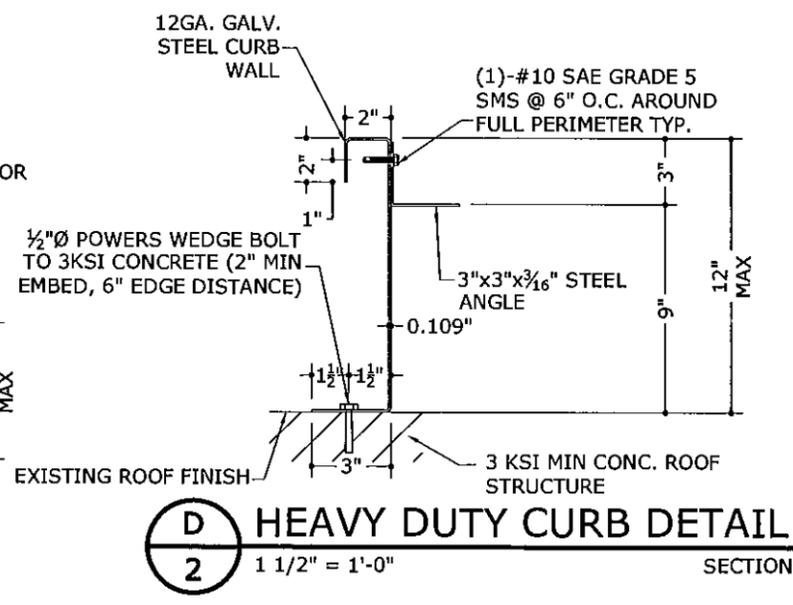
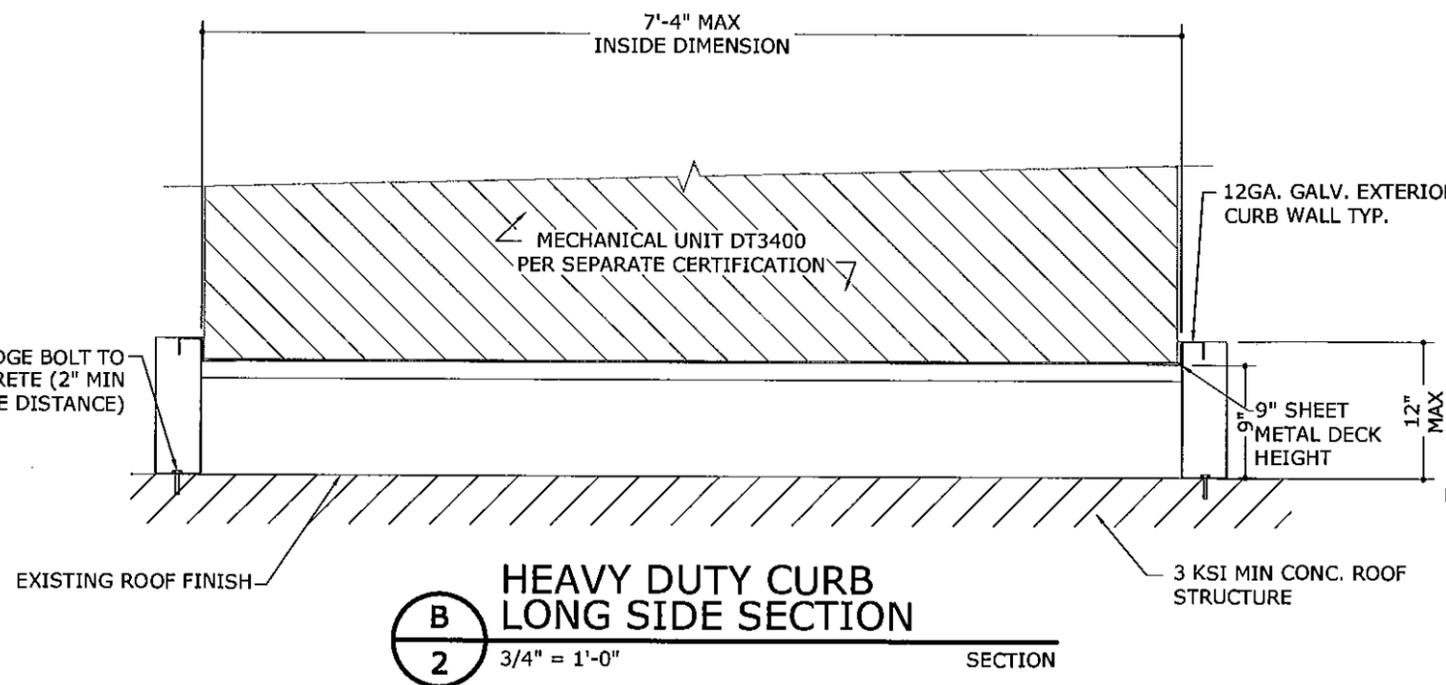
2



\*ALL WEDGE BOLTS SHALL BE 1/2"Ø POWERS WEDGE BOLTS WITH 2" MIN EMBED INTO 3KSI MIN CONC, 6" MIN EDGE DISTANCE. WEDGE BOLTS SHALL BE SPACED AS SHOWN ON PLANS A/2 & A/3. WEDGE BOLTS SHALL NOT BE SPACED CLOSER THAN 6" TOGETHER TYP.



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Date 06/23/2011  
NOA# 10-1123-01  
Miami Dade Product Control  
By *Helmut A. Nelson*



05/27/2011

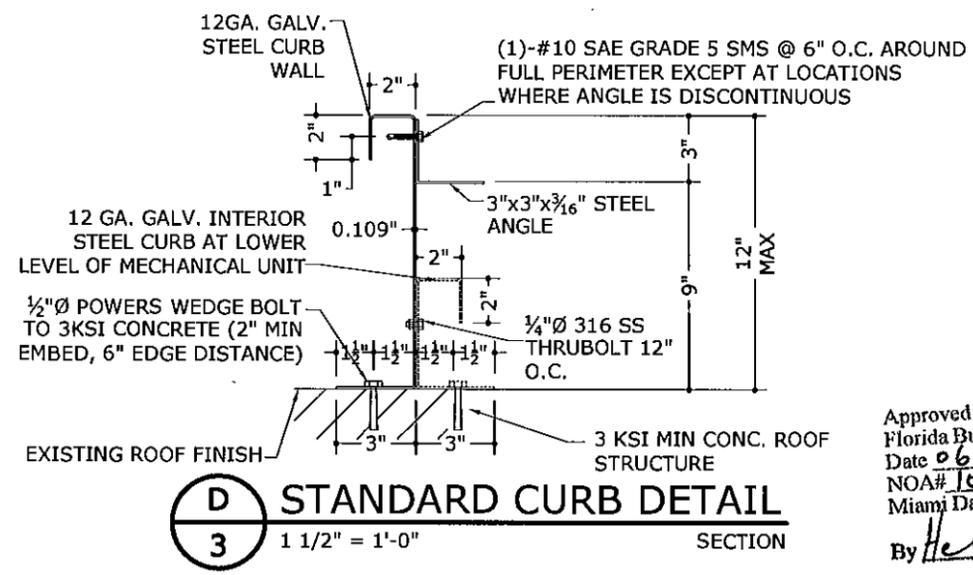
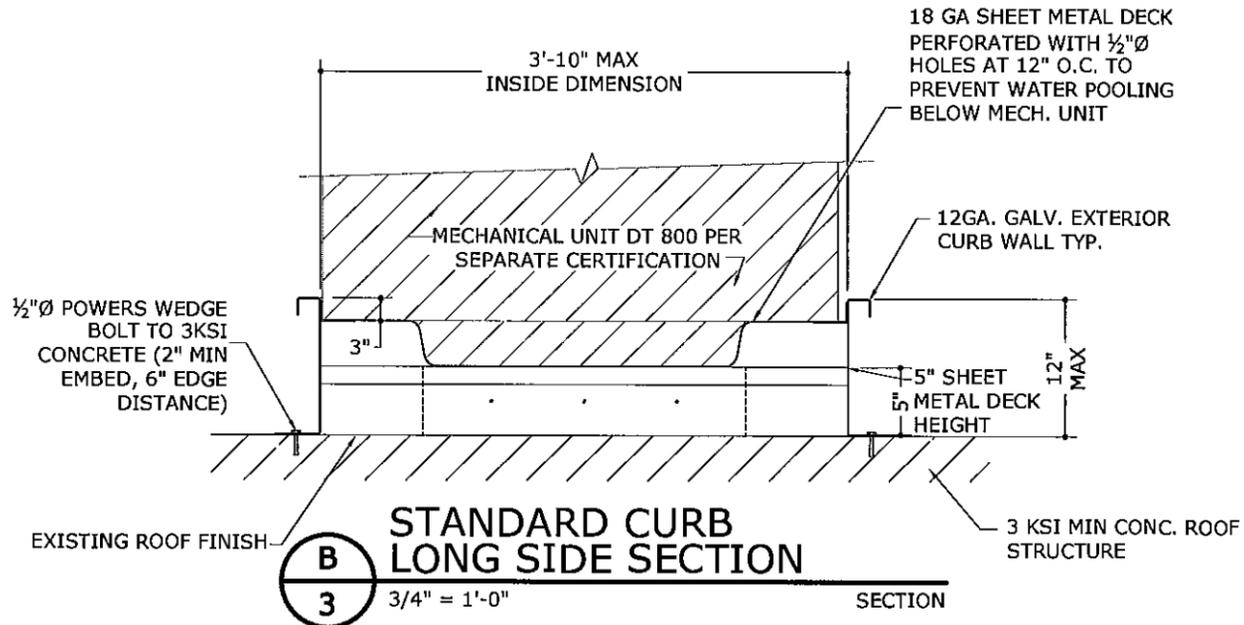
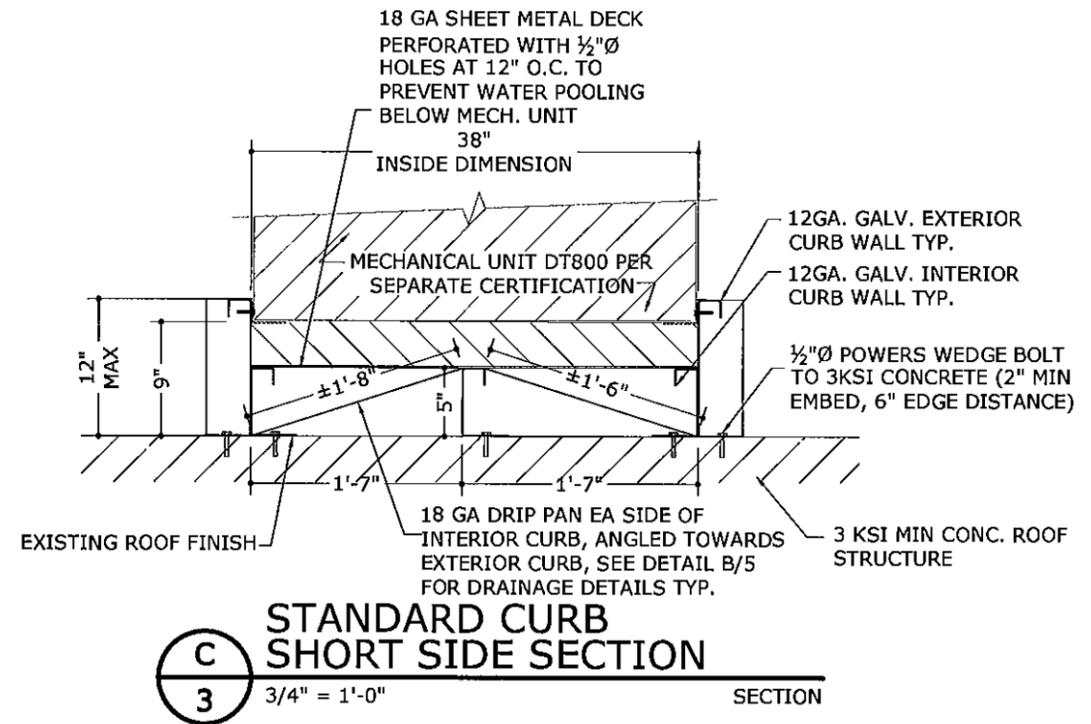
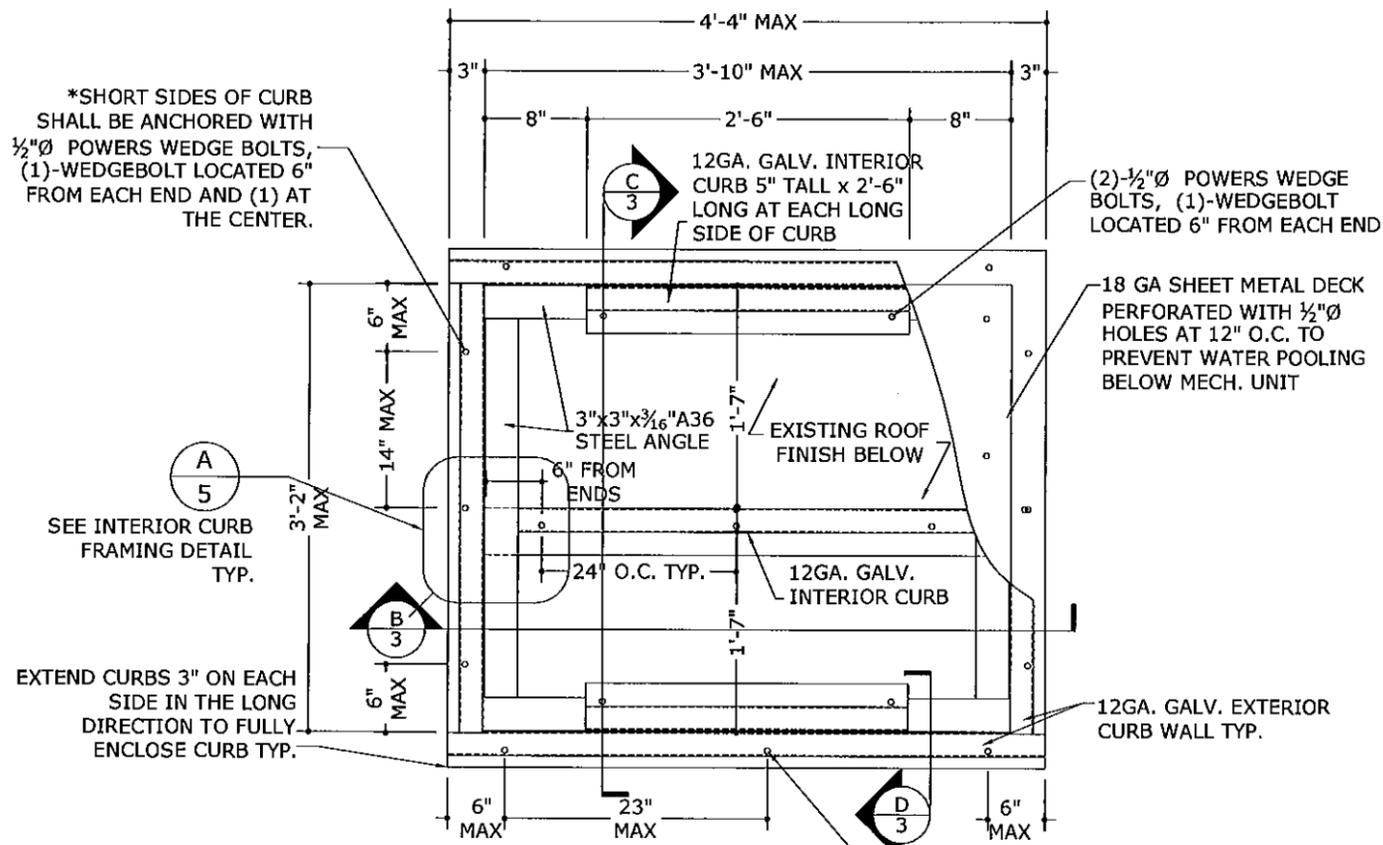
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Rooftop Curb Units  
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REMARKS	DATE	DRWN	CHKD
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SCALE: 1/2"  
PAGE DESCRIPTION:

3



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Date 06/23/2011  
NOA# 10-1123-01  
Miami Dade Product Control  
By *Healy A. Mad...*

F:\01-Project Files\DuCool (DUC)\2010\10-DUC-0001-02a-ROOFTOP CURB UNITS.dwg

F:\01 Project Files\DuCool (DUC)\2010\10-DUC-0001 Roof mounted support NOA\02 Address Comments\10-DUC-0001-02a ROOFTOP CURB UNITS.dwg

05/27/2011

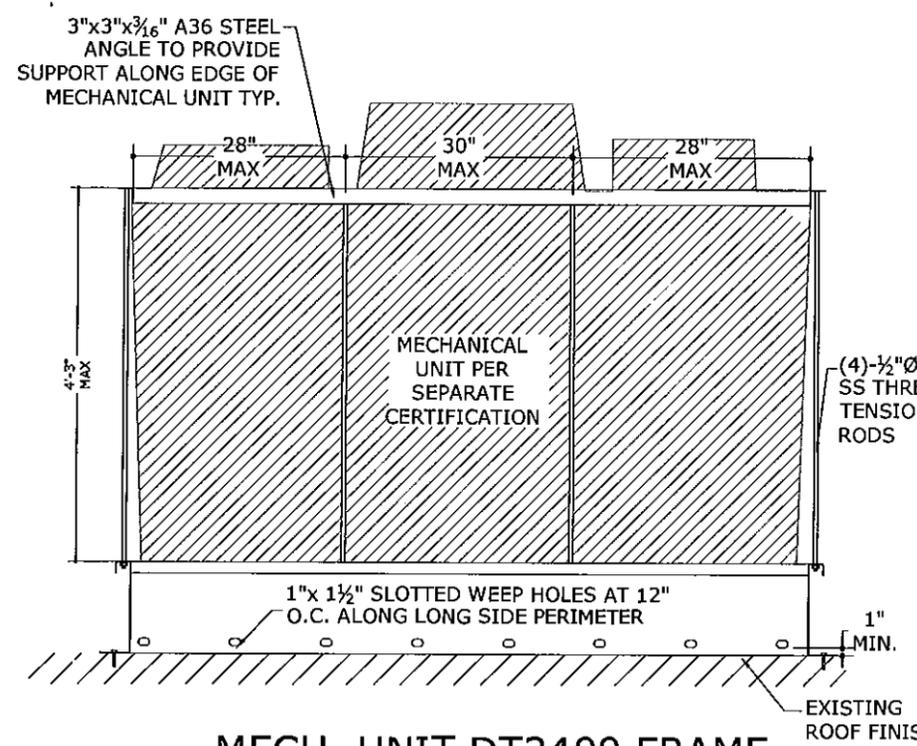
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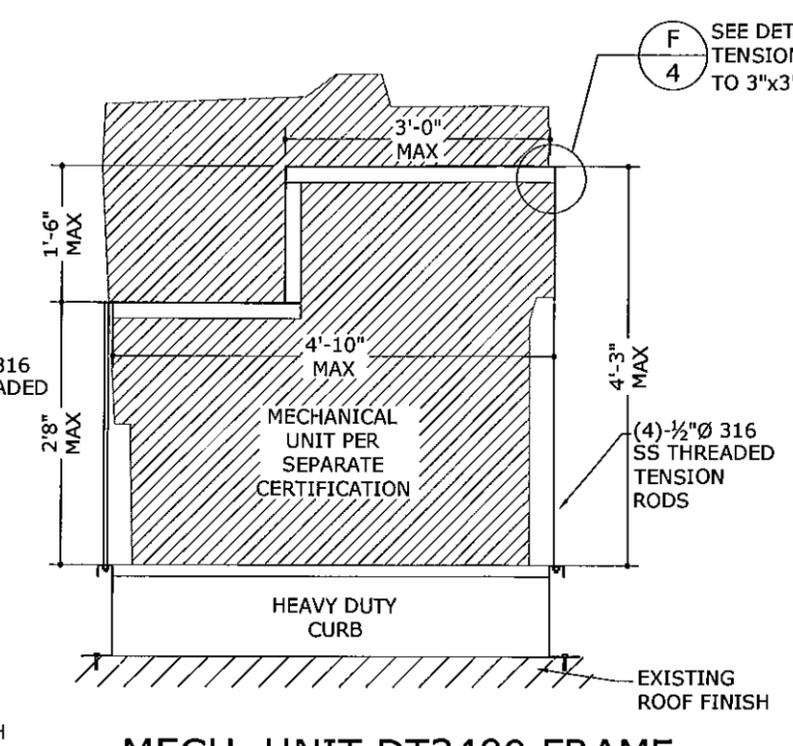
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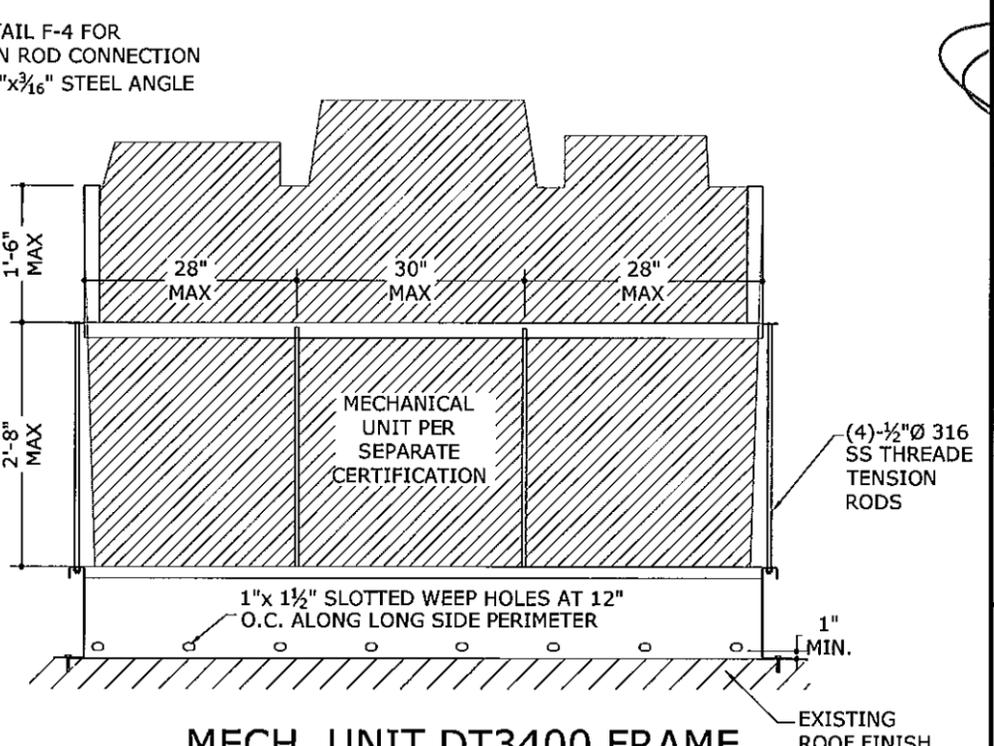
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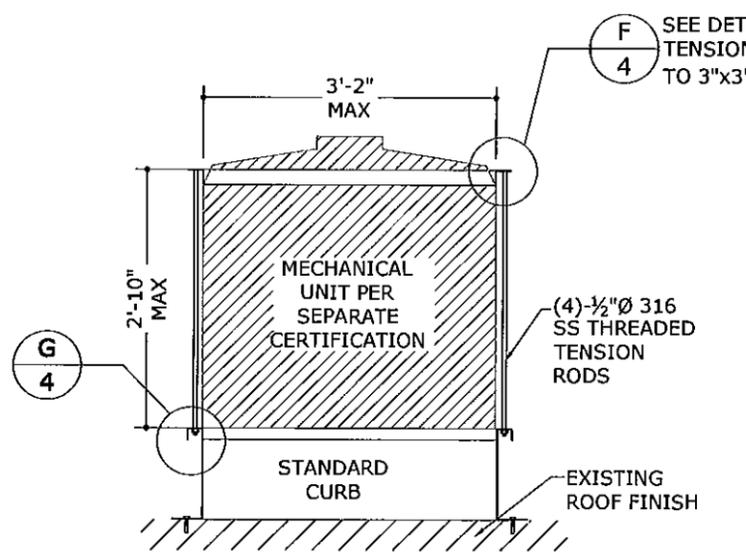
**A**  
4  
MECH. UNIT DT3400 FRAME  
BACK SIDE ELEVATION  
3/8" = 1'-0"  
ELEVATION  
TO BE SUPPORTED BY A  
HEAVY DUTY CURB



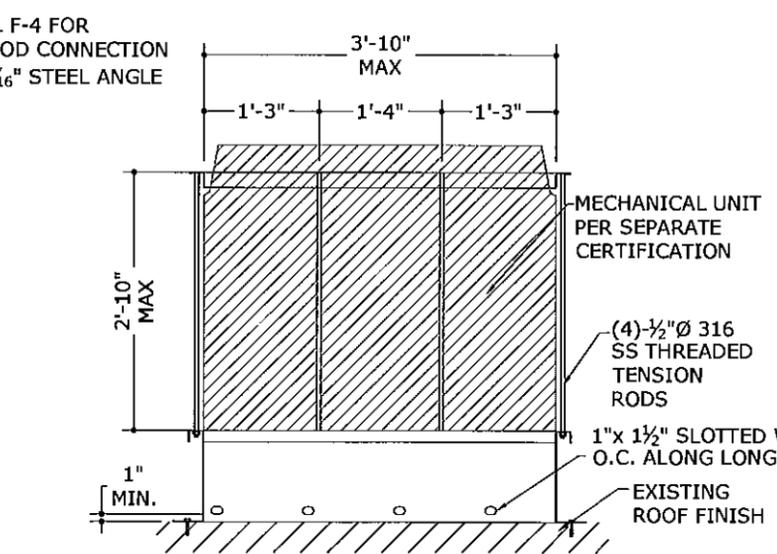
**B**  
4  
MECH. UNIT DT3400 FRAME  
TYPICAL SIDE ELEVATION  
3/8" = 1'-0"  
ELEVATION



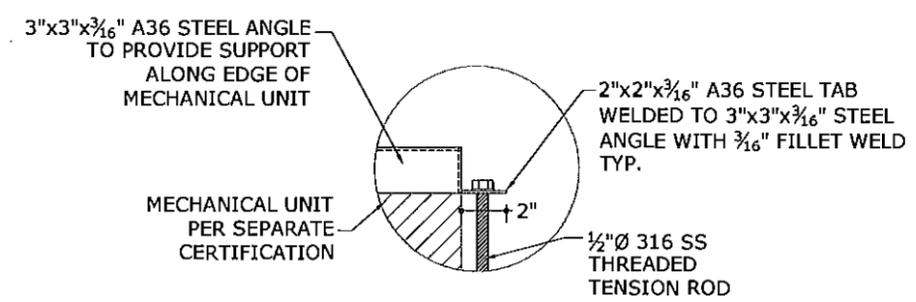
**C**  
4  
MECH. UNIT DT3400 FRAME  
FRONT SIDE ELEVATION  
3/8" = 1'-0"  
ELEVATION



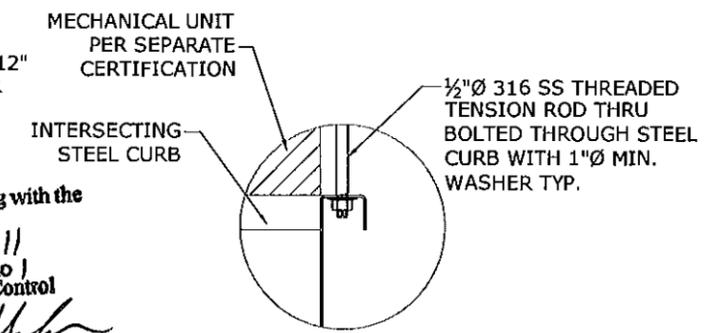
**D**  
4  
MECH. UNIT DT800 FRAME  
TYPICAL SIDE ELEVATION  
3/8" = 1'-0"  
ELEVATION  
TO BE SUPPORTED BY A  
STANDARD CURB



**E**  
4  
MECH. UNIT DT800 FRAME  
TYPICAL FRONT ELEVATION  
3/8" = 1'-0"  
ELEVATION



**F**  
4  
TENSION ROD CONNECTION  
TO STEEL ANGLE  
N.T.S.  
DETAIL



**G**  
4  
TENSION ROD CONNECTION  
TO STEEL CURB  
N.T.S.  
DETAIL

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Date 06/23/2011  
NOA# 10-1123-01  
Miami Dade Product Control  
By *Heung A. Heung*

F:\01 Project Files\DuCool (DUC)\2010\10-DUC-0001 Roof mounted support NOA\02 Address Comments\10-DUC-0001-02a ROOFTOP CURB UNITS.dwg 05/27/2011 - 12:19pm chen

05/27/2011

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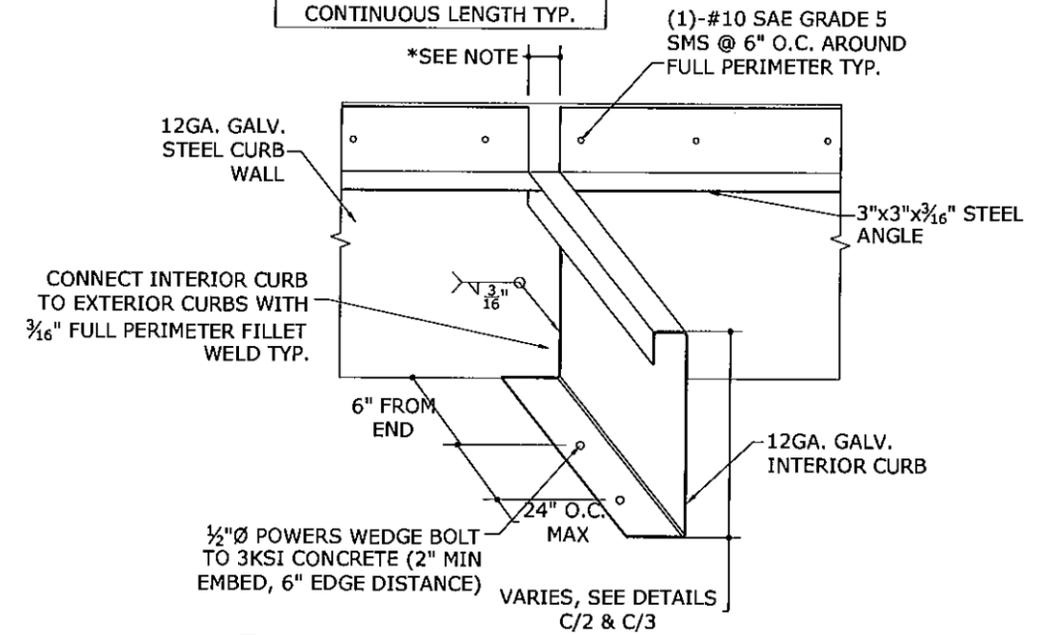
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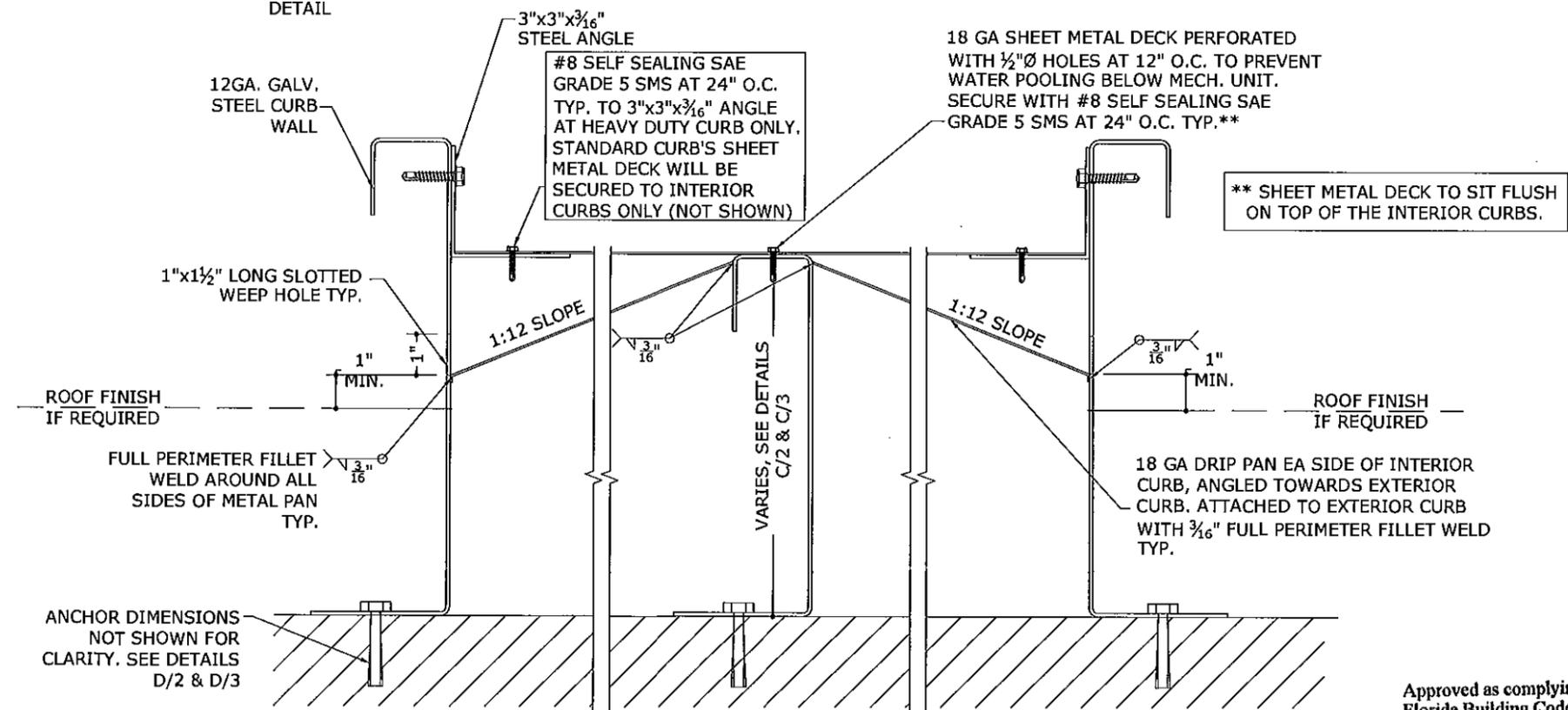
10-DUC-0001  
SCALE: 1/2  
PAGE DESCRIPTION:

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\*PROVIDE A BREAK IN THE 3"x3"x $\frac{3}{16}$ " STEEL ANGLE IF THE INTERIOR CURB HEIGHT INTERRUPTS STEEL ANGLE'S CONTINUOUS LENGTH TYP.



**A**  
**5** INTERIOR CURB FRAMING DETAIL  
1 1/2" = 1'-0"  
DETAIL



**B**  
**5** SHEET METAL DECK & DRIP PAN CONNECTION DETAILS  
N.T.S.  
DETAIL

MISCELLANEOUS DIMENSIONS NOT SHOWN FOR CLARITY, SEE DETAILS D/2 & D/3 FOR MORE INFORMATION

Approved as complying with the Florida Building Code  
Date 06/23/2011  
NOA# 16-1123.01  
Miami Dade Product Control  
By *Heather A. Mack*