

106-3 CONTRACTOR FURNISHED CERTIFICATION

The Contractor shall furnish the Department material certifications obtained from the producer, supplier, or an approved independent testing laboratory for the following types of materials, unless otherwise directed by the Engineer.

- (A)** Materials required to meet criteria documented by tests that are normally performed during the production process.
- (B)** Materials that are required to meet specifications other than those published by AASHTO, ASTM, or the Division of Highways.
- (C)** Materials produced at locations that are not within routine travel distance for Department representatives.
- (D)** Materials required to meet criteria documented by tests involving special equipment not readily available to Department representatives.
- (E)** Any other special material when so directed by the Engineer.
- (F)** Material certifications of one of the following types shall be furnished for pre-tested materials. The specific type of material certification for each material shall be in accordance with the schedule maintained by the Materials and Tests Unit.

Type 1 - Certified Mill Test Report

A certified mill test report shall be a certified report of tests conducted by the manufacturer on samples taken from the same heat or lot number as the material actually shipped to the project. The report shall identify the heat or lot number.

Type 2 - Typical Certified Mill Test Report

A typical certified mill test report shall be a certified report of tests conducted by the manufacturer on samples taken from a lot which is typical of the material actually shipped to the project, but which may or may not be from the lot shipped.

Type 3 - Manufacturer's Certification

A manufacturer's certification shall be a certified statement that the material actually shipped to the project was manufactured by production processes which are periodically and routinely inspected to assure conformance to specification requirements.

Type 4 - Certified Test Reports

A certified test report shall be a certified report of test conducted by an approved independent testing laboratory on samples taken from same heat or lot number as the material actually shipped to the project. The report shall identify the heat or lot number.

Type 5 - Typical Certified Test Reports

A certified test report shall be a certified report of tests conducted by an approved independent testing laboratory on samples taken from a lot which is typical of the material actually shipped to the project, but which may or may not be from the lot shipped.

Type 6 - Supplier's Certification

A supplier's certification is a signed statement by the supplier that the material described in the certification is of the specification grade required and that the supplier has on hand Type 1, Type 2, or Type 3 material certifications to cover the material which is included in the Type 6 supplier's certification.

Type 7 - Contractor's Certification

Contractor's certification is a signed statement by a contractor that the used material described in the certification meets the requirements of the current specifications to the best of the contractor's knowledge and that the contractor had in his possession at the time of purchase a Type 1, 2, or 3 materials certification to cover the material which is included in the Type 7 Contractor's Certification.

A certification is not a submittal, spec sheet or a brochure. An acceptable Material Certification must have a current date as well as a company officials signature. A certification dated within 2 years of the contract let date is acceptable to account for stock pile materials and project delays.



**AK Steel Corporation
Metallurgical Test Report
Middletown Works
1801 Crawford St.
Middletown, OH 45043 U.S.A.**

Page 1

Load No. 4946398
Srnr No. 4946398

| | | | | | | |
|-----------------|--|----------------|---|---|---|--|
| CUSTOMER | CONTECH ENGINEERED SOLUTIONS 9025 CENTRE POINTE DR STE 400 WEST CHESTER, OH 45069 | SHIP TO | CONTECH ENGINEERED SOLUTIONS C/O PRECISION STRIP 4400 OXFORD STATE ROAD MIDDLETOWN, OH 45044 | MILL ORDER NO. 241331-5515 | PROCESSOR ORDER NO. 76290-000OB-3 | BUYERS ORDER NO. 76290-000OB-3 |
| | | | PART NO. CO2AZL12M | ENGLISH UNITS --PRODUCT:- METRIC UNITS .1010 MIN 53.8750 X COIL | | |

| LIFT ID | PIECE | HEAT | PARENT LIFT ID | NET WEIGHT | OUTSIDE PROCESSOR ID |
|-------------|--------------|---------|----------------|------------------------|----------------------|
| 633696-06B | 1 | 7583329 | 633696-06B | 38,250 LBS. 17,350 KG. | 436392900 |
| TOTAL LIFTS | TOTAL PIECES | | | TOTAL NET WEIGHT | |
| 1 | 1 | | | 38,250 LBS. 17,350 KG. | |

L=Ladle Analysis of Heat P=Product Analysis of Parent Coil **CHEMICAL ANALYSIS**

| ID | C | MN | P | S | SI | CU | AL | CB | V | NI | CR | TI | N | MO | SN | B |
|-----------|-------|-----|------|------|------|------|------|------|------|------|------|------|-------|------|------|-------|
| L 7583329 | .047 | .20 | .004 | .004 | .020 | .120 | .019 | .001 | .001 | .040 | .040 | .001 | .0102 | .010 | .010 | .0002 |
| ID | CA | | | | | | | | | | | | | | | |
| L 7583329 | .0036 | | | | | | | | | | | | | | | |

SHIPPING DATE: 10/23/2018

REMARKS

MELTED AND MANUFACTURED IN THE USA

ALL MANUFACTURING PROCESSES FOR THIS STEEL HAVE OCCURED IN THE UNITED STATES. THIS STEEL WAS MELTED AT BUTLER, PA

PRODUCT DESCRIPTION

ALUMINIZED STEEL T2(R) 100 CSP GRADE CHEM TREATED DRY TEST REPORTS AASHTO M274-87 ASTM A929/A929M-17 (AKS CODE AAF)

| PARENT LIFT ID | POS | DIR (L, T, D) | COND | YIELD STRENGTH (KSI) | TENSILE STRENGTH (KSI) | % ELONG | ELONG METHOD | ELONG GAUGE LENGTH |
|----------------|-----|---------------|---------|----------------------|------------------------|---------|--------------|--------------------|
| 633696-06B | T | L | A.S.T.M | 44.4 | 55.5 | 32 | CALC | 2 Inch |

Type 2



**AK Steel Corporation
Metallurgical Test Report
Middletown Works
1801 Crawford St.
Middletown, OH 45043 U.S.A.**

Page 2

Load No. 4946398
Srnr No. 4946398

C
U
S
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E
R

CONTECH ENGINEERED SOLUTIONS
9025 CENTRE POINTE DR
STE 400
WEST CHESTER, OH 45069

S
H
I
P
T
O

CONTECH ENGINEERED SOLUTIONS
C/O PRECISION STRIP
4400 OXFORD STATE ROAD
MIDDLETOWN, OH 45044

MILL ORDER NO. 241331-5515 PROCESSOR ORDER NO. 76290-0000B-3 BUYERS ORDER NO. 76290-0000B-3
PART NO. CO2AZL12M
ENGLISH UNITS --PRODUCT:- METRIC UNITS
.1010 MIN 53.8750 X COIL

| PARENT LIFT ID | POS | DIR (L, T, D) | COND | CTG WGT TOP E1 (OZ/SQ FT) | CTG WGT TOP E1 (GM/SQ M) | CTG WGT TOP CT (OZ/SQ FT) | CTG WGT TOP CT (GM/SQ M) | CTG WGT TOP E2 (OZ/SQ FT) | CTG WGT TOP E2 (GM/SQ M) | CTG WGT BOT E1 (OZ/SQ FT) | CTG WGT BOT E1 (GM/SQ M) |
|----------------|-----|---------------|---------|---------------------------|--------------------------|---------------------------|--------------------------|---------------------------|--------------------------|---------------------------|--------------------------|
| 633696-06B | T | | A.S.T.M | 0.48 | 145.00 | 0.56 | 171.00 | 0.55 | 167.00 | 0.48 | 145.00 |
| PARENT LIFT ID | POS | DIR (L, T, D) | COND | CTG WGT BOT CT (OZ/SQ FT) | CTG WGT BOT CT (GM/SQ M) | CTG WGT BOT E2 (OZ/SQ FT) | CTG WGT BOT E2 (GM/SQ M) | CTG WGT AVG (OZ/SQ FT) | CTG WGT AVG (GM/SQ M) | | |
| 633696-06B | T | | A.S.T.M | 0.56 | 171.00 | 0.54 | 166.00 | 1.06 | 322.00 | | |

THE CHEMICAL ANALYSIS AND PHYSICAL OR MECHANICAL TESTS REPORTED ABOVE ARE CORRECT AS CONTAINED IN THE RECORDS OF THE CORPORATION.

ALL TESTING IS DONE IN ACCORDANCE WITH A.S.T.M. STANDARDS UNLESS OTHERWISE NOTED

THIS CERTIFIED TEST REPORT HAS BEEN DELIVERED TO A CONSIGNEE OF MATERIAL PURCHASED FROM AK Steel Corporation. TO AVOID THE POSSIBILITY OF ITS MISUSE ON DELIVERY OF THE REPORT TO A THIRD PARTY IT MUST BE RECERTIFIED BY AND UNDER THE NAME OF SUCH CONSIGNEE

SIGNED

Eric V Krause
ERIC V. KRAUSE

QUALITY MANAGER

DATE 10/23/2018 TIME 05:21 PM

CERTIFICATE OF CONFORMANCE

CAMDEN YARDS STEEL, INC.
2500 BROADWAY DRAWER 14
CAMDEN, NJ 08104
856-342-7100

2/21/19

TO:
DILLON SUPPLY/RALEIGH
P.O. BOX 14535
RALEIGH, NC 27620

SHIP TO:
DILLON/RALEIGH
440 CIVIC BLVD.
RALEIGH, N.C. 27610
919.838.4200

SIZE: .375 NOM X 48.00 X 96.00

GRADE: FLOOR PLATE A786 CQ

Bill/Ladng# 520161

B/L Date 2/21/19

| | | | | | | | |
|--------------|----------|-------------|--------|-----------|------------|-----|------|
| Tag# 1438245 | 01 | Weight | 5240 | Part No.: | 44219888 | | |
| Cust. P/O#: | 71272679 | Sales Ordr: | 300747 | 04 | Origin USA | | |
| Heat# | 1818188 | MasterTag# | 194541 | 01 | | | |
| C : | .06 | Mn: | .38 | P : | .009 | S : | .004 |
| Si: | .02 | Al: | .029 | Ti: | .001 | | |
| Mo: | .01 | Cu: | .09 | Va: | .002 | Cr: | .04 |
| Ni: | .04 | | | | | N : | .006 |

Type 6 or 3

WE HEREBY CERTIFY THE ABOVE FIGURES ARE ACCURATELY STATED, MEET YOUR MATERIAL REQUIREMENTS AND ARE TRACEABLE IN OUR RECORDS BACK TO THE PRODUCER AND/OR AN ACCREDITED TEST LABORATORY.



.....
QUALITY ASSURANCE MANAGER

Feb 26, 2019

Jon Persson
Project Manager SEPI
1025 Wade Avenue
Raleigh, NC 27605

RE: Rogers Rd Sidewalk (U-4726DD)
Town of Carrboro
Type 7 Certification

Dear Mr. Persson:

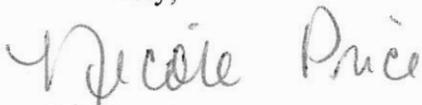
This letter is to serve as notice that hardware cloth purchased from Green Resources for the Rogers Rd sidewalk project, to the best of our knowledge, meets or exceeds the specifications/requirements stated in the contract. See reference below from NCDOT Standard Specifications:

1632-2 MATERIALS

(C) 1/4 Inch Hardware Cloth

Provide hardware cloth with 1/4" openings constructed from 24 gauge wire and with at least 48" width as specified in ASTM A740.

Sincerely,



Nicole Price
Contract Administrator

Type 7

Item Bundle Check List

BCHA

Job Name: CARRBORO HEADWALL
Customer: BROME CONSTRUCTION

Session: 002501
Run: 132526
Job: WA308
Release: 1

Fab Date: 2/13/2019
Caption:
Description: HEADWALL-FOUNDATION
Shp Date:

| Tag | Load | Color / Shape | Quantity | Size | Length | Mark | Shape Picture | Lbs | Grade | Coating | BC | Page / Item | CL / Tag |
|-------------|------|---------------|----------|------|--------|------|---------------|-----|-------|---------|----|-------------|----------|
| Bent | | | | | | | | | | | | | |
| 3 | | | 8 | 4 | 7-11 | 4A04 | | 42 | 60 | BIK | H | 1 / 2 | 2 / 2 |
| 4 | | | 4 | 4 | 6-07 | 4A05 | | 18 | 60 | BIK | H | 1 / 3 | 2 / 3 |
| 5 | | | 4 | 4 | 6-00 | 4A13 | | 16 | 60 | BIK | H | 1 / 4 | 2 / 4 |
| 7 | | | 4 | 4 | 5-08 | 4A06 | | 15 | 60 | BIK | H | 1 / 5 | 2 / 6 |
| 8 | | | 4 | 4 | 5-06 | 4A11 | | 15 | 60 | BIK | H | 1 / 6 | 2 / 7 |
| 9 | | | 4 | 4 | 5-06 | 4A10 | | 15 | 60 | BIK | C | 1 / 7 | 2 / 8 |
| 10 | | | 10 | 4 | 5-06 | 4A08 | | 37 | 60 | BIK | H | 1 / 8 | 2 / 9 |
| 13 | | | 4 | 4 | 4-09 | 4A07 | | 13 | 60 | BIK | C | 1 / 9 | 2 / 12 |
| 14 | | | 4 | 4 | 4-06 | 4A12 | | 12 | 60 | BIK | C | 1 / 10 | 2 / 13 |
| 15 | | | 6 | 4 | 3-11 | 4A03 | | 16 | 60 | BIK | C | 1 / 11 | 2 / 14 |
| 17 | | | 4 | 4 | 3-06 | 4A02 | | 9 | 60 | BIK | C | 1 / 12 | 2 / 16 |

Item Bundle Check List

BCHA

Job Name: CARRBORO HEADWALL
Customer: BROWE CONSTRUCTION

Session: 002501
Run: 132526

Job: WA308
Release: 1

Fab Date: 2/13/2019
Caption:

Description: HEADWALL-FOUNDATION
Ship Date:

| Tag | Load | Color / Shape | Quantity | Size | Length | Mark | Shape Picture | Lbs | Grade | Coating | BC | Page / Item | CL / Tag |
|-----------------|------|---------------|----------|------|--------|------|---------------|-----|-------|---------|----|-------------|----------|
| 18 | | | 4 | 4 | 3-06 | 4A09 | | 9 | 60 | BIK | C | 1 / 13 | 2 / 17 |
| 19 | | | 4 | 4 | 3-01 | 4A01 | | 8 | 60 | BIK | C | 1 / 14 | 2 / 18 |
| Straight | | | | | | | | | | | | | |
| 1 | | | 2 | 7 | 15-10 | | | 65 | 60 | BIK | 0 | 1 / 1 | 1 / 1 |
| 2 | | | 6 | 4 | 19-06 | | | 78 | 60 | BIK | 0 | 1 / 15 | 2 / 1 |
| 6 | | | 4 | 4 | 5-09 | | | 15 | 60 | BIK | 0 | 1 / 16 | 2 / 5 |
| 11 | | | 6 | 4 | 5-03 | | | 21 | 60 | BIK | 0 | 1 / 17 | 2 / 10 |
| 12 | | | 2 | 4 | 4-10 | | | 6 | 60 | BIK | 0 | 1 / 18 | 2 / 11 |
| 16 | | | 2 | 4 | 3-11 | | | 5 | 60 | BIK | 0 | 1 / 19 | 2 / 15 |

Item Bundle Check List

Session: 002501
Run: 132526

Fab Shop: Clayton, NC
Shift: Shift 1

Fab Date: 2/13/2019
Caption:

BCHA

Job Name: CARRBORO HEADWALL
Customer: BROME CONSTRUCTION

Job: WA308
Release: 1

Description: HEADWALL-FOUNDATION
Ship Date:

| Tag | Load | Color / Shape | Quantity | Size | Length | Mark | Shape Picture | Lbs | Grade | Coating | BC | Page / Item | CL / Tag |
|-----|------|---------------|----------|------|--------|------|---------------|-----|-------|---------|----|-------------|----------|
| 20 | | | 2 | 4 | 3-01 | | | 4 | 60 | BIK | 0 | 1 / 20 | 2 / 19 |
| 21 | | | 64 | 4 | 2-06 | | | 107 | 60 | BIK | S | 1 / 21 | 2 / 20 |

Total Rebar Tags: 21

Longest Length: 19-06

Total Weight:

526 Lbs

Production Summary

Session: 002501
Run: 132526

Fab Shop: Clayton, NC
Shift: Shift 1

Fab Date: 2/13/2019
Caption:

Ctrl Code Summary

| | | | | | | | | |
|----|-----|---------------|-----|---------|----------|-----|----------|---------------------|
| CC | ICC | Color / Shape | Job | Release | Customer | Job | Material | Bend Class Weight |
| | | | | | | | | Straight Bent Total |

| | | | | | | | | |
|------|-------|---|--------------------|------------------|---------------------|-----|-----|-----|
| BOHA | WA308 | 1 | BROWE CONSTRUCTION | CARBORO HEADWALL | HEADWALL-FOUNDATION | 301 | 225 | 526 |
|------|-------|---|--------------------|------------------|---------------------|-----|-----|-----|

301 225 526

Bend Class Summary

Rebar, Grade 60, Black

| Size | 0 | C | H | S | Total | Length |
|------|-----|----|-----|-----|-------|--------|
| 4 | 129 | 82 | 143 | 107 | 461 | 110-09 |
| 7 | 65 | 0 | 0 | 0 | 65 | 15-10 |
| | 194 | 82 | 143 | 107 | 526 | 126-07 |

**STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
MATERIALS AND TESTS UNIT**

Fabricator's Heat Number Identification of Reinforcing Bars

Date: 2/13/19 **Project:** U4726DD Rogers Rd Sidewalk Project
Fabricator: Carolina Form and Scaffold Supply **County:** Orange
Plant Location: Clayton NC **Station Number:** 67+30

The following table itemizes the heat numbers and heat number identifications such that each heat number involved may be positively identified and separated, if necessary, at the destination.

| Bar List Or Order Number | Bar Type Or Mark | Bar Size | Grade | Weight (Lbs./Kgs.) | Manufacturer, Mill Location and Mill Mark Symbol | Heat Number |
|--------------------------|------------------|----------|-------|--------------------|--|-------------|
| 002501-132526 | 4A04 | 4 | 60 | 42 | Steel Dynamics Roanoke VA | JM3433 |
| 002501-132526 | 4A05 | 4 | 60 | 18 | Steel Dynamics Roanoke VA | JM3433 |
| 002501-132526 | 4A13 | 4 | 60 | 16 | Steel Dynamics Roanoke VA | JM3433 |
| 002501-132526 | 4A06 | 4 | 60 | 15 | Steel Dynamics Roanoke VA | JM3433 |
| 002501-132526 | 4A11 | 4 | 60 | 15 | Steel Dynamics Roanoke VA | JM3433 |
| 002501-132526 | 4A10 | 4 | 60 | 15 | Steel Dynamics Roanoke VA | JM3433 |
| 002501-132526 | 4A08 | 4 | 60 | 37 | Steel Dynamics Roanoke VA | JM3433 |
| 002501-132526 | 4A07 | 4 | 60 | 13 | Steel Dynamics Roanoke VA | JM3433 |
| 002501-132526 | 4A12 | 4 | 60 | 12 | Steel Dynamics Roanoke VA | JM3433 |
| 002501-132526 | 4A03 | 4 | 60 | 16 | Steel Dynamics Roanoke VA | JM3433 |
| 002501-132526 | 4A02 | 4 | 60 | 9 | Steel Dynamics Roanoke VA | JM3433 |
| 002501-132526 | 4A09 | 4 | 60 | 9 | Steel Dynamics Roanoke VA | JM3433 |
| 002501-132526 | 4A01 | 4 | 60 | 8 | Steel Dynamics Roanoke VA | JM3433 |
| | | | | | | |
| | | | | | | |
| | | | | | | |

I hereby certify that no heat numbers other than those tabulated above were incorporated within this shipment, that the fabricated steel conforms to the plans and specifications in grade, size, and dimensions and that all steel was melted and manufactured in the USA.

Signature of Authorized Representative: _____



Sold To: ADELPHIA METALS I LLC
411 MAIN ST E
NEW PRAGUE, MN 56071 US

Ship To: ADELPHIA METALS I LLC
1930 E MARLTON PIKE
STEM-66
CUST PICKUP
CHERRY HILL, NJ 08003 US

| | | | |
|---------------------------|---|----------------------|----------------|
| Customer PO | 825171 | Sales Order # | 37000133 - 3.1 |
| Product Group | Rebar | Product # | 2110295 |
| Grade | A615 Gr 60/AASHTO M31 | Lot # | BR1910018701 |
| Size | #7 | Heat # | BR19100187 |
| BOL # | BOL-227110 | Load # | 134480 |
| Description | Rebar #7/22mm A615 Gr 60/AASHTO M31 40' 0" [480"] 2001-6000 lbs | Customer Part # | |
| Production Date | 01/10/2019 | Qty Shipped LBS | 10302 |
| Product Country Of Origin | United States | Qty Shipped EA | 126 |
| Original Item Description | | Original Item Number | |

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed above and that it satisfies those requirements.

Melt Country of Origin : United States

Melting Date: 01/08/2019

| C (%) | Mn (%) | P (%) | S (%) | Si (%) | Ni (%) | Cr (%) | Mo (%) | Cu (%) | V (%) | Nb (%) |
|-------|--------|-------|-------|--------|--------|--------|--------|--------|-------|--------|
| 0.33 | 1.25 | 0.016 | 0.033 | 0.250 | 0.09 | 0.22 | 0.04 | 0.44 | 0.057 | 0.001 |

Other Test Results

Yield (PSI) : 84600

Tensile (PSI) : 115200

Average Deformation Height (IN) : 0.056

Elongation in 8" (%) : 9.0

Bend Test : Pass

Weight Percent Variance (%) : -3.91

Comments:

Nucor-Birmingham is ISO 9001-2015 and ISO 14001 certified. All manufacturing processes of the steel materials in this product, including melting, have occurred within the United States. Mercury, in any form has not been used in the production or testing of this material. Meets (FTA) Buy American Requirements (49 C.F.R. part 661). Radium, or Alpha source materials in any form have not been used in the production of this material. All Products are manufactured in the United States and comply with Title 23 CFR 635.410 of the "Buy American Requirements". No weld repair was performed. Parts meet the requirements of the purchase order and have been produced under the Nucor Steel Birmingham quality manual rev 8 dated 9/14/2017.





P.O. Box 13948
Roanoke, VA 24038-3934

Office: (540) 342-1831
(800) 753-3532
Fax: (540) 342-9437
www.roanokesteel.com

PRODUCT CERTIFICATION

| | |
|-------------------------------------|---|
| MFG LOT NBR JM4538-604189 | HEAT NUMBER JM4538 |
| BILL OF LADING 00552087 | SALES ORDER/LINE 172557 / 003 |
| | CERT ID / REV 00159848 / 01 |

SOLD TO

**Adelphia Metals Inc.
1930E Marlton Park M66
Cherry Hill, NJ 08003
USA**

SHIP TO

**Adelphia Metals Inc.
1930E Marlton Park M66
Cherry Hill, NJ 08003
USA**

| CUSTOMER P.O. | CUSTOMER PART | QUANTITY | BUNDLE(S) | TOTAL PIECES | GRADE | SHIPMENT DATE |
|---------------|---------------|---------------|-----------|--------------|----------------|-------------------|
| 825257 | N/A | 23,070 | 3 | 384 | A615-60 | 02/12/2019 |

PART NUMBER: **RB019794000CA** DESCRIPTION: **Rebar # 06 (19) 40'0" A615-60**

Alt Certs

ASTM A615/A615M-18 GR60 | AASHTO M31/M31M-17 GR60

Chemical

| C | Mn | S | P | Si | Cr | Ni | Mo | Cu | V | Nb | CE |
|------|------|-------|-------|------|------|------|------|------|-------|-------|------|
| 0.42 | 1.11 | 0.023 | 0.012 | 0.27 | 0.09 | 0.08 | 0.02 | 0.33 | 0.004 | 0.002 | 0.70 |

Yield Tensile Elongation

| Sample | Yld-1 (KSI) | Yld-1 (MPa) | Ultimate-1 (KSI) | Ultimate-1 (MPa) | Elong8" (%) |
|----------|-------------|-------------|------------------|------------------|-------------|
| Sample-1 | 68.0 | 469 | 109.0 | 752 | 16 |
| Sample | Yld-2 (KSI) | Yld-2 (MPa) | Ultimate-2 (KSI) | Ultimate-2 (MPa) | Elong8" (%) |
| Sample-2 | 67.0 | 462 | 106.0 | 731 | 18 |

Mechanical

| TEST | RESULT |
|-----------|--------|
| Bend Test | Pass |

Approved ABS QA Mill. Certificate Nos. QA-3296994 and STML T1628063. This Material was melted and manufactured in our plant located in Roanoke, VA, USA, by basic Electric Furnace process(es) to meet the "ordered" Grade. Mercury, Radium or other Alpha source materials in any form have not been used in the production of this material. No Weld repair has been performed. Any tensile values stated herein either inch-pound units or SI units are to be regarded as separate as defined in the ASTM scope for this material. All samples tested are full size and in an "as-rolled" condition. Unless a metric specification is ordered, this material has been tested and meets the requirements of the inch-pound ranges.

This is to certify the above to be a true and accurate report as contained in the records of this company.

END OF CERTIFICATION

Engineer of Tests: Lewis E. Leftwich Jr.



P.O. Box 13948
Roanoke, VA 24038-3934

Office: (540) 342-1831
(800) 753-3532
Fax: (540) 342-9437
www.roanokesteel.com

PRODUCT CERTIFICATION

| | |
|-------------------------------------|---|
| MFG LOT NBR JM3433-529032 | HEAT NUMBER JM3433 |
| BILL OF LADING 00551407 | SALES ORDER/LINE 171753 / 001 |
| | CERT ID / REV 00159383 / 01 |

SOLD TO

**Adelphia Metals Inc.
1930E Marlton Park M66
Cherry Hill, NJ 08003
USA**

SHIP TO

**Adelphia Metals Inc.
1930E Marlton Park M66
Cherry Hill, NJ 08003
USA**

| CUSTOMER P.O. | CUSTOMER PART | QUANTITY | BUNDLE(S) | TOTAL PIECES | GRADE | SHIPMENT DATE |
|---------------|---------------|---------------|-----------|--------------|----------------|-------------------|
| 825016 | N/A | 46,063 | 6 | 1724 | A615-60 | 02/10/2019 |

PART NUMBER: **RB019774000CA** DESCRIPTION: **Rebar # 04 (13) 40'0" A615-60**

Chemical

| C | Mn | S | P | Si | Cr | Ni | Mo | Cu | V | Nb | CE |
|------|------|-------|-------|------|------|------|------|------|-------|-------|------|
| 0.40 | 1.03 | 0.015 | 0.012 | 0.23 | 0.08 | 0.12 | 0.05 | 0.41 | 0.003 | 0.002 | 0.67 |

Yield Tensile Elongation

| Sample | Yld-1 (KSI) | Yld-1 (MPa) | Ultimate-1 (KSI) | Ultimate-1 (MPa) | Elong8" (%) |
|----------|-------------|-------------|------------------|------------------|-------------|
| Sample-1 | 67.0 | 462 | 108.0 | 745 | 14 |
| Sample | Yld-2 (KSI) | Yld-2 (MPa) | Ultimate-2 (KSI) | Ultimate-2 (MPa) | Elong8" (%) |
| Sample-2 | 68.0 | 469 | 108.0 | 745 | 15 |

Mechanical

| TEST | RESULT |
|-----------|--------|
| Bend Test | Pass |

Approved ABS QA Mill. Certificate Nos. QA-3296994 and STML T1628063. This Material was melted and manufactured in our plant located in Roanoke, VA, USA, by basic Electric Furnace process(es) to meet the "ordered" Grade. Mercury, Radium or other Alpha source materials in any form have not been used in the production of this material. No Weld repair has been performed. Any tensile values stated herein either inch-pound units or SI units are to be regarded as separate as defined in the ASTM scope for this material. All samples tested are full size and in an "as-rolled" condition. Unless a metric specification is ordered, this material has been tested and meets the requirements of the inch-pound ranges.

This is to certify the above to be a true and accurate report as contained in the records of this company.

END OF CERTIFICATION

Engineer of Tests: Lewis E. Leftwich Jr.



CMC STEEL SOUTH CAROLINA
 310 New State Road
 Cayce SC 29033-3704

CERTIFIED MILL TEST REPORT
 For additional copies call
 800-637-3227

We hereby certify that the test results presented here
 are accurate and conform to the reported grade specification

Richard S. Ray
 Richard S. Ray - CMC Steel SC

Quality Assurance Manager

| | | | | | |
|---------------------------------------|----|---------------------------------|----|-----------------------------------|-------------------------------|
| HEAT NO.: 2072562 | S | Carolina Form & Scaffold Supply | S | Carolina Form And Scaffold Supply | Delivery#: 82583806 |
| SECTION: REBAR 16MM (#5) 20'0" 420/60 | O | | H | | BOL#: 72775637 |
| GRADE: ASTM A615-16 Gr 420/60 | L | 13308 Business Hwy 70 W | I | 13308 Us 70 Hwy W | CUST PO#: 7559 |
| ROLL DATE: 12/30/2018 | D | Clayton NC | P | Clayton NC | CUST P/N: |
| MELT DATE: 12/15/2018 | US | 27520-0000 | US | 27520-2170 | DLVRY LBS / HEAT: 6009.000 LB |
| Cert. No.: 82583806 / 072562D371 | T | 9195537124 | T | 9999999999 | DLVRY PCS / HEAT: 288 EA |
| | O | 9195538156 | O | | |

| Characteristic | Value | Characteristic | Value | Characteristic | Value |
|--------------------------------|----------|-------------------------------|----------|---|-------|
| C | 0.40% | Elongation Gage Lgth test 1 | 8IN | The following is true of the material represented by this MTR: *Material is fully killed *100% melted and rolled in the USA *EN10204:2004 3.1 compliant *Contains no weld repair *Contains no Mercury contamination *Manufactured in accordance with the latest version of the plant quality manual *Meets the "Buy America" requirements of 23 CFR635.410 *Warning: This product can expose you to chemicals which are known to the State of California to cause cancer, birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov | |
| Mn | 0.93% | Bend Test Diameter | 2.1881IN | | |
| P | 0.011% | Bend Test 1 | Passed | | |
| S | 0.026% | Rebar Deformation Avg. Spaci | 0.404IN | | |
| Si | 0.22% | Rebar Deformation Avg. Height | 0.038IN | | |
| Cu | 0.31% | Rebar Deformation Max. Gap | 0.129IN | | |
| Cr | 0.18% | | | | |
| Ni | 0.14% | | | | |
| Mo | 0.045% | | | | |
| V | 0.000% | | | | |
| Cb | 0.000% | | | | |
| Sn | 0.012% | | | | |
| Al | 0.000% | | | | |
| N | 0.0097% | | | | |
| Yield Strength test 1 | 68.8ksi | | | | |
| Yield Strength test 1 (metric) | 475MPa | | | | |
| Tensile Strength test 1 | 105.6ksi | | | | |
| Tensile Strength 1 (metric) | 729MPa | | | | |
| Elongation test 1 | 13% | | | | |

REMARKS :

Reinforcement Bundle Check List

BCHB

Job Name: CARBORO HEADWALL
 Customer: BROWNE CONSTRUCTION

Session: 002506
 Run: 132531
 Job: WA313
 Release: 2

Fab Shop: Clayton, NC
 Shift: Shift 1
 Description: HEAD WALL REINF. DETAILS
 Ship Date:

Fab Date: 2/13/2019
 Clayton, NC

| Tag | Load | Color / Shape | Quantity | Size | Length | Mark | Shape Picture | Lbs | Grade | Coating | BC | Page / Item | CL / Tag |
|-----------------------|------|---------------|----------|------|--------|------|---|-----|-------|---------|----|-------------|----------|
| 2 | | | 10 | 4 | 3-04 | 4A01 |  | 22 | 60 | BIK | C | 1 / 2 | 2 / 1 |
| Bent | | | | | | | | | | | | | |
| 1 | | | 2 | 6 | 12-10 | |  | 39 | 60 | BIK | 0 | 1 / 1 | 1 / 1 |
| Straight | | | | | | | | | | | | | |
| Total Rebar Tags: 2 | | | | | | | | | | | | | |
| Longest Length: 12-10 | | | | | | | | | | | | | |
| Total Weight: 61 Lbs | | | | | | | | | | | | | |

V16.01.056

Production Summary

Session: 002506
Run: 132531

Fab Shop: Clayton, NC
Shift: Shift 1

Fab Date: 2/13/2019
Caption:

Ctrl Code Summary

| CC | ICC | Color / Shape | Job | Release | Customer | Job | Material | Bend Class Weight | | |
|------|-----|---------------|-------|---------|--------------------|-------------------|--------------------------|-------------------|------|-------|
| | | | | | | | | Straight | Bent | Total |
| BCHB | | | WA313 | 2 | BROWE CONSTRUCTION | CARRBORO HEADWALL | HEAD WALL REINF. DETAILS | 39 | 22 | 61 |
| | | | | | | | | 39 | 22 | 61 |

Bend Class Summary

Rebar, Grade 60, Black

| Size | 0 | C | Total | Length |
|------|----|----|-------|--------|
| 4 | 0 | 22 | 22 | 3-04 |
| 6 | 39 | 0 | 39 | 12-10 |
| | 39 | 22 | 61 | 16-02 |

**North Carolina Department of Transportation, Division of Highways, Materials and Tests Unit
Statement of Concrete Mix Design and Source of Materials**

| | |
|--|---|
| Project | Date Expires 12/31/2075 |
| Mix Design Status Active | Concrete Producer ARGOS USA LLC |
| County | Plant Location & DOT No. CARRBORO, NC - 35 |
| Resident Engr. | Contractor |
| Class of Concrete CLASS A | Date Assigned |
| Mix Design No. 351VF16PE | Contractor's Signature |
| Note Mix Design Units (English or Metric) ENGLISH | |

Mix Design Proportions Based on SSD Mass of Aggregates

| Material | Producer | Source | Qty. per Cu. Yard |
|----------------------------|--|--|-------------------|
| Cement | ARGOS USA | ROBERTA PLANT - CALERA, AL | 451 lbs. |
| Pozzolan | APPROVED NCDOT CLASS F FLY ASH PRODUCE | APPROVED NCDOT CLASS F FLY ASH PRODUCI | 136 lbs. |
| Fine Aggregate | G.S. MATERIALS | HALL PIT - LEMON SPRINGS | 1171 lbs. |
| Coarse Aggregate | MARTIN MARIETTA | AMERICAN STONE COMPANY | 1850 lbs. |
| Total Water | | CITY | 34.0 gals. |
| Air. Entr. Agent | BASF CONSTRUCTION CHEMICALS, LLC | MASTERAIR AE 200 (AKA MICRO AIR) | As recommended |
| Retarder | BASF CONSTRUCTION CHEMICALS, LLC | MASTERSET R 300 (AKA POZZOLITH 300R) | As recommended |
| Water Reducer | BASF CONSTRUCTION CHEMICALS, LLC | MASTERPOZZOLITH 700 (AKA POZZOLITH 700N) | As recommended |
| Superplasticizer | | | |
| Corrosion Inhibitor | | | |

Mix Properties and Specifications

Slump 3.50 in. **Mortar Content** 16.52 cu. ft.
Max Water 36.0 gals. **Air Content** 6.0 %

| Material | Specific Gravity | % Absorption | Unit Mass | Fineness Modulus |
|-----------------------|------------------|--------------|-----------|------------------|
| Fine Aggregate | 2.64 | 0.5 | NA | 2.63 |
| Coarse Aggregate, #67 | 2.83 | 0.5 | 100.0 | NA |

Comment Agg. specific gravities & proportions adjusted 4-14-11.

Cast-in-place concrete shall conform to Section 1000, precast concrete to Section 1077, and prestressed concrete to Section 1078 of the applicable edition of the Standard Specifications for Roads and Structures plus all applicable Special Provisions.



APPROVED
BY
DATE

01-01-2011
01-01-2011

CERTIFICATE CERTIFYING COMPLIANCE WITH THE ARRA BUY
AMERICAN PROVISION

PROJECT OWNER: TOWN OF CARRBORO

CONTRACT NO. U-4726DD

CONTRACT NAME: ROGERS RD SIDEWALK PROJECT

T.I.P No. U-4726DD

County: Orange

CERTIFICATION:

This letter serves as blanket certification that all steel and iron products to be permanently incorporated into this project will be of domestic origin and will meet requirements of Article 106-1B of Standard Specification .

By: _____

Name: Jillane Brown

Title: President

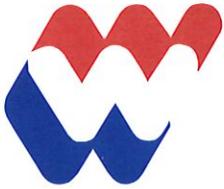
Date 11/26/18

Subscribed and sworn before me this 26th day of November 2018.

Notary Public Nicole S. Price

My commission expires 03/06/2022.

NICOLE S. PRICE
NOTARY PUBLIC
Johnston County
North Carolina
My Commission expires March 6, 2022



November 15, 2018

S.T. Wooten Corporation

City of Raleigh
127 West Hargett Street
Raleigh, NC 27601
Attn: Giles Bellot, P. E.

Re: Contract#: BR50148.3.1
Wake County
Lake Dam Road Bridge Replacement

Subject: Buy American

Dear Mr. Bellot:

As requested we do hereby certify that all steel and iron products to be permanently incorporated into this project conform to the requirements of Article 106-1B of the Standard Specifications entitled "Domestic Steel", CFR 23-635.410 entitled "Buy America Requirements", and State Law GS 136-28.7 "Contract Requirements Relating to Construction Materials."

Sincerely,
S. T. Wooten Corporation

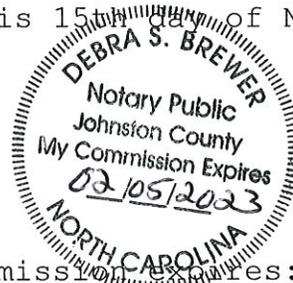
David Knoll
Project Manager

State of North Carolina
City of Wilson

Sworn to and Subscribed before me this 15th day of November, 2018

Notary Public

Debra S. Brewer
Printed Name



My commission expires: 02/05/2023

4-4-19

4-4-19

U C
C M



36 X 26
33" KO BOX
STK

