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CINCINNATI | DAYTON
MARIETTA

BRICKER & ECKLER LLP
100 South Third Street
Columbus, OH 43215-4291
MAIN: 614.227.2300
FAX: 614.227.2390

www.bricker.com
info@bricker.com

Sally W. Bloomfield
614.227.2368
sbloomfield@bricker.com

April 13, 2017

Via Electronic Filing

Ms. Barcy McNeal
Public Utilities Commission of Ohio
Administration/Docketing
180 East Broad Street, 11th Floor
Columbus, OH 43215-3793

**Re: Hog Creek Wind Farm LLC,
Case Nos. 09-277-EL-BGN, 10-654-EL-BGN, 16-1422-EL-BGA and
16-1423-EL-BGA**

Dear Ms. McNeal:

On November 29, 2016, the OPSB issued an Order on Certificate approving Hog Creek Wind Farm, LLC's ("Hog Creek") applications to amend its Hog Creek I Certificate (Case No. 09-277-EL-BGN) and Hog Creek II Certificate (Case No. 10-654-EL-BGN) subject to the conditions set forth in the Stipulation and continued compliance with the conditions set forth in the certificate orders as later amended (Order on Certificate at 9).

Within these sets of conditions, Hog Creek I **Condition No. 41** and Hog Creek II **Condition No. 54(a)** require that, at least 30 days before the preconstruction conference, Hog Creek shall submit to staff, for review and approval:

(a) One set of detailed engineering drawings of the final project design, including all turbine locations, collection lines, access roads, the crane route, permanent meteorological towers, substations, construction staging areas, and any other associated facilities and access points, so that staff can determine that the final project design is in compliance with the terms of the certificate. The final project layout shall be provided in hard copy and as geographically referenced electronic data. The final plan shall include both temporary and permanent access routes, as well as the measures to be used for restoring the area around all temporary sections, and a description of any long-term stabilization required along permanent access routes. The plan shall consider the location of streams, wetlands, wooded areas, and sensitive plant species as identified by the ODNR Division of Natural Areas and Preserves, and explain how impacts to all sensitive resources will be avoided or minimized during construction, operation, and maintenance.

Case Nos. 09-277-EL-BGN, 10-654-EL-BGN, 16-1422-EL-BGA and 16-1423-EL-BGA
April 13, 2017
Page 2

Also Hog Creek I **Condition No. 11** and Hog Creek II **Condition No. 9** provided that:

At least 30 days before the preconstruction conference. Hog Creek shall submit to staff, for review and approval, the final turbine foundation design for each turbine location.

On March 14, 2017, Hog Creek submitted the engineering drawings for the final project design. Through an inadvertence, the final turbine foundation plans were not included in the filing. In compliance with Hog Creek I Condition Nos. 11 and 41 and Hog Creek II Condition Nos. 54(a) and 9, attached is the final turbine foundation design plans.

If you have any questions please call at the number listed above.

Sincerely,



Sally W. Bloomfield

Attachment

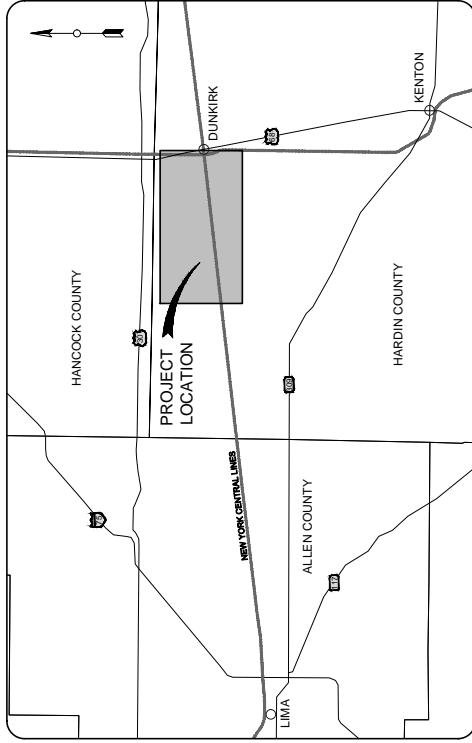
cc: Andrew Conway (w/Attachment)
Jonathan Pawley (w/Attachment)

STRUCTURAL FOUNDATION PLANS



DRAWING INDEX:

WT#	TYPE	NET / GROSS WEIGHT (LBS)	OFF / GROSS HEIGHT (IN)	GRASS INFORMATION BELOW BEARING ELEVATION IN 4" OVERLAP
1-61	A	7000	18	4" OVERLAP
1-62	A	6000	18	4" OVERLAP
1-63	B	7000	18	4" OVERLAP
1-64	B	7000	18	4" OVERLAP
1-65	A	7000	18	4" OVERLAP
1-66	A	6000	18	4" OVERLAP
1-67	A	6000	18	4" OVERLAP
1-68	A	6000	18	4" OVERLAP
1-69	A	6000	18	4" OVERLAP
1-70	A	6000	18	4" OVERLAP
1-71	C	7000	2-6"	4" OVERLAP
1-72	B	7000	18	4" OVERLAP
1-73	A	6000	18	4" OVERLAP
1-74	B	7000	18	4" OVERLAP
1-75	A	6000	18	4" OVERLAP
1-76	A	6000	18	4" OVERLAP
1-77	C	7000	2-6"	4" OVERLAP
1-78	B	7000	18	4" OVERLAP
1-79	B	7000	18	4" OVERLAP
1-80	C	7000	2-6"	4" OVERLAP
1-81	C	7000	2-6"	4" OVERLAP
1-82	A	6000	18	4" OVERLAP
1-83	C	7000	2-6"	4" OVERLAP
1-84	A	6000	18	4" OVERLAP
1-85	B	7000	18	4" OVERLAP
1-86	B	7000	18	4" OVERLAP
1-87	A	6000	18	4" OVERLAP
1-88	A	6000	18	4" OVERLAP
1-89	A	6000	18	4" OVERLAP
1-90	A	6000	18	4" OVERLAP
1-91	A	6000	18	4" OVERLAP
1-92	A	6000	18	4" OVERLAP
1-93	A	6000	18	4" OVERLAP



NOT TO SCALE

1. ALL PROJECT DATA COLLECTION OBTAINED ON SITE SHALL BE SHARED WITH RES ENGINEERING IN ORDER TO VERIFY EXISTING TOPOGRAPHY AND PROPOSED DESIGN ELEVATIONS. DATA COLLECTION IS DEFINED AS PROJECT BENCHMARK VERIFICATION, SITE VERTICAL AND HORIZONTAL CONTROL, EXISTING TOPOGRAPHY, AND PROJECT FIELD STAKING. ALL FIELD DATA THAT IS SHARED MUST RETAIN THE SAME PROJECT PROTECTION AS STATED ON THE CONSTRUCTION PLANS.

2. DURING REMOVAL, STOCKPILING, AND REPLACEMENT OF TOPSOIL, THE SUBCONTRACTOR SHALL EMPLOY COMMERCIALLY FEASIBLE MEANS, METHODS AND TRAINED PERSONNEL TO ENSURE THAT NO SOIL OR SUBGRADE MATERIALS ARE MIXED INTO THE TOPSOIL. THE DESIGNATED FERTILIZATION, SOIL CONDITIONING, AND SOIL STABILIZATION MATERIALS SHALL BE APPLIED TO THE TOPSOIL AT THE RECOMMENDED RATES. THE TOPSOIL SHALL BE STOCKPILED WITH SUBGRADE, TOPSOIL THICKNESS AND QUALITY PRIOR TO CONSTRUCTION SHALL BE REESTABLISHED AT THE COMPLETION OF CONSTRUCTION ACTIVITIES.

COORDINATE SYSTEM: NAD83 OHIO STATE PLANES, NORTH ZONE, US FOOT
HORIZONTAL DATUM: NAD83
VERTICAL DATUM: NAVD 88

OWNER
GULF OCEAN WIND PROJECT, LLC
CIVIL ENGINEER - TECHNICAL DESIGN
RENEWABLE ENERGY SYSTEMS AMERICAS INC.
11101 W. 120TH AVE. SUITE 400
BROOMFIELD, CO 80021
CONTACT: JAMES GOWIN, PE
PHONE: 303-439-4200

SURVEYOR
ATMELL GROUP
ADDRESS: 7100 E. PLEASANT VALLEY ROAD
SUITE 220 INDEPENDENCE, OH 44131
CONTACT: JAMES GOWIN, PE
PHONE: 440-349-2000

SITE CONTACT
RENEWABLE ENERGY SYSTEMS AMERICAS INC.
11101 W. 120TH AVE. SUITE 400
BROOMFIELD, CO 80021
CONTACT: JAMES GOWIN, PE
PHONE: 303-439-4200

- CONSTRUCTION STORM WATER POLLUTION

- SUBSTATION PLANS
SOURCE: NBI ELECTRIC POWER ENGINEERING, INC.
- SWITCHYARD PLANS
SOURCE: BURNS & MCDONNELL
- DAM PLANS
SOURCE: TBD
- NOT AAS REPORT
SOURCE: ETECH TECH., INC.
- PHASE I ENVIRONMENTAL ASSESSMENT
SOURCE: ETECH TECH., INC.
- CULTURAL/ARCHAEOLOGY
SOURCE: ETECH TECH., INC.
- ANALS AND WATERS STUDIES
SOURCE: WESTON SOLUTIONS TECHNOLOGY, INC.
- DEVELOPED CONSTRAINTS

TURBINE STATISTICS:									
WTC & FOUNDATION	MANUFACTURER AND MODEL	RATED POWER (MW)	HUB HEIGHT (M)	NET ULTIMATE BEARING (kN/ft)	OWF BESS (ft)	FOUNDATION DIAMETER (ft)	APPROX. TOTAL STEEL (kN/BS)	APPROX. TOTAL CONCRETE (kN/ft)	# WTC
TYPE A	VESTAS V10	2.2	95	9.0	NON-BUOYANT	56'-6"	27.5	342	14
TYPE B	VESTAS V10	2.2	95	7.5	NON-BUOYANT	61'-6"	31.0	394	11
TYPE C	VESTAS V10	2.2	95	7.5	5'-0"	61'-6"	31.0	394	5

TURBINE STATISTICS:

NOTES:

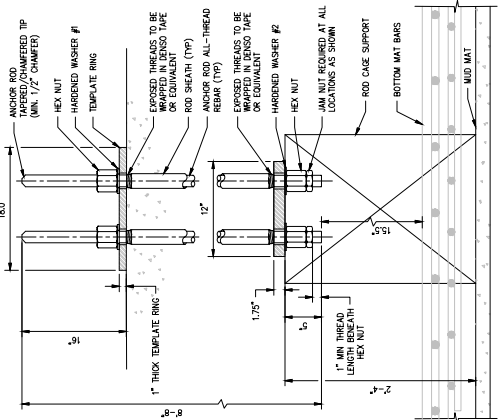
1. ALL DIMENSIONS IN FEET AND INCHES
UNLESS OTHERWISE STATED

CONSTRUCTION SEQUENCE FOR CONCRETE AND GROUT
(FOR MORE DETAILED GROUTING STEPS, SEE GROUTING SPECIFICATIONS):

- ASSEMBLE ROD CAGE & INSTALL ON TOWER BASE. THE UNDERGROUT RING SHALL BE HAND TIGHTENED TO A MINIMUM OF 50 FT-LBS BEFORE.
- ASSEMBLE REBAR FOR BASE SLAB & PIEDestal STARTERS.
- POUR BASE SLAB CONCRETE UP TO CONSTRUCTION JOINT.
- ASSEMBLE PIEDestal REBAR.
- POUR PIEDestal CONCRETE.
- PLACE AND COMPACT FOUNDATION BACKFILL. THIS STEP CANNOT TAKE PLACE PRIOR TO THE CONCRETE READING 60% OF ITS DESIGN STRENGTH (5000 PSI).
- REMOVE TEMPLATE RINGS.
- SET SHIMS THEN SET THE TOWER BASE SECTION ON THE SHIMS. THE TOWER BASE SECTION TO BE LAYED PER WFO MANUFACTURER'S REQUIREMENTS.
- BATTLE DOWN ALL NUTS ABOVE BASE FLANGE AND APPLY NOMINAL TORQUE OF 100 FT-LBS FOLLOWING TIGHTENING SEQUENCE SHOWN.
- PLACE EPOXY GROUT PER APPROVED PROCEDURE, TRIMMEL FINISH, TRIM AND CLEAN AS NECESSARY TO PRODUCE A NEAT GROUT BED IN INTIMATE CONTACT WITH THE BOTTOM OF THE BASE FLANGE.
- INTERMEDIATE TOWER SECTIONS MAY BE SET WHILE GROUT IS CURING. THE TOWER SECTIONS SHALL BE SET IN THE ORDER SHOWN. THE STACKED IS A FUNCTION OF THE NUMBER OF SAM STAKES AS INDICATED ON SHEET S-3100.
- WHEN GROUT REACHES 14000 PSI AND BOTH THE BASE AND INTERMEDIATE SECTIONS HAVE BEEN SET, THE TOWER SHALL BE TENSIONED FULLY AND THE TOWER CAN BE FULLY ERECTED. THE TOWER SHALL FOLLOW TIGHTENING SEQUENCE SHOWN.
- WHEN GROUT AND CONCRETE REACH THEIR RESPECTIVE 28-DAY STRENGTHS THE TOWER MAY BE OPERATED.
- NO TOWER TESTING IS PERMITTED PRIOR TO GROUT AND CONCRETE READING THEIR RESPECTIVE FULL 28-DAY STRENGTHS 15000 AND 5500 PSI.

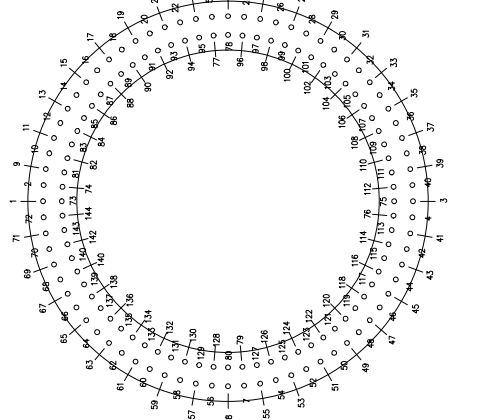
3. DESIGN ROD POST-TENSION LOADS
FOUNDATION: 103.3 KIP \pm 5 KIPS / -0 KIPS
TOWER: 103.3 KIP \pm 5 KIPS / -0 KIPS
MAX. PRESTRESS 103.3 KIPS

- ALL ANCHOR RODS, JAM NUTS AND WASHERS SHALL BE PROVIDED BY THE SAME SUPPLIER.

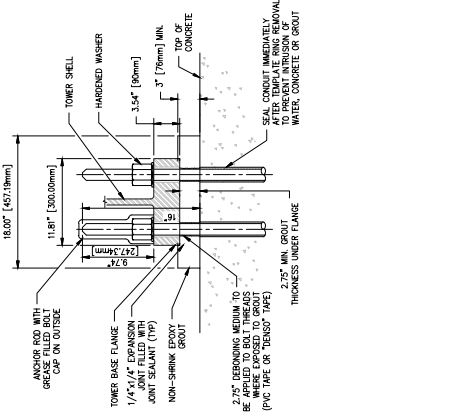


A SECTION: TEMPLATE AND EMBEDMENT RING ASSEMBLY
Scale: N.T.S.

TOWER DOOR

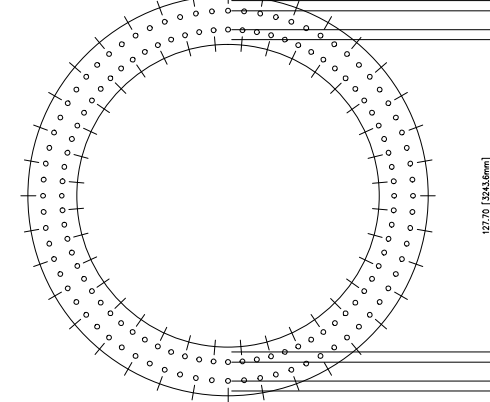


2 DETAIL: ONE-JACK ROD TENSIONING SEQUENCE
Scale: 1/2" = 1'



B DETAIL: BOTTOM FLANGE SEATED ON GROUT
Scale: N.T.S.

TOWER DOOR



3 DETAIL: TWO-JACK ROD TENSIONING SEQUENCE
Scale: 1/2" = 1'

ANCHOR BOLT DETAILS
HOG CREEK WIND PROJECT

HARDIN COUNTY, OHIO

RES AMERICA CONSTRUCTION INC.
11100 WILLOW BLVD. STE. 100, WILLOW PARK, OH 44094
TELEPHONE: (203) 439-4000, FAX: (203) 439-4099
WWW.RES-AMERICA.COM

CONSTRUCTION
FOR
TO CHANGE, NOT
INFORMATION SUBJECT

23049S3200
SHEET 5 OF 8

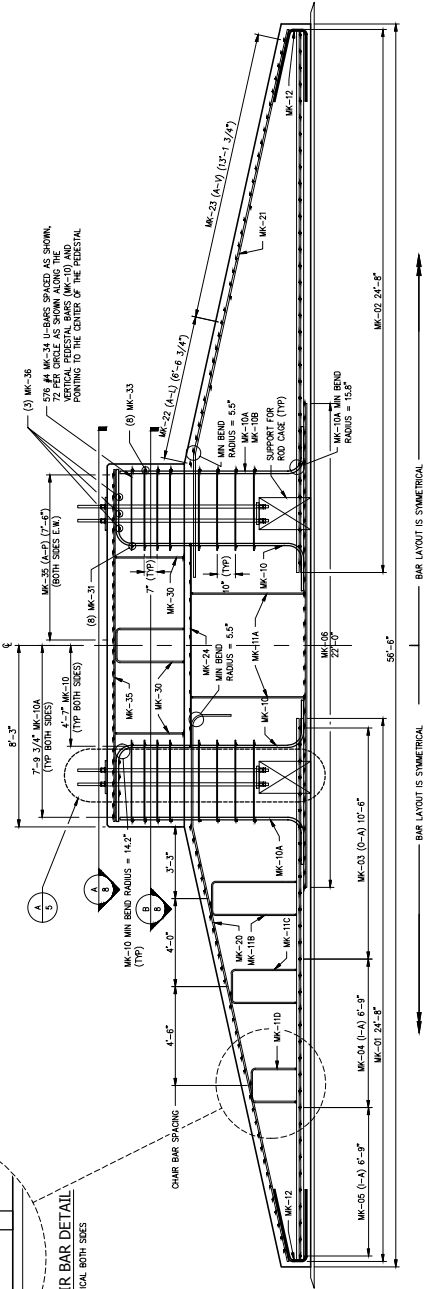
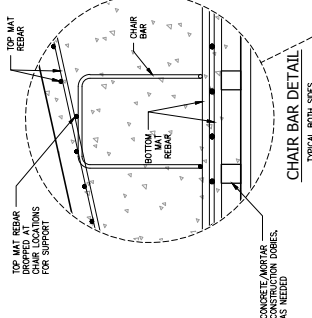
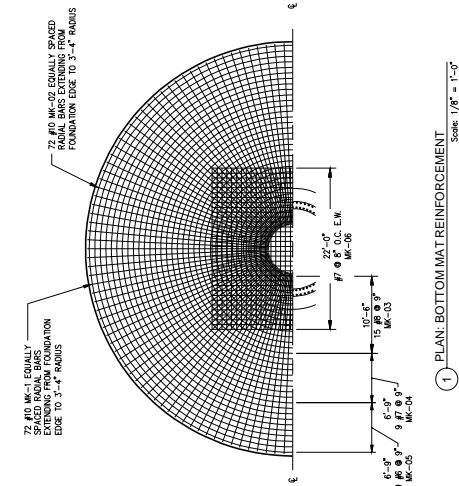
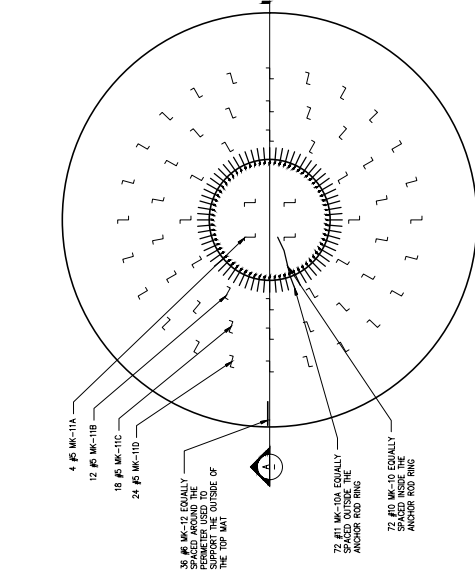
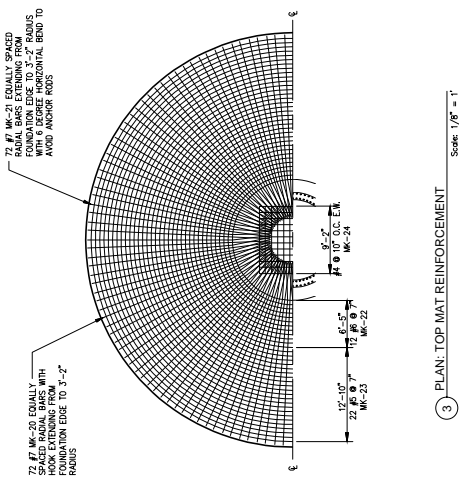
HOG CREEK WIND PROJECT
REINFORCEMENT PLAN - TYPE A
HARDIN COUNTY, OHIO

RES AMERICA CONSTRUCTION INC.
powering change
11100 W. 10TH AVE. SUITE 100 KNOXVILLE, TN 37921
TELEPHONE: (603) 439-4200, FAX: (603) 439-4299

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CONSTRUCTION INFORMATION
FOR
TO CHANGE, NOT
SUBJECT

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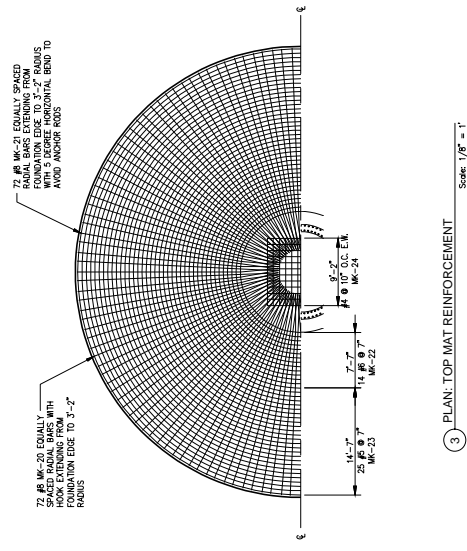
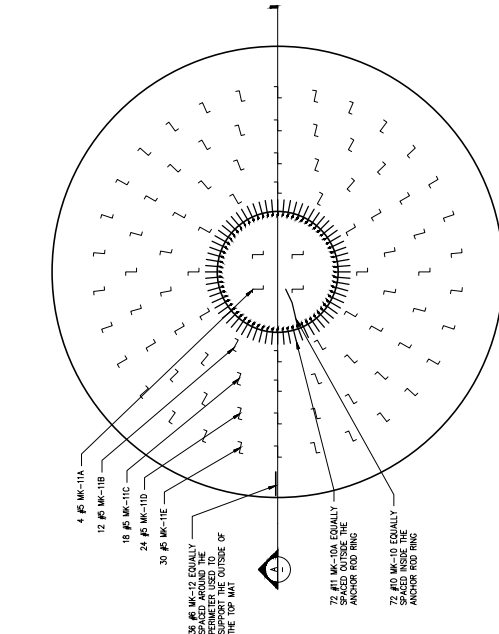
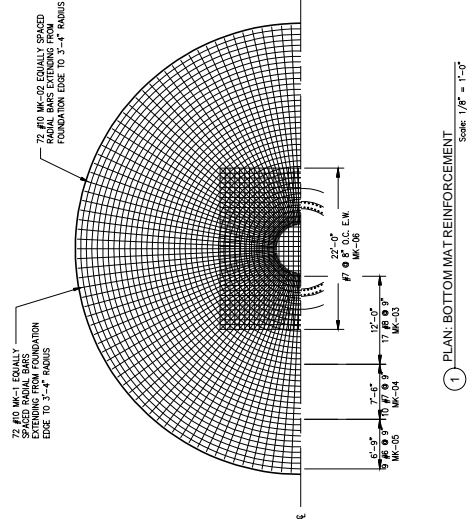
HOG CREEK WIND PROJECT
REINFORCEMENT PLAN - TYPES B AND C
HARDIN COUNTY, OHIO

23049SS3202
SHEET 7 OF 8

RES AMERICA CONSTRUCTION INC.
11100 W. 10TH AVE. SUITE 400 MINNEAPOLIS, MN 55428
TELEPHONE: (763) 439-4200, FAX: (763) 439-4299
www.resusa.com

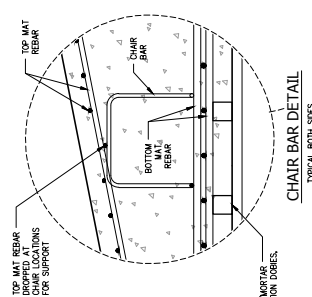
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NO.	DATE	BY	CHKD	APPD	DESCRIPTION
01	04/12/17	RES			ISSUED FOR CONSTRUCTION

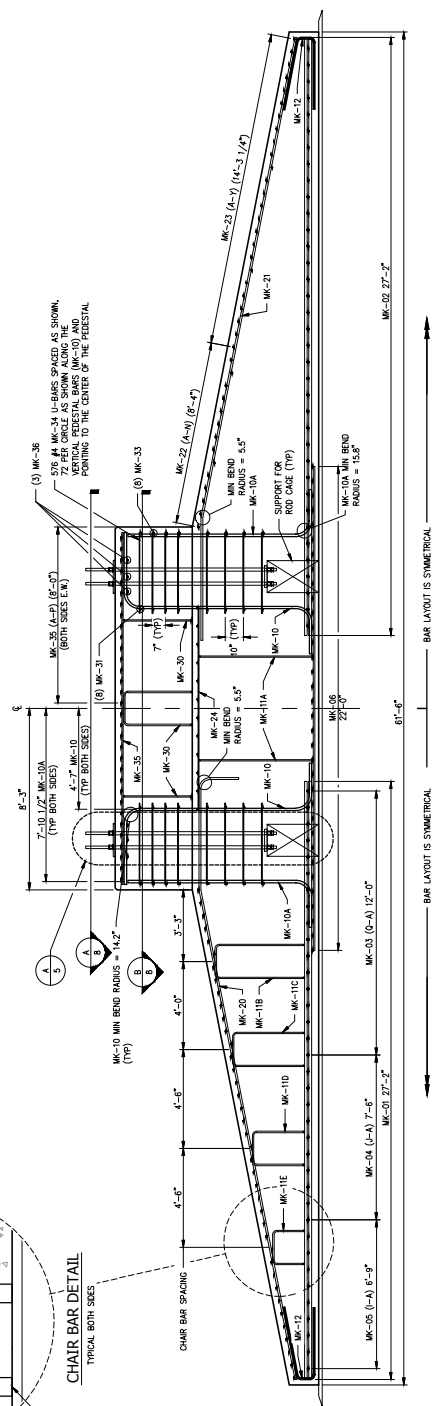


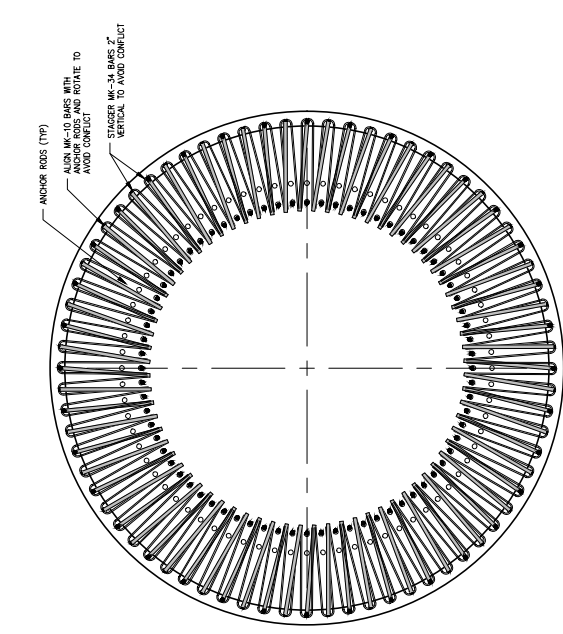
2 PLAN: TOP MAT SUPPORT LAYER

3 PLAN: TOP MAT REINFORCEMENT

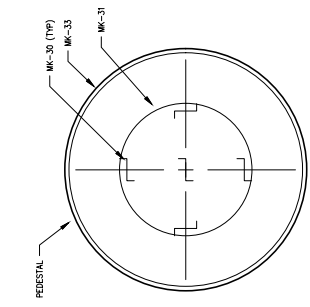


NOTE:
SUPPORT REBAR SHOWN IS LOCATED BENEATH THE TOP MAT REINFORCEMENT LAYER SHOWN ON PLAN 3, THIS SHEET

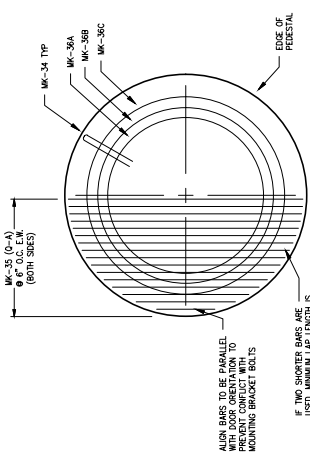




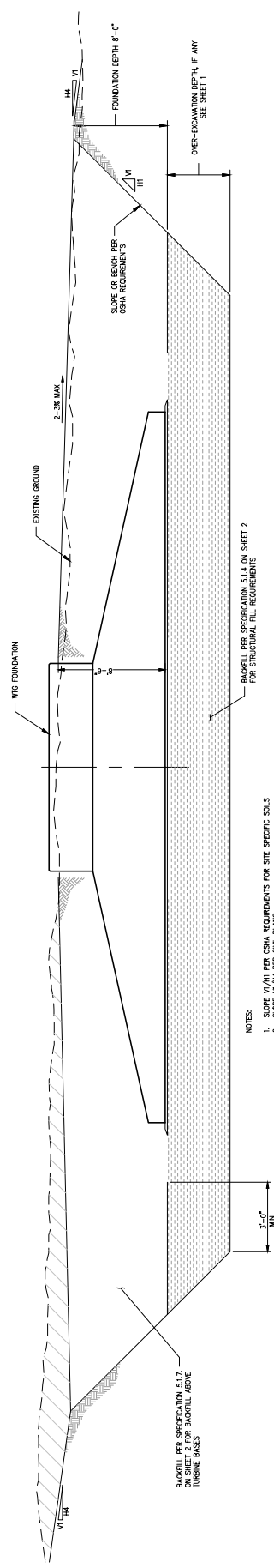
C SECTION: PEDESTAL
Scale: 1/2" = 1'-0"



B SECTION: PEDESTAL
Scale: 1/4" = 1'-0"



A SECTION: TOP OF PEDESTAL
Scale: 1/4" = 1'-0"



E SECTION: OVER-EXCAVATION AND BACKFILL PLACEMENT
Scale: 1/4" = 1'-0"

- NOTES:
1. SLOPE 1V/1H PER OSHA REQUIREMENTS FOR SITE SPECIFIC SOILS
 2. SLOPE 1V/1H PER OSHA PLANS

This foregoing document was electronically filed with the Public Utilities

Commission of Ohio Docketing Information System on

4/13/2017 9:53:14 AM

in

Case No(s). 09-0277-EL-BGN, 10-0654-EL-BGN, 16-1422-EL-BGA, 16-1423-EL-BGA

Summary: Correspondence of Hog Creek Wind Farm LLC in Compliance with Condition No. 54(a) - Final Turbine Foundation Design Plans electronically filed by Teresa Orahod on behalf of Sally W. Bloomfield