

U.S. TOWER, INC.

PO BOX N147, WESTPORT, MA 02790

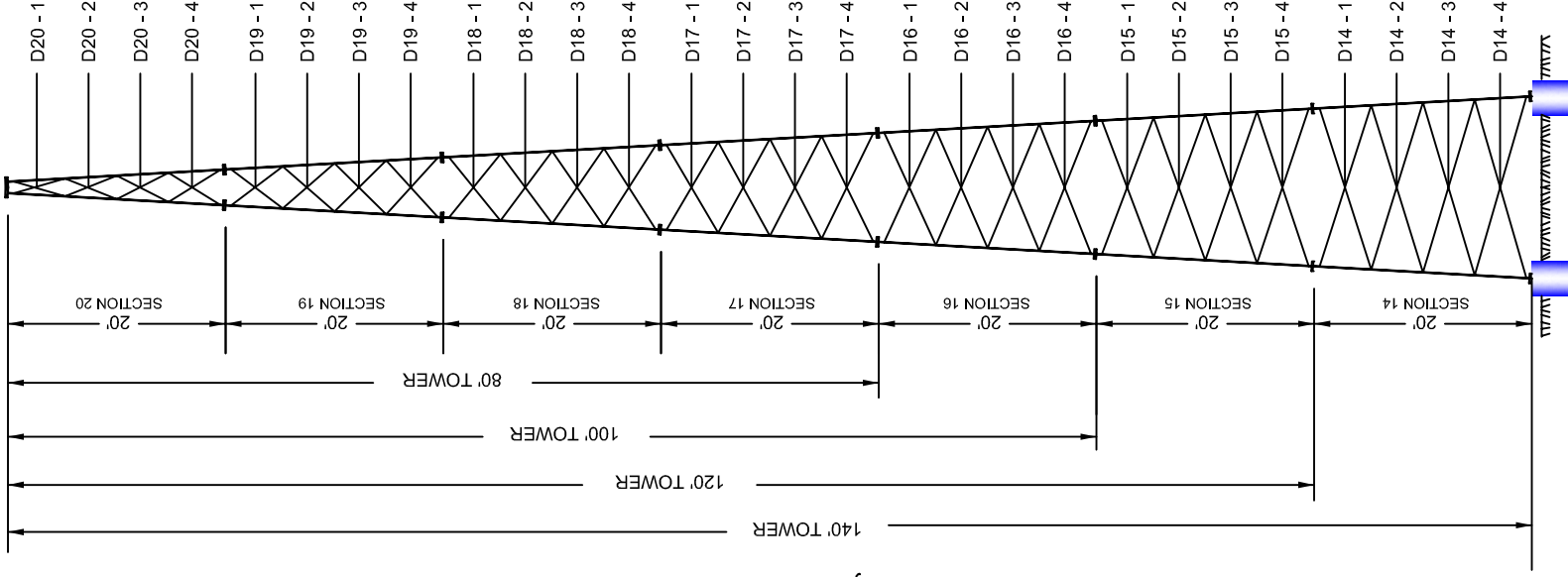
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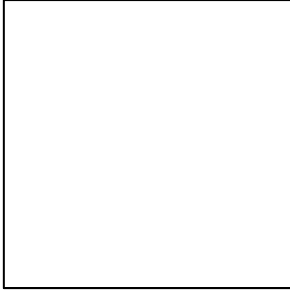
508-636-9100

This tower has been designed for the following wind turbines: Bergey Excel and Aerostar 6 Meter. Contact U.S. Tower, Inc. to determine suitability of this tower for use with other turbines.

MODEL W - FREESTANDING TOWER

SECTION NO.	SPREAD DIMENSION		TOWER LEGS A572-50	TOWER BRACES A36	FLANGE PLATES		FLANGE BOLTS	TOTAL WEIGHT
	UPPER	LOWER			TOP	BOTTOM		
20	12 1/2"	33 25/32"	2" SCH 40 PIPE	L 1 1/2 X 1 1/2 X 1/8"	5 X 5 X 3/4" 6 X 6 X 3/4" 5 21/32" BC	6 X 6 X 3/4" 5 21/32" BC	12 - 3/4 X 2 3/4"	367 LBS
19	33 25/32"	60 1/2"	2 1/2" SCH 40 PIPE	L 1 1/2 X 1 1/2 X 1/8"	6 X 6 X 3/4" 5 21/32" BC	6 X 6 X 3/4" 5 21/32" BC	12 - 3/4 X 2 3/4"	536 LBS
18	60 1/2"	87 1/4"	2 1/2" SCH 40 PIPE	L 2 X 2 X 1/8"	6 X 6 X 3/4" 5 21/32" BC	6 X 6 X 3/4" 5 21/32" BC	12 - 3/4 X 2 3/4"	663 LBS
17	87 1/4"	114"	3" SCH 40 PIPE	L 2 X 2 X 1/8"	6 X 6 X 3/4" 5 21/32" BC	6 X 6 X 3/4" 5 21/32" BC	12 - 3/4 X 2 3/4"	842 LBS
16	114"	144"	3" SCH 40 PIPE	L 2 X 2 X 3/16"	6 X 6 X 3/4" 5 21/32" BC	6 X 6 X 3/4" 5 21/32" BC	12 - 1" X 2 3/4"	1149 LBS
15	144"	174"	3" SCH 80 PIPE	L 2 X 2 X 3/16"	7 X 7 X 1" 6 3/8" BC	7 X 7 X 1" 6 3/8" BC	12 - 1" X 2 3/4"	1445 LBS
14	174"	204"	3" SCH 80 PIPE	L 2-1/2 X 2-1/2 X 3/16"	7 X 7 X 1" 6 3/8" BC	7 X 7 X 1" 6 3/8" BC	12 - 1" X 2 3/4"	1835 LBS





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Tower Height	A Square	B Height	Vertical Bars	Top & Bottom Bars	Anchor Bolts	Quantities	
140'	7.25'	5'	20 - #8 (54")	6 - #8 Each Way (81")	1" x 48"	90' - #8, 162' - #8	9.7 Yds/Block
120'	6.75'	5'	20 - #7 (54")	6 - #8 Each Way (75")	1" x 48"	90' - #7, 150' - #8	8.4 Yds/Block
100'	6.25'	5'	16 - #8 (54")	5 - #9 Each Way (69")	1" x 48"	72' - #8, 115' - #9	7.2 Yds/Block
						Rebar	Concrete

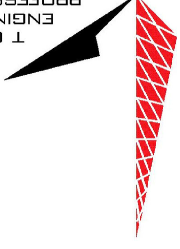
Block Foundation for U.S. Tower, Inc. Model W Freestanding Tower

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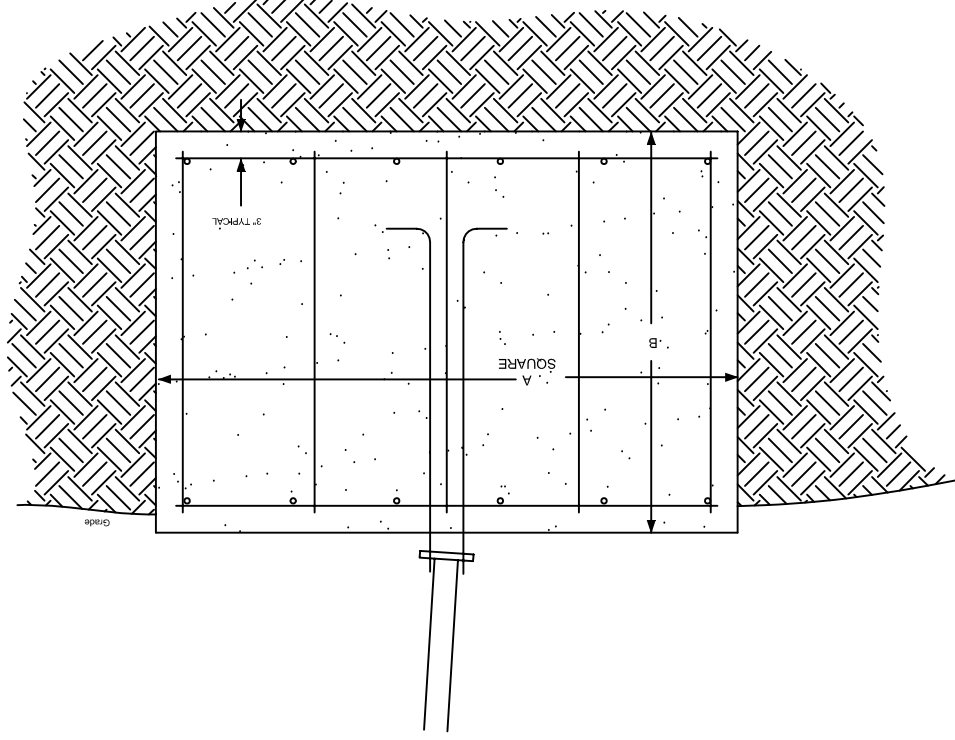
U.S. TOWER
ENGINEERING
PROFESSIONALS

Engineering Analysis performed by Tower
Engineering Professionals, 3703 Junction
Boulevard, Raleigh, NC 27603-5263

NOTES:

1. The foundation design shown is based on an allowable foundation pressure of 2,000 pounds per square foot. It is the responsibility of the owner to verify by geotechnical investigation that actual site soil parameters equal or exceed this value. If conditions other than those described herein exist, a soil analysis should be performed to determine the structural adequacy of the foundation.

2. If the frost depth is known to be greater than the foundation depth or the water table is less than the foundation depth, the design engineer (Tower Engineering Professionals, Inc.) shall be notified prior to construction and a foundation analysis or re-design shall be performed.



GENERAL NOTES:

1. All work presented on these drawings must be completed by the contractor unless noted otherwise.
2. The Contractor must have considerable experience in performance of work similar to that described herein. By acceptance of this assignment, the contractor is attesting that he does have sufficient experience and ability, that he is knowledgeable of the work to be performed and that he is properly licensed and properly registered to do this work in the applicable state.
3. All hardware assembly manufacturer's instructions shall be followed exactly and shall supersede any conflicting notes enclosed herein.
4. It is the contractor's sole responsibility to determine erection procedure and sequence to insure the safety of the structure and its component parts during erection. This includes, but is not limited to, the addition of temporary bracing, guys or tie downs that may be necessary. Such material shall be removed and shall remain the property of the contractor after the completion of the project.
5. All materials and equipment furnished shall be new and of good quality, free from faults and defects and in conformance with the contract documents. Any and all substitutions must be properly approved and authorized in writing by the owner and engineer prior to installation. The contractor shall furnish satisfactory evidence as to the kind and quality of the materials and equipment being substituted.
6. The contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the work.
7. The contractor is responsible for insuring that this project and related work complies with all applicable local, state, and federal safety codes and regulations governing this work. Contractor shall secure all necessary permits for this project from all applicable governmental agencies. All permits that must be obtained are the responsibility of the contractor. The contractor will be responsible for abiding by all conditions and requirements of the permits.
8. The contractor is required to maintain all pipes, ditches, and other drainage structures free from obstruction until work is accepted by the owner. The contractor is responsible for any damages caused by failure to maintain drainage structure in operable condition.
9. All materials and workmanship shall be warranted for one year from acceptance date.
10. The tower reactions were obtained and the foundations were designed in accordance with the ANSI/TIA-222-F-1996, Structural Standard for Antenna Supporting Structures and Antennas, dated June 1996, The 2006

International Building Code (IBC), and ASCE 7-05 Minimum Design Loads for Buildings and Other Structures. 120-MPH 3-second gust basic wind speed and 3/4" radial ice with a 50-mph 3-second gust wind speed.

REINFORCING STEEL NOTES:

1. The reinforcing steel shall conform to the requirements of ASTM A-615, Grade 60. It shall be deformed and splices shall not be allowed unless otherwise noted.
2. Welding is prohibited on reinforcing steel and embedments.
3. Reinforcing cages shall be braced to retain proper dimensions during handling and throughout placement of concrete. When temporary casing is utilized, bracing shall be adequate to resist forces occurring from flowing concrete during casing extraction.
4. Spaces shall be attached intermittently throughout the entire length of tieback reinforcing to insure concentric placement of cages in excavations.
5. Minimum concrete cover for reinforcement shall be 3" if cast in place and 2" cover if form work is used as defined in ACI 318 Section 7.7.1. Approved spaces shall be used to insure appropriate cover on reinforcement.

CONCRETE NOTES:

1. Work shall be in accordance with the latest revision of the ACI-318, "Building Code Requirements for Reinforced Concrete."
2. The concrete shall develop a minimum compressive strength of 3,000 PSI in 28-days.
3. Proportions of concrete materials shall be suitable for the installation method utilized and shall result in durable concrete for resistance to local anticipated aggressive actions. The durability requirements of ACI-318 shall be satisfied based on the conditions expected at the site.
4. Concrete shall be placed in a manner that will prevent segregation of concrete materials, infiltration of water or soil, and other occurrences that may decrease the strength or durability of the foundation.
5. Free fall concrete may be used provided fall is vertical down without hitting the sides of the excavation, form work, reinforcing bars, form ties, cage bracing, or other obstructions. Under no circumstances shall concrete fall through water.
6. The maximum size of the aggregate shall not exceed a size suitable for the installation method utilized of 1/3-clear distance behind or between reinforcing. The maximum size may be increased to 2/3-clear distance provided workability and methods of consolidation such as vibrating will prevent honeycombs and voids.