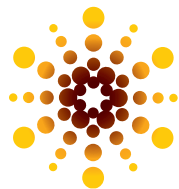


INSTALLATION MANUAL



Trylon



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TITAN® SELF SUPPORT TOWERS

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
TITAN TOWERS INSTRUCTION SHEET

- 1) CHECK ALL TOWER SECTIONS FOR DAMAGE BEFORE SIGNING SHIPPING PAPERS.
- 2) IF MATERIAL IS DAMAGED OR MISSING, NOTE ON ALL COPIES OF SHIPPING PAPERS FOR FUTURE REFERENCE.
NOTE: DO NOT ATTEMPT TO REPAIR DAMAGED MEMBERS, AS THIS WILL WEAKEN THE STRUCTURE.
- 3) ASSEMBLY INSTRUCTIONS ARE LOCATED IN A PLASTIC BAG WITH THE HARDWARE.
- 4) CHECK FOR PROPER QUANTITIES OF HARDWARE. BOLT SIZES ARE NOTED ON ASSEMBLY DRAWINGS.
- 5) BEFORE ASSEMBLY, CHECK FOR LOOSE OR MISSING BOLTS AND TIGHTEN OR REPLACE AS REQUIRED.
- 6) EXCAVATE FOR CONCRETE BASE AS PER FOUNDATION INSTRUCTIONS AND INSTALL REINFORCING BAR.
- 7) ASSEMBLE 4-FOOT STUB LEGS TO BASE SECTION AND PLACE IN EXCAVATION. SPLICE JOINT MUST BE ABOVE FINISHED CONCRETE. PLUMB TOWER SECTION WITH A TRANSIT OR LEVEL.
- 8) POUR CONCRETE AND ALLOW TO HARDEN FOR ONE (1) WEEK.
- 9) TOWER MAY BE ERECTED ONE (1) SECTION AT A TIME BY USING THE GIN POLE METHOD OR BY ASSEMBLING SECTIONS AND LIFTING WITH A CRANE.
NOTE: DO NOT ATTACH ANTENNA BEFORE TOWER IS ERECTED AND ALL BOLTS ARE TIGHTENED.
- 10) COMPLETE TOWER INSPECTION IS RECOMMENDED EVERY TWO (2) TO THREE (3) YEARS.
- 11) ALL TOWER BOLTS MUST BE TIGHTENED PROPERLY. RECOMMENDED TORQUE VALUES ARE AS FOLLOWS:
 - $\frac{1}{4}"$ 6 ft.lbs.
 - $\frac{5}{16}"$ 11 ft.lbs.
 - $\frac{3}{8}"$ 17 ft.lbs.

BOLT HARDWARE SUPPLIED WITH SPLIT WASHERS SHOULD BE INSTALLED USING "TURN-OF-NUT TIGHTENING"; SNUG-TIGHT PLUS $\frac{1}{4}"$ TO $\frac{1}{2}"$ TURN. IT IS EXTREMELY IMPORTANT NOT TO OVER TIGHTEN BOLTS. EXCESSIVE TIGHTENING WILL REDUCE THE LOCKING CAPABILITY OF THE BOLT ASSEMBLY.
- 12) DO NOT EXCEED MANUFACTURER'S LOADING SPECIFICATION.
- 13) AN EXPERIENCED INSTALLER SHOULD CARRY OUT INSTALLATION ONLY.

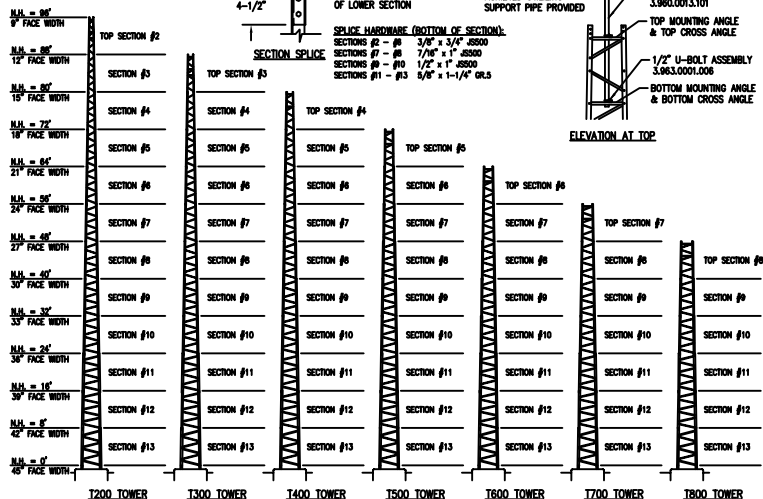
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DATE: 05 OCT 00	BY: JAG	CHK:
TITLE: TITAN TOWERS – INSTRUCTIONS		

NOTES:

[N.H. = NOMINAL HEIGHT]



- 1) ALL TOWER HEIGHTS SHOWN ARE NOMINAL. ACTUAL TOWER HEIGHT ACHIEVED UTILIZING SUPPORT PIPE.
- 2) ALL TOWERS ARE TRIANGULAR IN CROSS SECTION.
- 3) CONSTRUCTED FROM PASSIVATED G-90 COAT PRE-GALVANIZED STEEL SHEET.
- 4) SHEET GAUGES 8 THROUGH 16.
- 5) MINIMUM 32 KSI YIELD FOR ALL COMPONENTS.
- 6) 60-DEGREE ANGULAR LEGS WITH 90-DEGREE ANGULAR CROSS BRACING FOR MAXIMUM STRENGTH.
- 7) DIAGONAL MEMBERS ARE INSTALLED AT A SHALLOW ANGLE FOR CLIMBING.
- 8) THE MIDDLE OF DIAGONAL MEMBERS ARE DESIGNED TO SUPPORT A CLIMBER OF MAXIMUM 200 POUNDS.
- 9) HIGH QUALITY GRADE 5 BOLTS WITH J5500 PROTECTIVE FINISH.
- 10) HIGH TOLERANCE SLIP-FIT SPLICES ENSURE PROPER ALIGNMENT. SPLICE HARDWARE SHOULD BE INSTALLED USING "TURN-OF-NUT TIGHTENING"; SNUG-TIGHT PLUS 1/4" TO 1/2" TURN
- 11) TOWERS ARE AVAILABLE IN PRE-ASSEMBLED 8-FOOT SECTION OR AS KNOCK-DOWN SECTIONS.
- 12) KNOCK DOWN TOWERS MUST BE PROFESSIONALLY ASSEMBLED WITH THE USE OF THE PROPER ASSEMBLY JIGS.
- 13) KNOCK-DOWN TOWERS ARE IDEAL FOR LARGE QUANTITY REQUIREMENTS WHERE FREIGHT COST IS A MAJOR FACTOR.
- 14) TOWERS MAY BE CONSTRUCTED USING ANY PORTION OF THE TWELVE, 8-FOOT SECTIONS WHICH COMPRISE THIS STRUCTURE. FOR EXAMPLE, THE TOP 64 FEET MAY BE CHOSEN TO SUPPORT A SMALL ANTENNA LOAD OR THE BOTTOM 64 FEET COULD BE SELECTED TO SUPPORT A LARGER ANTENNA LOAD.
- 15) PLEASE REFER TO OUR "TOWERCAL" PROGRAM TO DETERMINE THE RIGHT TOWER FOR YOUR REQUIREMENTS.

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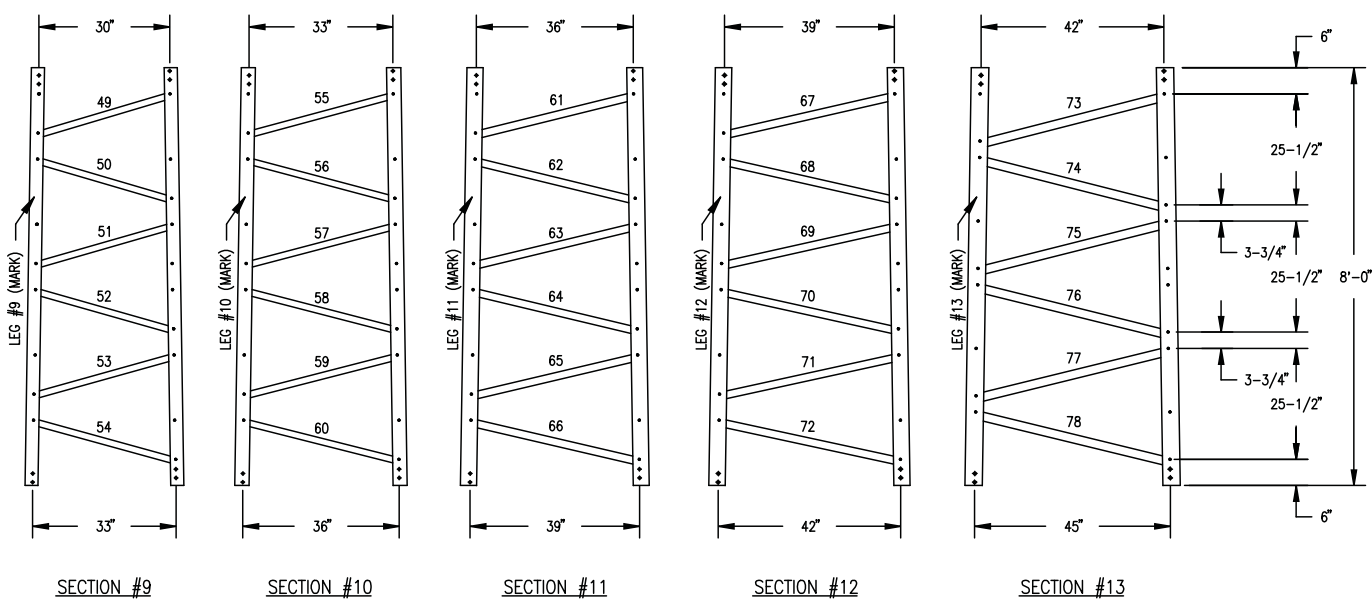
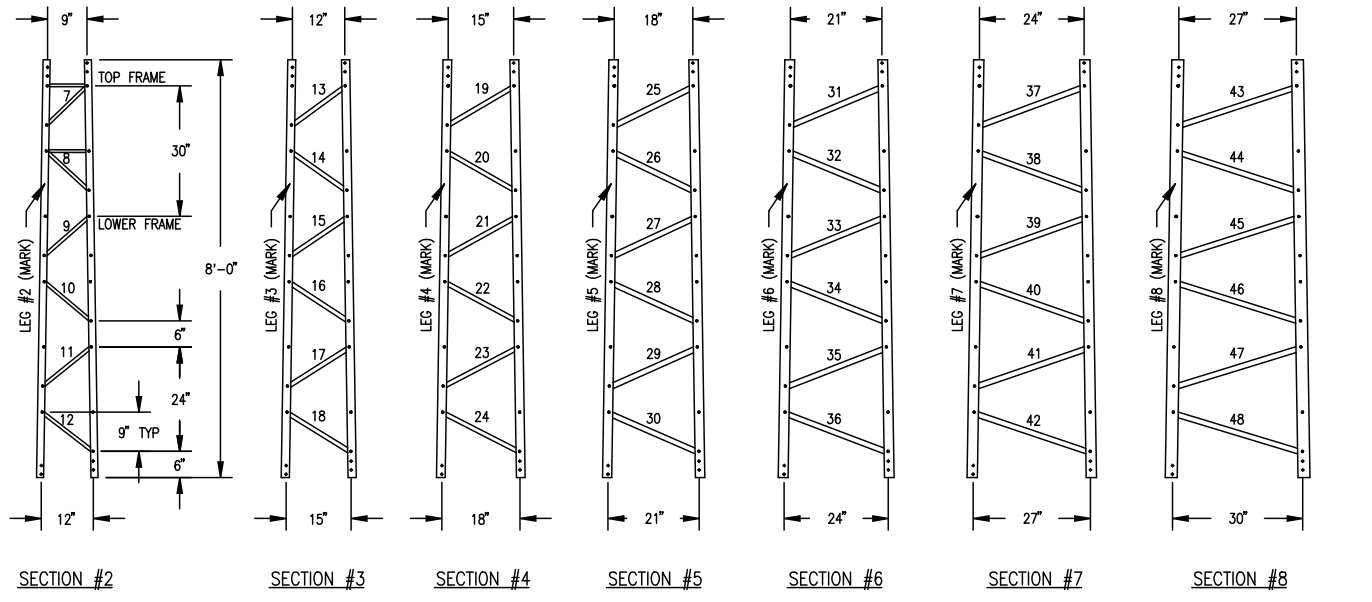
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DATE: 26 JAN 00	BY: BCP	CHK:	APP:
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TITAN SELF-SUPPORT OVERVIEW



Assembly Notes:

- 1) Section #2 - #8 are assembled with 1/4" x 1/2" GR.5 bolts with nuts inside. Lockwasher integral with nut.
- 2) Section #9 - #12 are assembled with 5/16" x 3/4" GR.5 bolts with nuts inside. Lockwasher integral with nut.
- 3) Section #13 is assembled with 3/8" x 1" GR.5 bolts with nuts and lockwashers inside.
- 4) Assemble angles to top section as a standard. Top angles are available for each sections #2 - #8.
- 5) Assemble sections without any visible twist. Keep stands level to each other.
- 6) All bracing members inside legs with flange facing top end.
- 7) Stack odd numbers together and even numbers together for shipping.
- 8) Decals to go on bottom section legs mid span.
- 9) Panel heights are the same for all sections except section #13.
- 10) Top end of leg is colour coded.

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DATE: 12 JUL 04	BY: MH	CHK:	APP:
TITLE: TITAN SELF-SUPPORT SECTION DRAWINGS			DRAWING NO.

NORMAL SOIL: - STUB LEGS

STANDARD FOUNDATION DRAWINGS ARE PROVIDED FOR "NORMAL" SOIL CONDITIONS. NORMAL SOIL CONDITIONS IS DEFINED AS A COHESIVE SOIL WITH AN ALLOWABLE BEARING CAPACITY OF 4000 PSF AND AN ALLOWABLE NET HORIZONTAL PRESSURE OF 400 PSF PER LINEAL FOOT OF DEPTH TO A MAXIMUM OF 4000 PSF. IF YOUR APPLICATION REQUIRES THAT THE THE TOWER BE INSTALLED ON OTHER THAN NORMAL SOIL CONDITIONS, CONTACT YOUR LOCAL GEOTECHNICAL CONSULTANT.

FOUR, STANDARD ANCHOR TYPES ARE SHOWN ON DRAWINGS 000001.610.0016 AND 000001.610.0017. SELECT THE PROPER ONE BASED ON THE SECTION NUMBER ASSIGNED TO THE BOTTOM 8-FOOT SECTION ON YOUR TOWER MODEL.

THE HOLE SHOULD BE EXCAVATED TO THE MINIMUM DIMENSIONS SUGGESTED AND FORMING IS NOT REQUIRED PROVIDED THE EXCAVATION WILL HOLD ITS WALLS. IF FORMING IS REQUIRED, A STRONG WELL-CONSTRUCTED PLYWOOD FORM WILL BE REQUIRED.

THE REINFORCING BARS ARE REQUIRED AS INDICATED ON DRAWINGS 000001.610.0016 AND 000001.610.0017 AND ONCE IN PLACE THE 4-FOOT LONG STUB LEGS CAN BE ATTACHED TO THE BOTTOM SECTION AND THIS ASSEMBLY CAN BE POSITIONED OVER THE EXCAVATION.

CARE SHOULD BE TAKEN AT THIS POINT TO ENSURE THAT THE SPLICE BOLTS TO THE STUB LEGS WILL BE ABOVE THE FINISHED LEVEL OF THE CONCRETE SURFACE AND THAT THE FIRST SECTION IS TRULY VERTICAL.


USING A HIGH QUALITY SPIRIT LEVEL OR TRANSIT, CHECK THE VERTICALITY OF THE SECTION. IF A SPIRIT LEVEL IS USED, PLACE IT ON THE TOP OF THE STUB LEGS ON ALL 3-TOWER FACES. BE SURE TO SECURE THE TOWER AND STUB LEGS AGAINST MOVING WHILE THE CONCRETE IS POURED.

CONCRETE SHOULD COVER ALL REBAR TO A DEPTH OF 3 INCHES AND REACH STRENGTH OF 3,000 PSI AT 28 DAYS. ALLOW PROPER CURING OF THE FOUNDATION PRIOR TO INSTALLING THE BALANCE OF THE TOWER.

IF THE CONCRETE HAS NOT BEEN POURED AGAINST AN UNDISTURBED SURFACE IT WILL BE NECESSARY TO BACKFILL WITH GRANULAR MATERIAL COMPACTED IN LAYERS OF NOT MORE THAN 6 INCHES.

REV.	BY:	BY:	DESCRIPTION	DATE
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REFERENCE DRAWINGS:	
DRAWING NUMBER	DRAWING NUMBER

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DRAWING NO. 000001.610.0014		
CUSTOMER:	SITE:	SCALE: 15.000
DATE: 27 JAN 00	BY: BCP	CHK: APP:
TITLE: SOIL FOUNDATIONS GENERAL INSTRUCTIONS		

NOTES: 1) SEE DRAWING 000001.610.0016 & 0017

FOUNDATION NOTES:

CONCRETE:

1. CONCRETE CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF CSA STANDARD A-23 OR SIMILAR ASTM STANDARD.
2. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS OF NOT LESS THAN 3000 PSI.
3. REINFORCING STEEL SHALL BE GRADE 50 DEFORMED BARS AND SHALL HAVE MINIMUM CONCRETE COVER OF 3 INCHES.

FOUNDATIONS:

1. ALL FOUNDATIONS SHALL BE KEPT DRY, BY PUMPING IF NECESSARY, BEFORE POURING CONCRETE AND SHALL BE KEPT DRY UNTIL BACKFILL IS IN PLACE.
2. BACKFILL WITH GRANULAR MATERIAL COMPACTED IN LAYERS OF NOT MORE THAN 6 INCHES.
3. BACKFILL SHALL BE PLACED SO AS TO PREVENT ACCUMULATION OF WATER AROUND FOUNDATIONS OR ANCHORS.

DESIGN:

1. SOIL ANCHORAGE SHOWN HAS BEEN BASED ON NORMAL DRY SOIL ASSUMPTIONS. THESE ARE AS FOLLOWS:
 - A) UNIT WEIGHT OF COMPACTED SOIL IS GREATER THAN 100 POUNDS PER CUBIC FOOT.
 - B) WATER TABLE IS AT A DEPTH GREATER THAN 8 FEET BELOW GRADE.
 - C) COEFFICIENT OF PASSIVE EARTH PRESSURE IS GREATER THAN 3.2.
 - D) COEFFICIENT OF ACTIVE EARTH PRESSURE IS APPROXIMATELY 0.3.
 - E) ORGANIC MATERIALS ARE NOT PRESENT IN THE SOIL.
 - F) SOIL IS NOT ACIDIC.
 - G) THE ALLOWABLE BEARING PRESSURE OF THE SOIL AT THE 5 FOOT DEPTH SHALL BE GREATER THAN 3500 POUNDS PER SQUARE FOOT.
2. THE INSTALLED FOUNDATION WILL HAVE A SAFETY FACTOR OF GREATER THAN 1.2 WHEN INSTALLED AS DESCRIBED (THE TOWER WILL FAIL PRIOR TO FOUNDATION FAILURE).
3. DESIGN ULTIMATE LOADS ARE AS PER TABLE BELOW.
4. FIGURES AND NOTES REPRESENT TRYLON TITAN SOIL FOUNDATIONS.
5. MAXIMUM FROST PENETRATION OF 3 FEET PRESUMED.
6. ANCHOR NUMBER ONE SHOULD BE USED FOR TOWERS WITH THE LOWEST SECTION HAVING A SECTION NUMBER OF 2, 3, 4, 5 OR 6.
7. ANCHOR NUMBER TWO SHOULD BE USED FOR TOWERS WITH THE LOWEST SECTION HAVING A NUMBER OF 7 OR 8.
8. ANCHOR NUMBER THREE SHOULD BE USED FOR TOWERS WITH THE LOWEST SECTION HAVING A SECTION NUMBER OF 9, 10, 11 OR 12.
9. ANCHOR NUMBER FOUR SHOULD BE USED FOR TOWERS WITH THE LOWEST SECTION HAVING A SECTION NUMBER OF 13.
10. ANCHOR NUMBER FIVE SHOULD BE USED FOR TOWERS WITH THE LOWEST SECTION HAVING A SECTION NUMBER OF 14.


GENERAL:

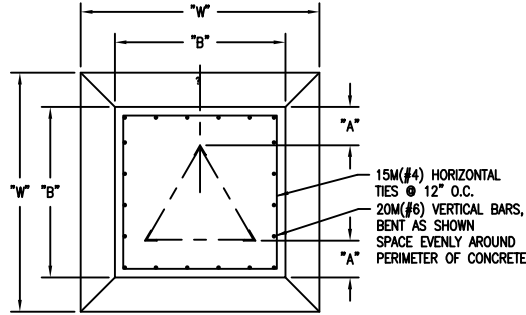
1. THE TOWER SHALL BE CENTERED ON THE CONCRETE CROSS SECTION SUCH THAT DIMENSION 'A' EQUALS DIMENSION 'A'.

NOTES: 1) SEE DWG 000001.610.0016 FOR FOUNDATION STUB LEGS
 2) SEE DWG 000001.610.0042 FOR FOUNDATION SECTIONS

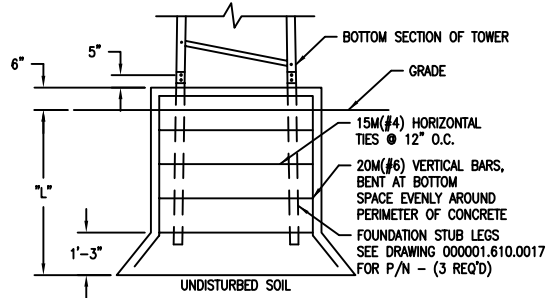
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CUSTOMER:	SITE:	SCALE:	
DATE:	BY:	CHK:	APP:
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TITLE:			
SOIL FOUNDATIONS NOTES			



FOUNDATION PLAN




FOUNDATION ELEVATION

NOTES: 1) SEE DRAWING 000001.610.0017 IN CONJUNCTION WITH THIS DRAWING

REV.	BY:	BY:	DESCRIPTION	DATE
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DRAWING NO. 000001.610.0016

CUSTOMER: SITE: SCALE: 15.000

DATE: 2 JAN 00 BY: BCP CHK: APP:

TITLE: SOIL FOUNDATION DESIGN


ANCHOR TYPE	'B' (FEET)	'W' (FEET)	'L' (FEET)	QTY. OF HORIZONTAL REINFORCING	QTY. OF VERTICAL REINFORCING	OVERTURNING MOMENT (FT. KIPS)	SHEAR (KIPS)	CONCRETE VOLUME CUBIC YARDS
1	3	4	4	4	16	17	0.7	2.0
2	4	5	5	5	20	28	1.0	4.0
3	5	7	5	5	20	67	1.7	6.0
4	5.5	7.5	5.5	6	24	105	3.0	7.0
5	6	8.5	6	7	28	130	3.2	11.0

BASE SECTION #	ANCHOR TYPE	BASE TOWER LEG P/N	ASSEMBLED SECTION P/N	STUB LEG KIT P/N (SET OF 3)
3	1	3.85.0021.003	4.95.0031.000	4.81.0104.000
4	1	3.85.0021.004	4.95.0041.000	4.81.0105.000
5	1	3.85.0021.005	4.95.0051.000	4.81.0106.000
6	1	3.85.0021.006	4.95.0061.000	4.81.0107.000
7	2	3.85.0021.007	4.95.0071.000	4.81.0108.000
8	2	3.85.0021.008	4.95.0081.000	4.81.0109.000
9	3	3.85.0021.009	4.95.0091.000	4.81.0110.000
10	3	3.85.0021.010	4.95.0101.000	4.81.0111.000
11	3	3.85.0021.011	4.95.0111.000	4.81.0112.000
12	3	3.85.0021.012	4.95.0121.000	4.81.0113.000
13	4	3.85.0021.013	4.95.0131.000	4.81.0114.000
14	5	3.85.0021.014	4.95.0141.000	4.81.0115.000

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DRAWING NO. 000001.610.0017

CUSTOMER: SITE: SCALE: 15.000

DATE: 27 JAN 00 BY: BCP CHK: APP:

TITLE: SOIL FOUNDATION

NOTES: 1) SEE DRAWING 000001.610.0016 IN CONJUNCTION WITH THIS DRAWING

FOUNDATION NOTES:

1. DRILL HOLE TO PROPER DIAMETER (D) AND DEPTH. NOTE THAT THE TOTAL DEPTH OF HOLE REQUIRED SHOULD BE 10 INCHES DEEPER THAN THE ROCK BOLT IMBEDMENT LENGTH. HOLE SHOULD THEN BE CLEANED OUT.
2. PLACE BOLT IN ACCORDANCE WITH THE MANUFACTURERS INSTRUCTIONS.
3. THE ROCK BOLTS SHALL ALSO BE GROUTED IN PLACE USING A NON-FERROUS, NON-SHRINKING GROUT HAVING A MINIMUM COMPRESSIVE STRENGTH OF 27.5 MPa.


DESIGN:

1. ROCK ANCHORAGE SHOWN HAS BEEN BASED ON SOUND UNFRACTURED ROCK ASSUMPTIONS.
2. THE INSTALLED FOUNDATION WILL HAVE A SAFETY FACTOR OF GREATER THAN 1.2 WHEN INSTALLED AS DESCRIBED (THE TOWER WILL FAIL PRIOR TO FOUNDATION FAILURE).
3. DESIGN ULTIMATE LOADS ARE AS PER TABLE BELOW.
4. FIGURES AND NOTES REPRESENT TRYLON TITAN ROCK FOUNDATIONS.
5. ANCHOR NUMBER ONE SHOULD BE USED FOR TOWERS WITH THE LOWEST SECTION HAVING A SECTION NUMBER OF 2, 3, 4, 5 OR 6.
6. ANCHOR NUMBER TWO SHOULD BE USED FOR TOWERS WITH THE LOWEST SECTION HAVING A NUMBER OF 7 OR 8.
7. ANCHOR NUMBER THREE SHOULD BE USED FOR TOWERS WITH THE LOWEST SECTION HAVING A SECTION NUMBER OF 9, 10, 11 OR 12.
8. ANCHOR NUMBER FOUR SHOULD BE USED FOR TOWERS WITH THE LOWEST SECTION HAVING A SECTION NUMBER OF 13.

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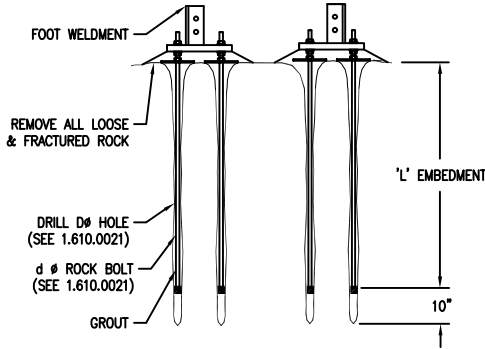
1) SEE DRAWING 000001.610.0020

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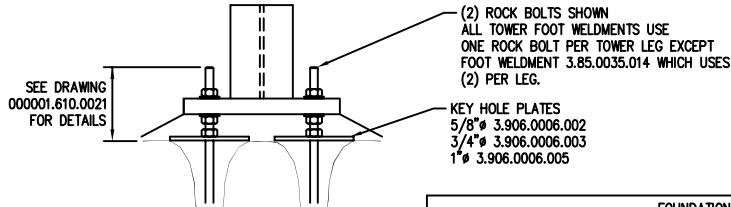
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TITLE:				
ROCK FOUNDATION NOTES				

NOTES:

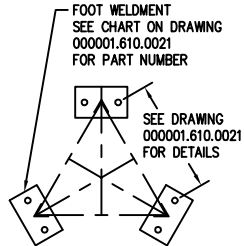
TITAN ROCK FOUNDATION DESIGN I



ROCK FOUNDATION



ENLARGEMENT OF FOOT WELDMENT



PLAN VIEW

1) FOR ROCK BOLT LAYOUT INSTRUCTIONS SEE DRAWING 000001.610.0021.

TITAN TOWER COMPONENT SELECTION CHART

BASE SECTION#	ANCHOR TYPE	BASE TOWER LEG P/N	KNOCK-DOWN SECTION P/N	ASSEMBLED SECTION P/N	FOOT WELDMENT P/N (1 ONLY)	FOOT WELDMENT KIT P/N (SET OF 3)
3	1	3.85.0021.003	4.94.0031.000	4.95.0031.000	3.85.0035.004	4.82.0104.000
4	1	3.85.0021.004	4.94.0041.000	4.95.0041.000	3.85.0035.005	4.82.0105.000
5	1	3.85.0021.005	4.94.0051.000	4.95.0051.000	3.85.0035.006	4.82.0106.000
6	1	3.85.0021.006	4.94.0061.000	4.95.0061.000	3.85.0035.007	4.82.0107.000
7	2	3.85.0021.007	4.94.0071.000	4.95.0071.000	3.85.0035.008	4.82.0108.000
8	2	3.85.0021.008	4.94.0081.000	4.95.0081.000	3.85.0035.009	4.82.0109.000
9	3	3.85.0021.009	4.94.0091.000	4.95.0091.000	3.85.0035.010	4.82.0110.000
10	3	3.85.0021.010	4.94.0101.000	4.95.0101.000	3.85.0035.011	4.82.0111.000
11	3	3.85.0021.011	4.94.0111.000	4.95.0111.000	3.85.0035.012	4.82.0112.000
12	3	3.85.0021.012	4.94.0121.000	4.95.0121.000	3.85.0035.013	4.82.0113.000
13	4	3.85.0021.013	4.94.0131.000	4.95.0131.000	3.85.0035.014	4.82.0114.000

FOUNDATION COMPONENT SELECTION CHART

ANCHOR TYPE	ROCK BOLT P/N (1 ONLY)	ROCK BOLT KIT P/N	KEY HOLE PLATE	'L'	d ø BOLT	D ø HOLE	OVERTURNING MOMENT	SHEAR	DESIGN UPLIFT*
1	4.80.0100.000	4.80.0100.100 (SET OF 3)	3.906.0006.002	5'	5/8"	1-3/4"	17 (FT*Kips)	0.7 (Kips)	10.0 (Kips)
2	4.80.0101.000	4.80.0101.100 (SET OF 3)	3.906.0006.003	5'	3/4"	1-3/4"	28 (FT*Kips)	1.0 (Kips)	14.0 (Kips)
3	4.80.0102.000	4.80.0102.100 (SET OF 3)	3.906.0006.005	5'	1"	1-3/4"	67 (FT*Kips)	1.7 (Kips)	23.0 (Kips)
4	4.80.0102.000	4.80.0102.200 (SET OF 6)	3.906.0006.005	5'	1"	1-3/4"	105 (FT*Kips)	3.0 (Kips)	32.0 (Kips)


* "DESIGN UPLIFT" VALUES ARE PER INDIVIDUAL LEG VALUES.

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REV.	CHK.	CHK.		

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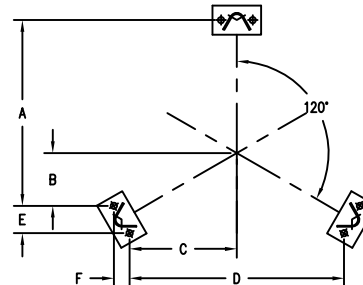
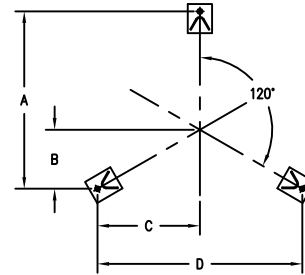
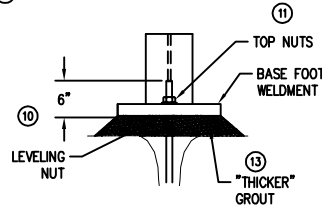
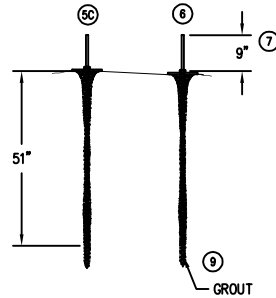
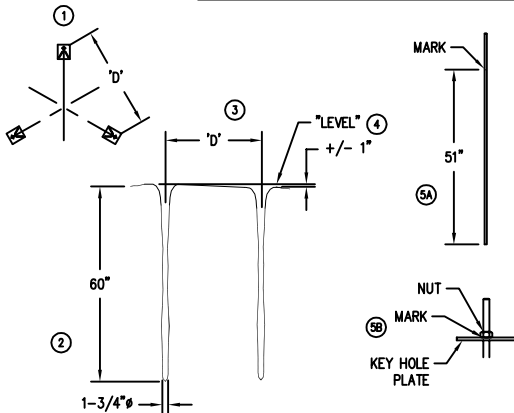
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SITE: SCALE: 15.000

DATE: 01 MAY 07 BY: MRH CHK: CR APP: JB

TITLE: **ROCK FOUNDATIONS**

TITAN ROCK FOUNDATION DESIGN II



- LOCATE HOLES BY USING THE BASE FOOT WELDMENTS AND THE APPROPRIATE CENTRE TO CENTRE DIMENSION ("D").
- DRILL ONE HOLE 1-3/4" ϕ x 60" DEEP.
- ENSURING ACCURATE CENTRE TO CENTRE DIMENSION ("D"), DRILL THE SECOND AND THIRD HOLE 1-3/4" ϕ x 60" DEEP.
- MAKE SURE ALL HOLES ARE APPROXIMATELY LEVEL +/- 1".
- MARK OFF 51" DEPTH ON ROD. PLACE THREADED ROD THRU KEY HOLE PLATE AND TURN ONE NUT TO THE 51" MARK. INSERT ROD w/ KEY HOLE PLATE AND NUT INTO HOLE SO 51" OF THE ROD IS IN THE HOLE.
- REPEAT STEP 5 FOR OTHER HOLES.
- ENSURE 9" OF THREAD ON THE ROD IS ABOVE THE HOLES.
- MIX GROUT ACCORDING TO MANUFACTURERS DIRECTIONS (TYPICALLY IN A 5 GALLON BUCKET).
- FILL THE HOLE WITH GROUT THROUGH THE KEY HOLE PLATE UNTIL GROUT COMES OUT OF THE TOP.
- INSTALL LEVELING NUTS ON EACH ROD. LEVEL EACH NUT TO EACH OTHER BY USING A 2x4 AND A LEVEL. MAKE SURE NUTS ARE AT LEAST 6" FROM THE TOP OF THE ROD.
- INSTALL FOOT WELDMENT AND LOCK DOWN TOP NUTS.
- INSTALL TOWER ON FOOT WELDMENTS.
- MIX SMALL BATCH OF "THICKER" GROUT AND PACK IT UNDER FOOT WELDMENTS.


SECTION	FOOT WELDMENT	A	B	C	D
3	3.85.0035.004	17-1/8"	5-11/16"	9-7/8"	19-3/4"
4	3.85.0035.005	19-11/16"	6-9/16"	11-3/8"	22-3/4"
5	3.85.0035.006	22-5/16"	7-7/16"	12-7/8"	25-3/4"
6	3.85.0035.007	24-7/8"	8-5/16"	14-3/8"	28-3/4"
7	3.85.0035.008	27-15/16"	9-5/16"	16-1/8"	32-1/4"
8	3.85.0035.009	31-3/8"	10-7/16"	18-1/8"	36-1/4"
9	3.85.0035.010	34"	11-5/16"	19-5/8"	39-1/4"
10	3.85.0035.011	37"	12-5/16"	21-3/8"	42-3/4"
11	3.85.0035.012	39-5/8"	13-3/16"	22-7/8"	45-3/4"
12	3.85.0035.013	42-7/16"	14-1/8"	24-1/2"	49"

SECTION	FOOT WELDMENT	A	B	C	D	E	F
13	3.85.0035.014	38-1/8"	10-13/16"	22"	44"	5-5/8"	3-1/4"

REV.	BY:	BY:	DESCRIPTION	DATE
	REV.	CHK.		

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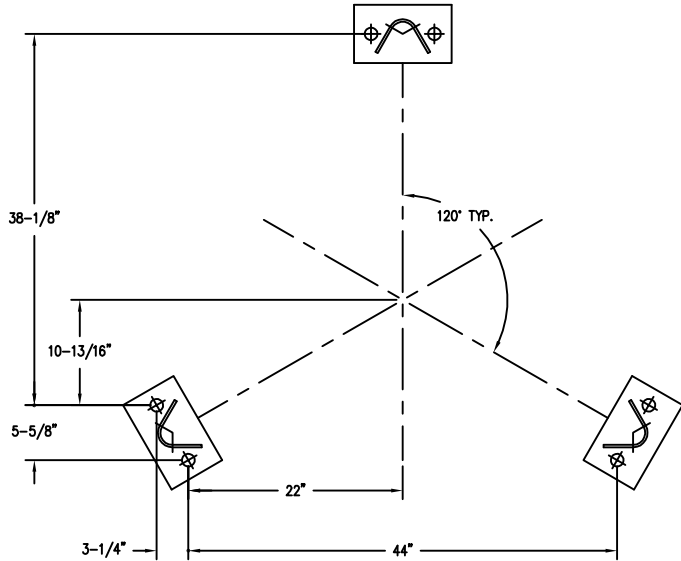


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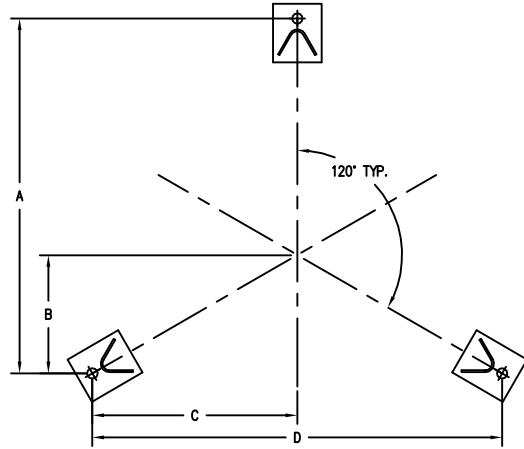
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DATE: 01 MAY 07 BY: MRH CHK: CR APP: JB

TITLE: ROCK FOUNDATIONS



SECTION #13 FOOT WELDMENT #3.85.0035.014



ROCK BOLT LAYOUT


SECTION	FOOT WELDMENT	A	B	C	D
3	3.85.0035.004	17-1/8"	5-11/16"	9-7/8"	19-3/4"
4	3.85.0035.005	19-11/16"	6-9/16"	11-3/8"	22-3/4"
5	3.85.0035.006	22-5/16"	7-7/16"	12-7/8"	25-3/4"
6	3.85.0035.007	24-7/8"	8-5/16"	14-3/8"	28-3/4"
7	3.85.0035.008	27-15/16"	9-5/16"	16-1/8"	32-1/4"
8	3.85.0035.009	31-3/8"	10-7/16"	18-1/8"	36-1/4"
9	3.85.0035.010	34"	11-5/16"	19-5/8"	39-1/4"
10	3.85.0035.011	37"	12-5/16"	21-3/8"	42-3/4"
11	3.85.0035.012	39-5/8"	13-3/16"	22-7/8"	45-3/4"
12	3.85.0035.013	42-7/16"	14-1/8"	24-1/2"	49"

REV.	BY:	BY:	DESCRIPTION	DATE

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DRAWING NO. 000001.610.0033

CUSTOMER: SITE: SCALE: 10,000

DATE: 29 AUG 00 BY: BCP CHK: APP:

TITLE: ROCK BOLT LAYOUT

NOTES:



TITAN[®] TOWER
SELF-SUPPORT

TRYLON[®]

21 South Field Drive, Elmira, ON N3B 0A6

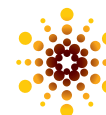
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