July 27, 2006

XXXX
Your Title
Your Company Name
Street Address
Address Line 2

Re Site #: SITE NAME

Dear XXXX,

We have completed the analysis of SITE NAME Tower located on XXX Hill Road in TOWN, Rensselaer County, NY and **have found it to be adequate to support the proposed antenna loading** within the scope of this analysis. The analysis was performed using 90 mph wind speed (3-second gust) w/o ice and 78 mph wind speed (3-second gust) with ½" radial ice per EIA/TIA 222-F standard and IBC 2000.

The tower we analyzed is a 286' Fred A. Nudd guyed tower consisting of all-welded sections with a face dimension of 3'-6" on leg centerlines. Tower members consist of pipe legs and solid rod bracing. No foundations information was available or provided for analysis purposes.

The proposed antenna loading used in the analysis consisted of:

(6) DBXLH-9090C-VTM w/(6) Diplexers, (6) Dual Band 850/1900 TMA's & (12) LDF7-50A 1-5/8" coax lines sectorized on (3) 12' Booms at 275' (Alpha & Gamma Sectors) & 283' (Beta Sector).

To support the proposed installation, Armor Tower has reinforced the tower legs from 0' to 240' with Masterflow 928 non-shrink grout. The operation was performed on June 15th 2006. Samples of grout were then taken to a lab for testing. The results of the test showed that samples broke at 6,823 psi and 7,095 psi at 28 days (attached). The design strength used in the analysis was 6,000 psi at 28 days.

We therefore find all tower members being loaded within acceptable limits. If you have any questions concerning this analysis, please contact us.

Sincerely,
ARMOR TOWER, INC.

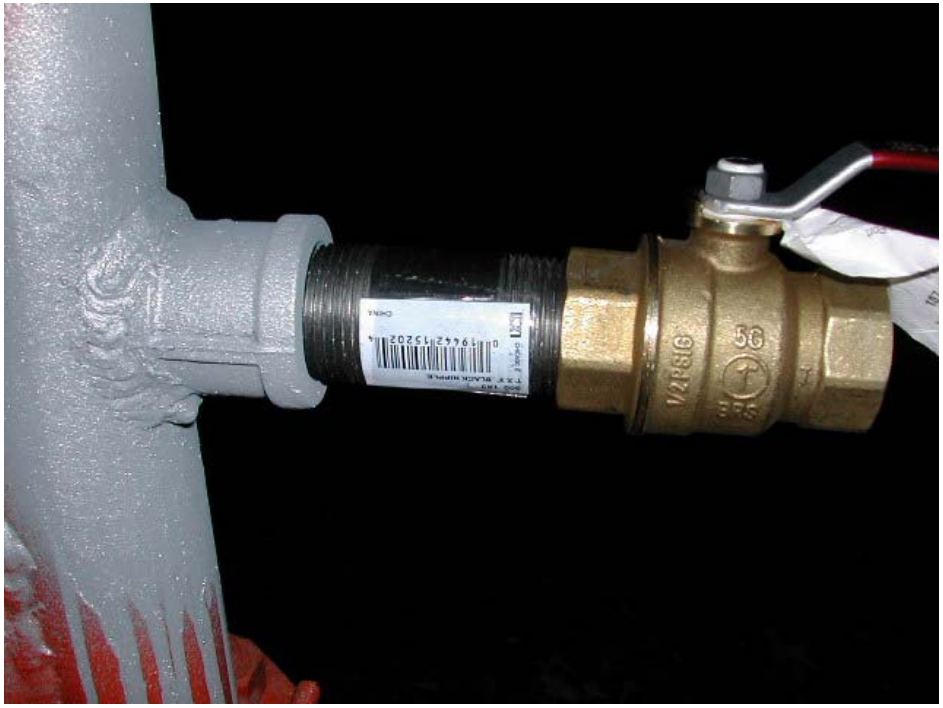
Ed Rosenbloom
Structural Engineer


12/02/2005


91


12/02/2005


12/02/2005


56
CHINA


ALLENTOWN
BRAKE & WHEEL
SERVICE INC


MASTERFLOW 928
MASTERFLOW 928
USDOT 268287


FCC
REGISTRATION


FCC

GROUT TEST REPORT

Branch Laboratory:
4340 Taggart Rd, Ste H
Charlotte, NC 28208
Phone (704) 676-0778

Project Name:	Cell Tower	**Location Sampled**	laboratory prep
BCE Job #:	06-082	**Owner:**	
Client:	Ed Ressenbloom	**Gen. Contractor:**	
Conc. Contractor:			

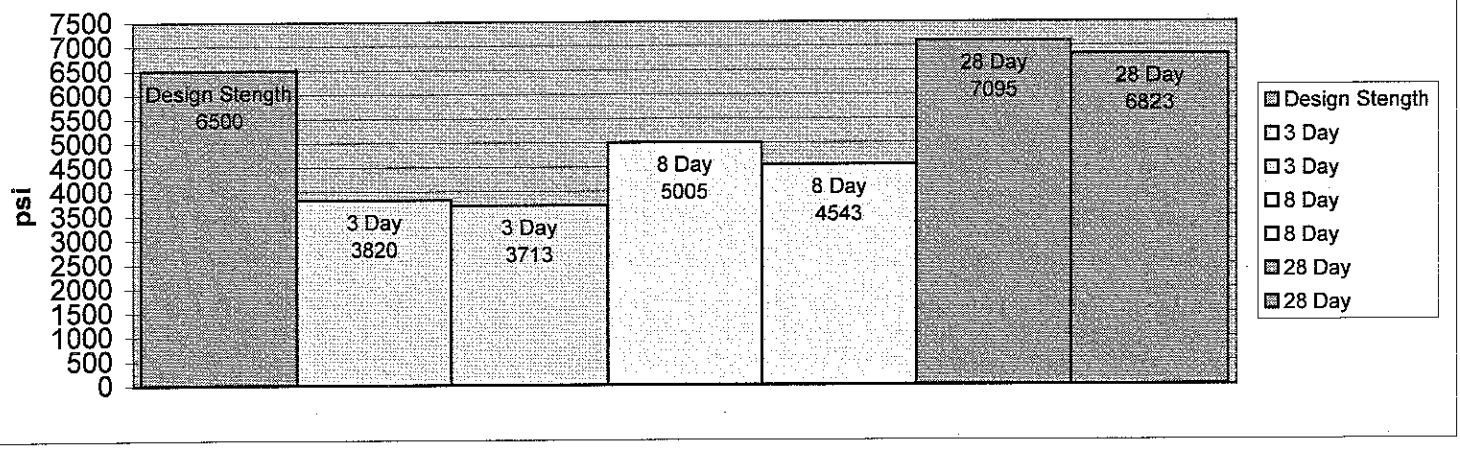
Compressive Strength:	7500	**Time Batched:**	
Concrete Supplier:		**Unit Weight:**	
Ticket #:		**Water Added:**	
Truck #:		**Time Added:**	
Cast Date:	6/27/06	**Mix Design #:**	

FIELD TEST DATA:

Performed By:	Brian Sain	**Air Content:**	
Time:		**Air Temp:**	73
Slump:		**Conc. Temp:**	

Cylinder No.	Design Strength	Load Pounds	Compressive Strength	Molded Date	Test Date	Age	Type Cure	Diam In	Area	Type of Break	Pass or Fail
G060257	6500	15,280	3820	6/27/06	6/30/06	3	MR	2	4	Shear	Pass
G060258	6500	14,850	3713	6/27/06	6/30/06	3	MR	2	4	Shear	Fail
G060259	6500	20,020	5005	6/27/06	7/5/06	8	MR	2	4	Shear	Pass
G060260	6500	18,170	4543	6/27/06	7/5/06	8	MR	2	4	Shear	Pass
G060261	6500	28,380	7095	6/27/06	7/25/06	28	MR	2	4	Shear	Pass
G060262	6500	27,290	6823	6/27/06	7/25/06	28	MR	2	4	Shear	Pass

Compressive Strength



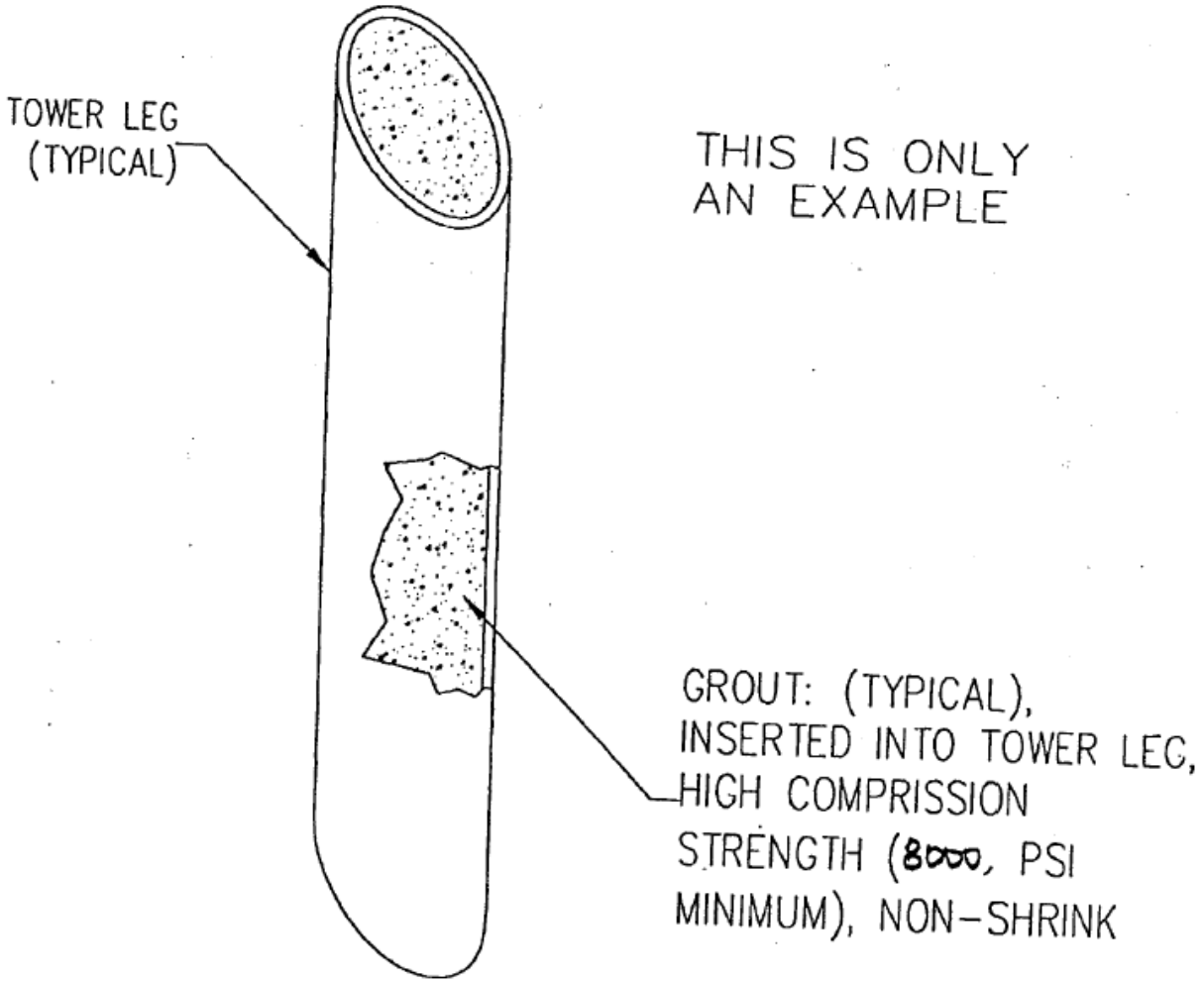
***Standards state the the specimen should obtain 50% of the design strength by 3 days**

***standards state the the specimen should obtain 70% of the design strength by 7 days**

Remarks:

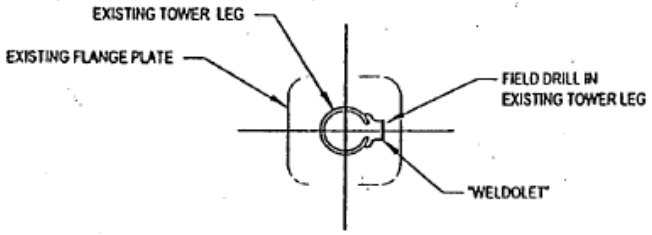
1. Prisms made and tested in accordance with ASTM C109.

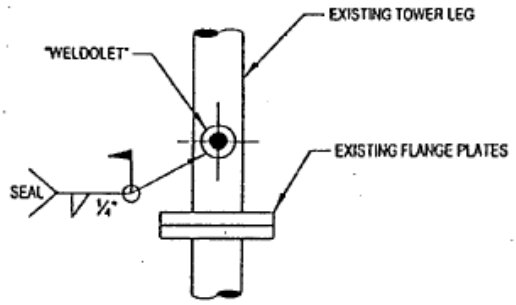
Boyle Consulting Engineers

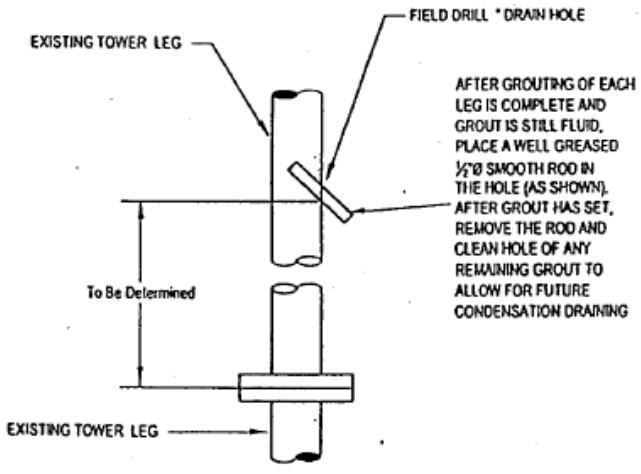


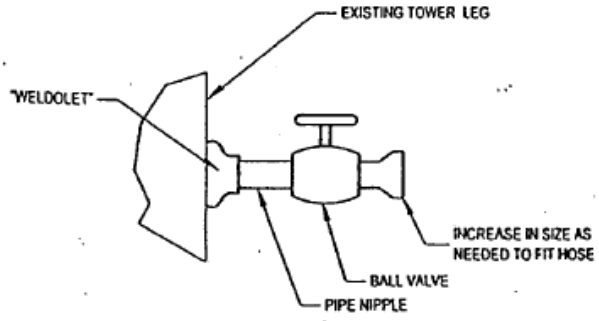
NOTE: This is a specialized installation, contractors with this type of experience should be used.

GROUTING SCOPE OF WORK









TOWER LEG GROUTING

NOTES

1. **MATERIALS:**

1.1 Grout Non-Shrink 6000 psi @ 28 days

2. **EQUIPMENT:**

2.1 Grout shall be pumped with an Allentown Powercreter Pro pump or approved equal. The pump shall be capable of a maximum pressure of 1300 psi. It must have a mixer capacity of at least 10 cu ft. And be able to recharge the mixer in order to maintain a nearly continuous flow of material. The pump shall have a screen between the mixer and the pump hopper to prevent lumps from entering the pump.

2.2 The Contractor shall submit a grout placement program. Program shall include a plan for filling legs in Two (2) lifts.

2.3 The Contractor shall submit an equipment failure back-up plan. It is essential that the grout filling be a continuous operation. The grout cannot be allowed to set prior to completely filling the leg to the vent hole.

3. **PREPARATION:**

3.1 Drill one-inch (7/8") diameter hole in each leg at the base where shown on the drawings. Weld a "weldolet" filling topped with a three quarter inch pipe thread over the hole. The "weldolet" shall be of proper size to conform to the outside diameter of the tower leg.

3.2 Prior to placing grout, flush out inside of the legs by filling void with potable water. Flush water out through bottom fill hole. Remove any water that may stand below the fill hole. When leg is full of water to the proper level, check for any leaks at the base and leg flanges. If leaks are found, mark their location before draining the water. Clean the area around the leak and seal with epoxy putty. Allow the putty to set prior to pumping the grout.

3.3 Drill 5/8" diameter vent hole where shown on the drawing to allow the air to escape and to determine when the grout has reached the proper level in the tower leg.

4. **APPLICATION:**

4.1 The grout shall be pumped from the bottom Fill Hole in a continuous flow until it exits at the weldolet or vent hole. Do not fill past the vent hole. This hole is to allow any water in the leg to drain out in the future. Keep vent hole open as shown on the drawings.

4.2 The Contractor shall record the following for each tower leg:

4.2.1. Amount of grout pumped into each leg.

4.2.2 Pump pressures at the start and finish of grouting each leg.

4.2.3 The beginning time and completion time for completely grouting each leg. Record any delays which may occur.

4.2.4 The slump or viscosity of the grout at 15 minute intervals.

4.2.5 Record the ambient, grout and pipe leg temperatures for each leg.

4.3 Contractor shall obtain three (3) 2" cube samples of grout from each 20 ft. of leg section. Samples shall be obtained per ASTM C109 and cured per ASTM C511. Compression tests shall be made at 7 days, 14 days, and 28 days, if necessary. Contractor shall employ the services of and pay for the services of an independent testing laboratory to obtain, transport and test the sample cubes. They shall issue a compressive test report for each set of samples. The test laboratory shall be approved by the county.

5. **CLEAN-UP AND PAINTING:**

5.2 After grouting is complete and set, clean all weld slag, loose galvanizing, grout, oil grease, etc. from around "weldolet", vent hole, and any galvanized surface and paint with two (2) brush coats of cold galvanize.

5.3 Properly prepare surface around "weldolet", vent hole and any galvanized surface and paint with two (2) brush coats of cold galvanize.

5.4 Remove all equipment, debris, spilled grout, etc. from area and legally dispose of some.

5.5 When grouting is complete and set, remove pipe nipple and valve. Install galvanized steel plug.