 <p>GLENMARTIN 13620 Old Hwy #0 Boonville, MO 65233 Phone: (800) 486-1223 FAX: (660) 882-7200</p>	Job	Site Name: Parkland Sanitary Force Main	Page 1 of 14
	Project	SO#:21570 Douglas County Wisconsin	Date 08:03:27 10/12/10
	Client	TWIN CITIES INDUSTRIAL CONTROL	Designed by cjmartin

SITE NAME: Parkland Sanitary Force Main

SITE #:

SALES ORDER: 21570

SITE ADDRESS: Parkland

Purchaser: Twin City Industrial Control

Project Contact: Tom Loeser

Contact Address:

13005 16th Ave N, Suite 500

Plymouth MN

tom@tcinc.com

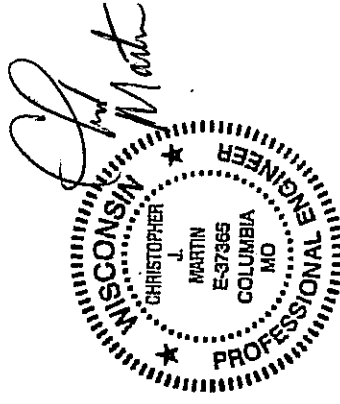
763-557-6648

All documents and details prepared in accordance with applicable EIA/TIA-222G under the direct supervision of a registered professional engineer under the laws of the state of Wisconsin , Enclosed calculations are certified and meet all specified purchaser requirements.

DESIGN ENGINEER:

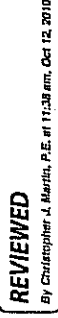
Kyle McQuinn

CERTIFIED BY:

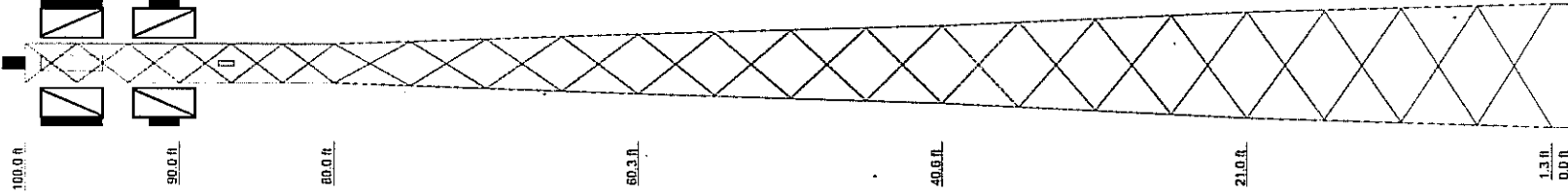


DATE : 10/12/2010

DATE REVIEWED:



0108/12/10/10



Section	Legs	Leg Grade	Diagonals	Diagonal Grade	Top Chrs	Face Width (ft)	# Panels @ (ft)	Weight (lb)
T7	P3.5x.226	A500-60	L1 3/4x1 3/4x3/16	A36	L1 1/2x1 1/2x8/16	6.75	16 @ 4.92	914
T8	P3x.216	A500-60	L1 1/2x1 1/2x3/16	A36	N.A.	5	16 @ 4.92	710
T9	P2.5x.203	A500-60	L1 1/2x1 1/2x3/16	A36	N.A.	3.75	16 @ 4.92	589
T3						2.5		561
T2							6 @ 3.3333	2819
T1								796

DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
Flash Beacon Lighting	100	SCADA ANTENNAS	92 - 90
SCADA ANTENNAS	99 - 95	BM-0303	92 - 90
BM-0303	93 - 95	SCADA ANTENNAS	92 - 90
SCADA ANTENNAS	99 - 95	BM-0303	92 - 90
BM-0303	99 - 95	SCADA ANTENNAS	92 - 90
SCADA ANTENNAS	99 - 95	BM-0303	92 - 90
SCADA ANTENNAS	99 - 95	BM-0303	92 - 90
SCADA ANTENNAS	99 - 95	BM-0303	92 - 90

SYMBOL LIST

MARK	SIZE	MARK	SIZE
A	P3x.337	C	1 @ 1.28
B	N.A.		

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A500-60	50 ksi	62 ksi	A36	36 ksi	58 ksi

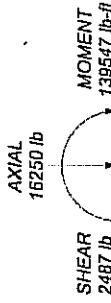
TOWER DESIGN NOTES

1. Tower designed for Exposure C to the TIA-222-G Standard.
2. Tower designed for a 110 mph basic wind in accordance with the TIA-222-G Standard.
3. Tower is also designed for a 50 mph basic wind with 0.50 in ice. Ice is considered to increase in thickness with height.
4. Deflections are based upon a 60 mph wind.
5. Tower Structure Class II.
6. Topographic Category 1 with Crest Height of 0.00 ft
7. Locking washers provided for all brace bolted connections. Connection bolts meet A325X structural joint specification. All X-braces are center bolted.
8. All members hot dipped galvanized after fabrication per ASTM A123. Hardware (Bolts, Nuts, Etc.) galvanized per ASTM B695 Class 50 (Mechanical).
9. All welded joints and connections welded in accordance per AWS D1:1.2008 and specified GlenMartin Weld Procedures (WP).
10. Standard base riser located at each leg footing shall be provided in accordance with GlenMartin design requirements.
11. TOWER RATING: 97.8%

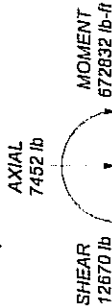
ALL REACTIONS ARE FACTORED

MAX. CORNER REACTIONS AT BASE:

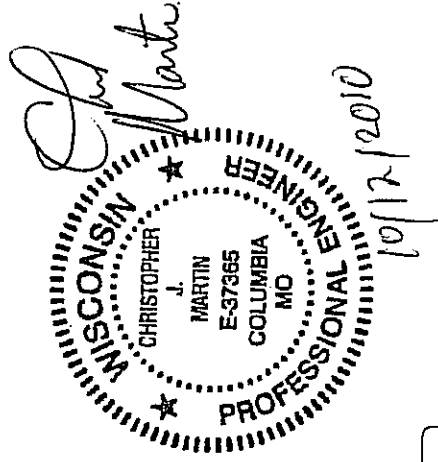
DOWN: 99157 lb
 UPLIFT: -95032 lb
 SHEAR: 6855 lb



TORQUE 316 lb-ft
 50 mph WIND - 0.5000 in ICE



TORQUE 1629 lb-ft
 REACTIONS - 110 mph WIND



REVIEWED
 By Christopher J. Martin, P.E. at 11:54 pm, Oct 12, 2010

GLENMARTIN
 13620 Old Hwy 40
 Boonville, MO 65233
 Phone: (800) 486-1223
 FAX: (660) 882-7200

Job: Site Name: Parkland Sanitary Force Main
 Project: SO#: 21570 Douglas County Wisconsin
 Client: TWIN CITIES INDUSTRIAL CONTROL Drawn by: cjmartin Appd:
 Code: TIA-222-G Date: 10/12/10 Scale: NTS
 Path: \\p3-65721\proj\21570\21570-01.dwg Drawn by: cjmartin Appd:
 Scale: NTS Date: 10/12/10 Draw No. E-1