August 16, 2017

Mr. Scott Wendland
Overland Contracting INC.
4600 S. Syracuse St. Suite 300
Denver, CO 80237
(303) 256-4080 (office)
(256) 417-3538 (mobile)
Wendlands@bv.com

Tower Engineering Professionals
2429 West 12th Street, Suite 3
Tempe, AZ 85281
(480) 285-0045 (office)
(919) 661-6350 (fax)
WestMiGroup@tepgroup.net

Subject: **Magnetic Particle Inspection of Existing Flange to Leg Welds Report – Magnetic Particle Inspection was performed on the existing leg flange to leg pipe welds. In addition, a Dye Penetrant inspection was performed on the flange welds where the weld profile prevented accurate evaluation with Magnetic Particle Inspection. Also, the area that had split in the C leg in the 5th section at the 80' elevation of the tower was checked for further evidence of cracking.**

Carrier Site Designation:	**Carrier Site Number:**	N/A
	Carrier Site Name:	Slide Mountain
Engineering Firm Designation:	**TEP Project Number:**	79179-76165
Site Data:	**New Washoe City, Washoe County, NV 89704** **Latitude N39° 18' 47.124″, Longitude W 119° 53' 2.8824″** **120± Foot – Self Support Tower**	

Dear Mr. Wendland,

Tower Engineering Professionals (TEP) completed a Non-Destructive Testing Inspection for the above referenced site. The onsite inspection was performed by Isaiah Perez, CWI and ASNT Level II UT-MT of TEP during the August 7, 2017, August 8, 2017 August 9, 2017 and August 10, 2017 site visit. TEP completed the inspection on all leg to flange welds to check for crack like indications. There were numerous indications found on the all three legs at base level flange to leg weld and there were also indications found on the bottom flange to leg weld on the 5th section in all three legs. Lastly, there was stress cracking found 3 inches above the existing split in the 5th section of the tower on Leg C. See executive summary below for further details on cracking found.

The purpose of this inspection was to check all leg to flange welds and any suspected attachment welds for evidence of cracking utilizing magnetic particle and dye penetrant testing.

Thank you for the opportunity to provide this service for you. If you have any questions or comments, please contact our office.

Sincerely,
Tower Engineering Professionals, Inc. (TEP)

Isaiah G. Perez, AWS CWI
ASNT, Level 2 UT-MT

Isaiah G Perez
CWI 12080201
QC1 EXP. 8/1/2018

Executive Summary

Photograph	Observations and Recommendations
  	**<u>Item #1 – Magnet Particle Inspection:</u>** **Observation:** A magnetic particle inspection was performed on base flanges, the bottom of the 1st section flanges at 20-foot elevation and the top of the 2nd section at the 40-foot elevation on all three legs. Debris and Protective coatings were removed mechanically on the flange welds prior to inspection. Due to a poor weld profile on the flange welds, a Dye Penetrant inspection was performed to aid in the identification of indications on all sections. Only the sections noted above could be Magnetic Particle inspected to provide accurate results. The base level flanges were found to have crack like indications and were proofed up with Dye Penetrant to provide more accurate evaluation. See executive summary for dye penetrant inspection indications found in base flange welds. The Flange at 120' elevation on leg B had broken off and was not in place during inspection. **Recommendation:** Repair the defect areas per engineering design and perform NDE inspection after repairs. .

Executive Summary

Photograph	Observations and Recommendations
  	**Item #1 – Dye Penetrant Inspection:** **Observation:** A dye penetrant inspection was performed on all leg to flange welds. Debris and Protective coatings were removed mechanically on the flange welds prior to inspection. The Flange at 120' elevation on leg B had broken off and was not in place during inspection. Base Level (0'): The A leg base to flange weld was found to have cracking throughout the weld with the longest indication area measuring 1" in length. The cumulative length of the all cracking in the A leg base plate flange measured 19.375". The B leg base flange to leg was found to have cracking throughout the weld with the longest indication measuring 1" in the length. The cumulative length of the all cracking in the B leg base plate flange measured 30". The C leg base flange to leg was found to have cracking throughout the entirety of the weld. 5th Section (80'): The A leg flange to leg at the bottom of section 5 exhibited cracking throughout the entire circumference of the weld at the toes of weld and at the center of the weld. The B leg flange to leg at the bottom of section 5 exhibited cracking throughout the entire circumference of the weld at the toes of weld and at the center of the weld. The C leg flange to leg at the bottom of section 5 exhibited cracking throughout the entire circumference of the weld the toes of weld and at the center of the weld. Finally, the area that was found to be split on Leg C at the 80' 8 ¼" elevation was Dye Penetrate Tested and was found to have cracking that extended 3" above the split with no further cracking found below. Remaining Sections: The reaming sections (1,2,3,4,6 and 7) of the tower that were free of indications at time of inspection. **Recommendation:** Repair the defect areas per engineering design and perform NDE inspection after repairs.

MAGNETIC PARTICLE INSPECTION

Client: Overland Contracting INC	**TEP Project No.** 79179-76165
Drawing No. 00-055-01	**Site ID:** N/A
Specification: AWS D1.1	**Acceptance Criteria:** AWS D1.1, Table 6.1

EQUIPMENT

Yoke Model: Y8	**Manufacturer:** Magnaflux	**S/N:** 0336
Particle Color: Red	**Manufacturer:** Magnaflux	**Batch No.:** 17C044
Method: Dry	**Pre-Cleaning:** Wire Brush	**Current Type:** AC/DC

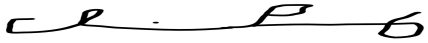
OBSERVATIONS

Area	Weld Type	Detail No.	Discontinuity	Result	Remarks
A Leg Base Flange	PJP		Crack	Reject	
A Leg Base Flange	PJP		Crack	Reject	
A Leg Base Flange	PJP		Crack	Reject	

NOTES

See Dye Penetrant Executive Summary for Details.

NOTE: P: POROSITY C: CRACK CP: CLUSTERED POROSITY
IP: INCOMPLETE FUSION LF: LACK OF FUSION UC: UNDERCUT

	NDT INSPECTOR	APPROVED BY	DATE
NAME	Isaiah Perez		
SIGNATURE			
LEVEL	LII		

DYE PENETRANT INSPECTION

Client: Overland Contracting INC				**TEP Project No.** 79179-76165	
Drawing No. 00-055-01				**Site ID:** N/A	
Specification: AWS D1.1				**Acceptance Criteria:** AWS D1.1, Table 6.1	
EQUIPMENT					
Penetrant Model: SKL-SP2	**Manufacturer:** Magnaflux			**Pre-Cleaning:** Wire Wheel	
Cleaner Model Color: SKC-S	**Manufacturer:** Magnaflux			**Penetrant Application:** Brush	
Developer Model: SKD-S2	**Manufacturer:** Magnaflux				
OBSERVATIONS					
Area	**Weld Type**	**Detail No.**	**Discontinuity**	**Result**	**Remarks**
A Leg Base Flange	PJP/Fillet		Crack	Reject	See Executive Summary
B Leg Base Flange	PJP/Fillet		Crack	Reject	See Executive Summary
C Leg Base Flange	PJP/Fillet		Crack	Reject	See Executive Summary
A Leg Bottom Flange 5th Section	PJP/Fillet		Crack	Reject	See Executive Summary
B Leg Bottom Flange 5th Section	PJP/Fillet		Crack	Reject	See Executive Summary
C Leg Bottom Flange 5th Section	PJP/Fillet		Crack	Reject	See Executive Summary
NOTES					
Dye Penetrant Inspection was performed due to poor weld profiles.					
NOTE: P: POROSITY C: CRACK CP: CLUSTERED POROSITY IP: INCOMPLETE FUSION LF: LACK OF FUSION UC: UNDERCUT					

	NDT INSPECTOR	**APPROVED BY**	**DATE**
NAME	Isaiah Perez		
SIGNATURE			
LEVEL	LII		

Photographs

Tower Overview

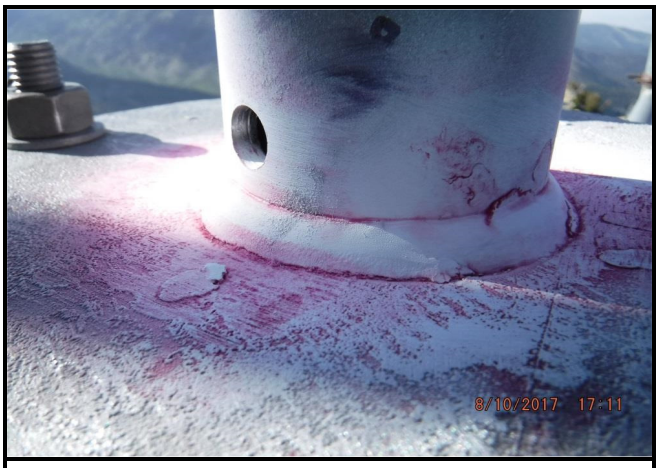
Magnetic Particle Testing

Penetrant Applied

Base Flange Cracking

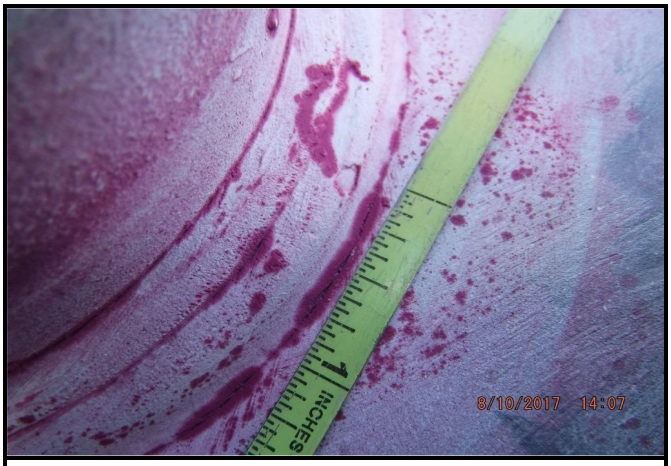
Base Flange Cracking

Base Flange Cracking



Flange with No Indications

Cracking Typical



Toe Cracking Typical

Center Bead Cracking Typical

Cracking 3” above Split

Cracking above Split

WASHOE COUNTY SLIDE MT. PLOT PLAN	Scale: 1" = 3'
Jim Lencioni	Date: 11/18/99

Development Review _____ Date _____

County Fire Dept. _____ Date 6.15.00

County Engineering _____ Date 6/21/00

County Health Dept. _____ Date _____

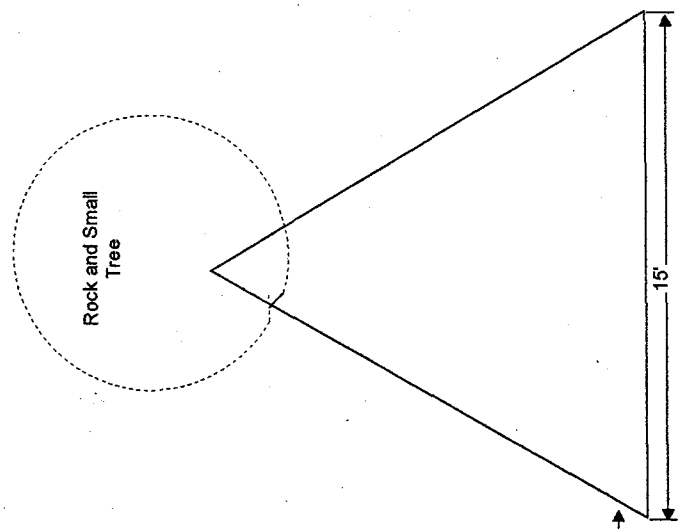
County Utility Dept. ROK Date 6/22/00

County Soc. Serv. Dept. _____ Date _____

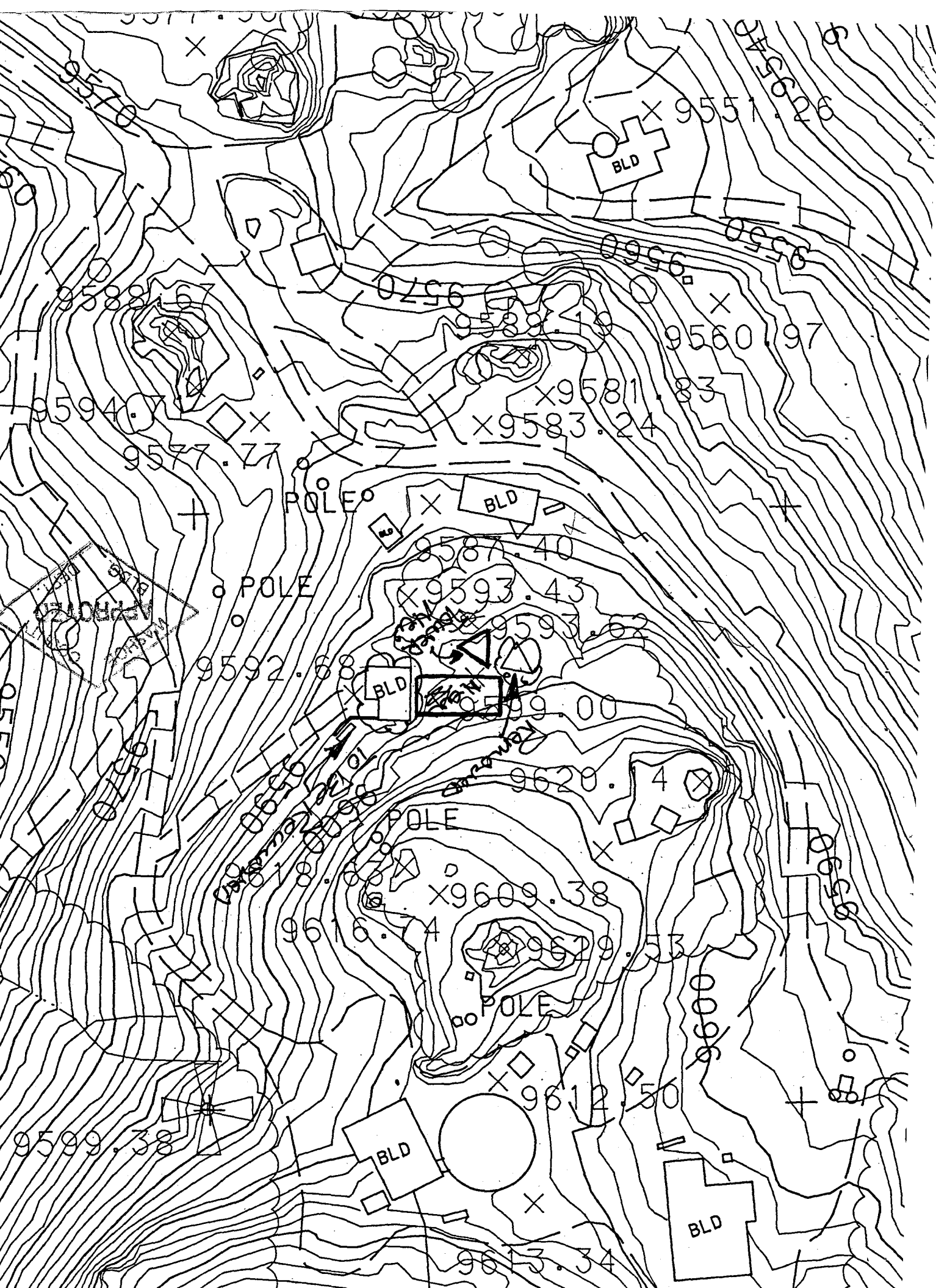
County _____ Dept. _____ Date _____

_____ Date _____

County Bldg. Dept. _____ Date 8/11/00



WASHOE COUNTY APPROVED BLDG. DEPT.


9551.26
BLD
9588.67
9583.19
9560.97
9581.83
9583.24
9577.77
POLE
BLD
9587.40
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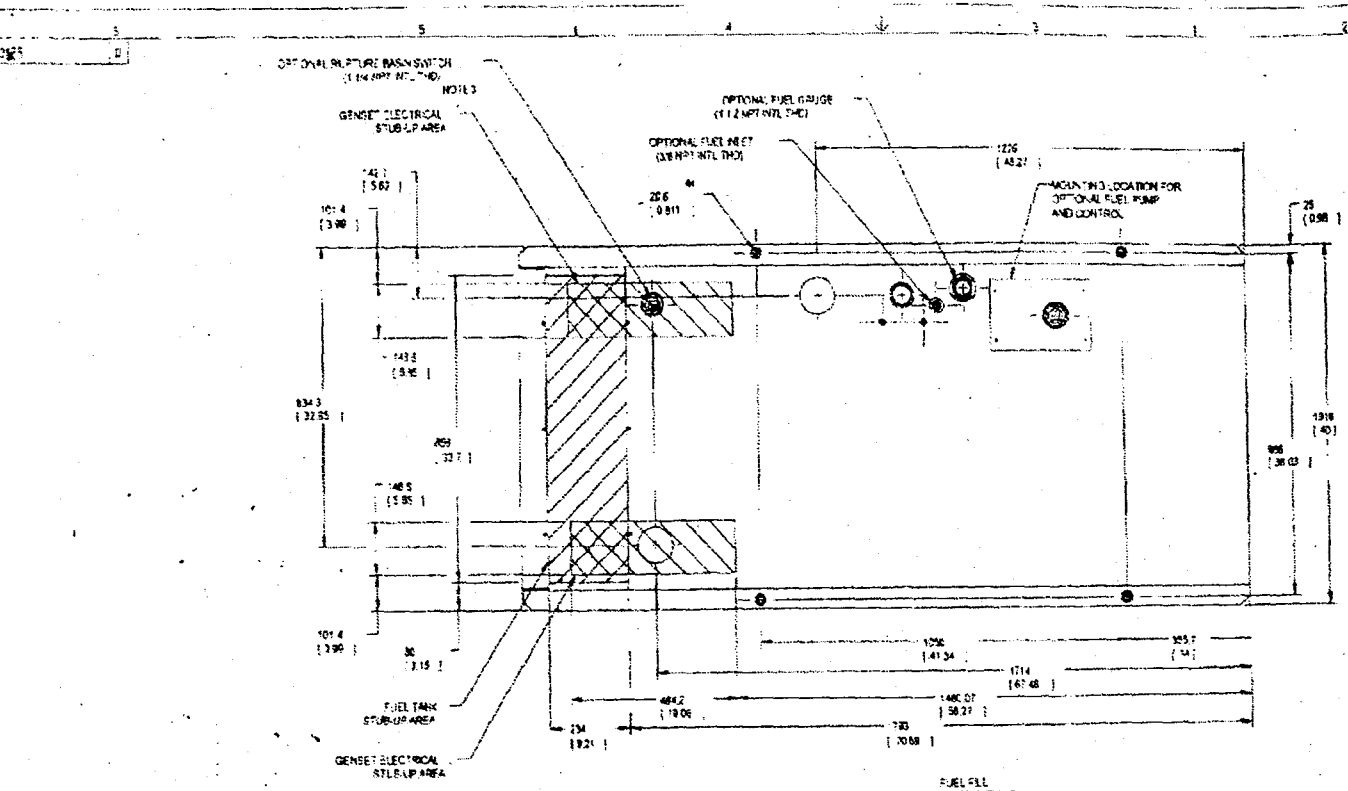
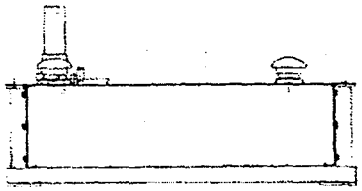
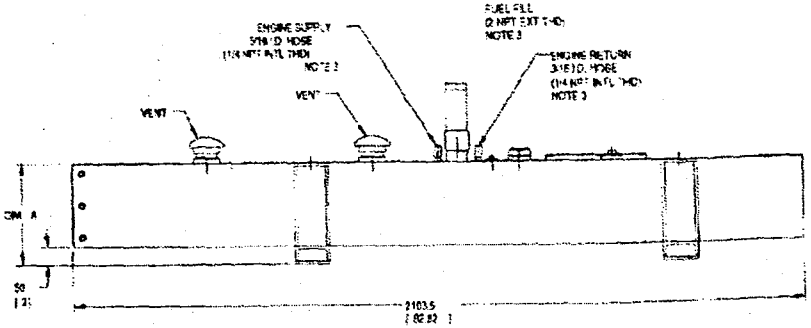
9593.02
9592.68
BLD
9599.00
9620.4
POLE
9618.66
9609.38
9616.74
9629.53
POLE
9612.50
9599.38
BLD
BLD
9613.34

140 GAL FUEL TANK RATED UL 142







NOTES:

1. TANKS ARE UL142 LISTED. SECONDARY CONTAINMENT GENERATOR BASE TANK. REFER TO TANK LABELS AND LOCAL CODE TO DETERMINE VENTING REQUIREMENTS FOR BOTH COMPARTMENTS.
2. SUB BASE FUEL TANK MOUNTING: EXCESSIVE TWISTING OF THE FUEL TANK WHEN FASTENING IT TO A FOUNDATION MAY RESULT IN STRUCTURAL FAILURE OF THE TANK. TO INSURE THE INSTALLATION DOES NOT EXCESSIVELY TWIST THE FUEL TANK THE FOLLOWING PROCEDURE SHOULD BE OBSERVED.
   2.1 REFER TO ONAN APPLICATION MANUAL 900-0X FOR GENERAL SET MOUNTING GUIDELINES.
   2.2 AFTER PLACING SET ON FOUNDATION, VERIFY ALL FOUR MOUNTING PADS CONTACT FOUNDATION.
   2.3 THERE ARE A (8MM (.5747 INCH) THICK ATTACHED TO EACH FUEL TANK. THESE ARE INTENDED TO FILL ANY GAP BETWEEN THE MOUNTING PADS AND FOUNDATION. IF MORE SHIMS ARE REQUIRED OBTAIN ADDITIONAL P/N 158-1378 FUEL TANK SHIMS.
   2.4 INSERT THE MINIMUM HEIGHT STACK OF SHIMS THAT WILL SLIDE INTO THE GAP.
   2.5 TIGHTEN TANK HOLD DOWN MOUNTING FASTENERS.
3. INDICATES PIPE SIZE OF INTERFACE PORT ON FUEL TANK FOR FEATURE OR OPTION INDICATED.
4. DIMENSIONS IN [ ] ARE IN INCHES.

WASHOE COUNTY APPROVED BLDG. DEPT.

TABULATION					
FUEL TANK PART NO.	DIM A	VENT SIZE NOTE 3	TANK VOLUME (GAL) NOMINAL	EFFECTIVE	DRY WEIGHT lb s
0179 8748 01	266.72	2"	75	72	227 500
0179 8748 02	661.02	3"	148	142	295 650

T17N-R19E
PORTION OF SECTIONS 20 & 29
ALL OF SECTIONS 21, 28 & 30

48-12

13|18
24|19

18|17
19|20

(06)

17|16
20|21

16|15
21|22

BOOK 46

(11)

24|19
25|30

20|21
29|28

21|22
28|27

SR 431

SR 43

21.43

(3)

(04)

(22)

2,551.60

SLIDE MT.

1	2	3	4	5	6	7	8	9	10	11	12
				39.64	39.15	38.89	39.19				
				39.68	39.16	38.77	39.07				
41.46				39.40	39.09	38.65	38.94	39.23	39.53		
41.40				39.43	39.13	38.82	38.81	39.11	39.40		

25|30
36|31

30|29
31|32

29|28
32|33

28|27
33|34

4" = 1 M

NOTE: This map is prepared for the use of the Washoe County Assessor for assessment and illustrative purposes only, it does not represent survey of the premises. No liability is assumed as to the sufficiency or accuracy of the data delineated hereon.

BOOK 55-01

DENOTES IMPROVEMENTS ONLY

Assessor's Map County of Washoe, Nevada

NOTE — *ASSESSOR'S BLOCK NUMBERS SHOWN IN ELLIPSES*
ASSESSOR'S PARCEL NUMBERS SHOWN IN CIRCLES

Drawn by B.T. 8/86
Revised by 4/88 3/93 4/93 9/94 7/97

13'-0" X 21'-0" X 9'-0"

BUILDING FOR

TOWER STRUCTURES-SLIDE MT. SITE-EQUIPMENT RM.

WASHOE COUNTY APPROVED BLDG. DEPT.

GFRC SHELTERS TYPICAL SYMBOLS LEGEND

- 4' FLOURESCENT STRIP FIXTURE (LETTER OR NOTE INDICATES TYPE: 2 TUBE
- EMERGENCY WALL LIGHTING FIXTURE WITH SELF CONTAINED BATTERY BACK-UP UNIT. CONNECT TO UNSWITCHED CONDUCTOR.
- WALL MOUNTED LIGHTING FIXTURE; SUPERSCRIPT INDICATES TYPE:
- HPS — WALL MOUNTED EXTERIOR LIGHTING FIXTURE; SUPERSCRIPT INDICATES TYPE: HIGH PRESSURE SODIUM
- DUPLEX RECEPTACLE, 110 VOLT NEMA 5-20R, 18" A.F.F. UNLESS NOTED OTHERWISE.
- DUPLEX RECEPTACLE, 110 VOLT NEMA 5-20R, MTD. 6" ABOVE COUNTER BACK SPLASH OR PER ADA AND ARCHITECT.
- DUPLEX RECEPTACLE, 220 VOLT NEMA 5-20R, 18" A.F.F. UNLESS NOTED
- FOURPLEX RECEPTACLE, 110 VOLT NEMA 5-20R, 18" A.F.F. UNLESS NOTED OTHERWISE.
- D — WALL MOUNTED DUPLEX RECEPTACLE IN DEDICATED CIRCUIT; 20R, 120V., 3 WIRE GROUNDED, 5-20R, MTD. @ +18" A.F.F., (U.N.O.). "HUBBLE" #5362-1 OR EQUAL.
- GFCI — WALL MOUNTED DUPLEX RECEPTACLE WITH GROUNDED FAULT CIRCUIT INTERRUPTER; 20A., 125V., 3 WIRE, GROUNDED NEMA 5-20R, MTD. @ +40" A.F.F. (U.N.O.). "HUBBLE" #GF-5362-1 OR EQUAL.
- DATA/COMPUTER OUTLET, +18" A.F.F. (U.N.O.).
- TELEPHONE OUTLET, +18" A.F.F. (U.N.O.).
- JUNCTION BOX, SIZE PER N.E.C.
- JUNCTION BOX IN ACCESSIBLE LOCATION WITH FLEXIBLE CONDUIT CONNECTION TO LIGHTING FIXTURE OR EQUIPMENT AS NOTED.
- SINGLE POLE, SINGLE THROW 20A. TOGGLE LIGHT SWITCH
- 2 — DOUBLE POLE, SINGLE THROW 20A. TOGGLE LIGHT SWITCH
- 3 — THREE-WAY, 20A. TOGGLE LIGHT SWITCH.
- INTAKE OR EXHAUST FAN (SIZE AS INDICATED ON DRAWINGS).
- SD — SMOKE DETECTOR.
- HD — HEAT DETECTOR.
- T — THERMOSTAT, +86" TYPICAL (U.N.O.).
- PANELBOARD (SIZE AND CONFIGURATION ACCORDING TO ELECTRICAL CONTROL DIAGRAMS AND CIRCUIT DIRECTORY.
- DISCONNECT SWITCH, SIZE AND POLES AS SHOWN (i.e. 30/3);
- LOW VOLTAGE TRANSFORMER WITH PRIMARY AND SECONDARY FUSING IN LINE SIZE PER N.E.C.
- INDICATES OVERHEAD CABLE LADDER RUN (SIZE AS NOTED ON DRAWINGS).

N.E.C.	NATIONAL ELECTRICAL CODE.	UPS	UNINTERUPTABLE POWER SUPPLY
M.L.O.	MAIN LUGS ONLY.	WP	WEATHERPROOF.
M.C.B.	MAIN CIRCUIT BREAKER.	M.T.S.	MANUAL TRANSFER SWITCH
		A.T.S.	AUTOMATIC TRANSFER SWITCH

CAD DRAWINGS PREPARED BY
GFRC SHELTERS
PLANT ADDRESS:
3727 E. TEXAS
BOSSIER CITY, LOUISIANA 71111

NEVADA

INDEX TO DRAWINGS

SHEET	DESCRIPTION	CHANGE 1	DATE	2	DATE	3	DATE	4	DATE	5	DATE	6	DATE
G174COV	COVER SHEET												
G174EXT	EXTERIOR ELEVATIONS												
G174WAL1	STRUCTURAL STEEL FRAME LAYOUT												
G174WAL2	CONCRETE WALL PANEL LAYOUT												
G174BAS	STRUCTURAL BASE PLAN & DETAILS												
G174RF	STRUCTURAL ROOF PLAN & DETAILS												
G174DET	TYPICAL CONSTRUCTION DETAILS												
G174FND	FOUNDATION PLAN & DETAILS												
G174ELE	ELECTRICAL & EQUIPMENT LAYOUT												

REFERENCES:

1. 1997 UNIFORM BUILDING CODE
2. 1997 UNIFORM MECHANICAL CODE
3. 1999 NATIONAL ELECTRICAL CODE
4. 1992 CABO MODEL ENERGY CODE

UBC OCCUPANCY USE GROUP S-2
UBC CONSTRUCTION TYPE V N
UBC MINIMUM SETBACK REQUIREMENT 10 Feet
WIND ZONE EXPOSURE 110 MPH, EXPOSURE C

LOAD FACTORS

WIND	110 MPH
LIVE	ROOF 300 PSF
LIVE	FLOOR 200 PSF
SEISMIC	UBC - ZONE 1

LIST OF FIELD INSTALLED ITEMS

1. FOUNDATION INSTALLATION.
2. ANCHORING OF BUILDING TO FOUNDATION.
3. ELECTRICAL HOOK-UP. ELECTRICAL OTHER THAN SHOWN ON PLANS IS TO BE REVIEWED, APPROVED AND INSPECTED BY LOCAL OFFICIAL HAVING JURISDICTION.

GENERAL NOTES

1. THIS IS AN UNMANNED FACILITY, FOR EQUIPMENT AND STORAGE ONLY.
2. THE USE OF THIS BUILDING, WITH PLUMBING FACILITIES, IS SUBJECT TO THE APPROVAL OF THE LOCAL JURISDICTION.
3. THIS BUILDING IS NOT ACCESSIBLE TO THE HANDICAPPED.
4. THIS BUILDING IS NOT DESIGNED TO BE ACCESSIBLE TO THE HANDICAPPED. THE USE OF THIS BUILDING IS SUBJECT TO THE APPROVAL OF THE LOCAL JURISDICTION.
5. THIS BUILDING SHALL NOT BE LOCATED ON PROPERTY WHERE ACCESSIBILITY IS REQUIRED.
6. PLUMBING FACILITIES SHALL BE BASED ON LOCAL JURISDICTION.
7. ALL EXTERIOR ELECTRICAL DEVICES SHALL BE WEATHER PROOF.

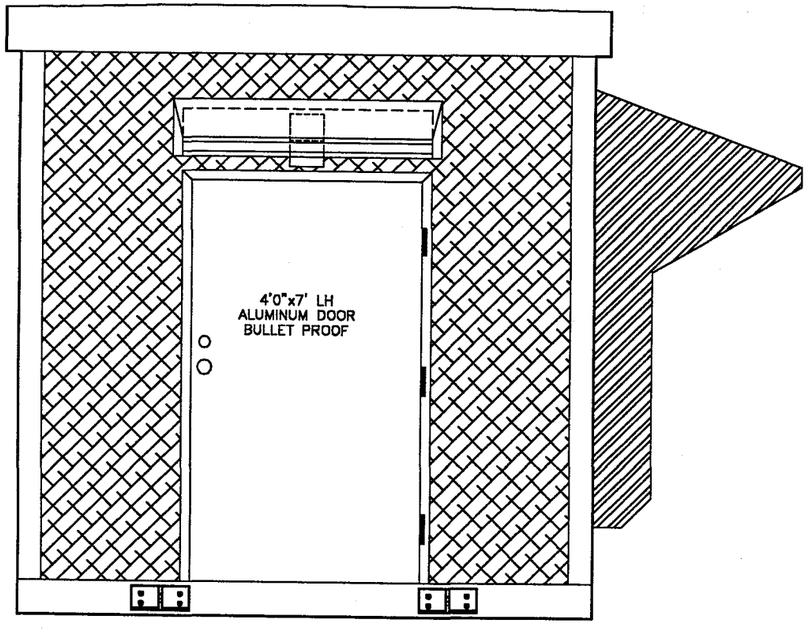
STATE OF NEVADA No. 7377 7/15/00

GFRC SHELTERS
POST OFFICE BOX 5664
SHREVEPORT, LOUISIANA 71135-5664
PHONE: (318) 425-4623

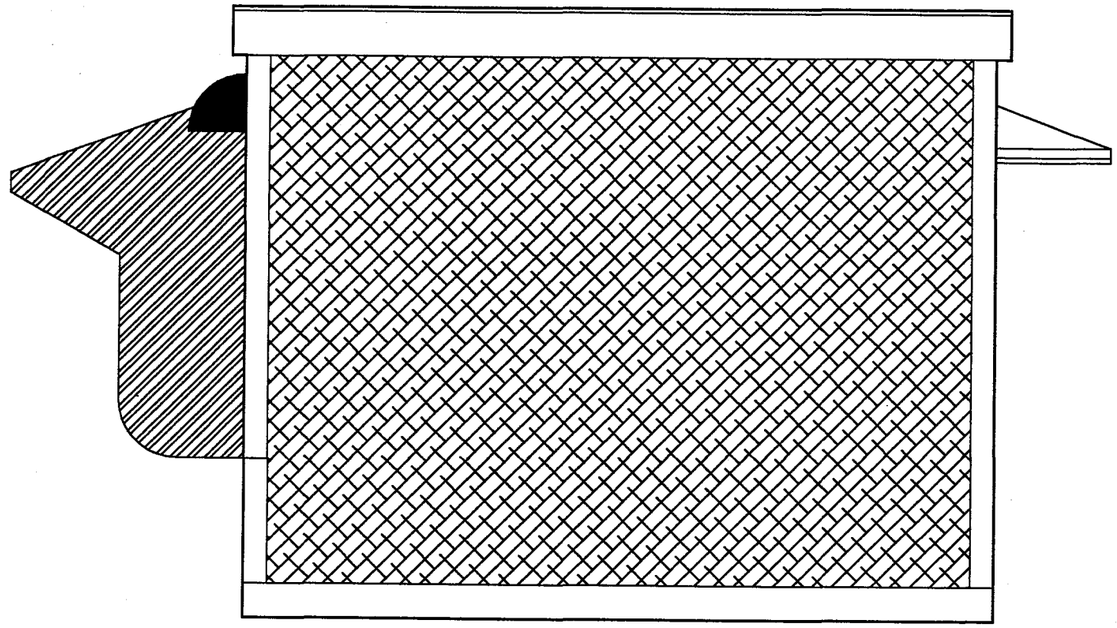
BLDG # XXXXX

PROJECT # 2KG174	FILE NO.: G174COV
DATE: 8/16/00	SHEET NO. 1 OF 9

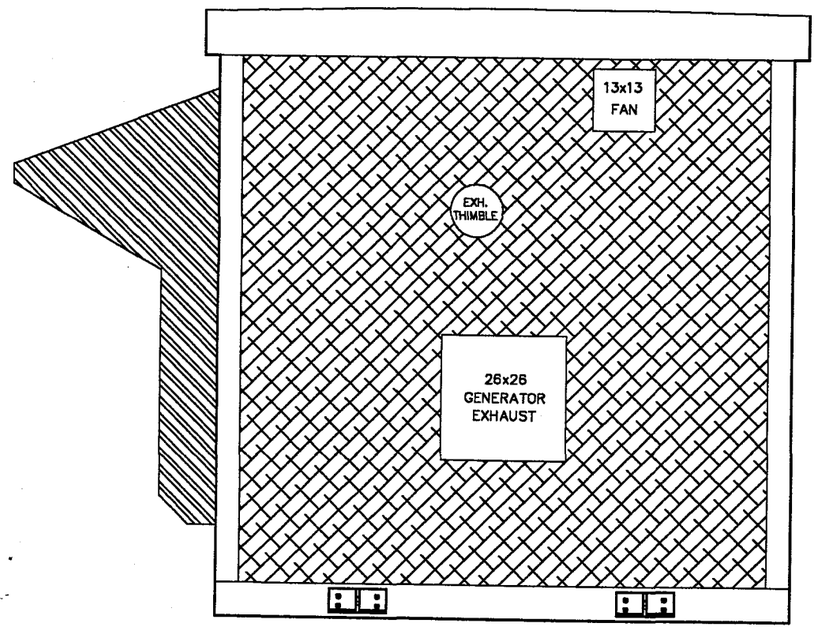
NO.	DATE	REVISION RECORD	DR.



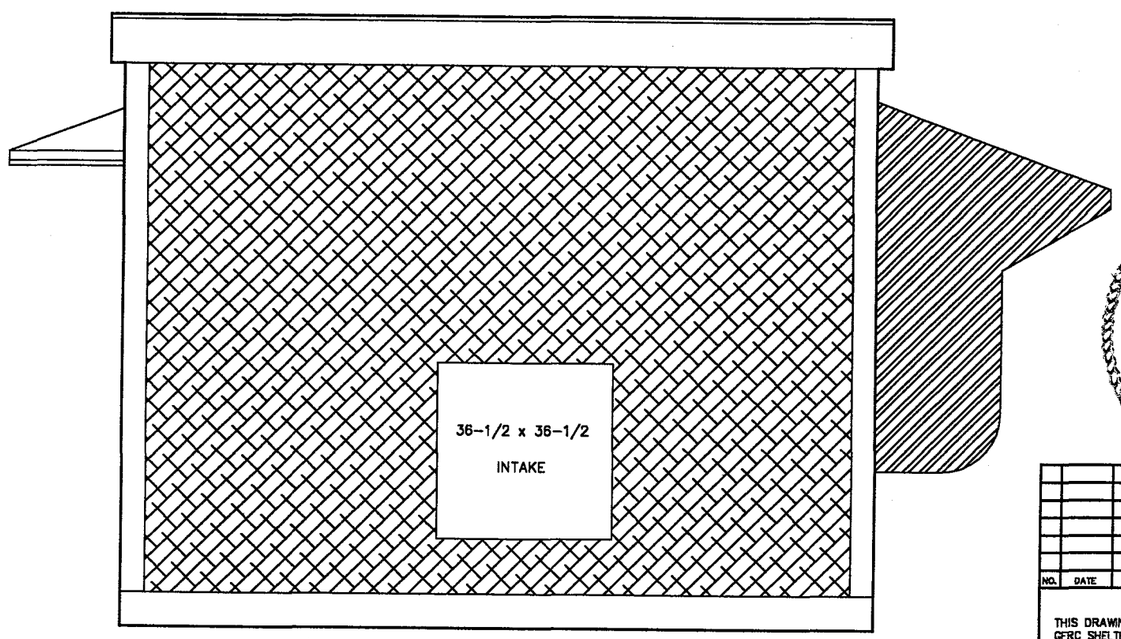
PANEL A



PANEL B



PANEL C



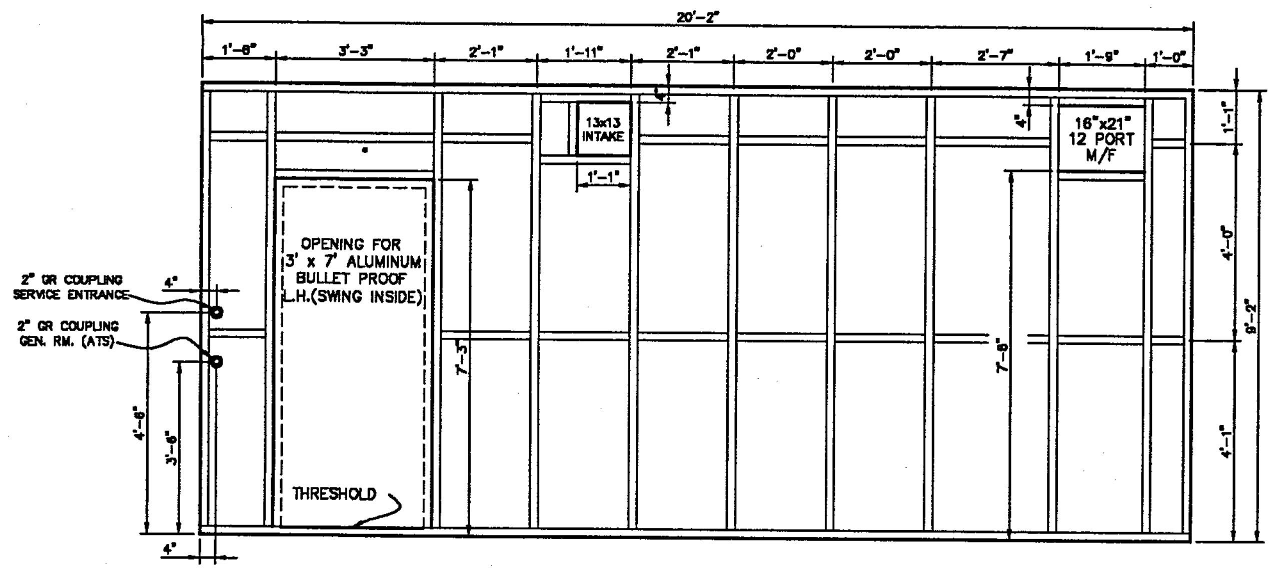
PANEL D

TOWER STRUCTURES
EXTERIOR ELEVATION
10'-0" x 13'-0" x 9'-0"

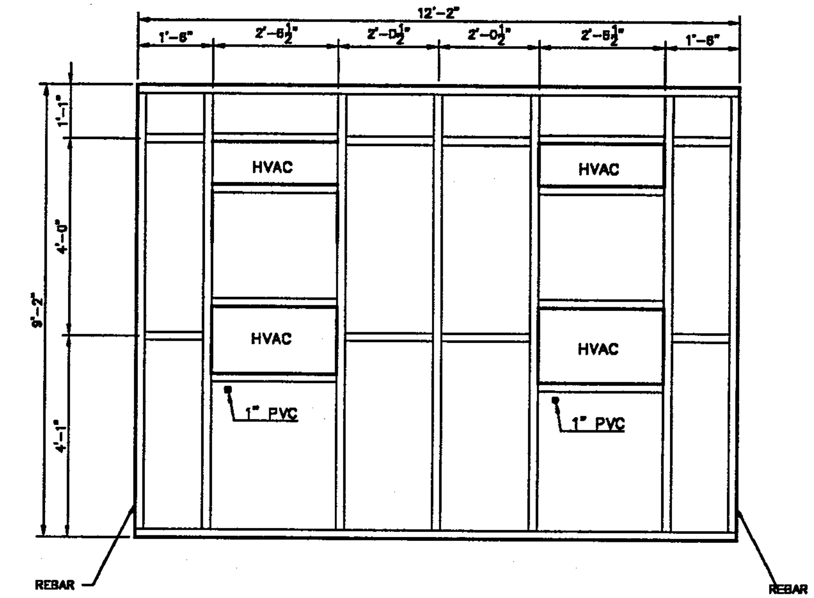
GFRC SHELTERS
POST OFFICE BOX 5664
SHREVEPORT, LOUISIANA 71135-5664
PHONE: (318) 425-4823

NO.	DATE	REVISION RECORD	DR.	CK.

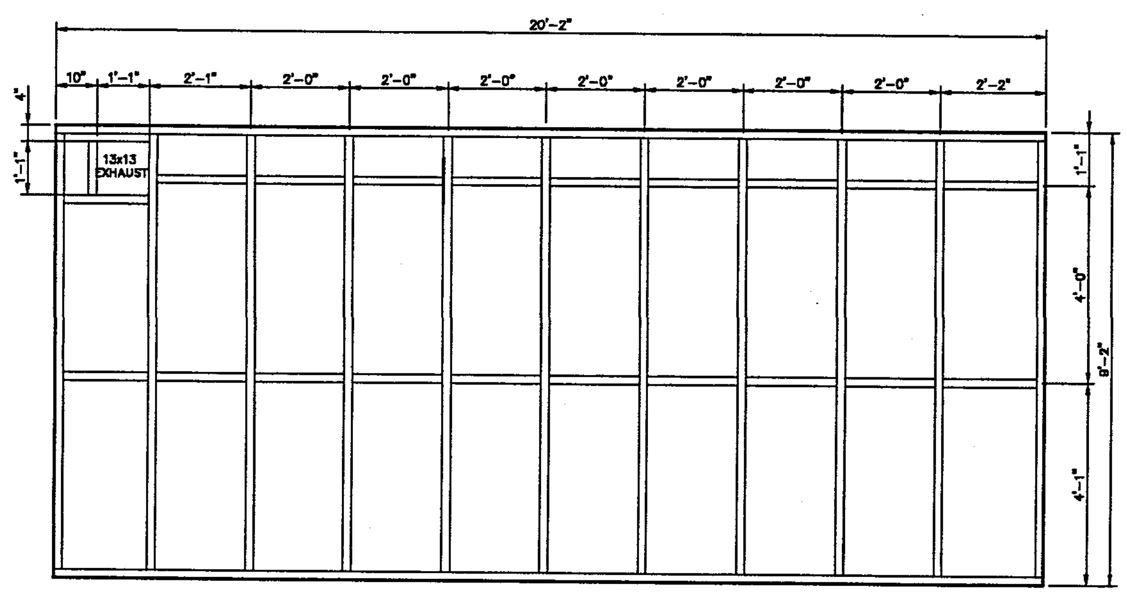
Date MAY 2000
Scale 3/8"=1'-0"
Drawn
Job 2KG175
Sheet G174EXT



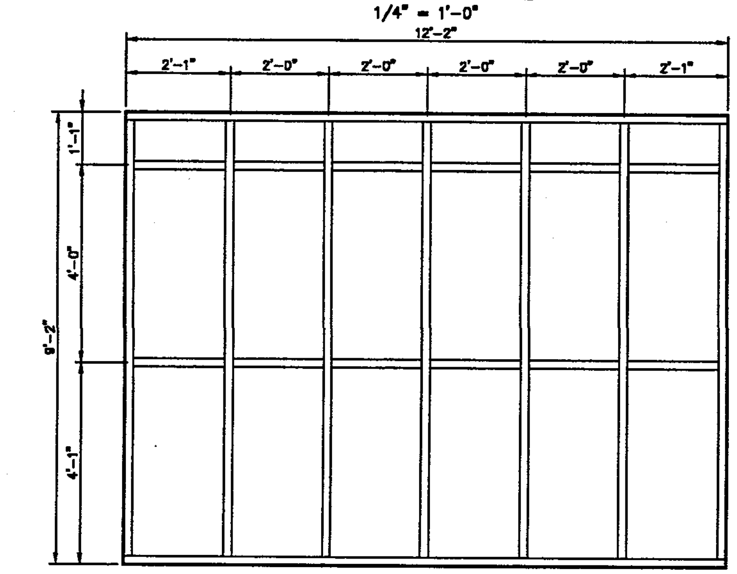
PANEL A
AS SEEN FROM INSIDE STRUCTURE
1/4" = 1'-0"



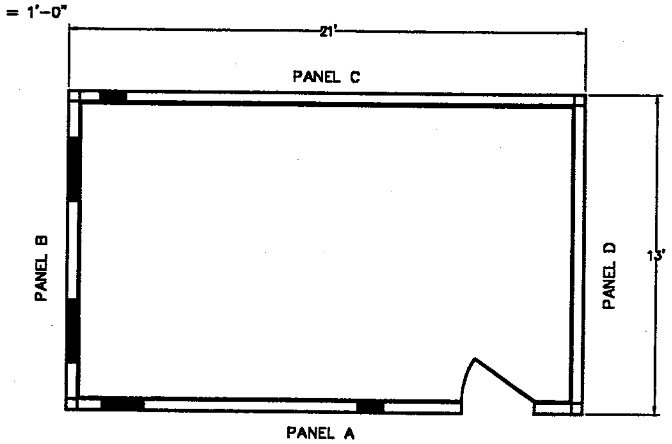
PANEL B
AS SEEN FROM INSIDE STRUCTURE
1/4" = 1'-0"

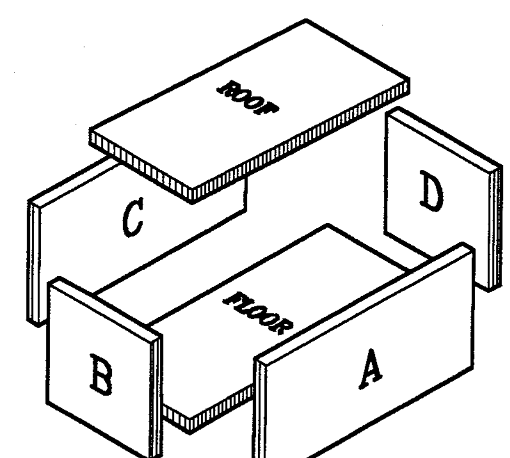


PANEL C
AS SEEN FROM INSIDE STRUCTURE
1/4" = 1'-0"



PANEL D
AS SEEN FROM INSIDE STRUCTURE
1/4" = 1'-0"





PANEL ASSEMBLY

GENERAL WALL NOTES

1. FRAMES SHALL BE CONSTRUCTED OF 3"X2"X1/8" RECTANGULAR STEEL TUBING, MIN. 36 KSI YIELD STR.
2. ALL WELDS SHALL BE 3/16" FILLET WELD PER LATEST AWS STANDARD UNLESS SPECIFIED OTHERWISE. SEE TYPICAL DETAIL SHEET FOR WELDING DETAILS.
3. VERIFY EXACT SIZE OF PANEL CUT-OUTS WITH VARIOUS EQUIPMENT MFRS. OR SUPPLIERS BEFORE CONSTRUCTION.
4. ALL PANELS ON THIS SHEET VIEWED FROM THE INSIDE UNLESS SHOWN OTHERWISE.
5. NO. 5 REBAR TO BE WELDED TO PANEL FRAMES FOR REINFORCEMENT OF 5" X 5" COLUMNS
6. LOCATION OF ELECTRICAL ENTRANCES, HVAC, DOOR, VENTILATION, CABLE ENTRIES, AND OTHER OPENINGS MAY VARY ACCORDING TO SITE REQUIREMENTS, THESE OPENINGS MAY NOT BE CLOSER THAN 8" TO ANY OUTSIDE CORNER.

NO.	DATE	REVISION RECORD	DR.	CK.

JOHN IRVING ... CIVIL No. 7377

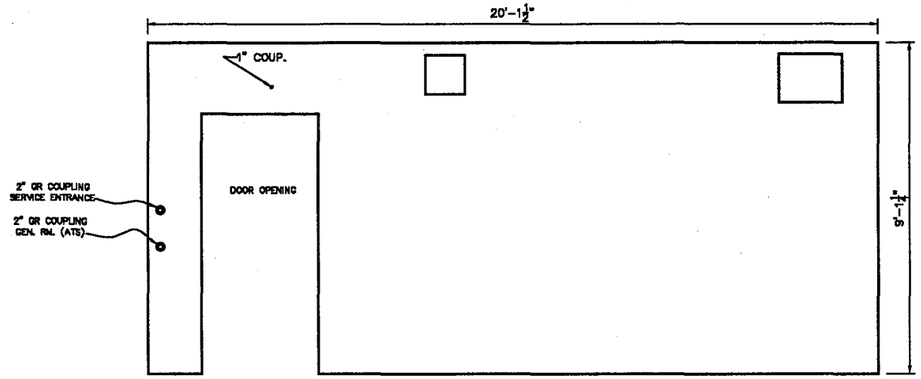
7/5/00

TOWER STRUCTURES
STRUCTURAL STEEL FRAME LAYOUT
13'-0" X 21'-0" X 9'-0"

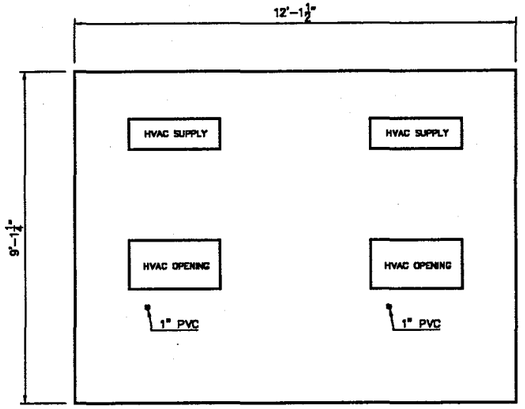
SLIDE MT. SITE

GFRC SHELTERS
POST OFFICE BOX 5664
SHREVEPORT, LOUISIANA 71135-5664
PHONE: (318) 425-4823

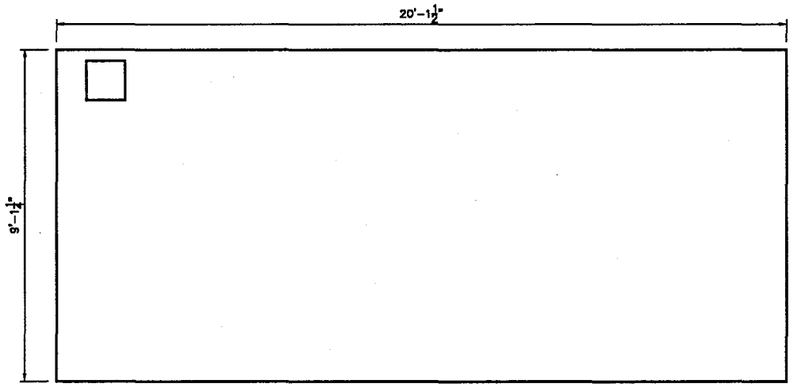
Date MAY 2000
Scale AS SHOWN
Drawn
Job 2KG174
Sheet G174WAL1



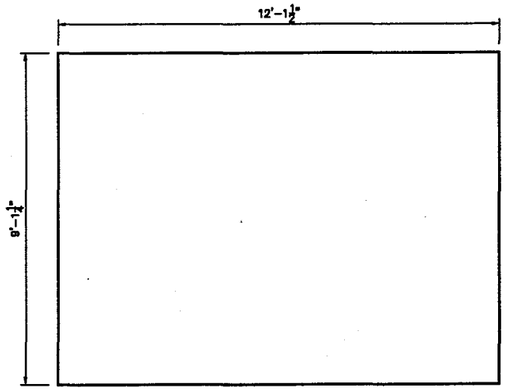
PANEL A
AS SEEN FROM INSIDE STRUCTURE
1/4" = 1'-0"



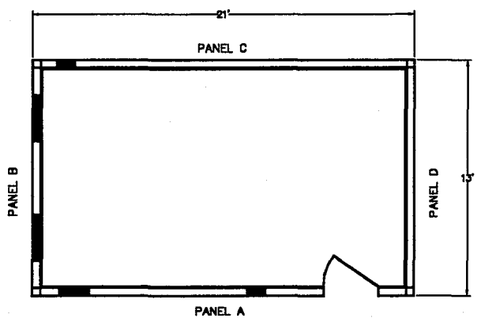
PANEL B
AS SEEN FROM INSIDE STRUCTURE
1/4" = 1'-0"



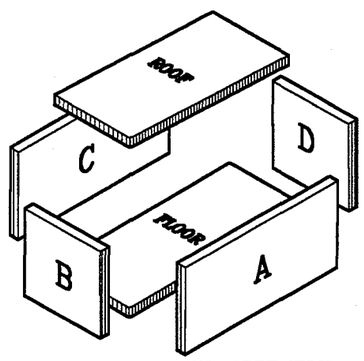
PANEL C
AS SEEN FROM INSIDE STRUCTURE
1/4" = 1'-0"



PANEL D
AS SEEN FROM INSIDE STRUCTURE
1/4" = 1'-0"



KEY PLAN



PANEL ASSEMBLY

REGISTERED PROFESSIONAL ENGINEER
STATE OF NEVADA
No. 7371
1/5/00

NO.	DATE	REVISION RECORD	DR.	CK.

SLIDE MT. SITE

TOWER STRUCTURES
CONCRETE WALL PANEL LAYOUT
13'-0" x 21'-0" x 9'-0"

GFRC SHELTERS
POST OFFICE BOX 5664
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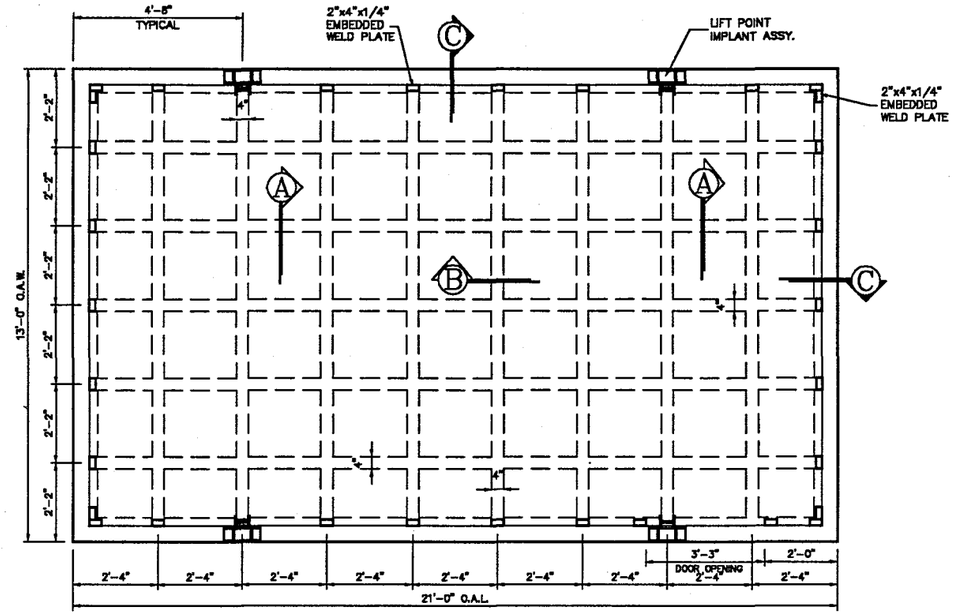
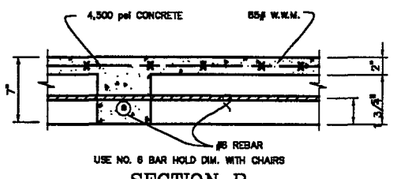
Drawn
Job 2KG174
Sheet G174WAL2



BASE PLAN
AS SEEN FROM ABOVE
1/4" = 1'-0"

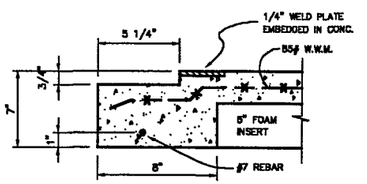
USE NO. 5 BAR HOLD DIM. WITH CHAIRS

SECTION A
N.T.S.

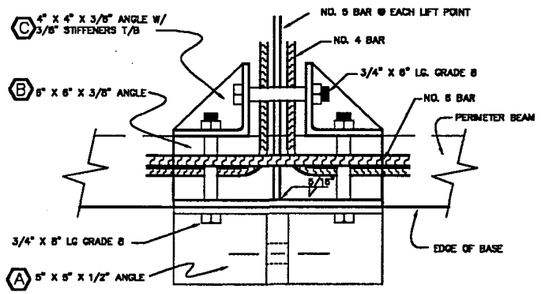


USE NO. 5 BAR HOLD DIM. WITH CHAIRS

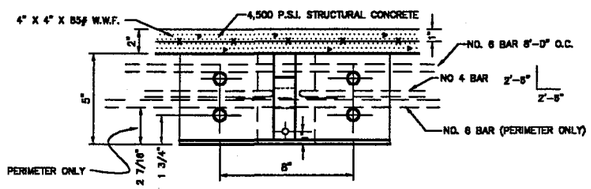
SECTION B
N.T.S.



SECTION C
N.T.S.



LIFTING ASSEMBLY PLAN

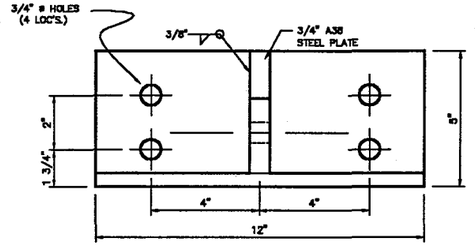


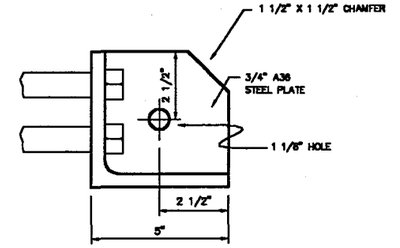
LIFTING ASSEMBLY ELEVATION

LIFT POINT DETAILS
N.T.S.

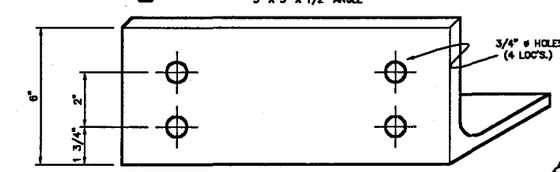
ROOF/BASE GENERAL NOTES

1a. ALL WALL FACE MIX SHALL HAVE A 2500 P.S.I. COMPRESSIVE STRENGTH AT 28 DAYS.
1b. ALL FLOOR & ROOF STRUCTURAL CONCRETE SHALL HAVE A 4500 P.S.I. COMPRESSIVE STRENGTH AT 28 DAYS.
2. ALL STEEL BARS SHALL BE A615 GRADE STEEL.
3. ALL STEEL TUBING SHALL BE MIN. 36 KSI YIELD STRENGTH.
4. ALL STEEL PLATE SHALL BE A36 STEEL.
5. ROOF INSULATION SHALL BE COVERED WITH 3/4" CDX PLYWOOD.
6. LIGHT RUST IS PERMISSIBLE ON WIRE FABRIC.
7. WELD PLATES MAY BE SECURED TO REBAR WITH TACK WELD.
8. LIFTING FERRULS IN ROOF MAY BE TACK WELDED TO REBAR.
9. THE FOAM THICKNESS IS UNIFORMLY REDUCED TO MAINTAIN THE 2" CONCRETE THICKNESS.

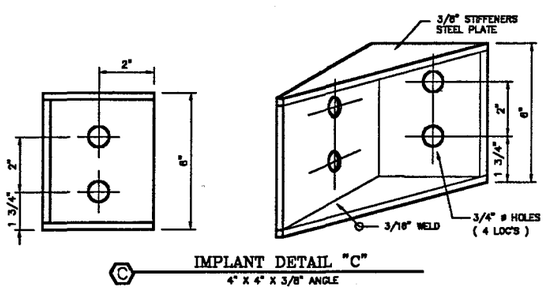




LIFTING LUG DETAIL "A"
5" X 5" X 1/2" ANGLE



IMPLANT DETAIL "B"
6" X 6" 3/8" ANGLE



IMPLANT DETAIL "C"
4" X 4" X 3/8" ANGLE

LIFTING DEVICE DETAILS
N.T.S.

NO.	DATE	REVISION RECORD	DR.	CK.

SLIDE MT. SITE

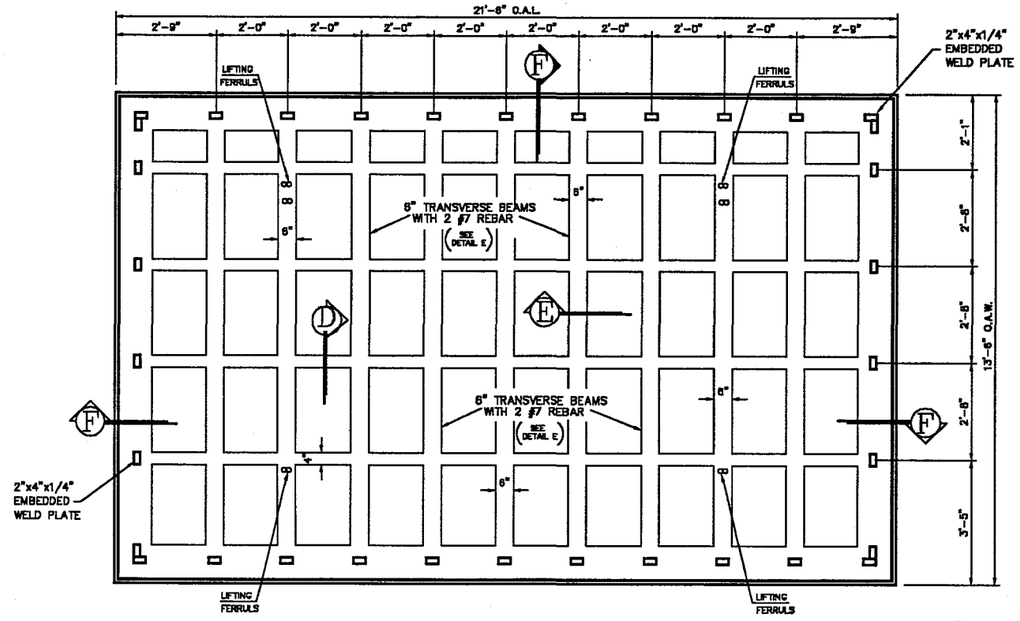
TOWER STURCTURES

STRUCTURAL BASE PLAN & DETAILS

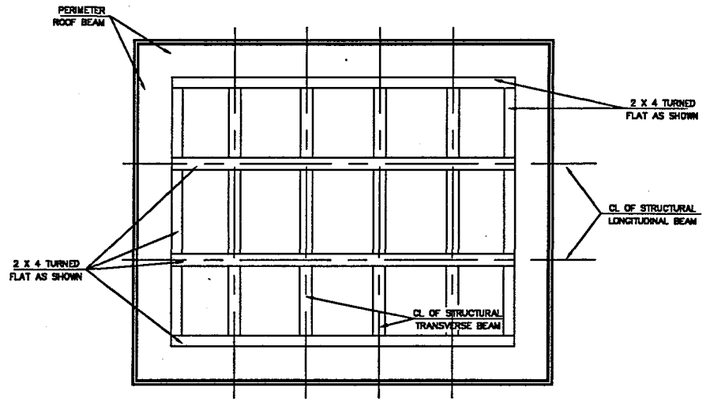
13'-0" X 21'-0" X 9'-0"

GFRC SHELTERS
POST OFFICE BOX 5664
SHREVEPORT, LOUISIANA 71135-5664
PHONE: (318) 425-4623

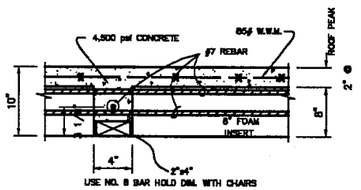
Date	MAY 2000
Scale	AS SHOWN
Drawn	
Job	2KG174
Sheet	G174BAS



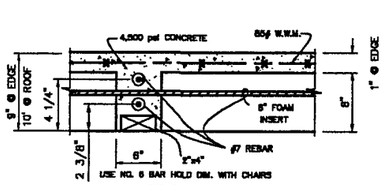
STRUCTURAL ROOF
AS SEEN FROM BELOW
1/4" = 1'-0"



TYPICAL 2 X 4 BOARD PLACEMENT IN ROOF
AS SEEN FROM BELOW
N. T. S.



SECTION D
N.T.S.



SECTION E
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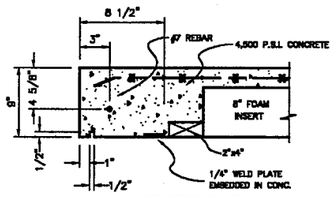
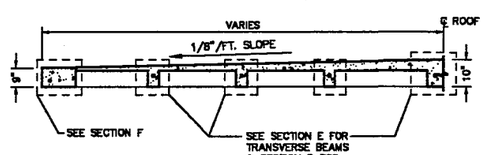


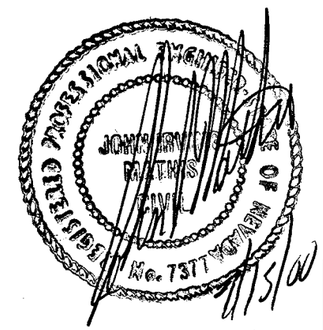
SECTION F
(TYP. PERIMETER)
N.T.S.



TYPICAL HALF ROOF SECTION
N.T.S.

ROOF/BASE GENERAL NOTES

1a. ALL WALL FACE MIX SHALL HAVE A 2500 P.S.I. COMPRESSIVE STRENGTH AT 28 DAYS.
1b. ALL FLOOR & ROOF STRUCTURAL CONCRETE SHALL HAVE A 4500 P.S.I. COMPRESSIVE STRENGTH AT 28 DAYS.
2. ALL STEEL BARS SHALL BE A615 GRADE STEEL.
3. ALL STEEL TUBING SHALL BE MIN. 36 KSI YIELD STRENGTH.
4. ALL STEEL PLATE SHALL BE A36 STEEL.
5. ROOF INSULATION SHALL BE COVERED WITH 3/4" COX PLYWOOD.
6. LIGHT RUST IS PERMISSIBLE ON WIRE FABRIC.
7. WELD PLATES MAY BE SECURED TO REBAR WITH TACK WELD.
8. LIFTING FERRULS IN ROOF MAY BE TACK WELDED TO REBAR.
9. THE FOAM THICKNESS IS UNIFORMLY REDUCED TO MAINTAIN THE 2" CONCRETE THICKNESS.



NO.	DATE	REVISION RECORD	DR.	CK.

SLIDE, MT. SITE

TOWER STRUCTURES
STRUCTURAL ROOF PLAN & DETAILS
13'-0" X 21'-0" X 9'-0"

GFRC SHELTERS
POST OFFICE BOX 5664
SHREVEPORT, LOUISIANA 71135-5664
PHONE (318) 425-4623

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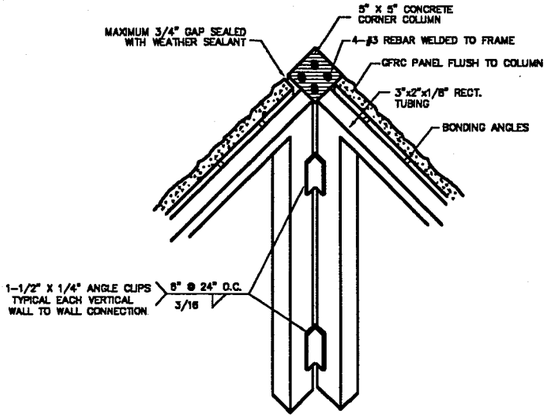
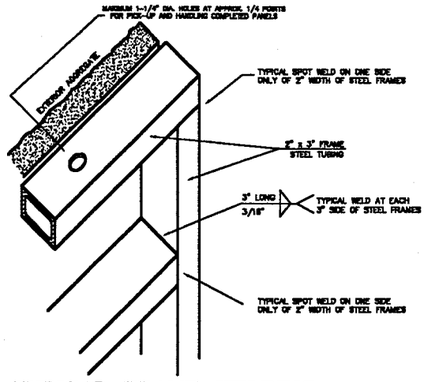
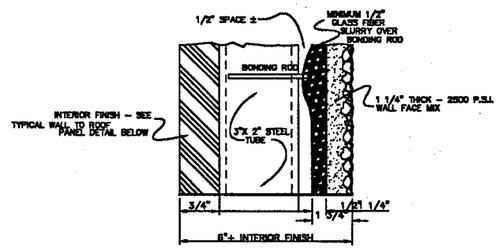
Drawn
Job 2KG174
Sheet G174RF





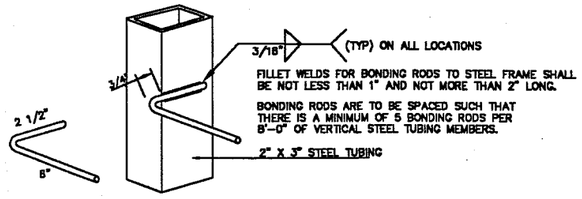
TYPICAL FRAME WELDING CONNECTION DETAIL

N.T.S.



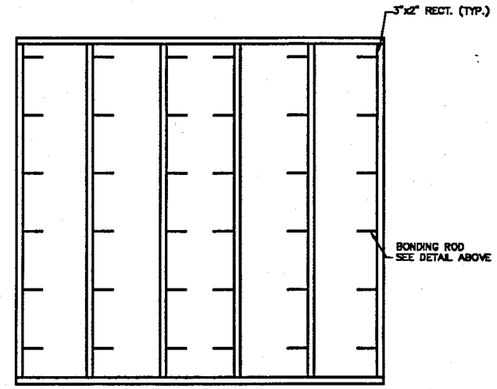
TYPICAL GFRC PANEL SECTION

N.T.S.



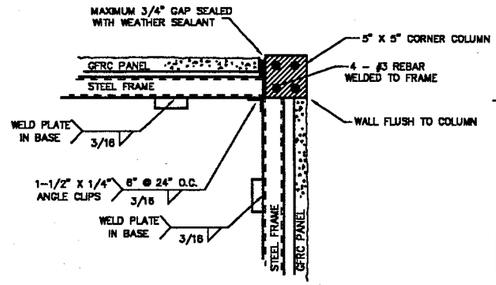
3/8" BONDING ROD DETAIL

N.T.S.

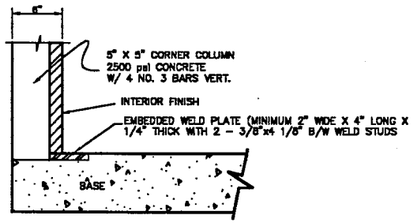


TYPICAL STEEL FRAME

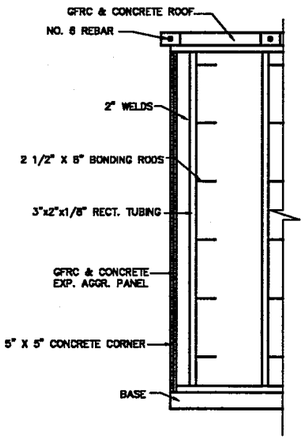
N.T.S.



PLAN



ELEVATION



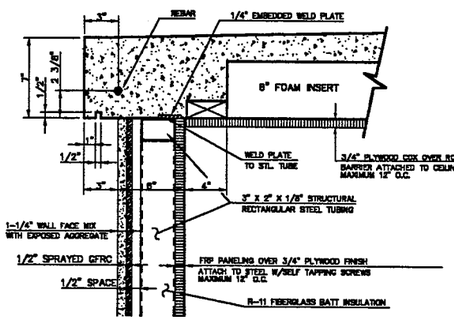
WALL SECTION

N.T.S.

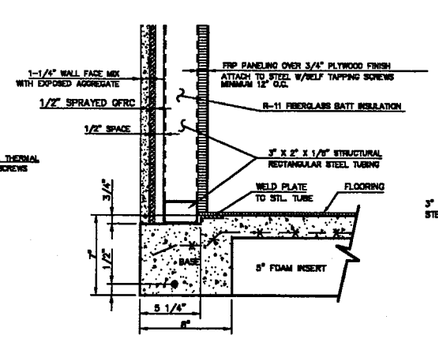
ANCHORAGE DETAIL

N.T.S.

WALL TO CORNER CONNECTION DETAILS



WALL TO ROOF PANEL

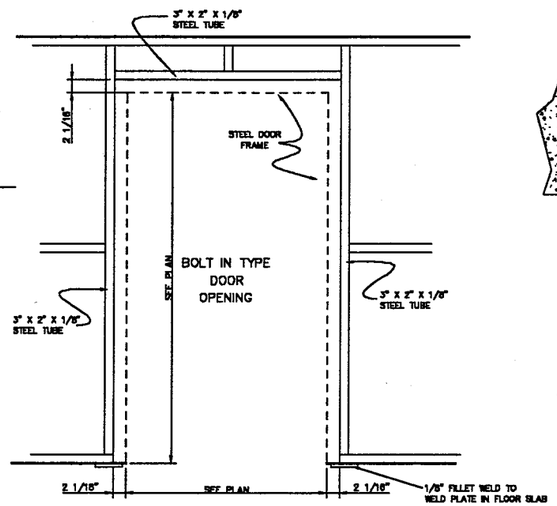


WALL TO BASE

NOTE: ALL WELDS CALLED OUT ON THIS SHEET 3/16 FILLET FULL LENGTH OF WELD PLATE

TYPICAL WELD DETAILS AT FLOOR, CORNERS, WALL & ROOF

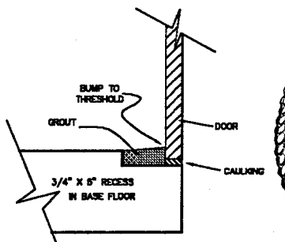
N.T.S.



DOOR FRAME DETAIL

AS SEEN FROM INSIDE STRUCTURE

N.T.S.



DOOR SECTION

N.T.S.

DOOR IS TO HAVE THE FOLLOWING SIGNS:
1. THIS DOOR IS TO REMAIN UNLOCKED DURING OCCUPANCY.

JOHN IRVIN MATHIS No. 731 REGISTERED PROFESSIONAL ENGINEER

1/15/20

TOWER STRUCTURES
TYPICAL CONSTRUCTION DETAILS
13'-0" x 21'-0" x 9'-0"

GFRC SHELTERS
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PHONE: (318) 425-4623

NO.	DATE	REVISION RECORD	DR.	CK.

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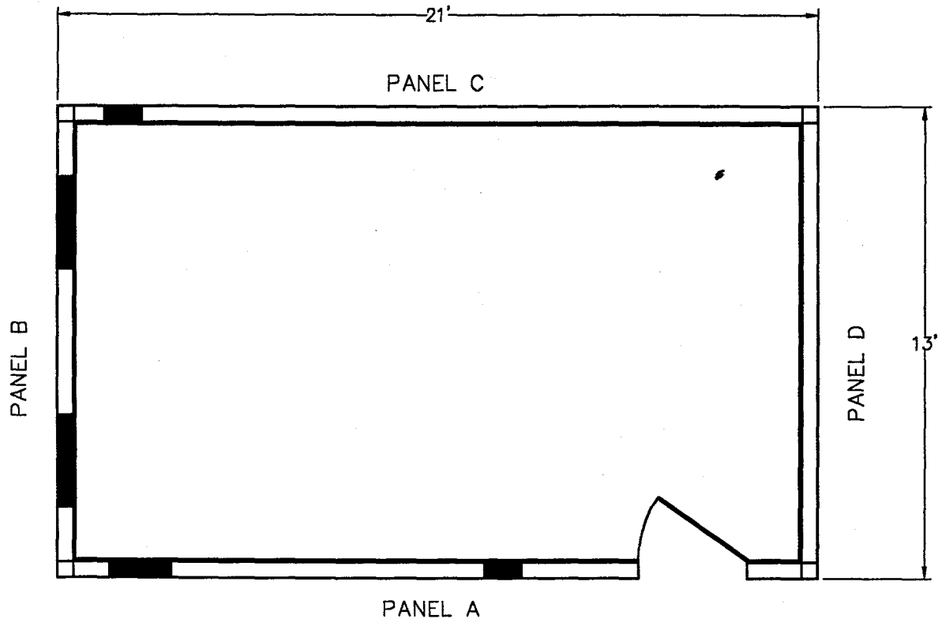
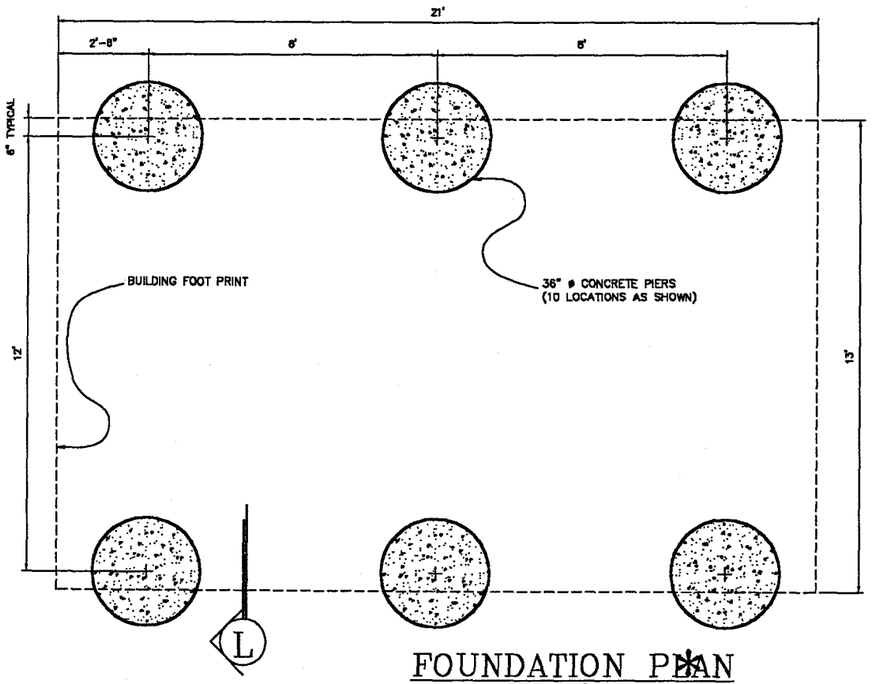
Sheet G174DET



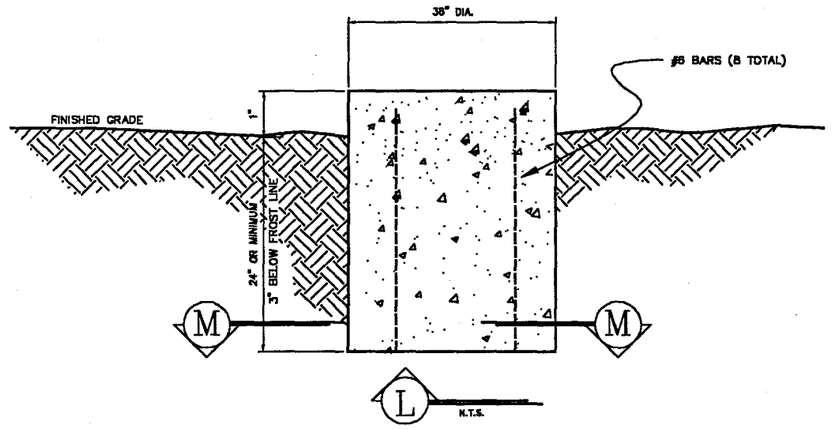
BUILDING OUTLINE

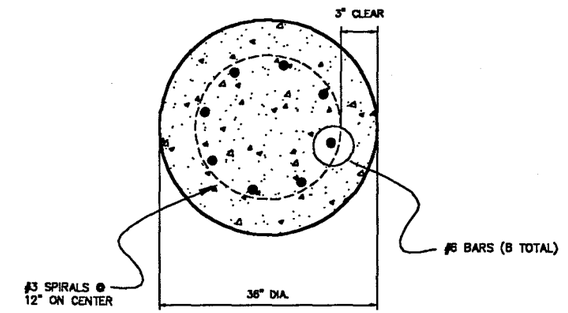
SCALE: 1/4" = 1'-0"

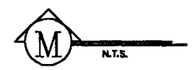


FOUNDATION PLAN

SCALE: 1/4" = 1'-0"







FOUNDATION GENERAL NOTES

*

GENERAL

1. All foundation work is a suggestive layout only for dimensioning purposes and that local code requirements shall prevail.
2. All work shown is field work.

SITE

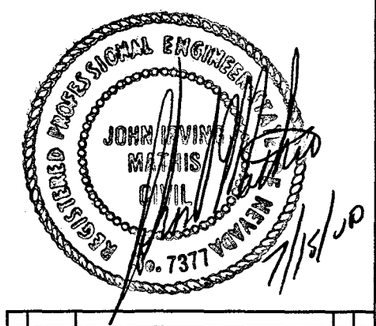
1. The site shall be stripped of all vegetation prior to fill or construction of the foundation pad.
2. All fill sand shall be 0–15 P.I. with a compaction test run on each 6" lift – compacted to 90% modified proctor.
3. Any soft areas (tree stump holes, etc.) shall be cut out and recompacted to said proctor.
4. The Contractor shall keep the site so it will have positive drainage at all times.
5. All excavation shall be observed by the Engineer/Architect prior to placing concrete.
6. All excavation shall be free of all water before pouring concrete.
7. Foundation design based on min. 4500 PSF allow. soil bearing with 4/3 increase in soil bearing allowed during wind or seismic activity.

REINFORCING STEEL

1. All steel bars shall be grade 60 steel. Number 3 bars may be grade 40.
2. Clear dimensions for steel: Steel against earth shall be 3". Steel against form 1 1/2".
3. All steel bars shall be splices 36 times bar diameter.
4. All corner and intersection bars shall have corner bars (top and bottom) installed.
5. All wire and bars shall be secured properly before pouring concrete.
6. Contractor shall submit shop drawing of steel for approval prior to concrete pour.

CONCRETE

1. All concrete shall have a 3000 psi compressive strength at 28 days.
2. Chamfer all exposed concrete edges.
3. Maximum slump shall be 5"
4. Submit design mix for approval prior to beginning construction.



NO.	DATE	REVISION RECORD	DR.	CK.

SLIDE MT. SITE

TOWER STRUCTURES
FOUNDATION PLAN & DETAILS
13'-0" X 21'-0" X 9'-0"

GFRC SHELTERS
POST OFFICE BOX 5664
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PHONE: (318) 425-4623

Date MAY 2000
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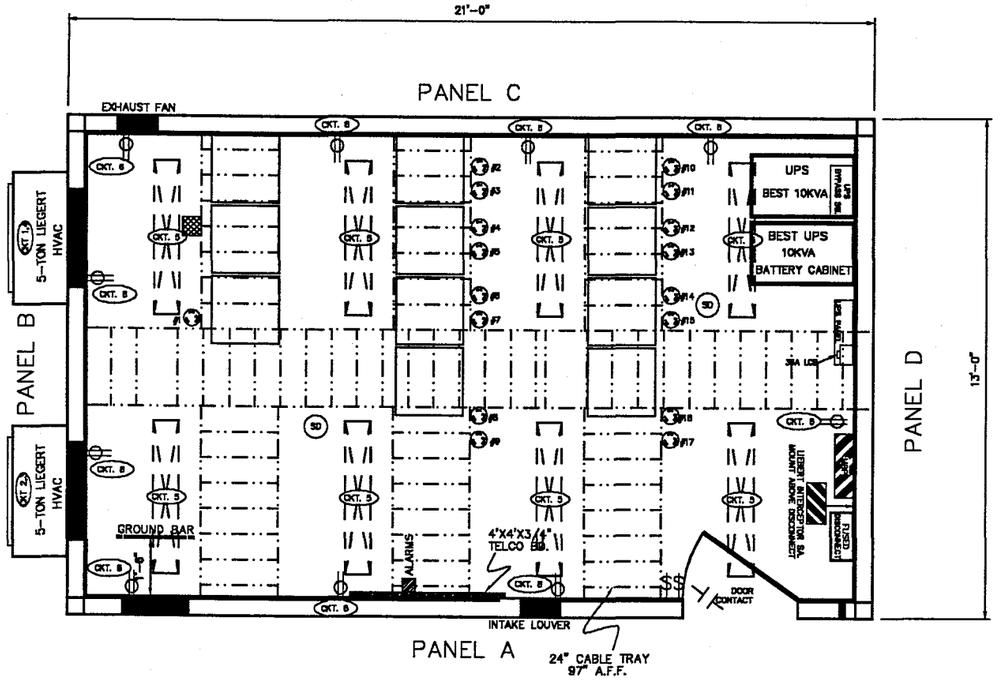
Drawn
Job 2KG174
Sheet G174FND



FLOOR PLAN

SCALE: 1/4" = 1'-0"

= NEMA L5-20R, 20A/125V TWISTLOCK RECEPTACLES, UPS CIRCUITS 1-17. PROVIDE MATING PLUGS FOR IN-FIELD WIRING. LABEL : "EDACS REPEATER CIRCUITS ONLY 120VAC"

= MICROWAVE POWER CIRCUIT 20A/250V TWIST LOCK RECEPT. NEMA L6-20R. PROVIDE MATING PLUG FOR IN-FIELD WIRING. LABEL : "ALCATEL MICROWAVE INPUT POWER CIRCUIT ONLY 240VAC"

GROUNDING NOTES:

1. PROVIDE INTERNAL HARGER COPPER GROUND BAR-1/4"x4"x24"- HUNG FROM CEILING WITH UNISTRUT HANGERS, 18" FROM PANEL A WALL.
2. PROVIDE EXTERNAL COPPER GROUND BAR-1/4"x2""x24"- MOUNT UNDER CABLE ENTRY.
2. PROVIDE INTERIOR COPPER HALO PER SPECS.

ELECTRICAL NOTES:

1. ALL WIRE AMPACITIES ARE PER TABLE 310-16 AND ADJUSTMENT FACTORS OF 310-15, (B) (2) (A), OF THE 1999 N.E.C.
2. ALL CONDUIT FILL IS PER CHAPTER 9, APPENDIX "C" OF THE N.E.C.
3. ALL WIRING RUN IN EMT CONDUIT SIZED IN ACCORDANCE WITH THE APPLICABLE VERSION OF THE NATIONAL ELECTRIC CODE.
4. SERVICE GROUND SHALL BE CONNECTED TO BUILDING SYSTEM GROUND.
5. OVERCURRENT PROTECTION TO PANELS AS FOLLOWS:
   A. WHEN NORMAL POWER IS SUPPLYING LOAD: 200 AMP FUSED DISCONNECT
   B. WHEN GENERATOR IS SUPPLYING LOAD: 200 AMP LCB ON GENERATOR
6. ALL EXTERIOR ELECTRICAL EQUIPMENT SHALL BE WEATHER PROOF.

MAIN: 200 A MCB — SERVICE PANEL NO.: MBP — TYPE: SQUARE D
BUS RATING: 200A — SOURCE: ATS — LOCATION: INTERIOR
AIC MIN: 22000 — SERVICE VOLTAGE: 120/240 1 PHASE 3 WIRE — MOUNTING: SURFACE

DESCRIPTION	BREAKER POLE	BREAKER AMP	VOLT-AMPS #A	VOLT-AMPS #B	CKT. NO.	BUS CONN A B N	CKT. NO.	VOLT-AMPS #A	VOLT-AMPS #B	BREAKER POLE	BREAKER AMP	DESCRIPTION
HVAC #1	2	60	5028		1		2	5028		2	60	HVAC #2
				5028	3		4		5028			
INTERIOR LIGHTS	1	20	1000		5		6	900		1	20	WALL RECEPTACLES
EXTERIOR LIGHTS	1	20		175	7		8		900	1	20	WALL RECEPTACLES
VENT SYSTEM-EQ. RM.	1	20	1200		9		10	720		1	20	WALL RECEPTACLES
EXHAUST FAN-GEN. RM.	1	20		1200	11		12		250	1	20	SMOKE DETECTORS
UPS	2	35			13		14	900		1	20	MICROWAVE POWER CIRCUIT
					15		16		900			
-					17		18					-
-					19		20					-
-					21		22					-
-					23		24					-
-					25		26					-
-					27		28					-
-					29		30					-
TOTALS			-	-				-	-			TOTALS

BUS A: - — MAIN: 200 A MCB — LINE AMPS: -
BUS B: - — LOCATION (TOP)(BOTTOM): TOP
FEEDER SIZE: 3/0 THWN — KVA DEMAND: -
TOTAL: - — SOURCE: ATS

MBP PANEL DOOR LABEL

N.T.S.

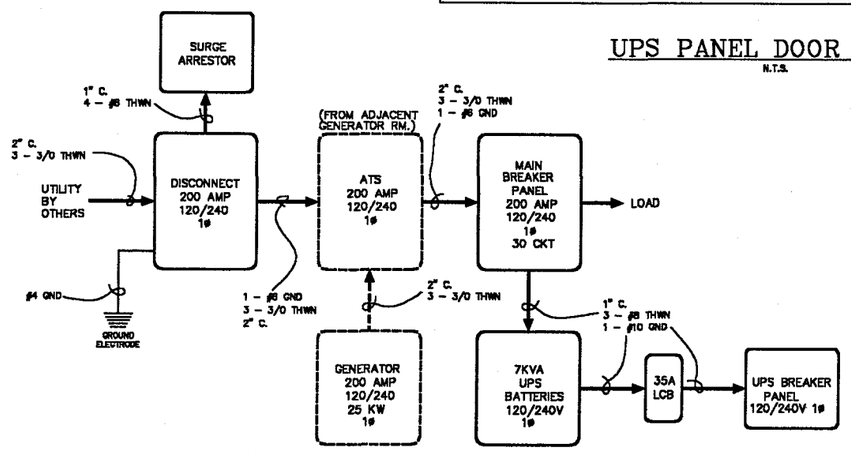
MAIN: 125 MLO — SERVICE PANEL NO.: UPS PNL #1 — TYPE: SQUARE D
BUS RATING: 125A — SOURCE: UPS — LOCATION: INTERIOR
AIC MIN: 22000 — SERVICE VOLTAGE: 120/240 1 PHASE 3 WIRE — MOUNTING: SURFACE

DESCRIPTION	BREAKER POLE	BREAKER AMP	VOLT-AMPS #A	VOLT-AMPS #B	CKT. NO.	BUS CONN A B N	CKT. NO.	VOLT-AMPS #A	VOLT-AMPS #B	BREAKER POLE	BREAKER AMP	DESCRIPTION
RACK RECEPTACLE #1	1	20	180		1		2	180		1	20	RACK RECEPTACLE #2
RACK RECEPTACLE #3	1	20		180	3		4		180	1	20	RACK RECEPTACLE #4
RACK RECEPTACLE #5	1	20	180		5		6	180		1	20	RACK RECEPTACLE #6
RACK RECEPTACLE #7	1	20		180	7		8		180	1	20	RACK RECEPTACLE #8
RACK RECEPTACLE #9	1	20	180		9		10	180		1	20	RACK RECEPTACLE #10
RACK RECEPTACLE #11	1	20		180	11		12		180	1	20	RACK RECEPTACLE #12
RACK RECEPTACLE #13	1	20	180		13		14	180		1	20	RACK RECEPTACLE #14
RACK RECEPTACLE #15	1	20		180	15		16		180	1	20	RACK RECEPTACLE #16
RACK RECEPTACLE #17	1	20	180		17		18					
-					19		20					-
-					21		22					-
-					23		24					-
-					25		26					-
-					27		28					-
-					29		30					-
TOTALS			-	-				-	-			TOTALS

BUS A: - — MAIN: MLO — LINE AMPS: -
BUS B: - — LOCATION (TOP)(BOTTOM): TOP
FEEDER SIZE: #8 THWN — KVA DEMAND: -
TOTAL: - — SOURCE: 35A LCB

UPS PANEL DOOR LABEL

N.T.S.



ELECTRICAL ONE LINE SCHEMATIC

SLIDE MT. SITE

TOWER STRUCTURES
INTERIOR EQUIPMENT LAYOUT
13'-0" X 21'-0" X 9'-0"

GFRC SHELTERS
POST OFFICE BOX 5664
SHREVEPORT, LOUISIANA 71135-6664
PHONE: (318) 425-4623

NO.	DATE	REVISION RECORD	DR.	CK.

Date MAY 2000
Scale AS SHOWN
Drawn
Job 2KG174
Sheet G174ELE

Design 100 MPH/87 MPH + 2" RADIAL ICE
According to ANSI/EIA-222-F 1996

ANTENNA LIST

NO.	EL.	ANTENNA	AZ	COAX
1	TOP	CELLWAVE BA1010-1		1 5/8"
2,3	TOP	(2) DB806T3		(2)-1 5/8"
4	TOP	PD1610		1 5/8"
5	100'	CELLWAVE BA1010-1		1 5/8"
6,7	100'	(2) DB806T3		(2)-1 5/8"
8	100'	PD1610		1 5/8"
9-11	90'	(2) PD620		(3)-7/8"
12-14	80'	(3) PD620		(3)-7/8"
15-22	75'	FUTURE ANTENNA CaAa=50 FT^2		(8)-7/8"
23	70'	HP-10	0°	EW52
24	60'	HP-10	0°	EW52

- (1) CLIMBING LADDER
- (1) WAVEGUIDE LADDER TO EL TOP
- COAX ASSUMED TO BE ALL ON ONE TOWER FACE FULLY EXPOSED TO THE WIND

STEEL NOTES

1. ALL STEEL PLATES, ROLLED SHAPES, AND THREADED RODS SHALL CONFORM TO ASTM A36.
2. ALL PIPES SHALL CONFORM TO ASTM A53 GRADE B OR ASTM A500 GRADE B.
3. WELDING SHALL BE PERFORMED WITH E70 ELECTRODES IN CONFORMANCE WITH AWS D1.1-96.
4. BOLTS SHALL CONFORM TO ASTM A325 WITH THREADS EXCLUDED FROM THE SHEAR PLANE.
5. BOLTS SHALL BE TIGHTENED BY THE "TURN OF THE NUT" METHOD AS DEFINED IN THE AISC ASD MANUAL OF STEEL CONSTRUCTION, 9TH EDITION.
6. U-BOLTS SHALL BE TIGHTENED TO SNUG TIGHT CONDITION AS DEFINED IN THE AISC ASD MANUAL OF STEEL CONSTRUCTION, 9TH EDITION.
7. ALL STRUCTURAL STEEL AND PIPE SHALL BE HOT DIPPED GALVANIZED PER ASTM A123 AFTER FABRICATION. ALL BOLTS, NUTS, AND WASHERS SHALL BE HOT DIPPED GALVANIZED PER ASTM A153.
8. ALL PIPES SHALL BE GALVANIZED INSIDE AND OUTSIDE.
9. EDGE DISTANCE SHALL BE 1 1/4" UNLESS OTHERWISE NOTED.
10. ALL BOLT HOLES SHALL BE PUNCHED OR DRILLED 1/16" LARGER THAN THE DIAMETER OF THE BOLTS THEY WILL RECEIVE.
11. "ANCO" LOCK NUTS SHALL BE PROVIDED ON ALL BOLTS. AT ANY LOCATIONS WHERE LOCK NUTS CANNOT BE INSTALLED, PROVIDE LOCK WASHERS.
12. ALL FABRICATION SHALL BE PERFORMED IN LOS ANGELES CITY APPROVED SHOP NO. 1094.

CONCRETE FOUNDATION NOTES:

NOTES:

1. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI @ 28 DAYS.
2. REINFORCING STEEL SHALL CONFORM TO THE REQUIREMENTS OF ASTM A615 (GRADE 60).
3. SEE PREVIOUS PAGE FOR ANCHOR BOLT SIZE.
4. TOTAL CONCRETE = 117 CUBIC YARDS.
5. FOUNDATION DESIGN BASED UPON 7500 PSF ALLOWABLE SOIL BEARING PRESSURE.

GEOTECHNICAL REVIEW:

A LETTER FROM THE GEOTECHNICAL ENGINEER SHALL BE PROVIDED TO THE BUILDING DEPARTMENT AND TO THE ENGINEER OF RECORD CONFIRMING THAT THE FOUNDATION DETAILS AND SPECIFICATIONS HAVE BEEN REVIEWED BY THE GEOTECHNICAL ENGINEER AND THAT IT HAS BEEN DETERMINED THAT THE RECOMMENDATIONS IN THE GEOTECHNICAL REPORT HAVE BEEN PROPERLY INCORPORATED INTO THE PLANS.

VERIFY

SPECIAL INSPECTION:

THE FOLLOWING ELEMENTS OF CONSTRUCTION SHALL REQUIRE SPECIAL INSPECTION PER UBC SECTION 1701.

ITEM	DESCRIPTION	INSPECTOR	DESIGN STRENGTH
1	PIER EXCAVATION DESIGN DEPTH SOIL SAME AS SOILS REPORT DEBRIS CLEAN OUT	SOILS ENGINEER	
2	PIER CONSTRUCTION REINFORCING STEEL BAR SIZES MILL CERTIFICATES INSTALLATION	SPECIAL INSPECTOR	Fy =60 KSI
	ANCHOR BOLTS BOLT SIZES & LENGTHS MILL CERTIFICATES INSTALLATION	SPECIAL INSPECTOR	Fy =36 KSI
	CONCRETE TEST SPECIMENS PLACING OF CONCRETE	SPECIAL INSPECTOR	fc' =4500 PSI TYPE V
3	HIGH STRENGTH BOLTING PER UBC SECTION 2228	SPECIAL INSPECTOR	A325X
4	FABRICATION BY LOS ANGELES CITY APPROVED SHOP FABRICATOR NO. 1094, AND UBC SECTION 1701.7		

SPECIAL INSPECTION NOTES:

1. THE CONSTRUCTION INSPECTION LISTED ARE IN ADDITION TO BUILDING OFFICIAL INSPECTION REQUIRED BY UBC SECTION 108.
2. CONTINUOUS INSPECTION IS ALWAYS REQUIRED DURING THE PERFORMANCE OF THE WORK UNLESS OTHERWISE SPECIFIED.
3. THE SPECIAL INSPECTORS MUST BE CERTIFIED BY THE LOCAL JURISDICTION TO PERFORM THE TYPES OF INSPECTION REQUIRED.
4. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INFORM THE SPECIAL INSPECTOR OR INSPECTION AGENCY AT LEAST ONE WORKING DAY PRIOR TO PERFORMING ANY WORK THAT REQUIRES SPECIAL INSPECTION. ALL WORK PERFORMED WITHOUT REQUIRED SPECIAL INSPECTION IS SUBJECT TO REMOVAL.

GENERAL CONSTRUCTION NOTES:

1. THE GENERAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS, CONDITIONS, AND ELEVATIONS BEFORE STARTING WORK. ALL DISCREPANCIES SHALL BE CALLED TO THE ATTENTION OF THE ENGINEER AND SHALL BE RESOLVED BEFORE PROCEEDING WITH THE WORK. ALL WORK SHALL BE PERFORMED IN A WORKMANLIKE MANNER IN ACCORDANCE WITH ACCEPTED CONSTRUCTION PRACTICES.
2. IT IS THE INTENTION OF THESE DRAWINGS TO SHOW THE COMPLETED INSTALLATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY BRACING, SHORING, TIES, FORM WORK, ETC., IN ACCORDANCE WITH ALL NATIONAL, STATE, AND LOCAL ORDINANCES, TO SAFELY EXECUTE ALL WORK AND SHALL BE RESPONSIBLE FOR SAME. ALL WORK SHALL BE IN ACCORDANCE WITH LOCAL CODES.
3. THE CONTRACTOR SHALL USE ADEQUATE NUMBERS OF SKILLED WORKMEN WHO ARE THOROUGHLY TRAINED AND EXPERIENCED IN THE NECESSARY CRAFTS, AND WHO ARE COMPLETELY FAMILIAR WITH THE SPECIFIED REQUIREMENTS AND METHODS NEEDED FOR PROPER PERFORMANCE OF THE WORK.
4. CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, AND THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. CONSTRUCTION CONTRACTOR FURTHER AGREES TO INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT.
5. THE TOWER/ MONOPOLE DESIGN DOES NOT INCLUDE STRESSES DUE TO ERECTION AND/ OR TRANSPORTATION SINCE ERECTION EQUIPMENT AND METHODS ARE UNKNOWN.
6. TOWER/ MONOPOLE GROUNDING SHALL COMPLY WITH ALL LOCAL AND NATIONAL CODES. GROUNDING TO BE PERFORMED BEFORE ERECTION.
7. ALL WORK SHALL COMPLY WITH OSHA SAFETY REQUIREMENTS. PROCEDURES FOR THE PROTECTION OF EXCAVATIONS, EXISTING CONSTRUCTION AND UTILITIES SHALL BE ESTABLISHED PRIOR TO FOUNDATION INSTALLATION.

WASHOE COUNTY APPROVED BLDG. DEPT.

PROFESSIONAL ENGINEER - STATE OF NEVADA - JOHN F. WILSON - STRUCTURAL - NO. 6505

PAUL J. FORD AND COMPANY
STRUCTURAL ENGINEERS
250 East Broad Street Suite 500 Columbus, Ohio 43215
PH (614)-221-6679 FAX (614)-221-0166

CFN=00055-01-S1

REVISIONS NO.	MADE BY	CH'K'D BY			****REMARKS****
					REVISED TOWER DIMENSIONS
					DO NOT SCALE FROM DRAWING
					CONTACT ENGINEER / DESIGNER FOR DISCREPANCIES ON DRAWING
					DESTROY PREVIOUS PRINTS

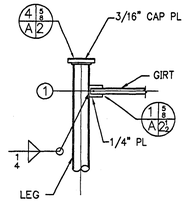
CLIENT'S ORDER:
CLIENT'S APPROVAL:
SCALE: NONE
DRAWN BY: WA — DATE: 5/19/2000
CHECKED BY:
APPROVAL
PERMIT

TOWER STRUCTURES
2567 BUSINESS PARKWAY
MINDEN, NEVADA 89423
PHONE (775) 267-1308
FAX (775) 267-1408

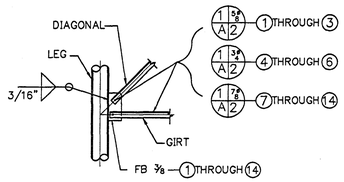
LEGEND OF BOLTED CONNECTIONS
NUMBER OF BOLTS — DIAMETER OF BOLTS
*A'(A-325) BOLTS
*B'(A-307) BOLTS — LENGTH OF BOLTS

CUSTOMER: WASHOE COUNTY, GENERAL SERVICES DEPARTMENT
DESCRIPTION: TOWER ELEVATION 120'-0"
SITE: SLIDE MOUNTAIN, NV

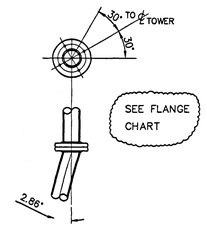
JOB NO. 00-055-01
REVISION
SHEET S1



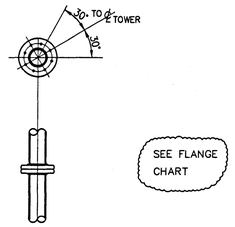
DETAIL 1



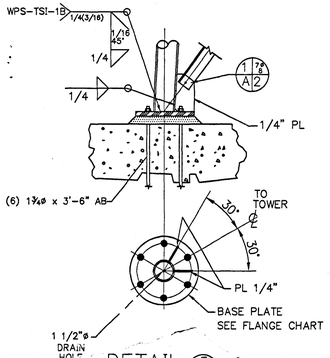
DETAIL 2



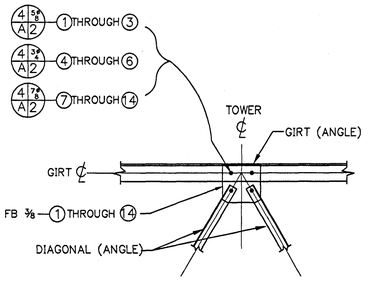
SPLICE DETAIL 3



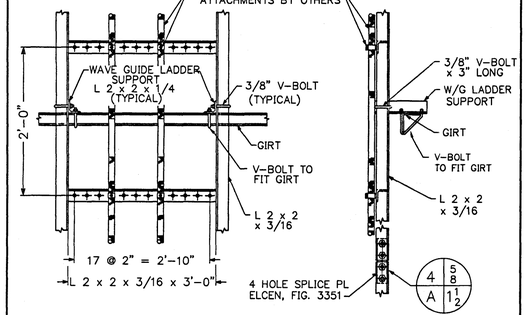
SPLICE DETAIL 4



DETAIL 5

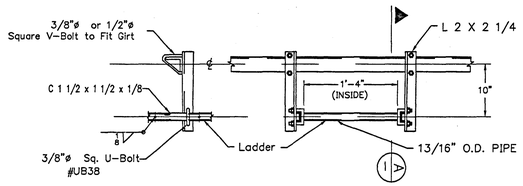


DETAIL 6



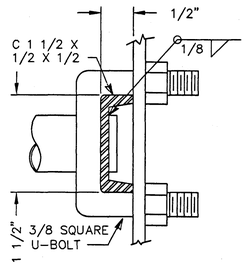
WAVE GUIDE LADDER DETAIL

REQUIRED: ONE FULL LENGTH LADDER
ONE UP TO 80' A.G.L.

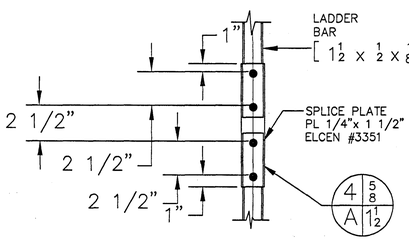


SECTION A — PLAN

TYP. LADDER CONN. TO GIRT



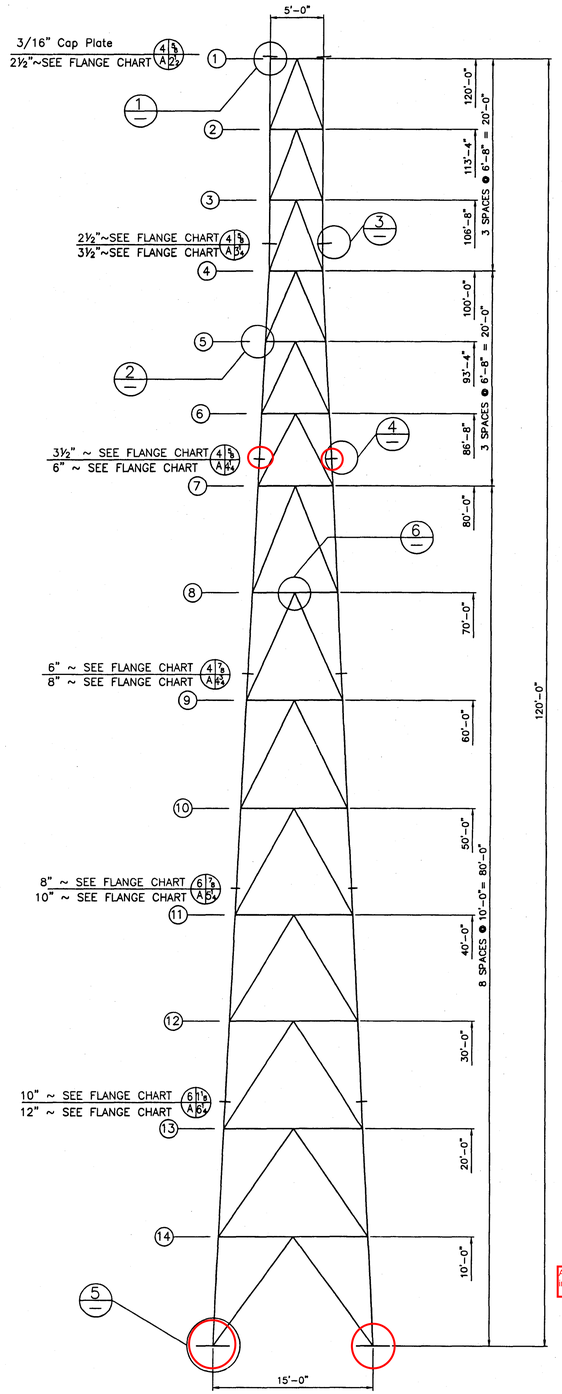
TYP. U-BOLT CONNECTION



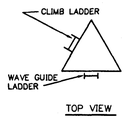
LADDER SPLICE DETAIL

FLANGE CHART

PIPE SIZE	THICKNESS	O D	NUMBER OF HOLES	HOLE SIZE	BOLT CIRCLE	BOLT SIZE
2" TO 2½"	1"	8"	4	1 1/16ø	6"	⅝ø
3½" TO 5"	1½"	11"	4	1 1/16ø	9½"	⅝ø
6"	1¾"	13½"	4	1 5/16ø	11¾"	⅞ø
8"	2"	16"	6	1 5/16ø	14¼"	⅞ø
10"	2¼"	19"	6	1 5/16ø	17"	1⅛ø
12"	2¼"	19"	6	1 5/16ø	17"	1¼ø
12"	2¼"	21"	6	1 5/16ø	18¾"	1¼ø
14"	2½"	24"	6	1 5/16ø	21"	1¼ø
BASE PLATES						
16"ø BASE	2½"	24"	6	2¼ø	20½"	2"ø
12"ø BASE	2¼"	20"	6	1⅞ø	16"	1¾ø
10"ø BASE	2"	18"	6	1⅝ø	13"	1½"ø



TOWER ELEVATION



TOP VIEW

TOWER SCHEDULE DATA		
PANEL	PC MK	DESCRIPTION
		LEGS (Fy=35000 P.S.I.)
1		2.875"ø x .203 WALL PIPE
2		2.875"ø x .203 WALL PIPE
3		2.875"ø x .203 WALL PIPE
4		4"ø x .226 Wall Pipe
5		4"ø x .226 Wall Pipe
6		4"ø x .226 Wall Pipe
7		6.625"ø x .280 Wall Pipe
8		6.625"ø x .280 Wall Pipe
9		8.625"ø x .322 Wall Pipe
10		8.625"ø x .322 Wall Pipe
11		10.75"ø x .365 Wall Pipe
12		10.75"ø x .365 Wall Pipe
13		12.75"ø x .375 Wall Pipe
14		12.75"ø x .375 Wall Pipe

PANEL	PC MK	DESCRIPTION
		DIAGONALS (Fy = 36000 PSI)
1		L 3 x 3 x 3/16
2		L 3 x 3 x 3/16
3		L 3 x 3 x 3/16
4		L 3 x 3 x ¼
5		L 3 x 3 x ¼
6		L 3 x 3 x ¼
7		JL 3 x 3 x ¼
8		JL 3 x 3 x ¼
9		JL 3 x 3 x ¼
10		JL 3 x 3 x ¼
11		JL 3 x 3 x ¼
12		JL 3 x 3 x ¼
13		JL 3 x 3 x ¼
14		JL 3 x 3 x ¼

PANEL	PC MK	DESCRIPTION
		GRITS (Fy = 36000 PSI)
1		L 2 x 2 x 3/16
2		L 2 x 2 x 3/16
3		L 2 x 2 x 3/16
4		L2½ x 2½ x 3/16
5		L2½ x 2½ x 3/16
6		L2½ x 2½ x 3/16
7		L 3 x 3 x 3/16
8		L 3 x 3 x 3/16
9		L 3 x 3 x 3/16
10		L 3 x 3 x 3/16
11		L 3½ x 3½ x ¼
12		L 3½ x 3½ x ¼
13		L 3½ x 3½ x ¼
14		L 3½ x 3½ x ¼

Areas where cracking was found during inspection

WASHOE COUNTY BLDG. DEPT. APPROVED

PROFESSIONAL ENGINEER - STATE OF NEVADA - JOHN T. WILSON - STRUCTURAL - NO. 6508

PAUL J. FORD AND COMPANY
STRUCTURAL ENGINEERS
250 East Broad Street Suite 500 Columbus, Ohio 43215
PH (614)-221-6679 FAX (614)-221-0166

REVISIONS	NO.	MADE BY	CH'K'D BY

****REMARKS****	CLIENT'S ORDER:		
REVISED TOWER DIMENSIONS	CLIENT'S APPROVAL:		
DO NOT SCALE FROM DRAWING	SCALE: NONE	DATE	PERMIT
CONTACT ENGINEER / DESIGNER FOR DISCREPANCIES ON DRAWING	DRAWN BY: WA	5/18/2000	
	CHECKED BY:		
DESTROY PREVIOUS PRINTS	APPROVAL		

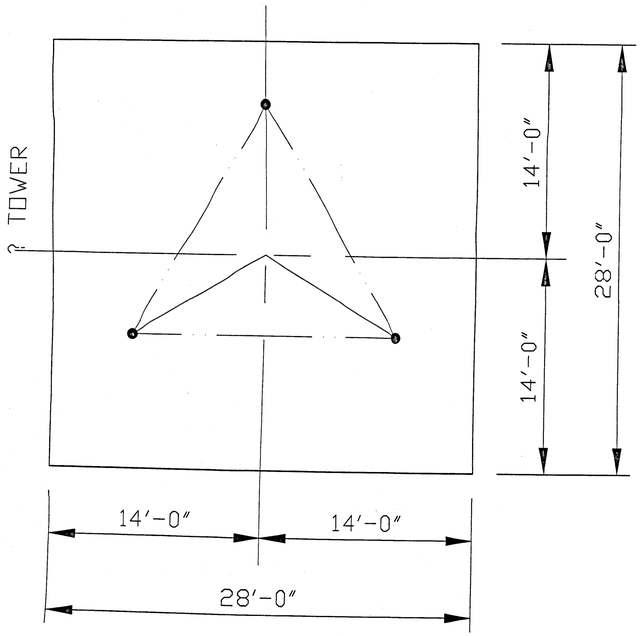
TOWER STRUCTURES
2567 BUSINESS PARKWAY
MINDEN, NEVADA 89423
PHONE (775) 267-1308
FAX (775) 267-1408

LEGEND OF BOLTED CONNECTIONS

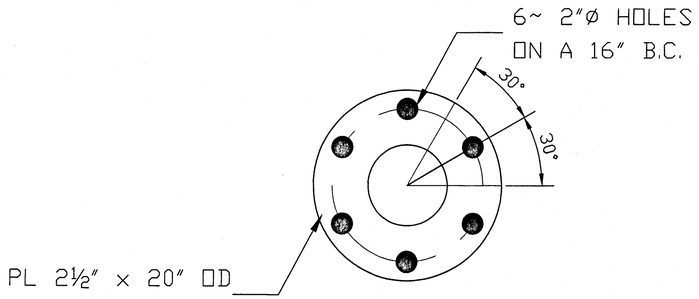
NUMBER OF BOLTS — DIAMETER OF BOLTS
"A"(A-325) BOLTS "B"(A-307) BOLTS — LENGTH OF BOLTS

CUSTOMER:	RENO DISPATCH
DESCRIPTION:	TOWER ELEVATION 120'-0"
SITE:	SLIDE MOUNTAIN, NV

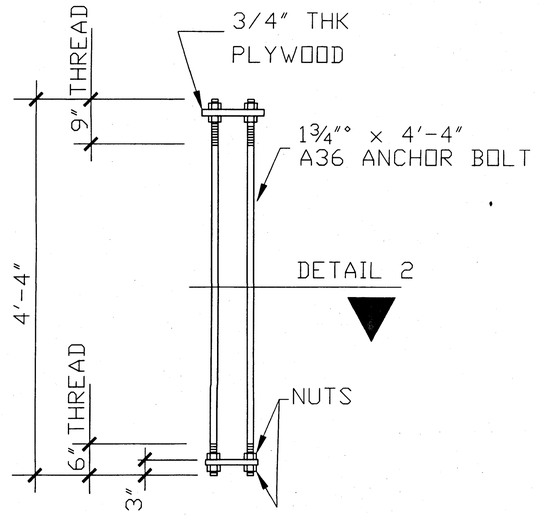
JOB NO.	
00-055-01	
REVISION	SHEET
	S2



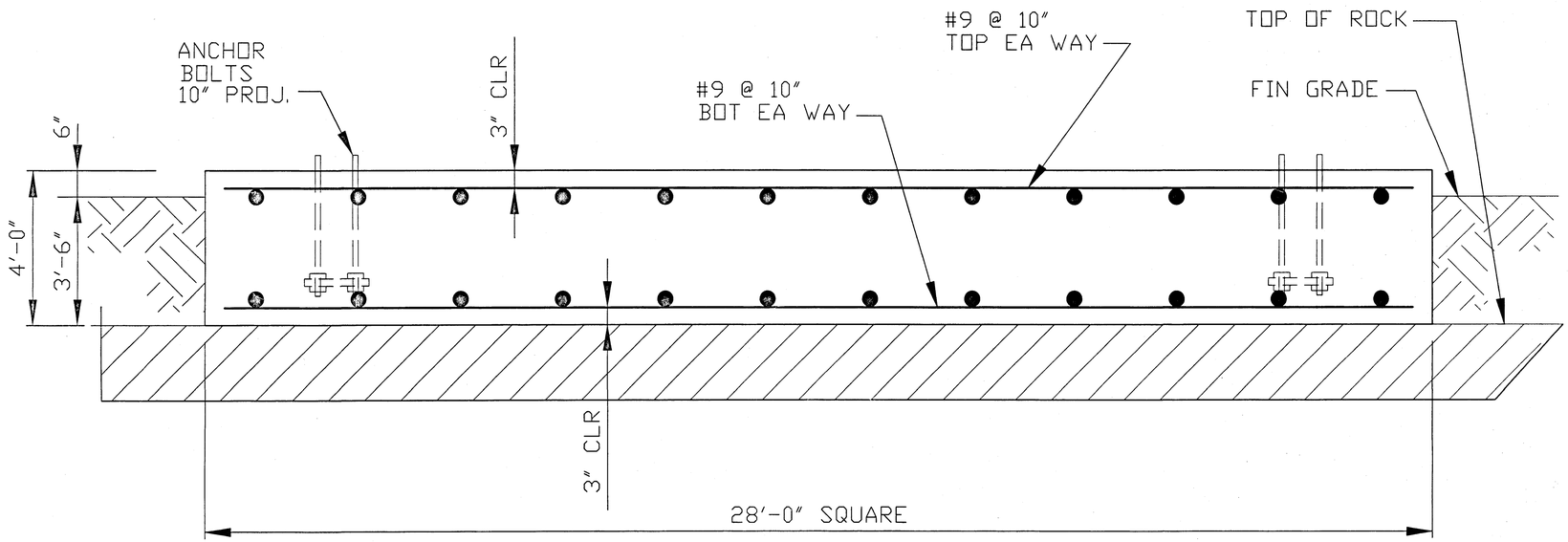
PLAN



DETAIL 2



ANCHOR BOLT DETAIL 1



MAT FOUNDATION

WASHOE COUNTY BLDG. DEPT. APPROVED

PROFESSIONAL ENGINEER · STATE OF NEVADA · JOHN T WILSON · STRUCTURAL · NO. 6808

PAUL J. FORD AND COMPANY
STRUCTURAL ENGINEERS
250 East Broad Street Suite 500 Columbus, Ohio 43215
PH (614)-221-6679 FAX (614)-221-0166

REVISIONS	NO.	MADE BY	CH'K'D BY	

****REMARKS****	CLIENT'S ORDER:		
REVISED TOWER DIMENSIONS	CLIENT'S APPROVAL:		
DO NOT SCALE FROM DRAWING	SCALE: NONE	DATE	PERMIT
CONTACT ENGINEER / DESIGNER FOR DISCREPANCIES ON DRAWING	DRAWN BY: WA	5/18/2000	
DESTROY PREVIOUS PRINTS	CHECKED BY:		
	APPROVAL		

TOWER STRUCTURES
2567 BUSINESS PARKWAY
MINDEN, NEVADA 89423
PHONE (775) 267-1308
FAX (775) 267-1408

LEGEND OF BOLTED CONNECTIONS

NUMBER OF BOLTS — DIAMETER OF BOLTS
"A"(A-325) BOLTS / "B"(A-307) BOLTS — LENGTH OF BOLTS

CUSTOMER: WASHOE COUNTY, GENERAL SERVICES DEPARTMENT

DESCRIPTION: TOWER ELEVATION 120'-0"

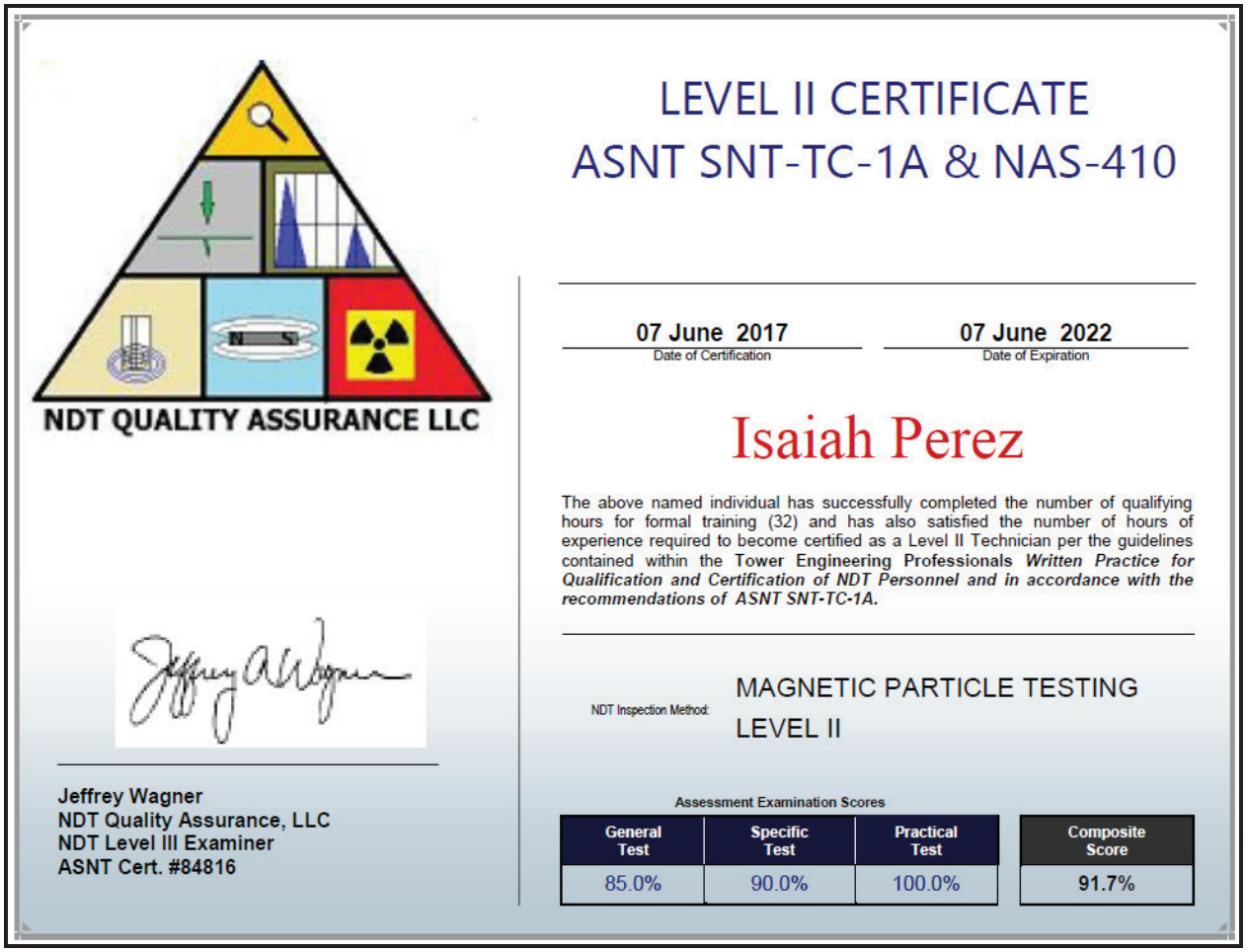
SITE: SLIDE MOUNTAIN, NV

JOB NO. 00-055-01

REVISION

SHEET S3

CERTIFICATIONS



NDT QUALITY ASSURANCE LLC

LEVEL II CERTIFICATE
ASNT SNT-TC-1A & NAS-410

07 June 2017	07 June 2022
Date of Certification	Date of Expiration

Isaiah Perez

The above named individual has successfully completed the number of qualifying hours for formal training (80) and has also satisfied the number of hours of experience required to become certified as a Level II Technician per the guidelines contained within the **Tower Engineering Professionals** ***Written Practice for Qualification and Certification of NDT Personnel and in accordance with the recommendations of ASNT SNT-TC-1A.***

NDT Inspection Method: ULTRASONIC TESTING
LEVEL II

Jeffrey Wagner
NDT Quality Assurance, LLC
NDT Level III Examiner
ASNT Cert. #84816

Assessment Examination Scores

General Test	Specific Test	Practical Test	Composite Score
85.0%	100.0%	100.0%	95.0%