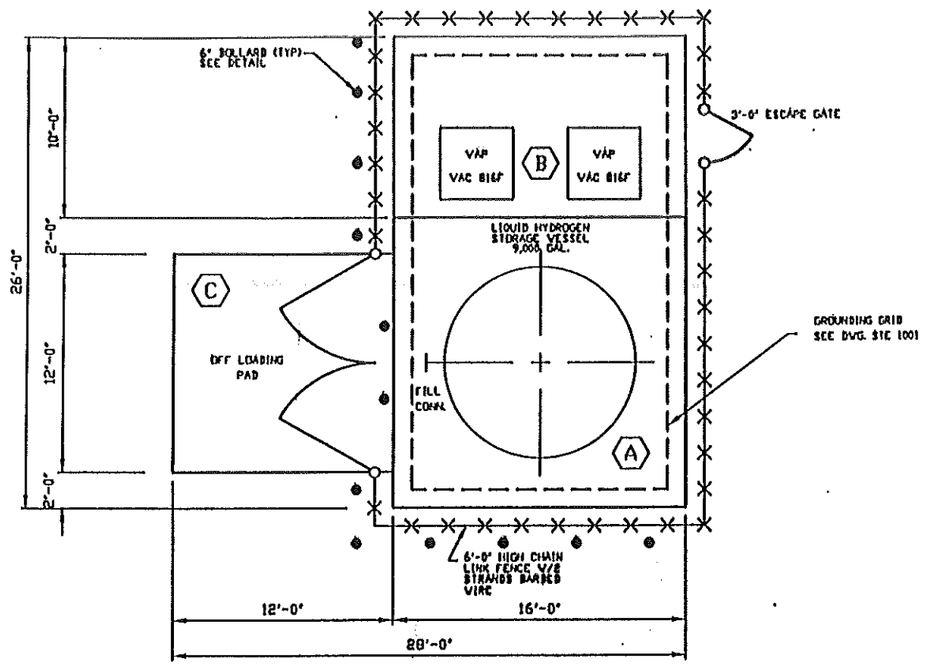
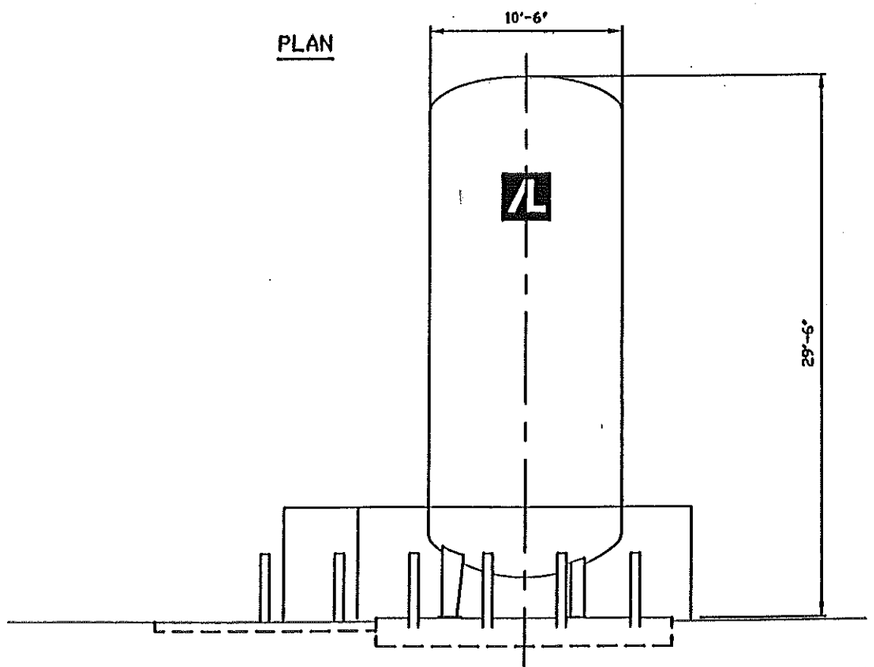


PLAN



FOUNDATION SPECIFICATIONS

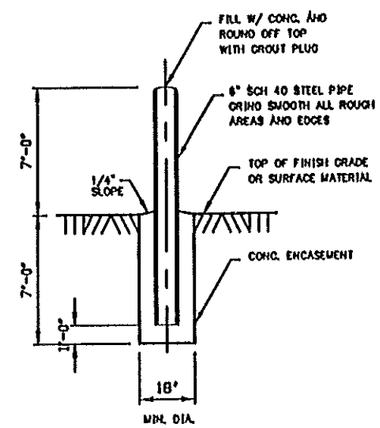
(A) LIQUID HYDROGEN STORAGE VESSEL
DESIGNED FOR 9,000 GAL.
18'-0"± 18'-0"± 18" THICK
REBAR 2 1/2" FROM TOP — #4 @12" E.W.
REBAR 3 1/2" FROM BOTTOM — #8 @8" E.W.
T.O.C. ELEV. 60'-2" ABOVE GRADE

(B) VAPORIZER PAD
10'-0"± 18'-0"± 6" THICK
REBAR #3 @18" E.W.
T.O.C. ELEV. 60'-2" ABOVE GRADE

(C) OFF LOADING PAD
12'-0"± 12'-0"± 6" THICK
REBAR #3 @18" E.W.
T.O.C. ELEV. @ GRADE

NOTES

1. ALL PERMITS/ APPROVALS ARE THE RESPONSIBILITY OF THE CUSTOMER AND SHOULD BE OBTAINED PRIOR TO CONSTRUCTION.
2. LOCATION OF HYDROGEN AND OXYGEN SYSTEMS SHALL CONFORM TO THE RECOMENDATIONS OF THE NATIONAL FIRE PROTECTION ASSOCIATION AND THE UNIFORM FIRE CODE.
3. FOR OXYGEN (AND LIQUID HYDROGEN) FOUNDATIONS EXPANSION JOINTS MUST BE NONCOMBUSTIBLE. ONE ACCEPTABLE MATERIAL IS CHEM SEAL CORP, CS2707 FLEXIBLE EPOXY JOINT SEALER.
4. STORAGE VESSEL FOUNDATION SITE SHALL BE LOCATED SUCH THAT DRAINAGE AWAY FROM THE FOUNDATION IS ASSURED.
5. THE SITE SHALL BE CLEARED OF ALL ORGANIC MATERIAL AND TOPSOIL. THE FOUNDATION MUST BE POURED UPON NATURAL GROUND OR ENGINEERED FILL. A CRUSHED ROCK SUB-BASE IS RECOMMENDED.
6. SOIL BEARING MUST BE 2,000 P.S.F. MINIMUM. IF THIS CANNOT BE SUSTAINED, CONSULT A PROFESSIONAL ENGINEER.
7. FOUNDATION DEPTH MUST BE BELOW LOCAL FROST LINE, AND MEET LOCAL CODES.
8. ALL CONCRETE MUST BE IN ACCORDANCE WITH ACI 318 LATEST EDITION.
9. THE CONCRETE SHALL DEVELOP A MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF 3,000 P.S.I. AT 28 DAYS.
10. REINFORCING STEEL SHALL BE DEFORMED AND CONFORM TO ASTM SPEC. A-615, GR 60.
11. ANCHOR BOLTS, NUTS, AND WASHERS SHALL BE A-307, AND GALVANIZED AFTER FABRICATION. COAT EXPOSED PARTS WITH ALUMINUM PAINT OR EQUAL.
12. STORAGE VESSEL SHALL BE LOCATED IN CENTER OF STORAGE VESSEL FOUNDATION.



BOLLARD DETAIL
SCALE 1/2"=1'-0"

REFERENCE DRAWING

STE 1001 STANDARD GROUNDING GRID FOR LIQUID HYDROGEN STORAGE VESSEL.

REV	DATE		REV	DATE		REV	DATE		DATE 11-17-97	DRAWN BY CARLOS GARCIA	AIR LIQUIDE AMERICA CORP. HOUSTON, TEXAS	EQUIPMENT ARRANGEMENT LIQUID HYDROGEN STORAGE VESSEL 9,000 GAL. VERTICAL NICHOLS PORTLAND PORTLAND, MAIN	SCALE 1/4"=1'-0"	REV. NO. 0
									JOB NO.	CHECKED BY RICK SPEAKE			DWG. NO. CSA 1480	
									COMPUTER FILE CSA1480	APPD				