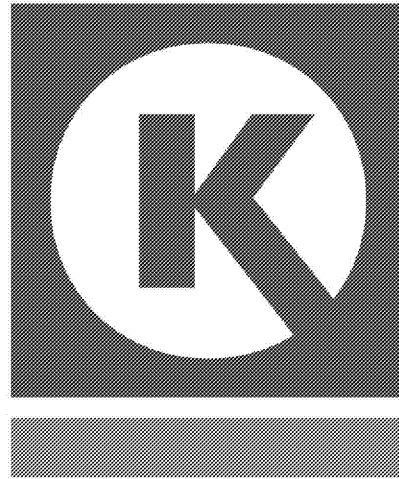


OWNER



12911 N. Telecom Parkway
Tampa, Florida 33637
813-910-6800 fax 813-910-6912

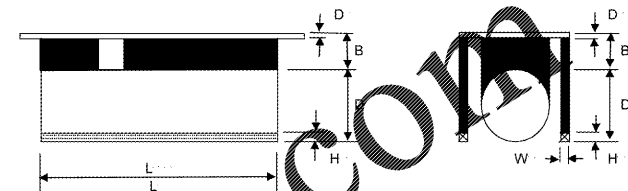
ENGINEER

MDM
SERVICES, INC.
engineering • environmental • construction

1055 KATHLEEN RD., LAKELAND, FL. 33805
EB #004857 (863) 646-9130

BOUYANCY CALCULATIONS

TANK(S):	20000	DOUBLE-WALL CLAD STEEL		
CAPACITY, NOMINAL:	20000	(C, gal)	SUMPS: NUMBER:	3 (N)
TANK WEIGHT:	17200	(W, #)	DIAMETER:	48 (S, in.)
DIAMETER:	10	(D, ft.)	HEIGHT:	5 (S, ft.)
LENGTH, TANK:	34.5	(L, ft.)	DEADMAN: LENGTH:	34.5 (L, ft.)
			HEIGHT:	12 (H, in.)
BURY:	5	(B, ft.)	WIDTH:	18 (W, in.)
DEPTH, TOP SLAB:	0.67	(D, ft.)	NUMBER:	2 (N)
WT. OF BACKFILL:	60	(W, #/c.f.)	WT. OF CONCRETE:	87.6 (W, #/c.f.)



I. TANK AND SUMP DISPLACEMENT:

$C = 7.48 \text{ (GAL/CF)} \times 0.05$		=	2807
$\{[(\pi \times (D/2)^2) \times H] \times 62.4\}$		=	168
			2996
TOTAL BOUYANT FORCE:	2996×62.4	=	186949

II. RESTRAINING FORCES:

A. WT. OF TANK = W		=	17200
B. OVERBURDEN - TANK BACKFILL:	$W = \{[D \times (D/2 + (B - T))] - [\pi \times (D/2)^2] \} \times L \times W$	=	111842
C. OVERBURDEN - DEADMAN BACKFILL:	$W = [D + (B - T) - H] \times L \times W \times N$	=	55186
D. OVERBURDEN - TOP SLAB:	$W = (D + 2) \times (L + 4) \times D \times W$	=	27116
E. WT. OF DEADMEN:	$W = L \times H \times W \times N$	=	9067
TOTAL RESTRAINING FORCE:	$W + W + W + W + W$	=	220411

III. SUMMARY:

BOUYANT FORCE	=	186949
RESTRAINING FORCE(S)	=	220411
SAFETY FACTOR	=	1.18 (> 1.0)

IV. ASSUMPTIONS:

- No Ballast.
- No Friction.
- Groundwater to underside of topslab.
- 5% allowance for annular space uplift.

UNDERGROUND STORAGE TANKS

GENERAL PROJECT NOTES

- A. All construction shall comply with applicable building codes and local restrictions. Contractors must comply with contractor registration requirements of all governing authorities.
- B. Approved plans shall be kept in a plan box and shall not be used by workmen. All construction sets shall reflect same information. Contractor shall maintain one complete set of plans on the premises in good condition at all times. This shall include all addenda.
- C. The contractor shall field verify all conditions and dimensions prior to starting any work and shall be responsible for all work and materials including those furnished by subcontractors and owner.
- D. Discrepancies between portions of the contract documents, drawings and specifications are not intended. The contractor is to clarify any such discrepancies with the owner prior to commencing work.
- E. Stated dimensions take precedence over graphics, do not scale drawings to determine locations. The owner shall be notified of any such discrepancies prior to continuing with work.
- F. Contact owner for instructions prior to the continuation of work should any unusual conditions become apparent during grading or foundation construction. Existing elevations and locations to be jointed shall be verified by the contractor prior to construction. If they differ from those shown on the drawings, the contractor shall notify the owner so that modifications can be made before proceeding with the work.
- G. It shall be the responsibility of the contractor to locate all existing utilities whether shown herein or not and to protect them from damage. The contractor shall bear the expense of repair or replacement of utilities or other property damaged by operations in conjunction with the execution of the work after so located.
- H. For construction details not shown, use the manufacturer's approved shop drawings / data sheets in accordance with the project specifications.
- J. Fire extinguishers to be installed at heights designated by owner and in compliance with local fire code. All fire extinguisher locations shall be approved by fire marshal.
- K. All construction must meet Florida Building Code regardless of supplier as prescribed by Jurisdiction, State, and Local Authority.
- L. G.C. to get application for "knox/access box" from the fire marshal. Knox Box is to be installed prior to final inspection.

DWG. NO.	REV. / DATE
TA0	COVER SHEET

UNDERGROUND STORAGE TANKS

- TA1 GENERAL NOTES
- TA2 GENERAL NOTES
- TA2.1 FUEL PIPING PLAN
- TA3 TANK & PIPING DETAILS
- TA4 TANK & PIPING DETAILS
- TA5 TANK DETAILS
- TA6 DISPENSER DETAILS
- TA7 TANK SPECIFICATIONS
- E-1.0 ELECTRICAL SPECIFICATIONS
- E-2.0 SITE ELECTRICAL PLAN
- E-6.0 ELECTRICAL FLOOR PLAN
- E-7.0 ELECTRICAL PANELS & RISER PLAN
- E-8.0 CPI EQUIPMENT DETAILS
- VEEDER-ROOT OVERFILL ALARM DETAILS

* CONVENIENCE STORE, TAGGED SHEETS ADDED TO FUEL PERMIT SET

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION APPROVED STORAGE TANK SYSTEM EQUIPMENT

- EQ-156 Modern Welding Glasteel II UST
- EQ-414 Emco Wheaton Overfill Drop Tubes w/ Overfill Protection Valve Assembly.
- EQ-524 Emco Wheaton Spill Buckets
- EQ-291 Ameron LCX piping
- EQ-727 Bravo Dispenser Sumps
- EQ-108 Western Fiberglass Tank Sumps
- EQ-335 Fe Petro Mechanical Leak Detectors
- EQ-724 Veeder Root TLS-450 Tank Gauge & Leak Detection & Associated Sensors

Order Plans

SYMBOLS LEGEND

DRAWING TITLE A1.1-01 **FLOOR PLAN**
SCALE: 1/4" = 1'-0"

SECTION A1.1-01

DETAIL A1.1-01

DETAIL (ENLARGED) A1.1-01

ELEVATION A1.1-01

CEILING HEIGHT 10'-0"

DOOR 1

KEYED NOTES

REVISIONS

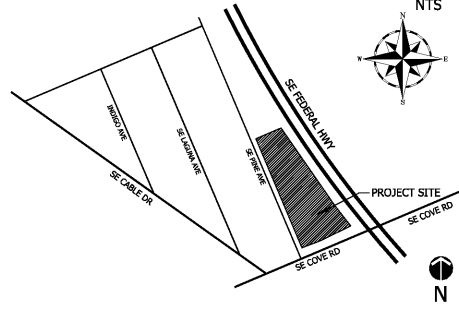
ELEVATION HEIGHT 100'-0" T.O.S.

EQUIPMENT A00

WINDOW P-1

FINISH MATERIAL

SITE VICINITY MAP



DATES

VERSION:

DATE	DESCRIPTION

STORE NUMBER: 1885
MDM PROJECT NUMBER: 17137
TA0

5750 SE FEDERAL HWY, MARTIN COUNTY, FL
CIRCLE K
UST STANDARDS
SITE: 1885