THE MEDICAL CENTER OF AURORA
WOUND CARE CENTER OXYGEN FIELD
1400 S. POTOMAC ST., SUITE #110 AURORA, CO 80012

PROJECT TEAM

DESIGNER / DRAFTSMAN:
THE DESIGN PLOT
PARKER, CO 80138
303-565-7282 CELL
303-338-7869
CONTACT:
TOM HECKER
thomas.hecker@healthonecares.com

OWNER:
MEDICAL CENTER OF AURORA
1501 S. POTOMAC STREET
AURORA, CO 80012
303.873.4895

DIRECTOR OF FACILITIES:
GREG MENKE
Gregory.Menke@HCAHealthcare.com

BLDG MANAGEMENT:
CBRE
730 POTOMAC ST., SUITE 116
AURORA, CO 80011

CONTACT:
NICOLE BUDLONG
303.360.3178
nicole.budlong@cbre.com

CONTRACTOR:
BFC CONSTRUCTION
ARVADA, CO
303.210.3851

CONTACT:
BRENT FLEETWOOD
BFC.BRENT@COMCAST.NET

GENERAL NOTES

1. ALL WORK SHALL BE PERFORMED IN STRICT CONFORMANCE WITH ALL LOCAL LAWS, ORDINANCES, RULES, REGULATIONS AND CODES OF THE GOVERNMENT AUTHORITIES HAVING JURISDICTION.
2. DIMENSIONS ARE TO FINISHED FACE OF WALL OR FACE OF EXISTING BASE BUILDING CONSTRUCTION, UNLESS NOTED OTHERWISE.
3. CONTRACTOR SHALL NOTIFY OWNER BEFORE COMMENCING WORK ON ANY ITEMS NOT CLEARLY DEFINED.
4. CHANGES OR DEVIATIONS FROM THE PLANS MADE WITHOUT THE CONSENT OF OWNER ARE UNAUTHORIZED.
5. CONTRACTOR SHALL PRESENT A WORKABLE PLAN TO MAINTAIN SECURITY AND SAFETY OF THE OWNER'S BUSINESS FOR AREAS AFFECTED BY CONSTRUCTION DURING THE ENTIRE PHASE OF CONSTRUCTION.
6. CONTRACTOR SHALL MINIMIZE DISRUPTION BY CONSTRUCTION WORK TO THE ONGOING BUSINESSES AND TRAFFIC IN THE VICINITY. EMPLOYEES OR SUBCONTRACTORS OF THE GENERAL CONTRACTOR SHALL REFRAIN FROM PROFANE OR OFFENSIVE LANGUAGE WHILE ON THE PROJECT SITE AND SHALL REFRAIN FROM USING LOUD RADIOS OR OTHER MUSIC PLAYERS WHILE OWNERS AND/OR DESIGN TEAM IS ONSITE.
7. GENERAL CONTRACTOR SHALL COORDINATE APPROPRIATE PARKING ACCOMMODATIONS FOR EMPLOYEE AND SUBCONTRACTOR VEHICLES WITH OWNER PRIOR TO COMMENCEMENT OF WORK.
8. G.C. SHALL COORDINATE APPROPRIATE CONSTRUCTION STAGING AREAS AND TRASH REMOVAL. G.C. WILL BE RESPONSIBLE FOR OBTAINING A DUMPSTER AND TRASH PICKUP FROM JOB SITE ON A REGULAR BASIS.
9. SUBSTITUTIONS OF SPECIFIED PRODUCTS MAY NOT OCCUR UNLESS SPECIFICALLY NOTED ON DRAWINGS THAT "OR EQUAL" IS ACCEPTABLE. OWNER APPROVAL IS REQUIRED FOR ALL SUBSTITUTIONS CONSIDERED BY G.C. TO MEET "OR EQUAL" REQUIREMENTS PRIOR TO BID SUBMISSION/INSTALLATION.
10. APPROVAL OF SHOP DRAWINGS DOES NOT IMPLY APPROVAL OF A SUBSTITUTED COLOR, SIZE OR FUNCTION OF AN ITEM SPECIFIED ON THESE CONTRACT DOCUMENTS UNLESS ATTENTION IS SPECIFICALLY CALLED TO THE REVISION AND APPROVAL IS GIVEN.
11. G.C. SHALL KEEP TOILET FACILITIES ON SITE CLEAN AND USABLE.

DRAWING INDEX

A.0	COVER SHEET
A1.0	SITE PLAN & DETAILS
A4.0	ELEVATIONS & SECTIONS
A5.0	SECTIONS & DETAILS

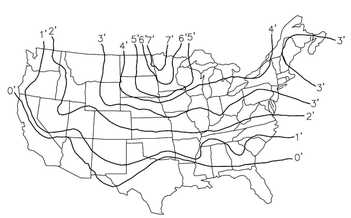
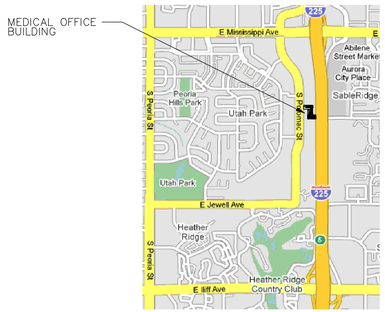


FIGURE 1 APPROXIMATE FROST SKIRT DEPTHS

Life Safety Review Only
City of Aurora Building Division
Reviewed for Code Compliance
Approved as Noted: *J Van Essen*
Date: *Jan 08, 2014*
2009 INTERNATIONAL CODES & 2011 NEC
1500 Gallon Oxygen Tank Installed Per 2009 IFC Chapter 40.

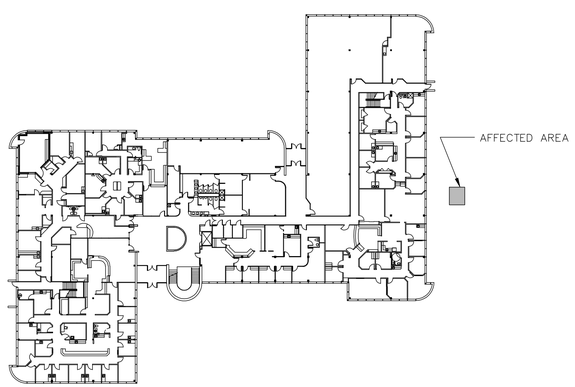
Code violations that are found during inspection are required to be corrected. Permit issuance does not grant approval of a code violation. **2009 IBC 105.4**

VICINITY MAP



KEY PLAN

NOT TO SCALE



CONSTRUCTION NOTES

1. MATERIAL AND WORKMANSHIP SHALL CONFORM WITH APPLICABLE BUILDING CODES AND BE IN ACCORDANCE WITH THE CURRENT EDITION OF THE FOLLOWING STANDARDS:
   - ACI 117 "STANDARD SPECIFICATIONS FOR TOLERANCE FOR CONCRETE CONSTRUCTION AND MATERIALS"
   - ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS"
   - ACI 318 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE"
   - AWS D1.1 "STRUCTURAL WELDING CODE - STEEL"
2. THE EXCAVATION SHALL BE CLEARED OF ALL ORGANIC MATERIAL AND TOP SOIL. PROOF ROLL EXCAVATED AREA AND REPLACE LOOSE AND SOFT AREAS WITH SELECT FILL. PLACE SELECT FILL AS REQUIRED IN 8" MAX. LOOSE LAYER PRIOR TO THE FOUNDATION CONSTRUCTION AND COMPACT TO A MINIMUM OF 95% STD PROCTOR. THE SELECT FILL SHALL BE NON-FROST SUSCEPTIBLE GRANULAR MATERIAL WITH PI BETWEEN 8 AND 20 WITH LL <40.
3. CONCRETE:
   - A. 28 DAY ULTIMATE COMPRESSIVE STRENGTH OF 4,000 PSI.
   - B. PORTLAND CEMENT: ASTM C150, TYPE 1.
   - C. MAXIMUM WATER-CEMENT RATIO; 0.45.
   - D. WATER-REDUCING ADMIXTURES: ASTM C494.
   - E. NORMAL WEIGHT AGGREGATES: ASTM C33.
   - F. AIR ENTRAIN ALL EXTERIOR CONCRETE (ADMIXTURE: ASTM C260) 5% VOIDS.
   - G. DO NOT USE CALCIUM CHLORIDE ADMIXTURES UNDER ANY CIRCUMSTANCES.
   - H. REINFORCING BARS: ASTM A615 SPECIFICATIONS, GRADE 60, DEFORMED, BEND BARS COLD.
   - I. LAP ALL BARS AT SPLICES IN ACCORDANCE WITH ACI 318, BUT NOT LESS THAN 40 BAR DIAMETERS NOR LESS THAN 18" UNLESS OTHERWISE NOTED.
   - J. ALL BAR STEEL SHALL BE PROPERLY SUPPORTED AND HELD ACCURATELY IN PLACE AS RECOMMENDED BY THE CRSI, EXCEPT THAT MAXIMUM SPACING OF ANY BAR SUPPORT SHALL BE 3 FEET.
   - K. ALL EXPOSED EDGES OF CONCRETE SHALL HAVE 3/4" 45° CHAMFER.
   - L. CONCRETE SURFACE TO BE BROOM FINISHED.
4. STEEL:
   - A. STRUCTURAL STEEL: ASTM A36, PLATES AND SHAPES.
   - B. VAPORIZER ANCHORS:
     - MECHANICAL ANCHORS: HILTI KWIK BOLT TZ.
     - PROPER ANCHORING SYSTEM COMPONENTS AND EQUIPMENT FOR GIVEN TANK MUST BE VERIFIED BY LOCAL AIR LIQUIDE REPRESENTATIVE.
     - ANCHORS MUST BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS TO ENSURE FULL LOAD STRENGTHS.
   - C. WELDING ELECTRODE - E70XX
   - D. PAINT ALL EXPOSED PARTS WITH ZINC COATING OR APPROVED EQUIVALENT.
5. EXPANSION JOINTS SHALL BE PLACED AT ALL LOCATIONS NOTED ON THE DRAWING AND AROUND FOUNDATIONS WHICH PROJECT THROUGH CONCRETE SLABS. FOR OXYGEN/HYDROGEN FOUNDATIONS, THE EXPANSION JOINTS SHALL BE SEALED WITH CS2727 FLEXIBLE EPOXY JOINT SEALER, MANUFACTURED BY CHEMSEAL DIVISION OF FLAMEMASTER CORP., 11120 SHERMAN WAY, SUNVALLEY, CALIFORNIA 91352, (818) 982-1650.
6. SYSTEM TO BE GROUNDED, IF NECESSARY, PER LOCAL CODES.

CODE INFORMATION SUMMARY

PROJECT NAME:	TMCA WOUND CARE CENTER OXYGEN FIELD
PROJECT ADDRESS:	1400 S. POTOMAC ST., AURORA, CO 80012
CONSTRUCTION TYPE:	UBC: IIN SPK 2 STORY BUILDING / FLOOR AREA OF BLDG = 54,219 SF HEIGHT OF BUILDING = 28'-1/2"
OCCUPANCY CLASSIFICATION:	GROUP B MEDICAL OFFICE BUILDING
PROJECT TYPE:	EXTERIOR CONCRETE STRUCTURE TO HOUSE OXYGEN TANK
PROJECT SQUARE FOOTAGE:	LIMITS OF RENOVATION FLOOR TOTAL 500 SF

City of Aurora Building Division
Reviewed for Code Compliance
Approved as Noted: *Richard LaCoste*
Date: *Nov 27, 2013*
2006 INTERNATIONAL CODES & 2008 NEC

APPLICABLE CODES:
2009 INTERNATIONAL BUILDING CODE (IBC)
2009 INTERNATIONAL EXISTING BUILDING CODE (IEBC)
2009 INTERNATIONAL PLUMBING CODE (IPC)
2009 INTERNATIONAL FIRE CODE (IFC)
2009 INTERNATIONAL ENERGY CONSERVATION CODE (IECC)
1999 NFPA 99 HEALTH CARE FACILITIES
2000 NFPA 101 LIFE SAFETY CODE
2012 NFPA 101 LIFE SAFETY CODE
2006 AIA/FGI DESIGN GUIDELINES
2003 ICC/ANSI A117.1 ACCESSIBLE USABLE BUILDINGS & FACILITIES
CHAPTER 22 BUILDINGS & REGULATIONS: THE AURORA BUILDING & ZONING CODES
CHAPTER 66 FIRE PREVENTION & PROTECTION REGULATIONS: THE AURORA BUILDING & ZONING CODES

City of Aurora Building Division
Project: *WOUND CARE OXYGEN FIELD*
Address: *1400 S. POTOMAC ST.*
Occupancy Group: *U*
Construction Type: *VB*
RSN: *856835*
Permit: *13-803267*

RSN: *856835*
Permit #: *13-803267*

The Medical Center of Aurora
HealthONE

dp DESIGN LOT
dpteam@thedesignplot.com
(303) 565-7282

MEDICAL CENTER OF AURORA
1400 S. POTOMAC ST. #110
AURORA, COLORADO 80012

PROJECT 13-08

WOUND CARE CENTER
OXYGEN FIELD

SHEET DESCRIPTION
COVER

DRAWN BY
TH

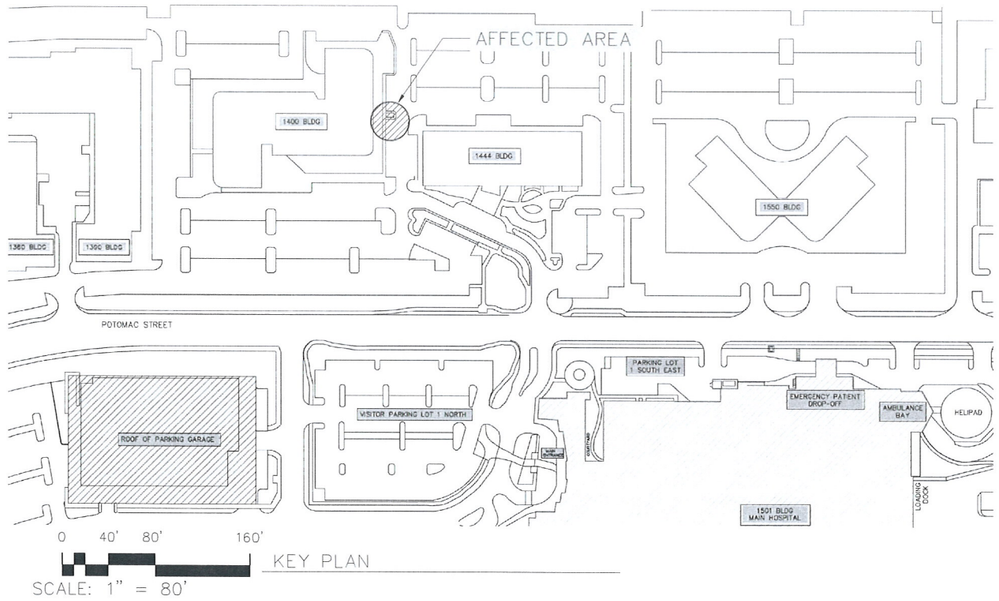
ISSUED FOR:
CONSTRUCTION

DATE:
11/22/2013

REVISIONS
△
△
△
△
△

SCALE
NTS

SHEET NUMBER
A.0



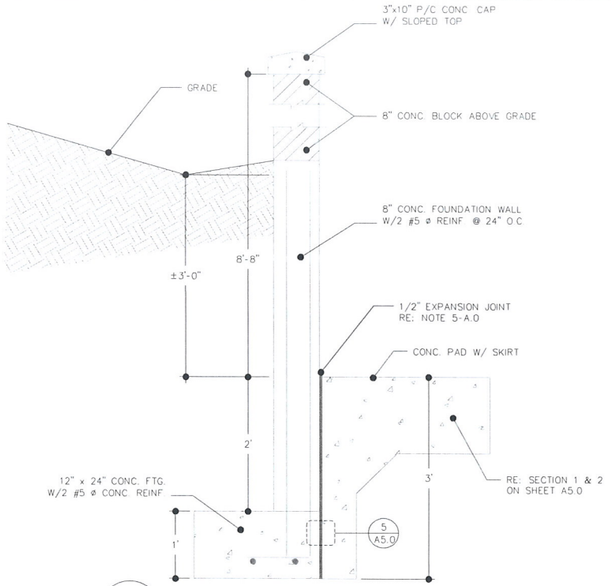
KEY PLAN

SCALE: 1" = 80'



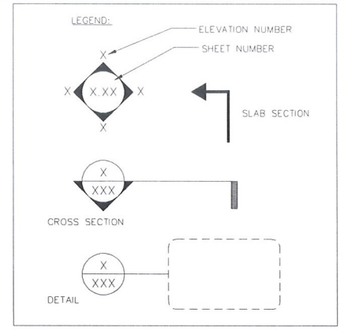
OXYGEN FIELD SITE PLAN

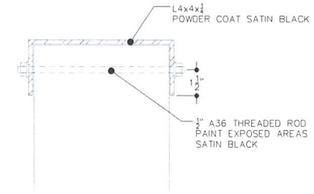
1/16" = 1'



2 A1.0 WALL SECTION

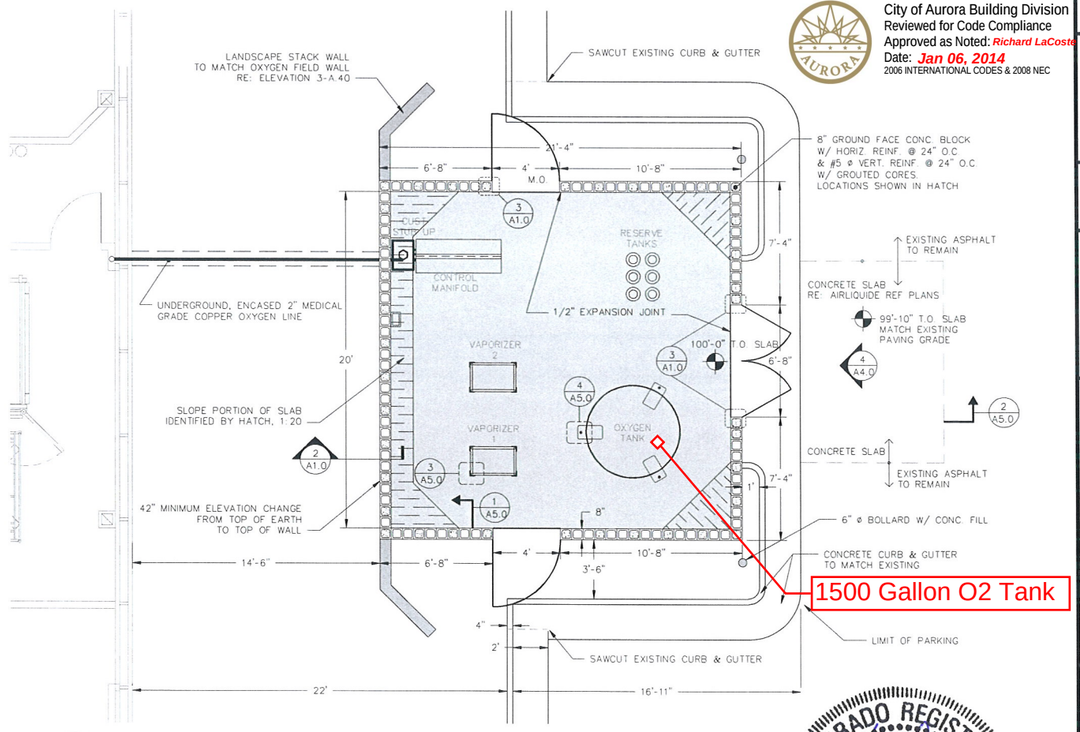
1" = 1'





3 A1.0 DOOR SUPPORT PLAN DETAIL

3" = 1'



1 A1.0 OXYGEN FIELD ENLARGED PLAN

1/4" = 1'

City of Aurora Building Division
Reviewed for Code Compliance
Approved as Noted: *Richard LaCoste*
Date: *Jan 06, 2014*
2006 INTERNATIONAL CODES & 2008 NEC

RSN: *856835*
Permit #: *13-803267*



The Medical Center of Aurora
HealthONE

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MEDICAL CENTER OF AURORA

1400 S. POTOMAC ST. #110
AURORA, COLORADO 80012

PROJECT 13-08

WOUND CARE CENTER

OXYGEN FIELD

SHEET DESCRIPTION

SITE PLAN / DETAILS

DRAWN BY

TH

ISSUED FOR:

CONSTRUCTION

DATE:

11/22/2013

REVISIONS

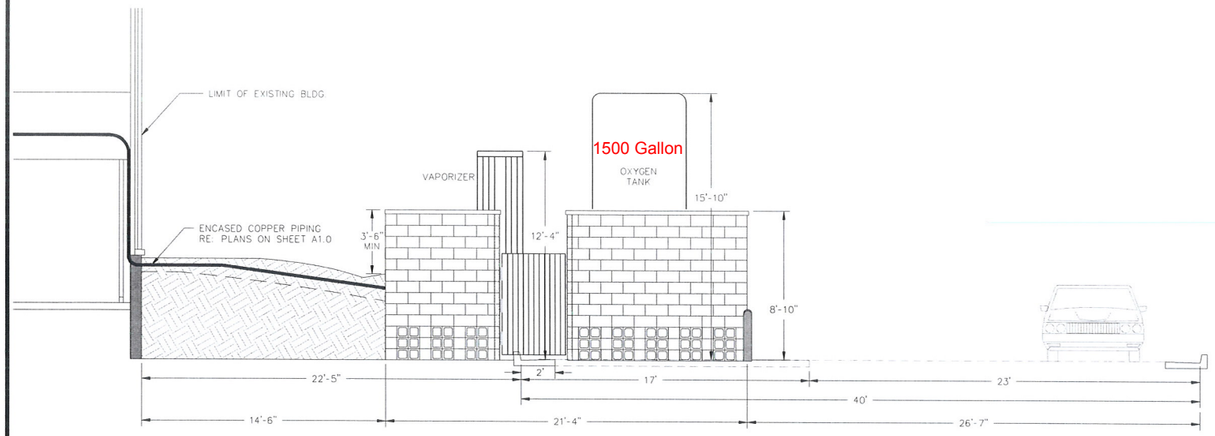
1 12/26/2013
2
3
4
5

SCALE

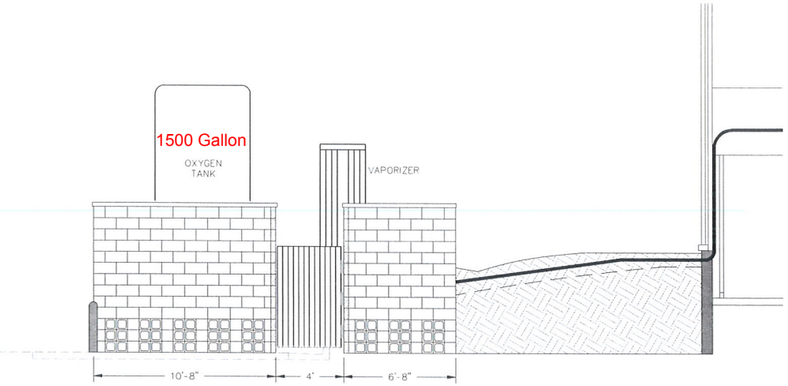
AS NOTED

SHEET NUMBER

A1.0



1 / A4.0 SECTION / OXYGEN FIELD WEST ELEVATION
1/4" = 1'



2 / A4.0 SECTION / OXYGEN FIELD EAST ELEVATION
1/4" = 1'

City of Aurora Building Division
Reviewed for Code Compliance
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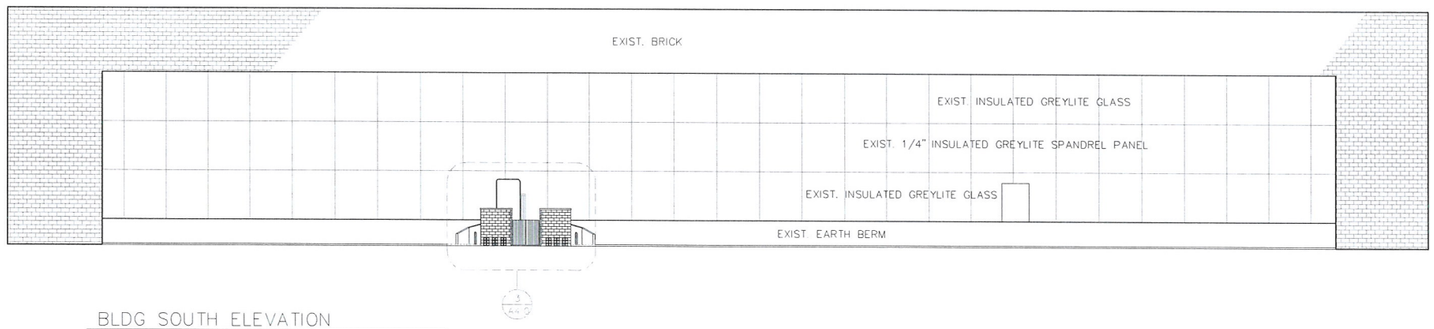
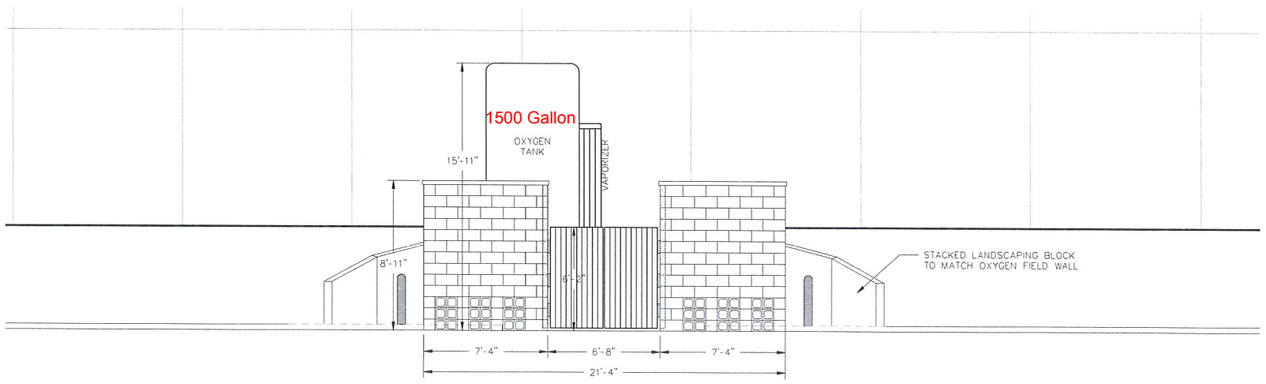
Date: ***Jan 06, 2014***
2006 INTERNATIONAL CODES & 2008 NEC

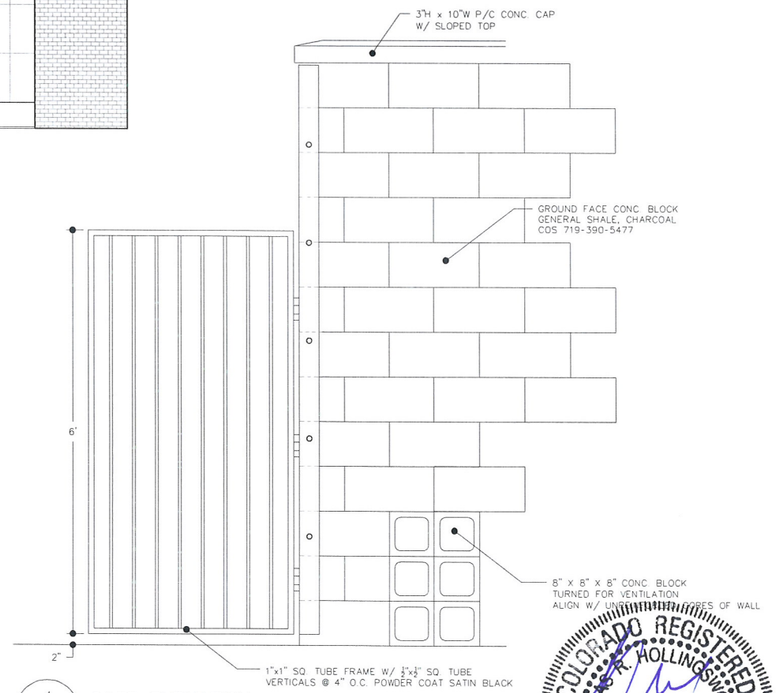


BLDG SOUTH ELEVATION
1/16" = 1'



3 / A4.0 OXYGEN FIELD SOUTH ELEVATION
1/4" = 1'

RSN: ***856835***
Permit #: ***13-803267***



4 / A4.0 GATE ELEVATION
1" = 1'

COLORADO REGISTERED
PROFESSIONAL ENGINEER
THOMAS R. HOLLINGSWORTH
26360

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(303) 565-7282

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1400 S. POTOMAC ST. #110
AURORA, COLORADO 80012

PROJECT 13-08

WOUND CARE CENTER
OXYGEN FIELD

SHEET DESCRIPTION
ELEVATIONS

DRAWN BY
TH

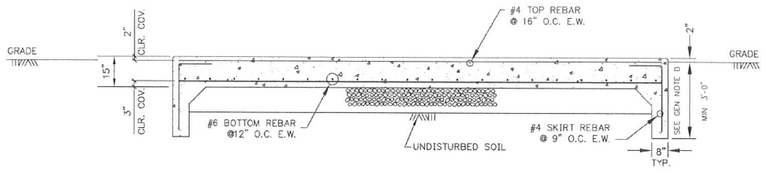
ISSUED FOR:
CONSTRUCTION

DATE:
11/22/2013

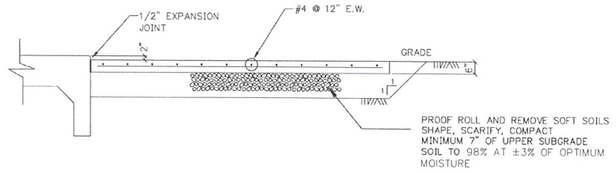
REVISIONS
1 12/26/2013

SCALE
AS NOTED

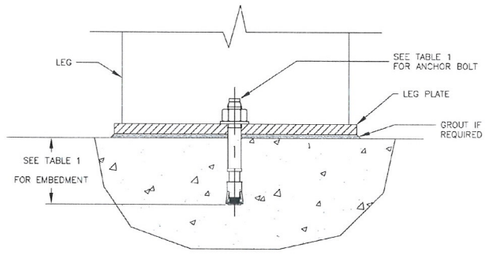
SHEET NUMBER
A4.0



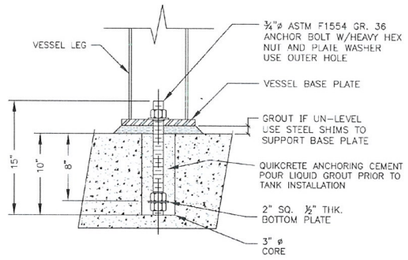
1 A5.0 SECTION / CONCRETE FOUNDATION
NTS



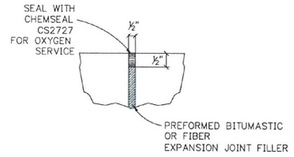
2 A5.0 SECTION / CONCRETE FOUNDATION
NTS



3 A5.0 VAPORIZER DRILLED ANCHOR BOLT
NTS



4 A5.0 1500 G VESSEL DRILLED GROUTED ANCHOR BOLT
NTS



5 A5.0 EXPANSION JOINT DETAIL
NTS

TABLE 1 - DRILLED MECHANICAL ANCHOR BOLT SCHEDULE

TANK/VAP	BOLT TYPE	BOLTS/LEG	BOLT ø	EMBEDMENT
1500 G	ASTM F1554 GR.36	ONE BOLT	3/4"	10"
VAPORIZER TF0610HF	KWIK BOLT TZ SS	ONE BOLT	1/2"	3-1/4"

DESIGN CRITERIA
IBC 2009
90 MPH BASIC WIND SPEED
SEISMIC USE GROUP IV, DESIGN CATEGORY C
ALLOWABLE SOIL BEARING PRESSURE = 3,500 PSF PER SOILS REPORT

GENRAL NOTES

A. LOCATION OF OXYGEN SYSTEMS MUST CONFORM TO THE RECOMMENDATIONS OF THE NATIONAL FIRE PROTECTION ASSOCIATION AND THE INTERNATIONAL FIRE CODE, AS WELL AS ANY LOCAL CODES.
B. GRADE THE SITE SUCH THAT DRAINAGE AWAY FROM THE FOUNDATION IS ASSURED.
C. SOIL MUST BE CAPABLE OF THE NET ALLOWABLE BEARING CAPACITY AT THE DEPTHS INDICATED. IF THIS CANNOT BE SUSTAINED, CONSULT LOCAL PROFESSIONAL ENGINEER FOR SPECIFIC DESIGN RECOMMENDATIONS.
D. FOUNDATION DEPTH (OR FROST SKIRT) MUST BE BELOW LOCAL FROST LINE, AND MEET LOCAL CODES. SEE FIGURE 1 BELOW FOR APPROXIMATE FROST DEPTHS.
E. FIELD VERIFY THE LOCATION AND DEPTH (OR HEIGHT) OF ALL UTILITIES PRIOR TO BEGINNING CONSTRUCTION IN ORDER TO PROVIDE ADEQUATE CLEARANCES AND TO INSURE NO INTERRUPTION OF SERVICES.
F. STORAGE VESSEL SHALL BE LOCATED AS SHOWN ON THE PLAN. VESSEL CAN BE ROTATED AS REQUIRED TO ORIENT FILL CONNECTION.

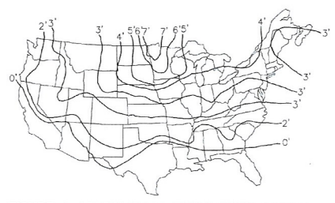


FIGURE 1 APPROXIMATE FROST SKIRT DEPTHS

Structural plan review is limited to a general survey for code compliance. No review is implied nor was undertaken to verify structural adequacy.

Code violations that are found during inspection are required to be corrected. Permit issuance does not grant approval of a code violation. **2009 IBC 105.4**

City of Aurora Building Division
Reviewed for Code Compliance
Approved as Noted: *Richard LaCoste*
Date: *Jan 06, 2014*
2006 INTERNATIONAL CODES & 2008 NEC

COLORADO REGISTERED PROFESSIONAL ENGINEER
THOMAS R. HOLLINGSWORTH
26360
12/30/13

RSN: *856835*
Permit #: *13-803267*

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PROJECT 13-08

WOUND CARE CENTER

OXYGEN FIELD

SHEET DESCRIPTION
SECTIONS / DETAILS

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TH

ISSUED FOR:
CONSTRUCTION

DATE:
11/22/2013

REVISIONS
1 12/26/2013

SCALE
NTS

SHEET NUMBER
A5.0

DRAWING NO. C-14190861

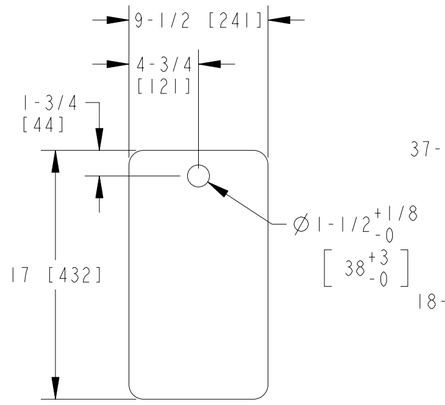
INNER VESSEL DESIGN DATA

Model:		VS-525 / 900 / 1500		
MAWP:	PSIG	250	400	500
	barg	17.24	27.58	34.47
DESIGN PRESSURE	PSIG	272.4	422.4	522.4
	barg	18.78	29.12	36.02
CODE COMPLIANCE:	ASME CODE CASE 2596			
DESIGN TEMPERATURE	°F	-320° TO 120°		
	°C	-196° TO 49°		
MATERIAL OF CONSTRUCTION:	SA240 304 STAINLESS STEEL			

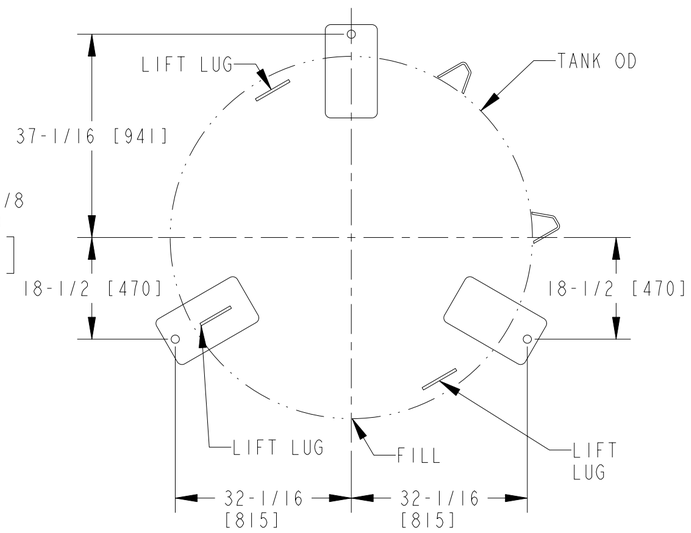
OUTER VESSEL DATA

CODE COMPLIANCE:	FULL VACUUM PER CGA-341	
DESIGN TEMPERATURE	°F	-20° TO 300°
	°C	-29° TO 149°
MATERIAL OF CONSTRUCTION:	A36 CARBON STEEL	
INSULATION TYPE:	VACUUM AND MULTILAYER INSULATION	
EVACUATION CONNECTION:	3-1/2" PUMPOUT PORT	
VACUUM GAUGE CONNECTION:	HASTINGS DV6R	

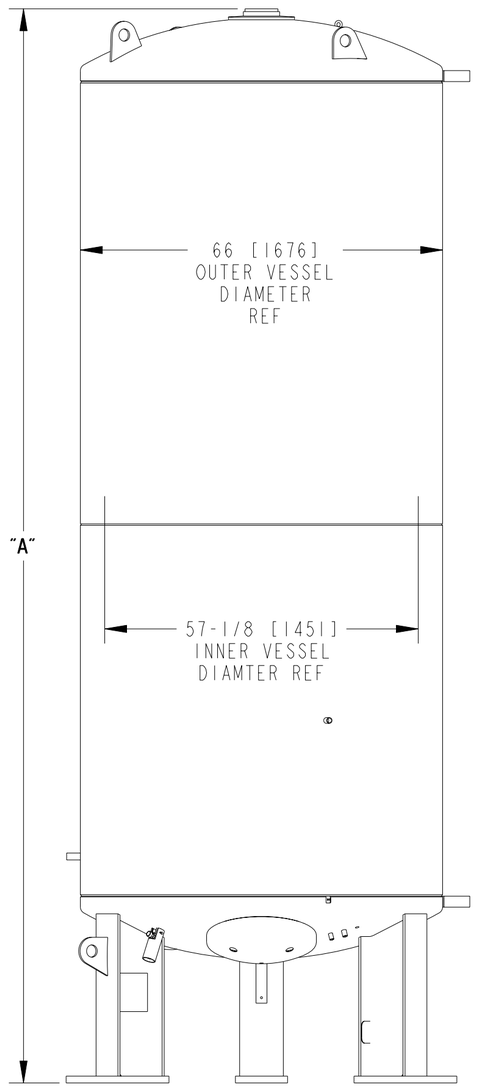
BUILDING CODE:
DESIGNED FOR CURRENT BUILDING CODE
SEE CHART POLICY #NP-180



FOOT PAD
1-1/4 [32] THK
TYP 3 PLCS



BOLT HOLE LAYOUT
TOP VIEW
SCALE: N/A



Code violations that are found during inspection are required to be corrected. Permit issuance does not grant approval of a code violation. **2009 IBC 105.4**

WEIGHTS AND SHIPPING DATA

MODEL:			VS-525			VS-900			VS-1500		
MAWP	PSIG		250	400	500	250	400	500	250	400	500
	barg		17.24	27.58	34.47	17.24	27.58	34.47	17.24	27.58	34.47
WEIGHT EMPTY	POUNDS		3,300	4,000	4,500	4,400	5,100	5,800	6,200	7,600	8,700
	KILOGRAMS		1,500	1,814	2,041	2,000	2,313	2,631	2,818	3,447	3,946
WEIGHT FULL	OXYGEN	POUNDS	8,300	9,000	9,500	12,700	13,400	14,100	21,600	23,000	24,100
		KILOGRAMS	3,773	4,082	4,309	5,773	6,078	6,396	9,818	10,433	10,932
	NITROGEN	POUNDS	6,800	7,500	8,000	10,200	11,000	11,700	17,100	18,500	19,600
		KILOGRAMS	3,091	3,402	3,629	4,636	4,990	5,307	7,773	8,391	8,890
	ARGON	POUNDS	9,400	10,100	10,600	14,500	15,200	15,900	25,000	26,400	27,500
		KILOGRAMS	4,273	4,581	4,808	6,591	6,895	7,212	11,364	11,975	12,474
SHIPPING DIMENSIONS	INCHES		105 X 85 X 75			136 X 85 X 75			196 X 85 X 75		
	MM'S		2,667 X 2,159 X 1,905			3,454 X 2,159 X 1,905			4,978 X 2,159 X 1,905		

TANK HEIGHT

MODEL	DIM "A" REF
VS-525	105 [2667]
VS-900	136 [3454]
VS-1500	196 [4978]

CAPACITIES

MODEL:			VS-525	VS-900	VS-1500
CAPACITY	GROSS (COLD)	GALLONS	570	940	1,640
		LITERS	2,158	3,558	6,208
	NET (COLD)	GALLONS	510	850	1,580
		LITERS	1,931	3,218	5,981
GASES EQUIVALENT AT 1 ATM AND 70°F/ 1 ATM AND 21°C	OXYGEN	SCF	58,800	97,900	181,900
		NM3	1,665	2,772	5,151
	NITROGEN	SCF	47,500	79,200	147,200
		NM3	1,345	2,243	4,168
	ARGON	SCF	57,400	95,700	177,800
		NM3	1,625	2,710	5,035

IN[mm]

Structural plan review is limited to a general survey for code compliance. No review is implied nor was undertaken to verify structural adequacy.

City of Aurora Building Division
Reviewed for Code Compliance
Approved as Noted: *Richard LaCoste*
Date: *Jan 09, 2014*
2006 INTERNATIONAL CODES & 2008 NEC

RSN: *856835*
Permit #: *13-803267*

REV	ECR NO	REVISION DESCRIPTION	BY	DATE
A	14219	UPDATE WEIGHTS	JJC	10-20-09

DRAWN BY	JJC	10-7-08	
CHK'D BY	MMK	10-8-08	
MFG. SERV.	KJR	10-15-08	
PROJ. ENGR.	DML	10-22-08	
MFG. ENGR.	RC	10-8-08	
QUAL. CONT.	JK	10-13-08	

NEXT ASS'Y	USED ON	NEXT ASS'Y	FINAL ASS'Y
APPLICATION		QUANTITY REQ'D	

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MAT'L SEE B.O.M.

PART NUMBER 14190861

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES.
TOLERANCES:
FRACTIONS ± 1/8
ANGLES ± 1°
2 PLACE DECIMALS ± NA
3 PLACE DECIMALS ± NA

CHART® Distribution & Storage Group New Prague Operations

TITLE O&D VS-525/900/1500 SS COLD STRETCH 250/400/500PSI

DRAWING NO. C-14190861 REV A

SCALE 1/32"=1" DO NOT SCALE DRAWING SHEET 1 OF 1