As-Built Plans

DESERT SAGE HEALTH CENTER

2280 American Legion Blvd. part of Glenns Ferry Health Center Mountain Home, Idaho

KEY TO MATERIALS

- EARTH
- ASPHALT PAVING
- COMPACTED GRANULAR FILL
- CONCRETE MASONRY UNITS
- CONCRETE
- BRICK
- PLYWOOD
- STEEL CONTINUOUS
- CONTINUOUS WOOD
- WOOD BLOCKING
- INSULATION
- RIGID INSULATION
- FINISH WOOD
- ENGINEERED FILL
- UNDISTURBED EARTH
- TOP SOIL
- CRUSHED GRAVEL
- SAND

CONSULTANTS

ARCHITECT
MEDICAL DESIGN GROUP
2716 Westland Place
Boise, Idaho 83704
archmdg@aol.com E-MAIL
(208) 378-1405 FAX
(208) 378-0817 PHONE
David R. Davies, AIA NCARB

CIVIL ENGINEER AND
STRUCTURAL ENGINEER
PINNACLE ENGINEERS, INC.
12552 W. Executive Dr., Suite B
Boise, Idaho 83713
brians@pinnacle-engineers.com
(208) 887-7781 FAX
(208) 887-7760 PHONE
Brian Smith, PE,SE
Roger Smith, PE

MECHANICAL ENGINEER
ELKHORN ENGINEERS, P.A.
290 E. Magic View Dr., Ste 190
Meridian, Idaho 83642
otennyson@elkhorneng.com
(208) 955-0999 FAX
(208) 955-0555 PHONE
Owen Tennyson, CIPE

ELECTRICAL ENGINEER
PAYNE ENGINEERING INC.
107 So. 18th Ave
Pocatello, Idaho 83201
payneeng@srv.net
(208) 232-1435 FAX
(208) 232-4439 PHONE
Todd Payne, PE

USDA RURAL DEVELOPMENT
Caldwell Office
(208) 459-0761 ext 116
Dave Flesher, RD Specialist

GEOTECHNICAL ENGINEER
MTI
(208) 376-4748
Kevin Schroeder, PG

DENTAL EQUIPT. SUPPLIER (DES)
SULLIVAN-SCHEIN
(208) 433-1852
Brent Davis

X-RAY EQUIPMENT SUPPLIER
TURN-KEY MEDICAL, INC.
(208) 888-1760
Willie Rowell

SURVEYOR
FOX LAND SURVEYS, INC.
(208) 342-7957
Tim Fox, Surveyor

DRAWING INDEX

SET NO. 20

Elect Inc Do Not Remove from Office

SYMBOLS

- BUILDING SECTION — 0 / A-000
- DETAIL — 0 / A-000
- FINISH ELEVATION PLAN — 100'-0"
- ELEVATIONS INTERIOR — 100'-0" T.O.FLOOR
- KEYNOTES — 1
- WINDOW TYPES — A
- WALL TYPES — 1
- DOOR NUMBER — 101
- INTERIOR ELEVATIONS — A-000 / 0
- EQUIPMENT, FURNISHING NO. — 1

ABBREVIATIONS

AC	Asphalt Concrete	HD	Hand Damper
ADJ	Adjustable	HORIZ	Horizontal
AFF	Above Finished Floor	HW	Hot Water
APPROX	Approximately	MANFR	Manufacturer
BM	Benchmark	MAX	Maximum
BS	Back Splash	MECH	Mechanical
CFCI	Contractor Furnished Contractor Installed	MIN	Minimum
		NTS	Not to Scale
CFM	Cubic Feet per Minute	OC	On Center
CI	Cast Iron	OFCI	Owner Furnished Contractor Installed
CL	Center Line	OFOI	Owner Furnished Owner Installed
CLG	Ceiling	OPP	Opposite
CMU	Concrete Masonry Unit	OSB	Oriented Strand Board
CO	Clean Out	PL	Plate
COL	Column	R	Radius
CONC	Concrete	RA	Return Air
CONT	Continuous	REF	Refrigerator
CONST	Construction	REQ'D	Required
CONT	Continuous	RJ	Rim Joist
COTG	Clean Out To Grade	RO	Rough Opening
CW	Cold Water	RPM	Rotations Per Minute
D	Deep	TEL	Telephone
d	Penny	TJI	Truss Joist International
DBL	Double	SA	Supply Air
DIA	Diameter	SIM	Similar
DIM	Dimension	STRUCT	Structural
DWGS	Drawings	T&B	Top and Botton
DWV	Drain Waste Vent	TEL	Telephone
EA	Each	TO	Top of
EC	Electrical Contractor	TV	Television
ELEC	Electrical	TYP	Typical
EQ	Equal or Equilivent	UNO	Unless Noted Otherwise
FF	Finish Floor	VERT	Vertical
FIN	Finish	VTR	Vent Through Roof
FND	Foundation	W	Wide
FO	Face Of	W/	With
FTG	Footing	W/O	With Out
GR	Grade	WCO	Wall Clean Out
GPM	Gallons Per Minute		
GYP BRD	Gypsum Board		
H	High		

CODE ANALYSIS

GENERAL:

OCCUPANCY GROUP	B
CONSTRUCTION TYPE	V - B
NFPA 13 FIRE SPRINKLERS THROUGHOUT	
BASIC ALLOWABLE AREA:	9000 SF
INCREASE FOR SPRINKLERS OF 200%	
INCREASE FOR FRONTAGE OF 75%	
MAX. ALLOWABLE AREA:	24,750 SF
ACTUAL AREA:	8370 SF

CODES:

2000 INTERNATIONAL BUILDING CODE
Latest Edition IPC
Latest Edition IMC
Latest Edition NEC
2000 INTERNATIONAL FIRE CODE
1985 NFPA Life Safety 101, ch. 26
Latest Edition UFAS and ADA/AG
AIA ISBN 0-913962-96-1 Guidelines

DESIGN LOADS:

See Structural Calcs, sheet 3.01 and following

OWNER APPROVALS:

I/WE HAVE REVIEWED THESE CONTRACT DOCUMENTS AND FIND THEM TO BE A COMPLETE STATEMENT OF OUR CONSTRUCTION REQUIREMENTS. WE UNDERSTAND THAT ANY MODIFICATIONS REQUESTED BY US AFTER THIS DATE MAY RESULT IN A CHANGE ORDER AFFECTING TIME AND/OR CONSTRUCTION COST.

DATE 3/17/04

Medical Design Group
Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

REGISTERED ARCHITECT No. AR-1740 22 March 2004
DAVID R. DAVIES STATE OF IDAHO

COVER SHEET

Desert Sage Health Center
2280 American Legion Blvd.
Mountain Home, Idaho

SHEET 1.00

Mar 2004 da100.dwg 03/22/04 22:05

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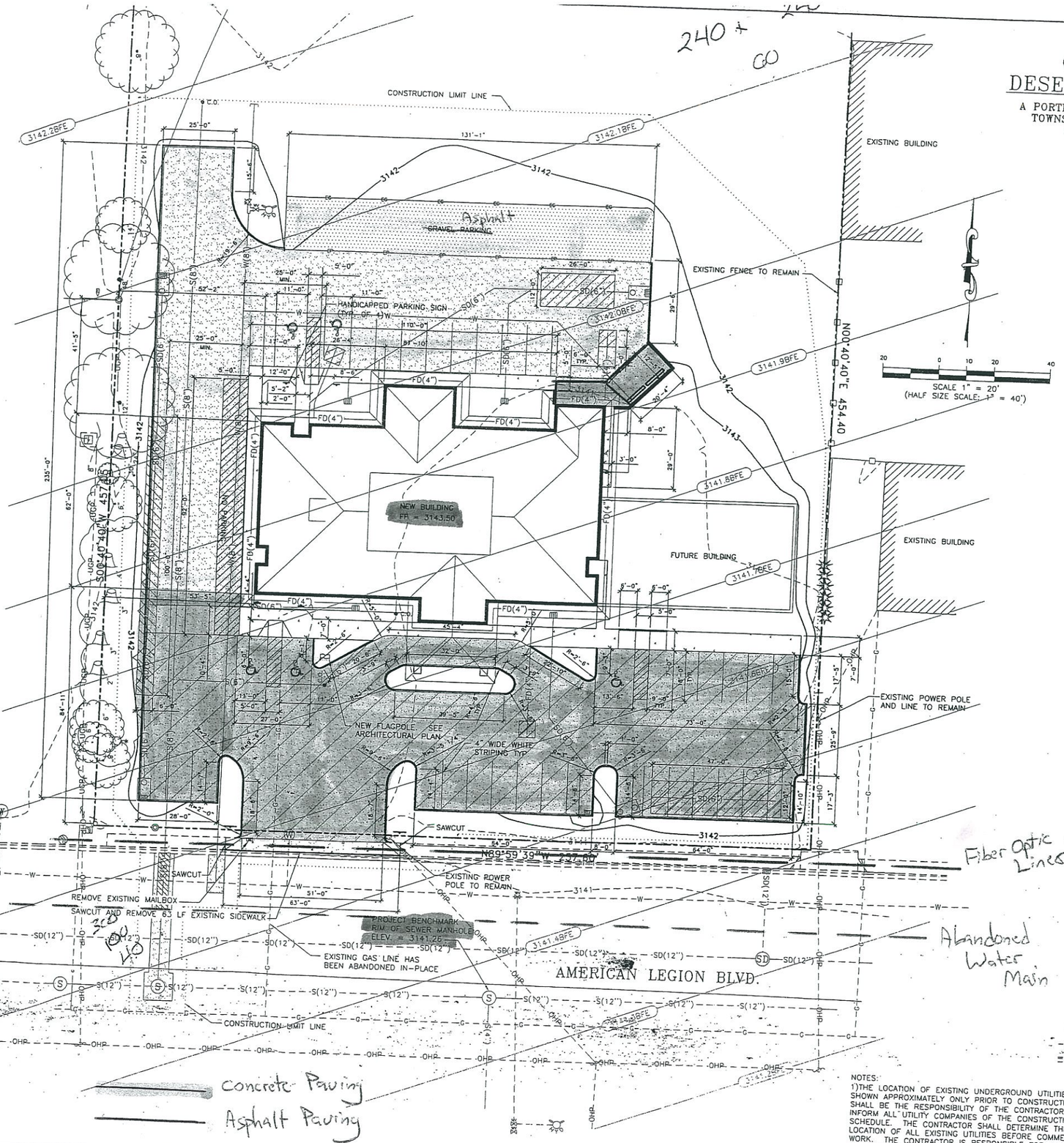
CIVIL SITE PLAN FOR DESERT SAGE HEALTH CENTER

A PORTION OF GOVERNMENT LOT 2, NW 1/4 SECTION 30, TOWNSHIP 3 SOUTH, RANGE 7 EAST, BOISE MERIDIAN
MOUNTAIN HOME, ELMORE COUNTY, IDAHO
2003



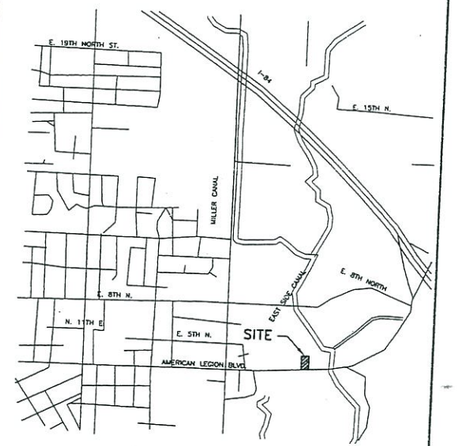
GENERAL LEGEND

- BOUNDARY LINE
- EXISTING FENCE
- -S(12")- EXISTING SEWER LINE (PIPE SIZE)
- -W- EXISTING WATER LINE
- -SD(12")- EXISTING STORM DRAIN LINE (PIPE SIZE)
- -G- EXISTING GAS LINE
- -OHP- EXISTING OVERHEAD POWER LINE
- -UGP- EXISTING UNDERGROUND POWER LINE
- SD(6") NEW STORM DRAIN LINE (PIPE SIZE)
- FD(4") NEW FOUNDATION DRAIN LINE (PIPE SIZE)
- W(8") NEW WATER LINE (PIPE SIZE)
- S(8") NEW SEWER LINE (PIPE SIZE)
- CONSTRUCTION LIMIT
- NEW CATCH BASIN
- NEW LANDSCAPE DRAIN
- EXISTING TELEPHONE MANHOLE
- EXISTING TELEPHONE BOX
- EXISTING SANITARY SEWER MANHOLE
- EXISTING STORM SEWER MANHOLE
- EXISTING POWER POLE GUY WIRE
- EXISTING POWER POLE
- EXISTING WATER MANHOLE
- EXISTING POWER MARKER
- EXISTING WATER VALVE
- EXISTING MAILBOX
- EXISTING LIGHT POLE
- NEW FLAGPOLE
- EXISTING FIRE HYDRANT
- FUTURE FIRE HYDRANT
- NEW SAND AND GREASE TRAP
- NEW SEWER CLEAN OUT
- EXISTING CONIFERIOUS TREE
- EXISTING DECIDUOUS TREE
- FOUND 5/8" REBAR
- FOUND 1/2" REBAR
- NEW CURB AND GUTTER
- 30.50 SPOT ELEVATION
- 30.50 TOC ELEVATION AT TOP OF CONCRETE
- TOA TOP OF ASPHALT
- TOA/C TOP OF ASPHALT AND CONCRETE
- BSW BACK OF SIDEWALK
- EP EDGE OF PAVEMENT
- TOG TOP OF GRATE
- TOC TOP OF CONCRETE
- INV. INVERT ELEVATION
- (EX.) EXISTING
- (M.E.) MATCH EXISTING
- EXISTING CURB, GUTTER, AND SIDEWALK
- ADD ALTERNATE #8=CONCRETE PARKING LOT

NOTES:
1) THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN APPROXIMATELY ONLY PRIOR TO CONSTRUCTION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INFORM ALL UTILITY COMPANIES OF THE CONSTRUCTION SCHEDULE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR IS RESPONSIBLE FOR ANY AND ALL DAMAGE WHICH MAY OCCUR BY FAILURE TO EXACTLY LOCATE AND PROTECT ALL UTILITIES. CALL DIGLINE, INC. BEFORE COMMENCING UNDERGROUND WORK, 342-1585.

2) CONTRACTOR SHALL COMPLETE BASE FLOOD ELEVATION CERTIFICATION PRIOR TO AND AFTER CONSTRUCTION IS COMPLETE TO CERTIFY BUILDING FINISHED FLOOR ELEVATION IS SUFFICIENTLY ABOVE THE BASE FLOOD ELEVATION AS REQUIRED BY THE (FEMA) CERTIFICATION PROCESS.

PROFESSIONAL ENGINEER
REGISTERED
3/23/04
8140
STATE OF IDAHO
ROGER J. SMITH



VICINITY MAP
SCALE: 1" = 1500'

PINNACLE
Engineers, Inc.
12552 W. Executive Dr., Suite B, Boise, Idaho 83713
(208) 887-7760

Medical Design Group
Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

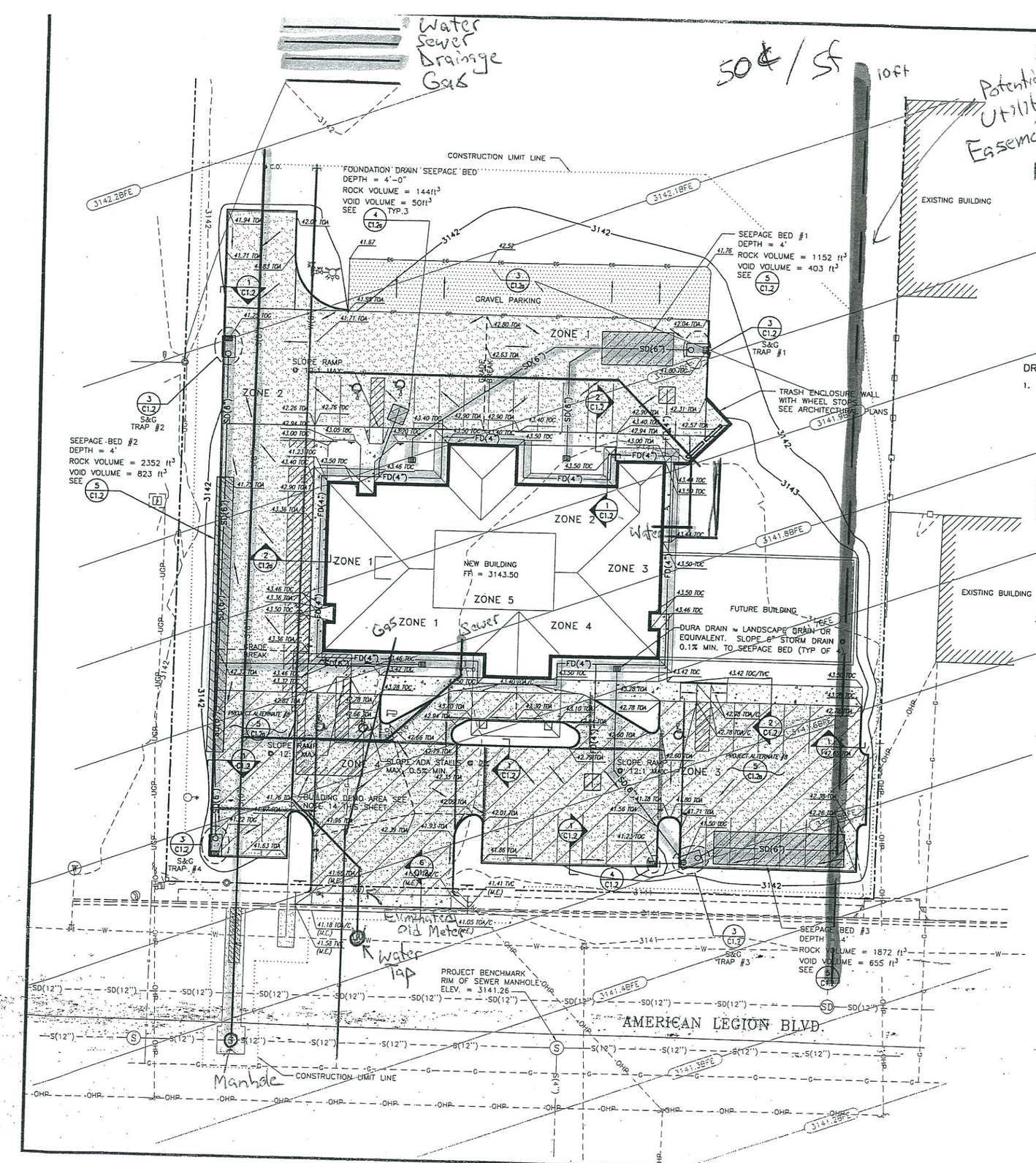
CIVIL SITE

Desert Sage He
2280 Americar
Mountair

Dr

DRAINAGE AND GRADING PLAN FOR DESERT SAGE HEALTH CENTER

A PORTION OF GOVERNMENT LOT 2, NW 1/4 SECTION 30, TOWNSHIP 3 SOUTH, RANGE 7 EAST, BOISE MERIDIAN
MOUNTAIN HOME, ELMORE COUNTY, IDAHO
2003



DRAINAGE CALCULATIONS

1. RUNOFF VOLUME

Rational Method employed

$V = A(c)(i)(t)$

V = Runoff Volume (ft^3)
A = Plan Area (Acres)
C = Runoff Coefficient = 0.95 (concrete, asphalt, roof), 0.3 (landscape)
i = Rainfall Intensity = 0.9 in/hr for 50 year design storm
t = Time = 60 minutes for 50 year design storm

PARKING		
AREA	AREA (FT^2)	VOLUME (FT^3)
Zone 1	5591	398
Zone 2	9666	689
Zone 3	10772	767
Zone 4	4530	322

ROOF		
AREA	AREA (FT^2)	VOLUME (FT^3)
Zone 1	3173	226
Zone 2	3502	250
Zone 3	1177	84
Zone 4	1716	122
Zone 5	1232	88
Future	1278	91

3. SEEPAGE BED CALCULATIONS

NOTES:
1) Seepage beds use 2" washed drain rock assumed to have 35% voids
2) Based on the geotechnical report percolation from beds assumed to occur at 8"/hr in native material at bed depth
3) Seepage depth used as 4'

Calculation Method

$V_B = D * A_B$

$A_B = \frac{V_{RO}}{D(v) + i}$

$Vt = \frac{Q_p}{A_g}$

V_{RO} = Runoff Volume (ft^3)
A_B = Bed Plan Area (ft^2)
v = Void volume percentage (0.35)
i = infiltration/percolation rate = 0.67 ft/hr
V_t = Trap maximum flow velocity (fps)
A_g = Minimum gross trap flow between baffles (ft^2)
V_B = Seepage Bed Volume (ft^3)
D = Bed Depth (ft)
$Q_p = Ci_pA$

SEEPAGE BED #1 – Receives all flow from Zone 1 and Roof Zone 2– 648 ft^3

$A_B = \frac{V_{RO}}{D(v) + i} = \frac{648\ ft^3}{4(0.35) + 0.67} = 313\ ft^2 \approx 26' \times 12'$

$V_B = 26(12)(4) = 1248\ ft^3 = 46\ yd.^3$

SEEPAGE BED #2 – Receives all flow from Zone 2, Zone 4, and Roof Zone1 – 1237 ft^3

$A_B = \frac{V_{RO}}{D(v) + i} = \frac{1237\ ft^3}{4(0.35) + 0.67} = 598\ ft^2 \approx 100' \times 6'$

$V_B = 100(6)(4) = 2400\ ft^3 = 88\ yd.^3$

SEEPAGE BED #3 – Receives all flow from Zone 3 and Roof Zone 4,5 and half of future roof– 1152 ft^3

$A_B = \frac{V_{RO}}{D(v) + i} = \frac{1152\ ft^3}{4(0.35) + 0.67} = 557\ ft^2 \approx 47' \times 12'$

$V_B = 47(12)(4) = 2256\ ft^3 = 84\ yd.^3$

DRAINAGE NOTES:

1. ALL WORK SHALL CONFORM TO THE LATEST EDITION OF THE IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION.
2. THE SIZE OF THE DRAINAGE TRENCH SHALL BE ENLARGED IF GROUND WATER IS ENCOUNTERED ABOVE NOMINAL SEEPAGE TRENCH DEPTH. IF THIS SITUATION OCCURS, CONTACT ENGINEER FOR NEW SEEPAGE BED SIZING.
3. THE CONTRACTOR IS TO CALL CITY OF MOUNTAIN HOME ENGINEE FOR THE INSPECTION OF ALL CATCH BASINS AND DRAINAGE TRENCH CONSTRUCTION. 24 HOUR NOTICE IS REQUIRED. DRAINAGE FACILITIES WILL NOT BE APPROVED BY MOUNTAIN HOME UNLESS INSPECTION IS PERFORMED.
4. THE BOTTOM OF DISPOSAL BEDS ARE TO PENETRATE A MINIMUM OF 12 INCHES INTO FREE DRAINING SAND AND GRAVEL MATERIALS.
5. POTABLE WATER LINES SHALL MAINTAIN A 25' SEPARATION FROM DISPOSAL BEDS AND A 10' SEPARATION FROM SAND AND GREASE TRAPS.
8. REFER TO ARCHITECTURAL DRAWINGS FOR LANDSCAPING. FINISH GRADE LANDSCAPING TO RETAIN ALL RUNOFF ON SITE.
9. THE CONTRACTOR IS RESPONSIBLE FOR ANY AND ALL DAMAGE WHICH MAY OCCUR BY FAILURE TO EXACTLY LOCATE AND PROTECT ALL UTILITIES. THE CONTRACTOR SHALL COMPLY WITH IDAHO CODE, CHAPTER 22, TITLE 55 REGARDING UNDERGROUND FACILITIES DAMAGE PREVENTION. CALL DIGLINE, INC. BEFORE COMMENCING WORK. 342-1585.
11. ALL CONSTRUCTION IN THE PUBLIC RIGHT-OF-WAY SHALL CONFORM TO THE LATEST EDITION OF THE ISPWC. NO EXCEPTION TO THE ISPWC WILL BE ALLOWED UNLESS SPECIFICALLY AND PREVIOUSLY APPROVED IN WRITING BY ITD AND CITY OF MOUNTAIN HOME.
12. IF ANY UTILITY OR IRRIGATION FACILITY INTERFERES WITH REQUIRED STREET IMPROVEMENTS, ALL SUCH UTILITIES OR IRRIGATION FACILITIES SHALL BE RELOCATED AT THE OWNER'S EXPENSE SO AS NOT TO INTERFERE WITH REQUIRED STREET IMPROVEMENTS.
13. ALL WATER VALVES, BLOW-OFFS, AND MANHOLES SHALL BE GRADED AND PLACED SO AS NOT TO CONFLICT WITH ANY CONCRETE CURB AND GUTTER, VALLEY GUTTER, OR SIDEWALK IMPROVEMENTS.
14. NORTHWEST TECHNOLOGIES (322-0757) REMOVED AN EXISTING 1000 SF. HOUSE WITH A PARTIAL BASEMENT FROM THE SITE IN SEPTEMBER 2003. WORK OF THIS CURRENT CONTRACT INCLUDES THE REMOVAL AND RE-COMPACTION OF THE EXISTING EARTH AT THE ORIGINAL HOUSE LOCATION. EXCAVATE SOILS IN THIS AREA AND RE-COMPACT TO 95% MINIMUM.

PROFESSIONAL ENGINEER
REGISTERED
3/22/04
8140
STATE OF IDAHO
ROGER J. SMITH

PINNACLE
Engineers, Inc.
12552 W. Executive Dr., Suite B, Boise, Idaho 83713
(208) 887-7760

Medical Design Group
Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

DRAINAGE AND GRADING PLAN

Desert Sage Health Center
2280 American Legion Blvd
Mountain Home, Id

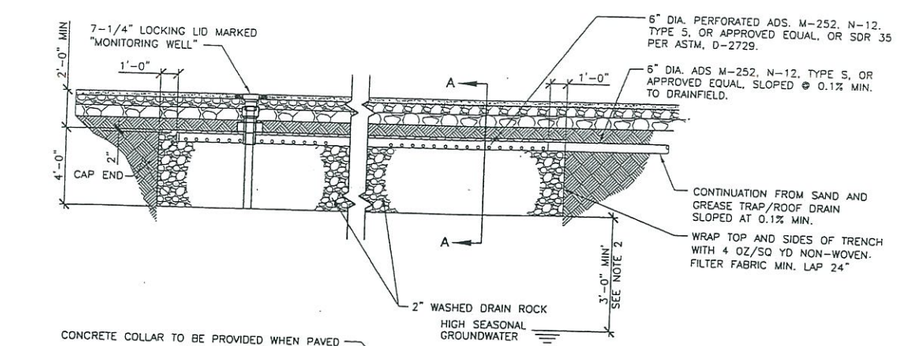
SHEET

Dec 2003

NOTES:

1. IF GROUND WATER IS ENCOUNTERED WITHIN THREE FEET OF THE BOTTOM OF THE DRAIN ROCK LAYER CONTACT THE ENGINEER TO REVISE THE SEEPAGE BED DIMENSIONS.
2. SEASONAL HIGH GROUND WATER AND FREE DRAINING MATERIAL ELEVATIONS ARE BASED UPON AVAILABLE GEOTECHNICAL INFORMATION AND MAY VARY FROM REPORTED VALUES.

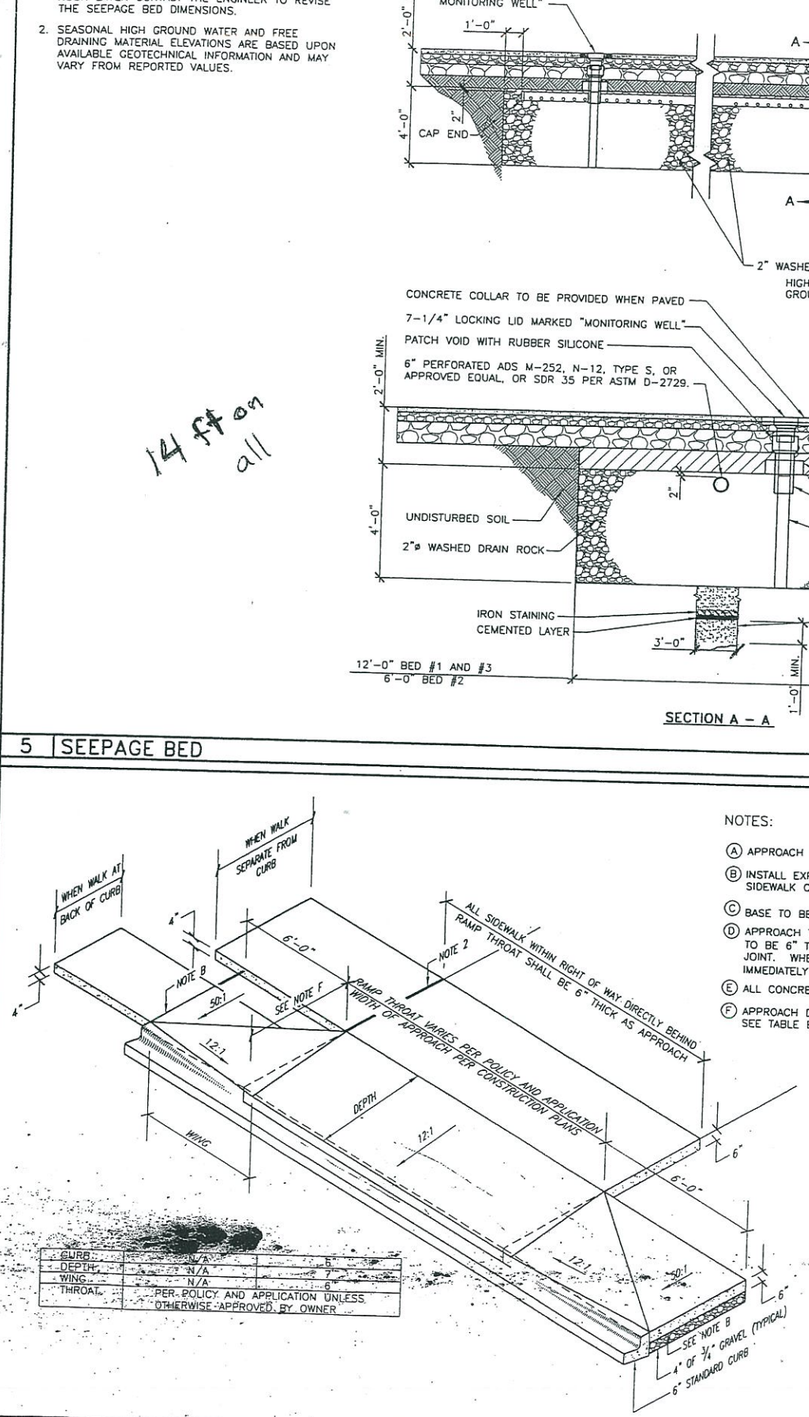
14 ft on all



SECTION A – A

5 | SEEPAGE BED

N.T.S.



CURB	N/A	6"
DEPTH	N/A	7"
WING	N/A	6"
THROAT	PER POLICY AND APPLICATION UNLESS OTHERWISE APPROVED BY OWNER	

NOTES:

(A) APPROACH TO CONFORM TO THE LATEST ADA STANDARDS.

(B) INSTALL EXPANSION JOINT AT TIP OF APPROACH WINGS AND WHERE SIDEWALK CHANGES THICKNESS.

(C) BASE TO BE A 4" THICKNESS OF -3/4" CRUSHED AGGREGATE PER SECTION-802.

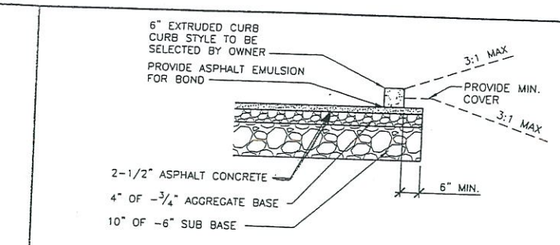
(D) APPROACH THROAT WIDTHS SET BY POLICY AND APPLICATION. ALL CONCRETE TO BE 6" THICK FROM TIP OF WING TO TIP OF WING UP TO THE EXPANSION JOINT. WHEN SIDEWALK IS SEPARATE FROM CURB THE SIDEWALK IMMEDIATELY BEHIND THE APPROACH THROAT SHALL BE 6" THICK ALSO.

(E) ALL CONCRETE SHALL BE CLASS 3000 PER SECTION-703.

(F) APPROACH DIMENSIONS ARE BASED ON THE HEIGHT OF THE CURB. SEE TABLE BELOW.

6 | CONCRETE DRIVEWAY APPROACH (SD-710)

N.T.S.



1 | 6" EXTRUDED CURB W/ ASPHALT SECTION

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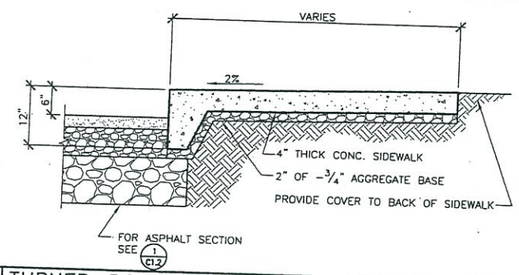
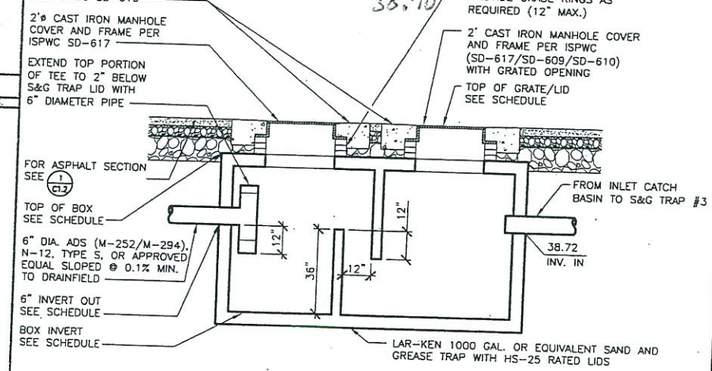


2 | TURNED-DOWN SIDEWALK

N.T.S.

SAND AND GREASE TRAP ELEVATION SCHEDULE

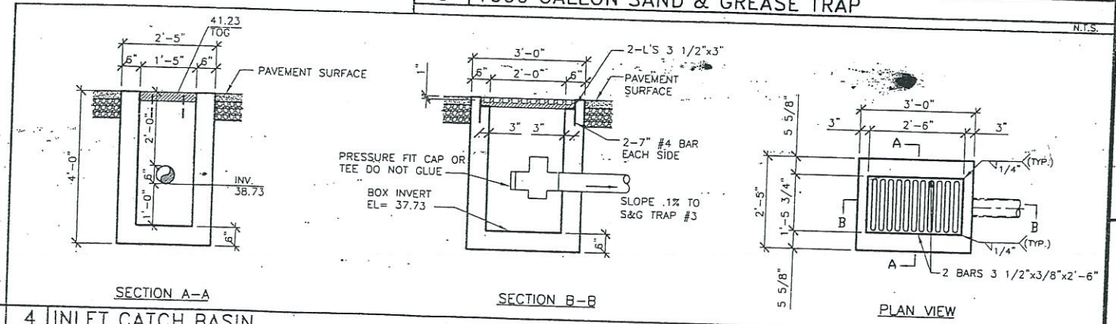
TRAP #	TOP OF GRATE	TOP OF BOX	INV. IN	INV. OUT	BOX INV.
1	41.80	40.80	–	39.15	35.15
2	41.25	40.25	–	38.60	34.58
3	41.50	40.50	~~38.59~~ 38.70	~~38.85~~ 38.65	34.83
4	41.22	40.22	–	38.57	34.55



NOTE: 1) EXTEND BOTTOM PORTION OF TEE(S) 12" BELOW OUTLET INVERT.
2) USE 6" PRESSURE FIT TEE(S). DO NOT GLUE.

3 | 1000 GALLON SAND & GREASE TRAP

N.T.S.



4 | INLET CATCH BASIN

N.T.S.

PROFESSIONAL ENGINEER REGISTERED 3/12/04 8140 STATE OF IDAHO ROGER J. SMITH

PINNACLE
Engineers, Inc.
12552 W. Executive Dr., Suite B, Boise, Idaho 83713
(208) 887-7760

Medical Design Group
Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

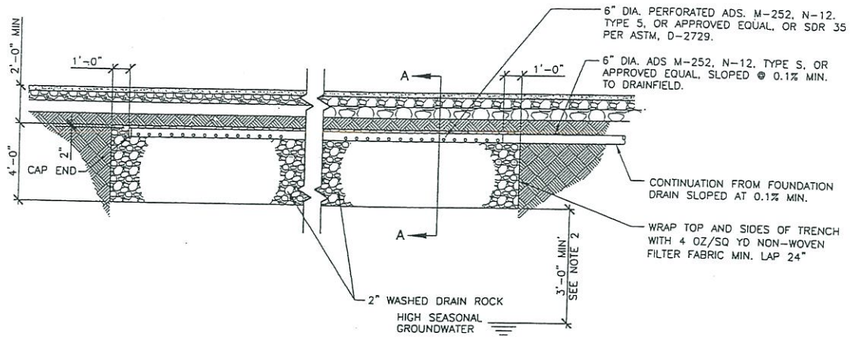
DRAINAGE AND GRADING DETAILS

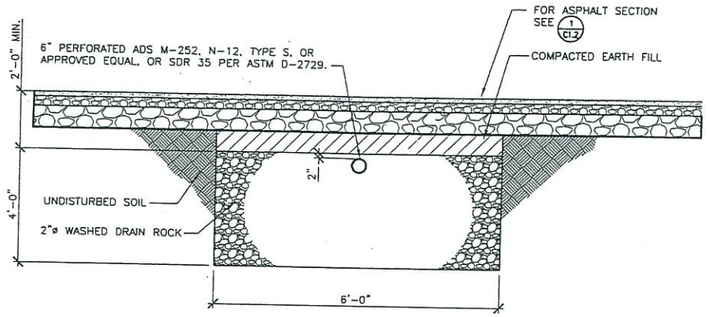
Desert Sage Health Center
2280 American Legion Blvd.
Mountain Home, Idaho

SHEET C1.2

Dec 2003 | PLOTDATE 12/00/03

1. IF GROUND WATER IS ENCOUNTERED WITHIN THREE FEET OF THE BOTTOM OF THE DRAIN ROCK LAYER CONTACT THE ENGINEER TO REVISE THE SEEPAGE BED DIMENSIONS.
2. SEASONAL HIGH GROUND WATER AND FREE DRAINING MATERIAL ELEVATIONS ARE BASED UPON AVAILABLE GEOTECHNICAL INFORMATION AND MAY VARY FROM REPORTED VALUES.





SECTION A – A

4 FOUNDATION DRAIN SEEPAGE BED

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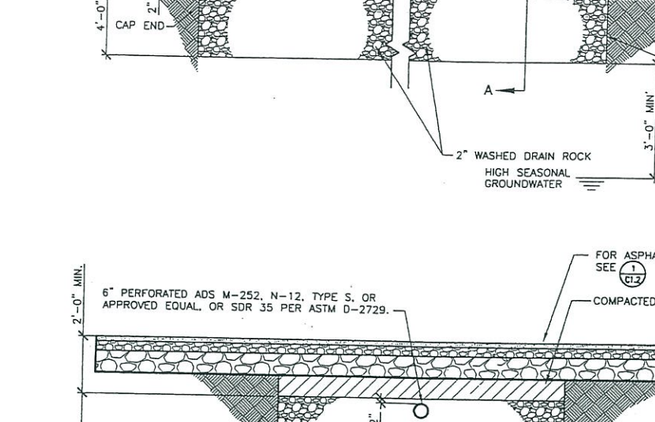
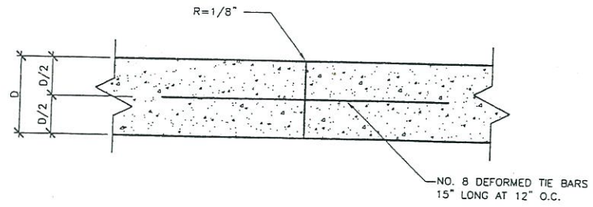


NOTES:

1) MAX. CONTROL JOINT SPACING IS 30'-0" O.C. EACH WAY.
2) CONTRACTORS OPTION TO USE EITHER SAWED OR FORMED JOINT.
3) SAW CUT TO BE MADE WITHIN 24 HRS.
4) FIBERMESH FIBERS ARE COLLATED FIBRILLATED POLYPROPYLENE OLEFIN FIBERS OR EQUAL ¾ INCH IN LENGTH. ADD FIBERMESH FIBERS AT A MINIMUM RATE OF 1.5 lbs/cu. yd.
5) REFER TO THE GEOTECHNICAL REPORT REGARDING EXISTING CLAY SOIL REMOVAL AND SITE PREPARATION.

5 6" CONCRETE @ PARKING SECTION WITH CONTROL JOINT – ADD ALTERNATE #8

N.T.S.

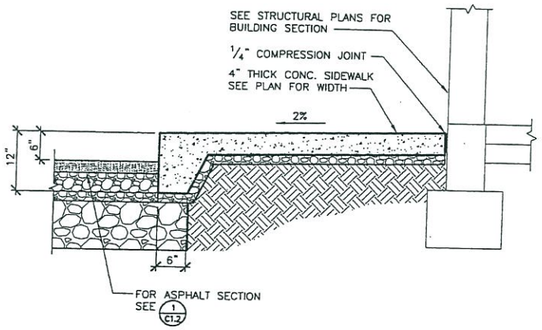


TIED TRANSVERSE CONSTRUCTION
JOINT ALTERNATIVE – TYPE D

NOTE: MATCH NEW TO EXISTING CONCRETE AND GRAVEL BASE DIMENSIONS

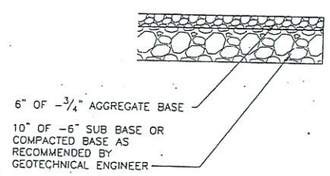
1 CONCRETE PAVEMENT JOINTING (SD-714A)

N.T.S.



2 TURNED-DOWN SIDEWALK AT BUILDING FOUNDATION

N.T.S.



3 GRAVEL SECTION

N.T.S.

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STATE OF IDAHO
ROGER J. SMITH

PINNACLE
Engineers, Inc.
12552 W. Executive Dr., Suite B, Boise, Idaho 83713
(208) 887-7760

Medical Design Group
Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

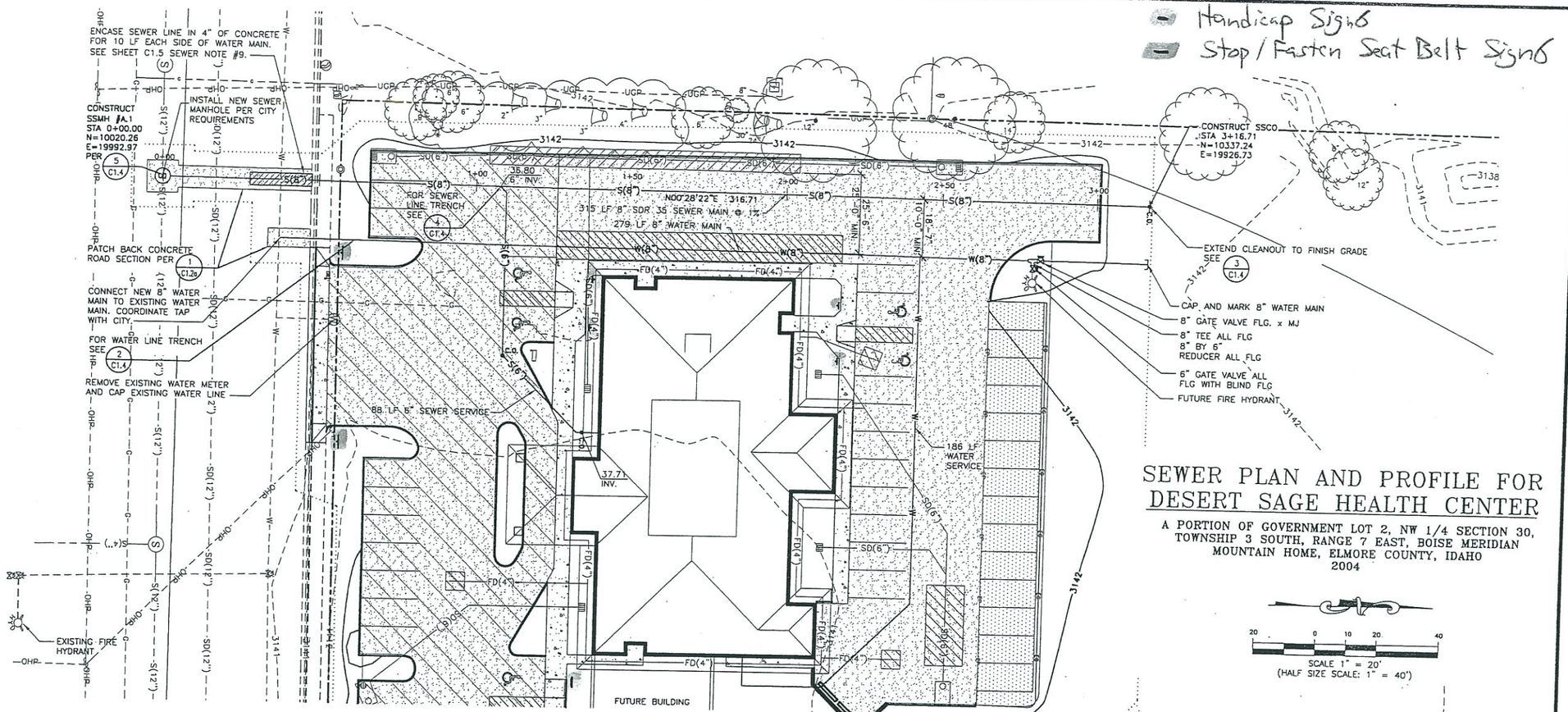
DRAINAGE AND GRADING DETAILS

Desert Sage Health Center
2280 American Legion Blvd.
Mountain Home, Idaho

SHEET C1.2a

Dec 2003 | PLOTDATE 12/00/03

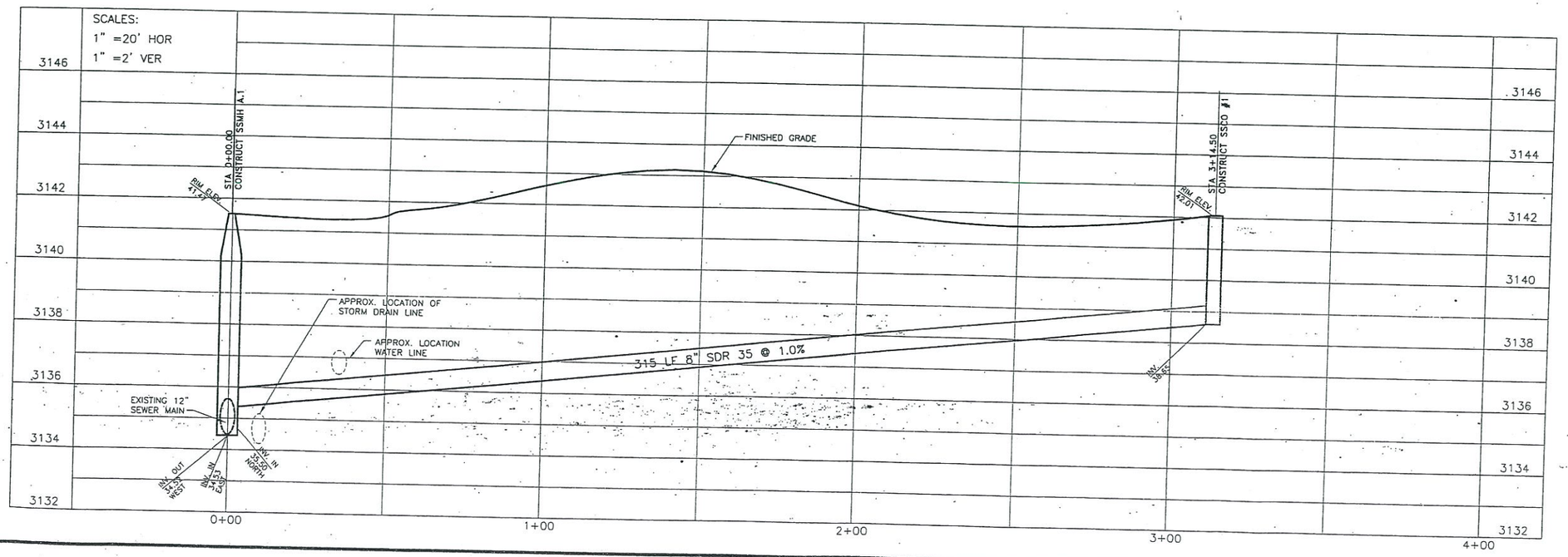
Handicap Sign
Stop / Fasten Seat Belt Sign



SEWER PLAN AND PROFILE FOR DESERT SAGE HEALTH CENTER

A PORTION OF GOVERNMENT LOT 2, NW 1/4 SECTION 30,
TOWNSHIP 3 SOUTH, RANGE 7 EAST, BOISE MERIDIAN
MOUNTAIN HOME, ELMORE COUNTY, IDAHO
2004

20 0 10 20 40
SCALE 1" = 20'
(HALF SIZE SCALE: 1" = 40')



UTILITY NOTES:

1. Any fire service shall be sized and installed by the fire service contractor.
2. The contractor shall install a reduced pressure backflow assembly (RPBA) for each water or fire service entering the building.
3. Refer to the mechanical plans for the water and/or fire service connection(s) at the building and for backflow protection. Coordinate with the water company for taps and metering.
4. For thrust blocking see detail 1 sheet C1.5
5. Verify the sewer connection at the building with the mechanical plans.
6. The gas service shall be sized and installed by the plumbing contractor and/or gas company.
7. The power transformer and service lines (primary and secondary) shall be sized and installed by the electrical engineer, electrical contractor, and/or power company. Refer to the electrical plans for further details.
8. See sheet C1.5 for utility details.
9. If any utility or irrigation facility interferes with required street improvements, all such utilities or irrigation facilities shall be relocated at the owner's expense so as not to interfere with required street improvements.
10. All water valves, blow-offs, and manholes shall be graded and placed so as not to conflict with any concrete curb and gutter, valley gutter, or sidewalk improvements.
11. All construction within the public right-of-way shall conform to the latest edition of the I.S.P.W.C. specifications. No exceptions to district policy, standards, or the I.S.P.W.C. will be allowed unless specifically and previously approved in writing by the district.
12. See Architectural and mechanical plans for Pressure Irrigation.
13. New water meter to be remote read per City of Mountain Home. See Mechanical plans for placement of meter.

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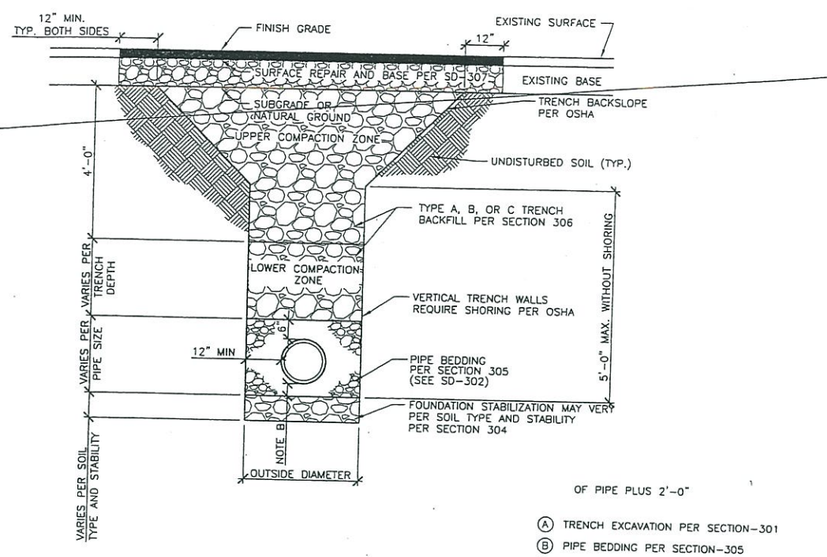
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

SEWER PLAN AND PROFILE

Desert Sage Health Center
2280 American Legion Blvd.
Mountain Home, Idaho

SHEET C1.3

Dec 2003 | PLOTDATE 12/00/03

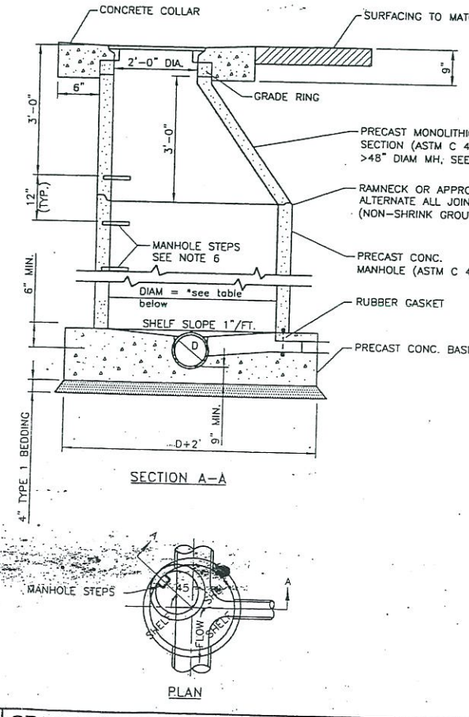


OF PIPE PLUS 2'-0"

(A) TRENCH EXCAVATION PER SECTION-301
(B) PIPE BEDDING PER SECTION-305
(C) BACKFILL AND COMPACTION PER SECTION-306

4 TYPICAL TRENCH

N.T.S.



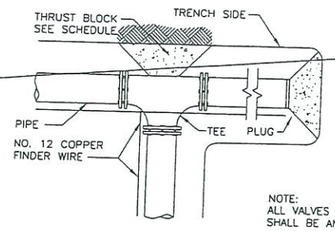
PIPE DIAM	DEPTH	REQUIRED MANHOLE DIAM
8" - 18"	<=18'	48"
8" - 18"	>18'	60"
> 18"	ANY DEPTH	60"

NOTES:

1. VERTICAL WALL SHALL BE PLACED ON UPSTREAM SIDE OF MANHOLE, ROTATED 45°.
2. MANHOLE FRAME AND COVER:
   A. FRAME AND COVER SHALL BE FLUSH WITH SLOPE AND PAVEMENT.
3. GRADE RINGS SHALL NOT EXCEED 1'-0" IN HEIGHT.
4. WHERE PVC IS UTILIZED, A RUBBER RING IS TO BE INSTALLED WHERE THE PIPE IS IN CONTACT WITH MANHOLE BASE AND/OR MANHOLE CHANNEL, IN ORDER TO ENSURE A WATERTIGHT SEAL.
5. A CONCENTRIC CONE SHALL BE USED ON MANHOLES 4'0" DEEP AND LESS.
6. MANHOLES MORE THAN 4'0" DEEP SHALL BE EQUIPPED WITH STEPS CONFORMING TO MOUNTAIN HOME STANDARD SPECIFICATIONS.

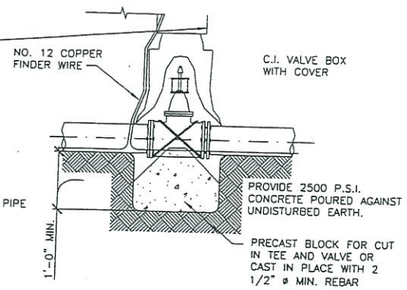
5 STANDARD MANHOLE DETAIL

N.T.S.



NOTE:
ALL VALVES CONNECTED TO P.V.C. PIPE SHALL BE ANCHORED AS SHOWN.

TEE AND PLUG DETAIL



VALVE ANCHOR DETAIL

MINIMUM THRUST BLOCK BEARING AREAS (FT.^{2})					
PIPE SIZE	TEE	90° BEND	45° BEND	22 1/2° BEND	11 1/4° BEND
8"	5.0	--	--		--

1 THRUST BLOCK DETAIL PER ISPWC SD-403

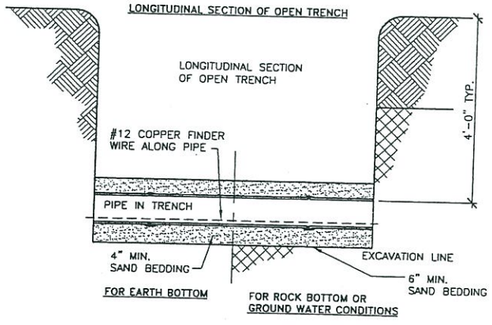
N.T.S.

LEGEND

(1) 4-1" DIA. HOLES ON 3 1/2" RADIUS.
(2) MECHANICAL PLUG
(3) 12" DIA. x 1'-0" PVC, DIP OR CP.
(4) FIBER JOINT PACKING.
(5) PVC ASTM 3034.
(6) 45° BENDS.
(7) "Y" FITTINGS.
(8) EXISTING OR NEW PIPE.
(9) TYPE 1 BEDDING MATERIAL.
(10) MISSION COUPLER OR APPROVED SUBSTITUTION.
(11) UNDISTURBED MATERIAL.
(12) SEWER CAP

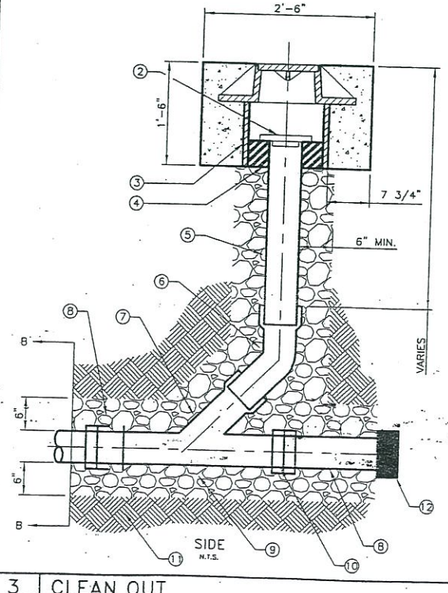
NOTES: (PIPE INSTALLATION)

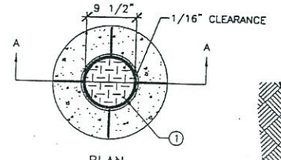
1. EXCAVATE BELL HOLES ON TRENCH BOTTOM AT PIPE JOINTS. BACKFILL W/ SELECTED EARTH AS DIRECTED.
2. BEDDING TO EXTEND AS REQUIRED BELOW PIPE BELL OR BOTTOM OF PIPE, WHICHEVER IS LOWER IN ELEVATION.
3. BEDDING TO BE PLACED 4" WIDER THAN PIPE SPRING LINE
4. ALL WATER PIPE SHALL BE AWWA C900 PIPE WITH C.I. FITTINGS CONFORMING TO AWWA C153.

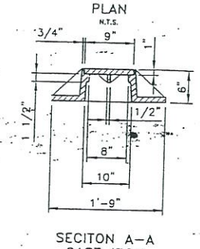


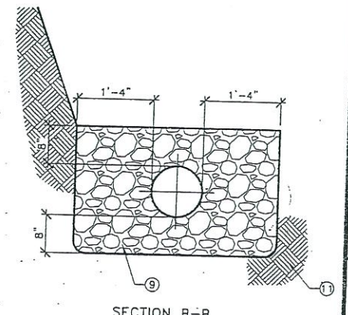
2 WATER TRENCH SECTION

N.T.S.









3 CLEAN OUT

N.T.S.

PROFESSIONAL ENGINEER
REGISTERED
3/23/04
8140
STATE OF IDAHO
ROGER J. SMITH

PINNACLE
Engineers, Inc.
12552 W. Executive Dr., Suite B, Boise, Idaho 83713
(208) 887-7760

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2716 WESTLAND PLACE
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BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

UTILITY DETAILS

Desert Sage Health Center
2280 American Legion Blvd.
Mountain Home, Idaho

SHEET C1.4

Dec 2003 | PLOTDATE 12/00/03

GENERAL:

1. THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN APPROXIMATELY ONLY PRIOR TO CONSTRUCTION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INFORM ALL UTILITY COMPANIES OF THE CONSTRUCTION SCHEDULE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR IS RESPONSIBLE FOR ANY AND ALL DAMAGE WHICH MAY OCCUR BY FAILURE CALL DIGLINE INC. BEFORE COMMENCING UNDERGROUND WORK, 342-1585.

2. ALL WORK SHALL CONFORM TO THE LATEST EDITION OF THE "IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (I.S.P.W.C.), AND /OR THE REQUIREMENTS OF THE IDAHO DEPARTMENT OF TRANSPORTATION.

3. THE CONTRACTOR(S) SHALL REMOVE ALL OBSTRUCTIONS ABOVE AND BELOW GROUND REQUIRED FOR THE CONSTRUCTION OF THE PROPOSED IMPROVEMENTS. THIS WORK INCLUDES CLEARING AND GRUBBING, WHICH INCLUDES CLEARING THE GROUND SURFACE OF ALL TREES, STUMPS, BRUSH, UNDERGROWTH, HEDGES, HEAVY GROWTH OF GRASS AND /OR WEEDS, FENCES, STRUCTURES, DEBRIS, RUBBISH, AND OTHER MATERIAL NOT SUITABLE FOR THE FOUNDATION OF PAVEMENTS AND OTHER STRUCTURES. ALL MATERIAL NOT SUITABLE FOR FUTURE USE ON-SITE SHALL BE DISPOSED OF OFF-SITE AT AN APPROVED LOCATION.

4. THE CONTRACTOR SHALL MAINTAIN EXISTING DRAINAGE FACILITIES WITHIN THE CONSTRUCTION AREA UNTIL THE DRAINAGE IMPROVEMENTS ARE IN PLACE AND APPROVED.

5. ALL CONTRACTORS WORKING WITHIN THE PROJECT BOUNDARIES ARE RESPONSIBLE FOR COMPLIANCE WITH ALL APPLICABLE SAFETY LAWS OF ANY JURISDICTIONAL BODY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY DEVICES AND TRAFFIC CONTROL AROUND AND WITHIN THE CONSTRUCTION AREA.

6. ALL MATERIALS FURNISHED ON OR FOR THE PROJECT MUST MEET THE MINIMUM REQUIREMENTS OF THE APPROVING AGENCY OR AS SET FORTH WITHIN, WHICHEVER IS MOST RESTRICTIVE. PROOF THAT ALL MATERIALS USED ON THIS PROJECT MEET THE REQUIREMENTS ABOVE MUST BE PROVIDED AT THE REQUEST OF THE AGENCY AND/OR THE ENGINEER.

7. ALL UNDER GROUND UTILITIES AND SERVICE LINES SHALL BE INSTALLED PRIOR TO STREET CONSTRUCTION.

8. ALL COSTS OF RETESTING FOR PREVIOUSLY FAILED TESTS, IF REQUIRED , SHALL BE BACK CHARGED TO THE RESPONSIBLE CONTRACTOR BY THE OWNER.

9. ALL COSTS INCURRED BY THE CONTRACTOR FOR CORRECTING DEFICIENT WORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR WHO PERFORMED THE WORK. FAILURE TO CORRECT DEFICIENT WORK WILL BE CAUSE FOR ISSUANCE OF A STOP WORK ORDER AND POSSIBLE TERMINATION.

10. ALL WORK SUBJECT TO APPROVAL BY ANY POLITICAL AGENCY OR GOVERNING AGENCY MUST BE APPROVED PRIOR TO (I) PLACING OF CONCRETE, (II) PLACING OF AGGREGATE BASE, (III) PLACING OF ASPHALT PAVING, (IV) BACKFILLING TRENCHES. WORK PERFORMED WITHOUT SUCH APPROVAL SHALL NOT RELIEVE THE CONTRACTOR FROM THE RESPONSIBILITY OF PERFORMING THE WORK TO THE REQUIRED STANDARDS.

11. STANDARD DRAWING NUMBERS, REFERENCED IN THESE NOTES, WHICH BEGIN WITH "SD" ARE FROM THE I.S.P.W.C. STANDARD DRAWINGS (2003 ED.).

12. THE CONTRACTOR IS TO ENSURE THAT THE LATEST REVISIONS OF CONSTRUCTION DRAWINGS ARE USED. CONTACT ENGINEER FOR VERIFICATION PRIOR TO COMMENCING CONSTRUCTION.

GENERAL NOTES

SEWER NOTES

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE 2003 SEWER SPECIFICATIONS AND STANDARD DRAWINGS OF IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (I.S.P.W.C.).

2. FINAL APPROVAL AND ACCEPTANCE OF ALL SEWER CONSTRUCTION WILL BE BY THE MOUNTAIN HOME PUBLIC WORKS DEPARTMENT.

3. SEWER PIPE WITH COVER OF GREATER THAN 3 FEET, SHALL BE BELL AND SPIGOT, POLYVINYL CHLORIDE (PVC), SDR 35, ASTM D-3034 AS SET FORTH BY THE MOUNTAIN HOME PUBLIC WORKS DEPARTMENT.

4. SEWER INSPECTIONS WILL BE BY THE MOUNTAIN HOME PUBLIC WORKS DEPARTMENT AND THEIR DECISIONS SHOULD BE CONSIDERED AS FINAL. SUCH APPROVAL SHALL NOT RELIEVE THE CONTRACTOR FROM THE RESPONSIBILITY OF PERFORMING THE WORK IN AN ACCEPTABLE MANNER. THE CONTRACTOR WILL NOTIFY THE CITY PUBLIC WORKS DEPARTMENT 48 HOURS PRIOR TO CONSTRUCTION. THE CITY OF MOUNTAIN HOME WILL PROVIDE PERIODIC INSPECTIONS FOR AN EIGHT-HOUR DAY, FROM 8:00 A.M. TO 5:00 P.M., FOR A FORTY HOUR WEEK. THE CONTRACTOR SHALL REIMBURSE THE CITY AT RATES ESTABLISHED BY THE CITY FOR INSPECTION IN EXCESS OF THE NORMAL WORK WEEK, INCLUDING LEGAL HOLIDAYS, OVERTIME INSPECTION RATES AND A LIST OF LEGAL HOLIDAYS CAN BE OBTAINED FROM THE MOUNTAIN HOME PUBLIC WORKS DEPARTMENT.

5. SERVICE LINES SHALL BE MARKED IN ACCORDANCE WITH THE SPECIFICATIONS AND STANDARD DRAWING SD 512. SERVICE LINE MARKERS SHALL REMAIN IN PLACE DURING CONSTRUCTION AND BE PRESENT FOR FINAL INSPECTION.

6. PRIOR TO FINAL ACCEPTANCE, AFTER ALL UTILITIES ARE IN AND PRIOR TO PAVING, AN AIR TEST SHALL BE CONDUCTED. THE CONTRACTOR SHALL CONTACT THE CITY OF MOUNTAIN HOME A MINIMUM OF 24 HOURS PRIOR TO TESTING.

7. THE SEWER CONTRACTOR SHALL SUPPLY ALL LID ASSEMBLIES AND THE REQUIRED NUMBER OF RISER AND GRADE RINGS. THE SEWER CONTRACTOR SHALL FIELD VERIFY THE ELEVATION OF THE TOP OF THE MANHOLE CONE TO ASSURE THAT RING ELEVATIONS MATCH FINAL STREET GRADES. THE MAXIMUM HEIGHT OF THE GRADE RINGS SHALL BE SUCH THAT THE FINISH GRADE ELEVATION OF THE MANHOLE FRAME AND COVER SHALL NOT BE MORE THAN TWENTY-ONE (21") INCHES ABOVE THE TOP OF THE MANHOLE CONE.

8. THE PAVING CONTRACTOR SHALL SET THE GRADE RINGS AND POUR THE CONCRETE COLLARS PER IDAHO DEPARTMENT OF TRANSPORTATION STANDARDS. THE PAVING CONTRACTOR SHALL CONTACT IDAHO DEPARTMENT OF TRANSPORTATION 48 HOURS PRIOR TO POURING CONCRETE COLLARS.

9. THE HORIZONTAL SEPARATION OF THE WATER AND SEWER MAINS SHALL BE A MINIMUM OF TEN (10) FEET. WHERE IT IS NECESSARY FOR SEWER AND WATER TO CROSS EACH OTHER AND THE SEWER LINE IS LESS THAN 18 INCHES BELOW OR ABOVE THE WATER MAIN, THE SEWER LINE CROSSING SHALL BE P.V.C. PRESSURE PIPE CONFORMING TO AWWA C-900 OR ASTM D2241, FOR A DISTANCE OF 10' ON BOTH SIDES OF WATER LINE. ONE FULL LENGTH OF BOTH WATER MAIN AND SEWER LINE SHALL BE CENTERED OVER THE CROSSING POINT SO THAT ALL JOINTS WILL BE AS FAR FROM THE CROSSING AS POSSIBLE. IN LIEU OF CONSTRUCTING OR RECONSTRUCTING THE SEWER TO CONFORM TO WATER MAIN STANDARDS, THE WATER LINE OR SEWER LINE OR BOTH MAY BE ENCASED IN FOUR (4) INCHES OF CONCRETE, MEASURED AT THE BELL FOR A DISTANCE OF 10' ON BOTH SIDES OF THE WATER LINE.

10. GROUNDWATER LEVELS SHALL BE MAINTAINED BELOW THE BOTTOM OF THE TRENCH DURING THE PIPE LAYING AND PIPE JOINING OPERATIONS.

11. THE TRENCH BACKFILL ABOVE THE PIPE ZONE WILL BE INSPECTED BY THE IDAHO DEPARTMENT OF TRANSPORTATION OR BY THE OWNER'S ENGINEER IN ACCORDANCE WITH THE LATEST EDITION OF THE "CONSTRUCTION QUALITY ASSURANCE MANUAL" COMPACTION TESTS ARE REQUIRED IN THE BACKFILL ABOVE THE PIPE ZONE, WITHIN PUBLIC RIGHT-OF-WAY, ACCORDING TO IDAHO DEPARTMENT OF TRANSPORTATON REQUIREMENTS AND THE RESULTS SHALL BE SUBMITTED TO MOUNTAIN HOME PUBLIC WORKS DEPARTMENT AND IDAHO DEPARTMENT OF TRANSPORTATION PRIOR TO FINAL ACCEPTANCE.

12. ALL STATIONING RELATES TO THE GRAVITY SEWER CENTERLINE.

13. THE SEWER MAIN SHALL BE TESTED FOR DEFLECTION IN ACCORDANCE WITH THE I.S.P.W.C..

14. THE MOUNTAIN HOME PUBLIC WORKS DEPARTMENT MAY TEST THE COMPACTION OF THE SEWER PIPELINE BEDDING. TESTING WILL BE DONE BY AN INDEPENDENT TESTING LABORATORY. THE COST OF THE FIRST TEST WILL BE PAID BY THE MOUNTAIN HOME PUBLIC WORKS DEPARTMENT. IF THE FIRST TEST FAILS TO MEET REQUIRED COMPACTION, ALL RE-TESTING SHALL BE PAID BY THE SEWER CONTRACTOR. THE CONTRACTOR SHALL CONTACT THE MOUNTAIN HOME PUBLIC WORKS DEPARTMENT AND/OR TESTING LABORATORY TO SCHEDULE THE TESTS PRIOR TO ANY PIPE LAYING AND BACKFILLING.

15. SEWER CONSTRUCTION WILL MEET SPECIFIC DETAILS AND REQUIREMENTS OF THE FOLLOWING IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION AND THE IDAHO DEPARTMENT OF TRANSPORTATION STANDARDS:

    1. STANDARD MANHOLE - TYPE A, DRAWING NO. SD-501.
    2. DROP MANHOLE, DRAWING NO. SD-504.
    3. MANHOLE COLLAR DETAIL, DRAWING NO. HD-508.
    4. MANHOLE COVER & FRAME, DRAWING NO. SD-507.
    5. SEWER SERVICE MARKER, DRAWING NO. SD-512.

16. THE CONTRACTOR SHALL LEAVE THE EXCAVATION FOR THE UPSTREAM END OF ALL SERVICE LINES OPEN FOR FIELD VERIFICATION OF THE INVERT ELEVATION BY THE CITY'S INSPECTOR. THE CONTRACTOR SHALL NOT BACKFILL THE ENDS OF SERVICE LINES UNTIL HE HAS OBTAINED APPROVAL FROM MOUNTAIN HOME'S INSPECTOR OR MADE OTHER ARRANGEMENTS FOR THE VERIFICATION OF SERVICE LINE INVERT ELEVATIONS.

17. THE CONTRACTOR SHALL PROVIDE MOUNTAIN HOME INSPECTOR WITH "CUT SHEETS" FOR THE STAKING PROVIDED FOR CONSTRUCTION OF THE SANITARY SEWER. "CUT SHEETS" SHALL BE PROVIDED TO THE CITY PRIOR TO CONSTRUCTION. ADDITIONALLY, TEMPORARY BENCHMARKS MUST BE PROVIDED TO THE MOUNTAIN HOME'S DEPARTMENT OF PUBLIC WORKS, INSPECTION DEPARTMENT, BY THE OWNER, PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.

18. THE CONTRACTOR SHALL INSTALL A REMOVABLE PLUG UPSTREAM OF SSMH A-1. THIS PLUG SHALL REMAIN IN PLACE DURING CONSTRUCTION UNTIL FINAL ACCEPTANCE OF THIS SEWER PROJECT. THE CONTRACTOR SHALL CONSTRUCT THE SANITARY SEWER IN ACCORDANCE WITH THE STAMPED PLANS APPROVED BY THE MOUNTAIN HOME PUBLIC WORKS DEPARTMENT. THESE PLANS WILL BE PROVIDED TO THE CONTRACTOR BY THE PROJECT INSPECTOR PRIOR TO CONSTRUCTION. WORK SHALL NOT BE DONE WITHOUT THE CURRENT SET OF APPROVED PLANS.

SEWER NOTES

WATER

1. THE WATER SYSTEM SHALL BE CONSTRUCTED TO CONFORM WITH THE STANDARDS SET FORTH IN THE "IDAHO RULES FOR PUBLIC DRINKING WATER SYSTEMS", AND CITY OF MOUNTAIN HOME WATER STANDARD SPECIFICATIONS AND DRAWINGS.

2. WATER DISTRIBUTION MAINS SHALL BE CONSTRUCTED WITH ASTM D2241, CLASS 200 OR AWWA C-900 CLASS 150 PIPE. THE PIPE SHALL BE INSTALLED IN WORKMANLIKE MANNER BY PERSONS PROPERLY QUALIFIED TO PERFORM SAID WORK AND SHALL BE IN CONFORMANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AS APPROVED BY THE DISTRICT ENGINEER. ALL WORK AND MATERIALS MUST CONFORM TO CURRENT REQUIREMENTS OF THE I.S.P.W.C.

3. ALL WATER MAINS SHALL HAVE A MINIMUM COVER OF 48 INCHES. AFTER INSTALLATION OF THE WATER MAINS, THE TRENCHES SHALL BE COMPACTED TO 95% OF MAXIMUM DENSITY TO PREVENT FURTHER SETTLEMENT. ALL MAINS SHALL BE LEAK-TESTED, FLUSHED AND SANITIZED BEFORE CONNECTING WITH THE MUNICIPAL SYSTEM.

4. WHERE IT IS NECESSARY FOR SEWER AND WATER TO CROSS EACH OTHER, REFER TO NOTE NO. 9 UNDER SEWER NOTES.

5. ALL GATE VALVES SHALL BE FLANGED AND/OR M.J. AND SHALL CONFORM TO AWWA C-153 SPECIFICATIONS AND SHALL HAVE A 200 P.S.I. WORKING PRESSURE RATING. ALL VALVES SHALL BE ANCHORED IN CONFORMANCE WITH THE DETAIL SHOWN IN THE I.S.P.W.C. AND THE CONSTRUCTION DRAWING DETAILS.

6. ALL TEES, PLUGS, CAPS AND BENDS, AND AT OTHER LOCATIONS WHERE UNBALANCED FORCES EXIST, SHALL BE SECURED AND ANCHORED BY SUITABLE THRUST BLOCKING AS SHOWN IN THE DETAILS.

7. NO. 12 DIRECT BURIAL WIRE SHALL BE PLACED ALONG THE NORTH AND EAST SIDE OF WATER MAINS AND SERVICE LINES. WIRE SHALL BE TAPED TO GATE VALVE SO IT IS ACCESSIBLE FROM ABOVE BUT DOES NOT INTERFERE WITH VALVE OPERATION.

8. ALL WATER LINES SHALL BE DISINFECTED ACCORDING TO THE AWWA C651-92 SPECIFICATIONS, LATEST EDITION.

    (A) THE DISTRIBUTION SYSTEM SHALL BE PRESSURE TESTED TO 150 P.S.I. TO THE SATISFACTION OF THE WATER DISTRICT. LEAKAGE SHALL NOT EXCEED .0331 GAL. PER INCH DIAMETER PER HR PER JOINT.

    (B) PRIOR TO USE OF THE PIPE LINE, IT SHALL BE DISINFECTED ACCORDING TO SPECIFICATIONS TO AWWA C651-92 AND THEN FLUSHED. THE DISINFECTION AND FINAL FLUSHING PROCEDURE SHALL BE TESTED TO DETERMINE IF THE APPROPRIATE MINIMUM CHLORINE (CL2) RESIDUALS HAVE BEEN EXCEEDED. DISINFECTION REPORTS FROM A CERTIFIED LABORATORY ARE REQUIRED.

9. CONTRACTOR SHALL NOTIFY THE OWNER THREE (3) WORKING DAYS BEFORE INITIAL CONSTRUCTION BEGINS AND SHALL ALSO REQUEST ENGINEER'S INSPECTION OF WATER LINES AND APPURTENANCES TWENTY-FOUR (24) HOURS IN ADVANCE OF BACKFILLING.

10. CONTRACTOR TO FIELD VERIFY ALL VALVE BOX LID ELEVATIONS TO ASSURE THAT SAID LID ELEVATIONS MATCH FINAL STREET GRADE.

11. WATER MAIN CONSTRUCTION SPECIFICATION SHALL BE AS DIRECTED BY THE CITY OF MOUNTAIN HOME.

12. VALVES FLANGED OR M.J. SHALL BE LOCATED IN THE STREET. ALL GATE VALVES SHALL BE SET AS CLOSE (FLANGE CONNECTED) AS POSSIBLE TO MAIN LINE FITTINGS.

13. UPON THE COMPLETION OF WORK, THE CONTRACTOR SHALL SUBMIT A SET OF AS-BUIT PLANS TO THE OWNER FOR SUBMITTAL TO THE CITY OF MOUNTAIN HOME.

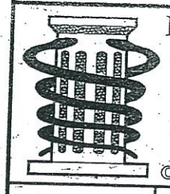
14. THE CONTRACTOR MAY PRESSURE TEST ALL WATER LINES AFTER DISINFECTION AND FLUSHING, BUT PRIOR TO INSTALLATION OF OTHER UTILITIES. AFTER ALL UTILITIES ARE INSTALLED AND PRIOR TO PAVING THE CONTRACTOR SHALL PERFORM A FINAL PRESSURE TEST WITH THE CITY OF MOUNTAIN HOME WATER ENGINEER OR THEIR REPRESENTATIVE IN ATTENDANCE. THE CONTRACTOR SHALL FURNISH ALL PERSONNEL AND EQUIPMENT NECESSARY TO CONDUCT THE TEST.

15. ALL WATER VALVES AND BLOW-OFFS SHALL BE PLACED SO AS NOT TO CONFLICT WITH CURB, GUTTER, SIDEWALK, OR OTHER REQUIRED STREET IMPROVEMENTS.

WATER NOTES

PROFESSIONAL ENGINEER
REGISTERED
3/23/04
8140
STATE OF IDAHO
ROGER J. SMITH

PINNACLE
Engineers, Inc.
12552 W. Executive Dr., Suite B, Boise, Idaho 83713
(208) 887-7760



Medical Design Group
Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

GENERAL NOTES

Desert Sage Health Center
2280 American Legion Blvd.
Mountain Home, Idaho

SHEET C1.5

Dec 2003 | PLOTDATE 12/00/03

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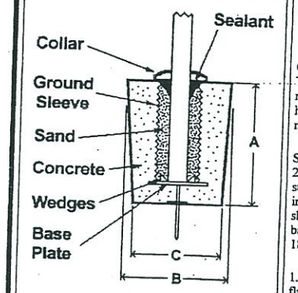
Ground Sleeve Installation

a.k.a. Ground Mount, Foundation Mount or Groundset



Ground mounted installations

Ground Mount

The embedded, or Groundset, mount is the method of choice for mounting aluminum flagpoles at grade. Flagpole shafts so mounted have a higher wind speed rating than the same shafts base-plate mounted.

Specifications:

2.3 A FOUNDATION TUBE: Fabricated from 16 ga. galvanized steel, with a steel base plate whose square dimension is at least the internal diameter of the sleeve plus 4". A setting plate 6" square shall be securely welded to the ground spike at least 6" below the base plate. The ground spike shall be 3/4" diameter, not less than 18" long.

1. Provide spun aluminum collar, Type FC-11, finished to match flagpole shaft. Diameter shall be at least 1" greater than diameter of sleeve.

Ground Sleeve Specifications

Shaft Foundation Dimensions

HEIGHT	BUTT DIAMETER	SLEEVE DIAMETER	DEPTH A	DEPTH B	DEPTH C
20'	4"	6"	3' 6"	30"	24"
20'	5"	8"	3' 6"	30"	24"
25'	5"	8"	3' 6"	30"	24"
25'	5.5" - 6"	10"	3' 6"	30"	24"
30'	5"	8"	3' 6"	30"	24"
30'	6"	10"	3' 6"	30"	24"
35'	5"	8"	4' 0"	36"	30"

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Sentry Flagpole Specifications

Exposed Height (feet)	Shaft Diameter (inch) Base	Shaft Diameter (inch) Top	Maximum Wall Thickness (inch)	Maximum Unflagged Windspeed (mph)	Recommended Flag Size (feet)	Flagged Windspeed (mph)	Concord Continental Catalog Part Number
20	5	3	.125	255	5x8	120+	S20050125
20	5	2	.188	316	5x8	120+	S20050188
25	5	3	.125	154	5x8	105	S25050125
25	5	3	.156	201	5x8	120	S25050156
25	6	3.5	.156	195	5x8	120+	S25060156
25	6	3.5	.188	222	5x8	120+	S25060188
30	5	3	.125	110	6x10	85	S30050125
30	5	3	.156	126	6x10	95	S30050156
30	6	3.5	.156	195	6x10	120	S30060156
30	6	3.5	.188	222	6x10	120+	S30060188
35	5	3	.156	100	6x10	80	S35050156
35	6	3.5	.156	129	6x10	95	S35060156
35	7	3.5	.156	184	6x10	120	S35070156
35	7	3.5	.188	209	6x10	120	S35070188
40	7	3.5	.156	138	8x12	95	S40070156

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Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
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REGISTERED ARCHITECT No. AR-1740 19 March 2004
DAVID R. DAVIES STATE OF IDAHO

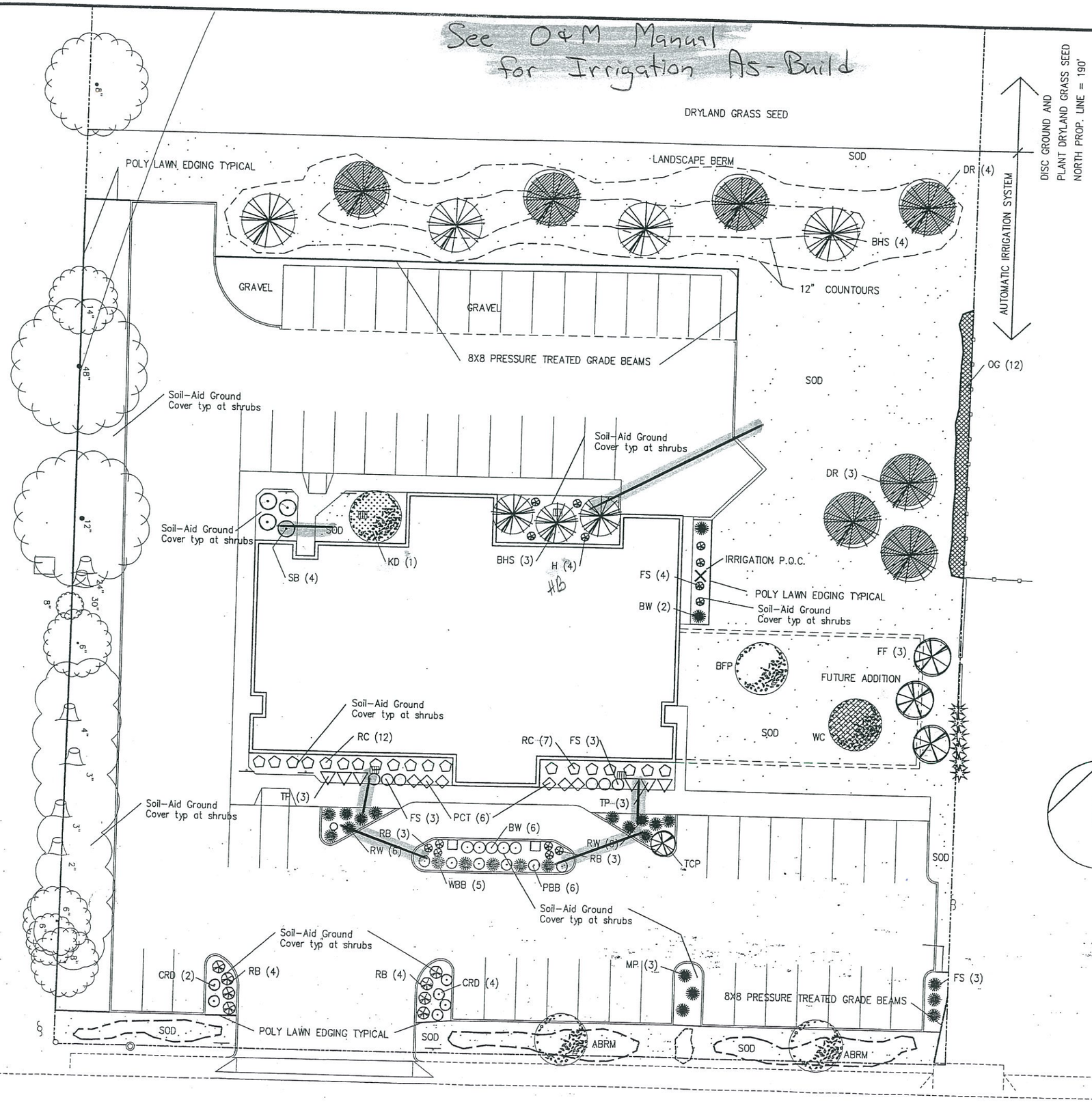
SITE DETAILS

Desert Sage Health Center
2280 American Legion Blvd.
Mountain Home, Idaho

SHEET 2.45

Mar 2004

See O&M Manual
for Irrigation As-Built



LANDSCAPE SCHEDULE

⊕	BHS	BLACK HILLS SPRUCE	5-7 FEET TALL
⊕	ABRM	AUTUM BLAZE RED MAPLE	2" MIN CALIPER
⊕	RM	RED MAPLE	2" MIN. CALIPER
	BFP	BRADFORD FLOWERING PEAR	2" MIN. CALIPER
⊕	KD	KOUSA DOGWOOD	2" MIN. CALIPER
	DR	DAWN REDWOOD	5-7 FEET TALL
	FF	FRASER FIR	5-7 FEET TALL
	WC	WEEPING CHERRY	2" MIN. CALIPER
	SB	SNOWBALL BUSH	5 GAL
⊕	HB	HOLLY BUSH	5 GAL
⊕	BW	BOXWOOD - WINTERGREEN	5 GAL
⊕	FS	FROBELI SPIREA	5 GAL
	RB	ROSEBUSH	5 GAL
⊕	MP	MUGO PINE	5 GAL
	WBB	WHITE BUTERFLY BUSH	5 GAL
	PBB	PURPLE BUTTERFLY BUSH	5 GAL
	CTP	POTENTILLA - CORANATION TRIUMP	5 GAL
	RC	CHOKEBERRY - RED	5 GAL
	TP	POTENTILLA TANGERINE	5 GAL
	TCP	THUNDERCLOUD PLUM	2" MIN. CALIPER
	RW	RED WEIGELA	5 GAL
	CRD	DOGWOOD - CORAL RED	5 GAL
	OG	OREGON GRAPE VINES	2 GAL

CONTRACTOR TO PROVIDE FULL LANDSCAPE DESIGN SUBMITTAL INCLUDING SHOP DRAWINGS AND PLANTING DETAILS

TOP SOIL DEPTH AT SHRUB BEDS: 12" MIN
SOIL-AID/MULCH DEPTH AT TREE BASE AND IN SHRUB AREAS: 3" MIN.
TOP SOIL AT SOD AREAS: 4" MIN.
PROPERLY STAKE AND TIE ALL TREES UTILIZING (3) RUBBER CINCH TIES
LAWN EDGING: BLACK DIAMOND; 36" DIA WHERE TREES OCCUR IN LAWN AREA
ALL PLANTING/TREES/SHRUBS TO BE WARRANTED FOR ONE FULL GROWING SEASON.
REPLACE ANY DEAD OR DYING PLANT MATERIALS DURING WARRANTY PERIOD.
BARE ROOT TREES ARE NOT ACCEPTABLE.
TOPSOIL: ASTM D 5268, pH RANGE 5.5 TO 7.4, FREE OF STONES 1" OR LARGER.
BERMS SHOWN ON THIS PLAN ARE THE SOLE RESPONSIBILITY OF THE LANDSCAPE CONTRCTOR
SUBSTITUTIONS FOR PLANT MATERIALS MUST BE REQUESTED 10 DAYS PRIOR TO BID.

Irrigation Sleeve

N

1 Landscape Plan
1" – 15' (half size: 1" = 30')

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REGISTERED ARCHITECT No. AR-1740 19 March 2004
DAVID R. DAVIES STATE OF IDAHO

LANDSCAPE PLAN

Desert Sage Health Center
2280 American Legion Blvd.
Mountain Home, Idaho

SHEET 2.50

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IRRIGATION PERFORMANCE SPECIFICATION

1. GENERAL DOCUMENTS
   a. SUMMARY
      i. Drawings and Contract Documents apply to this section.
      ii. This section includes:
         (1) Valves
         (2) Piping
         (3) Sprinklers
         (4) Specialties
         (5) Accessories
         (6) Controls
         (7) Wiring
      iii. Furnish and Install an underground sprinkler irrigation system to provide irrigation of the lawn and planing areas. The work shall cnosist of providing and installing all material necessary for a complete system including pipe, valves, fittings, heads, automatic contol equipment and all labor necessary for the installation of a satisfactorily operating system.
   b. DEFINITIONS:
      i. Supply Piping: Piping from water source to connections to irrigation system pressure piping. Piping is under same pressure as water supply. Supply piping is not included in the work of this section.
      ii. Pressure Piping: Piping downstream from supply piping to and including control valves. Piping is under irrigation system pressure. Pressure piping includes backflow preventers.
      iii. Circuit Piping: Piping downstream from control valves for control water flow to irrigation system zone.
      iv. Control Valve: Automatic (electrically operated) valve for control water flow to irrigation system zone.
      v. Drain Valve: Manual drain valve for draining of main pressure line.
   c. SYSTEM PERFORMANCE: 100 percent coverage.
   d. SUBMITTALS
      i. Product data
      ii. Wiring Diagrams
      iii. Maintenance data
      iv. Complete shop drawings showing location of all main and lateral lines and sizes, POC, sprinkler heads and type, valves with associated GPM, automatic controller and type, sleeve locations and wiring.
      v. Complete as-built drawings and operation and maintenance manuals.
   e. QUALITY ASSURANCE
      i. Comply with requirements of utility supplying water for backflow prevention.
      ii. Minimum water coverage in turf and planter areas: 100 percent.
   f. PROJECT CONDITIONS

      i. Perform site survey, research public utility records, and verify existing utility locations.
      ii. The project shall be designed for 50 PSI static water pressure and 35 GPM. Contractor to very exact pressures and adjust the system pipe sizes and zoning accordingly.
   g. SEQUENCING AND SCHEDULING
      i. Maintain uninterrupted water service to building during normal working hours. Arrange for temporary water shut off with owner.
   h. EXTRA MATERIALS
      i. Deliver the following to the owner:
         (1) (1) quick coupler
         (2) 10% of sprinklers
         (3) (2) valve keys
         (4) (2) quick coupler hose swivels
         (5) (2) quick coupler operating keys
   i. WARRANTY
      i. Irrigation contractor shall correct without dealy, at the contrctor's expense, any rouble that develops with the system due to faulty workmanship or materials during one (1) year after final acceptance of the work by the owner.
      ii. Irrigation contractor shall be responsible for the first year winterization.

2. PRODUCTS
   a. PIPES AND TUBES
      i. PVC Plastic pipe: ASTM D2241, PVC 1120, 200 PSIG min pressure rating. Class 200, solvent weld sockets.
   b. PIPE AND TUBE FITTINGS
      i. PVC ASTM D 2464, Schedule 80 threaded and ASTM D 2467 Schedule 80 socket type.
      ii. Dielectric Fittings: Assembly or fitting with insulations material isolating joined dissimilar metals to prevent galvanic action and stop corrosion.
      iii. Dielectric Unions: Factory fabricated union assembly 250 psig minimum working pressure.
   c. JOINING MATERIALS
      i. Solvent Cement: ASTM F 656 primer and ASTM D 2564 solvent cement.
   d. BACKFLOW PREVENTERS
      i. Description: ASSE Standard backflow preventers.
         (1) Working Pressure: 150 PSIG
         (2) 2 inch and smaller: bronze body with threaded ends
         (3) 2 ½ and larger: Bronze, cast-iron, steel or stainless steel body w/ flange ends.
      ii. Double-Check Backflow Prevention Assemblies: ASSE 1015, w/ shut-off valves on inlet and outlet and strainer on inlet. Include test cocks.
         (1) Pressure Loss: 12 psig
         (2) Gate valves supplied with and compatible for size and testing of

unit on inlet and outlet. 2" and smaller may be ball valves.
   e. VALVES
      i. General: Valves are for general-duty and underground applications.
   f. CONTROL VALVES
      i. Key operated manual Isolation and Control Valves: MSS SP-80, Class 125, globe valves, fitted for key operation.
      ii. Automatic Control Valves: Diaphragm-type normally closed, with manual flow adjustment and operated by 24 volt ac solenoid.
      iii. Quick Couplers: Factory fabricated 2-piece assembly. Include coupler water seal valve, removable upper body with spring loaded or weighted, rubber-covered cap, hose swivel with ASME B1.20.7, 3/4-11.5NH threads for garden hose on outlet and operating key.
      iv. Control Valve Box and Cover: Thermo-plastic valve boxes with lockable, snap-top lids. Max 2 valves per box.
         (1) Drainage backfill: Cleaned gravel or crushed stone, graded from 3 inch max. to 3/4" min.
      v. Service Boxes for Key-Operated Control Valves: Include valve key, 48 inches long with tee handle and key end to fit valve.
   g. SPRINKLERS
      i. Manufacturer's standard sprinklers designed to provide uniform coverage over entire area of spray shown on Drawings at available water pressure, as follows:
         (1) Housing: Plastic
         (2) Pop-up Spray: Fixed pattern with screw-type flow adjustment and stainless-steel reaction spring.
         (3) Pop-Up, Rotary Spray, Gear Drive, full-circle and adjustable part circle-type.
   h. AUTOMATIC CONTROL SYSTEM
      i. Low-voltage controller system made for control of irrigation system automatic control valves. Controller operates on 120 volts ac building power system, provides 24 voltes ac power to control valves and includes stations for at least required number of control valves.
      ii. Exterior Control Enclosures: Weatherproof enclosure with locking cover and (2) matching keys. Comply with NFPA 70 and NEMA 250, Type 4 and include provision for grounding.
      iii. Material: Stainless Steel
      iv. Mounting: Controller mounted in a stainless steel pedestal on concrete pad.
      v. Transformer: Internal-type and suitable for converting 120 volts ac building power to 24 volts ac power.
      vi. Controller Stations: Each station is variable from approximately 1 to 60 minutes. Include switch for manual or automatic operation of each station.
      vii. Timing Device: Adjustable 24 hour, 14 day clock to operate any time of day. Include provision for the following settings:

         (1) Setting to skip operation any day in timer period
         (2) Setting for operation every other day
         (3) Settings for operation (2) or more times daily
         (4) Include manual or semi-automatic operation without disturbing preset automatic operation
         (5) Provide NI-CAD battery and trickle charger to automatically power the timing device during power outages.
      viii. Wiring: UL 493, solid copper conductor, insulated cable, suitable for direct burial.
         (1) Feeder Circuit Cables: Type UF, No. 12 AWG minimum between building and controllers.
         (2) Low-Voltage, Branch Circuit Cables: Type UF, No. 14 AWG Min. Between controllers and automatic control valves in differing jacket colors. Install to the side fo the main line. Where control wires leave the main or lateral lines, install wire in Class 160 PVC conduit.
         (3) Splicing Materials: Pressure-sensitive, waterproof, thermoplastic wire connectors and other materials required to make specified connections. Locate all splices within valve boxes.
         (4) Add two extra control wires from panel to valves for use if a wire fails or for future addition and mark it in the control box as extra wire.
   i. DRIP IRRIGATION
      i. All planter beds are to be irrigated with a NETAFIM drip irrigation system.
      ii. All trees are to be irrigated with a NETAFIM drip irrigation system.
      iii. Utilize the following criteria:
         (1) NETFIM Techline drip tubing with 18" emitter spacing and .61 GPH emmitter flow spaced at 18".
         (2) A Techfilter with a triflurex ring is to be installed on each zone in conjunction with a rain bird or eq. DVF series remote valve. Filter size and type: 3/4" 120 mesh disc filter (DF075-120).
         (3) All zones are to be installed with a TLFV-1 line flushing valve installed with collar.
         (4) All zones are to have a TLARV in/vacuum relief valve installed at the highest points withing the zones.
         (5) All tubing is to be staked down with TLS6 6" soil staples.
         (6) Install extra emitters if necessary to ensure the health of the plant(s).

3. EXECUTION
   a. EXAMINATION
      i. Investigate and determine available water supply water pressure and flow characteristics.
   b. PREPARATION
      i. Set stakes to identify proposed sprinkler location. Obtain approval prior to excavation from general contractor.

   c. PAVING WORK
      i. Install piping in sleeves where crossing sidewalks, roadways and parking lots.
      ii. Install piping sleeves by boring under existing paving where possible.
   d. PIPING APPLICATIONS
      i. Main Lines:
         (1) 3 inch and smaller: Class 200 PVC plastic pipe, Schedule 80 PVC plastic, socket -type pipe fittings and solvent free cemented joints.
         (2) 4 inch and larger: Class 160 PVC plastic pipe, Schedule 80 PVC plastic, socket -type pipe fittings and solvent free cemented joints.
      ii. Circuit Piping and Sleeves:
         (1) All sizes: Class 200 PVC plastic pipe, Schedule 40 PVC plastic socket-type fittings and solvent-cement joints.
   e. PIPING SYSTEMS
      i. Install components having pressure rating equal to or greater than system operation pressure.
      ii. Install piping free of sage and bends.
      iii. Locate groups of pipes to permit valve servicing.
      iv. Pipe Connections:
         (1) Install unions adjacent to each valve and at final connection to each piece of equipment .
   f. PIPING INSTALLATION
      i. Install underground PVC piping according to ASTM D 2774
      ii. Lay piping on solid subbase without dips or depressions.
      iii. Install PVC piping in dry weather 40 degrees F or above for a period of at least 24 hours after pipe installation.
      iv. Install piping under sidewalks and paving in sleeves.
      v. Minimum cover:
         (1) Pressure piping: 18 inches
         (2) Circuit piping: 12 inches
         (3) Sleeves: 18 inches.
      vi. Lateral Line Pipe Sizing:
         (1) 3/4" pipe not to exceed 10 GPM
         (2) 1" pipe not to exceed 16 GPM
         (3) 1 1/4" pipe not to exceed 26 GPM
         (4) 1 ½" pipe not to exceed 35 GPM
         (5) 2" pipe not to exceed 55 GPM
         (6) 2 ½" pipe not to exceed 80 GPM
         (7) 3" pipe not to exceed 120 GPM
   g. VALVES AND BACKFLOW PREVENTION
      i. Install valves in valve control boxes - max (2) valves per box.
      ii. Install backflow preventers of type, size and capacity required. Include valves, and test cocks. Install according to plumbing code and authorities having jurisdiction (AHJ).
      iii. Do not install a bypass around the backflow preventer.

   h. SPRINKLER INSTALLATION
      i. Flush circuit piping with full head of water and install sprinklers after hydrostatic test is complete.
      ii. Locate part-circle sprinklers to maintain a min. distance of 12 inches from building exterior walls.
   i. AUTOMATIC CONTROL SYSTEM INSTALLATION
      i. Install per manufacturer's instructions. Install wiring in same trench as piping. Where no piping occurs, install wires in conduit.
   j. CONNECTIONS
      i. Connect piping to sprinklers, devices, valves, control valves, specialities and accessories.
      ii. Connect water supplies to irrigation systems. Include backflow preventers on potable water supplies.
      iii. Connect to power source, controllers and automatic control valves.
   k. FIELD QUALITY CONTROL
      i. Perform test of piping and valves before backfilling trenches. Repair leaks as required.
   l. CLEANING AND ADJUSTING
      i. Flush dirt and debris from piping before installing sprinklers and other devices.
      ii. Adjust automatic control valves to provide flow rate of rated operating pressure required for each sprinkler circuit.
      iii. Adjust settings of controllers and automatic control valves.
   m. COMMISSIONING
      i. Verify that speciality valves and accessories have been installed correctly and operate correctly.
      ii. VERIFY THAT NO SPRINKLERS HIT THE BUILDING WITH IRRIGATION WATER.
      iii. Verify that specified tests of piping are complete.
      iv. Check that sprinklers and devices are correct type.
      v. Check that damaged sprinklers and devices have been replaced with new materials.
      vi. Check that potable water supplies have correct type backflow preventers.
      vii. Energize circuits to electrical equipment and devices.
      viii. Adjust operating controls.
      ix. Perform operational testing after hydrostatic testing is complete, backfill is in place and sprinklers are adjusted to final position.
   n. DEMONSTRATION
      i. Demonstrate the complete system operation to the Owner.
      ii. Review operating and maintenance information with the Owner.

End of section

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IRRIGATION NOTES

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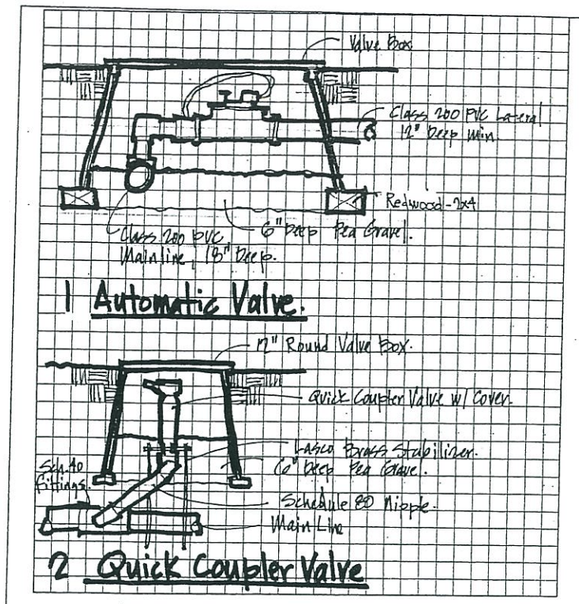

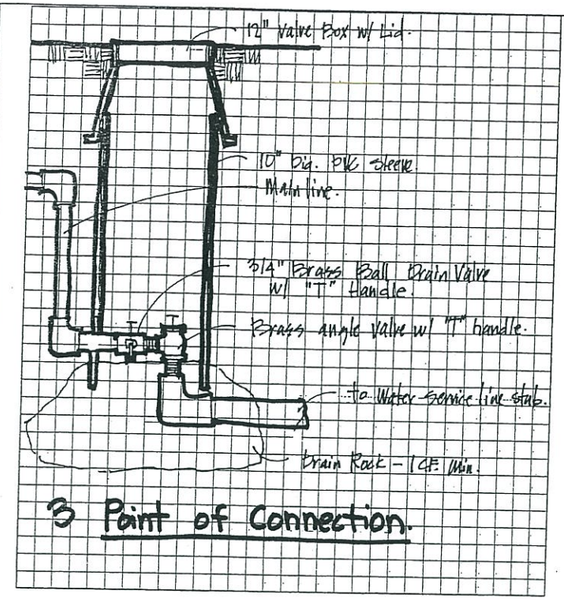

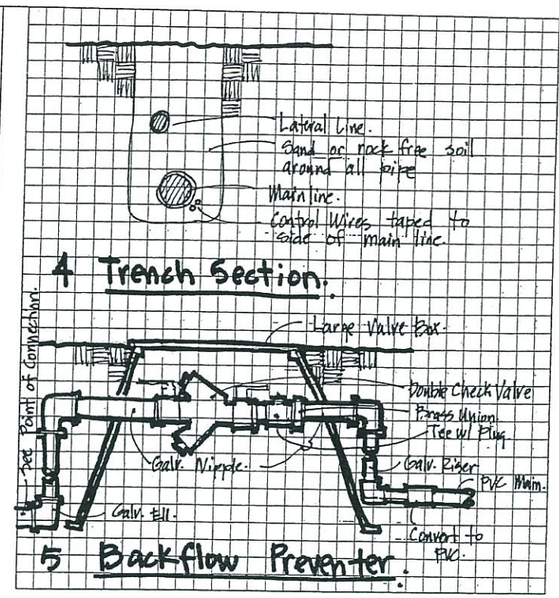

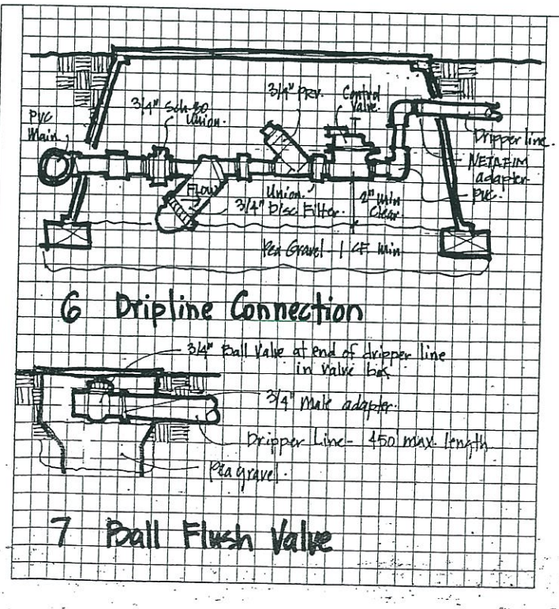

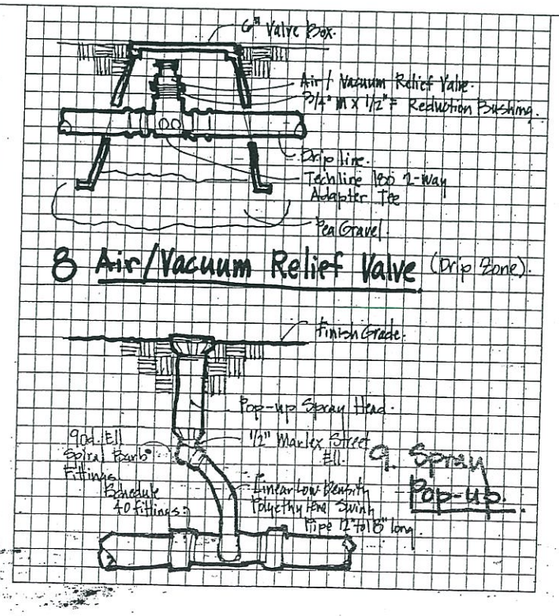

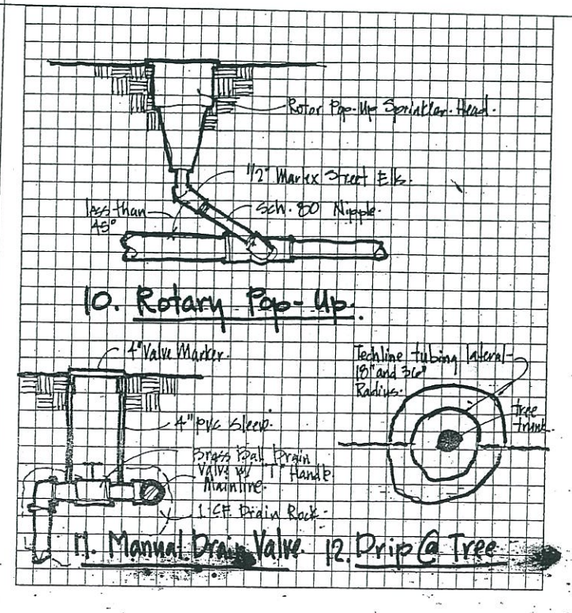

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IRRIGATION DETAILS

Desert Sage Health Center
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SHEET 2.66

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JOB NAME: Desert Sage Health Clinic
JOB NUMBER: S032273
CLIENT: Medical Design Group

GENERAL:

1. Unless noted otherwise, all work shall conform to the requirements of the 2000 International Building Code. It is the Contractor's responsibility to verify all existing conditions at the job site, and to fully coordinate all dimensions and conditions of details with other disciplines. Any field conditions requiring construction that is different from that shown on the plans shall be brought to the attention of the Architect. Any conflicting details shown in the drawings shall be brought to the attention of the Architect prior to the construction of said detail. Do not scale drawings.
2. All support of construction loads shall be the responsibility of the Contractor. All shoring and bracing required for the protection of the life and property during the construction process shall be the responsibility of the Contractor. All procedures of soil excavation, backfill, and support of adjacent property during earthwork shall be the responsibility of the General Contractor.
3. All dimensions indicated on plans shall be to face of studs, face of concrete block, face of rough concrete, centerline of columns, bottom of metal deck, and top of slab, unless noted otherwise. Refer to Architectural drawings for all dimensions not indicated on structural drawings.
4. Work these drawings with architectural, mechanical, and electrical drawings.
5. The following design criteria shall be enforced:
   - A. Roof Live Load: 20 PSF
   - B. Roof Snow Load:
     - A) Ground Snow Load: Pg = 20 PSF
     - B) Exposure Factor: Ce = 1
     - C) Thermal Factor: Ct = 1
     - D) Slope Factor: Cs = 1
     - E) Importance Factor: I = 1
     - F) Flat Roof Load: Pf = 25 PSF
     - G) Sloped Roof Load: Ps = 25 PSF
   - C. Floor Live Load: 60 PSF Labs, 50 PSF Office, 40 PSF Wards/Rooms
   - D. Corridor/Stair Live Load: 100 PSF
   - E. Roof Dead Load: 30 PSF
   - F. Floor Dead Load: 12 PSF
6. Wind Forces:
   - Wind Building Category: I
   - Wind Speed, 3 Second Gust: V3S 90 MPH
   - Wind Exposure Category: B
   - Wind Importance Factor: 1.0
   - Roof Net Uplift Due to Wind: 15.8 PSF
   - Components and Cladding in accordance with IBC Section 1609.6.5

Enclosed Portions Zone 1:	10 PSF	-12.1 PSF
Enclosed Portions zone 2:	10 PSF	-19.5 PSF
Enclosed Portions Zone 3:	10 PSF	-19.5 PSF
Wall Zone 4:	12.4 PSF	-13.6 PSF
Wall Zone 5:	12.4 PSF	-15.1 PSF
Roof Overhang Zone 2:	-27.2 PSF	
Roof Overhang Zone 3:	-28.4 PSF	

7. Seismic Forces:
   - Seismic Use Group: I
   - Spectral Response Coefficient: SDS = .333
   - Spectral Response Coefficient: SD1 = .155
   - Site Class: D
   - Seismic Design Category: C
   - Seismic force Resisting System: Light framed walls with wood shearwalls
   - Design Base Shear: 12217.16
   - Analysis Procedure: Simplified
8. Load combinations for Allowable Stress Design:
   D + L + (LR or S or R)
   D + L + (wW)
   D + L + wW + S/2
   D + L + S + wW/2
   D + L + S + E/1.4
   0.9 D + E/1.4
   Where wind loads are calculated in accordance with IBC Section 1609.6 or ASCE 7, the coefficient w in the above formulas shall be taken as 1.3. For other wind loads w may be taken as 1.0. Flat roof snow loads of 30 psf or less need not be combined with seismic loads. Where flat loads exceed 30 psf, 20 percent shall be combined with seismic loads.
9. Load combinations and Factors for strength design.
   1.4D
   1.2D + 1.6L + 0.5 (LR or S or R)
   1.2D + 1.6 (LR or S or R) + F1, L or 0.8W)
   1.2D + 1.6W + F1, L + 0.5 (LR or S or R)
   1.2D + 1.0E + f1, L + F2S
   0.9D + (1.0E or 1.6W)

   f1 = 1.0 for floors in places of public assembly, for live loads in excess of 100 psf and for parking garage live loads.
   f1 = 0.5 for other live loads.
   f2 = 0.7 for roof configurations that do not shed snow off the structure.
   f2 = 0.2 for other roof configurations. See also IBC Section 1605.2.1 Exceptions.
10. Components and cladding; Use the most stringent wind load obtained from code and the project specification. Cladding manufacturer shall consider increase pressure coefficients at building corners, eaves, and rakes.

FOUNDATION:

1. Followed recommendations from soils investigation report prepared by Materials Testing & Inspection, Inc. #B30023g dated January 28, 2003.
2. Minimum frost depth to bottom of footing from ground surface = 24 inches.
3. Maximum foundation soil bearing pressure used = 3000#/SF.
4. Backfill shall be compacted to 95% of Modified Proctor Density in accordance with ASTM D-1557.
5. Prior to construction, remove all construction debris, surficial fill, and topsoil at all pavement, sidewalk and building areas, and replace with structural fill, see soils report for specific requirements.
6. All footings shall be poured in neat excavated trenches. Trench shall be approved by inspector prior to placement of concrete at locations where structural fill is required, fill shall be placed in 6" lifts and compacted at optimum moisture content. Refer to soils investigation for depth and extent of structural fill. Not Given
7. The Contractor shall familiarize himself with the survey and the subsurface investigation report before starting construction. All foundation work shall be in accordance with the recommendations of the soils report except where noted otherwise on drawings or specifications.
8. The Contractor shall note all subsurface interferences noted in the geotechnical report and Construction Documents by other consultants including but not limited to rock, fills, utility lines, etc.
9. A soils testing laboratory may be retained by the owner to provide construction review to ensure conformance with the Construction Documents during the excavation, backfill, and foundation phases of the project.
10. The soils testing laboratory shall discuss with the Engineer the design intent of the Construction Documents and the testing procedures used to ensure conformance with the Construction Documents before construction begins. Inform the Engineer of any variance in these procedures.
11. It shall be the responsibility of the soils testing laboratory to: determine topsoil and excavation stripping depth; inspect all subsoil exposed during stripping. Site grading, and excavation operations; approve fill materials; perform density tests of fills to ensure placement per specification requirements; inspect foundation-bearing surfaces.
12. Step footing, where required shall be placed, at a ratio of one (1) vertical to two (2) horizontal with a maximum vertical step of 2'– 0" unless noted otherwise.
13. Inundation and long term exposure of bearing surfaces, which will result in deterioration of bearing formations, shall be prevented. Footing shall be placed immediately following footing excavations and bearing surface inspection.
14. All fill materials shall be free of organic contamination and other deleterious matter.
15. For back fill against grade beams, etc., Place in 8" thick layers, with each lift compacted at near optimum moisture content, until a minimum in place density of 95% of the maximum density as determined by ASTM test procedure D-1557 is achieved.
16. Notify structural and geotechnical Engineer of any unusual soil conditions that are in variance with the soils report.
17. See Geotechical report building pad preparation.

ok Quantity ?

CONCRETE (CAST IN PLACE AND TILT-UP):

1. All concrete materials shall comply with the standards specified in the latest edition

Medical Design Group
Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

REGISTERED ARCHITECT No. AR-1740 15 March 2004
DAVID R. DAVIES STATE OF IDAHO

STRUCTURAL SPECS

Desert Sage Health Center
2280 American Legion Blvd.
Mountain Home, Idaho

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of the ACI 318 and IBC building code. Each mix design shall be established in accordance to chapter 5 of ACI 318 and IBC and submitted to the Engineer at least 2 weeks prior to the placement of concrete.

2. Concrete testing shall be performed by an approved independent testing laboratory. The testing agency shall test (4) cylinders from each class of concrete used each day. A minimum of (1) sample must be taken from each 50 cubic yards of concrete.
3. All concrete shall develop a minimum compressive in 28 days as follows:

Location	Special Inspect.	Slump (max)	Aggregate (max size)	Compressive Strength (PSI)
Footings	NO	5	1" Ø	3500
Stem Walls	NO	5	1" Ø	3500
Columns	Yes	4	¾" Ø	4000
Retaining Wall	Yes	5	¾" Ø	4000
Tilt-up	Yes	5	¾ Ø	4000
Beams	Yes	5	¾" Ø	4000
Interior Slabs	NO	5	¾" Ø	3500
Exterior Slabs	NO	5	¾" Ø	4000
Composite Deck	YES	5	¾" Ø	4000

Slump based upon NO additives. Contractor shall be responsible for maintaining required strength.

4. All concrete shall have the following maximum water cement ratios:

Compressive Strength	Non-air Entrained	Air Entrained
3,500 PSI	0.60	0.50
4,000 PSI	0.57	0.48
5,000 PSI	0.50	0.40
6,000 PSI	0.45	0.40

5. Minimum Cement content = 500 #/ YD.
6. When special inspection is required by design, such special inspection shall be in conformance with special Inspections section. When special inspection is not required, higher concrete strengths have been specified for quality control.
7. Any concrete that fails to meet specifications shall be removed and replaced at the expense of the Contractor.
8. The Contractor shall be responsible for the construction, design, placement and removal of all formwork. All shoring during placement of concrete is the sole responsibility of the Contractor.
9. Provide 5%(+ 1%) air entrainment in all concrete exposed to the weather.
10. All concrete work shall conform to the latest edition of ACI 117 "Standard Specifications for Tolerances for Concrete Construction Materials."
11. Veneer anchors = "Dur-O-Wall" Duro-O-Eye or equal in first and second joints above and below openings and at 16" on center elsewhere.

CONCRETE REINFORCING:

1. All reinforcing bars shall conform to ASTM A-615 or ASTM A-706 #4 bars and larger grade 60, stirrups grade 60, Fy=60,000 PSI min., #3 bars and ties grade 40, Fy= 40,000 PSI min., unless noted otherwise. Bars shall be tied secure prior to placement of concrete to maintain proper placement after concrete is in place. Lap all bars per Chapter 12 of ACI 318 unless noted otherwise. Splice bars only where shown on plans or in accordance with Item #3 below.
2. Maintain the following concrete coverage for concrete reinforcing:
   - Unformed surfaces in contact with earth.....3"
   - Formed surfaces in contact with earth.....2"
   - Formed surfaces exposed to outside weather.....2"
   - Slabs and walls not exposed to weather.....1 ½ "
   - Clear distance between bars.....2" U.N.O.
3. All detailing, fabrication and placing of reinforcing bars, unless otherwise noted, shall conform to the latest edition of the ACI 318, "Building Code Requirements for Reinforce Concrete", the latest ACI " Manual of Standard Practice for Detail Reinforced Concrete Structures" and IBC International Building Code.
4. No tack welding for reinforcing in the field will be permitted.
5. Shop drawings of all bars and locations shall be submitted to the Structural Engineer for review prior to fabrication.
6. Normal weight concrete shall have a unit weight of 145 to 155 pounds per cubic foot. Use of calcium chloride is not permitted in any concrete mixes. All other additives and admixtures must have the written approval of the Engineer.
7. Welded wire mesh reinforcing shall conform to ASTM A-185 and be furnished in flat sheets, unfinished. Lap mesh 8 inches minimum.
8. Fibermesh fibers are collated fibrillated polypropylene olefin fibers or equal ¾ inch in length. Fibermesh Fibers shall be added to the concrete mix at a minimum rate of 1.5 pounds (0.1 percent by volume) per cubic yard of concrete. The dosage shall not exceed 15 pounds per cubic yard.

STRUCTURAL AND MISCELLANEOUS STEEL:

1. All steel work shall conform with AISC specifications.
2. Plates, angles and channels, ASTM A36.
3. W shapes ASTM A992, Grade 50.
4. Tubes, ASTM A500, Grade B.
5. Pipes, ASTM A53, Grade B.
6. Use E70 electrodes for all welds. Metal deck welding can be E60 or E70 electrodes for welding.
7. Camber beams only as specified in plans for 1½ times the supported dead load, do not camber continuous beams.
8. Bolts ASTM A307 for connections to concrete, ASTM A307 for steel connections.
9. All welding shall be performed by welders qualified by an independent testing agency. Qualifications shall be based on the requirements of IBC Section 2208.1.

COLD-FORMED STEEL FRAMING:

1. Erect partition walls and shear walls after roof system has been installed with complete dead and mechanical loads.
2. Attach gypsum board with #10 screws at 12" o.c. at all studs, tracks, etc..
3. Calculate structural characteristics of cold-formed metal framing according to AISI's "Cold-Formed Steel Design Manual".
4. Cold rolled metal framing shall be manufactured according to AISI specifications and shall meet the following minimum properties and criteria:
   a. Yield Strength: 50,000 psi for 16 gauge and heavier materials. 33,000 for 18 gauge and lighter materials.
   b. Studs: (S is effective properties, I is gross properties).
      1. 3½" x 20 ga., Sx = .244, Ix = .444, Iy = .059
      2. 3½" x 18 ga., Sx = .316, Ix = .562, Iy = .074
      3. 3½" x 16 ga., Sx = .381, Ix = .693, Iy = .090
      4. 3½" x 14 ga., Sx = .487, Ix = .854, Iy = .108
      5. 4" x 20 ga., Sx = .292 Ix = .606 Iy = .062
      6. 4" x 18 ga., Sx = .378 Ix = .769 Iy = .077
      7. 4" x 16 ga., Sx = .456 Ix = .950 Iy = .093
      8. 4" x 14 ga., Sx = .585 Ix =1.171 Iy = .113
      9. 6" x 20 ga., Sx = .512 Ix =1.590 Iy = .069
      10. 6" x 18 ga., Sx = .665 Ix =2.026 Iy = .086
      11. 6" x 16 ga., Sx = .807 Ix =2.510 Iy = .105
      12. 6" x 14 ga., Sx =1.035 Ix =3.109 Iy = .126
   c. Joists: (S is effective properties, I is gross properties).
      1. 6" x 18 ga., Sx = .777 Ix = 2.600 Iy = .243
      2. 6" x 16 ga., Sx =1.003 Ix = 3.312 Iy = .327
      3. 6" x 14 ga., Sx =1.322 Ix = 4.115 Iy = .402
      4. 6" x 12 ga., Sx =1.852 Ix = 5.556 Iy = .522
      5. 8" x 18 ga., Sx =1.128 Ix = 5.140 Iy = .264
      6. 8" x 16 ga., Sx =1.481 Ix = 6.559 Iy = .356
      7. 8" x 14 ga., Sx =1.971 I = 8.166 Iy = .437
      8. 8" x 12 ga., Sx =2.776 Ix =11.104 Iy = .568
      9. 10" x 16 ga., Sx =1.812 Ix =11.256 Iy = .376
      10. 10" x 14 ga., Sx =2.753 Ix =14.035 Iy = .462
      11. 10" x 12 ga., Sx =3.836 Ix =19.182 Iy = .601
      12. 12" x 16 ga., Sx =2.152 Ix =17.631 Iy = .392
      13. 12" x 14 ga., Sx =3.268 Ix =22.006 Iy = .481
      14. 12" x 12 ga., Sx =5.033 Ix =30.195 Iy = .626
   d. Track: (S is effective properties, I is gross properties).
      1. 3½" x 20 ga., Sx = .170 Ix = .458 Iy = .049
      2. 3½" x 18 ga., Sx = .246 Ix = .607 Iy = .064
      3. 3½" x 16 ga., Sx = .312 Ix = .764 Iy = .079
      4. 3½" x 14 ga., Sx = .425 Ix = .967 Iy = .099
      5. 4" x 20 ga., Sx = .207 Ix = .619 Iy = .051
      6. 4" x 18 ga., Sx = .297 Ix = .818 Iy = .066
      7. 4" x 16 ga., Sx = .376 Ix =1.029 Iy = .082
      8. 4" x 14 ga., Sx = .510 Ix =1.300 Iy = .102
      9. 6" x 20 ga., Sx = .330 Ix =1.585 Iy = .057
      10. 6" x 18 ga., Sx = .539 Ix =2.082 Iy = .073
      11. 6" x 16 ga., Sx = .680 Ix =2.616 Iy = .091
      12. 6" x 14 ga., Sx = .909 Ix =3.300 Iy = .113
5. Install cold formed steel framing and accessories in accordance with the manufacturer's recommendations.
6. Fastening of cold formed steel framing shall be with self-drilling screws or welding as

Medical Design Group
Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

REGISTERED ARCHITECT No. AR-1740 15 March 2004
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noted in the Construction Documents, unless noted otherwise.
7. Provide horizontal bridging at all bearing walls at 4'-0" o.c. vertically maximum.
8. Provide temporary bracing for all bearing walls during construction prior to sheathing.
9. Veneer to be anchored to stud walls with "Dur-O-Wall" D/4 431 seismic strap anchors at 16" on center each way with #10 screws.

LUMBER:

1. Sawn lumber for joists, etc. (2x6 or larger) = No. 2 Doug Fir Larch.
2. Sawn lumber for joists, etc. (2x4 or larger) = No. 2 Doug Fir Larch.
3. Sawn lumber for wall plates = No. 2 Doug Fir Larch.
4. 2xStuds = Stud Doug Fir Larch.
5. Posts, stringers and beams = No. 1 Doug Fir Larch.
6. Roof ply/OSB = 15/32" CDX, 32/16 APA Rated unblocked, provide one H Clip per span minimum, unless noted otherwise in plans. If roof is blocked, install blocking and do not install H Clips.
7. Floor ply/OSB = 23/32" CDX, 48/24 APA Rated unblocked.
8. Roof nailing = 8d at 6" o.c. all supported edges, 12" o.c. in field, see also diaphragm schedule.
9. Floor nailing = 10d at 6" o.c. all supported edges, 12" o.c. in field.
10. Wall ply/OSB = 7/16" CDX, APA Rated.
11. Wall nailing = 8d at 6" o.c. edges and 12" o.c. in field with blocked ply/OSB edges as noted in plans. See also Shearwall Schedule.
12. All ply/OSB nailing shall be 3/8" minimum from panel edges. Provide 1/8" spacing between panel edges by means of nails or Simpson PSCL sheathing clips.
13. All nailing shall, at a minimum, meet the requirements of IBC Chapter 23 Table 2304.9.1 Fastening Schedule.
14. All nails are to be common nails unless noted otherwise. All staples are 7/16" crown x 1-3/4" long unless noted otherwise. All nails and staples shall conform with IBC Chapter 23, Section 2303.6.
15. Follow manufacturer's recommendations for all Simpson, or equal, connections. All connectors shall conform to IBC Chapter 23, Section 2303.5.
16. Glu-Lam beams:
    a. Simple span members combination 24F-V4 DF/DF.
    b. Continuous span members combinations 24F-V8 DF/DF.
    c. Provide minimum camber radius of 2,000 ft. for 1-1/2 times the supported dead load if camber is specified in the Construction Documents.
17. Trus-Joist products:
    a. Roof joists shown as TJI etc. shall be designed for the loads specified and shall conform to Trus-Joist specification.
    b. Joists exceeding 24' in length shall be cambered to a standard radius of R = 2250.
    c. Any alternate joist system(s) shall be the same depth and load carrying capacity as the Trus-Joist system shown on the drawings.
    d. Camber shall not exceed Trus-Joist maximum camber for commercial Parallams. Camber is specified in Construction Documents.
    e. Micro Lam Products shall conform to the following values:

Microllam LVL;	Parallam PSL (18" deep end under);	Parallam PSL (Over 18" deep);
E = 1.9E6 psi	E = 2.0E6 psi	E = 2.0E6 psi
Fb = 2600 psi	Fb = 2900 psi	Fb = 2900 psi
Fc per = 750 psi	Fc per = 650 psi	Fc per = 750 psi
Fc par = 2310 psi	Fc par = 2900 psi	Fc par = 2900 psi
Fv = 285 psi	Fv = 290 psi	Fv = 290 psi

Timber Strand LSL (Headers);	Timber Strand LSL (Wall studs)
E = 1.5E6 psi	E = 1.5E6 psi
Fb = 2250 psi	Fb = 2250 psi
Fc per = 750 psi	Fc per = 350 psi
Fc par = 1950 psi	Fc par = 1950 psi
Fv = 285 psi	Fv = 400 psi

18. Premanufactured Trusses
    a. Truss Loading:
        Top Chord D.L. = 25 PSF.
        Bottom Chord D.L. = 5 PSF.
        Top Chord L.L. = 20 PSF, S.L. = 25 PSF.
    b. Member Properties:
        Chords shall be #2 Douglas Fir or better.
        Webs shall have minimum Modulas of Elasticity of 1,500,000 psi.
    c. All truss blocking shall be provided by the truss manufacturer and constructed with approved plates.
    d. Truss manufacturer shall verify all truss dimensions, accounting for tolerances, connections, and splice requirements.
    e. All truss connections design shall be the responsibility of the truss manufacturer. Truss manufacturer shall design all truss connections for loads shown in Structural Notes, Construction Documents and as required by governing codes.
    f. Truss profiles shown are representations of possible configurations of web locations and member sizes. Truss manufacturer shall submit shop drawings for approval in accordance with IBC Chapter 23, Section 2303.4.1. All trusses shall be designed by a registered Professional Engineer and all shop drawings shall be stamped and signed by a registered Professional Engineer in the State of Idaho. Shop drawings shall be submitted for approval prior to construction.
    g. Truss manufacturer shall provide proof of approved third party inspection as required by IBC Chapter 23, Section 2303.4.
    h. Each truss shall be marked with the following information:
        a. Manufacturer's identity.
        b. Design load.
        c. Truss spacing.
19. Brick veneer to be anchored to stud walls with 22 ga. x 1" nominal anchors at 1'-4" o.c., both vertical and horizontal.
20. Log work shall conform to the Log Building Standards, latest edition.
21. Log properties shall conform to the Timber Products Inspection Design Values.
22. All logs shall be Lodgepole Pine No. 1. The diameter shall be as noted in the plans.

DEFERRED SUBMITTALS

The following list of deferred submittals shall be submitted to Architect/Engineer for review in accordance with IBC Section 106.3.4.2.

Pre-Engineered Trusses

SPECIAL INSPECTION

Special Inspection, as specified in Chapter 17, Section 1704 of the IBC, is required as noted for the following items. The Contractor shall provide a minimum of 48 hours notice to Special Inspector prior to inspection.

I. Steel Construction:
   A. Fabrication:
      - Not required per IBC Section 1704.3, Exception 1.
      1. Material verification of high-strength bolts;
         - Not required.
      2. Inspection of high strength bolting:
         - Not required.
      3. Inspection of Welding:
         a. Structural Steel.
            - Not required.
         b. Reinforcing Steel:
            - Not required.

II. Concrete Construction:
   1. Footings & Foundations:
      - Not required per IBC Section 1704.4, Exception 1, 2, 3, 4 or 5.
   2. Inspection of reinforcing steel:
      - Not required.
   3. Inspection of bolts in concrete:
      - Not required.
   4. Verification of required mix design:
      - Not required.
   5. Sampling and testing concrete:
      - Not required.
   6. Inspection of concrete and shotcrete placement:
      - Not required.
   7. Inspection of specified curing temperature and techniques:
      - Not required.
   8. Inspection of prestressed concrete:
      - Not required.
   9. Erection of precast concrete members.
      - Not required.
   10. Verification of in-situ concrete, prior to stressing of tendons in post tensioned concrete and prior to removal of shoring and forms from beams and structural slabs.
      - Not required.

III. Wood Construction:
   - Per soils report.

IV. Soils:

Medical Design Group
Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
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- Not required per IBC Section 1704.7 Exception.
- Required per IBC Section 1704.7.1.
- Required per IBC Section 1704.7.2.
- Required per IBC Section 1704.7.3.

XI. Adhesive and/or epoxy anchors:
- Provide special inspection.

DETAIL FILENAME:
D:\ERIC\PROJECTS\DESERT SAGE\shearwall1

CREATION DATE:
26/SEPT/03

PINNACLE
Engineers, Inc.
870 N. Linder Suite B, Meridian, Idaho 83642
(208) 887-7760

DRAWN BY:
EW

CHECKED BY:
EW

SHEAR WALL SCHEDULE

MARK #	SHEATHING	NAILING	END MEMBERS	SILL ANCHORS
1	APA 7/16" PLY/OSB, ONE SIDE, BLOCKED	8d @ 6" O.C. EDGES, 8d @ 12" O.C. FIELD	(1) 2 x	1/2"ø x 7" EMBED. @ 3'-0" O.C.
2	APA 7/16" PLY/OSB, ONE SIDE, BLOCKED	8d @ 4" O.C. EDGES, 8d @ 12" O.C. FIELD	(1) 2 x	1/2"ø x 7" EMBED. @ 2'-0" O.C.

NOTE: SILL ANCHOR SPACING IS UNDER SHEAR WALLS, SPACE ALL OTHER EXTERIOR SILL ANCHORS @ 4'-0" O.C.

TABLE OF EQUIVALENT FOR STAPLES
(VALID FOR LATERAL LOAD ONLY)

COMMON NAIL SPACING	EQUIVALENT SPACING OF APPR'D FASTENER — STAPLES				
	GAUGE	16	15	14	13
	PENETRATION	1"	1"	1"	1"
6d AT DIA. = .113 PEN. = 1 1/4"	2" O.C.	NA	2" O.C.	2" O.C.	3" O.C.
	3" O.C.	2" O.C.	3" O.C.	3" O.C.	5" O.C.
	4" O.C.	3" O.C.	4" O.C.	5" O.C.	6" O.C.
	6" O.C.	5" O.C.	6" O.C.	7" O.C.	8" O.C.
	12" O.C.	8" O.C.	10" O.C.	12" O.C.	12" O.C.
8d AT DIA. = .131 PEN. = 1 1/2"	2" O.C.	NA	NA	NA	2" O.C.
	3" O.C.	NA	2"	2"	3" O.C.
	4" O.C.	2" O.C.	3" O.C.	3" O.C.	5" O.C.
	6" O.C.	4" O.C.	5" O.C.	6" O.C.	6" O.C.
	12" O.C.	6" O.C.	8" O.C.	12" O.C.	12" O.C.
10d AT DIA. = .148 PEN. = 1 5/8"	2" O.C.	NA	NA	NA	NA
	3" O.C.	NA	NA	NA	2" O.C.
	4" O.C.	NA	2" O.C.	2" O.C.	3" O.C.
	6" O.C.	2" O.C.	3" O.C.	4" O.C.	5" O.C.
	12" O.C.	4" O.C.	5" O.C.	6" O.C.	8" O.C.

NOTES:
1) PENETRATION IS THE DEPTH OF THE EMBEDMENT OF THE STAPLE OR NAIL INTO THE MAIN MEMBER REQ'D TO ATTAIN ITS FULL CAPACITY SHEAR VALUE FOR LATERAL LOADING.
2) NAILS ARE COMMON NAILS. STAPLES ARE 7/16" CROWN x 1 3/4" LONG.

HOLDOWN SCHEDULE

MARK #	TYPE	WOOD MEMBER	COMMENTS
■	SIMPSON STHD14/STHD14RJ	(2) 2x OR (1) 4x	SEE SHEARWALL SCHEDULE RJ – RIM JOIST APPLICATION

19/32"

DIAPHRAGM SCHEDULE

MARK #	MATERIAL	BLOCKED	NAILING
A	~~[illegible]~~ PLY, 32/16, APA RATED (MIN.)	NO	8d @ 6" O.C. EDGES, 12" O.C. FIELD
B	~~[illegible]~~ 48/24, APA RATED (MIN.)	NO	10d @ 6" O.C. EDGES, 12" O.C. FIELD
	(1 1/8" sturdi-floor		glue & nail.

SHEARWALL, HOLDOWN & DIAPHRAGM SCHEDULE

Medical Design Group
Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

REGISTERED ARCHITECT
No. AR-1740
15 March 2004
DAVID R. DAVIES
STATE OF IDAHO

STRUCT/ARCH SPECS

Desert Sage Health Center
2280 American Legion Blvd.
Mountain Home, Idaho

SHEET 3.04

Mar 2004

Permit Number

Checked By/Date

Envelope Compliance Certificate
2001 IECC

COM*check-EZ* Software Version 2.5 Release 1
Data filename: Untitled

Section 1: Project Information

Project Name:	Desert Sage Health center
Designer/Contractor:	Medical Design Group, Architect
Document Author:	David R. Davies

Section 2: General Information

Building Location (for weather data):	Mountain Home, Idaho
Climate Zone:	13b
Heating Degree Days (base 65 degrees F):	6176
Cooling Degree Days (base 65 degrees F):	741
Project Type:	New Construction

Building Type	Floor Area
Medical and Clinical Care	8557

Section 3: Requirements Checklist

Bldg. |
Dept. |
Use |

Air Leakage, Component Certification, and Vapor Retarder Requirements

[ ] | 1. All joints and penetrations are caulked, gasketed, weather-stripped, or otherwise sealed.
[ ] | 2. Windows, doors, and skylights certified as meeting leakage requirements.
[ ] | 3. Component R-values & U-factors labeled as certified.
[ ] | 4. Vapor retarder installed.

Climate-Specific Requirements

Component Name/Description	Gross Area	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U-Factor
Roof 1: All-Wood Joist/Rafter/Truss	7323	38.0	0.0	0.028	0.054
Roof 2: All-Wood Joist/Rafter/Truss	1188	30.0	0.0	0.035	0.054
Skylight 1: Metal Frame, Double Pane with Low-E Tinted, SHGC 0.59	64	---	---	0.600	0.054
Exterior Wall 1: Wood Frame, Any Spacing	2431	21.0	6.0	0.045	0.086
Window 1: Metal Frame with Thermal Break, Double Pane with Low-E Tinted, SHGC 0.58, PF 0.75	702	---	---	0.540	0.579
Window 2: Metal Frame with Thermal Break, Double Pane with Low-E Tinted, SHGC 0.58, PF 0.56	32	---	---	0.540	0.579
Door 1: Glass, Tinted, SHGC 0.47, PF 0.50	96	---	---	0.920	0.579
Exterior Wall 2: Wood Frame, Any Spacing	1309	21.0	0.0	0.062	0.086
Interior Wall 1: Wood Frame, Any Spacing	160	19.0	0.0	0.066	0.136
Interior Wall 2: Metal Frame, 16" o.c.	240	19.0	0.0	0.110	0.136

(a) Budget U-factors are used for software baseline calculations ONLY, and are not code requirements.

Envelope PASSES: Design 29% better than code

Section 4: Compliance Statement

The proposed envelope design represented in this document is consistent with the building plans, specifications and other calculations submitted with this permit application. The proposed envelope system has been designed to meet the 2001 IECC, Chapter 8, requirements in COM*check-EZ* Version 2.5 Release 1 and to comply with the mandatory requirements in the Requirements Checklist.

Dave Davies — Principal Envelope Designer-Name
Signature
29 Jan 04 — Date

Medical Design Group
Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

REGISTERED ARCHITECT No. AR-1740 15 March 2004
DAVID R. DAVIES STATE OF IDAHO

ENERGY ANALYSIS

Desert Sage Health Center
2280 American Legion Blvd.
Mountain Home, Idaho

SHEET 3.05

Mar 2004 | ds305.dwg 01/29/04 08:53

DIVISION 01 - General

01.03 Any requested substitutions to be accompanied with the CSI substitution request form and delivered to the office of the Architect at least 10 days prior to bid date.

01.04 Payment Application to be on form AIA G702 on or before 25th of the month. Payment by Owner within 30 days after certification by Architect, approval by the owner and acceptance by the funding agency.

01.06 All submittals required to be submitted to the architect within 30 days of notice to proceed. Architect to review and return within 14 calendar days.

01.08 General contractor required to provide the following for this project:
- Full time on-site superintendent
- Temporary electricity, lighting, heat, ventilation, water, sanitary facilities
- On-site telephone and fax machine
- Required construction barriers and/or fencing
- Progress cleaning and final cleaning prior to Owner occupancy.
- 4' x 8' professionally painted job site sign approved by the Architect erected within 10 days of Notice to Proceed.
- Full Labor, Performance and Payment bonds.

01.09 All work to be in full conformance with applicable codes and laws.

01.10 All materials included in the work to be new.

01.11 Construction Close Out:
General contractor to submit written certification to Architect that work is in full conformance with the contract documents.
Owner training has been accomplished to the satisfaction of the Owner.
Equipment systems are adjusted, tested and fully operational
Close out submittals (2 copies) have been approved by the Architect.
Close out submittals to include: Certificate of Occupancy, Project record documents, O&M data, Warranties and Bonds, Spare parts and Maintenance Materials, Keys, Evidence of Payment and Release of Liens, Consent of Surety to Final Payment, Certified completed list of final punch list items.

01.12 Items paid by Owner: Permanent Electrical, Sewer and Water connection fees, Plan Check and Building Permit fees, Fire department review fees, Traffic Impact fees and Materials Testing and Inspection costs. All other fees, permits, licenses and charges for services and connections to outside services by Contractor.

01.13 On Change Orders: Maximum Overhead and Profit mark-up by subcontractor on raw labor and material costs shall be 10% plus any bonding costs.

01.14 On Change Orders: Maximum Overhead and Profit markup by general contractor to subcontractors costs, and raw labor and materials costs incurred by the general contractor shall be 15% plus any bonding costs.

01.15 On Change Orders: On credits back to the owner, the Minimum credit for Overhead and Profit shall be 10% on labor, materials and subcontractor items plus any bonding costs.

01.17 Sub-Contractor Minimum Insurance Requirements: Same as General Contractor except $500,000 each for General Liability and Automobile Liability.

01.18 Materials Testing: In coordination with the architect, test sub-base and base materials for compaction prior to placement of concrete or asphalt materials, and also at the site of the demolished house and basement as noted on the site plan. Also, test concrete for slump, air and strength, test asphalt for compaction. contact MTI of Boise for testing services. (376-4748).

DIVISION 02 - Site

02.10 Foundation vent wall - Lay-right Foundation vent wall FV168E or equivalent. Bowman & Kemp Steel and Supply, Inc. (801) 733-7886

02.11 Pole Mounted Exterior Site Signs: Advances Sign, Boise, Idaho 2" square punched tube. Sign Schedule: (2) stop/buckle seat belts combination signs and (5) ADA parking signs.

DIVISION 04 - Masonry

04.07 Faux Stone: Cultured Stone by Owens Corning with the following components: Weather barrier (see div. 06), 2.5 lb. Metal Lath or 18 ga. Galv. Woven wire mesh, galv. Nail fasteners, Type N mortar (1 part Type N cement, 1 part lime, 4.5 to 6 parts sand), Mortar color (selection by Architect), and Cultured Stone including field pieces, corner pieces and wainscot cap pieces as applicable, and Silane base masonry sealer.

04.08 Faux Stone: Install per manufacturer's published instructions under NER report 358 to achieve a 50 year limited warranty.

04.09 Faux Stone: Color to be per architectural color schedule.

04.10 Reinforced Unit Masonry System: AC! 530 - Building Code Requirements for Masonry Systems, IMIAC - Recommended Practices and Guide Specifications for Cold and Hot Weather Construction. Utilize Type I, moisture controlled masonry units, ASTM C-90, 2800 psi compressive strength. Composite Masonry Strength: fm = 1500 psi. Reinforcing Steel: ASTM A615, 60 ksi.

DIVISION 06 - Woods and Plastics

06.03 Sill Plate Seal: 1/4" polyurethane foam

06.04 Building Paper: DuPont Tyvek or Dupont Tyvek Stucco Wrap, install horizontally over exterior wall sheathing. Lap edges 6" min. to shed water and secure.

06.15 Finish carpentry: provide and install finish carpentry items other that custom casework, max tolerance from true position: 1/16".

06.16 Trim Wood to be oak (light stain) and ~~Birch~~ 2QK (dark stain). Finish to be stained two colors to match wood doors.

06.17 Install finish carpentry in accordance with AWI custom quality standard.

06.18 Custom Casework: Provide and install: cabinet units, counter tops, cabinet hardware, prefinished surfaces in compliance with AWI's "AIW/AWMAC Quality Standards Illustrated"; Custom Grade. Furnish shop drawings. PROVIDE AWI QUALITY CERTIFICATION PROGRAM CERTIFICATE INDICATING THAT WOODWORK COMPLIES WITH REQUIREMENTS OF GRADES SPECIFIED. *AWI Quality Cert. Proj No.: 04.017*

06.19 Casework wood materials: Softwood lumber: 8% max moisture. Hardwood lumber oak veneer at all door and drawer fronts and face frames. Stain to match Hardwood Interior Doors (light stain). See the Architectural Color Selection Instructions. Utilize Birch wood where a Dark Stain is noted.

06.20 Casework sheet materials: Permalam thermoset decorative panels, 45 pound wood particle board at all interior semi-exposed surfaces. Location: Drawer construction, Gables and backs, Shelving. Color by architect from manufacturer's standard colors.

06.21 Casework Plastic laminate: Counter tops NEMA 0.050 inch general purpose.

06.22 Casework edge trim: Solid hardwood on all exposed edges where Hardwood lumber is specified.

06.23 Casework Hardware: Shelf Standards: Blum 34.0040; Drawer and Door Pulls: 4" wire pulls, finish to match Div. 08 door hardware; Cabinet locks: Dead Bolt 5 pin tumbler locks equal to Olympus 100DR and 200DW; Drawer glides: Blum ~~420~~ 239 series or ~~Accuride Model 301~~; Extra heavy drawer guides: Blum 426A series; Hinges: European style, Blum or eq., 125 degree self-closing concealed clip hinges, (2) per doors under 36" high, (3) per doors between 37" and 60" and (4) on doors taller than 60"; Cable grommets: two part 60mm with spring closure by Hafele or eq.

06.24 Shelf width: 30" wide or smaller: 3/4", 30" to 42": 1" wide, shelves above 42 inches are not allowed without intermediate support.

06.25 Crawl Space Access Door Hardware: Stanley 1215 Trap Door Pull Ring

06.26 Reception Window: Knape&Vogt P992 ZC w/ 1/4" min. tempered glass

DIVISION 07 - Thermal and Moisture Protection

07.01 Bituminous Damproofing: Sonneborn Hydrocide 600 installed on exterior side of foundation walls.

07.02 Vapor and Air Retarders: Under Slab and at ground level at crawl space: 10 mil clear polyethylene; At exterior walls and ceiling on warm side of insulation directly beneath gypsum board: 6 mil clear polyethylene; At exterior walls and ceiling on warm side of insulation not directly beneath gypsum board: Foil/Scrim/Kraft with flame spread less than 25 and a smoke density of less than 450. Anchor to substrate at 3" o.c. Design intent: provide a continuous vapor barrier throughout the building envelope. Vapor barrier is to be air tight and free from holes, tears and punctures.

07.03 Batt and Blanket insulation: Provide and install acoustical batt insulation, thermal, unfaced batt insulation; R-19 min at exterior walls, R-38 min at attic. Match framing spacing.

07.04 Concrete Roof Tile: Bartile, Shake Style. Install in strict accordance with manufacturer's written instructions. Color per Architectural Color Selection Instructions.

07.05 Asphalt shingles: Provide and install granular surfaced fiberglass reinforced asphalt shingle roofing, 30# underlayment, plus 60 mil ice dam protection min. 2' upslope beyond interior face of exterior wall and 2' each side of valleys, and all roof penetration and edge flashings weather lapped and sealed watertight. Contractor performing roofing work is solely responsible for complete weather tightness for the entire roof system. Min. air temperature while performing work: 50 degrees.

07.06 Asphalt shingle: Elk Prestique with manufacturer's pro-rated warranty for 50 years.

07.07 Sheet metal flashing and trim: provide and install roof flashings, reglets and misc. exposed metal trim and flashings, concealed brick, masonry and foundation flashings and window and door head flashings, gutter and downspout. Exposed flashings: shop pre-coated with Kynar 500. Provide 20 year warranty for degradation of metal finish. Color of flashing to be per Architectural Color Selection Instructions. Caulk all metal joints.

07.08 Joint Sealers: Sikaflex 2c NS/SL FS TT-S-00227 at exterior locations except as specifically noted in this paragraph; Sikaflex 1a FS TT-S-00230 at Interior door/window frames, metal flashing lap joints and masonry reglets and Sikaflex 15 LM FS TT-S-01543 at interior high moisture and mildew areas.

07.10 Translucent Skylights - Kallwall Translucent Daylighting Panels, Self-flashing Single Slope Crystal-Crystal, 2.5 R Factor, 65% Light Transmission, thermally broker perimeter framing. Live Load per code analysis on cover sheet of drawings.. Submit shop drawings. 2 3/4" panel thickness. Grid pattern - In-line Shoji. Alum finish: Class II Clear, 204-R1, 0.4 mil thickness. Install flashings, fasteners, hardware, sealants and glazing materials required for a complete weatherproof installation. Provide manufacturer's ten year weather tightness warranty against any leaks. Warranty to fully cover costs of materials and labor.

07.11 Architectural Wall Panels: Preformed flat seam wall panel system with manufacturer's fasteners, flashing and trim. Warranty: Manufacturer's 20 year finish and material warranty and Installer's 2 year warranty. Warranty: Garland Co., Cleveland, Ohio, R-MER FSP, 24 gauge steel, fluorcarbon finish, mfr. Standard color.

07.12a Modified Bituminous Membrane Roofing with insulation- Torch Applied. Over properly prepared substrate which is to include: 2 layers of 2" polyisocyanurate, 1/4" Dens-Prime, and .5/12 tapered polyisocyanurate crickets mechanically fastened to deck according to roofing system manufacturer's guidelines, install the following roofing system. 195 mil Modified Stressply IV Mineral surfaced roofing membrane with dual fiberglass scrim over two layers of HPR SBS torch base sheet. Include all flashings, counter-flashings, curbs and penetrations according to Garland guidelines. Submittals Required. Manufacturer: Garland Co., Cleveland, OH. Warranty: Manufacturer 30 year water tightness. Installer: 2 year. Annual inspections for the life of the warranty.

07.14 Roofing Sealant: Concealed: PT1-707 Exposed: GE Silglaze II 2800

DIVISION 08 - Doors and Windows

08.01 Exterior Standard steel doors and frames: Provide and install SDI-100 Grade III 16 gauge model 2 and 2A doors and 16 gauge fully welded steel frames equivalent to Steelcraft. Insulate exterior doors. Provide factory zinc chromate prime coat. Fire rated doors/frames conform to NFPA 252, provide door labeling per UBC. Max. tolerance 1/16"

08.02 Flush wood doors: Provide and install fire rated and non-fire rated 5 ply AWI PC-5 premium grade hardwood veneer doors equal to Weyerhauser/Marshfield and door light kits. Veneer species to be Red Oak. Finish to be stained. See door schedule and Architectural Color Selection Instructions.

08.02a Raise Panel wood doors (bid alternate): Marshfield Stile and Rail Doors, 1 3/4" thick, Red Oak Veneer, Lifetime Warranty.

08.05 Aluminum entrances and storefronts: Provide and install aluminum doors, frames and glazed lights, glass, anchors, brackets and attachments and hardware. Provide 5 year manufacturer's warranty. Product: EFCO Thermal D502 entrance and framing at exterior locations D500 entrances and framing at interior locations or prior approved equal (during bidding). Hardware: Weather stripping at exterior locations, off set pivot hinges, threshold door bottom, closer: LCN 4041, Adams Rite 4510 Latch Lock cylinder, push-pull: ultraline, solid metal kickplate. Hardware finish to be US26D. Door and Window Kynar 500 prefinished color to be selected by architect from standard or premium color finish. Provide shop drawing submittal.

08.06 Aluminum windows: Provide and install aluminum windows, operating hardware, perimeter sealant, glazing (shop glazed) to be EFCO window 890 series thermal Equal Sightline, 3 ½" frame or prior approved equal.. Kynar 500 frame color to be per Architectural Color Selection Instructions

08.08 Door hardware: Finish to be US10B, Antique Bronze. Hinges: McKinney T4B3786. Locksets and latches: Best 94K7-**-14L-S3. See door schedule for lockset functions. (entry = AB, Classroom = R, Passage = ON, Storage = D and Privacy = OL). Lever Latch Lock: Adams Rite 4510 Closer: LCN 4041 series, DA, ADA. Push/Pulls: 2350P Quality and 402 Quality Stops and holders: Floor: 119 Quality, HD Floor: 1209 Trimco, Panic Device: Von Duprin Series 35 rim surface vertical rod type with lever/key cylinder. Wall: 302 Quality, Overhead stop: GJ100LPS Glynn-Johnson, Door Holder: 1149-A Quality. Kickplates: 48 Quality, Weatherstrip and seals: S88D Pemko, Threshold: 2005BS light seal. Low Energy Power Assisted Opener: Horton series 7000 easy Access Low-Energy Electric Swing Door Operator. http://www.hortondoors.com Keyless Interior Latchset: Best Keypad Electronic Lock, trim to match latchset as noted above. Typical at all doors: frame silencers.

08.09 Glazing: Provide and Install 1/4" thick clear float (ASTM

Matt Hedlund
(208) 850-1621
Manufacturers Rep
Cultured Stone

Medical Design Group
Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

REGISTERED ARCHITECT No. AR-1740 19 March 2004
DAVID R. DAVIES STATE OF IDAHO

ARCHITECTURAL SPECS

Desert Sage Health Center
2280 American Legion Blvd.
Mountain Home, Idaho

SHEET 3.06

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C1036), 1/4" thick clear safety (ASTM C1048), 1/4" thick mirror glass, 1" overall thickness insulated glass units (ASTM E774) - 1/4" thick each glass pane with ½" air space. Provide ten year pro-rated warranty on insulating glass units. Utilize safety glass where required by code. Utilize insulated glass units at all exterior locations. All exterior glass: medium grey tint. The work of this contract includes the glazing for one door at the old Desert Sage Clinic location in Mountain Home. The existing clinic has an etched glass panel approx 24" x 72". Remove that existing panel, carefully measure the panel and fit it into the new door no. 126 at the new building. Replace the glazing at the old location with a clear piece of 1/4" tempered glazing.

DIVISION 09 - Finishes

09.01 Light Gauge Metal Studs: Provide and Install non-load bearing formed steel interior wall framing, accessories for steel stud walls and backing for all wall mounted equipment, door wall stops and accessories. Max. allowable deflection - L/240. Design system to provide for movement of components without damage, failure of joint seals, undue stress on fasteners or failure due to temperature variations. Utilize Angeles Metal System or equal. Studs, and furring channels: 25 gauge except 16 gauge at areas where wall mounted cabinets occur where blocking is required. Tracks and headers: 20 gauge. Backing: utilize 3/4" cdx plywood or solid 2x lumber. Tolerance: 1/8" in 10'.

09.04 Exterior Coatings (Lath and Plaster Stucco): Provide and Install exterior stucco system consisting of EPS Insulation board, 20 Ga. metal lath, Stucco base coat, elastomeric/acrylic finish coat and accessories such as continuous screened galvanized soffit vent, sealants and control joints. Manufacturer: Western Stucco Products Co., Inc. Product: Western One-Kote , ICBO report ER-3899 or prior approved equal.

09.05 Gypsum Board Systems: Provide and Install 5/8" type X gypsum board, taped and sanded joint treatment, Light orange peel sprayed texture finish and installation of acoustical sealant at sound rated wall perimeters and accessories including edge trim, control joints at walls greater that 30 in

and Kote by Sonneborn, Two coats Sonothane MVP by Sonneborn. Color selected by Architect from manufacturer's standard colors. Architect may select up to 10 paint colors.

09.10a Fabric Wall Covering: Tri-Kes, Halcyon 63

9.11 Acrylic Impregnated Hardwood Flooring: Gamapar, ~~Beech~~, ~~Natural Finish~~. translation 38799 maple, nutmeg

9.12 Sheet Vinyl Flooring: Armstrong ~~Possibilities~~, Heat welded seams mint

DIVISION 10 - Specialities

10.01 Fixed foundation wall louver: Provide and install 8" x 16" Witten Automatic Vent which open and close automatically based on the air temperature. Manufactured by Witten Automatic Vent Co. Www.doityourself.com

10.02 Corner Guards: Provide and Install 4'-0" long IPC 4212 Series corner guards. Utilize smaller width in "back to back" installation situations. Color: clear. Fastener: Self tapping screws into wall studs or solid backing.

10.03 Vinyl letters: Provide and install vinyl adhesive type building numbers adhered to the glass at the front door which satisfy building code requirements.

10.05 Plastic Signs: Provide and Install panel signs which comply , with ANSI 117.1 provisions for character proportions, height, raised and brailled characters and pictorial symbol. Center of sign to be 60" above finished floor adjacent to latch side of interior door on wall surface. Color by architect from manufacturer's standard. Manufacturer: Innerface Architectural Signage, Wood series, wall mounted; http://www.innerface-signage.com . Schedule: (4) Unisex Bathroom approx 8" x 8", (7) Exam Room signs approx 4" x 15", (2) 2-line "Exam Room/Procedure Room" signs approx 7" x 15", (1) X-Ray" sign approx 4" x 15", (1) "Laboratory" Sign Approx 4" x 15", (1) "No Smoking" sign approx 4" x 15", (1) "Conference Room" sign approx 4" x 15". Note: Each exam room is to be given a unique letter/number suffix (ie. "Exam Room A1" or "Exam Room B3/Procedure Room") Unique suffixes will be A1, A2, A3, B1, B2, B3 (combination procedure room), C1 and C2.

10.06 Fire Extinguisher, Cabinet and Accessories: Provide and install 60 BC tank with pressure gauge, 10 lb. capacity in a white semi-recessed cabinet equal to Larsen's Manufacturing

10.13 Window Coverings: Hunter-Douglas, Duette, 3/4" pleat, Double Honeycomb Construction, color by architect from entire range of colors and Elite fabrics, semi-opaque except at office areas which are to be semi-shear with Expressions fabrics, Bottom-up with Ultra Glide ~~and LiftPlus~~ along with a lifetime warranty.

10.14 Dedication Plaque: Best Sign Systems #228577, 300 Letters

DIVISION 13 - Special Construction

13.01 Radiation Protection

1. Includes Lead Backed Gypsum Board, Lead Sheet Accessories, Gypsum Panel Fasteners, Lead Lined flush wood doors, Lead Lined Steel telescopic window frames, Radiation resistant glass, Glazing accessories.
2. References: NCRP Report No. 49, Structural Shielding Design and Evaluation for Medical Use of X-rays and Gamma Rays of Energies up to 10 MeV.
3. System Description:
   A. Installed radiation protection materials shall comply with National Council on Radiation Protection, NCRP Report No. 49 for diagnostic rooms.
   B. Electrical installer shall install electrical boxes centered between studs and connect conduit at the top of electrical boxes, where possible at walls with lead lining.
4. Submittals: Product Data, Shop Drawings, Certificates, Door Hardware, Site Inspection Report prepared by a Radiation shielding inspector within 10 days after site inspection os exposed radiation resistant assemblies.
5. Distributors: Wave Barriers, Shielded Building Materials, 20811 NW Cornell Rd. Ste 500, Hillsboro, OR 97124-9804 Bill Zander 1-800-498-1460
6. Components:
   A. Lead Backed Gypsum Board Panels: ASTM C36, Beveled, Type X with lead backing sheet backing meeting FS QQ-L-201, Grade C.
   B. Lead Sheet Accessories: FS QQ-L-201, Grade C. Batten Strips: Same thickness or greater as lead sheet on back face of adj. Wall panels, 2" wide, 7 feet long.
   C. Wall Penetration Covers: Same thickness or greater than thickness of lead sheet on back face of adjacent wall panels. Size as required for not less than 1 inch wide lap with lead sheet on back face of adjacent wall panels.

vertical gypsum panel joints.
B. Install lead backed gypsum board in compliance with GA-216 and ASTM C840. Install with long edges vertical. Install to within 1/4" of floor. Screw lead backed gypsum board to steel framing members at 8 inches o.c. at panel edges and 12 inches o.c. in the field. Utilize fastener tabs at wood studs.
C. Install Steel Door Frames using adhesive to apply lead lining in door jambs. Otherwise, install in accordance with section 08.
D. Install Wood Doors and Door Hardware to comply with AWI Quality Standards, Section 1700.
E. Install Lead Lined Steel Telescopic View Window Frames setting unleaded frame plumb and square in wall opening on control room side of wall with shims. Set leaded frame inside unleaded frame on X-ray side of wall and compress adjustable frame against face of wall. Secure both frames with equal spaced screws through each jamb. Install setting blocks, shims and glazing tape in glazing channel to prevent glass from touching the steel frame. Install radiation resistant glazing in telescoping frame. Place steel stops.
F. Install wall penetration covers by cutting the covers from lead sheet making allowance for required laps. Install penetrating wall boxes and raceways centered between studs using steel telescoping mounting brackets. Adhesive apply lead sheet penetration covers on penetrating boxes and raceways and return penetration covers to backside of lead backed wall panels with 1 inch minimum laps.
G. Install pipe penetrations in Walls and Ceilings by wrapping pipe with wall penetration covers lapping lead joints 1 inch minimum. To prevent radiation passage through pipe openings, offset pipe direction as close behind wall lead lining as possible so that the pipe can be backed with lead sheet sufficient to prevent radiation passage at an angle.

10. Completion:
    A. Prior to applying gypsum panels to back face of radiation resistant interior walls, employ a qualified radiation shielding inspector for field inspection of installed radiation resistant materials. Contractor to include cost for this inspection in price for construction. Written report to be issued to Architect and Owner within ten days of inspection. Repair and replace work found defective by radiation shielding inspector or testing by a

length, joint materials and fasteners. Conform to applicable codes for fire rated assemblies. Manufacturer: USGypsum Co. or equal. Max. variation from flatness: 1/8" in 10'. Install water resistant gypsum board on the back and side walls within 5' of plumbing fixtures. Suspended Gypsum Board Systems: USG Drywall Suspension System.

09.07 Suspended Acoustical Ceilings: Provide and Install Non-fire rated Suspended metal grid ceiling system and perimeter trim, Acoustical tile. Fully comply with seismic bracing requirements of the building code. Furnish 100 sf. of extra tile to Owner for each tile type. Manufacturer: Suspension system: Donn Corp. 9/16" Centricitee Acoustical tile: USG Eclipse 24 x 24 Climaplus style FL and USG Sand Drift 24 x 24

09.08 Resilient Flooring: Provide and Install Sheet Linoleum flooring, 4" and 6" high Resilient Base, 1/4" Multi-ply sub-floor underlayment, Sub-floor fillers, primers and adhesives, Johnsonite Rubber floor thresholds, Heat Welded Seams. Provide 20 sf of extra stock for each type of flooring material. Manufacturer: Sheet Linoleum: Forbo Marmoleum Resilient Rubber Base: Johnsonite Carpet to Resilient transition threshold: Johnsonite CTA-XX-H 1/4" carpet to 1/8" resilient. Installation by certified Master Mechanic.

09.09a Carpet Base: Provide and Install carpet base as specified in "Resilient Floor Base" above unless hardwood floor base is shown on the drawings in which case install a 4" x 3/4" stained hardwood floor base to match doors.

09.09b Carpet: Manufacturer: Collins and Aikman Product: Bahaus Boarder Carpet: Per finish plan. Include 20 year Manufacturer's non prorated warranty.

09.10 Painting: Provide and install Surface preparation and Surface finish. Provide two gallons of extra stock of each type and color of paint. Manufacturer: Benjamin Moore Co.. Min. temperature for application: 50 degrees. Beginning of installation means acceptance of substrate. Schedule: Pavement markings: One coat chlorinated rubber paint, white; Steel shop primed and galvanized: One coat zinc chromate primer, Two coats alkyd enamel, gloss. Gypsum Board: On coat acrylic latex primer sealer, Two coats acrylic latex enamel, semi-gloss. Gypsum Board to receive wall covering: One coat acrylic latex primer sealer. Concrete Floors: One coat Prime

2409-6R, vertical duo, color: white. Dimensions: 27 x 12 x 8. Verify proper fit into wall cavity prior to order. Silk screen "FIRE EXTINGUISHER" on cabinet door.

10.07 Lock Boxes: Provide and Install one recessed mounted Knox Box at building exterior near the front entrance. Obtain purchase order from local fire chief.

10.08 Toilet and Bath Accessories: Provide and install toilet and bath accessories as manufactured by McKinney Manufacturing Co. as follows: Toilet paper dispenser - Surface MK 1530, Grab Bars MK 9604, Janitor Closet: 224 Utility shelf, 4'-0" long with mob hooks, Feminine Napkin Disposal: 626. Paper Towel Dispenser: 609 (250 C-Fold Capacity). Recessed Paper Towel Disposal: 829. Revolving Specimen Pass-through Cabinet 895. Robe Hood 1028B. Soap dispenser by suppliers of paper towel/soap products to be installed by owner. Electronic Paper Towel Dispenser: In-Sight Elect-R-Matic HRT Dispenser, 09703, 10.5" x 15.75" x 8.6", Smoke Grey. OFCI Paper Towel Dispensers to be relocated in exam rooms: total (5). OFCI Changing Table to be located in Patient Toilet 1. Remove these OFCI accessories from the existing Desert Sage Clinic in Mountain Home and relocate to the new facility. New Accessories required include: Grab Bars (per plan), Toilet Tissue dispenser - one per water closet, Feminine Napkin Dispenser - one per water closet, One Utility shelf to be located in the Utility 1 room above the janitor sink, (10) new Paper Towel Dispensers (C-Fold type) to be located next to each hand wash sink except at bathroom sinks, (4) new Electronic Paper Towel Dispensers to be located next to each of the Bathroom Hand Wash Sinks. (4) recessed Paper Towel Disposal units (15.5"W x 28.5" H x 4" deep. Top of unit 44" AFF max. (1) Revolving Specimen Pass-through Cabinet (rough opening: 13.75" W x 14.5" H). Robe Hooks: (1) at back of door 129. All Mirrors to be OFCI. Mirrors to be wood framed and are to be securely mounted to walls in locations determined by architect.

10.11 Fixed Wall Mounted Louver: Greenheck, Mill Finish Aluminum, Stationary Extruded Louver, Model ESK. www.greenheck.com

10.12 Cast Exterior Letters: Metallic Arts www.metallicarts.com Baked Enamel Painted Finish on Aluminum; ~~Helvetica~~ 12" high, 1" depth, 2.25 - 2.75" stroke, ave. width: 10.25 in both UPPER and lower case. Projected Spacer Mounting. Garamond Bold Italic

D. Fastener Tabs: Same or greater thickness than thickness of lead sheet on back face of adjacent wall panels. Size not less than 1 inch wide by 2 inches long. Note: these tabs are used for screw application of gypsum panels to steel studs without batten strips and for all wood studs. See details.
E. Door Jamb Lining: Same or greater thickness than thickness of lead sheet on back face of adjacent wall panels. Size 7 foot long by width required by door frame.
F. Lockset Rose and Knob Lining: Same or greater thickness than thickness of lead sheet within adjacent door. Size as required to fill lockset rose and knob.
G. Frame Lining: Same or greater thickness than thickness of lead sheet on back face of adjacent wall panels. Continuous length at head and jamb, 3 pieces with 1 inch laps at frame corners,
G. Gypsum Panels Fasteners: Screws: ASTM 1002, 1 inch long, bugle head. Adhesive: ASTM C557.
H. Radiation Shielding Glass: Glass type: Polished radiation shielding glass containing not less that 50 percent lead oxide. Glass Quality: Surface: Mirror polished, 1/4" thick min. Lead Equivalency of Glass: 1.58 mm min.
I. Glazing Accessories: Setting Blocks: Solid Neoprene, 80 to 90 Shore A hardness. Glazing Tape: Foam neoprene.

7. Lead Lined Flush Wood Doors: AWI Custom PC-5, Lead Lined, Face Veneer and Stain Color to match other wood doors in facility as specified in section 08. Thickness: 1 3/4". Finish: comply with requirements of section 09. Door fitting requirements: 1/8" space max at perimeter except ½' max space at door bottom.
8. Lead Lined steel Telescopic View Window Frames: Frame: ASTM A568 and ASTM 366 with Lead Sheet Lining FS QQ-L-201, Grade C, single un-pierced strip, 1/16" thick. Frame Profile: 2 inches wide with 7/16 inch high integral fixed stop and 16 gauge applied cold rolled steel stop. Frame Construction: Two telescoping steel frames with continuous welded corner seams and lead sheet applied with adhesive to inside face of the outside frame, shop primed.
9. Execution:
   A. Installation of Radiation Resistant Wall Assemblies: Screw lead battens to steel studs at 12 inches o.c. from floor to ceiling. If wood studs are used, secure lead battens to wood studs with adhesive or brad nails from floor to ceiling behind

Medical Design Group
Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

REGISTERED ARCHITECT No. AR-1740 22 March 2004
DAVID A. DANIELS STATE OF IDAHO

ARCHITECTURAL SPECS

Desert Sage Health Center
2280 American Legion Blvd.
Mountain Home, Idaho

SHEET 3.07

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qualified health physicist. Cost for re-inspection if necessary shall be borne by the contractor.
B. Tape temporary paper signs on radiation resistant walls with the following text: "DO NOT MOUNT EQUIPMENT ON THIS WALL WITHOUT COVERING PENETRATING FASTENERS WITH LEAD SHEET OF THICKNESS REQUIRED BY ORIGINAL CONTRACT DOCUMENTS"

ARCHITECTURAL COLOR SELECTION INSTRUCTIONS

VERSION 02

Date: 6 August 2004
Project: Desert Sage Health Center, Mountain Home

Exterior Materials	
Stone: Cultured Stone Blend:	80% Souther Ledgestone (CSV 2056) and 20% Bucks Country Dressed Fieldstone (CSV 2030)
Stucco Light:	Dryvit #612 Moonlight
Stucco Dark:	Dryvit #131 Gull Gray > see attached sketch.
Aluminum Window Frames:	EFCO Charcoal
Aluminum Storefront; South Entry:	EFCO Dove Grey
Aluminum Storefront; Other	EFCO Charcoal
Glass:	Medium Grey Tint
Metal Flashings and gutter system:	Uni-clad Charcoal Gray (Kynar 500)
Concrete Roof Tile:	Bartile: 20% Vermont Grey, 40% Laredo, 40% Lexington
Exterior Light Fixtures:	SPI PT09 Medium Gray
Interior Materials:	
Carpet:	
Boarder Carpet A:	C&A Bahaus, 56016 Itten
Boarder Carpet B:	C&A PAII 60042 Steel
Boarder Carpet C:	C&A SD 81363 Clarion
Boarder Carpet D:	C&A SD 81353 Bluegrass
Boarder Carpet E:	C&A SD 60035 Mediterranean
Carpet Rubber Base:	C&A 60056 Indigo
Walk-off Carpet:	Johnsonite 38 Pewter
	C&A Triad, 60 Bordeaux
Linoleum A:	Forbo Real 3053 Dove Blue w/ Johnsonite 38 Pewter
Linoleum B:	Forbo Fresco 3866 Eternity w/ John. 21 Platinum Base
Sheet Vinyl:	Armstrong Translations #31779 Mint
Wood Flooring:	Gamapar, Beech, Natural
Stain Light:	Marshfield Oak, Honey 26-95
Stain Dark:	Marshfield Birch, Raisin 50-97
Interior Wood Doors:	see "Stain Light" above
Interior Wood Trim:	Varies: See drawings.
Solid Surface:	Corian Venaro Gray, Malachite, Everest and Colbalt
Laminate One through Five:	WA 4797-60 Burnished Spruce, WA D321-60 Brittnay Blue, WA D369-60 Burgandy, WA 4829-07 Satin Silver, WA 4795-60 Windswept Pewter
Paint One through Ten:	–to be determined–
Fabric Wall Covering:	–to be determined–
Window Coverings:	

Stucco
Window
Roof
Carpet
painters
Millwork

Medical Design Group
Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
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REGISTERED ARCHITECT No. AR-1740 22 March 2004
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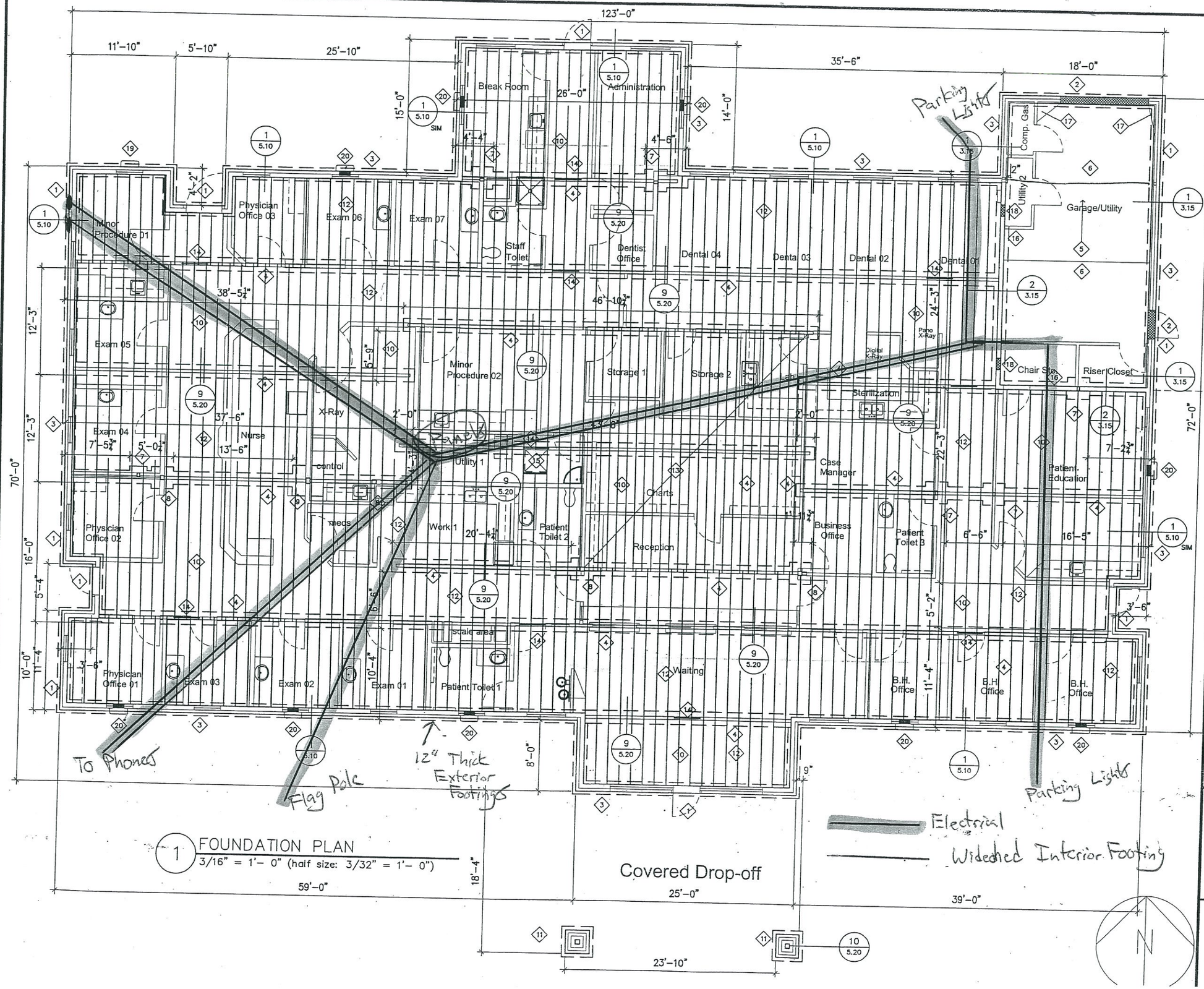

1 FOUNDATION PLAN
3/16" = 1'- 0" (half size: 3/32" = 1'- 0")

NUMBERED NOTES

01. Tie Site Concrete to foundation wall w/ #4 @ 6" O.c. w/ 6" min. embed
02. Depress top of conc. vfoundation wall 4" to pour slab over at cross hatch
03. Typical Exterior Foundation: 1'-6" x 8" Footing w/ (2) #4 Cont. w/ 10" stem wall w/ #4 vert. alt. hooks at 2'-8" o.c. w/ #4 Horiz @ 1'-0" o.c.
04. Typical Pony Wall Footing: 1'-4" x 8" W/ (2) #4 Continuous. Pony Wall Framing: 2x6 @ 1'-4" o.c.
05. Slope Concrete Slab to Overhead Door
06. 4" thick Conc. Slab over 4" gravel over 95% compacted sub-base
07. 2'-0" Sq. x 8" Pad w/ (3) #4 E.W.
08. 2'-6" Sq. x 8" Pad w/ (3) #4 E.W.
09. 3'-6" Sq. x 12" Pad w/ (4) #4 E.W.
10. Floor Sheathing: 1 1/8" T&G Sturdi-Floor Glue and Nail
11. 2'-8" Sq. Pier w/ (4) #4 Vert Hooks w/ #3 Ties @ 8" o.c. w/ 3'-6" Sq. x 8" Pad w/ (4) #4 E.W.
12. Floor Framing Members: 11 7/8" TJI Pro 250. Typical Spacing: 1'-4" except where noted at Chart Room Area.
13. Floor Joist Members 1'-0" o.c. this area
14. (2) 2x6 header at 36" wide opening through pony wall at crawl space
15. 22" x 30" min. crawl space access with recessed ring handel. Trim with Floor Finish for this room and rubber transition strip at access panel.
16. Interior Garage Foundation: 1'-4" x 8" Footing w/ (2) #4 Cont. w/ 6" stem wall w/ #4 vert. alt. hooks at 2'-8" o.c. w/ #4 Horiz @ 1'-0" o.c.
17. Cricket Conc. Slab slightly to promote drainage to the exterior.
18. 4" deep x 16" long x width of fnd. wall block out for HVAC/Mech
19. Ventwell for EF5 - see mechanical. w/ washed rock base down for fnd. drain
20. Ventwell and 8"x16" Witten Automatic Foundation Vent. Pack Foundation Wall full of rigid insulation.

General Note:
Dim. to Face of fnd wall or Face of footing or Face of pony wall studs

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Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

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FOUNDATION PLAN

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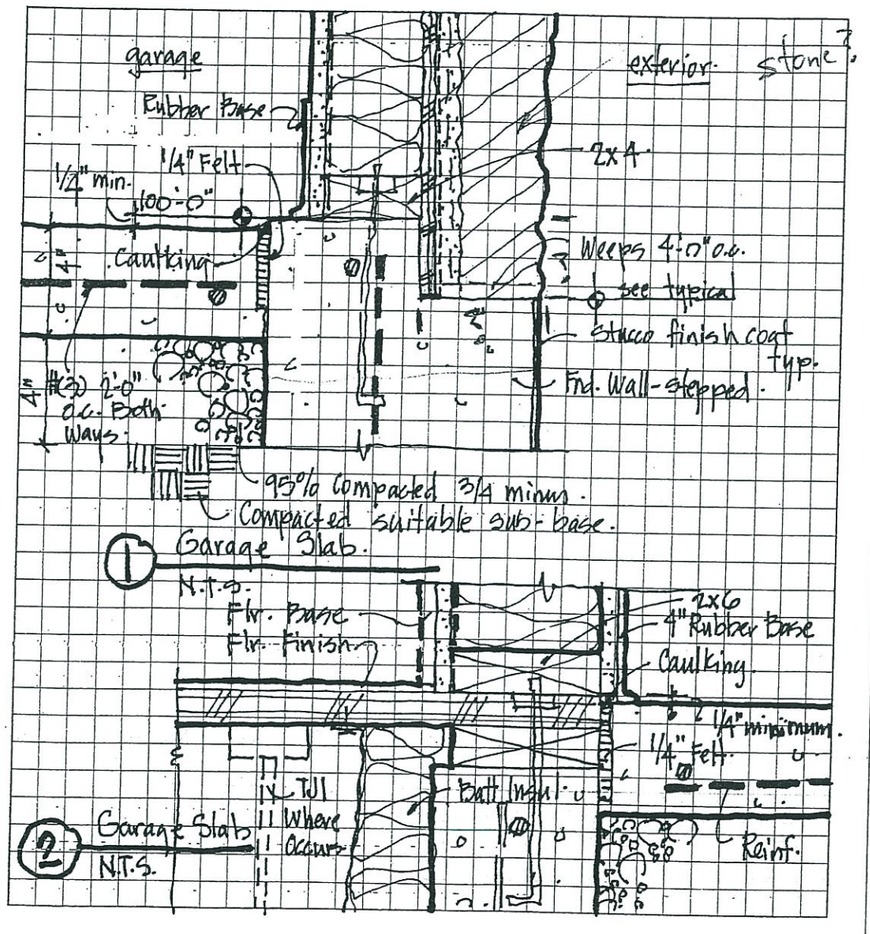
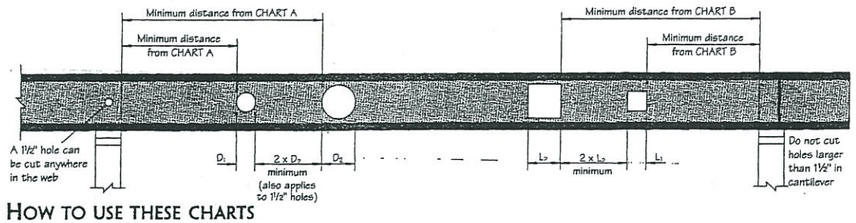


HOLE CHARTS – ROUND, SQUARE AND RECTANGULAR HOLES



HOW TO USE THESE CHARTS

1. Determine the hole shape (round, square or rectangular) and select the appropriate CHART – A or B.
2. Under HOLE SIZE, locate the column which meets or exceeds the size of hole you require.
3. Use the first two columns to identify the TJI® joist series and depth being used in your floor or roof system.
4. Scan right across the row until you intersect the column which contains the hole size you selected.
   The value shown is the required minimum distance from edge of the hole to the the inside face of the nearest support.

CHART A – ROUND HOLES

MINIMUM DISTANCE FROM INSIDE FACE OF ANY SUPPORT TO NEAREST EDGE OF HOLE

JOIST DEPTH	JOIST SERIES	ROUND HOLE SIZE 3"	4"	5"	6"	7"	8"	9"	10"	11"	12"	13"	14"
9½"	210TS	2'-0"	2'-6"	3'-6"	4'-6"	6'-6"	7'-0"						
	150	1'-6"	2'-6"	3'-6"	5'-0"	6'-6"	7'-6"						
	250	2'-0"	3'-0"	4'-0"	5'-6"	7'-6"	8'-0"						
11⅞"	210TS	1'-0"	1'-6"	2'-6"	3'-0"	4'-0"	4'-0"	5'-0"	6'-6"	8'-0"			
	150	1'-0"	1'-0"	1'-6"	3'-0"	4'-0"	4'-0"	5'-0"	7'-0"	8'-6"			
	250	1'-0"	1'-6"	2'-6"	3'-6"	5'-0"	5'-0"	6'-0"	8'-0"	9'-0"			
	350	1'-0"	2'-6"	3'-6"	4'-6"	5'-6"	6'-0"	7'-0"	9'-0"	10'-0"			
	550	1'-6"	2'-6"	4'-0"	5'-0"	6'-6"	7'-0"	8'-0"	9'-6"	10'-6"			
14"	420TS	1'-0"	1'-0"	1'-0"	2'-0"	2'-6"	3'-0"	3'-6"	4'-6"	5'-0"	5'-0"	7'-0"	8'-6"
	250	1'-0"	1'-0"	1'-0"	1'-0"	2'-6"	2'-6"	3'-6"	5'-0"	6'-0"	6'-6"	8'-6"	10'-0"
	350	1'-0"	1'-0"	1'-0"	2'-6"	3'-6"	4'-0"	5'-0"	6'-6"	7'-0"	8'-0"	9'-6"	11'-0"
	550	1'-0"	1'-0"	2'-0"	3'-6"	5'-0"	5'-6"	6'-6"	8'-0"	8'-6"	9'-0"	10'-6"	12'-0"
16"	250	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-0"	3'-0"	4'-0"	5'-6"	6'-6"
	350	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-6"	4'-0"	5'-0"	5'-6"	7'-0"	8'-0"
	550	1'-0"	1'-0"	1'-0"	1'-6"	3'-0"	3'-6"	4'-6"	6'-0"	7'-0"	7'-6"	9'-0"	10'-0"

JOIST DEPTH	JOIST SERIES	ROUND HOLE SIZE 15"	16"	17"	18"	19"	20"	21"	22"	23"	24"
9½"	210TS										
	150										
	250										
11⅞"	210TS										
	150										
	250										
	350										
	550										
14"	420TS										
	250										
	350										
	550										
16"	250	9'-0"	11'-0"								
	350	10'-6"	12'-6"								
	550	12'-0"	13'-6"								

DO NOT CUT OR NOTCH FLANGE

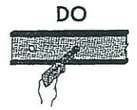


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CHART B – SQUARE OR RECTANGULAR HOLES

MINIMUM DISTANCE FROM INSIDE FACE OF ANY SUPPORT TO NEAREST EDGE OF HOLE

JOIST DEPTH	JOIST SERIES	SQUARE OR RECTANGULAR HOLE SIZE 3"	4"	5"	6"	7"	8"	9"	10"	11"	12"	13"	14"
9½"	210TS	2'-0"	3'-0"	4'-0"	6'-0"	6'-6"	6'-6"						
	150	1'-6"	3'-0"	4'-0"	6'-0"	6'-6"	6'-6"						
	250	2'-0"	3'-0"	4'-6"	6'-6"	7'-0"	7'-0"						
11⅞"	210TS	1'-6"	2'-6"	3'-6"	4'-6"	6'-6"	7'-6"	8'-0"	8'-6"	9'-0"			
	150	1'-0"	1'-6"	3'-0"	4'-6"	6'-6"	7'-6"	8'-0"	8'-6"	9'-0"			
	250	1'-0"	2'-0"	3'-6"	5'-6"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"			
	350	1'-6"	3'-0"	4'-6"	6'-0"	7'-6"	8'-6"	9'-0"	9'-6"	9'-6"			
	550	3'-6"	4'-6"	6'-0"	7'-6"	9'-0"	9'-6"	9'-6"	10'-0"	10'-6"			
14"	420TS	1'-0"	2'-0"	3'-0"	4'-0"	5'-6"	5'-6"	7'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-6"
	250	1'-0"	1'-0"	2'-0"	4'-0"	6'-0"	6'-6"	8'-0"	10'-0"	10'-6"	10'-6"	11'-0"	12'-0"
	350	1'-0"	1'-0"	3'-0"	5'-0"	6'-6"	7'-0"	9'-0"	10'-6"	10'-6"	11'-0"	11'-6"	12'-0"
	550	2'-6"	4'-0"	5'-6"	7'-0"	8'-6"	9'-0"	10'-0"	11'-6"	11'-6"	12'-0"	12'-6"	13'-0"
16"	250	1'-0"	1'-0"	1'-0"	1'-0"	2'-0"	3'-0"	4'-6"	6'-6"	8'-6"	8'-6"	9'-6"	10'-0"
	350	1'-0"	1'-0"	1'-0"	1'-6"	4'-0"	4'-6"	6'-0"	8'-0"	10'-0"	10'-0"	11'-0"	11'-6"
	550	1'-0"	2'-6"	4'-6"	6'-0"	8'-0"	8'-6"	9'-6"	11'-6"	13'-0"	13'-0"	13'-6"	14'-0"

JOIST DEPTH	JOIST SERIES	SQUARE OR RECTANGULAR HOLE SIZE 15"	16"	17"	18"	19"	20"	21"	22"	23"	24"
9½"	210TS										
	150										
	250										
11⅞"	210TS										
	150										
	250										
	350										
	550										
14"	420TS										
	250										
	350										
	550	10'-0"	11'-0"	11'-6"							
16"	250	10'-6"	11'-0"	12'-0"							
	350	11'-6"	12'-0"	12'-6"	13'-0"						
	550	14'-0"	15'-0"	15'-6"							

Rectangular holes based on measurement of longest side.

FULL WEB DEPTH RECTANGULAR HOLES ARE ALSO POSSIBLE. CONTACT YOUR TRUS JOIST MACMILLAN REPRESENTATIVE FOR ASSISTANCE.

GENERAL NOTES

- If more than one hole is cut into the web, the distance between the edges of the holes must be at least 2x the length of the largest hole.
- Holes may be located vertically anywhere within the web. Leave ⅛" of web *minimum* at top and bottom of hole.
- TJI® joists are manufactured with 1½" perforated knockouts in the web at approximately 12" on-center along the length of the joist.
- Distances in the charts above are based on uniformly loaded joists using the maximum loads shown for any of the tables listed within this brochure. For other load conditions or hole configurations not included in these charts, refer to our TJ-Beam™ software or contact your Trus Joist MacMillan representative.
- For simple span (5 foot minimum) uniformly loaded joists meeting the requirements of this brochure, one maximum size round hole may be located at the center of the joist span provided no other holes occur in the joist. DO NOT cut into joist flanges when cutting the web.

Medical Design Group
Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

REGISTERED ARCHITECT No. AR-1740 19 March 2004
DAVID R. DAVIES STATE OF IDAHO

FOUNDATION DETAILS

Desert Sage Health Center
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SHEET 3.15

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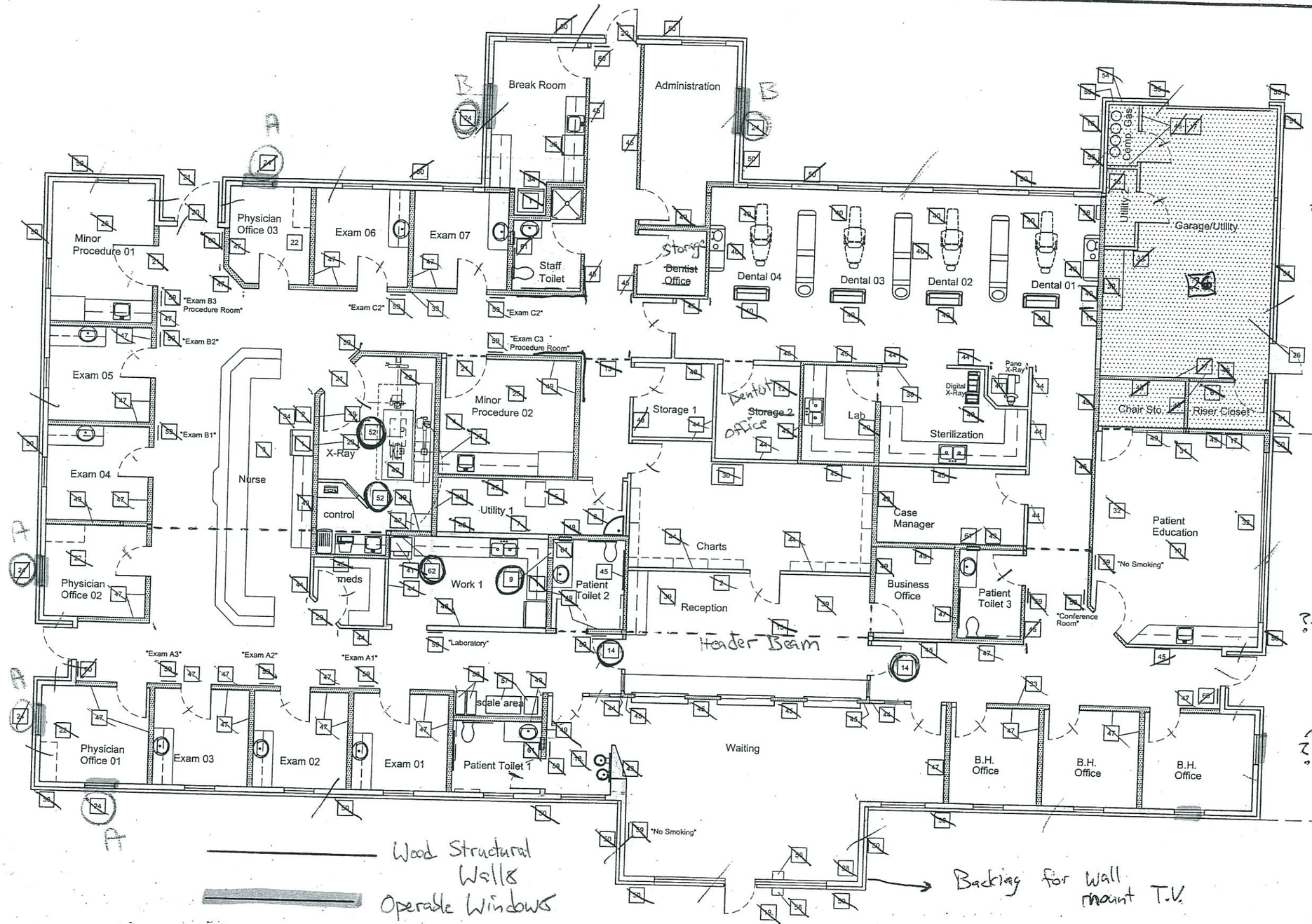

NUMBERED NOTES

~~01.~~ Owner Furnished Owner Installed (OFOI) Refrigerator
~~02.~~ Space for OFOI Photo Copy Machine
~~03.~~ Skylight shown dashed above
~~04.~~ Extend Medical Vacuum to this room
~~05.~~ Ladder and Roof Hatch
~~06.~~ Area for Fire Riser
~~07.~~ Area for electrical and Phone Panels
~~08.~~ Floor Mop Sink
~~09.~~ Specimen Pass Through → GC
~~10.~~ Ceiling Mounted Projector - OFOI
~~11.~~ Bite Wing and Panoramic x-ray
~~12.~~ Future Dental Operatory
~~13.~~ Roof Well Above shown dashed
~~14.~~ Bottom Half of Dutch Door with Shelf
~~15.~~ Vacuum and Air Compressor
~~16.~~ Nitrous and Oxygen Tanks - OFOI
~~17.~~ One Hour Fire Rated Wall
~~18.~~ Dual Drinking Fountain
~~19.~~ Push Button Assisted Entry
~~20.~~ Card Reader Entrance System
~~21.~~ 3'-6" Wide Doorway
~~22.~~ Future Exam Room
~~23.~~ Natural Gas Connection to Refrigerator
~~24.~~ Operable Windows
~~25.~~ OFCI Overhead Ceiling Mounted Exam Light elect.
~~26.~~ Hatched area is to be 4" Slab on Grade.
~~27.~~ – not used –
~~28.~~ TV Area for Kids
~~29.~~ Keyless lock
~~30.~~ OFOI casework
~~31.~~ ~~Electric roll down projection screen~~ not used
~~32.~~ Perimeter drop soffit with dimmable lights
~~33.~~ Acoustical Insulation
~~34.~~ Ice Maker with Refrigerator connection see mechanical
~~35.~~ Dishwasher w/ Microwave ~~Oven above~~ OFOI
36. Nitrous/Oxygen Shut-off
~~37.~~ Route cable to x-ray head through ceiling
~~38.~~ Vacuum/Compressor Switches
~~39.~~ Skylight - Bid Alternate
~~40.~~ Dental Equipment
~~41.~~ OFOI Stacking Washer/Dryer
~~42.~~ OFOI X-Ray Machine
43. Wall Type S03.5A
~~44.~~ Wall Type S03.5B
~~45.~~ Wall Type S03.5C
~~46.~~ Wall Type S03.5G
~~47.~~ Wall Type S03.5K
~~48.~~ Wall Type S05.5A
~~49.~~ Wall Type S05.5C
~~50.~~ Wall Type W05.5A
~~51.~~ Wall Type W3.5A
~~52.~~ See Sheet 13.01 - 13.06 for lead shielding req's
~~53.~~ not used
~~54.~~ (2) vents - see mech.
~~55.~~ See wall type W03.5B
~~56.~~ Automatic Door Push Button
~~57.~~ OFOI scales
~~58.~~ Wheelchair storage area
~~59.~~ Interior Sign, Wall Mounted
~~60.~~ Fire Extinguisher and FE Cabinet, Semi-recessed
~~61.~~ Recessed Trash Receptacle
62. 14" x 14" painted 3/4" Plywood Access Panel coord. with 3/M3.1

1 FLOOR PLAN
3/16" = 1'– 0" (half size: 3/32" = 1'– 0")

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Architecture for Health Care
2716 WESTLAND PLACE
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BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
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FLOOR PLAN

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SHEET 3.30

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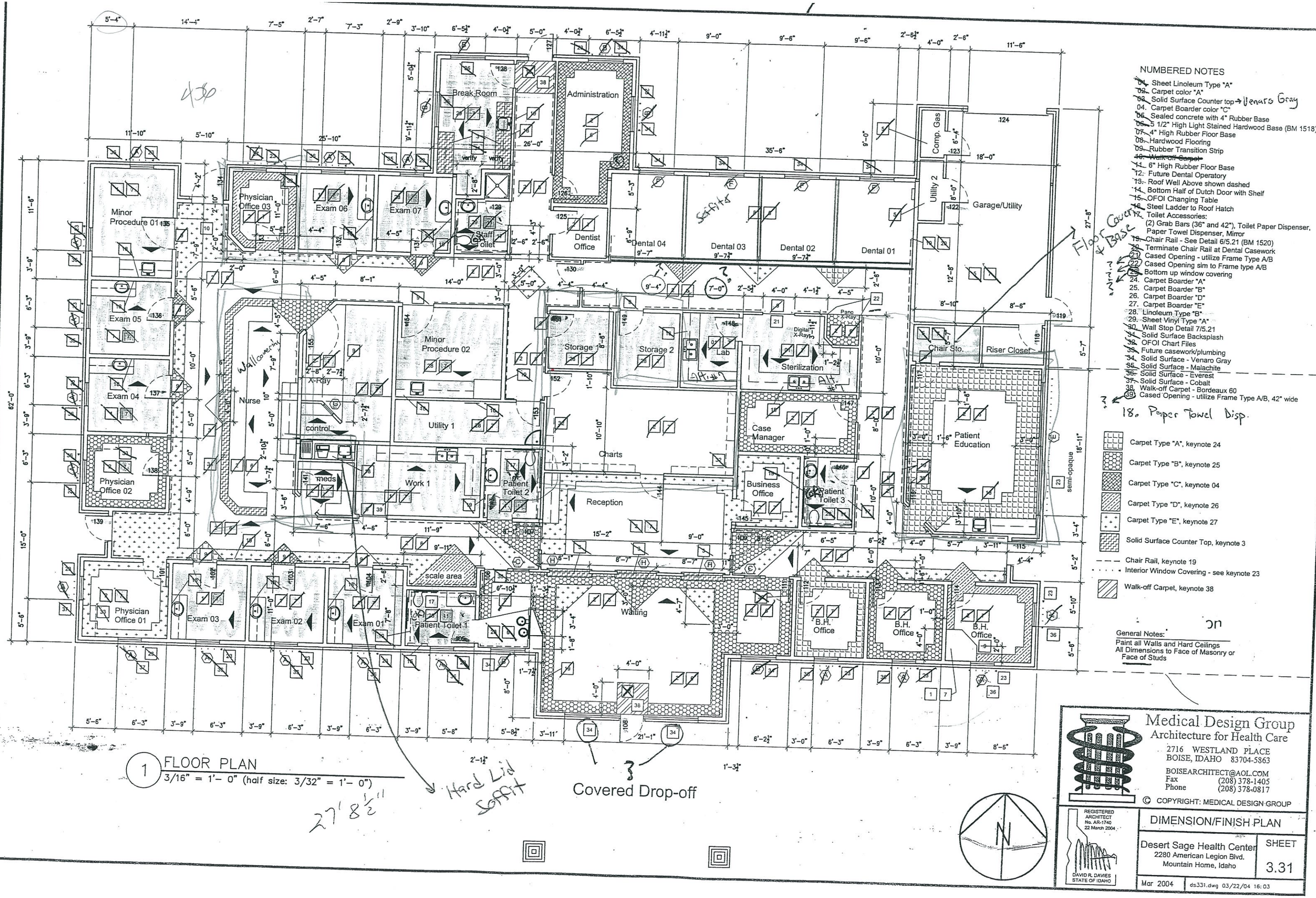

NUMBERED NOTES

01. Sheet Linoleum Type "A"
02. Carpet color "A"
03. Solid Surface Counter top → Venaro Gray
04. Carpet Boarder color "C"
05. Sealed concrete with 4" Rubber Base
06. 5 1/2" High Light Stained Hardwood Base (BM 1518)
07. 4" High Rubber Floor Base
08. Hardwood Flooring
09. Rubber Transition Strip
10. ~~Walk-off Carpet~~
11. 6" High Rubber Floor Base
12. Future Dental Operatory
13. Roof Well Above shown dashed
14. Bottom Half of Dutch Door with Shelf
15. OFOI Changing Table
16. Steel Ladder to Roof Hatch
17. Toilet Accessories: (2) Grab Bars (36" and 42"), Toilet Paper Dispenser, Paper Towel Dispenser, Mirror
19. Chair Rail - See Detail 6/5.21 (BM 1520)
20. Terminate Chair Rail at Dental Casework
21. Cased Opening - utilize Frame Type A/B
22. Cased Opening sim to Frame type A/B
23. Bottom up window covering
24. Carpet Boarder "A"
25. Carpet Boarder "B"
26. Carpet Boarder "D"
27. Carpet Boarder "E"
28. Linoleum Type "B"
29. Sheet Vinyl Type "A"
30. Wall Stop Detail 7/5.21
31. Solid Surface Backsplash
32. OFOI Chart Files
33. Future casework/plumbing
34. Solid Surface - Venaro Gray
35. Solid Surface - Malachite
36. Solid Surface - Everest
37. Solid Surface - Cobalt
38. Walk-off Carpet - Bordeaux 60
39. Cased Opening - utilize Frame Type A/B, 42" wide

Carpet Type "A", keynote 24
Carpet Type "B", keynote 25
Carpet Type "C", keynote 04
Carpet Type "D", keynote 26
Carpet Type "E", keynote 27
Solid Surface Counter Top, keynote 3
Chair Rail, keynote 19
Interior Window Covering - see keynote 23
Walk-off Carpet, keynote 38

General Notes:
Paint all Walls and Hard Ceilings
All Dimensions to Face of Masonry or Face of Studs

1 FLOOR PLAN
3/16" = 1'- 0" (half size: 3/32" = 1'- 0")

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REGISTERED ARCHITECT No. AR-1740 22 March 2004
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DIMENSION/FINISH PLAN

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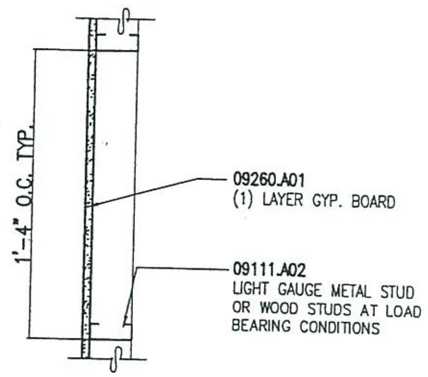
SHEET 3.31

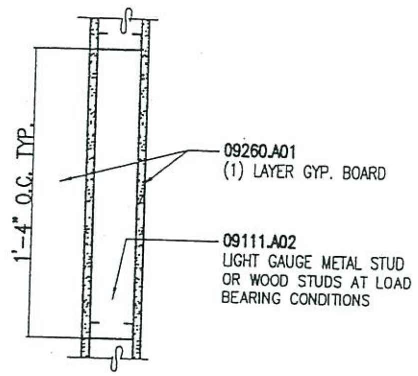
Mar 2004 | ds331.dwg 03/22/04 16:03

NOTE: BASE LAYER 5/8" TYPE X GYPSUM WALLBOARD APPLIED AT RIGHT ANGLES OR PARALLEL TO EACH SIDE OF STUDS 24" O.C. WITH 1" TYPE S DRYWALL SCREWS 8" O.C. TO VERTICAL EDGES AND 12" O.C. TO TOP AND BOTTOM RUNNERS AND INTERMEDIATE STUDS. STAGGER ALL VERTICAL AND HORIZONTAL JOINTS 24" O.C. EACH SIDE AND OPPOSITE SIDES.



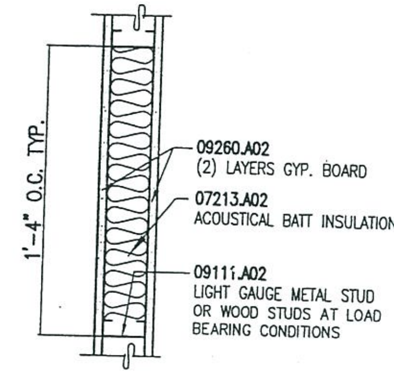
S03.5A
1 1/2" = 1'- 0" (half size: 3/4" = 1'- 0")

43



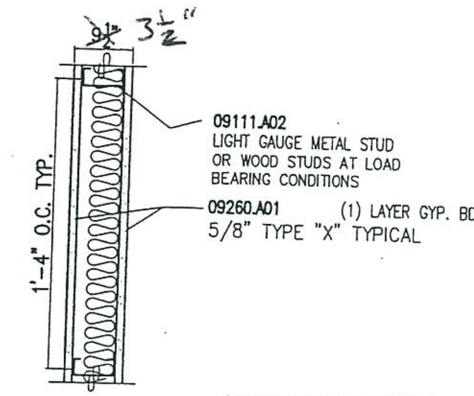
S03.5B
1 1/2" = 1'- 0" (half size: 3/4" = 1'- 0")

44



S03.5C
1 1/2" = 1'- 0" (half size: 3/4" = 1'- 0")

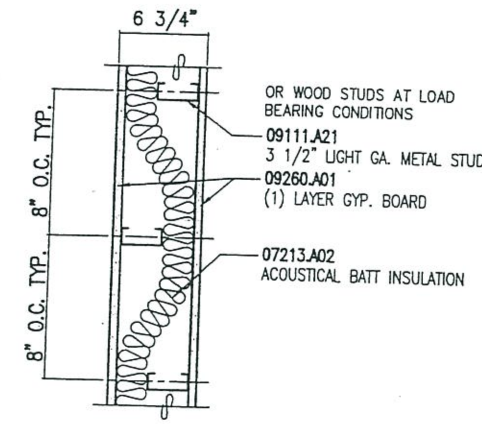
45



1 HR RATED ASSEMBLY
SIM TO GA # WP1200

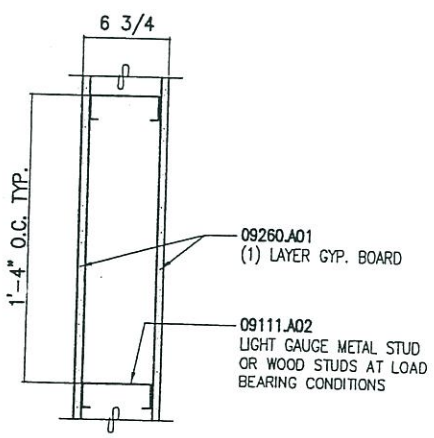
S03.5G
1 1/2" = 1'- 0" (half size: 3/4" = 1'- 0")

46



S03.5K
1 1/2" = 1'- 0" (half size: 3/4" = 1'- 0")

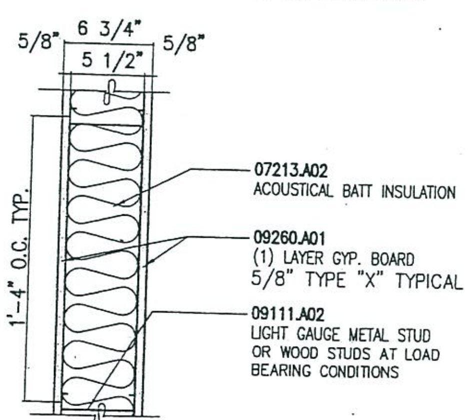
47



S05.5A
1 1/2" = 1'- 0" (half size: 3/4" = 1'- 0")

48

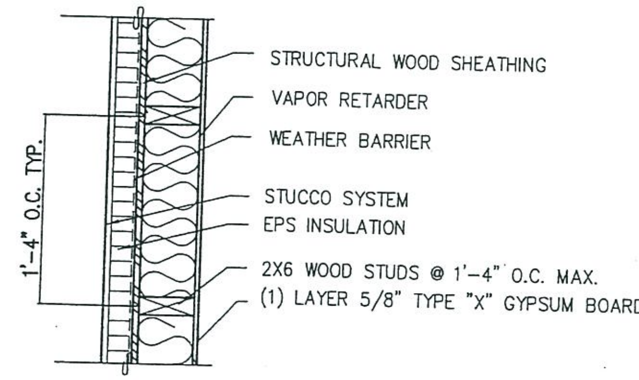
NOTE: BASE LAYER 5/8" TYPE X GYPSUM WALLBOARD APPLIED AT RIGHT ANGLES OR PARALLEL TO EACH SIDE OF STUDS 24" O.C. WITH 1" TYPE S DRYWALL SCREWS 8" O.C. TO VERTICAL EDGES AND 12" O.C. TO TOP AND BOTTOM RUNNERS AND INTERMEDIATE STUDS. STAGGER ALL VERTICAL AND HORIZONTAL JOINTS 24" O.C. EACH SIDE AND OPPOSITE SIDES.

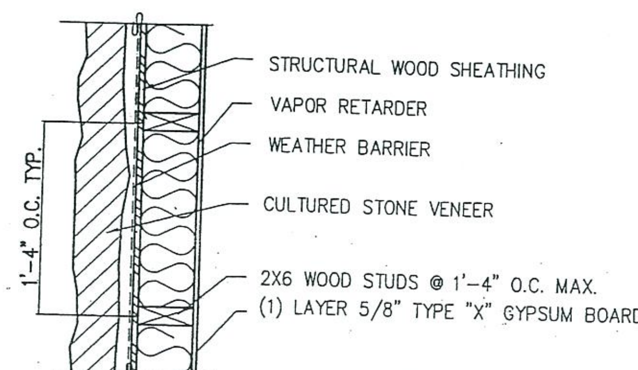


1 HR RATED ASSEMBLY
SIM TO GA # WP1200

S05.5C
1 1/2" = 1'- 0" (half size: 3/4" = 1'- 0")

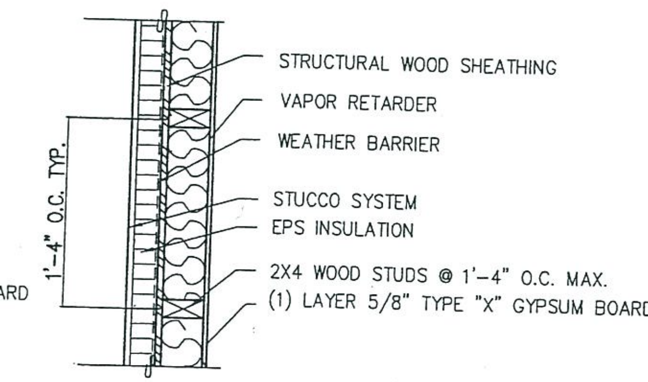
49

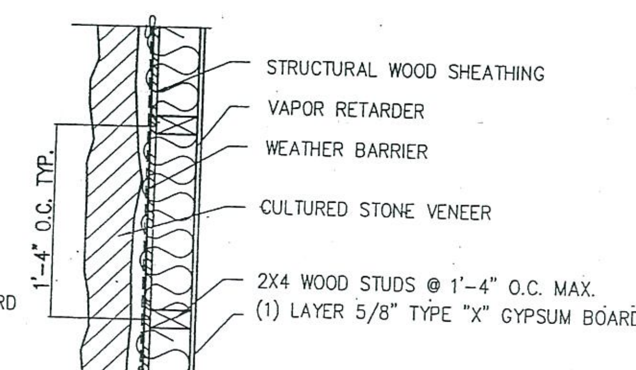




W05.5A
1 1/2" = 1'- 0" (half size: 3/4" = 1'- 0")

50





W03.5A
1 1/2" = 1'- 0" (half size: 3/4" = 1'- 0")

51

NOTE: BASE LAYER 5/8" TYPE X GYPSUM WALLBOARD APPLIED AT RIGHT ANGLES OR PARALLEL TO EACH SIDE OF STUDS 24" O.C. WITH 1" TYPE S DRYWALL SCREWS 8" O.C. TO VERTICAL EDGES AND 12" O.C. TO TOP AND BOTTOM RUNNERS AND INTERMEDIATE STUDS. STAGGER ALL VERTICAL AND HORIZONTAL JOINTS 24" O.C. EACH SIDE AND OPPOSITE SIDES.

Same as Wall Type W03.5A except replace the Structural Wood Sheathing with One Layer 5/8" Type "X" Gypsum Board

W03.5B

55

1 HR RATED ASSEMBLY
SIM TO GA # WP1200

GENERAL NOTE:
AT LOAD BEARING WALLS, UTILIZE WOOD STUDS, TOP/BOTTOM PLATES AND HEADER MEMBERS PER STRUCTURAL PLANS/SPECS. SEE SHEET 3.50

50 SEE NUMBERED NOTES, SHEET 3.30

Medical Design Group
Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

REGISTERED ARCHITECT No. AR-1740 19 March 2004
DAVID R. DAVIES STATE OF IDAHO

WALL ASSEMBLIES

Desert Sage Health Center
2280 American Legion Blvd.
Mountain Home, Idaho

SHEET 3.35

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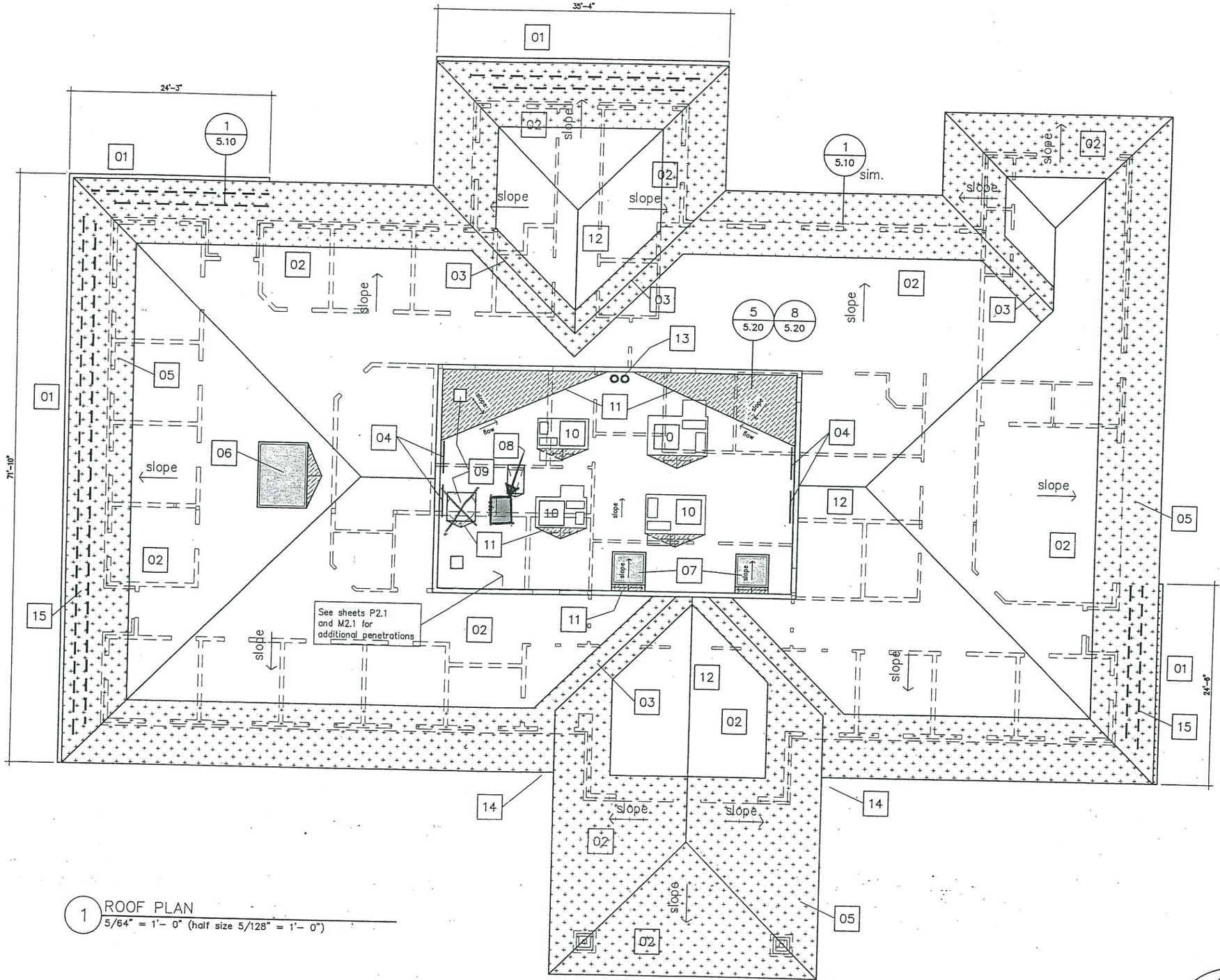

1 ROOF PLAN
5/64" = 1'– 0" (half size 5/128" = 1'– 0")

NUMBERED NOTES

01. Sheet Metal Gutter
02. High Slope Roofing – See Bid Alternates
03. Valley
04. 24 x 48" Attic Vents. See sheet 5.00 and the architectural specs for more information.
05. Ice and Water Shield shown hatched.
06. 6' x 8' Skylight
07. 4' x 4' Skylight – See bid alternate
08. Roof Hatch
09. HVAC Relief Air Vent and Fans
10. HVAC Roof Top Unit
11. Cricket – 1/2:12 min roof slope at valley
12. Ridge
13. Roof Drain and Overflow Drain – see sheet P2.1
14. Extend Roofing at Lower roof under the canopy structre and properly flash.
15. Heavy Dashed line represents line of Snow Cleats to help prevent damage to gutters by ice in winter.

Not Used

Medical Design Group
Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

REGISTERED ARCHITECT No. AR-1740 19 March 2004 DAVID R. DAVIES STATE OF IDAHO

ROOF PLAN

Desert Sage Health Center
2280 American Legion Blvd.
Mountain Home, Idaho

SHEET 3.40

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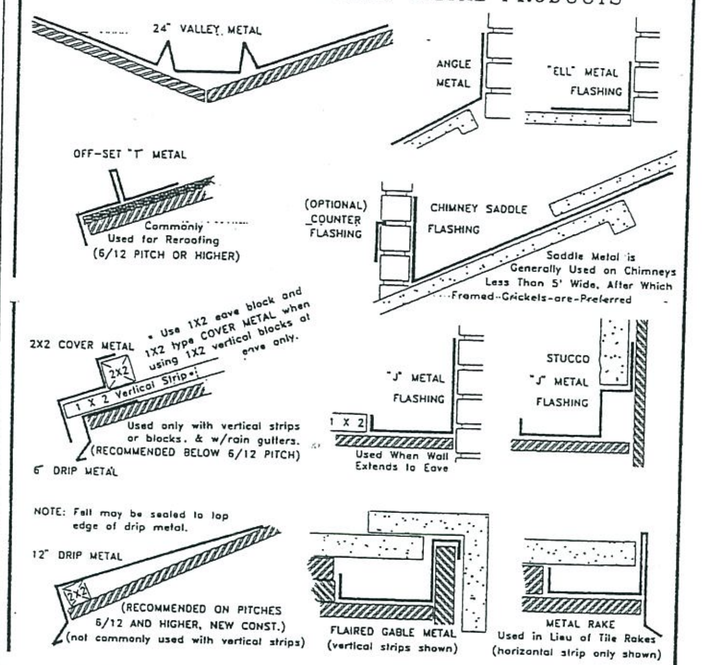
BARTILE®
Installation specifications and guide

STANDARD BARTILE SHEET METAL PRODUCTS



The Standard Metal is Galvanized Iron. Optional Colored Metal is Readily Available, as Well as Copper. Aluminum is stocked in White, Royal Brown, and Classic Cream. Lead is available in 2.5 lb. sheet. BARTILE also fabricates custom shapes for unique situations and special needs.

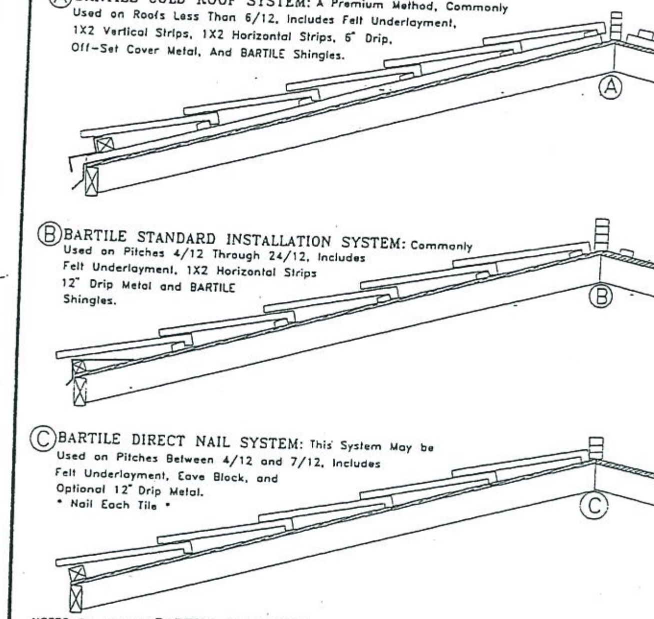
BARTILE®
Installation specifications and guide

BASIC FIELD TILE INSTALLATION OPTIONS

(A) BARTILE COLD ROOF SYSTEM: A Premium Method, Commonly Used on Roofs Less Than 6/12, Includes Felt Underlayment, 1X2 Vertical Strips, 1X2 Horizontal Strips, 6" Drip, Off-Set Cover Metal, And BARTILE Shingles.

(B) BARTILE STANDARD INSTALLATION SYSTEM: Commonly Used on Pitches 4/12 Through 24/12, Includes Felt Underlayment, 1X2 Horizontal Strips 12" Drip Metal and BARTILE Shingles.

(C) BARTILE DIRECT NAIL SYSTEM: This System May be Used on Pitches Between 4/12 and 7/12, Includes Felt Underlayment, Eave Block, and Optional 12" Drip Metal.
* Nail Each Tile *

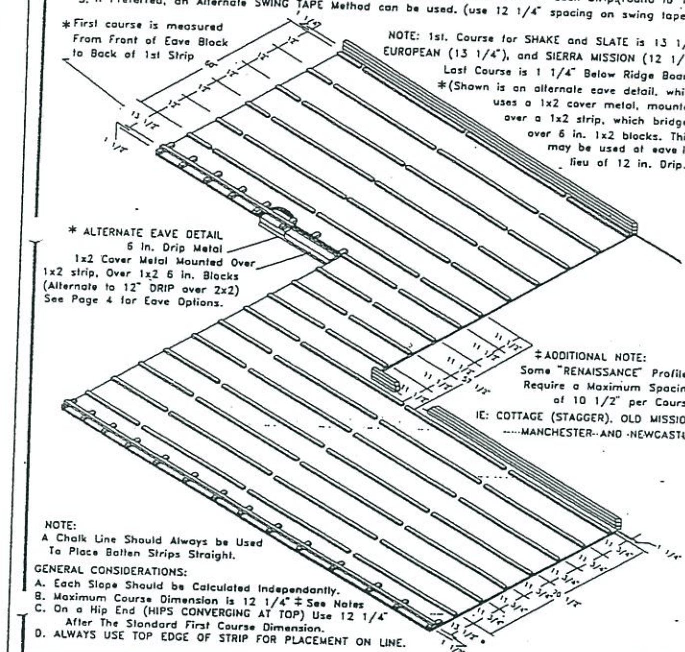


NOTES ON NAILING: BARTILE ULTRALITE Requires Each Tile to be Nailed. BARTILE Standard Wt. Requires (3 TILE) Periphery Nailing. (Includes Hips, Ridges, Rakes, and Eaves) On Pitches 2/12 To 5/12 (No Field Nailing Required), 6/12 To 9/12 (Nail 50%), 10/12 up (Nail each tile) The Nailing Requirements Under Severe Weather Conditions May Call For Additional Fastening. - On Pitches Below 4/12, 1 Nail For Std. Wt./ 2 Nails For Ultralite is Required.

BARTILE®
Installation specifications and guide

BARTILE BATTEN LAYOUT

*1. Begin With 6" 1x2 Eave Blocks (On 16" Centers), Eave Strip, Ridge Nailer, and 1st and Last Strip.
2. Measure Distance (in INCHES) Between 1st and Last Strip, and Divide by 12.25 (for 3" Headlap)
3. If the Resulting Number is not Even, ROUND UP, and Divide into the same total distance (in inches)
4. The Number Generated by This Formula is the Average Dimension Between Each Strip.(round to 1/8")
5. If Preferred, an Alternate SWING TAPE Method can be used. (use 12 1/4" spacing on swing tape)

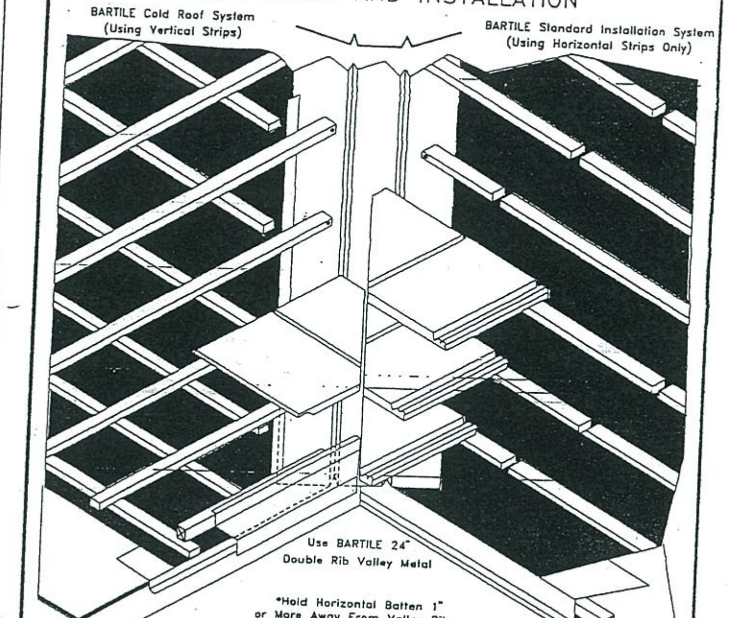


NOTE:
A Chalk Line Should Always be Used To Place Batten Strips Straight.

GENERAL CONSIDERATIONS:
A. Each Slope Should be Calculated Independantly.
B. Maximum Course Dimension is 12 1/4" ‡ See Notes
C. On a Hip End (HIPS CONVERGING AT TOP) Use 12 1/4" After The Standard First Course Dimension.
D. ALWAYS USE TOP EDGE OF STRIP FOR PLACEMENT ON LINE.

BARTILE®
Installation specifications and guide

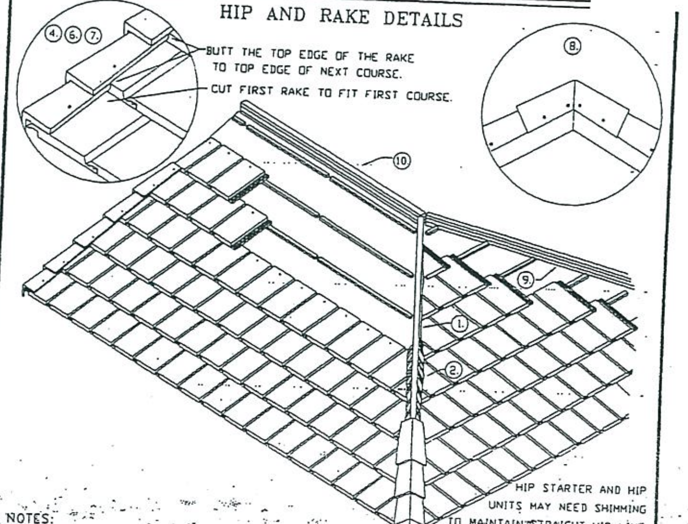
VALLEY METAL AND INSTALLATION



NOTES:
Underlayment may be sealed to drip Metal and woven at valley. (or run bleeder sheet at valley) In ice and snow climates, valley metal should be set in mastic. Lap valley metal sections 6" min. Use code approved underlayment, according to the climatic conditions applicable to the job. Avoid penetrating valley metal while nailing tile. (use mastic instead) Avoid using small pieces. BARTILE recommends a closed valley (as shown), but an open valley is acceptable. (where deemed appropriate) Do not block valley metal channel, nor drainage next to ribs in any way.

BARTILE®
Installation specifications and guide

HIP AND RAKE DETAILS

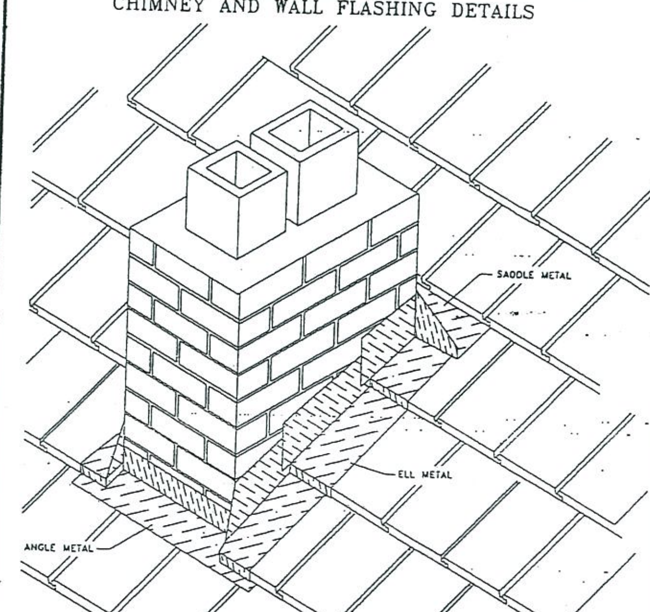


NOTES:
1. The Field Tile Must be Cut, (Mitered) to Fit Against the Hip Nailer Board.
2: Hip Cuts may be Grouted (Shown), or Covered With Flashing Tape, if Desired.
3. Hip Units are Nailed With Two 16d Galv. Nails. (One Nail is Exposed)
4. For Flat Tile, Every Other Course Must Start With a Cut Half Tile. (Half Bond)
5. Universal Rake Units Cover Either Side, Nail Through Either Side. (Not Top Hole)
6. First Rake Must be Cut to Fit the First Course of Tile. (Drill as Required)
7. Each Rake Covers One Course of Tile. Butt into Top Edge of Next Course.
8. The Last Rake Units at Crown Must be Mitered Together. (Drill as Required)
9. Hip Nailer Boards are Usually a Stack of 1x2 Strips 4 or 5 High, as Required.
10. Ridge Nailer Boards are Usually 3 to 5 Strips High, as Required.

****EUROPEAN AND SIERRA MISSION TILE ARE LAID STRAIGHT BOND, NOT OFF-SET.****
(Lay 5 Tile Wide, From Eave to Ridge, Verify Straight, Then Repeat)

BARTILE®
Installation specifications and guide

CHIMNEY AND WALL FLASHING DETAILS



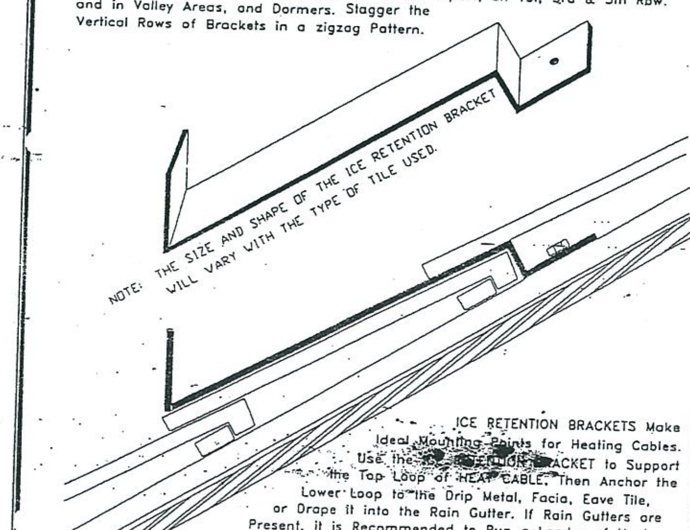
NOTES:
Roll the underlayment up the wall about 3" on all sides. Seal water tight. Leave a 1"-2" opening between battens and walls, for drainage. Install metal as shown, attaching only to wall, and seal. Counterflashing may be used. When wall terminates at or near eave, "J" METAL may be the preferred side wall flashing. Cut the sidewall tile within 1/2" of wall and seal with mastic. The EUROPEAN and SIERRA MISSION Profiles may require lead or grout flashings at the tile level, with metal underneath the tile. It is recommended that the "L" METAL be cut into 16" lengths, and the bottom 1" be cut and bent to cover the bottom edge of the tile.(as shown) Note how ANGLE METAL extends 3" beyond wall and SADDLE METAL extends 6" beyond wall on each side, then is bent over at flange. See page 4 for metal details and options.

BARTILE®
Installation specifications and guide

FIELD TYPE ICE BRACKETS

* in SEVERE WINTER CLIMATES, Massive Ice Buildup at the Eave Can Cause Damage. ICE RETENTION BRACKETS and/or HEAT CABLES can Reduce or Eliminate This Problem.

The ICE RETENTION BRACKETS are Nailed or Bolted to the Deck, Through the Vertical Strip (if Used) and Deck. The ICE RETENTION BRACKET is Designed to Hold the Ice Buildup in Place and Prevent it from Sliding Down the Roof, Causing Damage to Rain Gutters, Lower Roof Areas, Landscaping, Eave Tile, Etc. Mount the ICE RETENTION BRACKETS 16" to 24" Apart, on 1st, 3rd & 5th Row, and in Valley Areas, and Dormers. Stagger the Vertical Rows of Brackets in a zigzag Pattern.



ICE RETENTION BRACKETS Make Ideal Mounting Points for Heating Cables. Use the ICE RETENTION BRACKET to Support the Top Loop of HEAT CABLE. Then Anchor the Lower Loop to the Drip Metal, Facia, Eave Tile, or Drape it into the Rain Gutter. If Rain Gutters are Present, it is Recommended to Run a Leader of Heat Cable Through the Rain Gutter and Down Spout.

Medical Design Group
Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

REGISTERED ARCHITECT No. AR-1740 19 March 2004
DAVID R. DAVIES STATE OF IDAHO

TYPICAL ROOF DETAILS

Desert Sage Health Center
2280 American Legion Blvd.
Mountain Home, Idaho

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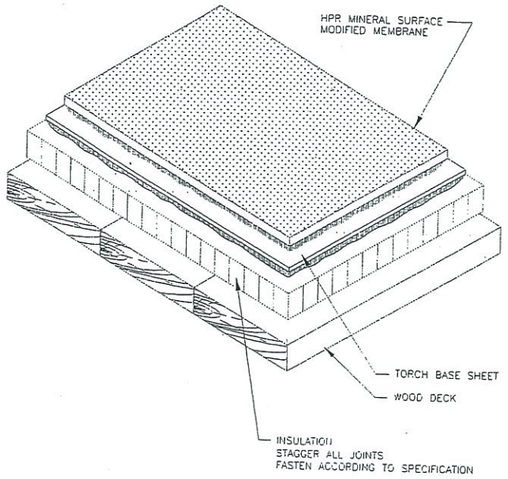
THE GARLAND COMPANY, INC.

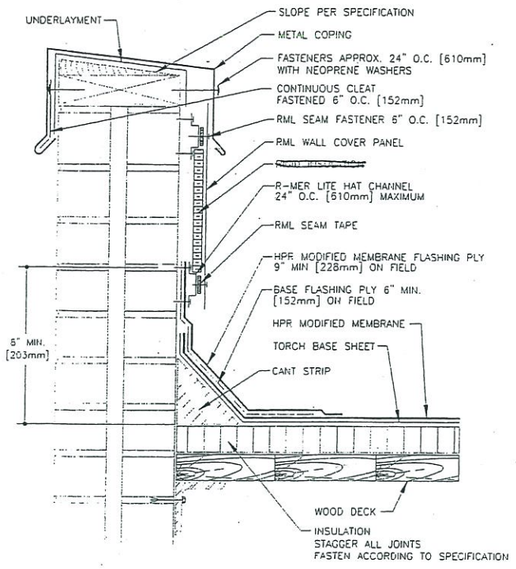
TYPICAL SECTIONS - MINERAL FINISH MBTW-02



TYPICAL SECTIONS - MINERAL FINISH
N.T.S.

THE GARLAND COMPANY, INC.

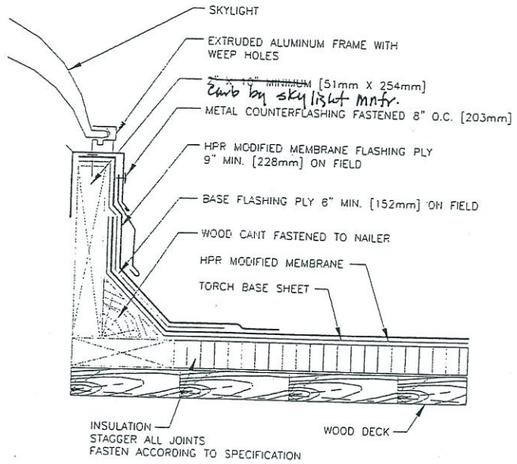
RML WALL PANEL W/MODIFIED BITUMEN ROOF/FLASHING MBTW-27



RML WALL PANEL W/MODIFIED BITUMEN ROOF/FLASHING
N.T.S.

THE GARLAND COMPANY, INC.

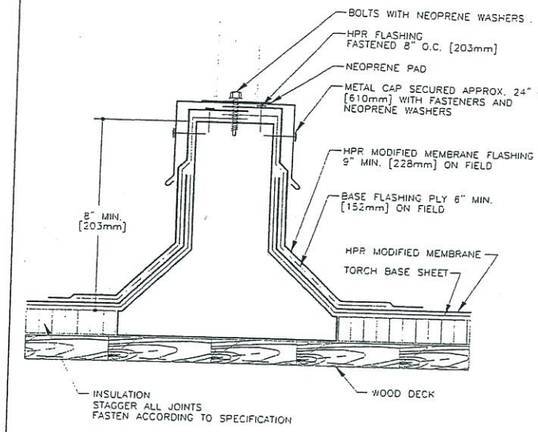
SKYLIGHT MBTW-34



SKYLIGHT
N.T.S.

THE GARLAND COMPANY, INC.

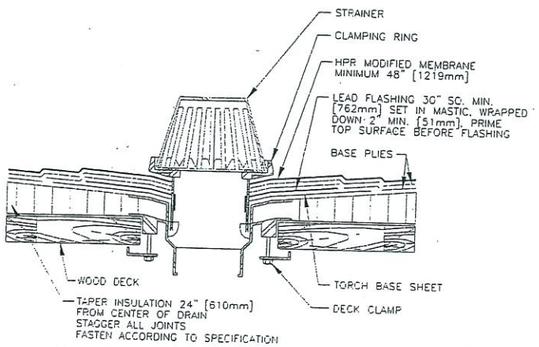
PREMANUFACTURED CURB FOR EQUIPMENT SUPPORT MBTW-35



PREMANUFACTURED CURB FOR EQUIPMENT SUPPORT
N.T.S.

THE GARLAND COMPANY, INC.

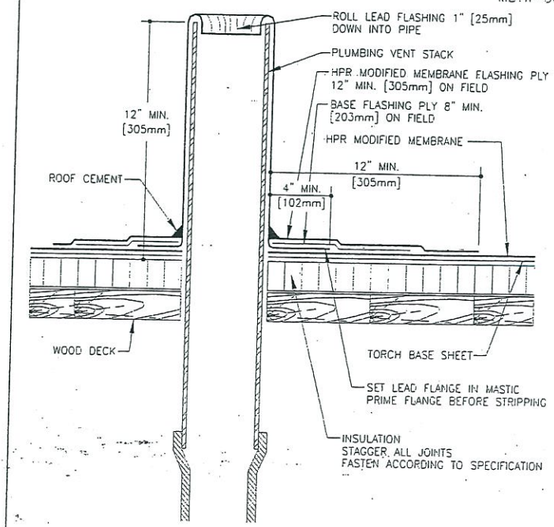
ROOF DRAIN - ALTERNATE MBTW-41



ROOF DRAIN - ALTERNATE
N.T.S.

THE GARLAND COMPANY, INC.

PLUMBING STACK MBTW-50



PLUMBING STACK
N.T.S.

Medical Design Group
Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

REGISTERED ARCHITECT No. AR-1740, 19 March 2004
DAVID R. DAVIES STATE OF IDAHO

TYPICAL ROOF DETAILS

Desert Sage Health Center
2280 American Legion Blvd.
Mountain Home, Idaho

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CAPSTONE PRODUCT

DIRECTIONS FOR APPLICATION

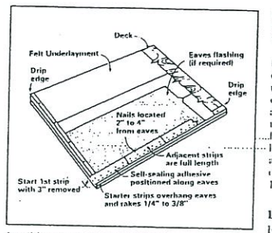
THESE APPLICATION INSTRUCTIONS ARE THE MINIMUM REQUIRED TO MEET ELK'S APPLICATION REQUIREMENTS. FAILURE TO USE THESE INSTRUCTIONS MAY VOID THE PRODUCT WARRANTY. IN SOME AREAS THE BUILDING CODES MAY REQUIRE ADDITIONAL APPLICATION TECHNIQUES OR METHODS BEYOND OUR INSTRUCTIONS. IN THESE CASES THE LOCAL CODE MUST BE FOLLOWED. UNDER NO CIRCUMSTANCES WILL ELK ACCEPT APPLICATION REQUIREMENTS THAT ARE LESS THAN THOSE PRINTED HERE. SHINGLES SHOULD NOT BE JAMMED TIGHTLY TOGETHER. ALL ATTICS SHOULD BE PROPERLY VENTILATED.

DECK PREPARATION

Roof decks should be dry, well seasoned 1" x 6" (2.54 cm x 15.24 cm) boards, exterior grade plywood at least 3/8" (0.95 cm) thick and conform to the specifications of the American Plywood Association, 7/16" (1.11 cm) oriented strandboard, or chipboard. Fire retardant plywood decking is NOT an approved substrate for Capstone shingles.

UNDERLAYMENT

Use non-perforated 15 to 30 pound asphalt saturated felt. Underlayment is required on new construction and recommended for reroofing.



STANDARD SLOPE 4/12 to 21/12. Use one layer of underlayment, as shown in Drawing 1.A.

LOW SLOPE 2/12 to 4/12. Completely cover the deck with two plies of felt underlayment overlapping a minimum of 18" (45.72 cm). Begin by fastening an 18" (45.72 cm) wide felt underlayment along the eaves. Next, apply a full, 36" (91.44 cm) wide felt sheet, horizontally along the eaves. Next, apply a full 36" (91.44 cm) wide and overlap the preceding course by 18"(45.72 cm).

EAVE FLASHING (ICE DAMS)

Eave flashing MUST be installed in localities where leaks may result by a water back up near an ice dam.

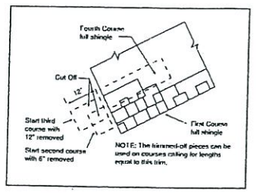
STANDARD SLOPE 4/12 to 21/12. Use coated roll roofing of not less that 50 pounds (22.68 kg) over the felt underlayment extending from the eave edge to a point at least 12" (30.48 cm) beyond the inside wall.

LOW SLOPE 2/12 to 4/12. Use a continuous layer of asphalt plastic cement between the two plies of underlayment from each edge up roof to a point at least 24" (60.96 cm) beyond the inside wall line.

METAL DRIP EDGES

Metal drip edges are recommended along rake and eave edges of all decks. Consult the Elk Tuscaloosa, Alabama Sales Office for application specifications over other decks and other slopes.

SHINGLE APPLICATION



STARTER COURSE: Use a self-sealing strip shingle with the tabs trimmed off and applied with the adhesive strip positioned at the eaves edge. With at least 1" (7.62 cm) trimmed from the end of the shingle, start at the rake edge overhanging the cave 1/4" to 3/8" (0.64 cm to 0.95 cm). Fasten 2" (5.08 cm) from the lower edge and 1" (2.54 cm) from each side (see Drawing 1.A).

FIRST COURSE: Start at rake and continue course with full shingles laid flush with the starter course. Refer to Drawing 1.B

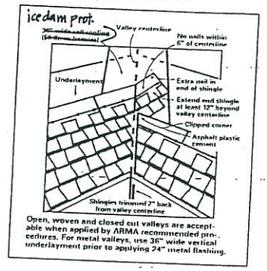
SECOND COURSE: Start at the rake with shingle having 6" (15.24 cm) trimmed off and continue across roof with full shingles.

THIRD COURSE: Start at the rake with shingles having 12" (30.48 cm) trimmed off and continue across roof with full shingles.

FOURTH COURSE: Start at the rake and continue with full shingles across the roof.

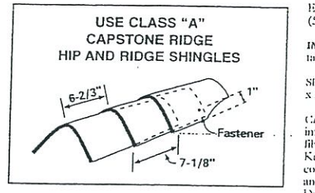
FIFTH AND SUCCEEDING COURSES: Repeat application as shown for second, third, and fourth courses.

VALLEY CONSTRUCTION



PRODUCT APPLICATION

HIP AND RIDGE SHINGLE



Exposure - Five inches (5" [12.7 cm]).

IMPORTANT: Do not remove tape on back of shingle.

SHINGLE DIMENSIONS: 12-1/8" x 39-1/2" (30.8 cm x 100.33 cm)

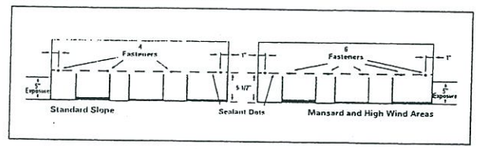
CAUTION: By careless and improper storage or handling, fiberglass shingles can be harmed. Keep these shingles completely covered, dry, reasonable cool, and protected from the weather. Do not store neat steam pipes, radiators, furnaces, or other sources of heat. Do not store indirect sunlight until applied. DO NOT DOUBLE STACK PALLETS. Systematically rotate all stock so the material stored the longest will be the first to be moved out.

FASTENERS

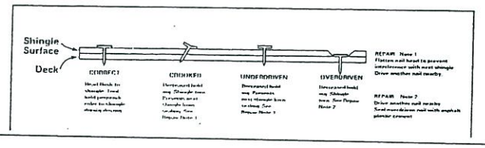
Help stop blow-offs and call-backs

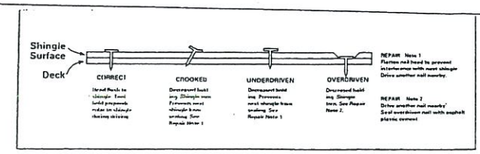
While nailing is the "preferred" fastening method for Capstone shingles, Elk Corporation of Alabama will accept fastening methods according to the following instructions: Four to six fasteners must be driven into the DOUBLE THICKNESS area of the shingle. Nails or staples must be placed between the sealant dots.

PROPER FASTENER LOCATION



PROPERLY AND IMPROPERLY DRIVEN NAILS





If you nail correctly, you will penetrate both layers of the shingle and the top portion of the shingle under it. This gives you double protection. You will reduce the chances of blow-offs, and you will not jeopardize your warranty. If you fasten above the sealant dots you will miss the shingle below and obtain no secondary fastening.

ELK Capstone shingles have a UL, Wind Resistance Rating when using nails or staples on reroofs as well as new construction.

NAILS: Galvanized, 3/8" (0.95 cm) head, 10 to 12 gauge barbed shank roofing nails. Minimum 3/4" (1.91 cm) penetration in deck. 1-1/4" (3.18 cm) nail required for new construction and 1-1/2" (3.81 cm) nail required for reroofing. Nails should be long enough to sink into and hold in a sound nailing base.

STAPLES: Galvanized, 16 gauge minimum, crown width minimum of 15/16" (2.38 cm). Minimum 3/4" (1.91 cm) penetration in deck.

Special care must be taken in the use of staple guns. Staples must be driven with the gun accurately adjusted to ensure the entire crown bears tightly against the shingle buy does not cut the shingle surface. An improperly adjusted staple gun can result in raised staples which can cause a fish-mouthed appearance and can prevent sealing.

MANSARD AND HIGH WIND AREA FASTENER LOCATION

Correct fastening is critical to the performance of the roof.

For slopes exceeding 60 degrees (or 21/12) use 6 fasteners. Locate fasteners in the fastener area 1" (2.54 cm) from each side edge with the remaining 4 fasteners equally spaced along the length of the double thickness area.

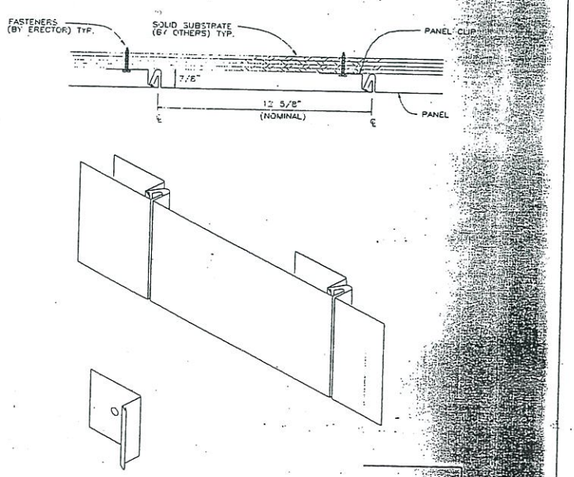
High wind areas are areas where sustained winds greater than 50 miles per hour (80.47 km/h) are normally experienced.

Correct fastening is critical to the performance of the roof. ELK CORPORATION will accept only fastening methods according to the above instructions.

ELK

THE GARLAND COMPANY, INC.

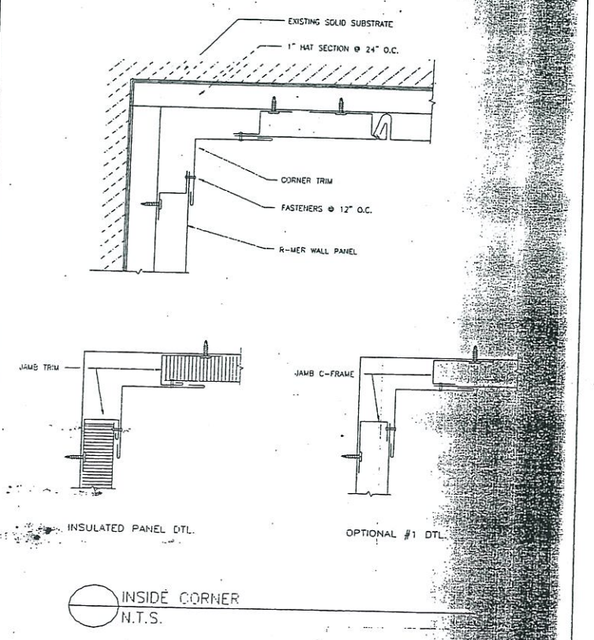
R-MER WALL FLUSH PANEL — WALL-102



R-MER WALL FLUSH PANEL
N.T.S.

THE GARLAND COMPANY, INC.

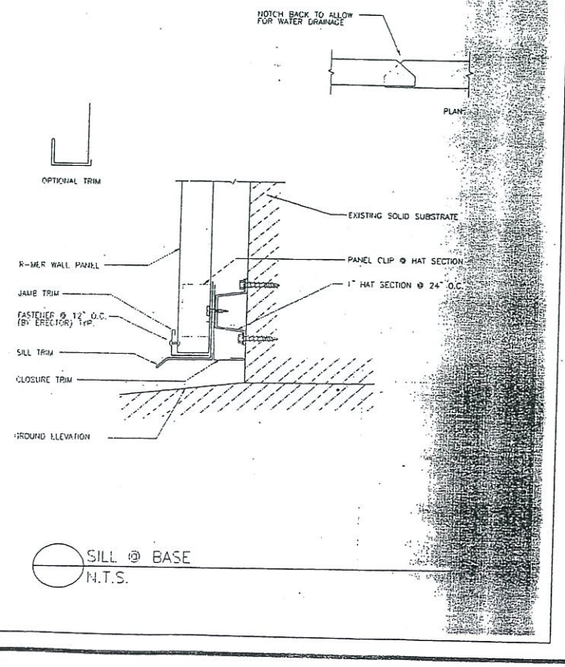
INSIDE CORNER — WALL-202



INSIDE CORNER
N.T.S.

THE GARLAND COMPANY, INC.

SILL @ BASE — WALL-207



SILL @ BASE
N.T.S.

Medical Design Group
Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

REGISTERED ARCHITECT
No. AR-1740
19 March 2004
DAVID R. DAVIES
STATE OF IDAHO

ROOF/WALL PANEL DETAILS

Desert Sage Health Center
2280 American Legion Blvd.
Mountain Home, Idaho

SHEET 3.47

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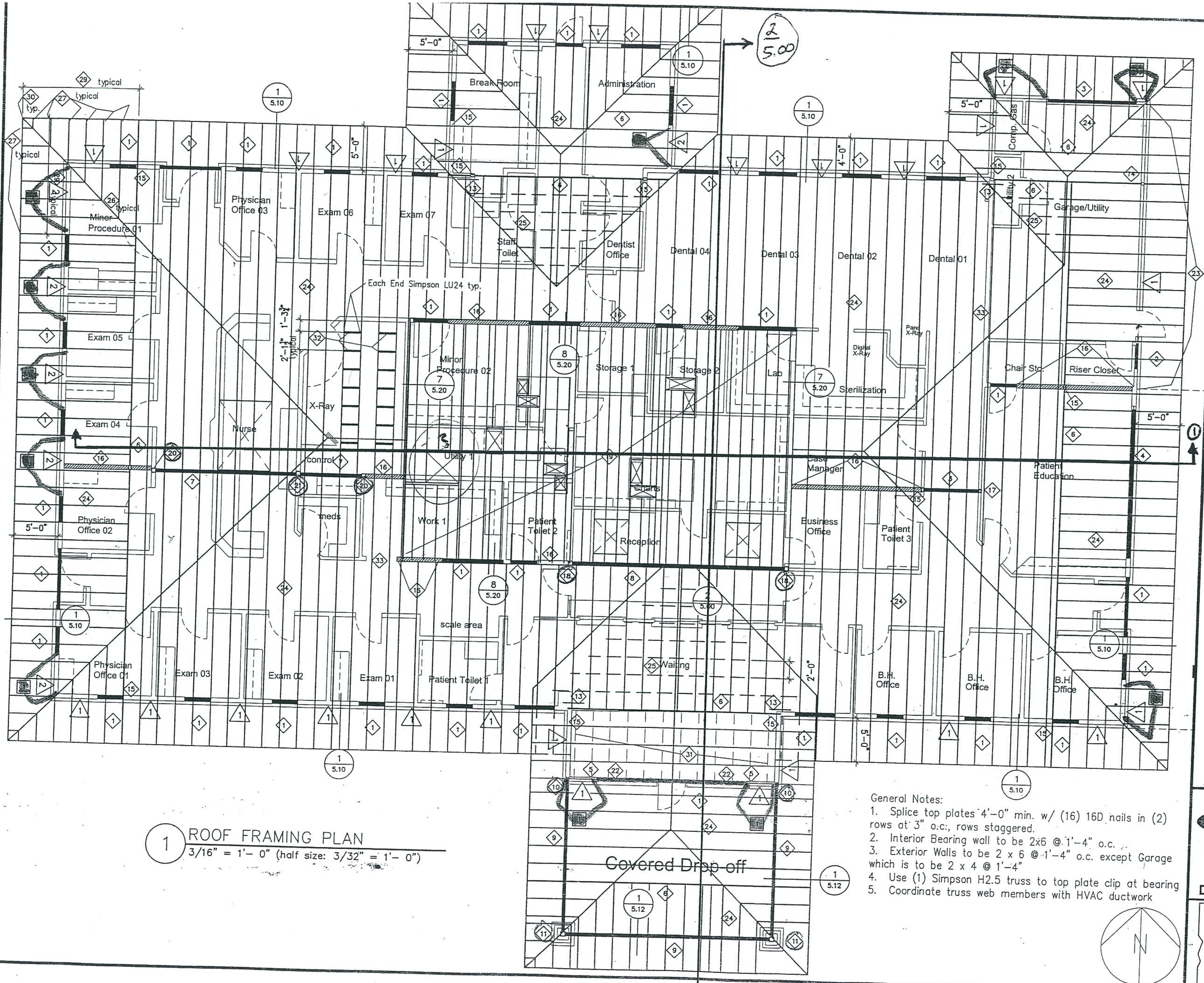

1 ROOF FRAMING PLAN
3/16" = 1'- 0" (half size: 3/32" = 1'- 0")

Numbered Notes

01. 6 x 8 or (2) 1 3/4 x 9 1/4 LVL.
02. 4 x 12
03. (2) 1 3/4 x 9 1/4 LVL w/ (2) 2 x 4 Trimmers w/ (4) 2x4 King Sts.
04. (3) 1 3/4" x 11 7/8 LVL w/ (2) 2 x 6 Trimmers w/ (3) 2 x 6 King Studs
05. (3) 2 x 6 King Studs
06. Girder Truss
07. 5 1/4" x 14" PSL
08. 5 1/8" x 24" GLB
09. 5 1/8" x 16 1/2" GLB
10. 6 x 6 #1 w/ ECC 5 1/4-6 cap 2 ea
11. 6 x 6 #1 w/ Simpson ECC 5 1/4-6 cap w/ GLT5 offset (for side beam) w/ CB66 base. 2 ea
12. (2) 2 x 6 King Studs
13. Strap G.T. to top Plates w/ (1) Simps. CMSTC16 (L=8') w/ 16D @ 3" o.c. staggered each end.
14. (2) 2 x 4
15. (2) 2 x 6
16. 2 x 6 @ 1'-4" o.c.
17. (3) 2 x 4
18. 6 x 6#1 w/Simps. ECCQ5-6SDS2.5 cap 2e
19. 16" TJI Pro 250's @ 1'-4" o.c. max. w/ Simpson IUS 1.81/16 Hangers
20. 6 x 6 #1 w/ Simps. ECCQ5-6 SDS 2.5 cap 2e
21. 6 x 8 #1 w/ Simps. ECCQ5-6 SDS 2.5 cap 1e
22. Connect Truss to top plate w/ Simps. A35's @ 2'-0" o.c.
23. 2 x 4 at 1'-4" o.c.
24. Pre-engineered trusses @ 2'-0" oc max
25. Overbuilt framing - 2 x 4 @ 1'-4" o.c. pony walls
26. Hip Truss
27. (1) Simpson HGA10 to truss
28. End Nail Fascia to truss tail w/ (3)16d
29. 2 x 10 LSL structural fascia.
30. (1) simpson HUC210 to hip truss
31. 2x6 @ 2'-0 o.c. Ceiling Joists
32. 4x4 solid wood blocking between bot. truss chords flush with back of gyp. board to accomodate x-ray head mounts. Mounts to be two OFOI Rails. Each rail to hold 500 lbs dynamic load
33. Install Header anticipating future door

General Notes:
1. Splice top plates 4'-0" min. w/ (16) 16D nails in (2) rows at 3" o.c., rows staggered.
2. Interior Bearing wall to be 2x6 @ 1'-4" o.c.
3. Exterior Walls to be 2 x 6 @ 1'-4" o.c. except Garage which is to be 2 x 4 @ 1'-4"
4. Use (1) Simpson H2.5 truss to top plate clip at bearing
5. Coordinate truss web members with HVAC ductwork

Medical Design Group
Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

REGISTERED ARCHITECT No. AR-1740 19 March 2004
DAVID R. DAVIES STATE OF IDAHO

ROOF FRAMING PLAN

Desert Sage Health Center
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Mountain Home, Idaho

SHEET 3.50

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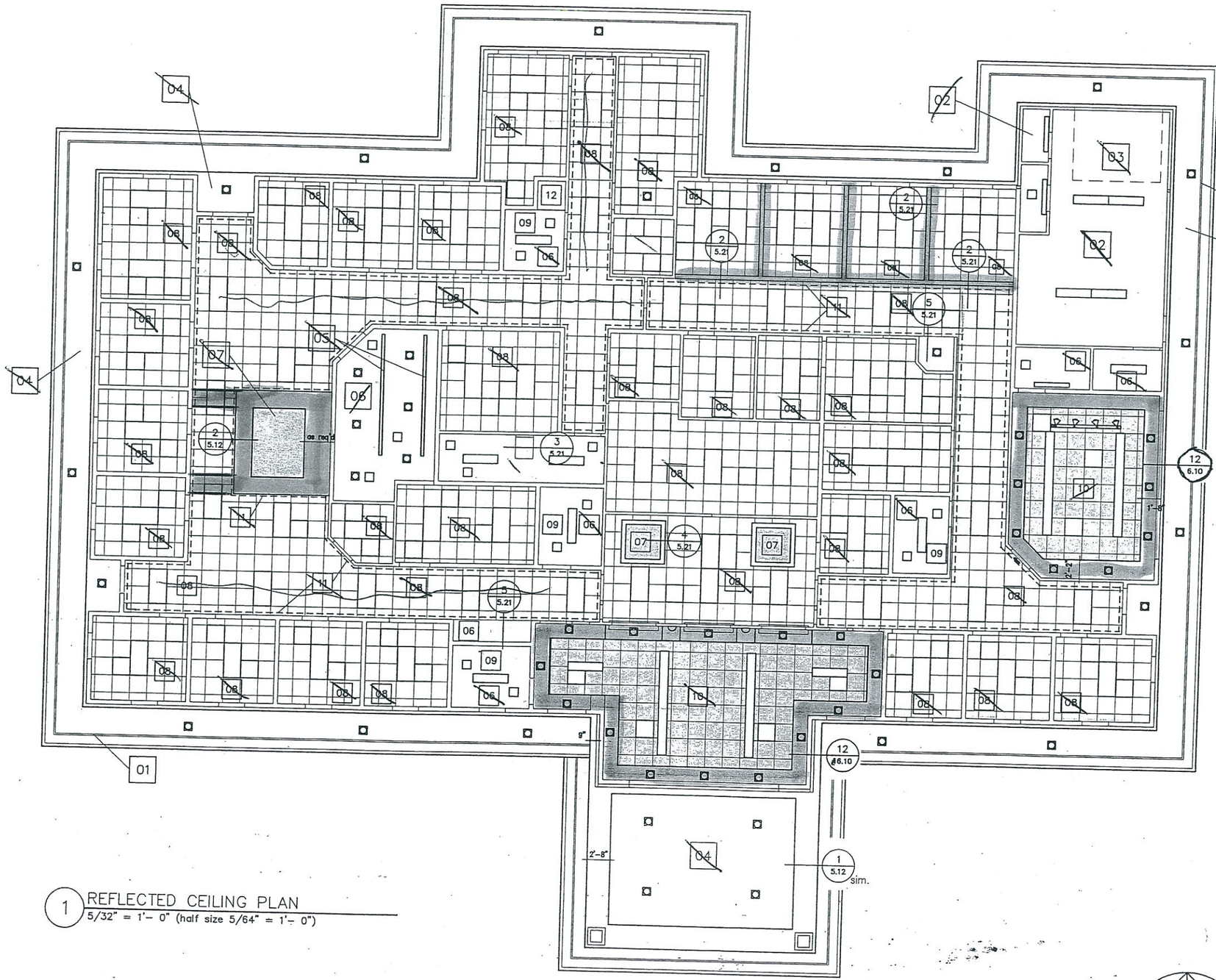

1 REFLECTED CEILING PLAN
5/32" = 1'- 0" (half size 5/64" = 1'- 0")

NUMBERED NOTES

01. Continuous Vent
02. (2) layers 5/8" type x gypsum board
03. Automatic Garage Door shown dashed
04. Stucco Finish
05. OFOI Xray Brackets bolted to blocking
06. (1) layer gypsum board onto trusses
07. Skylight
08. Lay-in Ceiling System
09. Epoxy Paint
10. Type "B" ceiling tiles
11. Crown Moulding - see detail 1/5.21
Similar to Boise Moulding (BM) 1520
12. Hard Ceiling at elev. 107'-6" - furr down

Soffits

GENERAL NOTE:
See sheet 5.10 for typical lay-in ceiling mounting height
Type "A" ceiling tiles typical UNO

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Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

REGISTERED ARCHITECT
No. AR-1740
19 March 2004
DAVID R. DAVIES
STATE OF IDAHO

REFLECTED CEILING PLAN

Desert Sage Health Center
2280 American Legion Blvd.
Mountain Home, Idaho

SHEET 3.60

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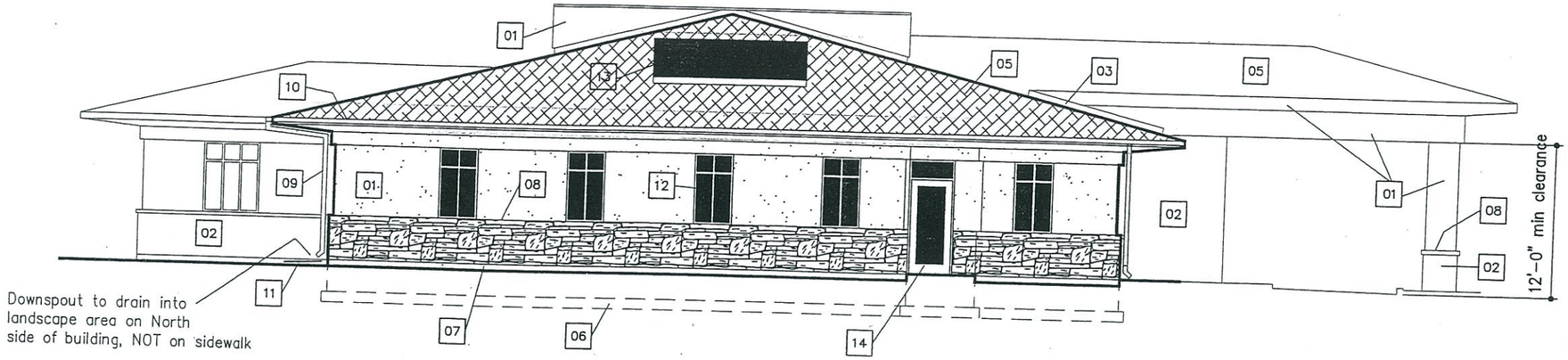
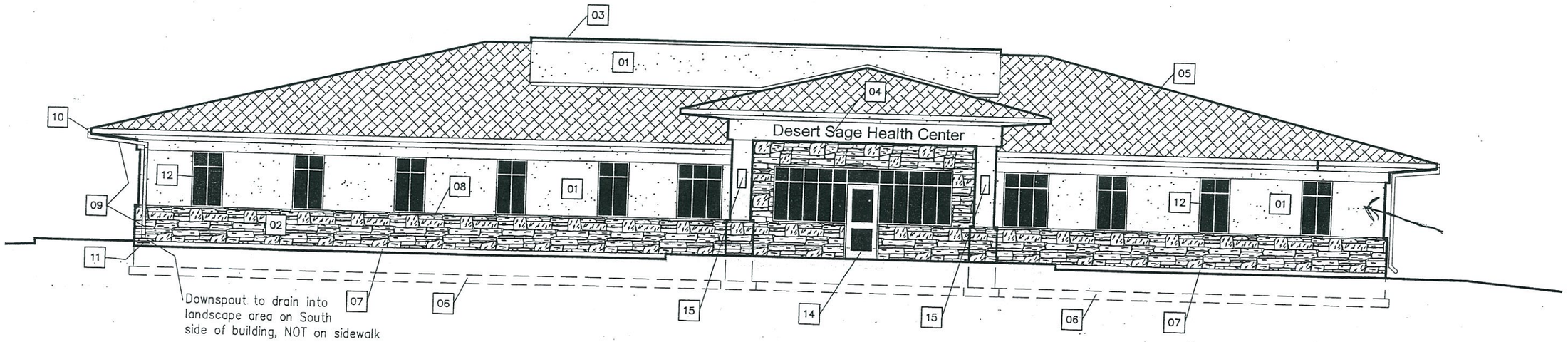


2 WEST EXTERIOR ELEVATION

3/16" = 1'- 0" (half size: 3/32" = 1' - 0")

NUMBERED NOTES:

01. Stucco
02. Stone Veneer
03. Metal Flashing
04. Cast Letters
05. Roofing
06. Conc. Footing/Foundation
07. Stucco Finish on exposed conc.
08. Pre-manuf. stone cap
09. Downspout
10. Gutter
11. Pre-cast Conc. Downspout
12. Window Assembly
13. Skylight Assembly
14. Door Assembly
15. Light Fixture



1 SOUTH EXTERIOR ELEVATION

3/16" = 1'- 0" (half size: 3/32" = 1' - 0")

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Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

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EXTERIOR ELEVATIONS

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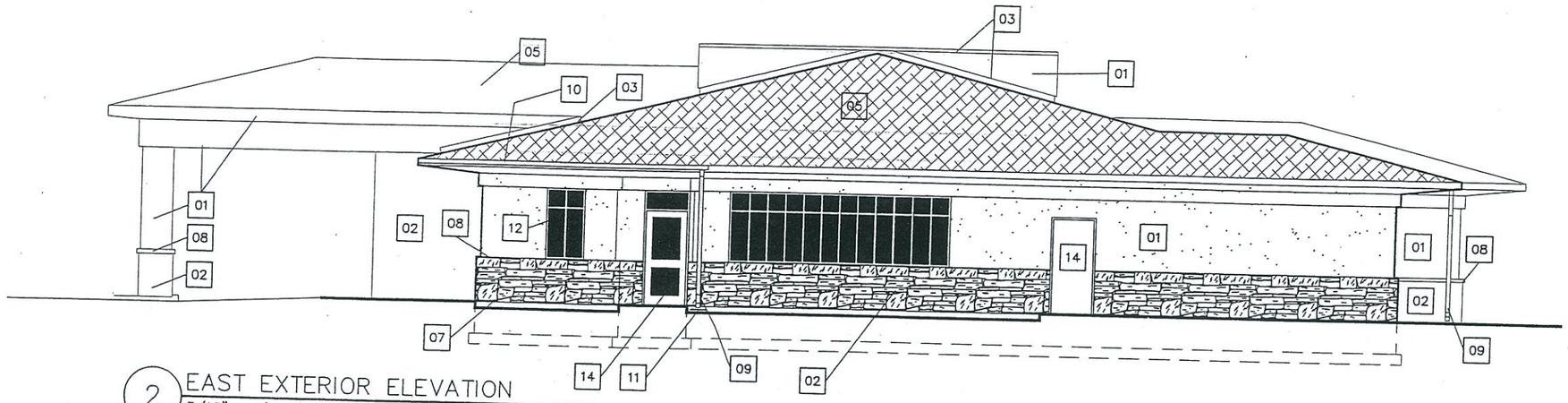
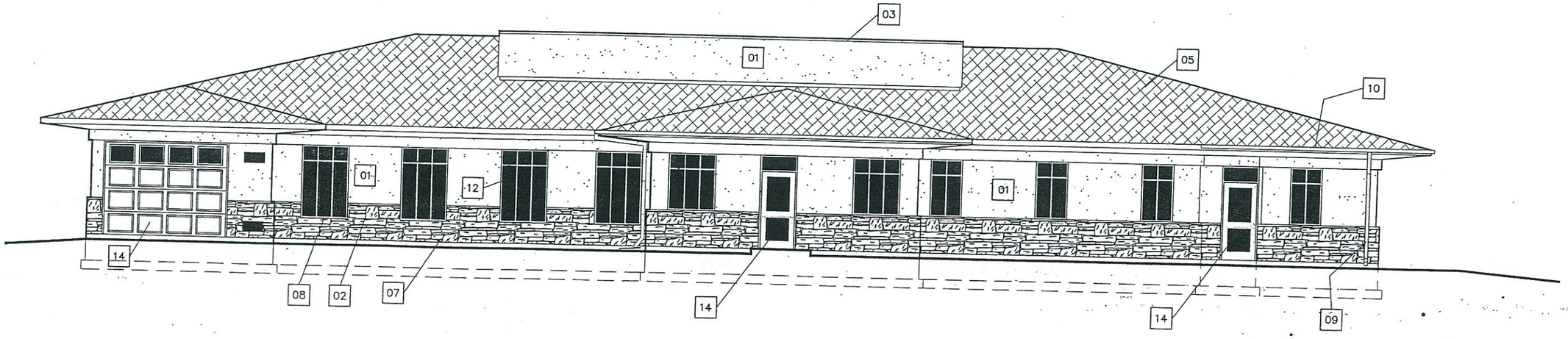


2 EAST EXTERIOR ELEVATION
3/16" = 1'– 0" (half size: 3/32" = 1' – 0")

NUMBERED NOTES:

01. Stucco
02. Stone Veneer
03. Metal Flashing
04. Cast Letters
05. Roofing
06. Conc. Footing/Foundation
07. Stucco Finish on exposed conc.
08. Pre–manuf. stone cap
09. Downspout
10. Gutter
11. Pre–cast Conc. Downspout
12. Window Assembly
13. Skylight Assembly
14. Door Assembly
15. Light Fixture



1 NORTH EXTERIOR ELEVATION
3/16" = 1'– 0" (half size: 3/32" = 1' – 0")

Medical Design Group
Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

REGISTERED ARCHITECT No. AR-1740 19 March 2004
DAVID R. DAWES STATE OF IDAHO

EXTERIOR ELEVATIONS

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SHEET 4.10

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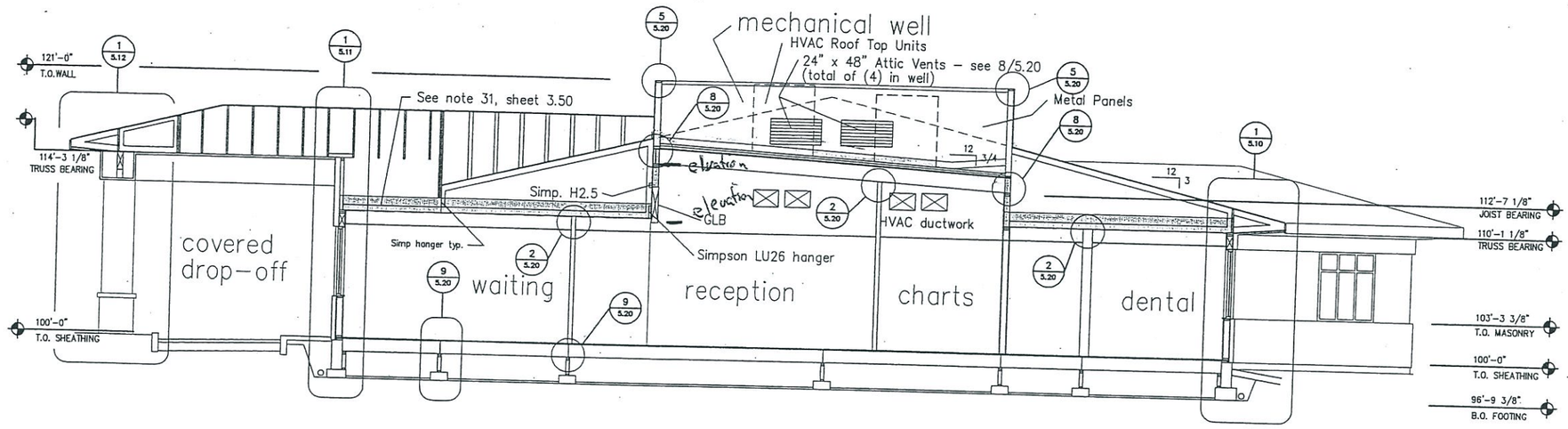
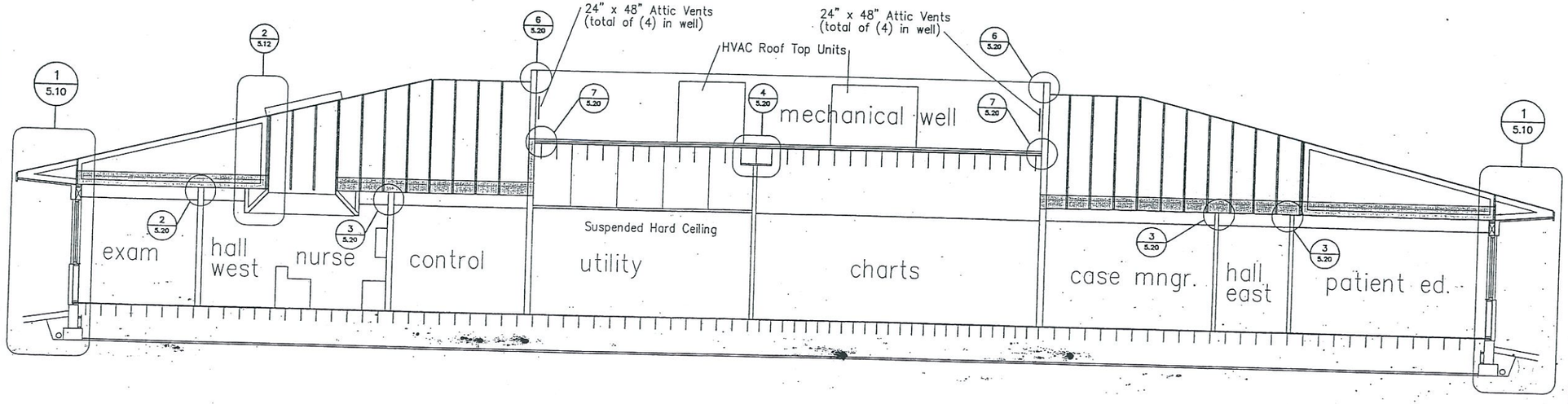


2 Building Section
3/16" = 1'– 0" (half size: 3/32" = 1'– 0")



1 Building Section
3/16" = 1'– 0" (half size: 3/32" = 1'– 0")

Medical Design Group
Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1465
Phone (208) 378-0312

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BUILDING SECTIONS

Desert Sage Health Center
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SHEET 5.00

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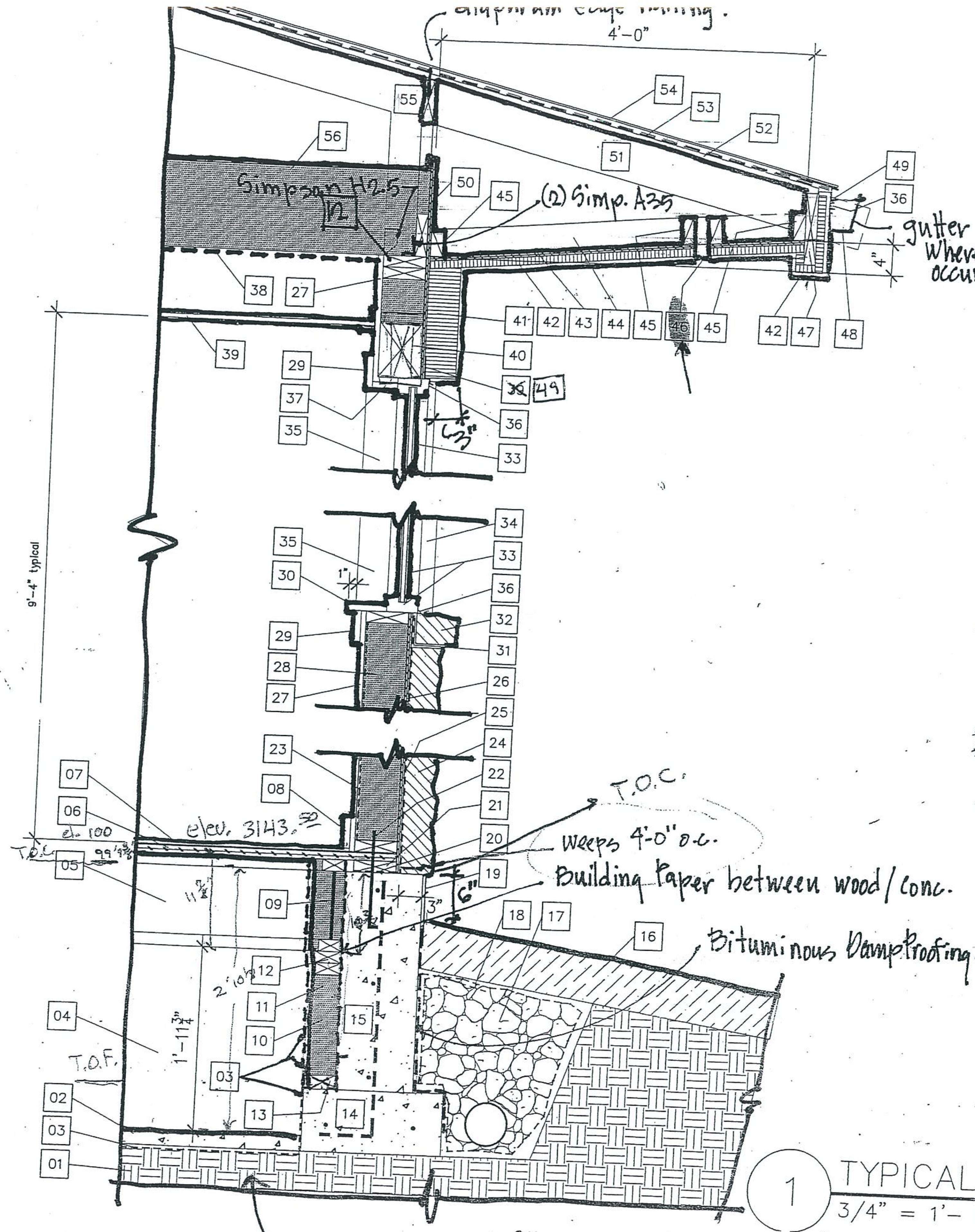

1 TYPICAL WALL SECTION

3/4" = 1'- 0"

NUMBERED NOTES:

01. Native Material OR Compacted Suitable Fill (see soils report)
02. 2" thick Concrete Slab throughout entire crawl space
#7 03. 10 mil vapor retarder
04. Crawl Space
05. Floor Joist Beyond
06. 1-1/8" Thick Sturdi-Floor T&G Wood Sheathing
07. Floor Finish as noted. (see specs for req'd underlayment)
08 Floor Base as noted (either rubber or hardwood)
09. TJI Blocking
#7 10. R-13 Min. Batt Insulation with Vapor Retarder shown hatched
11. 2x4 @ 1'-4" o.c. max.
12. Double Top Plate
13. Pressure Treated Bottom Plate
14. Reinforced Concrete Footing – See sheet 3.10
15. Reinforced Concrete Foundation Wall – See sheet 3.10
16. 6" min. top soil – 12" thick at planter beds
17. 3/4 to 2" drain rock around 4" perforated Foundation Drain
18. Geotech Filter Wrap to prevent sediment fro reaching Perf. Drain Pipe
#7 19. Stucco Finish Coat on Exposed Portions of the Concrete
20. Sill Sealer
21. Pressure Treated 2x6 Mud Sill
22. Anchor Bolt – spacing per shear wall schedule – sheet 3.04
Place additional anchor bolts within 6" of the end of each 2x sill member.
#7 23. Continuous Vapor Retarder
24. Cultured Stone Veneer over Lath #4
#7 25. Weather Resistant Barrier (Tyvek)
26. Wall Sheathing
27. 5/8" Type "X" Gypsum Board
28. 2x6 studs at 1'-4" o.c. max.
29. 1x4 Hardwood Trim
30. Sill
#5 31. 2 1/2 x 2 1/2 x 16 gauge sheet metal ledger for stone sill
32. Cultured Stone Sill over lath onto ledger #4
33. Aluminum window System
#7 34. Stucco system beyond
35. Hardwood Casing beyond
36. Caulking
37. 1x Hardwood Window Casing
38. Foil-Scrim-Kraft Vapor Retarder – seal all penetrations.
39. Acoustical Lay-in Ceiling and Metal Grid Assembly
40. Wood Header – See sheet 3.50
#7 41. Stucco Assembly with 4" Poly-iso
#7 42. Stucco Assembly with 1" Poly-iso
43. Wall Sheathing
44. 2x4 Framing to match truss spacing
45. 2x4 Blocking
~~46. 2" wide min. continuous galv. metal screen vent~~
47. 2x10 sub-fascia member
48. Cut Truss tails in the field
49. Drip-edge flashing
50. Extend Wall Sheathing up to baffle Roof Insulation
51. Pre-manufactured Pre-engineered Wood Trusses beyond
52. Roof sheathing
53. Ice and Water shield Membrane
54. Roofing Finish Material (see alternates) over building paper
55. Pre-manufactured Pre-Engineered Truss Blocking Panel (600 lb Axial Load) w/(2) Simp. A35 clips each panel.
56. Attic Insulation #7

Medical Design Group
Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

REGISTERED ARCHITECT No. AR-1740 14 Feb 2004 DAVID R. DAVIES STATE OF IDAHO

WALL SECTIONS

Desert Sage Health Center
2280 American Legion Blvd.
Mountain Home, Idaho

SHEET 5.10

Feb 2004

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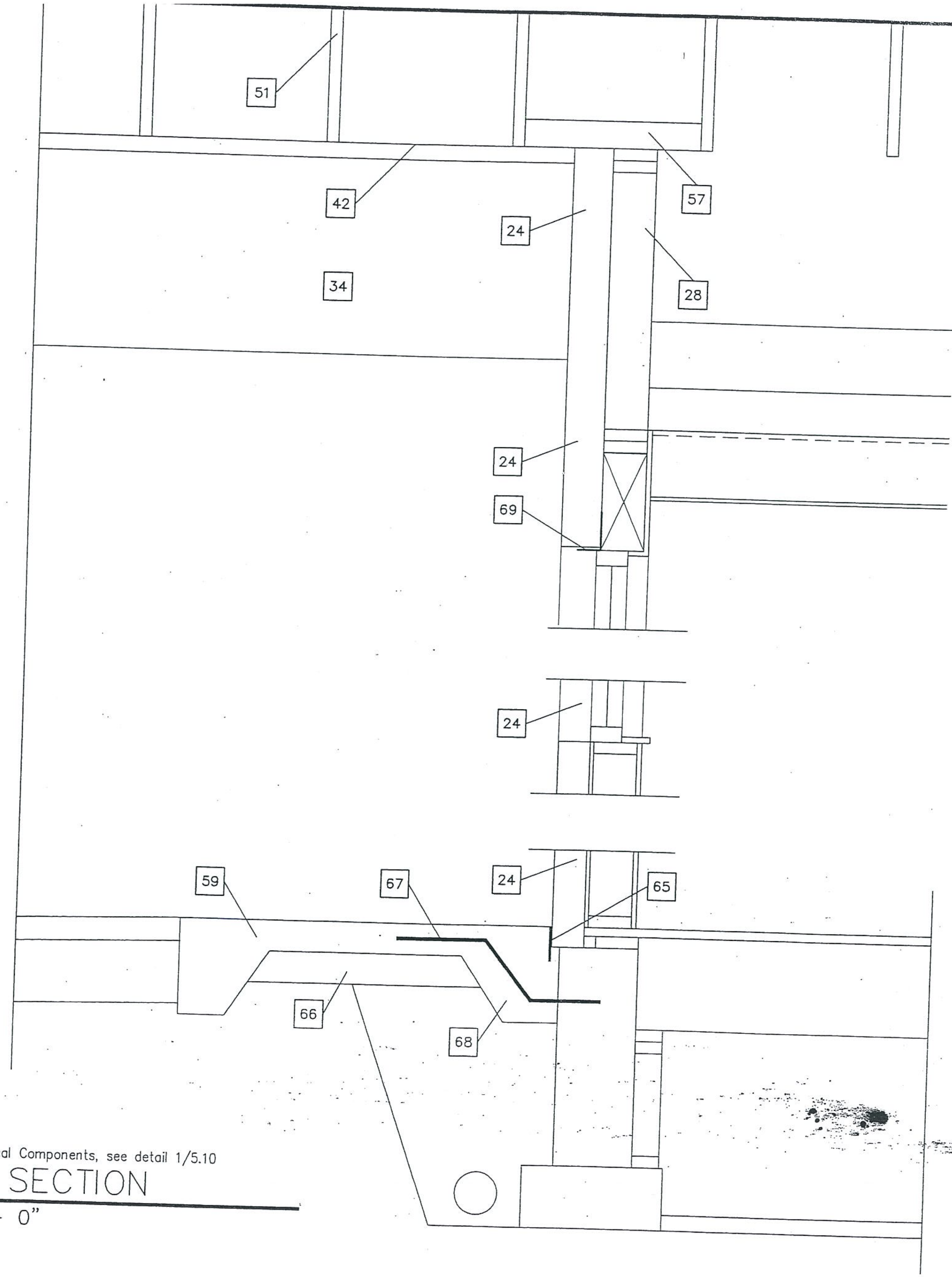

Note: For Typical Components, see detail 1/5.10

1 WALL SECTION

3/4" = 1'- 0"

NUMBERED NOTES:

01. Native Material OR Compacted Suitable Fill (see soils report)
02. 2" thick Concrete Slab throughout entire crawl space
03. 10 mil vapor retarder
04. Crawl Space
05. Floor Joist Beyond
06. 1-1/8" Thick Sturdi-Floor T&G Wood Sheathing
07. Floor Finish as noted. (see specs for req'd underlayment)
08 Floor Base as noted (either rubber or hardwood)
09. TJI Blocking
10. R-13 Min. Batt Insulation with Vapor Retarder shown hatched
11. 2x4 @ 1'-4" o.c. max.
12. Double Top Plate
13. Pressure Treated Bottom Plate
14. Reinforced Concrete Footing - See sheet 3.10
15. Reinforced Concrete Foundation Wall - See sheet 3.10
16. 6" min. top soil - 12" thick at planter beds
17. 3/4 to 2" drain rock around 4" perforated Foundation Drain
18. Geotech Filter Wrap to prevent sediment fro reaching Perf. Drain Pipe
19. Stucco Finish Coat on Exposed Portions of the Concrete
20. Sill Sealer
21. Pressure Treated 2x6 Mud Sill
22. Anchor Bolt - spacing per shear wall schedule - sheet 3.04
    Place additional anchor bolts within 6" of the end of each 2x sill member.
23. Continuous Vapor Retarder
24. Cultured Stone Veneer over Lath
25. Weather Resistant Barrier (Tyvek)
26. Wall Sheathing
27. 5/8" Type "X" Gypsum Board
28. 2x6 studs at 1'-4" o.c. max.
29. 1x4 Hardwood Trim
30. 1x Hardwood Sill
31. 2 1/2 x 2 1/2 x 16 gauge sheet metal ledger for stone sill
32. Cultured Stone Sill over lath onto ledger
33. Aluminum window System
34. Stucco system beyond
35. Hardwood Casing beyond
36. Caulking
37. 1x Hardwood Window Casing
38. Foil-Scrim-Kraft Vapor Retarder - seal all penetrations.
39. Acoustical Lay-in Ceiling and Metal Grid Assembly
40. Wood Header - See sheet 3.50
41. Stucco Assembly with 4" Poly-iso
42. Stucco Assembly with 1" Poly-iso
43. Wall Sheathing
44. 2x4 Framing to match truss spacing
45. 2x4 Blocking
46. 2" wide min. continuous galv. metal screen vent
47. 2x10 sub-fascia member
48. Cut Truss tails in the field
49. Drip-edge flashing
50. Extend Wall Sheathing up to baffle Roof Insulation
51. Pre-manufactured Pre-engineered Wood Trusses beyond
52. Roof sheathing
53. Ice and Water shield Membrane
54. Roofing Finish Material (see alternates) over building paper
55. Pre-manufactured Pre-Engineered Truss Blocking Panel
56. Attic Insulation
57. 2x4 blocking 2'-0" o.c. max. between trusses
58. 2x4 @ 1'-4" o.c. max. pony wall
59. Concrete Sidewalk
60. 2x4 framing - match truss spacing
61. Beam - See structural
62. Skylight and curb assembly
63. Exposed to view truss - paint
64. Painted Gypsum Board Beyond
65. 1/4" thick control joint with caulking
66. Crushed Rock Base - see civil
67. #4 Bent Bars at 2'-0" o.c. max. with 6" min. embed into conc. foundation wall where sidewalk abuts building
68. Thicken Concrete at bent bar locations
69. 3 x 5 x 3/8" min. Steel Ledger with 3/8" x 4" Lag Bolts into wood header member at 2'-0" o.c. max.
70. 3 1/2" light gauge metal framing attached to trusses

Medical Design Group
Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

REGISTERED ARCHITECT No. AR-1740 19 March 2004
DAVID R. DAVIES STATE OF IDAHO

WALL SECTIONS

Desert Sage Health Center
2280 American Legion Blvd.
Mountain Home, Idaho

SHEET 5.11

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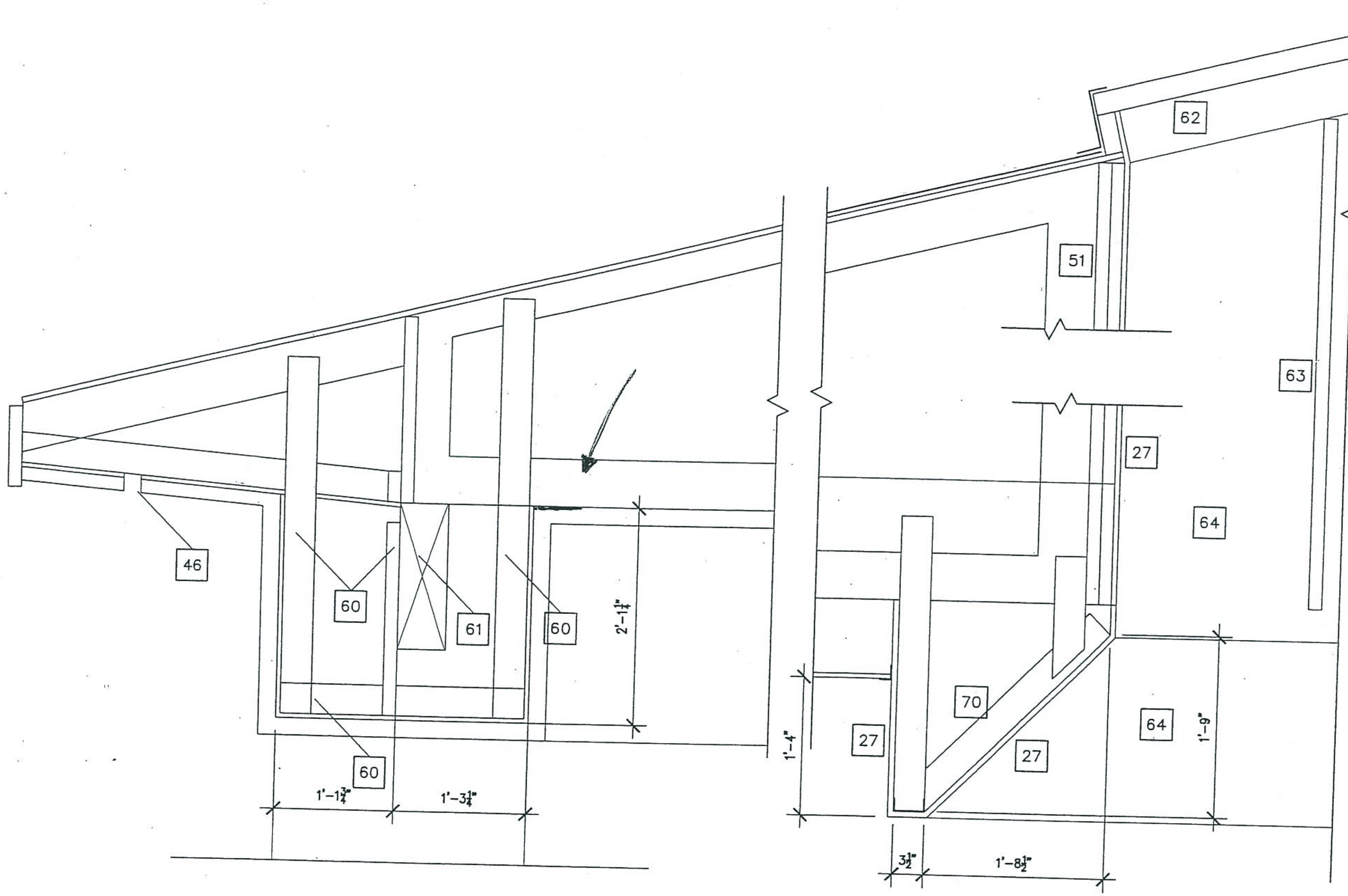

Note: For Typical Components, see detail 1/5.10

1 WALL SECTION

3/4" = 1'- 0"

Note: For Typical Components, see detail 1/5.10

2 WALL SECTION

3/4" = 1'- 0"

NUMBERED NOTES:

01. Native Material OR Compacted Suitable Fill (see soils report)
02. 2" thick Concrete Slab throughout entire crawl space
03. 10 mil vapor retarder
04. Crawl Space
05. Floor Joist Beyond
06. 1-1/8" Thick Sturdi-Floor T&G Wood Sheathing
07. Floor Finish as noted. (see specs for req'd underlayment)
08 Floor Base as noted (either rubber or hardwood)
09. TJI Blocking
10. R-13 Min. Batt Insulation with Vapor Retarder shown hatched
11. 2x4 @ 1'-4" o.c. max.
12. Double Top Plate
13. Pressure Treated Bottom Plate
14. Reinforced Concrete Footing - See sheet 3.10
15. Reinforced Concrete Foundation Wall - See sheet 3.10
16. 6" min. top soil - 12" thick at planter beds
17. 3/4 to 2" drain rock around 4" perforated Foundation Drain
18. Geotech Filter Wrap to prevent sediment fro reaching Perf. Drain Pipe
19. Stucco Finish Coat on Exposed Portions of the Concrete
20. Sill Sealer
21. Pressure Treated 2x6 Mud Sill
22. Anchor Bolt - spacing per shear wall schedule - sheet 3.04 Place additional anchor bolts within 6" of the end of each 2x sill member.
23. Continuous Vapor Retarder
24. Cultured Stone Veneer over Lath
25. Weather Resistant Barrier (Tyvek)
26. Wall Sheathing
27. 5/8" Type "X" Gypsum Board
28. 2x6 studs at 1'-4" o.c. max.
29. 1x4 Hardwood Trim
30. 1x Hardwood Sill
31. 2 1/2 x 2 1/2 x 16 gauge sheet metal ledger for stone sill
32. Cultured Stone Sill over lath onto ledger
33. Aluminum window System
34. Stucco system beyond
35. Hardwood Casing beyond
36. Caulking
37. 1x Hardwood Window Casing
38. Foil-Scrim-Kraft Vapor Retarder - seal all penetrations.
39. Acoustical Lay-in Ceiling and Metal Grid Assembly
40. Wood Header - See sheet 3.50
41. Stucco Assembly with 4" Poly-iso
42. Stucco Assembly with 1" Poly-iso
43. Wall Sheathing
44. 2x4 Framing to match truss spacing
45. 2x4 Blocking
46. 2" wide min. continuous galv. metal screen vent
47. 2x10 sub-fascia member
48. Cut Truss tails in the field
49. Drip-edge flashing
50. Extend Wall Sheathing up to baffle Roof Insulation
51. Pre-manufactured Pre-engineered Wood Trusses beyond
52. Roof sheathing
53. Ice and Water shield Membrane
54. Roofing Finish Material (see alternates) over building paper
55. Pre-manufactured Pre-Engineered Truss Blocking Panel
56. Attic Insulation
57. 2x4 blocking 2'-0" o.c. max. between trusses
58. 2x4 @ 1'-4" o.c. max. pony wall
59. Concrete Sidewalk
60. 2x4 framing - match truss spacing
61. Beam - See structural
62. Skylight and curb assembly
63. Exposed to view truss - paint
64. Painted Gypsum Board Beyond
65. 1/4" thick control joint with caulking
66. Crushed Rock Base - see civil
67. #4 Bent Bars at 2'-0" o.c. max. with 6" min. embed into conc. foundation wall where sidewalk abuts building
68. Thicken Concrete at bent bar locations
69. 3 x 5 x 3/8" min. Steel Ledger with 3/8" x 4" Lag Bolts into wood header member at 2'-0" o.c. max.
70. 3 1/2" light gauge metal framing attached to trusses

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Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

REGISTERED ARCHITECT No. AR-1740 19 March 2004
DAVID R. DAVIES STATE OF IDAHO

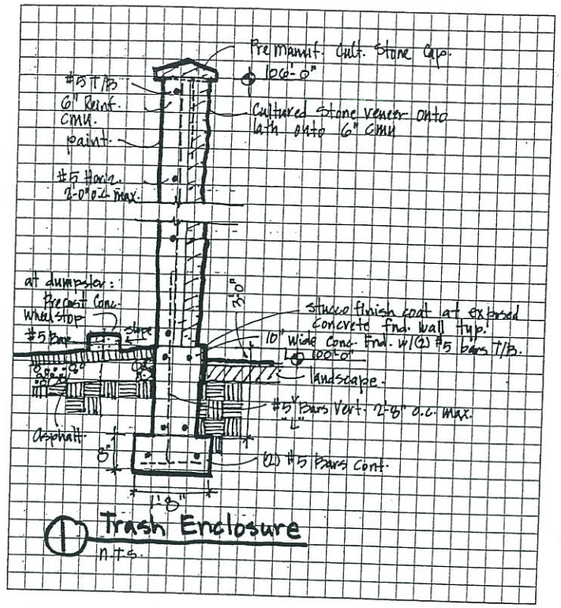
WALL SECTIONS

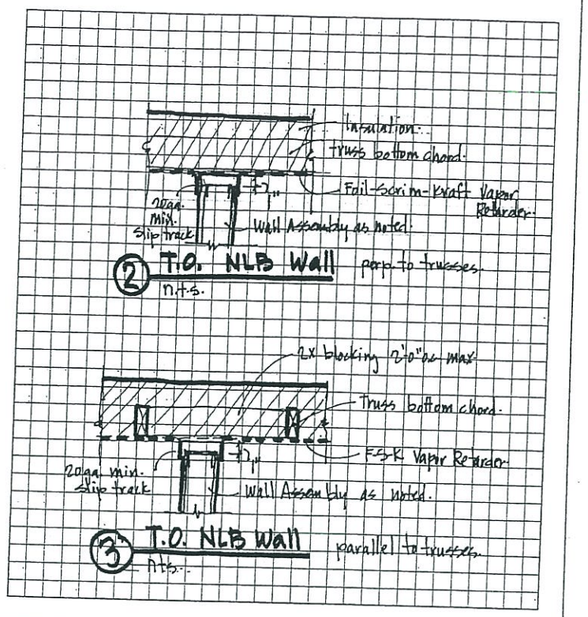
Desert Sage Health Center
2280 American Legion Blvd.
Mountain Home, Idaho

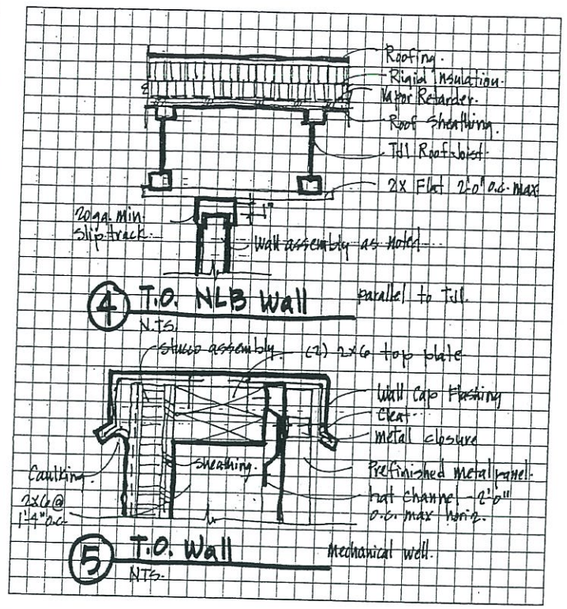
SHEET 5.12

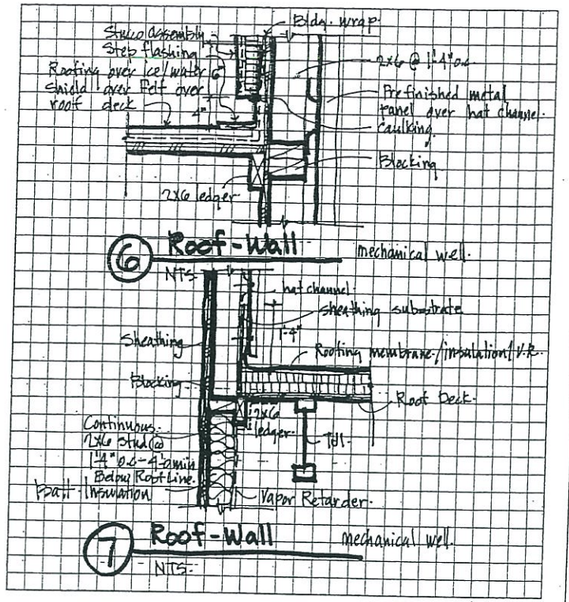
Mar 2004

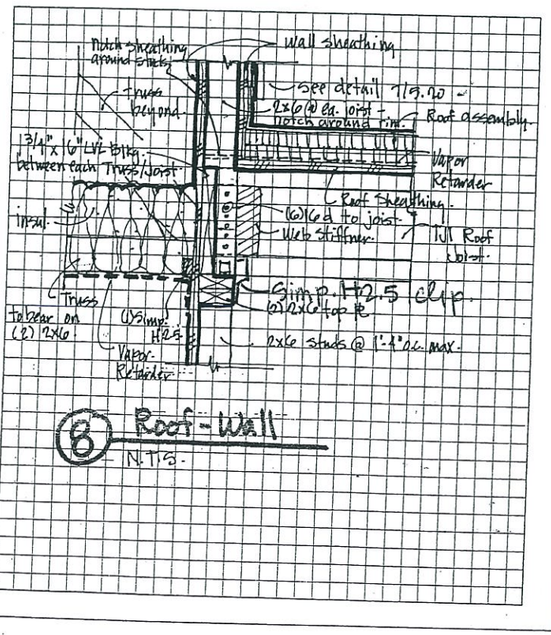
ds512.dwg 03/22/04 11:38

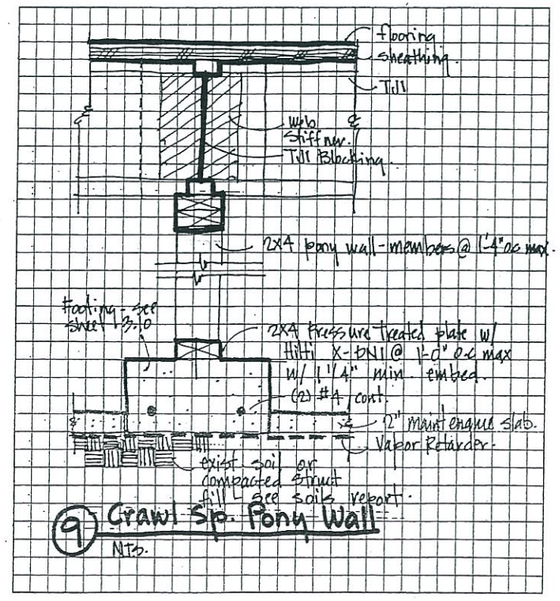


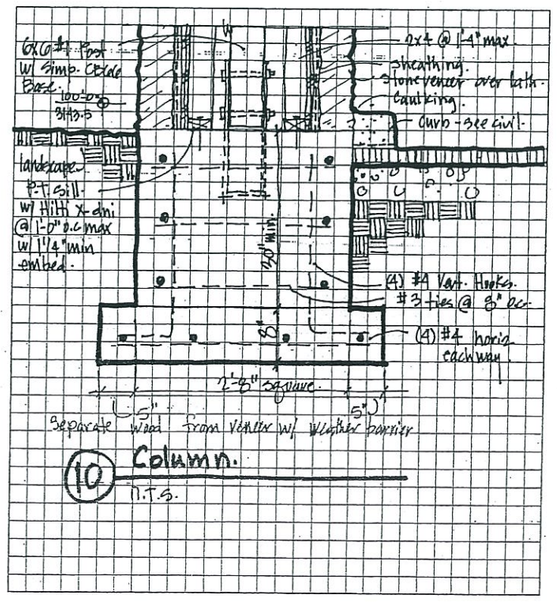












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Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

REGISTERED ARCHITECT No. AR-1740 19 March 2004

DAVID R. DAVIES STATE OF IDAHO

DETAILS

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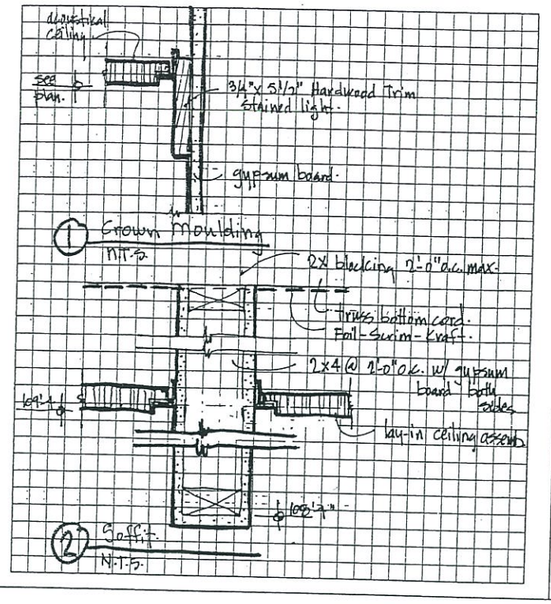
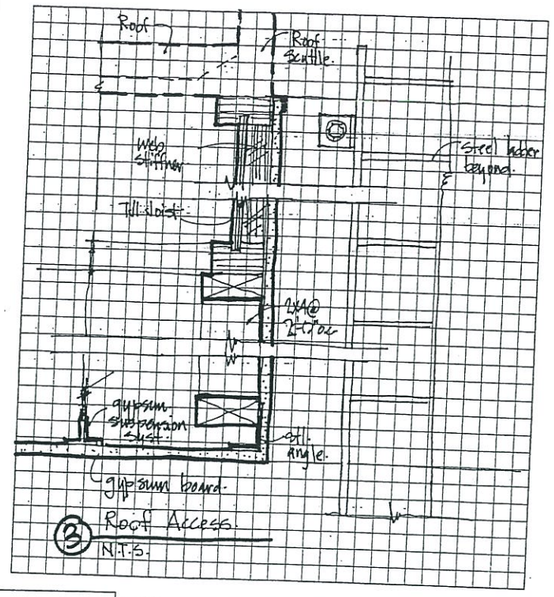
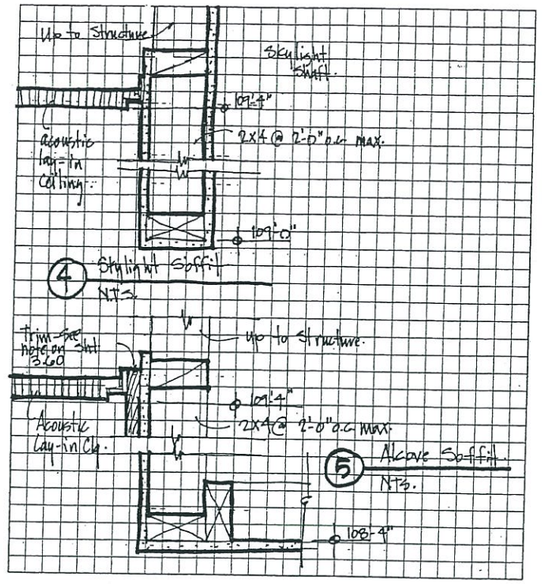
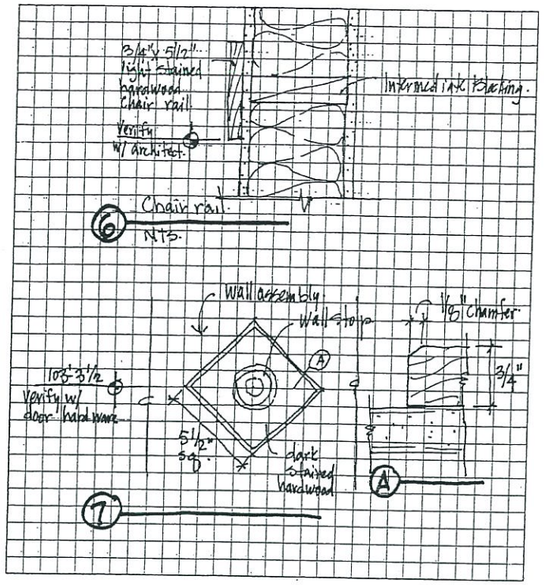
SHEET 5.20

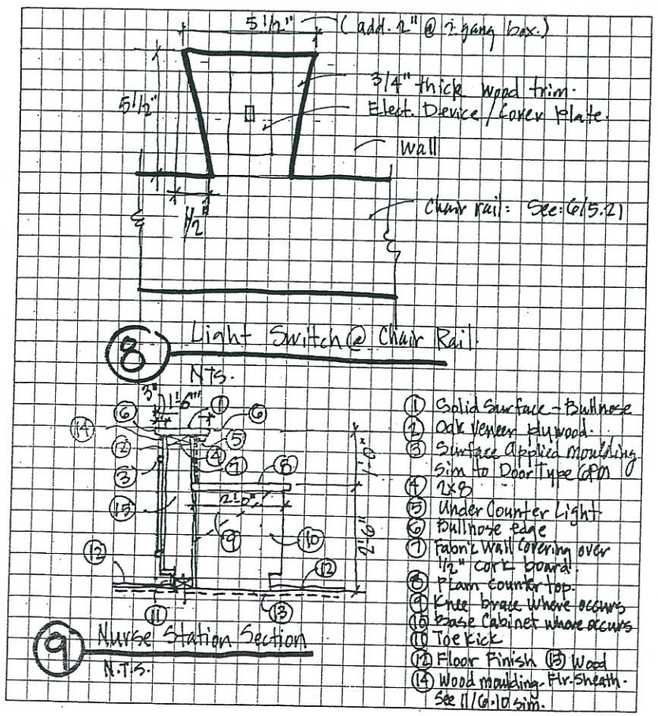
Mar 2004 | ds520.dwg 03/22/04 11:35











5.21

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DETAILS

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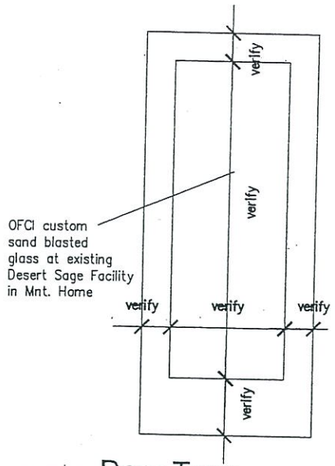
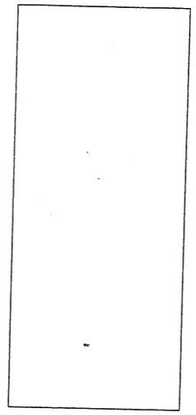
SHEET 5.21

Mar 2004

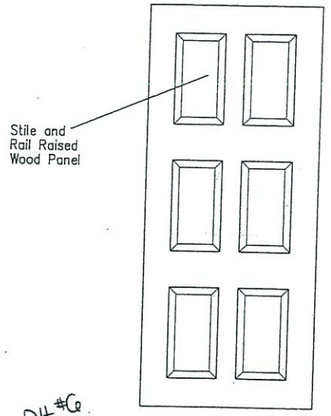


FG **Door Type**
3/4" = 1'– 0" (half size: 3/8" = 1' –0")



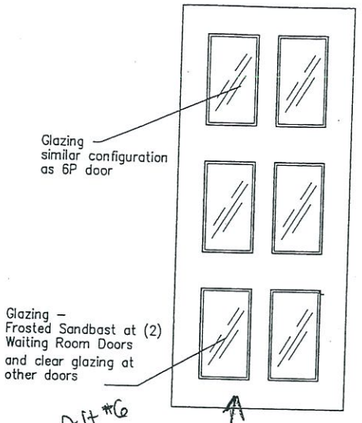
Alt #6

F **Door Type**
3/4" = 1'– 0" (half size: 3/8" = 1' –0")



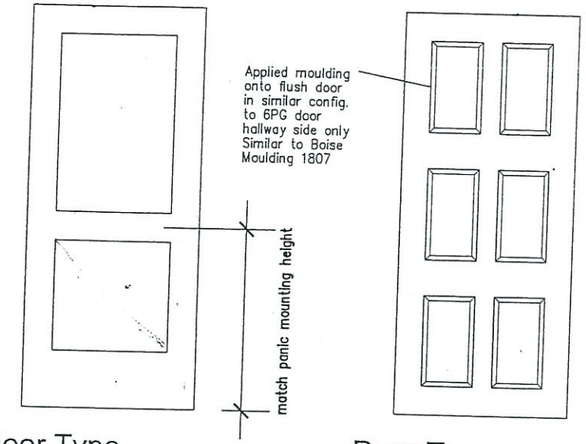
Alt #6

6P **Door Type**
3/4" = 1'– 0" (half size: 3/8" = 1' –0")



Alt #6

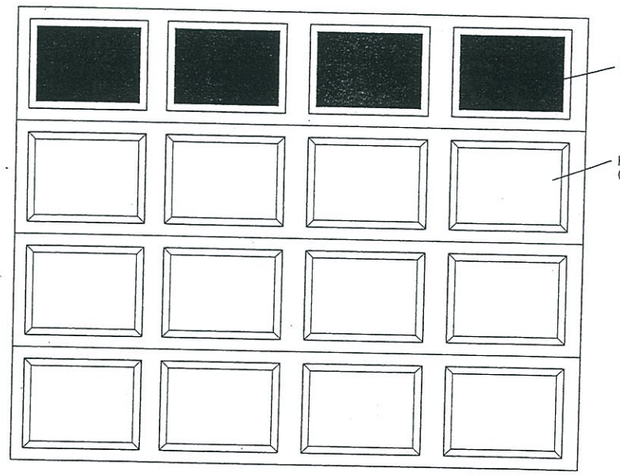
6PG **Door Type**
3/4" = 1'– 0" (half size: 3/8" = 1' –0")



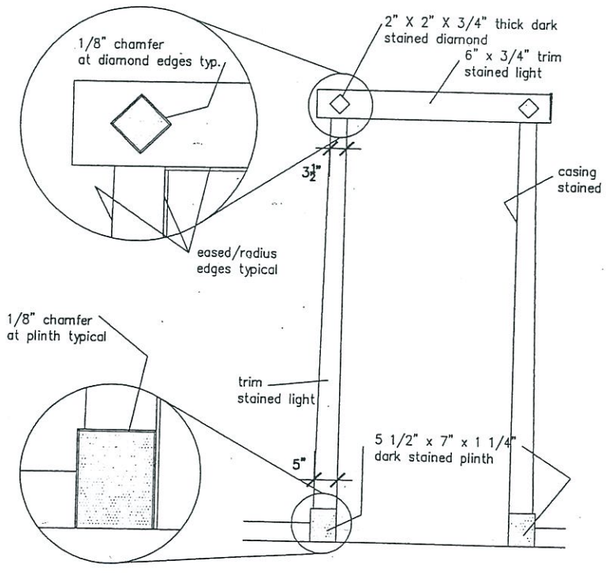
Alt #6

2H **Door Type**
3/4" = 1'– 0" (half size: 3/8" = 1' –0")

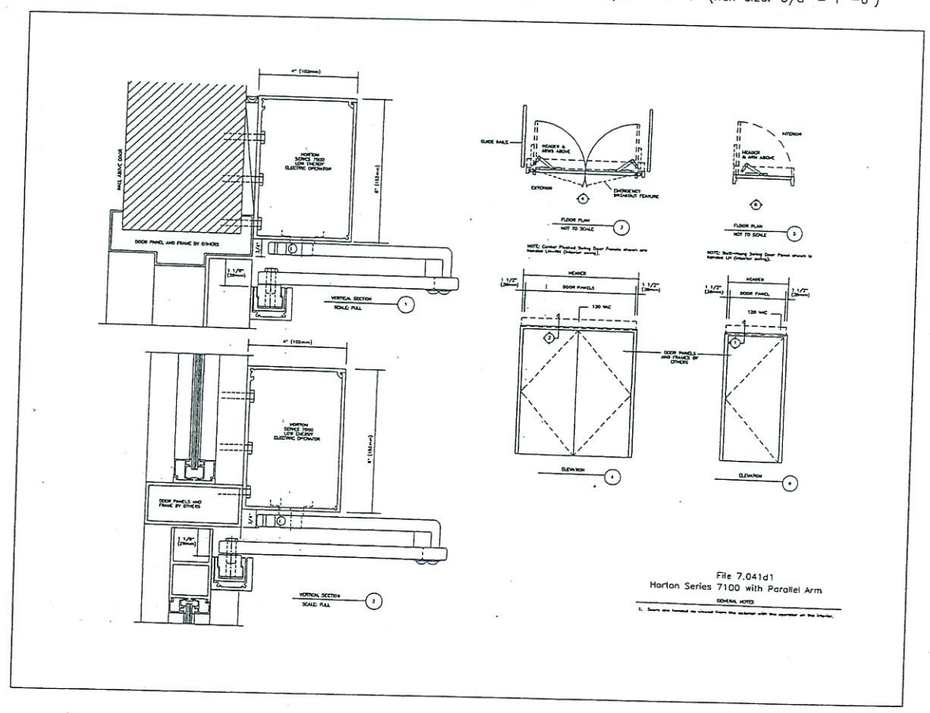
6PM **Door Type**
3/4" = 1'– 0" (half size: 3/8" = 1' –0")



G **Door Type**
3/4" = 1'– 0" (half size: 3/8" = 1' –0")



A **Frame Type**
3/4" = 1'– 0" (half size: 3/8" = 1' –0")



1 **Power Assist Door Detail**
NTS

Medical Design Group
Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

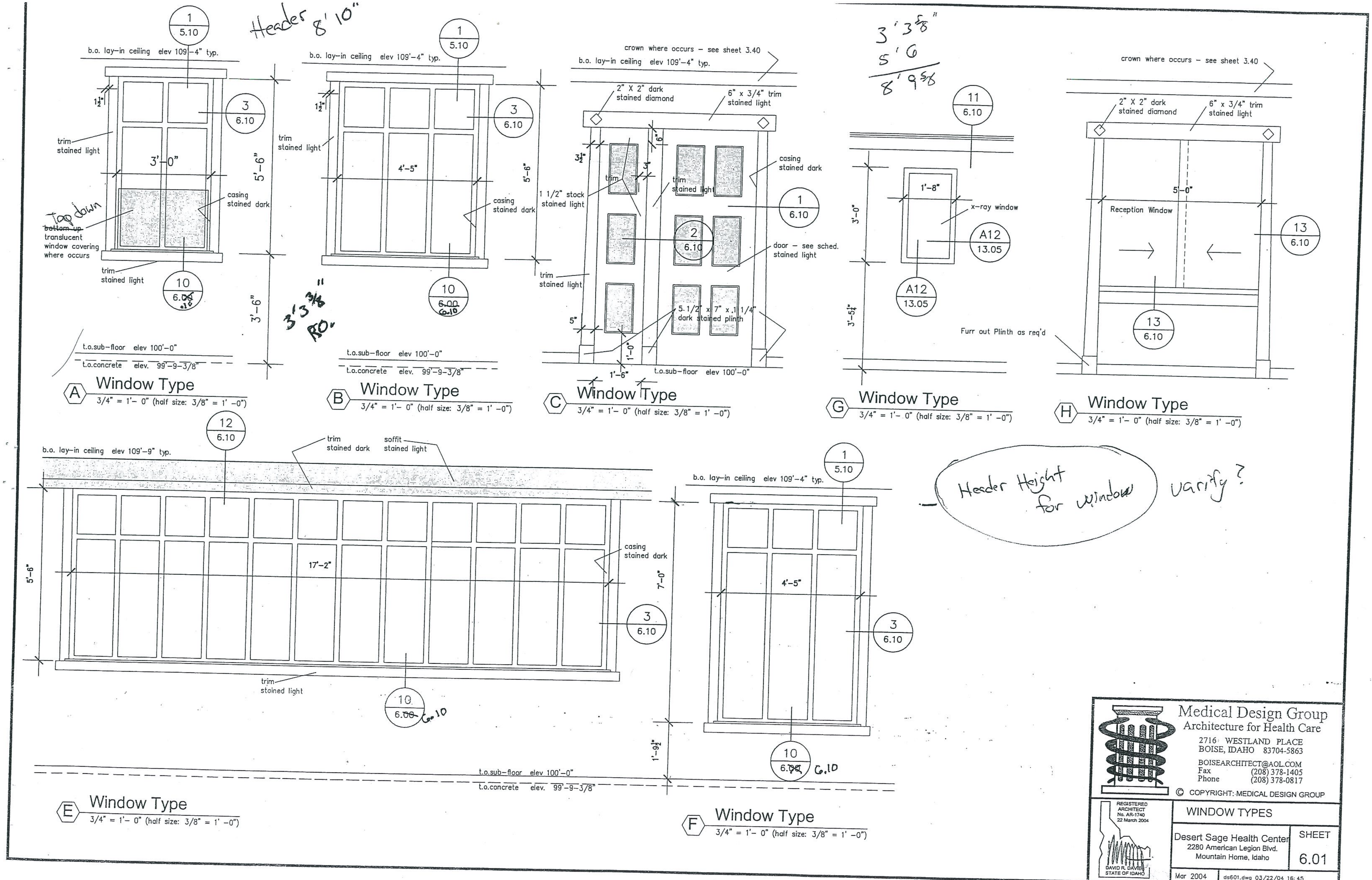
REGISTERED ARCHITECT No. AR-1740 19 March 2004
DAVID R. DAVIES STATE OF IDAHO

DOOR/FRAME TYPES

Desert Sage Health Center
2280 American Legion Blvd.
Mountain Home, Idaho

SHEET 6.00

Mar 2004 | ds600.dwg 03/22/04 12:13



Header 8' 10"
b.o. lay-in ceiling elev 109'-4" typ.
trim stained light
3'-0"
5'-6"
casing stained dark
Top down
bottom up
translucent window covering where occurs
trim stained light
3'-6"
t.o.sub-floor elev 100'-0"
t.o.concrete elev. 99'-9-3/8"
A Window Type
3/4" = 1'- 0" (half size: 3/8" = 1' -0")
b.o. lay-in ceiling elev 109'-4" typ.
4'-5"
casing stained dark
3'3 3/8" RO
t.o.sub-floor elev 100'-0"
t.o.concrete elev. 99'-9-3/8"
B Window Type
3/4" = 1'- 0" (half size: 3/8" = 1' -0")
crown where occurs - see sheet 3.40
b.o. lay-in ceiling elev 109'-4" typ.
2" X 2" dark stained diamond
6" x 3/4" trim stained light
casing stained dark
1 1/2" stock stained light
trim
trim stained light
door - see sched. stained light
trim stained light
5 1/2" x 7" x 1 1/4" dark stained plinth
t.o.sub-floor elev 100'-0"
C Window Type
3/4" = 1'- 0" (half size: 3/8" = 1' -0")
3'3 5/8"
5'6
8'9 5/8
1'-8"
x-ray window
3'-0"
3'-5 1/2"
G Window Type
3/4" = 1'- 0" (half size: 3/8" = 1' -0")
crown where occurs - see sheet 3.40
2" X 2" dark stained diamond
6" x 3/4" trim stained light
5'-0"
Reception Window
Furr out Plinth as req'd
H Window Type
3/4" = 1'- 0" (half size: 3/8" = 1' -0")
b.o. lay-in ceiling elev 109'-9" typ.
trim stained dark
soffit stained light
17'-2"
5'-6"
casing stained dark
trim stained light
E Window Type
3/4" = 1'- 0" (half size: 3/8" = 1' -0")
b.o. lay-in ceiling elev 109'-4" typ.
4'-5"
7'-0"
1'-9 1/2"
t.o.sub-floor elev 100'-0"
t.o.concrete elev. 99'-9-3/8"
F Window Type
3/4" = 1'- 0" (half size: 3/8" = 1' -0")
Header Height for window
varify?
Medical Design Group
Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817
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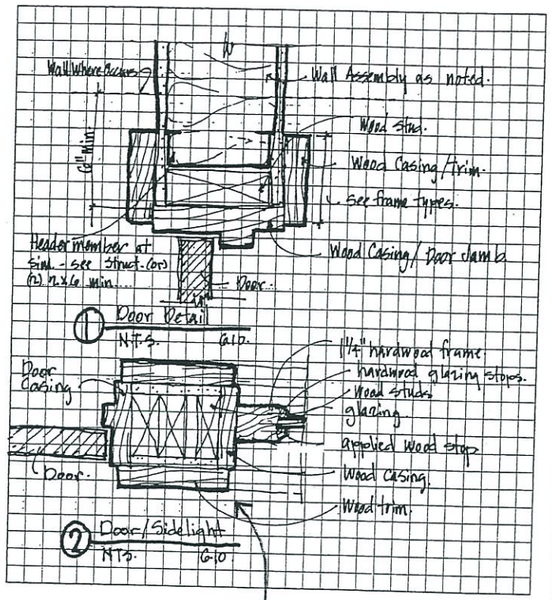
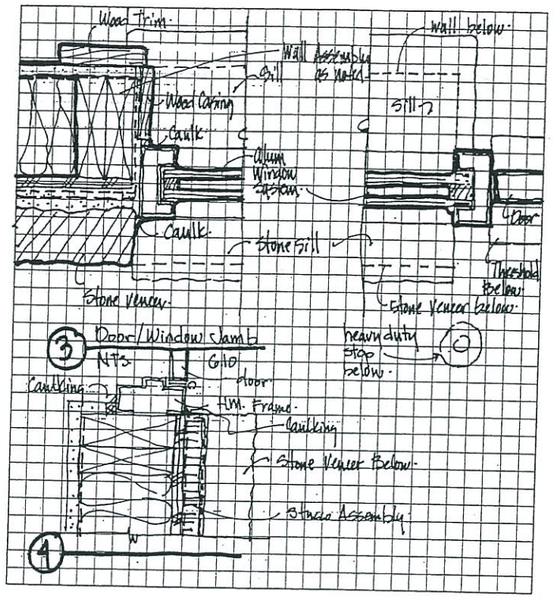
REGISTERED ARCHITECT No. AR-1740 22 March 2004
DAVID R. DAVIES STATE OF IDAHO
WINDOW TYPES
Desert Sage Health Center
2280 American Legion Blvd.
Mountain Home, Idaho
SHEET
6.01
Mar 2004
ds601.dwg 03/22/04 16:45



width
Mullion



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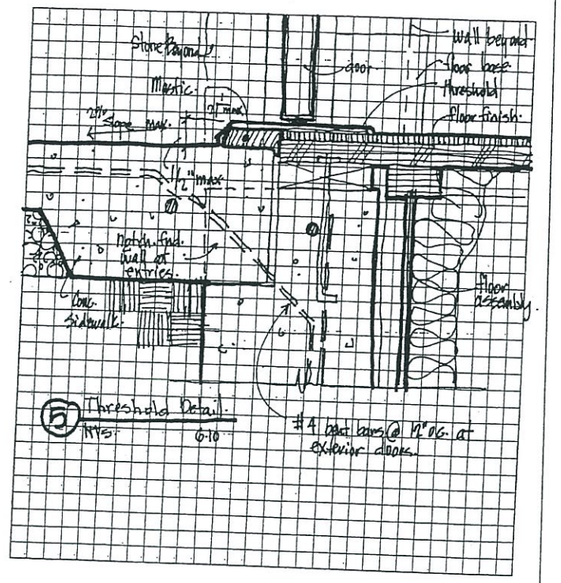

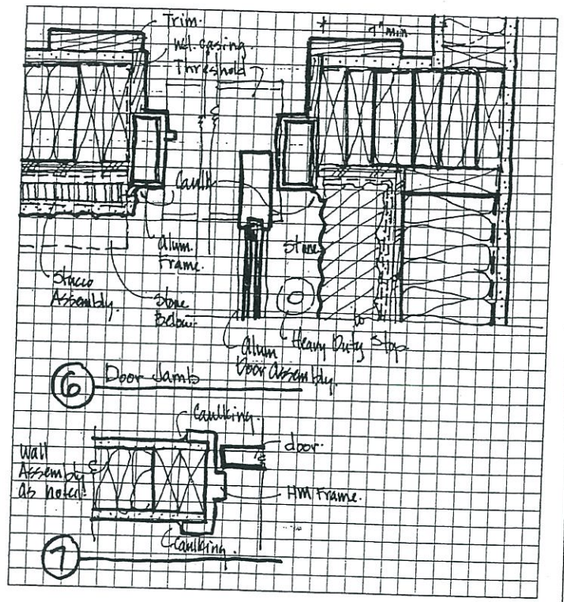

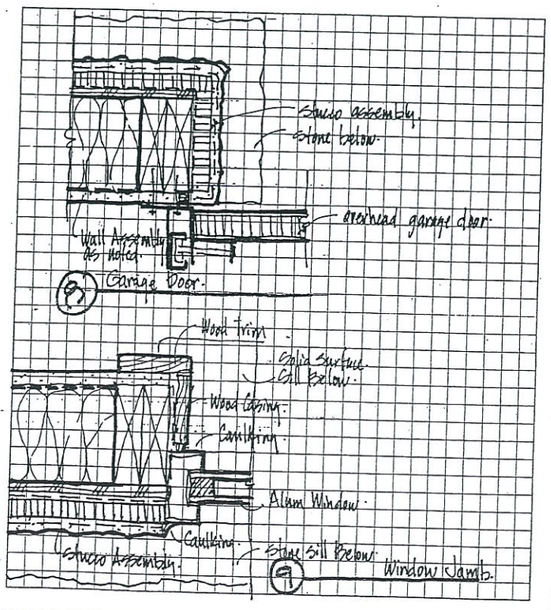

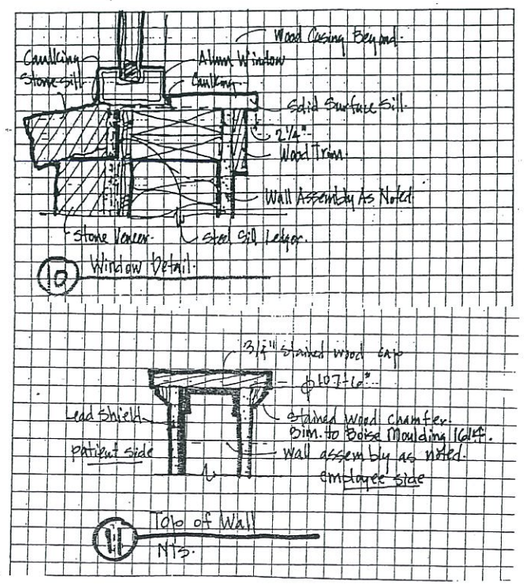

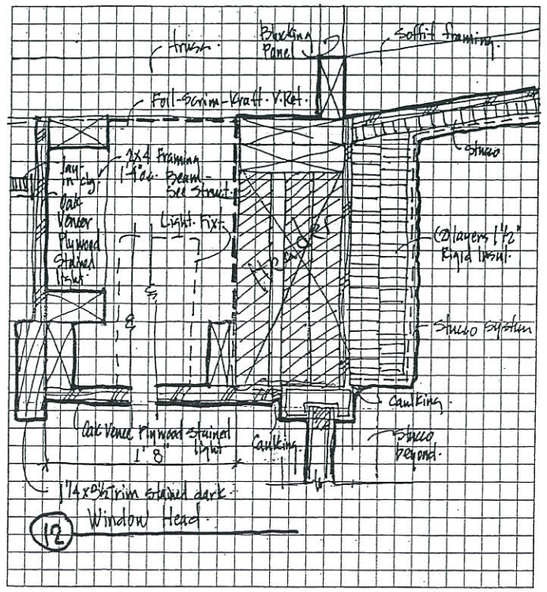

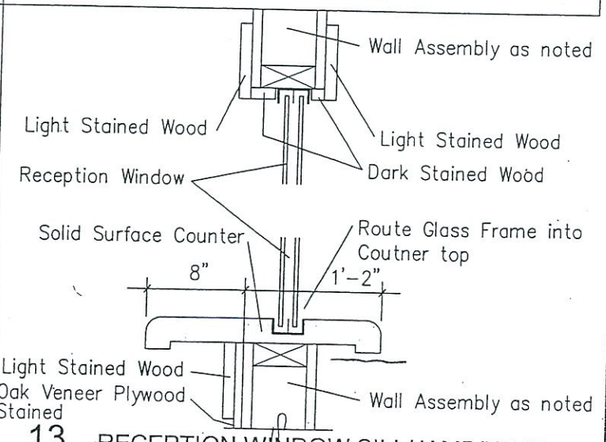

13 RECEPTION WINDOW SILL/JAMB/HEAD
NTS

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Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

REGISTERED ARCHITECT No. AR-1740 19 March 2004
DAVID R. DAVIES STATE OF IDAHO

DOOR/WINDOW DEATILS

Desert Sage Health Center
2280 American Legion Blvd.
Mountain Home, Idaho

SHEET 6.10

Mar 2004 | ds610.dwg 03/22/04 12:55

DOOR SCHEDULE

MARK	SIZE	DOOR MAT'L	DOOR TYPE	DOOR FINISH	FRAME MAT'L	FRAME TYPE	FRAME FINISH	DETAIL JAMB	DETAIL HEAD	DETAIL THRESH.	REMARKS	HARDWARE GROUP	MARK
101	36X84X1 3/4	WD	6P	STN	WD	A/B	STN	1/6.10	1/6.10 sim			2	101
102	36X84X1 3/4	WD	6P	STN	WD	A/B	STN	1/6.10	1/6.10 sim			3	102
103	36X84X1 3/4	WD	6P	STN	WD	A/B	STN	1/6.10	1/6.10 sim			4	103
104	36X84X1 3/4	WD	6P	STN	WD	A/B	STN	1/6.10	1/6.10 sim			4	104
105	36X84X1 3/4	WD	6P	STN	WD	A/B	STN	1/6.10	1/6.10 sim			4	105
106	36X90X1 3/4	WD	6PG	STN	WD	A/A	STN	2/6.10	1/6.10 sim			6	106
107	36X36X1 3/4	WD	DD	STN	WD	A/B	STN	2/6.10	—			10	107
108	36X89X1 3/4	ALUM	2H	PT	ALUM	D	PT	6/6.10	6/6.10 sim	5/6.10		18	108
109	36X36X1 3/4	WD	DD	STN	WD	A/B	STN	2/6.10	—			10	109
110													110
111	36X90X1 3/4	WD	6PG	STN	WD	A/B	STN	2/6.10	1/6.10 sim			6	111
112	36X84X1 3/4	WD	6P	STN	WD	A/B	STN	1/6.10	1/6.10 sim			4	112
113	36X84X1 3/4	WD	6P	STN	WD	A/B	STN	1/6.10	1/6.10 sim			4	113
114	36X84X1 3/4	WD	6P	STN	WD	A/B	STN	1/6.10	1/6.10 sim			4	114
115	36X89X1 3/4	ALUM	2H	PT	ALUM	D	PT	6/6.10	6/6.10 sim	5/6.10		8	115
116	36X84X1 3/4	WD	6PG	STN	WD	A/A	STN	1/6.10	1/6.10 sim			1	116
117	48X84X1 3/4	WD	6P	STN	WD	A/B	STN	1/6.10	1/6.10 sim			5	117
118	36X84X1 3/4	HM	F	PT	HM	D	PT	7/6.10	7/6.10 sim			19	118
119	36X84X1 3/4	HM	F	PT	HM	D	PT	4/6.10	4/6.10 sim			11	119
120													120
121													121
122	36X84X1 3/4	HM	F	PT	HM	D	PT	7/6.10	7/6.10 sim			13	122
123	36X84X1 3/4	HM	F	PT	HM	D	PT	7/6.10	7/6.10 sim			12	123
124	96X120X1 3/8	STL	G	PT	STL	–	PT- custom	8/6.10	8/6.10 sim		60 min. rated power operator	14	124
125	36X84X1 3/4	WD	6P	STN	WD	A/B	STN	1/6.10	1/6.10 sim			4	125
126	36X84X1 3/4	WD	FG	STN	WD	A/B	STN	1/6.10	1/6.10 sim			1	126
127	36X89X1 3/4	ALUM	2H	PT	ALUM	D	PT	6/6.10 sim	6/6.10 sim	5/6.10	OFCI glazing OFOI card reader	9	127
128	36X84X1 3/4	WD	6P	STN	WD	A/B	STN	1/6.10	1/6.10 sim			4	128
129	36X84X1 3/4	WD	6P	STN	WD	A/B	STN	1/6.10	1/6.10 sim			4	129
130	36X84X1 3/4	WD	6P	STN	WD	A/A	STN	1/6.10	1/6.10 sim			4	130

DOOR SCHEDULE

HARDWARE GROUP 01
1 1/2 pr Hinges
1 Latchset (R)
1 Wallstop

HARDWARE GROUP 02
1 1/2 pr Hinges
1 Latchset (D)
1 Wallstop

HARDWARE GROUP 03
1 1/2 pr Hinges - 180 degree
1 Latchset (ON)
1 Overhead Stop

HARDWARE GROUP 04
1 1/2 pr Hinges
1 Latchset (ON)
1 Wallstop

HARDWARE GROUP 05
2 pr Hinges
1 Latchset (D)
1 Wallstop

HARDWARE GROUP 06
1 1/2 pr Hinges
1 Closer
1 Push
1 Pull (waiting)
1 Wallstop

HARDWARE GROUP 07
1 1/2 pr Hinges
1 Latchset (OL)
1 Wallstop

HARDWARE GROUP 08
1 1/2 pr Hinges
1 Panic
1 Pull
1 Closer
1 Threshold
1 Weatherstrip

HARDWARE GROUP 09
1 1/2 pr Hinges
1 Panic
1 Pull
1 Closer
1 Threshold
1 Weatherstrip
1 Electric Strike

HARDWARE GROUP 10
1 pr Hinges
1 Latchset (OL)
1 Wallstop

HARDWARE GROUP 11
1 1/2 pr Hinges
1 Latchset (AB)
1 HD Stop
1 Kickplate
1 Closer
1 Weatherstrip
1 Threshold

HARDWARE GROUP 12
1 1/2 pr Hinges
1 Latchset (D)
1 Closer
1 Smoke seal

HARDWARE GROUP 13
1 1/2 pr Hinges
1 Latchset (D)
1 Sound Seal
1 Door Sound Sweep

HARDWARE GROUP 14
hardware by dor manuf.

HARDWARE GROUP 15
1 1/2 pr Hinges
1 Keyless Push Button
Combination Lock
Latch Set

Keying Instructions:
Provide (4) grand master keys
Exterior Doors all keyed alike under grand master
Each Office keyed differently under the grand master
Each Office Key allows acces to exterior doors and chart room
Storage/Janitor keyed alike and allow exterior door access, under grand master
Chart Room Key also opens exterior doors, under grand master
Nurse Key under grand master, opens exterior doors, chart room

HARDWARE GROUP 16
2 Hinges
1 Keyless Push Button
Combination Lock
Latch Set

HARDWARE GROUP 17
1 1/2 pr Hinges
1 Latchset (ON)
1 Closer w/ cush stop
1 Perimeter Air Seal

HARDWARE GROUP 18
1 1/2 pr Hinges
1 Panic
1 Pull
1 Closer
1 Threshold
1 Weatherstrip
1 Automatic Door Operator

HARDWARE GROUP 19
1 1/2 pr Hinges - Non Removable Pins
1 Latchset (D)
1 Wallstop

DOOR SCHEDULE

MARK	SIZE	DOOR MAT'L	DOOR TYPE	DOOR FINISH	FRAME MAT'L	FRAME TYPE	FRAME FINISH	DETAIL JAMB	DETAIL HEAD	DETAIL THRESH.	REMARKS	HARDWARE GROUP	MARK
131	36X84X1 3/4	WD	6P	STN	WD	A/B	STN	1/6.10	1/6.10 sim			2	131
132	36X84X1 3/4	WD	6P	STN	WD	A/B	STN	1/6.10	1/6.10 sim			3	132
133	36X84X1 3/4	WD	6P	STN	WD	A/B	STN	1/6.10	1/6.10 sim			4	133
134	42X89X1 3/4	ALUM	2H	PT	ALUM	D	PT	6/6.10 sim	6/6.10 sim	5/6.10	OFOI card reader	9	134
135	42X84X1 3/4	WD	6P	STN	WD	A/B	STN	1/6.10	1/6.10 sim			4	135
136	36X84X1 3/4	WD	6P	STN	WD	A/B	STN	1/6.10	1/6.10 sim			17	136
137	36X84X1 3/4	WD	6P	STN	WD	A/B	STN	1/6.10	1/6.10 sim			4	137
138	36X84X1 3/4	WD	6P	STN	WD	A/B	STN	1/6.10	1/6.10 sim			4	138
139	36X89X1 3/4	ALUM	2H	PT	ALUM	D	PT	6/6.10 sim	6/6.10 sim	5/6.10		8	139
140													140
141	36X84X1 3/4	WD	6P	STN	WD	A/B	STN	1/6.10	1/6.10 sim		keyless lock	15	141
142													142
143	36X84X1 3/4	WD	6P	STN	WD	A/B	STN	1/6.10	1/6.10 sim			4	143
144	36X84X1 3/4	WD	6P	STN	WD	A/B	STN	1/6.10	1/6.10 sim			4	144
145	36X84X1 3/4	WD	6PG	STN	WD	A/B	STN	1/6.10	1/6.10 sim			1	145
146	36X84X1 3/4	WD	6P	STN	WD	A/B	STN	1/6.10	1/6.10 sim			4	146
147	36X84X1 3/4	WD	6P	STN	WD	A/B	STN	1/6.10	1/6.10 sim			4	147
148	36X84X1 3/4	WD	F	STN	WD	B/B	STN	1/6.10	1/6.10 sim			4	148
149	36X84X1 3/4	WD	6P	STN	WD	A/B	STN	1/6.10	1/6.10 sim			4	149
150													150
151	36X84X1 3/4	WD	F	STN	WD	B/B	STN	1/6.10	1/6.10 sim				
152	36X84X1 3/4	WD	F	STN	WD	B/B	STN	1/6.10	1/6.10 sim			2	151
153	36X84X1 3/4	WD	F	STN	WD	B/B	STN	1/6.10	1/6.10 sim			1	152
154	42X84X1 3/4	WD	6P	STN	WD	A/B	STN	1/6.10	1/6.10 sim			2	153
155	42X84X1 3/4	WD	6PM	STN	HM	C	PT	sht 13.05	sht. 13.05 sim.		X-ray side Hallway side Lead Lined door/ frame per sht 13.01	4	154
					HM/W	A	STN					16	155

STN = factory applied clear finish over natural wood
WD = Wood
HM = Hollow Metal
ALUM = Aluminum
PT = Paint
FPT = Factory Paint
STL = Steel
PT custom = Field Paint garage door

Note: Frame Silencers typical except at openings with seals.

DD - dutch door

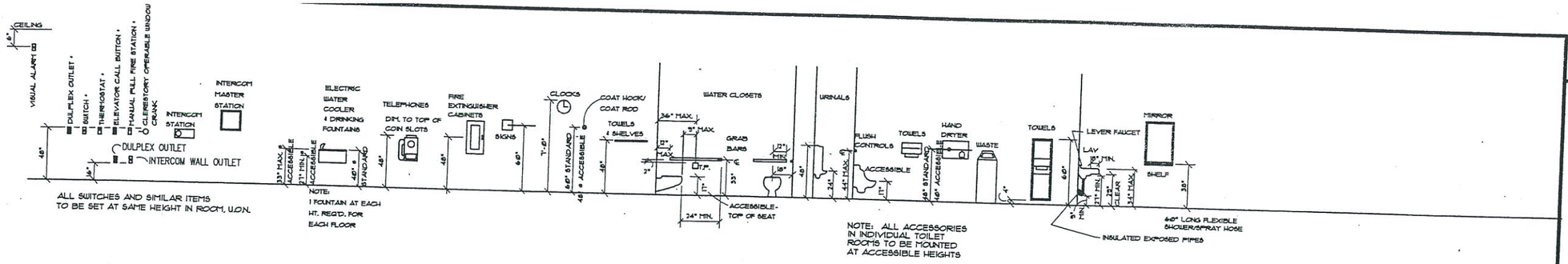
Medical Design Group
Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

REGISTERED ARCHITECT No. AR-1740 19 March 2004
DAVID R. DAVIES

DOOR SCHEDULES

Desert Sage Health Center
2280 American Legion Blvd.
Mountain Home, Idaho

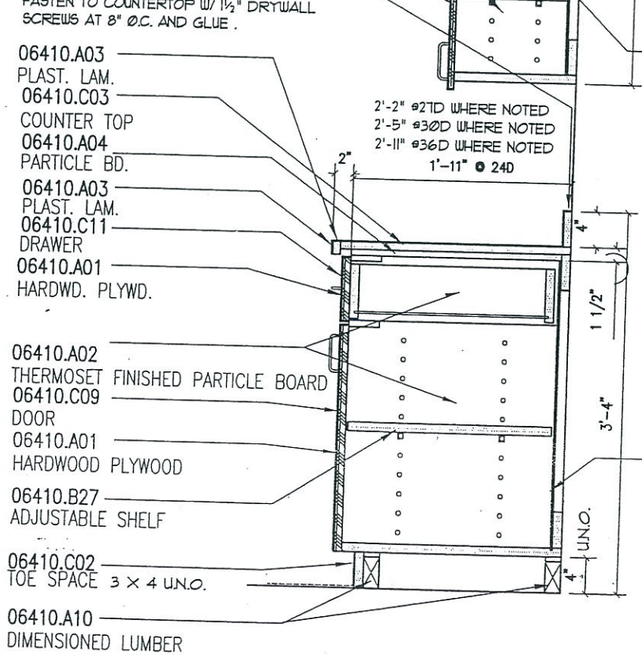
SHEET 6.11



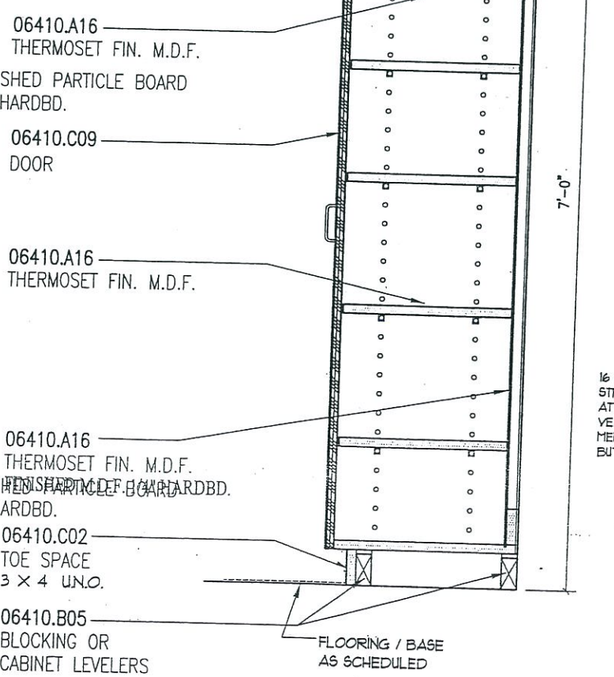
H STANDARD MOUNTING HEIGHT

" = 1'-0" | H = STANDARD MOUNTING HEIGHT

NOTE: ALL ITEMS SHOWN ABOVE MAY NOT EXIST IN THIS PROJECT



1 TYPICAL CASEWORK SECTION
N.T.S.



2 TYPICAL CASEWORK SECTION
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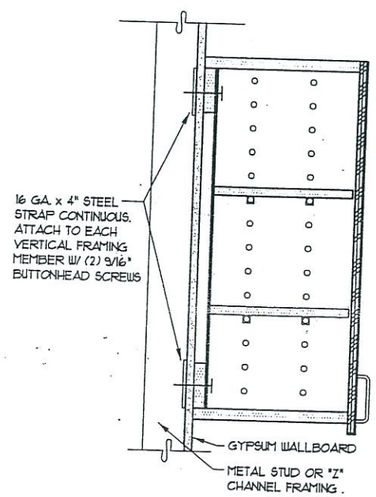


3 BACKING AT STEEL STUD WALLS
N.T.S.

MATERIAL KEYING LEGEND

Medical Design Group
Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

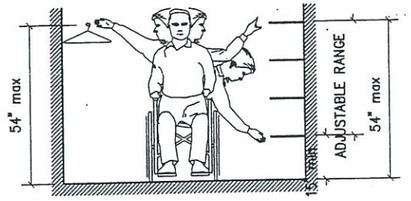
REGISTERED ARCHITECT No. AR-1740 19 March 2004
DAVID R. DAVIES STATE OF IDAHO

INTERIOR DETAILS

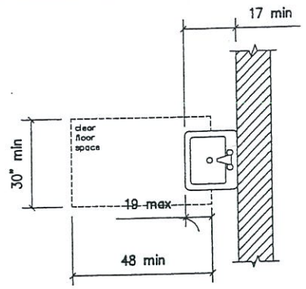
Desert Sage Health Center
2280 American Legion Blvd.
Mountain Home, Idaho

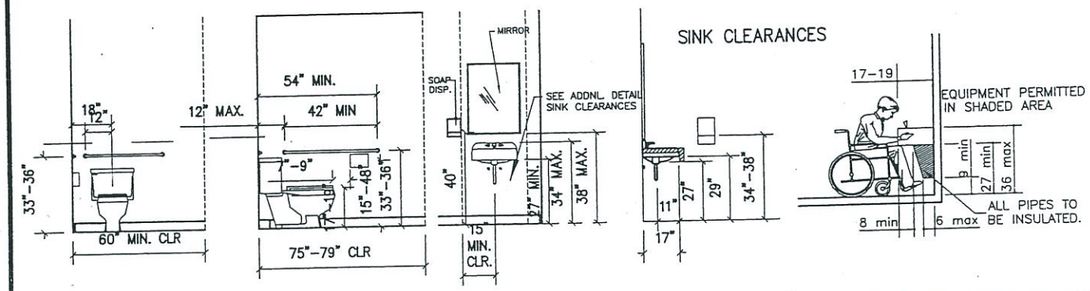
SHEET 7.00

Mar 2004 | ds700.dwg 03/22/04 12:59

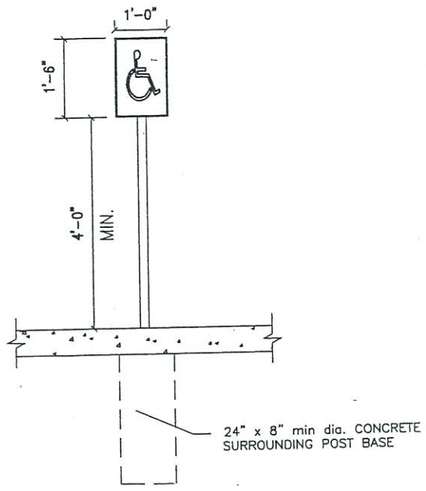


STORAGE SHELVES AND CLOSETS

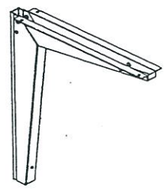




TOILET FRONT TOILET SIDE SINK FRONT SINK SIDE SPOUT HEIGHT AND KNEE CLEARANCE



SIGNAGE DETAIL

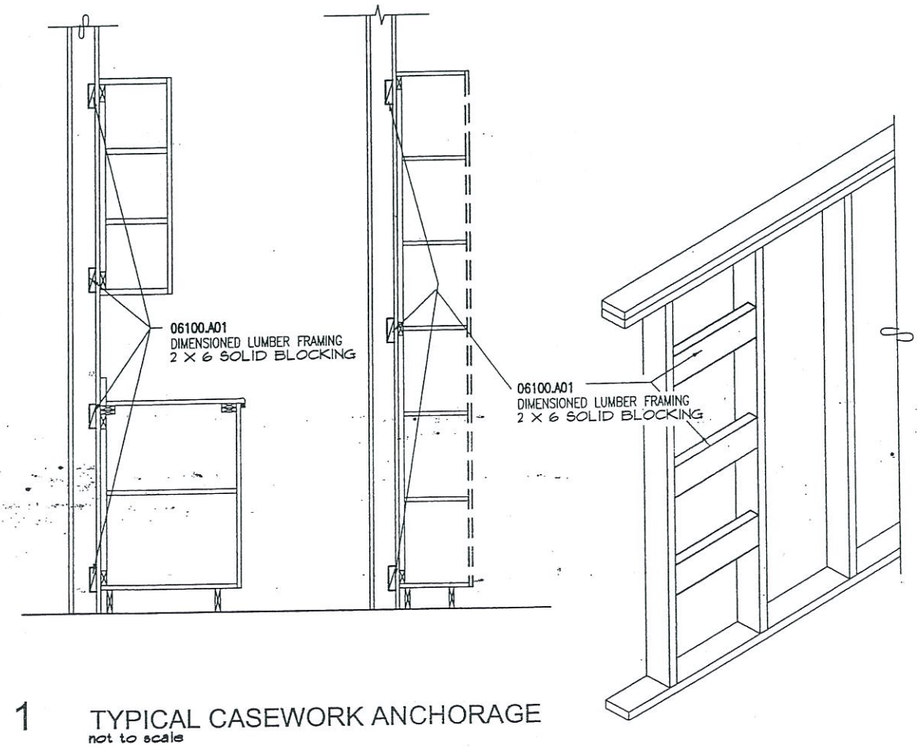


STEEL UNDER COUNTER SUPPORT BRACKET
as req. for top depth

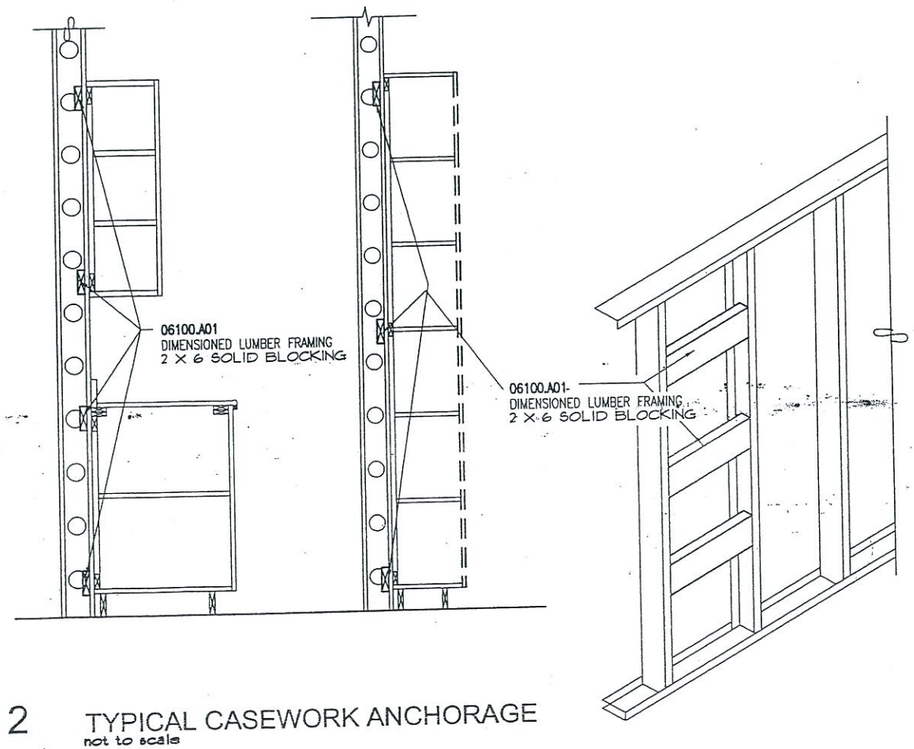
3 INTERIOR ACCESSIBILITY DETIALS
not to scale

4 EXT. SIGN
not to scale

5 COUNTER SUPPORT
not to scale



1 TYPICAL CASEWORK ANCHORAGE
not to scale



2 TYPICAL CASEWORK ANCHORAGE
not to scale

MATERIAL KEYING LEGEND

Medical Design Group
Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO · 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

REGISTERED ARCHITECT
No. AR-1740
19 March 2004
DAVID R. DINGES
STATE OF IDAHO

INTERIOR DETAILS

Desert Sage Health Center
2280 American Legion Blvd.
Mountain Home, Idaho

SHEET 7.01

Mar 2004 ds701.dwg 02/24/04 07:40

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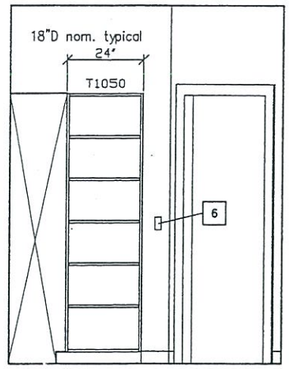
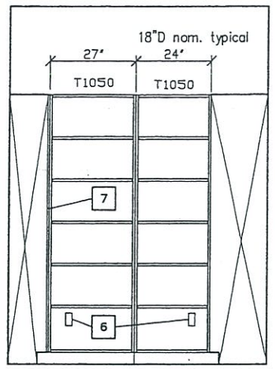
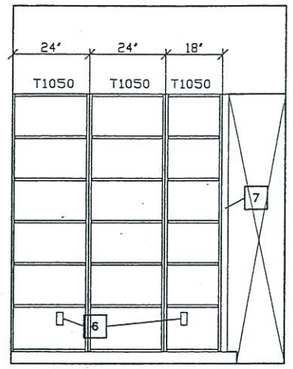


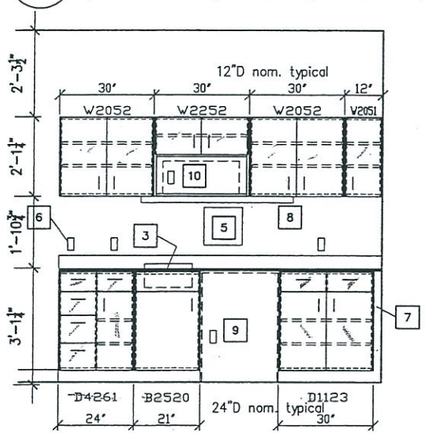




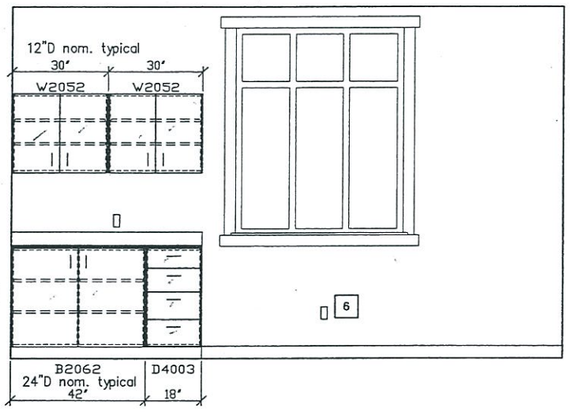
Keynotes:

1. OFOI Rolling Computer Cart
2. Cabinet Lock typical
3. Sink – See Mech
4. Full Height 3/4" thick PLam Backsplash
5. Paper Towel Dispenser
6. Electrical Device
7. Filler Panel as required
8. Under Counter Light Fixture
9. OFOI U.C. Refrigerator – Verify size
10. OFOI Microwave – Verify Size
11. Vertical 3/8" thick masonit dividers @ 3 1/2" o.c. Depth of slot: 16" with false back.
12. OFOI Floor Mounted Equipment – Verify size
13. OFOI Computer Monitor
14. Lead Shielded Window and Frame
15. OFOI Controller
16. Counter Top Cleat
17. Chair Rail – See detail 6/5.21
18. Set Rail in Clear Silicon Caulking at Counter top
19. OFOI Refrigerator
20. Decorative Wood Trim Around Light Switch See detail 8/5.21
21. Applied Wood Moulding – Stained Dark
22. Stained Hardwood Veneer Plywood
23. Solid Surface Counter Top
24. Stained Wood Moulding
25. Wider Counter Top Area – See Plan
26. Skylight Shaft
27. Fabric Wall Covering over 1/2" Cork brd.
28. Crown Moulding – see 1/5.21
29. Floor Base
30. OFOI Keyboard Pull–Out

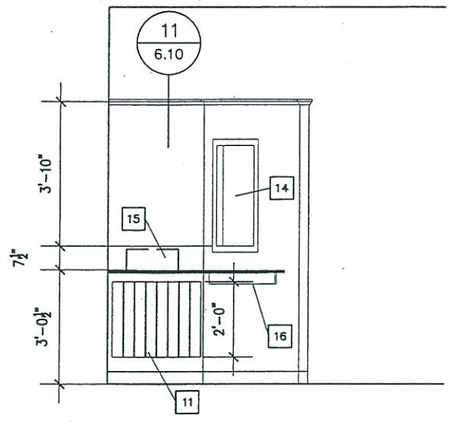
8 Meds
1/2" = 1'– 0" (half size: 1/4" = 1'–0")

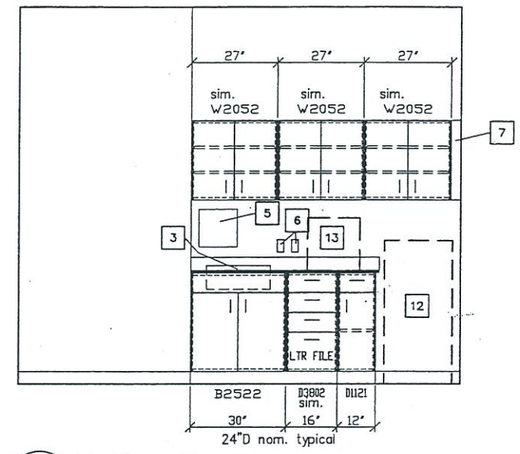


9 Meds
1/2" = 1'– 0" (half size: 1/4" = 1'–0")

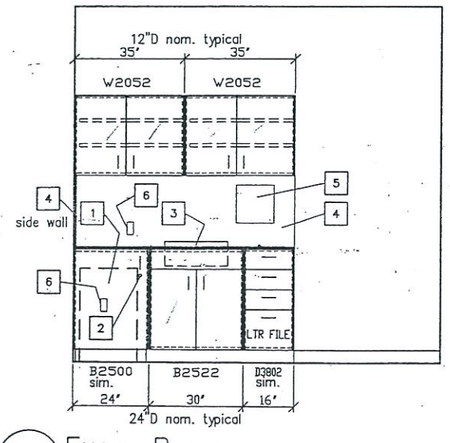


10 Meds
1/2" = 1'– 0" (half size: 1/4" = 1'–0")

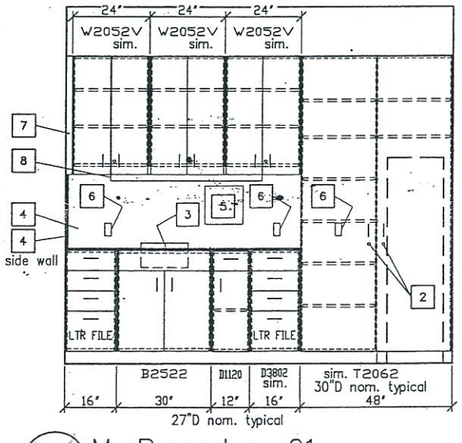




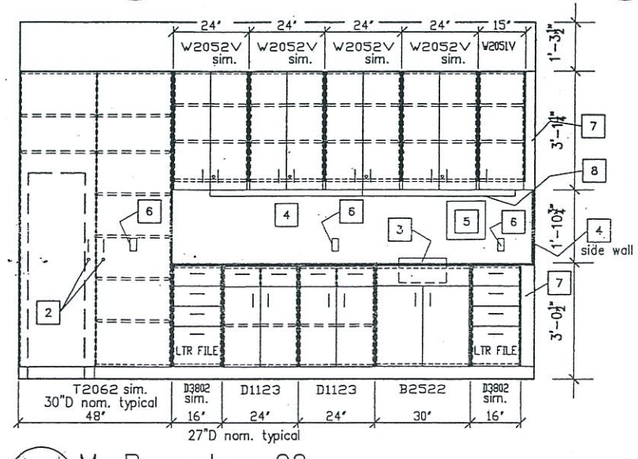
4 Break Room
1/2" = 1'– 0" (half size: 1/4" = 1'–0")



5 Break Room
1/2" = 1'– 0" (half size: 1/4" = 1'–0")



6 X–Ray Room
1/2" = 1'– 0" (half size: 1/4" = 1'–0")



7 X–Ray Room
1/2" = 1'– 0" (half size: 1/4" = 1'–0")

1 Exam Room
1/2" = 1'– 0" (half size: 1/4" = 1'–0")

2 M. Procedure 01
1/2" = 1'– 0" (half size: 1/4" = 1'–0")

3 M. Procedure 02
1/2" = 1'– 0" (half size: 1/4" = 1'–0")

Medical Design Group
Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

REGISTERED ARCHITECT No. AR-1740 22 March 2004

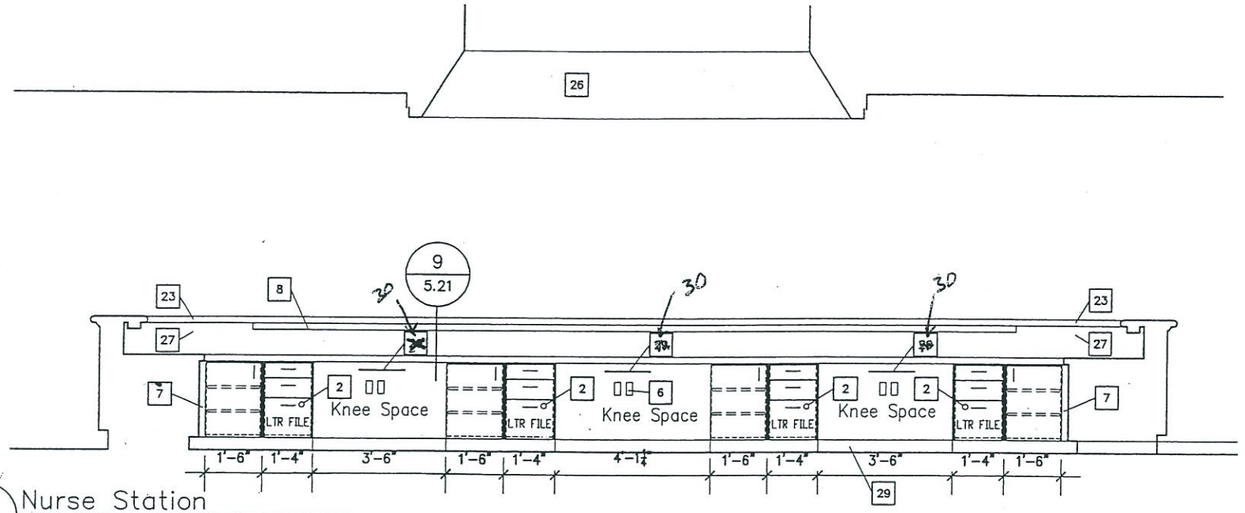
DAVID R. DAVIES STATE OF IDAHO

INTERIOR ELEVATIONS

Desert Sage Health Center
2280 American Legion Blvd.
Mountain Home, Idaho

SHEET 7.10

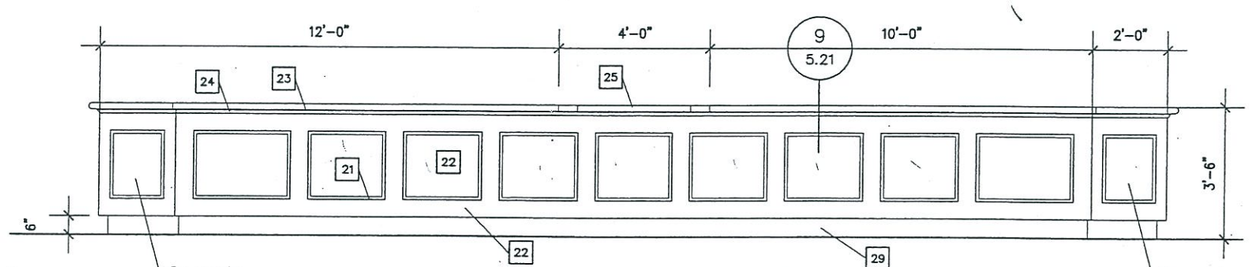
Mar 2004 | ds710.dwg 03/22/04 14:12



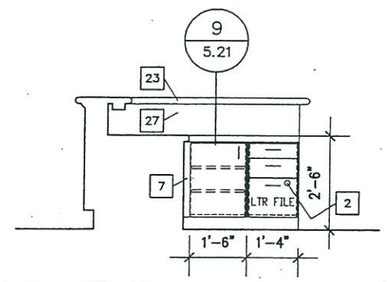
5 Nurse Station
1/2" = 1'- 0" (half size: 1/4" = 1'-0")

Keynotes:

1. OFOI Rolling Computer Cart
2. Cabinet Lock typical
3. Sink – See Mech
4. Full Height 3/4" thick PLam Backsplash
5. Paper Towel Dispenser
6. Electrical Device
7. Filler Panel as required
8. Under Counter Light Fixture
9. OFOI U.C. Refrigerator – Verify size
10. OFOI Microwave – Verify Size
11. Vertical 3/8" thick masonit dividers @ 3 1/2" o.c. Depth of slot: 16" with false back.
12. OFOI Floor Mounted Equipment – Verify size
13. OFOI Computer Monitor
14. Lead Shielded Window and Frame
15. OFOI Controller
16. Counter Top Cleat
17. Chair Rail – See detail 6/5.21
18. Set Rail in Clear Silicon Caulking at Counter top
19. OFOI Refrigerator
20. Decorative Wood Trim Around Light Switch See detail 8/5.21
21. Applied Wood Moulding – Stained Dark
22. Stained Hardwood Veneer Plywood
23. Solid Surface Counter Top
24. Stained Wood Moulding
25. Wider Counter Top Area – See Plan
26. Skylight Shaft
27. Fabric Wall Covering over 1/2" Cork brd.
28. Crown Moulding – see 1/5.21
29. Floor Base
30. OFOI Keyboard Pull-Out

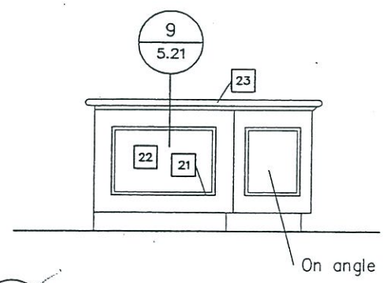


2 Nurse Station
1/2" = 1'- 0" (half size: 1/4" = 1'-0")



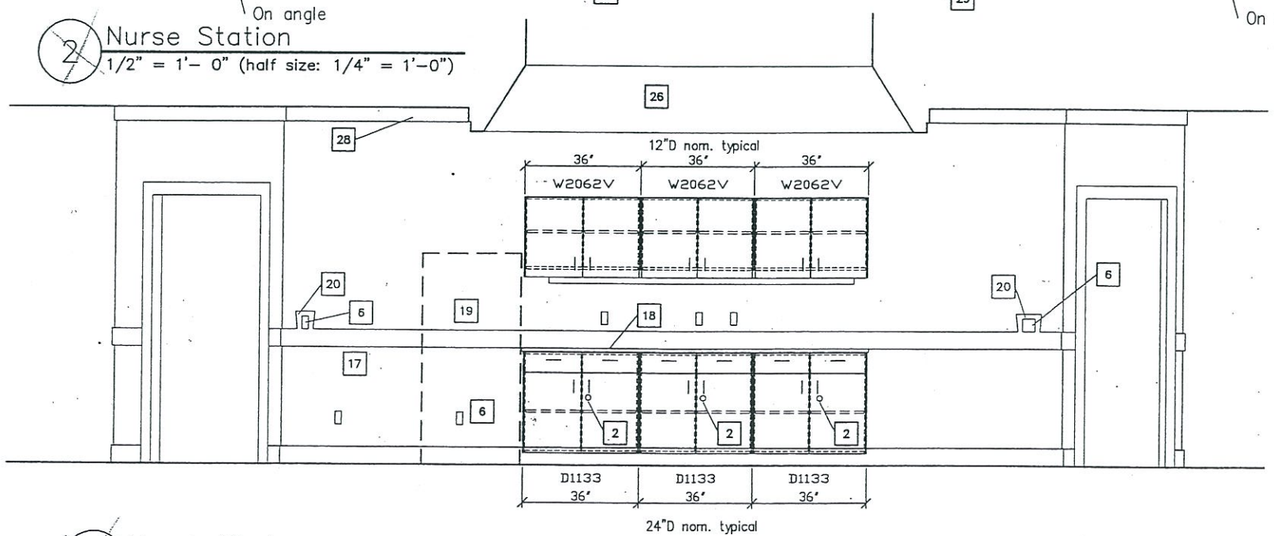
3 Nurse Station
1/2" = 1'- 0" (half size: 1/4" = 1'-0")

Note: This Elevation is Mirrored on the other end



4 Nurse Station
1/2" = 1'- 0" (half size: 1/4" = 1'-0")

Note: This Elevation is Mirrored on the other end



1 Nurse Work
1/2" = 1'- 0" (half size: 1/4" = 1'-0")

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Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
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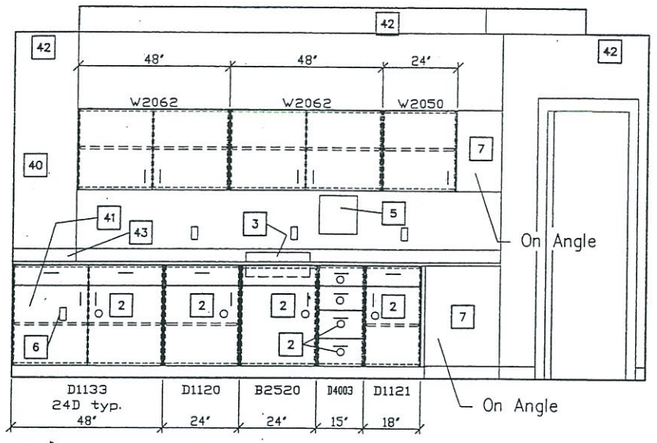
REGISTERED ARCHITECT No. AR-1740 22 March 2004
DAVID R. DAVIES STATE OF IDAHO

INTERIOR ELEVATIONS

Desert Sage Health Center
2280 American Legion Blvd.
Mountain Horne, Idaho

SHEET 7.11

Mar 2004 | ds711.dwg 03/22/04 14:14

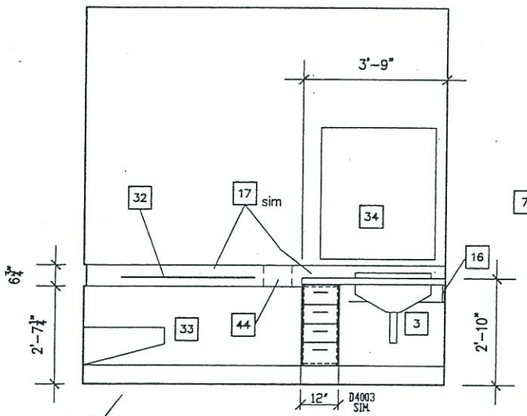


10 Patient Education
1/2" = 1'– 0" (half size: 1/4" = 1'–0")

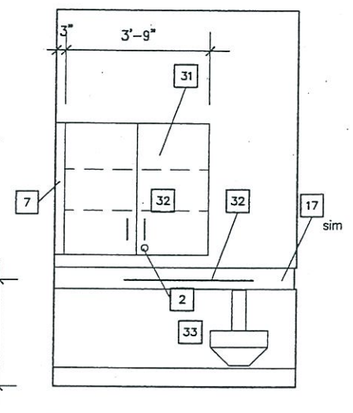
Keynotes:
1. OFOI Rolling Computer Cart
2. Cabinet Lock typical
3. Sink – See Mech
4. Full Height 3/4" thick PLam Backsplash
5. Paper Towel Dispenser
6. Electrical Device
7. Filler Panel as required
8. Under Counter Light Fixture
9. OFOI U.C. Refrigerator – Verify size
10. OFOI Microwave – Verify Size
11. Vertical 3/8" thick masonit dividers @ 3 1/2" o.c. Depth of slot: 16" with false back.
12. OFOI Floor Mounted Equipment – Verify size
13. OFOI Computer Monitor
14. Lead Shielded Window and Frame
15. OFOI Controller
16. Counter Top Cleat
17. Chair Rail – See detail 6/5.21
18. Set Rail in Clear Silicon Caulking at Counter top
19. OFOI Refrigerator
20. Decorative Wood Trim Around Light Switch See detail 8/5.21
21. Applied Wood Moulding – Stained Dark
22. Stained Hardwood Veneer Plywood
23. Solid Surface Counter Top
24. Stained Wood Moulding
25. Wider Counter Top Area – See Plan
26. Skylight Shaft
27. Fabric Wall Covering over 1/2" Cork brd.
28. Crown Moulding – see 1/5.21
29. Floor Base
30. OFOI Keyboard Pull–Out
31. 6" deep cabinet recessed into Stud Space
32. Grab Bar
33. Wall Mounted Toilet
34. Mirror – ~~OFOI~~ OFCI
35. Knee Brace into Solid blocking
36. Specimen Pass–Through
37. Furr Down hard Ceiling over Shower
38. Pre–Manufactured Shower Assembly
39. Two Vert. Dividers and 1/4" horiz. dividers at 2 1/8" o.c. behind two doors
40. Chase as Required for Electrical
41. Ventillate Cabinet for Owner Equipment
42. Soffit Assembly – see 12/6.10
43. Cope Counter around Chase As Req'd
44. Removable piece of chair rail to 4" x 3" min access

Trap Primer – provide removable fasteners into blocking

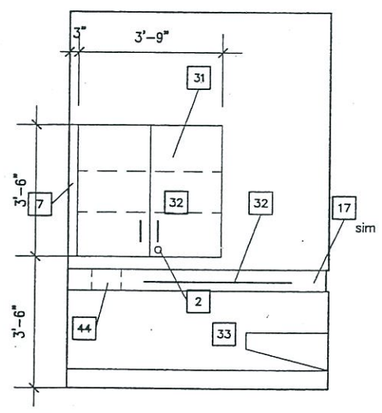
x millwork ✓



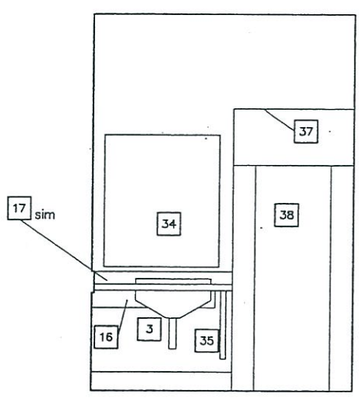
5 Patient Toilet 3
1/2" = 1'– 0" (half size: 1/4" = 1'–0")



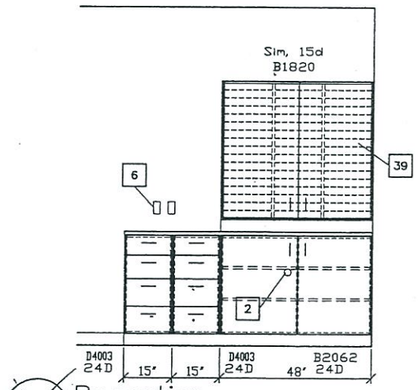
6 Patient Toilet 3
1/2" = 1'– 0" (half size: 1/4" = 1'–0")



7 Staff Toilet
1/2" = 1'– 0" (half size: 1/4" = 1'–0")



8 Staff Toilet
1/2" = 1'– 0" (half size: 1/4" = 1'–0")



9 Reception
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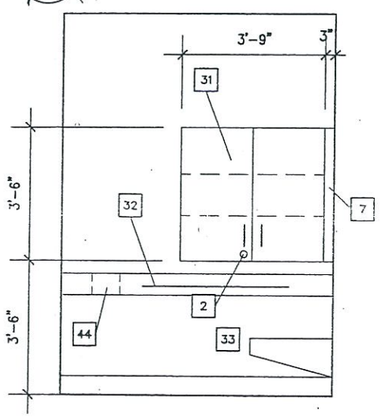
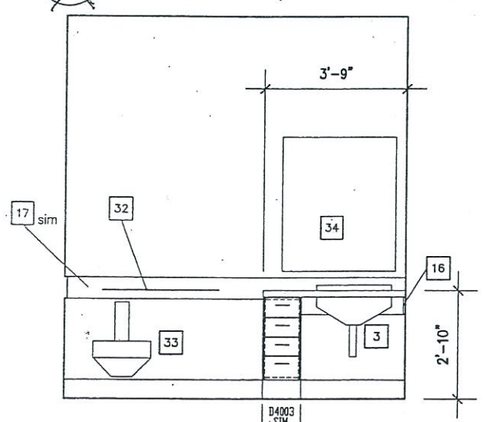


1 Patient Toilet 1
1/2" = 1'– 0" (half size: 1/4" = 1'–0")



2 Patient Toilet 1
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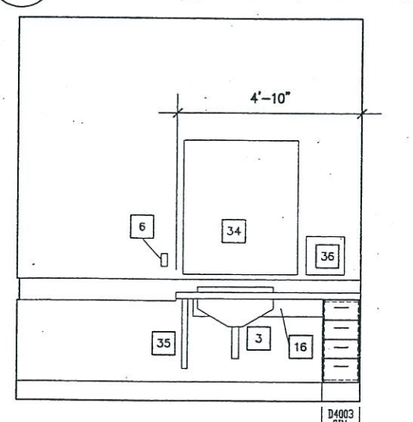
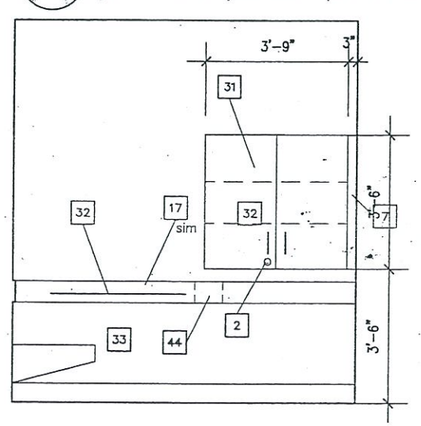


3 Patient Toilet 2
1/2" = 1'– 0" (half size: 1/4" = 1'–0")



4 Patient Toilet 2
1/2" = 1'– 0" (half size: 1/4" = 1'–0")

Medical Design Group
Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

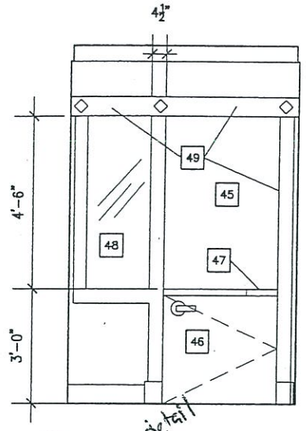
REGISTERED ARCHITECT No. AR-1740 22 March 2004
DAVID R. DAVIES STATE OF IDAHO

INTERIOR ELEVATIONS

Desert Sage Health Center
2280 American Legion Blvd.
Mountain Home, Idaho

SHEET 7.12

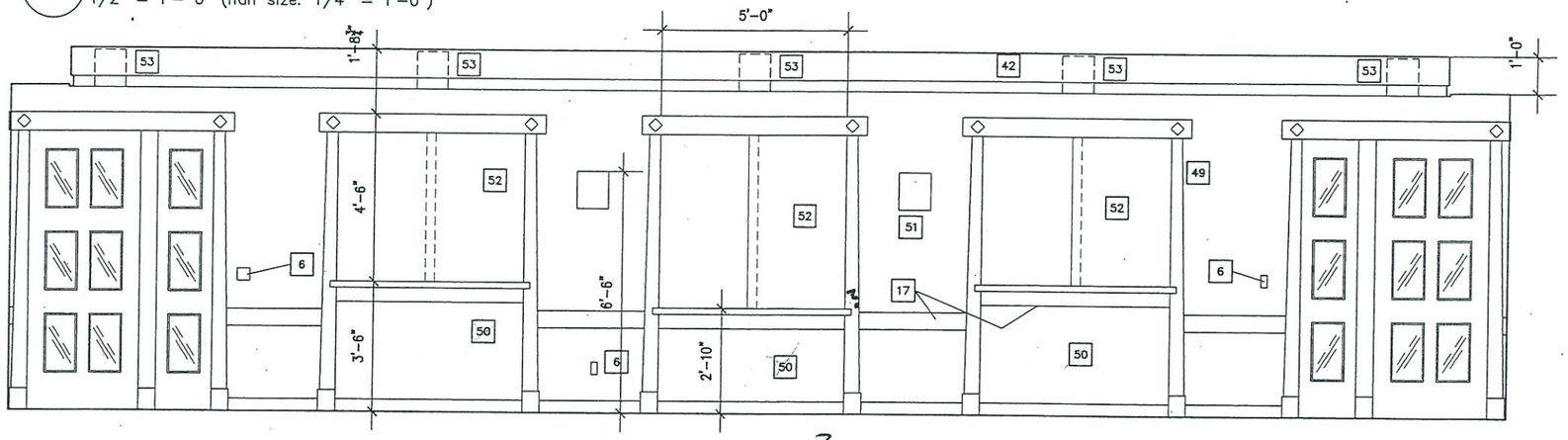
Mar 2004 | ds712.dwg 03/16/04 21:26



Keynotes:

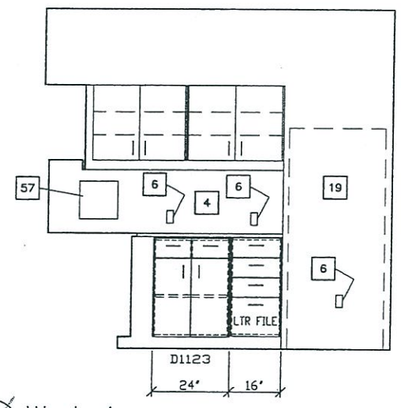
1. OFOI Rolling Computer Cart
2. Cabinet Lock typical
3. Sink – See Mech
4. Full Height 3/4" thick PLam Backsplash
5. Paper Towel Dispenser
6. Electrical Device
7. Filler Panel as required
8. Under Counter Light Fixture
9. OFOI U.C. Refrigerator – Verify size
10. OFOI Microwave – Verify Size
11. Vertical 3/8" thick masonit dividers @ 3 1/2" o.c. Depth of slot: 16" with false back.
12. OFOI Floor Mounted Equipment – Verify size
13. OFOI Computer Monitor
14. Lead Shielded Window and Frame
15. OFOI Controller
16. Counter Top Cleat
17. Chair Rail – See detail 6/5.21
18. Set Rail in Clear Silicon Caulking at Counter top
19. OFOI Refrigerator
20. Decorative Wood Trim Around Light Switch See detail 8/5.21
21. Applied Wood Moulding – Stained Dark
22. Stained Hardwood Veneer Plywood
23. Solid Surface Counter Top
24. Stained Wood Moulding
25. Wider Counter Top Area – See Plan
26. Skylight Shaft
27. Fabric Wall Covering over 1/2" Cork brd.
28. Crown Moulding – see 1/5.21
29. Floor Base
30. OFOI Keyboard Pull-Out
31. 6" deep cabinet recessed into Stud Space
32. Grab Bar
33. Wall Mounted Toilet
34. Mirror – ~~OFOI~~ OFCI
35. Knee Brace into Solid blocking
36. Specimen Pass-Through
37. Furr Down hard Ceiling over Shower
38. Pre-Manufactured Shower Assembly
39. Two Vert. Dividers and 1/4" horiz. dividers at 2 1/8" o.c. behind two doors
40. Chase as Required for Electrical
41. Ventillate Cabinet for Owner Equipment
42. Soffit Assembly – see 12/6.10
43. Cope Counter around Chase As Req'd
44. Removable piece of chair rail to 4" x 3" min access Trap Primer – provide removable fasteners into blocking
45. Open to Reception beyond
46. Dutch Door with 8" min. wide shelf
47. Bevel Door Shelf to allow door to open
48. Glazing
49. Modified frame type A
50. Light Stained Oak Veneer Plywood
51. Wall Mounted Light
52. Sliding Reception Window
53. Recessed Light Fixture in Soffit
54. OFOI Tackboard
55. PLam Counter top
56. 1/4" masonite shelf dividers 2" o.c. (removable)
57. Specimen Pass-through

5 Check-Out Door
1/2" = 1'– 0" (half size: 1/4" = 1'–0")



3 Reception Counter
1/2" = 1'– 0" (half size: 1/4" = 1'–0")

Dimensions?



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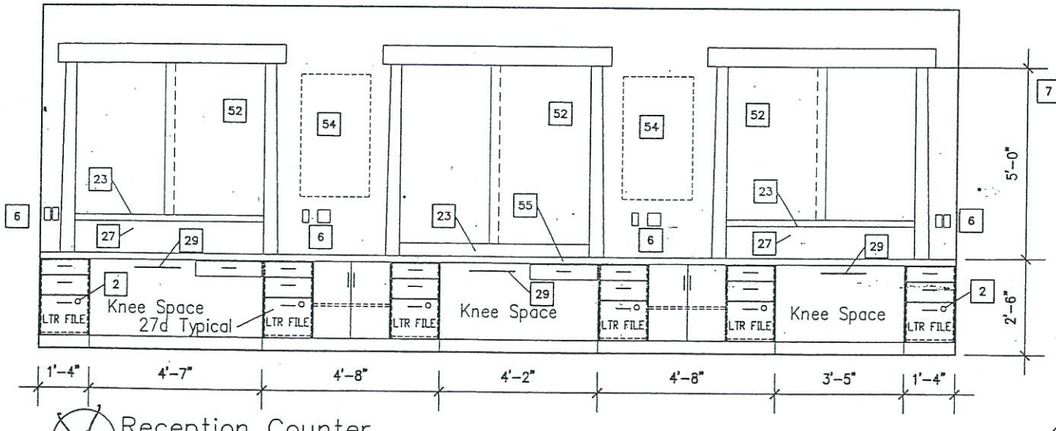

Reception Counter
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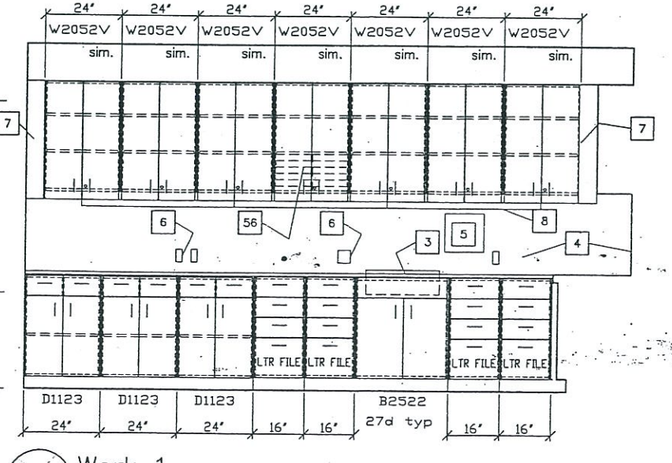

2 Work 1
1/2" = 1'– 0" (half size: 1/4" = 1'–0")

Medical Design Group
Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

REGISTERED ARCHITECT No. AR-1740 22 March 2004
DAVID R. DANES STATE OF IDAHO

INTERIOR ELEVATIONS

Desert Sage Health Center
2280 American Legion Blvd.
Mountain Home, Idaho

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Mar 2004 | ds713.dwg 03/22/04 20:39

1. OFOI Rolling Computer Cart
2. Cabinet Lock typical
3. Sink – See Mech
4. Full Height 3/4" thick PLam Backsplash
5. Paper Towel Dispenser
6. Electrical Device
7. Filler Panel as required
8. Under Counter Light Fixture
9. OFOI U.C. Refrigerator – Verify size
10. OFOI Microwave – Verify Size
11. Vertical 3/8" thick masonit dividers @ 3 1/2" o.c. Depth of slot: 16" with false back.
12. OFOI Floor Mounted Equipment – Verify size
13. OFOI Computer Monitor
14. Lead Shielded Window and Frame
15. OFOI Controller
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18. Set Rail in Clear Silicon Caulking at Counter top
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20. Decorative Wood Trim Around Light Switch See detail 8/5.21
21. Applied Wood Moulding – Stained Dark
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39. Two Vert. Dividers and 1/4" horiz. dividers at 2 1/8" o.c. behind two doors
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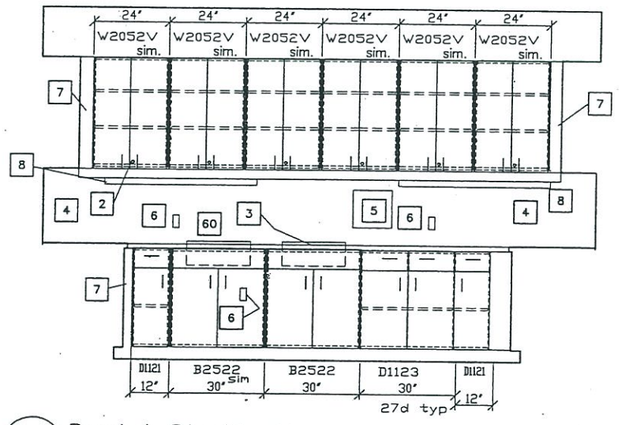
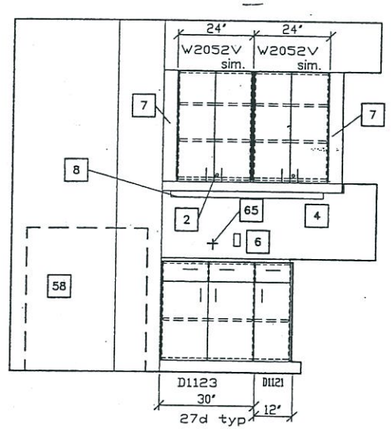
49. Modified frame type A
50. Light Stained Oak Veneer Plywood
51. Wall Mounted Light
52. Sliding Reception Window
53. Recessed Light Fixture in Soffit
54. OFOI Tackboard
55. PLam Counter top
56. 1/4" masonite shelf dividers 2" o.c. (removable)
57. Specimen Pass-through
58. OFOI Floor Mounted ditigal x-ray
59. Masonite Dividers to support Dental Tray – verify
60. Counter Recessed OFCI Dental Ultra Sonic Cleaner
61. Pull out drawer for Dental Staturn Sterilizer
62. Counter mounted Dental Auto-clave Sterilizer
63. Plaster Trap
64. Model Trimmer
65. Wall Mounted air Valve
66. Call Light Panel

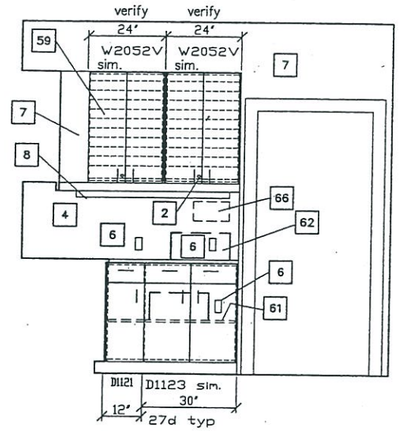
~~52. Sliding Reception Window~~
~~53. Recessed Light Fixture in Soffit~~
~~54. OFOI Tackboard~~



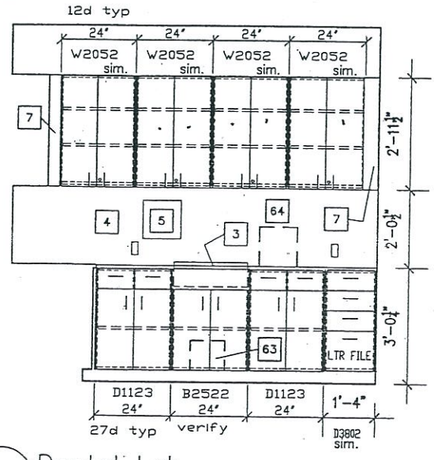
3 Dental Sterilization
1/2" = 1'– 0" (half size: 1/4" = 1'–0")



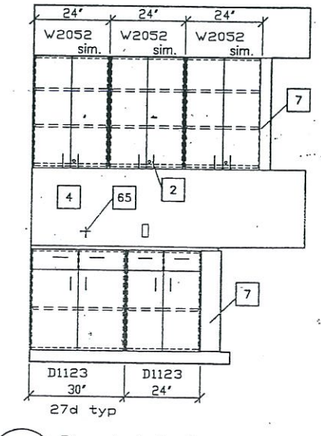
4 Dental Sterilization
1/2" = 1'– 0" (half size: 1/4" = 1'–0")



5 Dental Sterilization
1/2" = 1'– 0" (half size: 1/4" = 1'–0")



1 Dental Lab
1/2" = 1'– 0" (half size: 1/4" = 1'–0")



2 Dental Lab
1/2" = 1'– 0" (half size: 1/4" = 1'–0")

Medical Design Group
Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

REGISTERED ARCHITECT No. AR-1740 22 March 2004
DAVID R. DAVIES STATE OF IDAHO

INTERIOR ELEVATIONS

Desert Sage Health Center
2280 American Legion Blvd.
Mountain Home, Idaho

SHEET 7.14

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TREASURE VALLEY MEDICAL PHYSICS, INC.
2475 Parkside Dr.
Boise, Idaho 83712
(208) 345-7490

October 21, 2003

David R. Davies A.I.A.
2716 Westland Place
Boise, ID. 83704

Dear Mr. Davies:

The general objective of radiation shielding is to provide protection for both the radiation worker as well as the general public. To meet this need, the walls in the Desert Sage Health Center which will be located in Mountain Home, Idaho, will need to be lined with lead. In general, the walls will need to be shielded to a height of seven (7) feet. All openings and switch or receptacle boxes will have to be backed with shielding material (preferably lead). All penetrations for fasteners in the shielding will have to be backed with lead. There is no occupancy above or below the x-ray room, therefore no shielding is required for the floor or ceiling.

The following shielding recommendations were arrived at using NCRP 49, and The Health Physics and Radiological Health Handbook (1992). You provided the drawings for the room layout with the x-ray machine placement. Workloads used in the calculations were for a busy installation.

Please see the enclosed data set for the specifications.

Early visual inspection of the rooms during construction by a Medical Physicist is advantageous to ensure compliance with the specifications and possible revealing of faulty materials or workmanship. If there are problems they can be remedied more economically at this early stage.

Thank you for letting me be of service. If you have any questions, please feel free to call.

Sincerely,

Roger Stano

Roger G. Stano, M.S., FACR
Medical Physicist

SPECIFICATIONS

DESERT SAGE HEALTH CENTER
MOUNTAIN HOME, IDAHO

OCTOBER 21, 2003

North wall	-	Common to corridor and chest board	4.0 lbs./sq. ft. lead
Northwest wall and door			4.0 lbs./sq. ft. lead
East Wall	-	Common to work area	3.0 lbs./sq. ft. lead
Operators console area and window	-		4.0 lbs./sq. ft. lead
West Wall	-	Common to nursing	3.0 lbs./sq. ft. lead
South wall	-	common to work area	3.0 lbs./sq.ft. lead
Floor and ceiling			none required

RGS 10-21-03

13.01 Radiation Protection

1. Includes Lead Backed Gypsum Board, Lead Sheet Accessories, Gypsum Panel Fasteners, Lead Lined flush wood doors, Lead Lined Steel telescopic viiw window frames, Radiation resistant glass, Glazing accessories.
2. References: NCRP Report No. 49, Structural Shielding Design and Evaluation for Medical Use of X-rays and Gamma Rays of Energies up to 10 MeV.
3. System Description:
   A. Installed radiation protection materials shall comply with National Council on Radiation Protection, NCRP Report No. 49 for diagnostic rooms.
   B. Electrical installer shall install electrical boxes centered between studs and connect conduit at the top of electrical boxes, where possible at walls with lead lining. OP
4. Submittals: Product Data, Shop Drawings, Certificates, Door Hardware, Site Inspection Report prepared by a Radiation shielding inspector within 10 days after site inspection of exposed radiation resistant assemblies.
5. Distributors: Wave Barriers, Shielded Building Materials, 20811 NW Cornell Rd. Ste 500, Hillsboro, OR 97124-9804 Bill Zander 1-800-498-1460
6. Components:
   A. Lead Backed Gypsum Board Panels: ASTM C36, Beveled, Type X with lead backing sheet backing meeting FS QQ-L-201, Grade C.
   B. Lead Sheet Accessories: FS QQ-L-201, Grade C. Batten Strips: Same thickness or greater as lead sheet on back face of adj. Wall panels, 2" wide, 7 feet long.
   C. Wall Penetration Covers: Same thickness or greater than thickness of lead sheet on back face of adjacent wall panels. Size as required for not less than 1 inch wide lap with lead sheet on back face of adjacent wall panels.
   D. Fastener Tabs: Same or greater thickness than thickness of lead sheet on back face of adjacent wall panels. Size not less than 1 inch wide by 2 inches long. Note: these tabs are used for screw application of gypsum panels to steel studs without batten strips and for all wood studs. See details.
   E. Door Jamb Lining: Same or greater thickness than thickness of lead sheet on back face of adjacent wall panels. Size 7 foot long by width required by door frame.
   F. Lockset Rose and Knob Lining: Same or greater thickness than thickness of lead sheet within adjacent door. Size as required to fill lockset rose and knob.
   (Window) G. Frame Lining: Same or greater thickness than thickness of lead sheet on back face of adjacent wall panels. Continuous length at head and jamb, 3 pieces with 1 inch laps at frame corners,
   G. Gypsum Panels Fasteners: Screws: ASTM 1002, 1 inch long, bugle head. Adhesive: ASTM C557.
   H. Radiation Shielding Glass: Glass type: Polished radiation shielding

Medical Design Group
Architecture for Health Care
2716 WESTLAND PLACE
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Fax (208) 378-1405
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REGISTERED ARCHITECT No. AR-1740 15 March 2004
DAVID R. DAVIES STATE OF IDAHO

X-RAY SPECS/DETAILS

Desert Sage Health Center
2280 American Legion Blvd.
Mountain Home, Idaho

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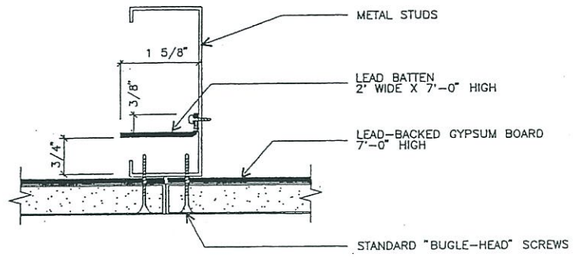
glass containing not less that 50 percent lead oxide. Glass Quality: Surface: Mirror polished, 1/4" thick min. Lead Equivalency of Glass: 1.58 mm min.
I. Glazing Accessories: Setting Blocks: Solid Neoprene, 80 to 90 Shore A hardness. Glazing Tape: Foam neoprene.

7. Lead Lined Flush Wood Doors: AWI Custom PC-5, Lead Lined, Face Veneer to match other wood doors in facility as specified in section 08. Thickness: 1 3/4". Finish: comply with requirements of section 09. Door fitting requirements: 1/8" space max at perimeter except ½' max space at door bottom.
8. Lead Lined steel Telescopic View Window Frames: Frame: ASTM A568 and ASTM 366 with Lead Sheet Lining FS QQ-L-201, Grade C, single un-pierced strip, 1/16" thick. Frame Profile: 2 inches wide with 7/16 inch high integral fixed stop and 16 gauge applied cold rolled steel stop. Frame Construction: Two telescoping steel frames with continuous welded corner seams and lead sheet applied with adhesive to inside face of the outside frame, shop primed.
9. Execution:
   A. Installation of Radiation Resistant Wall Assemblies: Screw lead battens to steel studs at 12 inches o.c. from floor to ceiling. If wood studs are used, secure lead battens to wood studs with adhesive or brad nails from floor to ceiling behind vertical gypsum panel joints.
   B. Install lead backed gypsum board in compliance with GA-216 and ASTM C840. Install with long edges vertical. Install to within 1/4" of floor. Screw lead backed gypsum board to steel framing members at 8 inches o.c. at panel edges and 12 inches o.c. in the field. Utilize fastener tabs at wood studs.
   C. Install Steel Door Frames using adhesive to apply lead lining in door jambs. Otherwise, install in accordance with section 08.
   D. Install Wood Doors and Door Hardware to comply with AWI Quality Standards, Section 1700.
   E. Install Lead Lined Steel Telescopic View Window Frames setting unleaded frame plumb and square in wall opening on control room side of wall with shims. Set leaded frame inside unleaded frame on X-ray side of wall and compress adjustable frame against face of wall. Secure both frames with equal spaced screws through each jamb. Install setting blocks, shims and glazing tape in glazing channel to prevent glass from touching the steel frame. Install tadiation resistant glazing in telescoping frame. Place steel stops.
   F. Install wall penetration covers by cutting the covers from lead sheet making allowance for required laps. Install penetrating wall boxes and raceways centered between studs using steel telescoping mounting brackets. Adhesive apply lead sheet penetration covers on penetrating boxes and raceways and return penetration covers to backside of lead backed wall panels with 1 inch minimum laps.
   G. Install pipe penetrations in Walls and Ceilings by wrapping pipe with wall penetration covers lapping lead joints 1 inch minimum. To prevent radiation passage through pipe openings, offset pipe direction as close behind wall lead lining as possible so that the pipe can be backed with lead sheet sufficient to prevent radiation passage at an angle.
10. Completion:
   A. Prior to applying gypsum panels to back face of radiation resistant interior walls, employ a qualified radiation shielding inspector for field inspection of installed radiation resistant materials. Contractor to include cost for this inspection in price for construction. Written report to be issued to Architect and Owner within ten days of inspection. Repair and replace work found defective by radiation shielding inspector or testing by a qualified health physicist. Cost for re-inspection if necessary shall be borne by the contractor.
   B. Tape temporary paper signs on radiation resistant walls with the following text: "DO NOT MOUNT EQUIPMENT ON THIS WALL WITHOUT COVERING PENETRATING FASTENERS WITH LEAD SHEET OF THICKNESS REQUIRED BY ORIGINAL CONTRACT DOCUMENTS"



Health Physics Northwest

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CAD File	A01
REVISION DATE	5-31-90
LAST PLOT DATE	5-31-90

METAL STUD DETAIL

PROJECT

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Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

REGISTERED ARCHITECT No. AR-1740 15 March 2004
DAVID R. DAVIES STATE OF IDAHO

X-RAY SPECS/DETAILS

Desert Sage Health Center
2280 American Legion Blvd.
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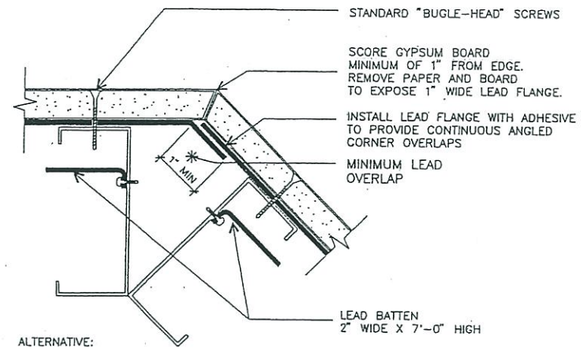

ALTERNATIVE:

IF CORNER IS CONSTRUCTED WITH (SUPPORT) BACKING DIRECTLY BEHIND THE ANGLE POINT, LEAD-BACKED GYPSUM BOARD MAY BE SCORED ON THE FACE AND "BROKEN" AROUND THE ANGLE POINT TO MAKE A CONTINUOUS SHIELDING BARRIER. (WILL REQUIRE ADDITION OF METAL CORNER GUARD.)

Health Physics Northwest

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PROJECT/JOB NUMBER	
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REVISION DATE	5-31-90
LAST PLOT DATE	5-31-90

METAL STUD DETAIL

PROJECT

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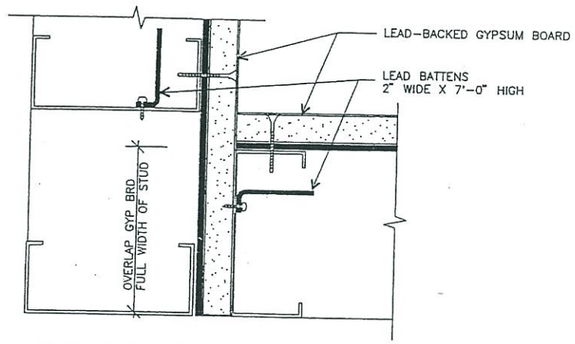

INSIDE CORNER

Health Physics Northwest

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PROJECT/JOB NUMBER	
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LAST PLOT DATE	5-31-90

METAL STUD DETAIL

PROJECT

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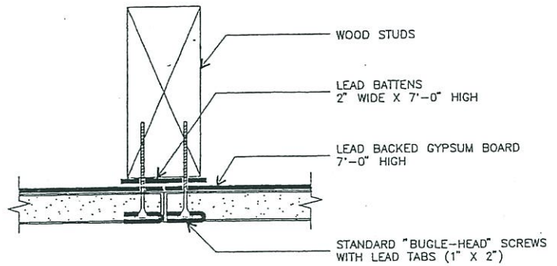
REV



Health Physics Northwest

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CAD File	A05
REVISION DATE	5-31-90
LAST PLOT DATE	5-31-90

WOOD STUD DETAIL

PROJECT

DWG NO A05 OF

REV

Medical Design Group
Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208)-378-1405
Phone (208) 378-0817

REGISTERED ARCHITECT No. AR-1740 15 March 2004
DAVID R. DAVIES STATE OF IDAHO

X-RAY SPECS/DETAILS

Desert Sage Health Center
2280 American Legion Blvd.
Mountain Home, Idaho

SHEET 13.03

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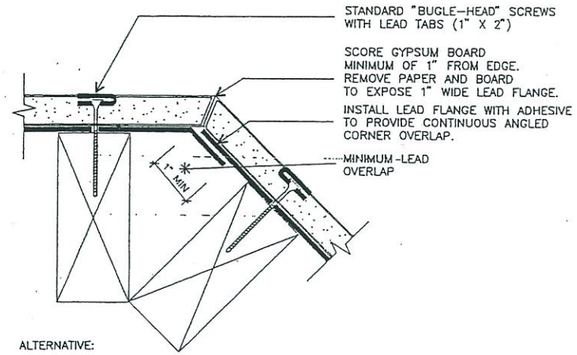

ALTERNATIVE:

IF CORNER IS CONSTRUCTED WITH (SUPPORT) BACKING DIRECTLY BEHIND THE ANGLE POINT, LEAD-BACKED GYPSUM BOARD MAY BE SCORED ON THE FACE AND "BROKEN" AROUND THE ANGLE POINT TO MAKE A CONTINUOUS SHIELDING BARRIER. (WILL REQUIRE ADDITION OF METAL CORNER GUARD.)

Health Physics Northwest

SCALE	6"=1'-0"
DRAWN BY	
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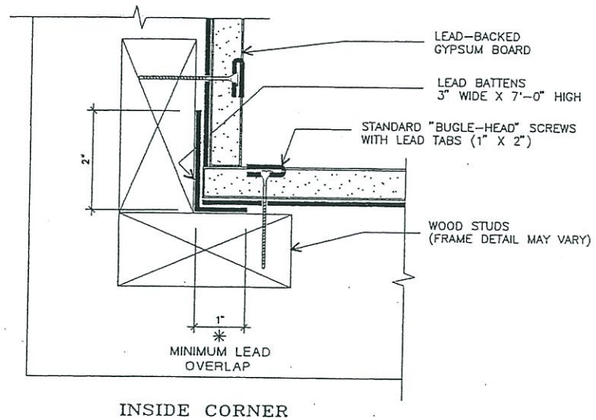
APPROVED	
PROJECT/JOB NUMBER	
CAD File	A06
REVISION DATE	5-31-90
LAST PLOT DATE	5-31-90

WOOD STUD DETAIL

PROJECT

DWG NO A06 OF

REV



INSIDE CORNER

Health Physics Northwest

SCALE	6"=1'-0"
DRAWN BY	
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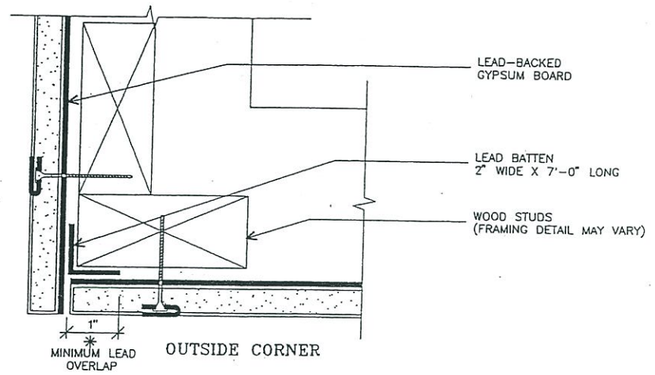
APPROVED	
PROJECT/JOB NUMBER	
CAD File	A07
REVISION DATE	5-31-90
LAST PLOT DATE	5-31-90

WOOD STUD DETAIL

PROJECT

DWG NO A07 OF

REV



OUTSIDE CORNER

Health Physics Northwest

SCALE	6"=1'-0"
DRAWN BY	
CHECKED	
APPROVED	
PROJECT/JOB NUMBER	
CAD File	A08
REVISION DATE	5-31-90
LAST PLOT DATE	5-31-90

WOOD STUD DETAIL

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Medical Design Group
Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

REGISTERED ARCHITECT No. AR-1740 15 March 2004
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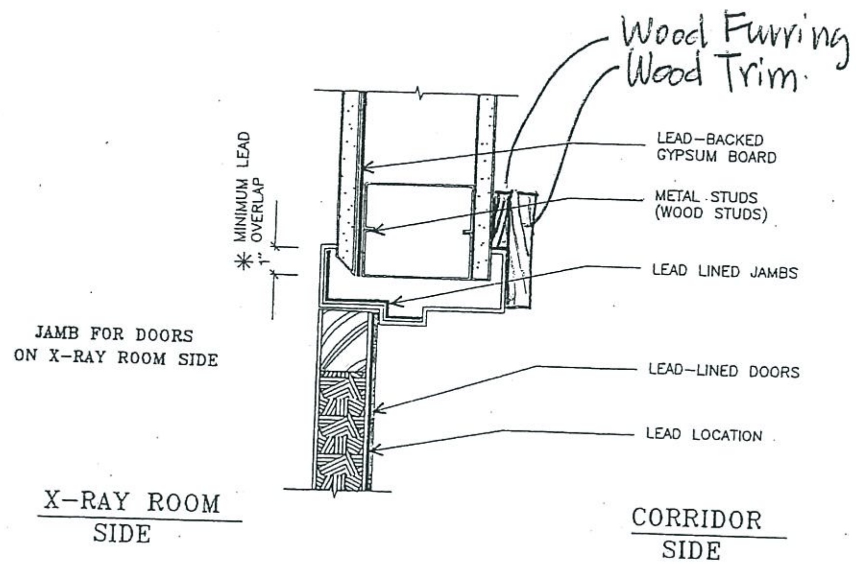

SCALE	3"=1'-0"
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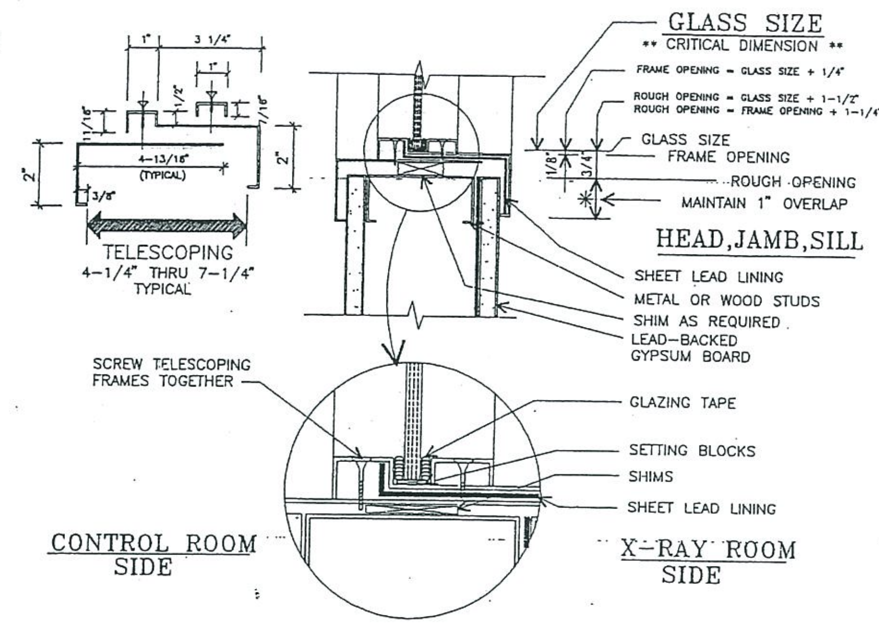
APPROVED	
PROJECT/JOB NUMBER	
CAD File	A09
REVISION DATE	5-31-90
LAST PLOT DATE	5-31-90

Health Physics Northwest

DOOR, JAMB, ASTRAGAL

PROJECT — DWG NO A09 — REV — OF



STRAIGHT-SIDE VIEW WINDOW FRAMES ARE TYPICAL FOR LARGE FRAMES AND MAY INCLUDE DIFFERENT MULLION OPTIONS.

SCALE	3"=1'-0"
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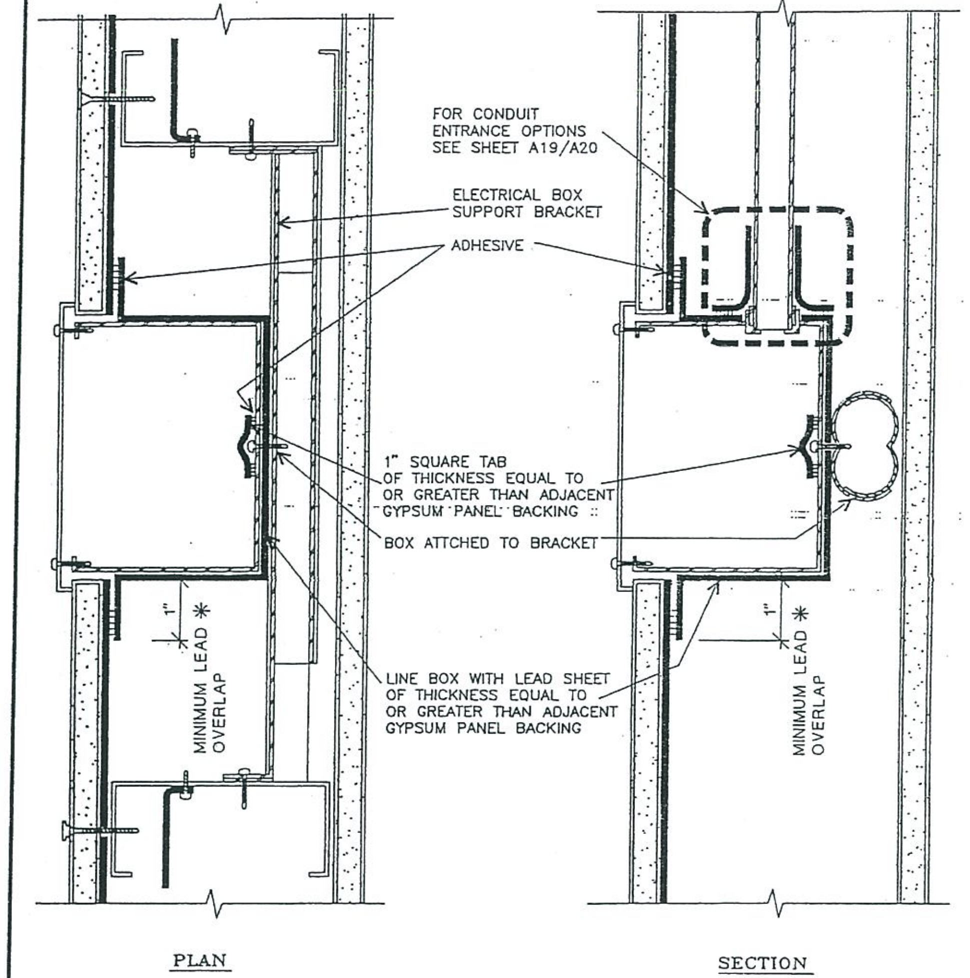
APPROVED	
PROJECT/JOB NUMBER	
CAD File	A12
REVISION DATE	5-31-90
LAST PLOT DATE	5-31-90

Health Physics Northwest

STRAIGHT TELESCOPIC WINDOW

PROJECT — DWG NO A12 — REV — OF



PRE-FORMED SHIELDING

SHEET LEAD LINER FORMED AS SHOWN ON SHEET A16

SCALE	6"=1'-0"
DRAWN BY	
CHECKED	
APPROVED	
PROJECT/JOB NUMBER	
CAD File	A17
REVISION DATE	5-31-90
LAST PLOT DATE	5-31-90

Health Physics Northwest

ELECTRICAL PANEL OR BOX

PROJECT — DWG NO A17 — REV — OF

Medical Design Group
Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

REGISTERED ARCHITECT No. AR-1740 15 March 2004
DAVID R. DAVIES STATE OF IDAHO

X-RAY SPECS/DETAILS

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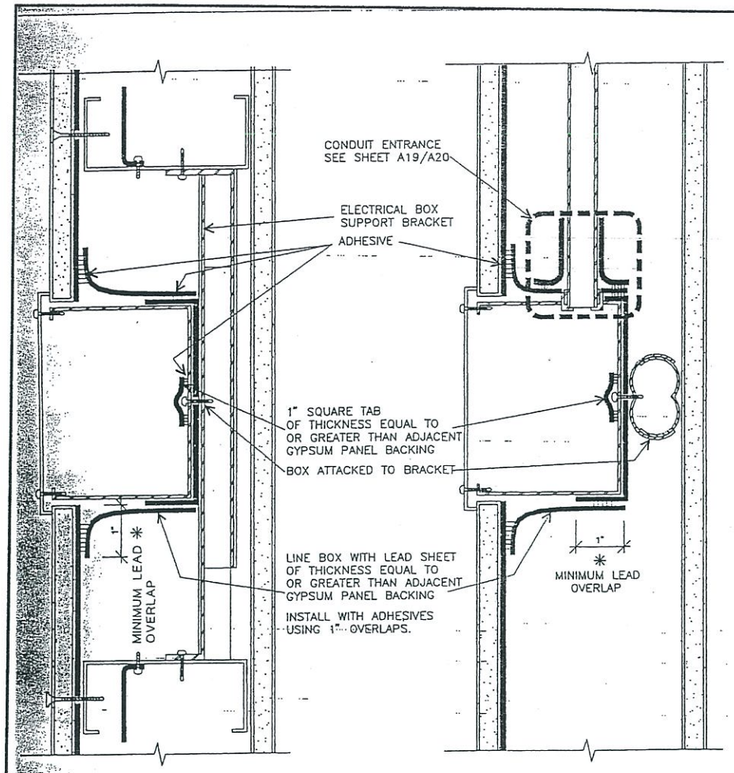

PLAN SECTION

JOB-FORMED SHIELDING

Health Physics Northwest	SCALE 6"=1'-0"	ELECTRICAL PANEL OR BOX	
	DRAWN BY		
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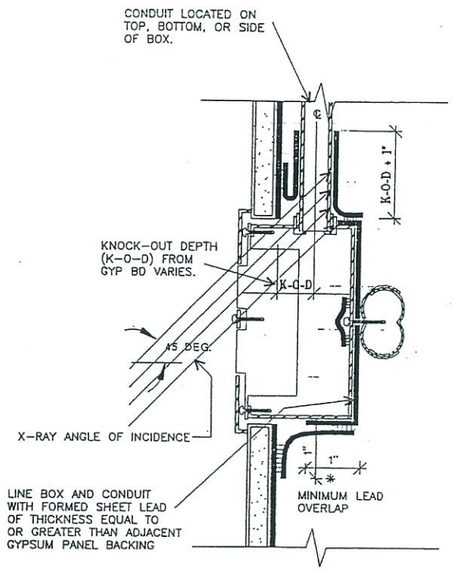
	APPROVED		
	PROJECT/JOB NUMBER	PROJECT	DWG NO A18 OF — REV
	CAD File A18		
	REVISION DATE 5-31-90		
	LAST PLOT DATE 5-31-90		



PLAN OR SECTION

CONDUIT ENTRANCE SHIELDING

JOB-FORMED SHEET LEAD LINING

Health Physics Northwest	SCALE 6"=1'-0"	CONDUIT ENTRANCE SHIELDING	
	DRAWN BY		
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	APPROVED		
	PROJECT/JOB NUMBER	PROJECT	DWG NO A19 OF — REV
	CAD File A18		
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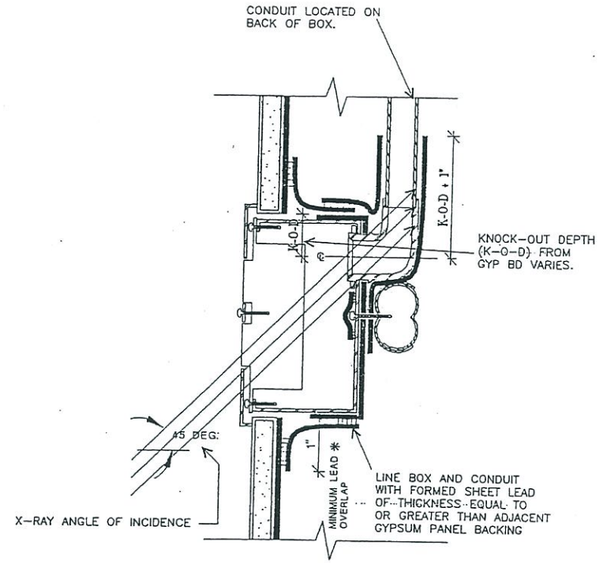
	LAST PLOT DATE 5-31-90		



PLAN OR SECTION

CONDUIT ENTRANCE SHIELDING

JOB-FORMED SHEET LEAD LINING

Health Physics Northwest	SCALE 6"=1'-0"	CONDUIT ENTRANCE SHIELDING	
	DRAWN BY		
	CHECKED		
	APPROVED		
	PROJECT/JOB NUMBER	PROJECT	DWG NO A20 OF — REV
	CAD File A20		
	REVISION DATE 5-31-90		
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Medical Design Group
Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

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DAVID R. DAVIES STATE OF IDAHO

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PLUMBING AND PIPING ABBREVIATIONS

(E)	EXISTING
(F)	FUTURE
(N)	NEW
(D)	DEPTH
(L)	LENGTH
(W)	WIDTH
@	AT
ø	DIAMETER/PHASE
L	ANGLE
#	NUMBER/POUND
ABV	ABOVE
ACOUST	ACOUSTICAL
ADA	AMERICAN DISABILITIES ACT
ADJ	ADJUSTABLE
AFC	ABOVE FINISHED CEILING
AFF	ABOVE FINISH FLOOR
AFS	ABOVE FINISH SLAB
ALT	ALTERNATE
ALUM	ALUMINUM
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
APPROX	APPROXIMATE
ARCH	ARCHITECTURAL
ASHRAE	AMERICAN SOCIETY OF HEATING, REFRIGERATING, AND AIR CONDITIONING ENGINEERS
ASTM	AMERICAN SOCIETY OF TESTING MATERIALS
AUTO	AUTOMATIC
AUX	AUXILIARY
BFF	BELOW FINISH FLOOR
BFS	BELOW FINISH SLAB
BG	BELOW GRADE
BLDG	BUILDING
BM	BEAM
BOP	BOTTOM OF PIPE
BOS	BOTTOM OF STEEL
BOT	BOTTOM
BRD	BOARD
BTU	BRITISH THERMAL UNIT
CA	COMPRESSED AIR
CAP	CAPACITY
CB	CATCH BASIN
CD	CONDENSATE DRAIN
CDA	CLEAN DRY AIR
CF	CUBIC FEET
CFF	CAP FOR FUTURE
CFCI	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED
CHWR	CHILLED WATER RETURN
CHWS	CHILLED WATER SUPPLY
CI	CAST IRON
CL	CENTERLINE
CLG	CEILING
CLK	CAULK(ING)
CLR	CLEAR
CNT	CENTER
CO	CLEANOUT
COL	COLUMN
CONC	CONCRETE
COND	CONDENSATE
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUOUS/CONTINUATION
CONTR	CONTRACTOR
COTG	CLEANOUT TO GRADE
CTC	CENTER TO CENTER
CW	DOMESTIC COLD WATER
CW/	COORDINATE WITH
CWR	CONDENSER WATER RETURN
CWS	CONDENSER WATER SUPPLY
CX	CONNECT TO EXISTING
DBL	DOUBLE
DCBP	DOUBLE CHECK BACKFLOW PREVENTOR
DEG	DEGREE
DES	DENTAL EQUIPMENT SUPPLIER
DET	DETAIL
DIM	DIMENSION
DISCH	DISCHARGE
DN	DOWN
DSN	DOWNSPOUT NOZZLE
DSP	DRY STANDPIPE
DWG	DRAWING
E	EAST
EA	EACH
EFF	EFFICIENCY
EL	ELEVATION
ELEC	ELECTRICAL
EMERG	EMERGENCY
ENCL	ENCLOSED/ENCLOSURE
EQ	EQUAL
EQUIP	EQUIPMENT
EWC	ELECTRIC WATER COOLER
EXH	EXHAUST
EXIST	EXISTING
EXP	EXPANSION
EXT	EXTERIOR
F	FIRE SERVICE
FA	FIRE ALARM
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
FDC	FIRE DEPARTMENT CONNECTION.
FH	FIRE HYDRANT
FIN	FINISH
FLASH	FLASHING
FLR	FLOOR(ING)
FPM	FEET PER MINUTE
FRPF	FIREPROOF
FS	FLOOR SINK
FT	FEET/FOOT
FURR	FURRING
FUT	FUTURE
GA	GAUGE OR GAGE
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
GCO	GRADE CLEANOUT
GW	GREASE WASTE
HB	HOSE BIB
HCP	HANDICAP
HD	HEAD
HDWR	HARDWARE
HGR	HOT GLYCOL RETURN
HGS	HOT GLYCOL SUPPLY
HP	HORSE POWER
HPC	HIGH PRESSURE CONDENSATE
HPS	HIGH PRESSURE STEAM
HORIZ	HORIZONTAL
HT	HEIGHT
HTG	HEATING
HVAC	HEATING, VENTILATING AND AIR CONDITIONING
HW	POTABLE HOT WATER SUPPLY
HWC	DOMESTIC HOT WATER RECIRC
HWR	HEATING WATER RETURN
HWS	HEATING WATER SUPPLY
IA	INSTRUMENT AIR
IBC	INTERNATIONAL BUILDING CODE
ID	INSIDE DIAMETER
IDW	INDIRECT WASTE
IE	INVERT ELEVATION
IMC	INTERNATIONAL MECHANICAL CODE
IN	INCH
IND	INDIRECT
INSUL	INSULATION
INT	INTERIOR
IPC	INTERNATIONAL PLUMBING CODE
J-BOX	JUNCTION BOX
JST	JOIST
KW	KILOWATT
KWH	KILOWATT HOUR
LAV	LAVATORY
LBS	POUNDS
LF	LINEAL FEET/FOOT
LPC	LOW PRESSURE CONDENSATE
LPG	LIQUEFIED PETROLEUM GAS
LPS	LOW PRESSURE STEAM
MAT	MATERIAL
MAX	MAXIMUM
MC	MECHANICAL CONTRACTOR
MECH	MECHANICAL
MEZZ	MEZZANINE
MFG	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
MO	MOTOR OPERATED
MPC	MEDIUM PRESSURE CONDENSATE
MPS	MEDIUM PRESSURE STEAM
MSG	MANUFACTURED STANDARD GAUGE
MTD	MOUNTED
MTG	MOUNTING
MTL	METAL
N	NORTH
N/A	NOT APPLICABLE
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRIC CODE
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NG	NATURAL GAS
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NOM	NOMINAL
NPW	NON-POTABLE WATER
NTS	NOT TO SCALE
NUM	NUMBER
OC	ON CENTER
OD	OUTSIDE DIAMETER
ODL	OVERFLOW DRAIN LEADER
OH	OVERHEAD
OFOI	OWNER FURNISHED OWNER INSTALLED
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
OS&Y	OUTSIDE STEM & YOKE
OZ	OUNCE
OZ	OUNCE
P/T	PRESSURE/TEMPERATURE
PHWR	POTABLE HOT WATER RETURN
PHWS	DOMESTIC HOT WATER
PIV	POST INDICATOR VALVE
PLBG	PLUMBING
POC	POINT OF CONNECTION
PRV	PRESSURE REDUCING VALVE
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PVC	POLYVINYL CHLORIDE
PW	POTABLE WATER
R	RISER
RAD	RADIUS
RD	ROOF DRAIN
RDL	ROOF DRAIN LEADER
RE:	REFERENCE
REFG	REFRIGERATION/REFRIGERANT
REINF	REINFORCE
REL	RELOCATE
REM	REMOVE
REQD	REQUIRED
RET	RETURN
RFLD	REFLECTED
RIO	ROUGH IN ONLY
RO	REVERSE OSMOSIS
RPBP	REDUCED PRESSURE BACKFLOW PREVENTOR
RPM	REVOLUTIONS PER MINUTE
S	SOUTH
SCHED	SCHEDULE
SD	STORM DRAIN
SECT	SECTION
SF	SQUARE FEET
SHT	SHEET
SIM	SIMILAR
SMACNA	SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION
SOV	SHUTOFF VALVE
SPEC	SPECIFICATION
SQ	SQUARE
SS	SANITARY SEWER
SST	STAINLESS STEEL
STD	STANDARD
STL	STEEL
STRUCT	STRUCTURAL
SUP	SUPPLY
SUSP	SUSPENDED
SYS	SYSTEM
TEMP	TEMPERATURE/TEMPERED/ TEMPORARY
TOD	TOP OF DRAIN
TOS	TOP OF STEEL
TPW	TEMPERED POTABLE WATER
TWR	TEMPERED WATER RETURN
TWS	TEMPERED WATER SUPPLY
TYP	TYPICAL
U	URINAL
UBC	UNIFORM BUILDING CODE
UFC	UNIFORM FIRE CODE
UG	UNDERGROUND
UL	UNDERWRITERS LABORATORY
UMC	UNIFORM MECHANICAL CODE
UNFIN	UNFINISHED
UNO	UNLESS NOTED OTHERWISE
UPC	UNIFORM PLUMBING CODE
V	VENT/VOLT
VA	VALVE
VAC	VACUUM
VEL	VELOCITY
VENT	VENTILATION
VERT	VERTICAL
VIF	VERIFY IN FIELD
VOL	VOLUME
VRV	VACUUM RELIEF VALVE
VTR	VENT THRU ROOF
W	WEST/WASTE
W/	WITH
W/O	WITHOUT
WC	WATER CLOSET/WATER COLUMN
WCO	WALL CLEANOUT
WH	WATERHEATER
WP	WATERPROOF
WPD	WATER PRESSURE DROP
WT	WEIGHT

MEDICAL GAS

CO2	CARBON DIOXIDE
HE	HELIUM
MA	MEDICAL AIR
MV	MEDICAL VACUUM
N2	NITROGEN
N2O	NITROUS OXIDE
O2	OXYGEN
WAGD	WASTE ANESTHETIC GAS DISPOSAL

NOTE: ALL ABBREVIATIONS LISTED ABOVE MAY NOT APPEAR ON THESE DOCUMENTS.

PLUMBING LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
SS	SANITARY SEWER		PRESSURE REDUCING VALVE
CW	DOMESTIC COLD WATER		BALL VALVE
HW	DOMESTIC HOT WATER		GATE VALVE
V	WASTE VENT		AGA RATED NATURAL GAS VALVE
NG	NATURAL GAS		UNION
RDL	ROOF DRAIN LEADER		HOSE BIBB
ODL	OVERFLOW DRAIN LEADER	RP	REDUCED PRESSURE BACKFLOW ASSY.
			DOUBLE CHECK ASSEMBLY
	DIRECTION OF FLOW		PIPE CAP
	REDUCER		FLOOR DRAIN (ROUND OR SQUARE)
	PIPE DROP		FLOOR SINK
	PIPE DROP		CHECK VALVE
	PIPE RISE		BUTTERFLY VALVE
	PIPE RISE		OVERFLOW DRAIN
	VENT THRU ROOF		ROOF DRAIN
	WALL CLEAN-OUT		POINT OF CONNECTION TO EXISTING
	FLOOR CLEAN-OUT		
	GRADE CLEAN-OUT		

PLUMBING DRAWINGS GENERAL NOTES:

1) PRINTS MUST BE REVIEWED FOR ACCURACY BEFORE STARTING THE JOB. ABSOLUTE ACCURACY OF THE DRAWINGS AND SPECIFICATIONS CANNOT BE GUARANTEED. WHILE EVERY EFFORT HAS BEEN MADE TO COORDINATE THE LOCATIONS OF EQUIPMENT & PIPING, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE EXACT REQUIREMENTS GOVERNED BY ACTUAL JOB CONDITIONS. CHECK ALL INFORMATION AND REPORT ANY DISCREPANCIES BEFORE SUBMITTING BID OR FABRICATING AND INSTALLING WORK.

2) THESE GENERAL NOTES APPLY TO ALL PLUMBING DRAWINGS IN THIS SET AND SHOULD BE TREATED AS IF THEY ARE REFERENCED TO THE ENTIRE SET.

3) THE CONTRACTOR IS TO PROVIDE A FULLY OPERATIONAL WASTE AND VENT AND DOMESTIC WATER SYSTEM. THE CONTRACTOR IS TO INSTALL ALL OF THE PIPING, ACCESSORIES, AND FIXTURES PER THE 2000 IPC, IMC, IBC, NFPA, AND THE AHJ (AUTHORITY HAVING JURISDICTION). NOTHING IN THESE PLANS IS TO BE INTERPRETED AS TO ALLOW THE CONTRACTOR TO PROVIDE INSTALLATIONS THAT ARE NOT PER CODE OR THE AHJ.

4) ALL DESIGN PRODUCT DATA IS FOR THE ITEM LISTED ONLY. SUBMITTAL DEVIATIONS WILL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. REVIEW BY THE ARCHITECT OR ENGINEER DOES NOT RELIEVE THE CONTRACTOR FROM HIS RESPONSIBILITIES FOR THE PRODUCT TO PERFORM OR PHYSICALLY FIT FOR THE APPLICATION AS INDICATED IN THESE DRAWINGS. ALL COORDINATION FOR THE NEW PRODUCT WITH THE OTHER TRADES IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THIS INCLUDES, BUT IS NOT LIMITED TO, PHYSICAL DIMENSIONS, WEIGHTS, ELECTRICAL CHARACTERISTICS, ETC. NO ADDITIONAL COSTS TO THE OWNER WILL BE ALLOWED DUE TO SUBSTITUTIONS.

5) THE CONTRACTOR FOR THIS WORK NEEDS TO PROVIDE ALL CONNECTIONS TO THE CIVIL WORK FOR ALL UTILITIES AND SERVICES SPECIFIED OR DRAWN IN THIS SET.

6) ALL PIPING INSTALLED IN EXTERIOR WALLS SHALL BE INSTALLED ON WARM SIDE OF INSULATION.

7) CONTRACTOR TO VERIFY ALL DENTAL TERMINATIONS, TYPE AND LOCATION, WITH THE OWNER AND DENTAL EQUIPMENT SUPPLIER (D.E.S.) PRIOR TO INSTALLATION.

8) INFORMATION REGARDING THE SIZE AND LOCATION OF EXISTING UTILITIES IS BASED ON OUR UNDERSTANDING OF THE EXISTING SYSTEMS. THERE ARE NO AS-BUILT OR VERIFIED DESIGN DRAWINGS AVAILABLE. ALL EXISTING CONDITIONS THAT COULD AFFECT THIS INSTALLATION SHALL BE VERIFIED BY THIS CONTRACTOR PRIOR TO BEGINNING NEW WORK.

9) ALL MEDICAL AIR, MEDICAL VACUUM LINES TO BE TYPE "K" OR "L" COPPER, PRE-CLEANED, DEGREASED, AND CAPPED. SYSTEMS MUST BE TESTED FOR LEAKS WITH DRY NITROGEN FOR 24 HOURS AT 150 PSI. ALL JOINTS MUST BE SILVER SOLDERED WITH 1000° F MELTING POINT.

ELKHORN ENGINEERS, P.A.
2950 E. Magic View Dr., Ste. 190
Meridian, Idaho 83642
phone: (208) 955-0555
fax: (208) 955-0999

REGISTERED PROFESSIONAL ENGINEER
Steve T. Bastian
5112
STATE OF IDAHO
STEVEN T. BASTIAN
3-15-04

Medical Design Group
Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

N

PLUMBING LEGENDS & ABBREV.

Desert Sage Health Care
2280 American Legion Blvd.
Mountain Home, Idaho

SHEET P0.0

March 2004

PART 1 - GENERAL

1.1 SCOPE OF WORK

A. PROVIDE ALL LABOR, EQUIPMENT AND MATERIALS THAT ARE REQUIRED TO PROVIDE A COMPLETE INSTALLATION AS INDICATED ON THE DRAWINGS AND IN THE SPECIFICATIONS INCLUDING THAT REASONABLY INFERRED BY INDUSTRY STANDARDS FOR PROPER EXECUTION OF WORK IN THIS DIVISION.

B. PROVIDE CARPENTRY, MASONRY, CONCRETE AND METAL WORK REQUIRED FOR WORK OF THIS SECTION.

C. COORDINATE WORK DONE TO ACCOMMODATE REQUIREMENTS OF THIS DIVISION TO ENSURE ADEQUACY OF SPACE AND PROPER LOCATION, WHETHER OR NOT WORK IS UNDER THIS DIVISION.

D. PROVIDE CUTTING AND PATCHING AS REQUIRED FOR EXECUTION OF WORK PERFORMED UNDER THIS SECTION AND NOT PROVIDED UNDER OTHER SECTIONS.

E. ANY DAMAGE THAT OCCURS DUE TO WORK OF THIS DIVISION CAUSED BY LEAKS, BREAKS, DISCHARGE OF NORMAL WORK OF CONTRACT, INADVERTENT ACTS, ETC., ARE THE RESPONSIBILITY OF THIS CONTRACTOR. DAMAGED MATERIAL OR EQUIPMENT SHALL BE REPAIRED OR REPLACED WITH LIKE MATERIAL TO THE SATISFACTION OF THE OWNER AND/OR OWNER'S REPRESENTATIVE. REPAIRS OR REPLACEMENT WORK SHALL BE DONE BY CRAFTSMEN SKILLED IN THE TRADE OF THE WORK INVOLVED AND SHALL BE APPROVED BY THE OWNER AND/OR OWNER'S REPRESENTATIVE. DAMAGE CAUSED SHALL INCLUDE BUT NOT BE LIMITED TO UTILITIES OR OTHER ITEMS WHICH ARE TO REMAIN IN USE.

F. VALVES AND TRIM NOT SPECIFICALLY INDICATED, BUT REQUIRED FOR PROPER FUNCTIONING OF EQUIPMENT, SHALL BE FURNISHED AND INSTALLED BY THE TRADE INSTALLING THE EQUIPMENT.

G. CONTRACTOR SHALL NOT PERFORM ANY WORK THAT HE EXPECTS ADDITIONAL PAYMENT FOR, WITHOUT WRITTEN PRIOR APPROVAL FROM THE ARCHITECT.

1.2 PROTECTION, STORAGE AND DELIVERY

A. COORDINATE WITH OWNER NECESSARY STORAGE AND SHOP AREAS AT THE SITE FOR SAFE AND PROPER STORAGE AND USE OF TOOLS AND MATERIALS IN OWNER APPROVED LOCATIONS WHICH DO NOT INTERFERE WITH THE WORK. RESTORE AREA(S) TO ORIGINAL CONDITION AT COMPLETION OF PROJECT.

B. PROTECT EQUIPMENT AND MATERIALS FROM PHYSICAL DAMAGE, CONSTRUCTION DIRT AND THE ELEMENTS, FROM THE TIME THEY ARE SHIPPED BY THE MANUFACTURER TO THE TIME THE BUILDING IS ACCEPTED BY THE OWNER.

C. ARRANGE DELIVERY OF PRODUCTS IN TIMELY FASHION TO COORDINATE WITH WORK IN PROGRESS. STORAGE SPACE ON SITE MAY BE LIMITED.

D. DELIVER PRODUCTS IN THE MANUFACTURER'S ORIGINAL PACKAGING WITH IDENTIFYING LABELS INTACT AND LEGIBLE. LEGIBLY IDENTIFY UNITS OR ITEMS AS TO INSTALLATION LOCATION AND/OR DRAWING DESIGNATIONS TO PERMIT CHECK BY OWNER'S REPRESENTATIVE AGAINST APPROVED MATERIAL LIST AND SHOP DRAWINGS.

E. IMMEDIATELY UPON DELIVERY INSPECT SHIPMENT(S), INCLUDING OWNER FURNISHED ITEMS, TO ASSURE THAT PRODUCTS ARE UNDAMAGED AND IN ACCORDANCE WITH SPECIFICATION REQUIREMENTS. SHOULD THE PRODUCT BE DAMAGED OR NOT IN COMPLIANCE WITH REQUIREMENTS, IMMEDIATELY REPAIR AS DIRECTED OR APPROVED, OR ORDER REPLACEMENT AT NO INCREASE IN CONTRACT SUM.

F. REPLACE LOST OR DAMAGED MATERIALS AND EQUIPMENT AT NO INCREASE IN CONTRACT SUM.

1.3 FEES AND PERMITS

A. SECURE AND PAY FEES FOR PERMITS, LICENSES, INSPECTIONS AND ROYALTIES REQUIRED FOR WORK OF THIS DIVISION.

1.4 REGULATIONS AND STANDARDS

A. WORK AND MATERIALS SHALL BE IN FULL ACCORDANCE WITH THE RULES AND REGULATIONS OF THE LATEST ADOPTED EDITION, INCLUDING ALL ELEMENTS OF THE FOLLOWING:

1. 2000 INTERNATIONAL BUILDING CODE (IBC)
2. 2000 INTERNATIONAL MECHANICAL CODE (IMC)
3. 2000 INTERNATIONAL PLUMBING CODE (IPC)
4. 2000 INTERNATIONAL FIRE CODE (IFC)
5. NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)
6. ANY OTHER APPLICABLE FEDERAL, STATE, AND LOCAL LAWS, AND REGULATIONS.

B. DO NOT CONSTRUE ANYTHING IN THESE DRAWINGS AND SPECIFICATIONS TO PERMIT WORK NOT CONFORMING TO THESE REQUIREMENTS. THE REGULATIONS SHALL GOVERN WHERE THEY REQUIRE HIGHER STANDARDS OR ARE IN CONFLICT WITH THE DRAWINGS AND SPECIFICATIONS. CONSIDER RULINGS AND INTERPRETATIONS OF THE ENFORCING AGENCIES AS PART OF THESE SPECIFICATIONS. COMPLY WITH THE DRAWINGS AND SPECIFICATIONS SHOWING WORK EXCEEDING MINIMUM CODE REQUIREMENTS.

C. PROVIDE ALL WORK REQUIRED BY THE GOVERNING AUTHORITY, EVEN IF IT IS NOT INDICATED ON DRAWINGS OR IN THE SPECIFICATIONS.

1.5 DRAWINGS AND SPECIFICATIONS

A. CONSIDER ALL DRAWINGS AND THESE SPECIFICATIONS AS A WHOLE AND PROVIDE WORK OF THIS SECTION AS SHOWN ANYWHERE THEREIN. DRAWINGS INCLUDE ALL ARCHITECTURAL, STRUCTURAL, CIVIL, AND ELECTRICAL DRAWINGS. PRINTS MUST BE REVIEWED FOR ACCURACY BEFORE STARTING THE JOB. ABSOLUTE ACCURACY OF THE DRAWINGS AND SPECIFICATIONS CANNOT BE GUARANTEED. WHILE EVERY EFFORT HAS BEEN MADE TO COORDINATE THE LOCATIONS OF EQUIPMENT COVERED BY THESE SPECIFICATIONS AND WORK OF OTHER TRADES, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE EXACT REQUIREMENTS GOVERNED BY ACTUAL JOB CONDITIONS. CHECK ALL INFORMATION AND REPORT ANY DISCREPANCIES BEFORE SUBMITTING BID OR FABRICATING WORK.

1.6 SUBMITTAL DATA

A. SUBMIT FOR REVIEW ALL ATTACHMENTS TO STRUCTURE, ARCHITECTURAL ACCESS PANELS, ALL FIXTURES AND PIECES OF EQUIPMENT TO BE INSTALLED ON THE JOB. SUBMITTALS SHALL INCLUDE BUT NOT BE LIMITED TO VALVES AND PIPE LINE ACCESSORIES AND INSULATION. PROVIDE ALL REQUIRED SUBMITTAL DATA IN COMPLETE SETS, BOUND AND INDEXED BY CATEGORY, USE, ETC. CLEARLY IDENTIFY EACH ITEM IN THE SUBMITTAL FOR INSTALLATION INTO THE PROJECT. PROVIDE A COPY OF THE REVIEWED SUBMITTALS FOR OWNERS O&M MANUAL.

1.7 SUBMITTALS

A. PREPARE THREE (3 PLUS THE NUMBER REQUIRED FOR THE GENERAL CONTRACTORS USE) COPIES FOR ALL EQUIPMENT AND MATERIALS. SUBMIT TO ARCHITECT FOR REVIEW AND DISTRIBUTION.

1.8 WORKMANSHIP AND MATERIALS

A. EMPLOY ONLY EXPERIENCED, COMPETENT AND PROPERLY EQUIPPED PERSONNEL ON THE JOB.

B. PROVIDE HIGH QUALITY WORKMANSHIP IN INSTALLATION OF EQUIPMENT AND MATERIALS.

C. USE ONLY NEW MATERIALS IN PERFECT CONDITION, INSPECT ALL MATERIALS UPON ARRIVAL AT JOB SITE AND IMMEDIATELY REMOVE DEFECTIVE ITEMS FROM THE SITE.

1.9 INSPECTION

A. WORK MAY BE INSPECTED AT ANY TIME BY THE OWNER OR HIS REPRESENTATIVE. OWNER OR REPRESENTATIVE SHALL BE NOTIFIED 48HRS PRIOR TO COVER. WORK COVERED OR CONCEALED BEFORE BEING INSPECTED AND APPROVED SHALL BE OPENED AND UNCOVERED UPON REQUEST.

1.10 OPERATION AND MAINTENANCE MANUAL INSTRUCTIONS.

A. PREPARE TWO (2) COPIES FOR ALL EQUIPMENT INCLUDING THE FINAL AIR/WATER BALANCE REPORT.

1.11 SITE CLEAN-UP

A. AFTER ALL OTHER WORK HAS BEEN ACCOMPLISHED, CLEAN ALL EXPOSED PIPING, DUCTWORK, FIXTURES, EQUIPMENT AND SUPPORTS. TOUCH UP PAINT, ON ANY EQUIPMENT SCRAPED, SCRATCHED OR DAMAGED DURING CONSTRUCTION.

B. LEAVE ALL AREAS INVOLVING MECHANICAL WORK IN A CONDITION SATISFACTORY TO THE OWNER. REMOVE ALL CRATES, CARDBOARD, PACKING MATERIAL, WASTE MATERIAL, AND OTHER DEBRIS LEFT OVER FROM CONSTRUCTION.

PART 2 - PRODUCTS

2.1 SPECIFIC MANUFACTURER AND MODEL

A. TRADE NAMES ARE USED TO ESTABLISH STANDARDS. SIMILAR PRODUCTS FROM OTHER MANUFACTURERS MAY BE SUBSTITUTED AFTER SUBMITTAL IS REVIEWED BY THE ENGINEER.

B. CONTRACTOR IS RESPONSIBLE FOR ANY AND ALL CHANGES DUE TO SUBSTITUTIONS OR ALTERNATES TO THE DESIGN DRAWINGS. AREAS OF COORDINATION CONCERN INCLUDE BUTNOT LIMITED TO; DIMENSIONS, STRUCTURAL IMPACTS, ELECTICAL CHARICTERISTICS, ETC... THIS CONTRACTOR WILL BE RESPONSIBLE FOR ANY INCREASE IN PROJECT COST OR IMPACT TO SHEDULE DUE TO THESE SUBSTITUTIONS.

2.2 U.L. LABEL

A. FURNISH UL LABELED AND LISTED MATERIALS AND EQUIPMENT EXCEPT WHEN EQUIPMENT IS OF A TYPE FOR WHICH LABELING OR LISTING SERVICES ARE NOT AVAILABLE FROM UL.

2.3 FINISHES AND PAINTING

A. PROVIDE ALL EQUIPMENT WITH A FACTORY FINISH. TOUCH UP ANY CHIPS OR SCRAPES THAT MAY OCCUR DURING HANDLING OR INSTALLATION.

ELKHORN ENGINEERS, P.A.
2950 E. Magic View Dr., Ste. 190
Meridian, Idaho 83642
phone: (208) 955-0555
fax: (208) 955-0999

REGISTERED PROFESSIONAL ENGINEER
Steve T. Bastian
5112
STATE OF IDAHO
STEVEN T. BASTIAN
3-15-04

Medical Design Group
Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

PLUMBING SPECIFICATIONS

Desert Sage Health Care
2280 American Legion Blvd.
Mountain Home, Idaho

SHEET P0.1

March 2004

N

PART 2 - PRODUCTS (continued from P0.1)

2.4 GENERAL PIPE MATERIALS

A. LPG PROPANE: STEEL: BLACK OR GALVANIZED CONFORMING TO ASTM SPECIFICATIONS A-53A. PIPE SIZE 2 1/2" AND LARGER SHALL BE SCHEDULE 40. ASTM A-120 IS ALLOWED FOR THREADED PIPE 2" AND SMALLER.

B. WATER: COPPER: SEAMLESS TYPE K OR L, HARD DRAWN, CONFORMING TO ASTM SPECIFICATION B-88.

C. SANITARY WASTE VENT: ABS: ACRYLONITRILE - BUTADIENE - STYRENE PLASTIC PIPE, SCHEDULE 40 CONFORMING TO ASTM D 2661.

D. NATURAL GAS AND WATER PIPE WRAPPING: WRAP PIPE BURIED IN GROUND WITH "SCOTCHWRAP" OR EQUAL. WRAP STRAIGHT RUNS WITH .010" THICK TAPE DOUBLY SPIRALLY APPLIED IN HALF-LAP LAYERS. PRE-WRAP ALL JOINTS, VALVES, AND SIMILAR IRREGULAR SURFACES WITH .010" THICK TAPE.

E. MA: MEDICAL GRADE COPPER TUBE TYPE K OR L, CLEANED DEGREASED CAPPED COPPER FOR MEDICAL USE ONLY.

F. MV TO BE SCHEDULE 40 PVC WASTE AND VENT FITTINGS.

2.5 PIPE FITTINGS

A. WELDED: PIPING 2 1/2" AND LARGER SHALL HAVE BUTT WELDED STEEL FITTINGS.

B. THREADED: PIPING 2" AND SMALLER SHALL HAVE AAR CLASS 300 MALLEABLE IRON FOR UNIONS AND CLASS 1 MALLEABLE IRON FOR ALL OTHER FITTINGS. MATERIAL SHALL CORRESPOND TO ASTM SPECIFICATION A-197. GALVANIZED OR BLACK TO MATCH PIPE.

C. SOLDERED: WROUGHT COPPER CONFORMING TO ANSI SPECIFICATION B16.22 OR CAST BRASS CONFORMING TO ANSI SPECIFICATIONS B16.18 SPECIFICALLY DISIGNED FOR SOLDERING.

D. BRAZED: WROUGHT COPPER CONFORMING TO ANSI SPECIFICATION B16.22 SPECIFICALLY DESIGNED FOR BRAZING.

E. CAST IRON SOIL: SERVICE WEIGHT HUBLESS PER CISPI STANDARD 301. HOT COAL TAR PITCH COATING INSIDE AND OUT.

2.6 PIPE JOINTS

A. FLANGED PIPE: PROVIDE WELD NECK FLANGES WITH 1/8" GASKETS SUITABLE FOR APPLICATIONS. BOLTS, WASHERS AND NUTS SHALL BE CADMIUM PLATED, OR ZINC CHROMATE.

B. SCREWED METALLIC PIPE: APPLY RECTORSEAL NO. 5 LUBRICANT OR PERMACEL, P-412 1/2" WIDE WHITE TEFLON PIPE JOINT SEALANT TAPE TO MALE PIPE THREADS WHEN MAKING UP JOINTS.

C. SOLDERED: USE 95/5 LEAD FREE SILVER SOLDER AND WATER SOLUBLE FLUX. JOINTS SHALL CONFORM TO ASTM B828.

D. BRAZED: USE BCUP PHOS-COPPER BRAZING ALLOY. JOINTS SHALL CONFORM TO ANSI B2.2.

E. HUBLESS: 304 STAINLESS STEEL BAND AND CLAMP WITH NEOPRENE SLEEVE PER CISPI STANDARD 301. CLAMP-ALL, TYLER OR HUSKY STANDARD CISPI COUPLINGS.

F. UNIONS:

1. STEEL PIPE: 300 LB. BRONZE TO IRON GROUND JOINT.
2. COPPER TUBING: BRONZE SWEAT UNIONS WITH COPPER TO IPS ADAPTERS.

2.7 VALVES + PIPING SPECIALTIES

A. PROVIDE ISOLATION VALVES AT EACH BRANCH FROM MAIN DISTRIBUTION ON ALL PIPING SYSTEMS. LOCATE VALVES AS CLOSE TO MAIN AS POSSIBLE.

B. INSTALL ALL VALVES SO THEIR STEMS ARE LOCATED ABOVE HORIZONTAL PLANE OF THE PIPE IN WHICH THEY ARE INSTALLED. IN GENERAL, LOCATE VALVES IN ACCESSIBLE LOCATIONS WITH ADEQUATE CLEARANCE AROUND HAND WHEELS OR LEVERS FOR EASY OPERATION.

C. PROVIDE ALL VALVES AND STRAINERS, FULL PIPE SIZE UNLESS INDICATED OTHERWISE.

D. RENEWABLE PARTS, INCLUDING DISCS, PACKING AND SEALS SHALL BE OF TYPES RECOMMENDED BY VALVE MANUFACTURER FOR INTENDED SERVICE. INSTALL ALL VALVES SO THEIR STEMS ARE LOCATED ABOVE HORIZONTAL PLANE OF THE PIPE.

E. FOR GENERAL USE VALVES (PLUMBING AND HVAC):

1. BALL (FULL PORT THROUGH 3"): WATTS FBVS-1 SERIES.
2. GATE (THROUGH 4"): WATTS WGV-1 SERIES.
3. GAS (THROUGH 1"): WATTS GBV SERIES.
4. GLOBE (THROUGH 2"): WATTS GLV SERIES.
5. CHECK (THROUGH 3"): WATTS WCV-2 SERIES.
6. STRAINER (THROUGH 2"): WATTS S777SI SERIES.
7. BALANCE (THROUGH 3"): WATTS CSM-61-M1 SERIES.
8. BUTTERFLY (3" & LARGER)

F. WATER HAMMER ARRESTER: SOUIX CHEIF, PPP, SMITH.

1. INSTALL PER MANUFACTURERS SIZING CRITERIA.
2. PROVIDE ACCESS PANELS AS NEEDED.

ALTERNATE MANUFACTURERS: APOLLO, RED & WHITE, MILWAUKEE, NIBCO, ARMSTRONG, AND B&G.

2.8 PIPE HANGERS AND SUPPORTS

A. DESIGN CRITERIA:

1. ALL PIPE WILL BE SUPPORTED WITH MANUFACTURED PIPE SUPPORTS AND SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE FOLLOWING: (A) MSS SP-58 PIPE HANGERS AND SUPPORTS - MATERIALS, DESIGN, AND MANUFACTURER, (B) MSS SP-69 PIPE HANGERS AND SUPPORTS - SELECTION AND APPLICATION, (C) MSS SP-89 PIPE HANGERS AND SUPPORTS - FABRICATION AND INSTALLATION PRACTICE, (D) ASME B31.1 AND B31.9.

B. GENERAL:

1. USE SUPERSTRUT, B-LINE, GRINNELL, PHD, OR TOLCO HANGERS, SUPPORTS AND STRUCTURAL ATTACHMENTS.
2. SUPPORT ALL PIPE LINES INDIVIDUALLY WITH HANGERS, EACH BRANCH HAVING AT LEAST ONE HANGER.
3. SUPPORT ALL PIPING SO THAT IT IS FIRMLY HELD IN PLACE BY APPROVED HANGERS AND SUPPORTS AND SPECIAL HANGERS AS REQUIRED.
4. SIZE HANGERS PROPERLY TO FIT AROUND BARE PIPE OR INSULATION AS REQUIRED. INSULATION SHALL BE CONTINUOUS, USE INSULATION SHEILDS AT HANGERS.
5. SPACE HANGERS OR SUPPORTS FOR HORIZONTAL WITH THE MAXIMUM DISTANCE BETWEEN HANGERS AS FOLLOWS OR AS SHOWN ON DRAWINGS.

   A. COPPER 2" AND SMALLER -6'-0"
   B. STEEL 1" AND SMALLER - 6'-0"
   C. COPPER 2 1/2" AND LARGER - 10'-0"
   D. STEEL 1 1/4" " AND LARGER - 10'-0"
   E. CAST IRON SOIL - LOCATE HANGERS WITHIN 18" OF EACH JOINT AT A MAXIMUM 8'-0" SEPARATION BETWEEN HANGERS.

6. SUPPORT VERTICAL PIPING AT EVERY STORY. COPPER PIPING SUPPORTS SHALL NOT EXCEED 10 FEET.
7. DO NOT USE WIRE, PLUMBER'S TAPE OR OTHER MAKESHIFT DEVICES FOR HANGERS.
8. NO VALVE, PIECE OF PIPE, OR PIECE OF EQUIPMENT SHALL BE USED TO SUPPORT THE WEIGHT OF ANY PIPE.
9. PROVIDE A SUPPORT OR HANGER CLOSE TO EACH CHANGE OF DIRECTION IN THE PIPE, EITHER HORIZONTAL OR VERTICAL.
10. SUPPORT ROOF TOP PIPING A MINIMUM OF 6" ABOVE ROOF SURFACE USING EITHER MANUFACTURED PIPING SUPPORTS OR 4x6x12 REDWOOD BLOCKS WITH "U" STRAPS.

C. MATERIALS:

1. GENERAL PIPING: INDIVIDUAL SUSPENDED PIPING - HANGERS AS SCHEDULED BELOW, COMPLETE WITH THREADED ROD. SUPERSTRUT OR B-LINE.

PIPE SIZE	HANGER	MINIMUM ROD SIZE
1/2" TO 2"	SUPERSTRUT C-711	1/4"
2 -1/2" TO 3"	SUPERSTRUT C-711	3/8"
4" TO 6"	SUPERSTRUT C-710	1/2"

D. STEEL SHAPES: ASTM A-36.

E. BEAM CLAMPS: B-LINE B751 WITH B753 SWIVEL NUT ARE TO BE USED FOR LESS THAN 300 LB LOADS.

F. PENETRATIONS AND ESCUTCHEONS: PROVIDE ESCUTCHEON PLATES THAT ARE NEAT, RIGID, SECURELY ATTACHED WHERE WORK OF THIS SECTION PENETRATES WALLS OR OTHER SURFACES. PROVIDE STAINLESS STEEL OR CHROME PLATED BRASS.

G. SEISMIC: PROVIDE SEISMIC RESTRAINT AS REQUIRED PER UBC.

ELKHORN ENGINEERS, P.A.
2950 E. Magic View Dr., Ste. 190
Meridian, Idaho 83642
phone: (208) 955-0555
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Steve T. Bastian
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Medical Design Group
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2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

PLUMBING SPECIFICATIONS

Desert Sage Health Care
2280 American Legion Blvd.
Mountain Home, Idaho

SHEET P0.2

March 2004

PART 2 - PRODUCTS (continued from P0.2)

2.9 PIPE INSULATION

A. PIPES SHALL BE INSTALLED WITH PRE FORMED FIBERGLASS PIPE INSULATION WITH ALL SERVICE JACKET. VALVES AND FITTINGS SHALL BE INSULATED WITH FIBERGLASS BATT THAT IS COVERED WITH PLASTIC OR CLOTH COVERS. SEAL ALL JOINTS VAPOR TIGHT.

B. PROVIDE ALUMINUM JACKET OVER ALL OUT-DOOR INSULATED PIPING. SEAL WATER TIGHT.

C. THICKNESSES SHALL BE AS FOLLOWS:

1. DOMESTIC HOT, COLD WATER, AND HOT WATER RECIRC-
   1-1/2" AND SMALLER-1/2" THICK
   2" THRU 4"-1" THICK

2.10 ARCHITECTURAL ACCESS PANELS AND DOORS

A. WHERE REQUIRED: WHEREVER A PIECE OF EQUIPMENT IS INACCESSIBLE AND REQUIRES ACCESS FOR MAINTENANCE, REPAIR OR ADJUSTMENT.

B. SIZE: SIZE IS DEPENDENT UPON THE RELATIONSHIP OF THE DOOR TO THE PRODUCT BEING SERVICED. THEREFORE, THE SIZE OF THE DOOR SHALL BE SELECTED TO PROVIDE CONVENIENT ACCESS TO ITS CONTENTS.

C. FRAME: THE FRAME SHALL BE FLUSH MOUNTED AND SHALL BE SUITABLE FOR THE BUILDING SURFACE IN WHICH IT IS BEING MOUNTED. PROVIDE FURRING AROUND THE DOOR FRAME AS DIRECTED WHERE THERE IS INSUFFICIENT DEPTH TO ALLOW A FLUSH MOUNTED FRAME AND DOOR.

D. DOOR: STEEL OR STAINLESS STEEL AS INDICATED HEREIN; AND OF SUFFICIENT GAUGE TO PREVENT PERMANENT DEFLECTION FROM NORMAL USE.

E. HINGES: THE DOOR SHALL HAVE A MINIMUM OF TWO SWING OUT TYPE HINGES WHICH ALLOW THE DOOR TO BE OPENED 180 DEGREES; QUANTITY AS REQUIRED TO SUIT DOOR HEIGHT.

F. LOCK: SCREW DRIVER LOCK, QUANTITY AS REQUIRED TO SUIT DOOR HEIGHT AND WIDTH.

G. FIRE RATED DOORS: PROVIDE WHEN LOCATED IN FIRE RATED SURFACES.

H. FURNISH DOORS TO SUBCONTRACTORS FOR INSTALLATION AND COORDINATE LOCATIONS.

I. MANUFACTURER: CESCO OR EQUAL.

J. LOCATION:

	TYPE	FINISH
DRYWALL	STYLE "DW"	BAKED ENAMEL PRIME COAT
CERAMIC TILE	STYLE "M" STAINLESS	STAINLESS STEEL
FIRE RATED SURFACES	FIRE RATED ACCESS DOOR	BAKED ENAMEL PRIME COAT

K. PENETRATIONS PER ARCHITECTURAL DRAWINGS, PROVIDE UL LISTED FIRE PENETRATION ASSEMBLIES AND CAULKING WHERE REQUIRED.

PART 3 - EXECUTION

3.1 COORDINATION

A. CUTTING AND REPAIRING: INCLUDE IN THE WORK ALL CUTTING AND REPAIRING NECESSARY AND REQUIRED FOR THE INSTALLATION. REPAIRING SHALL BE PERFORMED BY WORKMEN SKILLED IN THE TRADE INVOLVED, IN A MANNER SATISFACTORY TO THE OWNER.

B. COORDINATION WITH OTHER DIVISIONS: COORDINATE ELECTRICAL AND CONTROL INTERLOCKS OF MECHANICAL EQUIPMENT WITH THE ELECTRICAL DIVISION.

3.2 STRUCTURAL MODIFICATION

A. DO NOT CUT STRUCTURAL MEMBERS, WITHOUT PERMISSION FROM ARCHITECT.

3.3 WORKMANSHIP

A. WORKMANSHIP SHALL BE FIRST CLASS THROUGHOUT, PERFORMED ONLY BY COMPETENT AND EXPERIENCED WORKMEN IN A MANNER SATISFACTORY TO THE OWNER. REPLACE WORK FALLING BELOW THESE STANDARDS AS DIRECTED BY THE OWNER. CONSTANT SUPERVISION OF THE WORK EITHER BY THE CONTRACTOR OR HIS COMPETENT REPRESENTATIVE SHALL BE MAINTAINED.

3.4 GENERAL PIPING REQUIREMENTS

A. ALL PIPING SHALL BE CONCEALED UNLESS SPECIFICALLY INDICATED OR DIRECTED OTHERWISE. INSTALL PIPING PARALLEL TO BUILDING SURFACES WITH A MINIMUM OF FITTINGS.

B. INSTALL ALL GRAVITY LINES 3" AND SMALLER AT 2% SLOPE MINIMUM, 4" AND LARGER AT 2% SLOPE OR AS NOTED ON THE DRAWINGS.

C. PREPARE ALL PIPING TRENCHES AND BACKFILL PER RECOGNIZED, WRITTEN INDUSTRY STANDARDS.

D. CLOSE ENDS OF PIPE IMMEDIATELY AFTER INSTALLATION. LEAVE CLOSURE IN PLACE UNTIL REMOVAL IS NECESSARY FOR COMPLETION OF THE INSTALLATION.

E. EACH PIPING SYSTEM SHALL BE THOROUGHLY FLUSHED AND PROVEN CLEAN.

F. INSTALL PIPING AT COILS, SO THAT EQUIPMENT CAN BE REMOVED AND/OR SERVICED WITH A MINIMUM OF PIPE DISLOCATION. PROVIDE UNIONS AT ALL COILS FOR EASE OF REMOVAL.

G. SERVICE SHUT-OFF VALVES SHALL BE INSTALLED ON EACH BRANCH OFF ALL PIPING MAINS.

H. CUT PIPING ACCURATELY TO JOB MEASUREMENTS AND INSTALL IT WITHOUT SPRINGING OR FORCING, TRUE TO LINE AND GRADE, GENERALLY SQUARE WITH BUILDING AND ADEQUATELY SUPPORTED TO PREVENT SAGGING OR UNDUE STRESS ON PIPE, FITTINGS AND ACCESSORIES.

I. INSTALL DIELECTRIC UNIONS AT POINTS OF CONNECTION BETWEEN DISSIMILAR MATERIALS.

J. PROVIDE UNIONS OR FLANGES AT ALL CONNECTIONS TO EQUIPMENT, ON BOTH SIDES OF CONTROL VALVES AND ELSEWHERE AS REQUIRED TO FACILITATE MAINTENANCE AND EASY REMOVAL.

K. PROVIDE CHROME PLATED ESCUTCHEONS FOR PIPING PENETRATIONS THROUGH WALLS, FLOORS OR CEILINGS THAT ARE EXPOSED TO VIEW. ARRANGE PIPING AND HANGERS TO ALLOW FOR EXPANSION, CONTRACTION AND STRUCTURAL SETTLEMENT.

L. MAKE CHANGES IN SIZE OR DIRECTION WITH MANUFACTURED FITTINGS.

M. INSTALL PIPING FULL SIZE THROUGH SHUT-OFF VALVES, BALANCING VALVES, ETC.

N. CORE DRILLING: PROVIDE ALL EQUIPMENT, LABOR AND MATERIAL FOR CORE DRILLING HOLES WHERE PIPING PENETRATES EXISTING CONCRETE WALLS OR FLOORS. DRILL HOLES 1" LARGER THAN O.D. OF PIPE. PROTECT ALL SURROUNDING AREAS FROM DAMAGE BY WATER OR DUST WHILE CORE DRILLING. WHERE PIPES PASS THROUGH SLEEVES OR CORE DRILLED HOLES, PROVIDE BACKER ROD AND FILL OUTER 1/2" DEPTH OF THE ANNULAR SPACE WITH SEALER.

3.5 GENERAL EQUIPMENT INSTALLATION REQUIREMENTS

A. POSITION EQUIPMENT TO RESULT IN GOOD APPEARANCE. PROVIDE EASY ACCESS TO ALL COMPONENTS FOR MAINTENANCE AND ADEQUATE SPACE FOR TUBE REMOVAL OR OTHER REPAIRS. INSTALL THE PIPING AND PIPE LINE ACCESSORIES SO THEY DO NOT INTERFERE WITH EQUIPMENT ACCESS. INSTALL EQUIPMENT ISOLATION VALVES IN SUCH A MANNER TO ALLOW COMPLETE MAINTENANCE AND DISASSEMBLY OF EQUIPMENT WITHOUT HAVING TO REMOVE EQUIPMENT ISOLATION VALVES.

3.6 CLEANING

A. FLUSH PIPES FREE FROM FOREIGN SUBSTANCES BEFORE INSTALLING VALVES, STOPS OR MAKING FINAL CONNECTIONS. FURNISH AND INSTALL VALVED CONNECTIONS TO PIPING SYSTEMS TO FACILITATE FLUSHING, OTHER THAN FOR EQUIPMENT CONNECTIONS. WHEN FLUSHING PIPING SYSTEMS, CIRCULATE WATER AT A VELOCITY OF 8 FPS TO THOROUGHLY FLUSH THE PIPING SYSTEM ELIMINATING THE FOREIGN SUBSTANCES. CLEAN ALL PIPING AND EQUIPMENT BEFORE INSTALLATION AS ACCEPTED BY THE OWNER. REMOVE ANY PIECE OF EQUIPMENT (COILS, ETC.) WHICH MAY GET DAMAGED AS A RESULT OF INADEQUATE OR IMPROPER FLUSHING. INSTALL LOOPS AT END OF LINE OR AT RUN OUTS TO EQUIPMENT TO ENABLE FLUSHING OR BLOWDOWN ACTIVITIES. PROVIDE CLEANING PER UPC OR AHJ (WHICHEVER IS MOST STRINGENT).

3.7 TESTS

A. PROVIDE ALL LABOR, EQUIPMENT AND MATERIALS REQUIRED TO PERFORM TESTS. ALL TESTS SHALL BE PER UPC.

B. PROTECT VALVES AND EQUIPMENT FROM DAMAGE DURING TESTS. INCLUDE CONNECTION TO PREVIOUSLY TESTED SECTIONS, IF THE SYSTEMS ARE TESTED IN SECTIONS. PROTECT OWNER'S EQUIPMENT AND MECHANICAL SYSTEMS AS REQUIRED.

C. FINAL TESTING TO BE DONE ON COMPLETE SYSTEMS, NOT SEGMENTS.

D. PROVIDE MEDICAL GAS PIPING TESTS PER NFPA 99.

3.8 BALANCING AND ADJUSTING

A. ADJUST ALL BALANCING VALVES, HOT WATER THERMOSTATS, FLOW AND PRESSURE REGULATORS AND ANY OTHER ADJUSTABLE EQUIPMENT FOR OPTIMUM PERFORMANCE AND TO SUIT JOB CONDITIONS.

B. ADJUST ALL PIPING BALANCE VALVES TO FLOW INDICATED GPM AS NOTED ON DRAWINGS, PLUS OR MINUS 10%.

C. SUBMIT COMPLETE BALANCE REPORT TO ARCHITECT AND ENGINEER. LIST ALL EQUIPMENT & FLOWS. PROVIDE REVIEWED REPORT TO OWNER IN O&M MANUAL.

3.9 START-UP SERVICES

A. CONTRACTOR SHALL ALLOT A MINIMUM OF 2 HOURS FOR START UP SERVICES. START AND OPERATE ALL SYSTEMS AS REQUIRED BY THE OWNER. INSTRUCT OWNER'S REPRESENTATIVE ON THE PROPER OPERATION AND MAINTENANCE OF THE SYSTEMS AND EQUIPMENT.

3.10 OPERATING AND MAINTENANCE INSTRUCTIONS (O+M MANUAL)

A. PREPARE TWO (2) COPIES FOR ALL EQUIPMENT INCLUDING THE FINAL AIR/WATER BALANCE REPORT.

3.11 WARRANTY

A. THE CONTRACTOR SHALL WARRANTY HIS WORK FOR A PERIOD OF ONE YEAR FROM THE DATE OF COMPLETION. THIS INCLUDES WORKMANSHIP, MATERIALS, AND EQUIPMENT. CONTRACTOR SHALL PROVIDE LABOR, MATERIALS AND EQUIPMENT TO CORRECT ANY FAULTY INSTALLATIONS AND WORKMANSHIP.

B. THE OWNER IS RESPONSIBLE FOR ROUTINE MAINTENANCE AND CARE.

ELKHORN ENGINEERS, P.A.
2950 E. Magic View Dr., Ste. 190
Meridian, Idaho 83642
phone: (208) 955-0555
fax: (208) 955-0999

REGISTERED PROFESSIONAL ENGINEER
Steve T. Bastian
5112
STATE OF IDAHO
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Medical Design Group
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BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

PLUMBING SPECIFICATIONS

Desert Sage Health Care
2280 American Legion Blvd.
Mountain Home, Idaho

SHEET P0.3

March 2004

PLUMBING FIXTURE AND EQUIPMENT SCHEDULE

MINIMUM CONNECTION SIZE UNLESS INDICATED OTHERWISE ON PLANS

TAG	DESCRIPTION	ROUGH-IN SIZE WASTE	VENT	TRAP	CW	HW	REMARKS	MANUFACTURER & MODEL
WC-1	WATER CLOSET	3"	2"	INTEGRAL	1"	--	WALL HUNG, SIPHON JET (ADA COMPLIANT) LEVER TO BE ON WIDE SIDE OF STALL	MODEL – KOHLER K-4330 MATERIAL – VITREOUS CHINA, SIZE – ELONGATED BOWL, SEAT – K-4670-C OPEN FRONT, WHITE, VALVE – ZURN ZR-6000-WS1 CARRIER – JAY R. SMITH 200 SERIES WITH M51 SUPPORT MOUNT PER ADA REQUIREMENTS.
L-1	LAVATORY- COUNTER	1-1/2"	1-1/2"	1-1/4"	1/2"	1/2"	OVAL, COUNTERTOP	MODEL – KOHLER PENNINGTON K-2196-4, MATERIAL – VITREOUS CHINA, SIZE – 20-1/4" x 17-1/2", FAUCET – DELTA 501-WF-HGMHDF SINGLE LEVER FAUCET WITH .5 GPM VANDEL RESISTANT AERATOR, TRAP – KOHLER K-8999, SUPPLIES – EBC LAH16K-R15-CT3-CF, DRAIN – KOHLER K-13885 OFFSET GRID DRAIN ASSEMBLY FOR WHEELCHAIR. INSULATION – PER ADA REQUIREMENTS
S-1	SINK (SINGLE COMPARTMENT)	2"	1-1/2"	1-1/2"	1/2"	1/2"	SELF RIM COUNTERTOP	MODEL – ELKAY BLR-15, MATERIAL – 18 GAUGE STAINLESS STEEL, TYPE 304 SIZE – 15"x15"x6" FAUCET – JUST JWF-200 MODIFIED SPOUT SU-357-HAS TRAP – EBC TAN150-BF 1-1/2"x1-1/2", 17 GA. SUPPLIES – EBC LAH16K-R20-CT3-CF, DRAIN – ELKAY LK-36
S-2	SINK (DOUBLE COMPARTMENT)	2"	1-1/2"	1-1/2"	1/2"	1/2"	SELF RIM COUNTERTOP (TAP MASTER FOOT CONTROL PROVIDED BY D.E.S., INSTALLED BY CONTRACTOR)	MODEL – ELKAY LR-3321, MATERIAL – 18 GAUGE STAINLESS STEEL, TYPE 304 SIZE – 33"x21"x8" FAUCET – ELKAY LKC-2433 WITH HOSE AND SPRAY (SINK SHALL BE PUNCHED TO ACCOMMODATE FAUCET AND SPRAY) TRAP – EBC TAN150-BF 1-1/2"x1-1/2", 17 GA. SUPPLIES – EBC LAH16K-R20-CT3-CF DRAIN – ELKAY LKJ-35 ACCESSORIES – EBC WE150L16, 17 GA. CONTINUOUS DRAIN ASSEMBLY
ES-1	EXAM SINK (SINGLE COMPARTMENT)	2"	1-1/2"	1-1/2"	1/2"	1/2"	SELF RIM COUNTERTOP	MODEL – ELKAY BLH-15-C, MATERIAL – 18 GAUGE STAINLESS STEEL, TYPE 302 SIZE – 15"x15"x7" FAUCET – ELKAY LKA-2438 WITH BH-4 4" WRISTBLADES TRAP – 1-1/2", SUPPLIES – BRASSCRAFT STR-1715-J, DRAIN – ELKAY LK-36
ES-2	EXAM SINK – COUNTER	1-1/2"	1-1/2"	1-1/4"	1/2"	1/2"	OVAL, COUNTERTOP	MODEL – KOHLER PENNINGTON K-2196-4, MATERIAL – VITREOUS CHINA, SIZE – 20-1/4" x 17-1/2", FAUCET – DELTA 501-WF-HGMHDF SINGLE LEVER FAUCET WITH .5 GPM VANDEL RESISTANT AERATOR, TRAP – KOHLER K-8999, SUPPLIES – EBC LAH16K-R15-CT3-CF, DRAIN – KOHLER K-13885 OFFSET GRID DRAIN ASSEMBLY FOR WHEELCHAIR.
REF-1	NAT. GAS REFRIGERATOR	--	--	--	--	--	NAT. GAS REFRIGERATOR TO HAVE 10-12 INCHES CLEARANCE ON TOP AND 4-6 INCHES ON THE SIDES	MODEL – CRYSTAL COLD MODEL # CC15NG, SIZE – 63-1/2"H x 28-1/2"W x 34-1/2"D, GAS SUPPLY PRESSURE – 11.5" WATER COLUMN, ACCESSORIES – PROVIDE WITH NATURAL GAS CONVERSION, 3 YEAR EXTENDED WARRANTY.
SH-1	SHOWER	2"	2"	2"	1/2"	1/2"	ADA COMPLIANT	SHOWER – FIBERGLASS SYSTEMS INC. # CS-3838ADA.5 ACCESSORIES – PROVIDE WITH DELTA #1323, AMERICAN STANDARD #1674, #1675 OR HANSGROHE #06909003 SHOWER VALVE, SOAP DISH, GLIDE BAR/HAND SHOWER, CURTAIN AND ROD, DRAIN ASSEMBLY, AND ADA COMPLIANT THRESHOLD.

TAG	DESCRIPTION	ROUGH-IN SIZE WASTE	VENT	TRAP	CW	HW	REMARKS	MANUFACTURER & MODEL
DS-1	DENTAL SINK – COUNTER	1-1/2"	1-1/2"	1-1/4"	1/2"	1/2"	OVAL, COUNTERTOP (ROUGH-IN ONLY, FINAL CONNECTION BY CONTRACTOR)	MANUFACTURER – BY D.E.S. MODEL – BY D.E.S.
WCO-1	WALL CLEANOUT	--	--	--	--	--	SIZE TO MATCH SS PIPE.	MODEL – JAY R SMITH #(4472T).
FS-1	FLOOR SINK	2"	2"	2"	1/2" TRAP PRIME CONN.	-	CAST-IRON P-TRAP.	MODEL – JAY R SMITH #(3101-Y-12) WITH HALF GRATE AND SEDIMENT BUCKET, TRAP PRIMER CONNECTION. NOTE: VERIFY TRAP PRIMER.
RD-1	ROOF DRAIN	SEE PLANS	–	–	–	--		MODEL – JAY R SMITH FIG. #(1015-Y-C-U-R). FURNISH WITH UNDER-DECK CLAMP, ADJUSTABLE EXTENSION, VANDAL-PROOF DOME AND SUMP RECEIVER.
OD-1	OVERFLOW ROOF DRAIN	SEE PLANS	–	–	–	–		MODEL – JAY R SMITH FIG. #(1074-Y-C-U-R-RS). FURNISH WITH UNDER-DECK CLAMP, ADJUSTABLE EXTENSION, VANDAL-PROOF DOME, SUMP RECEIVER, RAIN SHIELD AND PVC WATER DAM EXTENSION FOR OVERFLOW SERVICE.
DF-1	DRINKING FOUNTAIN	2"	1-1/2"	1-1/4"	1/2"	--	WALL HUNG	MODEL – HAWS 1011 MATERIAL – STAINLESS STEEL ELECTRICAL – 120V/1ø, 244W, SIZE – 32"x18-1/2"
IM-1	ICE MAKER	–	–	–	1/2"	–	PROVIDE WALL VALVE BOX.	MODEL – GUY GRAY MODEL BIM875 SUPPLY – 1/2"x1/4" STOP
SS-1	SERVICE SINK	3"	2"	3"	1/2"	1/2"	FLOOR MOUNTED, SQUARE	MODEL – FIAT #(MSB-24-24) MATERIAL – MOLDED STONE FAUCET – 830-AA WITH VACUUM BREAKER TRAP – 3", CAST IRON SUPPLIES – INTEGRAL STOPS DRAIN – INTEGRAL ACCESSORIES – 832-AA HOSE AND WALL HOOK, 889-CC STAINLESS STEEL MOP HANGER, MSG2424 SPLASH CATCHER PANELS
RPBP-1	REDUCED PRESSURE BACKFLOW PREVENTER	--	--	--	LINE SIZE	--	WITH 1/4 TURN BALL VALVE AND BRONZE STRAINER, WALL MOUNT @ +36" AFF	MODEL – WATTS SERIES #909-QT-S ACCESSORIES – AIR GAP DRAIN ASSEMBLY NOTE: PIPE DRAIN ASSEMBLY TO FLOOR DRAIN.
WH-1	WATER HEATER	--	(2) 3"ø	--	3/4"	3/4"	GAS FIRED, HIGH EFFICIENCY CONCENTRIC VENT THRU ROOF (2) 3"ø PVC PIPES, FLUE VENT PROVIDED AND INSTALLED BY PLUMBING CONTRACTOR.	MODEL – BRADFORD WHITE PDV-100S-200-3N (100 GALLON) BURNER – 199,999 BTU INPUT, HIGH EFFICIENCY RECOVERY – 194 GPH @ 100°F RISE ACCESSORIES – T&P RELIEF, ASME RATED, PIPE TO FLOOR DRAIN FEATURES: GLASS LINED TANK, ANODE RODS, FOAM INSULATED TANK, INTERNAL THERMOTRAP SYSTEM, ENERGY SAVER THERMOSTAT WITH SAFETY SHUT-OFF, TOP CONNECTION OPENINGS, 10 YEAR WARRANTY, A.G.A. CERTIFIED, DIFFUSER DIP TUBE.
FD-1	FLOOR DRAIN	2"	2"	2"	1/2" TRAP PRIME CONN.	--	6"ø ROUND GRATE CAST IRON P-TRAP.	MODEL – JAY R SMITH #(2006-A5-CP) CHROME STRAINER AND TRAP PRIMER CONNECTION.
D-1	DISPOSAL	1-1/2"	--	1-1/2"	--	--	COORDINATE SWITCHED DUPLEX OUTLET WITH DIVISION 16.	MODEL – IN-SINK-ERATOR MODEL BADGER 1, 1/3 HP, 120V ACCESSORIES – PROVIDE COMPLETE WITH PLUG-IN TYPE CORD.
DGCO-1	DOUBLE GRADE CLEANOUT	--	--	--	--	--	ROUND, UNFINISHED FLOORS EXTRA HEAVY DUTY.	MODEL – JAY R SMITH SERIES (4223L) W/ CAST IRON TOP.
PT-1	PLASTER TRAP	--	--	--	--	--	SIZE TO MATCH SS	OWNER FURNISHED, CONTRACTOR INSTALLED
WB-1	WASHER HOOK-UP BOX	2"	1-1/2"	2"	1/2"	1/2"	FLUSH WALL MOUNTED	MODEL – GUY GRAY #(B200), 1/2" HOT, COLD, AND WASTE

MANUFACTURER'S APPROVED FOR SUBMITTAL OF COMPARABLE PRODUCTS

ENAMELED CAST IRON AND VITREOUS CHINA	KOHLER, AMERICAN STANDARD
WATER COOLERS	HALSEY TAYLOR, OASIS, ELKAY, HAWS, SUN ROC
STAINLESS STEEL SINKS	ELKAY, JUST, DAYTON
SERVICE SINKS	FIAT, BRADLEY, ACORN
FAUCETS	T & S, CHICAGO, DELTA HDF, ELKAY, JUST, KOHLER, ZURN
SENSOR FAUCETS	CHICAGO, SLOAN, DELANY, BRADLEY, ZURN
SHOWER VALVES, MIXING VALVES	POWERS, LEONARD, SYMMONS
FLUSH VALVES	SLOAN, ROYAL
FIXTURE SUPPORTS	SMITH, WADE, ZURN
TOILET SEATS	CHURCH, OLSONITE, BEMIS
ROOF DRAINS, FLOOR SINKS, FLOOR DRAINS AND TRAPS	SMITH, WATTS, ZURN, WADE, JOSAM
BACKFLOW PREVENTION DEVICES, PRESSURE REDUCING VALVES	WATTS, WILKENS, FEBCO
EMERGENCY SHOWER/EYEWASH	HAWS, BRADLEY, GUARDIAN
TRAP PRIMERS AND SHOCK ABSORBERS	PPP, SIOUX CHIEF, SMITH
WATER HEATERS	STATE, A.O. SMITH, BRADFORD WHITE

ELKHORN ENGINEERS, P.A.
2950 E. Magic View Dr., Ste. 190
Meridian, Idaho 83642
phone: (208) 955-0555
fax: (208) 955-0999

REGISTERED PROFESSIONAL ENGINEER
STEVEN T. BASTIAN
5112
STATE OF IDAHO
Steve T. Bastian
3-15-04

Medical Design Group
Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

PLUMBING SCHEDULES

Desert Sage Health Care
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SHEET P0.4

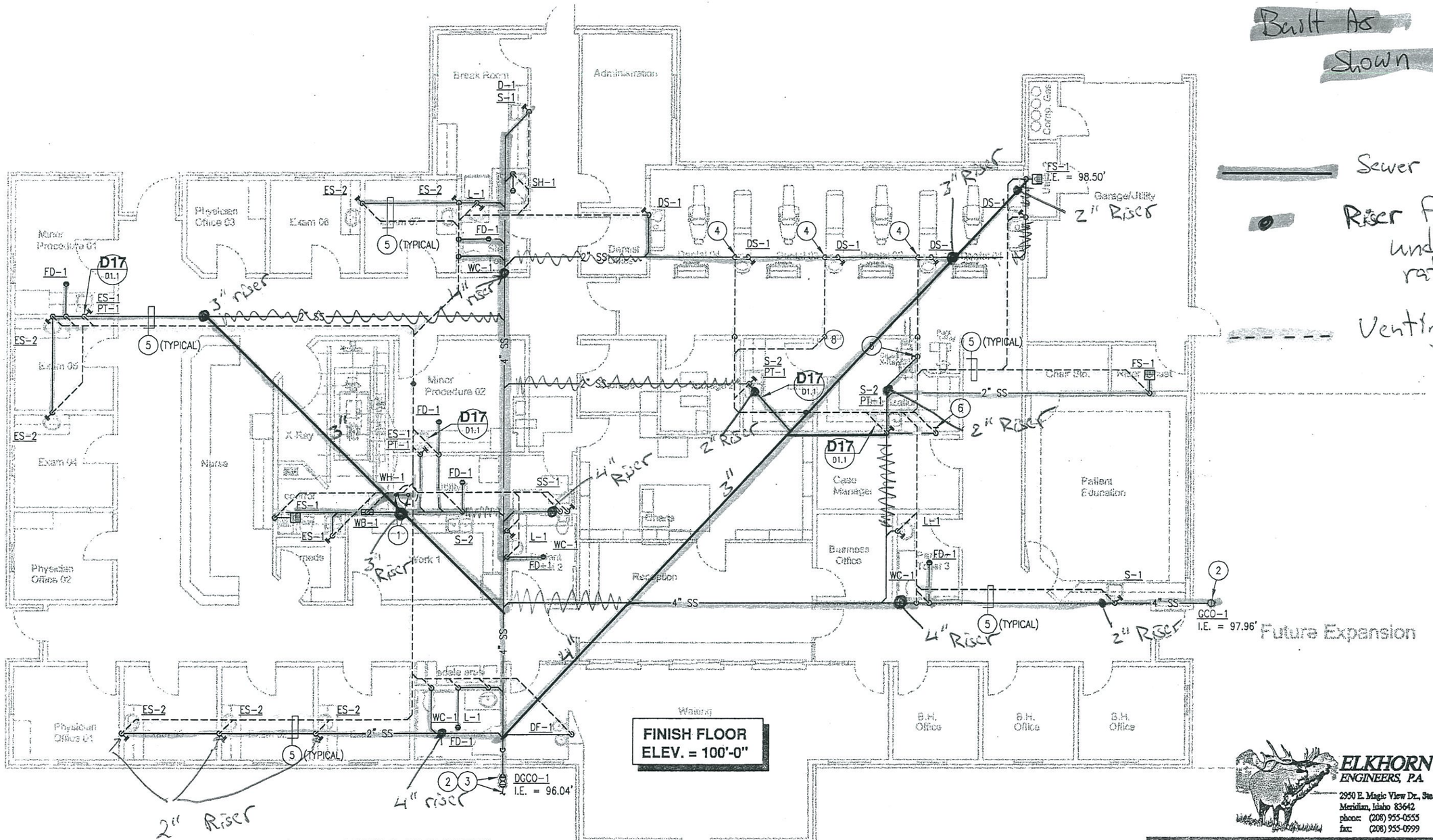
March 2004

Built As Shown

Sewer

Riser From under rat Slab

Venting



KEY NOTES:

1. PLUMBING CONTRACTOR TO PROVIDE AND INSTALL 3"ø INTAKE/EXHAUST UP TO CONCENTRIC VENT KIT AND THRU ROOF. SEAL PENETRATION WATER TIGHT. COORDINATE WITH ROOF CONTRACTOR.
2. 4" DGCO-1 SET IN 12"øx3-1/2" CONCRETE RING.
3. EXTEND 4" SS TO 5'-0" OUTSIDE OF BUILDING & CONNECT TO SITE CIVIL. COORDINATE ACTUAL INVERT ELEVATIONS PRIOR TO INSTALLATION.
4. ISLAND VENT, SEE DETAIL 6, SHEET P3.1.
5. FOR SIZING SEE RISER DIAGRAM 2, SHEET P3.2.
6. INSTALL 1-1/4" P-TRAP IN WALL FOR DENTAL EQUIPMENT.

ELKHORN ENGINEERS, P.A.
2950 E. Magic View Dr., Ste. 190
Meridian, Idaho 83642
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fax: (208) 955-0999

REGISTERED PROFESSIONAL ENGINEER
Steve T. Bastian
5112
STATE OF IDAHO
STEVEN T. BASTIAN
3-15-04

Medical Design Group
Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

PLUMBING FLOOR PLAN

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SHEET P1.1

March 2004

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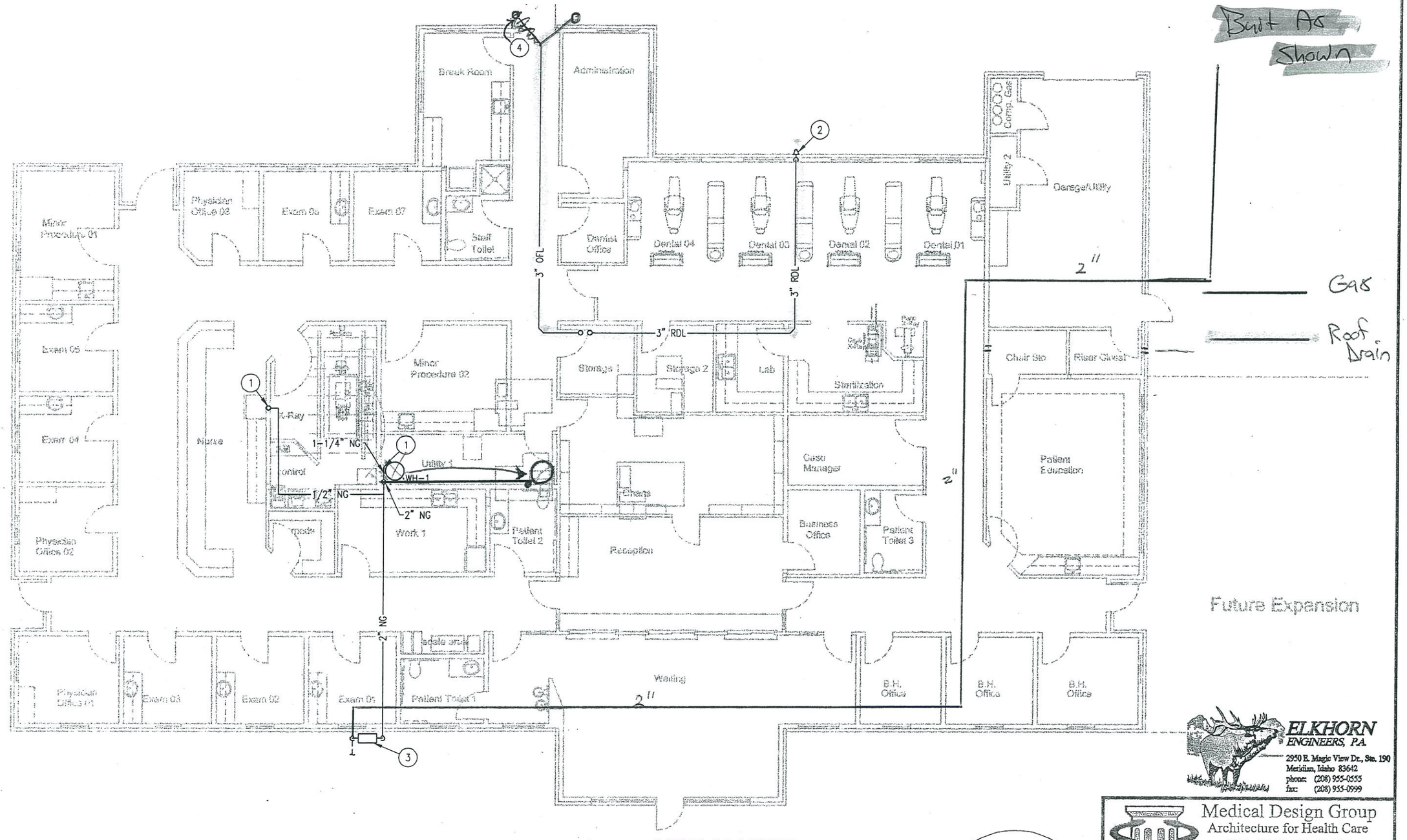

KEY NOTES:

1. SEE DETAIL 2, SHEET P3.1 FOR GAS CONNECTION DETAIL.
2. DROP 3" RDL IN WALL TO 12" A.F.F. AND TERMINATE WITH BRASS TONGUE.
3. GAS METER BY INTERMOUNTAIN GAS CO. SIZED FOR 676 MBH @ 125'-0" (ALL GAS LINES TO BE 7" W.C.)
4. TERMINATE 3" OFL 2" BELOW FINISHED SOFFIT FACE, SEAL PENETRATION WATER TIGHT. PROVIDE W/ ESCUTCHEON, PRIMED AND PAINTED TO MATCH.

REGISTERED PROFESSIONAL ENGINEER
Steven T. Bastian
5112
STATE OF IDAHO
STEVEN T. BASTIAN
3-15-04

ELKHORN ENGINEERS, P.A.
2950 E. Magic View Dr., Ste. 190
Meridian, Idaho 83642
phone: (208) 955-0555
fax: (208) 955-0999

Medical Design Group
Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

PLUMBING FLOOR PLAN

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SHEET P1.2

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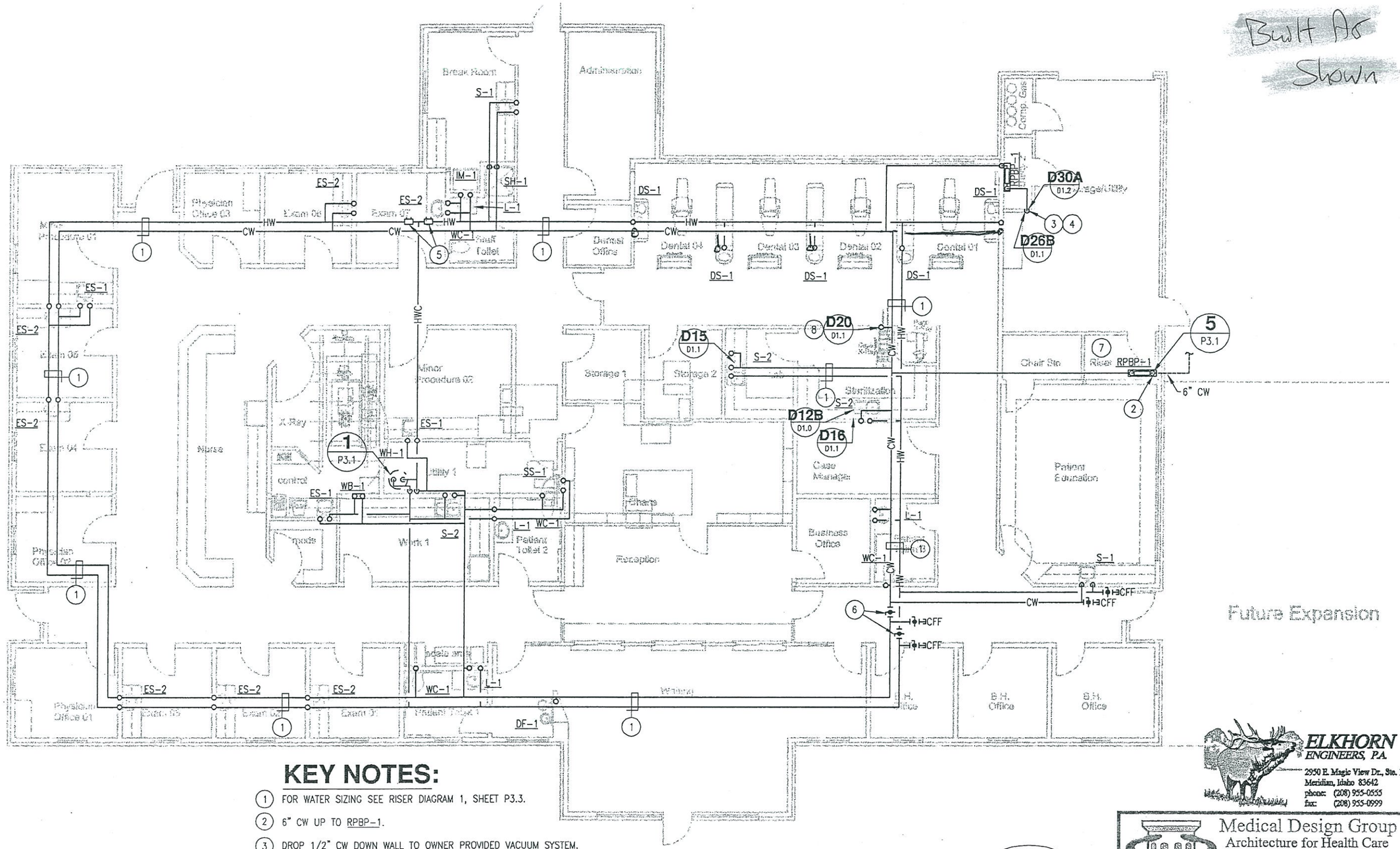

KEY NOTES:

1. FOR WATER SIZING SEE RISER DIAGRAM 1, SHEET P3.3.
2. 6" CW UP TO RPBP-1.
3. DROP 1/2" CW DOWN WALL TO OWNER PROVIDED VACUUM SYSTEM.
4. DROP 1" CW DOWN WALL TO OWNER PROVIDED WATER SOLENOID/FILTER.
5. SET CIRCUIT SETTER TO .5 GPM.
6. BALL VALVE TO REMAIN OPEN UNTIL FUTURE EXPANSION PIPING IS CONNECTED.
7. FIRE RISER ENTRANCE. LOCATE RISERS AND VALVES ACCESSORIES IN THIS ROOM PER SPECIFICATION SECTION 15300.
8. RPBP-1 FOR FILM PROCESSOR

ELKHORN ENGINEERS, P.A.
2950 E. Magic View Dr., Ste. 190
Meridian, Idaho 83642
phone: (208) 955-0555
fax: (208) 955-0999

REGISTERED PROFESSIONAL ENGINEER
Steven T. Bastian
5112
STATE OF IDAHO
STEVEN T. BASTIAN
3-15-04

Medical Design Group
Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

PLUMBING FLOOR PLAN

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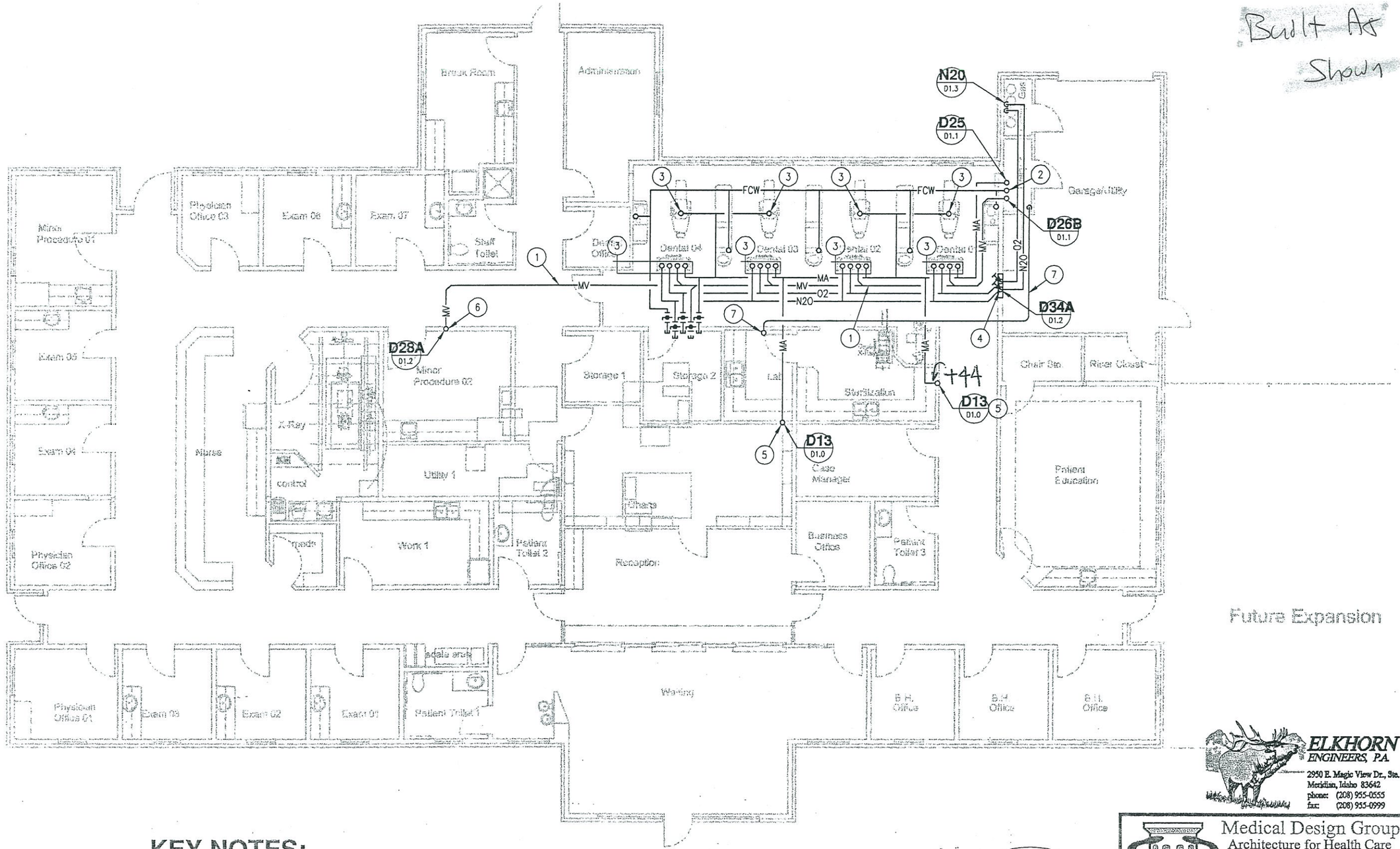

KEY NOTES:

1. SLOPE ALL MV LINES 1/4" PER FOOT BACK TO VACUUM PUMP. PROVIDE DWV FITTINGS FOR VACUUM LINES.
2. 1" FCW FROM WATER FILTER.
3. COORDINATE EXACT LOCATION OF PENETRATIONS WITH D.E.S. IN FIELD.
4. 3/4" O2, 3/4" N20 UP TO S.O.V. ON WALL, VALVE TO BE PROVIDED AND INSTALLED BY D.E.S. CLEARLY MARK ALL VALVES WITH TWO COLOR ENGRAVED LAMINATED MARKERS PER NFPA 99.
5. 1/2" MA UP TO 44" A.F.F., AIR VALVE IN WALL, VALVE TO BE PROVIDED AND INSTALLED BE D.E.S.
6. 1/2" MV UP TO 44" A.F.F. IN WALL TO WB-1, STUB PIPE 6" INTO BOX AND CAP PER SPECIFICATIONS.
7. 2" VACUUM EXHAUST, ROUTE AS SHOWN, SEE SHEET P2.1 FOR CONTINUATION.

REGISTERED PROFESSIONAL ENGINEER
Steve T. Bastian
5112
STATE OF IDAHO
STEVEN T. BASTIAN
3-15-04

ELKHORN ENGINEERS, P.A.
2950 E. Magic View Dr., Ste. 190
Meridian, Idaho 83642
phone: (208) 955-0555
fax: (208) 955-0999

Medical Design Group
Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

PLUMBING FLOOR PLAN

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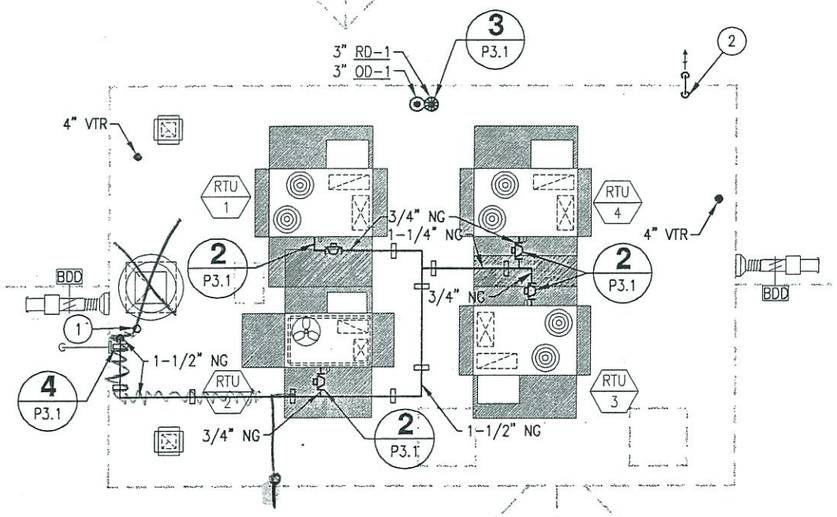
2280 American Legion Blvd.
Mountain Home, Idaho

SHEET P1.4

March 2004

G95



KEY NOTES:

1. CONCENTRIC VENT FROM BELOW, TERMINATE PER MANUFACTURERS WRITTEN INSTRUCTION.
2. 2" VACUUM EXHAUST UP INTO EQUIPMENT WELL FROM BELOW, ROUTE THRU PARAPET WALL TO TERMINATE ABOVE ROOF WITH TURNED DOWN 90° ELL FITTING AND NON CORROSIVE INSECT SCREEN.

REGISTERED PROFESSIONAL ENGINEER
Steve T. Bastian
5112
STATE OF IDAHO
STEVEN T. BASTIAN
3-15-04

ELKHORN ENGINEERS, P.A.
2950 E. Magic View Dr., Ste. 190
Meridian, Idaho 83642
phone: (208) 955-0555
fax: (208) 955-0599

Medical Design Group
Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

PLUMBING ROOF PLAN

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2280 American Legion Blvd.
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SHEET P2.1

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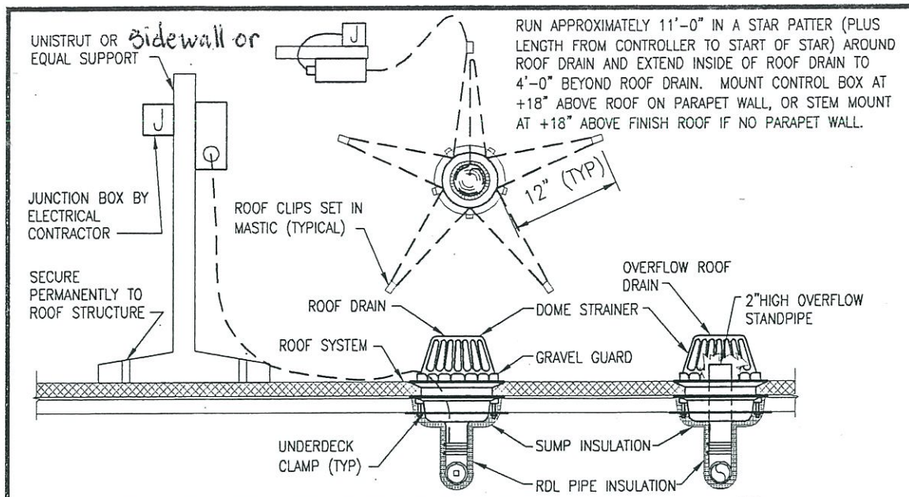
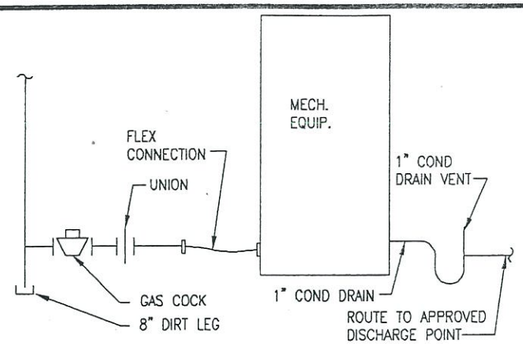


ROOF/OVERFLOW DRAIN DETAIL 3

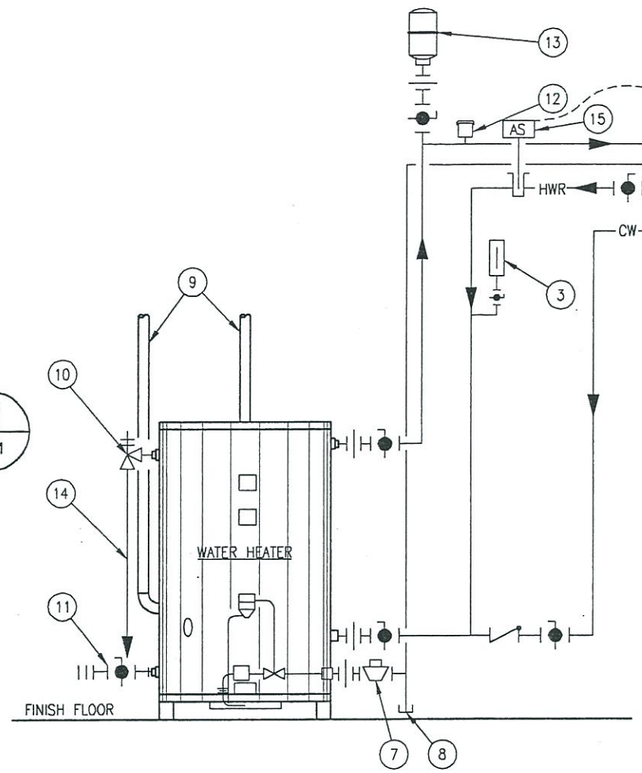
SCALE: NTS



NOTE: SEE PLAN FOR PIPE SIZES

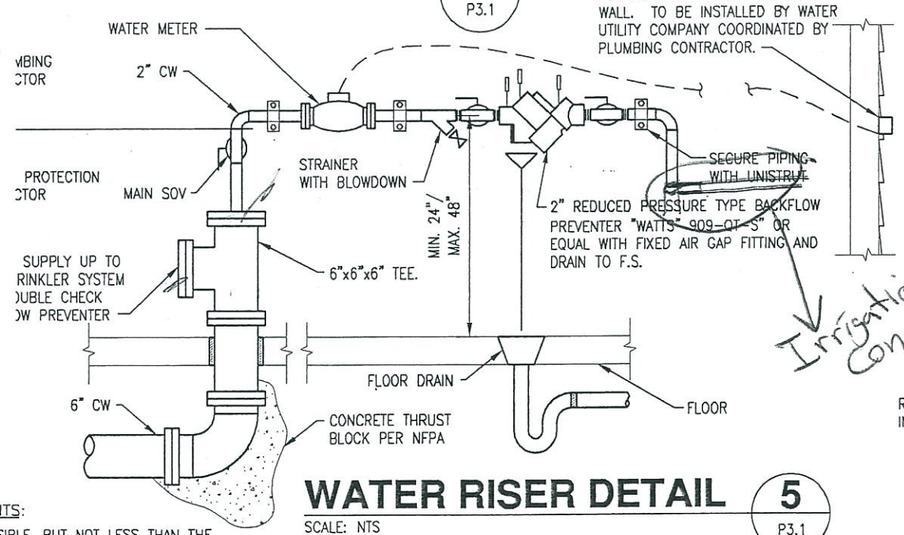
GAS/CONDENSATE CONNECTION DETAIL 2

SCALE: NTS



KEY NOTES:

1. UNION (TYP)
2. BALL VALVE (TYP)
3. THERMOMETER
4. RECIRCULATION PUMP, GRUNDFOS MODEL UP15-42SU
5. BALANCE VALVE
6. CHECK VALVE (TYP)
7. GAS COCK
8. DIRT LEG
9. PVC INTAKE AND EXHAUST PIPES UP TO CONCENTRIC VENT
10. ASME T&P RELIEF VALVE
11. FULL PORT BALL VALVE W/THREADED HOSE CONNECTION
12. VACUUM RELIEF VALVE
13. EXPANSION TANK (2.5 ACCEPTANCE GALLONS)
14. PIPE TO FLOOR DRAIN
15. AQUASTAT AND TIME CLOCK.

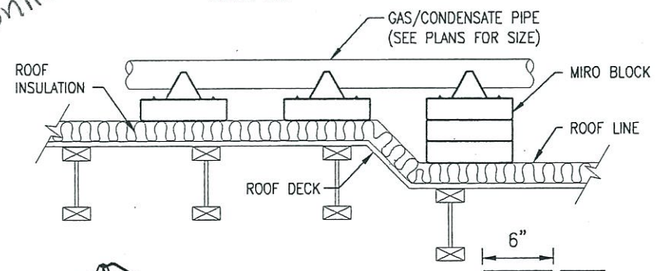


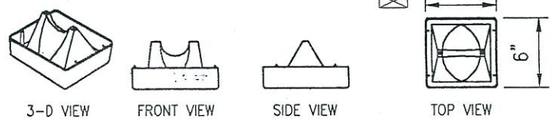
WATER RISER DETAIL 5

SCALE: NTS

GAS FIRE WATER HEATER DETAIL 1

SCALE: NTS





HORIZONTAL PIPING SUPPORT	
PIPE SIZE "INCHES"	SUPPORT DISTANCE "FEET"
1/2"	6'
3/4"	8'
1"	8'
1-1/4"	10'
1-1/2"	10'

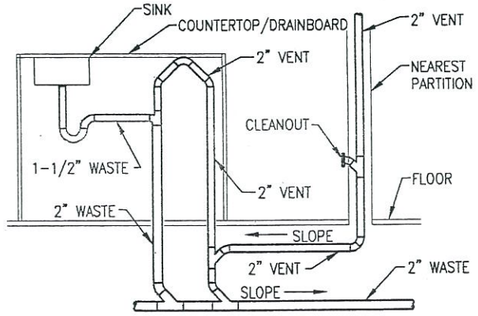
NOTE: MIRO MODEL 1.5

MIRO BLOCK DETAIL 4

SCALE: NTS

DETAIL NOTE REQUIREMENTS:

1) EXTEND VENT AS HIGH AS POSSIBLE, BUT NOT LESS THAN THE DRAINBOARD HEIGHT AND THEN RETURNING IT DOWNWARD AND CONNECTING IT TO THE HORIZONTAL SINK DRAIN IMMEDIATELY DOWNSTREAM FROM THE VERTICAL FIXTURE DRAIN.
2) THE RETURNED VENT SHALL BE CONNECTED TO THE HORIZONTAL DRAIN THROUGH A Y-BRANCH FITTING AND SHALL, IN ADDITION, BE PROVIDED WITH A FOOT VENT TAKEN OFF THE VERTICAL FIXTURE VENT BY MEANS OF A Y-BRANCH IMMEDIATELY BELOW THE FLOOR AND EXTENDING TO THE NEAREST PARTITION AND THENCE THROUGH THE ROOF OR CONNECTED TO OTHER VENTS, IN AN APPROVED MANNER.
3) DRAINAGE FITTINGS SHALL BE USED ON ALL PARTS OF THE VENT BELOW THE FLOOR AND A MINIMUM SLOPE OF 1/4 INCH PER FOOT BACK TYO THE DRAIN SHALL BE MAINTAINED.
4) THE RETURN BEND UNDER THE DRAINBOARD SHALL BE A ONE-PIECE FITTING OR AN ASSEMBLY OF A 45°, A 90°, AND A 45° IN THE ORDER NAMED.
5) THE ISLAND SINK DRAIN, UPSTREAM OF THE RETURNED VENT, SHALL SERVE NO OTHER FIXTURES.



ISLAND SINK VENTING DETAIL 6

SCALE: NTS

ELKHORN ENGINEERS, P.A.
2950 E. Magic View Dr., Ste. 190
Meridian, Idaho 83642
phone: (208) 955-0555
fax: (208) 955-0999

Medical Design Group
Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

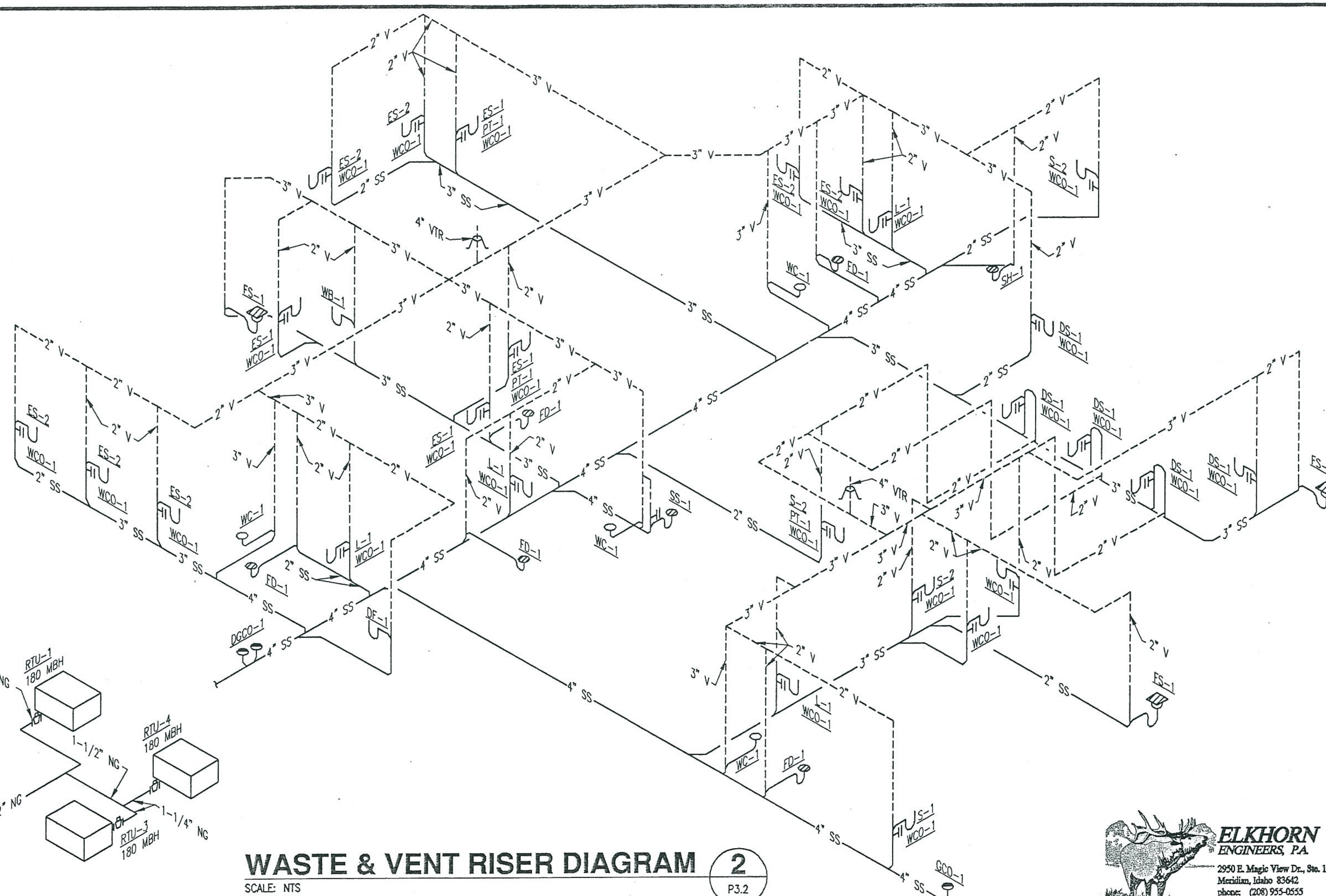
REGISTERED PROFESSIONAL ENGINEER 5112 STATE OF IDAHO STEVEN T. BASTIAN
Steven T. Bastian
3-15-04

PLUMBING DETAILS

Desert Sage Health Care
2280 American Legion Blvd.
Mountain Home, Idaho

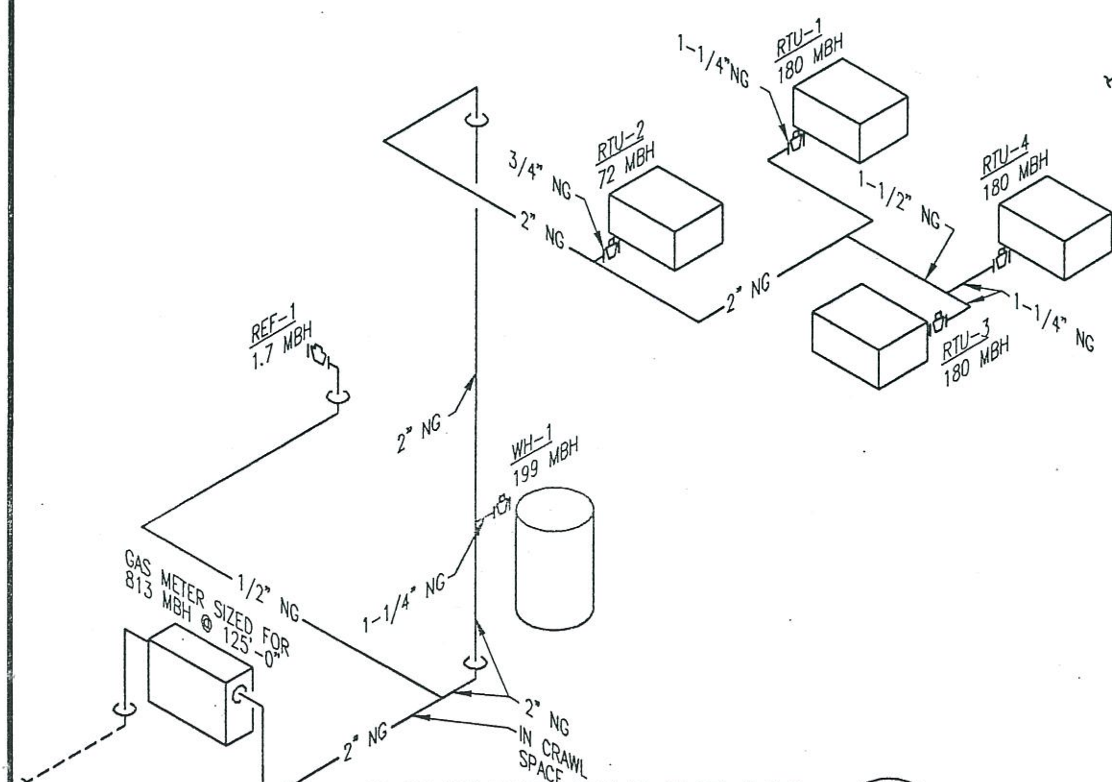
SHEET P3.1

March 2004



WASTE & VENT RISER DIAGRAM (2, P3.2)

SCALE: NTS



GAS RISER DIAGRAM (1, P3.2)

SCALE: NTS

ELKHORN ENGINEERS, P.A.
2950 E. Magic View Dr., Ste. 190
Meridian, Idaho 83642
phone: (208) 955-0555
fax: (208) 955-0999

REGISTERED PROFESSIONAL ENGINEER 5112 STATE OF IDAHO STEVEN T. BASTIAN

Steve T. Bastian

3-15-04

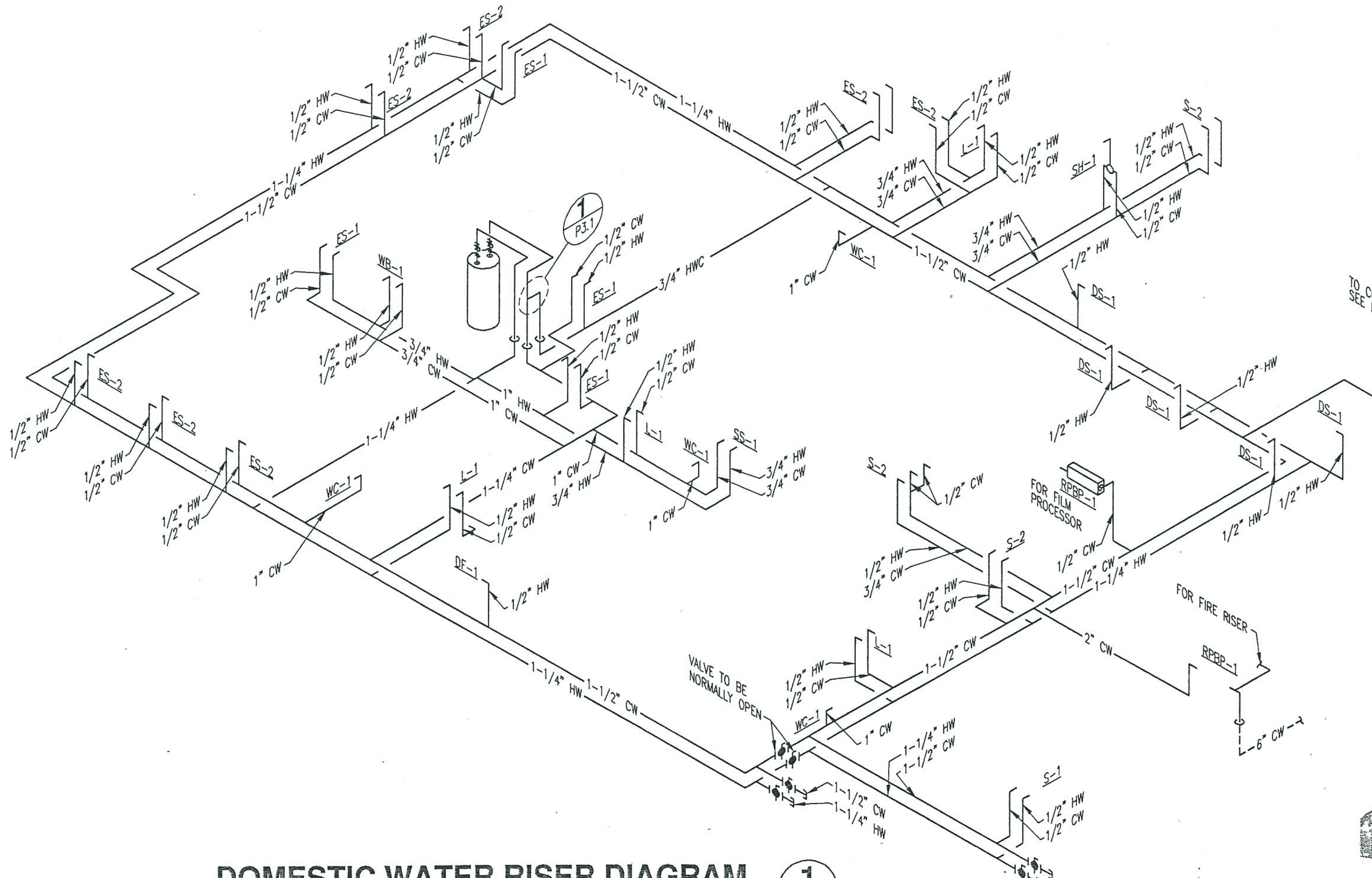
Medical Design Group
Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

PLUMBING DETAILS

Desert Sage Health Care
2280 American Legion Blvd.
Mountain Home, Idaho

SHEET P3.2

March 2004



DOMESTIC WATER RISER DIAGRAM

1 / P3.3

SCALE: NTS

ELKHORN ENGINEERS, P.A.
2950 E. Magic View Dr., Ste. 190
Meridian, Idaho 83642
phone: (208) 955-0555
fax: (208) 955-0999

REGISTERED PROFESSIONAL ENGINEER 5112 STATE OF IDAHO STEVEN T. BASTIAN

Steve T. Bastian

3-15-04

Medical Design Group
Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

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PLUMBING DETAILS

Desert Sage Health Care
2280 American Legion Blvd.
Mountain Home, Idaho

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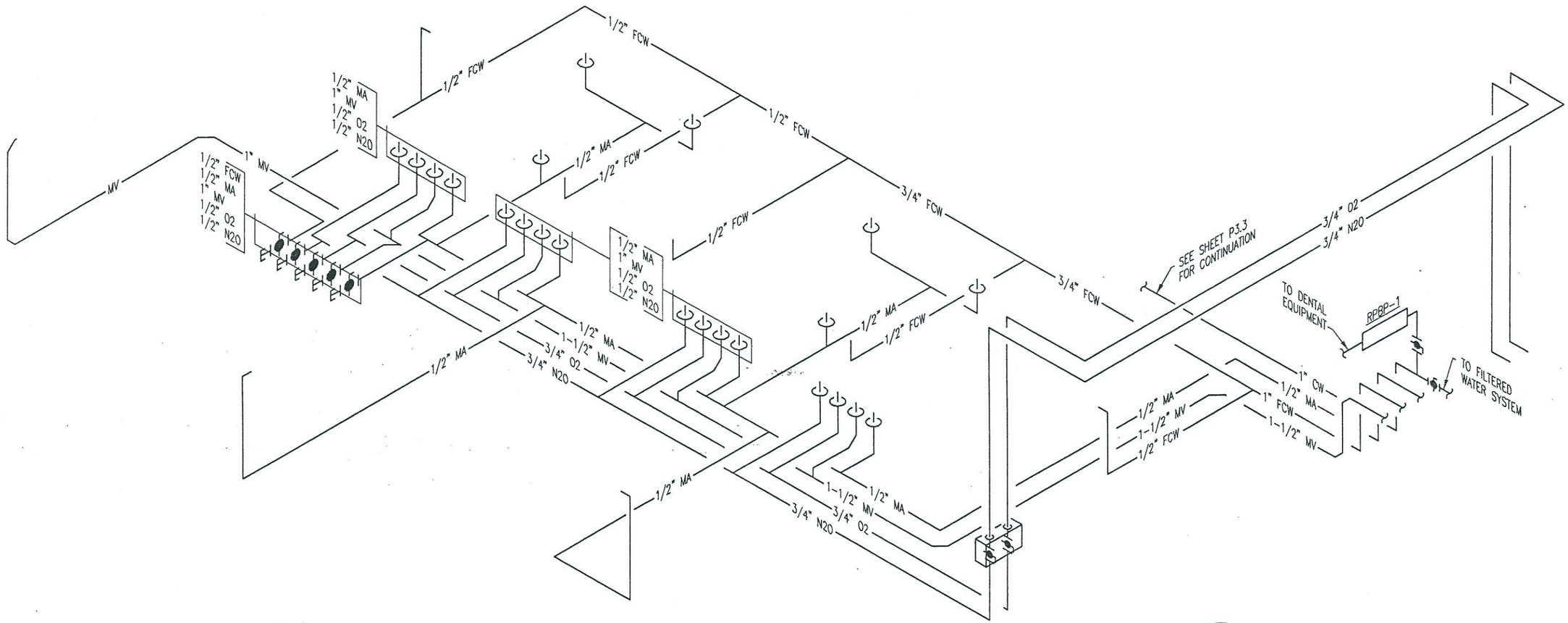
March 2004



MEDICAL GAS & WATER RISER DIAGRAM

2

P3.3

SCALE: NTS

ELKHORN ENGINEERS, P.A.
2950 E. Magic View Dr., Ste. 190
Meridian, Idaho 83642
phone: (208) 955-0555
fax: (208) 955-0999

Medical Design Group
Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

REGISTERED PROFESSIONAL ENGINEER
Steve T. Bastian
5112
STATE OF IDAHO
STEVEN T. BASTIAN
3-15-04

PLUMBING DETAILS

Desert Sage Health Care
2280 American Legion Blvd.
Mountain Home, Idaho

SHEET P3.4

March 2004

Permit Number

Checked By/Date

Mechanical Compliance Certificate
2000 IECC

COM*check-EZ* Software Version 2.4 Release 2
Data filename: S:\Projects\03MDG002(DesertSageHealth)\Documents\Calculations\01-15-04-COM.cck

Section 1: Project Information

Project Name:	Desert Sage Health Care
Designer/Contractor:	
Telephone:	
Document Author:	Tyler Thompson

Section 2: General Information

Building Location (for weather data):	Mountain Home, Idaho
Climate Zone:	13b
Heating Degree Days (base 65 degrees F):	6176
Cooling Degree Days (base 65 degrees F):	741

Project Description (check one):
__ New Construction __ Addition __ Alteration __ Unconditioned Shell (File Affidavit)

Section 3: Mechanical Systems List

Quantity	System Type & Description
4	EWH-1: Heating: Unit Heater, Electric
1	RTU-3: Heating: Central Furnace, Gas / Cooling: Rooftop Package Unit, Capacity >=90 - <135 kBtu/h, Air-Cooled Condenser / Single Zone
2	RTU-1,4: Heating: Central Furnace, Gas / Cooling: Rooftop Package Unit, Capacity >=65 - <90 kBtu/h, Air-Cooled Condenser / Single Zone
1	RTU-2: Heating: Central Furnace, Gas / Cooling: Rooftop Package Unit, Capacity <65 kBtu/h, Air-Cooled Condenser / Single Zone
1	WH-1: Service Water Heater w/ Circulation Pump

Section 4: Requirements Checklist

Bldg. | Dept. | Use |

Requirements Specific To: EWH-1
Requirements Specific To: RTU-3
[ ] 1. Newly purchased heating equipment meets the heating efficiency requirements
[ ] 2. Newly purchased cooling equipment meets the cooling efficiency requirements
[ ] 3. Integrated air economizer is included
Requirements Specific To: RTU-1,4
[ ] 1. Newly purchased heating equipment meets the heating efficiency requirements
[ ] 2. Newly purchased cooling equipment meets the cooling efficiency requirements
Requirements Specific To: RTU-2
[ ] 1. Newly purchased heating equipment meets the heating efficiency requirements
[ ] 2. Newly purchased cooling equipment meets the cooling efficiency requirements
Requirements Specific To: WH-1
[ ] 1. 1-in. pipe insulation on circulation systems
[ ] 2. Automatic on/off control required for circulating systems
Generic Requirements: Must be met by all systems to which the requirement is applicable
[ ] 1. Load calculations per 1997 ASHRAE Fundamentals
[ ] 2. Plant equipment and system capacity no greater than needed to meet loads
- Exception: Standby equipment automatically off when primary system is operating
- Exception: Multiple units controlled to sequence operation as a function of load
[ ] 3. Minimum one temperature control device per system
[ ] 4. Minimum one humidity control device per installed humidification/dehumidification system
[ ] 5. Thermostatic controls has 5 deg. F deadband
- Exception: Thermostats requiring manual changeover between heating and cooling
[ ] 6. Automatic Controls: Setback to 55 deg. F (heat) and 85 deg. F (cool); 7-day clock, 2-hour occupant override, 10-hour backup
- Exception: Continuously operating zones
- Exception: 2 kW demand or less, submit calculations
[ ] 7. Automatic shut-off dampers on exhaust systems and supply systems with airflow >3,000 cfm
[ ] 8. Outside-air source for ventilation; system capable of reducing OSA to required minimum
[ ] 9. R-5 supply and return air duct insulation in unconditioned spaces
R-8 supply and return air duct insulation outside the building
R-8 insulation between ducts and the building exterior when ducts are part of a building assembly
- Exception: Ducts located within equipment
- Exception: Ducts with interior and exterior temperature difference not exceeding 15 deg. F.
[ ] 10. Ducts sealed - longitudinal seams on rigid ducts; transverse seams on all ducts; UL 181A or 181B tapes and mastics
[ ] 11. Mechanical fasteners and sealants used to connect ducts and air distribution equipment
[ ] 12. Hot water pipe insulation: 1 in. for pipes <=1.5 in. and 2 in. for pipes >1.5 in.
Chilled water/refrigerant/brine pipe insulation: 1 in. for pipes <=1.5 in. and 1.5 in. for pipes >1.5 in.
Steam pipe insulation: 1.5 in. for pipes <=1.5 in. and 3 in. for pipes >1.5 in.
- Exception: Piping within HVAC equipment
- Exception: Fluid temperatures between 55 and 105 deg. F
- Exception: Fluid not heated or cooled
- Exception: Runouts <4 ft in length
[ ] 13. Operation and maintenance manual provided to building owner
[ ] 14. Balancing devices provided in accordance with IMC 603.15
[ ] 15. Newly purchased service water heating equipment meets the efficiency requirements
[ ] 16. Water heater temperature controls: 110 deg. F for dwelling units or 90 deg. F for other occupancies

Section 5: Compliance Statement

The proposed mechanical design represented in this document is consistent with the building plans, specifications and other calculations submitted with this permit application. The proposed mechanical systems have been designed to meet the 2000 IECC requirements in COM*check-EZ* Version 2.4 Release 2.

Steve Bastian — Principal Mechanical Designer-Name
Steven T. Bastian — Signature
3-15-04 — Date

Mechanical Requirements Description
2000 IECC

COM*check-EZ* Software Version 2.4 Release 2
Data filename: S:\Projects\03MDG002(DesertSageHealth)\Documents\Calculations\01-15-04-COM.cck

The following list provides more detailed description of the requirements in Section 4 of the Mechanical Compliance Certificate.

Requirements Specific To: EWH-1
Requirements Specific To: RTU-3
1. The specified heating equipment is covered by Federal minimum efficiency requirements. New equipment of this type can be assumed to meet or exceed ASHRAE 90.1 Code requirements for equipment efficiency.
2. The specified cooling equipment is covered by Federal minimum efficiency requirements. New equipment of this type can be assumed to meet or exceed ASHRAE 90.1 Code requirements for equipment efficiency.
3. An integrated air economizer is required for individual cooling systems over 90 kBtu/h or 3,000 cfm in the selected climate. An integrated economizer allows simultaneous operation of outdoor-air and mechanical cooling.

Requirements Specific To: RTU-1,4
1. The specified heating equipment is covered by Federal minimum efficiency requirements. New equipment of this type can be assumed to meet or exceed ASHRAE 90.1 Code requirements for equipment efficiency.
2. The specified cooling equipment is covered by Federal minimum efficiency requirements. New equipment of this type can be assumed to meet or exceed ASHRAE 90.1 Code requirements for equipment efficiency.

Requirements Specific To: RTU-2
1. The specified heating equipment is covered by Federal minimum efficiency requirements. New equipment of this type can be assumed to meet or exceed ASHRAE 90.1 Code requirements for equipment efficiency.
2. The specified cooling equipment is covered by Federal minimum efficiency requirements. New equipment of this type can be assumed to meet or exceed ASHRAE 90.1 Code requirements for equipment efficiency.

Requirements Specific To: WH-1
1. Piping for the specified circulating service hot water system must be insulated with a minimum of 1-in. insulation having a conductivity no >0.28 Btu·in/(h·ft2·°F).
2. Circulating service hot water systems must have a time switch control that can automatically turn off the system during unoccupied hours.

Generic Requirements: Must be met by all systems to which the requirement is applicable
1. Design heating and cooling loads for the building must be determined using procedures equivalent to those in Chapters 27 and 28 of the ASHRAE Handbook of Fundamentals or an approved equivalent calculation procedure.
2. All equipment and systems must be sized to be no greater than needed to meet calculated loads. A single piece of equipment providing both heating and cooling must satisfy this provision for one function with the capacity for the other function as small as possible, within available equipment options.
- Exception: The equipment and/or system capacity may be greater than calculated loads for standby purposes. Standby equipment must be automatically controlled to be off when the primary equipment and/or system is operating.
- Exception: Multiple units of the same equipment type whose combined capacities exceed the calculated load are allowed if they are provided with controls to sequence operation of the units as the load increases or decreases.
3. Each heating or cooling system serving a single zone must have its own temperature control device.
4. Each humidification system must have its own humidity control device.
5. Thermostats controlling both heating and cooling must be capable of maintaining a 5 degree F deadband (a range of temperature where no heating or cooling is provided).
- Exception: Deadband capability is not required if the thermostat does not have automatic changeover capability between heating and cooling.
6. The system or zone control must be a programmable thermostat or other automatic control meeting the following criteria:a) capable of setting back temperature to 55 degree F during heating and setting up to 85 degree F during coolingb) capable of automatically setting back or shutting down systems during unoccupied hours using 7 different day schedulesc) have an accessible 2-hour occupant overrided) have a battery back-up capable of maintaining programmed settings for at least 10 hours without power.
- Exception: A setback or shutoff control is not required on thermostats that control systems serving areas that operate continuously.
- Exception: A setback or shutoff control is not required on systems with total energy demand of 2 kW (6,826 Btu/h) or less.
7. Outdoor-air supply systems with design airflow rates >3,000 cfm of outdoor air and all exhaust systems must have dampers that are automatically closed while the equipment is not operating.
8. The system must supply outside ventilation air as required by Chapter 4 of the International Mechanical Code. If the ventilation system is designed to supply outdoor-air quantities exceeding minimum required levels, the system must be capable of reducing outdoor-air flow to the minimum required levels.
9. Air ducts must be insulated to the following levels:a) Supply and return air ducts for conditioned air located in unconditioned spaces (spaces neither heated nor cooled) must be insulated with a minimum of R-5. Unconditioned spaces include attics, crawl spaces, unheated basements, and unheated garages.b) Supply and return air ducts and plenums must be insulated to a minimum of R-8 when located outside the building.c) When ducts are located within exterior components (e.g., floors or roofs), minimum R-8 insulation is required only between the duct and the building exterior.
- Exception: Duct insulation is not required on ducts located within equipment.
- Exception: Duct insulation is not required when the design temperature difference between the interior and exterior of the duct or plenum does not exceed 15 degree F.
10. All joints, longitudinal and transverse seams, and connections in ductwork must be securely sealed using weldments; mechanical fasteners with seals, gaskets, or mastics; mesh and mastic sealing systems; or tapes. Tapes and mastics must be listed and labeled in accordance with UL 181A or UL 181B.
11. Mechanical fasteners and seals, mastics, or gaskets must be used when connecting ducts to fans and other air distribution equipment, including multiple-zone terminal units.
12. All pipes serving space-conditioning systems must be insulated as follows:
Hot water piping for heating systems:
1 in. for pipes <=1 1/2-in. nominal diameter
2 in. for pipes >1 1/2-in. nominal diameter.
Chilled water, refrigerant, and brine piping systems:
1 in. insulation for pipes <=1 1/2-in. nominal diameter
1 1/2 in. insulation for pipes >1 1/2-in. nominal diameter.
Steam piping:
1 1/2 in. insulation for pipes <=1 1/2-in. nominal diameter
3 in. insulation for pipes >1 1/2-in. nominal diameter.
- Exception: Pipe insulation is not required for factory-installed piping within HVAC equipment.
- Exception: Pipe insulation is not required for piping that conveys fluids having a design operating temperature range between 55 degrees F and 105 degrees F.
- Exception: Pipe insulation is not required for piping that conveys fluids that have not been heated or cooled through the use of fossil fuels or electric power.
- Exception: Pipe insulation is not required for runout piping not exceeding 4 ft in length and 1 in. in diameter between the control valve and HVAC coil.
13. Operation and maintenance documentation must be provided to the owner that includes at least the following information:a) equipment capacity (input and output) and required maintenance actionsb) equipment operation and maintenance manualsc) HVAC system control maintenance and calibration information, including wiring diagrams, schematics, and control sequence descriptions; desired or field-determined set points must be permanently recorded on control drawings, at control devices, or, for digital control systems, in programming commentsd) complete narrative of how each system is intended to operate.
14. Each supply air outlet or diffuser and each zone terminal device (such as VAV or mixing box) must have its own balancing device. Acceptable balancing devices include adjustable dampers located within the ductwork, terminal devices, and supply air diffusers.
15. Service water heating equipment must meet minimum Federal efficiency requirements included in the National Appliance Energy Conservation Act and the Energy Policy Act of 1992, which meet or exceed ASHRAE 90.1 Code. New service water heating equipment can be assumed to meet these requirements.
16. Water-heating equipment must be provided with controls that allow the user to set the water temperature to 110 °F for dwelling units and 90 °F for other occupancies. Controls must limit output temperatures of lavatories in public facility restrooms to 110 °F.

2000 IECC MECH. NOTES:

1) DUCTWORK TO BE SEALED WITH UNITED DUCT SEALER OR EQUAL. DUCT TAPE IS NOT ACCEPTABLE.
2) EXTERIOR DUCTS TO BE INSULATED WITH R-8 MINIMUM INSULATION.
3) DUCTS IN UN TEMPERED SPACES WITH A TEMPERATURE DIFFERENCE GREATER THAN 40° F SHALL BE INSULATED WITH R-5 MINIMUM INSULATION.
4) INTERIOR DUCTS IN TEMPERED SPACES WITH A TEMPERATURE DIFFERENCE GREATER THAN 15°F BUT LESS THAN 40° F SHALL BE INSULATED WITH R-3.3 MINIMUM INSULATION.
5) DUCTS IN TEMPERED SPACES THAT SERVE THAT AREA OR DUCTS WITH A TEMPERATURE DIFFERENCE LESS THAN 15° F DO NOT REQUIRE INSULATION.
6) ALL THERMOSTATS TO BE ELECTRONIC SEVEN-DAY FULLY PROGRAMMABLE WITH ONE HOUR OVERRIDE SWITCH/BUTTON, AND SEVEN-DAY FULLY PROGRAMMABLE FAN SUB-BASE.

2000 IECC PLUMB. NOTES:

1) DOMESTIC WATER TO BE INSULATED AS NOTED:

DOMESTIC HOT AND COLD WATER-
1-1/2" AND SMALLER-1/2" THICK
2" THRU 4"-1" THICK

2000 IECC MECH. PIPING NOTES:

1) MINIMUM PIPE INSULATION

FLUID	NOMINAL PIPE DIA.	
	< 1.5"	> 1.5"
STEAM	1.5"	3.0"
HOT WATER	1.0"	2.0"
CHILLED WATER, BRINE OR REFRIGERANT	1.0"	1.5"

BASED ON INSULATION HAVING A CONDUCTIVITY NOT EXCEEDING 0.27 BTU PER INCH/H * FT^2 * °F.

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BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

MECHANICAL ENERGY ANALYSIS

Desert Sage Health Care
2280 American Legion Blvd.
Mountain Home, Idaho

SHEET
EN1.0

March 2004

N

HVAC LEGEND

SYMBOL	DESCRIPTION
CAP (DOUBLE LINE) / CAP (SINGLE LINE)	DUCT CAP
24"x16" (DOUBLE LINE) / 8"ø (SINGLE LINE)	DUCT SIZES - FIRST DIMENSION LISTED IS VIEW DIMENSION
L24"x16" (DOUBLE LINE) / L1.5"ø (SINGLE LINE)	INTERNALLY LINED DUCT - SEE NOTES OR SPECIFICATION FOR TYPE OF LINING TO BE USED. DIMENSIONS DENOTE INTERNAL FREE AREA.
24"x16" (DOUBLE LINE) / 8"ø (SINGLE LINE)	DIRECTION OF AIRFLOW
24"x16" (DOUBLE LINE) / 8"ø (SINGLE LINE)	DUCTWORK OR EQUIPMENT TO BE DEMOLISHED
FOT / FOB (DOUBLE LINE) / (SINGLE LINE)	ECCENTRIC TRANSITION - (FOT = FLAT ON TOP, FOB = FLAT ON BOTTOM)
(DOUBLE LINE) / (SINGLE LINE)	CONCENTRIC TRANSITION
RISE / DROP (DOUBLE LINE) / (SINGLE LINE)	RISE OR DROP ARROW IN THE DIRECTION OF AIRFLOW
	SUPPLY DUCT (RISE)
	RETURN DUCT (RISE)
	EXHAUST DUCT (RISE)
	FLEX DUCT
24"x10" (DOUBLE LINE) / (SINGLE LINE)	SPIN-IN FITTING SUPPLY
24"x16" (DOUBLE LINE) / (SINGLE LINE)	SPIN-IN FITTING RETURN

SYMBOL	DESCRIPTION
(DOUBLE LINE) / (SINGLE LINE)	VOLUME DAMPER
(DOUBLE LINE) / (SINGLE LINE)	AUTOMATIC MOTOR OPERATED DAMPER PARALLEL AND OPPOSED BLADE
BDD (DOUBLE LINE) / BDD (SINGLE LINE)	BACKDRAFT DAMPER
(DOUBLE LINE) / (SINGLE LINE)	CONTROL AIR OR ZONE DAMPER
SD (DOUBLE LINE) / SD (SINGLE LINE)	DUCT MOUNTED SMOKE DETECTOR
(DOUBLE LINE) / (SINGLE LINE)	ACCESS DOOR (AD) ACCESS PANEL (AP)
F S FIS (DOUBLE LINE) & (SINGLE LINE)	F = FIRE DAMPER S = SMOKE DAMPER F AND S = FIRE AND SMOKE DAMPER SEE NOTES AND/OR SPECIFICATION FOR EXACT RATING AND MODEL NUMBERS
(DOUBLE LINE) (SINGLE LINE)	TURNING VANES IN DUCTWORK
RECTANGLE 24"x12" (DOUBLE LINE); ROUND 24"ø; FLAT OVAL 24"x12"; TURN UP / TURN DOWN	TURN DOWN/UP FOR VARIOUS STYLES OF DUCTWORK
RECTANGLE 10"x6" (SINGLE LINE); ROUND 6"; TURN UP / TURN DOWN	
(DOUBLE LINE) / (SINGLE LINE)	45° ENTRY TRANSITION

SYMBOL	DESCRIPTION
TAG NUMBER; NECK/THROAT SIZE; SD-1 12"ø; 500 CFM (4 TYP); NUMBER OF DIFFUSERS; CFM TO BALANCE TO	GRILLES, REGISTERS, DIFFUSERS - CALLOUT
SECTION/DETAIL NUMBER; SECTION/DETAIL; ADDITIONAL INFO; REFERENCED SHEET NUMBER	SECTION/DETAIL HEADING
SECTION NUMBER; REFERENCED SHEET NUMBER	SECTION CUT
H DH-01 / T AHU-01	HUMIDSTAT, THERMOSTAT - CALLOUT REFERENCES DEVICE, SEE SCHEDULES. MOUNT ALL DEVICES PER ARCHITECTURAL GUIDLINES.
	POWER OR GRAVITY ROOF INTAKE/EXHAUST
AHU 01 EQUIPMENT TAG NAME; SEQUENTIAL EQUIPMENT NUMBER	EQUIPMENT TAG SYMBOL; SEE EQUIPMENT SCHEDULES FOR THE CAPACITY, TYPE, AND QUANTITY.
4-WAY; 3-WAY; 2-WAY (CORNER); 2-WAY (OPPOSED THROW)	CEILING SUPPLY DIFFUSERS, SOLID FILL REPRESENTS BLANKED OFF AREAS.
	CEILING RETURN GRILLE
	CEILING EXHAUST GRILLE
	SIDEWALL SUPPLY/RETURN REGISTER, DIFFUSER, GRILLE.
	LINEAR SUPPLY / RETURN
PS	PRESSURE SENSOR
IL	INDICATOR LIGHT

NOTE: ALL SYMBOLS LISTED ABOVE MAY NOT APPEAR ON THESE DOCUMENTS.

HVAC ABBREVIATIONS

(E)	EXISTING
(F)	FUTURE
(N)	NEW
(D)	DEPTH
(L)	LENGTH
(W)	WIDTH
@	AT
ø	DIAMETER/PHASE
<	ANGLE
#	NUMBER/POUND
°	DEGREE
ABV	ABOVE
AC	AIR CONDITIONING
ACCU	AIR COOLED CONDENSING UNIT
ACOUST	ACOUSTICAL
ACP	ACOUSTICAL PANEL
ACT	ACOUSTICAL TILE
AD	AIR DROP
ADJ	ADJUSTABLE
AF	AIR FOIL
AFC	ABOVE FINISHED CEILING
AFF	ABOVE FINISH FLOOR
AFG	ABOVE FINISH GRADE
AFS	ABOVE FINISH SLAB
AFUE	AMERICAN FUEL UTILIZATION EFFICIENCY
AHU	AIR HANDLING UNIT
ALT	ALTERNATE
ALUM	ALUMINUM
AMB	AMBIENT
AMP	AMPERES
ANOD	ANODIZED
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
AP	AIR PRESSURE
APD	AIR PRESSURE DROP
APPROX	APPROXIMATE
ARCH	ARCHITECTURAL
ASHRAE	AMERICAN SOCIETY OF HEATING REFRIGERATION, AND AIR CONDITIONING ENGINEERS
ASTM	AMERICAN SOCIETY OF TESTING MATERIALS
AUTO	AUTOMATIC
AUX	AUXILIARY
BDD	BACK DRAFT DAMPER
BFF	BELOW FINISH FLOOR
BFS	BELOW FINISH SLAB
BG	BELOW GRADE
BHP	BRAKE HORSEPOWER
BI	BACKWARD INCLINED
BLDG	BUILDING
BOD	BOTTOM OF DUCT
BOS	BOTTOM OF STEEL
BRD	BOARD
BRG	BEARING
BTU	BRITISH THERMAL UNIT
CA	COMBUSTION AIR
CAP	CAPACITY
CB	CATCH BASIN
CD	CONDENSATE DRAIN
CF	CUBIC FEET
CFCI	CONTRACTOR FURNISHED CONTRACTOR INSTALLED
CFF	CAP FOR FUTURE
CFM	CUBIC FEET PER MINUTE
CI	CAST IRON
CL	CENTER LINE
CLG	CEILING
CLR	CLEAR
CNT	CENTER
CO	CLEAN OUT
COL	COLUMN
CONC	CONCRETE
COND	CONDENSATE
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUOUS/CONTINUATION
CONTR	CONTRACTOR
CTC	CENTER TO CENTER
CV	VALVE COEFFICIENT
DB	DECIBEL
DBL	DOUBLE
DB	DRY BULB TEMPERATURE
DEPT	DEPARTMENT
DET	DETAIL
DIM	DIMENSION
DISCH	DISCHARGE
DN	DOWN
DS	DOWNSPOUT
DSP	DRY STANDPIPE
DWG	DRAWING
E	EAST
EA	EACH
EAT	ENTERING AIR TEMPERATURE
EF	EXHAUST FAN
EFF	EFFICIENCY
EG	EXHAUST GRILLE
ELECT	ELECTRICAL
ELEV	ELEVATION
EMERG	EMERGENCY
ENCL	ENCLOSED/ENCLOSURE
ENT	ENTERING
EQ	EQUAL
EQUIP	EQUIPMENT
ESP	EXTERNAL STATIC PRESSURE
EWT	ENTERING WATER TEMPERATURE
EXH	EXHAUST
EXIST	EXISTING
EXP	EXPANSION
EXT	EXTERIOR
FA	FIRE ALARM
FAU	FURNACE AIR UNIT
FC	FORWARD CURVED
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
FH	FIRE HYDRANT
FIN	FINISH
FINS/IN	FINS PER INCH
FLA	FULL LOAD AMPS
FLASH	FLASHING
FLR	FLOOR(ING)
FOB	FLAT ON BOTTOM
FOT	FLAT ON TOP
FPM	FEET PER MINUTE
FRPF	FIREPROOF
FT	FEET/FOOT
FURR	FURRING
GA	GAUGE OR GAGE
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
GE	GENERAL EXHAUST
GND	GROUND
GSM	GALVANIZED SHEET METAL
HCP	HANDICAP
HD	HEAD
HDWR	HARDWARE
HORIZ	HORIZONTAL
HP	HORSEPOWER
HR	HOUR
HT	HEIGHT
HTG	HEATING
HZD	WATER
HVAC	HEATING, VENTILATING, AND AIR CONDITIONING
IBC	INTERNATIONAL BUILDING CODE
ID	INSIDE DIAMETER
IDW	INDIRECT WASTE
IE	INVERT ELEVATION
IGV	INLET GUIDE VANE(S)
IMC	INTERNATIONAL MECHANICAL CODE
IN	INCH
IND	INDIRECT
INSUL	INSULATION
INT	INTERIOR
IPC	INTERNATIONAL PLUMBING CODE
J-BOX	JUNCTION BOX
JST	JOIST
KW	KILOWATT
KWH	KILOWATT HOUR
L	LINED
LAT	LEAVING AIR TEMPERATURE
LAV	LAVATORY
LBS	POUNDS
LF	LINEAL FEET/FOOT
LPG	LIQUEFIED PETROLEUM GAS
LRA	LOCKED ROTOR AMP
L/S	LITERS PER SECOND
LWT	LEAVING WATER TEMPERATURE
M	METER
MAT	MATERIAL
MAX	MAXIMUM
MECH	MECHANICAL
MEZZ	MEZZANINE
MFD	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
MM	MILLIMETER
MO	MOTOR OPERATED
MOCP	MAX OVERLOAD CURRENT PROTECTION
MTD	MOUNTED
MTG	MOUNTING
MTL	METAL
MUA	MAKE-UP AIR/ MAKE-UP AIR UNIT
N	NORTH
N/A	NOT APPLICABLE
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRIC CODE
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NG	NATURAL GAS
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NOM	NOMINAL
NTS	NOT TO SCALE
NUM	NUMBER
OBD	OPPOSED BLADE DAMPER
OC	ON CENTER
OD	OUTSIDE DIAMETER
OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED, OWNER INSTALLED
OH	OVERHEAD
OSA	OUTSIDE AIR
OZ	OUNCE
P	PRESSURE
PD	PRESSURE DROP OR DIFFERENCE
PH	PHASE(S)
PLBG	PLUMBING
POC	POINT OF CONNECTION
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PVC	POLYVINYL CHLORIDE
RA	RETURN AIR
RAD	RADIUS
RD	ROOF DRAIN
RDL	ROOF DRAIN LEADER
REF	REFERENCE
REFL	REFLECTED
REL	RELOCATE
REM	REMOVE
REINF	REINFORCE
REQD	REQUIRED
RET	RETURN
RF	RECIRCULATION FAN
RG	RETURN GRILLE
RH	RELATIVE HUMIDITY
RPM	REVOLUTIONS PER MINUTE
RTU	ROOFTOP UNIT
S	SOUTH
SA	SUPPLY AIR
SCHED	SCHEDULE
SD	SUPPLY DIFFUSER
SECT	SECTION
SEER	SEASONAL ENGINEERING EFFICIENCY RATING
SEN	SENSIBLE
SER	SERIES
SF	SQUARE FOOT
SH	SENSIBLE HEAT
SIM	SIMILAR
SL	SUPPLY LOUVER
SMACNA	SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION
SOV	SHUT OFF VALVE
SP	STATIC PRESSURE
SPEC	SPECIFICATION
SQ	SQUARE
SS	SANITARY SEWER
SST	STAINLESS STEEL
STD	STANDARD
STL	STEEL
STRUCT	STRUCTURAL
SUP	SUPPLY
SUSP	SUSPENDED
SYS	SYSTEM
TA	TRANSFER AIR
TD	TEMPERATURE DIFFERENCE
TEMP	TEMPERATURE/TEMPERED/ TEMPORARY
TOD	TOP OF DUCT
TOS	TOP OF STEEL
TSP	TOTAL STATIC PRESSURE
TV	TURNING VANE(S)
TYP	TYPICAL
UBC	UNIFORM BUILDING CODE
UFC	UNIFORM FIRE CODE
UL	UNDERWRITERS LABORATORY
UMC	UNIFORM MECHANICAL CODE
UNFIN	UNFINISHED
UNO	UNLESS NOTED OTHERWISE
UPC	UNIFORM PLUMBING CODE
U	URINAL
V	VOLT
VAC	VACUUM
VAV	VARIABLE AIR VOLUME
VD	VOLUME DAMPER
VEL	VELOCITY
VENT	VENTILATION
VERT	VERTICAL
VFD	VARIABLE FREQUENCY DRIVE
VOL	VOLUME
VTR	VENT THRU ROOF
VVT	VARIABLE VOLUME TERMINAL
W	WEST
W/	WITH
W/O	WITHOUT
WB	WET BULB TEMPERATURE
WC	WATER CLOSET
WP	WATERPROOF
WPD	WATER PRESSURE DROP
WT	WEIGHT
ZD	ZONE DAMPER

NOTE: ALL ABBREVIATIONS LISTED ABOVE MAY NOT APPEAR ON THESE DOCUMENTS.

HVAC DRAWINGS GENERAL NOTES:

1) THESE GENERAL NOTES APPLY TO ALL HVAC DRAWINGS IN THIS SET AND SHOULD BE TREATED AS IF THEY ARE REFERENCED TO THE ENTIRE SET.

2) THE CONTRACTOR IS TO PROVIDE A FULLY OPERATIONAL HVAC HEATING AND COOLING SYSTEM. THE CONTRACTOR IS TO INSTALL ALL OF THE PIPING, DUCTWORK, ACCESSORIES, AND EQUIPMENT PER THE 2000 IPC, IMC, IBC, NFPA 99 (FOR MED. GAS), AND THE AHJ (AUTHORITY HAVING JURISDICTION). NOTHING IN THESE PLANS IS TO BE INTERPRETED AS TO ALLOW THE CONTRACTOR TO PROVIDE INSTALLATIONS THAT ARE NOT PER CODE OR THE AHJ.

3) NO ACTUAL WOOD TRUSS SHAPES ARE KNOWN AT THIS TIME. THE TRUSSES ARE TO BE BID AND DESIGNED WITH THE PROJECT. THE CONTRACTOR IS WARNED THAT THE LAYOUTS HERE ARE INTENDED TO BE DIAGRAMMATIC ONLY. THE CONTRACTOR WILL PROVIDE ALL FITTINGS AND EXTRA DUCTING REQUIRED TO COORDINATE WITH ALL OTHER TRADES AND THE STRUCTURE.

4) ALL DESIGN PRODUCT DATA IS FOR THE ITEM LISTED ONLY. SUBMITTAL DEVIATIONS WILL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. REVIEW BY THE ARCHITECT OR ENGINEER DOES NOT RELIEVE THE CONTRACTOR FROM HIS RESPONSIBILITIES FOR THE PRODUCT TO PERFORM OR PHYSICALLY FIT FOR THE APPLICATION AS INDICATED IN THESE DRAWINGS. ALL COORDINATION FOR THE NEW PRODUCT WITH THE OTHER TRADES IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THIS INCLUDES, BUT IS NOT LIMITED TO, PHYSICAL DIMENSIONS, WEIGHTS, ELECTRICAL CHARACTERISTICS, ETC. NO ADDITIONAL COSTS TO THE OWNER WILL BE ALLOWED DUE TO SUBSTITUTIONS.

5) LAYOUTS, ROUTING AND COORDINATION MUST BE DONE PRIOR TO FABRICATION OR INSTALLATION OF ANY DUCTWORK. THE CONTRACTOR SHALL BE ADVISED THAT THE OWNER WILL NOT PAY TO REMOVE DUCTWORK THAT WAS INSTALLED AND FOUND TO BE IN CONFLICT WITH THE STRUCTURE OR ANOTHER TRADE.

6) CONTRACTOR TO VERIFY ALL GRILLES, REGISTERS AND DIFFUSER FRAMES PRIOR TO ORDERING. CONTRACTOR SHALL VERIFY DIFFUSER LOCATIONS PRIOR TO INSTALLATION OF THE DIFFUSERS. ALL LIGHTING AND STRUCTURE NEEDS TO BE TAKEN INTO ACCOUNT.FOR EXACT DIFFUSER LOCATION SEE ARCHITECTS REFLECTED CEILING PLAN. COORDINATE WITH ELECTRICAL AND STRUCTURAL FOR FINAL DIFFUSER LOCAITON.

7) PROVIDE ACCESS DOORS FOR ALL EQUIPMENT LOCATED IN CEILINGS, WALLS, OR FLOORS, IF HIDDEN OR INACCESSIBLE. ALL FIRE DAMPERS SHALL BE SUPPLIED WITH ACCESS DOORS IN THE DUCT IN ORDER TO RESET DAMPER. ACCESS DOORS TO BE LOCATED IN MOST THE MOST ACCESSIBLE LOCATION, AND PRIOR APPROVED BY THE ARCHITECT BEFORE INSTALLATION. ACCESS DOORS TO BE LARGEST SIZE POSSIBLE FOR THE GIVEN DUCT SIZE. MAXIMUM ACCESS DOOR SIZE TO BE 12"X12".

8) CONTRACTOR MAY SUBSTITUTE EQUIVALENT ROUND OR RECTANGULAR SIZES FOR ALL LOW PRESSURE DUCTWORK. CONSULT S.M.A.C.N.A. CHARTS FOR EQUIVALENT SIZING CRITERIA.

9) INSTALL ALL COMPONENTS TO MEET MANUFACTURERS INSTALLATION MANUALS, LOCAL STATE AND AHJ CODES, OR AS DEPICTED IN THESE DOCUMENTS. WHICH EVER IS MOST STRINGENT.

10) CONTRACTOR SHALL SUPPLY DRAWING FOR APPROVAL TO OWNER/ARCHITECT SHOWING ALL PROPOSED THERMOSTAT LOCATIONS. ARCHITECT/OWNER SIGNATURE MUST BE OBTAINED PRIOR TO ANY THERMOSTAT WIRING, CONDUIT, OR INSTALLATION OF THERMOSTATS. FAILURE TO DO SO MAY RESULT IN MOVING THERMOSTATS AT CONTRACTORS LOSS.

11) PRINTS MUST BE REVIEWED FOR ACCURACY BEFORE STARTING THE JOB. ABSOLUTE ACCURACY OF THE DRAWINGS AND SPECIFICATIONS CANNOT BE GUARANTEED. WHILE EVERY EFFORT HAS BEEN MADE TO COORDINATE THE LOCATIONS OF EQUIPMENT & DUCTWORK, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE EXACT REQUIREMENTS GOVERNED BY ACTUAL JOB CONDITIONS. CHECK ALL INFORMATION AND REPORT ANY DISCREPANCIES BEFORE SUBMITTING BID OR FABRICATING AND INSTALLING WORK.

12) INSTALL ALL SHEET METAL IN ACCORDANCE WITH LATEST ASHRAE AND SMACNA RECOMMENDATIONS. PROVIDE VARIATIONS IN DUCT SIZE AND ADDITIONAL DUCT FITTINGS AS REQUIRED TO CLEAR OBSTRUCTIONS AND MAINTAIN CLEARANCES.

ELKHORN ENGINEERS, P.A.
2950 E. Magic View Dr., Ste. 190
Meridian, Idaho 83642
phone: (208) 955-0555
fax: (208) 955-0999

REGISTERED PROFESSIONAL ENGINEER
Steven T. Bastian
5112
STATE OF IDAHO
STEVEN T. BASTIAN
3-15-04

Medical Design Group
Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

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HVAC LEGENDS & ABBREV.

Desert Sage Health Care
2280 American Legion Blvd.
Mountain Home, Idaho

SHEET M0.0

March 2004

PART 1 - GENERAL

1.1 INDUSTRY STANDARD

A. ALL EQUIPMENT AND MATERIALS FURNISHED & INSTALLED UNDER THIS SECTION SHALL BE IN ACCORDANCE WITH THE FOLLOWING STANDARDS:

1. SHEET METAL DUCTWORK: ALL SHEET METAL DUCTWORK SHALL BE FABRICATED IN ACCORDANCE WITH THE STANDARDS ESTABLISHED BY THE AMERICAN SOCIETY OF HEATING, REFRIGERATION, AND AIR CONDITIONING ENGINEERS (ASHRAE) AND THE SHEET METAL AND AIR CONDITIONING NATIONAL ASSOCIATION (SMACNA) AND MEET THE MINIMUM REQUIREMENTS OF NFPA 90 AND NFPA 91.

2. FIRE DAMPERS AND EXPLOSION PROOF EQUIPMENT: ALL FIRE DAMPERS AND EXPLOSION PROOF EQUIPMENT SHALL HAVE AN UNDERWRITERS' LABORATORIES, INC. (UL) APPROVED LABEL.

3. FILTER MEDIA: FILTER MEDIA SHALL AS A MINIMUM REQUIREMENT BE RATED CLASS 2 BY UNDERWRITERS' LABORATORIES, INC.

4. DUCT INSULATION: DUCT INSULATION SHALL COMPLY WITH REQUIREMENTS OF NFPA-90A.

5. FLEXIBLE DUCTWORK: FLEXIBLE DUCTWORK SHALL COMPLY WITH REQUIREMENTS OF NFPA-90A.

1.2 SCOPE OF WORK

A. FURNISH AND INSTALL ALL AIR DISTRIBUTION EQUIPMENT AND ASSOCIATED ACCESSORIES AS INDICATED ON THE DRAWINGS AND SPECIFIED HEREIN. ALSO PROVIDE ANY INCIDENTAL WORK NOT SHOWN OR SPECIFIED THAT IS NECESSARY TO PROVIDE A COMPLETE SYSTEM.

B. PLACE ALL SLEEVES, HANGERS, SUPPORTS AND OPENINGS FOR WORK UNDER THIS SECTION. FLASH ALL WALL PENETRATIONS FOR WORK PERFORMED IN THIS SECTION. COORDINATE ALL ROOF PENETRATIONS WITH ROOFING CONTRACTOR.

C. PROVIDE CARPENTRY, MASONRY, CONCRETE AND METAL WORK REQUIRED FOR WORK OF THIS SECTION, EXCEPT WHERE SPECIFICALLY CALLED FOR UNDER OTHER DIVISIONS.

D. COORDINATE WITH WORK PERFORMED UNDER OTHER DIVISIONS. COORDINATE WORK DONE TO ACCOMMODATE REQUIREMENTS OF THIS DIVISION TO ENSURE ADEQUACY OF SPACE AND PROPER LOCATION.

E. PROVIDE CUTTING AND PATCHING AS REQUIRED FOR EXECUTION OF WORK PERFORMED UNDER THIS SECTION. NORMAL FRAMING AND BLOCKING SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR FOR WORK TO BE COMPLETED UNDER THIS DIVISION.

F. DAMAGE THAT OCCURS DUE TO WORK OF THIS DIVISION CAUSED BY LEAKS, BREAKS, DISCHARGE OF NORMAL WORK OF CONTRACT, INADVERTENT ACTS, ETC., ARE THE RESPONSIBILITY OF THIS CONTRACTOR. DAMAGED MATERIAL OR EQUIPMENT SHALL BE REPAIRED OR REPLACED WITH LIKE MATERIAL TO THE SATISFACTION OF THE OWNER AND/OR OWNER'S REPRESENTATIVE. REPAIRS OR REPLACEMENT WORK SHALL BE DONE BY CRAFTSMEN SKILLED IN THE TRADE OF THE WORK INVOLVED AND SHALL BE APPROVED BY THE OWNER AND/OR OWNER'S REPRESENTATIVE.

1.3 PROTECTION, STORAGE, AND DELIVERY

A. PROVIDE NECESSARY STORAGE AREAS AT THE SITE FOR SAFE STORAGE OF MATERIALS. PROVIDE SHOP AREA ELSEWHERE ON SITE THAT DOES NOT INTERFERE WITH WORK, FOR SAFE OPERATION OF TOOLS. REMOVE THESE FACILITIES AND RESTORE AREA(S) TO ORIGINAL CONDITION AT COMPLETION OF PROJECT.

B. PROTECT EQUIPMENT AND MATERIALS FROM PHYSICAL DAMAGE, CONSTRUCTION DIRT AND THE ELEMENTS FROM THE TIME THEY ARE SHIPPED BY THE MANUFACTURER TO THE TIME THE BUILDING IS ACCEPTED BY THE OWNER.

C. ARRANGE DELIVERY OF PRODUCTS IN TIMELY FASHION TO COORDINATE WITH WORK PROGRESS.

D. DELIVER PRODUCTS IN THE MANUFACTURER'S ORIGINAL PACKAGING WITH IDENTIFYING LABELS INTACT AND LEGIBLE. LEGIBLY IDENTIFY UNITS OR ITEMS AS TO INSTALLATION LOCATION AND/OR DRAWING DESIGNATIONS TO PERMIT CHECK BY OWNER'S REPRESENTATIVE AGAINST APPROVED MATERIAL LIST AND SHOP DRAWINGS.

E. IMMEDIATELY UPON DELIVERY INSPECT SHIPMENT(S), INCLUDING OWNER FURNISHED ITEMS, TO ASSURE THAT PRODUCTS ARE UNDAMAGED AND IN ACCORDANCE WITH SPECIFICATION REQUIREMENTS. SHOULD THE PRODUCT BE DAMAGED OR NOT IN COMPLIANCE WITH REQUIREMENTS, IMMEDIATELY REPAIR AS DIRECTED OR APPROVED OR ORDER REPLACEMENT AT NO INCREASE IN CONTRACT SUM.

F. REPLACE LOST OR DAMAGED MATERIALS AND EQUIPMENT AT NO INCREASE IN CONTRACT SUM.

G. PROTECT NEW AND EXISTING BUILDING STRUCTURES AND ADJACENT FINISHED SURFACES DURING CONSTRUCTION. PATCH, REPAIR AND REFINISH EXISTING FINISHED SURFACES DAMAGED BY WORK UNDER THIS DIVISION TO MATCH ADJACENT UNDISTURBED AREAS. PATCHING, REPAIR AND REFINISHING SHALL BE PERFORMED BY CRAFTSMEN SKILLED IN THE SECTIONS INVOLVED.

1.4 FEES

A. SECURE AND PAY FEES FOR PERMITS, LICENSES, INSPECTIONS AND ROYALTIES REQUIRED FOR WORK OF THIS DIVISION.

1.5 REGULATIONS AND STANDARDS

A. WORK AND MATERIALS SHALL BE IN FULL ACCORDANCE WITH THE RULES AND REGULATIONS OF THE LATEST ADOPTED EDITION AND ALL AMENDMENTS OF THE FOLLOWING:

1. 2000 INTERNATIONAL BUILDING CODE (IBC)
2. 2000 INTERNATIONAL MECHANICAL CODE (IMC)
3. 2000 INTERNATIONAL PLUMBING CODE (UPC)
4. 2000 INTERNATIONAL FIRE CODE (IFC)
5. ANY OTHER APPLICABLE FEDERAL, STATE, AND LOCAL LAWS, AND REGULATIONS.
6. SMACNA - SHEET METAL AND AIR CONDITIONING NATIONAL ASSOCIATION
7. AMERICAN SOCIETY OF HEATING, REFRIGERATION, & AIR CONDITIONING ENGINEERS (ASHRAE)
8. NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)
9. ASSOCIATED AIR BALANCE COUNCIL (AABC)

B. DO NOT CONSTRUE ANYTHING IN THESE DRAWINGS AND SPECIFICATIONS TO PERMIT WORK NOT CONFORMING TO THESE REQUIREMENTS. THE REGULATIONS SHALL GOVERN WHERE THEY REQUIRE HIGHER STANDARDS OR ARE IN CONFLICT WITH THE DRAWINGS AND SPECIFICATIONS. CONSIDER RULINGS AND INTERPRETATIONS OF THE ENFORCING AGENCIES AS PART OF THESE SPECIFICATIONS. COMPLY WITH THE DRAWINGS AND SPECIFICATIONS SHOWING WORK EXCEEDING MINIMUM CODE REQUIREMENTS.

C. PROVIDE ALL WORK REQUIRED BY THE GOVERNING AUTHORITY, EVEN IF IT IS NOT INDICATED ON DRAWINGS OR IN THE SPECIFICATIONS. IF REQUIRED WORK IS NOT SHOWN, SUBMIT A CONSTRUCTION PRICE FOR PROVIDING THIS WORK FOR APPROVAL PRIOR TO PERFORMING ANY WORK.

1.6 DRAWINGS AND SPECIFICATIONS

A. CONSIDER ALL DRAWINGS AND ALL DIVISIONS OF THESE SPECIFICATIONS AS A WHOLE AND PROVIDE WORK OF THIS SECTION AS SHOWN ANYWHERE THEREIN. PRINTS MUST BE REVIEWED FOR ACCURACY BEFORE STARTING THE JOB. ABSOLUTE ACCURACY OF THE DRAWINGS AND SPECIFICATIONS CANNOT BE GUARANTEED. WHILE EVERY EFFORT HAS BEEN MADE TO COORDINATE THE LOCATIONS OF EQUIPMENT COVERED UNDER OTHER SECTIONS OR DIVISIONS OF THESE SPECIFICATIONS, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE EXACT REQUIREMENTS GOVERNED BY ACTUAL JOB CONDITIONS. CHECK ALL INFORMATION AND REPORT ANY DISCREPANCIES BEFORE SUBMITTING BID OR FABRICATING AND INSTALLING WORK.

1.7 INSPECTION BY OWNER

A. WORK MAY BE INSPECTED AT ANY TIME BY THE OWNER OR HIS REPRESENTATIVE. WORK COVERED OR CONCEALED BEFORE BEING INSPECTED AND APPROVED SHALL BE OPENED AND UNCOVERED UPON REQUEST.

1.8 SUBMITTAL DATA

A. SUBMIT FOR APPROVAL ALL ATTACHMENTS TO STRUCTURE, ARCHITECTURAL ACCESS PANELS, ALL FIXTURES AND PIECES OF EQUIPMENT TO BE INSTALLED ON THE JOB. SUBMITTALS SHALL INCLUDE DUCTWORK AND ACCESSORIES, INSULATION, FANS, AND MOTORS. PROVIDE FAN CURVES, OPERATING CHARACTERISTICS, CAPACITIES, ETC., FOR ALL EQUIPMENT. PROVIDE ALL REQUIRED SUBMITTAL DATA IN ONE COMPLETE SET, BOUND AND INDEXED BY CATEGORY, USE, ETC. CLEARLY IDENTIFY IN THE SUBMITTAL ALL CAPACITIES, OPTIONS, AND CRITERIA REQUIRED TO DETERMINE THE PERFORMANCE OF THE EQUIPMENT.

B. PREPARE THREE (3 PLUS THE NUMBER REQUIRED FOR THE GENERAL CONTRACTORS USE) COPIES FOR ALL EQUIPMENT AND MATERIALS. SUBMIT TO ARCHITECT FOR REVIEW AND DISTRIBUTION.

1.9 WORKMANSHIP AND MATERIALS

A. EMPLOY ONLY EXPERIENCED, COMPETENT AND PROPERLY EQUIPPED PERSONNEL ON THE JOB. PROVIDE HIGH QUALITY WORKMANSHIP IN THE INSTALLATION OF EQUIPMENT AND MATERIALS. USE ONLY NEW MATERIALS IN PERFECT CONDITION EXCEPT THOSE SPECIFICALLY INDICATED TO BE RE-USED.

1.10 CLEANING

A. FLUSH PIPES AND DUCTS FREE FROM FOREIGN SUBSTANCES BEFORE INSTALLING VALVES, STOPS, OR MAKING FINAL CONNECTIONS. CLEAN ALL PIPING AND EQUIPMENT BEFORE INSTALLATION IS ACCEPTED BY THE OWNER. FURNISH AND INSTALL VALVED CONNECTIONS TO PIPING SYSTEMS TO FACILITATE CLEANING OTHER THAN FOR EQUIPMENT CONNECTIONS. SEE SPECIFIC CLEANING SPECIFICATIONS IN EACH SECTION.

1.11 OPERATING AND MAINTENANCE INSTRUCTIONS

A. PREPARE AND SUBMIT COMPLETE OPERATING MAINTENANCE MANUAL FOR EACH PIECE OF EQUIPMENT INSTALLED. PROVIDE WITH COMPLETE AND REVIEWED AND APPROVED BALANCE REPORT. PROVIDE MANUFACTURERS EQUIPMENT WARRANTIES IN THE O&M MANUAL. PROVIDE CONTRACTORS WARRANTY LETTER WITH THE NAMES AND PHONE NUMBERS IN THE O&M MANUAL.

1.12 SITE CLEAN-UP

A. AFTER ALL OTHER WORK HAS BEEN ACCOMPLISHED, CLEAN ALL EXPOSED, PIPING, DUCTWORK, FIXTURES, EQUIPMENT AND SUPPORTS OF CONSTRUCTION DUST, DIRT, AND DEBRIS.

B. LEAVE ALL AREAS INVOLVING MECHANICAL WORK IN A CLEAN CONDITION SATISFACTORY TO THE OWNER.

ELKHORN ENGINEERS, P.A.
2950 E. Magic View Dr., Ste. 190
Meridian, Idaho 83642
phone: (208) 955-0555
fax: (208) 955-0999

Medical Design Group
Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

REGISTERED PROFESSIONAL ENGINEER 5112 STATE OF IDAHO STEVEN T. BASTIAN

3-15-04

HVAC SPECIFICATIONS

Desert Sage Health Care
2280 American Legion Blvd.
Mountain Home, Idaho

March 2004

SHEET M0.1

PART 2 - PRODUCTS

2.1 SPECIFIC MANUFACTURER AND MODEL

A. TRADE NAMES ARE USED TO ESTABLISH STANDARDS. EQUIVALENT PRODUCTS FROM OTHER MANUFACTURERS MAY BE SUBSTITUTED AFTER SUBMITTAL IS REVIEWED AND APPROVED BY THE ENGINEER.

B. CONTRACTOR IS RESPONSIBLE FOR ANY AND ALL CHANGES DUE TO SUBSTITUTIONS OR ALTERNATES TO THE DESIGN DRAWINGS. AREAS OF COORDINATION CONCERN INCLUDE BUTNOT LIMITED TO; DIMENSIONS, STRUCTURAL IMPACTS, ELECTICAL CHARICTERISTICS, ETC... THIS CONTRACTOR WILL BE RESPONSIBLE FOR ANY INCREASE IN PROJECT COST OR IMPACT TO SHEDULE DUE TO THESE SUBSTITUTIONS.

2.2 UL LABEL

A. FURNISH 'UL' LABELED AND LISTED MATERIALS AND EQUIPMENT EXCEPT WHEN EQUIPMENT IS OF A TYPE FOR WHICH LABELING OR LISTING SERVICES ARE NOT AVAILABLE FROM 'UL'.

2.3 FINISHES AND PAINTING

A. PROVIDE ALL EQUIPMENT WITH A FACTORY FINISH. TOUCH UP ANY CHIPS OR SCRAPES THAT MAY OCCUR DURING HANDLING AND INSTALLING.

B. UNLESS ITEMS ARE FACTORY FINISHED, PROVIDE ONE PRIME COAT ON ALL PIPE, HANGER ASSEMBLIES, SUPPORTS, EQUIPMENT AND ACCESSORIES FURNISHED UNDER THIS DIVISION.

2.4 SHEET METAL DUCTWORK

A. GENERAL: CONSTRUCT AND INSTALL ALL SHEET METAL DUCTWORK IN ACCORDANCE WITH THE LATEST UMC, ASHRAE AND SMACNA RECOMMENDATIONS, USING GALVANIZED SHEET METAL HAVING A ZINC COATING OF 0.90 OZ. PER SQ. FT. EACH SIDE PER ASTM-A525, G-90, UNLESS STATED OTHERWISE. ALL DUCT SHALL BE 24 GAUGE OR GREATER (1.0 LB / SQ. FT., 0.0239" NOMINAL THICKNESS).

1. DUCT SIZE SHOWN ON LINED DUCT IS THE INSIDE DIMENSION.

2. THE THROAT RADIUS OF ALL BENDS SHALL BE 1-1/2 TIMES THE WIDTH OF THE DUCT WHEREVER POSSIBLE AND IN NO CASE SHALL THE THROAT RADIUS BE LESS THAN ONE WIDTH OF THE BRANCH DUCT. PROVIDE SQUARE ELBOWS WITH DOUBLE THICKNESS AIR FOIL TYPE TURNING VANES WHERE SPACE DOES NOT PERMIT THE ABOVE RADIUS, OR WHERE SQUARE ELBOWS ARE SHOWN. SPIN-IN FITTINGS SHALL HAVE DAMPERS OF 26-GAUGE THICKNESS WITH LOCKING QUADRANTS.

3. THE SLOPES OF TRANSITIONS SHALL BE NO GREATER THAN 30 DEGREES FOR ALL DUCT SYSTEMS.

4. PROVIDE SLIP DRIVE OR EQUIVALENT FLAT SEAMS FOR DUCTS EXPOSED IN THE CONDITIONED SPACE OR WHERE NECESSARY DUE TO SPACE LIMITATIONS. RUNOUTS TO GRILLES, REGISTERS OR DIFFUSERS ON EXPOSED DUCTWORK SHALL BE THE SAME SIZE AS THE OUTER PERIMETER OF THE CONNECTION FLANGE ON THE GRILLE, REGISTER OR DIFFUSER.

5. ALL ROUND DUCT WORK IN EXPOSED AREAS SHALL BE SPIRAL ROUND AND PAINTED PER ARCHITECTS DIRECTION AND COLOR REQUIREMENTS. PAINT ALL EXPOSED HANGERS AND SEISMIC RESTRAINTS.

6. INSTALL ADDITIONAL DUCT REINFORCEMENTS AND SEISMIC BRACING AS PER SMACNA.

7. PROVIDE A ¾" DUCT TEST OPENING WITH CORK - TO BE LOCATED WHERE AIR MEASUREMENTS ARE REQUIRED FOR BALANCING THE SYSTEM.

2.5 GRILLES AND DIFFUSERS:

A. FURNISH ALL DIFFUSERS, REGISTERS AND GRILLES WITH A BAKED ON, NON-GLOSSY PRIME COAT.

B. GRILLES AND DIFFUSERS SHALL MATCH ALL QUALITIES OF THOSE SPECIFIED ON THE DRAWINGS INCLUDING APPEARANCE, THROW, NOISE LEVEL, ADJUSTABILITY, ETC. REFER TO GRILLE , REGISTER, AND DIFFUSER SCHEDULE FOR PROPER COLOR. COORDINATE AND APPROVE COLOR WITH ARCHITECT BEFORE INSTALLATION. MATCH FRAME TYPE WITH ACTUAL SURFACE. VERIFY SURFACE BEFORE PURCHASING DEVICES.

2.6 FLEXIBLE CONNECTIONS

A. FLEXIBLE CONNECTIONS SHALL BE PROVIDED ON ALL ROTATING OR VIBRATING EQUIPMENT AND AT THE INLET AND OUTLET OF EACH FAN AND WHERE SHOWN ON THE DRAWINGS. PROVIDE FLEXIBLE CONNECTIONS LISTED FOR EXTERIOR LOCATIONS IF EXPOSED TO WEATHER.

2.7 FILTERS

A. FILTERS AND FRAMES IN THE AIR HANDLING UNITS ARE TO BE FURNISHED WITH THE UNIT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING THE FILTER MEDIA CARTRIDGES SPECIFIED HEREIN AND INSTALL THE FILTER MEDIA FURNISHED WITH THE EQUIPMENT. PROVIDED CHANGE OF FILTERS IF UNITS ARE RUN DURING CONSTRUCTION.

B. ALL REFERENCES TO EFFICIENCIES AND PERFORMANCE ARE BASED ON ASHRAE STANDARD 52-76. ALL FILTERS SHALL BE UL LISTED CLASS 2. ALL METAL SURFACES SHALL HAVE CORROSION RESISTANT COATINGS.

2.8 DUCT SEALERS

A. DUCTS SHALL BE SEALED WITH UNITED DUCT SEALER. DUCT TAPE WILL NOT BE ACCEPTED.

2.9 ACCESSORIES

A. FIRE DAMPERS SHALL BE FURNISHED WITH FUSIBLE LINKS AND CHAINS AND SHALL MEET ALL REQUIREMENTS OF LOCAL CODES AND U.L.; THIS SHALL INCLUDE THE STEEL SLEEVE, WHERE REQUIRED, AT FIRE WALLS. PROVIDE ONE FUSIBLE LINK FOR EACH 6 SQUARE FEET OF DAMPER OR FRACTION THEREOF. DAMPERS SHALL BE RATED AND APPROVED BY UNDERWRITERS' LABORATORIES, RUSKIN IBD2 OR AIR BALANCE #119 STYLE B OR C, FOR WALL AND FLOOR INSTALLATION; RUSKIN CFD OR TERRI MODEL FD30-AS-R FOR CEILING INSTALLATION. INSTALLATION SHALL CONFORM WITH UBC SECTION 713 REQUIREMENTS.

B. COMBINATION FIRE/SMOKE DAMPERS: "RUSKIN", FSD SERIES MINIMUM LEAKAGE CLASSIFICATION OF II, CONFORMING TO UL 555S CLASSIFICATION (OR PREFCO EQUAL). PROVIDE WITH FACTORY MOUNTED 120V ACTUATOR. INSTALLATION SHALL CONFORM TO UBC ARTICLE 713.10 REQUIREMENTS.

C. ALL DAMPER SHAFTS SHALL BE EXTERNALLY MARKED (GROOVED PARALLEL TO DAMPER POSITION) INDICATING DAMPER BLADE POSITION.

D. PROVIDE ACCESS DOORS (12"x12" MINIMUM; WITH VENTLOCK #202, #310 LATCHES AND #260 HINGES) FOR ALL DAMPERS OTHERWISE INACCESSIBLE, FIRE DAMPERS AND OTHER COMPONENTS OF THE SYSTEM, INSULATED TYPE IN INSULATED DUCTS.

E. MANUAL DAMPERS SHALL BE SINGLE OR OPPOSED BLADE TYPE AS INDICATED ON THE DRAWINGS AND SHALL BE COMPLETE WITH EXTERNAL LOCKING QUADRANTS.

F. FLEXIBLE DUCT SHALL BE "THERMA FLEX" TYPE GKM OR APPROVED EQUAL. DUCT SHALL BE FACTORY MADE USING COATED STEEL HELIX SPRING WIRE PERMANENTLY BONDED TO A COATED WOVEN FIBERGLASS COVER. MAXIMUM INSTALLED LENGTH OF FLEX DUCT SHALL BE 6 FEET. DUCTS SHALL MEET THE REQUIREMENTS OF NFPA 90A, AND UL181, CLASS 1.

2.10 ARCHITECTURAL ACCESS PANELS AND DOORS

A. WHERE REQUIRED: WHEREVER A PIECE OF EQUIPMENT IS INACCESSIBLE AND REQUIRES ACCESS FOR MAINTENANCE, REPAIR OR ADJUSTMENT. INSTALL AS REQUIRED FOR ACCESS TO FIRE AND SMOKE DAMPERS.

B. PHYSICAL PERFORMANCE: SIZE IS DEPENDENT UPON THE RELATIONSHIP OF THE DOOR TO THE PRODUCT BEING SERVICED. THEREFORE, WHERE NOT NOTED ON THE DRAWINGS, THE SIZE OF THE DOOR SHALL BE SELECTED TO PROVIDE CONVENIENT ACCESS TO ITS CONTENTS. THE FRAME SHALL BE FLUSH MOUNTED AND SHALL BE SUITABLE FOR THE BUILDING SURFACE IN WHICH IT IS BEING MOUNTED. PROVIDE FURRING AROUND THE DOOR FRAME AS DIRECTED WHERE THERE IS INSUFFICIENT DEPTH TO ALLOW A FLUSH MOUNTED FRAME AND DOOR. THE DOOR SHALL BE STEEL, OR STAINLESS STEEL AS INDICATED, AND OF SUFFICIENT GAUGE TO PREVENT PERMANENT DEFLECTION FROM NORMAL USE. PROVIDE FIRE RATED DOORS WHEN LOCATED IN FIRE RATED SURFACES.

C. FURNISH DOORS TO SUBCONTRACTORS FOR INSTALLATION AND COORDINATE LOCATIONS. PROVIDE WITH PRIME COAT AND FIELD PAINT AS DIRECTED BY ARCHITECT.

2.11 DUCT INSULATION

A. INTERIOR CONCEALED SUPPLY & RETURN DUCT SHALL BE INSULATED WITH 1.5 INCHES OF 1.0 LB/CUBIC FOOT DENSITY DUCT WRAP WITH FOIL BACKED SCRIM FACE. SEAL JOINTS VAPOR TIGHT. INSTALL PER MANUFACTURER'S INSTRUCTIONS.

B. INTERIOR EXPOSED SUPPLY DUCTS SHALL BE INSULATED WITH 1.0 INCHES OF 1.5 LB/CUBIC FOOT DENSITY DUCT LINER. LINER SHALL HAVE EROSION RESISTANT AIR SIDE FACE. LINE DUCTS WHERE SHOWN ON PLAN.

C. EXTERIOR EXPOSED SUPPLY & RETURN DUCTS SHALL BE DOUBLE-WALLED, INSULATED DUCTS. BOTH INNER AND OUTER SKINS WILL BE GALVANIZED 26 GA. (MINIMUM) INSULATION SHALL BE 1.5 INCHES OF 1.5 LB/CUBIC FOOT OF DUCT LINER. INSTALL PER MANUFACTURER'S INSTRUCTIONS AND SMACNA STANDARDS.

PART 3 - EXECUTION

3.1 COORDINATION

A. CUTTING AND REPAIRING: INCLUDE IN THE WORK ALL CUTTING AND REPAIRING NECESSARY AND REQUIRED FOR THE INSTALLATION. REPAIRING SHALL BE PERFORMED BY CRAFTSMEN SKILLED IN THE TRADE INVOLVED, IN A MANNER SATISFACTORY TO THE OWNER.

B. CONGESTED AREAS:

1. ALL CONDITIONS INVOLVING WORK UNDER THIS DIVISION AND OTHER SECTIONS SHALL BE COORDINATED IN ADVANCE OF INSTALLATION.

2. DIFFERENCES OR DISPUTES CONCERNING COORDINATION, INTERFERENCE OR EXTENT OF WORK BETWEEN SECTIONS SHALL BE DECIDED BY OWNER/GENERAL CONTRACTOR/CONSTRUCTION MANAGER.

ELKHORN ENGINEERS, P.A.
2950 E. Magic View Dr., Ste. 190
Meridian, Idaho 83642
phone: (208) 955-0555
fax: (208) 955-0999

REGISTERED PROFESSIONAL ENGINEER 5112 STATE OF IDAHO STEVEN T. BASTIAN
Steven T. Bastian
3-15-04

Medical Design Group
Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

HVAC SPECIFICATIONS

Desert Sage Health Care
2280 American Legion Blvd.
Mountain Home, Idaho

SHEET M0.2

March 2004

C. COORDINATION WITH OTHER DIVISIONS: COORDINATE ELECTRICAL INTERLOCKS OF MECHANICAL EQUIPMENT WITH THE ELECTRICAL DIVISION.

D. PROVIDE, CAUSING NO DELAY, ALL REQUIRED SLEEVES, CHASES, CONCRETE INSERTS, ANCHOR BOLTS, ETC., BEFORE CONCRETE IS POURED. BE RESPONSIBLE FOR CORRECT LOCATION AND INSTALLATION OF SAME.

E. INFORMATION TO OTHER DIVISIONS: PROVIDE TEMPLATES, INFORMATION AND INSTRUCTIONS TO OTHER DIVISIONS TO PROPERLY LOCATED HOLES AND OPENINGS TO BE CUT OR PROVIDED FOR MECHANICAL WORK.

3.2 SEISMIC RESTRAINT

A. PROVIDE SEISMIC RESTRAINTS PER SMACNA AND IBC, OR PER LOCAL AUTHORITY HAVING JURISDICTION, WHICHEVER IS MORE STRINGENT.

3.3 DUCTWORK

A. GENERAL

1. ALL DUCTWORK SHALL BE DELIVERED AND STORED IN SUCH A MANNER AS TO KEEP THE INTERIOR OF THE DUCT CLEAN. DUCTWORK SHALL NOT BE INSTALLED WHEN DUST OR DIRT IS BEING BLOWN THROUGH THE AREA DURING INSTALLATION. HUNG SECTIONS OF DUCT SHALL BE SEALED AT THE END OF EACH WORK DAY SO THAT NO INTRUSION OF DUST AND DIRT OCCURS.
2. ALL DUCTWORK SHALL BE STORED ON SITE WITH ALL OPENINGS COVERED AND TAPED TO PREVENT THE INTRUSION OF DUST AND DIRT.
3. ANY DUCTWORK UNCOVERED DURING A WORKING DAY SHALL BE RE-COVERED BEFORE THE END OF THAT WORKING DAY.
4. THE SIMPLE COVERING OF QUANTITIES OF DUCTWORK WITH PLASTIC SHEETS SHALL NOT BE AN ACCEPTABLE MEANS OF PROTECTION. THE OPENINGS IN EACH PIECE SHALL BE COVERED AND TAPED.
5. ALL DUCTWORK SHALL BE INSTALLED AS DIMENSIONED ON THE DRAWINGS WITH FIELD ROUTING VERIFICATIONS, AND IN ACCORDANCE WITH THE SPECIFICATIONS.
6. CLEAN ALL INTERIOR & EXTERIOR DUCTWORK OF DUST AND DIRT AS IT IS INSTALLED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO IMPLEMENT AND EMPLOY ANY AND ALL MEANS NECESSARY TO INSURE THAT ALL DUCT SYSTEMS ARE INSTALLED AND MAINTAINED CLEAN AT ALL TIMES.
7. TEST LOW VELOCITY DUCTWORK TO THE DESIGN OPERATING PRESSURE PER SMACNA. ALLOW LEAKAGE RATES AS PER THE ASSOCIATED AIR BALANCE COUNCIL (AABC).

B. SHEET METAL DUCTWORK:

1. INSTALL ALL SHEET METAL IN ACCORDANCE WITH LATEST ASHRAE AND SMACNA RECOMMENDATIONS. PROVIDE VARIATIONS IN DUCT SIZE (WITHOUT DIMINISHING SYSTEM PERFORMANCE) AND ADDITIONAL DUCT FITTINGS AS REQUIRED TO CLEAR OBSTRUCTIONS AND MAINTAIN CLEARANCES.
2. INSTALL DUCTS WITH ZINC DICHROMATE IRON HANGERS FASTENED TO OVERHEAD CONSTRUCTION. HANGERS SHALL BE IN CONFORMANCE WITH SMACNA, ASHRAE AND IMC REQUIREMENTS.

C. ACCESSORIES:

1. FIRE DAMPERS: INSTALL TYPE B FUSIBLE LINK FIRE DAMPERS FULL SIZE OF DUCT AT POINTS WHERE SHOWN OR REQUIRED.
2. MANUAL VOLUME DAMPERS: PROVIDE VOLUME DAMPERS WHERE INDICATED ON THE DRAWINGS. INSTALL SINGLE BLADE VOLUME DAMPERS OF 16 GAUGE GALVANIZED STEEL WITH CONTINUOUS $\frac{3}{8}$" ROD SECURED TO SUITABLE SUPPORT BEARINGS. SCORE ENDS OF DAMPER SHAFT TO INDICATE POSITION OF DAMPER BLADE. INSTALL DAMPER WITH SUFFICIENT CLEARANCE FROM DUCT TRANSITION AND/OR OTHER EQUIPMENT TO AVOID BINDING.
3. ACCESS DOORS: PROVIDE INSULATED ACCESS DOORS IN DUCTWORK AND FURRING FOR EACH FIRE DAMPER OR INSULATED ACCESS DOORS IN INSULATED DUCTS. PROVIDE PER SMACNA, 'UL' LISTING AND ALL RELATED CODES.

3.4 FILTERS

A. PRIOR TO INSTALLING FILTER MEDIA IN AIR HANDLING UNITS, CHECK AND SEAL ALL GAPS OR CRACKS PRESENT IN THE FILTER FRAMES.

B. INSTALL ALL FILTER MEDIA PRIOR TO STARTING SYSTEMS. VACUUM CLEAN ALL AIR HANDLERS PRIOR TO RUNNING UNITS AND INSTALLING FILTERS.

3.5 MAINTENANCE SCHEDULE

A. THE CONTRACTOR SHALL SUBMIT INFORMATION FROM THE EQUIPMENT MANUFACTURERS PERTAINING TO A LUBRICATION MAINTENANCE SCHEDULE, ALONG WITH ANTICIPATED BEARING LIFE. RELIABILITY AND LOW MAINTENANCE WILL BE A STRONG CONSIDERATION IN FAN SELECTION. INCLUDE THIS INFORMATION IN THE O&M MANUAL.

3.6 EQUIPMENT INSTALLATION

A. SET ALL EQUIPMENT IN PLACE ALLOWING FOR EASY ACCESS TO ALL PARTS OF THE EQUIPMENT. DO NOT BLOCK ACCESS TO ANY ACCESS DOORS, PULL SPACES OR PARTS REQUIRING ACCESS FOR MAINTENANCE (48" MINIMUM OR REFER TO MANUFACTURERS RECOMMENDATIONS).

B. PROVIDE ALL ANCHORS AND SUPPORTS FOR PROPER INSTALLATION ON EQUIPMENT. UNLESS NOTED OTHERWISE, ALL MATERIALS USED FOR ANCHORING AND SUPPORTS SHALL BE GALVANIZED.

3.7 EQUIPMENT IDENTIFICATION

A. IDENTIFY EACH FAN, PUMP, HEAT EXCHANGER, AIR HANDLER, MOTOR, MOTOR STARTER, AND SIMILAR EQUIPMENT. ALL EQUIPMENT SHALL HAVE ENGRAVED 2 COLOR (BLUE ON WHITE) PLATES THAT REFERENCE THE MAINTENANCE MANUALS.

3.8 GENERAL EQUIPMENT INSTALLATION REQUIREMENTS:

A. POSITION EQUIPMENT TO RESULT IN GOOD APPEARANCE AND PROVIDE EASY ACCESS TO ALL COMPONENTS FOR MAINTENANCE AND FOR TUBE REMOVAL OR OTHER REPAIRS. INSTALL THE PIPING AND PIPE LINE ACCESSORIES SO THEY DO NOT INTERFERE WITH EQUIPMENT ACCESS. INSTALL EQUIPMENT ISOLATION VALVES IN SUCH A MANNER TO ALLOW COMPLETE MAINTENANCE AND DISASSEMBLY OF EQUIPMENT WITHOUT HAVING TO REMOVE EQUIPMENT ISOLATION VALVES.

B. INSTALL EQUIPMENT IN A LOCATION THAT IS LEVEL, SECURE, AND FREE OF MOISTURE. PROVIDE SHIMS, ANCHORS, SUPPORT STRAPS, ANGLES, AND GROUTED BASES AS REQUIRED TO ACCOMPLISH THIS.

C. ONLY USE GALVANIZED OR CADMIUM PLATED SCREWS, NUTS, BOLTS, RODS, AND WASHERS. AFTER FABRICATION, HOT DIP GALVANIZE UNFINISHED FERROUS ITEMS FOR OUTDOORS USE, BELOW GRADE INSTALLATIONS OR OTHER AREAS SUBJECT TO MOISTURE.

D. INSTALL ALL EQUIPMENT PER MANUFACTURERS' RECOMMENDATIONS.

3.9 CONTROLS

A. PROVIDE CONTROLS AS DESCRIBED IN THESE DRAWINGS. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING THE ACTUAL WIRING DIAGRAMS. CONTRACTOR SHALL PROVIDE ALL NECESSARY COMPONENTS AND ACCESSORIES REQUIRED FOR A COMPLETE INSTALLATION THAT SHALL OPERATE PER THE "SEQUENCE OF OPERATION".

B. THE MECHANICAL CONTRACTOR IS RESPONSIBLE FOR ALL ELECTRICAL WORK ASSOCIATED WITH THE CONTROLS, INCLUDING CONDUIT, WIRING, AND FINAL CONNECTIONS. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR ALL POWER WIRING. COORDINATE WITH ELECTRICAL CONTRACTOR FOR POWER WIRING. CONTROL WIRING MAY BE SUB-CONTRACTED TO THE ELECTRICAL CONTRACTOR, IF DESIRED.

3.10 TESTS:

A. PROVIDE ALL LABOR, EQUIPMENT AND MATERIALS REQUIRED TO PERFORM TESTS.

B. PROTECT VALVES AND EQUIPMENT FROM DAMAGE DURING TESTS. INCLUDE CONNECTION TO PREVIOUSLY TESTED SECTIONS, IF THE SYSTEMS ARE TESTED IN SECTIONS.

C. SUBMIT TO THE ENGINEER, FOR APPROVAL, A LOG (BALANCE REPORT) OF ALL TESTS MADE WHICH SHALL INCLUDE DATE, TIME, TEMPERATURE, PRESSURE AND OTHER READINGS NECESSARY TO INDICATE THE SYSTEMS HAVE BEEN OPERATED AND TESTED IN THE MANNER OUTLINED IN THE CONSTRUCTION DOCUMENTS. TESTS SHALL BE OBSERVED AND SIGNED-OFF BY OWNER OR OWNER'S REPRESENTATIVE.

3.11 ADJUSTING AND BALANCING:

A. ADJUST ALL EQUIPMENT AND SYSTEM COMPONENTS AS SCHEDULED ON DRAWINGS, OR AS REQUIRED, TO RESULT IN THE INTENDED SYSTEM OPERATION. SYSTEMS SHALL BE INSTALLED, TESTED, AND ADJUSTED TO PERFORM AS DESIGNED BY THE ENGINEER.

B. TESTING ADJUSTMENT AND BALANCING REPORT (TAB) TO PERFORMED AS PART OF THE GENERAL CONTRACT. ACTUAL WORK TO BE PROVIDED BY INDEPENDENT QUALIFIED TAB SUB CONSULTANT.

3.12 STARTUP SERVICES:

A. PRIOR TO STARTUP, ENSURE THAT THE SYSTEMS ARE CLEAN AND READY, INCLUDING BUT NOT LIMITED TO THE FOLLOWING: PROPER EQUIPMENT ROTATION, PROPER WIRING, AUXILIARY CONNECTIONS, LUBRICATION, VENTING, CONTROLS, ALL FILTERS AND PROPERLY SET RELIEF AND SAFETY VALVES.

B. START AND OPERATE ALL SYSTEMS AS REQUIRED. ENSURE CONTROLS ARE FUNCTIONING PROPERLY. INSTRUCT OWNER OR OWNERS REPRESENTATIVE ON PROPER OPERATION AND MAINTENANCE. PROVIDE COMPLETED AND ENGINEER REVIEWED O & M MANUALS.

3.13 WARRANTY

A. THE CONTRACTOR SHALL WARRANTY HIS WORK FOR A PERIOD OF ONE YEAR FROM THE DATE OF COMPLETION. THIS INCLUDES WORKMANSHIP, MATERIALS, AND EQUIPMENT. CONTRACTOR SHALL PROVIDE LABOR, MATERIALS AND EQUIPMENT TO CORRECT ANY FAULTY INSTALLATIONS AND WORKMANSHIP.

B. THE OWNER IS RESPONSIBLE FOR ROUTINE MAINTENANCE AND CARE.

ELKHORN ENGINEERS, P.A.
2950 E. Magic View Dr., Ste. 190
Meridian, Idaho 83642
phone: (208) 955-0555
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REGISTERED PROFESSIONAL ENGINEER
Steve T. Bastian
5112
STATE OF IDAHO
STEVEN T. BASTIAN
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Medical Design Group
Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

HVAC SPECIFICATIONS

Desert Sage Health Care
2280 American Legion Blvd.
Mountain Home, Idaho

SHEET M0.3

March 2004

ROOFTOP UNIT SCHEDULE

EQUIP TAG	TOTAL CFM	NOMINAL TONS	OSA	ESP	FAN BHP	DRIVE	COOLING[1] EDB	EWB	EER	TOTAL MBH [5]	SEN MBH [5]	HEATING(NATURAL GAS) MBH-IN	MBH-OUT	EFFICENCY	ELECTRICAL CHAR	FLA	MCA	MOCP	APPROX. OPER WEIGHT	MANUFACTURER	MODEL #	REMARKS
RTU-1	3000	7-1/2	525	.60	1.63	BELT	80	62	9.0	83.6	81.3	120.0/180.0	96.0/144.0	80%	208/3/60	42	40.1	45	1200 Lbs.	CARRIER	48TFE008	[2],[3],[4],[6],[7],[8],[9],[11]
RTU-2	1600	4	155	.80	.93	BELT	80	62	9.0	45.7	42.2	72.0	56.0	80%	208/3/60	25	25.6	30	700 Lbs.	CARRIER	48TFE005	[2],[3],[4],[6],[7],[8],[9],[10],[11]
RTU-3	3400	8-1/2	725	.60	2.10	BELT	80	62	9.0	93.7	90.3	120.0/180.0	96.0/144.0	80%	208/3/60	47	44.6	50	1200 Lbs.	CARRIER	48TFE009	[2],[3],[4],[6],[7],[8],[9],[11]
RTU-4	3000	7-1/2	665	.60	1.63	BELT	80	62	9.0	83.6	81.3	120.0/180.0	96.0/144.0	80%	208/3/60	42	40.1	45	1200 Lbs.	CARRIER	48TFE008	[2],[3],[4],[6],[7],[8],[9],[11]

[1] DESIGN CONDITIONS: 95° F AMBIENT.
[2] PROVIDE WITH ROOF CURB PER MANUFACTURERS RECOMMENDATIONS, COORDINATE WITH ARCHITECTURAL DRAWINGS FOR DEPTH OF INSULATION.
(ALTERNATE #9) [3] PROVIDE ENTHALPY CONTROLLED 100% ECONOMIZER W/100% FULLY MODULATING POWERED EXHAUST.
[4] PROVIDE UNITS W/ ELECTRONIC AUTO CHANGE-OVER HEATING/COOLING T-STAT W/ FAN CONTROL. T'STAT TO BE 365 CALENDAR DAY FULLY PROGRAMMABLE WITH 1-HOUR UNOCCUPIED OVERRIDE.
[5] THESE VALUES ARE BASED UPON MANUFACTURER'S DATA, ASSUMING 80°F DB/62°F WB.
(ALTERNATE #10) [6] PROVIDE WITH ECONOMIZER CAPABLE OF 100% OSA. PROVIDE MECHANICAL OR CONTROLS STOP CAPABLE OF STOPPING @ 50% OSA.
(ALTERNATE #10) [7] PROVIDE UNITS WITH BAROMETRIC RELIEF CAPABLE OF 20% RELIEF AIR. PROVIDE ENTHALPY CONTROLLED 100% ECONOMIZER.
[8] PROVIDE DUCT MOUNTED SMOKE DETECTORS. PROVIDED AND INSTALLED BY MECHANICAL, FINAL CONNECTION BY ELECTRICAL.
[9] PROVIDE UNITS WITH LOOSE SHIPPED, FIELD WIRED CONVENIENCE OUTLETS SEPARATE CIRCUIT.
[10] PROVIDE ALTERNATE HIGH STATIC MOTOR.
[11] ROOF TOP UNITS TO OPERATE AT 70°F HEATING/72°F COOLING DURING OCCUPIED HOURS. FAN TO REMAIN ON DURING OCCUPIED HOURS. UNOCCUPIED TO OPERATE AT 65°F HEATING/85°F COOLING. FAN ON AUTO DURING UNOCCUPIED HOURS.

MANUFACTURER'S APPROVED FOR SUBMITTAL OF COMPARABLE PRODUCTS
CARRIER, YORK, LENNOX, TRANE, BRYANT

DESCRIPTION OF ALTERNATES:

THESE DESCRIPTIONS ARE TO PROVIDE AN UNDERSTANDING FOR THE MECHANICAL CONTRACTOR ONLY, AND DO NOT REFLECT THE FULL SCOPE OF ITEMS THAT MAY BE REQUIRED FOR ALL DISCIPLINES. ALTHOUGH SOME DIRECTION ON WHERE TO FIND INFORMATION CONCERNING EACH ALTERNATE IS NOTED BELOW, IT IS NOT INTENDED TO BE COMPLETE. TREAT THE ENTIRE DRAWING AND SPECIFICATIONS SET (ALL CONTRACT DOCUMENTS) AS APPLYING TO ALL ALTERNATES LISTED IN THE BID FORM AND ON THESE DRAWINGS.

ALTERNATE #3 - ROOFING

THE INTENT OF THIS ALTERNATE IS TO PROVIDE A BASE BID DESIGN FOR ASPHALT SHINGLES, THAT INCLUDES EXHAUST FANS TO PROVIDE VENTILATION AIR UNDER THE SHINGLES TO MAINTAIN A LOWER TEMPERATURE AND PROLONG THE LIFE OF THE SHINGLES. FOR THE MECHANICAL THIS IS A DEDUCTIVE ALTERNATE, AS THE GENERAL CONTRACTOR IS TO PROVIDE CONCRETE TILED ROOF FOR THE ALTERNATE. THIS WOULD ALLOW THE MECHANICAL CONTRACTOR TO ELIMINATE THE EXHAUST FANS (EF-8).

THIS BASE BID IS TO INCLUDE TWO EXHAUST FANS (EF-8), ONE LOCATED ON THE EAST SIDE OF THE ROOF WELL AND ONE ON THE WEST SIDE OF THE ROOF WELL. THESE ARE TO BE TIED TO SEPARATE HIGH TEMPERATURE THERMOSTATS TO BE LOCATED IN THE ATTIC ON THE TOP CHORD OF THE TRUSSES WITHIN 5'-0" OF FAN INLET. THESE ARE TO ACTIVATE THE FANS UPON THE TEMPERATURE RISING ABOVE 95F. ALL DUCTWORK AND ACCESSORIES AS DEPICTED IN THESE DRAWINGS REQUIRED FOR THE OPERATION OF THESE FANS SHALL BE PART OF THIS BASE BID.

THE ALTERNATE BID IS TO ELIMINATE THESE FANS AND THEIR ASSOCIATED DUCTWORK, CONTROLS AND ACCESSORIES.

ALTERNATE #9 - POWERED EXHAUST

THE INTENT OF THIS ALTERNATE IS TO PROVIDE 100% FULLY MODULATING POWERED EXHAUST MOUNTED DIRECTLY ON EACH ROOF TOP UNIT.

NO BASE BID.

ALTERNATE #10 - CENTRALIZED POWERED EXHAUST

THE INTENT OF THIS ALTERNATE IS TO PROVIDE 100% FULLY MODULATING POWERED EXHAUST CENTRALLY LOCATED AND CONTROLLED BY AVERAGING PRESSURE SENSORS IN EACH OF THE MAJOR COMPARTMENTS OF THE BUIDLING.

PROVIDE AS LISTED IN THE EXHAUST SCHEDULE EF-6, INCLUDE THE VFD FOR THIS FAN, THE CONTROLS, DUCT CONNECTIONS, LOW VOLTAGE WIRING ETC., SEE DRAWINGS M1.2, AND DETAIL 2 ON M3.1.

NO BASE BID.

EXHAUST FAN SCHEDULE

	EQUIP TAG	AREA SERVED	QTY [6]	TYPE	DRIVE	CFM	ESP	RPM	SONES	HP OR (WATTS)	ELECT	OPER WEIGHT	MANUFACTURER	MODEL #	REMARKS
	EF-1	RESTROOM	4	CEILING	DIRECT	75	.25	1200	1.5	(65)	115/1/60	22 Lbs.	COOK	GC-240	[1]
	EF-2	--	1	CEILING	DIRECT	100	.25	1200	1.5	(65)	115/1/60	22 Lbs.	COOK	GC-240	[3]
	EF-3	--	2	CEILING	DIRECT	150	.25	1365	3.5	(77)	115/1/60	25 Lbs.	COOK	GC-320	[3]
	EF-4	--	3	CEILING	DIRECT	200	.25	1610	4.3	(135)	115/1/60	25 Lbs.	COOK	GC-340	[3]
	EF-5	CRAWL SPACE	1	INLINE	DIRECT	155	.25	1360	2.1	(61)	115/1/60	25 Lbs.	COOK	GN-320	[2],[4]
(ALTERNATE #10)	EF-6	RELIEF AIR	1	UPBLAST	BELT	6000	.50	1725	7.9	1 HP	115/1/60	400 Lbs.	COOK	330R7B	[7],[8],[9],[10]
	EF-7	UTILITY 2	1	CEILING	DIRECT	75	.25	1200	1.5	(65)	115/1/60	22 Lbs.	COOK	GC-240	[5]
(ALT. #3)	EF-8	ATTIC	2	INLINE	DIRECT	230	.125	1500	3.4	153	115/1/60	22 Lbs.	COOK	GN-180	[5]
	EF-9	ISOLATION ROOM	1	INLINE	DIRECT	230	.125	1500	3.4	153	115/1/60	22 Lbs.	COOK	GN-180	[5]

[1] INTERLOCK WITH MOTION SENSOR, COORDINATE W/ ELECTRICAL.
[2] FAN TO RUN CONTINUOUSLY.
[3] PROVIDE WITH INDEPENDENT WALL SWITCH.
[4] TIE FAN TO INDICATOR LIGHT W/ PERMANENT SIGN, IN NURSE AREA, WHICH SIGNALS IF FAN FAILS TO ENERGIZE. PROVIDE DIFFERENTIAL PRESSURE SWITCH TO PROVE FLOW.
[5] INTERLOCK FAN WITH HEAT RISE T-STAT.
[6] VERIFY ALL COUNTS WITH THE FLOOR PLANS.
[7] PROVIDE EXHAUST FAN WITH MANUFACTURERS ROOF CURB WITH 1/2" NEOPRENE RUBBER VIBRATION ISOLATING PAD ALL AROUND BASE CURB.
[8] PROVIDE WITH BACKDRAFT DAMPER, DAMPER TO BE LOW LEAKAGE WITH RUBBER END SEALS.
[9] PROVIDE WITH VFD TO ACCEPT SIGNAL FROM PRESSURE CONTROL PANEL. SEE 2/M3.1.
[10] PROVIDE WITH INVERTOR RATED DUTY MOTOR.

MANUFACTURER'S APPROVED FOR SUBMITTAL OF COMPARABLE PRODUCTS
COOK, GREENHECK, PENN, CARNES

GRILLES, REGISTERS AND DIFFUSERS SCHEDULE

EQUIP. TAG	AREA SERVED	NOMINAL FACE SIZE	NECK SIZE	MATERIAL	FINISH	MOUNTING TYPE [2]	MANUFACTURER	MODEL #	DESCRIPTION
SD-1	--	[4]	[1]	STEEL	#26 WHITE	LAY-IN	TITUS	TMS	SUPPLY DIFFUSER
SD-2	--	[3]	[1]	STEEL	#26 WHITE	HARD	TITUS	TMS	SUPPLY DIFFUSER
RG-1	--	[4]	[1]	STEEL	#26 WHITE	LAY-IN	TITUS	25RL	RETURN GRILLE - 1/2" SPACING, 30° DEFLECTION
RG-2	--	[3]	[1]	STEEL	#26 WHITE	HARD/SIDEWALL	TITUS	25RL	RETURN GRILLE - 1/2" SPACING, 30° DEFLECTION
EG-1	--	[4]	[1]	STEEL	#26 WHITE	LAY-IN	TITUS	25RL	EXHAUST GRILLE - 1/2" SPACING, 30° DEFLECTION
EG-2	--	[3]	[1]	STEEL	#26 WHITE	HARD/SIDEWALL	TITUS	25RL	EXHAUST GRILLE - 1/2" SPACING, 30° DEFLECTION

[1] SEE PLANS FOR NECK SIZE. LEAD IN DUCT SIZE SHALL BE THE SAME AS NECK SIZE. PROVIDE SQUARE TO ROUND TRANSITION AS REQUIRED.
[2] CONTRACTOR SHALL VERIFY ALL CEILING TYPES BEFORE ORDERING GRILLES, REGISTERS, AND DIFFUSERS.
[3] NOMINAL FACE SIZE SHALL BE SIZED WITH NC RATING OF 25 OR LESS.
[4] NOMINAL FACE SIZE SHALL BE SIZED WITH NC RATING OF 25 OR LESS. PROVIDE WITH 24"x24" LAY-IN CEILING PANEL TO MATCH CEILING TYPE.

MANUFACTURER'S APPROVED FOR SUBMITTAL OF COMPARABLE PRODUCTS
ANEMOSTAT, KRUGER, PRICE, NAILOR, TITUS

WALL MOUNTED ELECTRIC HEATER SCHEDULE

EQUIP TAG	AREA SERVED	QTY [2]	TYPE	CFM	ELECT	WATTS	OPER WEIGHT	MANUFACTURER	MODEL #	REMARKS
EWH-1	ENTRANCE	6	ELECTRIC	50	120/1/60	500	--	QMARK	CRA-0512-T2	[1]

[1] PROVIDE UNIT WITH INTEGRAL THERMOSTAT CONTROLS.
[2] VERIFY COUNT WITH FLOOR PLAN

MANUFACTURER'S APPROVED FOR SUBMITTAL OF COMPARABLE PRODUCTS
QMARK, MARKEL

ELKHORN ENGINEERS, P.A.
2950 E. Magic View Dr., Ste. 190
Meridian, Idaho 83642
phone: (208) 955-0555
fax: (208) 955-0999

REGISTERED PROFESSIONAL ENGINEER
5112
STATE OF IDAHO
STEVEN T. BASTIAN

Steve T. Bastian

3-15-04

Medical Design Group
Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

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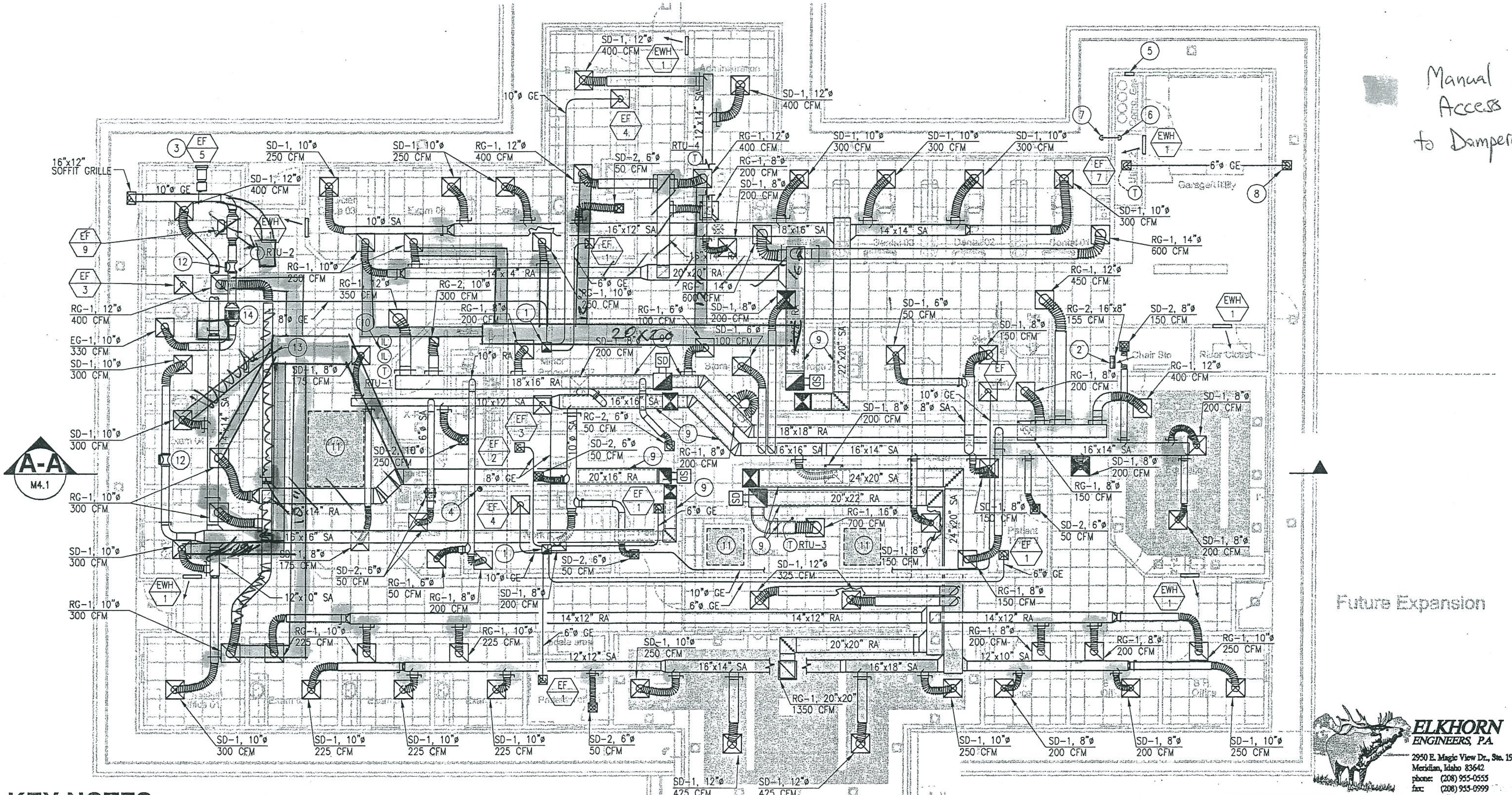
HVAC SCHEDULES

Desert Sage Health Care
2280 American Legion Blvd.
Mountain Home, Idaho

SHEET M0.4

March 2004

Manual Access to Dampers



KEY NOTES:

(1) 14"x14" EXHAUST UP THRU ROOF, SEE SHEET M2.1 FOR CONTINUATION.

(2) 14"x3" RELIEF DUCT DOWN IN WALL TO CRAWL SPACE, TERMINATE WITH BAROMETRIC DAMPER AND INSECT SCREEN, SEE DETAIL 4, SHEET M3.1.

(3) CONNECT 12"x6" GE DUCT TO 16"x8" VENT (VENT TO BE PROVIDED BY OTHERS).

(4) 6"ø DRYER EXHAUST UP TO ATTIC SPACE, SEE SHEET M2.1 FOR CONTINUATION. INSTALL DUCT CLEANOUT IN BOTTOM OF VERTICAL RUN PER DETAIL 3, SHEET M3.1.

(5) (2) 12"x24" LOUVERS (LDI MODEL # TE-12 WITH BIRD/INSECT SCREEN), MINIMUM OF 72 SQ. IN. FREE AREA, FOR GAS CABINET VENTING. MOUNT (1) WITHIN 6" OF FINISHED CEILING, AND (1) WITHIN 6" OF FINISHED FLOOR.

(6) ROUTE 4"ø OSA DUCT FROM SOFFIT TO COMPRESSOR ROOM, CONNECT TO OFCI REMOTE AIR MANIFOLD.

(7) EXTEND 4"ø OSA THRU SOFFIT 2" AND TERMINATE WITH ESCUTCHEON PRIMED AND PAINTED TO MATCH. COVER END WITH INSECT SCREEN.

(8) EXTEND 6"ø GE TO EG-1 IN SOFFIT.

(9) LINE DROP AND THE FIRST 10'-0" OF ALL SA & RA WITH 1" ACOUSTICAL LINING.

(10) INDICATOR LIGHT FOR EF-5/EF-8 LOCATED IN THIS AREA, COORDINATE FINAL LOCATION WITH ARCHITECT/OWNER.

(11) AREA FOR SKYLIGHT, KEEP CLEAR.

(12) PROVIDE PHOENIX CONTROL SUPPLY AND EXHAUST CONTROL VALVES, CONSTANT VOLUME MODEL # CVVA-108M NO SUBSTITUTIONS ALLOWED.

(13) PROVIDE PHOENIX ACTIVE PRESSURE MONITOR MODEL # APM100. NO SUBSTITUTIONS ALLOWED. MECHANICAL CONTRACTOR IS RESPONSIBLE FOR ALL LOW VOLTAGE WIRING FROM TRANSFORMER TO ALL COMPONENTS. SUPPLY WITH PRESSURE SENSORS AND MOUNT PER MANUFACTURERS WRITTEN INSTRUCTIONS. PROVIDE ALL REQUIRED COMPONENTS FOR A COMPLETE OPERATIONAL SYSTEM.

(14) PROVIDE 12"x12"x4" THICK HEPA (99.9% EFF) FILTER IN FRAME. MAKE ACCESSIBLE TO BOTTOM OR TO SIDE AS ALLOWED BY STRUCTURE AND CEILING. PROVIDE WITH WALL MOUNTED DIFFERENTIAL PRESSURE GAGE TO MEASURE PRESSURE ACROSS HEPA. MOUNT BESIDE ACTIVE PRESSURE MONITOR.

REGISTERED PROFESSIONAL ENGINEER 5112 STATE OF IDAHO STEVEN T. BASTIAN

Steve T. Bastian

3-15-04

ELKHORN ENGINEERS, P.A.
2950 E. Magic View Dr., Ste. 190
Meridian, Idaho 83642
phone: (208) 955-0555
fax: (208) 955-0999

Medical Design Group
Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

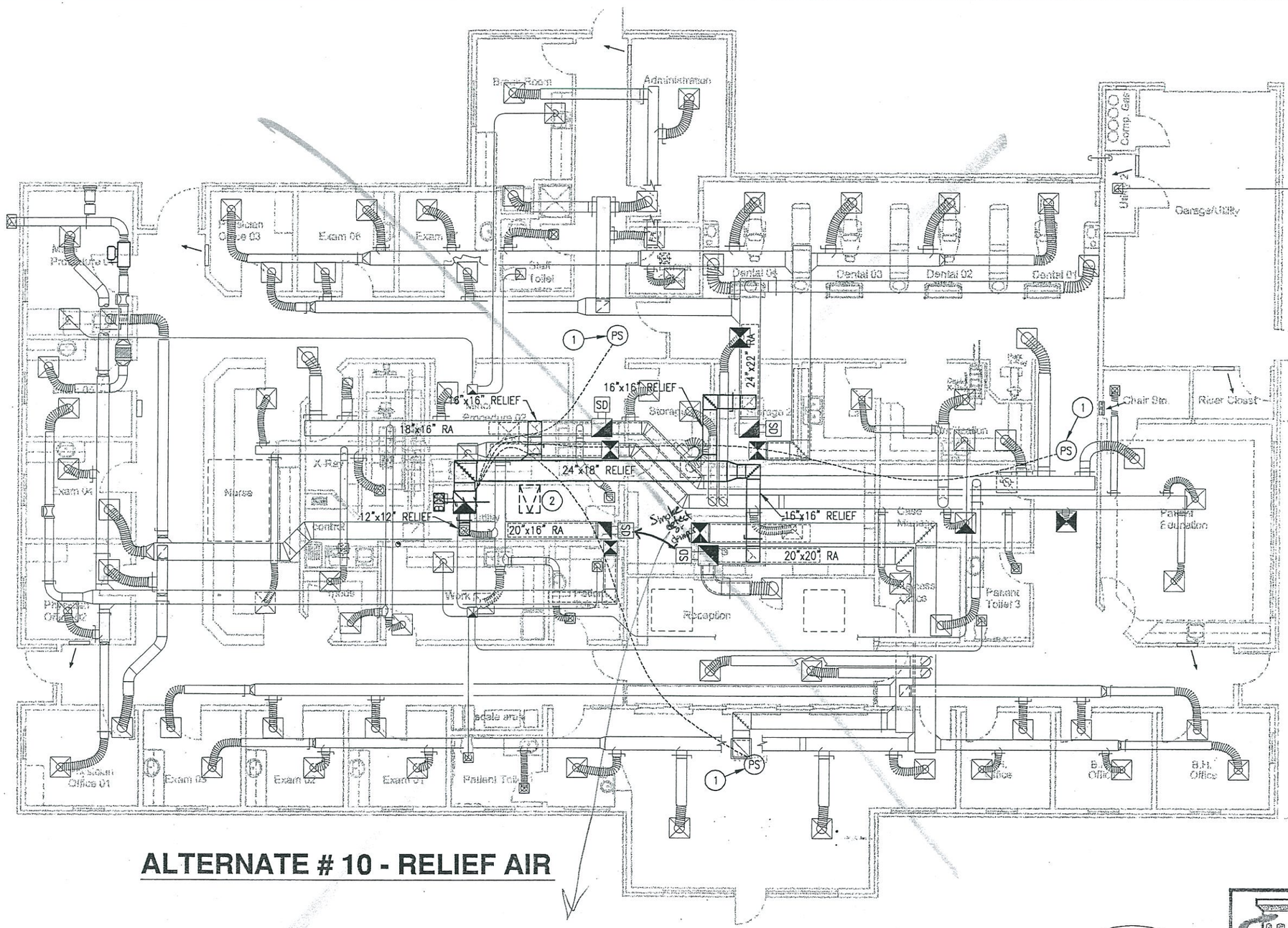
N

HVAC FLOOR PLAN

Desert Sage Health Care
2280 American Legion Blvd.
Mountain Home, Idaho

SHEET M1.1

March 2004



ALTERNATE # 10 - RELIEF AIR

110v
Low voltage

KEY NOTES:

1. PROVIDE PRESSURE SENSOR TO SENSE ROOM PRESSURE & SEND SIGNAL BACK TO AVERAGING CONTROLLER. CONTROLLER TO OPERATE VFD ON EF-6 TO MAINTAIN AVERAGE BUILDING PRESSURE OF .0.05 W.C., SEE DETAIL 2, SHEET M3.1 FOR MORE INFORMATION.
2. ROOF HATCH, KEEP CLEAR.

REGISTERED PROFESSIONAL ENGINEER
Steven T. Bastian
5112
STATE OF IDAHO
STEVEN T. BASTIAN
3-15-04

ELKHORN ENGINEERS, P.A.
2950 E. Magic View Dr., Ste. 190
Meridian, Idaho 83642
phone: (208) 955-0555
fax: (208) 955-0999

Medical Design Group
Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

RELIEF AIR PLAN - ALT. # 10

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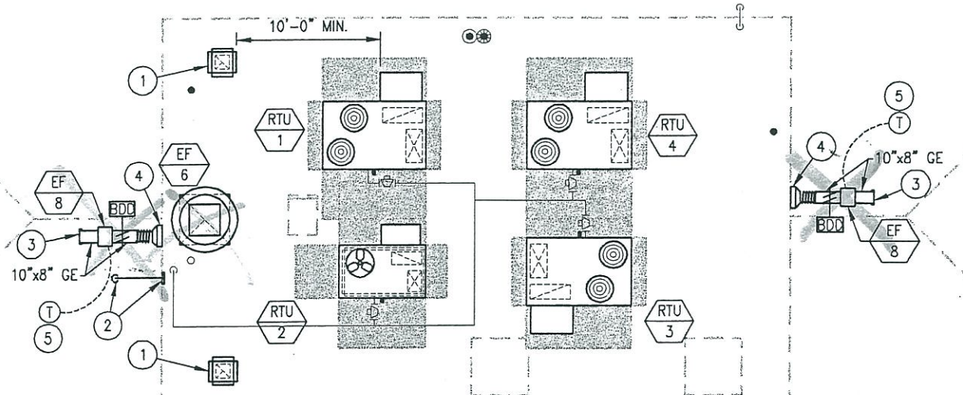
2280 American Legion Blvd.
Mountain Home, Idaho

SHEET
M1.2

March 2004



KEY NOTES:

1. RELIEF VENTILATOR, SEE DETAIL 1, SHEET M3.1 FOR MORE INFORMATION.
2. 6"ø DRYER EXHAUST FROM BELOW, ROUTE IN ATTIC SPACE TO PARAPET WALL AND TERMINATE WITH MANUFACTURERS RECOMMENDED WALL CAP.
3. 1/2"x1/2" WELDED WIRE MESH.
4. SIDEWALL GRILLE WITH INSECT SCREEN.
5. MOUNT HIGH TEMPERATURE T'STAT (RANGE 80F–110F ADJ.) AT TOP CHORD OF TRUSS, WITHIN 5'–0" OF INLET TO ATTIC EXHAUST FAN. T'STAT TO ACTIVATE EXHAUST FAN UPON TEMP RISING TO 95F. PROVIDE DIFFERINTIAL PRESSURE SWITCH TO PROVE AIR FLOW. PROVIDE INDICATOR LIGHT TO SHOW FAN FAILURE. MOUNT INDICATOR LIGHT AT UTILITY RM., LOCATE PER ARCHITECT/OWNER. MARK WITH LAMINATED, TWO COLOR, ENGRAVED TAG. PROVIDE WIRING DIAGRAM FOR REVIEW.

REGISTERED PROFESSIONAL ENGINEER
Steve T. Bastian
5112
STATE OF IDAHO
STEVEN T. BASTIAN
3-15-04

ELKHORN ENGINEERS, P.A.
2950 E. Magic View Dr., Ste. 190
Meridian, Idaho 83642
phone: (208) 955-0555
fax: (208) 955-0999

Medical Design Group
Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

HVAC ROOF PLAN

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2280 American Legion Blvd.
Mountain Home, Idaho

SHEET M2.1

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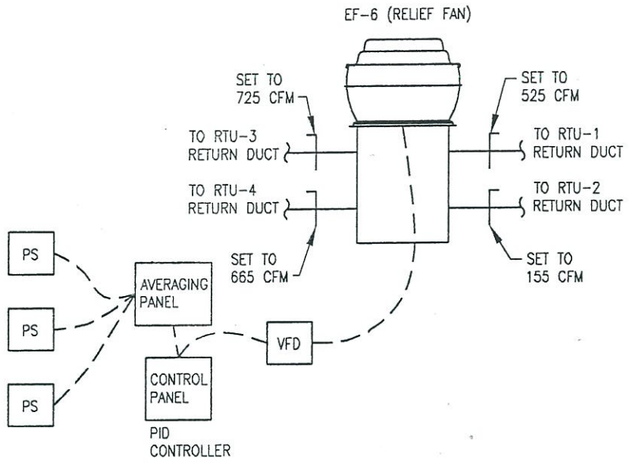


SEQUENCE OF OPERATIONS

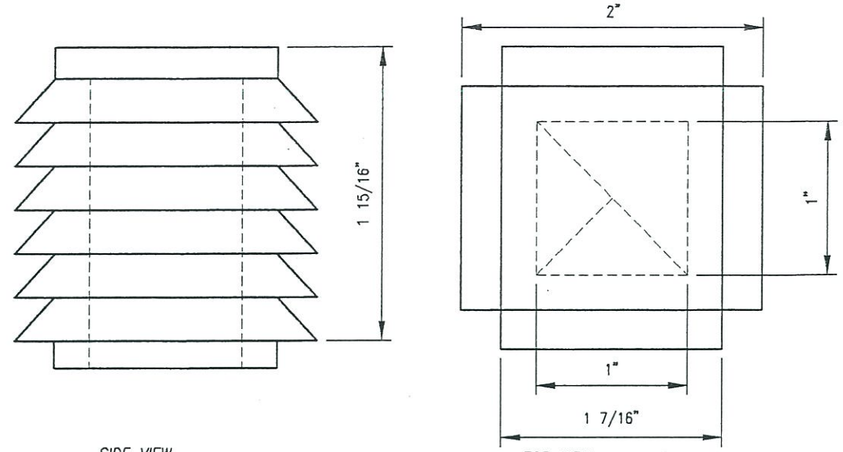
EF-6 TO START UPON AVERAGE PRESSURE TO RISE TO +0.1" W.G. UPON START, OPERATE FAN AT 50% SPEED FOR 30 SECONDS (ADJUSTABLE). THEN MODULATE TO CONTROL PRESSURE TO SET POINT.

STOP FAN UPON PRESSURE FALLING TO + .05" W.G.

ALL SET POINTS TO BE ADJUSTABLE CONTRACTOR TO SUBMIT ALL PROPOSED COMPONENTS FOR REVIEW.

RELIEF FAN SEQUENCE ADD ALTERNATE #10

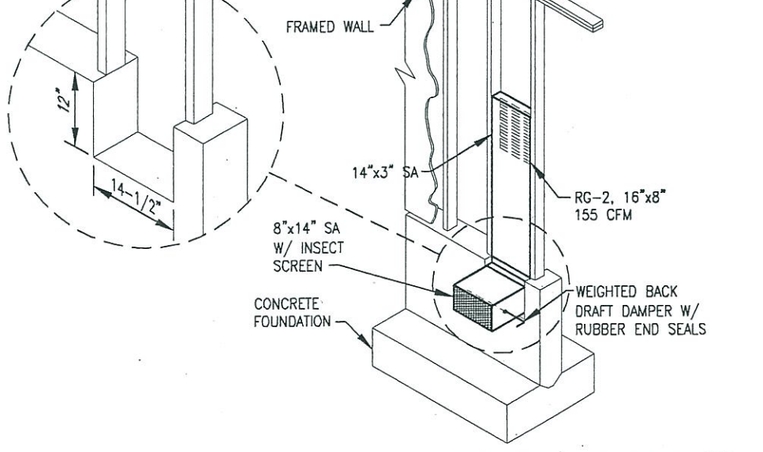
SCALE: NTS — 2 / M3.1



NOTE:
RELIEF VENTILATOR TO BE COOK MODEL 12X12X6TRE, WITH MANUFACTURERS RECOMENDED ROOF CURB.

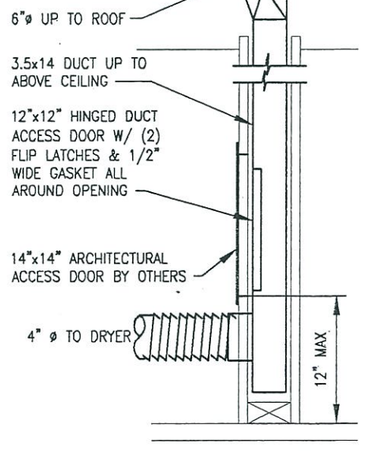
RELIEF VENTILATOR DETAIL

SCALE: NTS — 1 / M3.1



CRAWL SPACE RELIEF DUCT

SCALE: NTS — 4 / M3.1



DRYER CONNECTION

SCALE: NTS — 3 / M3.1

REGISTERED PROFESSIONAL ENGINEER
Steve T. Bastian
5112
STATE OF IDAHO
STEVEN T. BASTIAN
3-15-04

ELKHORN ENGINEERS, P.A.
2950 E. Magic View Dr., Ste. 190
Meridian, Idaho 83642
phone: (208) 955-0555
fax: (208) 955-0999

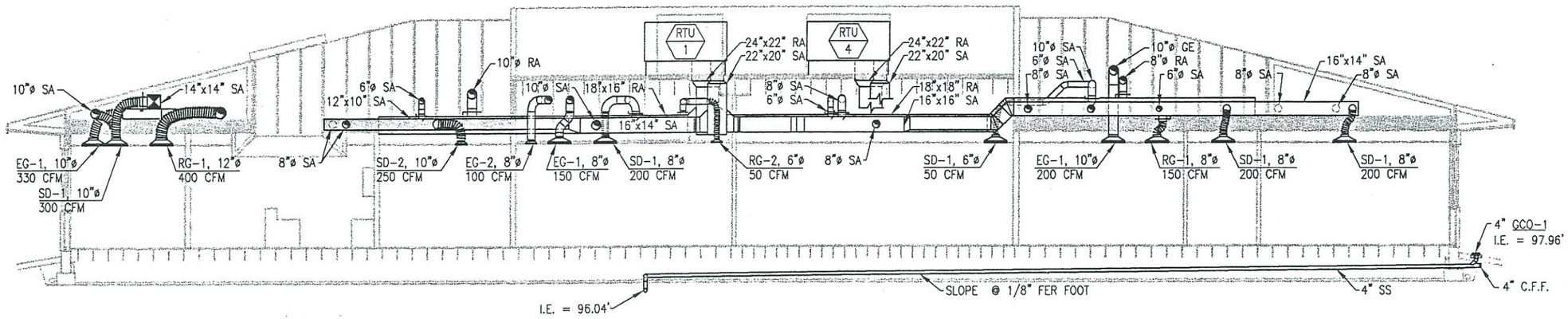
Medical Design Group
Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

HVAC DETAILS

Desert Sage Health Care
2280 American Legion Blvd.
Mountain Home, Idaho

SHEET M3.1

March 2004



MECHANICAL BUILDING SECTION A-A

SCALE: 3/16" = 1'=-0" (HALF SIZE: 3/32" = 1'-0")

M4.1

ELKHORN ENGINEERS, P.A.
2950 E. Magic View Dr., Ste. 190
Meridian, Idaho 83642
phone: (208) 955-0555
fax: (208) 955-0999

Medical Design Group
Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

REGISTERED PROFESSIONAL ENGINEER
STEVEN T. BASTIAN
5112
STATE OF IDAHO
3-15-04

MECH. BUILDING SECTIONS

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SHEET
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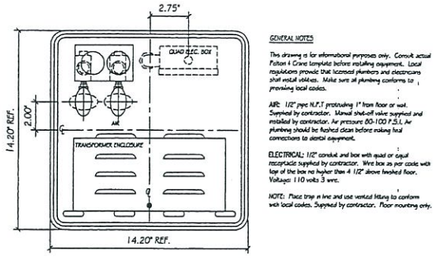


GENERAL NOTES

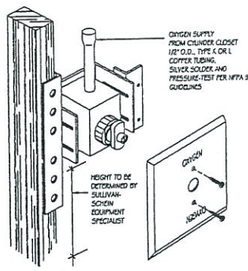
This drawing is for informational purposes only. Consult actual Pelton & Crane template before installing equipment. Local regulations provide that licensed plumbers and electricians shall install utilities. Make sure all plumbing conforms to governing local codes.

AIR: 1/2" pipe N.P.T protruding 1" from floor or wall. Supplied by contractor. Manual shut-off valve supplied and installed by contractor. Air pressure 80-100 P.S.I. Air plumbing should be flushed clean before making final connections to dental equipment.

ELECTRICAL: 1/2" conduit and box with quad or equal receptacle supplied by contractor. Wire box as per code with top of the box no higher than 4 1/2" above finished floor. Voltage: 110 volts 3 wire.

NOTE: Place trap in line and use vented fitting to conform with local codes. Supplied by contractor. Floor mounting only.

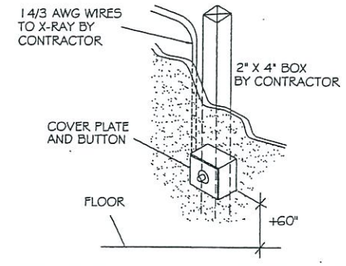
D-2A PELTON UTILITY J-BOX
NOT TO SCALE



THIS IS A TYPICAL OUTLET. REFER TO MANUFACTURER'S INSTALLATION LITERATURE FOR EXACT REQUIREMENTS.

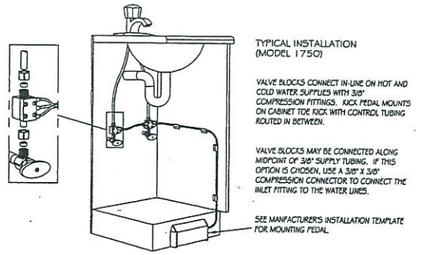
REVIEW NFPA 99, CHAPTER 4 FOR OXYGEN PIPING GUIDELINES. CONSULT LOCAL FIRE CODES BEFORE INSTALLATION.

D-7A OXYGEN OUTLET
NOT TO SCALE

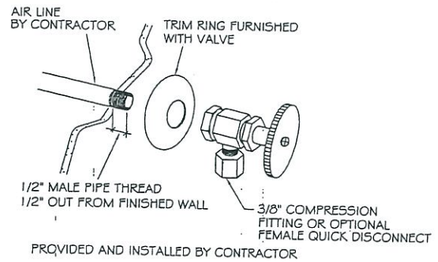


PROVIDED BY SULLIVAN-SCHEIN; INSTALLED BY ELECTRICIAN

D-9D X-RAY REMOTE SWITCH
NOT TO SCALE

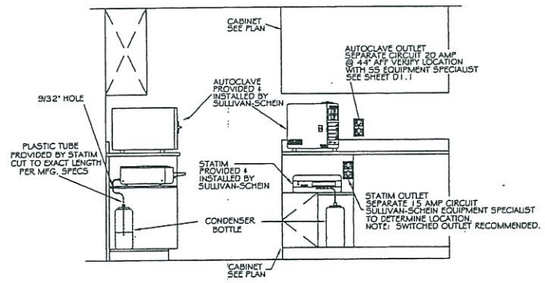


D-12B TAPMASTER FAUCET CONTROL
NOT TO SCALE



PROVIDED AND INSTALLED BY CONTRACTOR

D-13 AIR VALVE
NOT TO SCALE



D-14A AUTOCLAVE & STATIM OUTLETS
NOT TO SCALE

Medical Design Group
Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

REGISTERED ARCHITECT No. AR-1740 15 March 2004 DAVID P. DAVIES STATE OF IDAHO

DENTAL DETAILS

Desert Sage Health Center
2280 American Legion Blvd.
Mountain Home, Idaho

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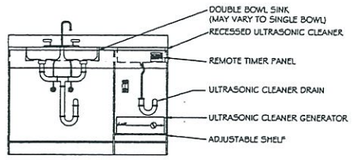
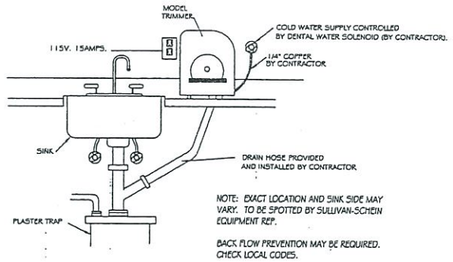
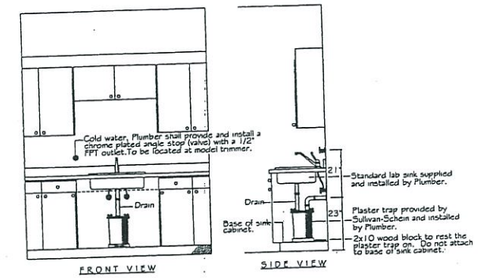


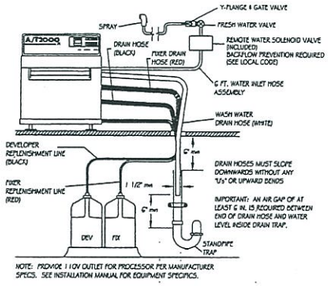
D-15 ULTRASONIC CLEANER
NOT TO SCALE



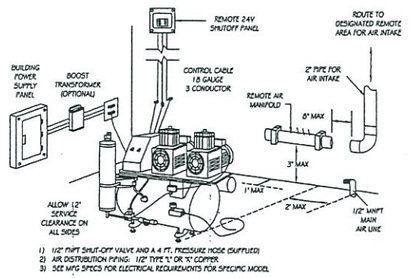
D-16 MODEL TRIMMER
NOT TO SCALE



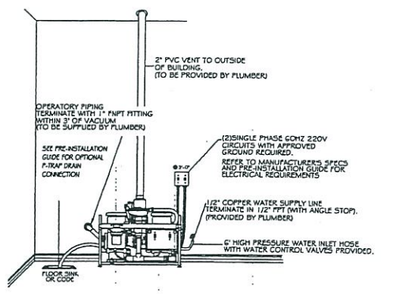
D-17 PLASTER TRAP
NOT TO SCALE



D-20 AUTOMATIC FILM PROCESSOR
NOT TO SCALE



D-25 AIRSTAR COMPRESSOR
NOT TO SCALE



D-26B VACSTAR - DUAL 220V
NOT TO SCALE

Medical Design Group
Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

REGISTERED ARCHITECT
No. AR-1740
15 March 2004
DAVID R. DAVIES
STATE OF IDAHO

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2280 American Legion Blvd.
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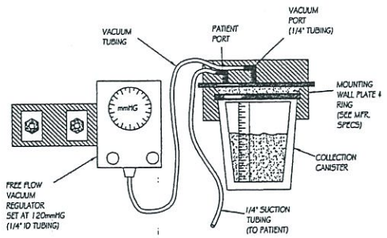
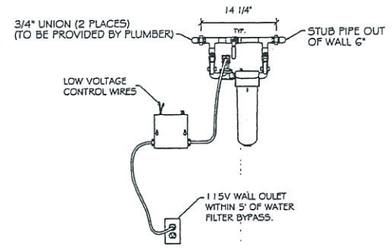


TYPICAL COLLECTION UNIT – REFER TO MANUFACTURER'S INSTALLATION DATA FOR EXACT MECHANICAL REQUIREMENTS

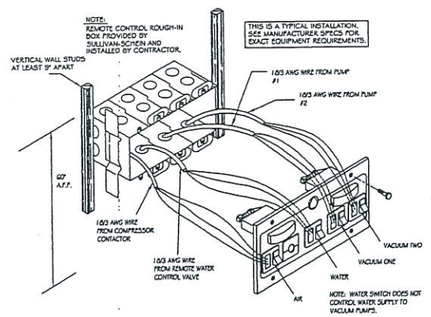
D-28A SURGICAL VACUUM INLET

NOT TO SCALE



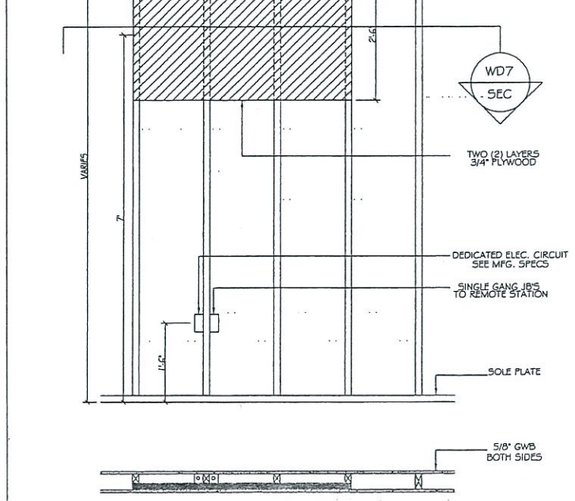
D-30A MASTER WATER SHUT OFF VALVE WITH FILTER

NOT TO SCALE



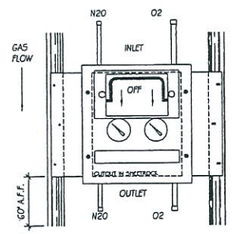
D-32A REMOTE CONTROL PANEL

NOT TO SCALE



WD7 TYP PANORAMIC BLOCKING

SCALE: 3/4" = 1'-0"

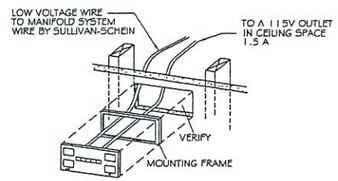


THIS IS A TYPICAL UNIT. REFER TO MANUFACTURER'S INSTALLATION LITERATURE FOR EXACT REQUIREMENTS.

ZONE CUT-OFF VALVE IS SPECIFIED IN THIS OFFICE PER NFPA 99 (4-5.1.2.1(b)1). CONSULT LOCAL FIRE CODES BEFORE INSTALLATION.

D-34A ZONE CUT-OFF VALVE

NOT TO SCALE



PROVIDED BY SULLIVAN-SCHEIN AND INSTALLED BY CONTRACTOR

D-34 N2O-O2 ALARM PANEL

NOT TO SCALE

Medical Design Group
Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

REGISTERED ARCHITECT No. AR-1740 15 March 2004
DAVID R. DAVIES STATE OF IDAHO

DENTAL DETAILS

Desert Sage Health Center
2280 American Legion Blvd.
Mountain Home, Idaho

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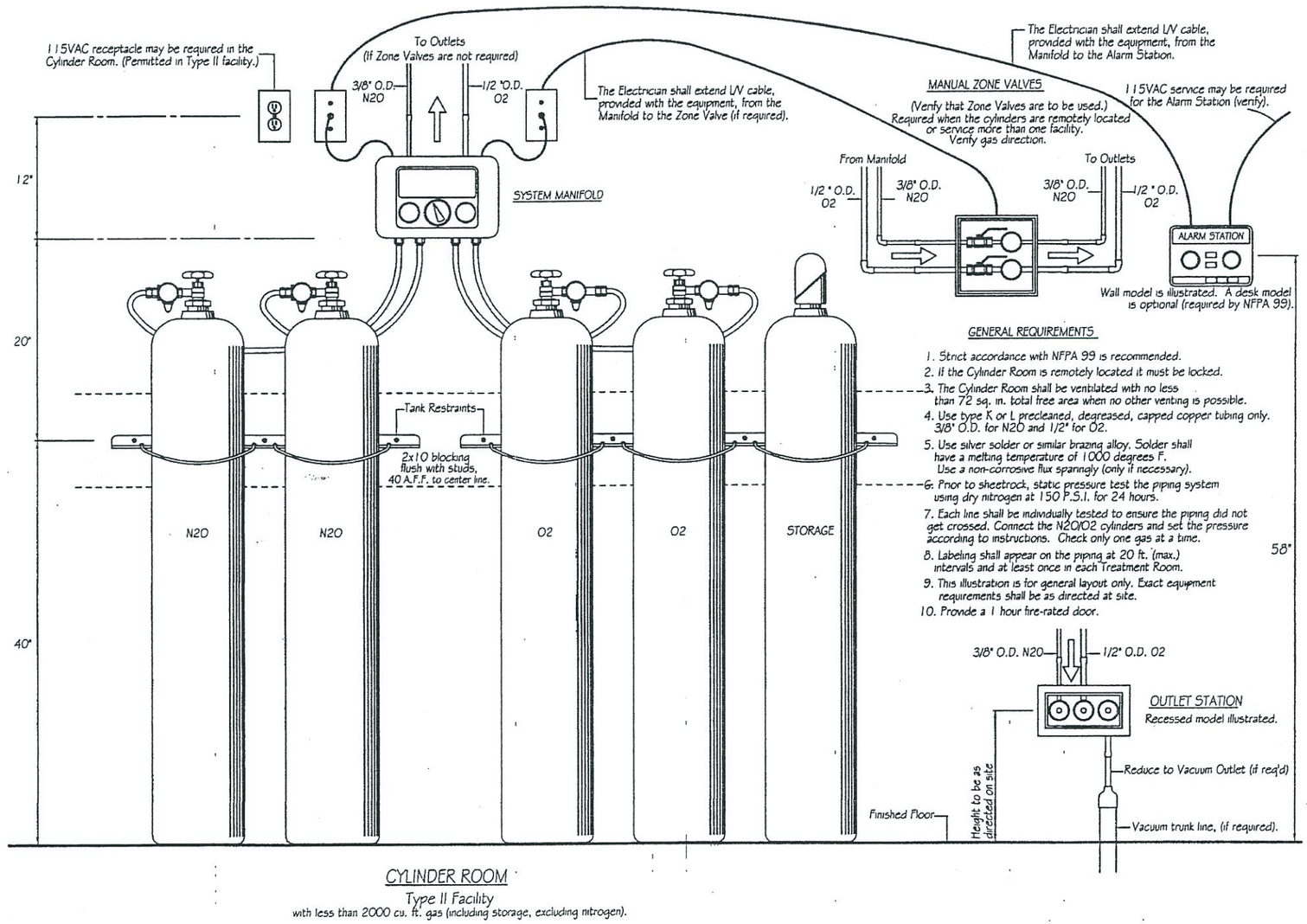

CYLINDER ROOM

Type II Facility

with less than 2000 cu. ft. gas (including storage, excluding nitrogen).

N20 NITROUS OXIDE AND OXYGEN TANK ROOM DETAIL

NTS

Medical Design Group
Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

REGISTERED ARCHITECT No. AR-1740 15 March 2004

DAVID R. DAVIES STATE OF IDAHO

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Desert Sage Health Center
2280 American Legion Blvd.
Mountain Home, Idaho

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ELECT. SYMBOL SCHEDULE

	FLUORESCENT FIXTURE (TYPICAL)
EM	FLUOR. FIXTURE EQUIPPED WITH AN EMERGENCY BATTERY BALLAST TO POWER ONE LAMP UPON POWER FAILURE.
NL	UNSWITCHED NIGHT LIGHT
	EXIT LIGHT (DIRECTIONAL ARROWS ON DRAWINGS)
	CEILING MOUNTED FIXTURE
	WALL MOUNTED FIXTURE
	RECESSED CAN TYPE FIXTURE
	EMERGENCY LIGHT WALL OR CLG. MT.
$	SINGLE POLE SWITCH
$3	3-WAY SWITCH
$4	4-WAY SWITCH
$F	EXHAUST FAN TIMER SWITCH (0 - 30 MIN)
$T	THERMAL OVERLOAD SWITCH W/PILOT LIGHT
$	FLUOR. DIMMER SWITCH. SEE FIXT. NOTE ◇2
E	PHOTOELECTRIC CELL/SWITCH
J	JUNCTION BOX
	DUPLEX RECEPTACLE (WP=WTHRPRF, GFI=GRND FLT)
S	DUPLEX RECEPTACLE (S = SAFETY TYPE OUTLET) SUCH AS P&S "TR" SERIES TAMPER RESISTANT
	DOUBLE DUPLEX OUTLET
	DOOR PUSHBUTTON OR CONTROLLER
E	SAME AS ⊖ EXCEPT RED W/RED COVER
F	DISCONNECT SWITCH (F=FUSED DISCONNECT)
	MAIN OR BRANCH PANELBOARD
	TELEPHONE / DATA BOARD
	BRANCH CIRCUIT - CONCEALED
	BRANCH CIRCUIT - IN FLOOR OR UNDERGROUND
A-1.3	BRANCH CIRCUIT - HOME-RUN TO PANEL
1	DRAWING NOTE (ON THE SHEET WHERE SHOWN)
EF-1	MECHANICAL EQUIPMENT OR DETAIL SYMBOL
T	TIME CLOCK SWITCH
T	THERMOSTAT W/ 3/4"C,. TO MECH UNIT.*
	CROSS LINES SHOW # OF COND'S. IF MORE THAN 2 GREEN GROUND CONDUCTOR AND ISOLATED GROUND CONDUCTOR NOT SHOWN.
F	FAN MOTOR CONNECTION POINT
M	MOTOR CONNECTION POINT
▶	VOICE & OR DATA OUTLET 4" SQ. DEEP BOX WITH 1" CONDUIT BACK TO MAIN TELEPHONE BACKBD. UNLESS INDIC. OTHERWISE SEE DETAIL, SHT. E4.1
SD	SMOKE DAMPER BY MECH. 120 VOLT

* SEE MECHANICAL DRAWINGS FOR CONDUIT DESTINATION.

FIXTURE NOTES:

◇1 PROVIDE WITH ALL NECESSARY TRAC SYSTEM ACCESSORIES, SUCH AS LIVE FEED ENDS, DEAD ENDS, CANOPIES, MOUNTING CLIPS, ETC., TO MAKE A COMPLETE SYSTEM. COMPONENT COLORS TO BE SELECTED BY ARCHITECT.

◇2 ALL F2A FIXTURES TO BE SUPPLIED WITH A LUTRON DIMMING BALLAST #FDB-4827-120-3. PROVIDE WITH CORRESPONDING DIMMER SWITCH LUTRON #NTF-10 (COLOR BY ARCH.)

◇3 STANDARD FINISH / COLOR TO BE SELECTED BY ARCHITECT.

◇4 FIXTURE TO BE SET BACK FROM BASE OF POLE APPROX. 4'-0. OR AS PER MFG'RS. RECOMMENDATIONS.

GENERAL NOTES: (ALL SHEETS)

1 ELECTRICAL CONTRACTOR SHALL COORDINATE ALL LAMP TYPES WITH FIXTURE TYPE BEFORE ORDERING.

ELECTRICAL CONTRACTOR SHALL REFER TO THE MECHANICAL DRAWINGS FOR EXACT LOCATION OF ALL MECHANICAL EQUIPMENT AND ELECTRICAL CONNECTIONS.

2 ELECTRICAL CONTRACTOR SHALL PROVIDE MINIMUM WORKING CLEARANCE AS PER NEC BEFORE INSTALLING ANY ELECTRIC PANELS OR CABINETS.

3 INSTALL ALL LIGHT FIXTURES IN MECHANICAL ROOM AFTER THE MECHANICAL EQUIPMENT IS IN PLACE.

4 REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT FIXTURE LOCATION.

5 ALL FLUORESCENT FIXTURES SHALL BE SUPPLIED WITH T8 (35K) LAMPS AND ELECTRONIC BALLASTS WITH -20% THD.

6 ELECTRICAL CONTRACTOR SHALL PROVIDE ALL CONCRETE PADS AS REQUIRED ON ALL ELECTRICAL EQUIPMENT.

7 CONFIRM EXACT LOCATIONS OF ALL TELEPHONE OUTLETS WITH OWNER PRIOR TO ROUGH-IN.

8 ELECTRICAL CONTRACTOR SHALL MOUNT SWITCHES AT 48" AND MOUNT CONVENIENCE OUTLETS AT 18" OR AS SHOWN ON PLANS TO MEET HANDICAPPED REQUIREMENTS.

9 ALL ACRYLIC LENSES USED ON THIS PROJECT, TO BE A MINIMUM OF .125" THICK.

10 LOCATE SWITCHES, OUTLETS. ETC., SHOWN AT ROOM ENTRY DOORWAYS, AS CLOSE TO DOOR FRAME AS POSSIBLE, SO AS NOT TO INTERFERE WITH ROOM CABINETS, ETC.

11 SUPPORT ALL LIGHT FIXTURES INDEPENDENT OF CEILING.

12 E.C. SHALL OBTAIN ALL APPLICABLE PERMITS FOR THIS WORK AND PAY ASSOCIATED FEES.

13 MAINTAIN 24" MIN. CLEARANCE FROM ALL COMM. CABLES AND ELECTRONIC BALLASTS.

14 INSTALL A GREEN GROUND CONDUCTOR IN ALL RACEWAYS. CONDUIT GROUND IS NOT ACCEPTABLE.

LIGHT FIXTURE SCHEDULE

TYPE	DESCRIPTION	MOUNT	VOLT	LAMPS	MFGR.	CATALOG #	NOTES
F1	2x4 2-LAMP LAY-IN GRID TROFFER - PRISMATIC LENS	RECESSED	120	2-F32T8/SPX35	LITHONIA METALUX	2SP8 G232 RW AI2125 120 GEB 2GPXR-232AI25-120-EB8I-WDF	
F2 F2A	2x4 3-LAMP LAY-IN GRID TROFFER - PRISMATIC LENS SAME AS F2 - W/ DIMMING BALLAST	RECESSED	120	3-F32T8/SPX35	LITHONIA METALUX	2SP8 G332 RW AI2125 120 GEB 2GPXR-332AI25-120-EB8I-WDF	◇2
F3	2x4 4-LAMP LAY-IN GRID TROFFER - PRISMATIC LENS	RECESSED	120	4-F32T8/SPX35	LITHONIA METALUX	2SP8 G432 RW AI2125 120 GEB 2GPXR-432AI25-120-EB8I-WDF	
F4	1x4 2-LAMP SURFACE WRAP LENS	SURFACE	120	2-F32T8/SPX35	LITHONIA METALUX	LB 232 120 GEB WS-232A-120-EB8I	
F5	4' 2-LAMP OPEN STRIP LIGHT	SURFACE OR COVE	120	2-F32T8/SPX35	LITHONIA METALUX	C232 120 GEB SS-232-120-EB8I	
F6	INTERIOR DECORATIVE WALL SCONCE	WALL @ 7'-6 UNLESS NOTED	120	1-26 DTT OR 2-13 DTT	LITHONIA SHAPER	AVSP 1 26DTT MDR 120 ALB M662-CF2/13-120-SC-PMR/MW	
F7	EXTERIOR DECORATIVE COMP FLUOR. WALL MOUNT	WALL @ 8'-0	120	2-F26 CF	ADVENT -	AEW1030 2F26 120 -	◇3
F8	EMERG. W/BATTERY LED EXIT LT. (SINGLE FACE)	WALL @ 7'-6 OR CLG.	120	INCLUDED	LITHONIA SURELITES	LES WIG 120/2TT ELN CX-7170-GW	
F9	EXTERIOR RECESS SOFFIT CAN LT. MH HID (NO LENS)	RECESSED	120	1-MXR100/N/MED/O (OPEN RATED LAMP)	LITHONIA PORTFOLIO	AH-100M 7WRLD-120 MDT-740-T150 WH	
F10	4' 1-LAMP UNDER COUNTER	UNDER OVER-HEAD CABINET	120	1-F32T8/SPX35	ALKCO FAILSAFE	SF332/WLAMP MTS-32-120V IK12-EB8I	
F11	INTERIOR RECESS CAN (COMP. FLUOR.) W/LOW IRR. REFLECTOR (HORIZ. LAMP)	RECESSED	120	1-F26DBXT4/SPX35	LITHONIA PORTFOLIO	AF 126DTT BAR LD 120 C7132 ET151STRMT-P	
F12	INTERIOR RECESS INCAND. CAN LIGHT ON DIMMER SW.	RECESSED	120	1-75 WATT A19	LITHONIA PORTFOLIO	A6AR WR LD -	
F13 F13A	LINEAR FLUOR. DIRECT/INDIRECT CABLE SUSPENSION SYSTEM (2-LAMPS IN CROSS SECTION) SAME AS F13 EXCEPT 3-LAMPS IN CROSS SECTION	PENDANT 18" FROM CLG.	120	2-F32T8/SPX35 (IN CROSS SECTION) 3-F32T8/SPX35 (IN CROSS SECTION)	NEORAY	1TIP 2T8 18SC 16' 120	
F14	LOW VOLT TRAC SYSTEM (QUANT. OF HEADS SHOWN)	CEILING	120/24	PAR 38 50W (FOR EACH HEAD)	LITHONIA	L.V TRAC - LT* (CBA) HEAD(S) - LPHR (BLWS) (CBA)	◇1
F15	2x4 2-LAMP RECESS LAY-IN INDIRECT W/ SIDE PURF BASKETS	RECESSED	120	2-F32T8/SPX35	LITHONIA -	2AV G232 MDR SMD 120 GEB -	
F16	PORCELAIN SOCKET	CEILING	120	1-75 WATT A19	GEN. ELECT.	GE 5740-7	
F17	FLUSH IN GROUND FLAG POLE LIGHT	FLUSH IN GROUND	120	1-175 MH	GREENLEE	RDS-100MH-120-SPV	◇4

ELECTRICAL SHEET SCHEDULE

PROFESSIONAL ENGINEER REGISTERED STATE OF IDAHO TODD PAYNE 8270 30th

PROJ. NO. 0353

PAYNE Engineering Inc.
Consulting Engineers
1823 E. Center
Pocatello, Idaho 83201
tel (208) 232-4439 fax (208) 232-1435

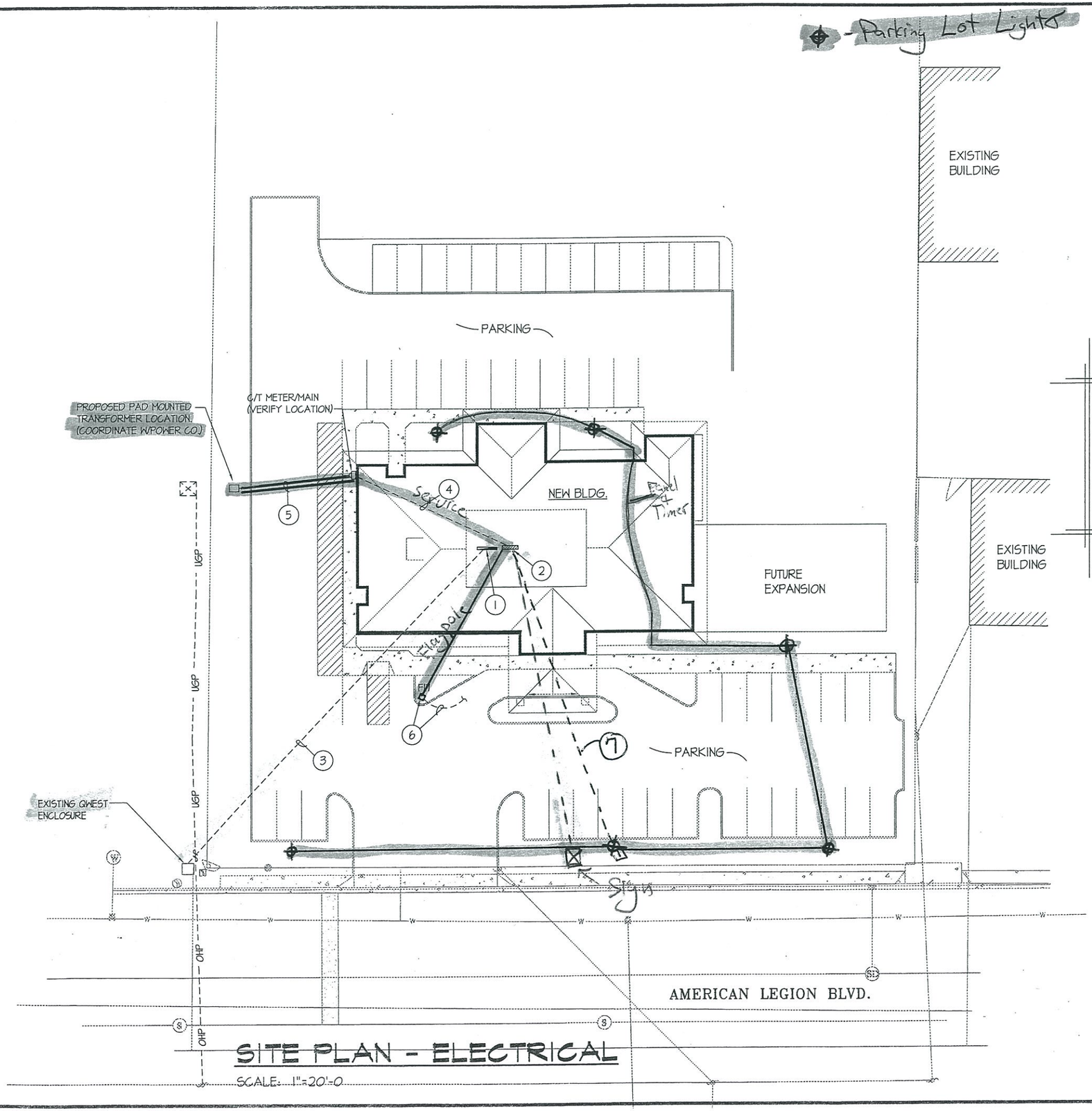
Medical Design Group
Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

NOTES & SCHEDULES

Desert Sage Health Center
2280 American Legion Blvd.
Mountain Home, Idaho

SHEET 16.00

March 2004



KEY NOTES

1. APPROXIMATE LOCATION OF NEW MAIN TELEPHONE BOARD. 4'x8'x3/4" PLYWOOD PROVIDE BLDG. GROUND AS PER TELEPHONE CO.
2. APPROXIMATE LOCATION OF MAIN PANEL-"M". SEE SHEET 16.20 FOR ACTUAL LOCATION.
3. PROVIDE AND INSTALL A 4" PVC SCH. 40 CONDUIT WITH NYLON PULL CORD FROM QWEST TELEPHONE ENCLOSURE TO MAIN TELEPHONE BOARD. FIELD VERIFY EXACT ROUTING WITH GENERAL CONTRACTOR AND QWEST. LIMIT THE NUMBER OF BENDS, AND ALL BENDS TO BE SWEEP TYPE BENDS.
4. UNDERGROUND SECONDARY ELECTRICAL FEEDER BY ELECT. CONTR. SEE POWER RISER, SHEET 16.21 FOR SIZE, ETC. EXACT ROUTING, TO BE FIELD DETERMINED.
5. PRIMARY UNDERGROUND ELECTRICAL SERVICE, BY POWER CO. COORDINATE WITH POWER CO. THE EXACT ROUTING, ETC. ELECTRICAL CONTR. SHALL INCLUDE A $5000.00 CASH ALLOWANCE IN HIS BID FOR UTILITY CO. CHARGES / FEES. ANY AMOUNT NOT USED, SHALL BE REFUNDED TO THE OWNER. THIS CASH ALLOWANCE IS FOR UTILITY CHARGES ONLY. ALL OTHER SERVICE RELATED EQUIPMENT & INSTALLATION IS SEPARATE.
6. Alt #2 IN GROUND FLAG POLE LIGHT. LOCATE AT BASE OF POLE AS PER MANUFACTURERS RECOMMENDATIONS. CONNECT INTO OUTSIDE BUILDING LIGHT CIRCUIT B-3. SEE SHT. 16.10.
7. 1" conduit w/ pull chord for future monument sign. Cap and mark.

SPECIAL NOTE:

These plans have been prepared without utility company comments. The contractor shall verify the exact requirements for the electric and telephone services with the utility company representatives and provide all work and pay all costs for complete and operating systems, as directed by the governing utilities.

PROFESSIONAL ENGINEER REGISTERED 8270 STATE OF IDAHO TODD PAYNE

UTILITY CONTACTS

POWER CO.

IDAHO POWER CO.
2430 AMERICAL LEGION BLVD.
MOUNTAIN HOME, ID 83647
PH. NO. 208-388-2408
ATTEN: MARK SCHOOLER

TELEPHONE CO.

QUEST COMM.
1315 WEST AMITY RD.
BOISE, ID 83705
PH. NO. 208-385-2144
ATTEN: GEORGE CRAWFORD

PROJ. NO. 0353

PAYNE Engineering Inc.
Consulting Engineers
1823 E. Center
Pocatello, Idaho 83201
tel (208) 232-4439 fax (208) 232-1435

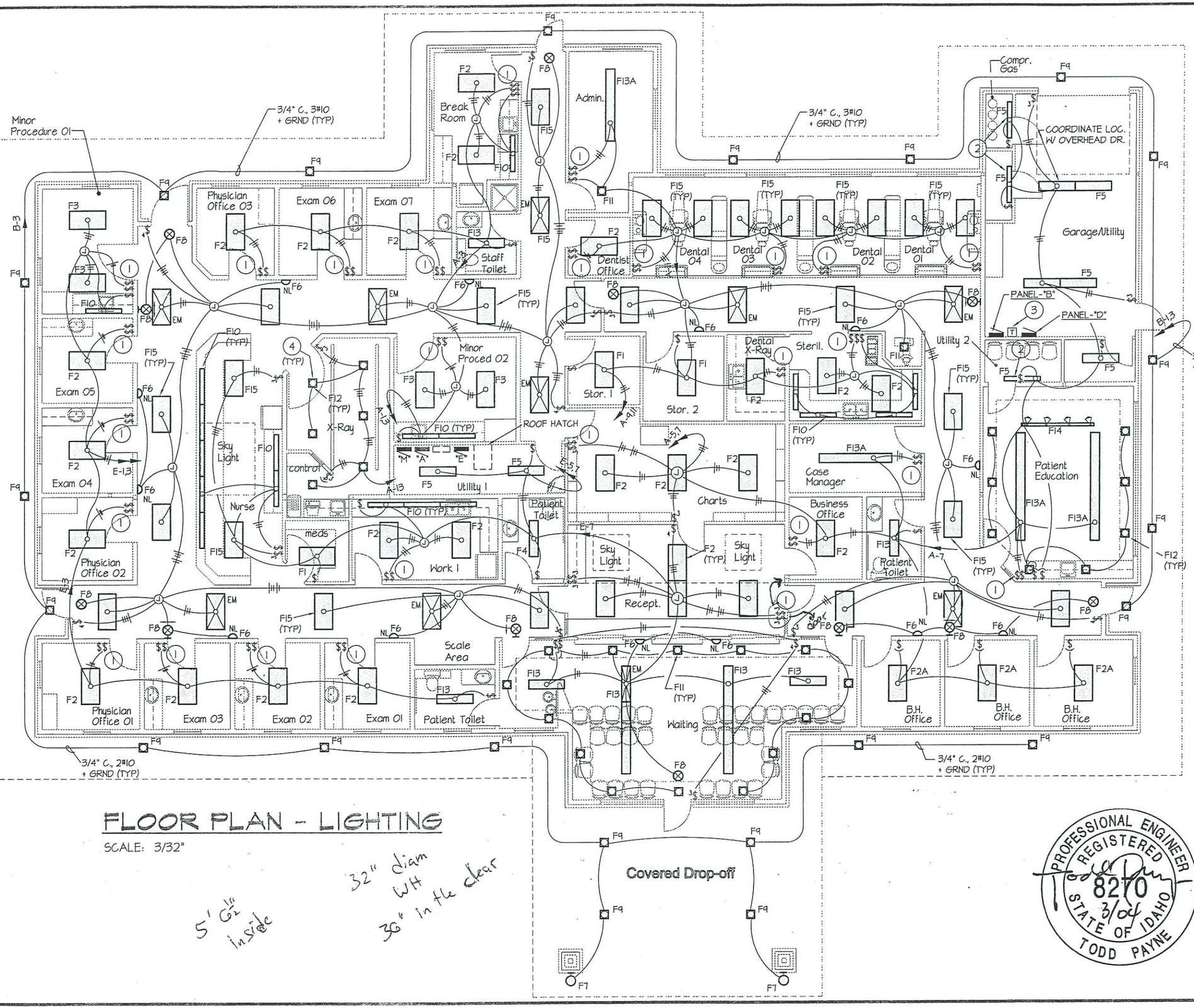
Medical Design Group
Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

ELECT. SITE PLAN

Desert Sage Health Center
2280 American Legion Blvd.
Mountain Home, Idaho

SHEET 16.01

March 2004



KEY NOTES

1. CONTROL THE LIGHTING IN THIS AREA SO THAT ONE SWITCH CONTROLS THE CENTER LAMP IN EACH FIXTURE AND THE OTHER SWITCH, CONTROLS THE TWO OUTBOARD LAMPS IN EACH FIXTURE. ALL ROOM LIGHTING CONTROL TO COMPLY WITH IECC LIGHTING COMPLIANCE CODE
2. MOUNT ON WALL ABOVE DOOR HEADER.
3. CIRCUIT OUTSIDE LIGHTING VIA TIME CLOCK / PHOTO-CELL CONTROL. LOCATE PHOTO-CELL OUTSIDE ON BUILDING SO AS NOT TO BE AFFECTED BY ARTIFICIAL LIGHT. LOCATE TIME CLOCK ADJACENT TO PANEL WHERE CIRCUITED. CONNECT SO THAT PHOTO-CELL TURNS LIGHTS ON AND TIME CLOCK TURNS LIGHTS OFF. CONTROL COMPONENTS, TO BE SUCH AS INTERMATIC #ET116-CK. PROVIDE WITH A 30 AMP 6-POLE CONTACTOR, COMPLETE WITH PHOTO-CELL.
4. COORDINATE LIGHT FIXTURES IN X-RAY RM. WITH OF01 X-RAY CEILING BRACKETS.

FLOOR PLAN - LIGHTING

SCALE: 3/32"

PROJ. NO. 0353

PAYNE Engineering Inc.
Consulting Engineers
1823 E. Center
Pocatello, Idaho 83201
tel (208) 232-4439 fax (208) 232-1435

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Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

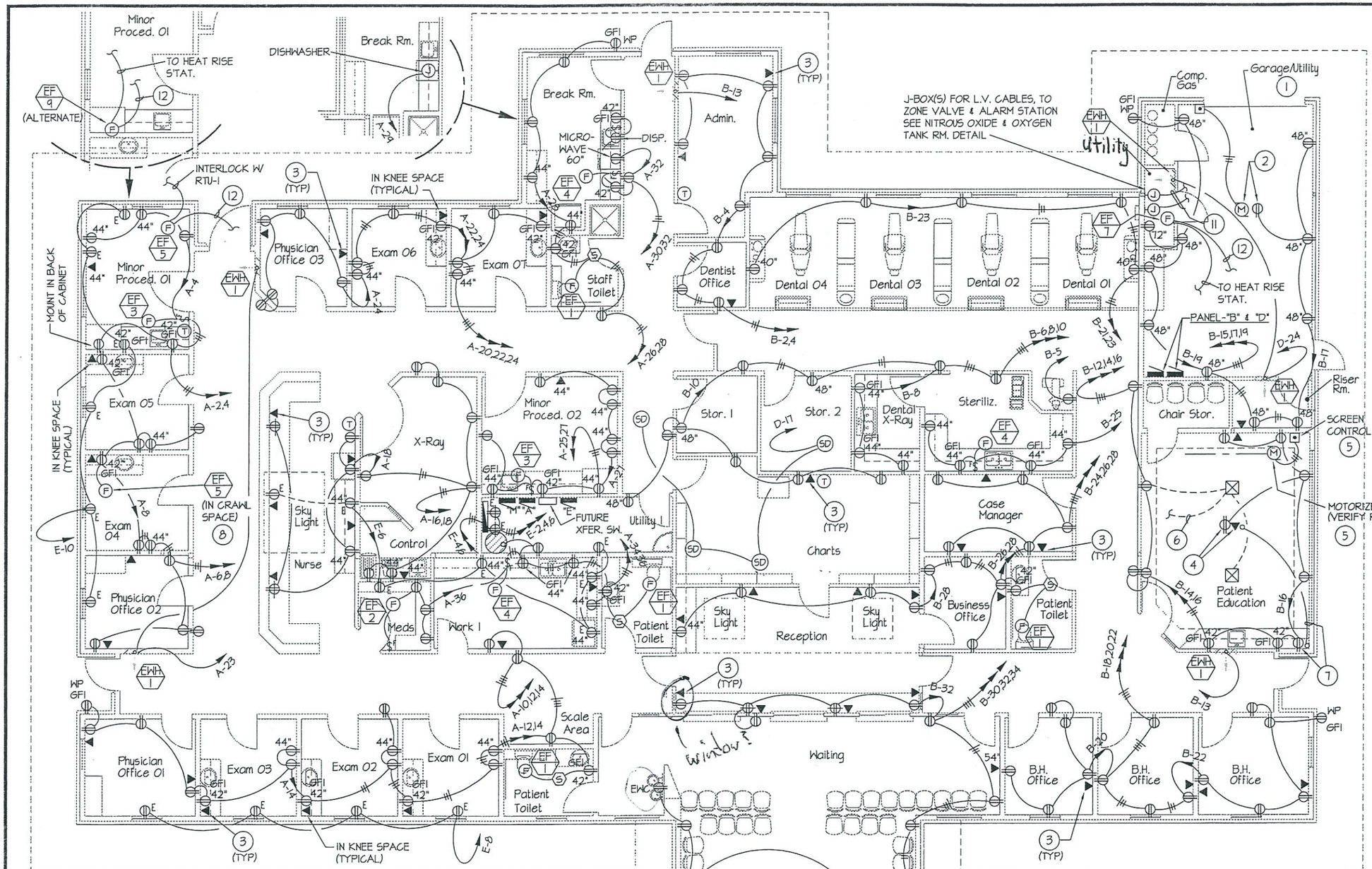
PROFESSIONAL ENGINEER REGISTERED 8270 STATE OF IDAHO TODD PAYNE 3/04

FLOOR PLAN - LIGHTING

Desert Sage Health Center
2280 American Legion Blvd.
Mountain Home, Idaho

SHEET 16.10

March 2004



FLOOR PLAN - POWER

SCALE: 3/32"

SPECIAL NOTE:

ELECT. CONTR. TO COORDINATE WITH THE SECURITY SYSTEM VENDOR, WHO WILL BE INSTALLING KEYLESS ENTRY & INTRUSION ALARM DEVICES IN THIS PROJECT, DURING THE ROUGH-IN PHASES OF THIS PROJECT. ELECTRICAL CONTR. TO MAKE ALLOWANCES AND PROVIDE SUPPORT TO THIS VENDOR DURING CONSTRUCTION.

KEY NOTES

1. ALL OUTLETS IN GARAGE AREA TO BE AT 48" AFF.
2. POWER AND CONTROL AT MOTORIZED OVERHEAD DOOR. FIELD VERIFY ROUGH-IN LOCATION.
3. PROVIDE A 3/4" CONDUIT WITH PULL CORD FROM EACH TEL/DATA OUTLET UP INTO ACCESSIBLE CEILING SPACE OR DOWN INTO ACCESSIBLE CRAWL SPACE BELOW FOR OWNER FURNISHED AND INSTALLED TEL/DATA CABLES. VERIFY EXACT OUTLET PLACEMENT W/OWNER.
4. MOUNT IN CEILING FOR A CEILING MOUNTED PROJECTOR.
5. COORDINATE WITH MOTORIZED SCREEN SHOP DWGS. PRIOR TO ANY ROUGH-IN, TO INSURE PROPER PLACEMENT OF ROUGH-IN BOXES, ETC. CONTROLLER TO BE SUPPLIED WITH EQUIPMENT, INSTALLED BY ELECT. CONTR.
6. PROVIDE A 1" CONDUIT FROM FLOOR BOXES BACK TO MAIN TELEPHONE BOARD. PROVIDE WITH NYLON PULL CORD. VERIFY EXACT FLOOR BOX PLACEMENT.
7. OUTLET IN BASE CAB. FOR CPU. VERIFY EXACT PLACEMENT. PROVIDE A 1 1/2" CONSULT AS INDICATED FROM CPU LOCATION UP INTO CEILING SPACE ADJACENT TO CEILING POWER / DATA OUTLETS.
8. SEE MECH. FOR EXACT FAN PLACEMENT IN CRAWL SPACE.
9. ELECTRICALLY OPERATED POWER ASSIST ENTRY UNIT AND RELATED EQUIPMENT, BY GEN. CONTR., WIRED BY ELECT. CONTR. ELECT. CONTR. TO BE RESPONSIBLE TO REVIEW EQUIP. SHOP DWGS AND PROVIDE ALL NECESSARY ROUGH-IN, ETC. FOR A COMPLETE INSTALLATION. PUSHBUTTON UNITS (2) SHOWN, ARE WIRELESS UNITS.
10. VERIFY ROUGH-IN REQUIREMENTS FOR THE STACKED WASHER/DRYER UNIT. FIELD VERIFY NEMA CONFIG. OF OUTLET WITH APPLIANCE PLUG TYPE.
11. L.V. CABLES TO ZONE VALVE & ALARM STATION, INSTALLED BY E.C. VERIFY VALVE & ALARM LOC.
12. CONNECT TO UNSWITCHED LEG OF LIGHTING CIRCUIT, THIS AREA.

PROFESSIONAL ENGINEER REGISTERED 8270 STATE OF IDAHO TODD PAYNE

PROJ. NO. 0353

PAYNE Engineering Inc.
Consulting Engineers
1823 E. Center
Pocatello, Idaho 83201
tel (208) 232-4439 fax (208) 232-1435

Medical Design Group
Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

FLOOR PLAN - POWER

Desert Sage Health Center
2280 American Legion Blvd.
Mountain Home, Idaho

SHEET 16.20

March 2004

PANEL "M"

CLASS 120/208V 3ø 4W
LOCATION UTILITY 1
MAKE/MODEL SQ D I-LINE (HCN)

☐ MAIN BRKR. ____ AMPS ☑ FEED BOTTOM ☑ SURFACE
☑ MAIN LUGS ONLY 800 ☐ FEED TOP ☐ FLUSH
☐ MAIN SW. ____ AMPS DIMENSIONS 26" x 6 1/2" x 65"

LOAD NAME	CIR NO.	LOAD WATTS	BRK AMP	POLE	LOAD/POLE A	LOAD/POLE B	LOAD/POLE C	POLE	BRK AMP	LOAD WATTS	CIR NO.	LOAD NAME
PANEL-"A"	1	9550	150	3	24950			3	225	19400	2	PANEL-"RTU"
–		12450	–	–		33350		–	–	19100		–
–		12300	–	–			27900	–	–	15600		–
PANEL-"B"	3	9000	150	3	18000			3	100	9000	4	PANEL-"D"
–		8700	–	–		16400		–	–	7700		–
–		5650	–	–			13250	–	–	7600		–
PANEL-"E"	5	2600	100	3	2600			3	125		6	SPARE
–		2650	–	–		2650		–	–			–
–		1150	–	–			1150	–	–			–
X-RAY EQUIP.	7	11600	150	3	11600			3	100		8	SPARE
–		11600	–	–		11600		–	–			–
–		11600	–	–			11600	–	–			–
BLANK	9										10	BLANK
–												–
–												–

TOTAL LOAD/PHASE WATTS 57150 64000 53900
AMPS 476 533 449
S.C. INT CAP/BKR. 22K AMPS.
FEEDER CONDUCTOR SIZE: TWO PARALLEL SETS – 4#500 KCMIL + GRND
CONDUIT SIZE (TWO PARALLEL) 4"
REMARKS:

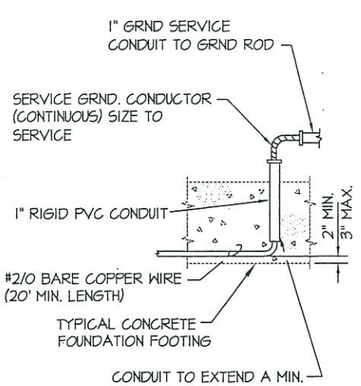
MECH. EQUIPMENT NOTES

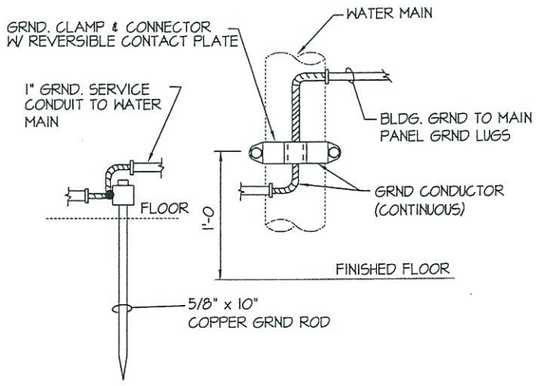
* INTERLOCK WITH RTU-1. ALSO CONNECT FAN TO INDICATOR LIGHT WITH A PERMANENT SIGN, IN NURSE AREA. INDICATOR LIGHT TO SIGNAL IF FAN FAILS TO ENERGIZE. SEE MECH. SHT. M0.4.

** INTERLOCK FAN WITH HEAT RISE S'TAT. SEE MECH. FOR S'TAT. LOCATION.

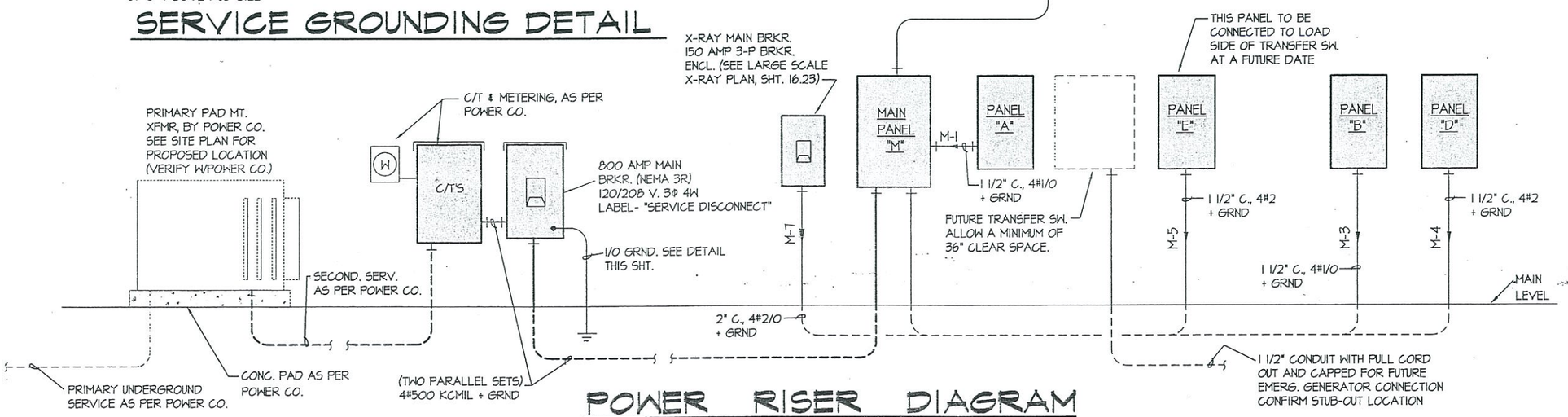
MECHANICAL EQUIPMENT SCHEDULE

SYMBOL	DESCRIPTION	AMPS	VOLTS	Φ	H.P.	K.W.	BREAKER OR DISCONNECT	EQUIPMENT CONTROL	REMARKS
RTU 1	ROOFTOP UNIT	42.0 (FLA)	208	3	2	-	60 AMP 3P DISC FUSED 60 AMPS	WALL STAT	SEE MECH / DISC. TO BE NEMA 3R
RTU 2	ROOFTOP UNIT	25.0 (FLA)	208	3	3/4		60 AMP 3P DISC FUSED 40 AMPS		
RTU 3	ROOFTOP UNIT	47.0 (FLA)	208	3	2		60 AMP 3P DISC FUSED 60 AMPS		
RTU 4	ROOFTOP UNIT	42.0 (FLA)	208	3	2		60 AMP 3P DISC FUSED 60 AMPS		
EF 1	EXHAUST FAN		115	1		65 WATTS	CIRCUIT WITH LIGHTS	SEE PLAN	
EF 2	EXHAUST FAN		115	1		65 WATTS		^{F}	
EF 3	EXHAUST FAN		115	1		77 WATTS		^{F}	
EF 4	EXHAUST FAN		115	1		135 WATTS		^{F}	
EF 5	EXHAUST FAN		115	1		61 WATTS		*	
EF 6	RELIEF AIR FAN	16.0 (FLA)	115	1	1		SEE PLAN	SEE DIAG. SHT. M3.1	
EF 7	EXHAUST FAN		115	1		65 WATTS	CIRCUIT WITH LIGHTS	**	
EF 8	EXHAUST FAN		115	1		153 WATTS		**	
EF 9	EXHAUST FAN		115	1		153 WATTS		**	
EWH 1	WALL MTD. ELECT. HTR.		115	1		500 WATTS	SEE PLAN	INTEGRAL STAT.	





SERVICE GROUNDING DETAIL



POWER RISER DIAGRAM

PROFESSIONAL ENGINEER REGISTERED 8270 STATE OF IDAHO TODD PAYNE 3/04

PROJ. NO. 0353

PAYNE Engineering Inc.
Consulting Engineers
1823 E. Center
Pocatello, Idaho 83201
tel (208) 232-4439 fax (208) 232-1435

Medical Design Group
Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

POWER RISER & SCHED'S.

Desert Sage Health Center
2280 American Legion Blvd.
Mountain Home, Idaho

SHEET 16.21

March 2004

PANEL "RTU"

CLASS 120/208V 3ø 4W
LOCATION ROOF
MAKE/MODEL SQ D NQOD (NEMA 3R)

☐ MAIN BRKR. ____ AMPS ☐ FEED BOTTOM ☐ SURFACE
☑ MAIN LUGS ONLY 225 ☑ FEED TOP ☑ FLUSH
☐ MAIN SW. ____ AMPS DIMENSIONS 20"x23"x5 3/4"

LOAD NAME	CIR NO.	LOAD WATTS	BRK AMP	POLE	LOAD/POLE A	LOAD/POLE B	LOAD/POLE C	POLE	BRK AMP	LOAD WATTS	CIR NO.	LOAD NAME
OUTLET ON ROOF	1	200	20	1	5900			3	60	5600	2	RTU-3
EF-6	3	1800	30			7400		–	–	5600	4	–
SPARE	5		20				5600	–	–	5600	6	–
RTU-1	7	5000	60	3	10000			3	60	5000	8	RTU-4
–	9	5000	–	–		10000		–	–	5000	10	–
–	11	5000	–	–			10000	–	–	5000	12	–
RTU-2	13	2800	40	3	3500			3	50		14	SPARE
–	15	2800	–	–		3500		–	–		16	–
–	17	2800	–	–				–	–		18	–
BLANK	19										20	BLANK

TOTAL LOAD/PHASE WATTS 19400 20900 15600
AMPS 162 174 130
S.C. INT CAP/BKR. 10K AMPS.
FEEDER CONDUCTOR SIZE: 4#4/0 + GRND
CONDUIT SIZE 2 1/2"
REMARKS: (NEMA 3R)

PANEL "B"

CLASS 120/208V 3ø 4W
LOCATION UTILITY 1
MAKE/MODEL SQ D NQOD

☐ MAIN BRKR. ____ AMPS ☐ FEED BOTTOM ☑ SURFACE
☑ MAIN LUGS ONLY 225 ☑ FEED TOP ☐ FLUSH
☐ MAIN SW. ____ AMPS DIMENSIONS 20"x39"x5 3/4"

LOAD NAME	CIR NO.	LOAD WATTS	BRK AMP	POLE	LOAD/POLE A	LOAD/POLE B	LOAD/POLE C	POLE	BRK AMP	LOAD WATTS	CIR NO.	LOAD NAME
OUTSIDE BLDG. LTS VIA T	1	1200	30	1	–			1	20	600	2	OUTLETS
	3	1700				–				1000	4	
PANORAMA MACHINE	5	800	20				1600			800	6	
SPARE	7				600					600	8	
	9					1200				1200	10	
	11						1200			1200	12	
WALL HTR. (2) EWH-1	13	1000			1600					600	14	
OUTLETS	15	600				1400				800	16	
	17	650					1450			800	18	
	19	1200			2200					1000	20	
DENTAL AREA OUTLETS	21	600				1800				1200	22	
	23	400					1400			1000	24	
STERIL AREA OUTLETS	25	800			1800					1000	26	
SPARE	27					800				800	28	
	29						800			800	30	
	31				1000					1000	32	RECEPTION AREA
	33					800				800	34	ELECT. WTR. COOLER
SPARE	35		20	2							36	SPARE
–	37		–	–							38	
SPARE	39		30	2							40	
–	41		–	–							42	

TOTAL LOAD/PHASE WATTS 9000 8700 6450
AMPS 75 73 54
S.C. INT CAP/BKR. 10K AMPS.
FEEDER CONDUCTOR SIZE: 4#1/0 + GRND
CONDUIT SIZE 1 1/2"
REMARKS:

PANEL "A"

CLASS 120/208V 3ø 4W
LOCATION UTILITY 1
MAKE/MODEL SQ D NQOD

☐ MAIN BRKR. ____ AMPS ☐ FEED BOTTOM ☑ SURFACE
☑ MAIN LUGS ONLY 225 ☑ FEED TOP ☐ FLUSH
☐ MAIN SW. ____ AMPS DIMENSIONS 20"x39"x5 3/4"

LOAD NAME	CIR NO.	LOAD WATTS	BRK AMP	POLE	LOAD/POLE A	LOAD/POLE B	LOAD/POLE C	POLE	BRK AMP	LOAD WATTS	CIR NO.	LOAD NAME
LIGHTING	1	1200	20	1	1600			1	20	400	2	OUTLETS
	3	600				1200				600	4	
	5	900					1900			1000	6	
	7	1600			2600					1000	8	
	9	1100				1800				700	10	EX. FAN
	11	750					1950			1200	12	
X-RAY RM. LIGHTS	13	350			1550					1200	14	
CRAWL SPACE LIGHTS	15	1400				2400				1000	16	X-RAY RM.
CRAWL SPACE OUTLETS	17	600					1600			1000	18	
X-RAY EQUIPMENT	19	1000			1800					800	20	
CLOTHS WASHER	21	1200				2000				800	22	
WALL HTRS. (2) EWH-1	23	1000					2000			1000	24	
OUTLETS	25	800			1400					600	26	EX. FAN
	27	1000				1800				800	28	BREAK RM.
DISHWASHER	29	1200					2000			800	30	
SPARE	31				1000					1000	32	MICRO WAVE
	33					1000				1000	34	EX. FAN
	35						600			600	36	MEDS RM.
	37							3	20		38	SPARE
CLOTHS DRYER	39	2250	30	2		2250		–	–		40	–
–	41	2250	–	–			2250	–	–		42	–

TOTAL LOAD/PHASE WATTS 9950 12450 12300
AMPS 83 104 102
S.C. INT CAP/BKR. 10K AMPS.
FEEDER CONDUCTOR SIZE: 4#1/0 + GRND
CONDUIT SIZE 1 1/2"
REMARKS:

PANEL "E"

CLASS 120/208V 3ø 4W
LOCATION UTILITY 1
MAKE/MODEL SQ D NQOD

☐ MAIN BRKR. ____ AMPS ☐ FEED BOTTOM ☑ SURFACE
☑ MAIN LUGS ONLY 100 ☑ FEED TOP ☐ FLUSH
☐ MAIN SW. ____ AMPS DIMENSIONS 20"x39"x5 3/4"

LOAD NAME	CIR NO.	LOAD WATTS	BRK AMP	POLE	LOAD/POLE A	LOAD/POLE B	LOAD/POLE C	POLE	BRK AMP	LOAD WATTS	CIR NO.	LOAD NAME
LIGHTING	1	500	20	1	800			1	20	300	2	PHONE BOARD
	3	450				1450				1000	4	GENERAL OUTLETS
	5	750					1150			400	6	NURSES STATION OUTLETS
	7	1000			1800					800	8	EXAM RM. OUTLETS
SPARE	9					1200				1200	10	
	11										12	SPARE
	13										14	
	15										16	
	17										18	
BLANK	19										20	BLANK
	21										22	
	23										24	
	25										26	
	27										28	
	29										30	

TOTAL LOAD/PHASE WATTS 2600 2650 1150
AMPS 22 22 10
S.C. INT CAP/BKR. 10K AMPS.
FEEDER CONDUCTOR SIZE: 4#2 + GRND
CONDUIT SIZE 1 1/2"
REMARKS: PANEL LABEL TO BE RED

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PROJ. NO. 0353

PAYNE Engineering Inc.
Consulting Engineers
1823 E. Center
Pocatello, Idaho 83201
tel (208) 232-4439 fax (208) 232-1435

Medical Design Group
Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

ELECT. PANEL SCHED'S.

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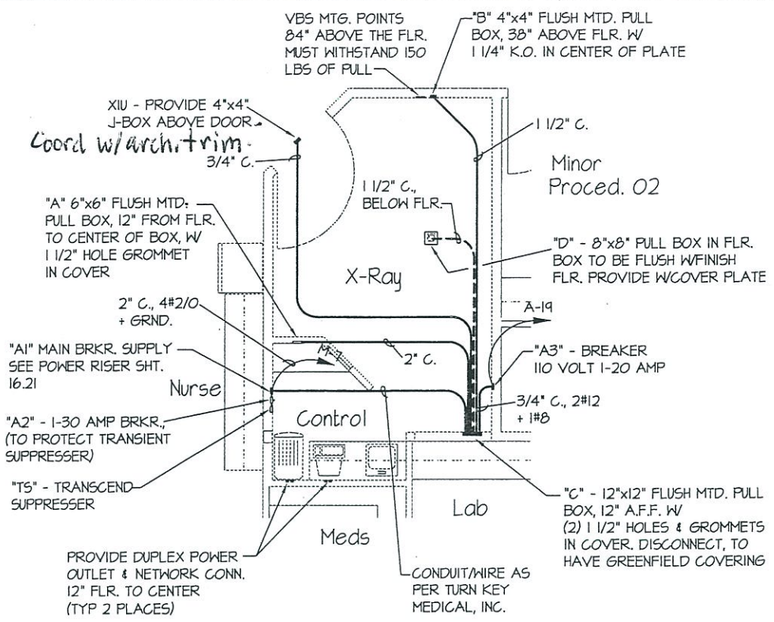
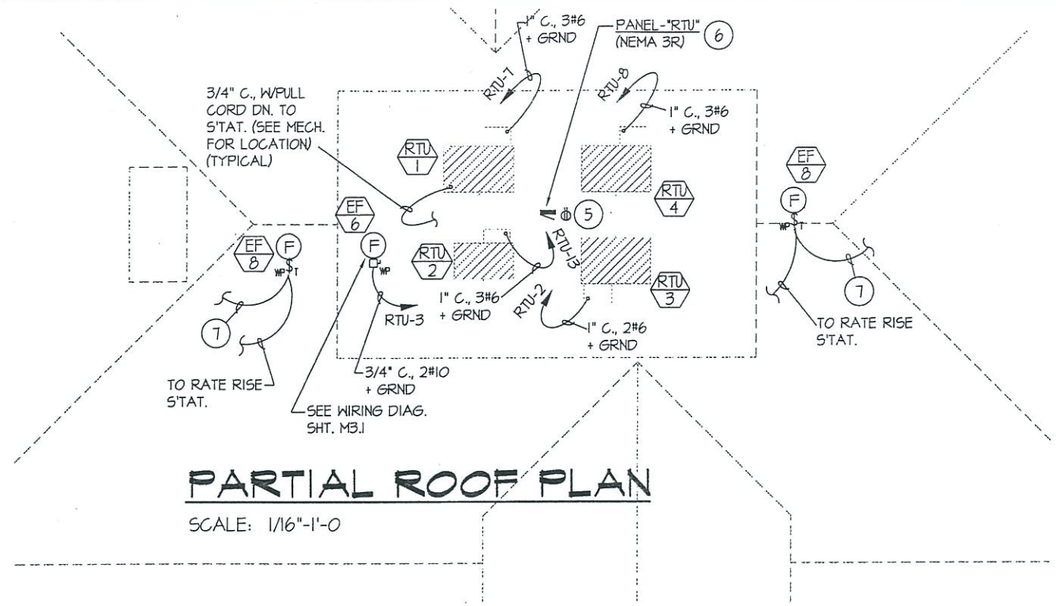
March 2004



LARGE SCALE X-RAY RM.

SCALE: 1/8"-1'-0

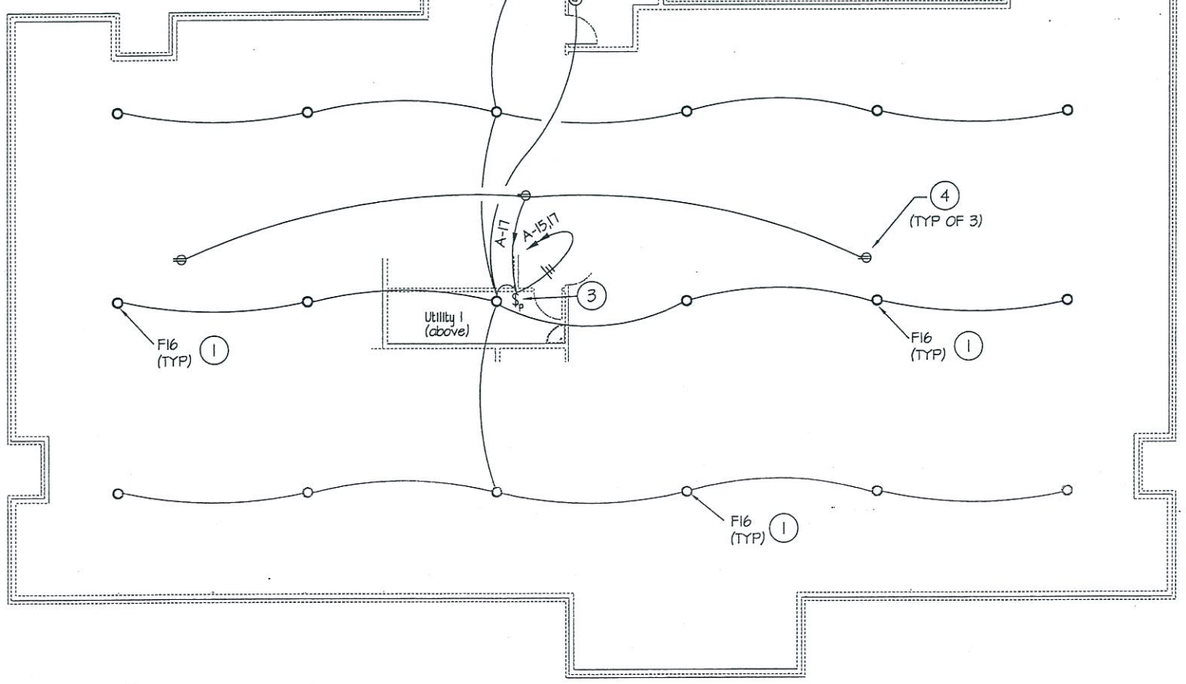


PARTIAL ROOF PLAN

SCALE: 1/16"-1'-0

KEY NOTES

1. EXACT PLACEMENT OF LIGHT FIXTURES IN CRAWL SPACE TO BE FIELD DETERMINED. ADJUST AS NECESSARY TO BEST FIT THE CONDITIONS, PIPING, DUCTWORK, ETC.
2. RED INDICATING LIGHT WITH LABEL THAT READS - CRAWL SPACE LIGHTS. RED LIGHT TO ILLUMINATE WHEN CRAWL SPACE LIGHTS ARE ON. LOCATE IN ADMIN. OFFICE ABOVE.
3. LIGHT SWITCH WITH PILOT LIGHT TO CONTROL CRAWL SPACE LIGHTS. LOCATE IN UTILITY 1 ABOVE. LABEL SWITCH "CRAWL SPACE LTS.)
4. PLACE THREE CONVENIENCE OUTLETS IN CRAWL SPACE. EXACT PLACEMENT, TO BE FIELD DETERMINED. LOCATE AT APPROXIMATE LOCATION SHOWN. COORDINATE WITH PIPING, DUCTS, TEC.
5. OUTLET TO BE MOUNTED IN A W.P. CAST BOX, WITH GFI RECEPTACLE AND W.P. COVER. CIRCUIT TO CKT. RTU-1.
6. EXACT PLACEMENT OF PANEL-"RTU" ON ROOF, TO BE FIELD DETERMINED. REFER TC POWER RISER FOR MOUNTING INSTR. FLASH AND SEAL PANEL FEEDER ROOF PENETRATION, AS PER ROOFING CONTR.
7. CONNECT TO UNSWITCHED LEG OF THE LIGHTING CIRCUIT IN RM. BELOW.



CRAWL SPACE ELECTRICAL PLAN

SCALE: 1/16"-1'-0

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PROJ. NO. 0353

PAYNE Engineering Inc.
Consulting Engineers
1823 E. Center
Pocatello, Idaho 83201
tel (208) 232-4439 fax (208) 232-1435

Medical Design Group
Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

ROOF/CRAWL SPACE PLANS

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2260 American Legion Blvd.
Mountain Home, Idaho

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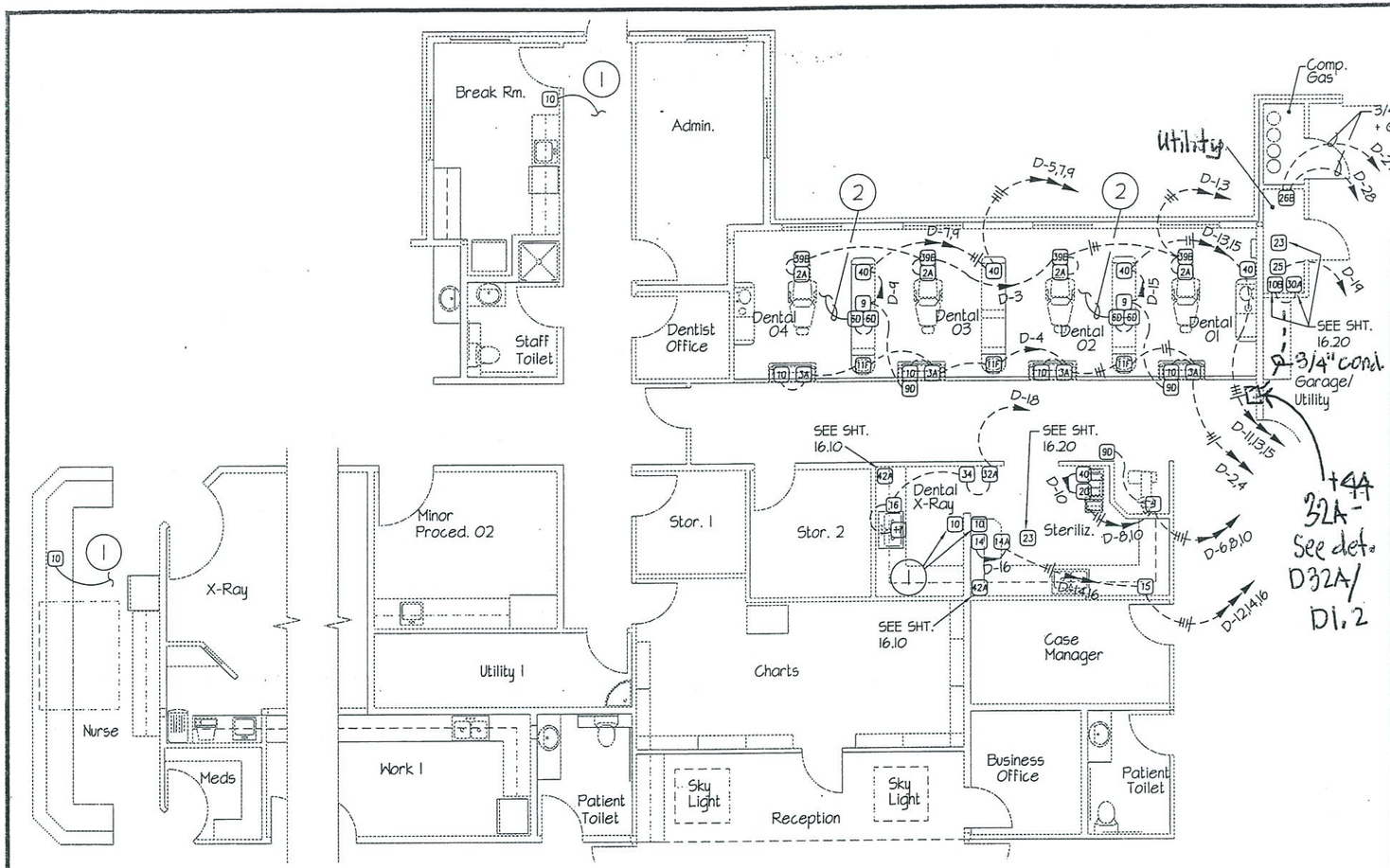
March 2004



FLOOR PLAN - DENTAL EQUIP. CONN.

SCALE: 3/32"

KEY NOTES

1. PROVIDE A 1/2" CONDUIT WITH NECESSARY SIGNAL WIRING FROM EACH SIGNAL LIGHT, BACK TO DENTAL EQUIPMENT AS DIRECTED BY SULLIVAN SHEIN DENTAL.
2. CONNECT INTO LIGHTING CIRCUIT THIS AREA. SEE SHEET 16.10.

PANEL "D"

CLASS 120/208V 3ø 4W
LOCATION GARAGE/UTILITY
MAKE/MODEL SQ D NQOD

☐ MAIN BRKR. ____ AMPS ☑ FEED BOTTOM ☑ SURFACE
☑ MAIN LUGS ONLY 100 ☐ FEED TOP ☐ FLUSH
☐ MAIN SW. ____ AMPS DIMENSIONS 20"x39"x5 3/4"

LOAD NAME	CIR NO.	LOAD WATTS	BRK AMP	POLE	LOAD/POLE A	LOAD/POLE B	LOAD/POLE C	POLE	BRK AMP	LOAD WATTS	CIR NO.	LOAD NAME
2A 39E	1	1000	20	1	2000			1	20	1000	2	3A 11F
↓	3	1000	↓	↓	↓	2000	↓	↓	↓	1000	4	↓
40	5	1000	↓	↓	↓	↓	2000	↓	↓	1000	6	9
↓	7	1000	↓	↓	2000	↓	↓	↓	↓	1000	8	20
9	9	1200	↓	↓	↓	2200	↓	↓	↓	1000	10	40
40	11	1000	↓	↓	↓	↓	1600	↓	↓	600	12	15
↓	13	1000	↓	↓	2000	↓	↓	↓	↓	1000	14	14A
9	15	1200	↓	↓	↓	2000	↓	↓	↓	1000	16	14
SMOKE DAMPERS	17	250	↓	↓	↓	↓	1250	↓	↓	1000	18	16 17 32A 34
25	19	1500	↓	↓	1500	↓	↓	↓	↓		20	SPARE
SPARE	21		↓	↓	↓	↓	1000	↓	↓	1000	22	↓
↓	23		↓	↓	↓	↓	↓	↓	↓		24	EWH-1 (2)
↓	25		↓	↓	↓	↓	↓	↓	↓		26	SPARE
BLANK	27		↓	↓	↓	↓	↓	↓	↓		28	BLANK
↓	29		↓	↓	↓	↓	↓	↓	↓		30	↓
SPARE	31		20	2	↓	↓	↓	↓	↓		32	↓
–	33		–	–	↓	1500	↓	2	30	1500	34	26B
26B	35	1500	30	2	↓	↓	3000	–	–	1500	36	–
–	37	1500	–	–	1500	↓	↓	3	20		38	SPARE
SPARE	39		30	2	↓	↓	↓	–	–		40	–
–	41		–	–	↓	↓	↓	–	–		42	–

TOTAL LOAD/PHASE WATTS 9000 7700 8600
AMPS 75 64 63
S.C. INT CAP/BKR. 10K AMPS.
FEEDER CONDUCTOR SIZE: 4#2 + GRND
CONDUIT SIZE 1 1/2"
REMARKS:

DENTAL EQUIPMENT LEGEND

SYMBOL	DESCRIPTION	ELECTRICAL REQUIREMENTS	DEDICATED CIRCUIT	SULLIVAN-SCHEIN DENTAL STANDARD DETAIL NO.
2A	UTILITY CENTER	115V 20A		D-2A
3A	UTILITY CENTER	115V 20A		D-3A
6D	DENTAL LIGHT	115V 3A		-
9	X-RAY	115V 20A	✓	-
9D	X-RAY REMOTE BUTTON	-		D-9D
10	SIGNAL LIGHT	115V 15A		D-10
10B	POWER OUTLET	-	(SEE SHEET 16.20)	
11F	CENTER CABINET	115V		-
14	STERILIZER	115V 15A	✓	D-14
14A	STERILIZER	115V 20A	✓	D-14A
15	ULTRASONIC CLEANER	115V 15A	✓	D-15
16	MODEL TRIMMER	115V		D-16
17				-
20				

SYMBOL	DESCRIPTION	ELECTRICAL REQUIREMENTS	DEDICATED CIRCUIT	SULLIVAN-SCHEIN DENTAL STANDARD DETAIL NO.
23	EXHAUST FAN	115V 15A	✓	-
25	AIR COMPRESSOR	SEE SPECS.	✓	D-25
26B	VACUUM SYSTEM	2-230V 30A	✓	D-26B
30A	WATER SOLENOID	115V OR 24V		D-30A
32A	REMOTE PANEL	-		D-32A
34	NITROUS OXIDE ALARM	115V 1.5A		D-34
39E	CHAIR-MOUNTED MONITOR	115V 15A		-
40	COMPUTER CIRCUIT	115V 20A	✓	-
42A	TASK LIGHTING	115V	(SEE SHEET 16.10)	

NOTES:

1. A SULLIVAN-SCHEIN REPRESENTATIVE WILL SPOT ALL EXACT EQUIPMENT LOCATIONS ON THE JOB.
2. ALL LOCATIONS, MOUNTING HEIGHTS, ROUGH-IN BOXES, SIZES, ETC, TO BE COORDINATED AND FIELD VERIFIED WITH SULLIVAN-SCHEIN PRIOR TO ANY ROUGH-IN.
3. REFER TO SULLIVAN-SCHEIN STANDARD DETAILS FOR HELPFUL INFORMATION ON EQUIPMENT WHERE DETAILS ARE AVAILABLE.

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PROJ. NO. 0353

PAYNE Engineering Inc.
Consulting Engineers
1823 E. Center
Pocatello, Idaho 83201
tel (208) 232-4439 fax (208) 232-1435

Medical Design Group
Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

N

DENTAL EQUIP. PLAN

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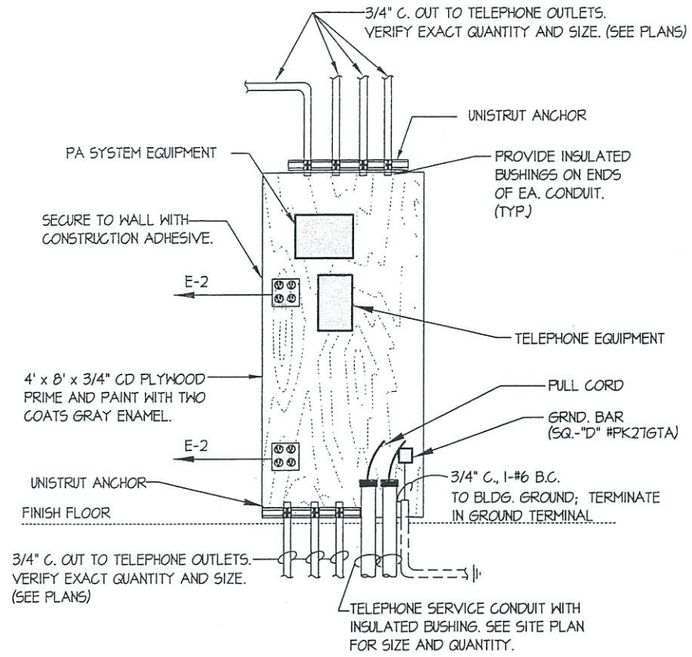
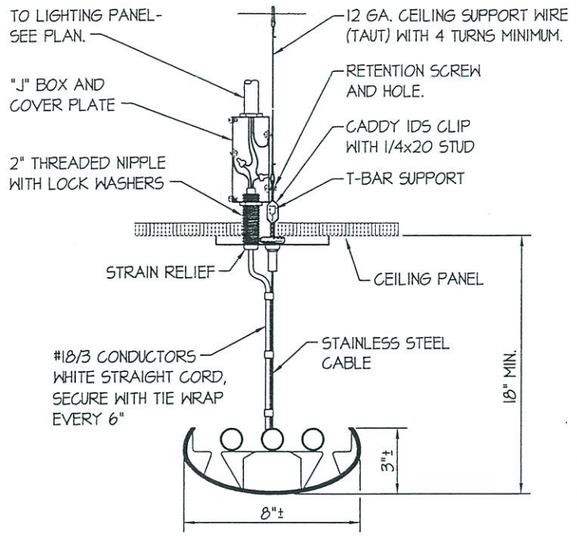
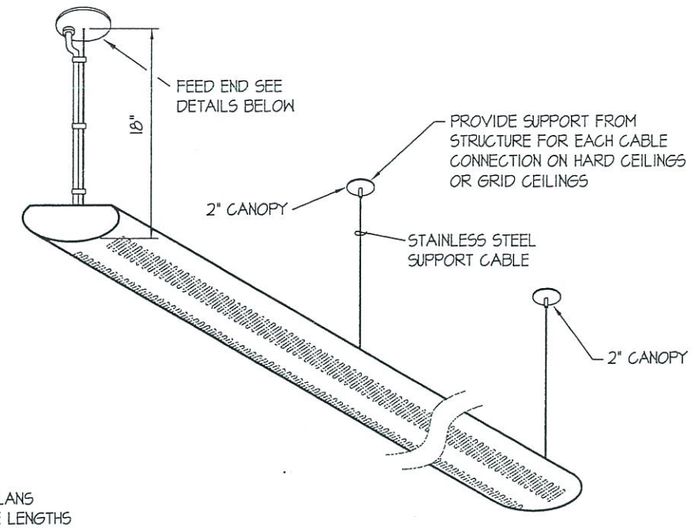
March 2004



TELEPHONE / DATA BOARD DETAIL

NO SCALE





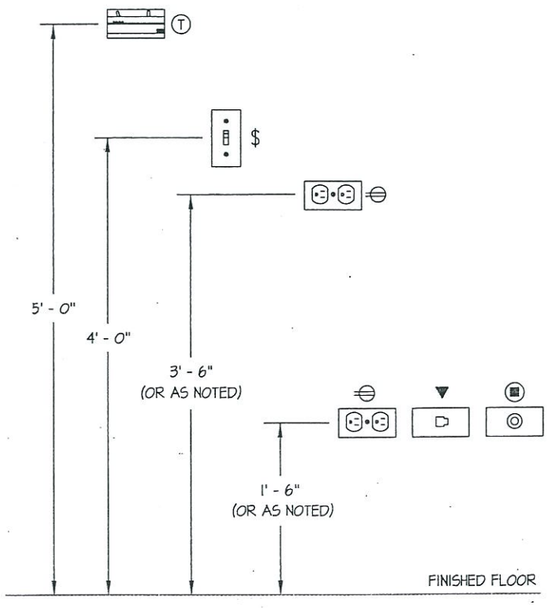
NOTE:
REFER TO PLANS FOR FIXTURE LENGTHS

F13 PENDANT LIGHT FIXTURE MOUNTING DETAIL

NO SCALE

NOTES:

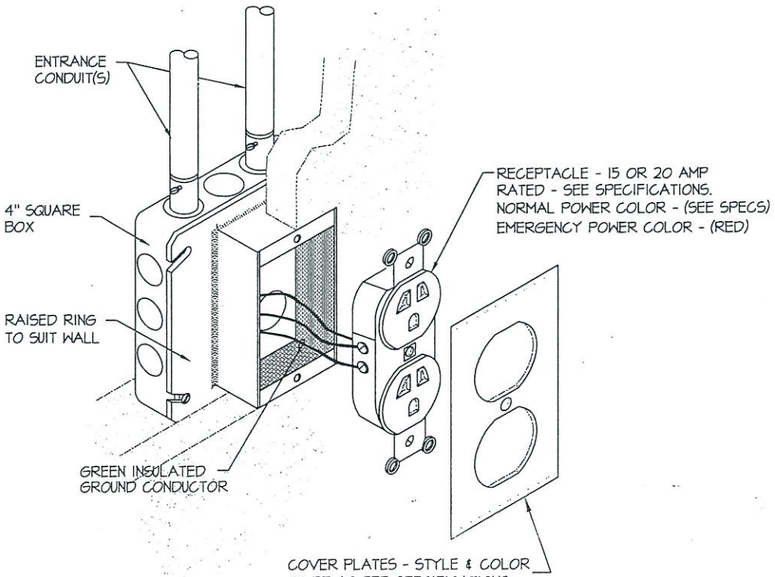
* ALL MOUNTING HEIGHTS TYPICAL UNLESS NOTED OTHERWISE.
* COORDINATE OUTLET HEIGHTS WITH ARCHITECTS MILLWORK DWGS. TO INSURE THAT OUTLETS WILL NOT FALL BEHIND CABINETS, BACKSPLASHES, OR INTERFERE WITH WAINSCOTING, ETC.
* ALL SWITCHES AND THERMOSTATS TO BE MOUNTED AS CLOSE TO DOOR JAMBS AS POSSIBLE. COORDINATE ALL DEVICES WITH ARCHITECTURAL PLANS AND DETAILS.



T THERMOSTAT OR MECHANICAL SWITCH
$ LIGHT SWITCH
CONVENIENCE OUTLET
TELEPHONE / DATA OUTLET
T.V. OUTLET

TYPICAL DEVICE MOUNTING HEIGHTS DIAGRAM

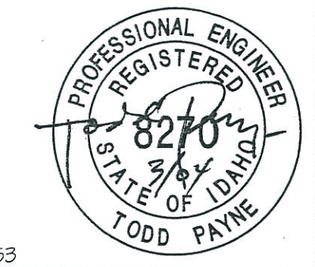
NO SCALE



NOTE:
IF ELECTRICAL OUTLET COVER PLATES ARE METAL, OUTLETS SHALL BE INSTALLED WITH THE GROUND RECEIVER IN THE UP POSITION, AS PER CODE.

RECEPTACLE MOUNTING DETAIL

NO SCALE



PROJ. NO. 0353

PAYNE Engineering Inc.
Consulting Engineers
1823 E. Center
Pocatello, Idaho 83201
tel (208) 232-4439 fax (208) 232-1435

Medical Design Group
Architecture for Health Care
2715 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

ELECTRICAL DETAILS

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8. EXECUTION
Raceway Installation: Separate underground conduits in a common trench 4" minimum horizontally, 12" minimum from other utility lines. Minimum conduit depth shall be 24". Coordinate conduit installation with pipes, steel and ducts installed by other trades. Install conduit runs exposed to view parallel or at right angles to structural members, walls or building lines. Support conduit with one-hole malleable factory made pipe straps, fastened with stainless steel screws.

9. OPERATING AND ADJUSTING
The owner reserves the right to operate any systems of equipment prior to final completion and acceptance of the work. Such preliminary operation shall not be construed as an acceptance of any work.

Each piece of equipment and all of the systems shall be adjusted to insure proper functioning and shall be left in first class operating condition.

10. CUTTING AND PATCHING
Do all drilling and cutting as necessary for installation of equipment. Do cutting and drilling of structure only with prior approval of the owner. Where cutting and patching of work is necessary, use same materials workmanship and finish neatly, match all surrounding work.

11. CONDUIT
Provide EMT conduit and install in strict
accordance with Electrical Code and for all systems in building. In damp or wet locations, use EMT conduit with appropriate fittings. Conduits underground or in slab shall be Sch. 40 PVC; install a galvanized steel elbow where these conduits emerge above grade or slab and wrap to retard deterioration. All conduits without conductors, installed with #12 TW pull wire. Verify sizes of all underground conduits not indicated.

12. OUTLET BOXES AND BOX EXTENSION
Provide 4" square steel boxes with mudring as required.

13. CONDUCTORS
Type THWN or THHN copper wire insulated for 600V. Smallest wire shall be #12 awg unless noted. Use "Ideal Yellow" pulling compound for all pulls. Use Scotchlock connectors for all splices in #12 wire and taped bolted pressure connectors for larger wire. All wiring shall be copper.

14. GROUNDING
Provide and install service grounding per NEC and as detailed on the drawings. Provide and install a green equipment ground conductor in all raceways. Conduit only ground is not acceptable.
Grounding shall conform to Article 517 in the NEC, as required.

15. DEVICES
Switches: specification grade, quiet type, color to be white, (nylon) 20 amps. (Such as P&S 20AC1 X) provide 3-way, 4-way and pilot light switches as indicated.

Convenience outlets: Specification grade duplex grounding type, 20 amps. at 125 volts, color white (nylon) and GFI in Code required locations. (Such as P&S 5352 X)

Special Outlets: As noted on plans.

Manufactured by P&S, Leviton, Bryant, or Hubbell.

16. DEVICE PLATES
Required for all wiring devices, outlets and similar applications. Gang covers for gang boxes. Nylon, color white Sierra "P" line or other as required.

17. LIGHTING FIXTURES
Provide all lighting fixtures complete with accessories as required for proper installation, including lamps. See notes and plans on Fixture Schedule. Substitutions shall be accompanied with copies of specified items and substitutions for comparison by engineer. Any relocation shall be approved by architect.

18. SERVICE EQUIPMENT
Panelboards: Circuit breakers and equipment shall be 42,000 AIC minimum. All locks keyed alike and typewritten directories. All panels shall have a minimum of 36" working clearance in front of panel.

DIVISION 16 ELECTRICAL SPECIFICATIONS

1. INTENT
The Contractor shall be responsible for the installation of complete and operable systems of electrical lighting, power and receptacles etc, as indicated on the drawings and specifications, this includes furnishing all incidental items not actually shown or specified, but which are required by good practice to provide complete and functional systems.
2. SUBMITTALS
Submit material lists, data and product cut sheets for all panels, service equipment and lighting fixtures for approval and "as-built" records for this work in accordance with the supplementary and general conditions of the contract documents. No material shall be installed until final approval is given.
3. COMPLIANCE WITH CODES
All work and materials shall comply with all applicable codes, safety orders, laws, ordinances and regulations of governing authorities and other agencies having jurisdiction including regulations of the Local Fire Marshall, unless detailed as specified to a more restrictive standard or higher requirement.

4. INTERPRETATION OF DRAWINGS
The electrical drawings are essentially diagrammatic in that all provisions necessary to conform to structural, architectural, mechanical and plumbing systems cannot be shown. All installations shall be adjusted as necessary to conform and to avoid obstructions without additional cost to the owner.

All work, material and equipment called for by notes, schedules or otherwise indicated on the drawings shall be furnished and installed as though fully set forth in these specifications.
5. VISITING THE SITE
Visit the site and become acquainted with conditions to be encountered. Extra funds will not be allowed due to failure to examine the site and to include existing conditions in bid price.

6. COORDINATION WITH UTILITIES
These plans have been prepared without utility company comments. The contractor shall verify the exact requirements for the electric and telephone services with the utility company representatives and provide all work and pay all costs for complete and operating systems, as directed by the governing utilities. Power, Telephone and Cable Television.

7. MATERIALS AND WORKMANSHIP
All workmanship shall be performed by skilled mechanics using the best standard practices of the trade. All materials shall, unless otherwise noted, be new and in perfect condition. All material for similar uses shall be of the same type, material and manufacture for ease of future maintenance.

All equipment shall be readily accessible for maintenance and repairs. Provide ladders or similar facilities necessary to install the work.

All materials, fixtures and equipment shall be covered or sealed upon installation so as to provide for safety and to insure that operation and appearance will be maintained after subsequent construction operations.

19. CLEAN-UP
Upon completion of the work, prior to final inspection, thoroughly clean all exposed fixtures, trim and equipment, and leave the entire installation in neat, clean and usable condition. Remove all cement, paint, grease, oil and other foreign substances.

20. TEST
Test all wire for shorts, opens, grounds, or other defects. Correct any defective work. Demonstrate continuous satisfactory operation of all electrical equipment.

21. GUARANTEE
Prior to final acceptance of the project, deliver to the owner a written one year guarantee on all workmanship, materials and equipment and agree to repair or replace all such defective items promptly that may occur during this period, including repair or replacement of the premises that may be damaged due to faulty work and materials furnished under this section.

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PROJ. NO. 0353

PAYNE Engineering Inc.
Consulting Engineers
1823 E. Center
Pocatello, Idaho 83201
tel (208) 232-4439 fax (208) 232-1435

Medical Design Group
Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

ELECTRICAL SPEC.

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2280 American Legion Blvd.
Mountain Home, Idaho

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March 2004

Permit Number

Checked By/Date

Lighting Compliance Certificate
2001 IECC

COM*check-EZ* Software Version 2.4 Release 2b
Data filename: C:\Program Files\Check\COMcheck-EZ\desert sage.cck

Section 1: Project Information

Project Name:	Desert Sage Health Center
Designer/Contractor:	Payne Engineering Inc.
Document Author:	Dennis Blanchard
Notes:	February 10, 2004

Section 2: General Information

Building Use Description by: Whole Building Type

Building Type	Floor Area
Medical and Clinical Care	8557

Project Description (check one):
✓ New Construction __ Addition __ Alteration __ Unconditioned Shell (File Affidavit)

Section 3: Requirements Checklist

Bldg. |
Dept. |
Use |

[ ] | **Interior Lighting**
| 1. Total actual watts must be less than or equal to total allowed watts

Allowed Watts	Actual Watts	Complies(Y/N)
13691	10211	YES

| **Exterior Lighting**
[ ] | 2. Efficacy greater than 45 lumens/W
| *Exceptions*:
| Specialized lighting highlighting features of historic buildings; signage; safety or security lighting; low-voltage landscape lighting.

| **Controls, Switching, and Wiring**
[ ] | 3. Independent controls for each space (switch/occupancy sensor).
| *Exception:* Areas that must be continuously lighted.
[ ] | 4. Master switch at entry to hotel/motel guest room.
[ ] | 5. Two switches or dimmer in each space to provide uniform light reduction capability.
| *Exceptions:*
| Only one luminaire in space; An occupant-sensing device controls the area;
| The area is a corridor, storage, restroom, or lobby; Areas that must be continuously lighted;
| Areas greater than 250 sq.ft.
[ ] | 6. Photocell/astronomical time switch on exterior lights.
| *Exceptions:* Areas requiring lighting during daylight hours

[ ] | 7. Tandem wired one-lamp and three-lamp ballasted luminaires.
| *Exceptions*:
| Electronic high-frequency ballasts; Luminaires not on same switch

Section 4: Compliance Statement

The proposed lighting design represented in this document is consistent with the building plans, specifications and other calculations submitted with this permit application. The proposed lighting system has been designed to meet the 2001 IECC requirements in COM*check-EZ* Version 2.4 Release 2b and to comply with the mandatory requirements in the Requirements Checklist.

DENNIS BLANCHARD — 3-11-04

Principal Lighting Designer-Name | Signature | Date

Lighting Application Worksheet
2001 IECC

COM*check-EZ* Software Version 2.4 Release 2b

Section 1: Allowed Lighting Power Calculation

A Building Type	B Floor Area (ft2)	C Total Allowed Watts (watts/ft2)	D Allowed Watts (B x C)
Medical and Clinical Care	8557	1.6	13691
		Total Allowed Watts =	13691

Section 2: Actual Lighting Power Calculation

A Fixture ID	B Fixture Description / Lamp Description / Wattage Per Lamp / Ballast	C Lamps/ Fixture	D # of Fixtures	E Fixture Watt.	F (D x E)
F1	2 lamp lay-in fluor. / 48" T8 32W / Electronic	2	4	61	244
F2/F2A	3 lamp lay-in fluor. / 48" T8 32W / Electronic	3	36	95	3420
F3	4 lamp fluor. wrap / 48" T8 32W / Electronic	4	4	112	448
F4	2 lamp fluor. wrap / 48" T8 32W / Electronic	2	4	61	244
F5	2 lamp strip light / 48" T8 32W / Electronic	2	10	61	610
F6	interior wall sconce / Triple 4-pin 26W / Electronic	1	13	26	338
F10	under counter light / 48" T8 32W / Electronic	1	19	37	703
F11	interior recessed can / Triple 4-pin 26W / Electronic	1	1	26	26
F12	interior recessed can / Incandescent 75W	1	10	75	750
F13	2 lamp linear fluor. / 48" T8 32W / Electronic	2	8	61	488
F14	low voltage trac light / Incandescent 50W	1	10	50	500
F15	2 lamp recessed fluor. / 48" T8 32W / Electronic	2	40	61	2440
			Total Actual Watts =		10211

Section 3: Compliance Calculation

If the *Total Allowed Watts* minus the *Total Actual Watts* is greater than or equal to zero, the building complies.

Total Allowed Watts = 13691
Total Actual Watts = 10211
Project Compliance = 3480

Lighting PASSES: Design 25% better than code

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PROJ. NO. 0353

PAYNE Engineering Inc.
Consulting Engineers
1823 E. Center.
Pocatello, Idaho 83201
tel (208) 232-4439 fax (208) 232-1435

Medical Design Group
Architecture for Health Care
2716 WESTLAND PLACE
BOISE, IDAHO 83704-5863
BOISEARCHITECT@AOL.COM
Fax (208) 378-1405
Phone (208) 378-0817

ELECT. COM-CHECK REPORT

Desert Sage Health Center
2280 American Legion Blvd.
Mountain Home, Idaho

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March 2004