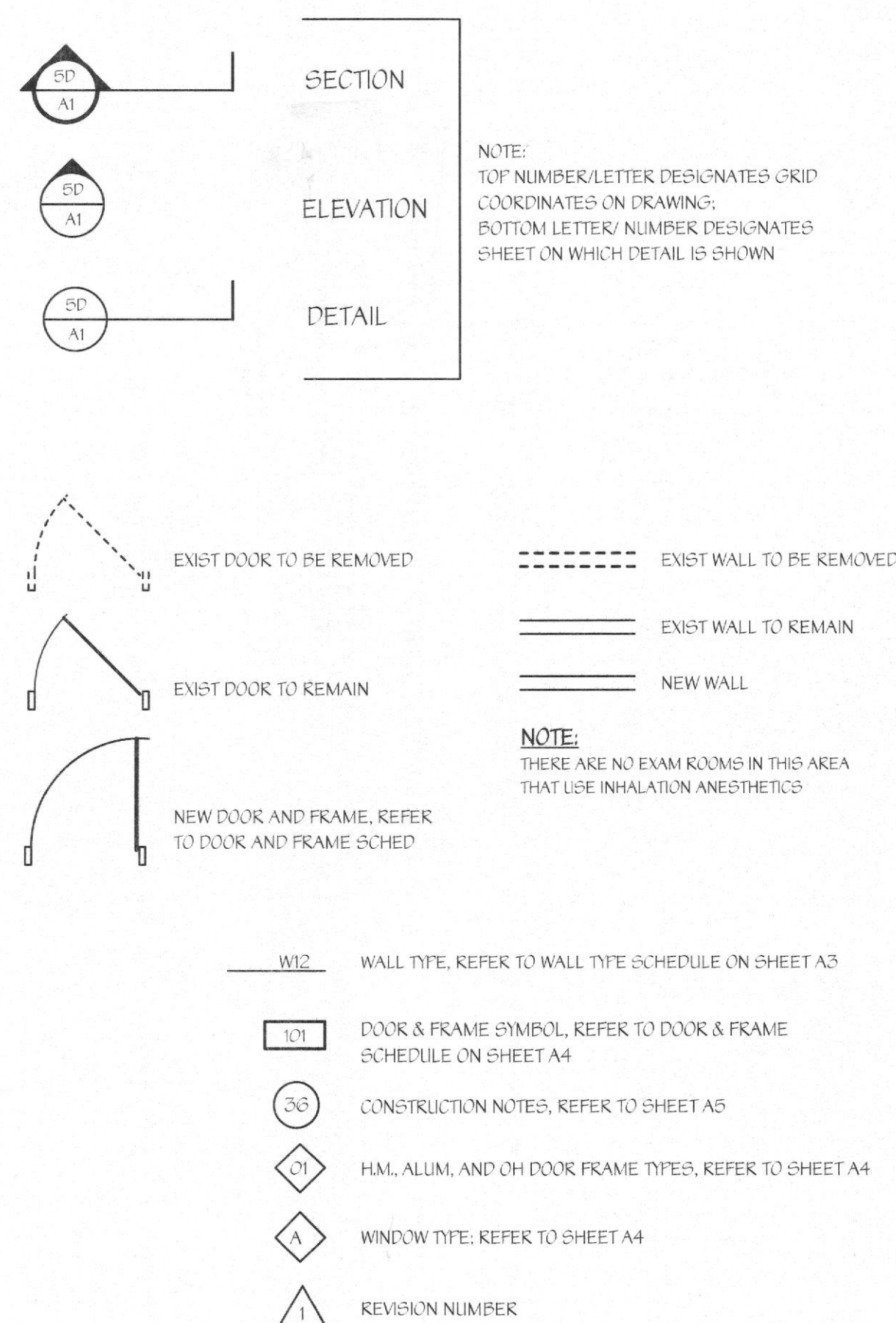


ARCHITECTURAL SYMBOLS



TENANT RENOVATIONS FOR: LIFELINE Access Center

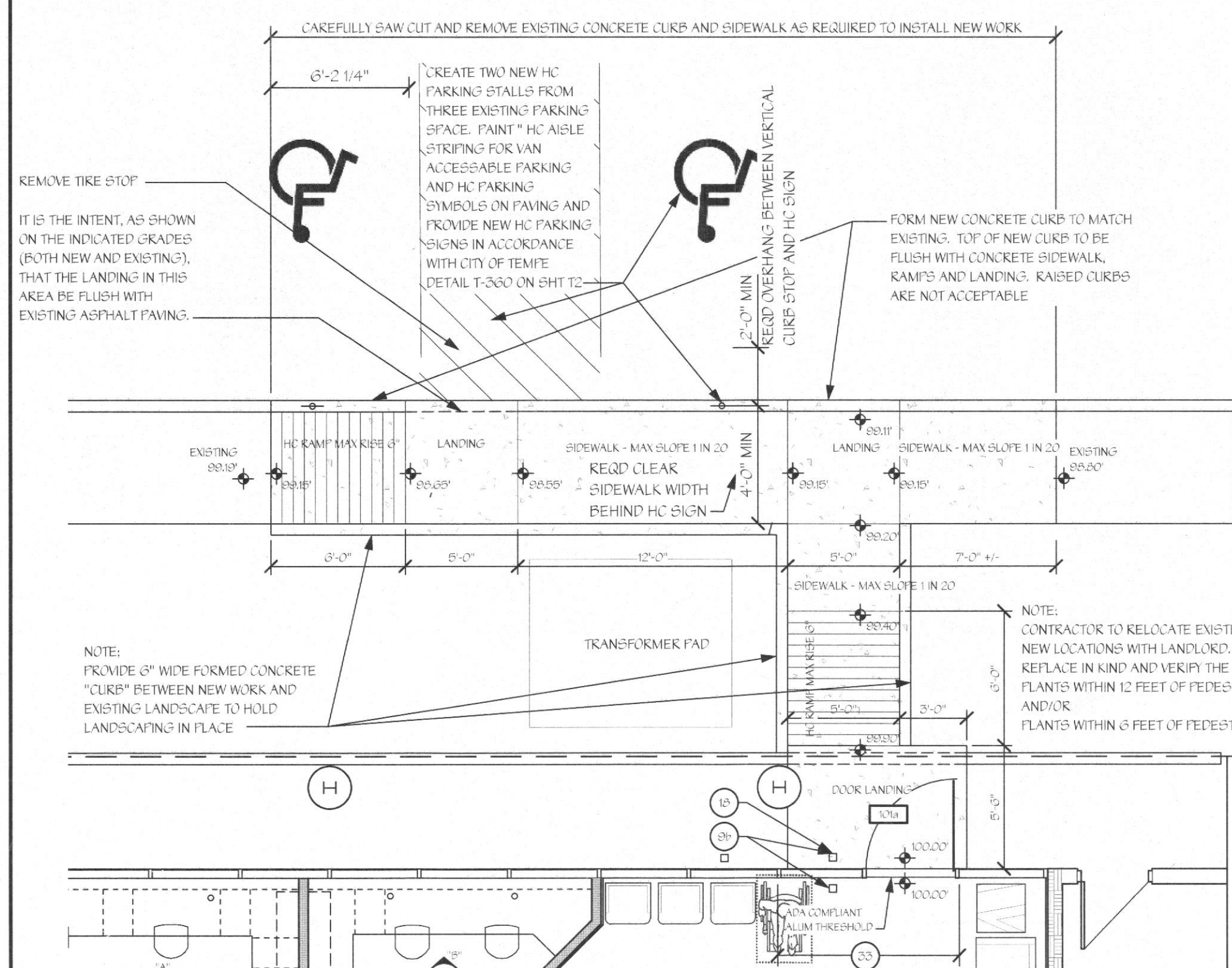
1100 E University Drive, Suite 102
Tempe, AZ 85281

DRAWING INDEX:

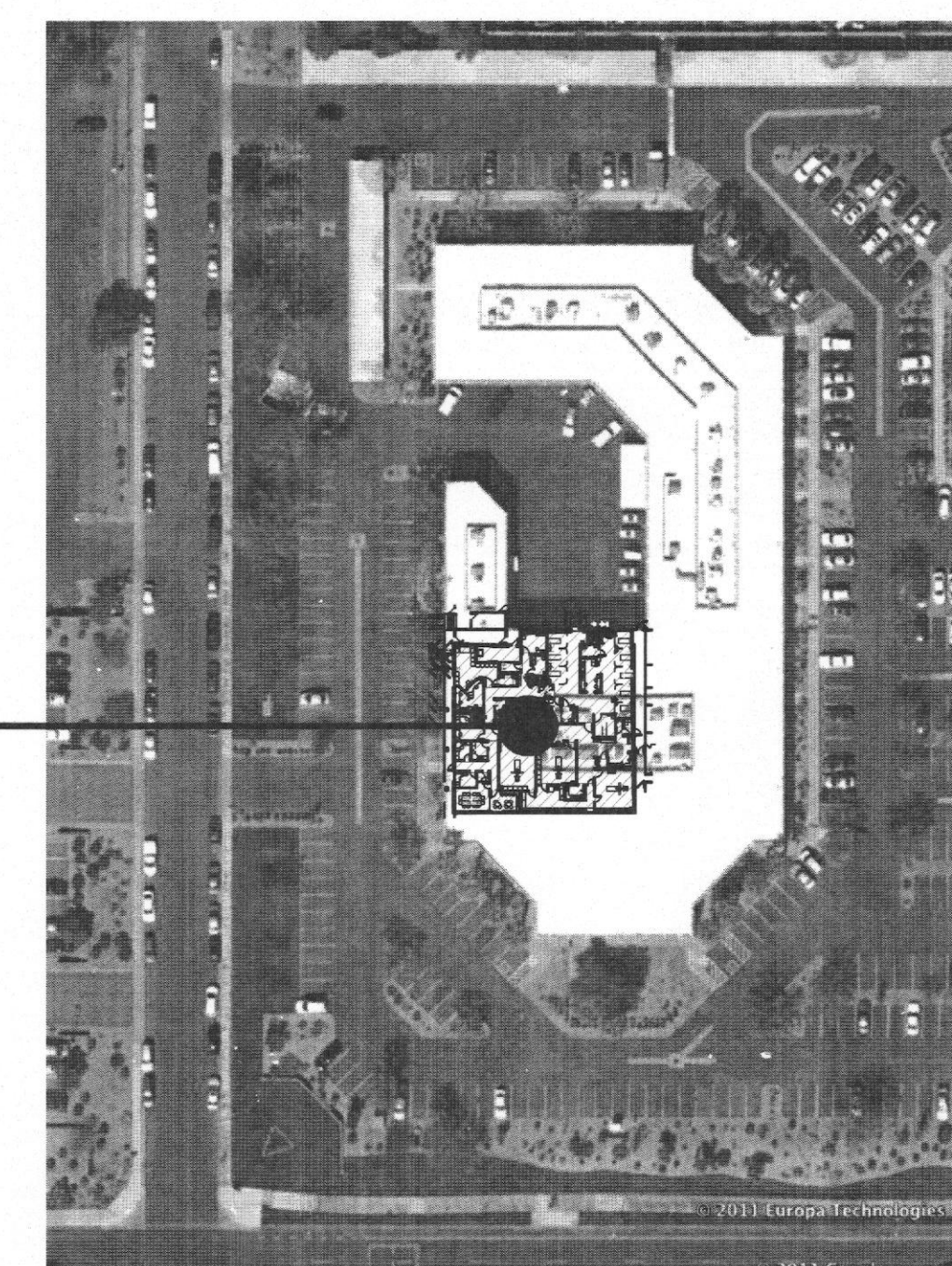
ARCHITECTURAL	
T1	TITLE SHEET
T2	PLANNING AND ZONING SHEET
A1	FLOOR PLAN & TOILET ACCESSORIES SCHEDULE
A2	DEMO, CEILING & OXGEN PLANS
A3	DIMENSION AND WALL SCHEDULE
A3.1	FIRE DETAILS
A4	INTERIOR ELEVATIONS
A5	DOOR & FRAME SCHEDULE AND MED GAS DETAILS
A6	CONSTRUCTION NOTES, DETAILS
A7	INTERIOR FINISH PLAN AND SIGNAGE
M1	FLOOR PLAN-EXIST CONDITIONS/DEMO (HVAC/FINISH)
M2	FLOOR FLR PLAN-EXIST CONDITIONS/NEW (HVAC)
M3	FLOOR PLAN-EXIST CONDITIONS/NEW (EXHAUST)
M4	FLOOR PLAN-EXIST CONDITIONS/NEW (PIPING)
M5	FLOOR PLAN-EXIST CONDITIONS/NEW (PLUMBING)
M6	RISER DIAGRAMS
M7	DETAILS
M8	SCHEDULES
M9	MECHANICAL OUTLINE SPECIFICATIONS
M10	ComCheck CALC'S AND VENTILATION TABLE
MECHANICAL / ELECTRICAL	
E1	FLOOR PLAN - LIGHTING
E2	FLOOR PLAN - POWER
E3	RISER DIAGRAMS AND SCHEDULES
E4	NOTES, SYMBOLS, DETAILS AND SCHEMATIC
E5	ELECTRICAL SPECIFICATIONS

ISSUED FOR ARIZONA
STATE ASC PLAN REVIEW

NEW HC ENTRY SCALE: 1/8" = 1'-0"



EXISTING SITE PLAN SCALE: NTS



CODE ANALYSIS

INTERNATIONAL BUILDING CODE, 2006 EDITION (IBC), AS AMENDED
INTERNATIONAL ENERGY CONSERVATION CODE, 2003 EDITION (IECC), AS AMENDED
INTERNATIONAL FIRE CODE, 2003 EDITION (IFC), AS AMENDED
INTERNATIONAL MECHANICAL CODE, 2003 EDITION (IMC), AS AMENDED
INTERNATIONAL PLUMBING CODE, 2003 EDITION (IPC), AS AMENDED
NATIONAL ELECTRIC CODE, 2003 EDITION (NEC), AS AMENDED
ICC/ANSI A117.1-2003 ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES (ANSI)
APPENDIX A TO 28 CFR PART 36 ADA STANDARDS FOR ACCESSIBLE DESIGN (ADAAG)
REVISED 7/1/94 BY USDOJ
TEMPE BUILDING SAFETY ADMINISTRATIVE CODE (SECTION 8 OF TEMPE CITY CODE)
TEMPE ZONING AND DEVELOPMENT CODE (ZDC)
TEMPE CODE AMENDMENTS

	EXISTING BLDG	PROPOSED RENOVATIONS
OCCUPANCY CLASSIFICATION	B - BUSINESS	UNCHANGED
TYPE OF CONSTRUCTION	2B (UN PROTECTED)	UNCHANGED
NUMBER OF FLOORS	ONE	UNCHANGED
SPRINKLER SYSTEM	YES	YES
RENOVATED TENANT SPACE		7795
OCCUPANT LOAD (B OCCUPANCY CLASSIFICATION @ 100 PER OCCUPANT)		78
NUMBER OF EXITS REQUIRED		TWO
NUMBER OF EXITS PROVIDED		FOUR

dp DON PENN CONSULTING ENGINEERS
635 WESTPORT PARKWAY, SUITE 300
GRAPEVINE, TEXAS 76051
Office 410-452-5006 FAX 917-251-6411

PROJECT INFO

PLEASE REFER TO THE FUNCTIONAL PROGRAM THAT IS PART OF THE PLAN REVIEW APPLICATION THAT IS ATTACHED WITH THESE DRAWINGS.

NOTE: AS INDICATED IN THE FUNCTIONAL PROGRAM THIS CLINIC WILL NOT BE OFFERING SERVICES / PROCEDURES THAT WILL USE GENERAL ANESTHESIA NOR WILL LIFE-SUPPORT EQUIPMENT BE USED DURING ANY SERVICES / PROCEDURES PERFORMED IN THIS CLINIC. THEREFORE, PER 2012 NFPA 101, CHAPTER 20, 20.2.9.2 AN ESSENTIAL ELECTRICAL SYSTEM IS NOT REQUIRED FOR THIS AMBULATORY HEALTH CARE FACILITY AND, ACCORDINGLY, HAS NOT BEEN PROVIDED.

FURTHERMORE, PER 2012 NFPA 99, 4.1 THIS CLINIC HAS BEEN DESIGNATED AS A CATEGORY 3, AS DEFINED IN 4.1.3.

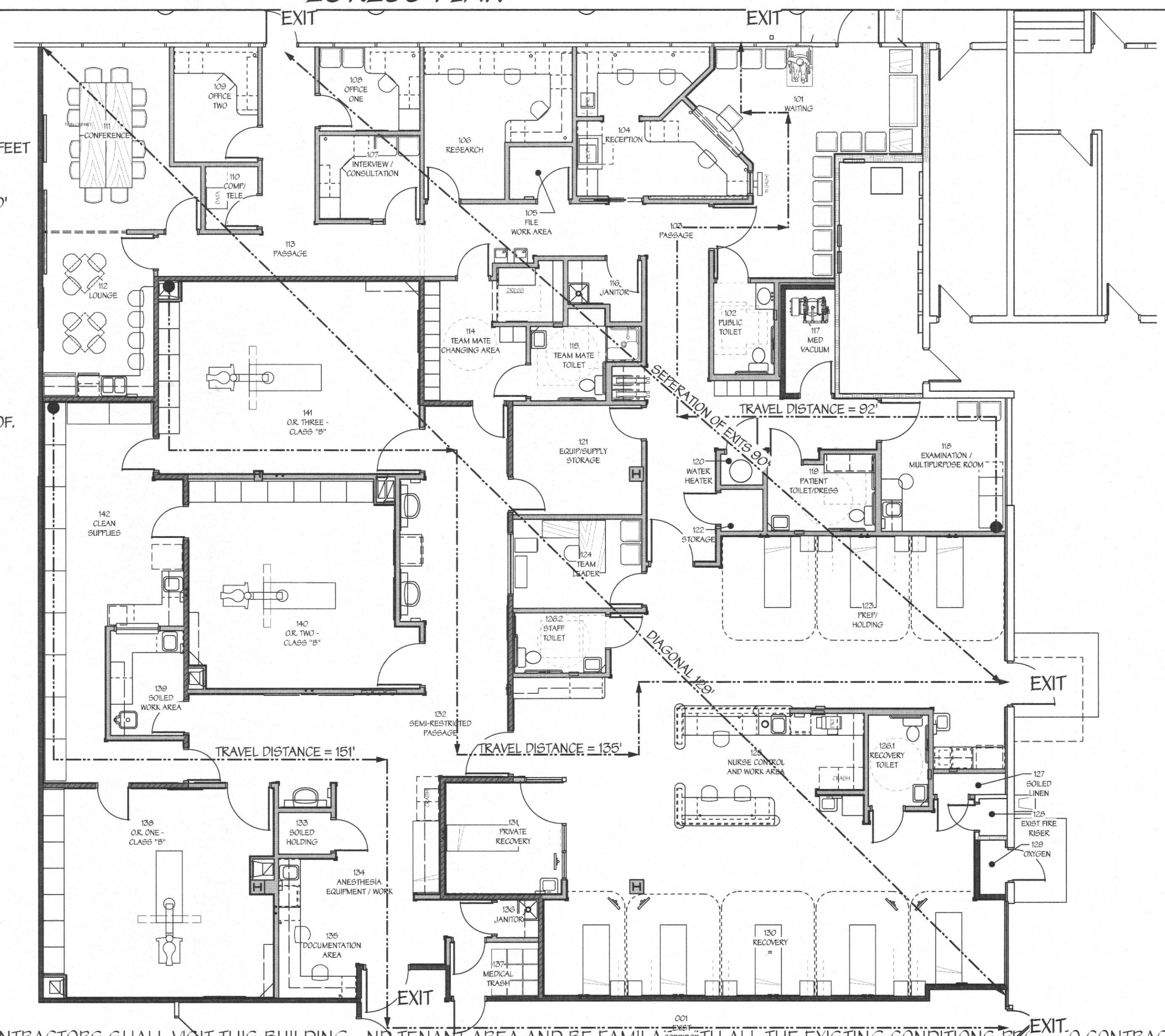
IN ADDITION, ALL OF THE PATIENT CARE EQUIPMENT USED DURING PROCEDURES HAS BEEN PROVIDED WITH AN BOARD BATTERY BACK UP THAT IS CAPABLE OF ALLOWING THE EQUIPMENT TO CONTINUE TO RUN IN THE CASE OF THE LOSS OF POWER FOR A TIME LONG ENOUGH TO ALLOW THE PROCEDURES TO BE STOPPED IN A SAFE AND ORDERLY MANNER SO THAT PATIENT CAN BE MOVED TO A RECOVERY AREA AND/OR EVACUATED FROM THE BUILDING AS MAYBE INDICATED.

TENANT AREA IS ON THE FIRST (GROUND) FLOOR OF EXISTING SINGLE STORY BUILDING

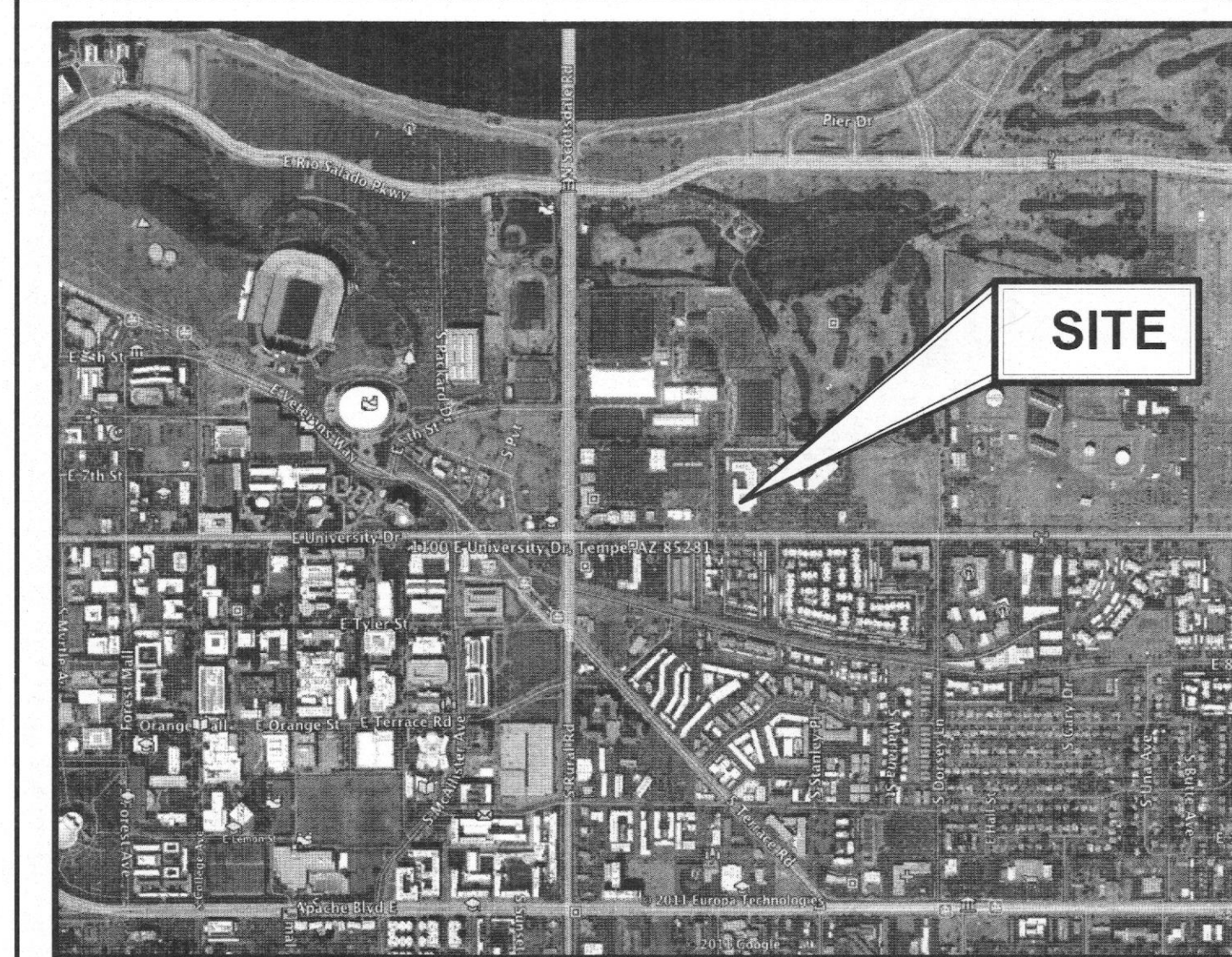
REQUIRED SEPARATION IN SPINKLERED BUILDING = 129/3 OR 43 FEET
MAXIMUM ALLOWABLE TRAVEL DISTANCE = 300'
MAXIMUM ALLOWABLE COMMON PATH OF TRAVEL DISTANCE = 100'

ROOF TOP EQUIPMENT:
AFFRONTAGE HEIGHT OF ROOF ABOVE FINISH FLOOR = 18'-3"
HEIGHT OF TALLEST PIECE OF NEW ROOF TOP EQUIPMENT 59"
(10" HIGH CURB PLUS 49" HIGH HVAC UNIT)
HEIGHT OF EXISTING EQUIPMENT SCREEN ABOUT 48" ABOVE ROOF.
REFER TO DETAIL 1 ON SHEET S1.0 FOR EXTENSION OF EXISTING SCREEN WALL TO A HEIGHT OF ABOUT 62" ABOVE ROOF.

EGRESS PLAN



VICINITY MAP SCALE: NTS



DEFERRED SUBMITTAL
UPON CONTRACT AWARD, CONTRACTOR SHALL ENGAGE SUB-CONTRACTORS TO PREPARE DESIGN / BUILDING DOCUMENTS FOR THE FOLLOWING SYSTEMS AND SHALL SUBMIT THEM TO THE AUTHORITIES HAVING JURISDICTION FOR REVIEW/APPROVAL PRIOR TO THESE PORTIONS OF THE WORK BEING COMPLETED:

FIRE SPRINKLER SYSTEM
FIRE ALARM SYSTEM

ARIZONA STATE ARCHITECTURAL BOARD
4519 S STEPHENSON PARKWAY
PHOENIX, ARIZONA 85044

1/8" = 1'-0"
1/4" = 1'-0"

0" 1" 2" 3"
4' 8' 12' 16' 24'

TITLE SHEET

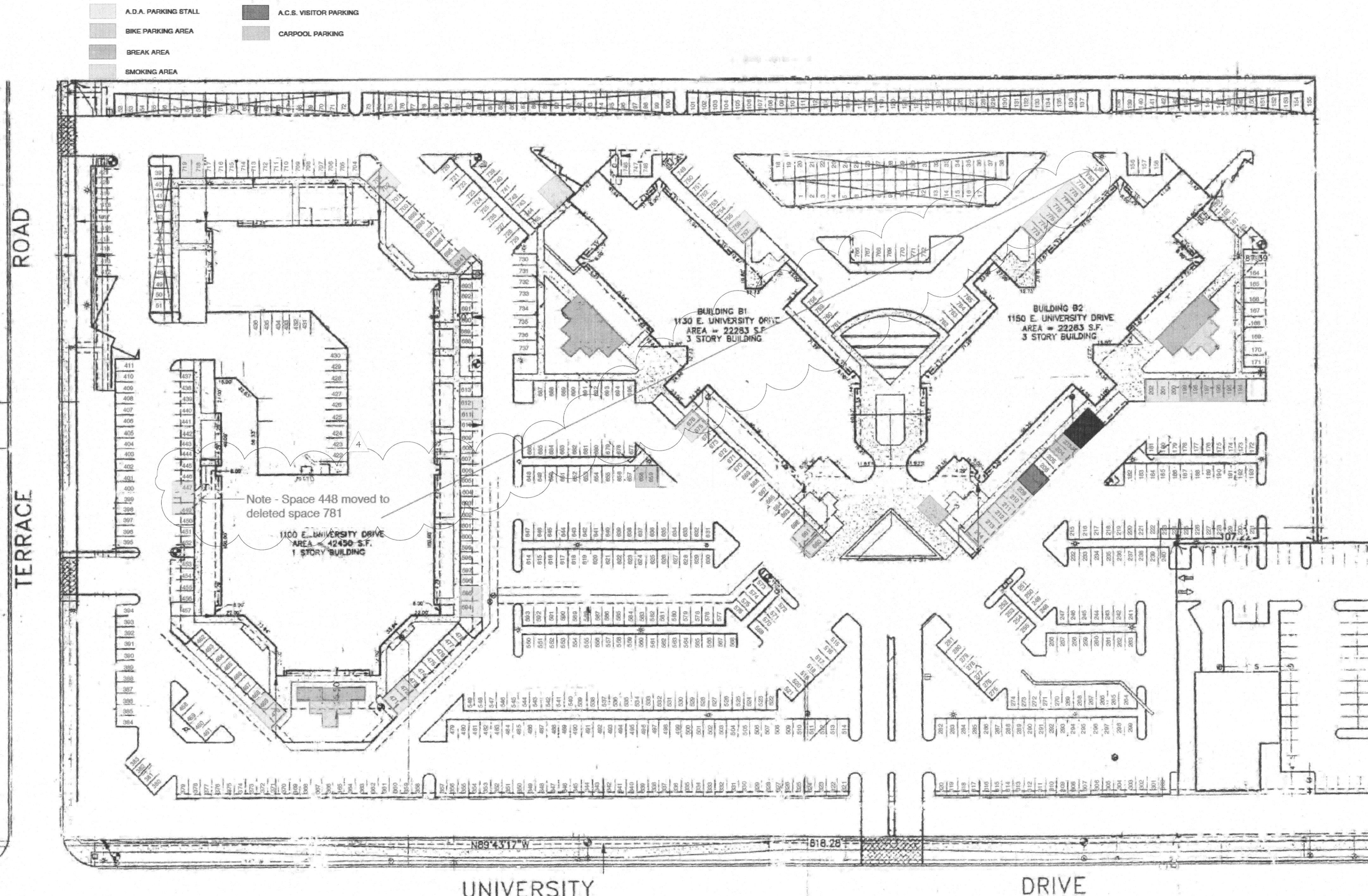
REV #	DATE	REVISIONS
#1	12/23/11	PERMIT COMMENTS
#2	1/15/12	PERMIT COMMENTS
#3	2/17/12	PERMIT COMMENTS
#4	5/3/12	NEW HC ENTRY
	1/17/17	ARIZONA STATE ASC PLAN REVIEW

DRAWING NO. T1
SHEET 01 OF 01
DATE 8/23/11
JOB NUMBER 10281
DRAWN BY KDT
CHECKED BY KDT

In Sync ARCHITECTURAL DESIGN, INC.
1213 Old Pileville Road
Whiteford, MD 21160
Office 410-452-5046

TENANT RENOVATIONS FOR:
LIFELINE
Access Center
1100 E University Dr., Suite 102
Tempe, AZ 85281

EXISTING PARKING INFORMATION (SCALE: NTS)



UNIVERSITY CENTER PARKING ALLOCATION

December-11

Tenant	Suite Number	Occupied Sq. Ft.	Parking Required by Code	Parking Provided on site	# of Parking spaces	Parking ratio
1100 EAST UNIVERSITY DRIVE						
Available office	101	1,959	6.53	7	7	Calculated at 1/300 SF
Occupied medical	102	8,198	54.65	55	55	Calculated at 1/150 SF
Available office	105	6,937	23.12	23	23	Calculated at 1/300 SF
Occupied office	106	5,809	19.36	19	19	Calculated at 1/300 SF
Occupied office	110	1,324	4.41	4	4	Calculated at 1/300 SF
Available office	112	8,266	27.55	28	28	Calculated at 1/300 SF
Occupied office	114	4,523	15.08	15	15	Calculated at 1/300 SF
Occupied office	116	4,108	13.69	14	14	Calculated at 1/300 SF
		41,124				
1130 EAST UNIVERSITY DRIVE						
Available office	101	2,642	8.81	9	9	Calculated at 1/300 SF
Occupied office	101	618	2.06	2	2	Calculated at 1/300 SF
Occupied office	104	722	2.41	2	2	Calculated at 1/300 SF
Occupied office	105	4,055	13.52	14	14	Calculated at 1/300 SF
Occupied office	110	3,883	12.94	13	13	Calculated at 1/300 SF
Occupied office	115	2,065	6.88	7	7	Calculated at 1/300 SF
Available office	117	2,071	6.90	7	7	Calculated at 1/300 SF
Occupied office	200	10,012	33.37	33	33	Calculated at 1/300 SF
Occupied office	208	4,460	14.87	15	15	Calculated at 1/300 SF
Occupied office	214	4,460	14.87	15	15	Calculated at 1/300 SF
Occupied office	300	24,746	82.49	83	83	Calculated at 1/300 SF
	BLDG. TTL	59,734				
1150 EAST UNIVERSITY DRIVE						
Occupied Office	101	22,551	75.17	75	75	Calculated at 1/300 SF
Occupied Office	201	23,562	78.54	79	79	Calculated at 1/300 SF
Occupied Office	301	23,026	76.75	77	77	Calculated at 1/300 SF
	BLDG. TTL	69,139				
TOTALS		169,997			596	

Total site SF	Parking required	Parking provided	Per Tempe
Existing parking on site	566.66	780	22.67
			ADA Req:
			ADA Pro: 35

PARKING REQUIRED = 594 SPACES
 PARKING PROVIDED = 780 SPACES - INCLUDES 1130 & 1150 E. UNIVERSITY DRIVE

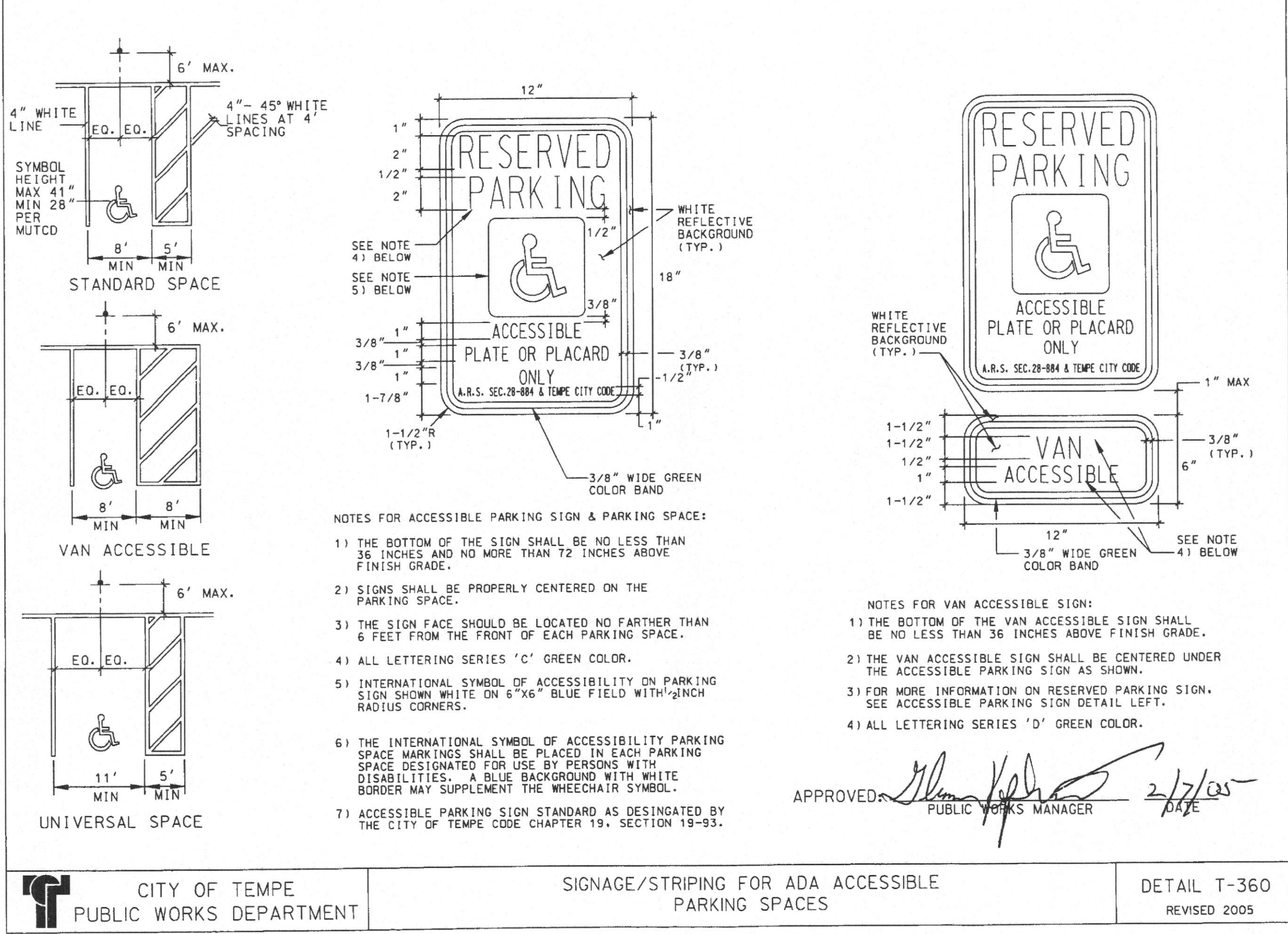
ISSUED FOR ARIZONA
 STATE ASC PLAN REVIEW

dp DON PENN
 CONSULTING ENGINEERS
 655 WESTPORT PARKWAY, SUITE 300
 GRAPEVINE, TEXAS 75051
 972-410-8555 FAX 972-451-8411

In Sync
 ARCHITECTURAL DESIGNS, INC.
 1213 Old Pikeville Road
 Whiteford, MD 21160
 Office 410-462-8006
 Fax 410-462-8046

TENANT RENOVATIONS FOR:
 LIFELINE
 Access Center
 1100 E. University Dr., Suite 102
 Tempe, AZ 85281

HC PARKING DETAIL / REQUIREMENTS (SCALE: NTS)

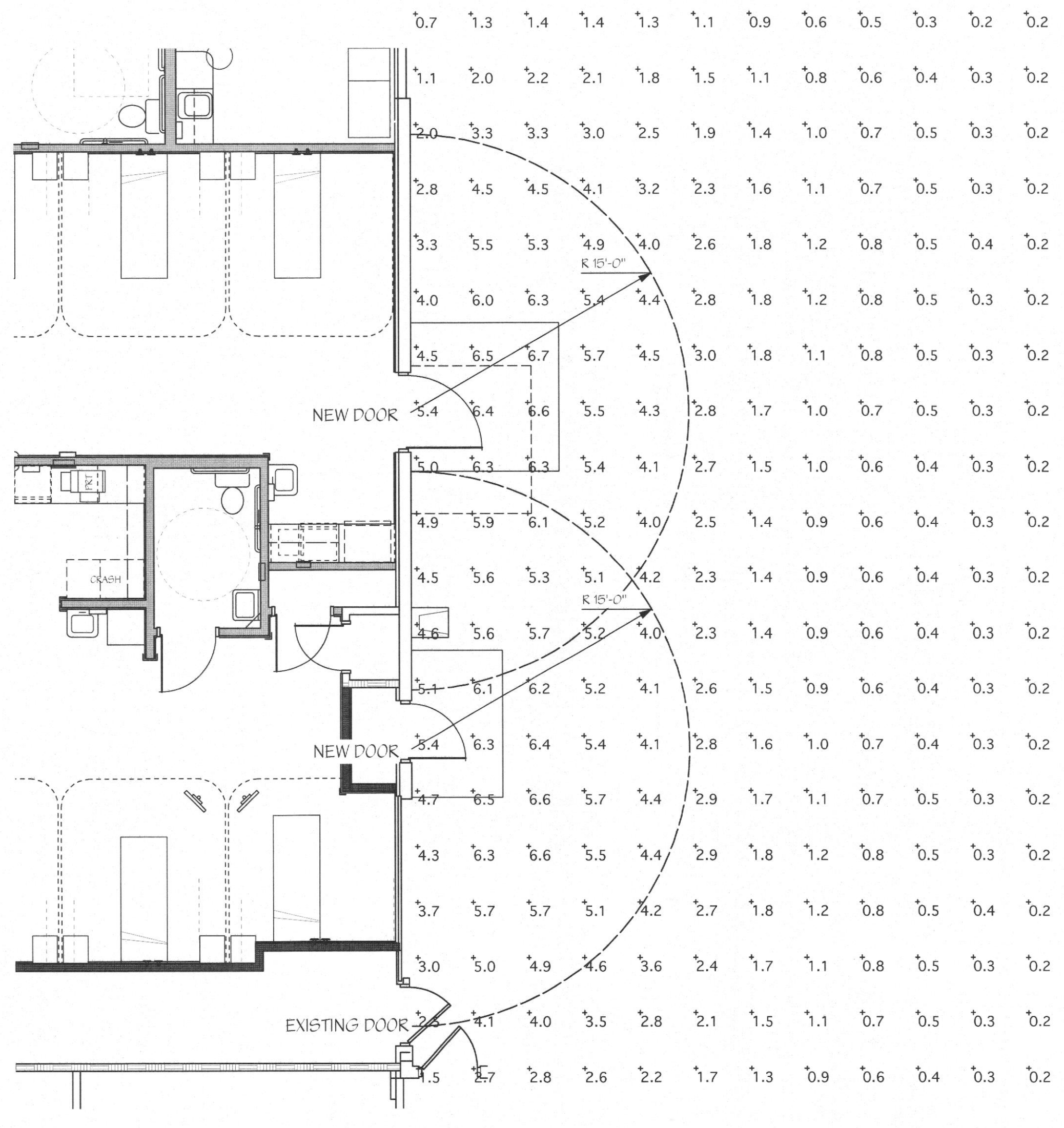


CITY OF TEMPE
 PUBLIC WORKS DEPARTMENT

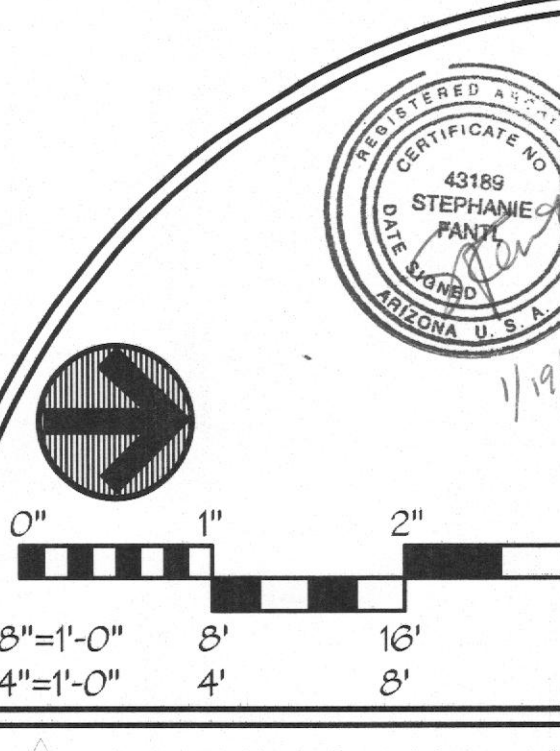
SIGNAGE/STRIPING FOR ADA ACCESSIBLE
 PARKING SPACES

DETAIL T-360
 REVISED 2005

PHOTOMETRIC INFORMATION AT NEW DOOR (SCALE: NTS)



REFER TO ELECTRICAL
 LIGHTING PLAN FOR
 LIGHT FIXTURES



PLANNING AND ZONING SHEET

REV#	DATE	DESCRIPTION
#1	12/23/11	PERMIT COMMENTS
#2	1/15/12	PERMIT COMMENTS
#3	2/17/12	PERMIT COMMENTS
#4	5/3/12	NEW HC ENTRY
	1/17/17	ARIZONA STATE ASC PLAN REVIEW

REVISIONS	DATE	DESCRIPTION

DRAWING NO. T2

SHEET 01 OF 01

DATE 5/23/11

DRAWN BY KDP

JOB NUMBER 10251

CHECKED BY KDP

RAB LIGHTING WPLED26/PC

DESCRIPTION
 LED 26 Watt Packages

SPECIFICATIONS

UL Listing
 Suitable for wet locations. Suitable for mounting within 4' of the ground.

Photocell
 120V Photocell included.

Country of Origin
 Designed by RAB in New Jersey and assembled in Taiwan.

Trade Agreements Act Compliant
 This product is a product of Taiwan and a "designated country" and product that complies with the Trade Agreements Act GSA Schedule.

This product is suitable for listing on the GSA Schedule of the US General Services in accordance with FAR Subpart 25.4

Finish
 Chip and fade resistant polyester powder coat finish.

Color Stability
 RAB LEDs exceed industry standards for chromatic stability.

Color Uniformity
 RAB's range of CCT (Correlated color temperature) follows the guidelines of the American National Standard for Specifications for the Chromaticity of Solid State Lighting (SSL) Products, ANSI C78.377-2008.

Ambient Temperature
 Suitable for use in 40C ambient temperatures.

Fixture Efficacy
 81 Lumens per Watt

Color Accuracy
 95 CRI

Color Temperature (Nominal CCT)
 5169 K (Daylight)

ORDERING INFORMATION

LED	Total Lamp Watts	Lamp Type	Base	Ballast	Starting Amps	Operating Amps	120V	208V	240V	277V	Input Watts	LAMP ANBI	Initial Lumens	Lamp Hours
26 LED	Heat sink	Constant Current	0.26	0.16	0.14	0.12	30.2	N/A	1816	50000				

Factory Installed Options
 Add suffix to Catalog Number

Photocell for 277V (PC2) Photocell for 120V (PC)

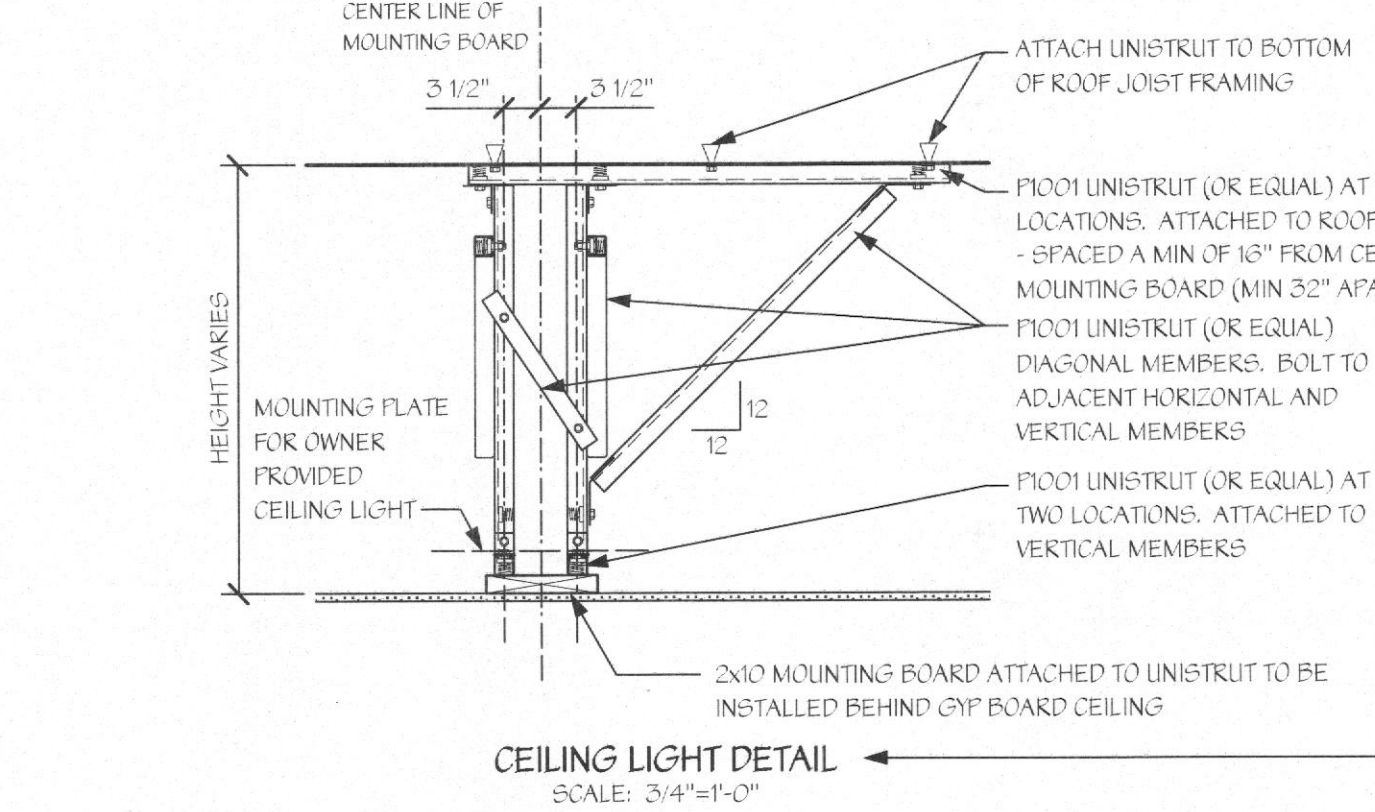
Note: Specifications may change without notice

RAB Lighting, Inc. • 170 Ludlow Ave • Northvale, NJ 07647 • Tel: 888 RAB-1000 • Fax: 888 RAB-1232 • www.rabweb.com

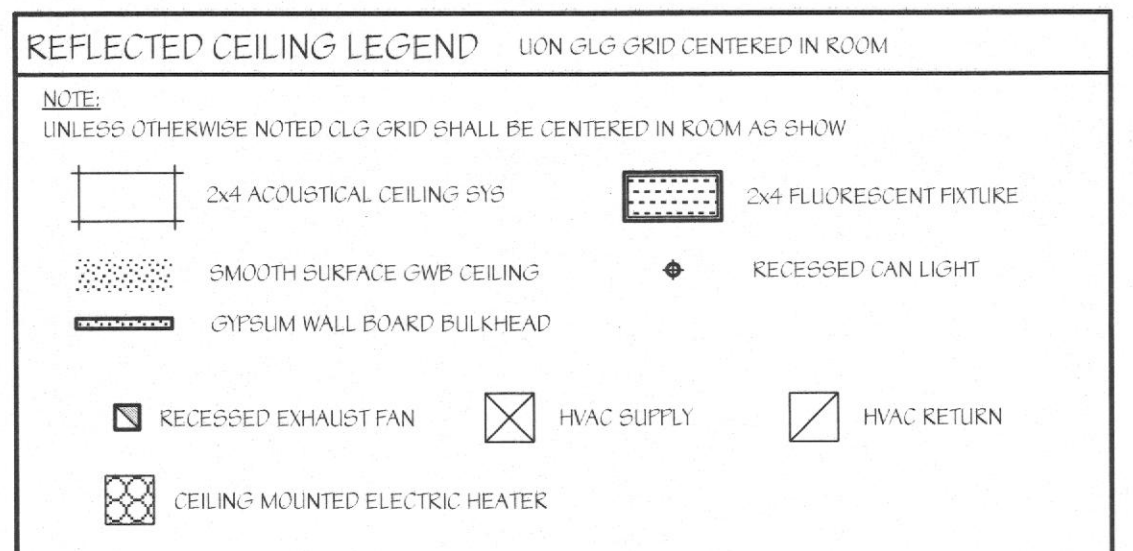
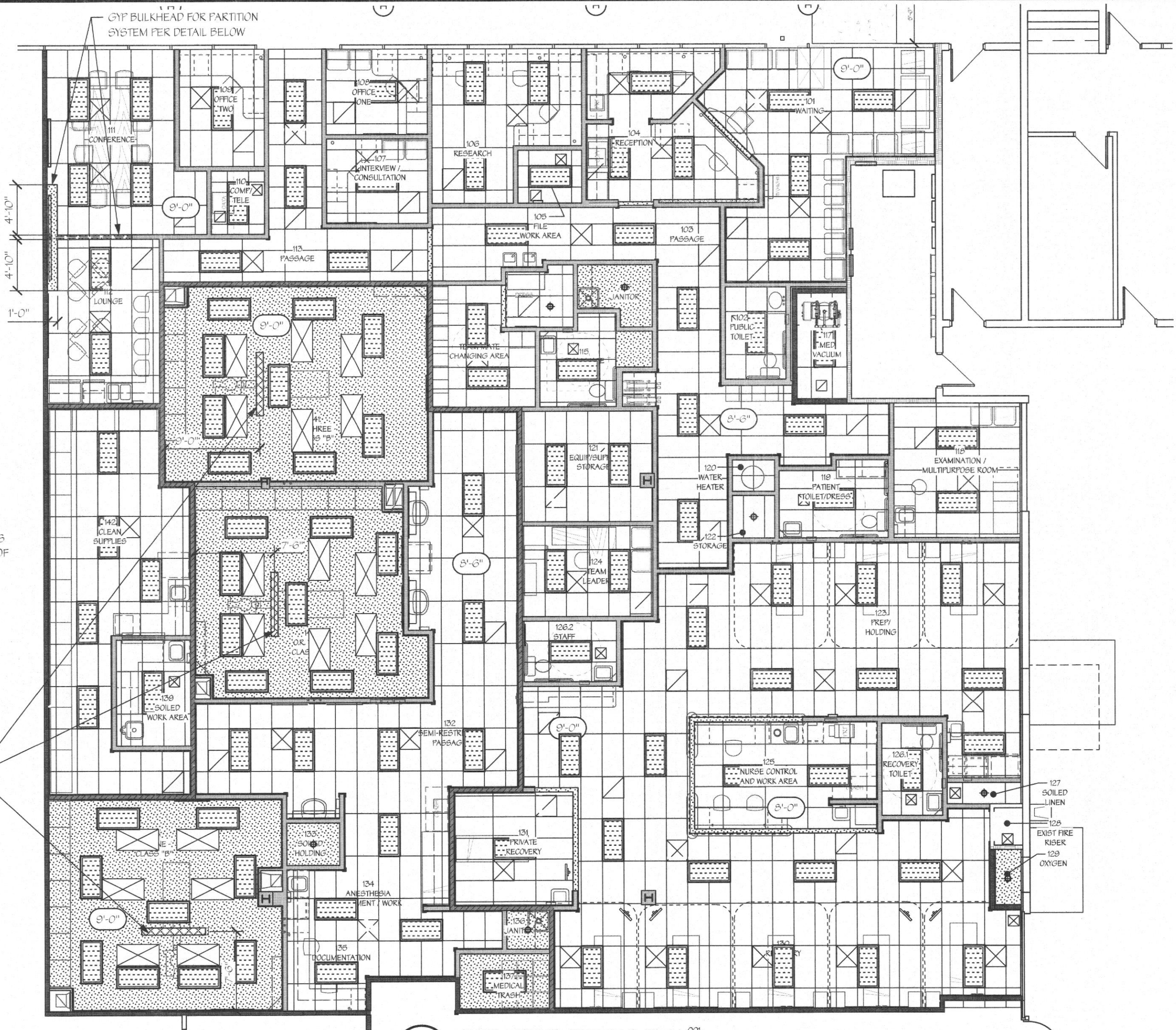
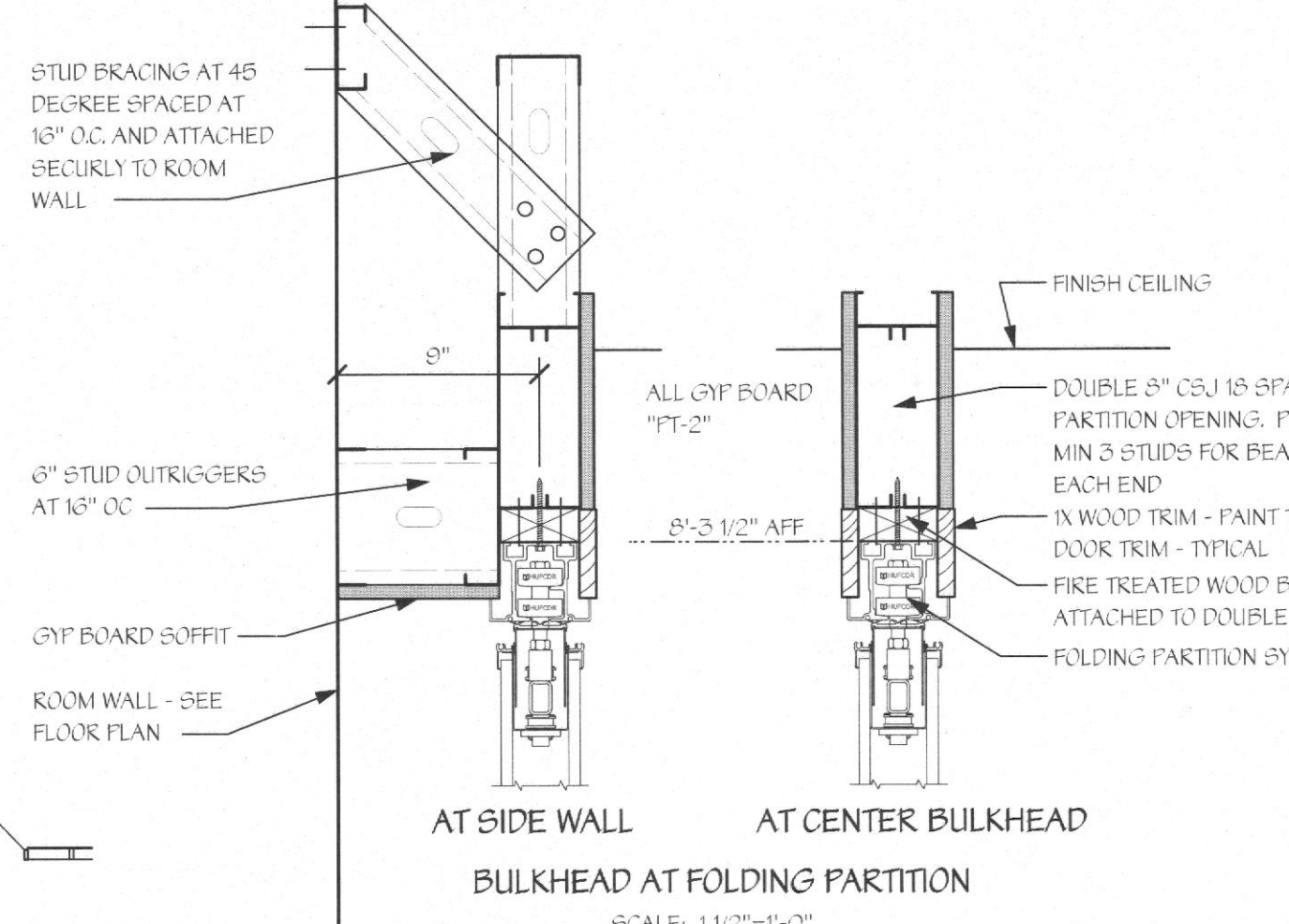
NOTE: CONTRACTOR AND SUB-CONTRACTORS SHALL VISIT THIS BUILDING AND TENANT AREA AND BE FAMILAR WITH ALL THE EXISTING CONDITIONS PRIOR TO CONTRACT AWARD

DEMOLITION NOTES

- DESIGNATES A DEMOLITION NOTE THAT CORRESPONDS TO THE NOTES BELOW.
- EXISTING CONSTRUCTION TO REMAIN. REFER TO NEW PLAN FOR ADDITIONAL REQUIREMENTS.
 - REMOVE EXIST STUD, GWB PARTITIONS AND DOORS/FRAMES. TYPICAL THROUGHOUT AREA OF DEMOLITION.
 - REMOVE EXIST CASEWORK.
 - REMOVE EXISTING FLOORING IN THIS AREA AND PREPARE EXISTING CONCRETE FOR INSTALLATION OF NEW FINISHES. REMOVE EXISTING CEILING SYSTEM, INCLUDING LIGHTS AND DIFFUSERS, IN THIS AREA. REMOVE ABANDONED/UNUSED ITEMS IN CEILING SPACE IN PREPARATION FOR NEW WORK. COORDINATE LIMITS WITH FLOOR PLAN.
 - REMOVE EXISTING DOOR AND FRAME.
 - REMOVE EXISTING STOREFRONT DOOR AND FRAME AS REQUIRED FOR INSTALLATION OF NEW STOREFRONT DOOR AND FRAME. SEE FLOOR PLAN.
 - REMOVE EXISTING PLUMBING FIXTURE. CAP AND SEAL ALL SUPPLY AND DRAINS AS REQUIRED.
 - REWORK EXISTING CEILING AND OTHER FINISHES IN THIS AREA TO ACCOMMODATE NEW WORK PER FLOOR PLAN.



SUPPLY NEW 2X4x8x8 FOOT LONG MOUNTING BOARD PER DETAIL ABOVE FOR OWNER PROVIDED SUSPENDED LIGHT. LIGHT UNIT IS ABOUT 60 POUNDS. MOUNTING BOARD SHALL BE INSTALLED BEHIND GYP BOARD CEILING AND SHALL BE HUNG FROM BOTTOM OF ROOF FRAMING ABOVE. PROVIDE LATERAL BRACING SUCH THAT UNIT WILL NOT SWAY. COORDINATE WITH OWNER'S VENDOR.



OXYGEN & VACUUM SYSTEM NOTES

- DESIGNATES AN OXYGEN / VACUUM SYSTEM NOTE
- GENERAL NOTE - INSTALL 1/2" GAUGE CONTROL WIRING PER MANUFACTURE'S REQUIREMENTS/RECOMMENDATIONS BETWEEN PRESSURE/VACUUM SWITCHES, MANIFOLD, CONTROL PANEL AND MASTER ALARM PANEL AND AREA ALARM PANEL LOCATIONS.
- OXYGEN MANIFOLD. UNIT SHALL BE OHIO MEDICAL CORPORATION MODEL #283432-02 WITH A 2X2 HEADER BAR, 1/2" RELIEF VALVE (SET AT 75psig) #232500 AND PIPE AWAY FOR RELIEF VALVE #232502. FULLY AUTOMATIC MANIFOLD SHALL HAVE A NEMA 4X ENCLOSURE AND BE UL LISTED. PRESSURE CONTROL CABINET SHALL CONTAIN DUAL PRESSURE REGULATORS AND SWITCHES THAT INSURE AN UNINTERRUPTED FLOW OF GAS TO THE PIPELINE. THE CABINET SHALL HAVE THREE PRESSURE GAUGES, ONE FOR EACH SUPPLY SIDE AND ONE FOR PIPELINE DELIVERY. IT SHALL BE AUTOMATIC SWITCH, HEADER BARS SHALL BE MODULAR IN DESIGN, ALLOWING FOR FUTURE EXPANSION. EACH INLET FORT SHALL BE EQUIPPED WITH AN INDIVIDUAL CHECK VALVE. HEADER BAR SHALL INCLUDE A MASTER SHUTOFF VALVE.
 - HEADER BAR ON EACH SIDE OF MANIFOLD PER NOTE 1 ABOVE. PROVIDE FASTENERS FOR CONNECTION TO CYLINDERS (BY OWNER). COORDINATE EXACT INSTALLATION LOCATION OF HEADERS WITH OWNER. MANIFOLD AND HEADERS SHALL BE INSTALLED PER NFPA REQUIREMENTS AND IN COMPLIANCE WITH MANUFACTURE'S RECOMMENDATIONS.
 - LOCKABLE VALVE FOR SYSTEM SHUTDOWN ADJACENT TO MANIFOLD ASSEMBLY. VALVE SHALL BE 201600-05 BY OHIO MEDICAL CORPORATION WITH LABEL KIT 261645. INSTALL PER MANUFACTURE'S RECOMMENDATIONS TO COMPLY WITH NFPA REQUIREMENTS.
 - PROVIDE GAS SPECIFIC DEMAND CHECK ASSEMBLY CONSISTING OF OHIO MEDICAL CORPORATION MAINLINE PRESSURE SWITCH #261709 AND P500-GAUGE-100 FOR OXYGEN AND P-500-GAUGE-VAC FOR VACUUM UTILIZING PART #261833 AND INSTALLED PER MANUFACTURE'S RECOMMENDED INSTALLATION DIAGRAM. PROVIDE 1/2" OXYGEN SUPPLY PIPE UP WALL TO CEILING FOR DISTRIBUTION PER DRAWING.
 - PRESSURE RELEASE VENT PIPING FOR PRESSURE RELIEF VALVE(S) TO THE OUTSIDE PER MANUFACTURE'S RECOMMENDATIONS. CONTRACTOR SHALL SELECT AN APPROPRIATE DISCHARGE POINT AND SHALL COORDINATE EXACT LOCATION WITH THE LANDLORD. TERMINATE PIPING PER MANUFACTURE'S RECOMMENDATIONS.
 - MEDICAL VACUUM EQUIPMENT TO BE OHIO MEDICAL HEALTHCARE SYSTEM MODEL NO 5300A-12V PACKAGED SYSTEM PART NO 5300A-12V-3 HP ELECTRIC MOTOR DRIVEN PUMPS, A 50 GALLON RECEIVER AND A UL LISTED DUPLEX ELECTRICAL CONTROL SYSTEM MOUNTED IN A NEMA 12 ENCLOSURE. ALL SYSTEM COMPONENTS SHALL BE INSTALLED FOR A COMPLETELY OPERATIONAL MEDICAL VACUUM SYSTEM.
 - FOR MOTOR PROTECTION, THE EQUIPMENT SHOULD NOT BE OPERATED IN AN AMBIENT TEMPERATURE ABOVE 104°F.
 - EQUIPMENT CONFORMS TO THE NATIONAL ELECTRICAL CODE.
 - THE SYSTEM SHALL MEET NFPA 99 2005 REQUIREMENTS AND IFC 500.5.
 - SYSTEM MUST BE CERTIFIED BY AN APPROVED MEDICAL GAS CERTIFICATION COMPANY AFTER INSTALLATION.
 - 1/2" OXYGEN DISTRIBUTION PIPING IN CEILING. PIPING SHALL BE INSTALLED PER NFPA AND MANUFACTURE'S REQUIREMENTS AND PER THE MATERIAL SPECIFICATIONS. (SEE SPEC BOOK)

VACUUM DISTRIBUTION PIPING IN CEILING SIZED PER MANUFACTURE'S RECOMMENDATIONS FOR THE VARIOUS LOCATIONS/DEMANDS - MINIMUM 3/4". PIPING SHALL BE INSTALLED PER NFPA AND MANUFACTURE'S REQUIREMENTS.

OXYGEN AND VACUUM PIPING (SEE NOTES #7 & #8) DOWN IN WALL TO ZONE VALVE BOX. VALVE BOX SHALL BE OHIO MEDICAL CORPORATION BRAND MODEL #261600-XXX WITH GAUGE FORT. IT SHALL BE CONSTRUCTED OF STEEL AND THE FRAME ALUMINUM WITH A TINTED, PLEXI-GLASS FULL OUT WINDOW. THE VALVE SHALL BE OXYGEN CLEANED, FULL FORT, THREE-PIECE BALL TYPE. COORDINATE MOUNTING HEIGHT WITH OWNER AND LOCAL JURISDICTION REQUIREMENTS AND INSTALL PER MANUFACTURE'S RECOMMENDATIONS. OXYGEN AND VACUUM PIPING (SEE NOTES #7 & #8) UP IN WALL DISTRIBUTION PIPING IN CEILING.

OXYGEN AND VACUUM PIPING (SEE NOTES #7 & #8) DOWN IN WALL TO MEDICAL GAS AND VACUUM OUTLET (VACUUM OUTLET TO INCLUDE SLIDE BRACKET NEXT TO VACUUM OUTLET). MEDICAL GAS OUTLETS SHALL BE OHIO MEDICAL CORPORATION BRAND, DIAMOND QUICK-CONNECT - FOR OXYGEN PART #261000-1C15 - FOR VACUUM PART NUMBER #261010-5 WITH VACUUM VACUUM WALL REGULATOR WITH OHMEDA WALL INLET AND NIPPLE CONNECTOR. FOR VACUUM SLIDE PART NUMBER 261650. VERIFY LOCATION OF SLIDE PLATE WITH OWNER PRIOR TO INSTALLATION. OUTLETS SHOULD INCLUDE ONE PIECE, HIGH IMPACT, FLAME-RETARDANT (V) TRIM PLATE. ALL OUTLETS SHALL BEAR THE UL LABEL AND BE CLEANED FOR OXYGEN SERVICE. OUTLETS SHOULD INCLUDE PRIMARY AND SECONDARY CHECK VALVES. WALL OUTLETS SHALL HAVE GAS SPECIFIC BACK BODY WITH A STEEL MOUNTING PLATE. COORDINATE EXACT MOUNTING HEIGHT/LOCATION WITH OWNER PRIOR TO INSTALLATION. NOTE - AT NOTE #10a PROVIDE TWO VACUUM OUTLETS WITH SLIDE BRACKET.

COMBINATION MASTER/AREA ALARM FOR OXYGEN AND VACUUM SYSTEMS. UNIT SHALL BE A OHIO MEDICAL CORPORATION COMBINATION 10 FOOT MASTER ALARM 4 GAS AREA/10 POINT MASTER ALARM WITH 40 OWNERS #261605-101212. ALLOWING IT TO INTERFACE WITH A FUTURE BUILDING AUTOMATION SYSTEM. IT SHALL COMPLY WITH FCC PART 15. IT SHALL HAVE HIGH VISIBILITY LED READOUTS. IT SHALL BE EQUIPPED WITH REMOTE SENSORS (REFER TO NOTE 9 BELOW). COORDINATE EXACT LOCATION OF INSTALLATION WITH CASEWORK AND OWNER PRIOR TO INSTALLATION.

REMOTE SENSORS, ONE FOR OXYGEN AND ONE FOR VACUUM. PROVIDE ALL ACCESSORIES REQUIRED FOR A COMPLETE INSTALLATION PER MANUFACTURE'S RECOMMENDATIONS. PROVIDE AS FOLLOWS

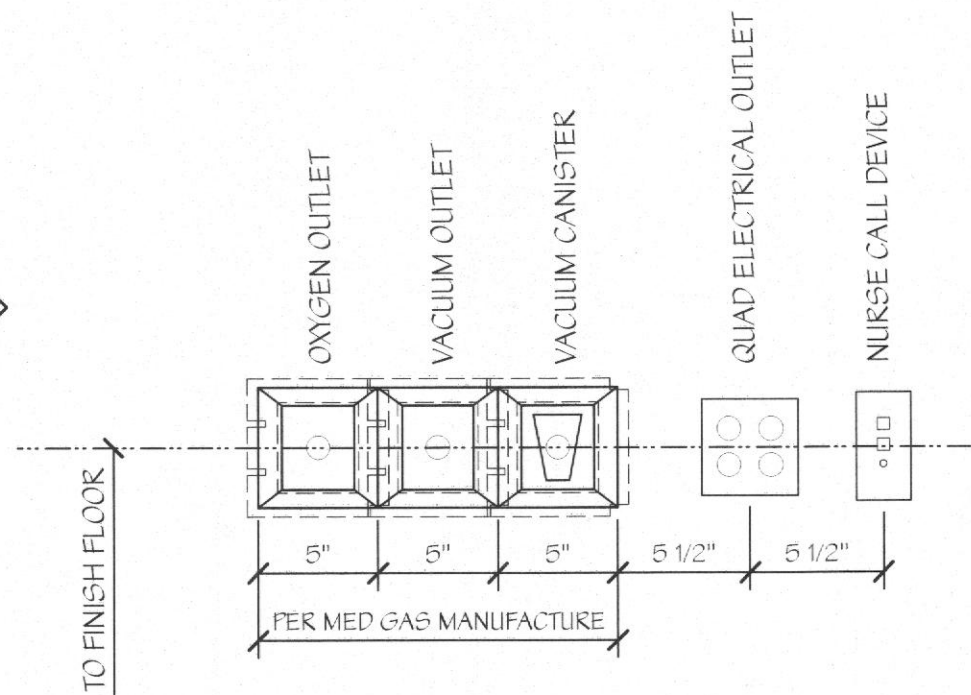
12a) TO BE INSTALLED ON THE UPSTREAM SIDE OF THE MAIN LINES PRIOR TO ZONE VALVES SERVING THE OR ROOMS.

12b) TO BE INSTALLED ON THE DOWN STREAM SIDE OF THE DISTRIBUTION PIPING AFTER THE ZONE VALVE BOX SERVING THE RECOVERY AREA.

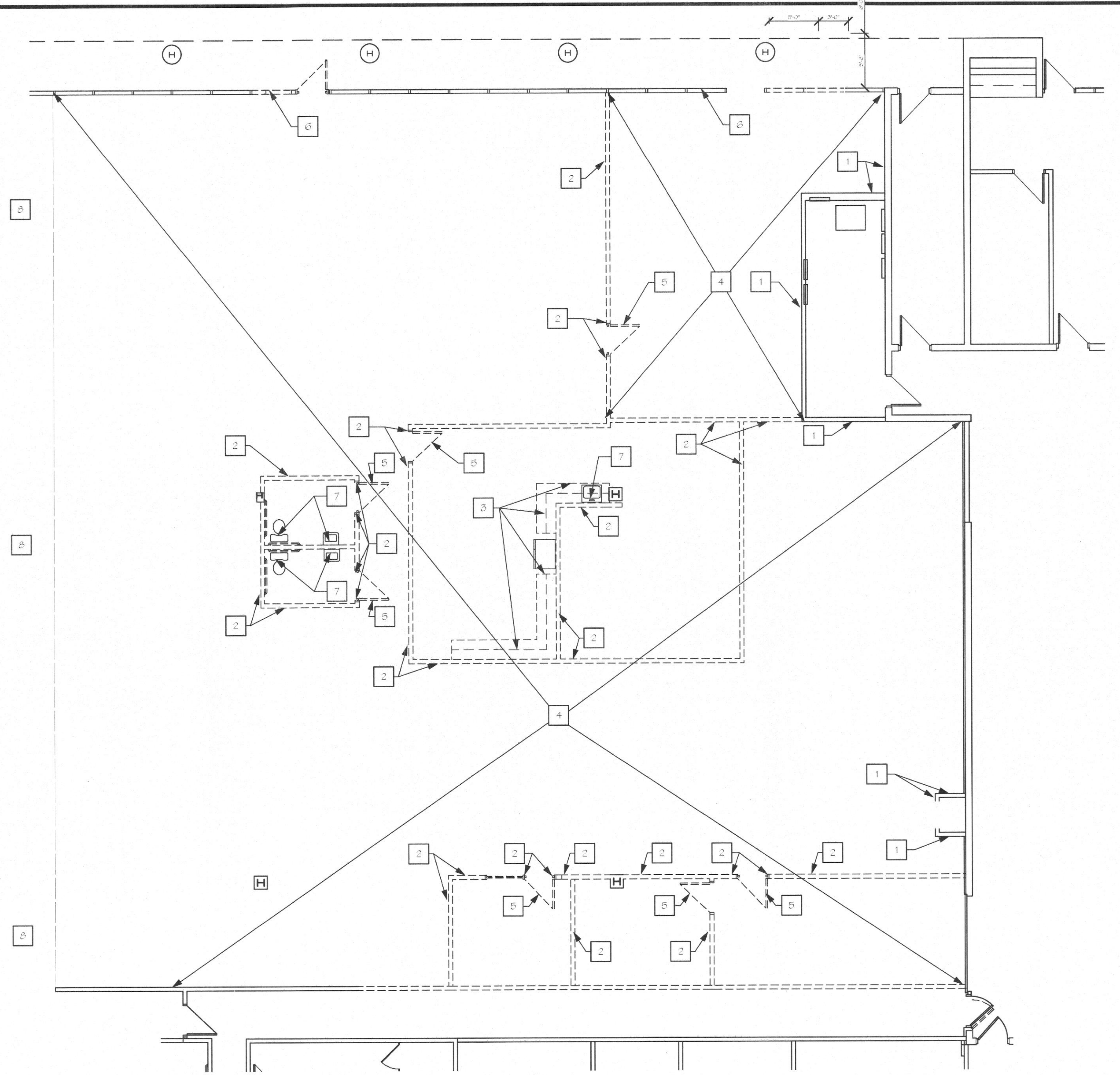
VACUUM EXHAUST EXHAUST PIPING TO THE OUTSIDE PER MANUFACTURE'S RECOMMENDATIONS. CONTRACTOR SHALL SELECT AN APPROPRIATE DISCHARGE POINT AND SHALL COORDINATE EXACT LOCATION WITH THE LANDLORD. SELECTED LOCATION SHALL BE A MIN OF 10 FEET FROM ANY INTAKE DEVICE OR ANY WINDOWS OR DOORS. TERMINATE PIPING PER MANUFACTURE'S RECOMMENDATIONS

NOTE: LIFELINE HAS A NATIONAL SALES RELATIONSHIP WITH THE FOLLOWING CONTACTS:
CLARK NIEMeyer - OHIO MEDICAL CORPORATION - 800-448-0770
AND/OR
MATTHEW KOLLO - DIVERSIFIED ANESTHESIA - 569-266-4417

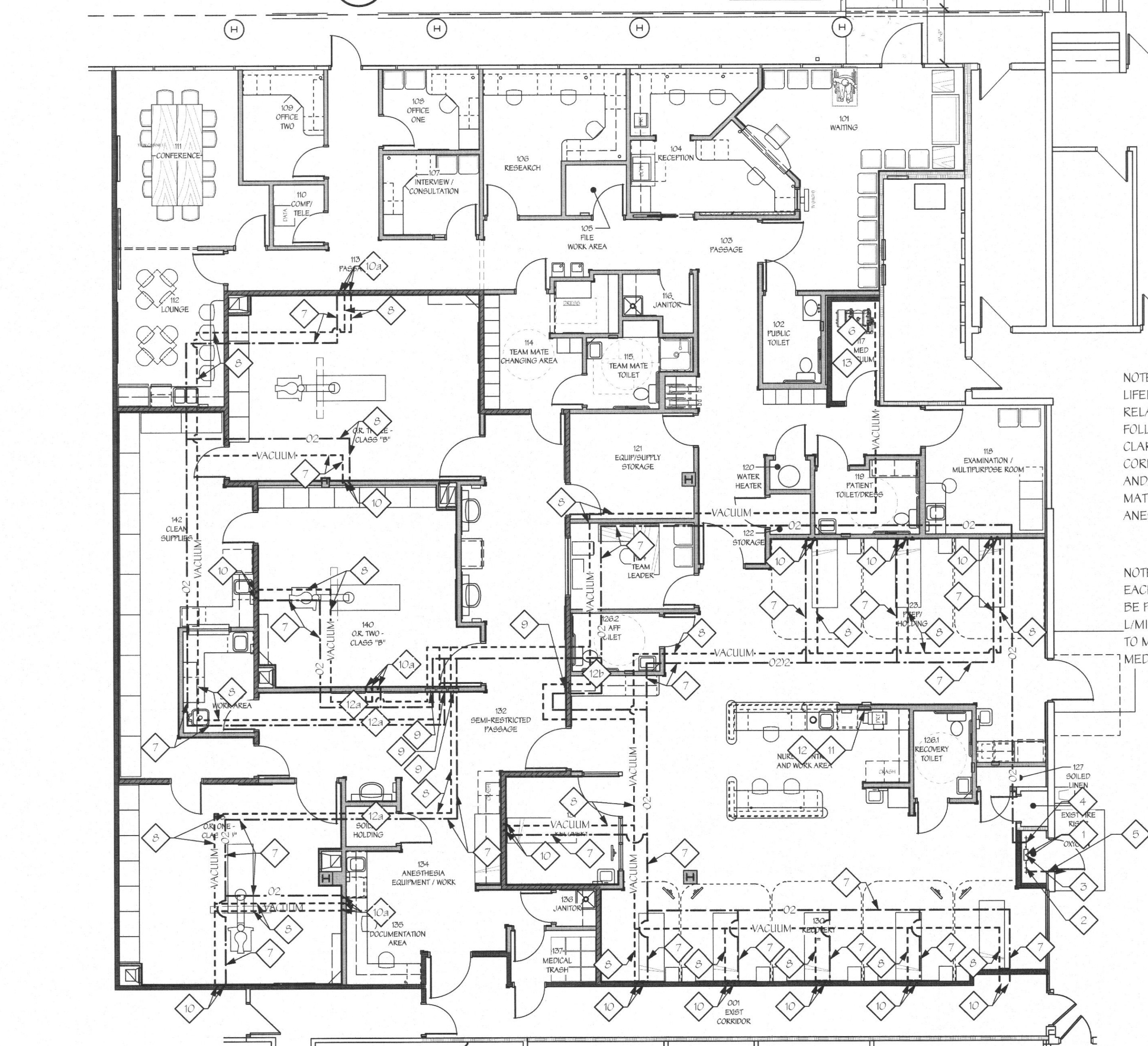
NOTE: EACH WALL OUTLET SHALL BE PROVIDED WITH A 1-1/2" L/MIN FLOWMETER EQUAL TO MODEL 12350 BY OHIO MEDICAL



9A MED GAS OUTLET DETAIL
SCALE: 1/2"=1'-0"



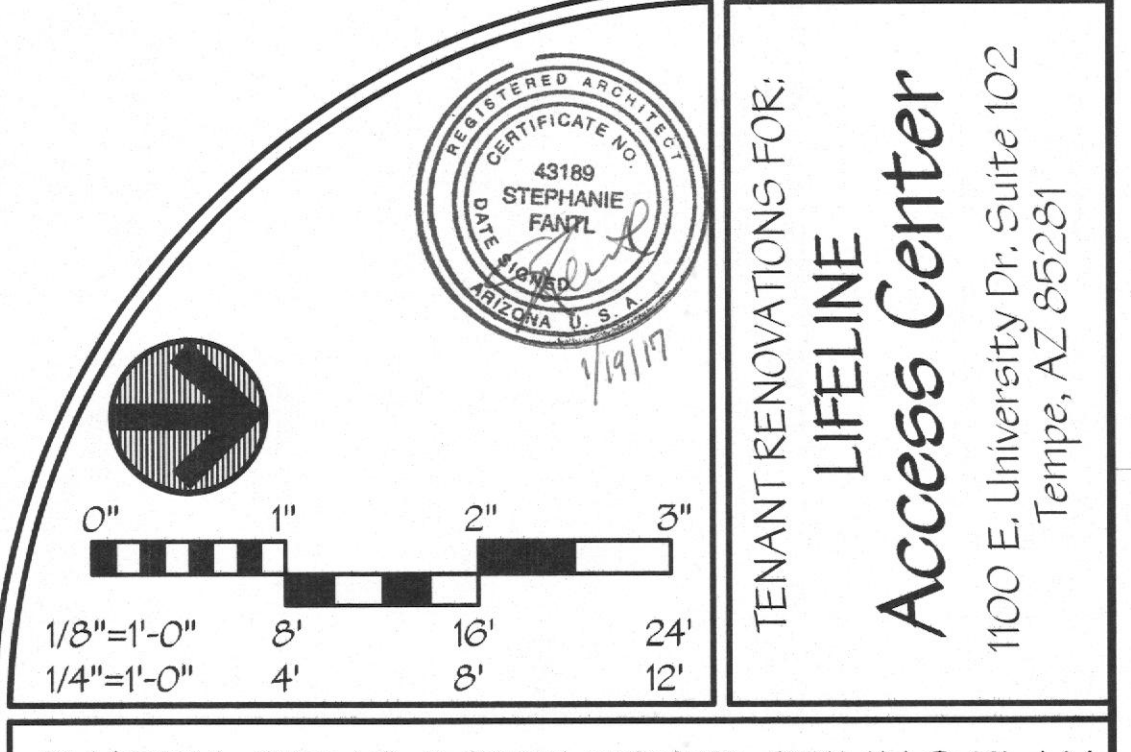
DEMOLITION PLAN
Scale: 1/8"=1'-0"



PIPED OXYGEN / VACUUM PLAN
Scale: 1/8"=1'-0"

NOTE: REFER TO DETAILS 9C/A5 AND 9F/A5 FOR TYPICAL VACUUM AND OXYGEN TANK RESTRAINT DETAILS.

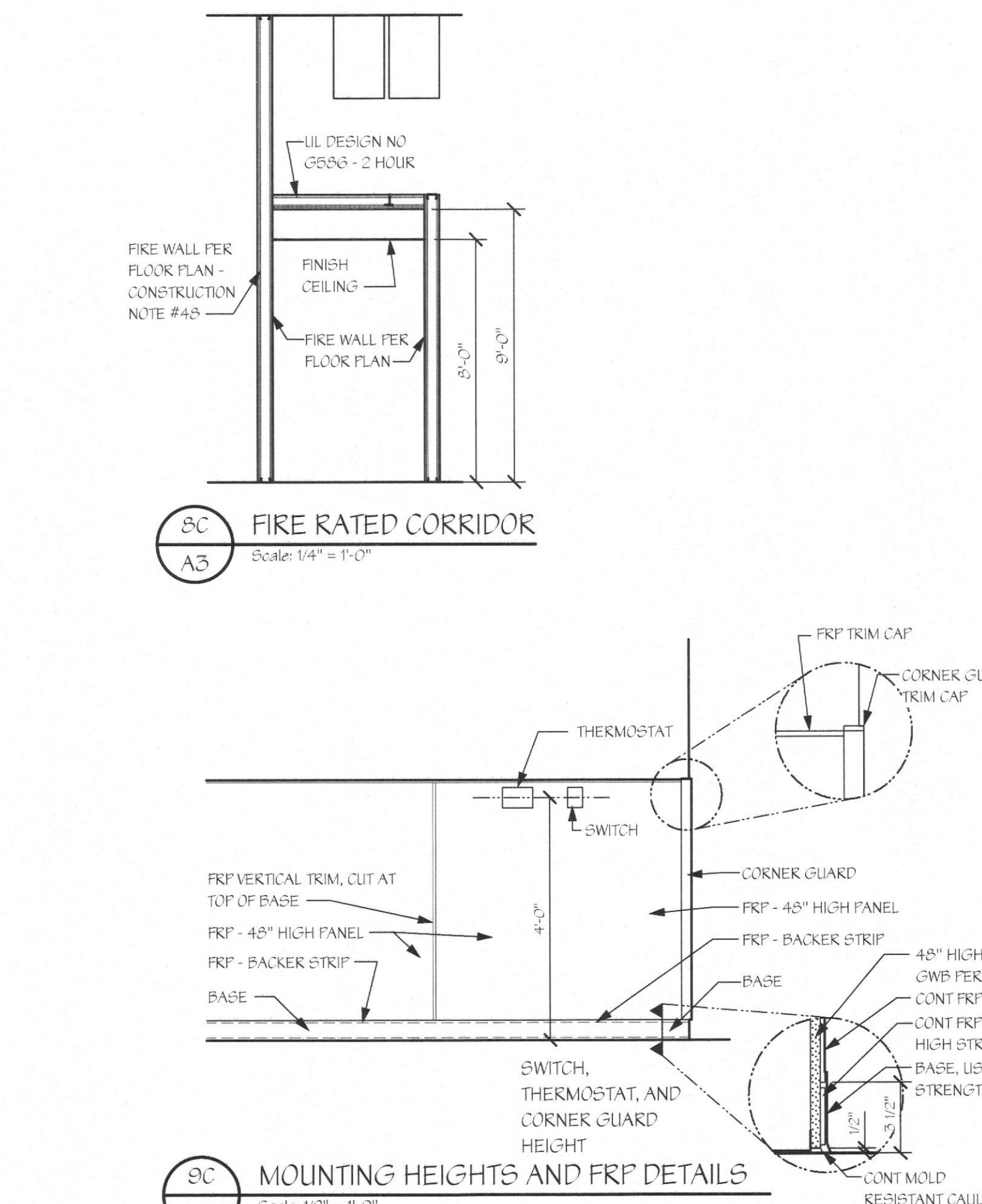
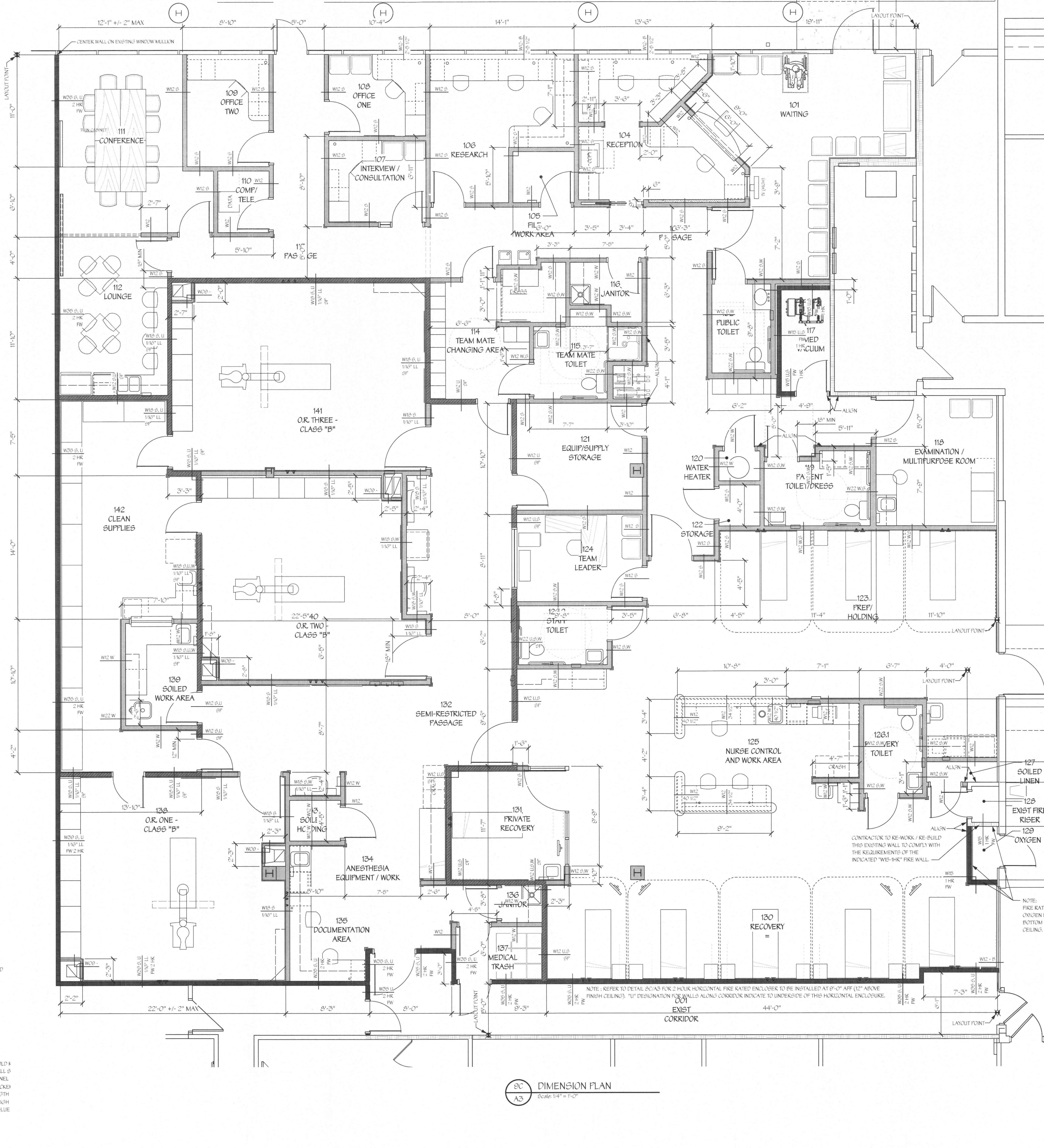
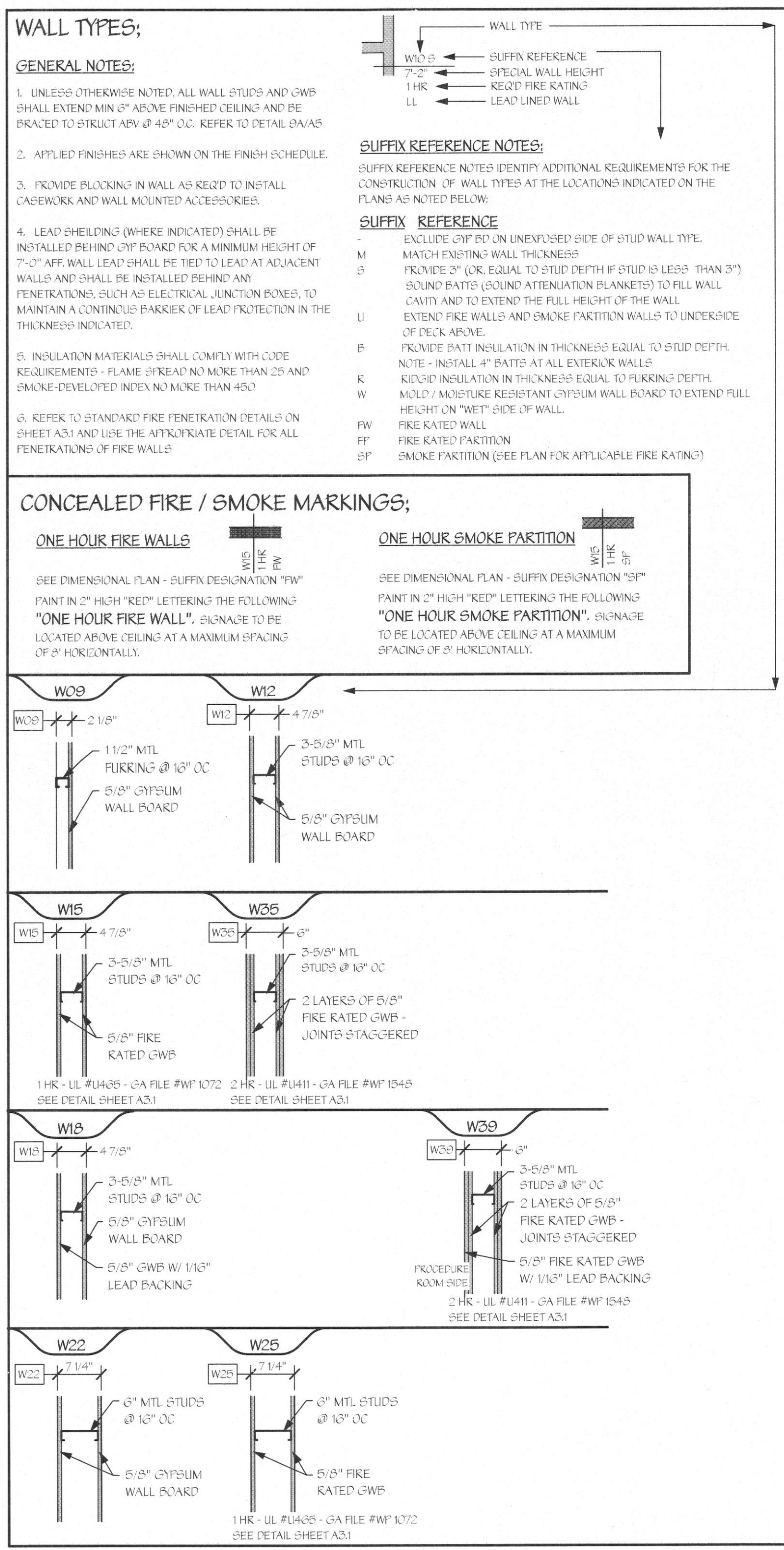
NOTE: CONTRACTOR AND SUB-CONTRACTORS SHALL VISIT THIS BUILDING AND TENANT AREA AND BE FAMILAR WITH ALL THE EXISTING CONDITIONS PRIOR TO CONTRACT AWARD



OXYGEN, DEMO & REFLECTED CEILING PLAN

REVISIONS		DRAWING NO. A2
REV#	DATE	
#1	12/23/11	PERMIT COMMENTS
#2	1/15/12	PERMIT COMMENTS
#3	2/17/12	PERMIT COMMENTS
#4	5/2/12	NEW HC ENTRY
	1/17/17	ARIZONA STATE ASC PLAN REVIEW

SHEET	OF
DATE	DRAWN BY
5/23/11	KCP
JOB NUMBER	CHECKED BY
10281	KCP



NOTE: CONTRACTOR AND SUB-CONTRACTORS SHALL VISIT THIS BUILDING AND TENANT AREA AND BE FAMILIAR WITH ALL THE EXISTING CONDITIONS PRIOR TO CONTRACT AWARD

43186 STEPHANIE PARK
GRANDVIEW, ARIZONA

0
1" = 8'
1/4" = 1'-0"

DIMENSION PLAN & WALL SCHEDULE

REV#	DATE	DESCRIPTION
#1	12/23/11	PERMIT COMMENTS
#2	1/12/12	PERMIT COMMENTS
#3	2/17/12	PERMIT COMMENTS
#4	5/3/12	NEW HC ENTRY
	1/17/17	ARIZONA STATE ASC PLAN REVIEW

DRAWING NO. **A3**

SHEET **OF**

DATE **01/23/11** DRAWN BY **KJP**

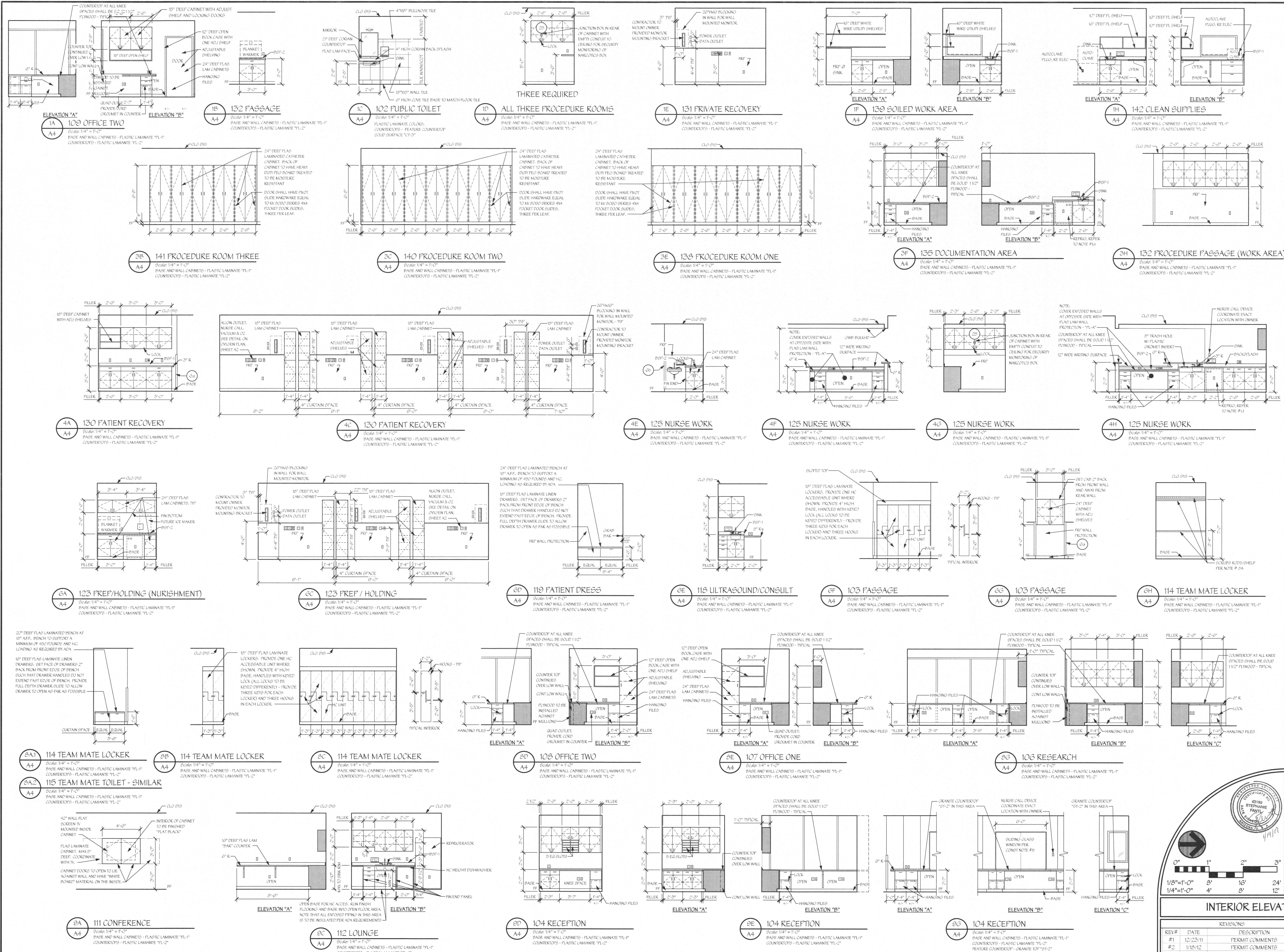
JOB NUMBER **10251** CHECKED BY **KJP**

ISSUED FOR ARIZONA STATE ASC PLAN REVIEW

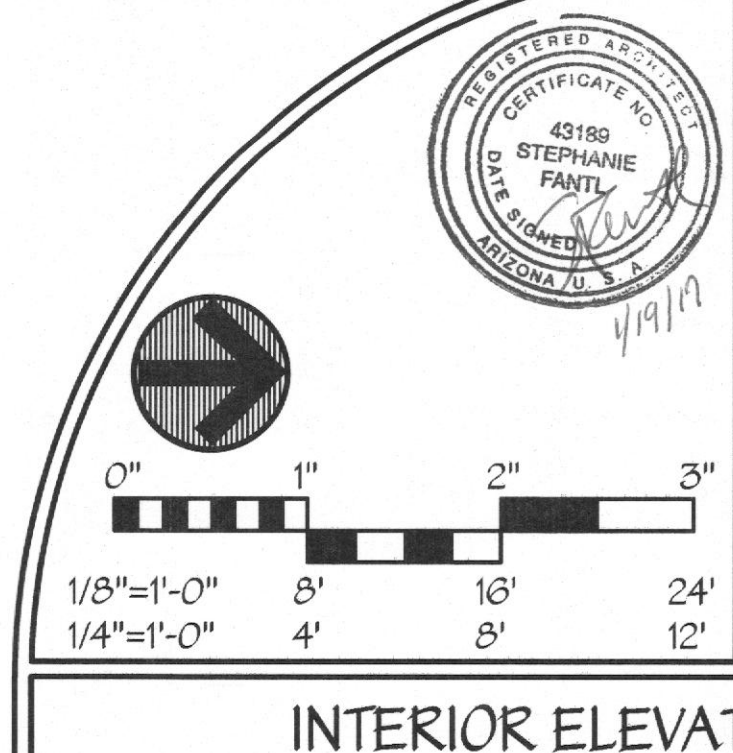
dp DON PENN CONSULTING ENGINEERS
666 WESTPORT PARKWAY, SUITE 300
GRAPEVINE, TEXAS 75051
817-410-2888 FAX 817-251-8411

In Sync ARCHITECTURAL DESIGN, INC.
1215 OLD PLYMOUTH ROAD
WILLOWDALE, MD 21153
Office 410-462-0006
Fax 410-462-0046

TENANT RENOVATIONS FOR:
LIFELINE Access Center
1100 E. University Dr., Suite 102
Tempe, AZ 85281



NOTE: CONTRACTOR AND SUB-CONTRACTORS SHALL VISIT THIS BUILDING AND TENANT AREA AND BE FAMILAR WITH ALL THE EXISTING CONDITIONS PRIOR TO CONTRACT AWARD



REVISIONS		
REV#	DATE	DESCRIPTION
#1	12/23/11	PERMIT COMMENTS
#2	1/18/12	PERMIT COMMENTS
#3	2/17/12	PERMIT COMMENTS
#4	5/3/12	NEW HC ENTRY
	1/17/17	ARIZONA STATE ASC PLAN REVIEW

ISSUED FOR ARIZONA STATE ASC PLAN REVIEW
 DON PENN CONSULTING ENGINEERS
 635 WESTPORT PARKWAY, SUITE 300
 GROESBECK, TEXAS 76061
 817-412-6858 FAX 817-251-6411
 In Sync ARCHITECTURAL DESIGN, INC.
 Whiteford, MD 21160
 1215 Old Millville Road
 Office 410-462-8008
 TENANT RENOVATIONS FOR:
 Lifeline Access Center
 1100 E. University Dr., Suite 102
 Tempe, AZ 85281
 DRAWING NO. A4
 SHEET 11 OF 11
 DATE 8/23/11
 JOB NUMBER 10281
 CHECKED BY KDT
 DRAWN BY KDT

DOOR AND FRAME SCHEDULE: SEE SHEET A5 FOR FRAME TYPE ELEVATIONS

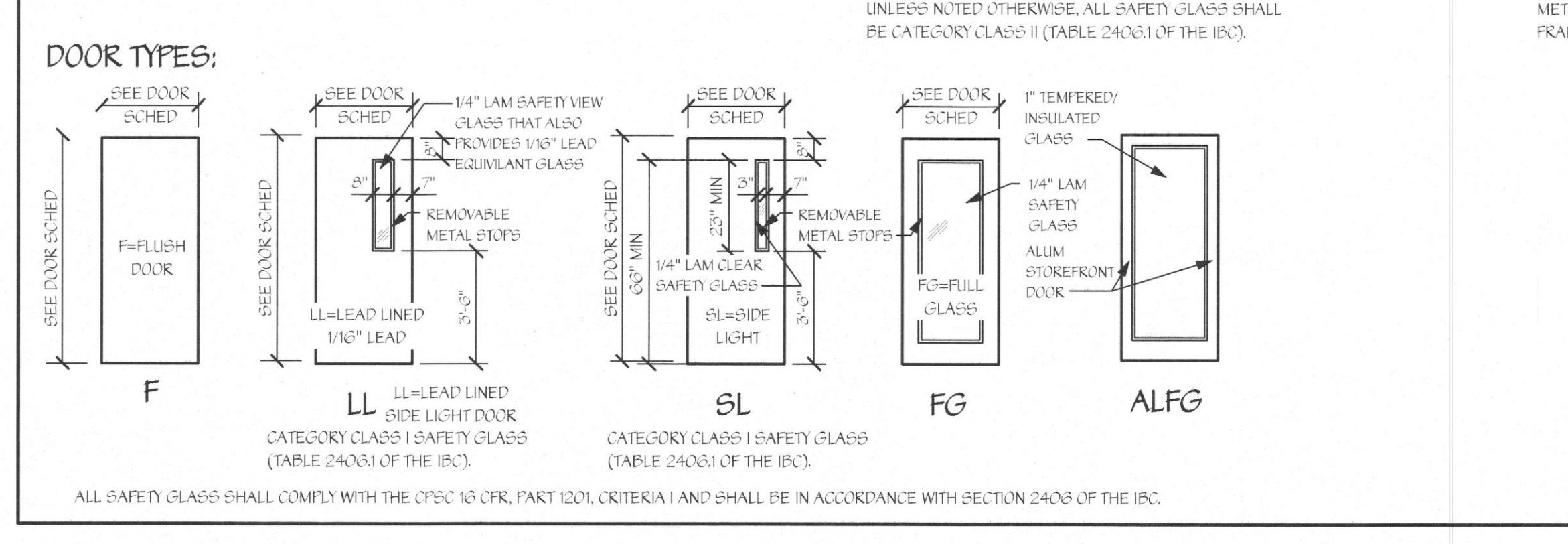
Frame #	Door Width	Door Ht	Door Thick	Door Type	Door Matl	Door Fin	Lockset	Frame Type	Frame Matl	Frame Depth	Hardware	Fire Rating	Remark
021	2'-0"	7'-0"	1 3/4"	F	SC-WD	MATCH EX	-	02	HM	5 7/8"	L	50 MIN	-
022	4'-0"	7'-0"	1 3/4"	F	HM	MATCH EX	-	01	HM	5 7/8"	J	-	MATCH EX
101a	48"	EXIST	EXIST	ALFG	ALUM	MATCH EX	-	A	ALUM	EXIST	A	-	MATCH EX
101b	4'-0"	7'-0"	1 3/4"	SL	SC-WD	NAT	-	01	HM	5 7/8"	B	-	FROSTED GLS, OTHER FULL SIDE
102	2'-0"	7'-0"	1 3/4"	F	SC-WD	NAT	-	01	HM	5 7/8"	F	-	UNDERCUT IT
104a	2'-0"	7'-0"	1 3/4"	F	SC-WD	NAT	-	07	HM	5 7/8"	POCKET	-	NOTE #2
104b	2'-0"	7'-0"	1 3/4"	F	SC-WD	NAT	-	01	HM	5 7/8"	C	-	UNDERCUT IT
105	2'-0"	7'-0"	1 3/4"	F	SC-WD	NAT	-	01	HM	5 7/8"	C	-	UNDERCUT IT
107	2'-0"	7'-0"	1 3/4"	F	SC-WD	NAT	-	08	HM	5 7/8"	C	-	UNDERCUT IT
108	2'-0"	7'-0"	1 3/4"	F	SC-WD	NAT	-	01	HM	5 7/8"	C	-	UNDERCUT IT
109	2'-0"	7'-0"	1 3/4"	F	SC-WD	NAT	-	01	HM	5 7/8"	C	-	UNDERCUT IT
110	2'-0"	7'-0"	1 3/4"	F	SC-WD	NAT	YES	01	HM	5 7/8"	C	-	2 LOCKERS-12"x24" TOP/EXT
111	2'-0"	7'-0"	1 3/4"	F	SC-WD	NAT	-	01	HM	5 7/8"	D	-	UNDERCUT IT
112	2'-0"	7'-0"	1 3/4"	SL	SC-WD	NAT	-	01	HM	5 7/8"	D	-	UNDERCUT IT
113	2'-0"	7'-0"	1 3/4"	F	SC-WD	NAT	-	01	HM	5 7/8"	D	-	UNDERCUT IT
114a	2'-0"	7'-0"	1 3/4"	F	SC-WD	NAT	-	01	HM	5 7/8"	D	-	UNDERCUT IT
114b	2'-0"	7'-0"	1 3/4"	F	SC-WD	NAT	-	02	HM	5 7/8"	B	20 MIN	NOTE #1, OTHER FULL SIDE
115	2'-0"	7'-0"	1 3/4"	F	SC-WD	NAT	-	01	HM	5 7/8"	F	-	UNDERCUT IT
116	2'-0"	7'-0"	1 3/4"	F	SC-WD	NAT	-	02	HM	5 7/8"	D	-	UNDERCUT IT
117	2'-0"	7'-0"	1 3/4"	F	SC-WD	NAT	-	02	HM	5 7/8"	E	45 MIN	UNDERCUT IT
118	2'-0"	7'-0"	1 3/4"	F	SC-WD	NAT	-	01	HM	5 7/8"	D	-	UNDERCUT IT
119	2'-0"	7'-0"	1 3/4"	F	SC-WD	NAT	-	01	HM	5 7/8"	F	-	UNDERCUT IT
120	2'-0"	7'-0"	1 3/4"	F	SC-WD	NAT	-	01	HM	5 7/8"	D	-	UNDERCUT IT
121a	2'-0"	7'-0"	1 3/4"	F	SC-WD	NAT	-	01	HM	5 7/8"	C	-	UNDERCUT IT
121b	2'-0"	7'-0"	1 3/4"	F	SC-WD	NAT	-	02	HM	5 7/8"	B	20 MIN	NOTE #1, OTHER FULL SIDE
122	2'-0"	7'-0"	1 3/4"	F	SC-WD	NAT	-	01	HM	5 7/8"	D	-	UNDERCUT IT
123a	4'-0"	7'-0"	1 3/4"	F	SC-WD	NAT	-	01	HM	5 7/8"	D	-	UNDERCUT IT
123b	4'-0"	7'-0"	1 3/4"	SL	HM	IT-5	-	01	HM	6"	J	-	MATCH EX
124a	2'-0"	7'-0"	1 3/4"	F	SC-WD	NAT	-	01	HM	5 7/8"	C	-	UNDERCUT IT
124b	2'-0"	7'-0"	1 3/4"	F	SC-WD	NAT	-	08	HM	5 7/8"	F	-	UNDERCUT IT
125a	2'-0"	7'-0"	1 3/4"	F	SC-WD	NAT	-	01	HM	5 7/8"	F	-	UNDERCUT IT
127	2'-0"	7'-0"	1 3/4"	F	SC-WD	NAT	-	01	HM	5 7/8"	D	-	UNDERCUT IT
128	2'-0" (EX)	7'-0"	1 3/4"	F	SC-WD	NAT	-	01	HM	5 7/8"	D	-	UNDERCUT IT
129	2'-0"	7'-0"	1 3/4"	F	HM	PT (EX)	-	02	HM	5 7/8"	J	1 HR	MATCH EXISTING
131	4'-0"	7'-0"	1 3/4"	ALFG	AL	MATCH EX	-	B	AL	4 1/2"	K	-	UNDERCUT IT
132	4'-0"	7'-0"	1 3/4"	F	SC-WD	NAT	-	02	HM	5 7/8"	G	20 MIN	NOTE #1
133	2'-0"	7'-0"	1 3/4"	F	SC-WD	NAT	-	01	HM	5 7/8"	L	-	UNDERCUT IT
135	4'-0"	7'-0"	1 3/4"	F	SC-WD	NAT	-	02	HM	5 7/8"	E	50 MIN	UNDERCUT IT
135	2'-0"	7'-0"	1 3/4"	F	SC-WD	NAT	-	01	HM	5 7/8"	D	-	UNDERCUT IT
137a	2'-0"	7'-0"	1 3/4"	F	SC-WD	NAT	-	01	HM	5 7/8"	B	-	UNDERCUT IT - OTHER FULL SIDE
137b	2'-0"	7'-0"	1 3/4"	F	SC-WD	NAT	-	02	HM	5 7/8"	E	50 MIN	UNDERCUT IT
138a	4'-0"	7'-0"	1 3/4"	LL	SC-WD	NAT	-	03	HM	5 7/8"	H	-	1 1/2" LEAD LINED DR FRAME
138b	2'-0"	7'-0"	1 3/4"	F	SC-WD	NAT	-	02	HM	5 7/8"	L	45 MIN	UNDERCUT IT, NOTE #1
138c	-	-	-	-	-	-	-	03	HM	5 7/8"	L	-	CONST NOTE #4
140	4'-0"	7'-0"	1 3/4"	LL	SC-WD	NAT	-	03	HM	5 7/8"	H	-	1 1/2" LEAD LINED DR FRAME
141	4'-0"	7'-0"	1 3/4"	LL	SC-WD	NAT	-	03	HM	5 7/8"	H	-	1 1/2" LEAD LINED DR FRAME
142a	2'-0"	7'-0"	1 3/4"	LL	SC-WD	NAT	-	04	HM	5 7/8"	L	45 MIN	NOTE #1, 1/2" LEAD LINED DR FRAME
142b	2'-0"	7'-0"	1 3/4"	LL	SC-WD	NAT	-	04	HM	5 7/8"	L	45 MIN	NOTE #1, 1/2" LEAD LINED DR FRAME
142c	2'-0"	7'-0"	1 3/4"	LL	SC-WD	NAT	-	04	HM	5 7/8"	L	45 MIN	NOTE #1, 1/2" LEAD LINED DR FRAME
142d	2'-0"	7'-0"	1 3/4"	LL	SC-WD	NAT	-	02	HM	5 7/8"	E	45 MIN	NOTE #1

GENERAL NOTE:
ALL DOOR HARDWARE SHALL BE INSTALLED IN ACCORDANCE WITH ADA AND ANCI RECOMMENDATIONS. LEVER LOCKSETS SHALL BE INSTALLED WITH CENTER OF LEVEL HANDLES AT 59" AFF.

GENERAL NOTE:
ALL DOORS AND DOOR HARDWARE SHALL COMPLY WITH SECTION 404 OF ICC/ANSI 103.

NOTE #1:
DOOR AND FRAME IN SMOKE PARTITION. PROVIDE SMOKE GASKET / SEAL PER LOCAL CODE REQUIREMENTS FOR DOORS IN SMOKE PARTITIONS.

NOTE #2:
POCKET DOOR WITH SPLIT HM FRAME. REFER TO DETAIL 9C/A5.



HARDWARE TYPES:

GENERAL HARDWARE NOTE: ALL COMPONENTS OF HARDWARE SHALL BE PROVIDED FOR A COMPLETELY FUNCTIONING HARDWARE INSTALLATION. ALL COMPONENTS SHALL COMPLY WITH LOCAL, STATE AND FEDERAL (ADA) DISABILITY REQUIREMENTS. ALL EGRESS DOORS SHALL BE READILY OBTAINABLE FROM THE SIDE FROM WHICH EGRESS IS TO BE MADE WITHOUT A KEY OR SPECIAL KNOWLEDGE OR EFFORT. NEW DOORS SHALL BE KEYS TO MATCH THE EXISTING TENANT AND BUILDING KEYING SYSTEM.

ALL LOCKSETS SHALL BE EQUAL TO THE D SERIES, LEVER HANDLE LOCKSETS (US200 FINISH) BY SCHLAGE, ATHENS LEVER DESIGN AND FULL SIZE INTERCHANGEABLE CORES. HARDWARE SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS FOR THE VARIOUS CONDITIONS ENCOUNTERED.

TYPE "A" - PROVIDE STOREFRONT MANUFACTURER'S STANDARD HARDWARE FOR A COMPLETE INSTALLATION TO INCLUDE DEADLATCH HANDLES / CYLINDER EQUAL TO 4590 BY ADAMS RITE, HINGES, DOOR STOPS, FLUSH/FULL DOOR HARDWARE, FULL WEATHER-STRIPPING AND ADA APPROVED ALUMINUM THRESHOLD. INSTALL PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE MAGIC-FORCE AUTOMATIC POWER OPENER, BY STANLEY. (COORDINATE TIMING WITH OWNER). OPENER TO HAVE PROXIMITY SENSOR AT HEAD DESIGNED TO KEEP DOOR FROM CLOSING WHEN SOMEONE IS IN THE DOOR OPENING. REFER TO FLOOR PLAN FOR REQUIRED CONTROL PADDLE LOCATIONS AND TO DETAIL 2D/A5 FOR DOOR CONTROL DIAGRAM / REQUIREMENTS.

TYPE "B" - OTHER LOCK EQUAL TO TRILOX DL2775 BY ALARM LOCK. LOCK SHALL BE PROVIDED WITH PASSAGE MODE/FUNCTION. CORBIN DC3200 SERIES SURFACE APPLIED DELAYED ACTION DOOR CLOSER (COORDINATE TIMING WITH OWNER), 4 1/2" BUTT HINGES (MINIMUM 3 PER LEAF) BY STANLEY, WALL STOP BY ROCKWOOD.

TYPE "C" - FUNCTION NDSOPD (OFFICE FUNCTION), 4 1/2" BUTT HINGES (MINIMUM 3 PER LEAF) BY STANLEY, WALL STOP BY ROCKWOOD.

TYPE "D" - FUNCTION NDSOPD (OFFICE FUNCTION), 4 1/2" BUTT HINGES (MINIMUM 3 PER LEAF) BY STANLEY, WALL STOP BY ROCKWOOD.

TYPE "E" - FUNCTION NDSOPD (OFFICE FUNCTION), CORBIN DC3200 SERIES SURFACE APPLIED DOOR CLOSER, 4 1/2" BUTT HINGES (MINIMUM 3 PER LEAF) BY STANLEY, WALL STOP BY ROCKWOOD.

TYPE "F" - FUNCTION NDSOPD (OFFICE FUNCTION), 4 1/2" BUTT HINGES (MINIMUM 3 PER LEAF) BY STANLEY, WALL STOP BY ROCKWOOD.

TYPE "G" - FLUSH PLATE "100" BY LINDSTROM ON "PUSH" SIDE AND FULL PLATE "100X60" BY LINDSTROM ON "PULL" SIDE OF DOOR. KICKPLATE #57 1/2"X48" US200 BY BALDWIN HARDWARE CORP. PROVIDE MAGIC-FORCE AUTOMATIC POWER OPENER, BY STANLEY, 4 1/2" BUTT HINGES (MINIMUM 3 PER LEAF) BY STANLEY, WALL STOP BY ROCKWOOD. POWER OPENER SHALL BE PROVIDED WITH OPTION THAT ACTIVATES OPENER WHEN LEAF IS OPENED MANUALLY AND SHALL HAVE PROXIMITY SENSOR AT HEAD DESIGNED TO KEEP DOOR FROM CLOSING WHEN SOMEONE IS IN THE DOOR OPENING. COORDINATE OPENING SPEED SETTINGS WITH OWNER. REFER TO PLAN AND NOTE #4 FOR LOCATION OF FLUSH PADDLES TO OPERATE AUTOMATIC DOOR OPENER.

TYPE "H" - PROVIDE FLUSH/FULL LATCH EQUAL TO HL-G FLUSH/FULL LATCH BY CLIMM-JOHNSON (US200FINISH) IN MOUNTING POSITION "C" WITH 5" BACKSET AND KEYS DEAD BOLT WITH INTERIOR THUMB TURN MOUNTED ABOVE (COORDINATE MOUNTING HEIGHTS WITH OWNER). H7 PIVOT SET WITH M19 INTERMEDIATE PIVOT BY KINSON PER LEAF, HEAVY DUTY DOOR CLOSURE WITH HOLD OPEN OPTION - CORBIN KUE500N DC3200 X A1 HOLD OPEN 500 X LEAD LINED CORN. KICKPLATE #57 1/2"X48" US200 BY BALDWIN HARDWARE CORP ON EACH SIDE OF DOOR. WALL STOP BY ROCKWOOD.

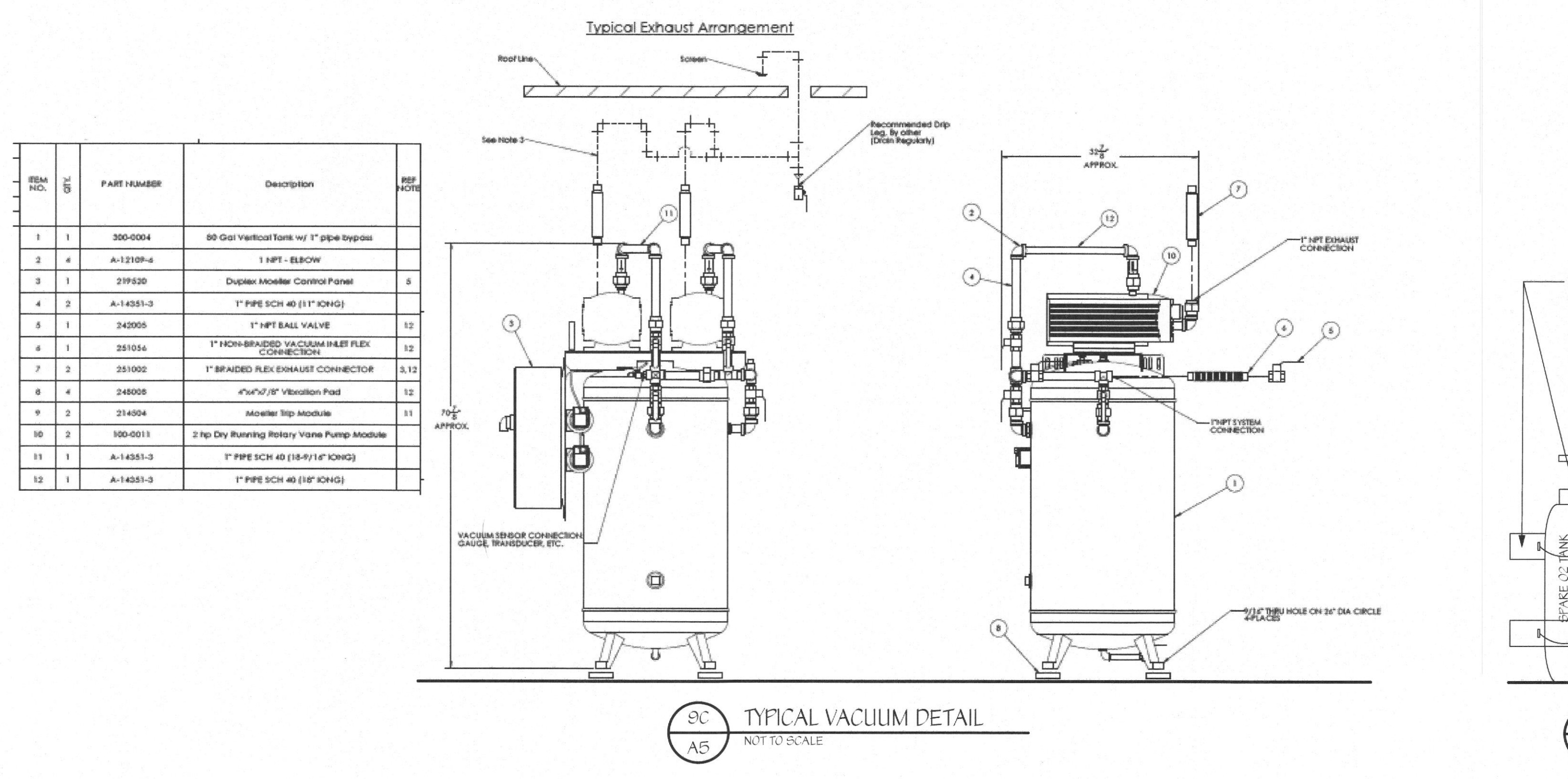
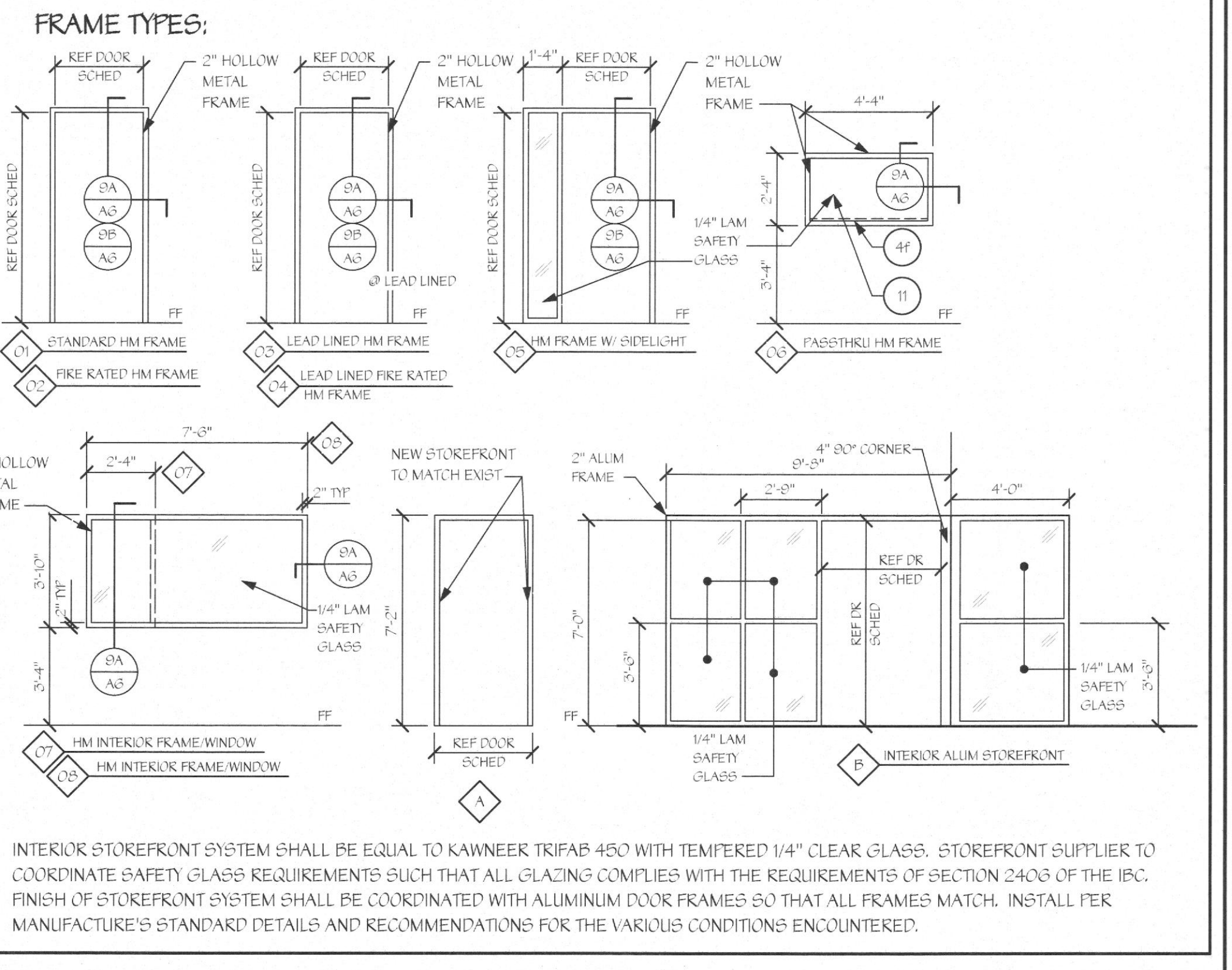
TYPE "J" - FUNCTION NDSOPD (OFFICE FUNCTION), CORBIN DC3200 SERIES SURFACE APPLIED DOOR CLOSER, 4 1/2" BUTT HINGES (MINIMUM 3 PER LEAF) BY STANLEY, WEATHER STRIPPING, ALUMINUM THRESHOLD, WALL STOP BY ROCKWOOD.

TYPE "K" - PROVIDE STOREFRONT MANUFACTURER'S STANDARD HARDWARE FOR A COMPLETE INSTALLATION WITH FLUSH/FULL DOOR HARDWARE, DOOR CLOSURE (NO LATCH), HINGES, DOOR STOPS. INSTALL PER MANUFACTURER'S RECOMMENDATIONS. WALL STOP BY ROCKWOOD.

TYPE "L" - FUNCTION NDSOPD (OFFICE FUNCTION), CORBIN DC3200 SERIES SURFACE APPLIED DOOR CLOSER, 4 1/2" BUTT HINGES (MINIMUM 3 PER LEAF) BY STANLEY, WALL STOP BY ROCKWOOD.

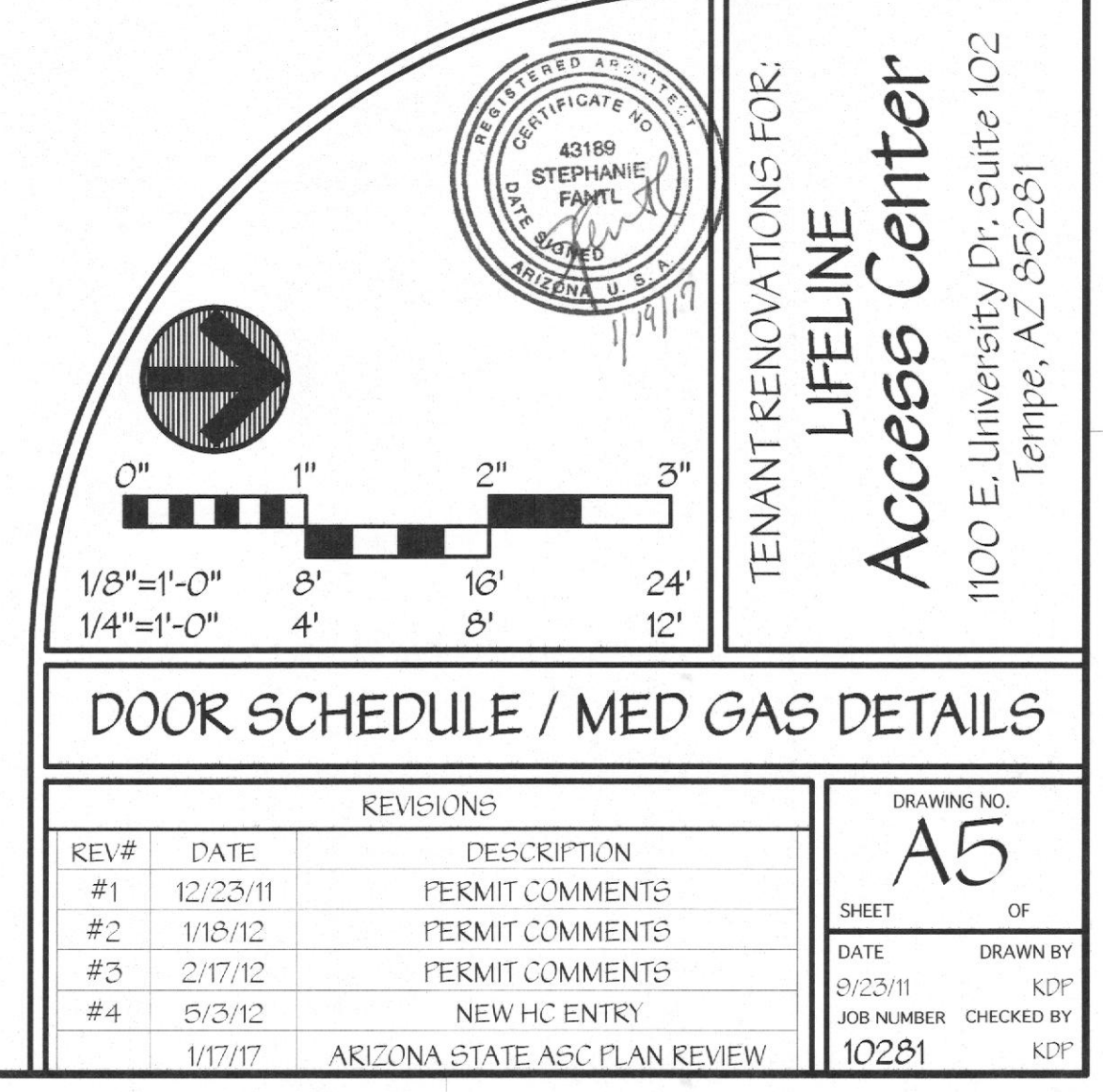
TYPE "M" - PROVIDE STOREFRONT MANUFACTURER'S STANDARD HARDWARE FOR A COMPLETE INSTALLATION TO INCLUDE DEADLATCH HANDLES / CYLINDER EQUAL TO 4590 BY ADAMS RITE, HEAVY DUTY CLOSURE, HINGES, DOOR STOPS, FLUSH/FULL DOOR HARDWARE, FULL WEATHER-STRIPPING AND ADA APPROVED ALUMINUM THRESHOLD. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.

POCKET - COMMERCIAL GRADE POCKET DOOR HARDWARE. SEE DETAIL 9C/A5. PROVIDE FLUSH/FULLS WITH CONCEALED SCREWS, C92002 BY ACCURATE LOCK AND HARDWARE. DOOR SHALL BE "STOPPED" SO THAT FULLS ARE EXPOSED AND A MINIMUM CLEAR OPENING OF 32" IS PROVIDED.



NOTE: CONTRACTOR AND SUB-CONTRACTORS SHALL VISIT THIS BUILDING AND TENANT AREA AND BE FAMILAR WITH ALL THE EXISTING CONDITIONS PRIOR TO CONTRACT AWARD

ITEM NO.	QTY	PART NUMBER	DESCRIPTION	REV
1	1	300-004	80 Gal Vertical Tank w/ 1" pipe top	
2	4	A-1218P-6	1 HPT - ELBOW	
3	1	219F20	Duplex Modeler Control Panel	6
4	2	A-14351-3	1" PIPE SCH 40 (11" LONG)	
5	1	242055	1" HPT BALL VALVE	12
6	1	251054	1" IRON-BRAZED WELDED-PHASE FLEX CONNECTION	12
7	2	251002	1" BRANDED FLEX EXHAUST CONNECTOR	5, 12
8	4	248005	1/2" x 1/2" Vision Pad	12
9	2	214004	Modeler Trip Module	11
10	2	300-011	2 Hp Dry Running Rotary Vane Pump Module	
11	1	A-14351-3	1" PIPE SCH 40 (18-1/2" LONG)	
12	1	A-14351-3	1" PIPE SCH 40 (11" LONG)	



INTERIOR SIGNAGE:

SIGNS BELOW TO BE LOCATED ADJACENT TO DOOR INTO ROOM. COORDINATE EXACT PLACEMENT WITH OWNER.

Room #	Signage by Door
001	WAITING
101	HC TOILET SIGN
102	HC TOILET SIGN
103	BUSINESS OFFICE
104	MEDICAL RECORDS
105	RESEARCH
106	OFFICE
107	OFFICE
108	OFFICE
109	NETWORK
110	COMPERKENT
111	CONFERENCE
112	LOUNGE
113	STAFF LOCKERS (2 REQUIRED)
114	HC TOILET SIGN "STAFF TOILET"
115	JANITOR
116	MEDICAL VACUUM
117	CONSULT ROOM
118	HC TOILET SIGN "PATIENT TOILET"
119	HC TOILET SIGN "PATIENT TOILET"
120	EQUIPMENT STORAGE (2 REQUIRED)
121	STORAGE
122	STORAGE
123	TEAM LEADER
124	TEAM LEADER
125	HC TOILET SIGN "STAFF TOILET"
126	HC TOILET SIGN "RECOVERY TOILET"
126.1	SOILED LINEN
127	FIRE RISER
128	EXIST FIRE RISER
129	EXIST FIRE RISER
130	EXIST FIRE RISER
131	EXIST FIRE RISER
132	EXIST FIRE RISER
133	EXIST FIRE RISER
134	EXIST FIRE RISER
135	EXIST FIRE RISER
136	EXIST FIRE RISER
137	EXIST FIRE RISER
138	EXIST FIRE RISER
139	EXIST FIRE RISER
140	EXIST FIRE RISER
141	EXIST FIRE RISER
142	CLEAN SUITLIES

ADDITIONAL SIGNS TO BE LOCATED APPROXIMATELY WHERE SHOWN ON INTERIOR FINISH PLAN WITH THE FOLLOWING DESIGNATION:

- PATIENT CARE COORDINATOR
- NO SMOKING
- IF THERE IS ANY CHANGE YOU ARE PREGNANT NOTIFY US IMMEDIATELY
- Same as 3 above but in Spanish
- PATIENT CARE PLEASE WAIT FOREscort
- PLEASE FLUSH TOILET AND KEEP ROOM CLEAN AS A COURTESY TO THE OTHER PATIENTS
- PLEASE FLUSH TOILET AND KEEP ROOM CLEAN AS A COURTESY TO THE OTHER PATIENTS
- Combined English/Spanish sign reading "Attention: If there is any possibility that you may be pregnant, please notify the physician, technologist or registered nurse. Thank You"
- Combined English/Spanish sign reading "Attention: If there is any possibility that you may be pregnant, please notify the physician, technologist or registered nurse. Thank You"
- Combined English/Spanish sign reading "Attention: If there is any possibility that you may be pregnant, please notify the physician, technologist or registered nurse. Thank You"
- PLEASE FLUSH TOILET AND KEEP ROOM CLEAN AS A COURTESY TO THE OTHER PATIENTS
- AUTHORIZED PERSONNEL ONLY, SIGNS REQUIRED
- Combined English/Spanish sign reading "Attention: If there is any possibility that you may be pregnant, please notify the physician, technologist or registered nurse. Thank You"
- Combined English/Spanish sign reading "Attention: If there is any possibility that you may be pregnant, please notify the physician, technologist or registered nurse. Thank You"
- Combined English/Spanish sign reading "Attention: If there is any possibility that you may be pregnant, please notify the physician, technologist or registered nurse. Thank You"

PROVIDE THE FOLLOWING SPECIAL SIGNS (TO BE LOCATED BY OWNER):

- One - "Nurse Call" IF DOOR IS LOCKED
- One - "Ambulance Only - Please Ring Bell" DELIVERIES - PLEASE USE LOBBY DOOR
- Five - Sluice-in Window Frame with integral sign below reading "EGRESS PLAN" for Letter Sign Egress Plan
- One - "Nurse Call System, DO NOT UNPLUG"
- Provide the following special warning signs by sign signs (TO BE LOCATED BY OWNER):
- Two - "Danger, Oxygen in Use, No Smoking or Open Flame", Sign Style No 18473.
- Three - "Caution, V-Ray Radiation", Sign Style No 17923.
- Two - "Caution, Biological Hazard Authorized Personnel Only", Sign Style No 15311.
- One - "Eye Wash Fountain" Sign First Aid Safety Sign Style No. 65025.
- Four - "Fire Extinguisher" Sign Style No 37792 (I would really like to find something that looks better than this sign that meets OSHA requirements).
- Misc. Products
- One - "Economic Right-to-Know Training Center" Style No. 26340 with one set of "NFPA Chemical Name Labels On A Roll" Style No. 22423 and one "NFPA Interpretation Guide" Style No. 22870.

ROOM FINISH SCHEDULE:

NOTE: ALL FINISHES SHALL BE IN ACCORDANCE WITH IRC 203.1, CLASS B, FLAME SPREAD 20-75; SMOKE DEVELOPED 0-450

ALL FLOOR FINISHES SHALL BE SLIP RESISTANT IN ACCORDANCE WITH IRC 1033.2.6

Room #	Scheduled Name	Floor Fin	Base Type	Wall Fin	Ceiling Type	Ceiling Ht	Trim	Special	Notes
001	EXISTING CORRIDOR	EX	EX	EX	EX	EX	EX	---	MATCH EXISTING
101	WAITING	CT-1	CB-1	PT-1	AC-2	9'-0"	PT-3	FEATURE WALL "PT-2"	---
102	PUBLIC TOILET	CT-1	CB-1	PT-1	AC	9'-6"	PT-3	---	SEE 10/44
103	PASSAGE	CT-1	CB-1	PT-1	AC	9'-6"	PT-3	---	SEE FINISH PLAN AT FOR WALLS
104	RECEPTION	CT-1	CB-1	PT-1	AC	9'-6"	PT-3	FEATURE WALL "ST-1"	---
105	FILE WORK AREA	CT-1	CB-1	PT-1	AC	9'-6"	PT-3	---	---
106	RESEARCH	CT-1	CB-1	PT-1	AC	9'-6"	PT-3	---	---
107	INTERVIEW / CONSULTATION ROOM	CT-1	CB-1	PT-1	AC	9'-6"	PT-3	FEATURE WALL "PT-2"	---
108	OFFICE ONE	CT-1	CB-1	PT-1	AC	9'-6"	PT-3	FEATURE WALL "PT-2"	---
109	OFFICE TWO	CT-1	CB-1	PT-1	AC	9'-6"	PT-3	FEATURE WALL "PT-2"	---
110	COMPUTER TELEPHONE	CT-1	CB-1	PT-1	AC	9'-6"	PT-3	---	---
111	CONFERENCE	CT-1	CB-1	PT-2	AC	9'-0"	PT-3	---	---
112	LOUNGE	CT-1	CB-1	PT-1	AC	9'-0"	PT-3	FEATURE WALL "PT-2"	---
113	PASSAGE	CT-1	CB-1	PT-1	AC	9'-6"	PT-3	---	---
114	TEAM MATE CHANGING AREA	SV-1	SV-1	PT-1	AC	9'-6"	PT-3	---	---
115	TEAM MATE TOILET	SV-1	SV-1	PT-1	AC	9'-6"	PT-3	---	---
116	JANITOR	CT-1	CB-1	PT-1	AC	9'-6"	PT-3	---	---
117	MED VACUUM	CT-1	CB-1	PT-2	GWB/PT-4	9'-6"	PT-3	---	---
118	EXAMINATION / MULTIPURPOSE ROOM	SV-1	SV-1	PT-1	AC	9'-0"	PT-3	---	---
119	PATIENT TOILET	SV-1	SV-1	PT-1	AC	9'-6"	PT-3	---	---
120	WATER HEATER	CT-1	CB-1	PT-2	GWB/PT-4	9'-6"	PT-3	---	---
121	EQUIP STORAGE	SV-1	SV-1	PT-1	AC	9'-6"	PT-3	---	---
122	STORAGE	CT-1	CB-1	PT-1	GWB/PT-4	9'-6"	PT-3	---	---
123	TEAM LEADER	SV-1	SV-1	PT-1	AC	9'-0"	PT-3	FEATURE WALL "PT-2"	---
124	TEAM LEADER	SV-1	SV-1	PT-1	AC	9'-6"	PT-3	FEATURE WALL "PT-2"	---
125	NURSE CONTROL / WORK	SV-1	SV-1	PT-2	AC	9'-0"	PT-3	---	---
126.1	RECOVERY TOILET	SV-1	SV-1	PT-1	AC	9'-6"	PT-3	---	---
126.2	STAFF TOILET	SV-1	SV-1	PT-1	AC	9'-6"	PT-3	---	---
127	SOILED LINEN	SV-1	SV-1	PT-1	GWB/PT-4	9'-6"	PT-3	---	---
128	EXIST FIRE RISER	SV-1	SV-1	PT-1	EX	EX	PT-3	---	---
129	EXIST FIRE RISER	SV-1	SV-1	PT-1	GWB/PT-4	9'-6"	PT-3	---	THICKATED CLR 5/8" (SEE DTL 70/45)
130	RECOVERY	SV-1	SV-1	PT-1	AC	9'-0"	PT-3	FEATURE WALL "PT-2"	---
131	PRIVATE RECOVERY	SV-1	SV-1	PT-2	AC	9'-0"	PT-3	FEATURE WALL "PT-1"	NOTE #1
132	SEMI-RESTRICTED PASSAGE	SV-1	SV-1	PT-2	AC-1	9'-6"	PT-3	---	---
133	SOILED HOLDING	SV-1	SV-1	PT-2	GWB/PT-4	9'-6"	PT-3	---	---
134	ANESTHESIA EQUIPMENT / WORK	SV-1	SV-1	PT-1	AC-1	9'-6"	PT-3	FEATURE WALL "PT-2"	---
135	DOCUMENTATION	SV-1	SV-1	PT-1	AC-1	9'-6"	PT-3	FEATURE WALL "PT-2"	---
136	JANITOR	SV-1	SV-1	PT-2	GWB/PT-4	9'-6"	PT-3	---	---
137	MEDICAL TRASH	SV-1	SV-1	PT-2	GWB/PT-4	9'-6"	PT-3	---	---
138	OK ONE - CLASS "B"	SV-1	SV-1	PT-1	AC	9'-6"	PT-3	---	*SCURRIBLE WALL FIN
139	SOILED WORK AREA	SV-1	SV-1	PT-2	AC	9'-6"	PT-3	---	*SCURRIBLE WALL FIN
140	OK TWO - CLASS "B"	SV-1	SV-1	PT-1	GWB/PT-4	9'-0"	PT-3	---	*SCURRIBLE WALL FIN
141	OK THREE - CLASS "B"	SV-1	SV-1	PT-1	GWB/PT-4	9'-0"	PT-3	---	*SCURRIBLE WALL FIN
142	CLEAN SUITLIES	SV-1	SV-1	PT-2	AC-1	9'-6"	PT-3	---	---

ROOM FINISH MATERIALS:

NOTE: ALL INTERIOR SPECIALTY FINISH ITEMS SHALL BE IN ACCORDANCE WITH IRC 203

NOTE #1: REFER TO FLOOR PLAN FOR FEATURE WALL LOCATIONS (CONSTRUCTION NOTED #573 AND #575)

FLOOR FINISH:

CT-1 = CARPETING

CT-1 SHAW RESURITE 4570 TRADITIONAL GRATE 1/8"X3" WITH CB-1 4" HIGH MATCHING CARPET BASE

SV-1 = SHEET VINYL

SV-1 ADMIRALTY CONNECTIONS COGNOL COLOR "DEBERT SAND" (25'X33") WITH HEAT WELDED BEAM

SV-1 = BEAMLESS WELDED BEAM SHEET VINYL

SV-1 ADMIRALTY CONNECTIONS COGNOL COLOR "DEBERT SAND" (25'X33") WITH HEAT WELDED BEAM

CT-1 = VINYL COMPOSITION TILE FLOORING

CT-1 AMTICO INTERNATIONAL SPACIA EMBER OAK SW 2812 WITH K2-1 K2PPE KUBERK BASE FINNACLE 703 SERIES - 110 BROWN

CT-1 = CERAMIC FLOOR TILE

CT-1 PLANK TILE - DALLIE M24 - METRO TAUPE - 10'X10" WITH MATCHING 3/8"X3" Cove Base Tile

BASE TYPE:

CB-1 = 4" HIGH CARPET BASE MATCHING CARPET

CB-1 = MATCHING 3/8"X3" Cove Base Tile

SV-1 = 4" HIGH SHEET VINYL-INTRUSION CONC. BASE WITH 3/4" RADIUS CORNER AND CONTINUOUS ALUMINUM CAP.

SV-1 = BEAMLESS WELDED BEAM SHEET VINYL-INTRUSION CONC. 4" HIGH WITH 3/4" RADIUS CORNER AND CONTINUOUS ALUMINUM CAP.

K2-1 = KUBERK COVE - K2PPE TP 77122 1/2" K2-1 K2PPE KUBERK BASE FINNACLE 703 SERIES - 110 BROWN

WALL FINISH:

PT-1 = PAINTED WALLS

PT-1 TO BE SELECTED (COLOR/TEXT) IN AN EGSS SHELL FINISH

PT-2 = PAINTED WALLS

PT-2 DUNN EDWARDS DEC 707 EMERALD LIVES IN AN EGSS SHELL FINISH

PT-3 = PAINTED TRIM - DOOR FRAMES

PT-3 DUNN EDWARDS DEA 157 BLACK IN A SEMI-GLOSS FINISH

CT-2 = CERAMIC WALL TILE

CT-2 WALL TILE - DALLIE M24 - METRO TAUPE - 10'X10" WITH MATCHING 3/8"X3" CEMENT FILLER

ST-1 = FEATURE WALL - STONE WALL

ST-1 NOXTON STONE ROCK PANEL OCHRE BLEND

CEILING TYPE:

AC = TYPICAL ACoustICAL TILE (2'X4')

AC-1 = SCURRIBLE ACoustICAL TILE (2'X4')

AC-2 = ACoustICAL TILE - TEGULAR EXE (2'X2')

GWB/PT-4 = GYPSUM WALL BOARD - PAINTED

PT-4 = SHERWIN WILLIAMS - CEILING WHITE

PLASTIC LAMINATE:

PROVIDE THE FOLLOWING LAMINATE COLORS PER THE INT. ELEVATIONS:

PLAS LAM PT-1 - CARIBBEAN

PL-1 FINITE HP 200 AFTERNOON SHOWERS

PLAS LAM PT-2 - COUNTERTOPS

PL-2 WILSON ART 4245-60 MORRO ZEPHYR

FEATURE COUNTERTOPS:

GRANITE COUNTERTOP "ST-2"

ST-2 CRYSTAL BEACH CACTUS STONE SLAB GRANITE

SOLID SURFACE COUNTERTOP "CT-3"

CT-3 BATHROOM COUNTER - CORIAN - SONORA

DOORS:

"NAT" - WOOD DOORS TO BE STAINED - COLOR TO MATCH VCT-1 SPACIA EMBER OAK #SW 2812

DOOR HARDWARE:

DOOR HARDWARE TO BE FINISHED UN200 - SATIN CHROME

PLUMBING FIXTURE TRIM:

WITH THE EXCEPTION OF THE PUBLIC TOILET, ALL PLUMBING FIXTURES WILL BE WHITE WITH CHROME FINISH.

SPECIALTY ITEMS:

BLINDS - 600 "DARK ENGINEER"

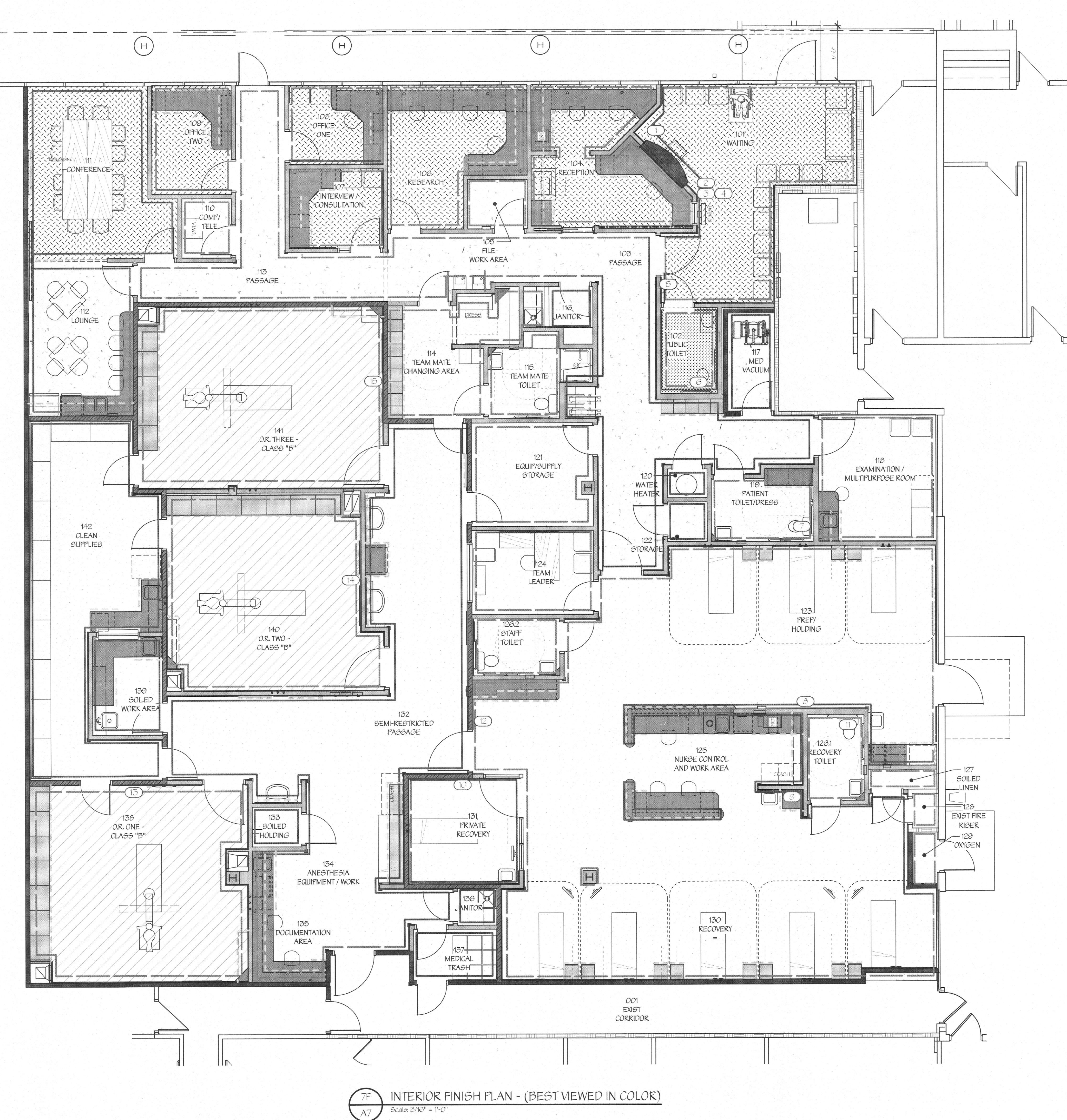
CORNER GUARDS - INR2 COLOR "CHINO" 0255

DOOR GUARD - INR2 COLOR "CHINO" 0255

WALL PROTECTION - FRP - INR3 WALL PANEL ELEMENTS - DE09

CURTAIN FABRIC - FROM 100% PR POLYESTER CURTAIN FABRIC, INR30 PATO MOCHA FROM THE SILVER SERIES, HIDDEN MESH, CURTAIN STYLE 1

NOTE: ALL SIGNAGE FOR ACCESSIBLE AREAS SHALL BE IN COMPLIANCE WITH ADAAG SECTION 4.30 AND SHALL BE TACTILE SIGNS IN ACCORDANCE WITH ANSI SECTION 703.3



7F INTERIOR FINISH PLAN - (BEST VIEWED IN COLOR)
Scale: 3/16" = 1'-0"

InPro CORPORATION
Interior and Exterior Architectural Products

Sydney Sign Collection

LETTERS - COLOR "MARLOT" SIZE AND FONT TO BE SELECTED

LAM 2 - FACE SIGN COLOR - PHOTOPOLYMER WOOD GRAIN SIGN FACE

LAM 4 - BACKGROUND SIGN COLOR - PHOTOPOLYMER WOOD GRAIN SIGN FACE

TYPICAL INTERIOR SIGN - (BEST VIEWED IN COLOR)
Scale: Actual Size

NOTE: CONTRACTOR AND SUB-CONTRACTORS SHALL VISIT THIS BUILDING AND TENANT AREA AND BE FAMILIAR WITH ALL THE EXISTING CONDITIONS PRIOR TO CONTRACT AWARD

ISSUED FOR ARIZONA STATE ASC PLAN REVIEW

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INTERIOR FINISH PLAN - SCHEDULE

REVISIONS

REV #	DATE	DESCRIPTION
#1	12/23/11	PERMIT COMMENTS
#2	1/18/12	PERMIT COMMENTS
#3	2/17/12	PERMIT COMMENTS
#4	5/3/12	NEW HC ENTRY
	11/7/17	ARIZONA STATE ASC PLAN REVIEW

DRAWING NO. **A7**

SHEET OF

DATE 8/22/11 DRAWN BY KDT

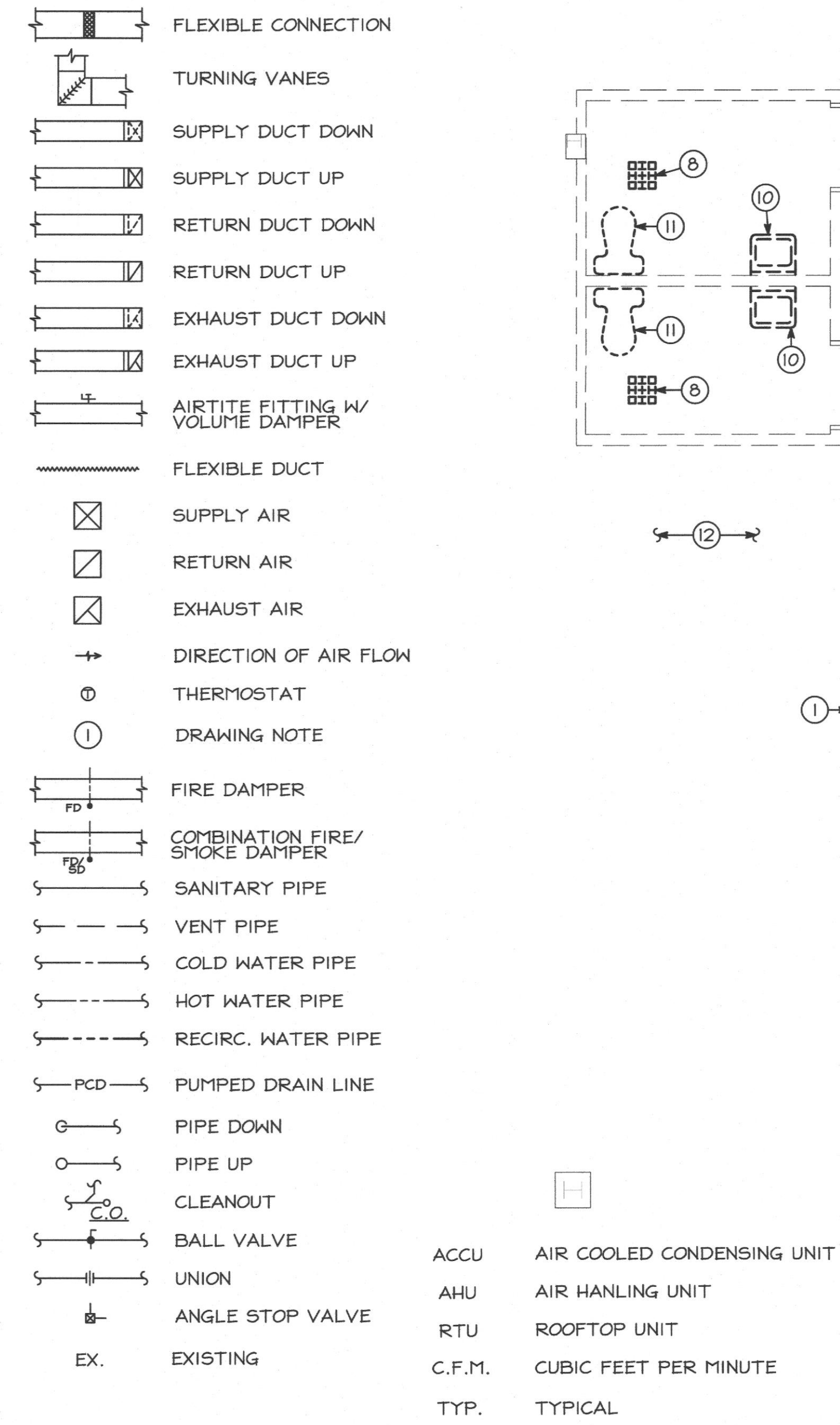
JOB NUMBER 102281 CHECKED BY KDT

DRAWING NOTES

- 1 EXISTING ROOFTOP UNIT SHOWN IN THEIR APPROXIMATE LOCATION MOUNTED ON THE ROOF TO REMAIN. CONTRACTOR TO FIELD VERIFY AND REMOVE ALL AIR DEVICES AND THEIR DUCT BRANCHES, ASSOCIATED WITH THE EXISTING ROOFTOP UNIT IN OUR SPACE. REFER TO NOTE 13, THIS SHEET, FOR MORE INFORMATION.
- 2 INCOMING EXISTING FIRE PROTECTION TO REMAIN. REFER TO THE FIRE PROTECTION PERFORMANCE SPECIFICATIONS FOR SPRINKLER HEAD RELOCATION WORK IN OUR SPACE.
- 3 OUTLINE OF AN EXISTING ROOFTOP UNIT TO BE REMOVED. REFER TO SHEET M2 FOR NEW ROOFTOP UNITS TO BE INSTALLED IN THE SAME LOCATION. MECHANICAL CONTRACTOR TO COORDINATE WITH THE LANDLORD'S ROOFING CONTRACTOR TO PATCH THE ROOF WEATHERTIGHT (TYPICAL).
- 4 CONTRACTOR TO FIELD VERIFY/LOCATE EXISTING DUCTWORK ASSOCIATED WITH THE EXISTING ROOFTOP UNIT AND REMOVE COMPLETELY, INCLUDING ALL AIR DEVICES IN OUR SPACE OF WORK.
- 5 OUTLINE OF AN EXISTING AIR COOLED CONDENSING UNIT TO BE REMOVED, ALONG WITH ASSOCIATED REFRIGERANT PIPING. CONTRACTOR TO COORDINATE WITH THE LANDLORD'S ROOFING CONTRACTOR TO PATCH THE ROOF WEATHERTIGHT (TYPICAL).
- 6 REMOVE EXISTING AIR HANDLING UNIT, ALONG WITH ASSOCIATED DUCTWORK AND DEVICES (TYPICAL).
- 7 REMOVE EXISTING THERMOSTAT AS INDICATED (TYPICAL).
- 8 REMOVE EXISTING CEILING MOUNTED EXHAUST FAN, ALONG WITH ASSOCIATED DUCTWORK UP TO JUST BELOW ROOF LINE AND CAP (TYPICAL).
- 9 CONTRACTOR TO FIELD VERIFY AND LOCATE EXISTING DUCTWORK AND AIR DEVICES ASSOCIATED WITH THE EXISTING ROOF MOUNTED EXHAUST FAN AND REMOVE DUCTWORK UP TO JUST BELOW ROOF LINE AND CAP.
- 10 CONTRACTOR TO FIELD VERIFY/LOCATE EXISTING PLUMBING FIXTURE AND REMOVE, INCLUDING ALL EXISTING DOMESTIC COLD WATER LINES THROUGHOUT OUR SPACE OF WORK ONLY AND REMOVE BACK TO MAIN AND CAP. IF REMOVING THE EXISTING DOMESTIC COLD WATER PIPING FROM OUR SPACE EFFECTS ANOTHER TENANT OCCUPYING A SPACE THAN PROVISIONS MUST BE MADE TO MAINTAIN THEIR SERVICE. REMOVE EXISTING HOT WATER LINE BACK TO ELECTRIC WATER HEATER, SERVING OUR SPACE ONLY AND REMOVE. ALSO REMOVE EXISTING SANITARY LINE DOWN JUST BELOW SLAB AND SANITARY VENT PIPE JUST BELOW THE ROOF LINE AND CAP EACH.
- 11 CONTRACTOR TO FIELD VERIFY/LOCATE EXISTING PLUMBING FIXTURE AND REMOVE, INCLUDING ALL EXISTING DOMESTIC COLD WATER LINES THROUGHOUT OUR SPACE OF WORK ONLY AND REMOVE BACK TO MAIN AND CAP. IF REMOVING THE EXISTING DOMESTIC COLD WATER PIPING FROM OUR SPACE EFFECTS ANOTHER TENANT OCCUPYING A SPACE THAN PROVISIONS MUST BE MADE TO MAINTAIN THEIR SERVICE. ALSO REMOVE EXISTING SANITARY LINE DOWN JUST BELOW SLAB AND SANITARY VENT PIPE JUST BELOW THE ROOF LINE AND CAP EACH.

- 12 CONTRACTOR TO FIELD VERIFY/LOCATE EXISTING WATER HEATER SERVING OUR SPACE, IF THERE IS ONE AND REMOVE.
- 13 CONTRACTOR TO FIELD VERIFY AND REMOVE ANY EXISTING DUCTWORK, BELOW THE ROOF LINE, THAT MAY SERVE THIS AREA OF DEMOLITION. PATCH THE TRUNK MAIN TO MAINTAIN AIRFLOW TO ADJACENT SPACE. CONTRACTOR TO FIELD VERIFY THAT THE EXISTING SUPPLY AND RETURN DUCT MAINS THAT WILL NOW SERVE THE ADJACENT SPACES CAN ACCOMMODATE THE APPROPRIATE AIRFLOW. IF NOT, THEN THE CONTRACTOR MUST EXTEND NEW PROPERLY SIZED DUCTWORK TO THE ADJACENT SPACE AND TRANSITION AS REQUIRED TO THE EXISTING DUCTS ON THE OTHER SIDE. ALSO PROVIDE NEW FIRE DAMPERS AND/OR SMOKE DAMPERS IN EACH DUCT AS NEEDED. MECHANICAL CONTRACTOR MUST COORDINATE WITH THE ELECTRICAL CONTRACTOR A POWER CONNECTION ANY NEW SMOKE DAMPERS ADDED PER THIS WORK HERE. LASTLY THE MECHANICAL CONTRACTOR MAY NEED TO ADJUST THE UNIT'S AIRFLOW TO MAINTAIN ABOVE THE UNIT'S MINIMUM AIRFLOWS/MORE AIRFLOW IN ADJACENT EMPTY SPACE. BE SURE THE EXISTING THERMOSTAT IS LOCATED IN THE ADJACENT ABANDON SPACE FOR FUTURE TENANT (TYPICAL).
- 14 EXISTING DOMESTIC COLD WATER PIPE SUPPORTED FROM STRUCTURE ABOVE TO REMAIN.

MECHANICAL LEGEND



NOTICE TO CONTRACTORS

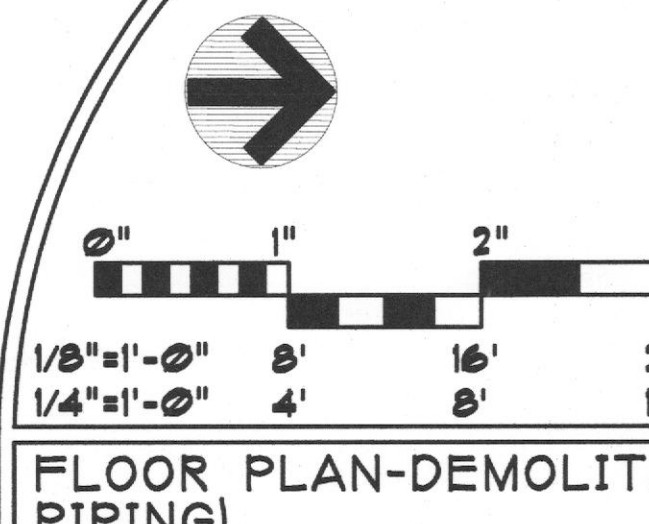
ALL CONTRACTORS PRIOR TO BID SUBMISSION PROCESS SHALL VISIT PROPOSED WORK SITE AND FIELD VERIFY ALL EXISTING CONDITIONS. ANY CONDITIONS THAT DIFFER FROM THAT SHOWN ON THIS PLAN SHALL BE REPORTED TO ARCHITECT/ENGINEER SO THAT NEW AND REVISED BID DRAWINGS OR INFORMATION MAY BE ISSUED. MODIFICATIONS TO SCOPE OF WORK WHICH RESULTS FROM CONTRACTORS NEGLIGENCE TO VISIT THE SITE PRIOR TO SUBMITTING BID, SHALL BE THE CONTRACTORS SOLE RESPONSIBILITY.

GENERAL NOTES (HVAC/PIPING)

- 1) ALL ITEMS INDICATED BOLD SHALL BE CONSIDERED NEW UNLESS OTHERWISE NOTED.
- 2) ALL DUCTWORK SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE WITH SMACNA STANDARDS.
- 3) ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH ALL APPLICABLE MUNICIPAL, STATE, AND CITY/COUNTY CODES.
- 4) COORDINATE ALL THERMOSTAT LOCATIONS WITH FINAL PARTITION/FURNITURE LAYOUT.
- 5) PROVIDE ACCESS PANELS EQUAL TO ARCHITECTURAL ACCESS DOORS, MODEL AHD BY METROPOLITAN DOOR INDUSTRIES WITH CYLINDER LOCK AND KEY. THESE PANELS SHALL BE PROVIDED ANYWHERE THERE ARE VOLUME DAMPERS, CONTROLS, ACTUATORS, ETC. THAT HAVE TO BE LOCATED ABOVE DRYWALL CEILINGS AND SHALL BE LOCATED AND SIZED TO ALLOW ACCESS TO THESE ITEMS ABOVE THE DRYWALL CEILINGS. COORDINATE THESE LOCATIONS WITH INSTALLATION OF THE GYP BOARD CEILING.
- 6) EXISTING SANITARY PIPING SHOWN IS ASSUMED/APPROXIMATE LOCATION. EXISTING SANITARY PIPING MUST BE ACTUALLY FIELD DETERMINED FOR EXACT LOCATION PRIOR TO INSTALLATION.
- 7) PLUMBING ROUGH-IN CONNECTIONS ARE APPROXIMATE LOCATIONS. ALL ROUGH-IN CONNECTIONS TO BE COORDINATED IN THE FIELD BY THE PLUMBING CONTRACTOR.
- 8) PROVIDE TRIM PANELS FOR SUPPLY DIFFUSER MOUNTED IN DRYWALL CEILING.
- 9) THE BALANCING OF AIRFLOWS IS TO BE PERFORMED BY A AAAC CERTIFIED BALANCING CONTRACTOR ONLY. FINAL AIRFLOW BALANCING REPORT WILL BE MADE AVAILBLE PRIOR TO THE FINAL INSPECTION.
- 10) ALL DOMESTIC WATER PIPING TO BE INSTALLED ON THE WARM SIDE OF THE BUILDING INSULATION.
- 11) BEFORE ANY ROOF WORK IS PERFORMED THE MECHANICAL CONTRACTOR IS TO CONTACT THE ORIGINAL ROOFING CONTRACTOR TO VERIFY THAT ANY WORK PERFORMED WILL NOT VOID ANY WARRANTIES. ALL ROOF PENETRATION AND/OR REPAIR WORK ON THE ROOF IS TO BE COORDINATED WITH THE LANDLORD'S ROOFING CONTRACTOR SO WORK MAY BE PERFORMED.
- 12) THE CONTRACTOR IS TO REVIEW THE WEIGHTS AND MOUNTING LOCATIONS OF THE NEW HVAC EQUIPMENT WITH A STRUCTURAL ENGINEER PRIOR TO INSTALLATION.
- 13) CONTRACTOR TO VERIFY THE NEW AND EXISTING EXHAUST FANS MOUNTED ON ROOF AND MAINTAIN MINIMUM 2'-0" FROM ANY FRESH AIR INTAKES.
- 14) PRIOR TO THE INSTALLATION OF THE EXHAUST FAN, ROOFTOP UNITS AND CONDENSER UNITS A STRUCTURAL ENGINEER WILL NEED TO SIGN OFF ON THE HVAC EQUIPMENT BEING MOUNTED ON THE EXISTING ROOF.
- 15) MIXED WATER TEMPERATURE NOT TO EXCEED 75°F FOR THE EMERGENCY EYEWASH.
- 16) FIRE AND/OR SMOKE STOPPING MATERIAL (NON-COMBUSTIBLE) FOR WALLS, FLOORS AND CEILINGS SHALL BE PROVIDED BY THE CONTRACTOR AS REQUIRED TO MAINTAIN ANY FIRE SEPERATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SCHEDULING AND COORDINATION OF ALL FIRE AND SMOKE STOPPING WORK, RESULTING FROM INSTALLATION OF NEW PIPING, DUCTWORK, ETC. THE CONTRACTOR IS RESPONSIBLE FOR FILLING ALL VOIDS IN WALLS, CEILINGS AND FLOORS TO WITHIN 1/2" OF EACH PENETRATION WITH MATERIAL TO MATCH THE ADJACENT SURFACES AND/OR CONSTRUCTION, UNLESS TIGHTER CLEARANCES ARE REQUIRED BY CODE. THE CONTRACTOR SHALL CORRECT ANY DEFICIENCIES PRIOR TO INITIATION OF FIRE AND/OR SMOKE STOPPING.
- 17) PRIOR TO ANY PIPING AND/OR DUCTWORK BEING INSTALLED MECHANICAL/PLUMBING CONTRACTOR IS TO COORDINATE ALL WORK WITH THE ELECTRICAL CONTRACTOR TO AVOID ANY NEC VIOLATIONS.
- 18) PROVIDE/INSTALL A CLEAR VENTED LOCKABLE COVER FOR ALL THERMOSTATS LOCATED THROUGHOUT THE SPACE.
- 19) ALL COLOR SELECTIONS FOR PLUMBING FIXTURES TO BE MADE BY THE ARCHITECT.
- 20) CONTRACTOR TO VERIFY THE NEW AND EXISTING SANITARY VENT PIPE THROUGH THE ROOF MAINTAIN MINIMUM 2'-0" FROM ANY FRESH AIR INTAKES.
- 21) ALLOWANCES ARE TO BE INCLUDED FOR UNFORSEEN CONDITIONS THAT MAY EFFECT THE CONTRACTOR'S SCOPE OF WORK. MINOR DEVIATIONS REQUIRED FOR ACCOMPLISHING THE INTENT OF THIS DESIGN ARE TO BE INCLUDED IN THAT ALLOWANCE.
- 22) CONTRACTOR TO PROVIDE/INSTALL BATT INSULATION UP INSIDE ALL NEW/EXISTING ROOF CURBS LOCATED ABOVE OUR AREA OF WORK. INSTALL TO BE NEATLY AND EVENLY INSTALLED TO BE MADE WEATHERTIGHT.
- 23) THERMOSTATS MOUNTING HEIGHTS TO BE PER THE DRAWINGS. THE TOP OF THE THERMOSTAT AND/OR HUMIDISTAT NOT TO EXCEED THE 5' HIGH WALL PROTECTION STRIP.
- 24) NOT SHOWN ON THE DRAWINGS, BUT IF SO REQUIRED PER LOCAL PLUMBING CODE AND/OR ASSE 1070 THE PLUMBING CONTRACTOR IS RESPONSIBLE TO PROVIDE/INSTALL A POINT OF USE THERMOSTATIC MIXING VALVE BELOW EACH HAND SINK, EVEN THOUGH A THERMOSTATIC MIXING VALVE IS SHOWN TO BE INSTALLED/REQUIRED AT THE HOT WATER SOURCE. THE SCRUB SINK DOES NOT REQUIRED THIS. THE POINT OF USE THERMOSTATIC MIXING VALVE MUST CONFORM TO ASSE 1016 AND 1070 AS MANUFACTURED BY WILKINS MODEL ZN3870T AND/OR ZN3870T-4P AS REQUIRED PER FAUCET TYPE USED.
- 25) ALL REFRIGERANT PIPING TO BE SIZED/TRAPPED AND INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.
- 26) AFTER THE AIR BALANCING CONTRACTOR HAS COMPLETED THEIR AIR BALANCING OF THE ROOFTOP AND AIR HANDLING UNITS, THE AIR BALANCING CONTRACTOR MUST CONTACT THE MECHANICAL ENGINEER WHILE STILL AT THE SITE TO REVIEW EVERYTHING.
- 27) DRAWINGS SHALL BE CONSIDERED SCHEMATIC IN NATURE AND SHALL REPRESENT A COMPLETED PROJECT. ACTUAL INSTALLATION AND METHODS OF ACHIEVING A SATISFACTORY AND INTENDED INSTALLATION ARE THE RESPONSIBILITY OF THE CONTRACTOR. LOCATIONS OF EQUIPMENT ARE INTENDED TO SHOW A GENERAL ARRANGEMENT AND INTENDED FUNCTION. COORDINATE WITH ALL CONTRACT DOCUMENTS, OWNER-PROVIDED EQUIPMENT, EQUIPMENT DRAWINGS, ARCHITECTURAL, STRUCTURAL, AND ELECTRICAL CONTRACT DOCUMENTS. COORDINATE WITH OTHER TRADES. AS DRAWINGS ARE SCHEMATIC IN NATURE, DO NOT SCALE DRAWINGS.
- 28) AFTER THE AIR BALANCING CONTRACTOR HAS COMPLETED THE AIR BALANCING OF THE ENTIRE SYSTEM THE AIR BALANCING CONTRACTOR MUST CONTACT THE MECHANICAL ENGINEER IF THERE IS AN ISSUE (NOISE, BDLG. PRESSURE, AIRFLOWS, ETC). IF THERE IS AN ISSUE, THE AIR BALANCING CONTRACTOR MUST MAKE CONTACT WITH THE MECHANICAL ENGINEER WHILE THE TECH IS STILL AT THE SITE SO THAT ANY ISSUES MAY BE RESOLVED QUICKLY.

FLOOR PLAN-EXISTING CONDITIONS/DEMOLITION (HVAC/PIPING)

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



FLOOR PLAN-DEMOLITION (HVAC/PIPING)

REVISIONS	
REV#	DESCRIPTION
1	01/26/12 PERMIT COMMENTS
2	02/17/12 PERMIT COMMENTS
3	1/17/17 ARIZONA STATE ASC PLAN REVIEW

ISSUED FOR ARIZONA STATE ASC PLAN REVIEW

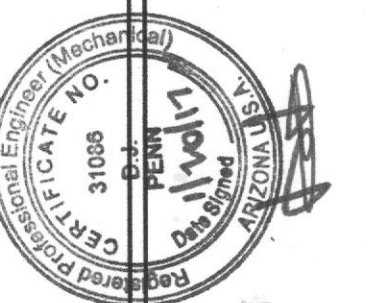


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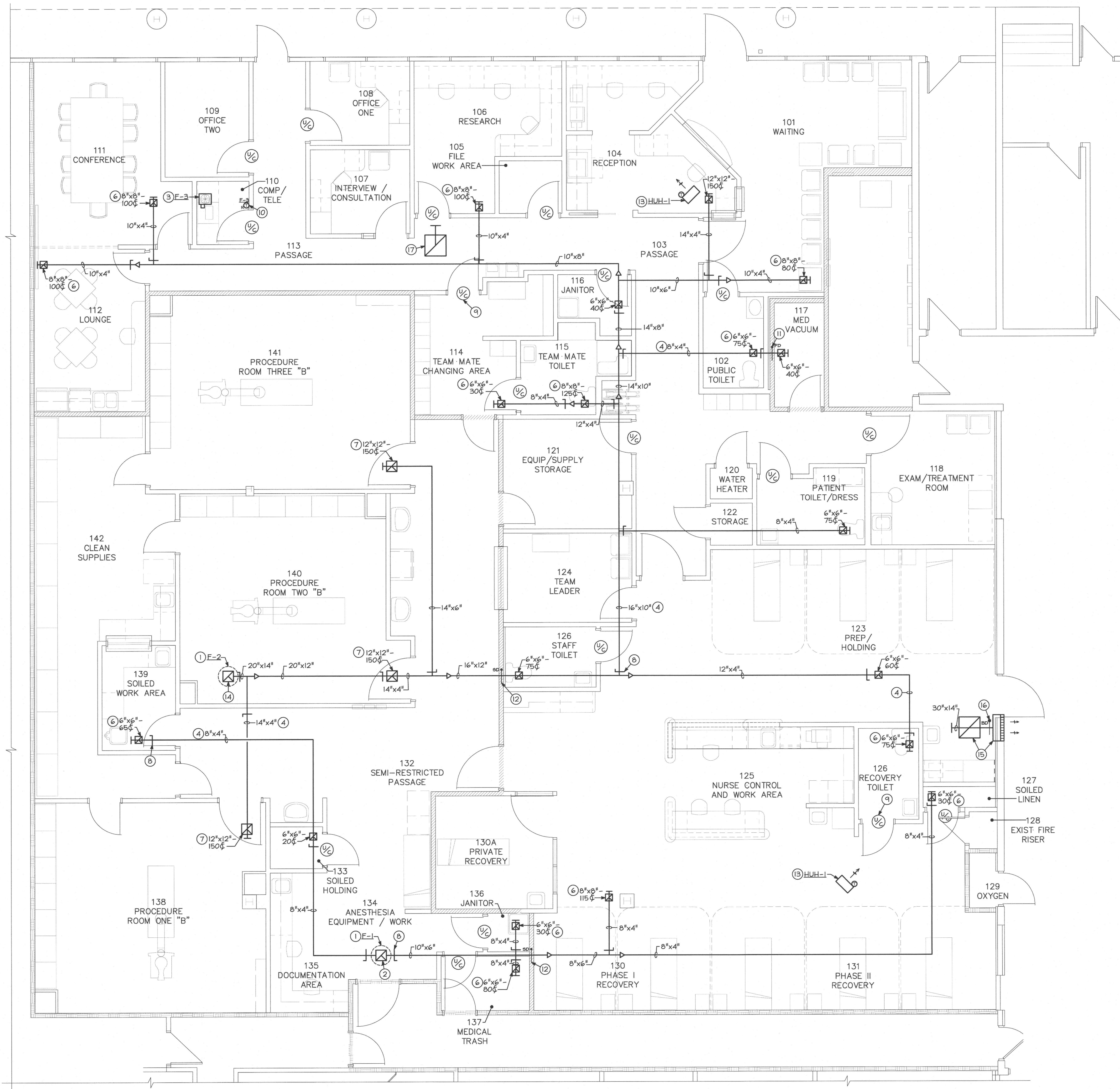
DRAWING NO. **M1**
 SHEET **1** OF **9**
 DATE **9/23/11** DRAWN BY **DL1**
 JOB NUMBER CHECKED BY **10281**
 SDI# 2011-01C



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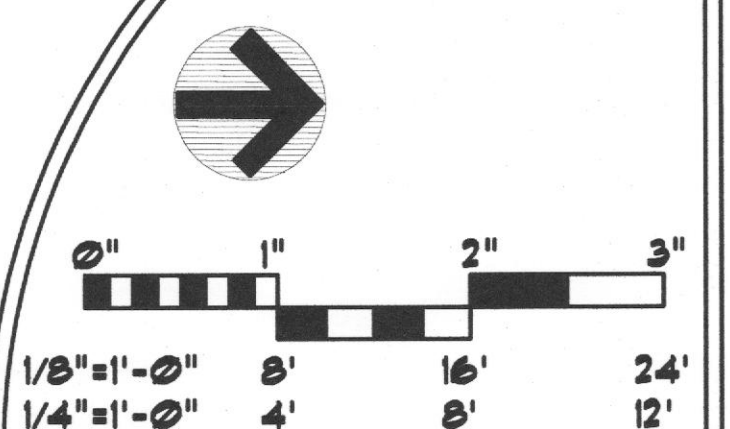
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DRAWING NOTES

- ① OUTLINE OF EXHAUST FAN MOUNTED ON ROOF ON ROOF CURB. REFER TO SHEET M8 FOR SIZE AND CAPACITY. PRIOR TO INSTALL OF EXHAUST FAN CONTRACTOR MUST COORDINATE EXACT MOUNTING LOCATION AND MAINTAIN A MINIMUM OF 2'-0" FROM ANY FRESH AIR INTAKES.
- ② EXTEND A 14"x14" EXHAUST AIR DUCTWORK PLENUM BOX DOWN ±36" BELOW ROOF LINE AND UP THROUGH EXISTING ROOF TO ROOF MOUNTED EXHAUST FAN. TRANSITION DUCTWORK AS REQUIRED TO UNIT'S CONNECTION. PROVIDE FLEXIBLE CONNECTION AT DUCTWORK CONNECTION TO UNIT.
- ③ CEILING MOUNTED VENTILATION FAN SUPPORTED ABOVE THE CEILING. DISCHARGE INTO PLENUM. REFER TO SHEET M8 FOR SIZE AND CAPACITY.
- ④ EXHAUST AIR DUCTWORK SUPPORTED ABOVE THE CEILING/TIGHT TO STRUCTURE (TYPICAL).
- ⑤ SPARE.
- ⑥ EXHAUST AIR GRILLE MOUNTED WITHIN ACOUSTICAL CEILING TILE WITH NECK SIZE AND AIR VOLUME INDICATED (TYPICAL).
- ⑦ STAINLESS STEEL EXHAUST AIR GRILLE MOUNTED IN DRYWALL CEILING WITH NECK SIZE AND AIR VOLUME INDICATED (TYPICAL).
- ⑧ VOLUME DAMPER (TYPICAL).
- ⑨ 1" DOOR UNDERCUT BY OTHERS (TYPICAL).
- ⑩ REVERSE ACTING THERMOSTAT TO BE MOUNTED ±48" ABOVE FINISHED FLOOR ON WALL TO CONTROL VENTILATION FAN.
- ⑪ FIRE DAMPER TO BE INSTALLED IN THE DUCTWORK ABOVE THE CEILING.
- ⑫ SMOKE DAMPER, INTERLOCK WITH DUCT SMOKE DETECTOR MOUNTED ON OUTSIDE OF DUCTWORK (WITH SENSING TUBE INSIDE DUCT) AND WITH DUCT SMOKE DETECTOR FROM ASSOCIATED ROOFTOP UNIT. DUCT SMOKE DETECTOR AND WIRING PROVIDED/INSTALLED BY ELECTRICAL CONTRACTOR. SMOKE DAMPER, ACTUATOR AND STEP DOWN TRANSFORMER IS TO BE PURCHASED/INSTALLED BY MECHANICAL CONTRACTOR. INSTALL 8"x8" ACCESS DOOR IN DUCTWORK. SMOKE DAMPER IS TO BE CLEARLY NEATLY IDENTIFIED ON CEILING GRID WITH 1/2" HIGH LETTERS.
- ⑬ ELECTRIC HEATER WITH INTEGRAL THERMOSTAT SUPPORTED ABOVE THE CEILING. REFER TO SHEET M8 FOR SIZE AND CAPACITY.
- ⑭ EXTEND A 20"x14" EXHAUST AIR DUCTWORK UP THROUGH EXISTING ROOF TO ROOF MOUNTED EXHAUST FAN. TRANSITION DUCTWORK AS REQUIRED TO UNIT'S CONNECTION. PROVIDE FLEXIBLE CONNECTION AT DUCTWORK CONNECTION TO UNIT.
- ⑮ 24"x24" (20"x20" NECK) RELIEF AIR GRILLE MOUNTED WITHIN ACOUSTICAL CEILING TILE WITH AIR TRANSFER ASSEMBLY DUCTED TO RELIEF AIR LOUVER. INSTALL A 36"x20" EXTERIOR WALL LOUVER AS MANUFACTURED BY GREENHECK, MODEL ESD-603 OR EQUAL.
- ⑯ BACKRAFT DAMPER.
- ⑰ 24"x24" (20"x20" NECK) RELIEF AIR GRILLE MOUNTED WITHIN ACOUSTICAL CEILING TILE WITH 22"x12" AIR TRANSFER END DUCT ABOVE CEILING. PROVIDE 1/2"x1/2" WIRE MESH SCREEN OVER DUCT OPENING.

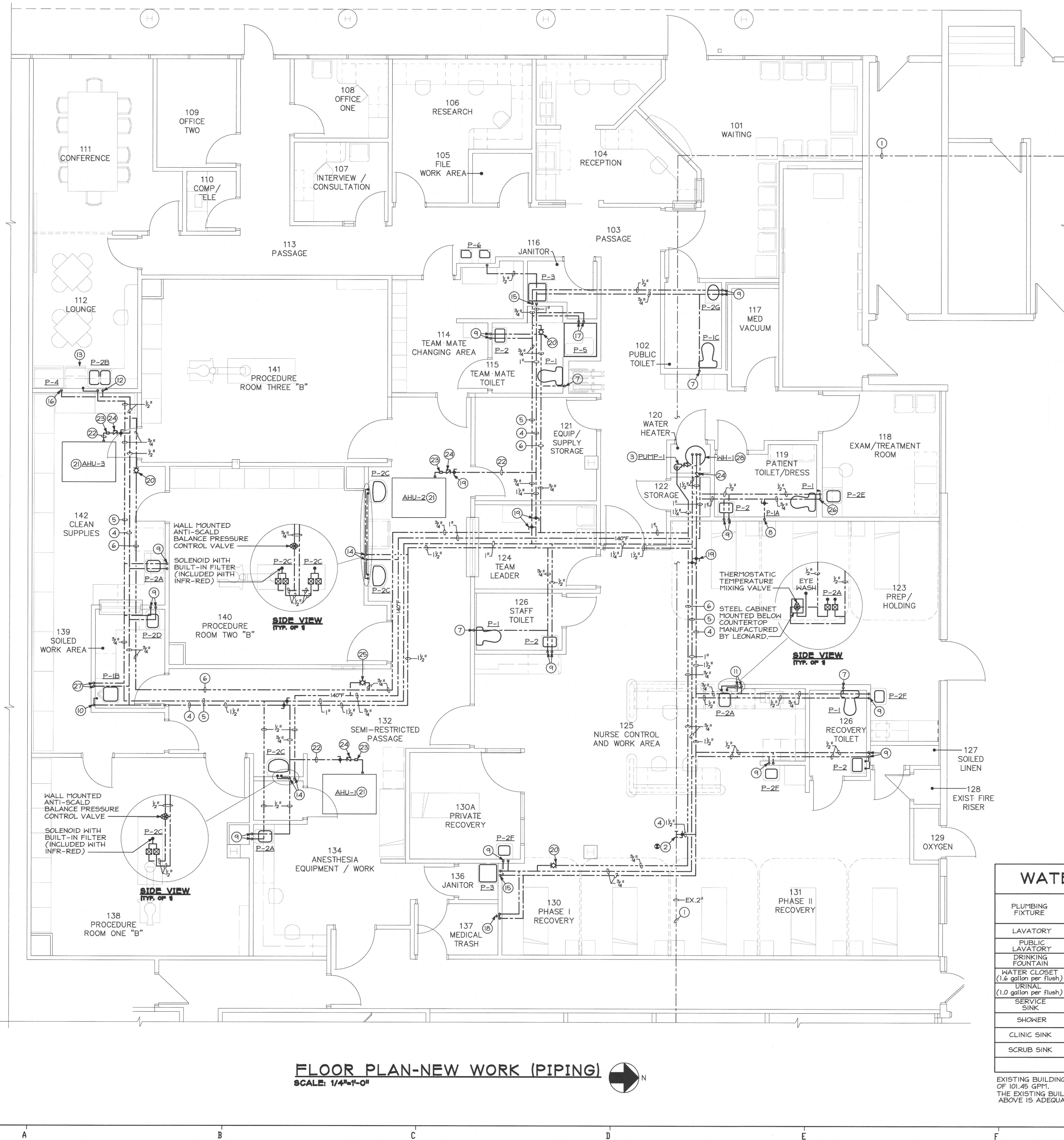


FLOOR PLAN-NEW WORK (EXHAUST)
SCALE: 1/4"=1'-0"

FLOOR PLAN-NEW WORK (EXHAUST)

REVISIONS		DATE	DESCRIPTION
#1	12/23/11	PERMIT COMMENTS	
#2	01/25/12	PERMIT COMMENTS	
#3	02/17/12	PERMIT COMMENTS	
	1/17/17	ARIZONA STATE ASC PLAN REVIEW	

DRAWING NO.
M3
SHEET OF 9
DATE DRAWN BY
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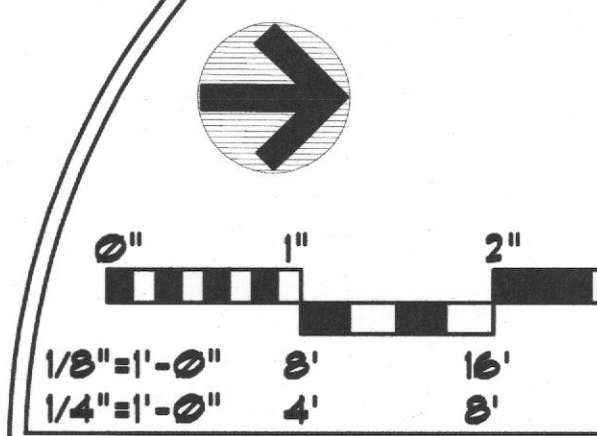
DRAWING NOTES

- 1 EXISTING DOMESTIC WATER PIPE SUPPORTED FROM STRUCTURE ABOVE TO REMAIN.
- 2 CONTRACTOR TO FIELD VERIFY AND EXTEND NEW 1/2" DOMESTIC COLD PIPE ABOVE THE CEILING AND CONNECTION TO EXISTING DOMESTIC COLD WATER PIPE.
- 3 HOT WATER RECIRCULATION IN-LINE PUMP, PROVIDE AND INSTALL FROM STRUCTURE ABOVE AS MANUFACTURED BY TACO, MODEL #001-BF4 WITH 7.0 GPM FLOW AT 3,250 RPM, 1/8 HP, 115V/1Ø WITH ALL BRONZE CONSTRUCTION.
- 4 DOMESTIC COLD WATER PIPING SUPPORTED ABOVE CEILING (TYPICAL).
- 5 DOMESTIC HOT WATER PIPING SUPPORTED ABOVE CEILING (TYPICAL).
- 6 DOMESTIC HOT WATER RECIRCULATION PIPING SUPPORTED ABOVE CEILING (TYPICAL).
- 7 1/2" DOMESTIC COLD WATER PIPING DOWN IN WALL TO SERVE TOILET P-1 (TYPICAL).
- 8 1/2" DOMESTIC COLD WATER PIPING DOWN IN WALL TO SERVE P-1A. PRIOR TO INSTALLATION COORDINATE EXACT LOCATION WITH THE ARCHITECT AND GENERAL CONTRACTOR IN THE FIELD. AFTER THE PUNCH OUT IS COMPLETE BY THE ARCHITECT THE PLUMBING CONTRACTOR IS TO STUB THE PLUMBING FIXTURE P-1A THROUGH WALL AND CAP AND TURNOVER THE SUPPLY SPRAY NOZZLE TO THE OWNER SEPARATELY.
- 9 1/2" DOMESTIC HOT AND COLD WATER PIPING DOWN IN WALL TO SERVE SINK (TYPICAL).
- 10 ROUTE 1" DOMESTIC COLD WATER PIPE DOWN IN WALL TO CLINIC SERVICE SINK.
- 11 EXTEND 1/2" DOMESTIC HOT AND COLD WATER LINE DOWN IN WALL TO SERVE P-2A NURSE WORK SINK. INSTALL A THERMOSTATIC TEMPERATURE CONTROLLER BELOW COUNTERTOP AS MANUFACTURED BY LEONARD, MODEL #TA-300. LEAVING WATER TEMPERATURE NOT TO EXCEED ±75°F FOR THE EYEWASH. REFER TO SPECIFICATIONS DRAWING FOR EYEWASH MANUFACTURER. PROVIDE TEMPERATURE CONTROLLER WITH FACTORY OPTION STEEL CABINET WITH COVER MOUNTED ON WALL BELOW SINK.
- 12 1/2" DOMESTIC HOT AND COLD WATER PIPINGS DOWN IN WALL TO SERVE P-2B LOUNGE SINK. BRANCH 1/2" DOMESTIC HOT WATER PIPING BELOW COUNTERTOP TO SERVE DISHWASHER.
- 13 DISHWASHER PROVIDED BY THE GENERAL CONTRACTOR.
- 14 EXTEND 1/2" DOMESTIC HOT AND COLD WATER PIPING WITHIN WALL TO SERVE P-2C SCRUB SINK. INSTALL A SPEAKMAN SENTINEL MARK II REGENCY, MODEL #SM-3200, ANTI-SCALD BALANCED PRESSURE VALVE, MOUNTED ON WALL ±4" ABOVE SCRUB SINK ON THE RIGHT HAND SIDE OF THE SINK. WALL MOUNTED ANTI-SCALD BALANCED PRESSURE VALVE TO WORK IN CONJUNCTION WITH INFRA-RED GOOSENECK FAUCET. REFER TO SHEET M3 FOR MORE INFORMATION.
- 15 3/4" DOMESTIC HOT AND COLD WATER PIPING DOWN IN WALL TO P-3 MOP SINK.
- 16 1/2" DOMESTIC COLD WATER PIPING DOWN WITHIN WALL TO SERVE P-4 REFRIGERATOR ICE MAKER VALVE BOX.
- 17 1/2" DOMESTIC HOT AND COLD WATER PIPING DOWN IN WALL TO P-5 SHOWER BALANCING VALVE.
- 18 1/2" DOMESTIC HOT AND COLD WATER PIPING DOWN WITHIN WALL TO SERVE FAUCET #8344.III WITH TOP BRACE, STOPS, 10-1/2" SPOUT, 3/4" HOSE THREAD ON SPOUT, INTEGRAL VACUUM BREAKER, AND ADJUSTABLE UNION COUPLINGS AS MANUFACTURED BY FIAT. MOUNT SERVICE FAUCET ON WALL ±3'-0" ABOVE FINISHED FLOOR.
- 19 BALL VALVE (TYPICAL).
- 20 BALANCING VALVE. BALANCE AT 2.0 GPM.
- 21 OUTLINE OF AIR HANDLING UNIT SUSPENDED FROM STRUCTURE ABOVE CEILING. REFER TO SHEET M2 FOR MORE INFORMATION.
- 22 EXTEND 3/8" DOMESTIC COLD WATER PIPING SUPPORTED ABOVE THE CEILING TO SERVE AIR HANDLING UNIT'S HUMIDIFIER.
- 23 PROVIDE/INSTALL A 5 MICRON FILTER. CLEARLY AND NEATLY IDENTIFY "HUMIDIFIER FILTER" ON CEILING GRID WITH 1/4" HIGH LETTERS JUST BELOW THE LOCATION.
- 24 CHECK VALVE (TYPICAL).
- 25 BALANCING VALVE. BALANCE AT 1.0 GPM.
- 26 1/2" DOMESTIC HOT AND 3/4" COLD WATER PIPING DOWN IN WALL. EXTEND 1/2" HOT WATER AND 1/2" COLD TO SERVE SINK AND BRANCH 1/2" COLD TO SERVE TOILET.
- 27 3/4" DOMESTIC HOT AND COLD WATER PIPING DOWN IN WALL TO SERVE SERVICE FAUCET. REFER TO SHEET M3, SECTION 15400, P-1B SPECIFICATIONS FOR MORE INFORMATION.
- 28 52 GALLON ELECTRIC WATER HEATER MOUNTED ON FLOOR. REFER TO DETAIL ON SHEET M7 FOR PIPING AND MOUNTING DETAIL. ALSO REFER TO SHEET M8 FOR SIZE AND CAPACITY.

WATER SIZING CALCS.

PLUMBING FIXTURE	EXISTING BUILDING PLUMBING FIXTURE	NEW TENANT PLUMBING FIXTURE	FLOW RATE (gpm)	TOTAL FLOW RATE
LAVATORY	10	13	2	46
PUBLIC LAVATORY	10	1	.5	5.5
DRINKING FOUNTAIN	-	1	.75	.75
WATER CLOSET (1.6 gallon per flush)	11	5	1.6	25.6
URINAL (1.0 gallon per flush)	4	-	1.0	4
SERVICE SINK	-	2	3	6
SHOWER	-	1	2.5	2.5
CLINIC SINK	-	1	4.5	4.5
SCRUB SINK	-	3	2.2	6.6
			FINAL FLOW RATE =	101.45

EXISTING BUILDING 2" WATER METER IS ADEQUATE FOR A FLOW RATE OF 101.45 GPM.
THE EXISTING BUILDING 2" WATER SUPPLY LINE WITH A FLOW RATE GIVEN ABOVE IS ADEQUATE AT A .9 DIVERSITY



FLOOR PLAN-NEW WORK (PIPING)

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	1/17/12	ARIZONA STATE ASC PLAN REVIEW

TENANT RENOVATIONS FOR:
LIFELINE
Access Center
1100 E. University Dr. Suite 102
Tempe, AZ 85281

DRAWING NO. **M4**
SHEET **OF 9**
DATE **9/23/11** DRAWN BY **DLI**
JOB NUMBER CHECKED BY **10281** DLI
SDI# 2011-01C

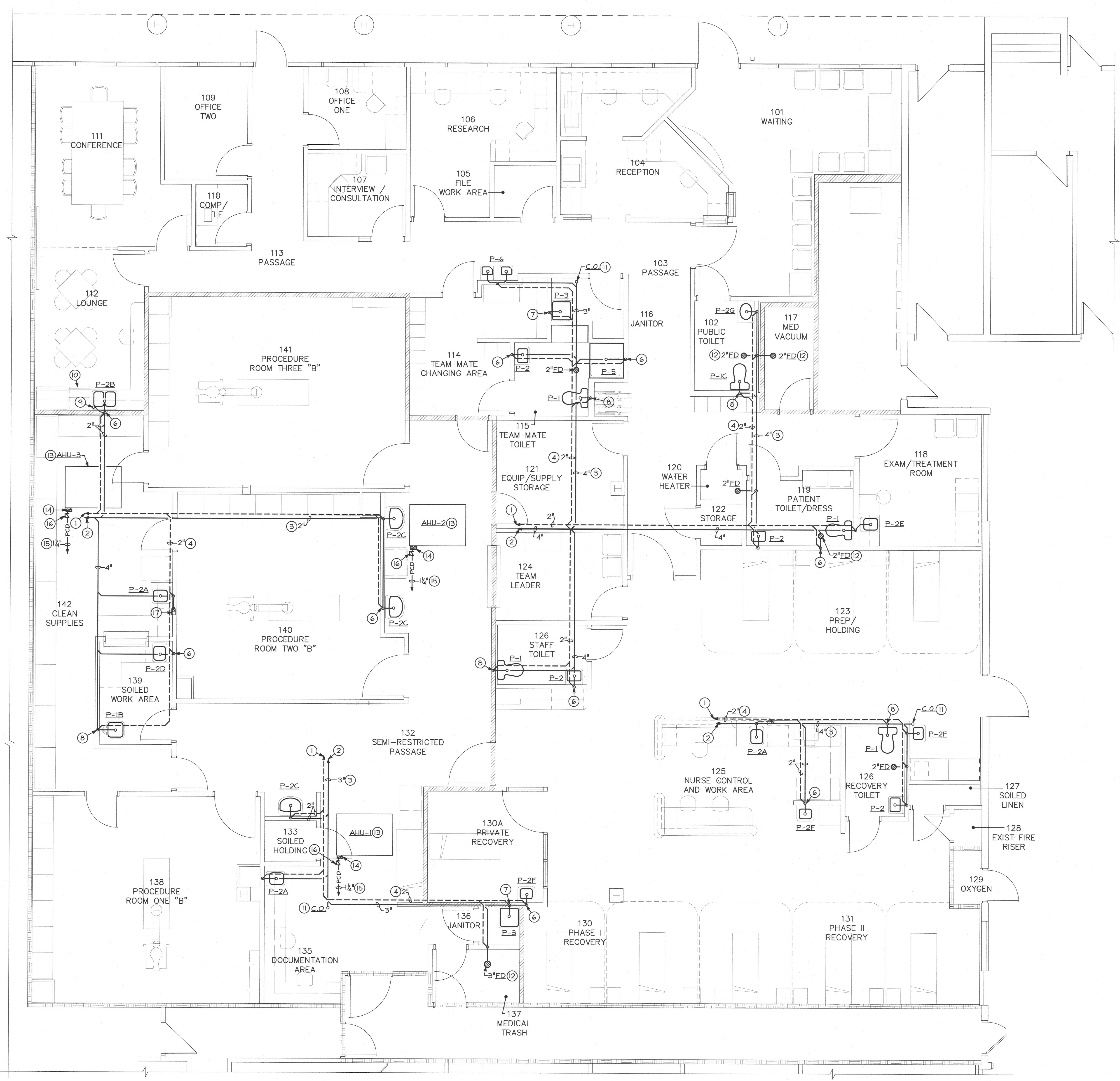


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FLOOR PLAN-NEW WORK (PIPING)
SCALE: 1/4"=1'-0"



DRAWING NOTES

- ① CONTRACTOR TO FIELD VERIFY/DETERMINE EXACT LOCATION OF EXISTING SANITARY VENT PIPE ABOVE THE CEILING AND MAKE PROPER CONNECTION.
- ② EXTEND AND CONNECT TO EXISTING SANITARY SEWER SERVICE BELOW SLAB. CONTRACTOR TO FIELD VERIFY/DETERMINE EXACT LOCATION AND SLOPE/DIRECTION OF EXISTING SANITARY LINE BELOW SLAB AND MAKE PROPER CONNECTION.
- ③ SANITARY PIPING BELOW SLAB. SLOPE AT 1/8" PER FOOT (TYPICAL).
- ④ SANITARY VENT PIPING SUPPORTED FROM STRUCTURE ABOVE CEILING (TYPICAL).
- ⑤ EXTEND 1/2" CONDENSATE LINE ABOVE CEILING TO NEAREST EXISTING STORM WATER RISER (WITHIN BLDG.) FOR PROPER CONNECTION. PROVIDE A CHECK VALVE AT POINT OF CONNECTION.
- ⑥ 2" SANITARY VENT PIPING UP AND 2" DOWN TO SANITARY PIPING (TYPICAL).
- ⑦ 2" SANITARY VENT PIPING UP AND 3" DOWN TO SANITARY PIPING (TYPICAL).
- ⑧ 2" SANITARY VENT PIPING UP AND 4" DOWN TO SANITARY PIPING (TYPICAL).
- ⑨ 1" SANITARY CONNECTION FROM DISHWASHER TO AIR GAP ABOVE SINK. EXTEND 1" SANITARY CONNECTION FROM AIR GAP TO TAILPIECE OF SINK.
- ⑩ DISHWASHER PROVIDED BY THE GENERAL CONTRACTOR.
- ⑪ FLOOR CLEANOUT (TYPICAL).
- ⑫ FLOOR DRAIN (TYPICAL).
- ⑬ OUTLINE OF AIR HANDLING UNIT SUPPORTED ABOVE THE CEILING. REFER TO SHEET 112 FOR MORE INFORMATION.
- ⑭ FACTORY SUPPLIED CONDENSATE PUMP WITH DIRECT ELECTRICAL CONNECTION TO UNIT POWER SUPPLY. COORDINATE WITH ELECTRICAL CONTRACTOR FOR HARDWARE CONNECTION.
- ⑮ PUMPED CONDENSATE LINE SUPPORTED ABOVE CEILING. SLOPE PIPE A MINIMUM OF 1/8" PER FOOT AWAY FROM UNIT.
- ⑯ CHECK VALVE (TYPICAL).
- ⑰ OUTLET BOX TO BE MOUNTED. ±24" A.F.F. BELOW COUNTERTOP AS MANUFACTURED BY SIOUX CHIEF, SERIES 8696. (DRAIN BOX ONLY). PRIOR TO INSTALL, COORDINATE EXACT MOUNTING LOCATION WITH THE GENERAL CONTRACTOR.

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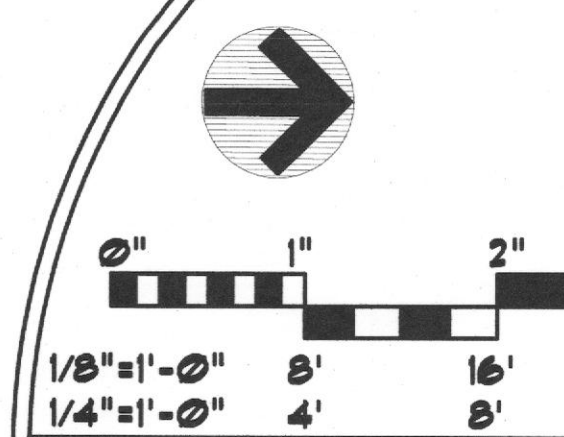


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TENANT RENOVATIONS FOR:
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 1100 E. University Dr. Suite 102
 Tempe, AZ 85281

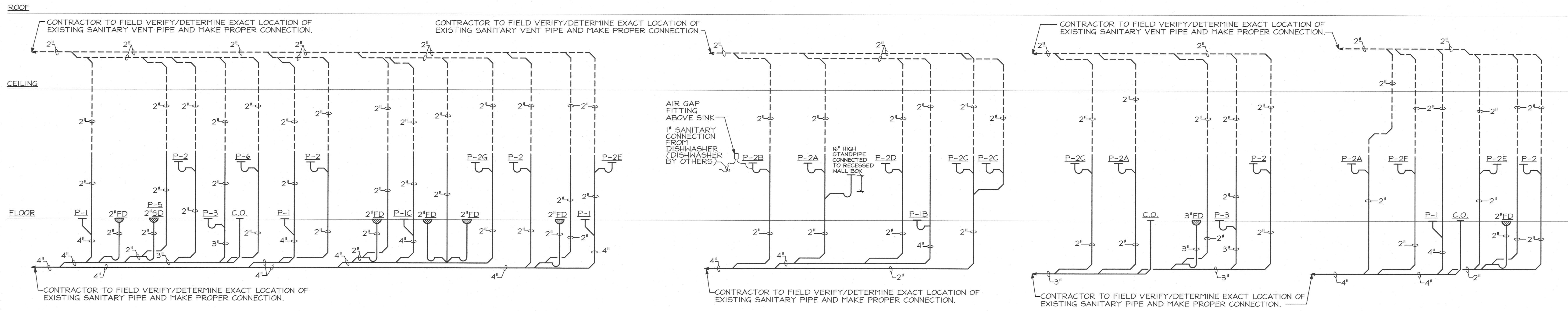


FLOOR PLAN-NEW WORK (PLUMBING)
 SCALE: 1/4"=1'-0"

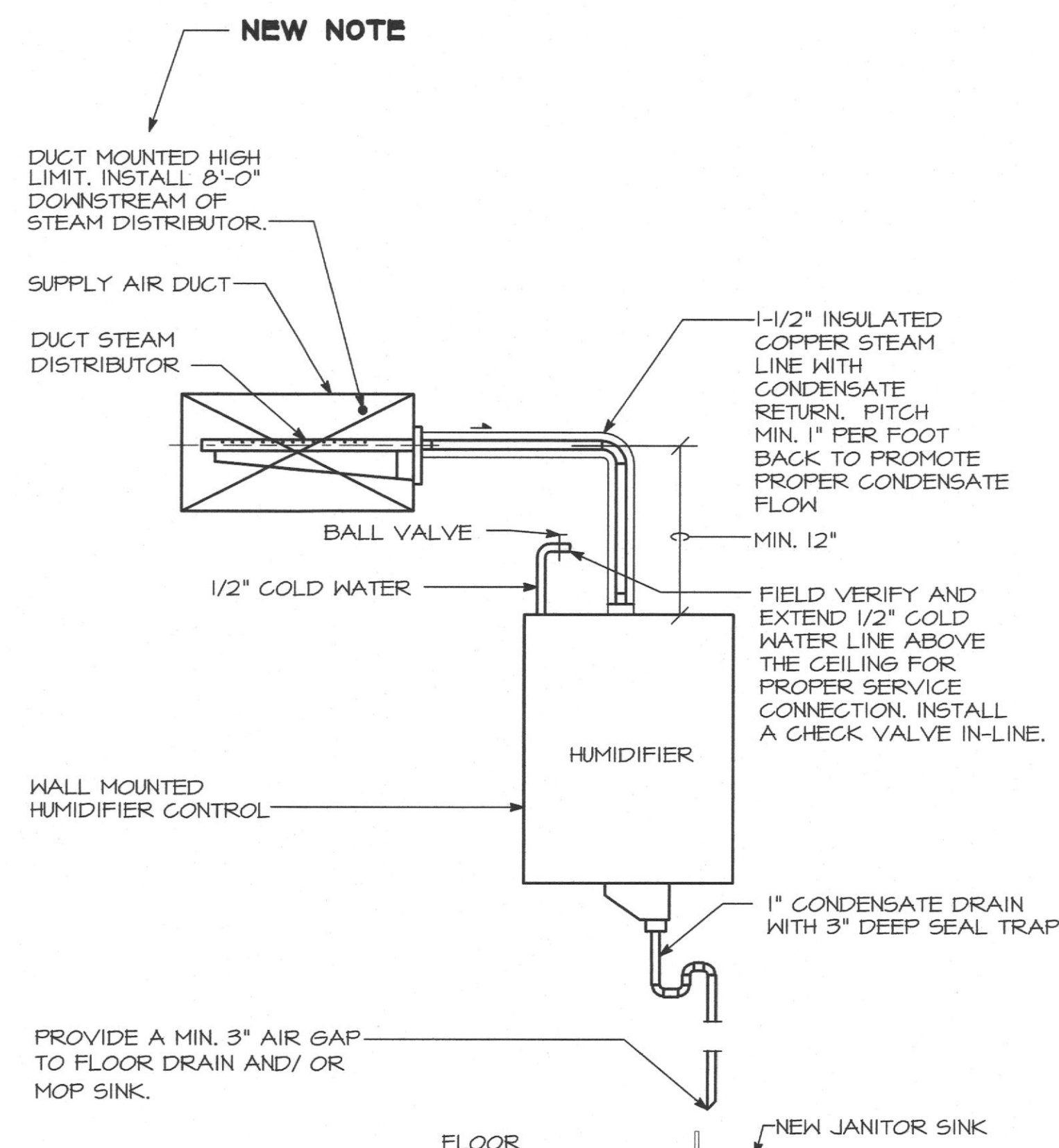
FLOOR PLAN-NEW WORK (PLUMBING)

REVISIONS		DRAWING NO.	
REV#	DATE	DESCRIPTION	M5
#1	12/23/11	PERMIT COMMENTS	OF 9
#2	01/26/12	PERMIT COMMENTS	
#3	02/17/12	PERMIT COMMENTS	
	1/17/12	ARIZONA STATE ASC PLAN REVIEW	

DATE: 02/23/11
 DRAWN BY: DLI
 CHECKED BY: DLI
 DESIGNED BY: DLI
 10281 DLI
 SDI# 2011-01C

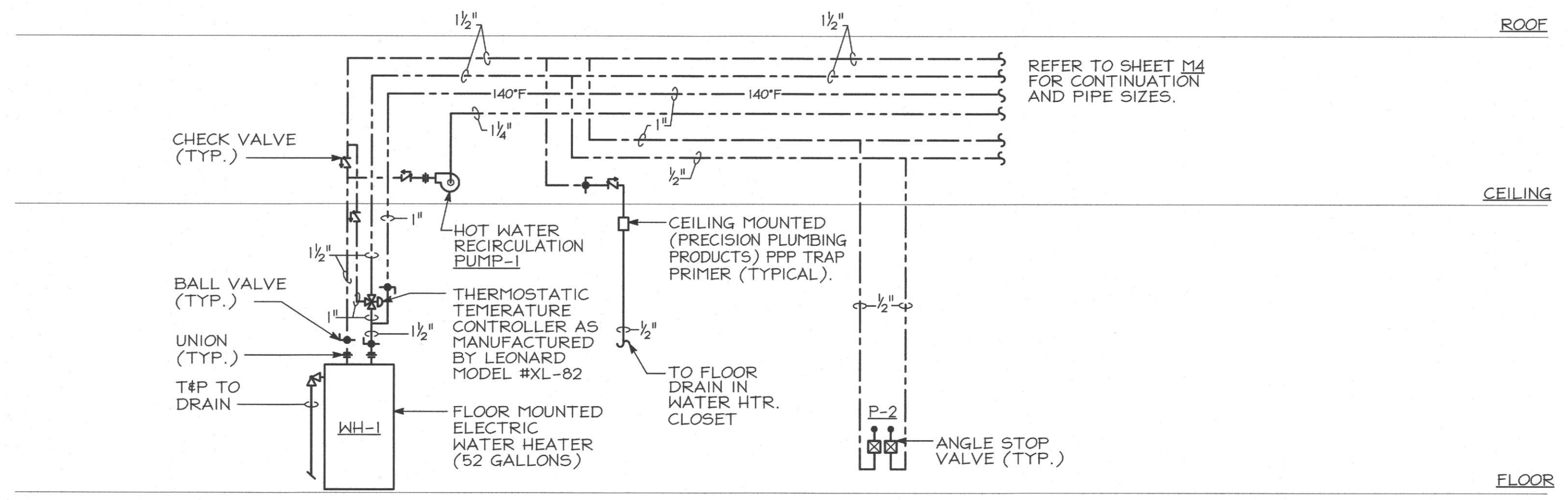


SANITARY RISER DIAGRAM
NO SCALE



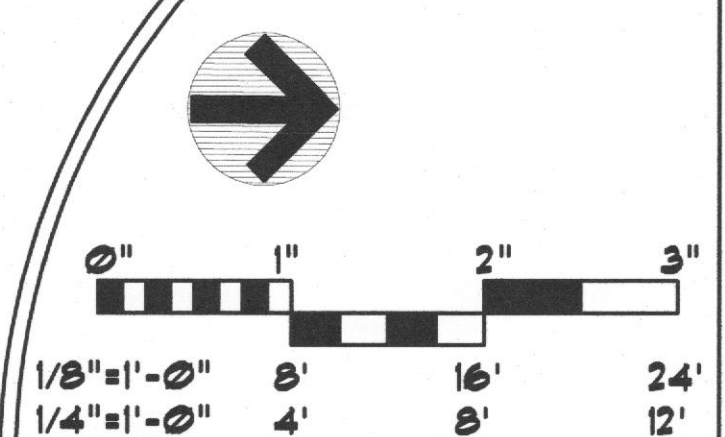
HUMIDIFIER DETAIL
NO SCALE

- NOTES:**
1. HUMIDIFIER TO BE PROVIDED WITH AN AIR PROVING SWITCH AND HIGH LIMIT HUMIDISTAT SENSOR.
 2. CONTRACTOR TO REFER TO THE MANUFACTURER'S INSTALLATION MANUAL FOR PROPER CONDENSATE RETURN.
 3. HUMIDISTAT TO BE PROVIDED WITH HUMIDIFIER FROM MANUFACTURER.
 4. MAXIMUM DISTANCE FROM THE DUCT MOUNTED MANIFOLD TO THE WALL MOUNTED HUMIDIFIER IS 20'-0".



DOMESTIC WATER RISER DIAGRAM
NO SCALE

- NOTES:**
- 1) ALL TRAPS FOR FLOOR DRAINS SERVING THE TOILET ROOMS TO BE PRIMED FROM THE NEAREST TOILET.
 - 2) ALL TRAPS FOR FLOOR DRAINS TO BE PRIMED THROUGHOUT THE SPACE. PLUMBING CONTRACTOR TO BE SURE ALL TRAPS FOR EACH FLOOR DRAIN TO BE PRIMED. IF NOT SHOWN THEN PROVIDE/INSTALL A PFP TRAP PRIMER AS REQUIRED. ALSO INSTALL/PROVIDE PFP TRAP PRIMER FOR RECESSED WALL BOX TRAP.
 - 3) DOMESTIC HOT WATER TEMPERATURE THAT SERVES ALL THE PLUMBING FIXTURES THROUGHOUT THE SPACE, BESIDES THE SCRUB SINKS, SHALL NOT EXCEED 115°F.



REVISIONS

REV#	DATE	DESCRIPTION
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TENANT RENOVATIONS FOR:
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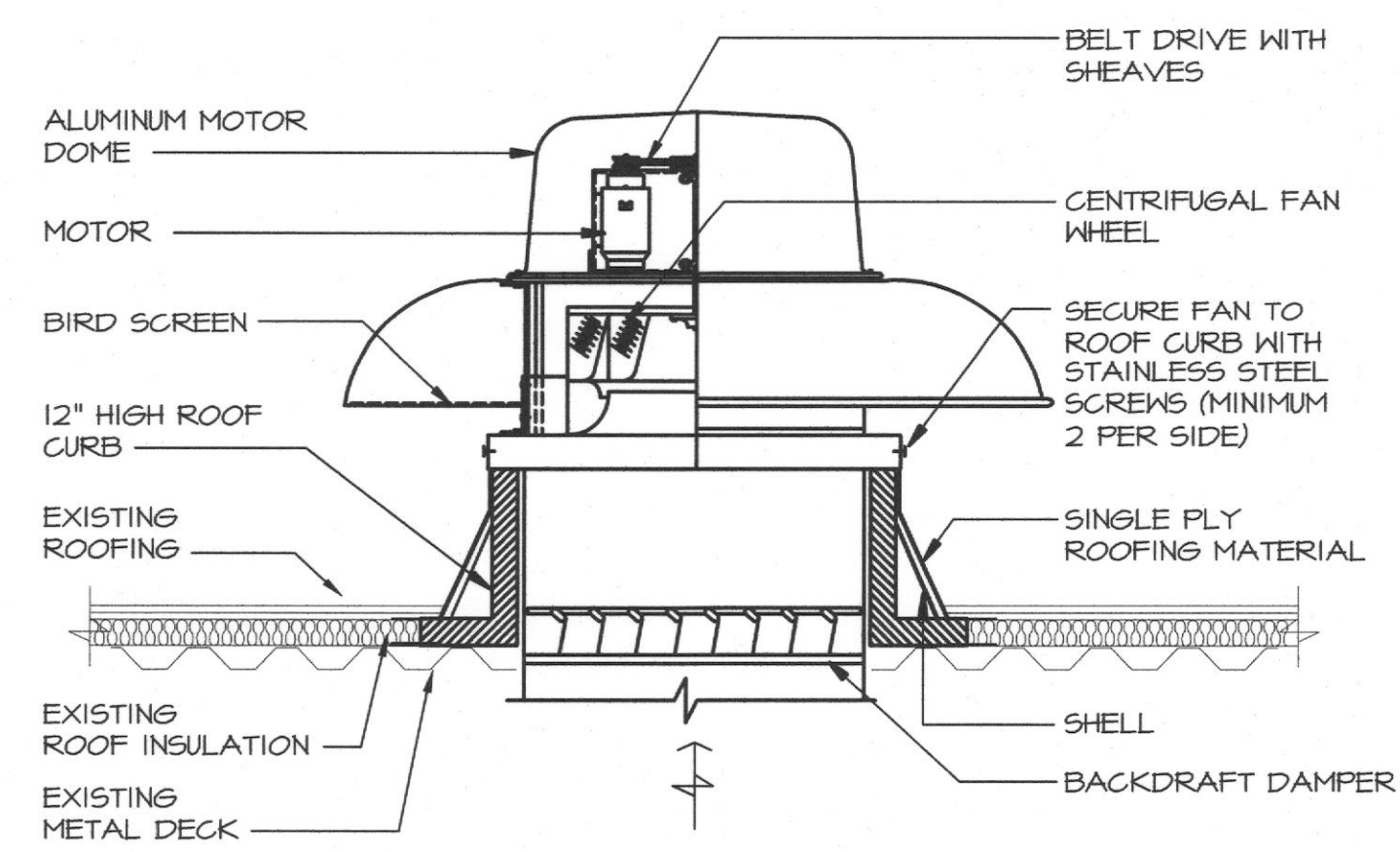
DRAWING NO.
M6
SHEET 9 OF 9
DATE 9/23/11
JOB NUMBER 10281
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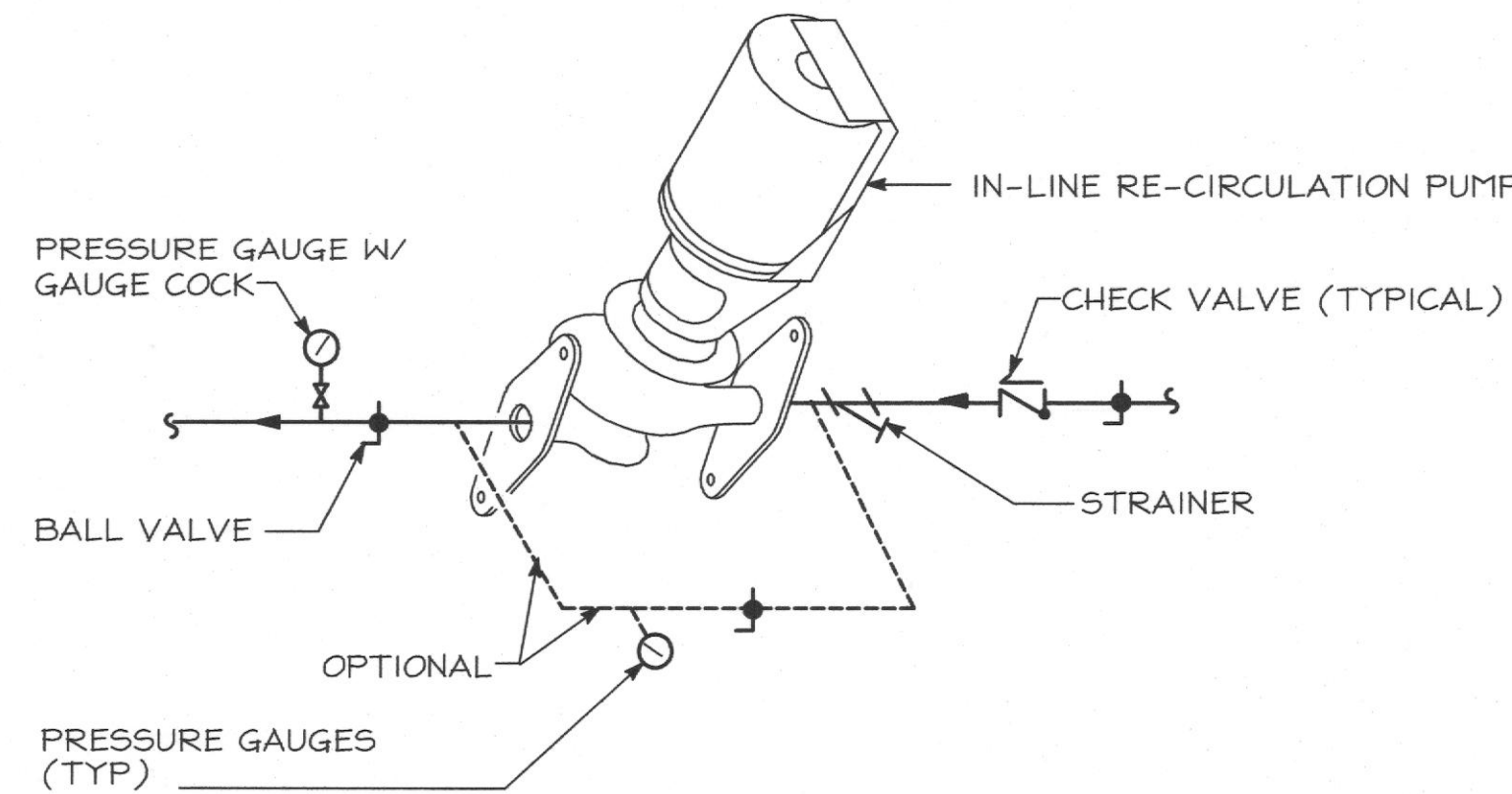
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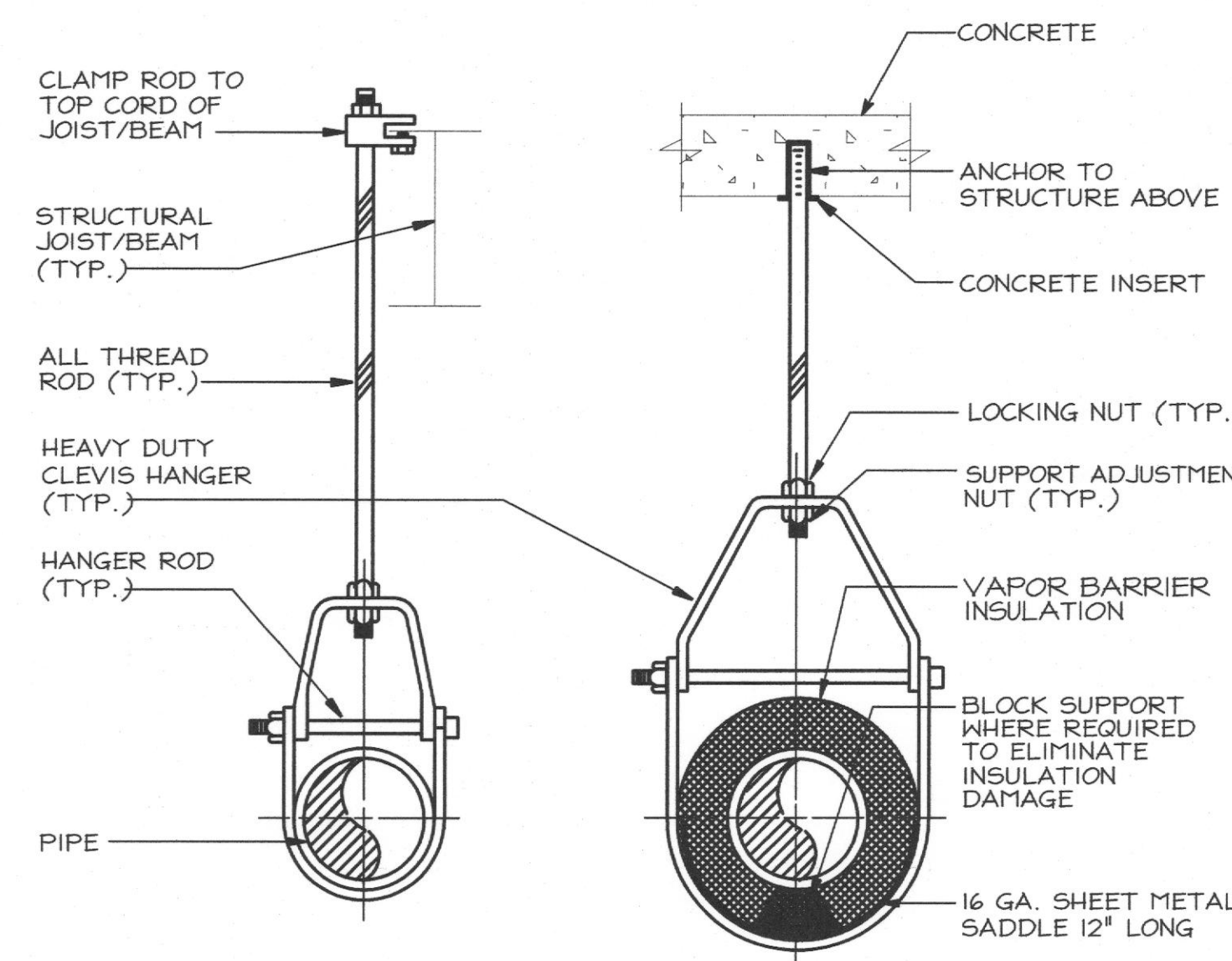


ROOF MOUNTED EXHAUST FAN DETAIL
NO SCALE



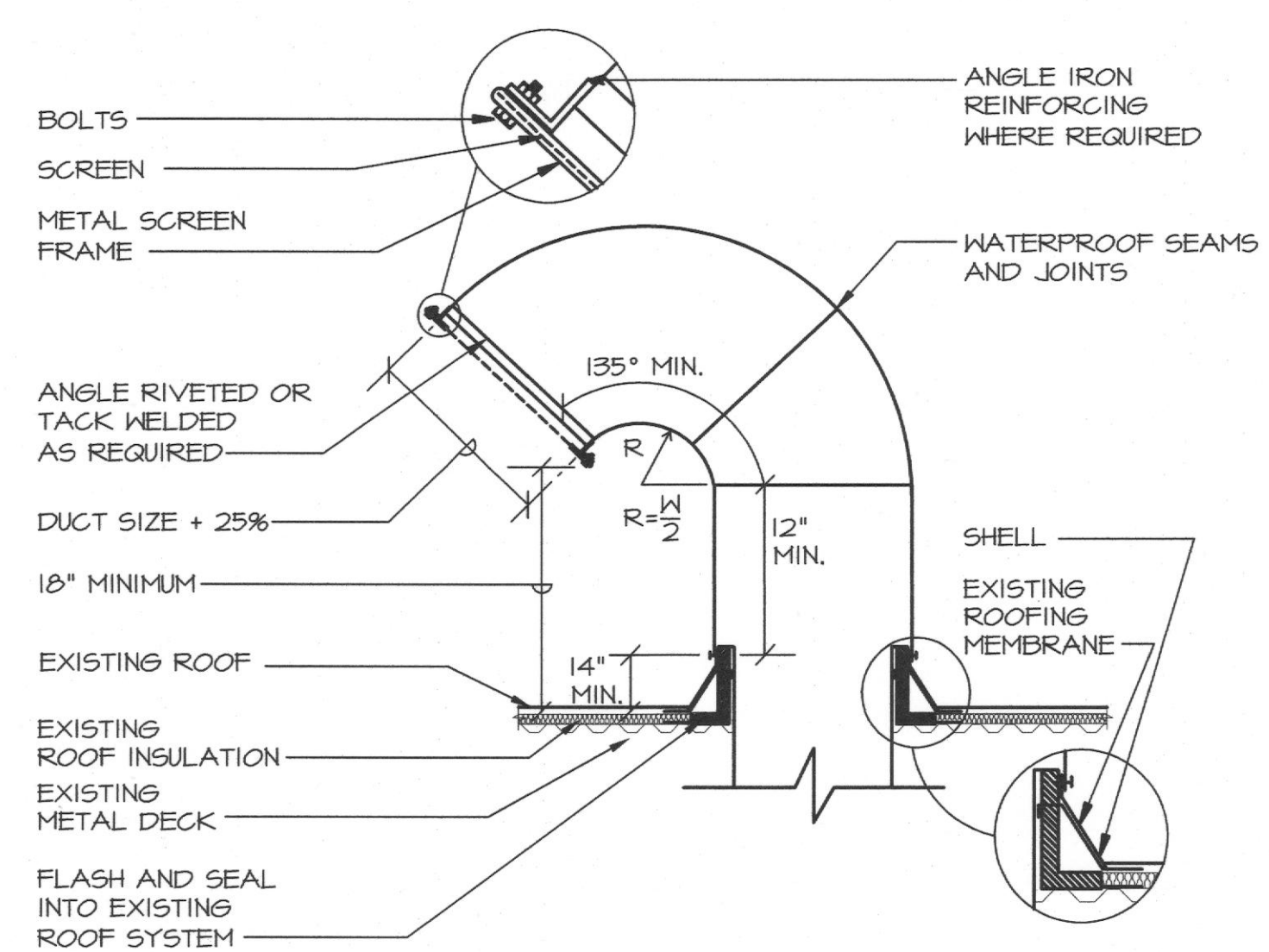
IN-LINE RE-CIRCULATING PUMP PIPING
NO SCALE

NOTE:
1) CONTRACTOR TO PROVIDE AND INSTALL CIRCULATING TIMER FOR PUMP THAT COMPLIES WITH IECC 2000 EDITION SECTION 804.

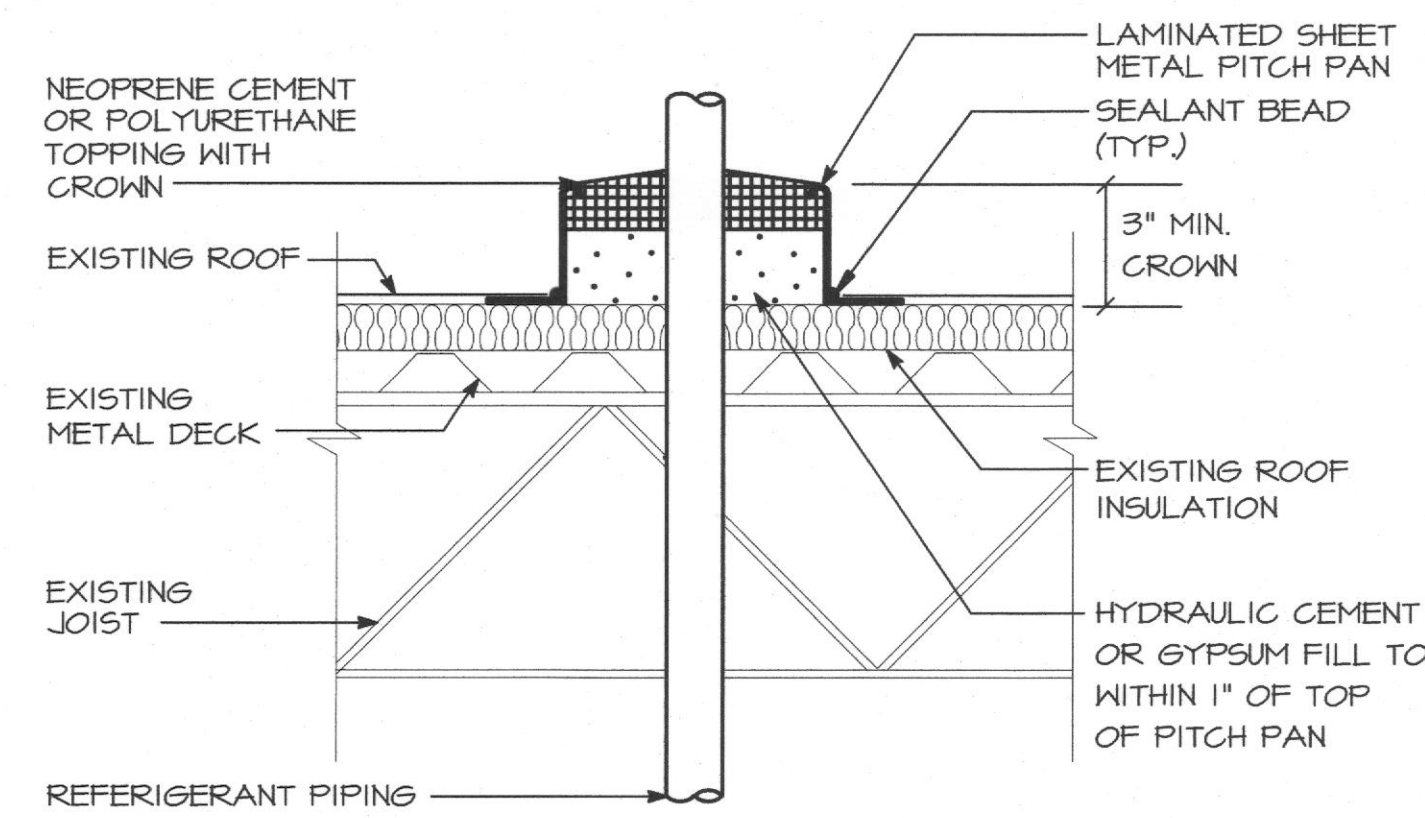


PIPE SUPPORT DETAIL
NO SCALE

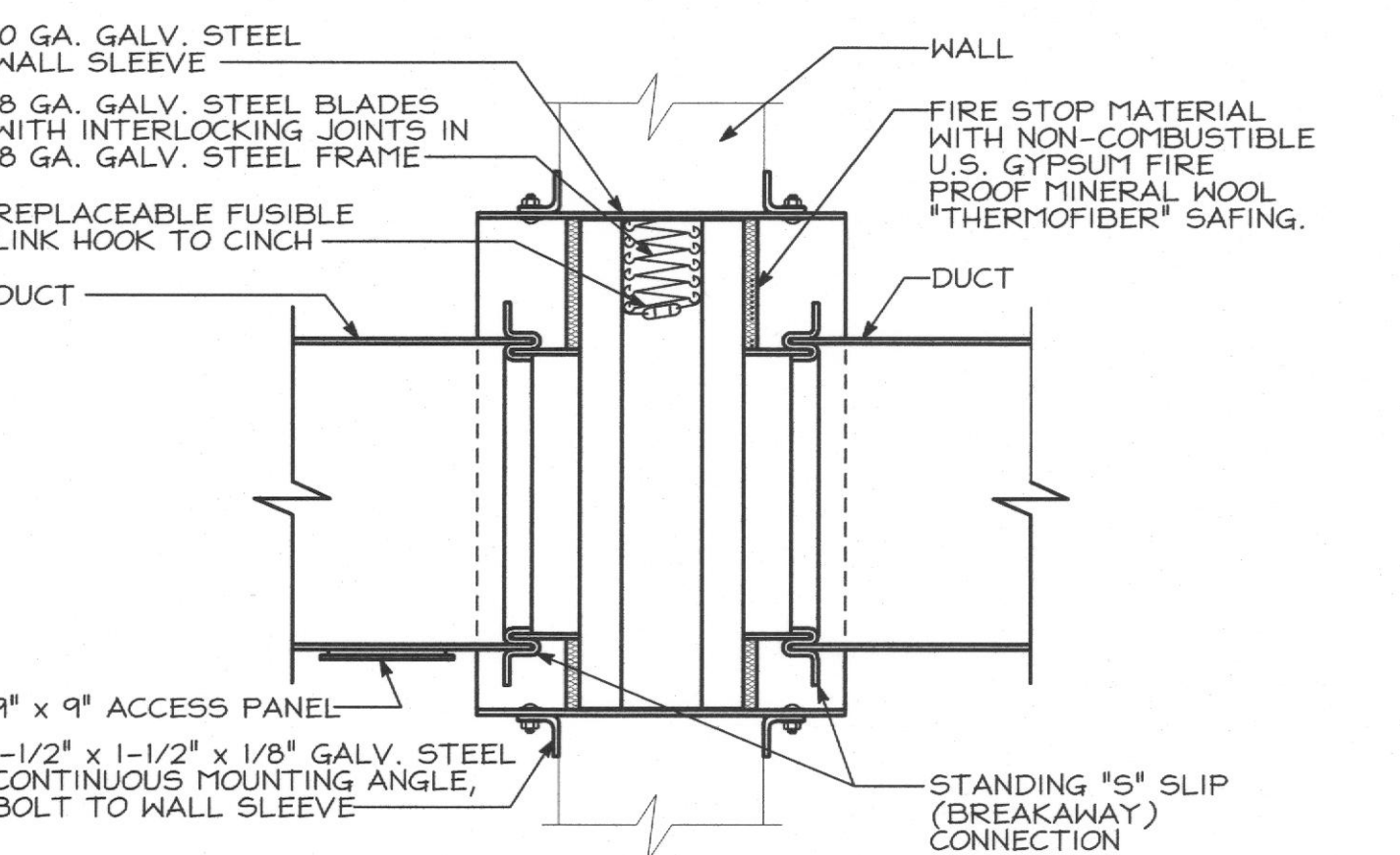
NOTE:
1) ALL HANGERS FOR COPPER PIPING SHALL BE COPPER COATED.



GOOSENECK THRU ROOF DETAIL
NO SCALE

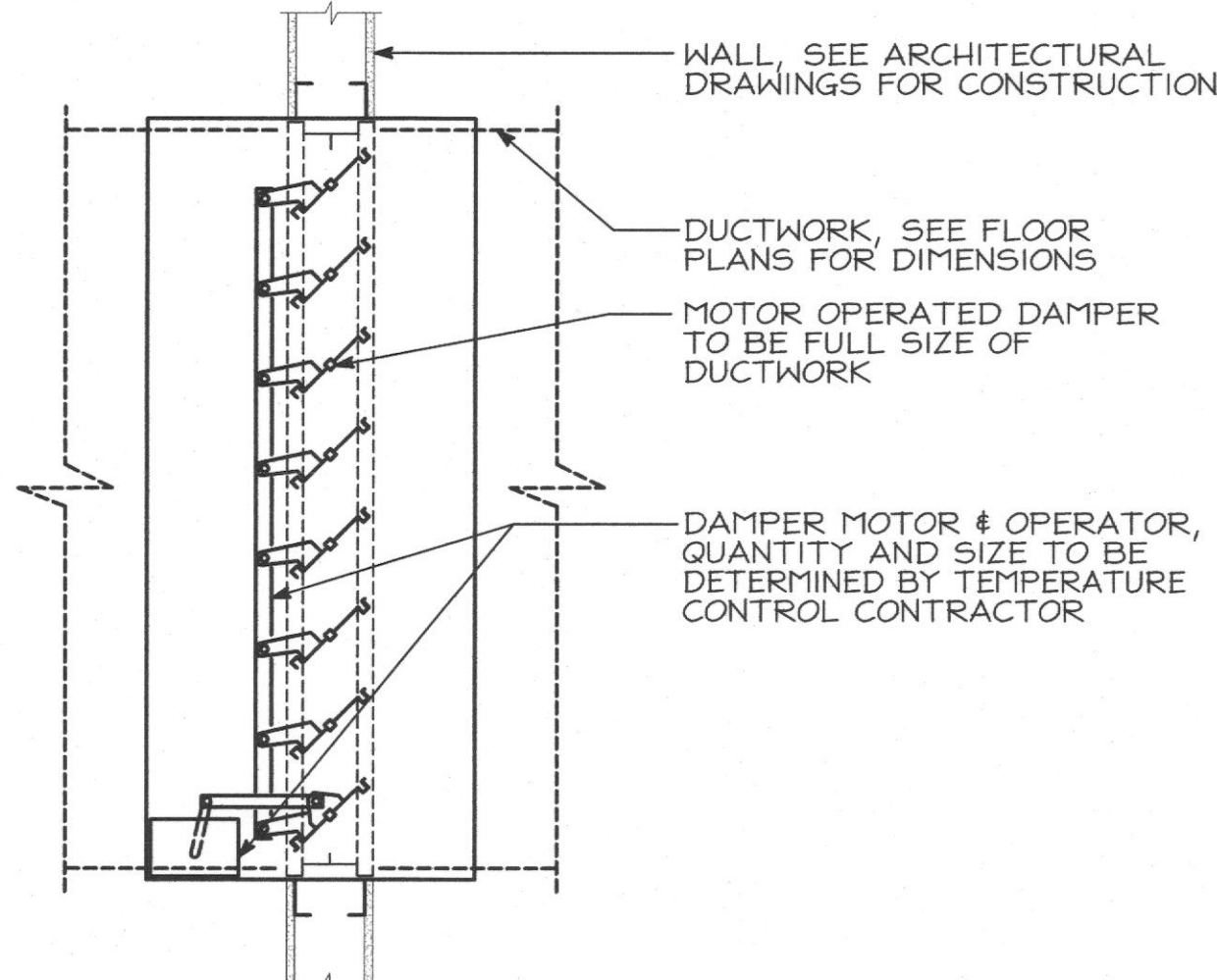


PITCH POCKET ROOF THRU DETAIL
NO SCALE



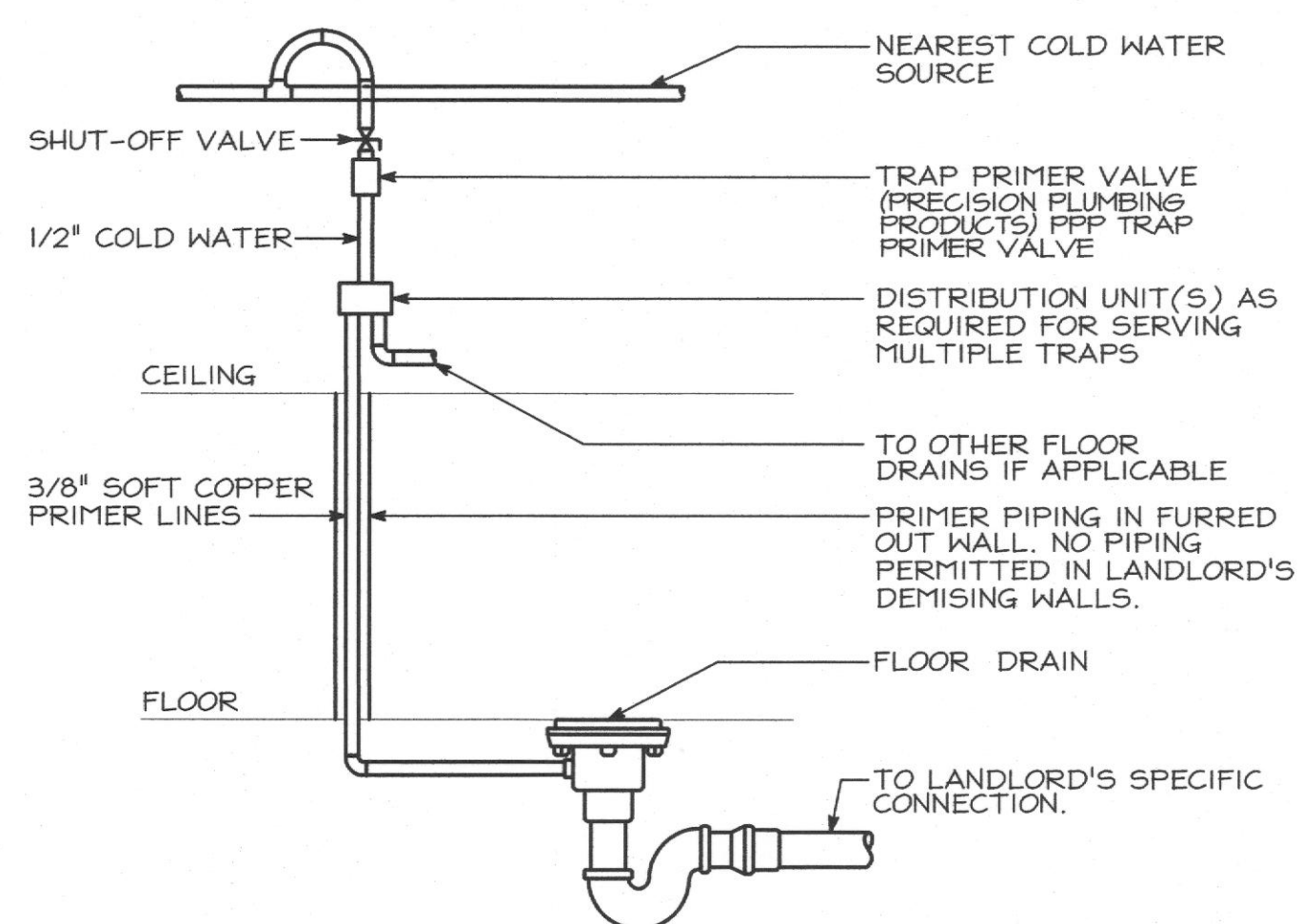
HORIZONTAL DUCT FIRE DAMPER DETAIL
NO SCALE

NOTE:
1. FIRE DAMPERS TO HAVE BREAKAWAY JOINT BETWEEN COLLARS AND DUCT. (COLLARS SHALL BE INTEGRAL WITH FIRE DAMPERS FRAME.)
2. FIRE DAMPER SHALL BE U.L. LABELED.

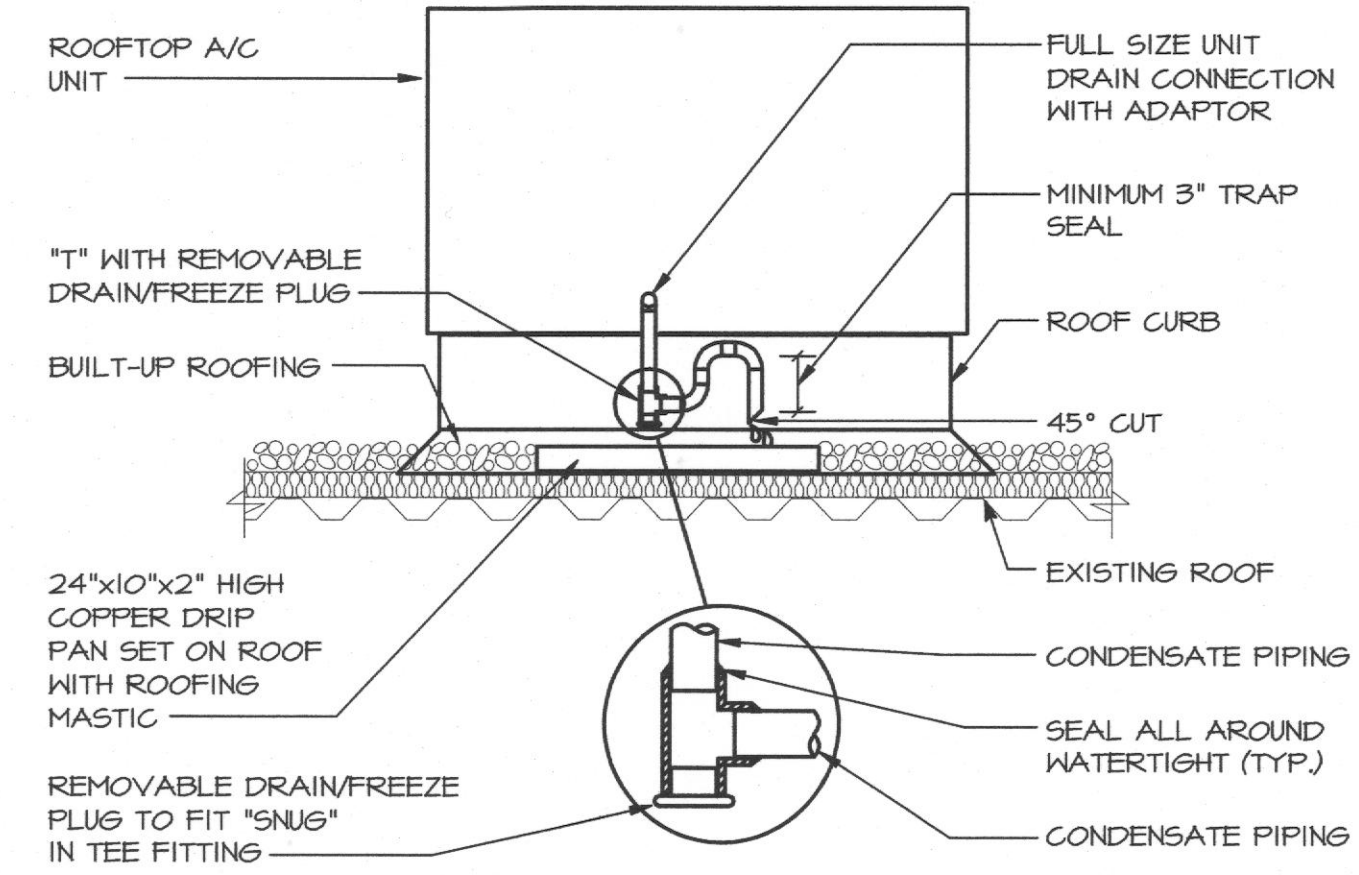


SMOKE DAMPER DETAIL
NO SCALE

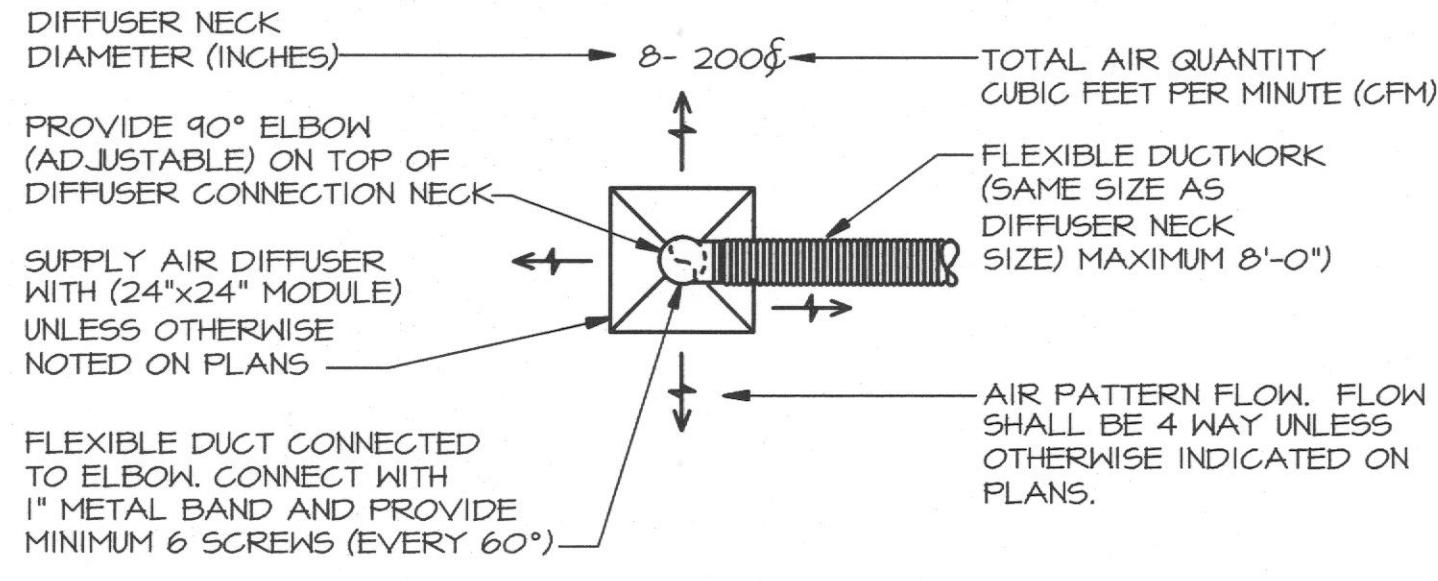
NOTES:
ALL SMOKE DAMPERS SHALL BE LEAKAGE CLASS II, TEMPERATURE CLASS 250 DEG. UNLESS NOTED OTHERWISE.
2. SMOKE DAMPERS SHALL BE AIR BALANCE MODEL F52 OR APPROVED EQUAL.
3. IF LOCAL CODE REQUIRES PROVIDE ACCESS DOOR IN DUCTWORK. IF SO, PROVIDE ACCESS DOOR AS REQUIRED.
4. IF ACCESS PANELS ARE REQUIRED THAN EVERY SMOKE DAMPER LOCATION MUST BE CLEARLY/NEATLY IDENTIFY ON THE CEILING GRID WITH 1/2" HIGH LETTERS JUST BELOW EACH SMOKE DAMPER ACCESS PANEL.



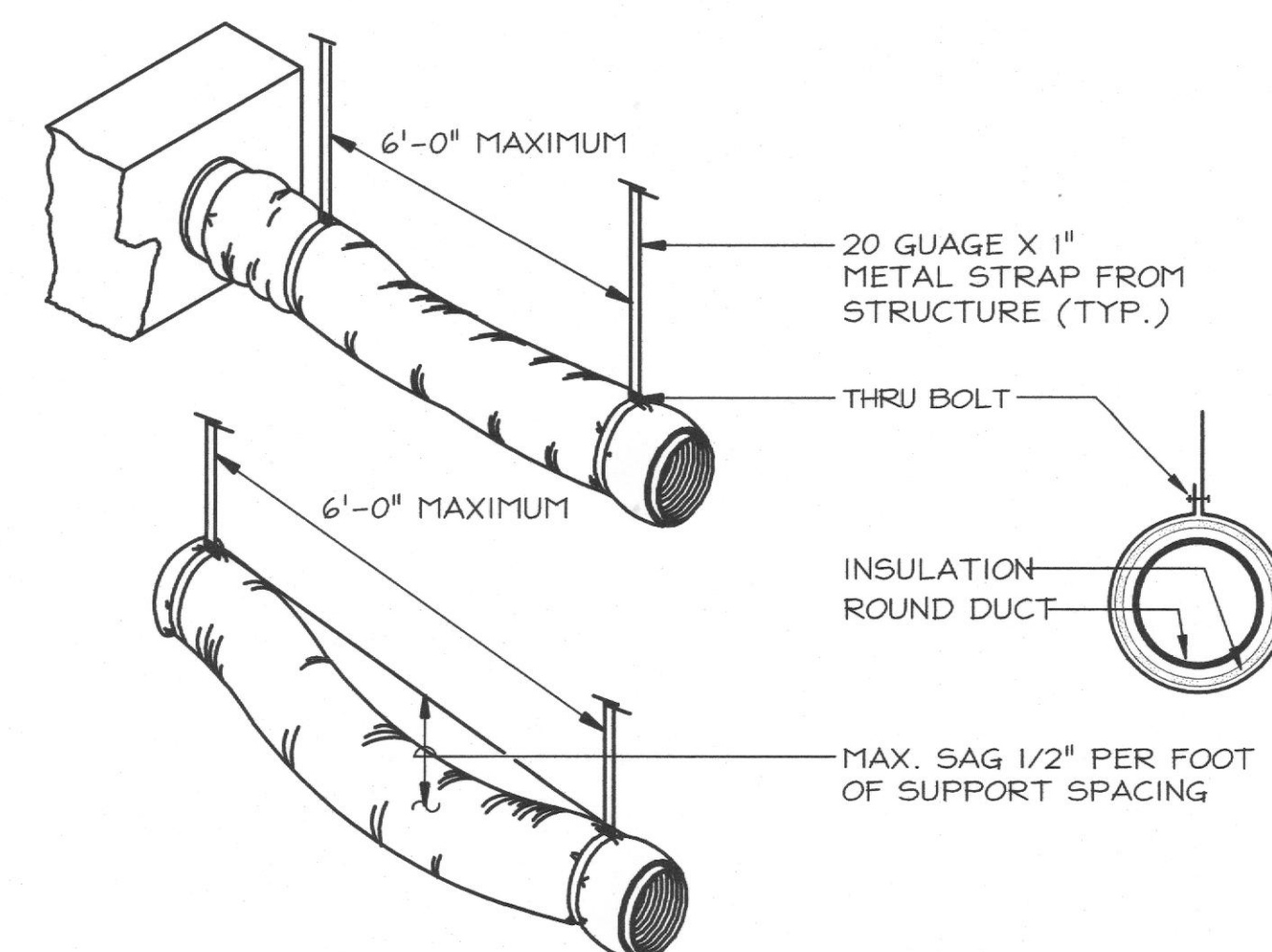
FLOOR DRAIN AND TRAP PRIMER DETAIL
NO SCALE



ROOFTOP UNIT CONDENSATE TRAP DETAIL
NO SCALE

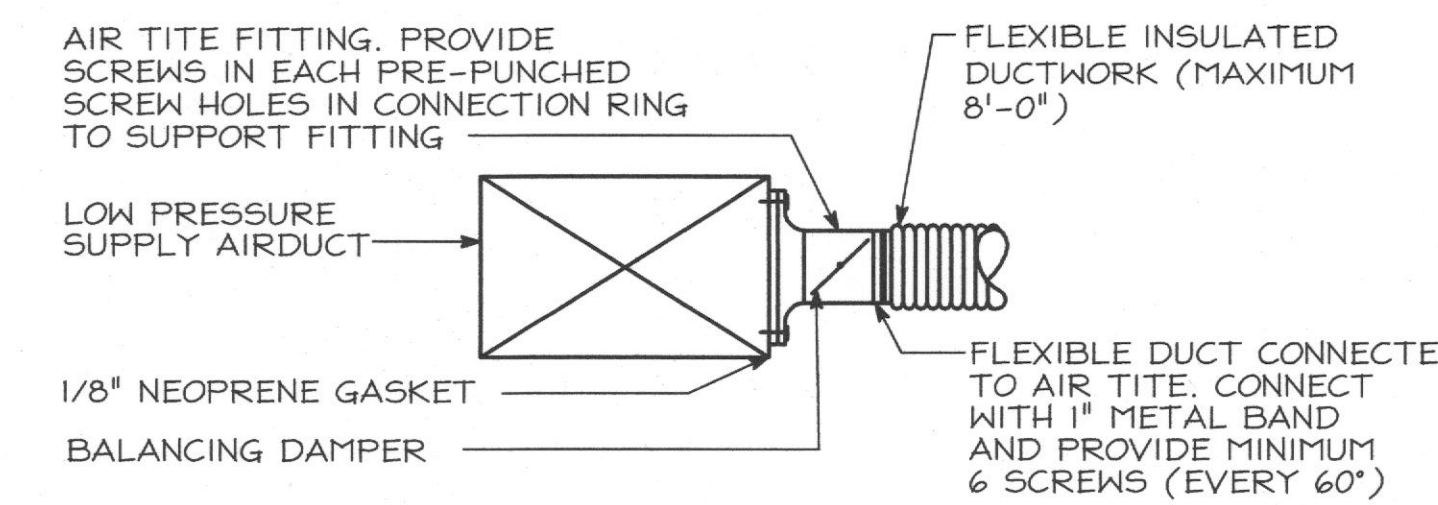


SUPPLY AIR DIFFUSER KEY
NO SCALE



FLEXIBLE DUCT RUN-OUT SUPPORT DETAIL
NO SCALE

NOTES:
1) FLEXIBLE DUCT SHOULD EXTEND STRAIGHT FOR SEVERAL INCHES FROM RECTANGULAR DUCT CONNECTION BEFORE BENDING.
2) FLEXIBLE DUCT SHOULD NOT EXCEED 6'-0" IN LENGTH. USE RIGID ROUND DUCTWORK WHEN ROUNDOUTS EXCEED

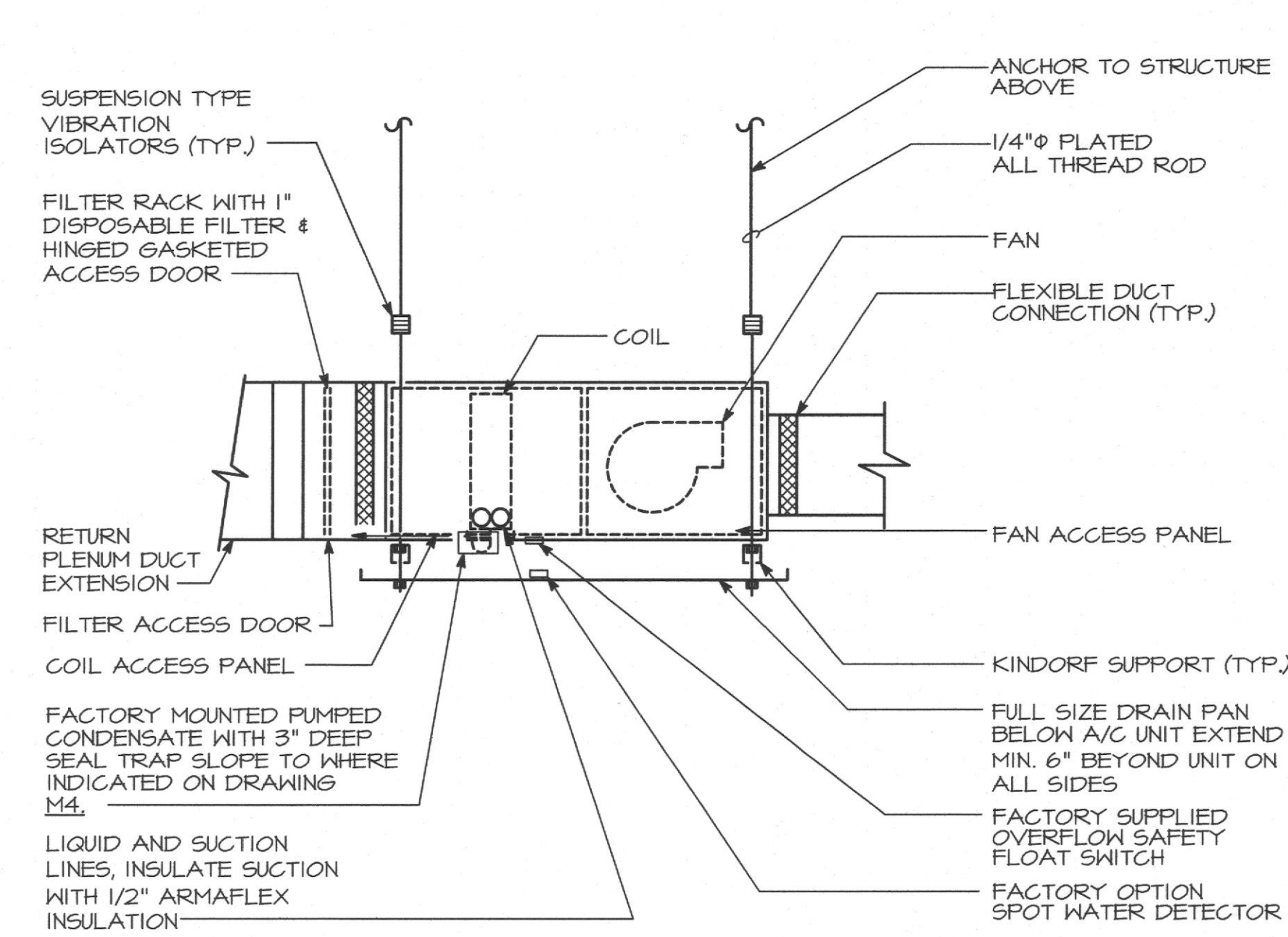


AIR TITE FITTING DETAIL
NO SCALE

AIR TITE SIZE CHART

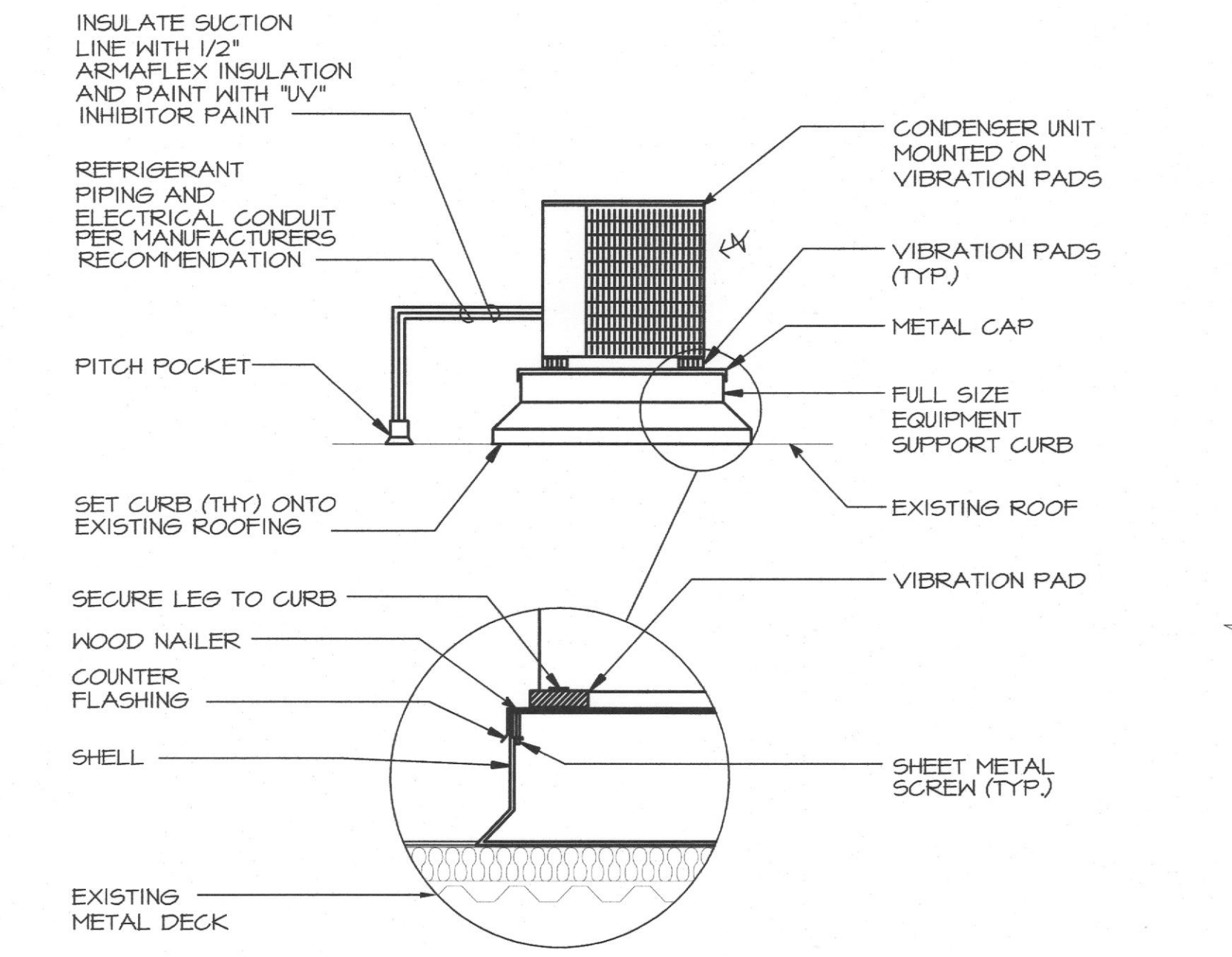
DUCTSIZE	CONNECTION RING	DUCTSIZE	CONNECTION RING
5"	8"	9"	12"
6"	9"	10"	13"
7"	10"	11"	14"
8"	11"	12"	15"

NOTE:
1) WHERE CONNECTION RING SIZE IS LARGER THAN SUPPLY DUCT, THEN CONNECTION RING SHALL BE CRIPPED OVER DUCT AND CONNECTED, SCREWED AND SEALED ON TOP AND BOTTOM OF SUPPLY DUCT.

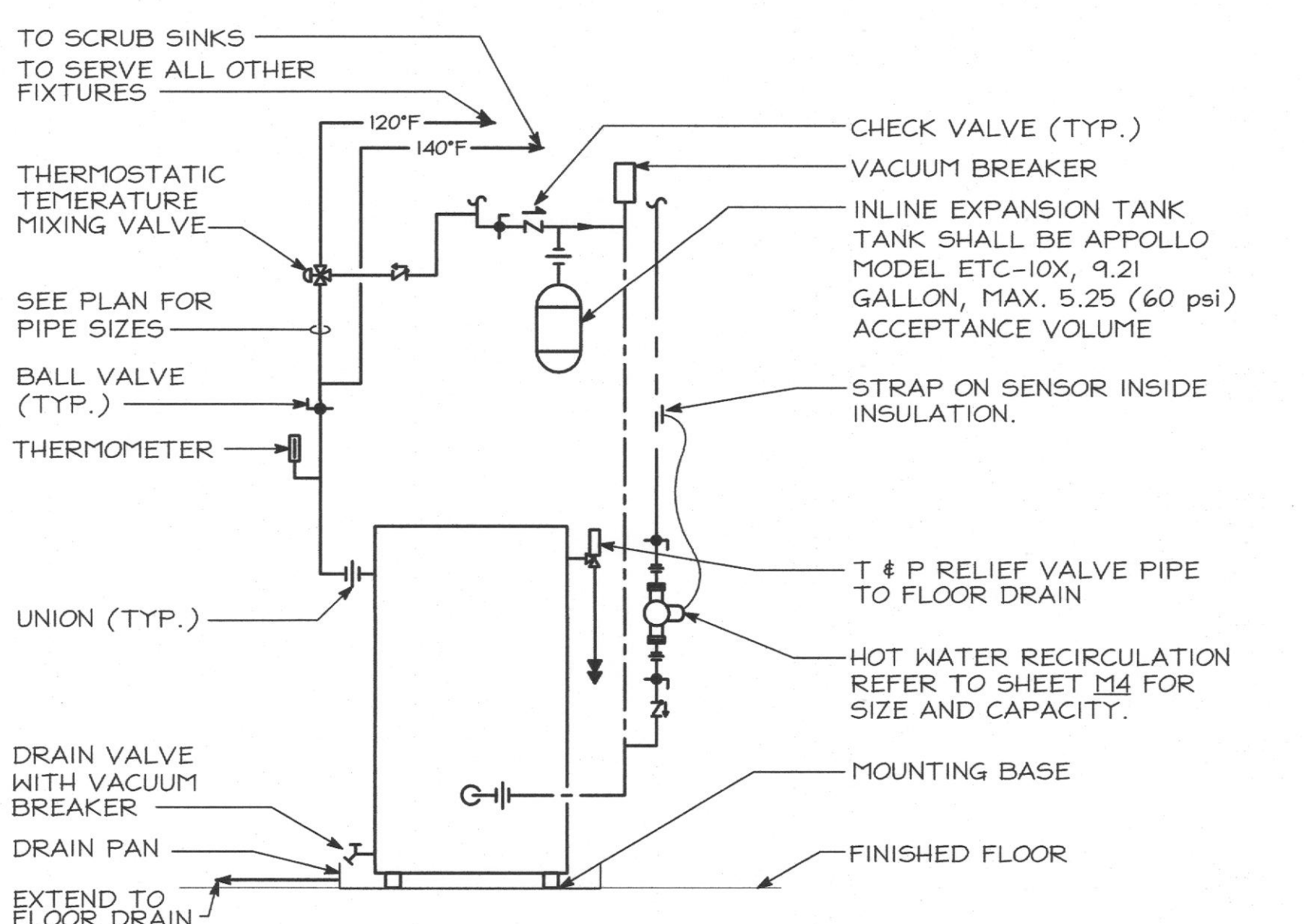


HORIZONTAL AIR HANDLING UNIT MOUNTING DETAIL
NO SCALE

NOTE:
1) FACTORY SUPPLIED OVERFLOW SAFETY FLOAT SWITCH AND FACTORY OPTION SPOT WATER DETECTOR BOTH ARE INTERLOCKED WITH A-TECH-20 FOR VISUAL ALARM.

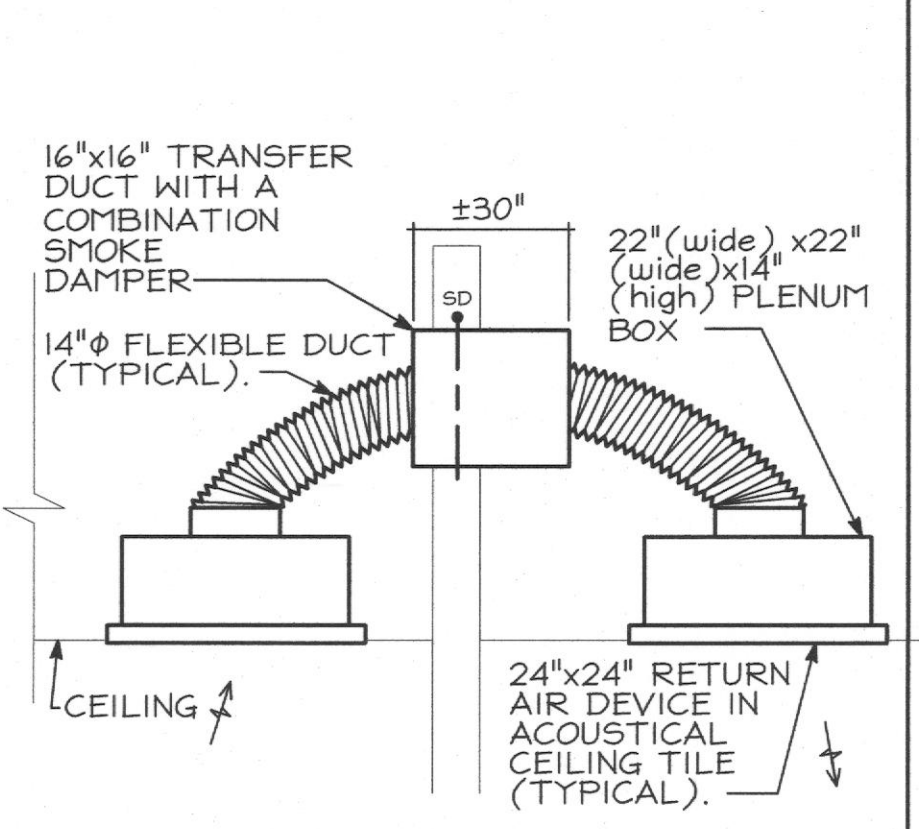


ROOF MOUNTED CONDENSER UNIT DETAIL
NO SCALE

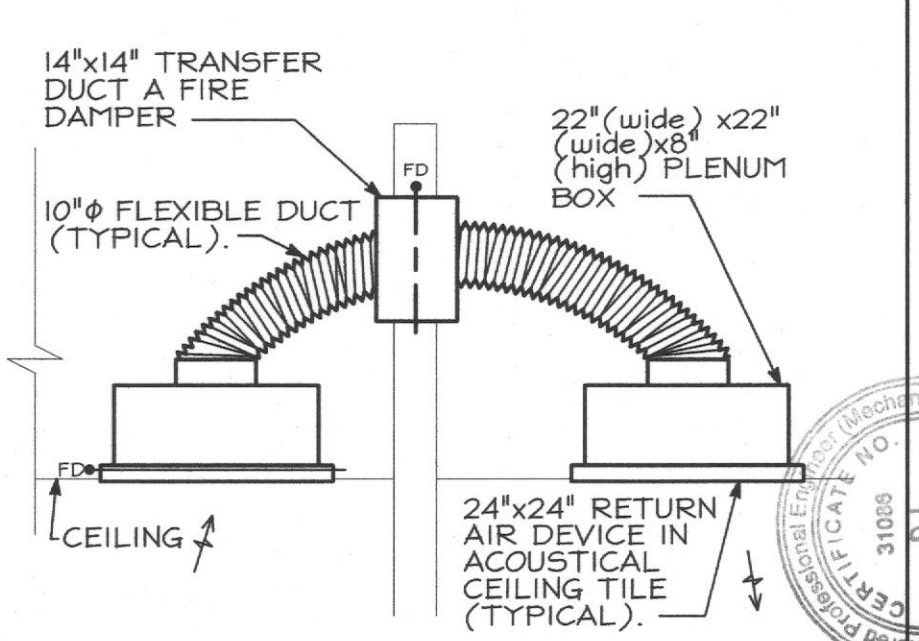


ELECTRIC WATER HEATER PIPING SCHEMATIC
NO SCALE

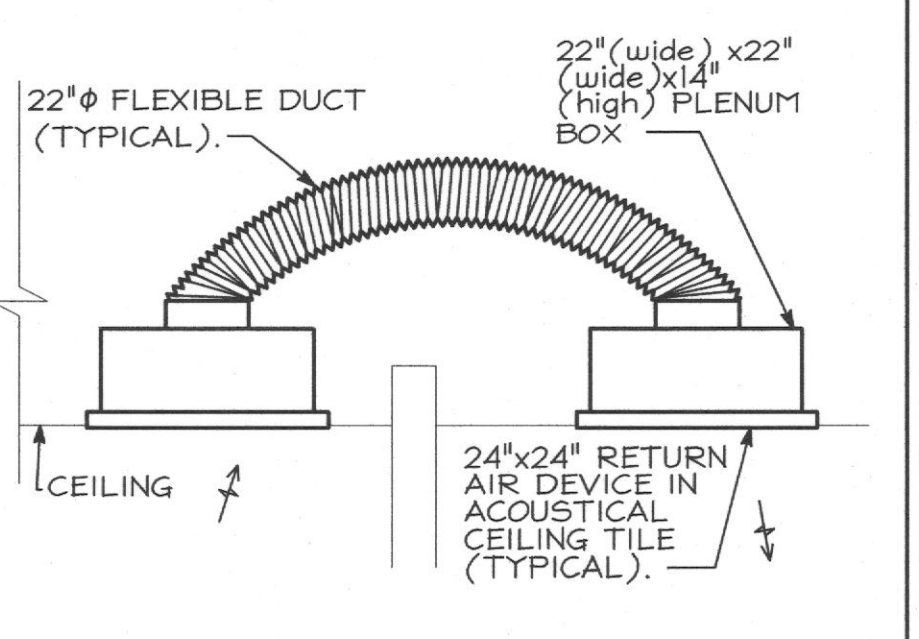
NOTES:
1) HOT WATER RECIRCULATION PUMP TO BE CONTROLLED BY AQUASTAT.
2) CONTRACTOR TO INSTALL AND SET THERMAL MIXING VALVE AT WATER HEATER PER COUNTY/CITY ANIT-SCALED REQUIREMENTS.
3) DRAIN PAN BELOW THE WATER IS TO BE INSTALLED IN ACCORDANCE WITH CODE.



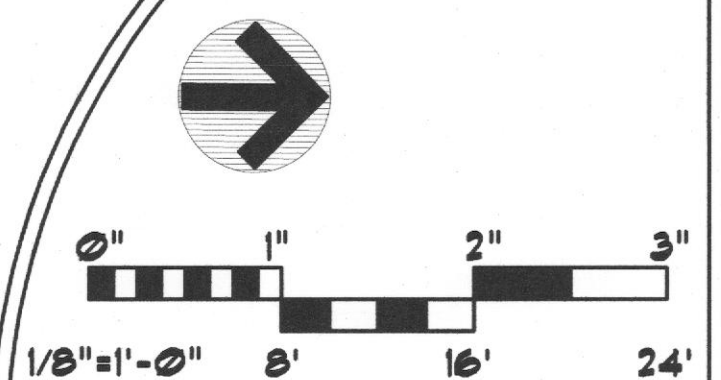
AIR TRANSFER ASSEMBLY WITH SMOKE DAMPER
NO SCALE



AIR TRANSFER ASSEMBLY WITH FIRE DAMPER
NO SCALE



AIR TRANSFER ASSEMBLY
NO SCALE



DETAILS

REV#	DATE	DESCRIPTION
#1	12/23/11	PERMIT COMMENTS
#2	01/26/12	PERMIT COMMENTS
#3	02/17/12	PERMIT COMMENTS
	1/17/17	ARIZONA STATE ASC PLAN REVIEW

ISSUED FOR ARIZONA STATE ASC PLAN REVIEW

dp DON PENN CONSULTING ENGINEERS
685 WESTPORT PARKWAY, SUITE 300
PHOENIX, AZ 85026
817-416-2666 FAX 817-261-9411

InSync ARCHITECTURAL DESIGNS, INC.
1219 Old Pylesville Road
Office: 410-452-8006

TENANT RENOVATIONS FOR:
LIFELINE
Access Center
1100 E. University Dr. Suite 102
Tempe, AZ 85281

DRAWING NO. **M7**
SHEET OF 9
DATE **01/23/11** DRAWN BY **DL1**
JOB NUMBER **10281** CHECKED BY **DL1**
SDI# 2011-01C

SEQUENCE OF OPERATION

NEW ROOFTOP UNIT

- DURING OCCUPIED PERIOD AS PROGRAMMED ON ASSOCIATED ROOFTOP THERMOSTAT, BLOWER FAN SHALL RUN CONTINUOUSLY AND OUTSIDE AIR DAMPERS OPEN TO MAXIMUM POSITION AS SCHEDULED. ONLY ROOFTOP UNIT #1 AND RTU-2 SHALL OPEN TO ITS SCHEDULED MINIMUM POSITION (REFER TO ITEM 6).
- ON A CALL FOR HEATING, COMPRESSOR SHALL BE ENERGIZED AND SHALL RUN UNTIL SETPOINT IS SATISFIED.
- DURING NIGHT SETBACK PERIOD AS PROGRAMMED ON ASSOCIATED ROOFTOP UNIT THERMOSTAT, BLOWER FAN SHALL BE OFF AND OUTSIDE AIR DAMPERS SHUT TO ITS SCHEDULED MINIMUM POSITION. ON A CALL FOR HEATING OR COOLING, THE OUTSIDE AIR DAMPERS SHALL REMAIN CLOSED AND THE FAN OR ASSOCIATED ELECTRIC HEATING COIL OR COMPRESSOR CYCLE UNTIL SPACE SETPOINTS ARE SATISFIED.

RTU-3 TO MAINTAIN THE FRESH AIR INTAKE DURING THE UNOCCUPIED MODE.

UNIT SHALL BE DE-ENERGIZED IF EXISTING SMOKE DETECTOR SENSES SMOKE OR ANY SAFETY/CONTROL EXCEEDS ITS LIMITS.

ENTHALPY ECONOMIZER CONTROL (RTU-1, RTU-2, & RTU-3):

WHEN THE OUTDOOR AIR TEMPERATURE IS BELOW 70°F, THE ENTHALPY OF THE OUTDOOR AIR IS LOWER THAN THE ENTHALPY OF THE RETURN AIR, THE SPACE TEMPERATURE IS ABOVE THE SETPOINT THE OUTDOOR AIR DAMPER SHALL MODULATE OPEN, THE RELIEF/POWER EXHAUST SHALL ENERGIZE PROPORTIONALLY TO THE BUILDING PRESSURE ALONG WITH AIR DAMPER SHALL MODULATE OPEN AND THE RETURN AIR DAMPER SHALL MODULATE CLOSED PROPORTIONALLY TO MAINTAIN THE DISCHARGE AIR SETPOINT OF 55°F (ADJUSTABLE). A DIFFERENTIAL PRESSURE SENSOR SHALL MONITOR BUILDING PRESSURE AND ENERGIZE THE POWER EXHAUST AS REQUIRED TO MAINTAIN PROPER BUILDING PRESSURE.

***ALL OCCUPIED AND UNOCCUPIED MODES ARE TO BE SET FOR THE SAME TIME FOR ALL THE ROOFTOP AND AIR HANDLING UNITS.

6 PROVIDE A NEW CARBON DIOXIDE SENSOR (CO₂) SHALL MODULATE OUTDOOR AIR FROM THE MINIMUM POSITION TO MAXIMUM POSITION WHEN ITS SETTING OF 700 PPM (ADJUSTABLE) IS EXCEEDED. UPON A DECREASE IN CO₂ LEVEL BELOW 500 PPM (ADJUSTABLE) THE REVERSE SHALL OCCUR. SENSOR SHALL BE A MOUNTED BELOW CEILING. (AS SENSED BY AN OUTSIDE TEMPERATURE SENSOR, WHEN THE OUTSIDE AMBIENT TEMPERATURE EXCEEDS 95°F DEGREES THE FRESH AIR INTAKE DAMPERS SHALL MODULATE BACK TO A MAXIMUM AIRFLOW SETTING AS FOLLOWS: RTU-1 = 630 CFM AND RTU-2 = 600 CFM).

SPLIT SYSTEM UNIT (AHU-1/ACU-1, AHU-2/ACU-2 & AHU-3/ACU-3)

1 DURING OCCUPIED PERIOD AS PROGRAMMED ON ASSOCIATED AIR HANDLING UNIT THERMOSTAT, BLOWER FAN SHALL RUN CONTINUOUSLY.

THE OUTSIDE AIR MOTOR OPERATED DAMPER FOR THE AIR HANDLING UNIT SHALL MODULATE OPEN TO THE MAXIMUM SCHEDULED POSITION DURING THE OCCUPIED MODE. DURING THE UNOCCUPIED MODE THE OUTSIDE AIR DAMPER SHALL MODULATE TO THE MINIMUM POSITION DURING FAN OPERATION AND CLOSE WHEN FAN DE-ENERGIZES.

2 ON A CALL FOR HEATING, IF ALL SAFETIES ARE SENSED, THEN ELECTRIC HEATING SHALL BE ENERGIZED, HEATER SHALL RUN UNTIL SETPOINT IS SATISFIED.

3 ON A CALL FOR COOLING, THE UNIT MOUNTED CONTROLS SHALL ENERGIZE OUTDOOR COMPRESSOR (MECHANICAL COOLING) SHALL BE ENERGIZED. THE UNIT COOLING CYCLE SHALL RUN UNTIL SETPOINT IS SATISFIED.

4 DURING NIGHT SETBACK PERIOD AS PROGRAMMED ON ASSOCIATED AIR HANDLING UNIT THERMOSTAT, BLOWER FAN SHALL BE OFF AND OUTSIDE AIR DAMPERS REMAIN AT THEIR MINIMUM POSITION. ON A CALL FOR HEATING OR COOLING, THE BLOWER FAN ALONG WITH ASSOCIATED ELECTRIC HEATER AND/OR COMPRESSOR SHALL CYCLE UNTIL SPACE SETPOINTS ARE SATISFIED.

5 UNIT SHALL BE DE-ENERGIZED IF LIQUID IS SENSED IN THE DRAIN PAN.

6 UNIT SHALL BE DE-ENERGIZED IF SMOKE DETECTOR SENSES SMOKE OR ANY SAFETY/CONTROL EXCEEDS ITS LIMITS.

EXHAUST/VENTILATION FANS

- EXHAUST FAN E-1 SHALL OPERATE 24 HOURS/7 DAYS A WEEK.
- EXHAUST FAN E-2 SHALL OPERATE PER NEW ROOFTOP UNIT #2 OCCUPIED/UNOCCUPIED MODE.
- COMP/TELE ROOM EXHAUST FAN E-3 SHALL BE INTERLOCKED WITH WALL MOUNTED REVERSE ACTING THERMOSTAT. UPON A RISE IN SPACE TEMPERATURE ABOVE (78°F ADJUSTABLE) FAN SHALL BE ENERGIZED. MAKE-UP AIR SHALL BE TRANSFERRED FROM ADJACENT STORAGE SPACE. FAN SHALL RUN UNTIL SETPOINT IS SATISFIED. UPON SATISFYING THERMOSTAT SETPOINT FAN SHALL BE DE-ENERGIZED.

ELECTRIC DUCT HEATER

1 ELECTRIC DUCT HEATER SHALL BE INTERLOCKED WITH HEATING ONLY REMOTE THERMOSTAT AND DUCT MOUNTED SENSOR (SETPOINT 71°F). UPON AIRFLOW AIR PROVING SWITCH, BEING SATISFIED, SHALL ALLOW ELECTRIC HEATER TO BE ENERGIZED UPON A CALL FOR HEAT. UPON REACHING SETPOINT HEATER SHALL BE DE-ENERGIZED.

ELECTRIC MISC. HEATER

- FAN FORCED ELECTRIC WALL HEATERS SHALL BE CONTROLLED VIA UNIT/FACTORY MOUNTED INTEGRAL THERMOSTAT. HEATER SHALL BE ENERGIZED UPON A CALL FOR HEAT. UPON REACHING SET POINT HEATER SHALL BE DE-ENERGIZED (SETPOINT 71°F).
- FAN FORCED ELECTRIC HORIZONTAL HEATERS SHALL BE CONTROLLED VIA UNIT/FACTORY MOUNTED INTEGRAL THERMOSTAT. HEATER SHALL BE ENERGIZED UPON A CALL FOR HEAT. UPON REACHING SET POINT HEATER SHALL BE DE-ENERGIZED (SETPOINT 50°F).

PACKAGED HEAT PUMP ROOFTOP UNIT SCHEDULE

ITEM#	AREA SERVED	NOMINAL TONS	FAN DATA					COOLING DATA			HEATING DATA			HEAT PUMP HEATING DATA						ELECTRICAL DATA	WEIGHT (LBS.)	MODEL #	MANUFACTURER	REMARKS
			C.F.M.	E.S.P.	B.H.P.	R.P.M.	C.F.M. O.A.	TOTAL BTU/HR	SENSIBLE BTU/HR	EER	TYPE	BTU/HR.	K.W.	HI-TEMP. HEAT 47 O.A.T.	LOW-TEMP. HEAT 17 O.A.T.	HI-TEMP. HEAT 47 O.A.T.		LOW-TEMP. HEAT 17 O.A.T.						
														BTU/HR.	K.W.	C.O.P.	BTU/HR.	K.W.	C.O.P.					
RTU-1	WAITING AREA, CONFERENCE ROOM, RESEARCH, ETC.	8½	3,285	.70"	2.9	710	320 min / 1056 max	87,600	86,500	11.20	ELECTRIC	47,440	13.9	96,000	-	3.30	54,000	-	2.25	480v/3Ø/60HZ	1,250	50TGD09	CARRIER	NEW
RTU-2	RECEPTION, EXAM/TREATMENT, LOUNGE, ETC.	7½	2,785	.70"	2.9	652	360 min / 900 max	78,400	75,000	11.20	ELECTRIC	47,440	13.9	86,000	-	3.30	48,000	-	2.25	480v/3Ø/60HZ	1,220	50TGD08	CARRIER	NEW
RTU-3	PATIENT RECOVERY, PREP HOLDING, NURSE WORK, ETC.	5	1,945	.70"	2.0	1,110	500	52,200	45,700	11.15	ELECTRIC	39,250	11.5	58,000	-	-	31,200	-	-	480v/3Ø/60HZ	840	50TCA06	CARRIER	NEW

NOTES:

- ALL NEW ROOFTOP UNITS TO BE PROVIDED WITH FULL MODULATING OUTSIDE AIR DAMPER, FACTORY SUPPLIED ENTHALPY ECONOMIZER WITH POWER EXHAUST AND BELT DRIVEN MOTOR.
- ALL PACKAGED ROOFTOP UNITS TO BE PROVIDED WITH 24 HOURS/7DAY PROGRAMMIABLE THERMOSTATS.
- PRIOR TO INSTALL OF THESE THE NEW ROOFTOP UNITS THE CONTRACTOR MUST HAVE THEM REVIEWED BY A STRUCTURAL TO BE INSTALLED ON THE EXISTING ROOF.
- COOLING TEMPERATURE SETPOINT TO BE 75°F AND HEATING SETPOINT TO BE 70°F.
- ALL ROOFTOP UNIT CAPACITIES ARE BASED ON 115° F AMBIENT TEMPERATURE WITH 85°F EDB/67°F EWB.
- ROOFTOP UNIT RTU-1 & RTU-2 TO HAVE FACTORY SUPPLIED CO₂ SENSOR CONTROL, ALONG WITH 3-POSITION DAMPER.
- EACH PACKAGED ROOFTOP UNIT TO BE PROVIDED WITH A CUSTOM 10" HIGH ROOF CURB AND/OR THE MINIMUM HEIGHT REQUIREMENT PER THE ROOFTOP UNIT SIZE AS MANUFACTURED BY MICRO-METL OR CAMBRIDGEPORT.

AIR COOLED ENVIRONMENTAL CONTROL UNIT SCHEDULE

ITEM#	AREA SERVED	COOLING CAPACITY @ 66 DB, 54 WB, 50GRH		EVAPORATOR COIL DATA		FAN SECTION				COMPRESSOR		RE-HEAT SECTION			INFRARED HUMIDIFIER		DISPOSABLE FILTER		INDOOR UNIT (AHU-1, AHU-2 & AHU-3)			OUTDOOR UNIT (ACU-1, ACU-2 & ACU-3)			ELEC. DATA					
		TOTAL BTU/HR	SENSIBLE BTU/HR	FACE AREA	ROWS	F.P.M.	NO.	C.F.M.	O.A.	E.S.P.	H.P.	NO. FANS	NO.	RE-FRIG.	WATTS INPUT	BTU/HR	K.W.	STAGES	CAP. LBS./HR	K.W.	SIZE	DEPTH	MODEL NO.	CONDEN.		WEIGHT	MODEL NO.	NO. FAN	HP	WEIGHT (LBS.)
AHU-1/ACU-1	PROCEDURE ROOM ONE	44,000	39,450	4.1	3	450	1	1,850	100/120/188	1.8"	2	1	2	R-407c	2,054	38,295	11.2	2	10.0	3.4	(2) 16"x20"	1"	OHS-048-DAR	¾"	440	SCS-144-DSA	2	½	275	480v/3Ø
AHU-2/ACU-2	PROCEDURE ROOM TWO	44,000	39,450	4.1	3	450	1	1,850	100/120/188	1.8"	2	1	2	R-407c	2,054	38,295	11.2	2	10.0	3.4	(2) 16"x20"	1"	OHS-048-DAR	¾"	440	SCS-144-DSA	2	½	275	480v/3Ø
AHU-3/ACU-3	PROCEDURE ROOM THREE	44,000	39,450	4.1	3	450	1	1,850	100/120/188	1.8"	2	1	2	R-407c	2,054	38,295	11.2	2	10.0	3.4	(2) 16"x20"	1"	OHS-048-DAR	¾"	440	SCS-144-DSA	2	½	275	480v/3Ø

NOTES:

- AIR HANDLING UNIT WILL BE FURNISHED WITH THE FOLLOWING OPTIONS "HEATING/RE-HEATING CONTROL, ELECTRODE CANISTER STEAM HUMIDIFIER W/ STANDARD CONTROL, DEHUMIDIFICATION MODE WITH REHEAT, LOW AMBIENT DOWN TO -0°F", BELT DRIVEN MOTOR, 1" HIGH EFFICIENCY FILTER, REMOTE CONTROL PANEL (THERMOSTAT), SMOKE DETECTOR AND UNIT MOUNTED/FACTORY INSTALLED RETURN AIR SENSOR TO BE LOCATED IN THE RETURN AIR STREAM.
- AIR HANDLING UNIT SHALL BE PROVIDED WITH CONDENSATE PUMP WITH INTEGRAL OVERFLOW SWITCH. CONDENSATE PIPE CONNECTION WILL BE SIDE DISCHARGE ONLY.
- FULL FLOATING HOT GAS BYPASS IS UTILIZED WITH THE SYSTEM TO ACHIEVE A 66°F DB TEMPERATURE SETPOINT.
- CONTRACTOR'S PRICE WILL INCLUDE COMMISSIONING (CHECK/TEST) OF AIR HANDLING UNIT BY ATS MANUFACTURER REPRESENTATIVE.
- THE TOTAL/SENSIBLE COOLING CAPACITY FOR THE ATC UNITS SCHEDULED ACTUALLY REPRESENTS A SLIGHTLY LESS COOLING CAPACITIES OUTPUT OF THESE UNITS. THE COOLING CAPACITIES WERE REDUCED TO ACHIEVE A 66°F ROOM TEMPERATURE AND INCREASED MOTOR HP HEAT REJECTION.
- CONTRACTOR WILL ONLY PURCHASE/OBTAIN THE ATS EQUIPMENT FROM THE FOLLOWING: ENVIRONMENTAL PRODUCTS, INC. CONTACT: DAVID ALI 57 TIMONIUM ROAD, SUITE 303 Phone (410) 560-7950 TIMONIUM, MARYLAND 21093 Fax (410) 560-7953
- A BIDDING MECHANICAL CONTRACTOR MUST BE A QUALIFIED CONTRACTOR TO INSTALL STULZ PROCEDURE ROOM UNITS. THE MECHANICAL CONTRACTOR MUST BE ABLE TO PROVIDE EVIDENCE OF TYPICAL MEDICAL EQUIPMENT INSTALLS.
- PRIOR TO INSTALL OF BOTH THE STRUCTURAL HUNG AIR HANDLING UNITS AND TO ROOF MOUNTED AIR CONDENSER UNITS THE CONTRACTOR MUST HAVE THEM REVIEWED BY A STRUCTURAL TO BE INSTALLED ON THE EXISTING ROOF/FROM THE STRUCTURE.
- ALL AIR HANDLING UNIT CAPACITIES ARE BASED ON 115° F AMBIENT TEMPERATURE.

ELECTRIC WATER HEATER SCHEDULE

ITEM #	AREA SERVED	KW ELEMENT	SIZE HEIGHT x DIAMETER (IN. X IN.)	RECOVERY RATE (GPH)	TANK CAPACITY (GALLONS)	PIPE CONNECTIONS		ELEC. DATA	MANUFACTURER/ MODEL #
						INLET (IN.)	OUTLET (IN.)		
WH-1	TOILET RMS, LOUNGE, ETC.	9.0	55½" x 2¼"	37	52	¾"	¾"	480v/3Ø	STATE/CSB 52 9 IFE

NOTE:

1) PROVIDE 100°F TEMPERATURE WATER RISE FOR 40°F ENTERING WATER TEMPERATURE.

FAN SCHEDULE

ITEM #	AREA SERVED	C.F.M.	E.S.P.	HP/WATTS	R.P.M.	CONTROL	ELEC. DATA	SONES	MODEL #	MFGR.
F-1	TRASH ROOMS AND SOILED LINEN AREA	340	.40"	.167 HP	1,237	24 HOURS/7 DAYS A WEEK	120v/1Ø	6.2	80 ACEB	COOK
F-2	TOILET ROOMS, JANITORS, ETC.	1,575	.50"	.25 HP	1,005	INTERLOCK BY ROOFTOP UNIT #2 REVERSE ACTING THERMOSTAT	120v/1Ø	8.3	150 ACEB	COOK
F-3	TELE./COMP.	250	.375"	.226 W	677		120v/1Ø	2.7	GC-640	COOK

NOTES:

- MANUFACTURER FAN SELECTIONS SHALL INCLUDE EXTERNAL PRESSURE DROP AND FAN DRIVE LOSS.
- VENTILATION FAN E-3 TO BE PROVIDED WITH FACTORY OPTION ADJUSTABLE SPEED CONTROLLER TO BE MOUNTED ON SIDE OF FAN HOUSING. SPEED CONTROLLER FOR FINAL AIR BALANCING.

PLUMBING FIXTURE SCHEDULE

ITEM #	DESCRIPTION	PIPE SIZES				TRAP TYPE	REMARKS
		C.W.	H.W.	SAN.	VENT		
P-1	WATER CLOSET	½"	-	4"	2"	INTEGRAL	HANDICAPPED
P-1A	BEDPAN CLEANER	½"	-	-	-	-	-
P-1B	CLINIC SERVICE SINK	1"	-	4"	2"	"P"	-
P-1C	WATER CLOSET	½"	-	4"	2"	INTEGRAL	HANDICAPPED
P-2	WALL HUNG SINK	½"	½"	2"	2"	"P"	HANDICAPPED
P-2A	NURSE/CLEAN WORK SINK	½"	½"	2"	2"	"P"	ONLY THE NURSE WORK SINK TO BE PROVIDED WITH EYE WASH
P-2B	LOUNGE SINK	½"	½"	2"	2"	"P"	HANDICAPPED
P-2C	SCRUB SINK	½"	½"	2"	2"	"P"	-
P-2D	SOILED WORK AREA	½"	½"	2"	2"	"P"	12" DEEP BOWL
P-2E	EXAM/TREATMENT SINK	½"	½"	2"	2"	"P"	-
P-2F	PATIENT RECOVERY HAND SINK	½"	½"	2"	2"	"P"	HANDICAPPED
P-2G	PUBLIC TOILET	½"	½"	2"	2"	"P"	HANDICAPPED
P-3	JANITOR'S SINK	¾"	¾"	3"	2"	"P"	-
P-4	REFRIG. ICE MAKER	½"	-	-	-	-	-
P-5	TEAM MATE TOILET SHOWER	½"	½"	2" SD	2"	"P"	ADA compliant. Crane model 3638 DIF R. Refer to sheet PD for more information.
P-6	DRINKING FOUNTAIN "BI-LEVEL"	½"	-	2"	2"	"P"	FOUNDED ON WALL AS REQ'D BY ADA

NOTES:

- ALL EQUIPMENT SHALL BE AS SCHEDULED OR EQUAL.
- PLUMBING CONTRACTOR MUST INSTALL P-5 SHOWER CURB NO MORE THAN ½" MAXIMUM IN HEIGHT ABOVE FLUSH FLOOR ELEVATION.

ELECTRIC STEAM HUMIDIFIER SCHEDULE

ITEM#	AREA SERVED	STEAM (LB./HR)	K.W.	PIPE CONNECTIONS			ELECTRICAL DATA	WEIGHT (LBS.)	MODEL #	MANUFACTURER
				C.W.	DRIP PAN DRAIN	OVERFLOW DRAIN				
H-1	RTU-1	10	3.3	½"	1"	1"	480v/3Ø	90	MDM1-480-3-10	HERRMIDIFIER
H-2	RTU-2	25	8.3	½"	1"	1"	480v/3Ø	90	MDM1-480-3-25	HERRMIDIFIER
H-3	RTU-3	15	5.0	½"	1"	1"	480v/3Ø	90	MDM1-480-3-15	HERRMIDIFIER

NOTE:

1) CONTRACTOR WILL ONLY PURCHASE/OBTAIN THE ATS EQUIPMENT FROM THE FOLLOWING:

ENVIRONMENTAL PRODUCTS, INC. CONTACT: DAVID ALI 57 TIMONIUM ROAD, SUITE 303 Phone (410) 560-7950 TIMONIUM, MARYLAND 21093 Fax (410) 560-7953

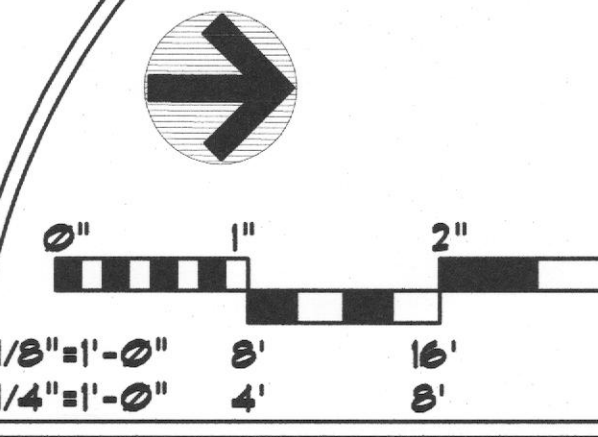
2) PRIOR TO THE INSTALLATION OF THE HUMIDIFIER SYSTEM, A WATER TEST MUST BE CONDUCTED AND THE RESULTS SENT TO DAVE ALI, ABOVE, FOR MANUFACTURER ANALYSIS.

MISCELLANEOUS HEATING SCHEDULE

ITEM#	AREA SERVED	HEATER TYPE	C.F.M.	K.W.	BTU/HR	ELEC. DATA	STEPS OF CONTROL	CONTROL	MANUFACTURER/ MODEL #
EWH-1	BACK ENTRANCE AND VESTIBULE	ELECTRIC WALL HEATER	100	1.5	5,119	120v/1	1	INTEGRAL THERMOSTAT	BERKO/SRAIS12DS
HUH-1	ABOVE THE CEILING	ELECTRIC UNIT HEATER	270	3.0	10,239	480/3	1	INTEGRAL THERMOSTAT	BERKO/HUHA4-524
EDH-1	CONFERENCE ROOM	ELECTRIC DUCT HEATER	290	2.5	8,532	480/3	1	WALL MTD. THERMOSTAT	INDEECO/SLIP-IN
EDH-2	PREP HOLDING	ELECTRIC DUCT HEATER	185	1.5	5,120	480/3	1	WALL MTD. THERMOSTAT	INDEECO/SLIP-IN
EDH-3	RECOVERY	ELECTRIC DUCT HEATER	210	2.0	6,826	480/3	1	WALL MTD. THERMOSTAT	INDEECO/SLIP-IN

NOTES:

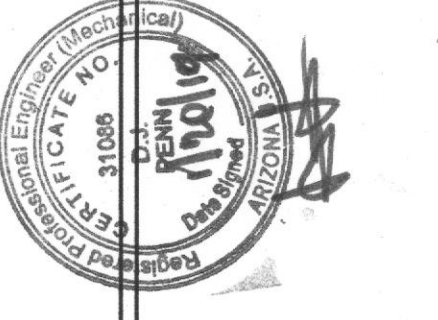
- ALL EQUIPMENT SHALL BE AS SCHEDULED OR EQUAL.
- ELECTRIC WALL HEATERS TO BE PROVIDED AND INSTALLED WITH FACTORY OPTION 2" RECESSED UNIT.
- ELECTRIC DUCT HEATER TO BE QUA SLIP-IN HEATER (OPEN COIL) WITH CONTROL SCR CONTROLLER (OPTION K) AND AIR PROVING SWITCH.
- ELECTRIC DUCT HEATERS HEATING ONLY THERMOSTATS (PULSE-TYPE) BY INDEECO.
- HORIZONTAL ELECTRIC UNIT HEATERS TO BE PROVIDED WITH INTEGRAL THERMOSTAT AND MOUNTING HORIZONTAL BRACKETS.



SCHEDULES

REV#	DATE	DESCRIPTION
#1	12/23/11	PERMIT COMMENTS
#2	01/26/12	PERMIT COMMENTS
#3	02/17/12	PERMIT COMMENTS
	1/17/17	ARIZONA STATE ASC PLAN REVIEW

ISSUED FOR ARIZONA STATE ASC PLAN REVIEW



DON PENN CONSULTING ENGINEERS
685 WESTPORT PARKWAY, SUITE 300
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817-410-2888

InSync ARCHITECTURAL DESIGNS, INC.
1213 Old Pyleville Road
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TENANT RENOVATIONS FOR:
LIFELINE Access Center
1100 E. University Dr. Suite 102
Tempe, AZ 85281

DRAWING NO. M8
SHEET 9 OF 9
DATE 9/23/11
JOB NUMBER 10281
DRAWN BY DLI
CHECKED BY DLI
SD# 2011-01C

MECHANICAL OUTLINE SPECIFICATION

1. Section 15010 - Basic Mechanical Requirements

A. The work of each of the mechanical sections includes furnishing and installing the material, equipment, and systems complete as specified and/or indicated on the drawings. The mechanical installations, when finished, shall be complete and coordinated, ready for satisfactory service of the build out.

B. All work under this contract shall be done in strict accordance with all applicable municipal, state, NFPA, BOCA, International codes and County/City Public Work, that govern each particular trade.

C. The contractor shall make applications and pay all charges for all necessary permits, licenses and inspections as required under the above codes. Upon completion of the work, the customary certifications of approval shall be furnished.

D. No materials or equipment shall be used in the work until approved. Before submission of the shop drawings, and not more than fifteen (15) days after award of the contract, the contractor shall submit for approval a complete list of materials and equipment which he intends to furnish, giving manufacturer and catalog numbers.

E. The contractor shall examine all drawings and specifications and shall comply with this requirement will not relieve the contractor of responsibility for complying with the intent of the contract documents.

F. The drawings indicate the general arrangement of the mechanical installations. Details of proposed departures due to actual field conditions or other causes shall be submitted for approval prior to installation. Reworking of completed items due to improper field coordination shall be at the contractor's expense.

G. Provide sufficient access and clearance for all items of equipment requiring servicing and maintenance, such as valves, drains, vents, etc.

H. The contractor shall prepare three (3) copies of a record and information booklet. The entire new drainage and venting system shall have all necessary openings plugged and filled with water to the level of ten (10) feet above the main or branch being tested. The system shall hold this water for thirty (30) minutes without showing a drop greater than four (4) inches.

- Catalog data on each piece of equipment furnished.
- Approved shop drawings on each piece of equipment furnished.
- Maintenance, operation and lubrication instruction on each piece of equipment furnished.
- Simplified temperature control diagram.
- Manufacturer's and contractor's guarantees.
- Air balancing reports.
- Commissioning reports.
- Schedule/Sequence of all service work/maintenance inspections required by paragraphs P, Q and R of this section.

I. The entire new plumbing system shall be tested hydrostatically before insulation covering is applied and proved tight under the following gauge pressures:

- Sanitary and vent piping As specified below
Domestic water 100 psig
Rigid pipe, liquid and suction piping 225 psig/400 psig
Fire protection Per NFPA

J. All sanitary and vent piping shall be tested by the contractor. The entire new drainage and venting system shall have all necessary openings plugged and filled with water to the level of ten (10) feet above the main or branch being tested. The system shall hold this water for thirty (30) minutes without showing a drop greater than four (4) inches.

Note: If any code or public utility requires testing which is different than the test listed above, the more stringent test shall be performed.

K. All parts of the heating, ventilating, air conditioning and exhaust systems shall be adjusted, checked, balanced and tested by an A.B.C. certified testing & balancing contractor. The contractor shall put all systems and equipment into full operation, and shall test and balance all devices to within ten (10) percent of capacities indicated on the drawings. Submit copies of the balancing reports as required by the contract. Permanently mark the position of each balancing damper and valve.

L. Upon completion of the mechanical installations, the contractor shall provide a complete set of prints of the mechanical contract drawings which shall be legibly marked in red pencil to show all changes and departures of the installation as compared with the original design. They shall be suitable for use in preparation of record drawings.

M. All piping systems shall be identified with labels. Materials shall be as manufactured by seton name plate corporation.

N. All mechanical installations, including all materials and labor shall be guaranteed for a period of one (1) year from date of owner acceptance. The above shall not in any way void or abrogate equipment manufacturer's guarantee or warranty. Certificates of guarantee shall be delivered to the owner.

O. After roughing in the entire water main with future stubs the entire potable water systems shall be disinfected prior to use. The method to be followed shall be that prescribed by the local health authority/code requirements.

P. Contractor shall also provide one (1) year free service to keep the equipment in operating condition. This service shall be provided per the following schedule and rendered upon request when notified of any equipment malfunction.

Q. In addition to the first year warranty period, the contractor shall provide, at no additional cost to the owner, a minimum of four (4) service calls and maintenance inspections. A complete outline of the required maintenance and the proposed schedule shall be included in the "record and information booklet" detailed in section 15010-basic mechanical requirements, paragraph I, for review and acceptance by the owner/representative and engineer. The inspections are to be performed at three (3) month intervals for a total of four (4) service calls and inspections during the first year warranty period (three (3) times during the year plus the original system start-up commissioning).

- The service work and inspections shall include, but not be limited to the following:
- Replace all disposable air filters;
 - Lubricate all motor and fan bearings as required;
 - Clean condensate drain lines;
 - Check and tighten all electrical connections;
 - Inspect all belts for adjustment and condition and replace as required;
 - Inspect and clean all water strainers;
 - Check operating pressures and refrigerant charge;
 - Inspect all controls for correct operation and calibrate as required;
 - Perform all maintenance as outlined in the equipment manufacturers operation and maintenance manuals.

Upon completion of each scheduled inspection, the contractor shall deliver to the building owner's representative within forty-eight (48) hours of completion, two (2) copies of the completed inspection report for record purposes.

R. The mechanical or service contractor shall, at the ninth month, advise the owner of the termination date of the above service. This contractor shall also provide the owner with a detailed proposal, reflecting annual escalation, for the continuation of the service and inspections described above.

2. Section 15050 - Basic Mechanical Piping Material & Methods

A. Provide all labor and materials necessary to furnish and install all piping systems on this project, including sanitary, sanitary vent, domestic water, condensate drain and refrigerant piping systems.

B. Piping and valves shall be as follows:

1) Sanitary drains below grade.

- Pipe Standard weight cast iron uncoated bell and spigot soil pipe.
Fittings Standard weight cast iron bell and spigot uncoated soil pipe fittings.
Joints Neoprene push-on lock fittings.

2) Sanitary wastes and vent piping above floor inside building.

- Pipe Cast iron no-hub soil pipe
Fittings Cast iron no-hub soil pipe fittings
Joints No-hub stainless steel gasketed fittings

3) Domestic hot and cold water piping.

- Pipe All water lines above grade - hard copper type L. All domestic lines below grade - hard copper type K.
Fittings Solder type wrought copper - lead free solder.

- Ball valves Two piece body, 150 lb. chrome plated full port bronze body and stem, reinforced the seat rings, Nibco S-585-70.
Unions 125 lb. Wrought copper, ground joint solder ends.

4) Pumped condensate drains (inside the bldg).

- Pipe Type DWV seamless copper tubing
Fittings Wrought copper solder drainage fittings

5) Refrigerant piping.

- Pipe Type "L" hard copper refrigerant tube, dehydrated and sealed.
Fittings Wrought copper solder type with silfos.

6) Fire protection: Piping and fittings as required by NFPA regulations and as hereinafter specified.

C. Copper pipe shall be reverse, anaconda, or chase types "I" hard drawn, with approved solder fittings.

D. Cast iron piping shall be service weight drainage piping and shall conform to the requirements of the C.I.S.P.I. Each length of pipe and each fitting shall be clearly marked with the manufacturer's initials and pipe classifications.

E. Steel piping shall be similar and equal to national tube company, republic, or Bethlehem black or zinc-coated (galvanized) steel as hereinafter specified. Pipe shall be free from all defects which may affect the durability of the intended use. Each length of pipe shall be stamped with the manufacturer's name.

F. All hangers for copper piping shall be copper clad, split ring swivel type, having rods with machine threads and threaded copper clad ceiling flange. Cast iron and steel piping supports shall be similar without copper clad and prime paint finish.

G. Provide dielectric couplings where non-ferrous metal piping is joined to ferrous metal piping. The gasket material shall be capable of withstanding the temperatures and pressures within the piping system in which installed. Submit dielectric coupling and gasket material for approval.

3. Section 15250 - Mechanical Insulation

A. All supply, return and outside air ductwork throughout and all domestic water piping systems and horizontal condensate piping (in our space) shall be insulated with plenum rated fiberglass insulation. Insulate all refrigerant piping with 1" Armaflex throughout. Contractor to field verify existing storm water piping within our space and repair any insulation as needed.

**Prior to purchase of Armaflex insulation the contractor must contact the manufacturer and verify that pipe insulation is suited for 115F ambient temperatures. If not then provide the corrected thickness per the manf.

B. Pipe insulation shall be 1-1/2" pre-molded fiberglass insulation with an all service jacket, Owens Corning fiberglass SSL-II. Fittings shall be insulated and covered with pvc covers.

C. Ductwork shall be insulated with 3" flexible duct wrap or if determined to be less by the contractor than provide data to support using less duct wrap during the submittal phase. Owens Corning fiberglass type 75 with foil faced vapor barrier. Insulation shall be neatly installed. Any insulation damaged during construction shall be properly fixed.

**Install all insulation per manufacturer's recommendations

4. Section 15300 - Fire Protection

A. All work, materials, equipment, and accessories shall comply with the standards of the National Fire Protection Association and all state and local regulations.

B. The sprinkler contractor shall extend the wet pipe sprinkler system to properly cover/protect the new tenant layout. Final density flow per square foot shall be determined by fire marshal.

C. The installation shall include, but are not limited to valves, flow switches, sprinkler heads and escutcheons, piping, fittings, hangers and signs and other identification markings, as required.

D. The sprinkler contractor shall carefully examine all documents during the bidding period. He should familiarize himself with project conditions such as building construction and pipe and ductwork locations and elevations.

E. Sprinkler heads shall be installed to properly cover and protect the new tenant layout. Sprinkler heads shall be installed to protect the entire structure. Any sprinkler heads installed in finished ceilings shall be concealed type to match existing building type.

F. The contractor shall arrange for approval of the sprinkler systems, and conduct tests in accordance with NFPA 13.

G. The sprinkler contractor shall provide a detailed shop drawing showing piping layout, head locations, elevations and coordination with all building structure, electrical and plumbing trades. The contractor shall submit detailed sprinkler shop drawings with actual heads for architect approval prior to any fabrication.

H. The sprinkler contractor must submit one set of sprinkler shop drawings and hydraulic calculations to county fire department/ Fire Marshal prior to any fabrication or construction.

5. Section 15400 - Plumbing

A. The work covered by this section of the specifications consists of furnishing all labor, equipment and materials in connection with the rough-in, final setting and connections to all plumbing fixtures. The contractor shall carefully review the conditions at the site and all of the contract drawings to determine the extent of the plumbing work required.

B. All plumbing fixtures shall be complete in every detail with all trimmings and connections. All fixtures shall be designed to prevent the backflow of polluted water or waste into the water supply system. Fixtures P-1, P-1A AND P-2 shall be American Standard or approved equal as follows:

P-1 Water closet (handicapped): #2377-100 Cadet, 16-1/2" high elongated toilet, water saver 1.6 gallon flush with vitreous china construction, pressure-assisted siphon jet flush action, escutcheon tank, bolt caps, Church open front white seat with cover, rigid supply with angle stop valve. Provide a toilet with alternate configuration #3109.203 to accommodate P-1A in Patient Toilet room.

P-1A Bedpan Cleaning Assembly: #7880.091 assembly which includes vacuum breaker, nozzle with hook and loose key supply.

P-1B Clinic Service Sink: American Standard model 9504 010, 18" high, 4.5 gallon flush with vitreous china construction, siphon jet action integral flushing rim, provide a Sloan Royal, model 117-0 flush valve with a 2" offset flush connection. Also install a service faucet as manufactured by Fiat #B30-AA with top brace, stops, 10-1/2" spout, 3/4" hose thread on spout, integral vacuum breaker, adjustable union couplings, stop shanks and 30" flexible hose. Mount service faucet directly behind the service sink on the same wall as the flush valve. Coordinate exact mounting location with the general contractor.

P-1C Water closet (handicapped): Kohler, #K-3503 Devonshire Comfort Height, 17-1/4" high, elongated toilet, water saver 1.6 gallon flush with vitreous china construction, pressure-assisted siphon jet flush action, escutcheon tank, bolt caps, Church open front white seat with cover, rigid supply with angle stop valve.

P-2 Wall Hung Sink (handicapped): #0355.012 Lucerne, vitreous china construction, front overflow, faucet ledge. Lavatory to be fitted with Moen #8510, 6" wrist blade handles, 2.0 gpm laminar flow, complete with grid drain, tailpiece, cast brass "P" trap, tubing to wall escutcheon, key operated supply valves with rigid supplies and chair carrier. All exposed waste piping and hot and cold water piping shall be insulated with truebro handi lav-guard model 102 insulation kit with white finish.

P-2A Nurse and Clean Work Sink: #LR-1722 by Elkay, 18 gauge-type 302-soft rim bowl. Faucet shall be #Z871B4 by Zurn, 12-1/8" high gooseneck spout with 6" wrist blade handles and a 2 gpm laminar flow. Sink to be complete with grid drain, tailpiece, cast brass "P" trap, tubing to wall escutcheon and supply valves with chrome supplies. Provide deck mounted eye wash by Guardian #G5022 with duct covers, internal flow control and filter to remove impurities (eyewash for the ONE Nurse Work sink only-refer to note 12 on sheet 144 for water temperature control).

P-2B Lounge Sink: #GECR321 by Elkay, 20 gauge-type 302 soft rim bowl double bowl sink #14 x15-3/4 x20-5/8, each, over 33 x22-1/4, 4-hole, faucet #K231BHS by Elkay with 5" handles, swinging hi-spout and retractable hose/spray and water flow restrictor (2.2 gpm max.) Sink to be complete with grid drain, tailpiece (offset only as needed), cast brass "P" trap, tubing to wall escutcheon, key operated supply valves with rigid supplies. All exposed waste piping and hot and cold water piping shall be insulated with Truebro Handi Lav-Guard model 102 insulation kit with white finish.

P-2C Scrub Sink: #Z5460 by Zurn, (No substitutes), wall mounted vitreous china composite sink, low front rim with large deep basin, single faucet hole, complete with concealed wall hangers and support brackets. Faucet shall be polished chrome plated sensor activated, solid brass solenoid with built-in filter solenoid valve with serviceable "Y" strainer filter and 2.2 gpm laminar flow. Metal jacketed wire protection for sensor and solid loads. Gooseneck faucet shall have a surgical bend spout, 8" trim plate and plug-in transformer. Faucet MLL will be Sloan, model # ET7-700-S-8P. (No substitutes). Sink to be complete flat metal grid drain with 1-1/2"x4" tailpiece. Also include P trap, tubing to wall escutcheon and supply valves with chrome supplies.

P-2D Sailed Work Sink: #DLR-2222-12 by Elkay, 19"x16"x12" DEEP 90ML, (3-hole) 18 gauge-type 302-soft rim bowl. Faucet shall be #Z871B4 by Zurn, 12-1/8" high gooseneck spout with 6" wrist blade handles and 2 gpm laminar flow. Sink to be complete with grid drain, tailpiece, cast brass "P" trap, tubing to wall escutcheon and supply valves with chrome supplies.

P-2E Exam/Treatment Sink: #LR-1722 by Elkay, 18 gauge-type 302-soft rim bowl. Faucet shall be #Z871B4 by Zurn, 12-1/8" high gooseneck spout with 6" wrist blade handles and a 2 gpm laminar flow. Sink to be complete with grid drain, tailpiece, cast brass "P" trap, tubing to wall escutcheon and supply valves with chrome supplies.

P-2F Patient Recovery Hand Sink: Briggs Milton #6620, vitreous china 20"x18" wall hung lavatory, front overflow, 4" o.c., Faucet Delta 2613935. Gooseneck faucet with deck plate, 6" wrist blade handles; 2.2 gpm aerator, 8" cover plate, complete with grid drain, tailpiece, cast brass "P" trap, tubing to wall escutcheon, key operated supply valves with rigid supplies and chair carrier. All exposed waste piping and hot and cold water piping shall be insulated with truebro handi lav-guard model 102 insulation kit with white finish.

P-2G Countertop Sink (handicapped): Kohler, #K-2350-47 Devonshire, undercounter sink, vitreous china construction, front overflow, faucet ledge. Lavatory to be fitted with Kohler #K-394-4, wrist blade handles, 1.5 gpm laminar flow, complete with grid drain, tailpiece, cast brass "P" trap, tubing to wall escutcheon and key operated supply valves with rigid supplies. All exposed waste piping and hot and cold water piping shall be insulated with truebro handi lav-guard model 102 insulation kit with white finish.

P-3 Janitor's Sink: #MSB-2424 by Fiat, 24" X 24" X 10" deep molded stone mop service basin color white. The factory installed drain body shall be stainless steel and designed to provide for a lead brick or 400-3 joint to a 3" drain pipe. Service faucet #B344.112 with top brace, stops, 10-1/2" spout, 3/4" hose thread on spout, integral vacuum breaker, adjustable union couplings, stop shanks and 30" flexible hose.

P-4 Refrigeration Ice Maker: Contractor shall provide wall mounted recessed box with shut off valve for connection to refrigerator ice maker by others. Extend 1/4" water line to unit with in-line cartridge filter. Verify exact line size. Box shall be Oatey Model 52K with chrome ball valve.

P-5 Shower Unit (handicapped): Crane model 3636.01F R with 36" x 36" stall, one-piece fiberglass construction. Unit shall come with factory option, dome light, cast brass drain with chrome plated strainer, acrylic antibacterial protection, white finish, shower curtain, solid padded vinyl seat, slide guide (for hand held shower attachment) swivel fitting, 69" flexible stainless steel hose, and in-line breaker and pressure balanced single lever mixing valve with check stops.

P-6 Drinking Fountain (handicapped): Halsey Taylor, model Contour HRFSEBP, barrier-free bi-level, wall-hung unit. Unit shall be constructed of non-corrosive series stainless steel with brush satin finish and push pad activation on the front of each fountain. Drinking fountain must be mounted per ADA requirements.

D. Potable water systems shall be disinfected prior to use. The method to be followed shall be that prescribed by the health authority and code requirements.

6. Section 15500 - Heating, Ventilating & Air Conditioning (HVAC)

A. The work to be performed shall include all labor, materials and equipment necessary to furnish and install complete, all hvac mechanical equipment as shown on drawings and/or hereinafter specified. It is the intent that the systems be installed complete with all items necessary to provide satisfactory service.

B. All heating, ventilating and air conditioning equipment which contains compressors shall be provided with extended warranties (minimum four (4) years) for the compressors.

C. Procedure Room HVAC Unit.

(1) The indoor air handler shall be ceiling mounted, supplemental DX-Air Handling Evaporator. The air handling section shall house, as a minimum, the evaporator coil, expansion valve, evaporator blower/motor, compressors and associated electrical and refrigeration component. The evaporator section shall be located at some distance from its corresponding outdoor remote air cooled condensing unit. The system's compressor shall be located the with Remote Condensing section.

(2) The remote outdoor shall be a remote air cooled condenser unit with propeller fan. The condenser unit cabinet shall also house the condenser coil, blower and blower motor and Nibco 3R condensing unit motor control/enabling box.

The condenser unit shall be sized to provide the total heat of rejection of the system at a 115F DB ambient temperature for the corresponding model AHU Air Handling Unit. Split system units shall be manufactured by ATS.

D. Rooftop heating and cooling unit:

All rooftop units shall be factory assembled, piped, internally wired and fully charged with R-410a refrigerant. Cooling and heating capacities shall be rated in accordance with AHJ standards.

All cooling units shall be Underwriters' Laboratory listed. All units shall be designed for outdoor rooftop level installation. Exterior surfaces of all units shall be phosphate, zinc-coated steel with epoxy resin primer and baked enamel finish.

All casing panels shall be 20 gauge steel, gasketed and insulated with one (1) inch, one (1) pound density foil-faced glass fiber. Insulation shall be on the heat exchanger and evaporation section.

Refrigeration cycle controls shall include condenser fan, evaporator fan and compressor controller. Compressor shall be equipped with a combination internal winding thermostat/current overload. Internal high pressure relief shall also be provided.

All units shall have 3,600 rpm hermetic sealed compressors. Compressor shall be equipped with over temperatures, over current and high pressure controls.

Crank case heaters shall be standard on all models. Evaporator coil shall be seamless copper tubing mechanically bonded to aluminum fins and shall be factory pressure and leak tested at 225 psig.

Both evaporator and condenser coil shall have drain pans. Evaporator pan shall be internally sealed and insulated. Threaded drain connection shall be provided in evaporator section with a drain opening in condensing section.

Condenser coil shall be 3/16" O.D. seamless copper tubing mechanically bonded to aluminum fins. Each coil shall be factory pressure and leak tested at 425 psig.

Indoor air fan shall be belt drive, forward curved, centrifugal type. Motor shall have thermal overload protection and permanently lubricated fan and motor bearings. Motor/blower assembly shall be isolated from unit with rubber mounts.

Condenser fan shall be direct-drive, statically and dynamically balanced, upflow propeller type. Weatherproof permanent split capacitor fan motor shall have built-in thermal overload and permanently lubricated sleeve bearings.

Electric heating section shall be completely assembled and wired for single point connection and branch circuit fusing (where required). Section shall contain nickel chromium elements and shall be factory provided 2 stages of heating. The heating section shall have limit controls (s) and automatic reset to prevent over heating. The section shall slide out of the unit for easy maintenance and service.

Low ambient temperature operation shall be factory option down to 0 degree F.

Each rooftop unit shall be complete with a factory supplied supply/return duct with discharge casing. Refer to sheet 144 for full size roof curb information, note 7 below packaged heat pump rooftop unit schedule.

Rooftop unit #1, 2, and 3 shall be complete with a factory supplied enthalpy-controlled economizer with power exhaust.

Refer to sheet 144 rooftop unit schedule for more factory options requirements.

Units shall be as manufactured by Carrier, York or approved equal.

7. SECTION 15880 - Air Distribution

A. Furnish all labor and materials necessary to complete the sheet metal work associated with the heating, ventilating, air conditioning and exhaust systems, and other miscellaneous items shown and required.

B. All ductwork shall be constructed and installed in accordance with the sheet metal and air conditioning contractors national association (smacna) standards, ashrae standards and boca standards.

C. Flexible ductwork shall be Hart & Cooley type F216 or approved equal. Listed duct shall comply with NFPA bulletin 90a and shall be U.L. listed as class I air duct and connector, standard 181.

D. Support horizontal ducts with hangers spaced not more than six (6) feet apart. Use strap hangers for ducts up to thirty (30) inches wide, angle hangers or rods for ducts over thirty (30) inches wide. Strap hangers to be one (1) inch wide, 20 gauge minimum; fasten to sides and bottom of duct with sheet metal screws.

E. Ducts shall be straight and smooth on the inside, with joints neatly finished. Ducts shall be suspended from the construction and shall be free from vibration. Curved elbows shall have a center radius equal to one and one-half (1-1/2) times the width of the duct. All square turns shall be vanned. Vanes consisting of curved metal blades shall permit the air to make abrupt turns without turbulence.

F. All joints in the heating, ventilating, air conditioning and exhaust system ductwork shall be sealed.

Sealant shall be as manufactured by United Inc. or approved equal, sealant shall be smacna and ul approved, with a flame spread of 10 and a smoke developed of 0, non-toxic and non-flammable. Sealant shall be approved for operating temperatures from 0 degrees f. to 200 degrees f.

Sealant system shall be installed in strict accordance with the manufacturer's recommendations and when applied shall provide a permanent seal without any deterioration.

G. Square ductwork air devices:

1) Supply air diffusers shall have all steel construction. Titus model TMS with vaneed face and finished with #26 off-white enamel. Air device to come with factory optional molded insulation blanket.

2) Return air grille shall have all steel construction, Titus model 25R with louvered face and finished with #26 off-white enamel.

3) Exhaust air grille shall have all steel construction, Titus model 25R with louvered face and finished with #26 off-white enamel.

4) Supply air device shall be perforated type with built in fire damper at ceiling with all steel construction. Supply air device shall be Titus model PAS-FR with #26 off-white enamel finish (Oxygen Room).

5) Supply air devices for the Procedure Room shall be laminar flow diffuser panels (TLF-AA) with airflow dampers. Air device shall be of aluminum construction as manufactured by Titus to make up a complete isolation system through controlled air patterns for the Procedure Rooms and finished with #26 white. Supply air device to come with factory optional insulation blanket on the back side of the air device.

6) Return air grille shall be of stainless steel construction, Price model 700R with louvered face. For Procedure Room only.

** The supply and exhaust air devices to be located in the Team Mate Toilet Room is to be of aluminum construction.

B. SECTION 15950 - Controls

A. The contractor under this heading shall furnish and install all wiring necessary for a complete electric system of automatic temperature control. The system shall include all necessary thermostats, relays, switches, etc. required for successful operation. Electrical work in connection with the temperature control system shall be performed by the control contractor.

B. New Rooftop hvac unit shall be controlled by a single wall mounted heating/cooling programmable thermostat, as needed, with seven (7) day twenty-four (24) hour program clock control as manufactured by Carrier.

C. Air handling unit shall be controlled by a wall mounted heating/cooling programmable thermostat with humidity control and seven (7) day twenty-four (24) hour control as manufactured by ATS E2. (AHU-1/AHU-2/AHU-3)

* Controls contractor to provide/install a differential pressure sensor in the ductwork before and after the MERV and the HEPA filter rack and interlock of the thermostat to provide a "dirty filter" signal for each air handling unit.

D. The automatic temperature control contractor shall be responsible for the commissioning of the project to assure a fully functional, fine-tuned hvac system upon occupancy.

The commissioning of the project shall be performed in accordance with american society of heating, refrigerating and air conditioning engineers, inc. (ASHRAE) pamphlet 1-1989 guideline for commissioning of hvac systems.

Commissioning is defined as verification of the proper operation of all equipment, alarms, safeties and control and energy management systems serving mechanical systems installed or modified on this project as defined within the specifications and indicated on the contract drawings.

Proper operation is defined as the activation of all controls, field or factory installed, to assure the correct sequencing of equipment and systems, including activation of all operating and safety controls, as hereinafter described.

The automatic temperature control contractor shall report all system deficiencies to the mechanical contractor. The mechanical contractor shall instruct the proper trade to correct any deficiencies reported by the automatic temperature control contractor so that the project commissioning can be completed.

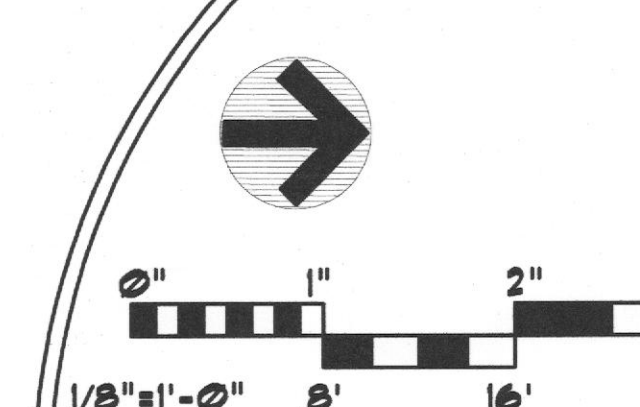
Prior to the commencement of any commissioning work, the automatic temperature control contractor shall provide the engineer with a commissioning report format for review and approval. The report format shall be delivered to the engineer not more than thirty (30) days after award of the atc contract or not less than sixty (60) days prior to start of atc work, whichever is earlier.

Commissioning report format shall include a list of all items to be completed during the initial commissioning of the project prior to occupancy. The second and third reports shall be completed no more than two (2) months (1 report/month) after occupancy of the building. The final report shall also contain the signature of the owner or owner's representative for each item verified.

Three (3) commissioning reports are req'd. The first report shall be completed during the initial commissioning of the project prior to occupancy. The second and third reports shall be completed no more than two (2) months (1 report/month) after occupancy of the building. The final report shall also contain the signature of the owner or owner's representative for each item verified.

E. Refer to drawing, sheet MB, sequence of operations.

F. All control wiring installed above the ceiling is to be approved for ceiling/plenum installation.



OUTLINE SPECIFICATIONS

REVISIONS	
REV#	DATE
#1	01/23/11
#2	01/26/12
#3	02/17/12
	1/17/17 ARIZONA STATE ASC PLAN REVIEW

ISSUED FOR ARIZONA STATE ASC PLAN REVIEW

2/11/10

Don Penn Consulting Engineers
608 WESTPORT PARKWAY, SUITE 800
GRANDVIEW, TEXAS 76040
817-410-2858 FAX 817-261-8411

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TENANT RENOVATIONS FOR:
LIFELINE ACCESS Center
1100 E. University Dr. Suite 102
Tempe, AZ 85281

DRAWING NO. M9

SHEET 09 OF 9

DATE DRAWN BY: 8/23/11 DLI
JOB NUMBER CHECKED BY: 10281 DLI

SD# 2011-01C

ROOFTOP UNIT #1 total fresh air intake 1055 cfm.
WAITING AREA
3,295 cfm total airflow for Rooftop Unit #1
1,055 cfm total fresh air intake at Rooftop Unit #1
750 cfm total airflow in the Waiting Area
275 sf x 60 persons/1,000 sf = 16.5 people
16.5 people x 15 cfm per person = 247 cfm of fresh air required.

ROOFTOP UNIT #2 total fresh air intake 900 cfm.
WAITING AREA
2,795 cfm total airflow for Rooftop Unit #2
900 cfm total fresh air intake at Rooftop Unit #2
120 cfm total airflow in the Waiting Area
50 sf x 60 persons/1,000 sf = 3 people
3 people x 15 cfm per person = 45 cfm of fresh air required.

ROOFTOP UNIT #3 total fresh air intake 500 cfm.
PRIVATE RECOVERY
1,945 cfm total airflow for Rooftop Unit #3
500 cfm total fresh air intake at Rooftop Unit #3
105 cfm total airflow in the Private Recovery
121 sf x 20 persons/1,000 sf = 2.42 people
2.42 person x 15 cfm per person = 36 cfm of fresh air required.

Total 19.5 people x 15 cfm per person = 293 cfm
Total 293 cfm of fresh air.

RESEARCH
3,295 cfm total airflow for Rooftop Unit #1
1,055 cfm total fresh air intake at Rooftop Unit #1
575 cfm total airflow in the Research Area
167 sf x 7 persons/1,000 sf = 1.2 people
1.2 people x 20 cfm per person = 24 cfm of fresh air required.

RECEPTION AREA
2,795 cfm total airflow for Rooftop Unit #2
900 cfm total fresh air intake at Rooftop Unit #2
280 cfm total airflow in the Reception Area
103 sf x 60 persons/1,000 sf = 6.1 people
6.1 people x 15 cfm per person = 92 cfm of fresh air required.

PHASE I RECOVERY
1,945 cfm total airflow for Rooftop Unit #3
300 cfm total fresh air intake at Rooftop Unit #3
180 cfm total airflow in the Phase I Recovery
161 sf x 20 persons/1,000 sf = 3.2 people
3.2 person x 15 cfm per person = 48 cfm of fresh air required.

Reception Annex/Work Area
3,295 cfm total airflow for Rooftop Unit #1
1,055 cfm total fresh air intake at Rooftop Unit #1
515 cfm total airflow in the Work Area
75 sf x 60 persons/1,000 sf = 4.5 people
4.5 people x 20 cfm per person = 90 cfm of fresh air required.

SOILED WORK ROOM
2,795 cfm total airflow for Rooftop Unit #2
900 cfm total fresh air intake at Rooftop Unit #2
115 cfm total airflow in the Soiled Work Room
70 sf x 7 persons/1,000 sf = 5.0 people
5.0 people x 20 cfm per person = 100 cfm of fresh air required.

PHASE II RECOVERY
1,945 cfm total airflow for Rooftop Unit #3
300 cfm total fresh air intake at Rooftop Unit #3
280 cfm total airflow in the Phase II Recovery
256 sf x 20 persons/1,000 sf = 5.1 people
5.1 person x 15 cfm per person = 76 cfm of fresh air required.

Office One
3,295 cfm total airflow for Rooftop Unit #1
1,055 cfm total fresh air intake at Rooftop Unit #1
325 cfm total airflow in the Office One
88 sf x 7 persons/1,000 sf = 1 people
1 people x 20 cfm per person = 20 cfm of fresh air required.

SOILED WORK ROOM
2,795 cfm total airflow for Rooftop Unit #2
900 cfm total fresh air intake at Rooftop Unit #2
115 cfm total airflow in the Soiled Work Room
70 sf x 7 persons/1,000 sf = 5.0 people
5.0 people x 20 cfm per person = 100 cfm of fresh air required.

NURSE CONTROL AND WORK AREA
1,945 cfm total airflow for Rooftop Unit #3
500 cfm total fresh air intake at Rooftop Unit #3
300 cfm total airflow in the Nurse Control and Work Area
641 sf x 7 persons/1,000 sf = 4.5 people
4.5 person x 20 cfm per person = 90 cfm of fresh air required.

Office Two
3,295 cfm total airflow for Rooftop Unit #1
1,055 cfm total fresh air intake at Rooftop Unit #1
290 cfm total airflow in the Office Two
76 sf x 7 persons/1,000 sf = 1 people
1 people x 20 cfm per person = 20 cfm of fresh air required.

SEMI-RESTRICTED PASSAGE
2,795 cfm total airflow for Rooftop Unit #2
900 cfm total fresh air intake at Rooftop Unit #2
395 cfm total airflow in the Semi-Restricted Passage
590 sf x 7 persons/1,000 sf = 4.13 people
4.13 people x 20 cfm per person = 83 cfm of fresh air required.

PREP HOLDING
1,945 cfm total airflow for Rooftop Unit #3
300 cfm total fresh air intake at Rooftop Unit #3
280 cfm total airflow in the Prep Holding
257 sf x 20 persons/1,000 sf = 5.1 people
5.1 person x 15 cfm per person = 76 cfm of fresh air required.

CONFERENCE ROOM
3,295 cfm total airflow for Rooftop Unit #1
1,055 cfm total fresh air intake at Rooftop Unit #1
600 cfm total airflow in the Conference Room
200 sf x 50 persons/1,000 sf = 10 people
10 people x 20 cfm per person = 200 cfm of fresh air required.

ANESTHESIA EQUIP/WORK
2,795 cfm total airflow for Rooftop Unit #2
900 cfm total fresh air intake at Rooftop Unit #2
115 cfm total airflow in the Anesthesia Equip/Work
190 sf x 7 persons/1,000 sf = 1.33 people
1.33 people x 20 cfm per person = 27 cfm of fresh air req'd

AIR HANDLING UNIT #1 total fresh air intake 270 cfm.
PROCEDURE ROOM ONE B
1,850 cfm total airflow for Air Handling Unit #1
270 cfm total fresh air intake at Air Handling Unit #1
1,850 cfm total airflow in the Procedure Room One B
440 sf x 20 persons/1,000 sf = 8.8 people
8.8 people x 30 cfm per person = 264 cfm of fresh air required.

TEAM LEADER
2,795 cfm total airflow for Rooftop Unit #2
900 cfm total fresh air intake at Rooftop Unit #2
145 cfm total airflow in the Team Leader
102 sf x 7 persons/1,000 sf = 71 people
71 people x 20 cfm per person = 15 cfm of fresh air required.

EXAM/TREATMENT ROOM
2,795 cfm total airflow for Rooftop Unit #2
900 cfm total fresh air intake at Rooftop Unit #2
145 cfm total airflow in the Exam/Treatment Room
150 sf x 20 persons/1,000 sf = 1.33 people
1.33 people x 15 cfm per person = 45 cfm of fresh air required.

AIR HANDLING UNIT #2 total fresh air intake 270 cfm.
PROCEDURE ROOM TWO B
1,850 cfm total airflow for Air Handling Unit #2
270 cfm total fresh air intake at Air Handling Unit #2
1,850 cfm total airflow in the Procedure Room Two B
440 sf x 20 persons/1,000 sf = 8.8 people
8.8 people x 30 cfm per person = 264 cfm of fresh air required.

LOUNGE
2,795 cfm total airflow for Rooftop Unit #2
900 cfm total fresh air intake at Rooftop Unit #2
470 cfm total airflow in the Lounge
135 sf x 50 persons/1,000 sf = 6.75 people
6.75 people x 20 cfm per person = 135 cfm of fresh air req'd

INTERVIEW/CONSULTATION
2,795 cfm total airflow for Rooftop Unit #2
900 cfm total fresh air intake at Rooftop Unit #2
90 cfm total airflow in the Interview/Consultation
75 sf x 7 persons/1,000 sf = 52 people
52 people x 20 cfm per person = 11 cfm of fresh air req'd

AIR HANDLING UNIT #3 total fresh air intake 270 cfm.
PROCEDURE ROOM THREE B
1,850 cfm total airflow for Air Handling Unit #3
270 cfm total fresh air intake at Air Handling Unit #3
1,850 cfm total airflow in the Procedure Room Three B
450 sf x 20 persons/1,000 sf = 9 people
9 people x 30 cfm per person = 270 cfm of fresh air required.

INTERVIEW/CONSULTATION
2,795 cfm total airflow for Rooftop Unit #2
900 cfm total fresh air intake at Rooftop Unit #2
90 cfm total airflow in the Interview/Consultation
75 sf x 7 persons/1,000 sf = 52 people
52 people x 20 cfm per person = 11 cfm of fresh air req'd

INTERVIEW/CONSULTATION
2,795 cfm total airflow for Rooftop Unit #2
900 cfm total fresh air intake at Rooftop Unit #2
90 cfm total airflow in the Interview/Consultation
75 sf x 7 persons/1,000 sf = 52 people
52 people x 20 cfm per person = 11 cfm of fresh air req'd

INTERVIEW/CONSULTATION
2,795 cfm total airflow for Rooftop Unit #2
900 cfm total fresh air intake at Rooftop Unit #2
90 cfm total airflow in the Interview/Consultation
75 sf x 7 persons/1,000 sf = 52 people
52 people x 20 cfm per person = 11 cfm of fresh air req'd



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Section 1: Project Information

Project Type: Addition
Project Title: Lifeline Access Center
Construction Date: 11/00
City: Tempe, AZ 85281
Owner/Agent: Lifeline
Designer/Contractor: Don Penn, Don Penn Consulting Engineer, 605 Westpark Parkway, Suite 300, Greenway, TX 78051, 817-410-2882, donpenn@donpenn.com

Section 2: General Information

Building Location (or weather data): Tempe, Arizona
Climate Zone: 2b

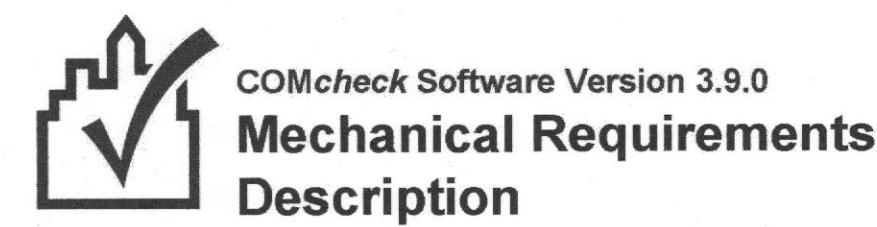
Section 3: Mechanical Systems List

Table with columns: Quantity, System Type & Description, Heating Mode, Capacity, Efficiency, Cooling Mode, Capacity, Efficiency. Lists HVAC systems RTU-1, RTU-2, EDH-1, EDH-2, EDH-3, EDH-4, EDH-5, EDH-6, EDH-7, EDH-8, EDH-9, EDH-10, EDH-11, EDH-12, EDH-13, EDH-14, EDH-15, EDH-16, EDH-17, EDH-18, EDH-19, EDH-20, EDH-21, EDH-22, EDH-23, EDH-24, EDH-25, EDH-26, EDH-27, EDH-28, EDH-29, EDH-30, EDH-31, EDH-32, EDH-33, EDH-34, EDH-35, EDH-36, EDH-37, EDH-38, EDH-39, EDH-40, EDH-41, EDH-42, EDH-43, EDH-44, EDH-45, EDH-46, EDH-47, EDH-48, EDH-49, EDH-50, EDH-51, EDH-52, EDH-53, EDH-54, EDH-55, EDH-56, EDH-57, EDH-58, EDH-59, EDH-60, EDH-61, EDH-62, EDH-63, EDH-64, EDH-65, EDH-66, EDH-67, EDH-68, EDH-69, EDH-70, EDH-71, EDH-72, EDH-73, EDH-74, EDH-75, EDH-76, EDH-77, EDH-78, EDH-79, EDH-80, EDH-81, EDH-82, EDH-83, EDH-84, EDH-85, EDH-86, EDH-87, EDH-88, EDH-89, EDH-90, EDH-91, EDH-92, EDH-93, EDH-94, EDH-95, EDH-96, EDH-97, EDH-98, EDH-99, EDH-100.

Section 4: Requirements Checklist

- Requirements Specific To: HVAC System RTU-1:
1. Equipment minimum efficiency: Heat Pump: 3.20 COP/10.10 SEER
2. Integrated air economizer required
3. Cooling system provides a means to relieve excess outdoor air during economizer operation.

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

- Requirements Specific To: HVAC System RTU-1:
1. The specified heating and/or cooling equipment is covered by the ASHRAE 90.1 Code and must meet the following minimum efficiency: Heat Pump: 3.20 COP/10.10 SEER
2. An integrated air economizer is required for individual cooling systems over 64 kBtu/h in the selected project location and allows simultaneous operation of outdoor air and mechanical cooling
3. Cooling system provides a means to relieve excess outdoor air during economizer operation to prevent overpressurizing the building
Requirements Specific To: HVAC System RTU-2:
1. The specified heating and/or cooling equipment is covered by the ASHRAE 90.1 Code and must meet the following minimum efficiency: Heat Pump: 3.20 COP/10.10 SEER
2. An integrated air economizer is required for individual cooling systems over 64 kBtu/h in the selected project location and allows simultaneous operation of outdoor air and mechanical cooling
3. Cooling system provides a means to relieve excess outdoor air during economizer operation to prevent overpressurizing the building
Requirements Specific To: HVAC System RTU-3:
1. The specified heating and/or cooling equipment is covered by the ASHRAE 90.1 Code and must meet the following minimum efficiency: Heat Pump: 6.00 HSPF/9.70 SEER
Requirements Specific To: HVAC System EDH-1:
None
Requirements Specific To: HVAC System EDH-2:
None
Requirements Specific To: HVAC System EDH-3:
None
Requirements Specific To: HVAC System EDH-4:
None
Requirements Specific To: HVAC System EDH-5:
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- Requirements Specific To: HVAC System RTU-1:
1. Equipment minimum efficiency: Heat Pump: 3.20 COP/10.10 SEER
2. Integrated air economizer required
3. Cooling system provides a means to relieve excess outdoor air during economizer operation.
Requirements Specific To: HVAC System RTU-3:
1. Equipment minimum efficiency: Heat Pump: 6.00 HSPF/9.70 SEER
Requirements Specific To: HVAC System EDH-1:
None
Requirements Specific To: HVAC System EDH-2:
None
Requirements Specific To: HVAC System EDH-3:
None
Requirements Specific To: HVAC System EDH-4:
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Requirements Specific To: HVAC System EDH-99:
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Requirements Specific To: HVAC System EDH-100:
None

- Requirements Specific To: Water Heating 1:
1. Water heating equipment meets minimum efficiency requirements: Unknown hot water system type. Efficiency requirements can not be determined.
2. Hot water system sized per manufacturer's sizing guide
3. All piping in circulating system insulated
4. Automatic time control of heat losses and recirculating systems present
5. Controls not shut off operation of circulating pump between water heater/buffer and storage tanks within 5 minutes after end of heating cycle
General Requirements: Must be met by all systems to which the requirement is applicable:
1. Standby equipment automatically off when primary system is operating
2. 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. Automatic time control of heat losses and recirculating systems present
6. Controls not shut off operation of circulating pump between water heater/buffer and storage tanks within 5 minutes after end of heating cycle
7. Mechanical fanbases and seals used to connect ducts and air distribution equipment
8. Ducts sealed - longitudinal seams on rigid ducts, transverse seams on all ducts, UL 181A or 181B tapes and mastics
9. Hot water pipe insulation: 1 in. for pipes <= 1.5 in. and 2 in. for pipes > 1.5 in.
10. Chilled water/condensate pipe insulation: 1 in. for pipes <= 1.5 in. and 1.5 in. for pipes > 1.5 in.
11. Steam pipe insulation: 1.5 in. for pipes <= 1.5 in. and 3 in. for pipes > 1.5 in.
12. Piping within HVAC equipment
13. Fluid temperatures between 55 and 100°F
14. Fluid not heated or cooled with renewable energy
15. Runouts <= 8 ft length.

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- 4. 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°F during heating and setting up to 85°F during cooling
b) capable of automatically setting back or shutting down systems during unoccupied hours using different day schedules,
c) have an accessible 2-hour occupant override,
d) have a battery back-up capable of maintaining programmed settings for at least 10 hours without power.
Exceptions:
- A setback or shutoff control is not required on thermostats that control systems serving areas that operate continuously
- A setback or shutoff control is not required on systems with total energy demand of 2 kW (8,828 Btu/h) or less.
5. 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.
6. All 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, unfinished basements, and unfinished 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., Roofs or walls), minimum R-8 insulation is required only between the duct and the building exterior.
Exceptions:
- Duct insulation is not required on ducts located within equipment
- Duct insulation is not required when the design temperature difference between the interior and exterior of the duct or plenum does not exceed 15°F
7. Mechanical fanbases and seals, mastics, or gaskets must be used when connecting ducts to fans and other air distribution equipment, including multiple-zone terminal units.
8. 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 and shall be marked "181A-M" for pressure sensitive tapes, "181A-F" for mastic or "181A-H" for heat-sensitive tapes. Tapes and mastics used to seal flexible air ducts and flexible air connectors shall comply with UL 181B and shall be marked "181B-FX" for pressure-sensitive tape or "181B-M" for mastic. Unlisted duct tape is not permitted as a sealant on any metal ducts.
9. All pipes serving space-conditioning systems must be insulated as follows:
Hot water piping for heating systems:
1 in. for pipes <= 1.5 in. nominal diameter.
2 in. for pipes > 1.5 in. nominal diameter.
Chilled water, refrigerant, and brine piping systems:
1 in. insulation for pipes <= 1.5 in. nominal diameter.
1.5 in. insulation for pipes > 1.5 in. nominal diameter.
Steam piping:
1 in. insulation for pipes <= 1.5 in. nominal diameter.
3 in. insulation for pipes > 1.5 in. nominal diameter.
Exceptions:
- Pipe insulation is not required for factory-installed piping within HVAC equipment.
- Pipe insulation is not required for piping that conveys fluids having a design operating temperature range between 55°F and 100°F.
- 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.
- 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.
10. 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 actions
b) equipment operation and maintenance manuals
c) 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 comments
d) complete narrative of how each system is intended to operate
11. Service hot water piping, when required, must be insulated to 1.5 in. if pipe less than 1.5 in. nominal diameter. Larger pipe must be insulated to 1 in. Pipe insulation will have a conductivity of less than 0.25 Btu-in./h-ft-°F.
12. Temperature controlling means must be provided to limit the maximum temperature of water delivered from storage vessels in public facility restrooms to 115°F.
13. Heating and cooling system design loads for sizing systems and equipment must be determined using generally accepted engineering standards and methods as applicable to the building authority (for example, ASHRAE Handbook of Fundamentals).
14. Thermostats controlling both heating and cooling must be capable of maintaining a 1°F deadband in range of temperature where no heating or cooling is provided.
Exceptions:
- Deadband capability is not provided if the thermostat does not have automatic changeover capability between heating and cooling.

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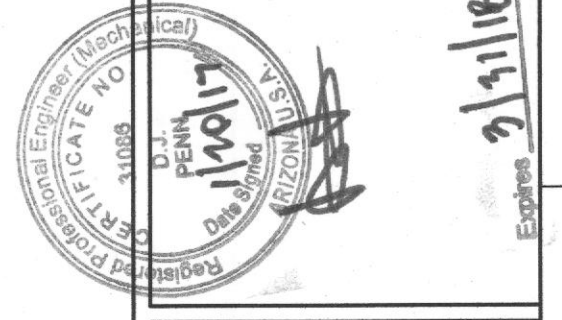
- 10. Operation and maintenance manual provided to building owner
11. Piping, installed to 1/2 in. if nominal diameter of pipes is <= 1.5 in.
- Larger pipe insulated to 1 in. thickness
12. Laboratory moist surface temperatures in public restrooms limited to 110°F (43°C)
13. Load calculations per acceptable engineering standards and handbooks
14. Thermostats controls have 1°F deadband
Exceptions:
- Thermostats requiring manual changeover between heating and cooling
- Special occupancy or special applications where wide temperature ranges are not acceptable and are approved by the authority having jurisdiction.
15. Balancing devices provided in accordance with IMC 2006.603.17
- None
16. Motorized, automatic shutoff dampers required on exhaust and outdoor air supply openings
Exceptions:
- Gravity dampers acceptable in buildings <= 3 stories
- Gravity dampers acceptable in systems with outside or exhaust air flow rates less than 300 cfm where dampers are interlocked with fire
17. Exhaust air heat recovery included for systems 5,000 cfm or greater with more than 70% outside air fraction or specifically exempted (exceptions):
- Systems serving spaces that are not cooled and heated to >65°F
- Commercial kitchen hoods (grease) classified as Type 1 by NFPA 96
- Systems exhausting toxic, flammable, paint, or corrosive fumes or dust
- Where the largest exhaust source is less than 75% of the design outdoor airflow
- Systems requiring dehumidification that employ energy recovery in series with the cooling coil.

Section 5: Compliance Statement

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 2006 IECC requirements in COMcheck Version 3.0 and to comply with the mechanical systems in the Requirements Checklist.

Don Penn, PE
Signature: [Signature] Date: 11/18/11

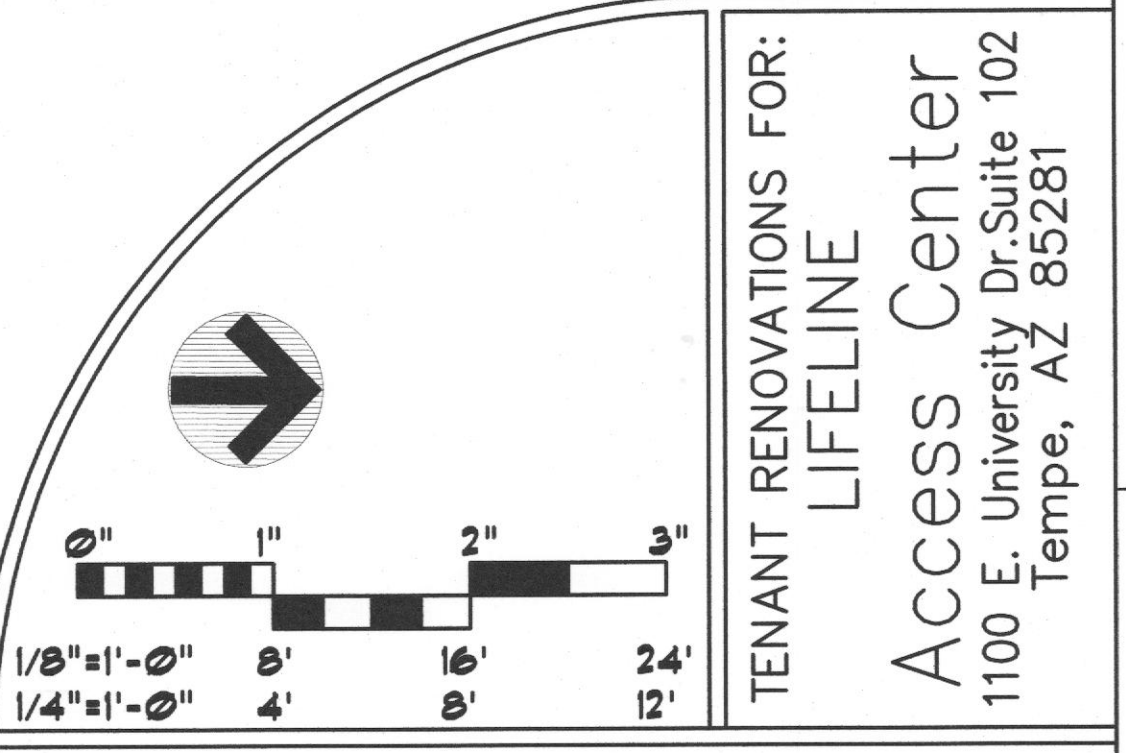
Project Name: Lifeline Access Center
Notes: Existing notes and to remain.



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Comcheck Mechanical Compliance Calcs. and Req'd Ventilation Table

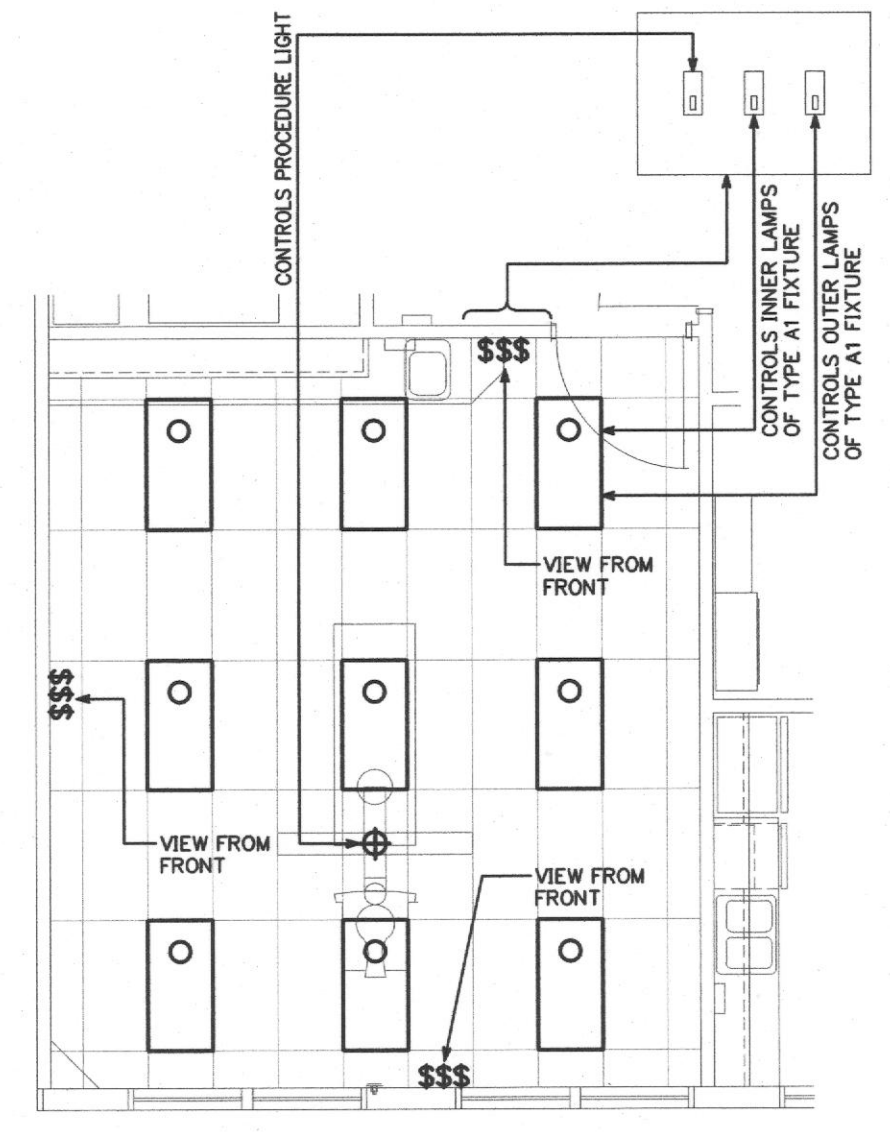
Table with columns: REV#, DATE, DESCRIPTION, REVISIONS. Includes drawing number M10, sheet 9 of 9, date 8/23/11, and other project details.

TYPE	LAMPS	MOUNTING	DESCRIPTION	VOLTS	CATALOG NO.
A	2-F032T8 41K	RECESSED CEILING GRID	2x4 RECESSED FLUORESCENT WITH ACRYLIC PRISMATIC LENS AND ELECTRONIC BALLAST	UNIVERSAL	LITHONIA # 2078-232-A12125 -MVOLT-GEBIORS
A1	4-F032T8 41K	SURFACE DRYWALL	2x4 SURFACE FLUORESCENT TROFFER WITH ACRYLIC PRISMATIC LENS, FULLY GASKETED FLUSH STEEL DOOR AND TWO ELECTRONIC BALLASTS (2 LAMP), FOR DUAL LIGHT LEVEL	UNIVERSAL	LITHONIA # 2M-432-A12125 -MVOLT-GEBIORS
A2	2-F032T8 41K	RECESSED DRYWALL CEILING	2x4 RECESSED FLUORESCENT WITH ACRYLIC PRISMATIC LENS AND ELECTRONIC BALLAST	UNIVERSAL	LITHONIA # 2078-232-A12125 -MVOLT-GEBIORS
B	3-F032T8 41K	CEILING RECESSED	2x4 FLUORESCENT TROFFER WITH 3" DEEP PARABOLIC LOUVER AND TWO ELECTRONIC BALLASTS	UNIVERSAL	LITHONIA # 2M-432-A12125 -MVOLT-GEBIORS
C	1-F032T8 41K	SURFACE	5 5/8"x48" FLUORESCENT WITH WRAP AROUND ACRYLIC PRISMATIC DIFFUSER AND ELECTRONIC BALLAST	UNIVERSAL	MOBERN # 772-1-35-EL0-DT
C1	1-F025T8 41K	SURFACE	5 5/8"x36" FLUORESCENT WITH WRAP AROUND ACRYLIC PRISMATIC DIFFUSER AND ELECTRONIC BALLAST	UNIVERSAL	MOBERN # 772-1-25-EL0-DT
D	2-26WDT 41K	CEILING RECESSED	6" DIA FLUORESCENT DOWNLIGHT WITH HORIZONTAL LAMP, CLEAR ALZAK AND HFF BALLAST	UNIVERSAL	LITHONIA # AF2/26DT16AR-MVOLT HFF
F	1-100W MAX A19	WALL ABOVE MIRROR	2 LIGHT WALL SCONCE WITH POLISHED NICKEL FINISH AND SATIN-ETCHED CASED OPAL GLASS DIFFUSER	120V	KICHLER # 54377N
G	INCLUDED	SURFACE	OPERATING LIGHT WITH FLEXIBLE ARM AND INTEGRAL SWITCH	120V	FURNISHED BY OWNER
H	1-26WDT 41K	CEILING RECESSED	6" DIA FLUORESCENT DOWNLIGHT WITH HORIZONTAL LAMP, FLAT PRISM LENS, FOAM GASKETING AND HFF BALLAST. UL LISTED AND LABELED SUITABLE FOR WET LOCATIONS	UNIVERSAL	LITHONIA # LF1-26DT16AR-MVOLT-OSKT
J	2-9WTT 41K	WALL ABOVE DOOR	ENCLOSED AND GASKETED COMPACT FLUORESCENT FIXTURE WITH GLASS GLOBE AND GUARD	120V	CROUSE-HINDS # VHT2220P
K	44.5W LED 5000K	WALL @ 9'-0" A.F.G.	LED CUT OFF FIXTURE WITH DARK BRONZE FINISH, BALCK BACK-UP FOR EGRESS AND INTEGRAL BUTTON PHOTOCELL.	UNIVERSAL	HUBBELL # LMC-18L1-5K-1-PC(4)-BOC-LED
L	26W LED 5000K	WALL @ 15'-0" A.F.G.	LED CUT OFF WALLPACK FIXTURE WITH DARK BRONZE FINISH, AND INTEGRAL PHOTOCELL.	UNIVERSAL	PAR # WFLD26/PC2
X	LED	UNIVERSAL	LED "X-RAY IN USE" SIGN WITH WHITE HOUSING AND INTEGRAL LETTERS	120V	LITHONIA # LOM P WR120M "X-RAY IN USE"
E1	LED	UNIVERSAL (TOP, END BACK)	LED EMERGENCY EXIT SIGN WITH WHITE HOUSING AND INTEGRAL BATTERY/CHARGER REFER TO FLOOR PLANS FOR MOUNTING AND LOCAL CODES FOR COLOR OF LETTERS.	120/277V	LITHONIA LOM SERIES
E2	2-DC (5.4WTS)	SURFACE WALL OR CEILING	6 VOLT EMERGENCY BATTERY LIGHT WITH TWIN LAMPS, WHITE THERMOPLASTIC HOUSING AND INTEGRAL LEAD CALCIUM BATTERY AND CHARGER	120/277V	LITHONIA # QUANTUM SERIES ELM2
E3	LED 2-DC	UNIVERSAL (TOP, END BACK)	SELF POWERED COMBINATION LED EXIT/2 LAMP EMERGENCY LIGHT WITH INTEGRAL HIGH OUTPUT BATTERY AND CHARGER. ARROWS AND FACING AS SHOWN - LETTER COLOR PER LOCAL CODE.	120/277V	LITHONIA # LOM300W/G 120/277HO
E4	2-DC (6WATT-H)	WEATHERPROOF WALL	TWIN HEAD WEATHERPROOF REMOTE EMERGENCY LIGHTING HEAD, SEALED AND GASKETED, WHITE FINISH.	6V DC	LITHONIA # ELA-W-T-NX-H0606

NOTE:
ALL LIGHTING FIXTURES SHALL BE APPROVED BY THE OWNER AND ARCHITECT PRIOR TO ORDERING.

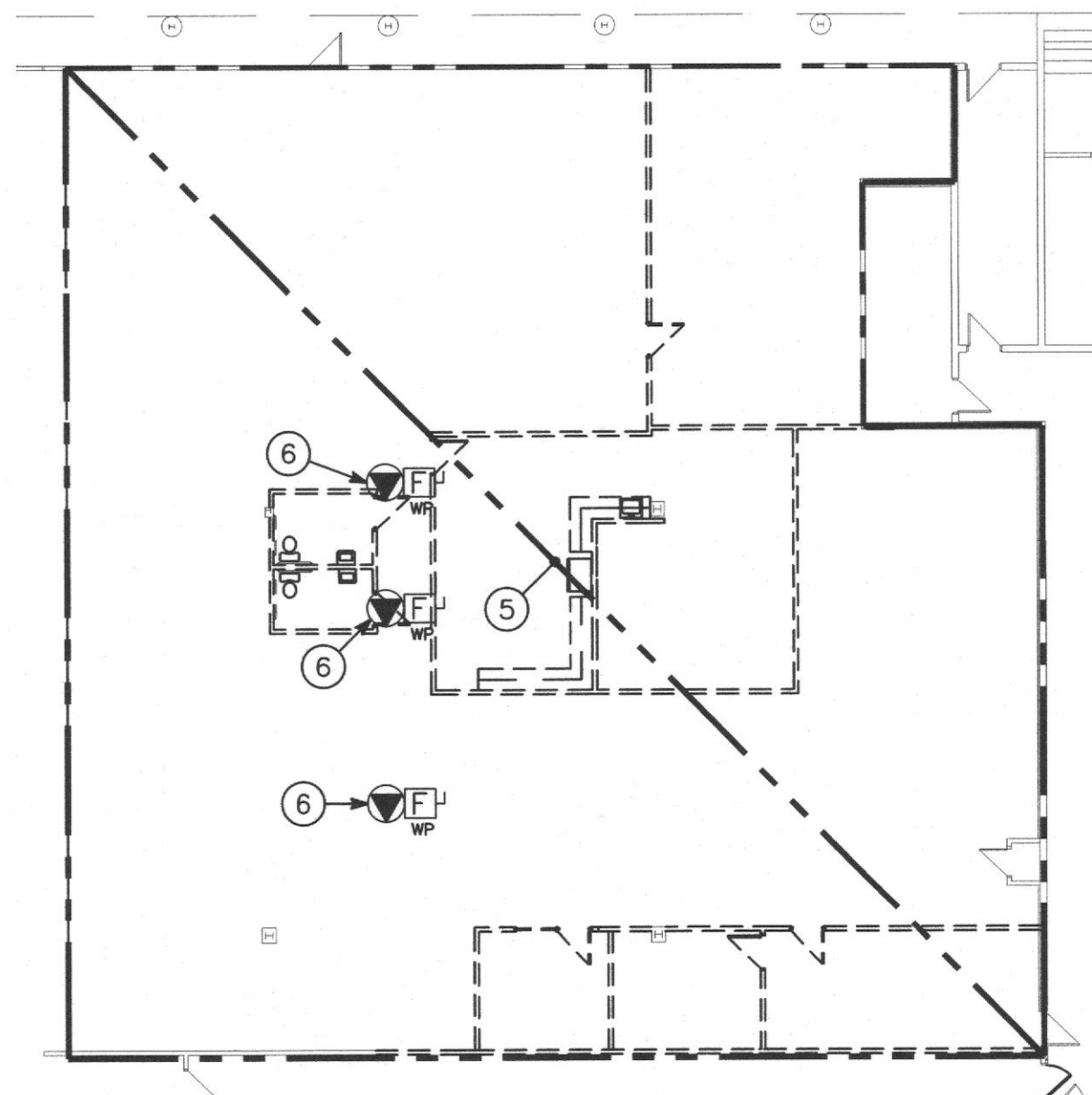
DRAWING NOTES:

- ONE SWITCH SHALL CONTROL THE INNER LAMPS AND ONE SWITCH SHALL CONTROL THE OUTER LAMPS FOR 50% LIGHT LEVEL OF THE 2x4 FIXTURES.
- OWNER SHALL BE RESPONSIBLE FOR FURNISHING AND INSTALLING LIGHT FIXTURE INDICATED. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING ALL FINAL ELECTRICAL CONNECTIONS.
- IF REQUIRED, ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL JUNCTION BOX AND WEATHERPROOF SWITCH FOR TENANT EXTERIOR BUILDING MOUNTED SIGN. COORDINATE LOCATION IN FIELD.
- ELECTRICAL CONTRACTOR SHALL INSTALL FLUSH MOUNTED FUSED DISCONNECT SWITCH SUPPLIED WITH LIGHT FIXTURE TYPE "C". COORDINATE DISCONNECT SWITCH LOCATION WITH ARCHITECT.
- DISCONNECT AND REMOVE ALL PANELBOARDS, LIGHTS, RECEPTACLES, EMERGENCY BATTERY UNITS, EXIT SIGNS, FIRE ALARM DEVICES, ETC. FROM EXISTING SPACE BEING DEMOED UNLESS OTHERWISE NOTED. REMOVE ALL ASSOCIATED WIRING AND CONDUIT BACK TO SOURCE.
- DISCONNECT AND REMOVE EXISTING CIRCUIT SERVING EXISTING ROOFTOP UNIT TO REMAIN FROM EXISTING PANEL. COIL EXISTING BRANCH CIRCUIT WIRE AT ROOF JOIST FOR FUTURE EXTENSION.



TYPICAL PROCEDURE ROOM WALL SWITCH DETAIL
NO SCALE

REFER TO DRAWING T2 FOR POINT BY POINT PHOTOMETRICS.



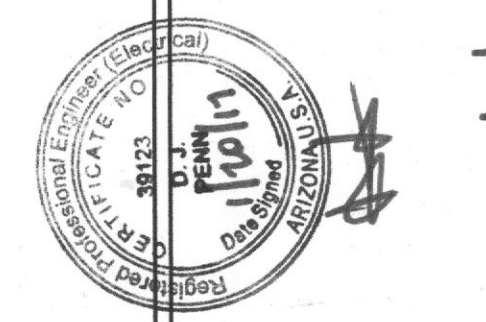
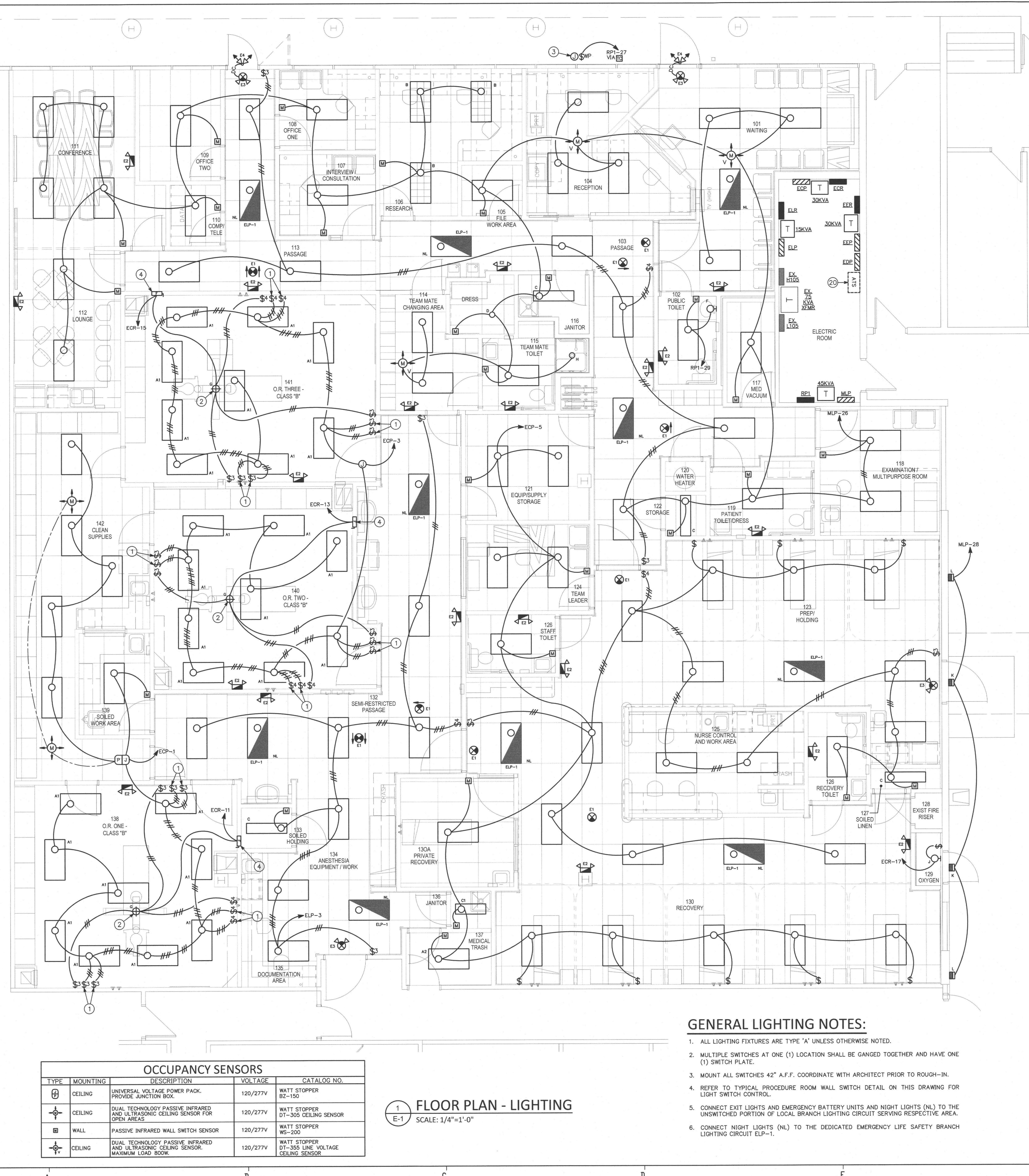
DEMO PLAN
SCALE: 1/16"=1'-0"

GENERAL LIGHTING NOTES:

- ALL LIGHTING FIXTURES ARE TYPE "A" UNLESS OTHERWISE NOTED.
- MULTIPLE SWITCHES AT ONE (1) LOCATION SHALL BE GANGED TOGETHER AND HAVE ONE (1) SWITCH PLATE.
- MOUNT ALL SWITCHES 42" A.F.G. COORDINATE WITH ARCHITECT PRIOR TO ROUGH-IN.
- REFER TO TYPICAL PROCEDURE ROOM WALL SWITCH DETAIL ON THIS DRAWING FOR LIGHT SWITCH CONTROL.
- CONNECT EXIT LIGHTS AND EMERGENCY BATTERY UNITS AND NIGHT LIGHTS (NL) TO THE UNSWITCHED PORTION OF LOCAL BRANCH LIGHTING CIRCUIT SERVING RESPECTIVE AREA.
- CONNECT NIGHT LIGHTS (NL) TO THE DEDICATED EMERGENCY LIFE SAFETY BRANCH LIGHTING CIRCUIT ELP-1.

TYPE	MOUNTING	DESCRIPTION	VOLTAGE	CATALOG NO.
⊕	CEILING	UNIVERSAL VOLTAGE POWER PACK. PROVIDE JUNCTION BOX.	120/277V	WATT STOPPER BZ-150
⊕	CEILING	DUAL TECHNOLOGY PASSIVE INFRARED AND ULTRASONIC CEILING SENSOR FOR OPEN AREAS.	120/277V	WATT STOPPER DT-305 CEILING SENSOR
⊕	WALL	PASSIVE INFRARED WALL SWITCH SENSOR	120/277V	WATT STOPPER WS-200
⊕	CEILING	DUAL TECHNOLOGY PASSIVE INFRARED AND ULTRASONIC CEILING SENSOR. MAXIMUM LOAD 80W.	120/277V	WATT STOPPER DT-365 LINE VOLTAGE CEILING SENSOR

FLOOR PLAN - LIGHTING
SCALE: 1/4"=1'-0"



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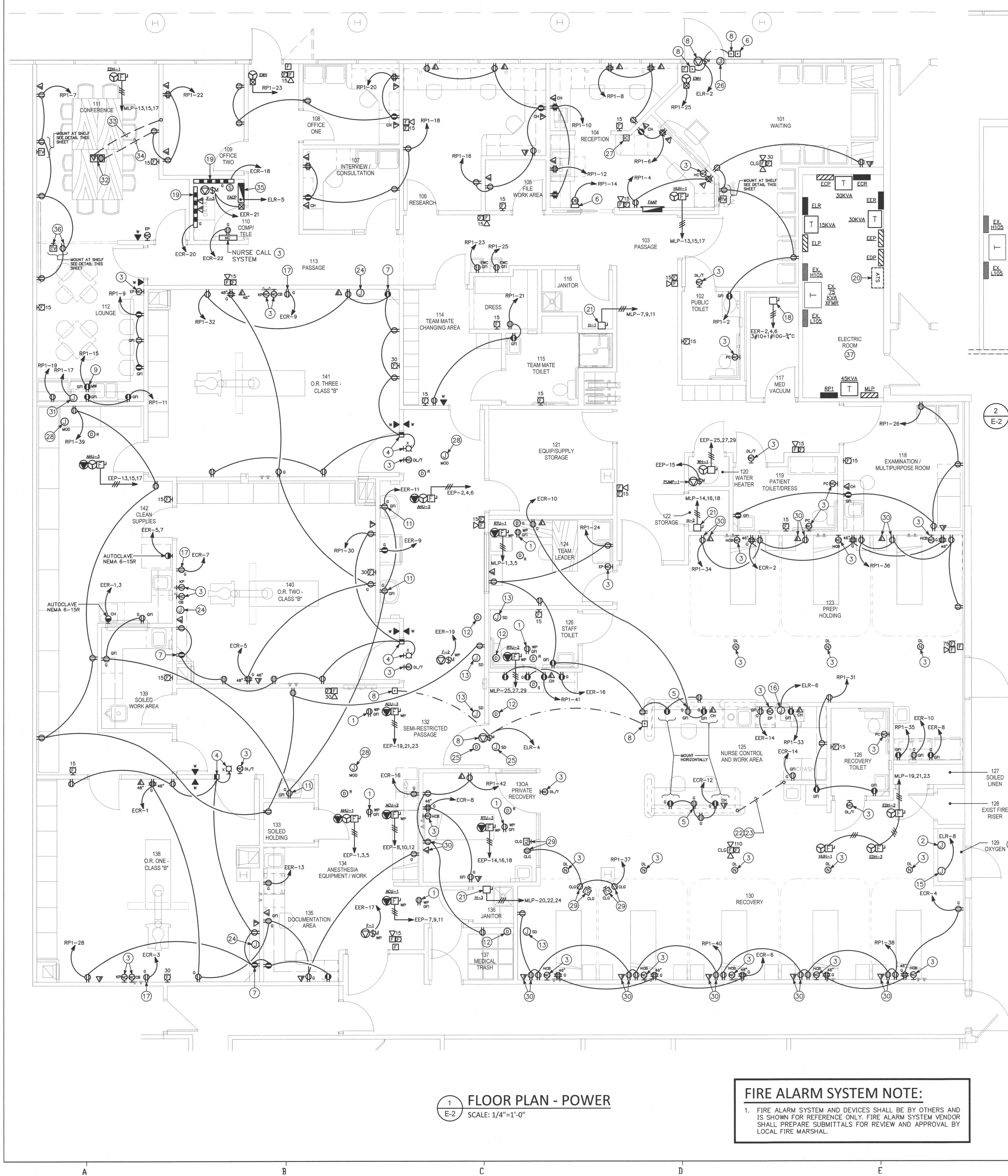


TENANT RENOVATIONS FOR:
LIFELINE Access Center
1100 E. University Dr. Suite 102
Tempe, AZ 85281

FLOOR PLAN - LIGHTING AND SCHEDULES

REVISIONS		DRAWING NO.
#1	12/23/11 PERMIT COMMENTS	E-1
#2	1/26/12 PERMIT COMMENTS	
#3	2/17/12 PERMIT COMMENTS	
#4	1/17/17 ARIZONA STATE ASC PLAN REVIEW	

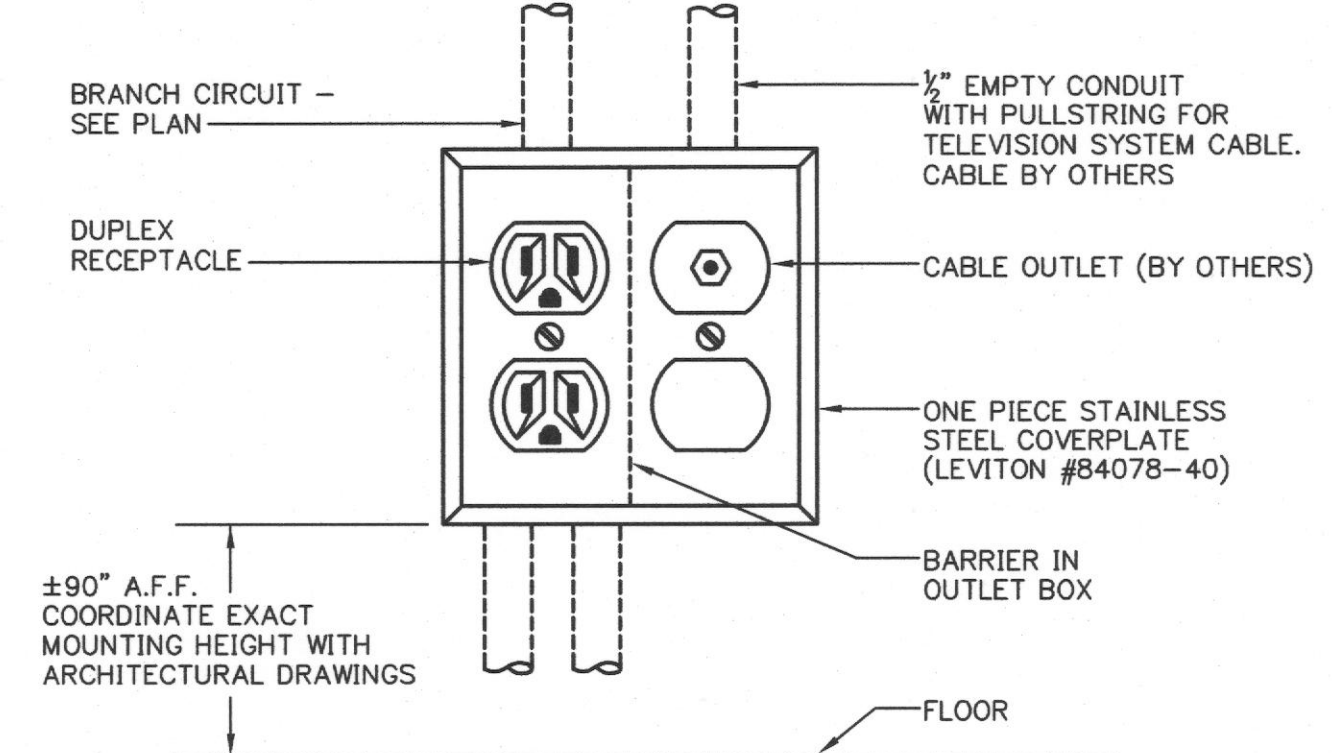
SHEET OF 5
DATE DRAWN BY: 9/23/11 MBR
JOB NUMBER CHECKED BY: 10281 MBR
WDC/J 2011-118-02



**ELECTRIC ROOM
EXISTING CONDITIONS/
DEMOLITION PLAN**
SCALE: 1/4"=1'-0"

DRAWING NOTES:

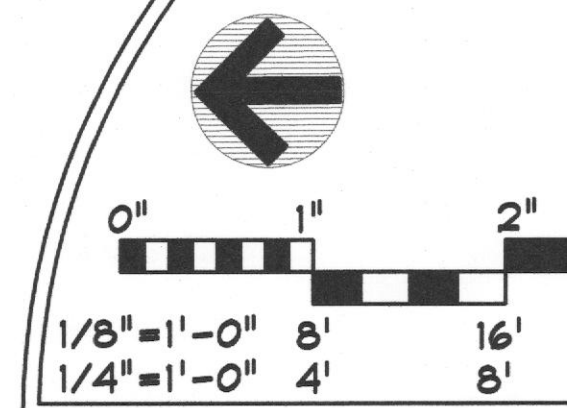
- 1 PROVIDE RECEPTACLE AT MECHANICAL EQUIPMENT FOR MAINTENANCE USE. CIRCUIT RP1-1.
- 2 PROVIDE A FLUSH MOUNTED JUNCTION BOX WITH 3/4" CONDUIT TO CEILING SPACE FOR LOW VOLTAGE OXYGEN EQUIPMENT WIRING. EXTEND TO NURSE STATION COORDINATE LOCATION AND ROUTING IN FIELD WITH VENDOR PRIOR TO ROUGH-IN.
- 3 EXPEDITE NURSE CALL SYSTEM DEVICE LOCATION. CONTRACTOR SHALL FURNISH AND INSTALL COMPLETE NURSE CALL SYSTEM. PROVIDE CONDUIT FROM EACH OUTLET LOCATION TO CEILING SPACE ABOVE. COORDINATE ALL WORK WITH OWNER'S VENDOR. EXPEDITE SYSTEMS (1-800-843-9651). REFER TO SCHEDULE ON SHEET E4. COORDINATE ALL LOCATIONS WITH OWNER.
- 4 MOUNT "IN-USE" SIGN OVER DOOR AND INTERLOCK WITH DOOR CONTACT SWITCH SO THAT SIGN ENERGIZES WHEN DOOR IS CLOSED. DOOR SWITCH TO BE EDWARDS #503A OR APPROVED EQUAL.
- 5 MOUNT BELOW COUNTER IN KNEE SPACE. COORDINATE WITH OWNER.
- 6 HARD WIRE ELECTRONIC DOOR CHIME WITH 3 SEPARATE TONES FOR EACH PUSHBUTTON LOCATION. COORDINATE LOCATION OF PUSHBUTTONS AND DOOR CHIME WITH OWNER OR ARCHITECT. ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL ELECTRONIC DOOR CHIME. 16 VOLT TRANSFORMER, PUSHBUTTONS AND ALL WIRING ASSOCIATED WITH DOOR CHIME SYSTEM.
- 7 PROVIDE A RECEPTACLE FOR RADIO. COORDINATE LOCATION OF RECEPTACLE IN FIELD.
- 8 POWER ASSISTED DOOR AND PUSHBUTTON FURNISHED BY OTHERS AND INSTALLED BY ELECTRICAL CONTRACTOR. COORDINATE WITH VENDOR SPECIFICATIONS PRIOR TO ROUGH-IN.
- 9 MOUNT AT MICROWAVE SHELF.
- 10 NOT USED.
- 11 PROVIDE GFI RECEPTACLE UNDER SCRUB SINK FOR INFRARED SENSOR BY PLUMBING CONTRACTOR.
- 12 PROVIDE DUCT SMOKE DETECTOR LOCATED WITH IN 5 FEET OF SMOKE DAMPER. WHEN ACTIVATED, DUCT MOUNTED SMOKE DETECTOR SHALL CLOSE SMOKE DAMPER AT SMOKE PARTITION. ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL SMOKE DETECTOR AND MAKE ALL FINAL CONNECTIONS. INTERLOCK DETECTORS WITH FIRE ALARM SYSTEM PER NFPA 72.
- 13 CONNECT TO MOTORIZED SMOKE DAMPERS (5 DAMPER MOTORS) - SEE MECHANICAL. SMOKE DAMPERS SHALL CLOSE WHEN RESPECTIVE UNIT DUCT DETECTOR ACTIVATES AND WHEN ASSOCIATED FAN SERVING THE DUCT SYSTEM IS SHUT OFF (PER IMC 607.2). RESPECTIVE AIR HANDLING UNIT SHALL SHUT DOWN UPON ACTIVATION OF DUCT DETECTOR. COORDINATE ALL WORK REQUIRED BY FIRE ALARM SYSTEM VENDOR. CONNECT TO CIRCUIT ELR-1.
- 14 ALL ELECTRICAL EQUIPMENT, CONDUIT, WIRE, ETC. IN THIS ROOM SHALL BE INSTALLED PER NEC AND LOCAL BUILDING CODES. FURNISH AND INSTALL ELECTRICAL ITEMS PER NEC AND LOCAL BUILDING CODES.
- 15 OXYGEN CABINET - MOUNT FLUSH IN WALL AND MAKE FINAL CONNECTIONS. REFER TO VENDORS SPECIFICATIONS FOR SIZE OF JUNCTION BOX.
- 16 PROVIDE A JUNCTION BOX FOR OXYGEN MASTER ALARM PANEL. COORDINATE EXACT ELECTRICAL REQUIREMENTS IN FIELD WITH OXYGEN VENDOR.
- 17 PROVIDE A DEDICATED RECEPTACLE FOR TENANT PROVIDED UPS.
- 18 VACUUM PUMP - 2 @ 2HP, 208V, 3Ø. PROVIDE A 3P3ØA NON FUSED SAFETY SWITCH FOR VACUUM PUMP. COORDINATE LOCATION AND ALL ELECTRICAL REQUIREMENTS WITH EQUIPMENT VENDOR AND MANUFACTURER PRIOR TO ROUGH-IN.
- 19 PROVIDE 48" WIREMOLD V2400 SERIES STEEL RACEWAY (IVORY) WITH 4-20A DUPLEX RECEPTACLES MOUNTED 12" ON CENTER. MOUNT RACEWAY 36" ABOVE FINISHED FLOOR.
- 20 APPROXIMATE LOCATION OF FUTURE AUTOMATIC TRANSFER SWITCH. PROVIDE CONDUITS AND TERMINATE ABOVE CEILING AS SHOWN ON RISER WITH PULL STRING FOR FUTURE GENERATOR. EXTEND CONDUITS TO EXTERIOR OF BUILDING AT LOCATION DETERMINED BY RMS LIFELINE PROJECT MANAGER. SEE RISER DIAGRAM ON DWG E3 FOR ADDITIONAL INFORMATION. COORDINATE EXACT LOCATION OF AUTOMATIC TRANSFER SWITCH PRIOR TO ROUGH-IN.
- 21 PROVIDE A NON-FUSED DISCONNECT SWITCH FOR CONNECTION TO HUMIDIFIER. COORDINATE LOCATION AND EXACT REQUIREMENTS WITH MECHANICAL CONTRACTOR.
- 22 PROVIDE 1-1" EMPTY CONDUIT WITH PULL STRING IN SLAB FROM NURSES STATION COUNTER AREA AND TURN UP AT NEAREST WALL TO CEILING SPACE FOR VOICE/DATA CABLES TO THE NURSES STATION COUNTER AREA. SAW CUT AND PATCH EXISTING FLOOR AS REQUIRED. COORDINATE CONDUIT LOCATION WITH ARCHITECT PRIOR TO ROUGH-IN.
- 23 PROVIDE 1-1" CONDUIT WITH 2#12+1#12G IN SLAB FROM NURSES STATION COUNTER AREA AND TURN UP AT NEAREST WALL TO CEILING SPACE FOR POWER WIRING TO THE NURSES STATION COUNTER AREA. EXTEND HORIZONTALLY TO PANEL AS REQUIRED. SAW CUT AND PATCH EXISTING FLOOR AS REQUIRED. COORDINATE CONDUIT LOCATION WITH ARCHITECT PRIOR TO ROUGH-IN.
- 24 PROVIDE JUNCTION BOX WITH 1-1" EMPTY CONDUIT TO ACCESSIBLE CEILING SPACE FOR SECURITY MONITORING OF NARCOTICS BOX. MOUNT JUNCTION BOX IN REAR OF CABINET. COORDINATE LOCATION WITH ARCHITECT.
- 25 WHERE AIR TRANSFER DUCT OCCURS - PROVIDE DUCT SMOKE DETECTOR LOCATED WITH IN 5 FEET OF SMOKE DAMPER. WHEN ACTIVATED, DUCT MOUNTED SMOKE DETECTOR SHALL CLOSE SMOKE DAMPER AT SMOKE PARTITION. ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL SMOKE DETECTOR AND MAKE ALL FINAL CONNECTIONS. INTERLOCK DETECTORS WITH FIRE ALARM SYSTEM PER NFPA 72. PROVIDE 120V/1Ø TO MOTORIZED SMOKE DAMPER - SEE MECHANICAL. COORDINATE ALL WORK REQUIRED WITH FIRE ALARM SYSTEM VENDOR. CIRCUIT ELR-1.
- 26 PROVIDE JUNCTION BOX ABOVE DOOR FOR ELECTRIC DOOR STRIKE LOW VOLTAGE TRANSFORMER - CIRCUIT NUMBER ELR-3. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION.
- 27 PROVIDE AND INSTALL HARDWIRED LOW VOLTAGE DOOR INTERCOM SYSTEM. PROVIDE MASTER STATION AT RECEPTION DESK. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATION AND ELEVATIONS. COORDINATE SYSTEM DETAILS WITH LIFELINE PROJECT MANAGER. INTERCOM SYSTEM MAY BE COMBINED WITH DOOR CHIME SYSTEM FOR ONE COMPLETE SYSTEM.
- 28 PROVIDE JUNCTION BOX FOR CONNECTION TO MOTOR OPERATED DAMPER (MOD). COORDINATE LOCATION WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN. CIRCUIT EER-12.
- 29 PROVIDE RECEPTACLE AND T.V. OUTLET FLUSH IN FINISHED CEILING. COORDINATE EXACT LOCATION WITH ARCHITECT.
- 30 COORDINATE MOUNTING HEIGHT AND LOCATION OF RECEPTACLE AND VOICE/ DATA OUTLET FOR MONITOR AT BED.
- 31 PROVIDE A JUNCTION BOX FOR CONNECTION TO DISHWASHER - 120V/ 1Ø.
- 32 PROVIDE 2 GANG FLUSH FLOOR BOX WITH BRASS COVER AND FLANGE IN CONCRETE FLOOR, WALKER OMNI BOX SERVICES. COORDINATE LOCATION IN FIELD WITH TENANT, ARCHITECT AND FURNITURE LAYOUT.
- 33 PROVIDE 1-1" EMPTY CONDUIT WITH PULL STRING IN SLAB AND TURN UP AT NEAREST WALL TO CEILING SPACE FOR VOICE/ DATA CABLES. SAW CUT AND PATCH EXISTING FLOOR AS REQUIRED.
- 34 PROVIDE 1-1" CONDUIT IN SLAB WITH 2#12+1#12G FOR POWER AND TERMINATE AS SHOWN ON PLAN. SAW CUT AND PATCH EXISTING FLOOR AS REQUIRED.
- 35 FIRE ALARM CONTROL PANEL SHALL BE PERMANENTLY LABELED WITH PANEL DESIGNATION AND CIRCUIT NUMBER PER NFPA 72.
- 36 FIELD VERIFY FINAL LOCATION PRIOR TO ROUGH-IN WITH ARCHITECT AND TENANTS REPRESENTATIVE.
- 37 PROVIDE PHENOLIC NAMEPLATE ON PANELS WITH PANEL DESIGNATION AND 'SUITE' 102.



DETAIL - COMBINATION OUTLET
NO SCALE

1 FLOOR PLAN - POWER
E-2 SCALE: 1/4"=1'-0"

FIRE ALARM SYSTEM NOTE:
1. FIRE ALARM SYSTEM AND DEVICES SHALL BE BY OTHERS AND IS SHOWN FOR REFERENCE ONLY. FIRE ALARM SYSTEM VENDOR SHALL PREPARE SUBMITTALS FOR REVIEW AND APPROVAL BY LOCAL FIRE MARSHAL.



FLOOR PLAN - POWER AND SCHEDULES

REVISIONS		DRAWING NO.
#1	12/23/11 PERMIT COMMENTS	
#2	1/26/12 PERMIT COMMENTS	
#3	2/17/12 PERMIT COMMENTS	
#4	1/17/17 ARIZONA STATE ABC PLAN REVIEW	

TENANT RENOVATIONS FOR:	LIFELINE ARCHITECTURAL DESIGNS, INC.	DRIVING BY
Access Center	1218 Old Pahrump Road, Primm, NV 89019	DATE
	Office: 402-652-8026 Fax: 402-652-8046	1/23/11
		BY
		10281
		NEW

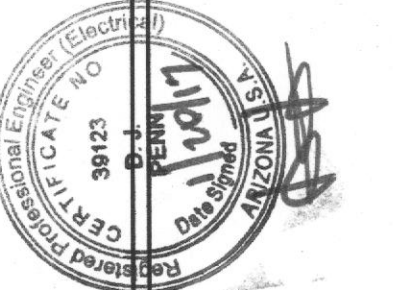
ISSUED FOR ARIZONA STATE ASC PLAN REVIEW

DON PENN CONSULTING ENGINEERS
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TENANT RENOVATIONS FOR:
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Access Center
1100 E. University Dr., Suite 102
Tempe, AZ 85281

DRAWING NO. E-2
SHEET OF 8
DATE 9/23/11
BY MBR
CHECKED BY 10281
NEW
WDC | 2011-118-02



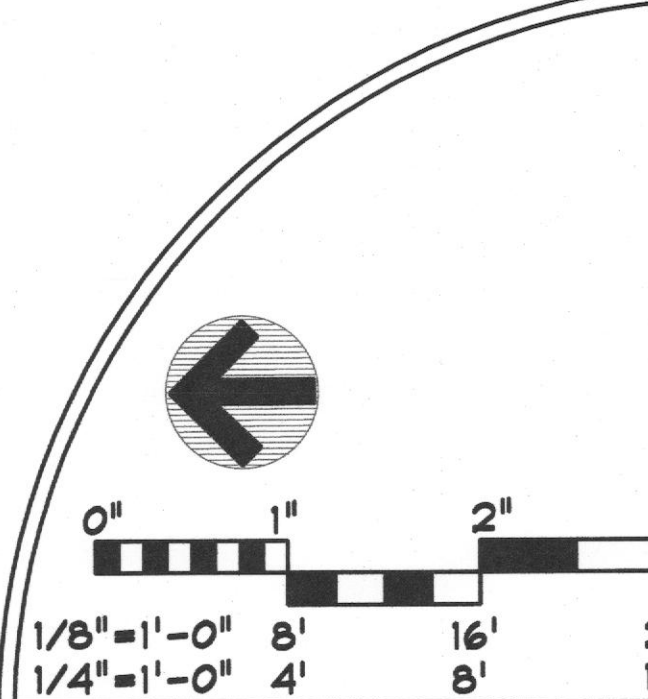
635 WESTPORT PARKWAY, SUITE 300
GRAEVINE, TEXAS 76051
817-410-2888 FAX 817-251-0411

ELECTRICAL SYMBOLS LIST

SYMBOL	DESCRIPTION
	FIXTURE—FLUORESCENT—CEILING, WALL, STRIP
	FIXTURE—INCANDESCENT/FLUORESCENT—CEILING, WALL BRACKET
	FIXTURE—HID—WALL BRACKET
	FIXTURE—INCANDESCENT—FLOODLIGHT/EMERGENCY LIGHT
	EXIT LIGHT—CEILING, WALL, WITH DIRECTIONAL ARROWS
	EMERGENCY BATTERY UNIT, WALL MOUNTED
	SWITCH—SINGLE POLE, THREEWAY, SUBSCRIPT DENOTES OUTLET CONTROLLED M.H. 4'-0"
	SWITCH—PILOT LIGHT, DIMMER M.H. 4'-0"
	SWITCH—MOTOR RATED
	RECEPTACLE—20A-125 VOLTS—DUPLX, DOUBLE DUPLX M.H. 1'-6"
	RECEPTACLE—DUPLX—COUNTER HEIGHT—20A-125 VOLT
	SPECIAL RECEPTACLE AS NOTED
	JUNCTION BOX
	OUTLET—TELEPHONE—WALL WITH RING AND STRING TO CEILING SPACE M.H. 1'-6" UNLESS OTHERWISE NOTED.
	OUTLET—VOICE/DATA WALL WITH RING AND STRING TO CEILING SPACE M.H. 1'-6"
	TELEPHONE TERMINAL BACKBOARD
	PANELBOARD 277/480 VOLTS
	PANELBOARD 120/208 VOLTS
	DISCONNECT SWITCH—UNFUSED, FUSED
	CONTROL DEVICE BY EQUIPMENT CONTRACTOR
	MOTOR—SINGLE PHASE, THREE PHASE, HORSEPOWER AS NOTED
	HEATING ELEMENT—CAPACITY AS NOTED
	FIRE ALARM—PULL STATION M.H. 4'-0"
	FIRE ALARM—AUDIBLE SIGNAL AND VISUAL FLASHER (CANDELA RATING SHOWN)
	FIRE ALARM—VISUAL FLASHER (CANDELA RATING SHOWN)
	FIRE ALARM—SMOKE DETECTOR
	FIRE ALARM—DUCT SMOKE DETECTOR—RETURN DUCT, SUPPLY DUCT
	SMOKE DAMPER
	FIRE ALARM—DUCT SMOKE DETECTOR
	DRY TYPE TRANSFORMER
	ANNUNCIATOR PANEL OR TERMINAL PANEL—AS NOTED
	GROUND CONNECTION
	BRANCH CIRCUIT—IN CEILING OR WALLS
	BRANCH CIRCUIT—IN OR UNDER FLOOR
	BRANCH CIRCUIT—EXPOSED ON CEILING OR WALLS
	HOMERUN TO PANEL—LETTER AND NO. INDICATES CIRCUIT NUMBER. NO. OF CROSSELS INDICATES NO. OF CONDUCTORS WHEN MORE THAN 2+G.
	OUTLET—CABLE TELEVISION WALL WITH RING AND STRING TO CEILING SPACE
	TIMECLOCK
	INTERCOM STATION

ABBREVIATIONS LIST:

AFF	— ABOVE FINISHED FLOOR	MH	— MOUNTING HEIGHT
AHU	— AIR HANDLING UNIT	MOD	— MOTOR OPERATED DAMPER
CU	— CONDENSING UNIT	MTD	— MOUNTED
C, QD	— CONDUIT	RTU	— ROOF TOP UNIT
CH	— COUNTER HEIGHT	TC	— TIME CLOCK
DWG	— DRAWING	UH	— UNIT HEATER
EF	— EXHAUST FAN	VAV	— VARIABLE AIR VOLUME
GRD	— GROUND	W/	— WITH
GFI	— GROUND FAULT INTERRUPTER	WP	— WEATHERPROOF
HP	— HORSEPOWER	XMR	— TRANSFORMER
MCA	— MINIMUM CIRCUIT AMPS	XR	— EXISTING TO REMAIN
MOCPP	— MAXIMUM OVERCURRENT PROTECTIVE DEVICE	RX	— REMOVE EXISTING



SYMBOLS LIST, NOTES, SCHEDULES AND SCHEMATICS

REVISIONS		DRAWING NO.
#1	12/23/11 PERMIT COMMENTS	
#2	1/26/12 PERMIT COMMENTS	
#3	2/17/12 PERMIT COMMENTS	
	1/17/17 ARIZONA STATE ASC PLAN REVIEW	

GENERAL ELECTRICAL NOTES:

- ALL WORK SHALL BE IN ACCORDANCE WITH THE 2008 NATIONAL ELECTRICAL CODE AND ALL LOCAL COUNTY CODES. WIRING METHODS SHALL BE IN ACCORDANCE WITH N.E.C., LOCAL CODES AND STANDARDS. THE CONTRACTOR SHALL OBTAIN AND PAY ALL FEES AND PERMITS REQUIRED FOR THE CONSTRUCTION OF THE PROJECT.
- CONNECT EXIT LIGHTS, EMERGENCY BATTERY UNITS AND NIGHT LIGHTS (NL) TO UNSWITCHED PORTION OF NORMAL LIGHTING CIRCUIT SERVING RESPECTIVE AREA.
- ALL WIRING SHALL BE COPPER, #12 AWG MINIMUM, TYPE THW OR THHN INSULATION, INSTALLED IN CONDUIT (1/2" MINIMUM). NO ROMEX OR BX CABLE PERMITTED. MC CABLE MAY BE USED, WHERE PERMITTED BY CODE, FOR WORK ABOVE CEILING AND CONCEALED IN WALLS.
- REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATION OF LIGHTING FIXTURES AND GRID COORDINATION. THE ELECTRICAL CONTRACTOR SHALL VERIFY THE TYPE OF CEILING SYSTEM WITH THE GENERAL CONTRACTOR OR THE CEILING CONTRACTOR TO INSURE THAT ALL CEILING RECESSED LIGHTING FIXTURES ARE COMPATIBLE WITH THE CEILING SYSTEM BEING INSTALLED. LIGHTING FIXTURES SHOULD NOT BE ORDERED UNTIL TYPE OF CEILING HAS BEEN VERIFIED.
- CONTRACTOR SHALL VERIFY ALL DOOR SWINGS WITH THE ARCHITECTURAL PLANS PRIOR TO INSTALLING LIGHT SWITCH BOXES. LIGHT SWITCHES SHALL BE LOCATED ON LOCK SIDE OF THE DOOR UNLESS PHYSICALLY IMPOSSIBLE TO INSTALL IN THIS LOCATION. VERIFY EXACT LOCATION WITH ARCHITECT PRIOR TO INSTALLATION IN THIS EVENT.
- ELECTRICAL CONTRACTOR SHALL VERIFY ALL VOLTAGES OF MECHANICAL EQUIPMENT WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN.
- CONTRACTOR SHALL VERIFY ALL EQUIPMENT REQUIREMENTS BEFORE INSTALLING CONDUIT OR CONDUCTORS FROM POWER SOURCE TO EQUIPMENT TERMINATION.
- THE WIRE SIZE INDICATED IN THE HOMERUN SHALL BE USED THROUGHOUT THE CIRCUIT.
- THE CORRECT NUMBER OF WIRES MAY NOT BE INDICATED FOR ALL CIRCUITS. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL WIRES NECESSARY FOR THE PROPER FUNCTION OF THE SYSTEM WHETHER INDICATED ON DRAWING OR NOT.
- ALL D.C. WIRING SHALL BE #10 AWG MINIMUM.
- OUTLET BOXES LOCATED ON OPPOSITE SIDES OF RATED WALL MUST HAVE A MINIMUM 24" HORIZONTAL SEPARATION OR PROTECTED BY A LISTED MATERIAL THAT WILL MAINTAIN RATING.
- SEAL ALL CONDUIT PENETRATIONS THRU RATED WALLS AND FLOORS TO MAINTAIN FIRE INTEGRITY. REFER TO ARCHITECTURAL DRAWINGS FOR FIRE WALL LOCATIONS.
- ELECTRICAL CONTRACTOR SHALL USE CONDULET SEALING FITTINGS WITH APPROVED SEALING COMPOUND ON ALL CONDUITS PASSING FROM INTERIOR TO EXTERIOR OF A BUILDING AND OF THE INTERFACE OF DIFFERING SPACE TEMPERATURES.
- AFTER FINAL INSTALLATION, CONTRACTOR WILL BE RESPONSIBLE FOR FILLING ALL VOIDS AROUND CONDUIT PENETRATIONS AND OTHER CORE DRILLS/OPENINGS IN SLAB WITH A FIRE SAFING REMOVABLE MASTIC. FILL SHALL EQUAL FIRE RATING OF FLOOR.
- GROUND, PHASE AND NEUTRAL CONDUCTORS SHALL BE PIG-TAILED IN OUTLET BOXES OR MULTI-OUTLET ASSEMBLY FOR EACH RECEPTACLE SO THAT GROUND AND ELECTRICAL SERVICE WILL NOT BE DISTURBED TO OTHER RECEPTACLES ON THE SAME MULTI-WIRE CIRCUIT IF RECEPTACLE IS REMOVED. THE GROUNDING TERMINALS OF ALL RECEPTACLES SHALL BE GROUNDED BY AN INSULATED COPPER CONDUCTOR IN ACCORDANCE WITH TABLE 250.122 N.E.C.
- ELECTRICAL CONTRACTOR PRIOR TO BID SUBMISSION PROCESS SHALL VISIT PROPOSED WORK SITE AND FIELD VERIFY ALL EXISTING CONDITIONS. ANY CONDITIONS THAT DIFFERS FROM THAT SHOWN ON THIS PLAN SHALL BE REPORTED TO ARCHITECT/ENGINEER SO THAT NEW AND REVISED BID DRAWINGS OR INFORMATION MAY BE ISSUED. MODIFICATIONS TO SCOPE OF WORK WHICH RESULTS FROM CONTRACTORS NEGLECT TO VISIT THE SITE PRIOR TO SUBMITTING BID, SHALL BE THE CONTRACTORS SOLE RESPONSIBILITY.
- ALL EMPTY CONDUIT RUNS IN EXCESS OF 10 FT. SHALL BE PROVIDED WITH A PULL WIRE OR FISH TAPE/CORD.
- ELECTRICAL CONTRACTOR TO VERIFY EXACT PLACEMENT OF ALL DEVICES SHOWN ON THE ELECTRICAL CONSTRUCTION DOCUMENTS WITH ARCHITECTURAL, MECHANICAL AND PLUMBING DRAWINGS PRIOR TO FINAL PLACEMENT.
- ELECTRICAL CONTRACTOR TO INCLUDE GROUND WIRE IN ALL RACEWAYS. SIZE RACEWAYS AS NECESSARY TO COMPLY WITH NEC.
- PROVIDE "HOSPITAL" GRADE RECEPTACLES IN ALL "PATIENT CARE" AREAS PER NEC 517.
- CONTRACTOR SHALL INSTALL "HOT" CABLE OR CONDUIT IN ALL PATIENT CARE AREAS. METAL CLAD (MC), ROMEX AND AC CABLE ARE NOT PERMITTED IN PATIENT CARE AREAS PER NEC 517. COORDINATE PATIENT CARE AREAS WITH OWNER. ALL WIRING IN PATIENT CARE AREAS SHALL COMPLY WITH N.E.C. ARTICLE 517.13 (A) & (B).
- TENANT WILL PROVIDE UNDER SEPARATE CONTRACT (UNLESS OTHERWISE NOTED HERE WITHIN CONTRACT DOCUMENTS) WITH OTHERS ALL EQUIPMENT AND CABLING FOR TELEPHONE, DATA, INTERCOM AND SECURITY SYSTEMS.
- PROVIDE DUCT SMOKE DETECTORS IN ALL AIR HANDLING UNITS RATED 2000 CFM AND GREATER. COORDINATE REQUIREMENTS WITH MECHANICAL CONTRACTOR. CONNECT TO BUILDING FIRE ALARM SYSTEM.
- FIRE ALARM SYSTEM EQUIPMENT IS SHOWN ON THE PLAN, HOWEVER, CONDUIT AND WIRING IS NOT SHOWN. WIRING VARIES BETWEEN MANUFACTURERS, THE WIRING AND CONDUIT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. CONDUIT AND WIRING SHALL BE SUBMITTED WITH FIRE ALARM SUBMITTAL FOR APPROVAL PRIOR TO INSTALLATION.
- ALL RECEPTACLES LOCATED WITHIN 6 FEET OF A SINK SHALL BE GFI TYPE.
- THE ELECTRICAL PLANS ARE DIAGRAMMATIC ONLY. REFER TO ARCHITECTURAL PLANS FOR EXACT DIMENSIONS OF THE BUILDING. REFER TO MECHANICAL OR PLUMBING PLANS FOR EXACT LOCATION OF THE EQUIPMENT.
- ALL DEVICES SHALL BE MOUNTED TO COMPLY WITH AMERICAN DISABILITIES ACT 1991.
- CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER SIZING OF ALL MOTOR OVERLOAD DEVICES (HEATERS) IN STARTERS BASED ON ACTUAL NAMEPLATE RATINGS ON THE MOTORS BEING INSTALLED.
- CONTRACTOR SHALL NOTE UL LABEL/NAMEPLATE ON MECHANICAL EQUIPMENT OR SHOULD LOCAL INSPECTOR CALL FOR THE OVERLOAD PROTECTIVE DEVICE TO BE FUSED. THE ELECTRICAL CONTRACTOR SHALL PROVIDE A FUSED DISCONNECT SWITCH WITH PROPER SIZE FUSES AT THE SWITCH LOCATION AS INDICATED ON THE DRAWINGS.
- ELECTRICAL EQUIPMENT REQUIRING ACCESS SUCH AS J-BOXES OR CONNECTIONS TO EQUIPMENT SHALL NOT BE INSTALLED ABOVE INACCESSIBLE CEILING OR BEHIND WALLS. CONTRACTOR SHALL REMOVE ANY EXISTING CONDUIT AND J-BOXES INCLUDING CONNECTIONS TO ELECTRICAL EQUIPMENT TO AN ACCESSIBLE LOCATION WHETHER INDICATED ON THE DRAWINGS OR NOT. EXISTING CONDUIT AND J-BOXES ABOVE INACCESSIBLE CEILING/WALLS WHICH CANNOT BE RELOCATED SHALL BE ABANDONED WITH ALL WIRING REMOVED.
- PROVIDE TYPED CIRCUIT DIRECTORIES FOR ALL PANELBOARDS TO INDICATE TYPE OF LOAD SERVED AND AREA SERVED (E.G. RECEPTABLES—OFFICE 201.).
- ELECTRICAL COMPONENTS, EQUIPMENT AND SYSTEMS SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE PROVISIONS OF NFPA 70.
- GROUNDING SYSTEM IN PATIENT CARE AREAS SHALL BE TESTED IN ACCORDANCE WITH NEC AND NFPA 99 4.3.3. SUBMIT FINAL REPORT TO OWNER UPON PROJECT COMPLETION.

FIRE ALARM SYSTEM NOTE:

- FIRE ALARM SYSTEM AND DEVICES SHALL BE BY OTHERS AND IS SHOWN FOR REFERENCE ONLY. FIRE ALARM SYSTEM VENDOR SHALL PREPARE SUBMITTALS FOR REVIEW AND APPROVAL BY LOCAL FIRE MARSHAL.

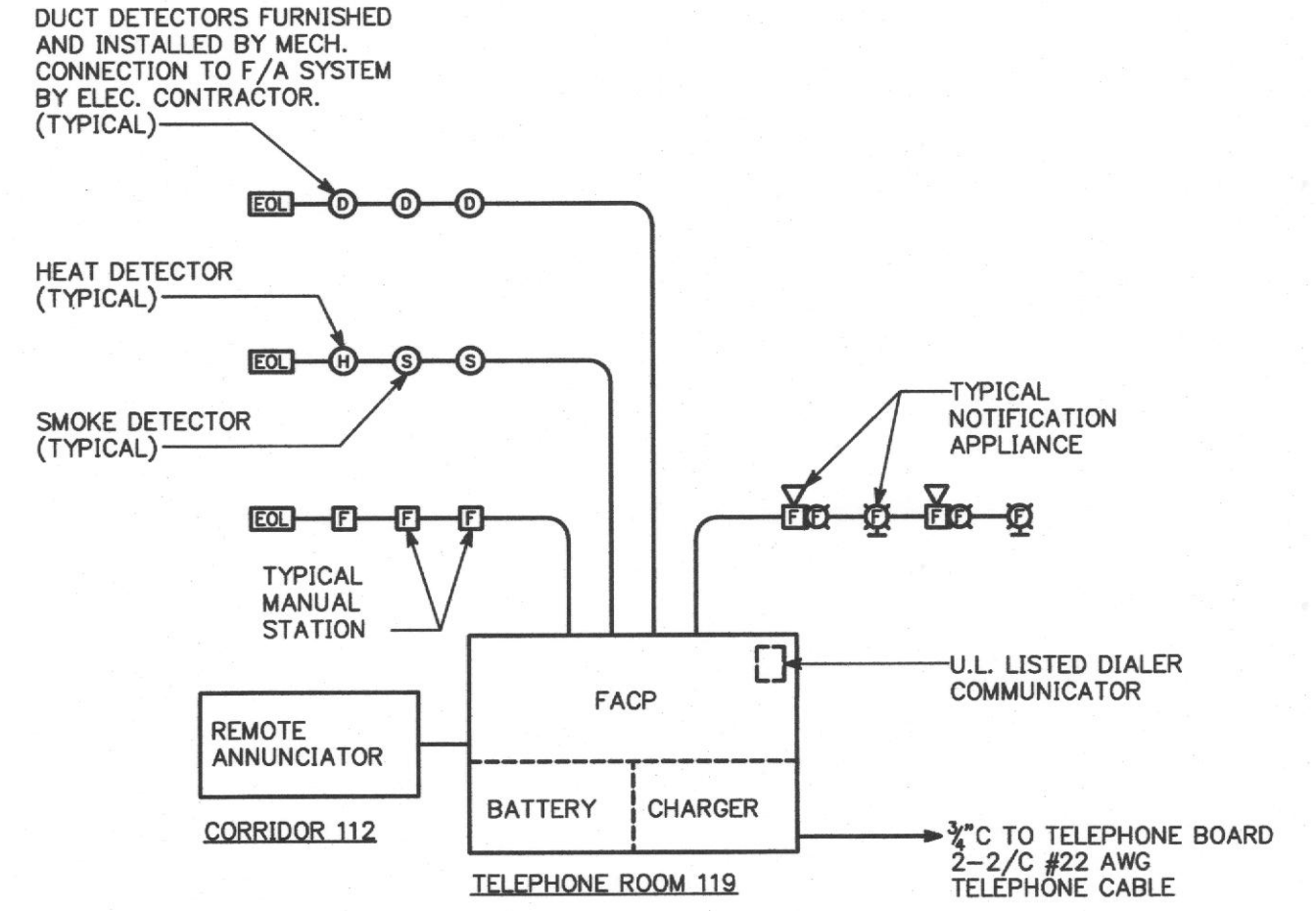
DEMOLITION NOTES:

- ALL ACCESSIBLE ITEMS OF ELECTRICAL EQUIPMENT CONDUITS, WIRING, LIGHTS, RECEPTABLES, ETC. AFFECTED BY THE RENOVATION WORK AND NOT REQUIRED IN THE COMPLETED WORK SHALL BE CAREFULLY REMOVED. DAMAGED WALLS, FLOORS, CEILING, ETC. SHALL BE PATCHED AND FINISHED TO MATCH THE EXISTING ADJACENT SURFACES. REMOVED ITEMS SHALL BE PROPERLY DISPOSED OF OFF SITE AND NOT REUSED EXCEPT AS NOTED. TURN OVER ALL EXISTING EQUIPMENT DESIRED BY BUILDING OWNER.
- WHEREVER EXISTING ELECTRICAL WORK IS INDICATED TO BE REMOVED, THE FOLLOWING NOTES SHALL APPLY:
 - ALL EXISTING WIRING SHALL BE REMOVED BACK TO ITS SOURCE.
 - ALL EXISTING CONDUIT WHICH IS EXPOSED, OR WHICH BECOMES EXPOSED AT ANY TIME DURING CONSTRUCTION SHALL BE REMOVED IN ITS ENTIRETY. CONDUIT STUBS THROUGH THE FLOOR SHALL BE CUT OFF FLUSH WITH THE FLOOR SLAB, FILLED WITH CONCRETE, AND MADE READY TO ACCEPT NEW FLOOR FINISHES WHERE APPLICABLE.
 - WHERE EXISTING CONDUIT STUBS THROUGH THE ROOF ARE NO LONGER REQUIRED, AND OCCUR IN AREAS WHERE THE EXISTING ROOF IS TO REMAIN, THE CONDUIT SHALL BE CUT OFF 6" ABOVE AND BELOW THE ROOF, FILLED WITH EXPANDABLE FOAM SEALANT (DOW CORNING SILICONE RTV OR APPROVED EQUAL). THE CONDUIT SHALL THEN BE CAPPED ABOVE THE ROOF AND MADE COMPLETELY WATERTIGHT.
 - WHEREVER EXISTING FLUSH MOUNTED BOXES WILL REMAIN EXPOSED, FURNISH AND INSTALL BLANK COVERPLATES ON THE EXISTING OUTLET BOXES.
 - ALL EXISTING TELEPHONE WIRING AND EQUIPMENT SHALL BE DISCONNECTED AND REMOVED. COORDINATE DEMOLITION WITH TELEPHONE COMPANY.
- RECONNECT CIRCUITS AS REQUIRED TO MAINTAIN CONTINUITY TO EXISTING DEVICES AND EQUIPMENT NOTED TO REMAIN AS WELL AS ADJACENT AREAS WHICH ARE NOT IN CONTRACT.
- REMOVE ALL ABANDONED POWER BRANCH CIRCUIT CABLES/CONDUITS AND TELEPHONE/DATA CABLES ABOVE CEILING OR IN WALLS THAT ARE NOT USED. EXISTING CONDUIT FOUND TO BE REUSABLE MAY BE USED. ALL OTHER MATERIAL SHALL BE REMOVED FROM THE JOB SITE UNLESS OTHERWISE DIRECTED BY THE RESIDENT ENGINEER.

20 AMPERE CIRCUITS

120 VOLT		277 VOLT		MINIMUM CONDUIT SIZE
WIRE LENGTH	WIRE SIZE	WIRE LENGTH	WIRE SIZE	
0'-60"	#12	0'-130"	#12	3/4"
60'-100"	#10	130'-210"	#10	3/4"
100'-150"	#8	210'-340"	#8	3/4"
150'-240"	#6	340'-540"	#6	3/4"
OVER 240"	#4	OVER 540"	#4	1"

- NOTES:**
- CIRCUIT LENGTH AS GIVEN SHALL BE THE WIRE LENGTH BETWEEN THE FIRST AND LAST OUTLET ON THE CIRCUIT. HOMERUN LENGTH GIVEN SHALL BE THE WIRE LENGTH BETWEEN THE FIRST OUTLET AND THE PANELBOARD.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT ROUTING OF WIRING AND CONDUITS AND SHALL BE RESPONSIBLE FOR SIZING ALL BRANCH CIRCUIT WIRING TO LIMIT VOLTAGE DROP TO 3%. CONTRACTOR SHALL SIZE CONDUIT TO ACCOMMODATE WIRING PER NEC. 20 AMPERE CIRCUITS SHALL BE SIZED AS SHOWN IN SCHEDULE ABOVE.
 - WIRING AND CONDUIT SIZES INDICATED IN PANEL SCHEDULES ARE MINIMUM ONLY. CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING EXACT WIRING AND CONDUIT SIZES. CONTRACTOR SHALL PROVIDE SPLICE BLOCKS AND REDUCING PINS AS REQUIRED TO TERMINATE WIRING AND MAKE FINAL CONNECTIONS.
 - BRANCH CIRCUITS IN PANELBOARDS WITH 200% RATED NEUTRAL BUS AND ALL DIMMER RACK CIRCUITS SHALL HAVE DEDICATED NEUTRAL CONDUCTORS.



FIRE ALARM SYSTEM NOTE: LAYOUT AND ZONING IS SCHEMATIC FOR BIDDING ONLY. FIRE ALARM SYSTEM VENDOR SHALL PREPARE COMPLETE SYSTEM SHOP DRAWINGS AND SUBMIT TO LOCAL FIRE MARSHAL FOR APPROVAL PRIOR TO ROUGH-IN. ZONING SHALL BE PROVIDED AS DIRECTED BY FIRE MARSHAL.

FIRE ALARM RISER DIAGRAM

NO SCALE

SYSTEM OPERATION

- UPON ACTIVATION OF ANY PULL STATION, AUTOMATIC DETECTION DEVICE OR SPRINKLER FLOW SWITCH (IF APPLICABLE) THE SYSTEM SHALL:
 - ANNUNCIATE THE ALARMED DEVICE TYPE AND ZONE LOCATION AT THE FIRE ALARM CONTROL PANEL.
 - ACTIVATE THE AUDIBLE ALARM EVACUATION SIGNAL THROUGHOUT THE PROPERTY AND.
 - ACTIVATE THE VISUAL ALARM INDICATING APPLIANCES THROUGHOUT THE PROPERTY.
- UPON DETECTION OF PRODUCTS OF COMBUSTION, EACH DUCT SMOKE DETECTOR SHALL SHUT DOWN ALL AIR HANDLING UNITS.
- ACTIVATION OF A SUPERVISORY CIRCUIT SHALL ANNUNCIATE A TROUBLE CONDITION AT THE CONTROL PANEL.
- FIRE ALARM SYSTEM WILL BE MONITORED BY A UL LISTED CENTRAL RECEIVING STATION.

FIRE ALARM NOTES

- SYSTEM SHALL BE CLASS "B" OR AS REQUIRED BY LOCAL AUTHORITIES.
 - F.A.C.P. — GAMEWELL, FIRE LITE, OR APPROVED EQUAL. A SPACE FOR 24 ZONES WITH FUTURE SPACE FOR 8 ZONES.
 - NFPA 717, 2.4.3.2 POWER LIMITED APPLICATIONS FOR NEC 760 AND FED. REGISTER VOL. 56 3144 JULY 28, 1991 C.F.M APPROVED AND UL LISTED.
 - CHARGER AND BATTERY PACK FOR MIN. 60 HOURS STND-BY SERVICE ON EMERGENCY POWER.
- SYSTEM SHALL BE AS ACCEPTED BY NATIONAL AND LOCAL CODES AND AUTHORITIES AND SHALL COMPLY WITH ADA REQUIREMENTS.
- SYSTEM SHALL HAVE AN ALARM VERIFICATION MODE TO WAIT 60 SECONDS BEFORE RE-TESTING FOR ALARM.
- SYSTEM SHALL BE INSTALLED PER NFPA 72.
- PROVIDE ALLOWANCE FOR SMOKE DETECTORS MOUNTED ABOVE AND BELOW THE CEILING SHOULD THEY BE REQUIRED BY THE AUTHORITY HAVING JURISDICTION AND THE STATE FIRE MARSHAL.
- FIRE ALARM SYSTEM TO BE COMPATIBLE WITH ANY REQUISITE BASE BUILDING SYSTEMS ALREADY INSTALLED.

- Independent controls for each space (with/without emergency services).
- Exhaustion:
 - Areas designated as security or emergency areas that must be continuously monitored.
 - Lighting in areas or corridors that are elements of the means of egress.
 - Master controls in areas to be continuously monitored.
 - Individual signaling units separately installed.
 - Space required to house a manual control also allows for reducing the connected lighting load by at least 50 percent by either controlling all luminaires, dual switching of alternative means of luminaires, alternate switches, or alternate logic, including the ability to bypass luminaires independently of other logic, or extending each luminaire to each logic.
- Exhaustion:
 - Only one luminaire in space.
 - In occupant assembly areas controls the area.
 - The area is a corridor, stairwell, rest room, public lobby or sleeping unit.
 - Areas that use less than 50 Watts/ft.².
- Automatic signaling control or building larger than 5,000 sq ft.
 - Exhaustion:
 - Exhausting entire patient care areas, and spaces where automatic shutoff would endanger safety or security.
 - Photoluminescent exit signs on exterior signs.
 - Exhaustion:
 - Lighting intended for 24 hour use.
 - Tandem used on one-way and two-way ballasts (this single lamp ballast).
 - Exhaustion:
 - Electronic high-frequency ballasts, Luminaires on emergency circuits or with no available power.

Section 3: Compliance Statement

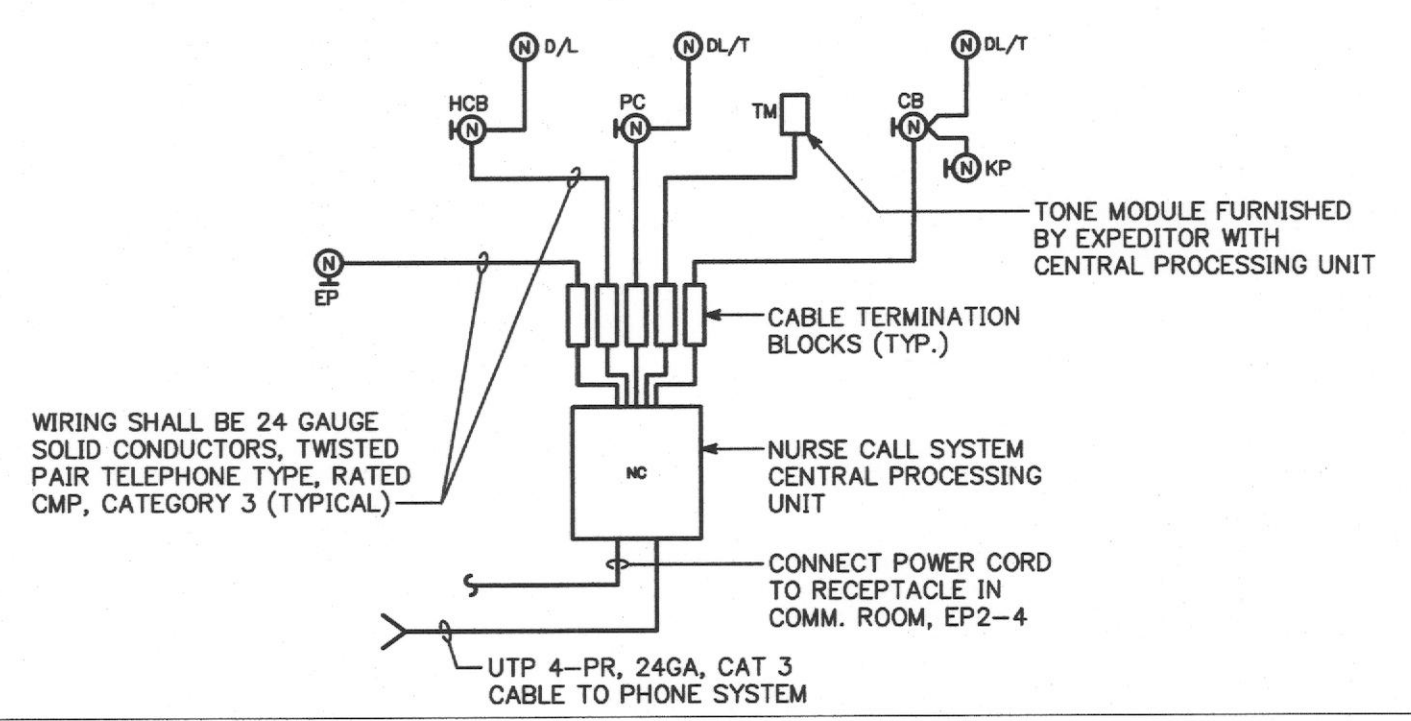
Compliance Statement: The proposed lighting system represented in this document is consistent with the building plans, specifications and other calculations submitted with the permit application. The proposed lighting system has been designed to meet the 2008 IECC requirements in COMcheck Version 3.0 and to comply with the mandatory requirements in the Requirements Checklist.

Name	Title	Signature	Date
Project Manager:			
Energy Auditor and to remain:			

Project Title: Lifeline Access Center
Date Revises: 1/26/12
Page 1 of 1

NURSE CALL SYSTEM

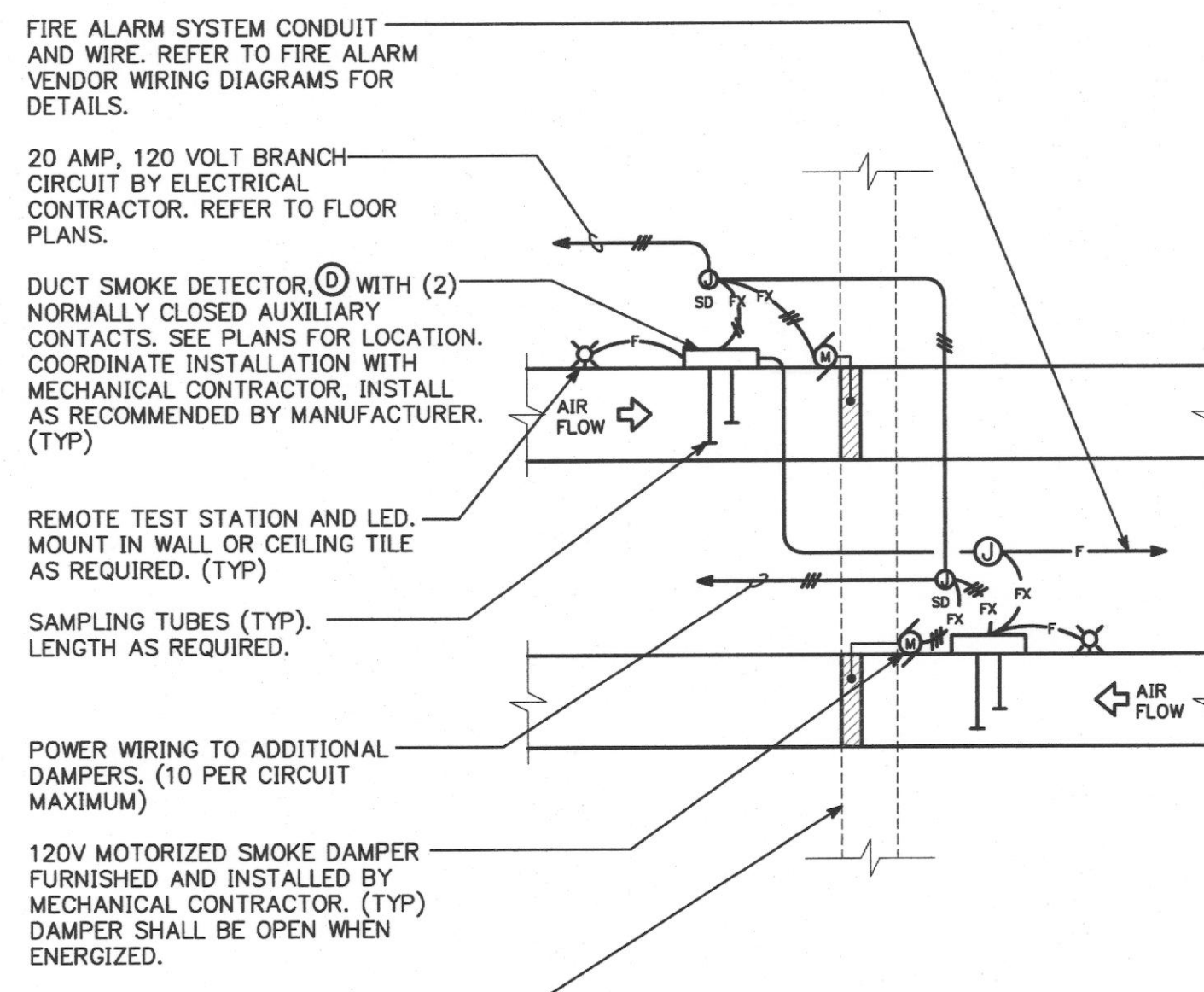
TYPE	LOCATION	DESCRIPTION	CATALOG #
NE	PATIENT PREP/PATIENT RECOVERY SINGLE GANG BACK BOX 48" AFF	HAND HELD CALL BUTTON WITH RESET BUTTON AT WALL SEPARATE EMERGENCY CALL ACTIVATED BY REMOVAL OF PENDANT CHORD FROM WALL PANEL (PREFERRED), OR SEPARATE WALL BUTTON. PROVIDE CEILING MOUNTED INDICATION LIGHT IMMEDIATELY OUTSIDE CUBICLE CURTAIN TRACK AT EACH RECOVER/ PREP POSITION.	EXPEDITOR NCB8 SERIES
NE	PATIENT TOILET/PATIENT DRESSING TWO GANG BACK BOX 48" AFF	WALL MOUNTED CALL SWITCH ACTIVATED BY PULL ON CHORD. PULL MUST NOT BE CANCELLED BY SECOND OR REPEATED PULL ON CHORD. PROVIDE RESET BUTTON ABOVE CHORD ATTACHMENT, OR SIMILAR SEPARATE RESET PROVISION. PROVIDE WALL MOUNTED INDICATION LIGHT/TONE DEVICE ABOVE DOOR. LOCATE TO MAXIMIZE STAFF VISIBILITY/ NOTIFICATION.	EXPEDITOR NPC8 SERIES
NE	PROCEDURE ROOM SINGLE GANG BACK BOX 48" AFF	EMERGENCY CALL ("CODE BLUE"), WALL MOUNTED CALL BUTTON WITH HINGED "ELBOW PLATE" TO FACILITATE EMERGENCY ACTIVATION. PUSH ONCE TO INITIATE CALL, PUSH SECOND TIME TO CANCEL (ALL OFF). PROVIDE WALL MOUNTED INDICATION LIGHT/TONE DEVICE ABOVE DOOR IDENTIFYING TYPE OF CALL. LOCATED TO MAXIMIZE STAFF VISIBILITY/ NOTIFICATION.	EXPEDITOR P-1C SERIES
NE	NURSE WORK/SITE MANAGER/NURSE CONSULTANT/STAFF LOUNGE BACK BOX FURNISHED BY EXPEDITOR INSTALLED BY ELEC. CONTRACTOR 48" AFF	ZONE ANNUNCIATOR PANEL WITH TONE; SHOWS WHICH ROOMS ARE OCCUPIED, STAFF LOCATION, WHICH PATIENTS ARE NEXT, WHERE ASSISTANCE IS NEEDED OR WHERE A SPECIAL PROCEDURE IS REQUIRED.	EXPEDITOR P-6C SERIES
NE	BUSINESS BACK BOX FURNISHED BY EXPEDITOR INSTALLED BY ELEC. CONTRACTOR 48" AFF	ZONE ANNUNCIATOR PANEL WITH TONE; SHOWS WHICH ROOMS ARE OCCUPIED, STAFF LOCATION, WHICH PATIENTS ARE NEXT, WHERE ASSISTANCE IS NEEDED OR WHERE A SPECIAL PROCEDURE IS REQUIRED.	EXPEDITOR P-6C SERIES
NE	PROCEDURE ROOM TWO GANG BACK BOX 12" AFF BELOW '08' DEVICE	KICK PLATE	EXPEDITOR KP-1 SERIES
NE	PATIENT PREP/PATIENT RECOVERY SINGLE GANG BOX IN CEILING	CEILING MOUNTED DOME LIGHT LOCATED IMMEDIATELY OUTSIDE OF CUBICLE CURTAIN. ACTIVATED BY REMOVAL OF PULL CHORD.	EXPEDITOR DOME
NE	PATIENT TOILET/PATIENT DRESSING/PROCEDURE ROOM SINGLE GANG BOX ABOVE DOOR	DOME LIGHT WITH TONE LOCATED ABOVE DOOR. ACTIVATED BY PULL CHORD OR CALL BUTTON.	EXPEDITOR DOME
NE	COMPUTER ROOM	CENTRAL PROCESSING UNIT (CPU); CONTROLS ALL LIGHT PANEL FUNCTIONS. REQUIRES (1) SINGLE LINE (RJ-11C) TELEPHONE JACK AND (1) DEDICATED POWER OUTLET.	EXPEDITOR



NURSE CALL SYSTEM NOTE: LAYOUT IS SCHEMATIC AND FOR INFORMATION ONLY. NURSE CALL SYSTEM VENDOR SHALL PREPARE COMPLETE SYSTEM SHOP DRAWINGS AND SUBMIT TO ARCHITECT FOR APPROVAL PRIOR TO ROUGH-IN.

NURSE CALL SYSTEM SCHEMATIC

NO SCALE



MOTORIZED SMOKE DAMPER WIRING DIAGRAM

NO SCALE

- NOTES:**
- JUNCTION BOX INDICATED FOR DUCT SMOKE DETECTOR POWER SHALL INCLUDE ADDRESSABLE MONITOR MODULE FOR EACH DUCT MOUNTED SMOKE DETECTOR. MONITOR MODULES TO BE PROGRAMMED IN THE FIRE ALARM SYSTEM TO OPEN OR CLOSE THE ASSOCIATED FIRE/ SMOKE DAMPER BASED ON A SIGNAL FROM THE TEMPERATURE CONTROL SYSTEM INDICATING THE ASSOCIATED EQUIPMENT IS IN OPERATION. SIGNAL FROM THE TEMPERATURE CONTROL SYSTEM SHALL BE THROUGH A MONITOR MODULE PROVIDED BY THE FIRE ALARM CONTRACTOR. FIRE ALARM CONTRACTOR TO PROVIDE A MONITOR MODULE AT EACH AIR HANDLING UNIT SHOWN OR AS REQUIRED. AT STARTUP OF EQUIPMENT, ALL ASSOCIATED FIRE/ SMOKE DAMPERS ARE TO BE OPEN. AT SHUT DOWN OF EQUIPMENT ALL ASSOCIATED FIRE/ SMOKE DAMPERS ARE TO BE CLOSED. FINAL LOCATION OF MONITOR MODULES TO BE COORDINATED WITH THE TEMPERATURE CONTROLS CONTRACTOR.
 - FIRE ALARM CONTRACTOR TO PROVIDE ADDITIONAL RELAY MODULES AND WIRE TO THE EQUIPMENT SAFETY CIRCUIT FOR EACH AIR HANDLING UNIT AND EXHAUST FAN. IF A DUCT SMOKE DETECTOR IN THE SYSTEM HAS ADJURED THE RELAY MODULE SHALL SHUT DOWN THE ASSOCIATED EQUIPMENT THROUGH INTERRUPTION OF THE EQUIPMENT SAFETY CIRCUIT. FIRE ALARM CONTRACTOR TO PROGRAM DUCT SMOKE DETECTORS INTO THE SYSTEM TO ALERT THE APPROPRIATE EQUIPMENT SHUTDOWN RELAY MODULE. COORDINATE FINAL LOCATION OF RELAY MODULES WITH THE TEMPERATURE CONTROLS CONTRACTOR.

**COMcheck Version 3.0
Interior Lighting Compliance Certificate**

2006 IECC

Section 1: Project Information
Project Title: Lifeline Access Center
Construction Site: 1100 E. University Dr., Suite 102, Tempe, AZ 85281
Owner/Agent: Lifeline
Design/Contractor: Don Penn Consulting Engineers

Section 2: Interior Lighting and Power Calculation

Area Category	A	B	C	D	E
Healthcare-Clinic	1400	1400	1400	1400	1400
	Total Allowed Watts =	1400			

Section 3: Interior Lighting Fixture Schedule

Fixture ID	Description / Lamp / Wattage / Per Lamp / Ballast	A	B	C	D	E
Line#1	Linear Fluorescent 1, 2x4' 40W T8 320V / Electronic	2	77	64	408	
Line#2	Linear Fluorescent 2, 2x4' 80W T8 320V / Electronic	2	77	64	500	
Line#3	Linear Fluorescent 3, 2x4' 40W T8 320V / Electronic	2	1	64	44	
Line#4	Linear Fluorescent 4, 2x4' 40W T8 320V / Electronic	4	27	128	104	
Line#5	Linear Fluorescent 5, 2x4' 40W T8 320V / Electronic	1	4	64	108	
Line#6	Linear Fluorescent 6, 1x4' 40W T8 320V / Electronic	1	4	25	25	
Line#7	Linear Fluorescent 7, 1x4' 40W T8 320V / Electronic	1	4	25	25	
Line#8	Linear Fluorescent 8, 1x4' 40W T8 320V / Electronic	1	1	100	100	
Line#9	Linear Fluorescent 9, 1x4' 40W T8 320V / Electronic	1	1	300	200	
Line#10	Linear Fluorescent 10, 1x4' 40W T8 320V / Electronic	1	1	26	26	
Line#11	Linear Fluorescent 11, 1x4' 40W T8 320V / Electronic	1	1	18	18	
Line#12	Linear Fluorescent 12, 1x4' 40W T8 320V / Electronic	2	1	18	18	
	Total Proposed Watts =				5822	

Section 4: Requirements Checklist

Lighting Wattage

1. Total proposed watts must be less than or equal to total

ELECTRICAL SPECIFICATIONS

GENERAL ELECTRICAL REQUIREMENTS

- 1.1 Requirements:**
- A. The work covered by this Section of the specification includes furnishing of all labor, equipment, supplies and materials and performing all operations including excavation and backfilling, cutting, channeling and chasing necessary for the installation of wiring systems, as shown on the drawings, as hereinafter specified, and as directed by the Engineer.
- B. The Contractor shall perform all work hereunder in strict accordance with the rules and regulations of all applicable municipal, state and other local codes, and in accordance with applicable provisions of the 2005 edition of the National Electrical Code.
- C. The Contractor shall make application for all necessary permits, licenses and inspections as required under the above codes and shall pay all fees and charges appurtenant thereto.
- D. The electrical contractor shall make application for electrical service with the local electrical utility and forward anticipated electrical loads for the project. In addition, the electrical contractor shall be responsible for coordinating the installation of the permanent electrical service with the utility company to assure completion of the earliest possible date so as not to delay the project.
- E. The general arrangement of conduit, wiring and equipment shall be as shown on the contract drawings. The Contractor shall carefully examine all contract drawings and shall be responsible for the proper fitting of materials and equipment in each location as indicated, without substantial alteration. In as much as the drawings are generally diagrammatic and due to the small scale of the drawings, it is not possible to indicate all offsets, fittings and accessories, as may be required. The Contractor shall carefully investigate the site, structural, and finish conditions affecting his work and shall arrange such work accordingly, furnishing such fitting and accessories as may be required to meet such conditions, at no additional cost to the Owner. The right to make any reasonable change in location of apparatus, equipment, outlets or routing of conduit and wiring, up to the time of roughing-in is reserved by the Engineer without involving any additional expense to the Owner.

- 1.2 Materials:**
- A. All materials shall be new and the best of their respective kinds, suitable for the conditions and duties imposed on them after installation. All such material shall be as found in the approved list of the National Board of Fire Underwriters. All equipment and systems shall be UL approved.
- B. Where material or equipment is identified by proprietary name, model number and/or manufacturer, furnish the named item or equal thereof, subject to acceptance by the Engineer. Substituted items shall be equal or better in quality and performance and must be suitable for the available space, required arrangement and application. Submit all and data necessary to determine the suitability of substituted items. The suitability of only the named item has been verified. Where more than one item is named, only the first item has been verified as suitable.

- 1.3 Examination of Premises:**
- A. The Contractor shall visit the site and observe the conditions under which the work shall be done or other circumstances which will affect the contemplated work. No allowance will be made subsequently in this connection for any error or negligence in the Contractor's part.
- 1.4 Shop Drawings:**
- A. The Contractor shall prepare and submit detailed shop drawings. In general, catalog cuts, specification sheets, descriptive data, etc., shall be acceptable for submittal of all equipment specified by standard catalog numbers, unless directed otherwise by the Engineer.

- 1.5 Low Voltage Testing:**
- A. The Contractor shall furnish all labor, materials, instruments, fuel and power required to perform all necessary tests. All tests shall be performed to the satisfaction of the Engineer. All defective materials and/or workmanship discovered as a result of these tests, shall be removed and replaced at the Contractor's expense and the test repeated.
- B. A thorough test shall be made to demonstrate that the system is entirely free from ground faults, short circuits, and that the resistance to ground of a ground of non-grounded circuits, before and after connection of equipment meets the requirements of the National Electrical Code.

- 1.6 Identification:**
- A. Mark and permanently identify all motor starters, switches, controls, panelboards and other equipment in accordance with the project nomenclature. Identification plates shall be laminated plastic, black and white engraved letters. Letters for panels and other equipment shall be 3/8" high. Attach identification plates by permanent means.
- B. No embossed plastic tape markers or hand written marker pens will be permitted for use in marking equipment.

- 1.7 Guarantees:**
- A. The material and workmanship of all parts of the electrical installation specified herein shall be guaranteed unconditionally for a period of one (1) year from date of acceptance against mechanical and electrical defects arising from faulty materials or workmanship. Either replacement or repairs shall be made promptly on any defective materials or workmanship without charge during that period.

- 1.8 Record Drawings:**
- A. Upon completion of the electrical installation, the Contractor shall deliver to the Owner one (1) set of prints of electrical contract drawings which shall be legibly marked in place by reason of this work shall be repaired at the Contractor's expense. Patching shall be uniform in appearance and shall match with the surrounding surface.

- 1.9 Record and Information Manual:**
- A. The Contractor shall have prepared three (3) copies of the Record and Information Manual and deliver three copies of the booklet to the Owner. The manuals shall include copies of all specifications, shop drawings and maintenance instructions for all electrical equipment provided.

- 1.10 Outfitting and Patching:**
- A. All cutting and patching necessary for the installation of the electrical work shall be done by the electrical contractor. Any damage done to the work already in place by reason of this work shall be repaired at the Contractor's expense. Patching shall be uniform in appearance and shall match with the surrounding surface.

- 1.11 Mounting Heights:**
- The following mounting heights of the various electrical outlets and devices are for guidance, the Contractor shall study the Architectural and Electrical Drawings for exact locations coordinated with door swings, glass partitions, etc.

- Switches & Pull Stations 48" to center of outlet box above floor.
- Receptacles 18" to center of outlet box above floor (unless otherwise noted).
- Voice/Data Outlets 18" to center of outlet box above floor (unless otherwise noted).
- Fire Alarm Horns/Flashing lights.... 80" min to 84" max to top of device.

- 1.12 Motor Connections and Control Wiring:**
- A. Provide all power wiring and connections from source to starter, starter to disconnect, and disconnect to motor or device, except where such wiring is provided by equipment manufacturer. All automatic temperature control wiring shall be furnished and installed under Division 15 - Mechanical, unless indicated or specified otherwise. However, Electrical Contractor shall provide and install all starters and make all power connections. Manual control switches shall be furnished and/or installed by the Electrical Contractor as indicated.
- B. Furnish and install a disconnect for each motor. Disconnects shall be fused or unfused safety switches as required.

- 1.13 Connections and Alterations To Existing Work:**
- A. Any electrical work which will interfere with the normal use of the building in any manner shall be done at such times as mutually agreed upon between the Contractor and the Owner's representative.
- B. All existing electrical systems in occupied areas shall be kept in operation during the progress of the work. Temporary electrical connections shall be provided to all systems and equipment where necessary to maintain continuous operation until the new systems and equipment are ready for operation.
- C. When existing electrical work is removed, all conduit, ducts, wiring and appurtenances shall be removed to a point below the finished floors or behind finished walls and capped. Such points shall be far enough behind finished surfaces to allow for the installation of the normal thickness of finish material.
- D. When the work specified herein connects to any existing conduit, wiring or other equipment, the Contractor shall perform all necessary alterations, cutting and fitting of the existing work as may be necessary or required to make satisfactory connections between the new and existing work and shall leave the completed work in a finished and workmanlike condition, to the entire satisfaction of the Engineer.
- E. When the work specified herein or under other divisions of this contract necessitates relocation of existing conduit, wiring or electrical equipment, the Contractor shall perform all work and make all necessary changes to existing work as may be required to leave the completed work in a finished and workmanlike condition to the entire satisfaction of the Engineer.
- F. All existing electrical materials not reused under this division and not salvaged by the Owner shall become the property of the Contractor and shall be disposed of in a proper manner off the project site.
- G. Removal of existing equipment and feeder renovations shall be closely coordinated with the Owner's representative where they impact critical areas. Interruption of electrical service to critical equipment shall be kept to a minimum and performed on off hours as designated by the Owner's representative.

- 1.14 Electrical Demolition:**
- A. In areas indicated to be renovated, remove that portion of the existing electrical installation to complete the new work and all equipment, wiring, conduits and appurtenances necessary for the completed installation. All unused electrical and wiring exposed after demolition shall be removed back to the point of concealment.
- B. Where electrical systems pass through the renovated areas to serve other portions of the facility, they shall be suitably relocated and the system restored to normal operation.
- C. The extent of electrical demolition and relocation is not specifically indicated on the drawings. The contractor shall visit the site prior to submitting his bid to thoroughly review the existing installations and the proposed construction to include the full scope of electrical demolition and relocation. The contractor shall review all areas of the proposed renovation and the required removal and relocation of existing electrical work. In addition, the contractor shall review in detail, the architectural drawings for areas of demolition and removal of existing construction and review in detail, the existing electrical installations at the site. This review shall include all necessary costs in the bid to make the necessary adjustments to the existing electrical work to meet the proposed building construction. No allowances or change orders will be made after the bid for insufficient review and/or cost for the electrical demolition.

BASIC ELECTRICAL MATERIALS AND METHODS

- 1.1 Conduits and Fittings:**
- A. General:
- 1) Install all wiring in conduit (except where noted under Wire and Cable) and provide empty conduit for special systems described elsewhere.
 - 2) Minimum conduit size shall be 1/2". All conduit embedded in concrete shall be 3/4" minimum. All exterior underground conduit shall be 1" minimum.
 - 3) In finished areas, install all conduit concealed unless otherwise indicated. Where conduit cannot be suitably concealed, use surface metal raceway as manufactured by Wiremold. All surface metal raceway shall be run inconspicuously and painted to match adjacent wall/ceiling finishes. Conduit may be run exposed on unfinished walls, in mechanical equipment spaces and elsewhere as indicated.

- 4) Support all conduit not embedded in concrete or masonry so that strain is not transmitted to outlet boxes and pull boxes, etc. Supports to be sufficiently rigid to prevent distortion of conduits during wire pulling.

- B. Conduit:
- 1) Provide hot-dip galvanized, rigid steel conduit for work exposed to weather and for embedded work in concrete or masonry and in or below the concrete slab on grade (above the vapor barrier).

- 2) Provide galvanized, (inside and out) electrical metallic tubing (EMT) for interior exposed work, for concealed work above suspended ceilings and within interior partitions or non-masonry walls.
- 3) Provide polyvinylchloride (PVC) schedule 40 conduit for exterior underground direct burial and interior underground concrete encased installation.

- C. Supports:
- 1) All parts and hardware used for support of equipment, conduits and fittings, shall be galvanized.
 - 2) Support single runs of suspended feeder conduit with adjustable hangers using threaded rods attached to the structure above.
 - 3) Support groups of suspended conduits run in parallel on trapeze hangers constructed of "Kindorf" channels and conduit straps suspended with threaded hanger rods attached to the structure above. No tie wires or building wire shall be used for strapping conduits.

- 4) Support surface runs of conduit using one hold pipe straps or two hold pipe straps. Strap spacing maximum 6 ft. on centers.
- 5) Fasten pipe straps and hangers to concrete using inserts or expansion bolts and to hollow masonry using toggle bolts. Wooden plugs and shields will not be permitted. All supports in bar joint construction shall be attached to the top cord of the joists using suitable clamps approved for the purpose.

- 6) Support conduits from joists and beams using clamps and/or Caddy clips approved for the purpose.

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- 1) All parts and hardware used for support of equipment, conduits and fittings, shall be galvanized.
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- 6) Support conduits from joists and beams using clamps and/or Caddy clips approved for the purpose.

- 1.2 Wire and Cable (600 Volt):**
- A. Building wire, unless otherwise indicated, shall be 600 volt, type THHN/THWN-2 insulation for interior use and exterior use within conduit. Conductors shall be sized and run as indicated. Conductors shall be soft drawn copper of not less than 98% conductivity. Branch circuits (rated 60 amperes or less), installed above ceilings and within walls, where permitted by code, may be type MC cable (with ground wire). No Romex or BX cable is permitted.

- B. No wire smaller than number twelve (12) AWG shall be used unless otherwise indicated. The wire size indicated in the homerun shall be used throughout the circuit. Conductors shall be continuous from outlet to outlet and from terminal board to point of final connection, and no splice shall be made except within outlet or junction boxes. All conductors shall be of the sizes as indicated. All wires number eight (8) AWG and larger shall be stranded. The Contractor shall make wiring connections of all electrical equipment requiring electric service. Wires and cables shall be as manufactured by Plastic Wire & Cable Corporation, Okonite Company, General Electric or equivalent.

- C. A color coding system, as listed below, shall be used for throughout the building's network of feeders and circuits and used as a basis of balancing the load. Selection shall be based on applicable work covered by this Contract.
- | System | Phase A | Phase B | Phase C | Neutral | Ground |
|----------|---------|---------|---------|---------|--------|
| 120/208V | Black | Red | Blue | White | Green |
| 277/480V | Brown | Orange | Yellow | White | Gray |

- D. All control wiring shall be color coded with wires of colors different from those to designate phase wires. All isolated ground conductors shall be green with a yellow tracer.

- 1.3 Disconnects (Safety Switches):**
- A. Furnish and install safety switches where indicated and as required for motor outlets or other equipment. Switches shall be of size, number of poles and fused or nonfused, as required for job conditions and the National Electrical Code.
- B. Switches shall be equipped with fuse contacts and jaws which insure positive fuse and jaw contact by means of reinforcing spring clips or other approved means. All current carrying parts shall be silver plated. Hinges shall be non-current carrying. Switches shall be so designed that they can be locked in either open or closed position. Switches used with Class R fuses installed shall have rejection clip provisions.
- C. All safety switches shall be quick-make, quick-break, and have interlocking cover with handle that may either be front or side operating with a padlocking provision, as manufactured by Square "D" or approved equal. Provide NEMA 3R enclosures where required to be weatherproof.

- 1.4 Motor Starters:**
- A. Provide starters, H-O-A switches and pilot lights for all motors. All temperature control wiring and components shall be under Division 15 - Mechanical.
- B. Thermal manual motor starting switches shall be provided for all fractional horsepower, single phase motors, unless otherwise specified. Manual motor starters shall be of the snap-switch type containing thermal overload protection and a self-indicating trip-free handle. Starting switches shall be combined with a three-position hand-off-automatic selector switch when motor is controlled automatically. (Refer to mechanical equipment schedules.) Pilot indicating light shall be mounted in all starter enclosures where noted. The starters shall be Square D Company, Class 2510, Allen Bradley Bulletin 600, or approved equal. Enclosures shall be NEMA 1 for interior use.
- C. Magnetic motor starters shall be provided for all three phase motors unless otherwise specified. Motor starters shall be 3 pole, 60 hertz, full-voltage, magnetic type with NEMA 1 enclosure. Starters shall be provided with three element overloads. Where shown, starters shall be of the combination fused or unfused disconnect type as noted. Starters shall be equipped with hand-off-automatic selector switch when automatically controlled, a pilot indicating light and auxiliary contacts. Each magnetic starter shall have a 120 volt coil, an individual control power transformer and a fuse for protection of control wiring. Starters shall be Square D Company, Class 8536 and Class 8538 as required or approved equal.

- 1.5 Wiring Devices:**
- A. The following wiring devices shall be furnished and installed where called for on the drawings. Miscellaneous items not included below shall be Underwriters Laboratories (UL) and approved equal, as required. All devices shall be of the same manufacturer. Devices shall be Arrow Hart, General Electric, Circle F, or Hubbell or equal.

- 1) **Wall Switches:** Toggle switches shall be of the silent mechanical type rated 20 ampere. Three and four-way switches shall be of the same manufacturer and grade.
- 2) **Receptacles:** Receptacles for wall outlets shall be rated 20 ampere, 125 volts duplex, three-wire with third pole grounded, GFCI (ground fault circuit interrupter), 120 volt, isolated ground (IG) receptacles shall be orange in color and be isolated ground type.
- 3) **Special Wiring Devices:** Shall be provided as shown on the drawings.
- 4) **Dimmers:** Shall be solid state, full wave, incandescent or fluorescent (based on the load controlled), rated 120 volt 1000/1500/2000 watts as required by the circuit. Provide Lutron "Nova" slide series or Prescote "P" series.

- 5) **Ground, phase and neutral conductors** shall be pig-tailed in outlet boxes or multi-outlet assembly for receptacles so that ground and electrical service will not be disturbed to other receptacles on the same multi-wire circuit if receptacle is removed.
- 6) **Device Plates:** A device plate shall be provided for each outlet requiring one. All plates shall be manufactured of satin finished, 0.032 stainless steel, Type 430, except where specifically called for to be otherwise in these specifications. Telephone blank plates shall be of similar construction.
- 7) Where wiring devices are noted to be weatherproof, they shall be mounted with clear Lexan, hinged lid type covers which allow the plug to remain in while the cover is closed (intermatic or equal).

- 1.6 Grounding:**
- A. The main service grounding system shall consist of three branches, one being a grounding conductor to the water piping system which shall be sized in accordance with the National Electrical Code, the second being a grounding conductor to the reinforcing steel and the concrete footings, the third being a grounding conductor to the electrode grounding system (driven ground rods) which shall be sized in accordance with the National Electrical Code. In all instances, the grounding conductor shall be bonded at both ends to the conduit which it is installed. The main service ground to the water piping system shall be connected on the street side of the water meter, or on a cold water pipe as near as practicable to the water service entrance to the building. Bonding jumpers shall be provided where required by the National Electrical Code. Bond all structural steel of the building to the main service ground bus.
- B. Contractor shall provide a grounding system consisting of driven ground rods with interconnecting cables. Ground rods shall be installed with two feet of cover and cables exothermically welded. Ground rods shall be 3/4" diameter by 10 feet long copper clad steel, one piece, copperweld #2450, or approved equal. Ground rod conductors shall be #1/0 bare direct buried. The ground system shall be so constructed that the resistance between the equipment and the ground shall not exceed 25 ohms.
- C. Provide equipment grounding conductors in all raceways and cables sized in accordance with the NEC.

SERVICE AND DISTRIBUTION

- 1.1 Electrical:**
- A. Electrical service to the site is existing underground 277/480 volt, 3 phase, 4 wire service. Coordinate metering requirements with utility company. All work shall be in accordance with the utility companies Commercial Construction Handbook - latest edition. All charges for permanent service by the utility company shall be paid for by the Owner.

- 1.2 Panelboards:**
- A. Furnish and install, where indicated on the drawings, automatic circuit breaker panelboards complete with enclosing cabinets. Enclosures shall be NEMA 1 for recessed or surface mounting as indicated. Where panelboards are recessed mounted, they shall be provided with a minimum of 3 @ 3/4" spare conduits per backbox to the accessible ceiling space above and terminated for future use. Panelboards and enclosing cabinets shall conform to standards established by Underwriters Laboratories, Inc., and requirements of the NEC.
- B. The Contractor shall branch the loading on all panelboards as closely as possible and to the satisfaction of the Engineer.
- C. All panelboards interiors shall be factory assembled, complete with circuit breakers as scheduled on the drawings. All circuit breakers shall be quick-make and shall be trip indicating.
- D. The circuit numbers used on the drawings are for identification only and the circuit number in the panelboard need not necessarily correspond. Each circuit in the panels, however, shall be accurately indexed as specified herein. Circuits shall be arranged in panels so that all lighting circuits are together, motor circuits are together, etc.

- E. As specifically designated on the drawings, panelboards shall be 120/208 volt, and 277/480 volt, three phase employing ball-on breakers of not less than the symmetrical A.I.C. ratings indicated on the drawings. Provide isolated ground bus and 200% neutral bus as designated on the drawings. Furnish type Square D, General Electric or Westinghouse as indicated on the panelboard schedule as follows:
- | Manufacturer | 120/208V | 277/480V |
|------------------|------------|--------------|
| Square D | NOQD | NF |
| General Electric | AO | AE |
| Cutler-Hammer | POW-R-LINE | POW-R-LINE-2 |

- F. Distribution panels 600 amperes and larger shall be provided as scheduled on the drawings and shall accept branch breakers up to the main rating of the panel. Panels shall be as manufactured by Square D - L-Line construction or equal.

- 1.3 Fuses:**
- A. Fuses for service entrance and distribution equipment shall be UL listed class RK-1 and L current limiting type. All fused switches shall incorporate rejection clips to insure only current limiting replacement fuses. Provide Busman "low peak" or equal by Coulter-Sherritt. Provide a spare set of three fuses to the owner for each ampere size and type used.

- 1.4 Dry Type Transformers:**
- A. Furnish and install where indicated on the drawings, self-cooled, dry type transformers of KVA, phase, and voltage ratings indicated on the drawings. Provide K-13 transformers suitable for use with non-linear loads where noted. Where transformers are not indicated to be "K" rated they shall be energy efficient type meeting NEMA TP-1 standards.
- B. Transformers shall be enclosed in a suitable housing arranged for conduit entrance on the primary and secondary side. Cases shall be provided with adequate louvered openings to allow suitable ventilation and cooling. Transformers shall have Class H (220 degrees C) insulation for continuous operation at rated load in a 40 degree C. ambient with a temperature rise not exceeding 150 degree C.
- C. Transformers shall have four 2-1/2X full rated KVA taps below and two 2-1/2X above rated primary voltage. Transformers shall have a noise level not exceeding 45 db based on standard NEMA test procedures.
- D. The transformers shall be wall or floor mounted as indicated. Wall mounted units shall be bracketed off the wall and structurally supported by a steel element structure with steel supports sufficiently sized to accommodate the transformer weight. All units shall be mounted on suitable vibration isolators.
- E. Neutrals of all dry type transformers shall be grounded in accordance with the N.E.C. All transformers. Immediate connections to and from transformer shall be through flexible conduit. Complete shop drawings and details shall be submitted to the Engineer for approval. Transformer shall be Hav-Duty Electric Company, General Electric, Sorgel or Acme.

LIGHTING

- 1.1 Scope:**
- A. Furnish and install a complete lighting fixture for each lighting fixture symbol shown on the drawings, of the type and quality as described herein. Fixtures shall be installed complete with lamps of the wattage indicated, sockets, housing, ballast (if required), shades, diffusers, supports, etc., and wired for operation.

- 1.2 Requirements:**
- A. The Contractor shall be completely responsible for the proper and accurate position of sockets in all fixtures so that the filament of the size and type lamps specified, when installed in such sockets, will be in correct relation to the center of the fixture as specified by the manufacturer of the various lighting fixtures and glass units specified.
- B. All sockets shall be approved by Underwriters Laboratories, Inc. Fluorescent sockets shall be thru-slat type and incandescent lamp sockets shall be 250 volt code standard, medium base for lamps up to 200 watts inclusive and Mogul base for lamps 300 watts and larger. They shall be of Bryant, Hubbell, Arrow, Benjamin, General Electric or approved equal.
- C. All fixtures shall be wired for polarized system with one wire in each fixture to be distinctly marked for its entire length. Wire shall bear the label of approval of the Underwriters Laboratories, Inc. Fixture wiring for fluorescent fixtures and branch circuit wiring in fluorescent fixture channels shall be type THHN or THW (90 degree C. rated). All channels in fluorescent lighting fixtures shall be approved for through wiring. Type AF wire shall only be used for interior incandescent fixture wiring.
- D. All fixtures shall be in accordance with all local Municipal and State Requirements governing same and shall be U.L. approved.
- E. All plastic diffusers shall be 100 percent virgin acrylic (nominal 1/8 inch thick) and all Lexan diffusers shall be Lexan Type MR-4000, or equal.
- F. Each fixture shall be completely equipped with lamps of the size, type, wattage and shape indicated and specified. All lamps shall be manufactured by the General Electric Co., Westinghouse Mfg. Co., Sylvania or approved equal, of standard schedule make. Lumen output and life of lamps shall be proper voltage for the building. Exact voltage shall be checked before ordering fixtures.
- G. Fluorescent lamps shall be Sylvania F032794100K or approved equal, unless otherwise specified. Lamps shall be energy saver type.
- H. All fluorescent lighting fixtures shall have energy saving, solid state electronic ballasts.
- I. At the location of outlets indicated on the various drawings, the type of fixture required is designated by a type letter. All fixtures shall be furnished in the quantities, sizes and types as indicated on the drawings.

- J. Recessed incandescent and fluorescent fixtures in ceilings may not be supported from the suspended ceiling construction. Box and fixture supports shall be fastened securely to concrete slab or bar joist, except as noted. Where fixtures are surface mounted, they shall be cut in the ceiling as required for the fixture supports. All support hangers, channels, bolts, etc., shall be galvanized or Galv-Krom.
- K. Provide adequate supports for all fixtures separate from the suspended ceiling system. Contractor shall furnish and install all necessary accessories, as required, to support the fixtures. Provide a minimum of two (2) galvanized steel #12 gauge hanger wires (alternate corners) on all recessed fixtures.

COMMUNICATION SYSTEMS

- 1.1 Scope:**
- A. The Contractor shall furnish and install all material, labor and incidentals necessary for the complete installation and successful operation of the following systems:
- (1) Telephone (conduit rough-in)

- 1.2 Telephone System:**
- A. Telephone service shall be extended by Telephone Company. Provide wall and floor telephone outlet boxes, conduits, backboards, sleeves, receptacles, and other equipment shown on the drawings for use by the Telephone Company. All charges by the Utility Company shall be paid by the Owner.
- B. Wall outlets for telephone shall consist of 4" square boxes with single gang ring coverplate and 3/4" empty conduit to the nearest accessible ceiling.
- C. Furnish 3/4" plywood backboard for telephone equipment, where indicated on drawings or as directed in field.
- D. All elbows in conduit runs shall be wide sweep field bends. Install pull boxes as required and where provided by the Telephone Company and/or as required by the National Electrical Code.
- E. Erect nylon pull wire in all conduits left empty. All conduits shall be terminated with nylon insulating bushings.

FIRE ALARM SYSTEM

- 1.1 Scope:**
- A. The Contractor shall furnish and install all material, labor and incidentals necessary for the new fire alarm system throughout the existing and new building. All work shall be coordinated with the existing building and the local fire marshal.

- 1.2 Fire Alarm System:**
- A. Provide an integrated, automatic fire/smoke detection system complete with all wiring, conduit, boxes, controls, automatic and manual initiation devices, annunciators, microphone stations, audible speaker/horns and visual devices.
- B. The system shall be manufactured by Notifier, Gamewell, Edwards or approved equal. Match existing system when applicable. The system shall be a microprocessor based, multiplex type with "addressable" initiating devices and be 100% compatible with existing system.
- C. The voice evacuation portion (if required) of the system shall be a continuous voice/tone speaker alarm type. The voice evacuation shall include an electronic pre-recorded message and remote microphone stations in locations shown on the drawings.
- D. The system shall meet all requirements of the NFPA and local requirements. The manufacturer shall submit shop drawings to the fire marshal or authority having jurisdiction and obtain approval prior to starting any rough-in work.
- E. The contractor and his fire alarm vendor shall prepare equipment cuts and rough-in drawings showing all devices and associated wiring requirements and zoning. Submit this information to the engineer for approval and to the authority having jurisdiction for approval.

- 1.3 SYSTEM COMPONENTS:**
1. Strobe lights and horn/speaker notification devices shall meet the requirements of the ADA as defined in UL Standard 1971 and shall consist of a xenon flash tube and associated lens/reflector. Strobe shall produce one flash per second with continuously applied minimum voltage. Audibility shall meet the requirements of NFPA over the facility's ambient level.
 2. Manual Fire Alarm Stations shall be non-break glass type, equipped with key lock for testing. Stations shall be constructed of red Lexan and the word FIRE shall appear on the front of the station in raised white letters.
 3. Ionization Type Area Smoke Detectors shall be two-wire, 24 VDC type using a dual unipolar chamber. Each detector shall contain an LED output and a built-in test switch. Visual indication of an alarm shall be provided by a Latching Light Emitting Diode (LED), on the detector, which may be seen from floor level.
 4. Duct Smoke Detectors shall be 24 VDC, ionization type with visual alarm and power indicators, and a reset switch. Each detector shall be installed upon the composite supply/return air duct(s), with properly sized air sampling tubes. Detector shall be provided with a remote alarm LED and test switch flush mounted on the ceiling below.
 5. Automatic Heat Detectors shall be combination rate of rise and fixed temperature rated at 135 degrees Fahrenheit for areas where ambient temperatures do not exceed 100 degrees, and 200 degrees for areas where the temperature does not exceed 150 degrees.

- 6. INSTALLATION:**
1. Installation shall be in accordance with the NEC, NFPA 72, local and state codes, as shown on the drawings, as directed by the fire marshal and as recommended by the major equipment manufacturer.
 2. All conduit, junction boxes, conduit supports and hangers shall be independent of all other wiring systems. Smoke detectors shall not be installed prior to the system programming and test period. If construction is ongoing during this period, measures shall be taken to protect smoke detectors from contamination and physical damage.

- H. TEST:**
1. Provide the service of a factory-trained engineer or technician to supervise and participate during all of the adjustments and tests for the system.

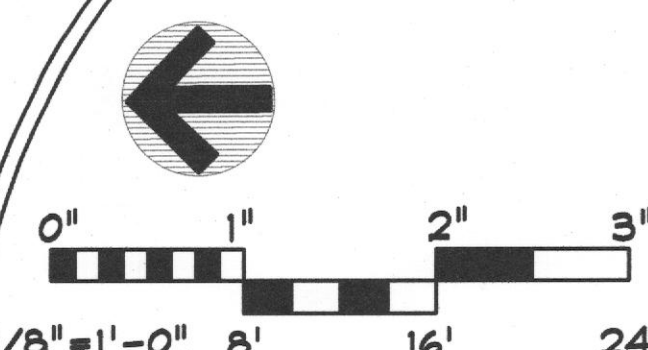
- I. INSTRUCTION:**
1. Provide instruction as required to the building personnel and fire and safety personnel. "Hands-on" demonstrations of the operation of the system shall be provided.

- J. WRING:**
1. The Contractor shall furnish and install non-specified equipment required to make each system fully functional as per stated intent, without additional cost. This shall include major components, if required.
 2. The installation and design of the fire alarm and detection system shall comply with Chapter 2, "Basic Requirements" of NFPA Standard 72A.
 3. Install fire alarm and detection system wiring in conduit (3/4 inch minimum). Fire alarm BX cable may be provided for all circuits concealed above ceilings and within walls.
 4. Minimum wire size: No. 18 AWG solid copper for initiation and annunciator circuits; No. 14 AWG solid copper for indicating circuits; No. 12 AWG solid copper for 120 volts circuits.
 5. No wiring other than that directly associated with the fire alarm or auxiliary functions shall be permitted in the fire alarm conduits or cables. Wiring splices are to be avoided to the extent possible. Transposing or changing color coding of wires shall not be permitted. All conductors in conduit containing more than one shall be color coded and be labeled on each end with "E-Z Markers" or equivalent. All fire alarm junction boxes shall be painted red. Conductors in cabinets shall be carefully formed and harnessed so that each drop off directly opposite to its terminal. Cabinet terminals shall be numbered and coded. All controls, functions switched, etc. shall be clearly labeled on all equipment panels.
 6. Location for all ceiling - mounted equipment shall be coordinated with lights, air outlets and other ceiling fixtures and shall be acceptable to the Engineer.
 7. Mount end-of-line device for each indicating and indicating circuit in a separate box located not more than 6 feet above the finished floor. Device shall be mounted on a terminal strip attached to the box cover with an engraved phenolic plate.

- K. PROJECT ACCEPTANCE, GUARANTEE AND MAINTENANCE:**
1. Testing procedures for the acceptance of the alarm and detection system shall be conducted in accordance with provisions of Chapter 2 and 4 of NFPA 72H.
 2. As-built drawings in conformance with the provision of Chapter 1 of NFPA 72H shall be provided prior to the acceptance test. Drawings provided shall be reproducible vellum or sepiu with a minimum scale of 1/8 inch equal to 1 foot. Three sets of maintenance manuals and a complete acceptance test report shall be provided.
 3. The Contractor shall guarantee labor, materials and equipment provided under this contract against defects for a period of 1 year after the date of the final acceptance of this work by the Owner.

FIRE ALARM SYSTEM NOTE:

1. FIRE ALARM SYSTEM AND DEVICES SHALL BE BY OTHERS AND IS SHOWN FOR REFERENCE ONLY. FIRE ALARM SYSTEM VENDOR SHALL PREPARE SUBMITTALS FOR REVIEW AND APPROVAL BY LOCAL FIRE MARSHAL.



ELECTRICAL SPECIFICATIONS

REVISIONS		DRAWING NO.	
#1	12/23/11	PERMIT COMMENTS	ES
#2	1/26/12	PERMIT COMMENTS	OF 6
#3	2/17/12	PERMIT COMMENTS	DATE
	1/17/17	ARIZONA STATE ASC PLAN REVIEW	DRWN BY
			DATE
			09/23/11
			MBR
			DESIGN
			10/28/11
			MSB

ISSUED FOR ARIZONA
STATE ASC PLAN REVIEW



dp DON PENN
CONSULTING ENGINEERS

ARCHITECTURAL DESIGNS, INC.

InSync
ARCHITECTURAL DESIGNS, INC.

Access Center

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WOC# 2011-118-02