

DEMOLITION NOTES

INTENT OF WORK:

- SECURE ALL PERMITS AS REQUIRED FOR SUCH WORK.
- PROVIDE ALL LABOR, MATERIALS AND EQUIPMENT TO PERFORM DEMOLITION AND REMOVAL OF EXISTING BUILDING CONSTRUCTION AND LANDSCAPE ITEMS AS INDICATED OR SPECIFIED.
- STRUCTURAL AND NON-STRUCTURAL, NOT AFFECTING THE BUILDING DEMOLITION WORK:
 - REMOVE DESIGNATED EQUIPMENT AND FIXTURES.
 - DISCONNECT, REMOVE AND CAP DESIGNATED UTILITY SERVICES WITHIN DEMOLITION AREA.
 - REMOVE DESIGNATED DOOR.
- SALVAGE REMOVED ITEMS TO OWNER, TYP.
- IF THE PRESENCE OF ASBESTOS IS SUSPECTED, CEASE WORK AND REPORT TO OWNER.
- CLEAN UP WORK SITE.

PREPARATION:

- ERECT AND MAINTAIN SECURE, WEATHERPROOF TEMPORARY ENCLOSURES FOR EXTERIOR OPENINGS DURING DEMOLITION AND CONSTRUCTION.
 - PROTECT EXPOSED AREAS OF EXISTING BUILDING WITH WEATHERPROOF BARRIER.
 - PROTECT EXISTING INTERIOR ITEMS NOT INDICATED TO BE ALTERED.
- CUT CONCRETE FLOORS WITH CONSIDERATION OF ITEMS BELOW THE SLAB.
- PROTECT EXISTING EXTERIOR STRUCTURES, LANDSCAPE MATERIAL AND ITEMS THAT ARE NOT INDICATED TO BE ALTERED.

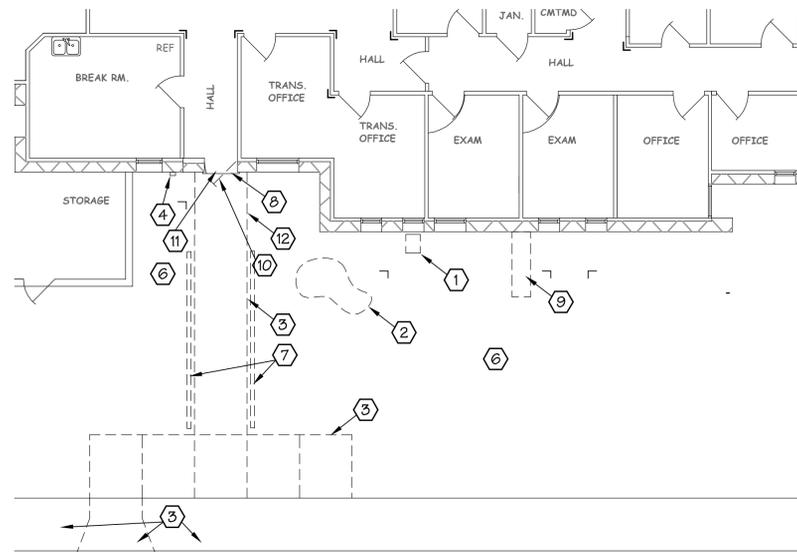
EXECUTION:

- CONDUCT DEMOLITION TO MINIMIZE INTERFERENCE WITH:
 - ADJACENT STRUCTURES.
 - PUBLIC OR PRIVATE THOROUGHFARES.
- MAINTAIN PROTECTED EGRESS AND ACCESS AT ALL TIMES.

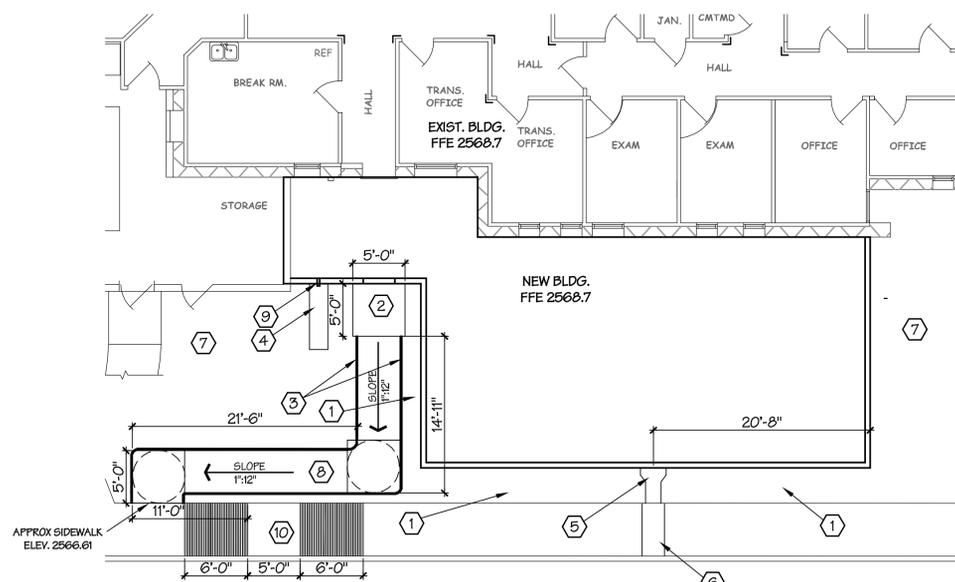
- DO NOT CLOSE OR OBSTRUCT ROADWAYS OR SIDEWALKS WITHOUT PERMITS.
- DEMOLISH INDICATED STRUCTURES AND APPURTENANCES IN AN ORDERLY AND CAREFUL MANNER.
 - PREVENT MOVEMENT OR SETTLEMENT OF ADJACENT STRUCTURES.
 - PROVIDE BRACING AND SHORING AS NECESSARY.
 - PROTECT EXISTING FOUNDATION, SUPPORTING MEMBERS AND WALLS. CEASE OPERATIONS AND NOTIFY ARCHITECT/ENGINEER IMMEDIATELY IF ADJACENT STRUCTURES APPEAR TO BE ENDANGERED.
 - DO NOT RESUME OPERATIONS UNTIL CORRECTIVE MEASURES HAVE BEEN TAKEN.

- DO NOT BURN OR BURY MATERIALS ON SITE.
- KEEP EXTERIOR WORK SPRINKLED TO MINIMIZE DUST.
 - ADHERE TO DUST CONTROL STANDARDS.
- ROUGH GRADE AND COMPACT AREAS AFFECTED BY DEMOLITION TO MAINTAIN SITE GRADES AND CONTOURS.
- REMOVE DEMOLISHED MATERIAL FROM SITE AS WORK PROGRESSES.
 - UPON COMPLETION OF WORK, LEAVE AREAS IN CLEAN CONDITION.

END OF SECTION



A SITE AND BUILDING DEMOLITION PLAN
1/8"=1'-0"



B SITE PLAN
1/8"=1'-0"

DEMOLITION KEYNOTES

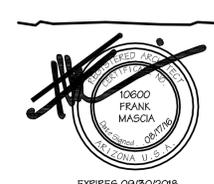
- 1 REMOVE IRRIGATION BOX - CAP LINES AS NECESSARY
- 2 REMOVE AND RE-SET BOLDER TO NORTH OF NEW ADDITION.
- 3 REMOVE CONCRETE WALK AT DASHED LOCATIONS AS REQUIRED TO CONSTRUCT NEW ADDITION.
- 4 REMOVE EXISTING DOWNSPOUT AND INFILL OPENING. REPAIR AND REPAINT.
- 5 DEMO EXISTING STEM WALL PER DETAIL 2/5-1.
- 6 REMOVE EXISTING LANDSCAPE PLANTS, ROCK AND FEATURES IN THE AREA WHERE CONSTRUCTION TO OCCUR.
- 7 REMOVE HAND RAILINGS AND SALVAGE FOR POSSIBLE RE-USE ON THIS PROJECT.
- 8 DEMO FLOOR AT DOOR THRESHOLD DOWN TO EXISTING STEM WALL FOR POUR-OVER DURING CONSTRUCTION.
- 9 REMOVE CONCRETE SPLASH BLOCK AND SALVAGE FOR RE-USE ON THE PROJECT. SEE NEW LOCATION AT SITE PLAN BELOW.
- 10 REMOVE DOOR. SALVAGE FOR RE-USE AS EXIT DOOR IN NEW FLOOR PLAN.
- 11 REMOVE AND SALVAGE EXISTING LIGHT FIXTURE FOR RE-USE ABOVE NEW EXIT DOOR.

SITE KEYNOTES

- 1 4"-8" RIVER ROCK (RE-USE ROCK REMOVED DURING DEMOLITION AND SUPPLEMENT WITH MATCHING ROCK) HAND-LAID, LOOSE AT SLOPE FROM SIDEWALK TO BUILDING STEM WALL.
- 2 NEW 5' X 5' CONCRETE LANDING. SEE FOUNDATION PLAN.
- 3 REINSTALL SALVAGED HANDRAILS AT WALKWAY, IF POSSIBLE. SUPPLEMENT WITH NEW HANDRAILS AS NECESSARY. ALL HANDRAILS TO MEET ALL ANSI A117.1 (2009) REQUIREMENTS.
- 4 RELOCATE SALVAGED CONCRETE SPLASH BLOCK TO BASE OF ALTERNATE ROOF DRAIN.
- 5 DRAINAGE ROUTE TO SIDEWALK SCUPPER - SEE PLUMBING PLAN.
- 6 STEEL DIAMOND PLATE SIDEWALK SCUPPER - DRAIN OUTLET AT PARKING LOT.
- 7 PLANTINGS AND IRRIGATION PER FYT FACILITIES DEPT.
- 8 NEW RAMP TO MEET ALL ANSI A117.1 (2009) REQUIREMENTS. AREA HAS NOT BEEN SURVEYED - VERIFY ALL GRADES PRIOR TO DESIGN OF CONCRETE RAMP. SLOPES AND LENGTHS AT NEW RAMP TO BE DETERMINED AND VERIFIED BY ARCHITECT AS PART OF THIS PROJECT.
- 9 NEW 3" ROOF DRAIN OUTLET WITH BRASS DOWNSPOUT NOZZLE @ 12" ABOVE GRADE. SPLASH BLOCK BELOW PER SITE PLAN.
- 10 NEW RAMPS TO TIE IN TO EXISTING SIDEWALK AND MEET ALL ANSI A117.1 (2009) REQUIREMENTS. SCORE CONCRETE FOR SLIP RESISTANCE.

REVISIONS

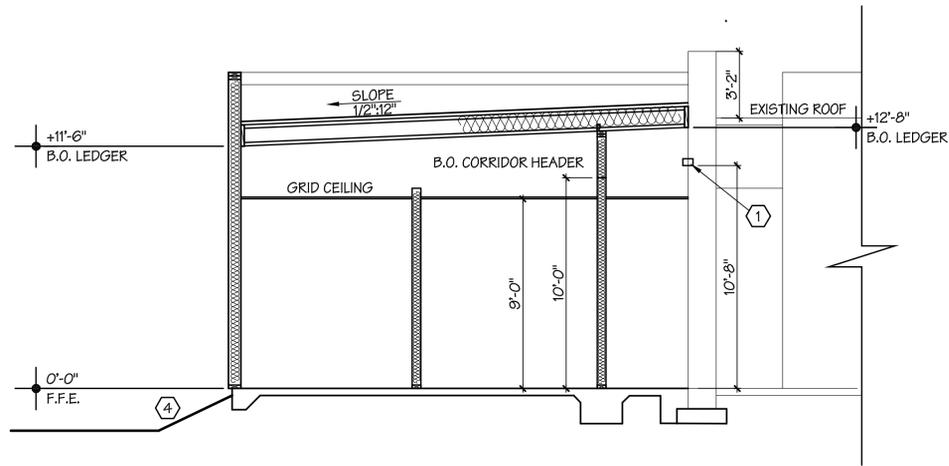
PASCUA YAQUI CLINIC OFFICE ADDITION
 DEMOLITION SITE PLAN
 AND ARCHITECTURAL SITE PLAN



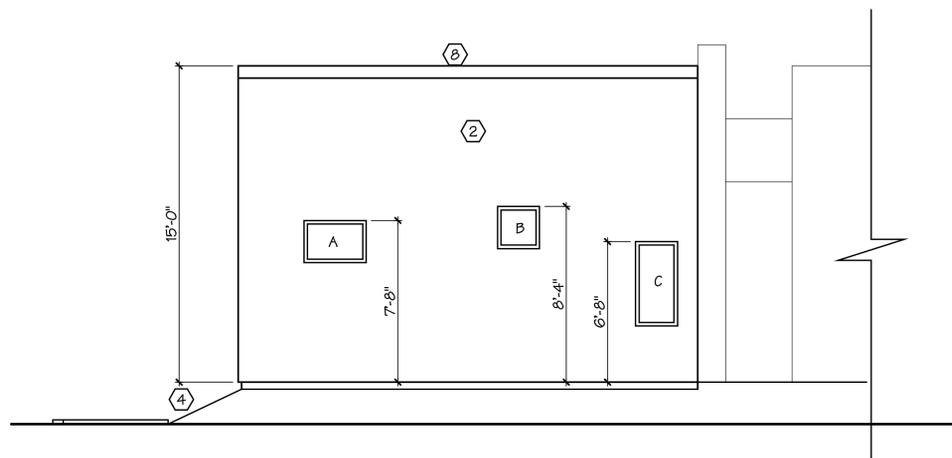
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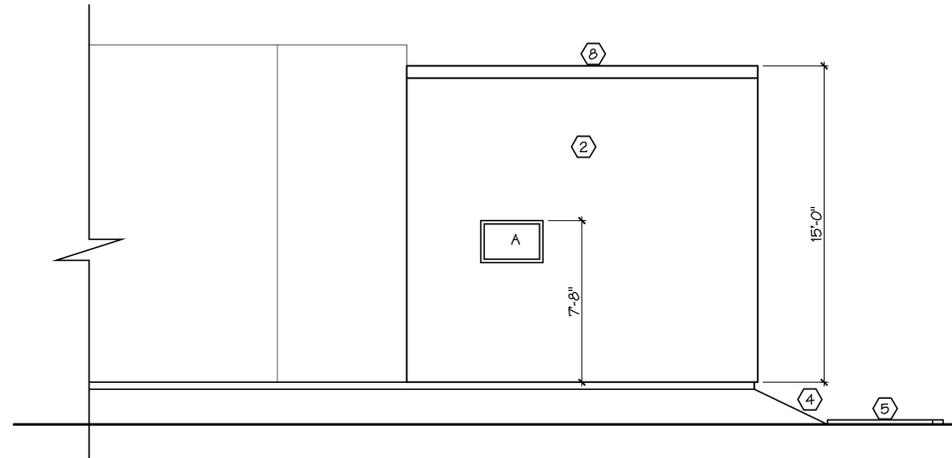
PROJECT NO. 16014



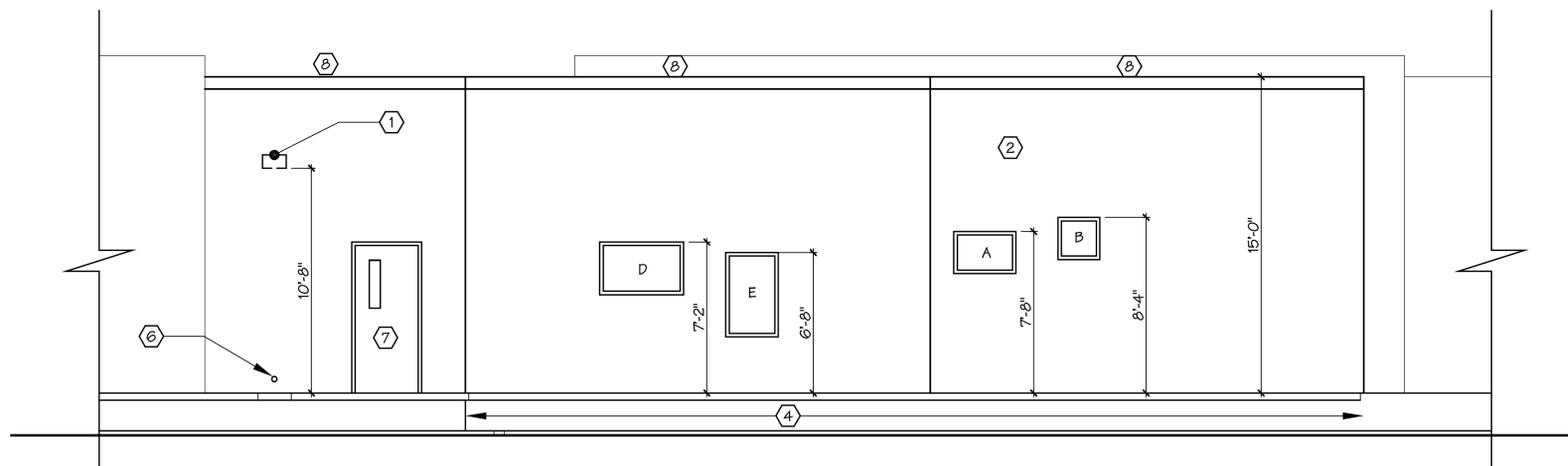
1 SECTION
1/4"=1'-0"



B NORTH ELEVATION
1/4"=1'-0"



C SOUTH ELEVATION
1/4"=1'-0"



A EAST ELEVATION
1/4"=1'-0"

SECTION AND ELEVATION KEYNOTES

- 1 EXISTING DRAIN OPENING TO REMAIN IN PLACE. SEE ROOF DRAIN DESIGN AT SHEET P-1.
- 2 EXTERIOR FINISH TO MATCH EXISTING BUILDING IN ALL CASES.
- 3 SEE WINDOW SCHEDULE AT SHEET 1.4.
- 4 ROCK AT SLOPE PER B.1.0.
- 5 NEW SIDEWALK SCUPPER.
- 6 NEW 3" ROOF DRAIN OUTLET WITH BRASS DOWNSPOUT NOZZLE @ 12" ABOVE GRADE. SPLASH BLOCK BELOW PER SITE PLAN.
- 7 NEW EXIT DOOR.
- 8 METAL PARAPET CAP PER 1,3/6-2.

NO.	DATE	DESCRIPTION

PASCUA YAQUI CLINIC OFFICE ADDITION
 ELEVATIONS AND SECTION



08/17/16

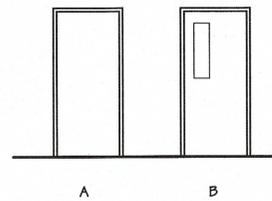
1.2

PROJECT NO. 16014

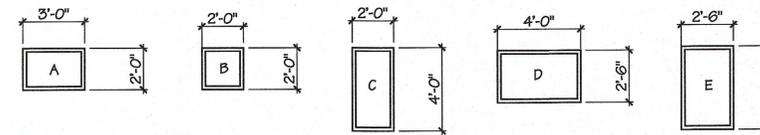
DOOR SCHEDULE								
DOOR LOCATION	DOOR MARK	WIDTH	HEIGHT	ELEVATION	MATERIAL	FRAME	HARDWARE *	REMARKS
OFFICE	101	30	70	A	SCW	HM	OFFICE FUNCTION	INSTALL DOOR BUMP*
OFFICE	102	30	70	A	SCW	HM	OFFICE FUNCTION	INSTALL DOOR BUMP*
OFFICE	103	30	70	A	SCW	HM	OFFICE FUNCTION	INSTALL DOOR BUMP*
OFFICE	104	30	70	A	SCW	HM	OFFICE FUNCTION	INSTALL DOOR BUMP*
OFFICE	105	30	70	A	SCW	HM	OFFICE FUNCTION	INSTALL DOOR BUMP*
OFFICE	106	30	70	A	SCW	HM	OFFICE FUNCTION	INSTALL DOOR BUMP*
CORRIDOR - RE-USE EXISTING EGRESS DOOR	110	30	70	B	HM	HM	ENTRY FUNCTION, PANIC HARDWARE FROM EXISTING DOOR, CARD READER, DOORBELL, ALARM	EGRESS DOOR
HALLWAY STOR.	111	30	70	A	SCW	HM	STORAGE FUNCTION	INSTALL DOOR BUMP*

***HARDWARE**

- SCHLAGE LOCKSETS WITH C KEYWAY, 6-PIN TO MATCH OWNER'S KEY SYSTEM.
- MEET ANSI A156.2, SERIES 4000, GRADE 2.
- WALL-MOUNTED, CONCAVE DOOR BUMP - METAL TO MATCH HARDWARE



DOOR ELEVATIONS
SCALE 1/4"=1'-0"



WINDOW ELEVATIONS
SCALE 1/4"=1'-0"

WALL FINISH LEGEND AND NOTES

TEXTURE WALLS TO MATCH EXISTING BUILDING INTERIOR.

PAINT:

PRIMER: DUNN EDWARDS W10 PROSEAL INTERIOR PRIMER/SEALER

P-1 ALL WALLS U.N.O. DUNN EDWARDS COLOR DEW336 - WHITE SAND VERSA SATIN EGG SHELL, LOW VOC

P-2 ACCENT WALL DUNN EDWARDS COLOR DE5793 - FROZEN TUNDRA VERSA FLAT, LOW VOC

P-3 ACCENT WALL DUNN EDWARDS COLOR DE5795 - SPIRIT MOUNTAIN VERSA SATIN EGG SHELL, LOW VOC

F APPLY SKIM COAT TO EXISTING STUCCO FINISH. TEXTURE TO MATCH INTERIOR TEXTURE AT EXISTING BUILDING.

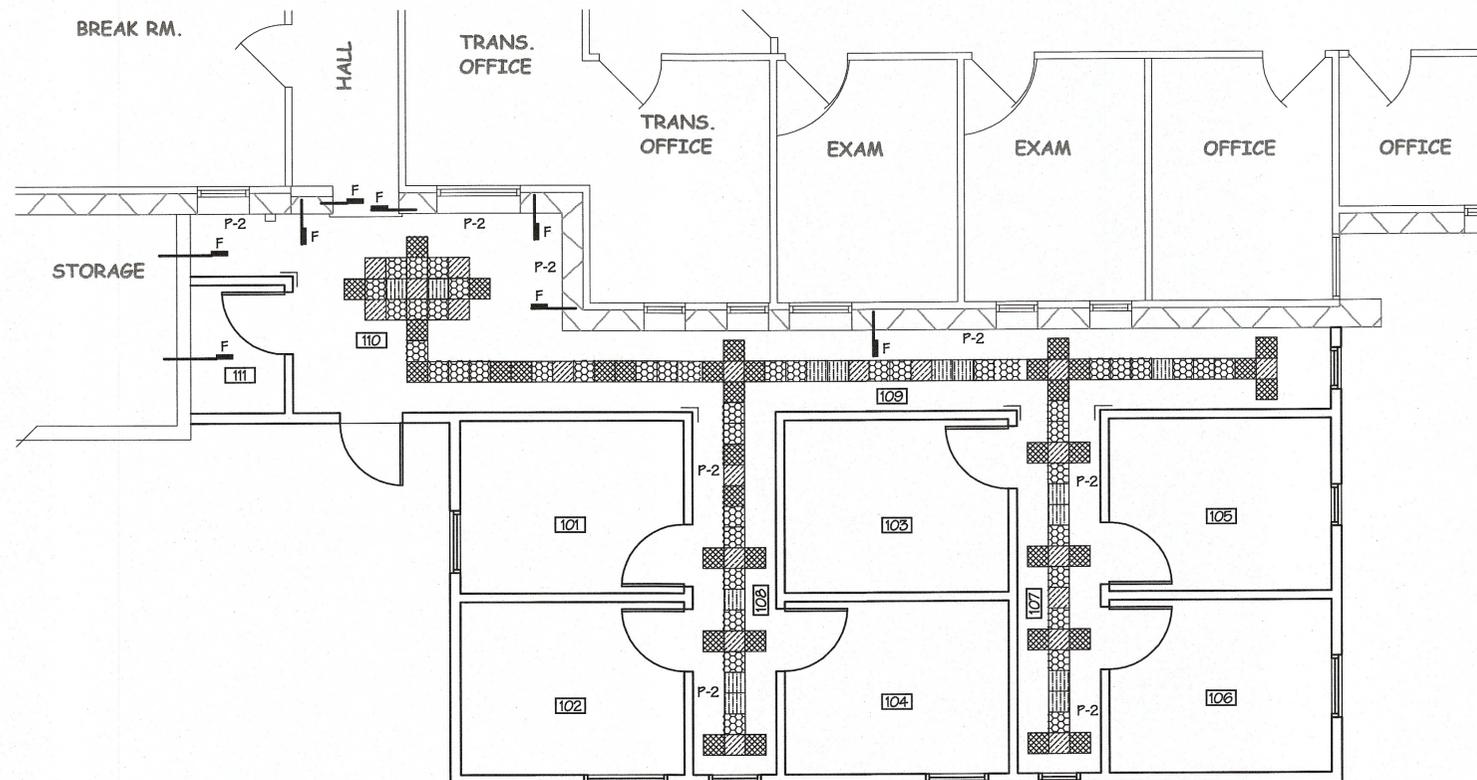
L INSTALL CORNER GUARDS TO MATCH THOSE INSTALLED IN THE EXISTING BUILDING.

FLOORING NOTES

- 1) ALL FLOORING TO BE VINYL COMPOSITE TILE: ARMSTRONG IMPERIAL TEXTURE, STANDARD EXCELON, 12" X 12". COLOR SELECTIONS BELOW.
- 2) ALL COVE BASE TO BE TRADITIONAL 4" WITH WALL BASE: JOHNSONITE THERMOPLASTIC RUBBER, COLOR #47 BROWN. COVER BASE AT ALL WALLS, U.N.O.
- 3) ALL FLOORING AND COVE BASE TO BE INSTALLED PER MANUFACTURERS' RECOMMENDATIONS.
- 4) ALL APPROPRIATE MOISTURE TESTS TO BE PERFORMED AND FLOORING INSTALLED IN ACCORDANCE WITH FLOORING MANUFACTURERS' REQUIREMENTS. ANY CONCRETE CURING MEDIUM REQUIRED PRIOR TO FLOORING INSTALLATION SHALL BE AT THE CONTRACTOR'S EXPENSE.
- 5) TRANSITIONS/THRESHOLDS: FLOORING INSTALLER TO CONFIRM ALL TRANSITIONS/THRESHOLDS AND RECOMMEND APPROPRIATE USES AND MATERIALS.

FLOOR FINISH LEGEND

	VCT-1	FIELD	COLOR #51809 - DESERT BEIGE
	VCT-2	ACCENT	COLOR #57501 - NOUGAT
	VCT-3	ACCENT	COLOR #57504 - CHOCOLATE
	VCT-4	ACCENT	COLOR #57506 - COLORADO STONE
	VCT-5	ACCENT	COLOR #51874 - GRAYED BLUE



A FINISH PLAN
SCALE 1/4"=1'-0"



REVISIONS

WINDOW NOTES

1. ALL WINDOWS FIXED.
2. DUAL PANE LOW-E GLAZING TO MEET 2012 IECC.
3. FRAMES TO MATCH EXISTING BUILDING IN ALL CASES.

WINDOW TREATMENT NOTES

1. PROVIDE STANDARD WHITE MINI-BLINDS FOR EACH NEW WINDOW.
2. PROVIDE OPAQUE WINDOW FILM TO THE EAST FACE OF THE EXISTING BUILDING WINDOWS THAT ARE TO REMAIN TO ENSURE PRIVACY.

PASCUA YAQUI CLINIC OFFICE ADDITION

FLOOR FINISH PLAN



08/17/16

1.4

PROJECT NO. 16014

SOIL NOTES

1. SCARIFY, MOISTEN OR DRY AS REQUIRED, AND COMPACT ALL SUB-GRADE SOILS TO A MINIMUM DEPTH OF 8". IMPORT SOIL (NATIVE SOILS NOT RECOMMENDED). SEE SOILS REPORT BY WESTERN TECHNOLOGIES INC. JOB NO. 2925 JM399.
2. MINIMUM DEPTH OF RECOMPACTION / ENGINEERED FILL REQUIRED BELOW FOOTING BASE = TO FOOTING WIDTH BUT NOT LESS THAN 2 FEET. MINIMUM WIDTH OF RECOMPACTION / ENGINEERED FILL REQUIRED BEYOND THE FOOTING EDGE SHALL BE 0.6 TIMES THE DEPTH OR NOT LESS THAN 2'.
3. SEE SOILS REPORT PREPARED BY WESTERN TECHNOLOGIES INC. JOB NO. 2925 JM399.
4. SPECIAL INSPECTION ON SOIL PREPARATION BELOW SLAB, 90%. OVER EXCAVATION AND REPLACEMENT, 95%. BASE COURSE, 95%.
5. SOIL PRESSURE 2500 PSF PER SOILS REPORT.

PRIOR TO FTG. OR SLAB POUR

- VERIFY THE FOLLOWING PRIOR TO POUR
1. ALL HOLD DOWNS, STRAP, AND POST LOCATIONS
 2. CONCRETE FINISHES.
 3. UNDER SLAB MECHANICAL REQUIREMENTS.
 4. UNDER SLAB ELECTRICAL REQUIREMENTS AND PANEL RISER LOCATION - WHERE APPLICABLE.
 5. SLOPE FINISH GRADE AWAY FROM FOOTING

FOUNDATION PLAN KEYNOTES

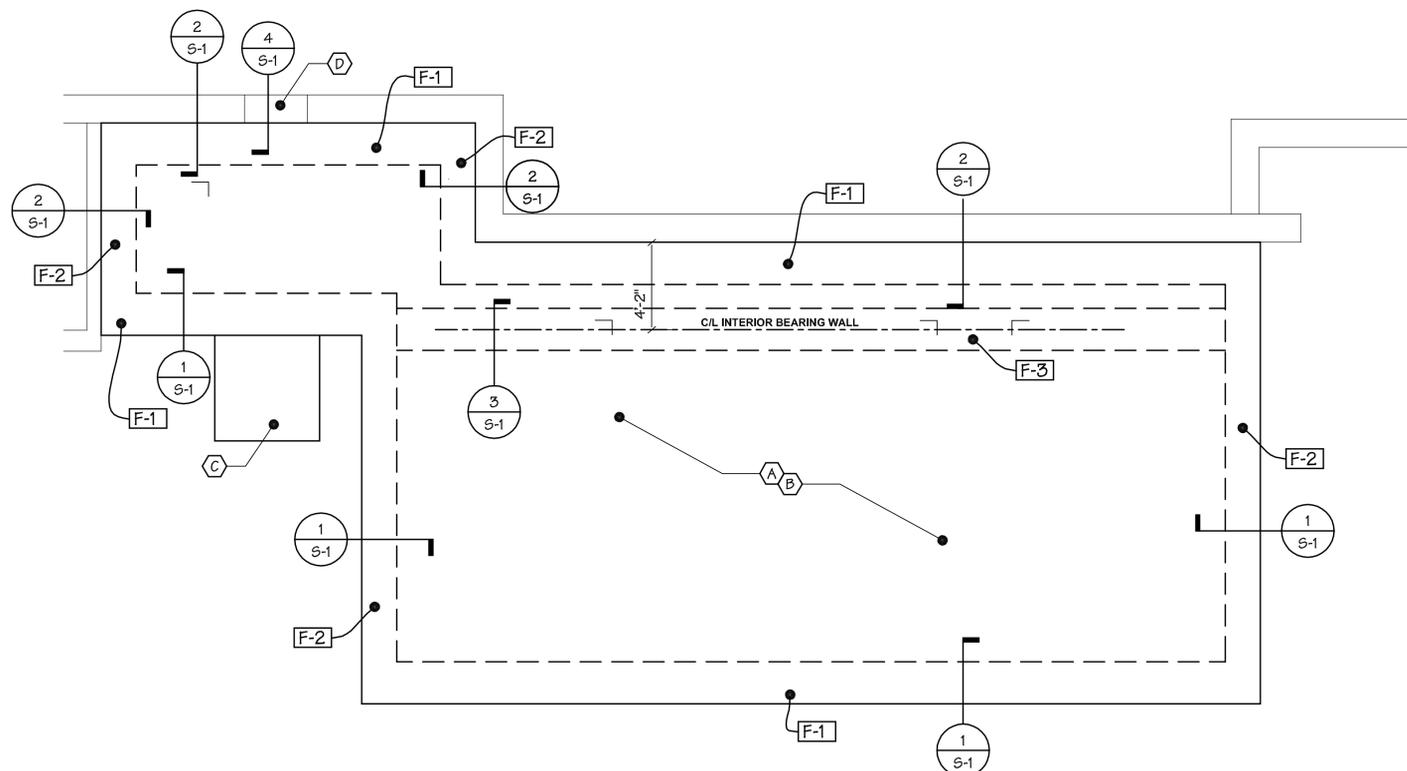
- A. 5" THICK, MIN. 2500 PSI CONCRETE SLAB OVER 8" AB FILL OVER PROPERLY COMPACTED SUB-SOIL. TERMITE TREAT @ ALL SLABS TYP.
- B. PROVIDE CONTROL JOINTS AS REQ'D TO CONTROL SLAB CRACKING.
- C. 4" CONCRETE STOOP, 5'-0" X 5'-0" W/ 8" X 8" TURNDOWN EDGES. SLOPE AWAY FROM BUILDING.
- D. EXISTING DOOR OPENING. RE-CAP SLAB OVER EXISTING DEMOLISHED STEM WALLS PER DETAIL 4/S-1.

FOOTING SCHEDULE

F-#	FTG. DESCRIPTION
F-1	20" MONOLITHIC TURNDOWN W/ 3- #4'S CONT./ HORIZ.
F-2	16" W., MONOLITHIC, TURNDOWN W/ (2)- #4'S CONT./ HORIZ.
F-3	24" SQ. X 20" D., MONOLITHIC CONC. PAD, W/ (2)- #4'S CONT./ HORIZ.

GENERAL FOUNDATION / CONCRETE NOTES

1. IMPASSE OR EQUAL TERMITE PRE-TREATMENT BY LICENSED OPERATOR UNDER SLAB AND AROUND FOOTINGS. ALL AREAS BELOW SLABS SHALL BE TREATED NO MORE THAN 24 HOURS PRIOR TO CONCRETE POUR. EVIDENCE OF TREATMENT MUST BE PROVIDED PRIOR TO PLACING OF CONCRETE.
2. ALL INTERIOR CONCRETE SLABS SHALL BE POURED OVER 8", COMPACTED, AGGREGATE BASE COURSE TO 95% OF STANDARD PROCTOR MAXIMUM DRY DENSITY (A.S.T.M. D698), & PER SOILS REPORT. FINISH ELEVATIONS, AS NOTED ON DRAWINGS, TO BE A MIN. 6" ABOVE ADJACENT NATURAL GRADE. LEVEL SLABS TO WITHIN 1/8" : 10'-0", U.N.O., MAX. POUR CONCRETE THROUGH AT EXTERIOR DOOR THRESHOLDS TO 8" THICK, WITH A #4 HORIZ. REBAR LOCATED 4" DOWN FROM THE TOP OF FLOOR. RE-BAR & POUR-THRU TO BE EXTENDED A MINIMUM OF 6" BEYOND EACH SIDE OF OPENING DIMENSIONS SHOWN ON PLAN., CONCRETE SLABS SHALL BE MIN., 2500 PSI. AT 28 DAYS WITH A 4" ALLOWABLE SLUMP.
3. ALL FOOTINGS TO EXTEND MINIMUM 12" INTO NATURAL, UNDISTURBED SOIL. PRIOR TO PLACEMENT OF FOOTING, THE BOTTOM OF FOOTING TRENCHES MUST BE MOISTENED AND COMPACTED TO 95 % OF OPTIMUM DENSITY FOOTING CONCRETE TO BE 2500 PSI AT 28 DAYS WITH A 4" ALLOWABLE SLUMP.
4. ALL CONCRETE WALKS AND PORCHES TO BE ON 4" THICK, COMPACTED, AGGREGATE BASE COURSE WITH A MINIMUM 8" FINISHED TURNDOWN OR AS NOTED ON DRAWINGS. CONCRETE TO BE 2500 PSI AT 28 DAYS WITH A 4" ALLOWABLE SLUMP. VERIFY ANY COLOR, FINISH, & CONTROL JOINTS W/ BUILDER.
5. CONCRETE SUBCONTRACTOR TO INSTALL CONTROL JOINTS WHERE NECESSARY TO CONTROL CRACKING, OR NOT GREATER THAN 10' DISTANCE IN ANY DIRECTION.
6. ALL COLD JOINTS TO BE FORMED KEED.
7. GENERIC TURNDOWN 8" W/ (1) #3 CONT.



A FOUNDATION PLAN
1/4"=1'-0"

NO.	REVISIONS

PASCUA YAQUI CLINIC OFFICE ADDITION
FOUNDATION PLAN



EXPIRES 09/30/2016



08/17/16

S-1

PROJECT NO. 16014

<p>4 SLAB LAP OVER EXISTING STEMS</p>	<p>3 INTERIOR POST TO FTG. CONNECTION</p>	<p>2 TYP. ADJACENT WALL FOOTING</p>	<p>1 EXTERIOR MONOLITHIC FOOTING</p>
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DESIGN CRITERIA & LOADS

- ALL WORK SHALL CONFORM TO THE 2012 INTERNATIONAL BUILDING CODE
- ROOF LIVE LOAD = 20 PSF
 - WIND LOAD = 90 MPH EXPOSURE
 - SEISMIC ZONE = 2A
 - SOIL PRESSURE = 2500 PSF PER SOILS REPORT.

FIREBLOCKING NOTES

- AT CONCEALED SPACES OF STUD WALLS AND PARTITIONS, INCLUDING FURRED SPACES AT THE CEILING AND FLOOR LEVELS, AND AT 10 FOOT INTERVALS BOTH VERTICAL AND HORIZONTAL.
- AT ALL INTERCONNECTIONS BETWEEN CONCEALED VERTICAL AND HORIZONTAL SPACES SUCH AS SOFFITS, DROP CEILING, AND COVE CEILING.
- IN OPENINGS AROUND VENTS PIPES, DUCTS AND SIMILAR OPENINGS WHICH AFFORD A PASSAGE FOR FIRE AT CEILING AND FLOOR LEVELS, USE NON-COMBUSTIBLE MATERIALS.
- WALLS HAVING PARALLEL OR STAGGERED STUDS FOR SOUND CONTROL SHALL HAVE FIRE BLOCKS OF MINERAL FIBER OR GLASS FIBER OR OTHER APPROVED NONRIDGED MATERIAL.
- THE INTEGRITY OF ALL FIRE BLOCKING, AND DRAFT STOPS, SHALL BE MAINTAINED.

FRAMING PLAN KEYNOTES

- PRE-ENGINEERED 'I' JOISTS 11-7/8 TJI 110 OR EQUAL @ 16" O.C. SIMPSON OR EQUAL METAL HANGERS & CLIPS TO EACH JOIST, TYP.
- 2 X 12 RIM JOIST OR MICRO LAM EQUAL.
- CRICKET & SLOPES TO ROOF DRAIN.
- 2 X 12 RIM JOIST OR MICRO LAM EQUAL W/ MIN. (3) 16D. NAILS TO EA. STUD.
- BLOCK AT I-JOISTS UNDER AT POINT LOADS OF MECHANICAL EQUIPMENT. ROOF DRAIN LEADER TO CONCRETE SPLASH BLOCK.
- EXISTING PARAPETS TO REMAIN.
- 3 X 12 LEDGER.

GENERAL FRAMING NOTES

- INDICATES HEIGHT FROM F.F.E. DIRECTLY BELOW, TO THE BOTTOM OF JOISTS, BEAMS OR RAFTERS.
- CONTRACTOR TO PROVIDE EXTRA SHEATHING TO CREATE CORRECT THICKNESS OF HEADERS.
- #16 GAGE GALVANIZED STAPLES, 1 1/2" MIN. LENGTH @ 6" O.C. MAXIMUM OR 8d @ 6" O.C. MAX. AND 8d @ 12" @ INTERMEDIATE. SEE SHEAR WALL SCHEDULE FOR WALL NAILING.
- RAFTERS 11" OR MORE IN DEPTH SHALL BE SUPPORTED LATERALLY BY BRIDGING AT INTERVALS NOT TO EXCEED 8 FEET UNLESS BOTH EDGES ARE HELD IN LINE.
- PRE-MANUFACTURED JOIST CALCULATIONS AND SPECIFICATIONS MUST BE SIGNED BY AN ARIZONA REGISTERED ENGINEER AND ARE APPROVED BY BUILDING CODES DIVISION PRIOR TO INSTALLATION. JOIST, JOIST HANGERS AND CONNECTORS AS DESIGNED AND APPROVED BY MANUFACTURER
- ALL INTERIOR NON-BRG. HEADERS TO BE MIN. DOUBLE 2x4 PLATES IN 4" STUD WALLS & 6" BOX BEAM IN 6" STUD WALLS. (UNLESS NOTED OTHERWISE)
- ALL POST AND BEAM CONNECTIONS TO USE SIMPSON POST CAPS, TYP. U.N.O.
- ROUGH CARPENTRY:
 - ALL WOOD CONSTRUCTION SHALL CONFORM TO 2012 I.B.C.
 - ALL LUMBER SHALL BEAR THE STAMP OF AN APPROVED GRADING AGENCY.
 - PROVIDE ALL REQUIRED NAILERS FOR GYPSUM BOARD AND BACK-UP REQUIRED FOR ALL PLUMBING FIXTURES AND ACCESSORIES.
 - ALL CONNECTORS FOR WOOD CONSTRUCTION NOTED ON DRAWINGS SHALL BE SIMPSON "STRONG TIE" OR EQUAL. FILL ALL NAIL HOLES IN SIMPSON "STRONG TIE" CONNECTORS UNLESS OTHERWISE NOTED. w/ RECOMMENDED FASTENERS.
- CONTRACTOR TO FOLLOW PRE-ENGINEERED JOIST MANUFACTURER'S SPECIFICATIONS FOR INTERMEDIATE BEARING CONNECTIONS
- CONTRACTOR TO FOLLOW PRE-ENGINEERED JOIST MANUFACTURER'S SPECIFICATIONS FOR BLOCKING OUT OPENINGS FOR MECHANICAL, AS NECESSARY. COORDINATE WITH HVAC SUBCONTRACTOR.
- CONTRACTOR TO USE CORRECT TYPE AND QUANTITY OF NAILS/SCREWS/BOLTS, ETC. FOR EACH STRONG TIE CONNECTION.

WOOD HEADER SCHEDULE U.N.O.

MARK	DESCRIPTION
H-1	3-PLY 2X6 DF #2 OR 2-PLY 2X8 DF# 2 OR BETTER

SHEAR WALL CRITERIA

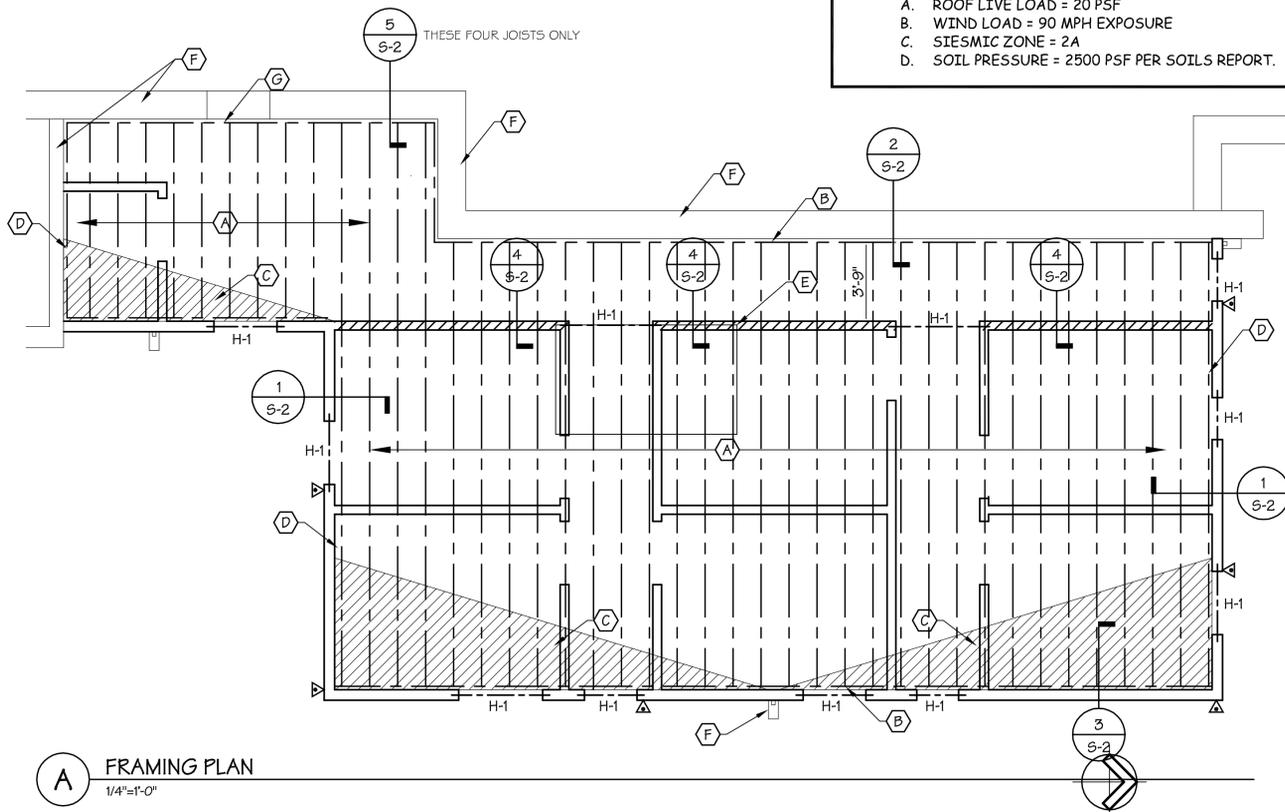
SEE DRAWING FOR LOCATION SPECIFICS

GROUP/LOCATION	SHEATHING	FASTENERS	NAILING EDGE	FIELD
ALL EXTERIOR WALLS	3/8" STRUCTURAL SHEATHING OR OSB	10d	6	12
INTERIOR WALL	1/2" GYPSUM	#6 SCREWS	8	12

INTERIOR GYPSUM BOARD NOT INCLUDED IN DESIGN

HOLD-DOWNS - SIMPSON (OR EQUAL) - HTT4 OR LSTHD8 DESIGNATED - 250#

DRAG STRUT CRITERIA: EAST-WEST (SIDE TO SIDE) 250# NORTH-SOUTH (TOP TO BOTTOM) 1,100#



A FRAMING PLAN
1/4"=1'-0"

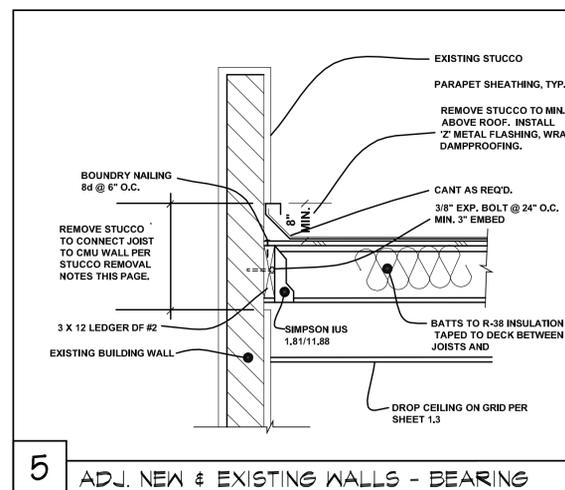
REVISIONS

PASCUA YAQUI CLINIC OFFICE ADDITION

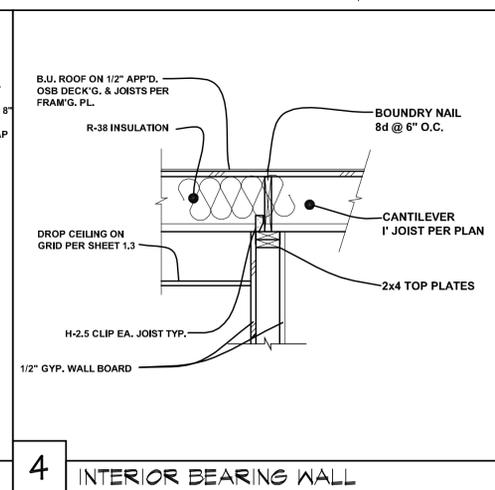
FRAMING PLAN

STUCCO REMOVAL NOTES

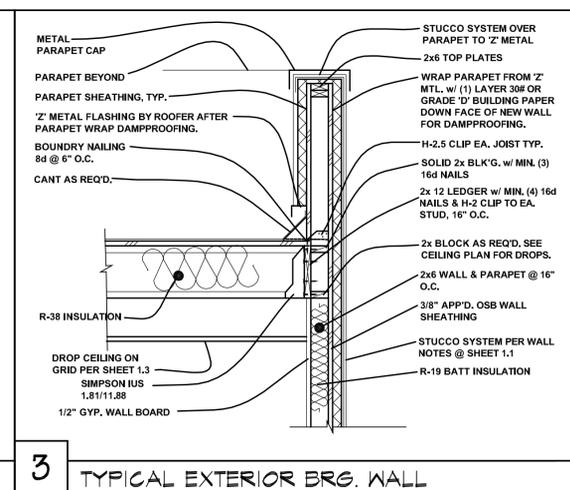
- SNAP TWO HORIZONTAL STRAIGHT LINES AT THE STUCCO WALL THE LENGTH OF THE NEW ADDITION, ONE AT 12'-6" AFF AND ONE 20" ABOVE THE FIRST LINE.
- USING AN ANGLE GRINDER CAREFULLY CUT INTO THE EXISTING STUCCO, ONLY DEEP ENOUGH TO REMOVE THE STUCCO FINISH, BETWEEN THE TWO LINES.



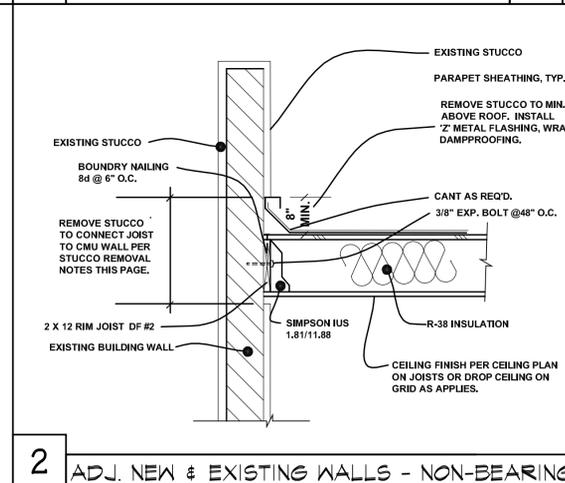
5 ADJ. NEW & EXISTING WALLS - BEARING



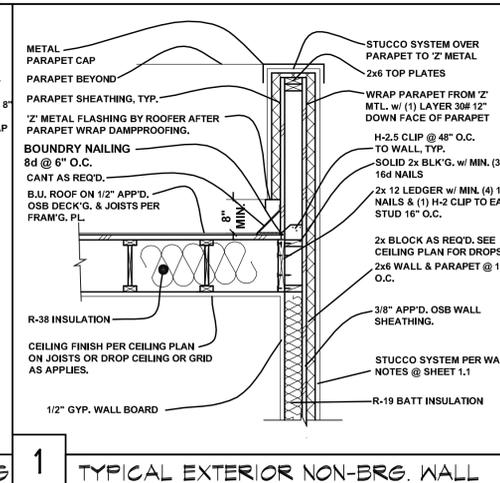
4 INTERIOR BEARING WALL



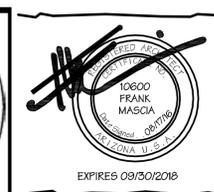
3 TYPICAL EXTERIOR BRG. WALL



2 ADJ. NEW & EXISTING WALLS - NON-BEARING



1 TYPICAL EXTERIOR NON-BRG. WALL



08/17/16

S-2

PROJECT NO. 16014

PLUMBING FIXTURE SPECIFICATIONS

PLUMBING FIXTURE & EQUIPMENT SCHEDULE:

NOTE: ALL PLUMBING FIXTURES SHALL BE LISTED OR LABELED BY A NATIONALLY RECOGNIZED, ACCREDITED CONFORMITY ASSESSMENT COMPANY (E.G. UL, ETL, IPC, ETC.)

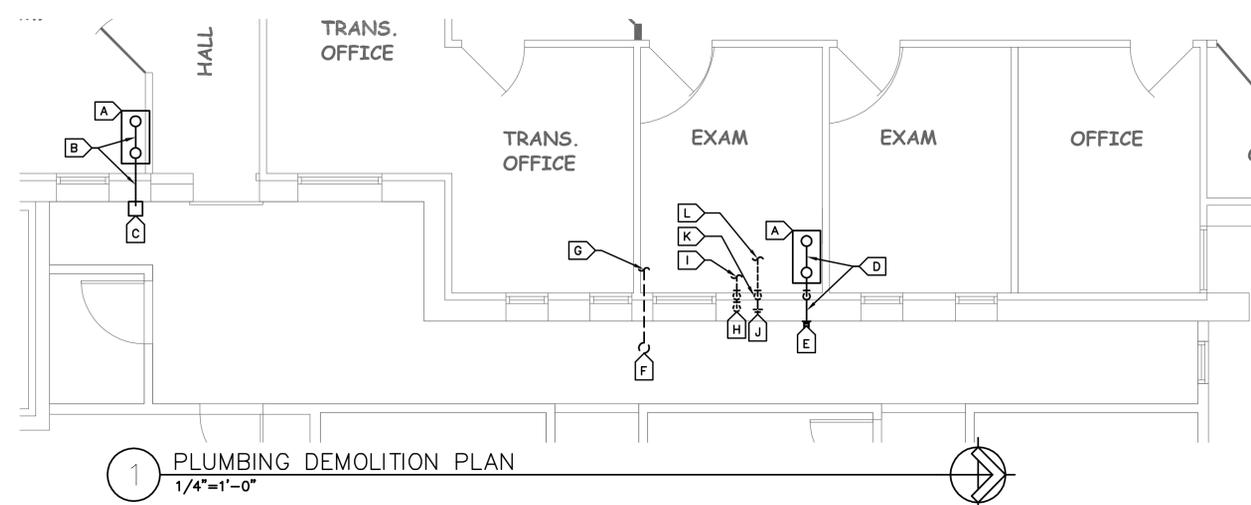
HB-1:
HOSE BIBB:
WOODRUM MODEL #Y24CH-3/4 YARD FAUCET, TEE KEY, VACUUM BREAKER, BRASS CONSTRUCTION, CHROME PLATED FINISH.

RD & ORD:
ROOF DRAIN & OVERFLOW ROOF DRAIN COMBINATION:
WATTS MODEL RD-250 CAST IRON BODY, DECK FLANGE, FLASHING CLAMPS WITH INTEGRAL GRAVEL GUARD, SELF LOCKING CAST IRON DOME, NO-HUB OUTLETS.

DSN:
DOWNSPOUT NOZZLE:
WATTS MODEL NO. RD-940 CAST NICKEL BRONZE DOWNSPOUT NOZZLE WITH ANCHOR FLANGE, COUNTER SUNK MOUNTING HOLES, AND IPS THREADED INLET CONNECTION.

PLUMBING SPECIFICATIONS

- INSTALLATION SHALL COMPLY WITH THE 2012 EDITION OF THE INTERNATIONAL PLUMBING CODE WITH LOCAL AMENDMENTS.
- MAKE ARRANGEMENTS FOR AND PAY FOR ALL FEES, PERMITS, LICENSES, CONNECTION CHARGES AND INSPECTIONS REQUIRED FOR PLUMBING WORK NOT BEING PAID FOR BY GENERAL CONTRACTOR AND/OR OWNER. PERFORM REQUIRED TESTS AND SECURE REQUIRED INSPECTIONS PRIOR TO CONCEALING WORK.
- EVERY EFFORT HAS BEEN MADE TO PROVIDE CONTRACTOR WITH ACCURATE INFORMATION REGARDING EXISTING CONDITIONS. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO BIDDING. ANY CONFLICTS DISCOVERED DURING THE PRE-BID PROCESS THAT MAY AFFECT THE SCOPE OF WORK SHALL BE REPORTED TO THE ARCHITECT AND/OR ENGINEER PRIOR TO BIDDING. THE SUBMISSION OF A BID SHALL INDICATE CONTRACTOR'S COMPLETE UNDERSTANDING OF THE CONTRACT DOCUMENTS AND ACCEPTANCE OF EXISTING CONDITIONS. THE NEW SYSTEMS INDICATED ON THE PLANS AND SPECIFICATIONS SHALL BE FULLY INSTALLED AND OPERATIONAL. ALL ITEMS INCIDENTAL TO THE COMPLETION OF THE WORK SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER. THIS CONTRACTOR SHALL COORDINATE ALL CUTTING, PATCHING AND REPAIRING AS REQUIRED WITH GENERAL CONTRACTOR.
- CONTRACTOR SHALL FIELD VERIFY SEWER INVERT (TO ASSURE PROPER SLOPE MAY BE OBTAINED) AND WATER PRESSURE AT WATER METER PRIOR TO BIDDING AND/OR BEGINNING WORK. NOTIFY ARCHITECT AND ENGINEER OF ANY CONFLICTS OR DISCREPANCIES THAT MAY AFFECT THE SCOPE OF WORK.
- ALL OVERHEAD PIPING SHALL BE SUSPENDED FROM THE STRUCTURE ABOVE WITH PIPE HANGERS OR WITH "ALL TRADE" AND INSTRUT OVERHEAD PIPING SHALL BE INSTALLED AS HIGH AS POSSIBLE AND/OR TIGHT TO STRUCTURE UNLESS NOTED OTHERWISE. ALL PIPING SHALL BE CONCEALED IN FURRED AREAS UNLESS OTHERWISE NOTED OR APPROVED BY THE ARCHITECT OR ENGINEER PRIOR TO INSTALLATION. PIPING MAY RUN IN JOIST SPACE AS REQUIRED OR WHERE SHOWN ON PLANS. PENETRATION OF TJI TRUSS JOISTS OR ANY OTHER STRUCTURAL COMPONENTS MUST BE CLOSELY COORDINATED WITH THE ARCHITECT AND STRUCTURAL ENGINEER PRIOR TO INSTALLATION. ALL FRAMING MEMBERS TO PREVENT NOISE TRANSMISSION. PIPING ON ROOF SHALL BE SUPPORTED ON 4 X 4 REDWOOD BLOCKS SET ON SHEET METAL BASE WITH HEMMED EDGES AND SET IN MASTIC. PROVIDE HOLD-DOWN CLAMPS TO SECURE PIPES TO BLOCKING.
- COORDINATE EQUIPMENT, FIXTURE AND PIPING LOCATIONS WITH NEW AND/OR EXISTING HVAC DUCTWORK, LIGHTS, STRUCTURE AND ALL WORK OF OTHER TRADES.
- ALL FIXTURES AND EQUIPMENT TO HAVE ACCESSIBLE STOPS OR SHUT OFF VALVES WHETHER SPECIFICALLY MENTIONED IN FIXTURE SPECIFICATIONS OR NOT.
- A DIELECTRIC UNION SHALL BE USED TO JOIN ANY DISSIMILAR METAL PIPING OR FITTINGS.
- ALL HOT AND COLD WATER LINES SERVING FIXTURES USING FLUSH VALVES, SOLENOID VALVES OR QUICK CLOSING DEVICES SHALL BE EQUIPPED WITH A WATER HAMMER ARRESTOR (SHOCK ABSORBER). WADE SHOCKSTOP OR EQUAL IS ACCEPTABLE. ARRESTOR SHALL BE PROPERLY SIZED AND LOCATED IN PIPING ACCORDING TO MANUFACTURER'S RECOMMENDATIONS FOR THE TOTAL NUMBER OF FIXTURES SERVED AND IN ACCORDANCE WITH PDI W201. ACCESS TO WATER HAMMER ARRESTOR SHALL BE BY MEANS OF AN ACCESS PANEL MINIMUM 12" X 12" IN SIZE.
- WRAP ALL PIPING IN BLOCK WALLS OR PENETRATING CONCRETE WITH 10 MIL. POLYVINYL TAPE. SLEEVE STEM WALLS WITH PVC SCHEDULE 40 PLASTIC PIPE FOR ALL PIPE PENETRATIONS. COORDINATE WITH GENERAL CONTRACTOR.
- CONTRACTOR SHALL FURNISH ANY MISCELLANEOUS ITEMS NORMALLY USED, SPECIFICALLY MENTIONED OR NOT, TO RENDER A COMPLETE INSTALLATION.
- FIXTURES AND EQUIPMENT SPECIFIED HEREIN ARE INTENDED TO ESTABLISH GENERAL STANDARDS OF QUALITY. CONTRACTOR MAY SUBSTITUTE OTHER FIXTURES OR EQUIPMENT PROVIDED THAT SUCH SUBSTITUTES COMPLY WITH LOCAL CODES AND THEY ARE FIRST APPROVED BY THE ARCHITECT/ENGINEER AND OWNER. SUBMIT SIX (6) COPIES SHOP DRAWINGS OR LITERATURE IN AN INDEXED THREE-RING BINDER ON THE FOLLOWING ITEMS: PLUMBING FIXTURES, WATER HEATERS, PUMPS, ETC. AS SPECIFIED OR IN ACCORDANCE WITH OWNER'S REQUEST.
- FURNISH THREE (3) SETS OF OPERATION, MAINTENANCE AND WARRANTY LITERATURE IN A THREE-RING BINDER.
- CONTRACTOR SHALL GUARANTEE ALL PARTS AND LABOR OR ONE (1) YEAR FROM DATE OF FINAL ACCEPTANCE OF PROJECT.
- MAKE NOTE OF ANY CHANGES IN LAYOUT AND INCORPORATE IN 'RECORD' DRAWINGS. THIS CONTRACTOR AT NO COST TO THE OWNER SHALL CORRECT PROBLEMS DEVELOPING AS A RESULT OF DEVIATION FROM CONSTRUCTION DOCUMENTS.
- ALL VENTS THROUGH ROOF SHALL BE FLASHED WITH 4 LB. LEAD SHEET EXTENDING AROUND PIPE 8" IN ALL DIRECTIONS. TURN LEAD SHEET DOWN 2" INTO PIPE. OTHER ACCEPTABLE VENT FLASHINGS MAY BE USED PROVIDED THE ARCHITECT FIRST APPROVES THEM. VTR'S MUST BE A MINIMUM OF 10'-0" FROM ROOF OR 3'-0" ABOVE OUTSIDE AIR INTAKES OF HVAC EQUIPMENT AND 1'-0" FROM ANY VERTICAL SURFACES WHETHER SPECIFICALLY INDICATED ON PLANS OR NOT. ALL VTR'S SHALL BE LOCATED IN FLAT ROOF AREAS (NOT IN PARAPETS). ALL OTHER PIPING PENETRATIONS SHALL HAVE IAPMO LISTED FLASHING EQUAL OF DATEY, MAIFIELD OR STONEHAM.
- INSULATION SHALL BE INSTALLED ON ALL HOT WATER AND HOT WATER RETURN PIPING. INSULATE COLD WATER PIPING IN AREAS WHERE PIPING MIGHT BE SUBJECT TO FREEZING. PIPE INSULATION SHALL BE 1" THICK FIBERGLASS OR EQUAL LOW PRESSURE PIPE INSULATION WITH ASJ DR ARMAFLEX. ALL JOINTS OF INSULATION SHALL BE NEATLY SEALED WITH TAPE AND LAGGING ADHESIVE. INSULATION SHALL COMPLY WITH ALL REQUIREMENTS OF INTERNATIONAL ENERGY CODE.
- DOMESTIC WATER PIPING SHALL BE TYPE "L" COPPER WITHIN THE BUILDING AND TO A POINT 4'-0" FROM THE BUILDING SLAB. UNDERGROUND DOMESTIC WATER PIPING WITHIN THE BUILDING WALLS AND TO 4'-0" FROM THE BUILDING SLAB SHALL BE TYPE "L" SOFT (ANNEALED) COPPER (NO JOINTS IN SOFT COPPER UNDERGROUND WITHIN THE BUILDING WALLS AND TO A POINT 4'-0" FROM THE BUILDING SLAB). ALL JOINTS SHALL BE MADE WITH A LEAD-FREE SOLDER OR 95/5 SOLDER. PIPING SHALL BE CUT SQUARE AND REAMED. ALL PARTS OF PIPE AND FITTINGS TO BE SOLDERED SHALL BE THOROUGHLY CLEANED WITH SAND CLOTH BEFORE APPLYING FLUX.
- ALL WATER HEATERS SHALL BE PROVIDED WITH AN ASME RATED PRESSURE/TEMPERATURE RELIEF VALVE. P/T RELIEF LINE SHALL BE TYPE "L" HARD DRAWN COPPER. P/T RELIEF LINE SHALL EXTEND TO DAYLIGHT WITH ELBOW DOWN AT 6" ABOVE GRADE. OTHER ACCEPTABLE TERMINATION POINTS MAY BE SHOWN ON CONSTRUCTION DOCUMENTS.
- DRAIN, WASTE AND VENT PIPING SHALL BE ABS OR PVC PLASTIC DWV PIPE. JOINTS SHALL BE PRIMED AND SOLVENT WELDED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. INTERIOR WASTE PIPING SHALL SLOPE AT MINIMUM 2 PERCENT. INTERIOR 4" WASTE PIPE MAY SLOPE AT 1 PERCENT IF REQUIRED TO CONNECT TO BUILDING SEWER.
- NATURAL GAS PIPING SHALL BE SCHEDULE 40 BLACK STEEL PIPE. GAS PIPING LESS THAN 12" ABOVE GRADE AND ALL UNDERGROUND GAS PIPING SHALL HAVE A CONTINUOUS COATING OF SCOTCH COAT #202 OR EQUAL. PROVIDE GAS COCK AND UNION AT CONNECTION TO EACH GAS APPLIANCE AND AT GAS PIPING ENTRANCE TO BUILDING. THIS CONTRACTOR SHALL PROVIDE FLEXIBLE CONNECTIONS WHERE REQUIRED BY CODE. GAS METER AND HIGH PRESSURE GAS LINE TO BE INSTALLED BY GAS COMPANY. CONTRACTOR TO COORDINATE INSTALLATION AND PAY ALL FEES.
- CONDENSATE DRAIN PIPING SHALL BE TYPE "M" COPPER PIPE AND SHALL SLOPE A MINIMUM OF 1/8" PER FOOT. PROVIDE THREADED PLUG AT EACH 90-DEGREE CHANGE OF DIRECTION FOR USE AS CLEANDOUT. CONDENSATE PIPE WITHIN THE BUILDING SHALL BE INSULATED WITH 1/2" ARMAFLEX FOR ITS FULL LENGTH. CONDENSATE PIPE SHALL BE TRAPPED AND VENTED ON DOWNSTREAM SIDE OF TRAP AT AC/HP UNIT.
- PIPING ABOVE GRADE SHALL BE PROVIDED WITH PIPING LABELS AT 20-FOOT INTERVALS AND AT DIRECTIONAL CHANGES. LABELS SHALL BE SNAP ON PLASTIC WRAP-AROUND TYPE AND SIZED TO COVER THE ENTIRE CIRCUMFERENCE OF THE PIPE AND INSULATION. LABELS SHALL HAVE INTEGRAL COLOR IDENTIFICATION AS ESTABLISHED BY ANSI STANDARD A13.1 - 1981. LETTERING SHALL BE LOCATED TO BE EASILY LEGIBLE. DIRECTIONAL ARROWS SHALL INDICATE DIRECTION OF FLOW AND SHALL BE SIZED TO POINT AWAY FROM LETTERING.
- ALL UTILITIES (WATER AND SEWER PIPING) BURIED OR PLACED BELOW GROUND SHALL BE LOCATABLE ABOVE GRADE WITHOUT POT-HOLING IN ACCORDANCE WITH THE STATE OF ARIZONA "HOUSE BILL 2236, DETECTABLE UNDERGROUND FACILITIES REQUIREMENTS".
- ALL POTABLE WATER SYSTEMS SHALL BE DISINFECTED PRIOR TO USE IN ACCORDANCE WITH SECTION 610 OF THE 2012 INTERNATIONAL PLUMBING CODE. FOLLOWING DISINFECTION, AND PRIOR TO THE FINAL INSPECTION AND ISSUANCE OF THE CERTIFICATE OF OCCUPANCY, PROVIDE STERILIZATION REPORT AND CLEAN BACTERIOLOGICAL REPORT TO THE AUTHORITY HAVING JURISDICTION.



1 PLUMBING DEMOLITION PLAN
1/4"=1'-0"

PLUMBING LEGEND

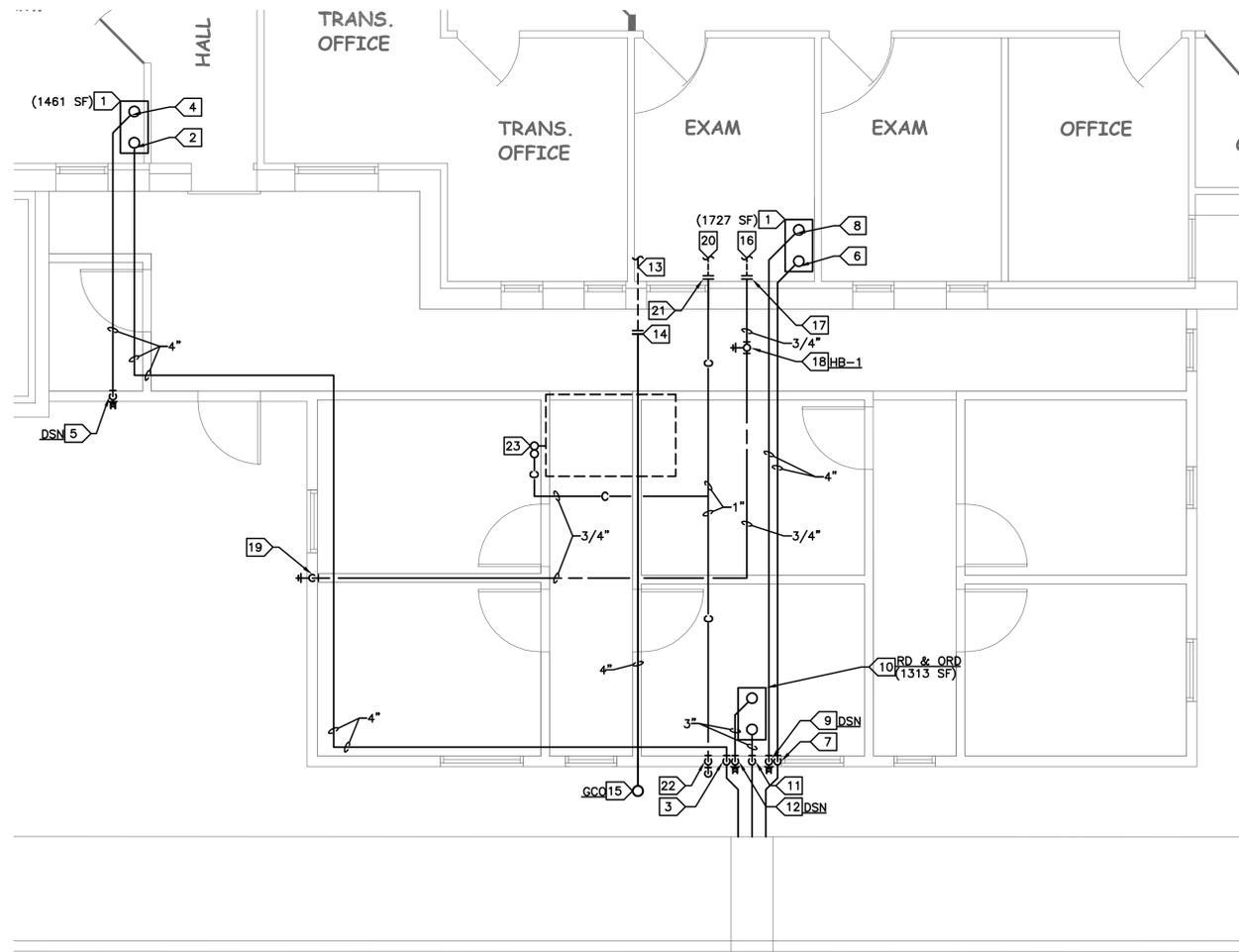
SYMBOL	ABBREV.	ITEM
---	DCW	DOMESTIC COLD WATER
---	DHW	DOMESTIC HOT WATER
---	DCW - EXISTING	DCW - EXISTING
---	W	WASTE
---	V	VENT
---	G	NATURAL GAS
---	C	CONDENSATE
---	SOV	SHUT-OFF VALVE
---	WCO	WALL CLEANOUT

GENERAL NOTES

- ALL WORK SHALL COMPLY WITH THE 2012 INTERNATIONAL PLUMBING CODE, THE 2012 INTERNATIONAL FUEL GAS CODE AND THE 2012 INTERNATIONAL ENERGY CONSERVATION CODE.
- ALL POTABLE WATER SYSTEMS SHALL BE DISINFECTED PRIOR TO USE IN ACCORDANCE WITH SECTION 610 OF THE 2012 INTERNATIONAL PLUMBING CODE. FOLLOWING DISINFECTION, AND PRIOR TO THE FINAL INSPECTION AND ISSUANCE OF THE CERTIFICATE OF OCCUPANCY, PROVIDE STERILIZATION REPORT AND CLEAN BACTERIOLOGICAL REPORT TO THE AUTHORITY HAVING JURISDICTION.

NEW ROOF DRAIN CALCULATION 3" PER HOUR

SURFACE	DIMENSIONS	AREA (SQ FT)
ROOF AREA	IRREGULAR	1048
NORTH PARAPET WALL AREA	(3.0' X 27')/2 =	40.5
SOUTH PARAPET WALL AREA	(3.0' X 27')/2 =	40.5
EAST PARAPET WALL AREA	(3.33' X 55')/2 =	92
WEST PARAPET WALL AREA	(3.33' X 55')/2 =	92
TOTAL AREA:		1313
VERTICAL RWL SIZE REQUIRED @ 1/4" SLOPE:		3"
HORIZONTAL RWL SIZE REQUIRED @ 1/4" SLOPE:		3"



2 PLUMBING PLAN
1/4"=1'-0"

KEYED NOTES PLUMBING DEMO

- EXISTING ROOF DRAIN & OVERFLOW ROOF DRAIN ASSEMBLY ON ROOF TO REMAIN. SEE PLUMBING PLAN.
- REMOVE EXISTING 3" ROOF DRAIN & OVERFLOW ROOF DRAIN PIPING ABOVE CEILING AND THRU EXTERIOR WALL.
- REMOVE EXISTING RAINWATER DOWN SPOUT AT EXTERIOR WALL.
- REMOVE EXISTING 4" ROOF DRAIN & OVERFLOW ROOF DRAIN PIPING ABOVE CEILING, DOWN IN WALL AND THRU EXTERIOR WALL.
- REMOVE EXISTING DOWN SPOUT NOZZLE.
- REMOVE EXISTING 4" SEWER GRADE CLEANDOUT. SEE PLUMBING PLAN FOR SEWER EXTENSION.
- EXISTING 4" SEWER BELOW FLOOR TO REMAIN.
- REMOVE EXISTING 1" CONDENSATE LINE DOWN IN WALL FROM ABOVE CEILING. SEE PLUMBING PLAN FOR CONDENSATE EXTENSION.
- EXISTING 1" CONDENSATE LINE ABOVE CEILING TO REMAIN.
- RELOCATE EXISTING HOSE BIBB. SEE PLUMBING PLAN.
- REMOVE EXISTING 3/4" DCV DOWN IN WALL FROM ABOVE CEILING. SEE PLUMBING PLAN FOR DCV EXTENSION.
- EXISTING 3/4" ABOVE CEILING TO REMAIN.

WATER CALCULATION

STATIC PRESSURE: 50-58 PSI (AT METER FROM WATER COMPANY)
USE: 50 PSI (DESIGN PRESSURE)
SUBTRACT LOSSES: 25 PSI (PRESS. REQ'D AT FIXTURE.)
2 PSI (EX 2" METER PRESS LOSS)
10 PSI (2-EX 2" 90° PRESS LOSS)
2.6 PSI (ELEVATION 6 FT./2.31)
10.4 PSI (REMAINING FOR PIPE LOSS)

DEVELOPED LENGTH: 400 FEET
EQUIVALENT PIPE LENGTH: 400 FEET X 1.20 = 480 FEET
CALCULATE ALLOWABLE PIPE LOSS PER 100 FEET OF PIPE

10.4 x 100 = 2.17 PSI LOSS PER 100 FEET

480 FEET

NOTES:
1. PIPING SIZE LIMITED TO 8 FEET PER SECOND MAXIMUM VELOCITY.
2. EXISTING 2" TUCCSON WATER METER NO. 14134936.
3. (2) EXISTING 2" REDUCED PRESSURE BACKFLOW PREVENTER.
4. EXISTING 3/4" DCV SERVICE LINE TO BUILDING.

FIRE SPRINKLER NOTES

- PROVIDE HYDRAULICALLY CALCULATED DESIGN FOR FIRE SPRINKLER SYSTEM TO FULLY COVER THE ENTIRE AREA OF THE TENANT IMPROVEMENT AS AN EXTENSION/MODIFICATION TO THE EXISTING SYSTEM. THE SYSTEM SHALL BE DESIGNED FOR THE HAZARD CLASSIFICATION AS REQUIRED BY BOTH THE MOST RECENT EDITION OF THE NFPA-13 AND LOCAL AUTHORITY HAVING JURISDICTION. CONTRACTOR SHALL VERIFY HAZARD CLASSIFICATION WITH THE AUTHORITY HAVING JURISDICTION PRIOR TO THE START OF DESIGN.
- CONTRACTOR TO FURNISH AND INSTALL AN APPROVED FIRE SPRINKLER SYSTEM IN ALL AREAS OF THE BUILDING.
- SYSTEM SHALL BE DESIGNED FOR THE HAZARD OCCUPANCY AS REQUIRED BY BOTH THE MOST RECENT EDITION OF THE NFPA-13 AND LOCAL AUTHORITY HAVING JURISDICTION. COORDINATE THE DESIGN WITH THE INSURANCE UNDERWRITER FOR ANY REQUIREMENTS ABOVE AND BEYOND THE PREVIOUSLY MENTIONED REQUIREMENTS.
- SUBMIT SHOP DRAWINGS FOR REVIEW AND APPROVAL BY THE LOCAL FIRE DEPARTMENT, ARCHITECT/ENGINEER, AND BUILDING OWNER'S INSURANCE COMPANY. COORDINATE SPRINKLER HEAD AND PIPE LOCATIONS WITH CEILING PATTERN, AIR CONDITIONING DUCTWORK, LIGHTS, AND ALL WORK OF OTHER TRADES. CENTER SPRINKLER HEAD IN AT LEAST ONE DIRECTION IN CEILING TILES.
- ALL HANGERS, HANGER SPACING, SWAY BRACING AND SWAY BRACE SPACING SHALL MEET THE REQUIREMENTS OF NFPA-13.
- PENDANT SPRINKLER HEADS SHALL BE RECESSED TYPE WITH FINISH AS SELECTED BY ARCHITECT. EXISTING SPRINKLER HEADS SHALL NOT BE REUSED. PROVIDE SPARE SPRINKLER HEADS AS REQUIRED BY NFPA-13.
- THIS CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO THE BIDDING. NOTIFY THE ARCHITECT/ENGINEER OF ANY CONFLICTS WHICH MAY AFFECT THE SCOPE OF WORK.

KEYED NOTES PLUMBING NEW

- EXISTING ROOF DRAIN & OVERFLOW ROOF DRAIN ASSEMBLY ON ROOF TO REMAIN.
- CONNECT NEW 4" RAINWATER LEADER TO EXISTING 3" ROOF DRAIN ABOVE CEILING AND ROUTE AS INDICATED. SLOPE AT A MINIMUM OF 1/8" PER FOOT.
- 4" RAINWATER LEADER DOWN IN WALL TO BELOW GRADE, ELBOW BELOW GRADE AND ROUTE TO SIDEWALK SCUPPER. SEE ARCHITECTURAL PLAN.
- CONNECT NEW 4" RAINWATER LEADER TO EXISTING 3" OVERFLOW ROOF DRAIN ABOVE CEILING AND ROUTE AS INDICATED. SLOPE AT A MINIMUM OF 1/8" PER FOOT.
- 4" OVERFLOW RAINWATER LEADER DOWN IN WALL, ELBOW THRU WALL AT 12" ABOVE GRADE TO DOWN SPOUT NOZZLE.
- CONNECT NEW 4" RAINWATER LEADER TO EXISTING 4" ROOF DRAIN ABOVE CEILING AND ROUTE AS INDICATED. SLOPE AT A MINIMUM OF 1/8" PER FOOT.
- 4" RAINWATER LEADER DOWN IN WALL TO BELOW GRADE, ELBOW BELOW GRADE AND ROUTE TO SIDEWALK SCUPPER. SEE ARCHITECTURAL PLAN.
- CONNECT NEW 4" RAINWATER LEADER TO EXISTING 4" OVERFLOW ROOF DRAIN ABOVE CEILING AND ROUTE AS INDICATED. SLOPE AT A MINIMUM OF 1/8" PER FOOT.
- 4" OVERFLOW RAINWATER LEADER DOWN IN WALL, ELBOW THRU WALL AT 12" ABOVE GRADE TO DOWN SPOUT NOZZLE.
- NEW 3" ROOF DRAIN & OVERFLOW ROOF DRAIN ASSEMBLY ON ROOF. SEE SCHEDULE.
- 3" RAINWATER LEADER DOWN IN WALL TO BELOW GRADE, ELBOW BELOW GRADE AND ROUTE TO SIDEWALK SCUPPER. SEE ARCHITECTURAL PLAN.
- 3" OVERFLOW RAINWATER LEADER DOWN IN WALL, ELBOW THRU WALL AT 12" ABOVE GRADE TO DOWN SPOUT NOZZLE.
- EXISTING 4" SEWER BELOW GRADE.
- CONNECT NEW 4" SEWER TO EXISTING SEWER BELOW GRADE AND ROUTE AS INDICATED.
- NEW 4" GRADE CLEANDOUT.
- EXISTING 3/4" DCV ABOVE CEILING.
- CONNECT NEW 3/4" DCV TO EXISTING DCV ABOVE CEILING AND ROUTE AS INDICATED.
- 3/4" DCV UP THRU ROOF TO HOSE BIBB AT 12" ABOVE ROOF. INSULATE PIPING ABOVE ROOF AND PROVIDE ALUMINUM LAGGING OVER INSULATION. SUPPORT PIPING ABOVE ROOF WITH INSTRUT PIPE STANTION.
- 3/4" DCV DOWN IN WALL TO RELOCATED HOSE BIBB.
- EXISTING 1" CONDENSATE LINE ABOVE CEILING.
- CONNECT NEW INSULATED 1" CONDENSATE LINE TO EXISTING ABOVE CEILING AND ROUTE AS INDICATED.
- 1" INSULATED CONDENSATE DOWN IN WALL, ELBOW THRU WALL AT 6" ABOVE FINISH GRADE AND TURN DOWN IN LANDSCAPED AREA.
- 3/4" TRAPPED CONDENSATE AT HP UNIT ABOVE ROOF, DROP THRU ROOF AND ROUTE INSULATED CONDENSATE ABOVE CEILING AS INDICATED.

NO.	REVISIONS

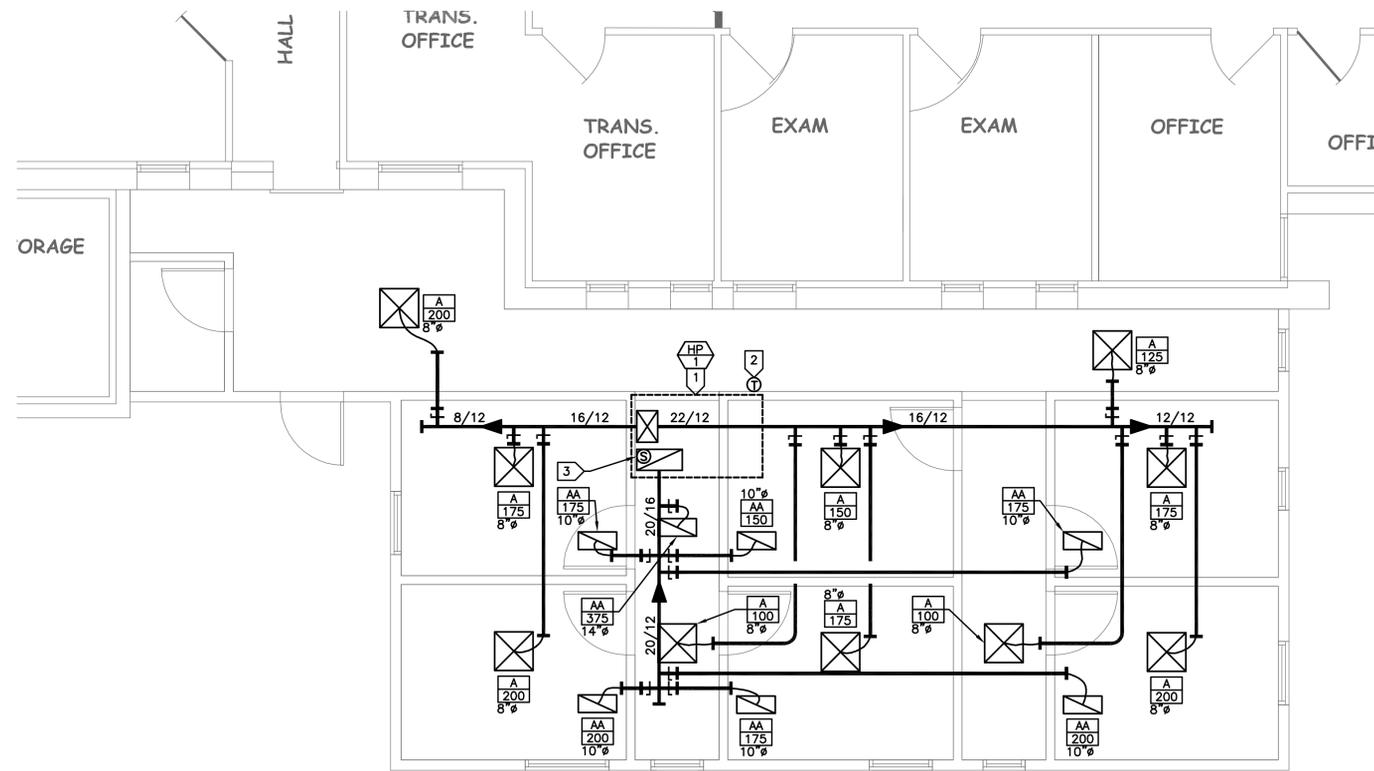
PASCUA YAQUI CLINIC OFFICE ADDITION
PLUMBING PLANS



cdg
ARCHITECTS
2102 N. COUNTRY CLUB ROAD #9
TUCSON, ARIZONA 85716
(520) 608-9752 / (520) 788-3341 F
www.cdg-architects.com

Mechanical Engineering Consultants, LLC
PO BOX 6819
Tucson, Arizona 85737
520-877-2700 (Phone)
1-888-443-5443 (Fax)
MEC PROJECT NO.: 16-014

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PROJECT NO. 16014



KEYED NOTES		
1.	ROOFTOP HEAT PUMP UNIT, SEE DETAIL AND SCHEDULE.	
2.	PROGRAMMABLE THERMOSTAT ON WALL. PROVIDE CONTROL WIRING AS REQUIRED. COORDINATE FINAL LOCATION WITH TENANT/OWNER PRIOR TO ROUGH-IN.	
3.	REMOTE TEMPERATURE SENSOR IN RETURN DUCT MAIN. PROVIDE CONTROL WIRING TO AC UNIT AND THERMOSTAT AS REQUIRED.	

GENERAL NOTES		
1.	SEE ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION OF CEILING AIR DEVICES AND CEILING TYPES.	
2.	SEE SHEET M2 FOR MECHANICAL DETAILS.	
3.	SEE SHEET M3 FOR MECHANICAL SPECIFICATIONS.	
4.	ALL WORK SHALL COMPLY WITH THE 2012 INTERNATIONAL MECHANICAL CODE AND THE 2012 INTERNATIONAL ENERGY CONSERVATION CODE.	

MECHANICAL LEGEND		
SYMBOL	ABBREV.	ITEM
	---	SUPPLY
	---	RETURN
	---	EXHAUST
	FD	FIRE DAMPER
	---	THERMOSTAT (NEW)
	---	REMOTE TEMPERATURE SENSOR
	---	FLEXIBLE DUCT
	C	CONDENSATE
KEYED NOTE MARK		
	---	TYPE
	X	AIR DEVICE CALL-OUT
	xxx	CFM
	8"	DUCT SIZE

1 MECHANICAL PLAN
1/4"=1'-0"

PACKAGED ROOFTOP HEAT PUMP UNIT SCHEDULE																					
MARK	MFR.*	MODEL	NOMINAL TONS	COOLING CYCLE (115° F)			HEATING CYCLE (ARI)			CFM			ELECTRICAL DATA						OPERATING WEIGHT (LBS.)	NOTES	
				COOLING CAP. MBH TOT/SENS	EAT COIL DB	MIN. SEER	HEATING CAP. MBH	MIN. COP/HSPF	SUPPLY	E.S.P. IN. W.C.	O.S.A.	VOLTS/PHASE	COMP. RLA	O.F.M. FLA	I.F.M. FLA	STRIP HEATER KW	MCA	MOCP			
HP-1	TRANE	4WCZ60-48	4.0	39.70/33.00	80	67	16.0 SEER	42.0	9.0 HSPF	1600	0.70	150	208V/3Ø	13.5	0.9	6.8	3.76	40	50	625	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13

1. PROVIDE FACTORY ROOF CURB, SET LEVEL, SEE DETAIL.
2. PROVIDE WITH FILTER RACK WITH FACTORY HINGED ACCESS DOOR & 2" MERV-8 FILTERS.
3. PROVIDE WITH FACTORY 50% MANUAL OUTSIDE AIR HOOD WITH DAMPER.
4. PROVIDE WITH FAN MOTOR FOR AIRFLOW AND ESP SCHEDULED.
5. PROVIDE WITH FACTORY SINGLE POINT POWER CONNECTION.
6. PROVIDE WITH PROGRAMMABLE THERMOSTAT - HONEYWELL 7220 ULTRASTAT WITH TWO-STAGE COOLING, TWO-STAGE HEATING. THERMOSTAT SHALL BE 7 DAY PROGRAMMABLE FOR 2 OCCUPIED/UNOCCUPIED PERIODS PER DAY, WITH CONTROL LOCKOUT, NIGHT SETBACK CONTROLS 3 HOUR CONTINUOUS OVERRIDE CONTROLS AND REMOTE TEMPERATURE SENSOR CAPABILITY.
7. PROVIDE REMOTE TEMPERATURE SENSOR WIRED TO THERMOSTAT.
8. PROVIDE UNIT WITH FACTORY INSTALLED LOW AMBIENT CONTROLS TO 25 DEGREES.
9. PROVIDE WITH FACTORY INSTALLED COMPRESSOR SHORT CYCLE CONTROLS.
10. PROVIDE WITH FACTORY INSTALLED CONDENSER COIL HALL GUARDS.
11. AIR CONDITIONING UNITS SHALL OPERATE WITH FACTORY CHARGED R-410A REFRIGERANT.
12. HEAT PUMP UNITS SHALL BE LISTED AND LABELED FOR OUTDOOR INSTALLATION.
13. TRANE OR APPROVED EQUAL OF CARRIER OR LENNOX.

AIR DEVICE SCHEDULE									
MARK	SERVICE	NECK SIZE (IN.)	TYPE	DAMPER	PANEL SIZE (IN.)	FINISH	MANUFACTURER	MODEL NO.	REMARKS
A	SUPPLY	8"	DIFFUSER	OBD	24/24	WHITE	KRUEGER	6504	PERFORATED FACE, CURVED BLADE, 4-WAY
AA	RETURN	22/10	GRILLE	OBD	24/12	WHITE	KRUEGER	EGC	EGGCRATE, ALUMINUM

NOTE: 1. PROVIDE FRAME STYLE SUITABLE FOR CEILING SPECIFIED ON ARCH. DWGS.
2. PROVIDE SQUARE TO ROUND ADAPTERS AS REQUIRED.
3. KRUEGER OR EQUAL BY PRICE OR TITUS.

IMC OUTDOOR AIR VENTILATION SCHEDULE									
UNIT	SPACE	AREA SF	OCCUPANTS PER 1000 SF	OSA CFM RATE R _o	NO. OF OCCUPANTS	OSA CFM REQUIRED PER OCCUPANT	E _z	TOTAL OSA CFM REQUIRED	TOTAL OSA CFM PROVIDED
HP-1	OFFICE	1000	5	0.06	5	5	0.8	107	150

REVISIONS

PASCUA YAQUI CLINIC OFFICE ADDITION
MECHANICAL PLAN



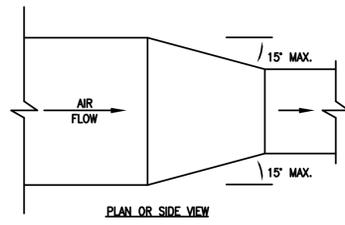
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PO BOX 69819
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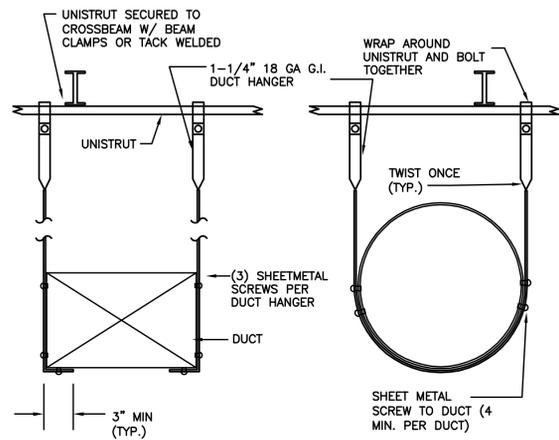
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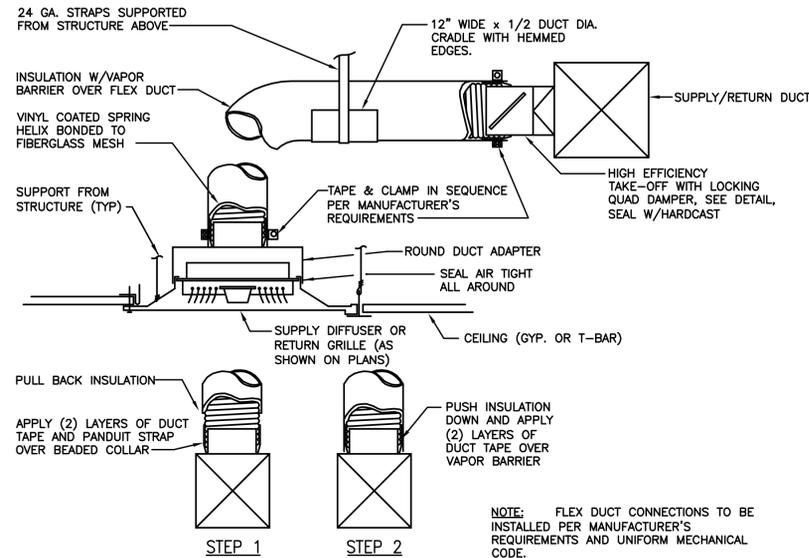
PROJECT NO. 16014



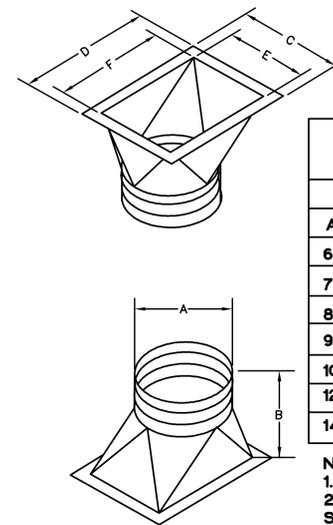
4 DUCT TRANSITION
N.T.S.



3 DUCT SUPPORT DETAIL
N.T.S.



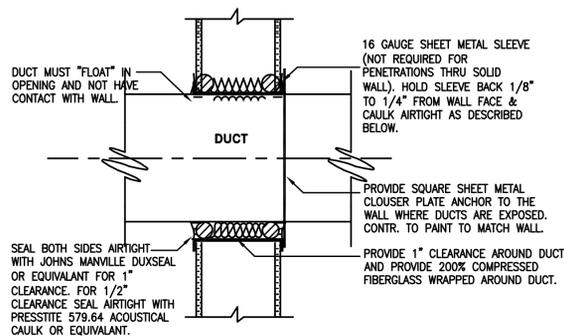
2 SUPPLY DIFFUSER AND FLEXIBLE DUCT DETAILS
N.T.S.



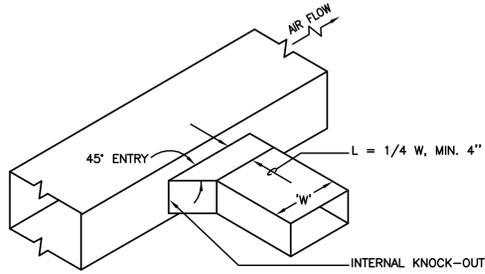
H.E.T. HIGH EFFICIENCY TAKEOFFS					
DIMENSIONS				CUT HOLE SIZE	
A	B	C	D	E	F
6"	10"	8-1/4"	11"	6"	9"
7"	10"	9-1/4"	12"	7"	10"
8"	10"	10-1/4"	13"	8"	11"
9"	11-1/2"	11-1/4"	14"	9"	12"
10"	11-1/2"	12-1/4"	14"	10"	12"
12"	11-1/2"	14-1/4"	16"	12"	14"
14"	12-1/2"	16-1/4"	18"	14"	16"

NOTES:
1. 'E' SIZE MUST BE MIN. 'A' DIMENSION
2. TAKE-OFFS SHALL BE FLEXMASTER SERIES STO OR APPROVED EQUAL.

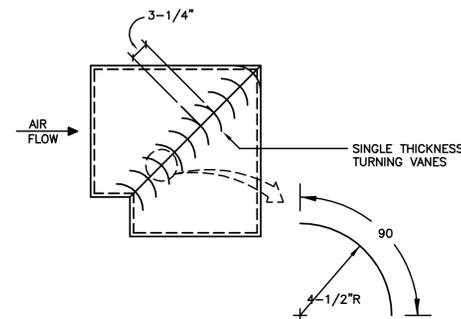
1 HIGH EFFICIENCY DUCT TAKE-OFF DETAIL
N.T.S.



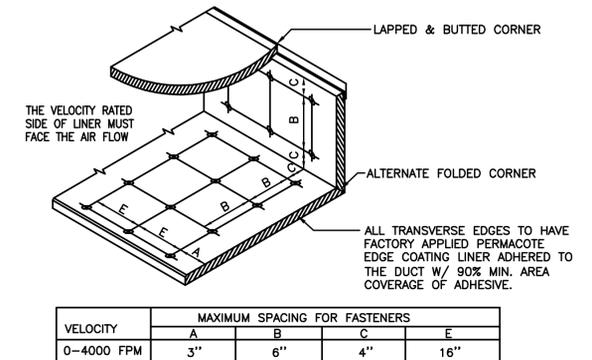
8 DUCT THRU WALL DETAIL
N.T.S.



7 TYPICAL DUCT TAKE-OFF DETAIL
N.T.S.



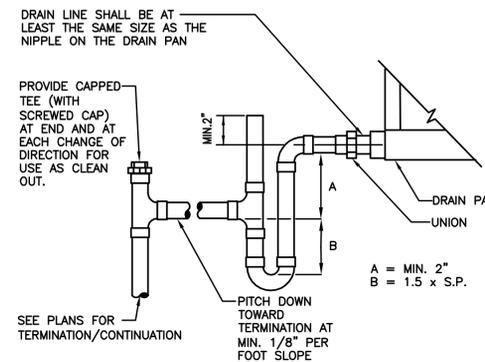
6 MITER ELBOW WITH TURNING VANES
N.T.S.



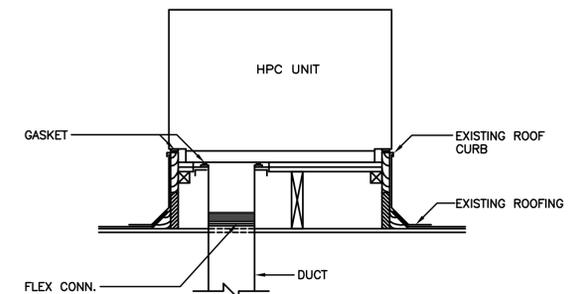
VELOCITY	MAXIMUM SPACING FOR FASTENERS			
	A	B	C	E
0-4000 FPM	3"	6"	4"	16"

NOTE: METAL NOISING APPLIES ONLY TO LINED HIGH VELOCITY DUCTWORK

9 ACOUSTICAL DUCT LINER DETAIL
N.T.S.



10 CONDENSATE TRAP DRAIN
N.T.S.



9 ROOFTOP HEAT PUMP UNIT DETAIL
N.T.S.

REVISIONS

NO.	DATE	DESCRIPTION

PASCUA YAQUI CLINIC OFFICE ADDITION
MECHANICAL DETAILS



cdg ARCHITECTS
2102 N. COUNTRY CLUB ROAD #9
TUCSON, ARIZONA 85716
(520) 828-9752 / (520) 788-3341 F
www.cdg-architects.com

Mechanical Engineering Consultants, LLC
PO BOX 6819
Tucson, Arizona 85737
520-877-2700 (Phone)
1-888-400-5443 (Fax)
MEC PROJECT NO.: 16-014

07/08/16
M2
PROJECT NO. 16014

MECHANICAL SPECIFICATIONS

1. CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS, CONNECTION FEES, AND INSPECTIONS AND SHALL ADHERE TO ALL CODES AND THOSE HAVING JURISDICTION.

2. DESCRIPTION:

A. PROVIDE LABOR, MATERIALS, TOOLS, MACHINERY, AND EQUIPMENT NECESSARY FOR THE CONSTRUCTION OF THE MECHANICAL SYSTEMS SPECIFIED AND SHOWN ON THE DRAWINGS INCLUDING MISCELLANEOUS ITEMS REQUIRED FOR PROPER EXECUTION AND COMPLETION OF SAID WORK.

B. IN CASE OF CONFLICT BETWEEN THE PROJECT SPECIFICATIONS, DRAWINGS AND APPLICABLE LAWS, ORDINANCES, CODES, RULES AND REGULATIONS, THE MORE STRINGENT REQUIREMENTS SHALL GOVERN.

C. CONTRACTOR'S OPTION: SYSTEMS HAVE BEEN DESIGNED AROUND THE MAKES, MODELS, AND SIZES OF EQUIPMENT SPECIFIED. ANY MAKE OF EQUIPMENT NAMED IN SPECIFICATIONS OR PROPERLY APPROVED MAY BE PROVIDED; SUCH EQUIPMENT SHALL MEET ALL PROVISIONS OF THE SPECIFICATIONS. IT IS, HOWEVER, THE CONTRACTOR'S RESPONSIBILITY TO BE SURE THAT SUCH EQUIPMENT HAS EQUAL CAPACITY TO EQUIPMENT SPECIFIED, SAME ELECTRICAL CHARACTERISTICS, SUBSTANTIALLY THE SAME PHYSICAL DIMENSIONS AND SHALL BE CAPABLE OF BEING INSTALLED IN AVAILABLE SPACE INCLUDING AMPLE WORKING SPACE AROUND IT. ANY ADDITIONAL COSTS SUCH AS ENGINEERING RE-DESIGN FEES, PLAN CHECK FEES OR INCREASED SIZES OR QUANTITIES OF CONDUIT WIRE, CIRCUIT PROTECTIVE DEVICES & ETC., RESULTING FROM EQUIPMENT OR MATERIAL SUBSTITUTION SHALL BE BORNE BY THIS CONTRACTOR.

D. "PROVIDE" SHALL MEAN THE FURNISHING AND INSTALLING OF AN ITEM.

E. DRAWINGS ARE DIAGRAMMATIC AND INTENDED TO SHOW APPROXIMATE LOCATION OF OUTLETS AND EQUIPMENT:

- 1) DIMENSIONS INDICATED IN FIGURES SHALL TAKE PRECEDENCE OVER SCALED DIMENSIONS.
 - 2) VERIFY LOCATIONS AND SIZES IN FIELD PRIOR TO FABRICATION AND INSTALLATION.
 - 3) CERTAIN RUNS OF DUCTS MAY BE SHOWN DISTORTED FOR CLARITY.
 - 4) INSTALL DUCTWORK AND EQUIPMENT IN A MANNER AND IN LOCATIONS TO AVOID OBSTRUCTIONS, PRESERVE HEADROOM AND KEEP OPENINGS AND PASSAGEWAYS CLEAR.
 - 5) CAREFULLY EXAMINE THE CONTRACT DOCUMENTS AND EXISTING CONDITIONS. DETERMINE IN ADVANCE MEANS AND METHODS OF INSTALLING AND COORDINATING MECHANICAL/ELECTRICAL WORK.
 - 6) AVOID INTERFERENCE BETWEEN THE VARIOUS BUILDING SYSTEMS. SHOULD INTERFERENCE OCCUR, DO NOT PROCEED WITH THE WORK UNTIL RESOLUTION OF INTERFERENCE HAS BEEN APPROVED.
- F. ALL MATERIALS SHALL BE NEW WHEN INSTALLED AND HAVE NEW APPEARANCE WHEN ACCEPTED BY THE OWNER.

3. SUBMITTALS:

A. SHOP DRAWINGS:

- 1) ITEMS SUBMITTED MUST CONTAIN THE PURCHASING CONTRACTOR'S CERTIFICATION THAT ALL ASPECTS OF THE CONTRACT HAVE BEEN MET. DEVIATIONS FROM THE CONTRACT DOCUMENTS MUST BE OUTLINED IN WRITING, IN LETTER FORM, WITH ALL TECHNICAL DETAILS ATTACHED.
- 2) ALL ITEMS INDICATED ON DRAWINGS SHALL BE EASILY IDENTIFIED ON SHOP DRAWINGS. CLEARLY IDENTIFY ITEMS INTENDED FOR USE.
- 3) REVIEW OF THE SHOP DRAWINGS BY ENGINEER DOES NOT RELIEVE THE CONTRACTOR FROM RESPONSIBILITY FOR CONFORMANCE WITH THE CONSTRUCTION CONTRACT DOCUMENTS OR FOR RESPONSIBILITY FOR ERRORS AND OMISSIONS IN THE SHOP DRAWINGS.
- 4) SUBMIT SIX SETS OF ALL SHOP DRAWINGS FOR APPROVAL.

B. ENGINEERING DATA AND INSTRUCTIONS:

- 1) SUBMITS THREE SETS FOR EQUIPMENT INSTALLED, MAKE, MODEL AND SERIAL NUMBERS; PARTS LISTS; CAPACITIES; OPERATING AND MAINTENANCE INSTRUCTIONS; AND OTHER RELEVANT DATA.
- 2) SUBMIT INFORMATION IN THREE-RING NOTEBOOKS, PROPERLY FILED, INDEXED, TITLED AND DATED.

C. RECORD DRAWINGS:

- 1) PROVIDE AND KEEP UP-TO-DATE COMPLETED RECORD PRINTS OF WORK.
- 2) RECORD DAILY EVERY CHANGE FROM CONSTRUCTION CONTRACT DOCUMENTS.
- 3) SHOW LOCATIONS, SIZES AND DEPTHS.
- 4) UPON COMPLETION OF WORK, PURCHASE SET OF PRINTS FOR USE AS RECORD CONSTRUCTION CONTRACT DRAWINGS.
- 5) INDICATE ON DRAWINGS CHANGES IN WORK.

4. DUCTWORK:

A. FURNISH AND INSTALL ALL SHEET METAL DUCTS TOGETHER WITH NECESSARY DAMPERS, SUPPORTS AND OTHER ITEMS REQUIRED FOR A COMPLETE INSTALLATION.

B. ALL SUPPLY AND RETURN DUCTWORK SHALL BE CONSTRUCTED OF NEW GALVANIZED PRIME STEEL. GAUGES AND INSTALLATION SHALL BE ACCORDING TO LATEST SMACNA "HVAC DUCT CONSTRUCTION STANDARDS" FOR THE 1" W.G. PRESSURE CLASS UNLESS OTHERWISE NOTED.

1) ALL DUCT JOINTS, INCLUDING BRANCH DUCT CONNECTIONS, SHALL BE SEALED WITH UL 181A OR 181B RATED HARDCAST, TAPE OR MASTIC.

2) ROUND BRANCH DUCT CONNECTIONS SHALL BE MADE WITH A HIGH EFFICIENCY DUCT TAKE-OFF FITTING AND SHALL BE SEALED WITH HARDCAST. NO DAVE TAIL FITTING AND NO DUCT TAPE ALLOWED.

3) HIGH EFFICIENCY DUCT TAKE-OFF FITTINGS SHALL BE SERIES STO AS MANUFACTURED BY FLEXMASTER.

C. ROUND DUCT SHALL BE SPIRAL AS MANUFACTURED BY UNITED SHEET METAL OR EQUIVALENT. DUCT CONSTRUCTION SHALL BE PER LATEST SMACNA "HVAC DUCT CONSTRUCTION STANDARDS" FOR THE 2" W.G. PRESSURE CLASS.

1) ALL JOINTS SHALL BE MADE WITH SPIRAL-MATE.

2) ALL BRANCH DUCT CONNECTIONS SHALL BE FACTORY MADE 45 DEGREE TAKE-OFFS OR FULL CONICAL TEES. NO STRAIGHT TAPS OR FIELD CONNECTIONS ALLOWED. BRANCH DUCT CONNECTIONS MAY BE MADE WITH FIELD INSTALLED FULL CONICAL SADDLE TAPS, GASKETED AND SEALED AIRTIGHT IN LIEU OF FACTORY MADE TAKE-OFFS.

D. ALL DUCTWORK SHALL BE HUNG WITH SHEET METAL STRAP HANGERS PER LATEST SMACNA "HVAC DUCT CONSTRUCTION STANDARDS" FASTENED TO STRUCTURE ABOVE.

E. THE SIZES OF DUCTS SHOWN ON DRAWINGS ARE ACTUAL OUTSIDE DUCT DIMENSIONS.

F. INSIDE RADIUS OF ALL ELBOWS SHALL BE NOT LESS THAN 6" AND SHALL INCORPORATE TURNING VANES AS SHOWN ON DRAWINGS. TURNING VANES SHALL BE SINGLE THICKNESS WITH STANDARD METAL RUNNERS AS MANUFACTURED BY DURO DYNE OR AERO DYNE.

G. REDUCING ELBOWS WITH TURNING VANES SHALL NOT BE USED. ALL ELBOWS WITH TURNING VANES SHALL HAVE THE SAME INLET AND OUTLET SIZES WITH TRANSITIONS AS NECESSARY DOWNSTREAM OF THE ELBOW.

H. CHANGES IN DUCT SIZES OR SHAPE SHALL BE MADE WITH TRANSITIONS AS LONG AS PRACTICAL. THE MAXIMUM ANGLE BETWEEN THE SIDE AND AXIS OF THE DUCT SHALL BE 20 DEGREES UNLESS SHOWN ON THE DRAWINGS OR AUTHORIZED BY THE ARCHITECT.

I. PAINT ALL VISIBLE SHEET METAL DUCTWORK BEHIND GRILLES AND REGISTERS FLAT BLACK.

5. PIPE AND FITTINGS:

A. AIR CONDITIONING REFRIGERANT PIPING SHALL BE ACR REFRIGERATION HARD TEMPERED TUBING CLEANED AND CAPPED WITH WROUGHT COPPER FITTINGS.

B. REFRIGERATION PIPING SHALL HAVE A TRIPLE EVACUATION WITH DRY NITROGEN AND A 12 HOUR HOLDING TEST INSPECTION BY ARCHITECT'S REPRESENTATIVE. A WRITTEN REPORT OF TEST RESULTS SHALL BE SUBMITTED FOR APPROVAL AND SHALL BE SIGNED BY THE INSPECTING PARTY.

C. JOINTS IN COPPER AIR CONDITIONING REFRIGERANT PIPING SHALL BE MADE WITH SILFOS AND FLUX AS RECOMMENDED BY THE BRAZING ALLOY MANUFACTURER. DURING BRAZING THE PIPE AND FITTINGS SHALL BE KEPT FULL OF AN INERT GAS, DRY NITROGEN, OR CO₂, TO PREVENT FORMATION OF SCALE.

D. CONDENSATE PIPING SHALL BE TYPE "M" COPPER WITH SOLDERED JOINTS. PROVIDE THREADED PLUG AT EACH 90 DEGREE CHANGE OF DIRECTION FOR USE AS CLEANOUT.

6. PIPE HANGERS:

A. ALL PIPING WITHIN THE CONFINES OF THE BUILDING SHALL BE SUPPORTED BY MEANS OF ADJUSTABLE STEEL CLEVIS HANGERS SPACED PER ASHRAE RECOMMENDATIONS AND SUSPENDED FROM THE BUILDING CONSTRUCTION BE ALL THREAD RODS. STRAP, WIRE OR CHAIR HANGERS ARE NOT PERMITTED. WHERE SUSPENDED FROM STEEL STRUCTURAL MEMBERS, APPROPRIATE CLAMPS SHALL BE USED. HANGER RODS SHALL BE SIZED PER ASHRAE RECOMMENDATIONS. CLEVIS HANGERS TO BE SIZED LARGE ENOUGH TO PASS INSULATION ON INSULATED PIPE. PROVIDE A SHEET METAL SADDLE, MINIMUM 12" LONG BY 1/2 DIAMETER OF THE OUTSIDE OF THE INSULATED PIPE AT ALL HANGERS.

B. TRAPEZE HANGERS MAY BE USED IN LIEU OF INDIVIDUAL CLEVIS HANGERS AT CONTRACTOR'S OPTION. PROVIDE HOLD DOWN CLAMPS FOR EACH PIPE AND A SHEET COVER FULL DIAMETER OF PIPE AT EACH HOLD DOWN CLAMP.

7. INSULATION:

A. DUCTWORK: PER SECTION 403 OF THE 2012 IECC ALL DUCTWORK INSULATION SHALL MEET THE REQUIREMENTS OF ASHRAE 90.1-200 CHAPTER 6, TABLE 6.8 .2B.

1) ALL CONCEALED RECTANGULAR SUPPLY AND RETURN DUCTWORK LOCATED WITHIN THE INSULATED BUILDING ENVELOPE SHALL BE INTERNALLY LINED PER THE "1-INCH INTERNAL" SECTION BELOW.

2) ALL AIR CONDITIONED SUPPLY AND RETURN DUCTWORK LOCATED OUTSIDE OF THE INSULATED BUILDING ENVELOPE SHALL BE LINED PER THE "2-INCH INTERNAL LINING" SECTION BELOW.

3) ALL CONCEALED ROUND SUPPLY AND RETURN DUCTWORK LOCATED WITHIN THE INSULATED BUILDING ENVELOPE SHALL BE EXTERNALLY WRAPPED PER THE "2-INCH EXTERNAL WRAP" SECTION BELOW.

5) ALL EXHAUST DUCT SHALL BE UNINSULATED UNLESS OTHERWISE INDICATED ON THE DRAWINGS.

B. 1-INCH INTERNAL LINING: DUCTWORK SHALL BE LINED WITH 1" THICK FIBERGLASS DUCT LINER WITH A MINIMUM VALUE OF R-6. THE LINER SHALL MEET THE LIFE SAFETY STANDARDS AS ESTABLISHED BY NFPA 90A AND 90B. THE DUCT LINER SHALL CONFORM TO THE REQUIREMENTS OF ASTM C 1071, WITH AN NRC NOT LESS THAN .60 AS TESTED PER ASTM C 423 USING A TYPE "A" MOUNTING, AND A THERMAL CONDUCTIVITY NO HIGHER THAN .24 AT 75 DEGREES F. MEAN TEMPERATURE. ALL EXPOSED EDGES AND JOINTS SHALL BE HEAVILY COATED WITH CUT MASTIC TO PROVIDE A CONTINUOUS SURFACE. ALL LEADING EDGES OF EXPOSED DUCT LINER SHALL BE PROTECTED WITH SHEET METAL. THE DUCT LINER SHALL BE GLUED AND PINNED PER SMACNA RECOMMENDATIONS.

C. 2-INCH EXTERNAL WRAP: DUCTWORK SHALL BE INSULATED WITH 2" THICK DUCTWRAP WITH ALUMINUM FOIL VAPOR BARRIER AND A MINIMUM INSTALLED R-6 VALUE WITH ALL JOINTS SEALED. DUCT WRAP TO BE OVERLAPPED MINIMUM 2" AND SECURED WITH STAPLES AND WIRE. THE WRAP SHALL MEET THE LIFE SAFETY STANDARDS AS ESTABLISHED BY NFPA 90A AND 90B. THE DUCT WRAP SHALL CONFORM TO THE REQUIREMENTS OF ASTM C 518 AND/OR ASTM C177, AND A THERMAL CONDUCTIVITY NO HIGHER THAN 0.29 AT 75 DEGREES F. MEAN TEMPERATURE. ALL EXPOSED EDGES AND JOINTS SHALL BE HEAVILY COATED WITH CUT MASTIC TO PROVIDE A CONTINUOUS SURFACE. ALL LEADING EDGES OF EXPOSED DUCT LINER SHALL BE PROTECTED WITH SHEET METAL. THE DUCT LINER SHALL BE GLUED AND PINNED PER SMACNA RECOMMENDATIONS.

D. 2-INCH INTERNAL LINING : ALL AIR CONDITIONED SUPPLY AND RETURN DUCTWORK LOCATED OUTSIDE OF THE INSULATED BUILDING ENVELOPE SHALL BE LINED WITH 2" THICK FIBERGLASS DUCT LINER WITH A MINIMUM R-6 VALUE. THE LINER SHALL MEET THE LIFE SAFETY STANDARDS AS ESTABLISHED BY NFPA 90A AND 90B. THE DUCT LINER SHALL CONFORM TO THE REQUIREMENTS OF ASTM C 1071, WITH AN NRC NOT LESS THAN .865 AS TESTED PER ASTM C 423 USING A TYPE "A" MOUNTING, AND A THERMAL CONDUCTIVITY NO HIGHER THAN .24 AT 75 DEGREES F. MEAN TEMPERATURE. THE DUCT LINER SHALL BE GLUED AND PINNED PER SMACNA RECOMMENDATIONS.

E. PIPING:

1) CONDENSATE LINES AND REFRIGERANT SUCTION LINES SHALL BE INSULATED WITH 1/2" ARMAFLEX. ARMAFLEX EXPOSED TO WEATHER SHALL BE COATED WITH TWO COATS ARMAFLEX COATING.

2) WHERE INSULATED PIPING IS SUPPORTED, PROVIDE HIGH-DENSITY INSULATION INSERTS SUCH AS CALCIUM SILICATE OR EQUIVALENT OF THE SAME THICKNESS AS THE ADJACENT PIPE INSULATION. INSERTS SHALL BE COMPLETE (360 DEGREE) SEGMENTS OF INSULATION, A MINIMUM OF 12" IN LENGTH. THE INSERTS SHALL BE COVERED AS SPECIFIED HEREIN FOR THE ADJACENT PIPING. PROVIDE GALVANIZED IRON SADDLES AS SPECIFIED IN PARAGRAPH ENTITLED, "PIPE HANGERS".

3) ALL EXPOSED INSULATED PIPING OUTSIDE THE BUILDING SHALL HAVE AS ALUMINUM JACKET INSTALLED ON THE PIPE IN ADDITION TO THE INSULATION AS DESCRIBED ABOVE. THE JACKET SHALL BE COVERED WITH AN ALUMINUM JACKET 0.016" THICK MINIMUM. THE FITTING SHALL BE COVERED WITH 0.024" THICK ALUMINUM MOLDED FITTING COVERS. COVERING FOR VALVES, FLANGES, UNIONS, ETC., SHALL BE FITTED WITH 0.016" THICK ALUMINUM JACKET. ALUMINUM JACKETING SHALL PROVIDE COMPLETE COVERAGE FOR ALL INSULATION SURFACES AND ALL JOINTS AND OPENINGS FOR VALVE STEMS SHALL BE SEALED WEATHER-TIGHT. AL ALUMINUM JACKETS AND FITTING COVERS SHALL BE SECURE WITH 0.020" THICK ALUMINUM STRAPS INTENDED FOR THIS PURPOSE, LOCATE AT ALL JOINTS AND SPACED NOT MORE THAN 18" ON CENTER. PLASTIC FITTING COVERS COATED WITH TWO COATS ALUMINUM PAINT PUT PREVIOUS ULTRAVIOLET DEGRADATION MAY BE USED IN LIEU OF ALUMINUM FITTING COVERS.

4) BEFORE APPLICATION OF ALUMINUM JACKETS, THE PIPE INSULATION SHALL BE INSPECTED AND APPROVED BY THE ARCHITECT'S REPRESENTATIVE.

8. FLEXIBLE CONNECTIONS:

A. PROVIDE DURO DYNE UL APPROVED NEOPRENE-COATED FIBERGLASS FLEXIBLE CONNECTIONS TO INLET AND OUTLET OF ALL AIR MOVING DEVICES.

9. WORK COORDINATION:

A. CONTRACTOR SHALL FIELD VERIFY ALL CONDITIONS BEFORE FABRICATING OR INSTALLING AND SHALL MAKE MINOR CHANGES (AFTER APPROVAL) AS REQUIRED.

B. CONTRACTOR SHALL COORDINATE HIS WORK WITH ALL OTHER BUILDING TRADES AND SHALL MAKE ANY MINOR CHANGES (AFTER APPROVAL) AS REQUIRED.

10. GUARANTEES:

A. GUARANTEE WORK TO BE FREE FROM DEFECTS IN WORKMANSHIP AND MATERIAL FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE. ALL COMPRESSORS SHALL BE GUARANTEED FOR FIVE (5) YEARS. ANY MATERIAL OR EQUIPMENT FURNISHED BY HIM WHICH PROVES DEFECTIVE WITHIN THE PERIOD SHALL BE PROMPTLY REPAIRED OR REPLACED BY THAT CONTRACTOR WITHOUT COST TO THE OWNER. FURNISH A LETTER STATING THAT THE SYSTEM HAS BEEN INSTALLED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND WITH ANY DEVIATIONS DETAILED IN FULL STANDARD FACTORY WARRANTIES SHALL BE PROVIDED ON ALL EQUIPMENT FURNISHED AND EVIDENCE OF SAME SHALL BE FURNISHED TO THE ARCHITECT IN TRIPLICATE.

11. SEISMIC CONTROL:

A. ALL EQUIPMENT, PIPING, REGISTERS AND GRILLES, ETC., SHALL BE INSTALLED TO MEET THE REQUIREMENTS OF THE 2006 IBC WITH LOCAL AMENDMENTS, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:

- 1) EQUIPMENT ISOLATORS SHALL HAVE SEISMIC RESTRAINT TO MEET THE LOADING REQUIREMENTS OF THE SEISMIC ZONE.
- 2) CEILING DIFFUSERS AND RETURN GRILLES IN T-BAR CEILINGS CONNECTED TO FLEXIBLE DUCT SHALL BE SUPPORTED FROM STRUCTURE ABOVE.
- 3) PIPING AND PIPING SUPPORTS SHALL HAVE SEISMIC RESTRAINT TO MEET THE LOADING REQUIREMENTS OF THE SEISMIC ZONE.

12. CUTTING AND PATCHING:

A. THE CONTRACTOR SHALL PROVIDE THE CHASES AND OPENINGS THROUGH WALLS, THAT ARE NECESSARY FOR THE INSTALLATION OF THE WORK UNDER THIS SECTION.

B. PROVIDE ALL CHASE AND OPENING LAYOUTS REQUIRED AND FURNISH AND SET ALL SLEEVES, CONCRETE INSERTS, AND ANCHOR BOLTS REQUIRED FOR THE INSTALLATION OF WORK UNDER THIS SECTION. THE CONTRACTOR WILL BE HELD SOLELY RESPONSIBLE FOR THE PROPER SIZE AND LOCATION OF ALL CHASES, OPENINGS, SLEEVES, INSERTS, ANCHOR BOLTS, ETC. FAILURE TO COORDINATE REQUIREMENTS DURING THE NORMAL CONSTRUCTION SEQUENCE RENDERS THIS CONTRACTOR LIABLE FOR ALL CORRECTIVE CONSTRUCTION.

13. ELECTRICAL COORDINATION:

A. ELECTRICAL HIGH VOLTAGE POWER WIRING, CONDUIT, INTERLOCK WIRING, DISCONNECT SWITCHES, FUSES, ETC., SHALL BE FURNISHED AND INSTALLED BY SECTION 16.

B. THERMOSTAT WIRING SHALL BE SHIELDED OR UNSHIELDED AS REQUIRED PER THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.

14. ACCESS DOORS:

A. PROVIDE ACCESS DOOR AS MANUFACTURED BY GESCO FOR ANY CONCEALED EQUIPMENT REQUIRING ACCESS. ACCESS DOOR SHALL BE MINIMUM SIZES REQUIRED BY CODE AND BE OF A TYPE COMPATIBLE WITH CEILING OR WALL CONSTRUCTION.

B. ACCESS DOORS FOR LINED DUCT TO BE INSULATED ACCESS DOOR TYPE. ACCESS DOORS FOR WRAPPED DUCT SHALL HAVE INSULATION TRIMMED BACK AND INSULATION GLUED TO THE OUTSIDE OF THE ACCESS DOOR. ALL ACCESS DOORS TO HAVE SCREWDRIVER OPERATED LATCHES. EQUAL OF KARP.

15. FIRE DAMPERS:

A. PROVIDE FIRE DAMPERS AS REQUIRED BY CODE WHEN PASSING THROUGH FIRE RATED STRUCTURE.

B. FIRE DAMPERS CONNECTED TO SUPPLY OR RETURN DUCTWORK SHALL HAVE BLADES OUT OF THE AIR STREAM. FIRE DAMPERS FOR TRANSFER AIR OPENINGS IN WALLS WITH NO DUCTWORK MAY BE TYPE A FIRE DAMPERS WITH BLADES EXPOSED.

C. FIRE DAMPERS SHALL BE CONSTRUCTED AND TESTED IN ACCORDANCE WITH UL SAFETY STANDARDS 555. EACH FIRE DAMPER SHALL HAVE A 1-1/2" HOUR FIRE PROTECTION RATING, 165 DEGREE F. FUSIBLE LINK, AND SHALL INCLUDE A UL LABEL IN ACCORDANCE WITH ESTABLISHED UL LABELING PROCEDURES. DAMPER MANUFACTURER'S LITERATURE SUBMITTED FOR APPROVAL PRIOR TO INSTALLATION SHALL INCLUDE COMPREHENSIVE PERFORMANCE DATA DEVELOPED FROM TESTING IN ACCORDANCE WITH AMCA STANDARD 500 AND SHALL ILLUSTRATE PRESSURE DROPS FOR ALL SIZES OF DAMPERS REQUIRED AT ALL ANTICIPATED AIR FLOW RATES. FIRE DAMPERS SHALL BE EQUIPPED FOR VERTICAL OF HORIZONTAL INSTALLATION AS REQUIRED BY THE LOCATION SHOWN. FIRE DAMPERS SHALL BE INSTALLED IN WALL AND FLOOR OPENINGS UTILIZING STEEL SLEEVES, ANGLES, AND OTHER MATERIALS, AND PRACTICES REQUIRED TO PROVIDE AND INSTALLATION EQUIVALENT TO THAT UTILIZED BY THE MANUFACTURER WHEN DAMPERS WERE TESTED AT UL. INSTALLATION SHALL BE IN ACCORDANCE WITH THE DAMPER MANUFACTURER'S INSTRUCTIONS AND CITY OF TUCSON/PIMA COUNTY STANDARDS.

D. FIRE DAMPERS INSTALLED ABOVE A HARD CEILING SHALL HAVE A MINIMUM 24"x24" ACCESS PANEL. ACCESS PANEL SHALL BE LABELED WITH MINIMUM 1/2" HIGH PERMANENT LETTERING READING: FIRE DAMPER.

16. PAINTING:

A. TOUCH-UP OF DAMAGED FACTORY FINISHES.

B. ALL SURFACES TO BE PAINTED SHALL BE THOROUGHLY CLEANED OF GREASE, DIRT AND OIL BEFORE PAINT IS APPLIED. PAINTING MATERIALS, THE APPLICATION THEREOF, AND PROTECTION OF OTHER WORK SHALL CONFORM TO THE REQUIREMENTS OF THE OWNER.

C. PAINT ALL VISIBLE SHEET METAL DUCTWORK BEHIND GRILLES AND REGISTERS FLAT BLACK.

17. FLEX-DUCT

A. ALL FLEX-DUCTS SHALL BE THERMAFLEX TYPE "MK-E", WITH A MINIMUM 2" THICK INSULATION WITH A MINIMUM R-6 VALUE WITH MYLAR LINING AND FIBERGLASS REINFORCED METALLIZED FILM VAPOR BARRIER. ALL COMPONENTS OF FLEX DUCT SHALL BE SELF-EXTINGUISHING AND NOT SUPPORT FLAME. MINIMUM OXYGEN INDEX RATINGS: CPE CORE - 31.3, METALLIZED JACKET - 45.7. THERMAFLEX OR APPROVED EQUAL, 10-YEAR WARRANTY. FLEX-DUCT SHALL NOT EXCEED 10 FEET IN LENGTH AND SHALL BE PROPERLY SUPPORTED.

18. TESTS AND ADJUSTMENTS:

A. NOTIFY THE ARCHITECT OR OWNER OF HIS READINESS TO PERFORM A TEST 24 HOURS IN ADVANCE AND ALL TESTS SHALL BE PERFORMED IN THE PRESENCE OF THE OWNER'S REPRESENTATIVE. ANY DEFECTIVE MATERIAL AND/OR EQUIPMENT SHALL BE REPAIRED, ADJUSTED AND/OR REPLACED BY LIKE NEW MATERIALS AND/OR EQUIPMENT BEFORE ACCEPTANCE.

B. ALL TEMPERATURE CONTROL AND OTHER AUTOMATIC DEVICES SHALL BE THOROUGHLY TESTED AND ADJUSTED.

C. LUBRICATE, START-UP AND OPERATE ALL EQUIPMENT AND DEMONSTRATE ITS OPERATION AND COMPLIANCE WITH THE SPECIFICATIONS. ANY UNDUE NOISE, VIBRATION AND/OR OTHER OBJECTIONABLE FEATURES SHALL BE PROMPTLY REPAIRED AND/OR THE DEVICE REPLACED AND THE SYSTEM RETESTED. REGISTER VANES SHALL BE ADJUSTED TO DEFLECTIONS INDICATED BY THE DRAWINGS TO OBTAIN PROPER DISTRIBUTION AND THROW. COOLING AND HEATING EQUIPMENT SHALL BE OPERATED AND TESTED AND ALL CONTROLLERS, SAFETY DEVICES, ETC., CHECKED AND ADJUSTED WHERE NECESSARY.

D. ALL SYSTEMS SHALL BE PLACED IN SERVICE AND BE OPERATING PROPERLY FOR A PERIOD OF NOT LESS THAN FIVE CONSECUTIVE 24-HOUR DAYS BEFORE ACCEPTANCE.

19. CLEANING-UP:

A. AT ALL TIMES KEEP THE BUILDING AND PREMISES IN A NEAT MANNER. ALL INSTRUCTIONS ISSUED BY THE OWNER IN REGARD TO STORAGE OF MATERIALS, PROTECTIVE MEASURES, CLEANING OF DEBRIS ETC., SHALL BE EXPLICITLY FOLLOWED. UPON COMPLETION OF THE WORK, THOROUGHLY CLEAN ALL MACHINERY, PIPING, ETC., AND LEAVE AREAS DIRECTLY AFFECTED BY HIS WORK BROOM CLEAN.

20. BALANCING:

A. THE AIR SYSTEMS SHALL BE BALANCED AS PER ABC STANDARDS AND FORMS (4) COPIES OF A BALANCE REPORT FURNISHED TO THE ARCHITECT ON FOUR PUBLISHED BY ABC. THE DUCT SHALL HAVE A MAXIMUM CFM LEAKAGE RATE OF 1% PER HUNDRED LINEAL FEET OF DUCT.

B. AN INDEPENDENT TEST AND BALANCE AGENCY, NOT AFFILIATED WITH INSTALLING CONTRACTOR OR EQUIPMENT SUPPLIERS FOR THIS PROJECT, WHOSE REGULAR BUSINESS IS THE SPECIALTY OF TESTING AND ADJUSTING AIR CONDITIONING SYSTEMS, SHALL BE ENGAGED TO PROVIDE TESTING AND BALANCING WORK. THE AGENCY SHALL POSSESS CURRENT MEMBERSHIP IN THE ASSOCIATED AIR BALANCE COUNCIL (AABC).

C. THE FOLLOWING AGENCIES ARE APPROVED:

- 1) SYSTEMS COMMISSIONING & TESTING
- 2) GENERAL AIR CONTROL

D. ALL OUTLETS SHALL BE BALANCED UNTIL EACH OUTLET DELIVERS SUBSTANTIALLY ITS SPECIFIED AMOUNT. SIMILARLY BALANCE ALL RETURN, AND EXHAUST AIR GRILLES.

E. ADJUST THE LOUVERS IN ALL SUPPLY OUTLETS TO PRODUCE AIR DISTRIBUTION SATISFACTORY TO THE OCCUPANTS.

F. ALL MEASUREMENTS OF AIR QUANTITIES DELIVERED BY GRILLES SHALL BE MADE IN A MANNER APPROVED BY THE MANUFACTURER OF THE GRILLE.

G. ALL WORK SHALL BE GUARANTEED FOR A PERIOD OF NINETY (90) DAYS. TAB CONTRACTOR SHALL MAKE ADJUSTMENTS DURING THIS PERIOD FOR COMFORT LEVEL ADJUSTMENT, AT DIRECTION OF OWNER. TAB CONTRACTOR SHALL MEET WITH ENGINEER DURING THIS PERIOD AS MAY BE REQUIRED TO VERIFY ANY READINGS.

21. OPERATION AND MAINTENANCE MANUAL:

A. FURNISH TO THE OWNER THREE COPIES OF AN OPERATING AND MAINTENANCE MANUAL CONTAINED IN A THREE-RING BINDER WITH HARD COVER. MANUALS SHALL BE LOOSE-LEAF BOUND AND SHALL CONTAIN MANUFACTURER'S CUTS OF ALL EQUIPMENT FURNISHED, SPARE PARTS LIST, SEQUENCE OF OPERATION AND A PREVENTATIVE MAINTENANCE SCHEDULE IDENTIFYING DAILY, WEEKLY, MONTHLY AND SEASONAL MAINTENANCE PROCEDURES AS REQUIRED. INSTRUCT THE MAINTENANCE PERSONNEL IN THE OPERATION OF THE SYSTEM AND SUBMIT THREE COPIES OF A LETTER SIGNED BY THE OWNER'S REPRESENTATIVE ATTESTING TO SUCH INSTRUCTIONS.

22. EXECUTION:

A. GENERAL:

- 1) WORK SHALL BE PERFORMED BY PERSONNEL AND COMPANY WITH A MINIMUM OF THREE (3) YEARS EXPERIENCE IN THIS TYPE OF WORK. ALL WORK SHALL BE UNDER THE DIRECT SUPERVISION OF A COMPETENT FOREMAN. VERIFICATION OF SIMILAR WORK EXPERIENCE SHALL BE SUBMITTED TO THE ARCHITECT AND OWNER PRIOR TO BEGINNING WORK. ALL WORK SHALL BE PLANNED AND CARRIED OUT SO AS NOT TO INTERFERE WITH THE PROGRESS OF THE WORK BY OTHER INDIVIDUALS ON THE SITE.
- 2) LOCATIONS INDICATED ON THE DRAWINGS SHOW THE ARRANGEMENT DESIRED FOR THE PRINCIPAL APPARATUS AND SHALL BE FOLLOWED AS CLOSELY AS POSSIBLE. THE WORK SHALL BE LAID OUT ON THE JOB TO SECURE A NEAT ARRANGEMENT, TO SECURE THE BEST CONDITIONS THROUGHOUT, AND TO OVERCOME LOCAL DIFFICULTIES AND INTERFERENCES WHERE ENCOUNTERED. IF EQUIPMENT PROPOSED IS ARRANGED DIFFERENTLY THAN THAT SPECIFIED, CONTRACTOR SHALL FURNISH SHOP DRAWINGS OF ALL DUCTWORK AND OTHER ITEMS AFFECTED. EQUIPMENT SHALL BE INSTALLED TO PERMIT ACCESS FOR SERVICE, AND PERMIT REMOVAL, ETC. ALL INSTALLATIONS SHALL BE MADE AS RECOMMENDED BY THE EQUIPMENT MANUFACTURERS.

23. IDENTIFICATION:

A. EACH ROOFTOP UNIT SHALL BE LABELED WITH MIN. 1" HIGH PERMANENT LETTERING INDICATING UNIT NUMBER AND SPACE(S) SERVED.

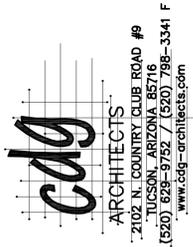
B. EACH INDOOR UNIT SHALL BE LABELED WITH MIN. 1" HIGH PERMANENT LETTERING INDICATING UNIT NUMBER AND CORRESPONDING ROOFTOP UNIT NUMBER.

C. EACH THERMOSTAT SHALL BE LABELED WITH MIN. 1/2" HIGH PERMANENT LETTERING INDICATING CORRESPONDING ROOFTOP UNIT NUMBER.

REVISIONS

PASCUA YAQUI CLINIC OFFICE ADDITION

MECHANICAL SPECIFICATIONS



07/08/16

M3



PO BOX 6819
Tucson, Arizona 85737
520-877-2700 (Phone)
1-888-400-5443 (Fax)
MEC PROJECT NO. : 16-014

PROJECT NO. 16014

