WANDERIST OFFICE & RETAIL

3743 E. INDIAN SCHOOL ROAD, PHOENIX, AZ 85018

ABBREVIATIONS

A	AIR	MICRO	MICROWAVE
A/C	AIR CONDITIONING	MIN	MINIMUM
ACT	ACOUSTICAL TREATMENT (CEILING TILE OR PANEL)	MIR	MIRROR
		MISC	MISCELLANEOUS
AD	AREA DRAIN	MM	MILLIMETER, -S
ADD	ADDENDUM	MTL	METAL
ADJ	ADJUSTABLE	MULL	MULLION
AFF	ABOVE FINISH FLOOR	N	NORTH
AL, ALUM	ALUMINUM	NA	NOT APPLICABLE
ALT	ALTERNATE	NIC	NOT IN CONTRACT
ANOD	ANODIZED	NO, #	NUMBER
APPROX	APPROXIMATE	NOM	NOMINAL
ARCH	ARCHITECT, -URAL	NTS	NOT TO SCALE
BETW	BETWEEN	OC	ON CENTER
BLDG	BUILDING	OD	OVERFLOW DRAIN
BOC	BOTTOM OF CURB	OFCI	OWNER FURNISHED/CONTRACTOR INSTALLED
BOF	BOTTOM OF FOOTING		
CAB	CABINET	OFI	OWNER FURNISHED & INSTALLED
CARD	CARD READER		
CB	CATCH BASIN	OH	OPPOSITE HAND
CEM	CEMENT	OPP	OPPOSITE
CJ	CONTROL JOINT	OSB	ORIENTED STRANDBOARD
CL	CENTERLINE	OZ	OUNCE
CLG	CEILING	PCF	POUNDS PER CUBIC FEET
CLO	CLOSET	PERF	PERFORATE, -D
CLR	CLEAR, -ANCE	PL	PLATE
CM	CENTIMETER	PLAM	PLASTIC LAMINATE
CMU	CONCRETE MASONRY UNIT	PLAS	PLASTER
COL	COLUMN	PLYWD	PLYWOOD
CONC	CONCRETE	PNL	PANEL
CONST, CONSTR	CONSTRUCTION	PNT, P	PAINT, -ED
CONT	CONTINUE, -OUS	PORC	PORCELAIN
CORR	CORRIDOR	POS	POSTITION
CTR	CENTER	PREFAB	PREFABRICATE, -D
DEMO	DEMOLISH, DEMOLITION	PTN	PARTITION
DEP, DEPR	DEPRESSED	R	RECEPTACLE
DET, DTL	DETAIL	R	RISER
DIA	DIAMETER	RAD	RADIUS
DIAG	DIAGONAL	RCP	REFLECTED CEILING PLAN
DIM	DIMENSION	RD	ROOF DRAIN
DN	DOWN	REF	REFERENCE
DP	DAMPPROOFING	REFL	REFLECT, -ED, -IVE, -OR
DWG	DRAWING	REFR	REFRIGERATOR
E	EAST	REINF	REINFORCE
EA	EACH	REM	REMOVE
EIFS	EXTERIOR INSULATION AND FINISH SYSTEM	REQ'D	REQUIRED
		REV	REVISE, REVISION
EJ	EXPANSION JOINT	RO	ROUGH OPENING
EL	ELEVATION	S	SOUTH
ELEC	ELECTRICAL	SCHED	SCHEDULE
ELEV	ELEVATOR	SEAL	SEALANT
EMER	EMERGENCY	SECT	SECTION
EP	ELECTRICAL PANEL	SHT	SHEET
EPS	EXPANDED POLYSTYRENE	SHTHG	SHEATHING
EQ	EQUAL	SHWR	SHOWER
EQUIP	EQUIPMENT	SIL	SILICONE
EX, (E)	EXISTING	SIM	SIMILAR
EXP	EXPOSED	SPEC	SPECIFICATION (S)
EXT	EXTERIOR	SPF	SPRAY POLYURETHANE FOAM
FA	FIRE ALARM		
FD	FLOOR DRAIN	SPK	SPEAKER
FDN	FOUNDATION	SPR	SINGLE-PLY ROOFING
FE	FIRE EXTINGUISHER	SQ	SQUARE
FEC	FIRE EXTINGUISHER CABINET	SST, SS	STAINLESS STEEL
FF	FINISHED FLOOR	STC	SOUND TRANSMISSION CLASS
FHC	FIRE HOSE CABINET		
FIN	FINISH	STD	STANDARD
FLR, FL	FLOOR, -ING	STL	STEEL
FOC	FACE OF CONCRETE	STOR	STORAGE
FOF	FACE OF FINISH	STR, STRL	STRUCTURE, STRUCTURAL
FOM	FACE OF MASONRY	SYM	SYMMETRY, -IC(AL)
FOS	FACE OF STUDS	T	TEL/DATA OUTLET
FUT	FUTURE	T STAT	THERMOSTAT
GA	GAUGE	T&G	TONGUE AND GROOVE
GAL, GALV	GALVANIZED	TEL	TELEPHONE
GFI	GROUND FAULT INTERRUPTER	THK	THICK, -NESS
		THRU	THROUGH
GL	GLASS, GLAZING, GLAZED	TOC	TOP OF CONCRETE, CURB
GWB	GYPSUM BOARD	TOF	TOP OF FOOTING
GYP	GYPSUM	TOP	TOP OF PAVEMENT
HB	HOSE BIB	TOS	TOP OF STEEL
HGT, HT	HEIGHT	TOW	TOP OF WALL
HM	HOLLOW METAL	TRANS, TPT	TRANSPARENT
HOR, HORIZ	HORIZONTAL	TV	TELEVISION
HSS	HOLLOW STEEL SHAPE	TYP	TYPICAL
HVAC	HEATING, VENTILATING, AIR CONDITIONING	UC	UNDER CABINET
		UL	UNDERWRITERS' LABORATORIES
ID	INSIDE DIAMETER		
INCL	INCLUDE, -D, -ING	UNO	UNLESS NOTED OTHERWISE
INSUL	INSULATE, -ION, -D, -ING	UON	UNLESS OTHERWISE NOTED
INT	INTERIOR	VCT	VINYL COMPOSITION TILE
JT	JOINT	VERT	VERTICAL
KIT	KITCHEN	VIF	VERIFY IN FIELD
LAM	LAMINATE	W	WEST
LAV	LAVATORY	W	WIDTH
LT	LIGHT	W/	WITH
LVL	LEVEL	W/O	WITHOUT
MANUF	MANUFACTURER	WC	WATER CLOSET
MAS	MASONRY	WD	WOOD
MAT, MATL	MATERIAL, -S	WDW	WINDOW
MAX	MAXIMUM	WF	WIDE FLANGE
MDF	MEDIUM DENSITY FIBERBOARD	WP	WATERPROOF, -ING
		WP/C	WATERPROOFING, CRYSTALLINE
MECH	MECHANIC, -AL		
MED	MEDIUM	WT	WEIGHT
MEMB	MEMBRANE	WWF	WELDED WIRE FABRIC
MET	METAL, -LIC	XPS	EXTRUDED POLYSTYRENE INSULATION
MFD	MANUFACTURED		

SHEET INDEX

GENERAL NOTES

IF THERE IS A CONFLICT BETWEEN ANY NOTES, DRAWINGS, OR SPECIFICATIONS, THE MOST RESTRICTIVE SHALL APPLY.

ALL WORK SHALL BE IN STRICT ACCORDANCE WITH THE GOVERNING EDITION OF THE INTERNATIONAL BUILDING CODE, OR SUCH OTHER LEGAL CODES, AND SHALL CONFORM TO ANY SPECIAL REQUIREMENTS OF ANY LENDING OR GOVERNMENTAL INSTITUTIONS.

CONTRACTOR AND SUBCONTRACTORS SHALL BE LICENSED IN THE STATE OF THE PROJECT SITE AND SHALL BE KNOWLEDGEABLE, SKILLED, AND COMPETENT TO PERFORM THE INTENDED WORK.

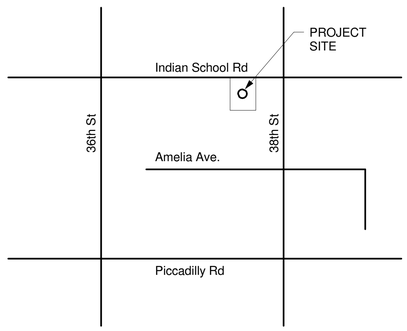
CONTRACTOR AND SUBCONTRACTOR SHALL ENSURE THAT ALL WORK IS PERFORMED IN A PROFESSIONAL MANER BY SKILLED CRAFTSMAN OR TRADESMAN AND SHALL REPLACE ANY ITEMS DAMAGED BY THE CONTRACTOR OR SUBCONTRACTORS AT NO COST TO THE OWNER. SUBCONTRACTORS SHOULD COOPERATE FULLY WITH EACH OTHER DURING THE COURSE OF CONSTRUCTION TO DETERMINE THE EXACT EXTENT AND OVERLAP OF EACH OTHERS WORK AND TO SUCCESSFULLY COMPLETE THE EXECUTION OF THE WORK IN A TIMELY MANNER.

CONTRACTOR AND SUBCONTRACTORS SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, AND PROCEDURES, AND FOR THE SAFETY PRECAUTIONS IN CONNECTION WITH THE WORK.

CONTRACTOR AND SUBCONTRACTORS SHALL AT ALL TIMES INDEMNIFY AND HOLD THE ARCHITECT HARMLESS AGAINST ALL LIABILITY FOR CLAIMS AND LIENS FOR LABOR PERFORMED OR MATERIALS USED OR FURNISHED TO BE USED ON THE JOB, INCLUDING ANY COSTS AND EXPENSES FOR ATTORNEY FEES AND ALL INCIDENTIAL OR CONSEQUENTIAL DAMAGES RESULTING TO THE ARCHITECT ARISING FROM SUCH CLAIMS.

ALL BIDS SUBMITTED AND ACCEPTED UNDER THIS CONTRACT SHALL INCLUDE ALL MATERIALS AND LABOR NECESSARY TO COMPLETE THE PROJECT IN ACCORDANCE WITH THE DOCUMENTS.

THE ARCHITECT NEITHER WARRANTS NOR GUARANTEES ANY CONSTRUCTION MATERIAL, EQUIPMENT, APPLIANCE, FIXTURE, HARDWARE, FINISH, OR MEAN/METHOD OF CONSTRUCTION. THE ARCHITECT SHALL NOT BE RESPONSIBLE FOR ANY PROJECT SITE GRADING OR DRAINAGE, NOR ANY TOXIC AND HAZARDOUS MATERIAL, GROUND EROSION, CORROSION, SUBSOIL, OR AIR AND WATER CONDITIONS, OR SIMILAR SUCH CONDITIONS OF THE PROJECT.



VICINITY MAP

PROJECT DESCRIPTION

NEW 3,760 SF OFFICE/RETAIL BUILDING
CONSTRUCTED ON EXISTING SLAB ON GRADE.

DEFERRED SUBMITTALS

FIRELINE
FIRE SPRINKLER
FIRE ALARM
FIRE ACCESS
GATE ACCESS
KNOX BOX

SEPARATE SUBMITTALS

SIGNAGE
LANDSCAPE
INVENTORY/SALVAGE
GATES

CODE COMPLIANCE

2018 INTERNATIONAL BUILDING CODE
2018 UNIFORM PLUMBING CODE
2018 INTERNATIONAL MECHANICAL CODE
2017 NATIONAL ELECTRIC CODE
2018 INTERNATIONAL FUEL AND GAS CODE
2018 INTERNATIONAL ENERGY CONSERVATION CODE
2010 ADA STANDARDS FOR ACCESSIBLE DESIGN
2012 INTERNATIONAL FIRE CODE

SPECIAL INSPECTIONS

SEE STRUCTURAL S.02

CONTRACTOR & OWNER NOTICE

THIS PROJECT HAS BEEN PERMITTED UNDER THE CITY OF PHOENIX SELF-CERTIFICATION PROGRAM. THE PROJECT IS SUBJECT TO AUDIT AND FIELD INSPECTION BY THE PLANNING & DEVELOPMENT DEPARTMENT. IF THE CONSTRUCTION OF THE PROJECT IS CONTRARY TO, OR DOES NOT MEET THE STANDARD OF THE CITY OF PHOENIX BUILDING CONSTRUCTION CODES, THE OWNER, AT HIS/HER OWN EXPENSE, SHALL REMOVE OR MODIFY ANY AND ALL COMPONENTS THAT DO NOT CONFORM. ANY DEVIATIONS FROM THE APPROVED PLAN MUST BE COORDINATED IN ADVANCE WITH THE CITY INSPECTOR AND REVISED PLANS OR SKETCHES MUST BE PROVIDED BY THE SELF-CERTIFIED PROFESSIONAL.

CERTIFICATION STATEMENT

I HEREBY CERTIFY THAT THESE DRAWINGS ARE PREPARED BY ME, UNDER MY SUPERVISION, OR REVIEWED BY ME AND TO THE BEST OF MY PROFESSIONAL KNOWLEDGE CONFORM TO THE PHOENIX BUILDING CONSTRUCTION CODE.

SELF CERTIFIED BY: _____ DATE: 03/11/19
DONALD ANDREWS CERTIFICATE #45

- PLANS WERE PREPARED BY OR UNDER THE DIRECT SUPERVISION OF, OR REVIEWED BY THE SELF-CERTIFIED PROFESSIONAL,
- PLANS ARE COMPLETE,
- THE PLANS ARE, AS OF THE DATE OF SUBMISSION, IN ACCORDANCE WITH THE REQUIREMENTS OF THE PHOENIX BUILDING CONSTRUCTION CODE AND ALL OTHER APPLICABLE LAWS.

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT
Self-Certified Plans - Official Construction Set

This set of Self Certified plans shall be kept at the construction site. Acceptance of these plans shall not prevent the City from requiring correction of errors in the plans where such errors are subsequently found to be in violation of any code, law, ordinance, health, safety, or other design issues.

IBC - Stevan Varnell 602-534-8705

IMC-UPC - John Lanoue 602-534-2881

KIVA #18-1372
SDEV #1800276
PAPP #1806619
PRLC
QS Q16-36

ERWIN | ARCHITECTURE DEVELOPMENT

CONTACTS:

OWNER
SUPERLUXE SCREEN PRINTING
JONATHAN PITT
(E) JON@THEWANDERIST.COM
(P) 480.247.6653

ARCHITECT
ERWIN ARCHITECTURE & DEVELOPMENT, LLC.
WILLIAM ERWIN, AIA, LEED AP BD+C
(E) WILL@ERWINARCHITECTURE.COM
(P) 602.677.8372

SELF-CERTIFIED ARCHITECT
ANDREWS DESIGN GROUP INC.
DON ANDREWS JR.
(E) DON@ADGARCH.NET
(P) 480.894.3478

CIVIL
3 ENGINEERING
DAN MANN, P.E.
6370 E. THOMAS RD, SUITE 200,
SCOTTSDALE, AZ 85251
(E) DAN@3ENGINEERING.COM
(P) 602.334.4387

STRUCTURAL
UNITED STRUCTURAL DESIGN
DAVID GRAPSAS, P.E., S.E.
2058 S. DOBSON ROAD, SUITE 10
MESA, AZ 85202
(E) DGRAPSAS@UNITEDSTR.COM
(P) 480.382.9768

MEP
PETERSON ENGINEERING
DAVID MCKERCHER
7201 N. DREAMY DRAW DRIVE, SUITE 200
PHOENIX, AZ 85020
(E) DAMEM@MPECONSULT.COM
(P) 602.388.1716

LANDSCAPE
NORRIS DESIGN
JOEL THOMAS
(E) JTHOMAS@NORRIS-DESIGN.COM
(P) 512.900.7888

SHEET ISSUE/REV:

NO.	DESCRIPTION	DATE
-	PRE-APP MTG	10.10.18
-	MINOR SITE PLAN	01.09.19
-	CITY SUBMITTAL	03.06.19

REGISTERED ARCHITECT
STATE OF ARIZONA
WILLIAM FRANKLIN ERWIN
Date signed 6.30.19
ARIZONA U.S.A.

Expires 6.30.19

Owner JONATHAN PITT
Proj. Name WANDERIST OFFICE & RETAIL

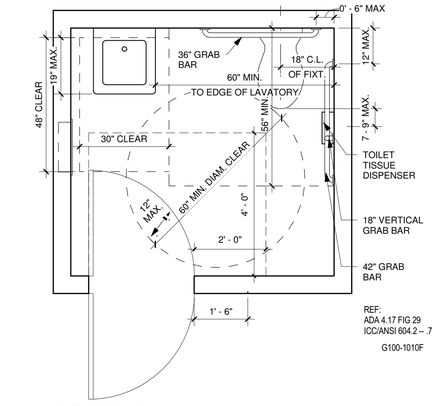
COVER SHEET

Date 03/06/19

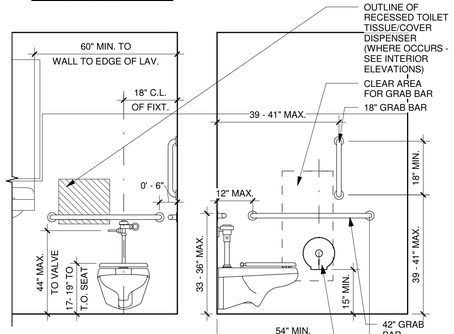
A000

Scale 1/4" = 1'-0"

City of Phoenix Plan #: 1901783-LPSC Date: 03/12/19



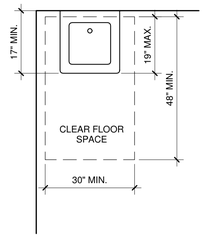
16. BATHROOM PLAN



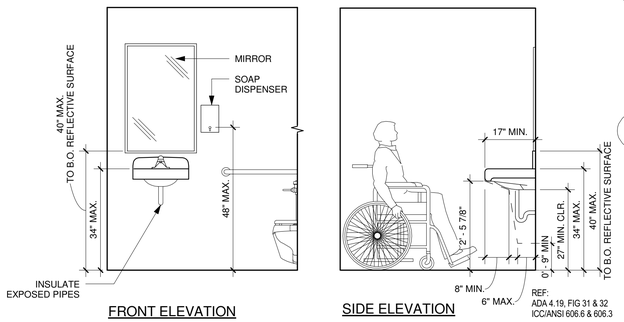
15. FRONT ELEVATION

14. SIDE ELEVATION

3 SINGLE TOILET ROOM
1/2" = 1'-0"



SINK PLAN



FRONT ELEVATION

SIDE ELEVATION

2 ACCESSIBLE LAVATORY
1/2" = 1'-0"

PLUMBING FIXTURE COUNTS

IBC TABLE 2902.1

CLASSIFICATION	OCCUPANCY	WATER CLOSETS	LAVS	TUB / SHOWERS	DRINKING FOUNTAINS	OTHER
BUSINESS	B	1 per 25 for the first 50 and 1 per 50 for the remainder exceeding 50 14/50 = .28	1 per 40 for the first 80 and 1 per 80 for the remainder exceeding 80 14/40 = .35	-	1 per 100 14/100 = .14	1 Service Sink
MERCANTILE	M	1 per 500 78/500 = .15	1 per 750 78/750 = .10	-	1 per 1000 78/1000 = .078	1 Service Sink

WATER CLOSETS
1 REQUIRED
2 PROVIDED

DRINKING FOUNTAINS
1 REQUIRED
WATER COOLER PROVIDED IN LIEU OF DRINKING FOUNTAIN

SERVICE SINK
1 REQUIRED
1 PROVIDED

NOTE: PER IBC 2902.2 SEPARATE FACILITIES ARE NOT REQ'D FOR EA. SEX IN MERCANTILE OCCUPANCIES W/ MAXIMUM OCCUPANT LOAD OF 100 OR FEWER OR BUSINESS OCCUPANCIES W/ 25 OR FEWER. PROVIDE UNISEX SIGNAGE PER IBC 2902.4

IECC DATA

ALL NEW FENESTRATION MUST MEET REQUIREMENTS OF 2012 IECC
TABLE C402.3 CLIMATE ZONE 2

TABLE C402.3
BUILDING ENVELOPE REQUIREMENTS: FENESTRATION

CLIMATE ZONE	1	2	3	4 EXCEPT MARINE	5 AND MARINE 4	6	7	8
Vertical fenestration								
***U*-factor**								
Fixed fenestration	0.50	0.50	0.46	0.38	0.38	0.36	0.29	0.29
Operable fenestration	0.65	0.65	0.60	0.45	0.45	0.43	0.37	0.37
Entrance doors	1.10	0.83	0.77	0.77	0.77	0.77	0.77	0.77
SHGC								
SHGC	0.25	0.25	0.25	0.40	0.40	0.40	0.45	0.45
Skylights								
***U*-factor**	0.75	0.65	0.55	0.50	0.50	0.50	0.50	0.50
SHGC	0.35	0.35	0.35	0.40	0.40	0.40	NR	NR

NR = No requirement.

OCCUPANT LOAD

OCCUPANT LOAD TABLE

AREA NAME	USE GROUP	AREA	NET OR GROSS	LOAD FACTOR	OCCUPANT LOAD
OFFICE & STOCK ROOM	B	1408 SF	GROSS	100 SF	14
RETAIL AREA	M	2336 SF	GROSS	30 SF	78

NO SEPARATION BETWEEN USES REQUIRED PER TABLE 508.4

EXIT ARRANGEMENT

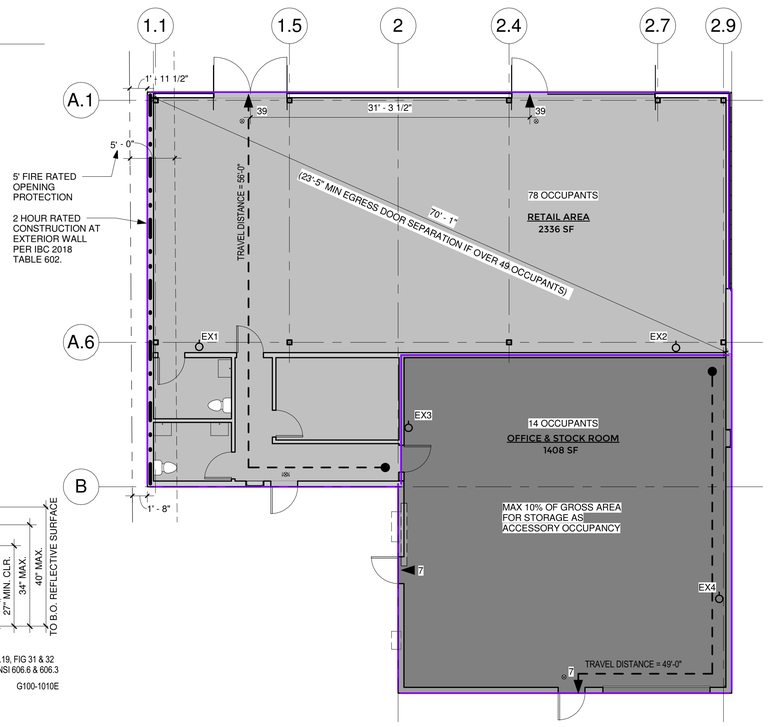
REFERENCE IBC SECTION 1015 & 1021

A MINIMUM OF TWO EXITS WILL BE PROVIDED WHERE EVER THE OCCUPANT LOAD IS GREATER THAN 49 PERSONS IN B AND M USES.

RETAIL AREA
2 EXITS REQUIRED
2 EXITS PROVIDED

PRINT AREA
1 EXIT REQUIRED
2 EXITS PROVIDED

WHERE EVER TWO EXITS ARE REQUIRED FROM ANY PORTION OF THE BUILDING, THE EXITS WILL BE LOCATED A DISTANCE OF NOT LESS THAN ONE-THIRD OF THE LENGTH OF THE MAXIMUM OVERALL DIAGONAL DIMENSION OF THE SPACE.



1 CODE PLAN AND EXITING DIAGRAM
1/8" = 1'-0"

EGRESS COMPONENTS

EXIT SIGNS:
1. EXITS AND EXIT ACCESS DOORS WILL BE MARKED BY AN APPROVED EXIT SIGN READILY VISIBLE FROM ANY DIRECTION OF EGRESS TRAVEL. EXIT SIGN PLACEMENT WILL BE SUCH THAT NO POINT IN A CORRIDOR IS MORE THAN 100 FEET, OR THE LISTED VIEWING DISTANCE FRO THE SIGN, WHICH EVER IS LESS, FROM THE NEAREST VISIBLE EXIT SIGN.

2. EXIT SIGN LETTERS TO BE NOT LESS THAN 2" WIDE X 6" HIGH (EXCEPT LETTER I). AND THE MINIMUM SPACING BETWEEN THE LETTERS WILL NOT BE LESS THAN (3/4) INCHES. IBC FIGURE 1011.6.1

4. EXIT SIGN LETTERS TO BE IN HIGH CONTRAST WITH THE BACKGROUND AND CLEARLY DISCERNABLE WHEN THE MEANS OF EGRESS ILLUMINATION IS OR IS NOT ENERGIZED.

5. TO ENSURE CONTINUED ILLUMINATION FOR A DURATION OF NOT LESS THAN 90 MINUTES IN CASE OF PRIMARY POWER LOSS, THE SIGN WILL BE CONNECTED TO AN EMERGENCY POWER SYSTEM PROVIDED FROM AN ONSITE GENERATOR.

DOORS:
1. MINIMUM CLEAR WIDTH SHALL BE .2 INCHES PER OCCUPANT SERVED. MINIMUM CLEAR WIDTH SHALL BE REDUCED TO .15 INCHES PER OCCUPANT SERVED IN BUILDING EQUIPPED THROUGHOUT AUTOMATIC SPRINKLER SYSTEM & EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM, BUT NOT LESS THAN 32 INCHES. IBC, SECTION 1005.3.2 AND TABLE 1008.1.1

2. MINIMUM HEIGHT SHALL BE 80 INCHES. IBC, SECT 1008.1.1

3. MAXIMUM WIDTH OF SWINGING DOOR LEAF IS 48 INCHES. IBC, SECT 1008.1.1

4. DOORS WILL BE SIDE HINGED SWINGING TYPE, AND WILL SWING IN THE DIRECTION OF TRAVEL WHERE THE AREA SERVED HAS AN OCCUPANT OF 50 OR MORE. IBC SECT 1008.1.2

5. DOORS WILL BE SET IN MOTION WHEN SUBJECTED TO A 30 POUND FORCE, AND SWING TO THE FULLY OPEN POSITION WHEN SUBJECTED TO A 15 POUND FORCE. IBC, TABLE 1008.1.3

6. DOORS WILL BE OPERABLE FROM THE INSIDE WITHOUT THE USE OF A KEY, SPECIAL KNOWLEDGE, OR SPECIAL EFFORT.

CORRIDORS:
1. MINIMUM CLEAR WIDTH SHALL BE .15 INCHES PER OCCUPANT SERVED IN BUILDING EQUIPPED THROUGHOUT AUTOMATIC SPRINKLER SYSTEM & EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM, BUT NOT LESS THAN 44 INCHES. IBC, SECT 1005.3.2 & 1018.2

2. MIN CLEAR WIDTH WITH AN OCCUPANT CAP OF 50 OR LESS IS 36 INCHES. IBC SECT 1018.2

3. THE MAXIMUM LENGTH OF DEAD-END CORRIDORS IS 50 FEET FOR GROUP B, M, S, & R-2 AND 20 FEET FOR ALL OTHER OCCUPANCIES. IBC, SECTION 1018.4

INTERVENING ROOMS:
1. EGRESS FROM A ROOM OR SPACE MAY NOT PASS THROUGH ADJOINING OR INTERVENING ROOMS OR AREAS, EXCEPT WHERE SUCH ADJOINING ROOMS OR AREAS ARE ACCESSORY TO THE AREA SERVED, NOT A HIGH-HAZARD OCCUPANCY, AND PROVIDE A DISCERNABLE PATH OF EGRESS TRAVEL TO AN EXIT. IBC SECT 1014.2

2. EGRESS MAY NOT PASS THROUGH STORAGE ROOMS, CLOSETS, OR SPACES USED FOR SIMILAR PURPOSES.

3. EXIT ACCESS MAY NOT PASS THROUGH A ROOM THAT CAN BE LOCKED TO PREVENT EGRESS. IBC, SECTION 1014.2

CODE DATA

2018 CITY OF PHOENIX BUILDING CONSTRUCTION CODE INCLUDING THE FOLLOWING CODES AND AMENDMENTS:
2018 IBC (INTERNATIONAL BUILDING CODE)
2018 IECC (INTERNATIONAL ENERGY CONSERVATION CODE)
2018 IFC (INTERNATIONAL FIRE CODE)
2017 NEC (NATIONAL ELECTRIC CODE)
2018 IMC (INTERNATIONAL MECHANICAL CODE)
2018 IPC (INTERNATIONAL PLUMBING CODE
2018 UPC (UNIFORM PLUMBING CODE)
ACCESSIBILITY:
CHAPTER 11 OF THE IBC
2009 ANSI A117.1, ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES
2010 ADA STANDARDS FOR ACCESSIBLE DESIGN
OTHER:
VARIOUS NFPA CODES AND STANDARDS AS REFERENCED BY CODES LISTED ABOVE

FIRE EXTINGUISHERS

EX PER IBC TABLE SECTION 906 PROVIDE 2-A RATED EXTINGUISHERS. MAX TRAVEL DISTANCE TO EXTINGUISHER 75'-0". MAXIMUM FLOOR AREA PER UNIT OF "A" IS 3,000 SF.

EXIT SIGN

SELF CERTIFIED BY: _____ DATE: 03/11/19
DONALD ANDREWS CERTIFICATE #45

- PLANS WERE PREPARED BY OR UNDER THE DIRECT SUPERVISION OF, OR REVIEWED BY THE SELF-CERTIFIED PROFESSIONAL,
- PLANS ARE COMPLETE,
- THE PLANS ARE, AS OF THE DATE OF SUBMISSION, IN ACCORDANCE WITH THE REQUIREMENTS OF THE PHOENIX BUILDING CONSTRUCTION CODE AND ALL OTHER APPLICABLE LAWS.

ZONING DATA

PARCELS: 127-25-120-J & 127-25-122
ZONING: C-1
ADDRESS: 3743 E. INDIAN SCHOOL ROAD, PHOENIX, AZ 85018

CONSTRUCTION TYPE

TYPE VB - SPRINKLERED (UNDER SEPARATE PERMIT)
OCCUPANCY CLASSIFICATION B, M
2018 IECC CLIMATE ZONE - 2B

BUILDING LIMITATIONS

REFERENCE IBC TABLE 504.3, SECTION 504.4, AND SECTION 506.2

GROUP	TYPE 5B	
M	2 / 27,000	HEIGHT
B	3 / 27,000	UL/UL
		AREA

MAX HEIGHT 60'

THE PROPOSED BUILDING IS A SINGLE STORY

OCCUPANCY CLASSIFICATION

REFERENCE IBC TABLE 1004.1.2

AREA OF USE	OCCUPANCY	LOAD FACTOR
PARKING GARAGE	S-2	200 GROSS
STORAGE	S-1	300 GROSS
MECH-ELEC	S-1	300 GROSS
BUSINESS	***B***	***100 GROSS***
MERCANTILE	***M***	***30 GROSS***
SWIMMING POOL	A-3	50 GROSS
SWIMMING POOL DECK	A-3	15 GROSS
RESIDENTIAL UNIT	R-2	200 GROSS
RES. BALCONY/PATIO	R-2	200 GROSS
CIRCULATION SPACE	N/A	100 GROSS
ASSEMBLY (UNCONCENTRATED)	A-3	15 NET
ASSEMBLY (CONCENTRATED)	A-3	7 NET

FIRE RESISTANCE RATING

BUILDING ELEMENT		TYPE 5B	
STRUCTURAL FRAME		0 HR	TABLE 601
EXTERIOR NON-BEARING WALLS	X<5'	2 HR (M)	TABLE 602
INTERIOR NON-BEARING WALLS		0 HR	
EXTERIOR BEARING WALLS		0 HR	TABLE 601
INTERIOR BEARING WALLS		0 HR	TABLE 601
FLOOR CONSTRUCTION		0 HR	TABLE 601
ROOF CONSTRUCTION		0 HR	TABLE 601

SAFETY GLAZING

GLAZING LOCATION	MINIMUM CATEGORY CLASSIFICATION 9 SF OR LESS	MORE THAN 9 SF
FRAMED SWING DOORS	I	II
UNFRAMED SWING DOORS	I	II
TUB AND SHOWER ENCLOSURE	NR	II
ADJACENT TO DOORS	I	II
INDIVIDUAL PANELS	II	II
ADJACENT WALKING SURFACE	NR	II

SAFETY GLAZING WILL NOT BE PROVIDED WHERE ALLOWED BY IBC 2406.3

EXIT TRAVEL DISTANCE

MAXIMUM EXIT ACCESS TRAVEL DISTANCE **IBC, TABLE 1016.2**

GROUP M	***250 FEET***
GROUP B	***300 FEET***

MAXIMUM COMMON PATH OF EGRESS TRAVEL DISTANCE **IBC, TABLE 1014.3**

GROUP M	***75 FEET***
GROUP B	***100 FEET***

DISTANCES REFLECT THE PRESENCE OF AUTOMATIC SPRINKLER SYSTEM

KIVA #18-1372
SDEV #1800276
PAPP #1806619
PRLC
QS Q16-36

ERWIN | ARCHITECTURE DEVELOPMENT

CONTACTS:

OWNER
SUPERLUXE SCREEN PRINTING
JONATHAN PITT
(E) JON@THEWANDERIST.COM
(P) 480.247.6653

ARCHITECT
ERWIN ARCHITECTURE & DEVELOPMENT, LLC.
WILLIAM ERWIN, AIA, LEED AP BD+C
(E) WILL@ERWINARCHITECTURE.COM
(P) 602.677.8372

SELF-CERTIFIED ARCHITECT
ANDREWS DESIGN GROUP INC.
DON ANDREWS JR.
(E) DON@ADGARCH.NET
(P) 480.894.3478

CIVIL
3 ENGINEERING
DAN MANN, P.E.
6370 E. THOMAS RD, SUITE 200,
SCOTTSDALE, AZ 85251
(E) DAN@3ENGINEERING.COM
(P) 602.334.4387

STRUCTURAL
UNITED STRUCTURAL DESIGN
DAVID GRAPSAS, P.E., S.E.
2058 S. DOBSON ROAD, SUITE 10
MESA, AZ 85202
(E) DGRAPSAS@UNITEDSTR.COM
(P) 480.382.9768

MEP
PETERSON ENGINEERING
DAVID MCKERCHER
7201 N. DREAMY DRAW DRIVE, SUITE 200
PHOENIX, AZ 85020
(E) DAMEM@MPECONSULT.COM
(P) 602.388.1716

LANDSCAPE
NORRIS DESIGN
JOEL THOMAS
(E) JTHOMAS@NORRIS-DESIGN.COM
(P) 512.900.7888

SHEET ISSUE/REV:

NO.	DESCRIPTION	DATE
-	PRE-APP MTG	10.10.18
-	MINOR SITE PLAN	01.09.19
-	CITY SUBMITTAL	03.06.19

REGISTERED ARCHITECT
STATE OF ARIZONA
32856
WILLIAM FRANKLIN ERWIN
Date signed: 4/8/19

Expires 6.30.19

Owner JONATHAN PITT
Proj. Name WANDERIST OFFICE & RETAIL

CODE DATA & EGRESS PLAN

Date 03/06/19

A001

Scale As indicated

City of Phoenix Plan #: 1901783-LPSC Date: 03/12/19

COMcheck Software Version 4.1.1.0
Envelope Compliance Certificate

Project Information

Energy Code:	2018 IECC
Project Title:	Wanderist Office & Retail
Location:	Phoenix, Arizona
Climate Zone:	2b
Project Type:	New Construction
Vertical Glazing / Wall Area:	29%
Skylight / Roof Area	0%

Construction Site:
3743 E. Indian School Road
Phoenix, AZ 85018

Owner/Agent:
Jonathan Pitt
Superluxe Screen Printing
3007 N 73Rd St Ste. E
Scottsdale, AZ 85251
480.247.6653

Designer/Contractor:
William Erwin
Erwin Architecture & Development, LLC
5911 W. Park Ave
Chandler, AZ 85226
602.677.8372
will@erwinarchitecture.com

Additional Efficiency Package(s)

Enhanced Envelope Performance

Building Area	Floor Area
1-Retail with office, print area, and support space (Retail) : Nonresidential	3744

Envelope Assemblies

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U-Factor(a)
Roof 1: Attic Roof with Wood Joists, [Bldg. Use 1 - Retail with office, print area, and support space]	3744	28.0	10.0	0.026	0.027
Skylight 1: Metal Frame with Thermal Break:Glass, With Curb, Perf. Specs.: Product ID 3762, SHGC 0.35, [Bldg. Use 1 - Retail with office, print area, and support space] (c)	5	---	---	0.650	0.650
Floor 1: Slab-On-Grade:Unheated, [Bldg. Use 1 - Retail with office, print area, and support space] (d)	265	---	---	0.730	0.730
NORTH					
Exterior Wall 5: Wood-Framed, 24" o .c., [Bldg. Use 1 - Retail with office, print area, and support space]	980	20.0	0.0	0.062	0.064
Window 4: Other Window:Fixed, Perf. Specs.: Product ID NA, SHGC 0.25, [Bldg. Use 1 - Retail with office, print area, and support space] (c)	673	---	---	0.180	0.500
Window 5: Other Window:Fixed, Perf. Specs.: Product ID NA, SHGC 0.33, PF 0.38, [Bldg. Use 1 - Retail with office, print area, and support space] (c)	96	---	---	0.500	0.500
Door 4: Glass (> 50% glazing):Nonmetal Frame, Entrance Door, Perf. Specs.: Product ID NA, SHGC 0.37, PF 0.38, [Bldg. Use 1 - Retail with office, print area, and support space] (c)	99	---	---	0.830	0.830
EAST					
Exterior Wall 1: Wood-Framed, 24" o .c., [Bldg. Use 1 - Retail with	1007	20.0	0.0	0.062	0.064

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U-Factor(a)
office, print area, and support space]					
Window 1: Other Window:Fixed, Perf. Specs.: Product ID NA, SHGC 0.25, [Bldg. Use 1 - Retail with office, print area, and support space] (c)	275	---	---	0.180	0.500
Window 3: Metal Frame:Operable, Perf. Specs.: Product ID NA, SHGC 0.25, [Bldg. Use 1 - Retail with office, print area, and support space] (c)	22	---	---	0.650	0.650
SOUTH					
Exterior Wall 1 copy 1: Wood-Framed, 24" o .c., [Bldg. Use 1 - Retail with office, print area, and support space]	980	20.0	0.0	0.062	0.064
Window 2: Metal Frame:Operable, Perf. Specs.: Product ID NA, SHGC 0.25, [Bldg. Use 1 - Retail with office, print area, and support space] (c)	7	---	---	0.650	0.650
Door 1: Insulated Metal, Swinging, [Bldg. Use 1 - Retail with office, print area, and support space]	42	---	---	0.610	0.610
Door 2: Insulated Metal, Garage door 14% glazing, [Bldg. Use 1 - Retail with office, print area, and support space]	126	---	---	0.310	0.310
WEST					
Exterior Wall 3: Wood-Framed, 16" o.c., [Bldg. Use 1 - Retail with office, print area, and support space]	750	20.0	0.0	0.064	0.064
Exterior Wall 4: Wood-Framed, 24" o .c., [Bldg. Use 1 - Retail with office, print area, and support space]	340	20.0	0.0	0.062	0.064
Door 3: Insulated Metal, Swinging, [Bldg. Use 1 - Retail with office, print area, and support space]	21	---	---	0.610	0.610

(a) Budget U-factors are used for software baseline calculations ONLY, and are not code requirements.
(b) 'Other' components require supporting documentation for proposed U-factors.
(c) Fenestration product performance must be certified in accordance with NFRC and requires supporting documentation.
(d) Slab-On-Grade proposed and budget U-factors shown in table are F-factors.

Envelope PASSES: Design 12% better than code

Envelope Compliance Statement

Compliance Statement: The proposed envelope design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed envelope systems have been designed to meet the 2018 IECC requirements in COMcheck Version 4.1.1.0 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

William Erwin, President — Signature — 3/4/19
Name - Title — Date

SELF CERTIFIED BY: _____ DATE: 03/06/2019
DONALD ANDREWS CERTIFICATE #45

- PLANS WERE PREPARED BY OR UNDER THE DIRECT SUPERVISION OF, OR REVIEWED BY THE SELF-CERTIFIED PROFESSIONAL,
- PLANS ARE COMPLETE,
- THE PLANS ARE, AS OF THE DATE OF SUBMISSION, IN ACCORDANCE WITH THE REQUIREMENTS OF THE PHOENIX BUILDING CONSTRUCTION CODE AND ALL OTHER APPLICABLE LAWS.

KIVA #18-1372
SDEV #1800276
PAPP #1806619
PRLC
QS Q16-36

ERWIN | ARCHITECTURE DEVELOPMENT

CONTACTS:

OWNER
SUPERLUXE SCREEN PRINTING
JONATHAN PITT
(E) JON@THEWANDERIST.COM
(P) 480.247.6653

ARCHITECT
ERWIN ARCHITECTURE & DEVELOPMENT, LLC.
WILLIAM ERWIN, AIA, LEED AP BD+C
(E) WILL@ERWINARCHITECTURE.COM
(P) 602.677.8372

SELF-CERTIFIED ARCHITECT
ANDREWS DESIGN GROUP INC.
DON ANDREWS JR.
(E) DON@ADGARCH.NET
(P) 480.894.3478

CIVIL
3 ENGINEERING
DAN MANN, P.E.
6370 E. THOMAS RD, SUITE 200,
SCOTTSDALE, AZ 85251
(E) DAN@3ENGINEERING.COM
(P) 602.334.4387

STRUCTURAL
UNITED STRUCTURAL DESIGN
DAVID GRAPSAS, P.E., S.E.
2058 S. DOBSON ROAD, SUITE 10
MESA, AZ 85202
(E) DGRAPSAS@UNITEDSTR.COM
(P) 480.382.9768

MEP
PETERSON ENGINEERING
DAVID MCKERCHER
7201 N. DREAMY DRAW DRIVE, SUITE 200
PHOENIX, AZ 85020
(E) DAMEM@MPECONSULT.COM
(P) 602.388.1716

LANDSCAPE
NORRIS DESIGN
JOEL THOMAS
(E) JTHOMAS@NORRIS-DESIGN.COM
(P) 512.900.7888

SHEET ISSUE/REV:

NO.	DESCRIPTION	DATE
-	PRE-APP MTG	10.10.18
-	MINOR SITE PLAN	01.09.19
-	CITY SUBMITTAL	03.06.19

REGISTERED ARCHITECT
STATE OF ARIZONA
23356
WILLIAM FRANKLIN ERWIN
Date signed with
ARIZONA, U.S.A.

Expires 6.30.19

Owner JONATHAN PITT
Proj. Name WANDERIST OFFICE & RETAIL

ENVELOPE COMCHECK

Date 03/06/19

A002

Scale

City of Phoenix Plan #: 1901783-LPSC Date: 03/12/19

MECHANICAL LEGEND

SINGLE	DOUBLE	ABBR.	DESCRIPTION
		○	RECTANGULAR DUCT (NEW)
		○	TRANSITION
		○	ROUND DUCT (NEW) (OR OVAL) Ø RD ⌀ OVAL
		○	RECTANGULAR DUCT (EXISTING)
		○	ROUND DUCT (EXISTING)
		○	45 DEG. TAP: USE AT BRANCH DUCTS ONLY
		○	DUCT SPLIT W/DAMPER: USE AT ELBOWS AND TEES: PROPORTION DUCT AREAS BY CFM'S
		○	CURVED ELBOW–MIN. RADIUS R: 1.5 WIDTH
		○	90 DEG. ELBOW WITH SINGLE RADIUS TURNING VANES
		○	FLEXIBLE DUCT CONNECTION
		VD	VOLUME DAMPER W/LOCKING QUADRANT
		○	SPIN–IN FLEX DUCT TAKE–OFF W/DAMPER
		S&Q	SPLITTER DAMPER WITH LOCKING QUADRANT
○		SA	SUPPLY AIR
○		EXH	EXHAUST AIR
○		RA	RETURN AIR
○		REL	RELIEF AIR
○		OSA	OUTSIDE AIR
○		○	NEW CONNECTION TO EXISTING
○	○	TA	TRANSFER AIR
○	○	ER	EXHAUST REGISTER
○	○	ED	EXHAUST DUCT
○	○	AFF	ABOVE FINISHED FLOOR
○	○	BFF	BELOW FINISHED FLOOR
○	○	NTS	NOT TO SCALE
○	○	EH	EXHAUST HOOD
○	T	T	THERMOSTAT
		F/S	COMBINATION FIRE/SMOKE DAMPER
		SD	SMOKE DUCT DETECTOR
F	F	○	FIRE STAT SET AT 165°
⊘	⊘	○	OUTSIDE AIR STAT
S	S	○	SENSOR

MECHANICAL NOTES

1. FURNISH ALL LABOR, MATERIALS, TOOLS EQUIPMENT, FEES, PERMITS, CERTIFICATE OF INSPECTION, ETC., NECESSARY OR REASONABLE, REQUIRED FOR THE COMPLETE INSTALLATION OF ALL AIR CONDITIONING WORK. THE WORK SHALL BE IN STRICT ACCORDANCE WITH ASHRAE GUIDE, AND ALL LOCAL AND STATE CODES, ORDINANCES AND REGULATIONS.
2. DUCTS SHALL BE FABRICATED OF PRIME GALVANIZED LOCK FORMING QUALITY STEEL SHEETS, OR A GAUGE IN ACCORDANCE WITH THE FOLLOWING TABLE:
   - DUCTS WITH LONGEST SIDE NOT MORE THAN 12" IN WIDTH..26 GA
   - DUCTS WITH LONGEST SIDE 13" TO 30" IN WIDTH.....24 GA
   - DUCTS WITH LONGEST SIDE 31" TO 40" IN WIDTH.....22 GA
   - DUCTS WITH LONGEST SIDE OVER 40".....20 GA
3. PROVIDE RADIUS ELBOWS, TURNING VANES, AND SPLITTER DAMPERS IN BRANCHES AND EXTRACTORS WHERE APPLICABLE.
4. DUCT SIZES SHOWN ARE "CLEAR INSIDE" DIMENSIONS.
5. PREFORM A TOTAL TEST AND BALANCE OF SYSTEM. TESTING COMPANY MUST BE CERTIFIED BY AABC OR NEBB. SUBMIT A CERTIFIED REPORT TO ARCH. 10 DAYS PRIOR TO C OF O WITH A COPY TO CITY INSPECTOR.
6. ALL DUCTWORK TO BE CONSTRUCTED AND INSTALLED IN ACCORDANCE WITH "ASHRAE GUIDE AND SMACNA OR IMC (2012) STANDARDS". SEAL ALL DUCTWORK, LONGITUDINAL AND LATITUDINAL JOINTS WITH DP–1010 SEALANT (PER 2018 IECC).
7. EXACT PLACEMENT OF DIFFUSERS AND REGISTERS TO BE COORDINATED WITH ARCHITECTURAL – REFLECTED CEILING PLAN.
8. CONTRACTOR TO VERIFY LOCATION OF ALL AIR EQUIPMENT SO THAT NO INTERFERENCE ARE ENCOUNTERED WITH OTHER EQUIPMENT OR WITH STRUCTURAL ELEMENTS.
9. MECHANICAL CONTRACTOR TO VERIFY THAT ALL DUCTWORK WILL FIT WHERE INDICATED WITHOUT INTERFERENCE.
10. CONTRACTOR AND ARCHITECT TO VERIFY T–STAT LOCATIONS.
11. THERMOSTATS MUST BE LOCATED 48" ABOVE FINISHED FLOOR. (TO CENTERLINE OF THERMOSTAT) T–STATS SHALL BE 7 DAY PROGRAMMABLE WITH SET–BACK CAPABILITIES (PER 2018 IECC).
12. MECHANICAL CONTRACTOR SHALL INSULATE ALL NEW SUPPLY AND RETURN AIR DUCTWORK LOCATED WITHIN AN ATTIC SPACE WITH MIN. R–6 INSULATION, ALL NEW SUPPLY AIR DUCTWORK LOCATED WITHIN A PLENUM SPACE WITH MIN. R–6 INSULATION AND/OR ANY DUCTWORK EXPOSED TO THE EXTERIOR WITH MIN. R–8 INSULATION (PER 2012 IECC). INSULATION NOT REQUIRED FOR SUPPLY/RETURN AIR DUCTWORK LOCATED WITHIN A PLENUM SPACE WHERE THE ENVELOPE INSULATION IS MIN. R–8 OR ANY EXHAUST DUCT.
13. HVAC CONTRACTOR SHALL REPLACE ALL FILTERS UPON COMPLETION OF CONSTRUCTION. THIS INCLUDES FILTERS AT ALL NEW UNITS AND FILTERS AT ALL EXISTING UNITS AFFECTED BY CONSTRUCTION.

SPLIT SYSTEM HEAT PUMP – 208/1 – HIGH EFFICIENCY (15+ SEER)

MARK	MANUF./ MODEL #		INDOOR UNIT					OUTDOOR UNIT			EER/ SEER	CYCLE	HEATING/COOLING CAPACITIES						UNIT WEIGHT LBS		REMARKS
	INDOOR	OUTDOOR	TOTAL CFM	OA CFM	ESP IWG	HP	VOLT/ø	MCA	MOCP	VOLT/ø			ENT AIR		AMBIENT		BTUH		INDOOR	OUTDOOR	
													DB	WB	DB	WB	TOTAL	SENS.			
1,2	CARRIER FX4DNF049	CARRIER 25HBC548	1600	–	0.5	3/4	230/1	28.5	40	230/1	15.0/12.5	COOL	80	63	115	71	39.6	38.0	185	260	
												HEAT	70	–	30	–	35.9	–			
3	CARRIER FX4DNF061	CARRIER 25HBC560	1880	–	0.5	3/4	230/1	34.2	50	230/1	15.0/12.5	COOL	80	63	115	71	47.8	45.8	201	294	
												HEAT	70	–	30	–	43.2	–			

1. PROVIDE WITH 1" FACTORY FILTER RACK AND 1" PLEATED 'FARR' 30/30 TYPE FILTERS.
2. PROVIDE WITH 7 DAY PROGRAMMABLE THERMOSTAT, SUB–BASE AND LOCKING COVER.
3. A 24V DUCT MOUNTED SMOKE DETECTOR SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR AND INSTALLED BY THE MECHANICAL CONTRACTOR. FIRE ALARM SYSTEM WIRING SHALL BE BY THE ELECTRICAL CONTRACTOR. LOW VOLTAGE SHUTDOWN WIRING TO UNIT SHALL BE BY MECHANICAL CONTRACTOR. CEILING MOUNTED STATUS LED SHALL BE FURNISHED, INSTALLED AND CONNECTED BY THE ELECTRICAL CONTRACTOR. SEE ELECTRICAL DRAWINGS FOR DETAILS.

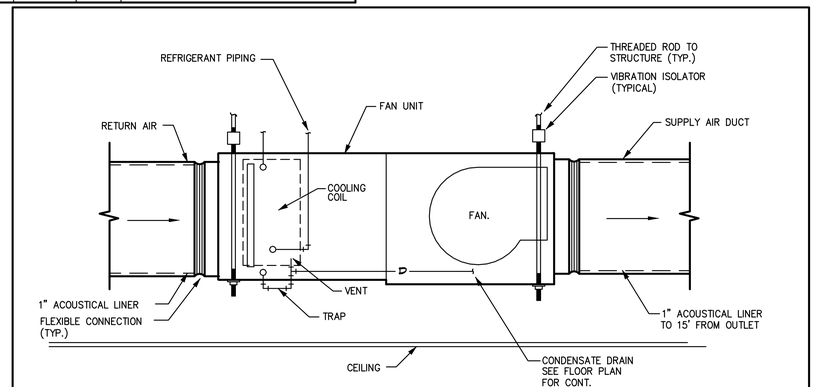
CITY OF PHOENIX CODES ADOPTED AT THIS TIME ARE THE 2018 IMC AND 2018 IECC.

EXHAUST FAN SCHEDULE

MARK	MANUF./ MODEL #	TYPE	CFM	E.S.P.	HP	VOLT ø	B.D.D.	DRIVE	OPER. WT.	REMARKS
1	GREENHECK SPA–50	CLG.	50	0.25	77W	120/1	YES	DIRECT	25	

GRILLE, REGISTER & DIFFUSER SCHEDULE

MARK	MANUF./ MODEL #	DESCRIPTION	FRAME	STYLE	FINISH	MATERIAL	DAMPER	MAX. NC	REMARKS
CD–1	PRICE SMD	DIFFUSER	DUCT MTD	LOUVER	WHITE	STEEL	OBD	30	
RG–1	PRICE 535	RETURN GRILLE	SURF.	LOUVER	WHITE	STEEL	–	30	
SR–1	PRICE 525DL	SIDE WALL SUPPLY GRILLE	DUCT MTD	BAR	WHITE	STEEL	OBD	30	SIZE PER PLAN



FAN COIL MOUNTING DETAIL NTS

2018 IECC MECHANICAL COMPLIANCE NOTES:

HVAC SYSTEM(S)

1. MINIMUM HEATPUMP EFFICIENCY 13 SEER.
2. ALL HEAT PUMPS WITH SUPPLEMENTAL STRIP HEATERS MUST UTILIZE HEAT PUMP THERMOSTAT TO PREVENT STRIP HEATERS FROM ENERGIZING IF HEAT PUMP CAN ACCOMMODATE THE LOAD.

GENERAL REQUIREMENTS

1. ALL THERMOSTATS PROVIDED MUST BE FULLY PROGRAMMABLE WITH SETBACK OPERATIONS.
2. ALL EXHAUST SYSTEMS SHALL HAVE BAROMETRIC DAMPERS TO CLOSE WHEN NOT IN OPERATION.
3. OSA SYSTEMS IN EXCESS OF 3000 CFM SHALL AUTOMATICALLY CLOSE WHEN NOT IN OPERATION.
4. OSA SYSTEM DESIGNED TO COMPLY WITH MINIMUM OSA REQUIREMENTS PER CHAPTER 4 OF THE 2018 IMC.
5. INSULATE ALL SUPPLY AND RETURN DUCTS LOCATED WITHIN ATTIC SPACE WITH MINIMUM R–5 INSULATION, ALL SUPPLY DUCTS LOCATED WITHIN PLENUM SPACE WITH MINIMUM R–5 INSULATION AND/OR ANY DUCTWORK EXPOSED TO EXTERIOR TO BE INSULATED WITH MINIMUM R–8 INSULATION. EXHAUST DUCTS DO NOT REQUIRE ANY INSULATION.
6. ALL JOINTS SEAMS AND CONNECTIONS IN DUCTWORK SYSTEM TO BE SECURELY SEALED USING WELDMENTS, MECHANICAL FASTENERS WITH SEALS, GASKETS, MASTICS OR TAPES. TAPES AND MASTICS MUST BE UL 181(A) OR (B) LISTED.
7. MECHANICAL FASTENERS AND SEALS, MASTICS OR GASKETS MUST BE USED WHEN CONNECTING DUCTS TO FANS OF OTHER AIR DISTRIBUTION EQUIPMENT.
8. OPERATION AND MAINTENANCE DOCUMENTATION TO BE PROVIDED TO OWNER AT COMPLETION OF PROJECT. OWNER MAY WITHHOLD FINAL PAYMENT PENDING RECEIPT OF DOCUMENTATION.
9. EACH SUPPLY AIR OUTLET, DIFFUSER OR VAV BOX SHALL HAVE ITS OWN BALANCING DEVICE.

LOAD CALCULATIONS WERE PERFORMED USING
THE CARRIER HAP PROGRAM BASED ON ASHRAE FUNDAMENTALS
THE SPLIT SYSTEM UNITS HAVE FIXED HEATING
CAPAPCITY, UNIT SIZES ARE BASED ON UNIT COOLING SENSIBLE CAPACITY
REDUCED LIGHTING POWER IS THE ADDITIONAL ENERGY SAVING FEATURE USED.

UNIT	SENSIBLE LOAD	UNIT CAPACITY
FC/CU–1,2	72	76
FC/CU–3	43	46

SELF CERTIFIED BY: _____ DATE: 03/06/2019
DONALD ANDREWS CERTIFICATE #45

- PLANS WERE PREPARED BY OR UNDER THE DIRECT SUPERVISION OF, OR REVIEWED BY THE SELF-CERTIFIED PROFESSIONAL,
- PLANS ARE COMPLETE,
- THE PLANS ARE, AS OF THE DATE OF SUBMISSION, IN ACCORDANCE WITH THE REQUIREMENTS OF THE PHOENIX BUILDING CONSTRUCTION CODE AND ALL OTHER APPLICABLE LAWS.

PETERSON ASSOCIATES
CONSULTING ENGINEERS INC.
7201 N. Dreamy Draw Drive
Suite 200
Phoenix, Arizona 85020
(602) 943.4116
Facsimile (602) 943.2507
www.mpeconsult.com
Job No. 197090

KIVA #18-1372
SDEV #1800276
PAPP #1806619
PRLC
QS Q16-36

ERWIN | ARCHITECTURE DEVELOPMENT

CONTACTS:

OWNER
SUPERLUXE SCREEN PRINTING
JONATHAN PITT
(E) JON@THEWANDERIST.COM
(P) 480.247.6653

ARCHITECT
ERWIN ARCHITECTURE & DEVELOPMENT, LLC.
WILLIAM ERWIN, AIA, LEED AP BD+C
(E) WILL@ERWINARCHITECTURE.COM
(P) 602.677.8372

SELF-CERTIFIED ARCHITECT
ANDREWS DESIGN GROUP INC.
DON ANDREWS JR.
(E) DON@ADGARCH.NET
(P) 480.894.3478

CIVIL
3 ENGINEERING
DAN MANN, P.E.
6370 E. THOMAS RD, SUITE 200,
SCOTTSDALE, AZ 85251
(E) DAN@3ENGINEERING.COM
(P) 602.334.4387

STRUCTURAL
UNITED STRUCTURAL DESIGN
DAVID GRAPSAS, P.E., S.E.
2058 S. DOBSON ROAD, SUITE 10
MESA, AZ 85202
(E) DGRAPSAS@UNITEDSTR.COM
(P) 480.382.9768

MEP
PETERSON ENGINEERING
DAVID MCKERCHER
7201 N. DREAMY DRAW DRIVE, SUITE 200
PHOENIX, AZ 85020
(E) DAMEM@MPECONSULT.COM
(P) 602.388.1716

LANDSCAPE
NORRIS DESIGN
JOEL THOMAS
(E) JTHOMAS@NORRIS-DESIGN.COM
(P) 512.900.7888

SHEET ISSUE/REV:

NO.	DESCRIPTION	DATE
-	PRE-APP MTG	10.10.18
-	MINOR SITE PLAN	01.09.19
-	CITY SUBMITTAL	03.06.19

Owner	JONATHAN PITT
Proj. Nam	WANDERIST OFFICE & RETAIL

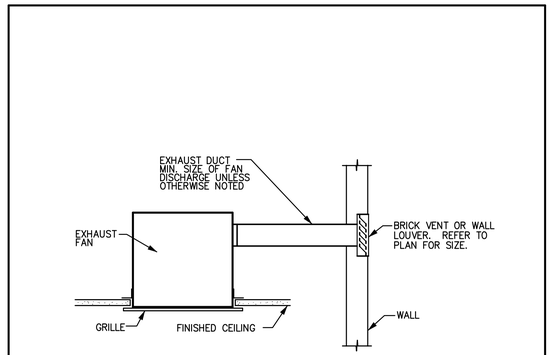
MECHANICAL SCHEDULES

Date	03/06/19

M001

Scale	AS SHOWN

02/07/2019 5:48:06 PM



EXHAUST FAN DETAIL NTS

COMcheck Software Version 4.1.1.0

Mechanical Compliance Certificate

Project Information

Energy Code:	2018 IECC
Project Title:	Wanderist
Location:	Phoenix, Arizona
Climate Zone:	2b
Project Type:	New Construction

Construction Site: Owner/Agent: Designer/Contractor:

Additional Efficiency Package(s)

Reduced interior lighting power. Requirements are implicitly enforced within interior lighting allowance calculations.

Mechanical Systems List

Quantity	System Type & Description
2	FC/CU 1,2 (Single Zone): Split System Heat Pump Heating Mode: Capacity = 36 kBtu/h, Proposed Efficiency = 8.20 HSPF, Required Efficiency = 8.20 HSPF Cooling Mode: Capacity = 38 kBtu/h, Proposed Efficiency = 15.00 SEER, Required Efficiency: 14.00 SEER Fan System: None
1	FC/CU 3 (Single Zone): Split System Heat Pump Heating Mode: Capacity = 43 kBtu/h, Proposed Efficiency = 8.20 HSPF, Required Efficiency = 8.20 HSPF Cooling Mode: Capacity = 46 kBtu/h, Proposed Efficiency = 15.00 SEER, Required Efficiency: 14.00 SEER Fan System: None

Mechanical 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 2018 IECC requirements in COM*check* Version 4.1.1.0 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Robin Harris — Name - Title; Signature; 03.04.2019 — Date

Project Title: Wanderist — Report date: 03/04/19
Data filename: W:\Large\2019\197090 Wanderist Building\ComCheck\mech.cck — Page 1 of 10

OUTSIDE AIR CALCULATION (PER 2018 IMC, TABLE 403.3)

Ez = .8 Ez = .8

ZONE #	OCCUPANCY CLASSIFICATION	OCCUPANT DENSITY #/1,000 FT²	SYSTEM #	# OF FIXTURES	AREA (A_z)	PRIMARY AIR FLOW (V_{pz})	OCCUPANTS (P_z)	OSA CFM/FT² (R_a)	OSA CFM/PERSON (R_p)	EXHAUST RATE CFM/FT²	EXHAUST RATE PER/FIXTURE	O.S.A. REQUIRED (V_{bz})	EXHAUST REQUIRED	TOTAL O.S.A. & EXH. MAKEUP REQUIRED	COOLING (V_{oz})	HEATING (V_{oz})	ZONE OUTDOOR AIR FLOW: OUTDOOR AIR FRACTION (COOLING)	ZONE OUTDOOR AIR FLOW: OUTDOOR AIR FRACTION (HEATING)	PRIMARY OUTDOOR AIR FRACTION (Z_p)	SYSTEM VENTILATION EFFICIENCY (E_v)	UNCORRECTED OUTDOOR AIR INTAKE (V_{ou})	OUTDOOR AIR INTAKE FLOW RATE (V_{ot})	OUTDOOR AIR INTAKE FLOW RATE (V_{ot}) + EXHAUST MAKEUP AIR
1	Corridors	0	1		115 FT²	200 CFM	0 People	0.06	0	0	0	7	0	7	9	9	4.50%	4.50%	4.50%	1	126 CFM	126 CFM	126 CFM
2	Office	5	1		126 FT²	200 CFM	1 People	0.06	5	0	0	13	0	13	16	16	8.00%	8.00%	8.00%	1			
3	Warehouses	0	1		1,340 FT²	1,600 CFM	0 People	0.06	0	0	0	80	0	80	101	101	6.31%	6.31%	6.31%	1			
Balance FC-3 to 130 cfm												CFM O.S.A. REQUIRED		126									
												CFM O.S.A. PROVIDED		130									

SELF CERTIFIED BY: _____ DATE 03/06/2019
DONALD ANDREWS CERTIFICATE #45

- PLANS WERE PREPARED BY OR UNDER THE DIRECT SUPERVISION OF, OR REVIEWED BY THE SELF-CERTIFIED PROFESSIONAL,
- PLANS ARE COMPLETE,
- THE PLANS ARE, AS OF THE DATE OF SUBMISSION, IN ACCORDANCE WITH THE REQUIREMENTS OF THE PHOENIX BUILDING CONSTRUCTION CODE AND ALL OTHER APPLICABLE LAWS.

PETERSON ASSOCIATES
CONSULTING ENGINEERS INC.
7201 N. Dreamy Draw Drive
Suite 200
Phoenix, Arizona 85020
(602) 943.4116
Facsimile (602) 943.2507
www.mpeconsult.com
Job No. 197090

KIVA #18-1372
SDEV #1800276
PAPP #1806619
PRLC
QS Q16-36

ERWIN | ARCHITECTURE DEVELOPMENT

CONTACTS:

OWNER
SUPERLUXE SCREEN PRINTING
JONATHAN PITT
(E) JON@THEWANDERIST.COM
(P) 480.247.6653

ARCHITECT
ERWIN ARCHITECTURE & DEVELOPMENT, LLC.
WILLIAM ERWIN, AIA, LEED AP BD+C
(E) WILL@ERWINARCHITECTURE.COM
(P) 602.677.8372

SELF-CERTIFIED ARCHITECT
ANDREWS DESIGN GROUP INC.
DON ANDREWS JR.
(E) DON@ADGARCH.NET
(P) 480.894.3478

CIVIL
3 ENGINEERING
DAN MANN, P.E.
6370 E. THOMAS RD, SUITE 200,
SCOTTSDALE, AZ 85251
(E) DAN@3ENGINEERING.COM
(P) 602.334.4387

STRUCTURAL
UNITED STRUCTURAL DESIGN
DAVID GRAPSAS, P.E., S.E.
2058 S. DOBSON ROAD, SUITE 10
MESA, AZ 85202
(E) DGRAPSAS@UNITEDSTR.COM
(P) 480.382.9768

MEP
PETERSON ENGINEERING
DAVID MCKERCHER
7201 N. DREAMY DRAW DRIVE, SUITE 200
PHOENIX, AZ 85020
(E) DAMEM@MPECONSULT.COM
(P) 602.388.1716

LANDSCAPE
NORRIS DESIGN
JOEL THOMAS
(E) JTHOMAS@NORRIS-DESIGN.COM
(P) 512.900.7888

SHEET ISSUE/REV:

NO.	DESCRIPTION	DATE
-	PRE-APP MTG	10.10.18
-	MINOR SITE PLAN	01.09.19
-	CITY SUBMITTAL	03.06.19

Registered Professional Engineer Declaration
2968
MARK J. PETERSON
Date Signed 3/6/19
ARIZONA, U. S. A.

Owner JONATHAN PITT
Proj. Nam WANDERIST OFFICE & RETAIL

MECHANICAL SCHEDULES

Date 03/06/19

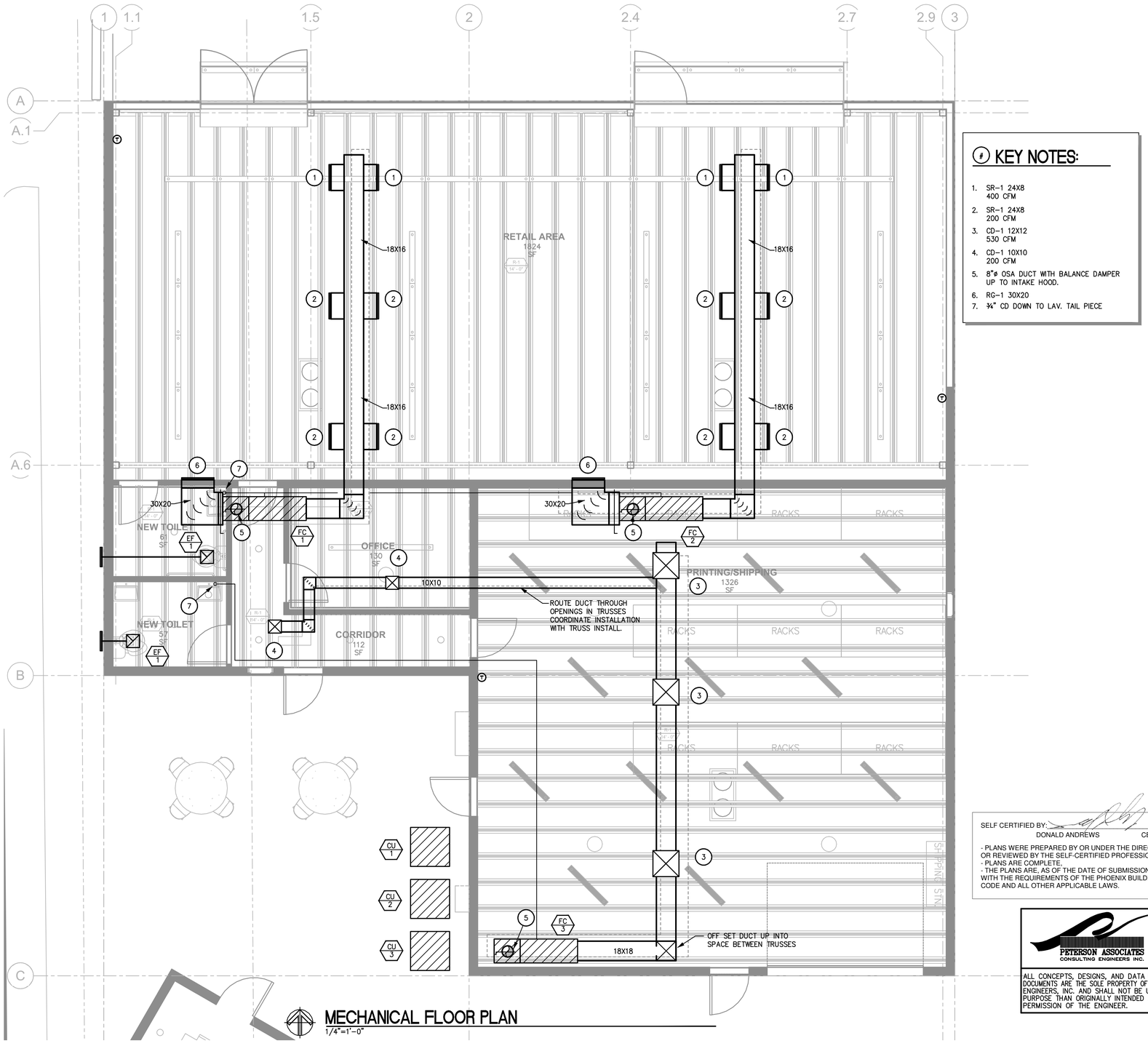
M002

Scale AS SHOWN

02/07/2019 5:48:06 PM

City of Phoenix Plan #: 1901783-LPSC Date: 03/12/19

RETAIL SALES
15 PEOPLE PER 1000 SQ.FT. AT 7.5 CFM PER SQ. FT. PLUS .12 CFM PER SQ.FT.
= 15 X 1.8 + .12 X 1800
= 27 + 216
= 243 CFM
= Ez = .8
= 243/8
= 304 CFM
BALANCE FC-1 AND 2 EACH TO 155 CFM
= 310 CFM PROVIDED.



KEY NOTES:

1. SR-1 24X8
   400 CFM
2. SR-1 24X8
   200 CFM
3. CD-1 12X12
   530 CFM
4. CD-1 10X10
   200 CFM
5. 8"ø OSA DUCT WITH BALANCE DAMPER UP TO INTAKE HOOD.
6. RG-1 30X20
7. ¾" CD DOWN TO LAV. TAIL PIECE

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

SELF CERTIFIED BY: _____ DATE 03/06/2019
DONALD ANDREWS CERTIFICATE #45

- PLANS WERE PREPARED BY OR UNDER THE DIRECT SUPERVISION OF, OR REVIEWED BY THE SELF-CERTIFIED PROFESSIONAL,
- PLANS ARE COMPLETE,
- THE PLANS ARE, AS OF THE DATE OF SUBMISSION, IN ACCORDANCE WITH THE REQUIREMENTS OF THE PHOENIX BUILDING CONSTRUCTION CODE AND ALL OTHER APPLICABLE LAWS.

PETERSON ASSOCIATES CONSULTING ENGINEERS INC.
7201 N. Dreamy Draw Drive
Suite 200
Phoenix, Arizona 85020
(602) 943.4116
Facsimile (602) 943.2507
www.mpeconsult.com
Job No. 197090

KIVA #18-1372
SDEV #1800276
PAPP #1806619
PRLC
QS Q16-36

ERWIN | ARCHITECTURE DEVELOPMENT

CONTACTS:

OWNER
SUPERLUXE SCREEN PRINTING
JONATHAN PITT
(E) JON@THEWANDERIST.COM
(P) 480.247.6653

ARCHITECT
ERWIN ARCHITECTURE & DEVELOPMENT, LLC.
WILLIAM ERWIN, AIA, LEED AP BD+C
(E) WILL@ERWINARCHITECTURE.COM
(P) 602.677.8372

SELF-CERTIFIED ARCHITECT
ANDREWS DESIGN GROUP INC.
DON ANDREWS JR.
(E) DON@ADGARCH.NET
(P) 480.894.3478

CIVIL
3 ENGINEERING
DAN MANN, P.E.
6370 E. THOMAS RD, SUITE 200,
SCOTTSDALE, AZ 85251
(E) DAN@3ENGINEERING.COM
(P) 602.334.4387

STRUCTURAL
UNITED STRUCTURAL DESIGN
DAVID GRAPSAS, P.E., S.E.
2058 S. DOBSON ROAD, SUITE 10
MESA, AZ 85202
(E) DGRAPSAS@UNITEDSTR.COM
(P) 480.382.9768

MEP
PETERSON ENGINEERING
DAVID MCKERCHER
7201 N. DREAMY DRAW DRIVE, SUITE 200
PHOENIX, AZ 85020
(E) DAMEM@MPECONSULT.COM
(P) 602.388.1716

LANDSCAPE
NORRIS DESIGN
JOEL THOMAS
(E) JTHOMAS@NORRIS-DESIGN.COM
(P) 512.900.7888

SHEET ISSUE/REV:

NO.	DESCRIPTION	DATE
-	PRE-APP MTG	10.10.18
-	MINOR SITE PLAN	01.09.19
-	CITY SUBMITTAL	03.06.19

Registered Professional Engineer Mechanical STATE OF ARIZONA 22968 MARK J. PETERSON Date Signed 3/6/19 ARIZONA, U.S.A.

Owner	JONATHAN PITT
Proj. Nam	WANDERIST OFFICE & RETAIL

MECHANICAL FLOOR PLAN

Date	03/06/19

M200

Scale	AS SHOWN

02/07/2019 5:48:06 PM

SECTION 23 0010

MECHANICAL SHEET (T.I. PACKAGES/SPLITS)

PART 1 GENERAL

1.01 SCOPE OF WORK

A. The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complimentary, and what is required by one shall be as binding as if required by all. The Performance by the Contractor shall be required only to the extent consistent with the Contract Documents as reasonably inferable from them as necessary to produce the intended results.

1. The Contractor shall refer to all project drawings and specifications prior to submission of bid and include monies to provide a complete and functioning system. Reference drawings include, but are not necessarily limited to, Civil, Architectural, Structural, Electrical, Plumbing and Fire Protection.
2. Work Included: Unless specified otherwise, provide all labor, materials and equipment necessary for completely finished and operational mechanical systems. Provide all minor incidental items such as offsets, fittings, etc. required as part of the Work even though not specified or indicated. All materials used shall be of domestic manufacturers. No foreign material will be allowed.
3. Description of Systems: The work includes but is not limited to:
   a. Heating, Ventilating and Air Conditioning System(s).
4. Drawings are diagrammatic. Refer to Civil, Electrical, Plumbing, Fire Protection, Architectural and Structural Drawings and specifications for information on equipment furnished and installed by others which may conflict with rough-in or equipment locations. Coordinate Mechanical system components with all other Disciplines' Work. No adjustment in contract price will be made for failure to review or coordinate work prior to fabrication and/or installation.
5. Inconsistencies. In the case of any inconsistency between drawings and specifications or within either document not clarified by addendum, the better quality or greater quantity of work shall be provided in accordance with the Engineer's interpretation.

1.02 INSPECTION AND TESTS

A. Furnish Architect with certificate of inspection and approval by local authorities and required test reports prior to final acceptance of the project by the Architect. All work must be inspected and tested per local code requirements.

1.03 PROJECT COORDINATION

A. All Contractors shall be responsible for coordinating Work with other trades and for cutting and re-finishing of existing walls, floors, solid and suspended ceilings, etc., where required by Work shown and noted herein. Install all Work to clear new and existing architectural and structural members. Items such as pipe, fittings, etc., shall not be installed in conflict with equipment. Coordinate all cutting and patching with the General Contractor. Subcontractor shall be responsible for all cutting and patching of his Work. Obtain written permission of Architect before proceeding with any cutting or patching of structural systems.

B. Any discrepancies which may affect the Contractor's bid shall be brought to the attention of the Engineer and Architect for direction.

C. During construction, coordinate use of site and facilities and work sequence to meet the project requirements.

D. Contractor shall coordinate with Electrical Subcontractor to insure proper electrical voltage requirements for all mechanical equipment.

E. Coordinate exact location of ceiling outlets with lighting plan and Architectural Drawings.

1.04 FIELD VERIFICATION

A. Contractor shall visit the job site and familiarize himself with all existing conditions which may affect his bid. All existing equipment, ductwork, air distribution devices, thermostats, controls and piping are shown on the drawings for reference only. No allowances will be made after the bid for existing conditions or the Contractor's failure to verify existing conditions.

B. The following items shall be verified:

1. Exact placement, size, capacity, manufacturer and condition of all existing HVAC equipment within the scope of work whether specifically shown on the drawings or not.
2. Size and location of all existing ductwork.
3. Structural members which may be in conflict with new work.
4. Size and location of all existing grilles, registers, louvers and diffusers.
5. Type and location of all thermostatic control devices.
6. Size and location of all existing hydronic piping, valves and controls.

C. Any discrepancies which may affect the Contractors bid shall be brought to the attention of the Engineer and Architect for direction.

1.05 SUBMITTALS

A. See Architectural Administrative Requirements, for submittal procedures.

B. Product Data: Provide shop drawings and manufacturers' product data and catalog information on the following:

1. All HVAC equipment, including roof curbs, controls, etc.
2. Air distribution systems, including ductwork, fittings, insulation, fire dampers, diffusers, grilles, balancing dampers, sound attenuators, etc.

C. Project Record Documents: Provide two (2) sets of Record Documents and two (2) bound sets of all operation manuals, diagrams, service contracts, guarantees, etc. for Owner's use. Record actual locations of all ductwork, piping, valves or equipment and incorporate into the Record Documents to show the final "Installed" conditions.

D. Submit only those manufacturers listed on the drawings or in the specific section unless prior approval was obtained.

E. Submit shop drawings and product data grouped to include complete submittals of related systems, products, and accessories in a single submittal. Partial submittals will not be reviewed by the Engineer.

F. Mark dimensions and values in units to match those specified.

G. Clearly identify specific components on multi-item equipment or data sheets.

H. The Installing Contractor shall review all submittals for compliance with plans and specifications. The contractor shall stamp each item in the submittal indicating that the review process has been completed.

I. Any discrepancies in the submittals from the requirements of the plans and specifications shall be noted by the Installing Contractor. If major discrepancies, errors, or product omissions are found, the Installing Contractor shall correct the submittals before forwarding for review by the Engineer.

1.06 REQUEST FOR INFORMATION

A. Requests for information are to be submitted to the Architect/Engineer by the General Contractor.

B. Sufficient back-up information shall be included to describe the situation. Where possible a suggested solution shall be included to facilitate response time.

1.07 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section, with not less than three years of documented experience.

B. Installer Qualifications: Company specializing in performing the work of this section with minimum five years of experience.

C. Products Requiring Electrical Connection: Listed and classified by UL as suitable for the purpose specified and indicated.

1.08 REGULATORY REQUIREMENTS

A. All materials, equipment and installation must comply with all applicable laws, codes, rules, and regulations, required by City, County and State, as well as Federal requirements.

1.09 WARRANTY

A. Contractor shall guarantee all materials, equipment and workmanship from defect and shall replace or repair, without additional cost to the Owner, all defective material, equipment and workmanship for a period of one year after Date of Substantial Completion.

B. Submit manufacturers' warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.

PART 2 PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

A. Manufacturer's names and catalog numbers are scheduled or specified for the purpose of establishing standard of design, quality, appearance, performance and serviceability, and not to limit competition. Scheduled products (as may be modified by detailed specifications) are those selected as the basis for system design with respect to physical size and space arrangements, required capacity and performance characteristics, and the product quality intended.

B. The Drawings indicate specified products physically arranged in the spaces, as cataloged by specific manufacturers, generally as listed in the Equipment Schedules.

C. Listed "Acceptable Manufacturers" are those considered capable of manufacturing products conforming to detailed Specifications, as as such, are invited to compete on an equal basis provided the offering is comparable in every respect to scheduled or specified products and actually conforms to the detailed Specifications and Schedule requirements. Listing herein as "acceptable manufacturers" does not imply "accepted", "approved", "prior approval", or any other such connotation. All product offerings must be submitted for approval after Contract award.

D. Acceptable Manufacturers:

1. Unitary Packaged or Split System Equipment: Trane, Carrier, York
2. Evaporative Coolers: United Metal Products, Mastercool
3. Exhaust and Supply Fans: Greenheck, Cook, Twin City
4. Grilles, Registers and Diffusers: Titus, Krueger, Price

E. Substitutions of materials or products shown herein shall be at the Owner's, Architect's or Engineer's written approval only and must be made in accordance with the Architect's requirements.

2.02 FLAME SPREAD AND SMOKE DEVELOPED PROPERTIES OF MATERIALS

A. Material and adhesives used throughout the mechanical systems for insulation, acoustical lining, filters, ducts, flexible connections, and jackets or coverings regardless of kind, or for piping or continued combustion and with a smoke developed rating not higher than 50. If such materials are to be applied with adhesives, they shall be tested as applied with such adhesives, or the adhesives used shall have a flame spread rating not over 25 and a smoke developed rating not higher than 50.

B. "Flame Spread Rating" and "Smoke Developed Rating" shall be as determined by the "Method of Test of Surface Burning Characteristics of Building Materials. NFPA No. 255, ASTM E84, Underwriters Laboratories, Inc., Standard". Such materials are listed in the Underwriters Laboratories, Inc. "Building Materials List" under the heading "Hazard Classifications (Fire)".

2.03 IDENTIFICATION OF EQUIPMENT

A. Identify mechanical equipment with a nameplate bearing the equipment name, number and area served, 1/16-inch thick, 1 1/2-inch white laminated bakelite with engraved black letters and beveled edges, 1/2-inch (single line) or 7/8-inch (double line) high, permanently mounted on the equipment in a conspicuous place with screws.

2.04 ELECTRIC MOTORS

A. Shall conform to the requirements of IEEE, NEMA, and shall have voltage, phase, frequency and service as scheduled.

B. Each item of motor driven equipment shall be furnished complete with the motors, drives and control equipment, including remote pilot devices as required to perform the specific function for which it is intended.

C. Motors shall be sleeve or ball bearing type selected for quiet operation, shall be manufactured for general purpose duty, with each bearing accessible for lubrication, and designed for the load imposed by the drive.

D. Motors 1/2 horsepower and larger shall have bearings with pressure grease lubrication.

E. Motors connected to drive equipment by belt shall be furnished with adjustable slide rail bases except for fractional horsepower motors which shall have slotted bases. Motor leads shall be permanently identified and supplied with connectors.

F. Each motor shall be suitable for the brake horsepower of the driven unit, rated with 1.15 minimum service factor, with the temperature rise not to exceed NEMA standards and shall be capable of withstanding momentary overloads of 25 percent without injurious overheating.

2.05 MOTOR STARTERS

A. Except where otherwise specified or scheduled, each starter shall be furnished by the supplier who furnishes the equipment it controls.

B. Provide a manual or magnetic starter for each motor. They shall be as recommended by the equipment manufacturer.

2.06 ACCESS DOORS

A. Furnish, for installation under appropriate Section of the Work, access doors at each point required to provide access to concealed valves, dampers, damper operators, and other devices requiring operation, adjustment, or maintenance.

B. Access doors shall be 16 gage steel, with mounting straps, concealed hangers, and screwdriver locks, designed for the doors to open 180 degrees, minimum.

C. Access doors installed in fire walls or partitions shall be UL labeled to maintain the fire rating of the wall or partition.

2.07 SLEEVES, INSERTS, ANCHORS AND SUPPORTS

A. Provide in concrete, carpentry or masonry construction, hangers, sleeves, expansion bolts, inserts, supporting steel, or other fixtures necessary for the support of pipe, equipment and devices furnished under each Section of the Specifications.

B. Provide each pipe, conduit, or duct passing through fire, smoke or sound control walls, floors, ceilings or partitions with sleeves having internal dimension approximately 1-inch larger than the outside dimension (including insulation) of pipes, conduits or ducts.

C. Sleeves (when required) through interior partitions and floors shall be no less than 22 gage galvanized steel, set flush with the finished surfaces.

2.08 FIRESTOPPING

A. Seal annular spaces between sleeves and penetrating materials in fire rated floors, ceilings, and walls with fireproof and waterproof silicone elastomer applied in accordance with the manufacturer's published instructions. Multiple penetrations shall be sealed with silicone calking. Seal material shall be UL classified for use in fire rated penetration seals, and shall be

SELF CERTIFIED BY: _____ DATE: 03/06/2019

DONALD ANDREWS CERTIFICATE #45

- PLANS WERE PREPARED BY OR UNDER THE DIRECT SUPERVISION OF, OR REVIEWED BY THE SELF-CERTIFIED PROFESSIONAL,
- PLANS ARE COMPLETE,
- THE PLANS ARE, AS OF THE DATE OF SUBMISSION, IN ACCORDANCE WITH THE REQUIREMENTS OF THE PHOENIX BUILDING CONSTRUCTION CODE AND ALL OTHER APPLICABLE LAWS.

PETERSON ASSOCIATES CONSULTING ENGINEERS INC.
7201 N. Dreamy Draw Drive
Suite 200
Phoenix, Arizona 85020
(602) 943.4116
Facsimile (602) 943.2507
www.mpeconsult.com
Job No. 197090

KIVA #18-1372
SDEV #1800276
PAPP #1806619
PRLC
QS Q16-36

ERWIN | ARCHITECTURE DEVELOPMENT

CONTACTS:

OWNER
SUPERLUXE SCREEN PRINTING
JONATHAN PITT
(E) JON@THEWANDERIST.COM
(P) 480.247.6653

ARCHITECT
ERWIN ARCHITECTURE & DEVELOPMENT, LLC.
WILLIAM ERWIN, AIA, LEED AP BD+C
(E) WILL@ERWINARCHITECTURE.COM
(P) 602.677.8372

SELF-CERTIFIED ARCHITECT
ANDREWS DESIGN GROUP INC.
DON ANDREWS JR.
(E) DON@ADGARCH.NET
(P) 480.894.3478

CIVIL
3 ENGINEERING
DAN MANN, P.E.
6370 E. THOMAS RD, SUITE 200,
SCOTTSDALE, AZ 85251
(E) DAN@3ENGINEERING.COM
(P) 602.334.4387

STRUCTURAL
UNITED STRUCTURAL DESIGN
DAVID GRAPSAS, P.E., S.E.
2058 S. DOBSON ROAD, SUITE 10
MESA, AZ 85202
(E) DGRAPSAS@UNITEDSTR.COM
(P) 480.382.9768

MEP
PETERSON ENGINEERING
DAVID MCKERCHER
7201 N. DREAMY DRAW DRIVE, SUITE 200
PHOENIX, AZ 85020
(E) DAMEM@MPECONSULT.COM
(P) 602.388.1716

LANDSCAPE
NORRIS DESIGN
JOEL THOMAS
(E) JTHOMAS@NORRIS-DESIGN.COM
(P) 512.900.7888

SHEET ISSUE/REV:

NO.	DESCRIPTION	DATE
-	PRE-APP MTG	10.10.18
-	MINOR SITE PLAN	01.09.19
-	CITY SUBMITTAL	03.06.19

Registered Professional Engineer Arizona
CERTIFICATE NO. 32968
MARK J. PETERSON
Date Signed 3/6/19
ARIZONA, U.S.A.

Owner JONATHAN PITT
Proj. Nam WANDERIST OFFICE & RETAIL

MECHANICAL FLOOR SPECIFICATIONS

Date 03/06/19

M300

Scale AS SHOWN

applied in the manufacturer's recommended thickness for the fire rating of the penetrated structure in accordance with ASTM E-814 requirements.

2.09 FLASHINGS

A. Furnish weatherproof flashings for mechanical system related openings through the roof for installation under roofing specification.

B. Furnish roof flashing for round and rectangular openings, pipes, vents machinery, devices, or ducts. The flashings shall be constructed to terminate not less than 12-inches above the roof. Provide suitable counterflashing constructed from the same material as the flashing.

C. Furnish flashings for mechanical curbs, and furnish and install counterflashing at each.

2.10 THERMOSTATS

A. Electric Room Thermostats:
1. Type: NEMA DC 3, 24 volts , with setback/setup temperature control.
   a. Automatic switching from heating to cooling.
   b. Seven day programmable with set-back capabilities per current IECC.
   c. Locking cover.
   d. Preferential rate control and short cycle protection.
2. Service: cooling and heating.

B. Thermostats must be located 48" above finished floor to centerline of device. Verify exact location with Architect.

2.11 DUCTWORK

A. Fabricate and support in accordance with SMACNA HVAC Duct Construction Standards - Metal and Flexible, International Mechanical Code and as indicated. Provide duct material, gages, reinforcing, and seal all longitudinal and transverse joints with DP-1010, for operating pressures of 2.0" static pressure and below.

B. Each duct system shall be complete with all required ductwork fittings, turning vanes, splitter dampers and supports.

C. Galvanized Steel Ducts: Hot-dipped galvanized steel sheet, ASTM A 653/A 653M FS Type B, with G90 coating.

D. Joint Sealers and Sealants: Non-hardening, water resistant, mildew and mold resistant.
1. Type: Heavy mastic or liquid used alone or with tape, suitable for joint configuration and compatible with substrates, and recommended by manufacturer for pressure class of ducts.
2. Surface Burning Characteristics: Flame spread of zero, smoke developed of zero, when tested in accordance with ASTM E 84.

E. Crossbreak all sides of all ducts. Ductwork shall have no objectionable noise, and Contractor shall provide any additional stiffeners required.

F. All longitudinal seams shall be Pittsburgh lock seam, hammered flat, with all transverse joints sealed airtight.

G. Construct T's bends, and elbows with radius of not less than 1-1/2 times width of duct on centerline. Where not possible and where rectangular elbows must be used, provide air foil turning vanes of perforated metal with glass fiber insulation.

H. All round duct branch takeoffs shall be provided with spin-in type fittings with balancing damper with locking quadrants.

I. Ductwork shall conform to dimensions on the drawings unless locations of structural members prohibit. In case of changes in dimensions, cross sectional areas shall be maintained. Attach hangers to the top cord of trusses.

J. All duct sizes shown on the drawings are clear inside dimension. Increase size of duct as required to accommodate duct liner.

K. All ducts shall be substantially supported with hangers to the structure or otherwise depending on location conditions. Hangers shall conform to all SMACNA and IMC requirements.

L. Flexible Ducts: UL 181, Class 1, aluminum laminate and polyester film with latex adhesive supported by helically wound spring steel wire.
1. Insulation: Fiberglass insulation with polyethylene vapor barrier film. Minimum R-5.
2. Pressure Rating: 10 inches WG (2.50 kPa) positive and 1.0 inches WG (250 Pa) negative.
3. Maximum Velocity: 4000 fpm (20.3 m/sec).
4. Temperature Range: -20 degrees F to 210 degrees F (-28 degrees C to 99 degrees C).

M. Insulated Flexible Ducts shall not exceed 8'-0" in length. Provide rigid duct takeoffs from the main duct (length as required) to accommodate maximum flexible duct length.

N. Increase duct sizes gradually, not exceeding 15 degrees divergence wherever possible; maximum 30 degrees divergence upstream of equipment and 45 degrees convergence downstream.

O. Fabricate continuously welded round and oval duct fittings two gages heavier than duct gages indicated in SMACNA Standard. Joints shall be minimum 4 inch cemented slip joint, brazed or electric welded. Prime coat welded joints.

P. Provide standard 45 degree lateral wye takeoffs unless otherwise indicated where 90 degree conical tee connections may be used.

Q. Where ducts are connected to exterior wall louvers and duct outlet is smaller than louver frame, provide blank-out panels sealing louver area around duct. Use same material as duct, painted black on exterior side, seal to louver frame and duct.

2.12 DUCTWORK PRESSURE CLASS

A. Low Pressure Supply (Heating and Cooling Systems): 2 inch w.g. (500 Pa) pressure class, galvanized steel.

B. Medium and High Pressure Supply: 6 inch w.g. (1500 Pa) pressure class, galvanized steel.

C. Return and Relief: 2 inch w.g. (500 Pa) pressure class, galvanized steel.

D. General Exhaust: 1 inch w.g. (250 Pa) pressure class, galvanized steel.

E. Outside Air Intake: 1 inch w.g. (250 Pa) pressure class, galvanized steel.

2.13 DUCTWORK INSULATION

A. Glass Fiber, Flexible
1. Insulation: ASTM C 553; flexible, noncombustible blanket.
2. Vapor Barrier Jacket:
   a. Kraft paper with glass fiber yarn and bonded to aluminized film.
   b. Moisture Vapor Permeability: when tested in accordance with
      1) ASTM E 96.
      2) Secure with Pressure sensitive tape.

B. Duct Liner
1. Insulation: Incombustible glass fiber complying with ASTM C 1071; flexible blanket; impregnated surface and edges coated with poly vinyl acetate polymer or acrylic polymer shown to be fungus and bacteria resistant by testing to ASTM G 21.
2. Liner Fasteners: Galvanized steel, self-adhesive pad; impact applied; or welded with integral; or press-on head.

C. Duct Insulation Schedules
1. Exhaust Duct: None
2. Outside Air: None
3. Supply Air (Round): 2 inch thick Glass Fiber, Flexible (Minimum R-6)
4. Supply Air (Rectangular): 1-1/2 inch thick Duct Liner (Minimum R-6)
5. Return Air (Round): 2 inch thick Glass Fiber, Flexible (Minimum R-6)
6. Return Air (Rectangular): 1-1/2 inch thick Duct Liner (Minimum R-6)

7. Outdoor Ductwork: 2 inch thick Duct Liner (Minimum R-8)
8. Evaporative Cooling: None

2.14 COMBINATION FIRE AND SMOKE DAMPERS

A. Fabricate in accordance with NFPA 90A, UL 555, UL 555S, and as indicated.

B. Provide factory fabricated dynamic fire damper with sleeve, and collar, and frame for each damper.

C. Multiple Blade Dampers: Fabricate with 16 gage galvanized steel frame and blades, oil-impregnated bronze or stainless steel sleeve bearings and plated steel axles, stainless steel jamb sealed, 1/8 x ½ inch plated steel concealed linkage, stainless steel closure spring, blade stops, and lock, and ½ inch actuator shaft.

D. Operators: UL Listed and labeled spring return electric type suitable for 120 volts, single phase, 60 Hz. Provide end switches to indicate damper position. Locate damper operator on interior exterior of duct and link to damper operating shaft. Stand alone dampers to be provided with integral smoke detector control.

E. Electro Thermal Link: Fusible link melting at 165 degrees F (74 degrees C); 120 volts, single phase, 60 Hz; UL Listed and labeled.

F. Interlock combination fire-smoke damper operator with duct smoke detector or zone smoke detector. Coordinate electrical connection with Electrical Contractor.

2.15 GRILLES, REGISTERS AND DIFFUSERS

A. Furnish and install all grilles, registers, ceiling diffusers and door grilles where indicated. They shall be of size and model called for on the drawings.

B. All grilles, registers, and ceiling diffusers must be set flush and true to wall or ceiling to prevent air leakage around edges. All units shall be provided with neoprene gasketing around the inside of the frame.

C. Check location of outlets and inlets and make necessary adjustments in position to conform with architectural features, symmetry, and lighting arrangement.

D. All units shall be factory finished, of color selected by the Architect, or as otherwise indicated.

E. Paint all ductwork, turning vanes, insulation, etc., that is visible through grilles, registers, or ceiling diffusers flat black.

2.16 DISPOSABLE EXTENDED AREA FILTERS

A. Media: UL 900 Class 1, pleated, lofted, non-woven, reinforced cotton fabric; supported by corrugated aluminum separators.
1. Frame: Non-flammable.
2. Nominal thickness: 1 inch (25 mm).

B. Minimum Efficiency Reporting Value (MERV): 8, when tested in accordance with ASHRAE 52.2.

C. Contractor shall replace all filters upon completion of construction. This shall include all new units and filters at all existing units affected by construction.

2.17 CONDENSATE DRAIN PIPING MATERIAL

A. Copper tubing - ASTM B88, Type M, hard drawn.

B. Fitting: AMME B16.18, cast bronze, of ASME B16.22, wrought copper and bronze.

C. Joints: ASTM B52, Grad 95TA.

D. Insulation: 1/2" thick Armaflex insulation.

2.18 REFRIGERANT PIPING MATERIAL

A. Copper Tube: ASTM B 280, H58 hard drawn or O60 soft annealed.
1. Fittings: ASME B16.22 wrought copper.
2. Joints: Braze, AWS A5.8 BCuP silver/phosphorus/copper alloy.

B. Copper Tube to 7/8 inch (22 mm) OD: ASTM B 88 (ASTM B 88M), Type K (A), annealed.
1. Fittings: ASME B16.26 cast copper.
2. Joints: Flared.

C. Insulation: 3/4" thick Armaflex insulation. Provide aluminum jacket on exterior piping.

D. Provide pipe hangers and supports in accordance with ASME B31.5 unless indicated otherwise.

E. Flexible Connectors: Utilize at or near compressors where piping configuration does not absorb vibration.

PART 3 EXECUTION

3.01 PROTECTION OF EQUIPMENT

A. Protect equipment from physical damage and deterioration after it is delivered to the Project, and during the installation period prior to Owner acceptance.

B. The equipment shall be kept clean. Motors and electrical devices shall be covered with suitable materials to prevent dirt or dust accumulation within equipment. Machinery and devices shall be properly oiled and maintained to prevent rusting and deterioration.

C. Repair scratches, mars, or paint deterioration.

3.02 EQUIPMENT SPACE

A. The Drawings indicate specified products physically arranged in the spaces, as cataloged by specific manufacturers, generally as listed in the Equipment Schedules.

B. Prepare Shop Drawings indicating the exact physical space requirements for equipment and servicing of equipment actually purchased for each item of equipment involved. NOTE: Physical space required for equipment servicing must be shown on Shop Drawings.

C. Drawings show pipe and ductwork diagrammatically.

D. Adhere to Drawings as closely as possible in layout of work.

E. Install piping and ductwork in furred spaces wherever possible. Run exposed piping and ductwork parallel to or at right angles to building walls.

F. Conform to ceiling heights established on architectural construction drawings.

3.03 HVAC DUCTWORK INSTALLATION

A. Install accessories in accordance with manufacturer's instructions, NFPA 90A, and follow SMACNA HVAC Duct Construction Standards - Metal and Flexible. Contractor shall verify that ductwork will fit where indicated without interference prior to installation.

B. All exhaust systems shall have barometric dampers to close when not in operation.

C. Provide duct access doors for inspection and cleaning before and after filters, coils, fans, automatic dampers, at fire dampers, combination fire and smoke dampers, and elsewhere as indicated. Provide minimum 8 x 8 inch (200 x 200 mm) size for hand access, size for shoulder access, and as indicated. Provide 4 x 4 inch (100 x 100 m) for balancing dampers only. Review locations prior to fabrication.

D. Provide duct test holes where indicated and required for testing and balancing purposes.

E. Provide fire dampers, combination fire and smoke dampers, and smoke dampers at locations indicated, where ducts and outlets pass through fire rated components, and where required by authorities having jurisdiction. Install with required perimeter mounting angles, sleeves, breakaway duct connections, corrosion resistant springs, bearings, bushings and hinges.

F. Install smoke dampers and combination smoke and fire dampers in accordance with NFPA 92A.

G. At fans and motorized equipment associated with ducts, provide flexible duct connections immediately adjacent to the equipment.

H. At equipment supported by vibration isolators, provide flexible duct connections immediately adjacent to the equipment.

I. Provide balancing dampers at points on supply, return, and exhaust systems where branches are taken from larger ducts as required for air balancing. Install minimum 2 duct widths from duct take-off.

J. Use splitter dampers only where indicated.

K. Provide balancing dampers on duct take-off to diffusers, grilles, and registers, regardless of whether dampers are specified as part of the diffuser, grille, or register assembly.

L. Each supply air outlet, diffuser, register or VAV box shall have it's own balancing device.

M. Flexible Ducts: Connect to metal ducts with draw bands.

3.04 DUCTWORK INSULATION INSTALLATION

A. Install in accordance with manufacturer's instructions.

B. Install in accordance with NAIMA National Insulation Standards.

C. Insulated duct conveying air below ambient temperature:
1. Provide insulation with vapor barrier jackets.
2. Finish with tape and vapor barrier jackets.
3. Continue insulation through walls, sleeves, hangers, and other duct penetrations.
4. Insulate entire system including fittings, joints, flanges, fire dampers, flexible connections, and expansion joints.

D. External Duct Insulation Application:
1. Secure insulation with vapor barrier with wires and seal jacket joints with vapor barrier adhesive or tape to match jacket.
2. Secure insulation without vapor barrier with staples, tape, or wires.
3. Install without sag on underside of duct. Use adhesive or mechanical fasteners where necessary to prevent sagging. Lift duct off trapeze hangers and insert spacers.
4. Seal vapor barrier penetrations by mechanical fasteners with vapor barrier adhesive.
5. Stop and point insulation around access doors and damper operators to allow operation without disturbing wrapping.

E. Duct and Plenum; Liner Application:
1. Adhere insulation with adhesive for 100 percent coverage.
2. Secure insulation with mechanical liner fasteners. Refer to SMACNA HVAC Duct Construction Standards - Metal and Flexible for spacing.
3. Seal and smooth joints. Seal and coat transverse joints.
4. Seal liner surface penetrations with adhesive.
5. Duct dimensions indicated are net inside dimensions required for air flow. Increase duct size to allow for insulation thickness.

3.05 REFRIGERANT PIPING INSTALLATION

A. Install refrigeration specialties in accordance with manufacturer's instructions.

B. Route piping in orderly manner, with plumbing parallel to building structure, and maintain gradient.

C. Install piping to conserve building space and avoid interference with use of space.

D. Group piping whenever practical at common elevations and locations. Slope piping one percent in direction of oil return.

E. Install piping to allow for expansion and contraction without stressing pipe, joints, or connected equipment.

F. Pipe Hangers and Supports:
1. Install in accordance with ASME B31.5.
2. Support horizontal piping as scheduled.

SELF CERTIFIED BY: _____ DATE: 03/06/2019
DONALD ANDREWS CERTIFICATE #45

- PLANS WERE PREPARED BY OR UNDER THE DIRECT SUPERVISION OF, OR REVIEWED BY THE SELF-CERTIFIED PROFESSIONAL.
- PLANS ARE COMPLETE.
- THE PLANS ARE, AS OF THE DATE OF SUBMISSION, IN ACCORDANCE WITH THE REQUIREMENTS OF THE PHOENIX BUILDING CONSTRUCTION CODE AND ALL OTHER APPLICABLE LAWS.

PETERSON ASSOCIATES
CONSULTING ENGINEERS INC.
7201 N. Dreamy Draw Drive
Suite 200
Phoenix, Arizona 85020
(602) 943.4116
Facsimile (602) 943.2507
www.mpeconsult.com
Job No. 197090

KIVA #18-1372
SDEV #1800276
PAPP #1806619
PRLC
QS Q16-36

ERWIN | ARCHITECTURE DEVELOPMENT

CONTACTS:

OWNER
SUPERLUXE SCREEN PRINTING
JONATHAN PITT
(E) JON@THEWANDERIST.COM
(P) 480.247.6653

ARCHITECT
ERWIN ARCHITECTURE & DEVELOPMENT, LLC.
WILLIAM ERWIN, AIA, LEED AP BD+C
(E) WILL@ERWINARCHITECTURE.COM
(P) 602.677.8372

SELF-CERTIFIED ARCHITECT
ANDREWS DESIGN GROUP INC.
DON ANDREWS JR.
(E) DON@ADGARCH.NET
(P) 480.894.3478

CIVIL
3 ENGINEERING
DAN MANN, P.E.
6370 E. THOMAS RD, SUITE 200,
SCOTTSDALE, AZ 85251
(E) DAN@3ENGINEERING.COM
(P) 602.334.4387

STRUCTURAL
UNITED STRUCTURAL DESIGN
DAVID GRAPSAS, P.E., S.E.
2058 S. DOBSON ROAD, SUITE 10
MESA, AZ 85202
(E) DGRAPSAS@UNITEDSTR.COM
(P) 480.382.9768

MEP
PETERSON ENGINEERING
DAVID MCKERCHER
7201 N. DREAMY DRAW DRIVE, SUITE 200
PHOENIX, AZ 85020
(E) DAMEM@MPECONSULT.COM
(P) 602.388.1716

LANDSCAPE
NORRIS DESIGN
JOEL THOMAS
(E) JTHOMAS@NORRIS-DESIGN.COM
(P) 512.900.7888

SHEET ISSUE/REV:

NO.	DESCRIPTION	DATE
-	PRE-APP MTG	10.10.18
-	MINOR SITE PLAN	01.09.19
-	CITY SUBMITTAL	03.06.19

Registered Professional Engineer
2968
MARK J. PETERSON
Date Signed 3/6/19
ARIZONA, U.S.A.

Owner JONATHAN PITT
Proj. Nam WANDERIST OFFICE & RETAIL

MECHANICAL FLOOR SPECIFICATIONS

Date 03/06/19

M301

Scale AS SHOWN

City of Phoenix Plan #: 1901783-LPSC Date: 03/12/19

City of Phoenix Plan #: 1901783-LPSC Date: 03/12/19

City of Phoenix Plan #: 1901783-LPSC Date: 03/12/19

02/07/2019 5:48:06 PM

3. Install hangers to provide minimum 1/2 inch (13 mm) space between finished covering and adjacent work.
4. Place hangers within 12 inches (300 mm) of each horizontal elbow.
5. Support vertical piping at every floor. Support riser piping independently of connected horizontal piping.
6. Where several pipes can be installed in parallel and at same elevation, provide multiple or trapeze hangers.
7. Provide copper plated hangers and supports for copper piping.

G. Arrange piping to return oil to compressor. Provide traps and loops in piping, and provide double risers as required. Slope horizontal piping 0.40 percent in direction of flow.

H. Provide clearance for installation of insulation and access to valves and fittings.

I. Provide access to concealed valves and fittings.

J. Flood piping system with nitrogen when brazing.

K. Where pipe support members are welded to structural building frame, brush clean, and apply one coat of zinc rich primer to welding.

L. Follow ASHRAE Std 15 procedures for charging and purging of systems and for disposal of refrigerant.

M. Provide replaceable cartridge filter-driers, with isolation valves and valved bypass.

N. Locate expansion valve sensing bulb immediately downstream of evaporator on suction line.

O. Provide external equalizer piping on expansion valves with refrigerant distributor connected to evaporator.

P. Install flexible connectors at right angles to axial movement of compressor, parallel to crankshaft.

Q. Fully charge completed system with refrigerant after testing.

R. Provide electrical connection to solenoid valves.

3.06 CUTTING AND PATCHING

A. Assume costs and responsibility for cutting and patching required to complete the installation.

B. Surfaces shall be patched to the condition of the adjacent surfaces.

3.07 PAINTING AND FINISHING AND CLEANING

A. Finish painting (other than factory applied) of mechanical equipment, and its associated piping and ductwork, is scheduled under other Sections. Provide touchup painting of prefinished mechanical products.

B. Surfaces shall be left clean, debris shall be removed, and equipment shall be furnished in prime coat finish ready for finish coats.
1. Piping, ductwork and equipment - Clean exterior of piping, ductwork and equipment, removing rust, plaster and dirt by wire brushing. Remove grease, oil, and similar materials by wiping with clean rags and suitable solvents.
2. Motors, pumps and other items with factory finish - Remove grease and oil and leave surfaces clean and polished.

3.08 TESTING, ADJUSTING AND BALANCING

A. Perform total system balance in accordance with the following:
1. AABC MN-1, AABC National Standards for Total System Balance.

B. Begin work after completion of systems to be tested, adjusted, or balanced and complete work prior to Substantial Completion of the project.

C. Where HVAC systems and/or components interface with life safety systems, including fire and smoke detection, alarm, and control, coordinate scheduling and testing and inspection procedures with the authorities having jurisdiction.

D. TAB Agency Qualifications:

1. Company specializing in the testing, adjusting, and balancing of systems specified in this section.
2. Having minimum of three years experience.
3. Certified by the following:
a. AABC, Associated Air Balance Council: www.aabchq.com; upon completion submit AABC National Performance Guaranty.

E. TAB Supervisor and Technician Qualifications: Certified by same organization as TAB agency.

F. Pre-Qualified TAB Agencies:
1. Southwest Testing and Balancing LLC
2. Arizona Air Balance Company
3. Precisionaire of Arizona
4. Technical Air Balance SW, Inc.

G. Final Report: Indicate deficiencies in systems that would prevent proper testing, adjusting, and balancing of systems and equipment to achieve specified performance.
1. Provide final copies for Architect and for inclusion in operating and maintenance manuals.
2. Provide reports in binder manuals, complete with index page and indexing tabs, with cover identification at front and side. Include set of reduced drawings with air outlets and equipment identified to correspond with data sheets, and indicating thermostat locations.
3. Include actual instrument list, with manufacturer name, serial number, and date of calibration.
4. Units of Measure: Report data in I-P (inch-pound) units only.
5. Test Reports: Indicate data on AABC MN-1 forms.
6. Include the following on the title page of each report:
a. Name of Testing, Adjusting, and Balancing Agency.
b. Address of Testing, Adjusting, and Balancing Agency.
c. Telephone number of Testing, Adjusting, and Balancing Agency.
d. Project name.
e. Project location.
f. Project Architect.
g. Project Engineer.
h. Project Contractor.
i. Report date.
7. A written report of test results shall be submitted to Architect.

H. Examination.
1. Verify that systems are complete and operable before commencing work.
a. Systems are started and operating in a safe and normal condition.
b. Temperature control systems are installed complete and operable.
c. Proper thermal overload protection is in place for electrical equipment.
d. Final filters are clean and in place. If required, install temporary media in addition to final filters.
e. Duct systems are clean of debris.
f. Fans are rotating correctly.
g. Fire and volume dampers are in place and open.
h. Air coil fins are cleaned and combed.
i. Access doors are closed and duct end caps are in place.
j. Air outlets are installed and connected.
k. Duct system leakage is minimized.

I. Tolerances.
1. Air Handling Systems: Adjust to within plus or minus 5 percent of design for supply systems and plus or minus 10 percent of design for return and exhaust systems.

2. Air Outlets and Inlets: Adjust total to within plus 10 percent and minus 5 percent of design to space. Adjust outlets and inlets in space to within plus or minus 10 percent of design.

J. Air System Procedure
1. Adjust air handling and distribution systems to provide required or design supply, return, and exhaust air quantities .
2. Make air quantity measurements in ducts by Pitot tube traverse of entire cross sectional area of duct.
3. Measure air quantities at air inlets and outlets.
4. Adjust distribution system to obtain uniform space temperatures free from objectionable drafts and noise.
5. Use volume control devices to regulate air quantities only to extend that adjustments do not create objectionable air motion or sound levels. Effect volume control by duct internal devices such as dampers and splitters.
6. Vary total system air quantities by adjustment of fan speeds. Provide drive changes required. Vary branch air quantities by damper regulation.
7. Provide system schematic with required and actual air quantities recorded at each outlet or inlet.
8. Measure static air pressure conditions on air supply units, including filter and coil pressure drops, and total pressure across the fan. Make allowances for 50 percent loading of filters.
9. Adjust outside air automatic dampers, outside air, return air, and exhaust dampers for design conditions.
10. Measure temperature conditions across outside air, return air, and exhaust dampers to check leakage.

3.09 SPECIAL MECHANICAL INSPECTION CERTIFICATE

A. Duct Smoke Detectors and Fire and Smoke Dampers will require a Special Mechanical Inspection Certificate as required by the Local Jurisdiction.

B. The Special Mechanical Inspector shall be one of the following independent, third party testing agencies (No exceptions):
1. Technical Air Balance SW, Inc.
2. Arizona Air Balance Company
3. Precisionaire of Arizona
4. Southwest Testing and Balancing LLC
5. Tab Technology, Inc.

C. The Special Mechanical Inspector shall submit a final signed report to the Registered Design Professional, Contractor and City Inspector providing final test results and stating whether the items requiring Mechanical special inspection were, to the best of the inspector's knowledge, in compliance with the approved plans and specifications and applicable workmanship provisions of the code.

D. All discrepancies shall be brought to the immediate attention of the contractor for correction.

END OF SECTION

SELF CERTIFIED BY: DATE: 03/06/2019
DONALD ANDREWS CERTIFICATE #45

- PLANS WERE PREPARED BY OR UNDER THE DIRECT SUPERVISION OF, OR REVIEWED BY THE SELF-CERTIFIED PROFESSIONAL,
- PLANS ARE COMPLETE,
- THE PLANS ARE, AS OF THE DATE OF SUBMISSION, IN ACCORDANCE WITH THE REQUIREMENTS OF THE PHOENIX BUILDING CONSTRUCTION CODE AND ALL OTHER APPLICABLE LAWS.

PETERSON ASSOCIATES CONSULTING ENGINEERS INC.
7201 N. Dreamy Draw Drive
Suite 200
Phoenix, Arizona 85020
(602) 943.4116
Facsimile (602) 943.2507
www.mpeconsult.com
Job No. 197090

KIVA #18-1372
SDEV #1800276
PAPP #1806619
PRLC
QS Q16-36

ERWIN | ARCHITECTURE DEVELOPMENT

CONTACTS:

OWNER
SUPERLUXE SCREEN PRINTING
JONATHAN PITT
(E) JON@THEWANDERIST.COM
(P) 480.247.6653

ARCHITECT
ERWIN ARCHITECTURE & DEVELOPMENT, LLC.
WILLIAM ERWIN, AIA, LEED AP BD+C
(E) WILL@ERWINARCHITECTURE.COM
(P) 602.677.8372

SELF-CERTIFIED ARCHITECT
ANDREWS DESIGN GROUP INC.
DON ANDREWS JR.
(E) DON@ADGARCH.NET
(P) 480.894.3478

CIVIL
3 ENGINEERING
DAN MANN, P.E.
6370 E. THOMAS RD, SUITE 200,
SCOTTSDALE, AZ 85251
(E) DAN@3ENGINEERING.COM
(P) 602.334.4387

STRUCTURAL
UNITED STRUCTURAL DESIGN
DAVID GRAPSAS, P.E., S.E.
2058 S. DOBSON ROAD, SUITE 10
MESA, AZ 85202
(E) DGRAPSAS@UNITEDSTR.COM
(P) 480.382.9768

MEP
PETERSON ENGINEERING
DAVID MCKERCHER
7201 N. DREAMY DRAW DRIVE, SUITE 200
PHOENIX, AZ 85020
(E) DAMEM@MPECONSULT.COM
(P) 602.388.1716

LANDSCAPE
NORRIS DESIGN
JOEL THOMAS
(E) JTHOMAS@NORRIS-DESIGN.COM
(P) 512.900.7888

SHEET ISSUE/REV:

NO.	DESCRIPTION	DATE
-	PRE-APP MTG	10.10.18
-	MINOR SITE PLAN	01.09.19
-	CITY SUBMITTAL	03.06.19

Owner JONATHAN PITT
Proj. Nam WANDERIST OFFICE & RETAIL

MECHANICAL FLOOR SPECIFICATIONS

Date 03/06/19

M302

Scale AS SHOWN

City of Phoenix Plan #: 1901783-LPSC Date: 03/12/19