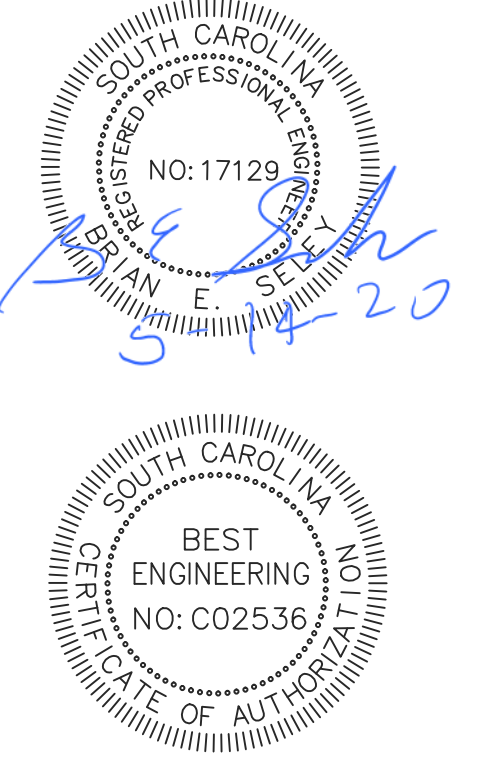


STAMPS



PROJECT AND LOCATION:

UP FIT PLANS FOR

DUNES DENTAL OFFICES

MYRTLE BEACH, SC

REVISIONS:

NUM	DESCRIPTION

DATE:
 APR 29, 2020

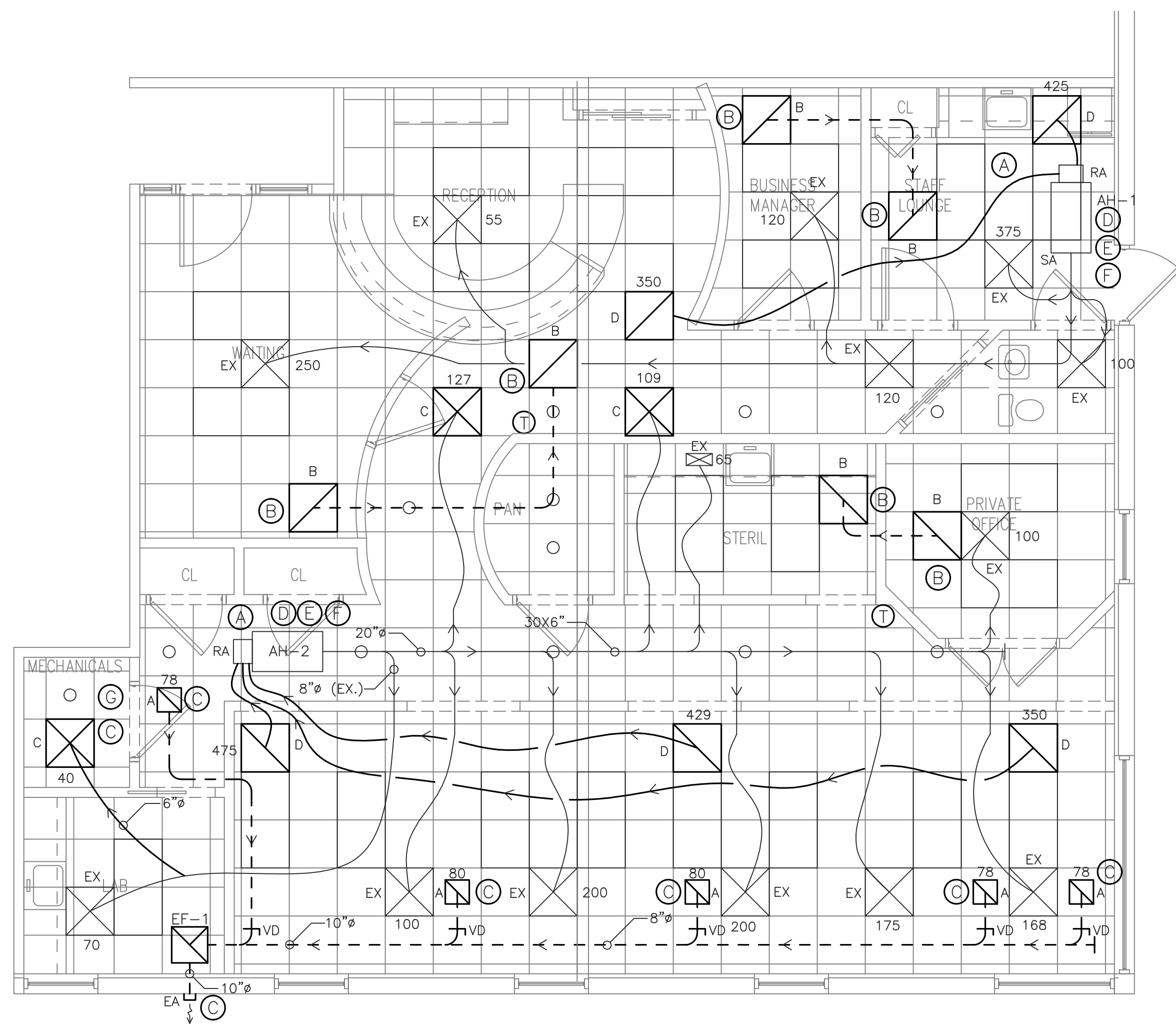
DRAWING TITLE:

**MECHANICAL
 PLAN, NOTES,
 & LEGEND**

DWG. NO.:
M1.0

HVAC LEGEND

- AIR HANDLER UNIT, EXISTING
- EXISTING WALL MOUNTED EXHAUST
- SUPPLY DUCT
- RETURN / EXHAUST DUCT
- DUCT AIR FLOW DIRECTION
- DIRECTION OF AIR FLOW
- THERMOSTAT - NEW, HONEYWELL VISION PRO 8000 WITH REMOTE SENSOR - SET FAN TO RUN CONTINUOUSLY DURING OCCUPIED HOURS
- SUPPLY AIR DIFFUSER, EXISTING
- SUPPLY AIR DIFFUSER, NEW
- NEW RETURN AIR GRILLE
- VOLUME CONTROL DAMPER
- OUTSIDE AIR
- EXHAUST AIR
- RETURN AIR
- SUPPLY AIR
- EXISTING



NOTES:

- ALL OF THE EXISTING DUCTWORK SHALL BE CLEANED. CLEAN THE COILS IN EACH AIR HANDLER. A DUCTED RETURN SHALL BE INSTALLED. THE PLENUM SPACE SHALL NO LONGER BE USED FOR RETURN AIR. REPLACE ALL PLENUM EGGRATE RETURNS WITH SOLID CEILING TILE.

1 HVAC FLOOR PLAN
 M1.0 SCALE: 1/4" = 1'-0"

PLAN KEY NOTES:

- (A) REMOVE ALL EXISTING AIR RETURNS. CHANGE SYSTEMS TO DUCTED RETURNS. PROVIDE BLANK CEILING TILES IN PLACE OF EGGRATE RETURN GRILLES. PROVIDE A RETURN PLENUM ON EACH AH, DUCT OA TO EACH PLENUM DUCT. CONNECT ALL AIR RETURNS TO PLENUMS. FIELD LOCATE AIR RETURN INTAKES AS CONDITIONS ALLOW.
- (B) ADD TRANSFER GRILLES AND DUCTS AS SHOWN, AND AS FIELD CONDITIONS REQUIRE.
- (C) INSTALL A NEW EXHAUST SYSTEM PER SCHEDULE. PROVIDE DUCTING TO EXTERIOR THROUGH NEW WALL CAP. REMOVE EF IN CEILING OF MECHANICAL ROOM.
- (D) INSTALL A NEW HEPA AIR FILTER, HP-1 ON RETURN OF EACH EXISTING AIR HANDLER. SEE SCHEDULE.
- (E) INSTALL A NEW UV LIGHT SYSTEM, UV-1 ON EACH AIR HANDLER. SEE SCHEDULE.
- (F) THERE IS AN EXISTING 6" FRESH AIR SUPPLY DUCT TO THE RETURN OF EACH AIR HANDLER. PROVIDE A MOTORIZED AND MANUAL DAMPER. CONTROL MOTORIZED DAMPER TO OPEN WHILE AIR HANDLER IS OPERATING. BALANCE EACH OA TO 200 CFM WHILST EF-1 IS OPERATING.
- (G) PROVIDE A NEW SUPPLY DIFFUSER AND DUCT TO MECHANICAL ROOM.

AIR BALANCE TABLE	
TOTAL EXHAUST AIR FLOW	400 CFM
SQUARE FEET OF TREATMENT AREAS	817 SFT
CUBIC FEET OF TREATMENT AREAS	6536 CU. FT.
OUTSIDE AIR CHANGES PER HOUR = $(400 \times 60)/6536$	3.7 ACH
AIR OUTPUT OF AIR HANDLER AH-2	1350 CFM
TOTAL AIR CHANGES PER HOUR = $(1354 \times 60)/6536$	12.5 ACH
REQUIRED AIR CHANGES PER HOUR	12.0 ACH

GENERAL HVAC NOTES

- EXAMINE THE SITE WITH RESPECT TO ALL EXISTING CONDITIONS AND TO HAVE FULLY EXAMINED THE DRAWINGS FOR THIS BUILDING WITH RESPECT TO HIS SCOPE OF WORK.
- THESE DRAWINGS ARE ESSENTIALLY DIAGRAMMATIC IN NATURE. ADDITIONAL OFFSETS, BENDS, TRANSITIONS, ETC. MAY BE REQUIRED TO PROVIDE AND INSTALL A COMPLETE SYSTEM. VERIFY EXISTING CONDITIONS PRIOR TO THE FABRICATION AND/OR INSTALLATION OF MATERIALS. NO ABRUPT TRANSITIONS ARE PERMITTED.
- COORDINATE LOCATION OF ALL HVAC WORK IN FIELD WITH REFERENCE TO STRUCTURAL ELEMENTS.
- THE MECHANICAL DESIGN INDICATED ON PLANS IS INTENDED TO BE A COMPLETE AND WORKABLE SYSTEM IN ACCORDANCE W/ALL APPLICABLE CODES. ALL MISCELLANEOUS PARTS REQUIRED, WHETHER INDICATED ON PLANS OR NOT, SHALL BE INCLUDED AS PART OF THIS DRAWING.
- MATERIALS & WORKMANSHIP SHALL COMPLY WITH ALL APPLICABLE CODES AND ORDINANCES IN THEIR LATEST REVISION.
- COORDINATE SPECIFIC REQUIREMENTS OF EQUIPMENT WITH MANUFACTURER'S SHOP DRAWINGS AND INSTALLATION INSTRUCTIONS.
- ALL EQUIPMENT SHALL BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS.
- CONTRACTOR IS RESPONSIBLE FOR ALL CUTTING AND PATCHING NECESSARY FOR INSTALLATION OF HIS WORK.
- ALL FLEXIBLE DUCTWORK SHALL BE A MAXIMUM OF 8'-0" IN LENGTH AND SHALL BE STRETCHED TAUT.
- VERIFY ALL EXISTING FIELD CONDITIONS PRIOR TO THE PURCHASE, FABRICATION, OR INSTALLATION OF NEW MATERIALS.
- BALANCE ALL SUPPLY AND RETURN AIR DUCTWORK AS TO ALLEVIATE AIR DELIVERY NOISE WHEREVER POSSIBLE AND TO COORDINATE ALL MATERIAL AND INSTALLATION METHODS WITH UNIT MANUFACTURER'S SPECS.
- SUBMIT SHOP DRAWINGS TO ENGINEER PRIOR TO FABRICATION.
- PROVIDE TURNING VANES IN ALL 90 DEGREE ELBOWS IN SUPPLY AIR DUCTS.
- PROVIDE VOLUME AIR DAMPERS WHERE INDICATED AND AT ALL DIFFUSER BRANCH LINES.
- ALL DUCT SIZES ARE CLEAR INSIDE DIMENSIONS.
- IN GENERAL DUCT UPSETS AND DOWNSETS HAVE NOT BEEN SHOWN. COORDINATE THESE AS REQUIRED.
- DUCTWORK AND ACCESSORIES: ALL DUCTWORK CONSTRUCTION SHALL CONFORM TO THE LATEST EDITION OF SMACNA HVAC DUCT CONSTRUCTION STANDARDS.
- VISIT TO SITE: PRIOR TO SUBMISSION OF BID, VISIT SITE AND BECOME FAMILIAR WITH ALL CONDITIONS. NO EXTRA PAYMENT WILL BE ALLOWED FOR WORK RESULTING FROM LACK OF PROPER APPRAISAL OF EXISTING CONDITIONS. EXAMINE ALL OTHER SPECIFICATIONS, DRAWINGS, AND ALL FEATURES OF BUILDING CONSTRUCTION WHICH MAY AFFECT HIS WORK AND SHALL BE GOVERNED BY THESE OTHER SPECIFICATIONS, INSTRUCTIONS TO ALL BIDDERS AND SUPPLIERS.
- DAMPERS: PROVIDE SINGLE BLADE MANUAL DAMPERS WITH LOCKING QUADRANTS AT EVERY BRANCH DUCT CONNECTION, AT LOCATIONS INDICATED ON THE DRAWING, AND WHERE NECESSARY TO CONTROL AIR FLOW. PROVIDE AN OPPOSED BLADE BALANCING DAMPER WHERE SPECIFIED. DAMPER BLADES SHALL BE 16 GAUGE (MINIMUM) GALVANIZED STEEL WITH 3/8" (MINIMUM) STEEL SHAFT AND 10" (MAXIMUM) BLADE WIDTH.
- CLEANING SYSTEMS: KEEP DUCTS FREE FROM FOREIGN MATTER AFTER INSTALLING THE SYSTEM.
- CLOSING IN WORK: ALL DUCTWORK SHALL NOT BE CONCEALED UNTIL INSPECTED AND APPROVED BY THE INSPECTING AUTHORITIES.
- DUCTS SHALL BE SUPPORTED FROM OVERHEAD STRUCTURE WITH 1" WIDE, 16 GAUGE, GALVANIZED STEEL BANDS.
- PROVIDE FIRE DAMPERS IN ALL DUCTS WHERE CROSSING FIRE RATED ASSEMBLIES, WHETHER SHOWN OR NOT ON HVAC DRAWINGS.
- RETURN TRIP SHALL BE SCHEDULED BY THE MC FOR ANY NEEDED AIR RE-BALANCING TO BE COMPLETED WITHIN THE FIRST SIX MONTHS AFTER INITIAL INSTALLATION OF EQUIPMENT, OR UPON REQUEST BY OWNER OR ARCHITECT.
- MATERIALS OTHER THAN THOSE SPECIFIED OR PRE-APPROVED AS LISTED ON THE DRAWINGS AND SPECIFICATIONS, SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW NOT LESS THAN TEN WORKING DAYS PRIOR TO THE PROJECT BID DATE. SUBMITTALS MUST INCLUDE COMPLETE CATALOG NUMBERS AND SPECIFICATION SHEETS AND BE IN EITHER PDF FORMAT (PREFERRED) OR HARD COPY. FACSIMILES ARE NOT ACCEPTABLE.
- PROVIDE AIR BALANCE REPORT AT JOB COMPLETION.

HVAC DIFFUSER AND GRILLE SCHEDULE							
TAG	ITEM	MANUF./MODEL	FACE SIZE	NECK SIZE	MOUNTING	CONSTRUCTION	NOTES
A	CEILING EXHAUST INTAKE	HART & COOLEY	12" x 12"	6"φ	GRID	STEEL	
B	CEILING TRANSFER GRILLE	HART & COOLEY	24" x 24"	AS SHOWN	GRID	STEEL	
C	CEILING SUPPLY DIFFUSER	HART & COOLEY	24" x 24"	AS SHOWN	GRID	STEEL	1
D	CEILING RETURN DIFFUSER	HART & COOLEY	24" x 24"	AS SHOWN	GRID	STEEL	2

NOTES:

- NEW SUPPLY DIFFUSER.
- NEW RETURN DIFFUSER.

EXHAUST FAN SCHEDULE												
TAG	AREA SERVED	MANUF.	MODEL	FAN/MOTOR DATA								NOTES
				CFM	SP	HP	AMPS	TYPE	VOLTS	φ	WEIGHT	
EF-1	TREATMENT	GREENHECK	SQ90	400	0.4	1/6	-	IN-LINE	120	1	-	1

NOTES:

- SET SPEED CONTROL FOR SPECIFIED AIR FLOW. PROVIDE 7-DAY TIMER CONTROL TO OPERATE FAN DURING OCCUPIED HOURS. FEED FROM A LIGHTLY LOADED CIRCUIT IN EXISTING PANEL & LABEL PANEL DIRECTORY.

HEPA FILTER SCHEDULE						
TAG	LOCATION	MANUF.	FILTER TYPE	MERV	EFFICIENCY	NOTES
HP-1	AIR HANDLER, RETURN SIDE	ULTRAVATION	HEPA	11	90%	

UV LAMP SCHEDULE					
TAG	LOCATION	MANUF.	MODEL	LIGHT TYPE	NOTES
UV-1	AIR HANDLER	ULTRAVATION	UVPHOTOMAX	GERMICIDAL UV	1

NOTES:

- FEED FROM A LIGHTLY LOADED CIRCUIT IN EXISTING PANEL & LABEL PANEL DIRECTORY.

BEST Engineering, LLC

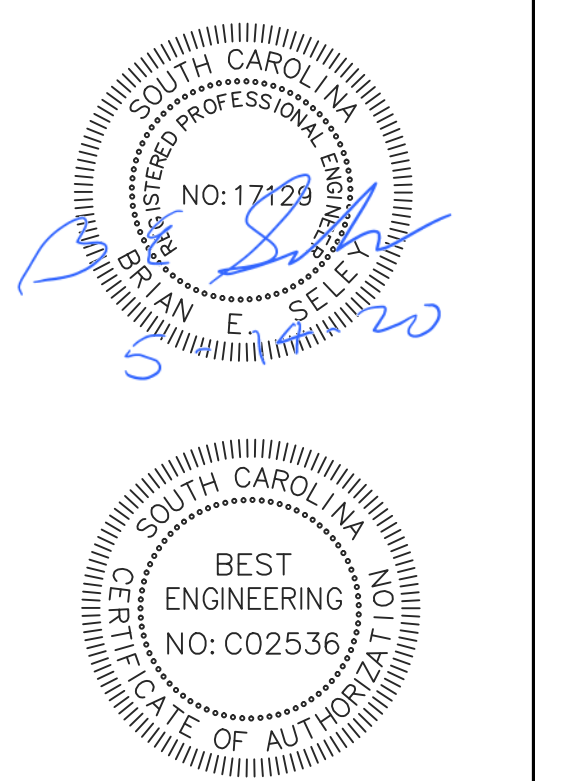
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STAMPS



PROJECT AND LOCATION:

UP FIT PLANS FOR

DUNES DENTAL OFFICES

MYRTLE BEACH, SC

REVISIONS:

NUM	DESCRIPTION

DATE:

APR 29, 2020

DRAWING TITLE:

MECHANICAL NOTES & SCHEDULES

DWG. NO.:

M2.0