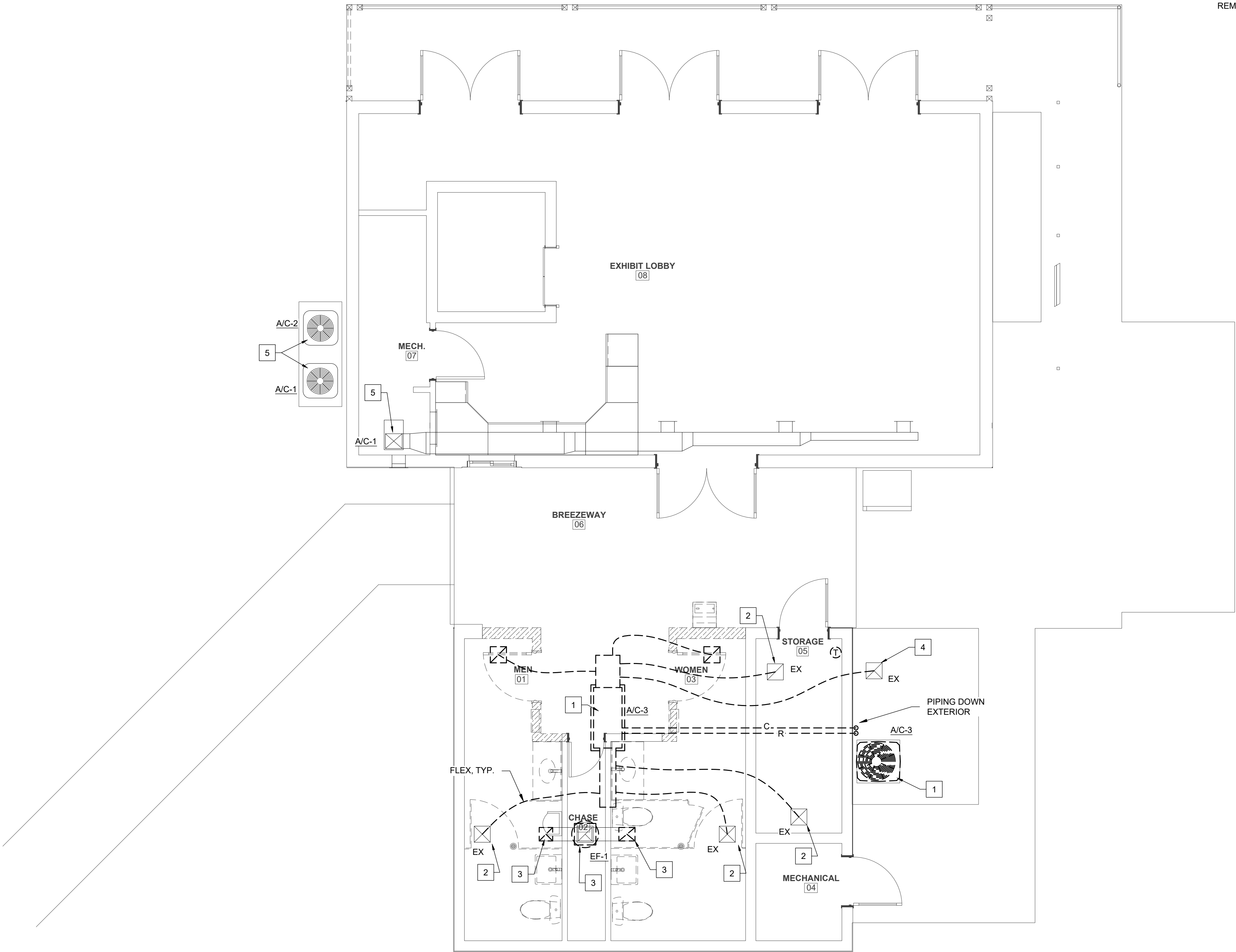
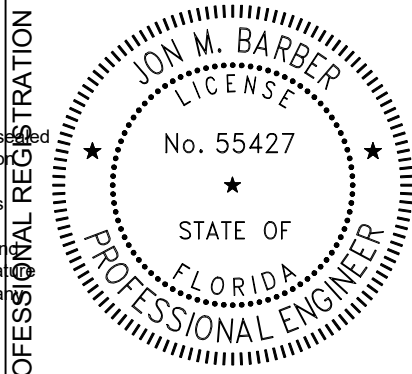




- DEMOLITION PLAN NOTES:
1. DEMOLISH AC-3 AIR HANDLER AND CONDENSING UNIT, AND ALL ASSOCIATED DUCTWORK, PIPING, CONTROLS, ETC.
 2. SOME EXISTING GRILLES TO REMAIN.
 3. DEMOLISH EF-1 ON ROOF AND EXHAUST GRILLES IN RESTROOMS. DUCTWORK, ROOF PENETRATION, AND CURB TO REMAIN FOR REUSE.
 4. EXISTING FRESH AIR INTAKE IN UNDERSIDE OF EAVE TO REMAIN FOR REUSE.
 5. AC-1 AND AC-2 SYSTEMS ARE TO REMAIN AS-IS.

1 MECHANICAL DEMOLITION PLAN
SCALE: 1/4" = 1'-0"

This item has been digitally signed and sealed by Jon Barber, PE No. 55427, State of Florida. Printed copies of this document are not considered signed and sealed and the signature must be verified on electronic copies.



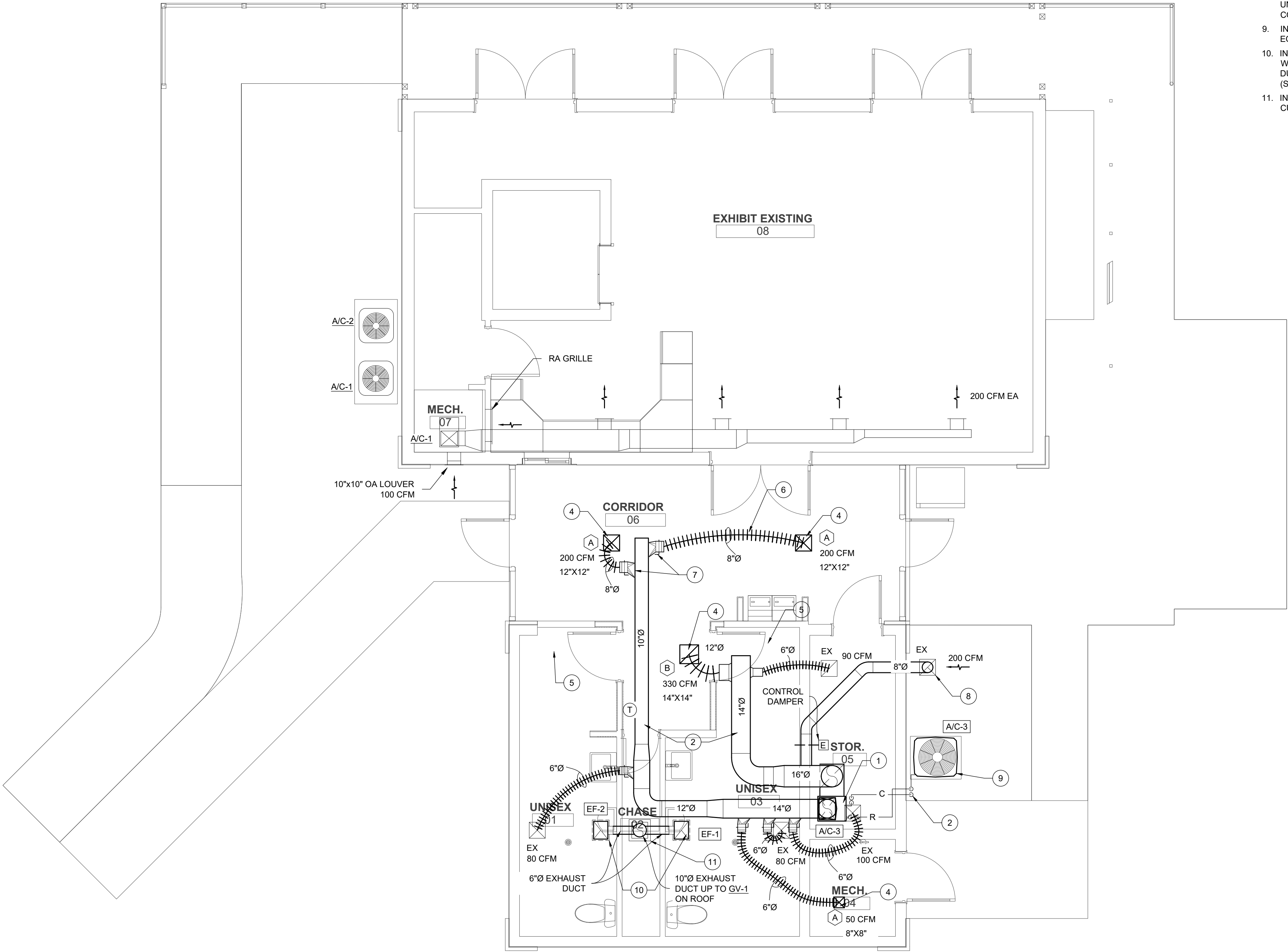
WINDLEY KEY FOSSIL REEF GEOLOGICAL STATE PARK
SHEET TITLE MECHANICAL DEMOLITION PLAN
PROJECT TITLE ADA RESTROOM & BOARDWALK

SHEET NO.
M101

DESIGNER: MH	ISSUE DATE: 02/25/2025	SYMBOL	REVISION	DATE
DRAWN BY: MH	COMP. FILE No:	SYMBOL	REVISION	DATE
REVIEWED BY: JB	STATE PROJECT No.: 61531C	SYMBOL	REVISION	DATE
Consultant:				

McGINNISS + FLEMING ENGINEERING
JON BARBER, PE No. 55427, State of Florida
228025
WFLA-TV 10
WFLA-TV 10
WFLA-TV 10

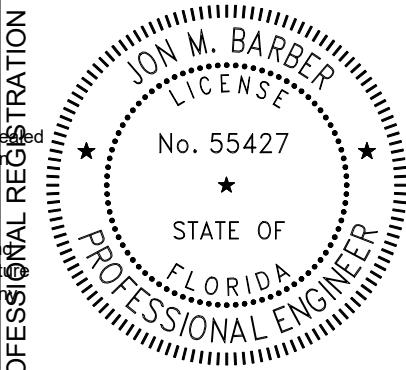
Department of Environmental Protection
Division of Recreation and Parks
Bureau of Design and Construction
3800 Commonwealth Blvd., Tallahassee, FL 32399 (850) 245-2300



1 NEW WORK HVAC PLAN
SCALE: 1/4" = 1'-0"

- NEW WORK PLAN NOTES:
1. INSTALL NEW AC-3 AIR HANDLER IN STORAGE ROOM 05 (SEE INSTALLATION DETAIL).
 2. ROUTE CONDENSATE TO BUILDING EXTERIOR ONTO SPLASH BLOCK AS SHOWN.
 3. INSTALL ALL NEW DUCTWORK AS SHOWN. SUPPORT DUCTWORK FROM STRUCTURE.
 4. PROVIDE NEW SUPPLY/RETURN GRILLES AS SHOWN. SOME EXISTING GRILLES ARE EXISTING TO REMAIN - GRILLES TO BE CLEANED.
 5. PATCH CEILING OPENINGS RESULTING FROM REMOVAL OF GRILLES. PAINT TO MATCH.
 6. LIMIT FLEX DUCT RUNOUTS TO 10'.
 7. ALL TAKEOFFS SHALL BE MITERED/CONICAL SPIN-IN TYPE AND HAVE MANUAL VOLUME DAMPERS.
 8. INSTALL NEW OA DUCT TO EXISTING INTAKE GRILLE IN UNDERSIDE OF EAVE. OA DUCT SHALL HAVE ELECTRIC CONTROL DAMPER INTERLOCKED WITH SUPPLY FAN.
 9. INSTALL NEW CONDENSING UNIT ON EXISTING EQUIPMENT PAD AND STRAP TO PAD.
 10. INSTALL NEW CEILING RESTROOM EXHAUST FANS WHERE SHOWN. CONNECT FANS TO THE EXISTING DUCT. FANS SHALL OPERATE VIA OCCUPANCY SENSOR (SEE ELECTRICAL).
 11. INSTALL GRAVITY VENTILATOR ON EXISTING ROOF CURB.

This item has been digitally signed and sealed by Jon Barber, PE No. 55427, State of Florida. Printed copies of this document are not considered signed and sealed and the signature must be verified on an electronic copy.



WINDLEY KEY FOSSIL REEF GEOLOGICAL STATE PARK
MECHANICAL NEW WORK PLAN
ADA RESTROOM & BOARDWALK

SHEET NO. M102

Department of Environmental Protection
Division of Recreation and Parks
Bureau of Design and Construction
3800 Commonwealth Blvd., Tallahassee, FL 32399 (850) 245-2300

DESIGNER: MH
DRAWN BY: MH
REVIEWED BY: JB
CONSULTANT: MCGINNIS + FLEMING ENGINEERING
ISSUE DATE: 02/25/2025
COMP. FILE NO.:
STATE PROJECT NO.: 61531C

100% CONSTRUCTION DOCUMENTS

DIFFUSER & GRILLE SCHEDULE					
TYPE	QTY.	DESCRIPTION	MODEL	REMARKS	AIR PATTERN DAMPER
A	3	AERO BLADE SUPPLY AIR GRILLE	TITUS 271FS	SURFACE MOUNT TYPE-1, ALUMINUM CONSTRUCTION, 3/4" BLADE SPACING, EXTERNALLY-ADJ. INTEGRAL DAMPER, DOUBLE DEFLECTION, WHITE FINISH, SEE PLANS FOR SIZE	NA YES
B	2	LOUVERED RETURN AIR GRILLE	TITUS 350FS	SURFACE MOUNT TYPE-1, ALUMINUM CONSTRUCTION, 3/4" BLADE SPACING, 35° FIXED BLADE, SINGLE DEFLECTION, WHITE FINISH, SEE PLANS FOR SIZE	NA YES
NOTES: 1. COORDINATE FINISHES WITH ARCHITECT. 2. ALL SUPPLY GRILLES WILL BE ADJUSTABLE AT TAKEOFF UOS. 3. MANUFACTURERS AND MODELS LISTED ARE BASIS OF DESIGN, EQUALS MAY BE USED WITH ENGINEER APPROVAL.					

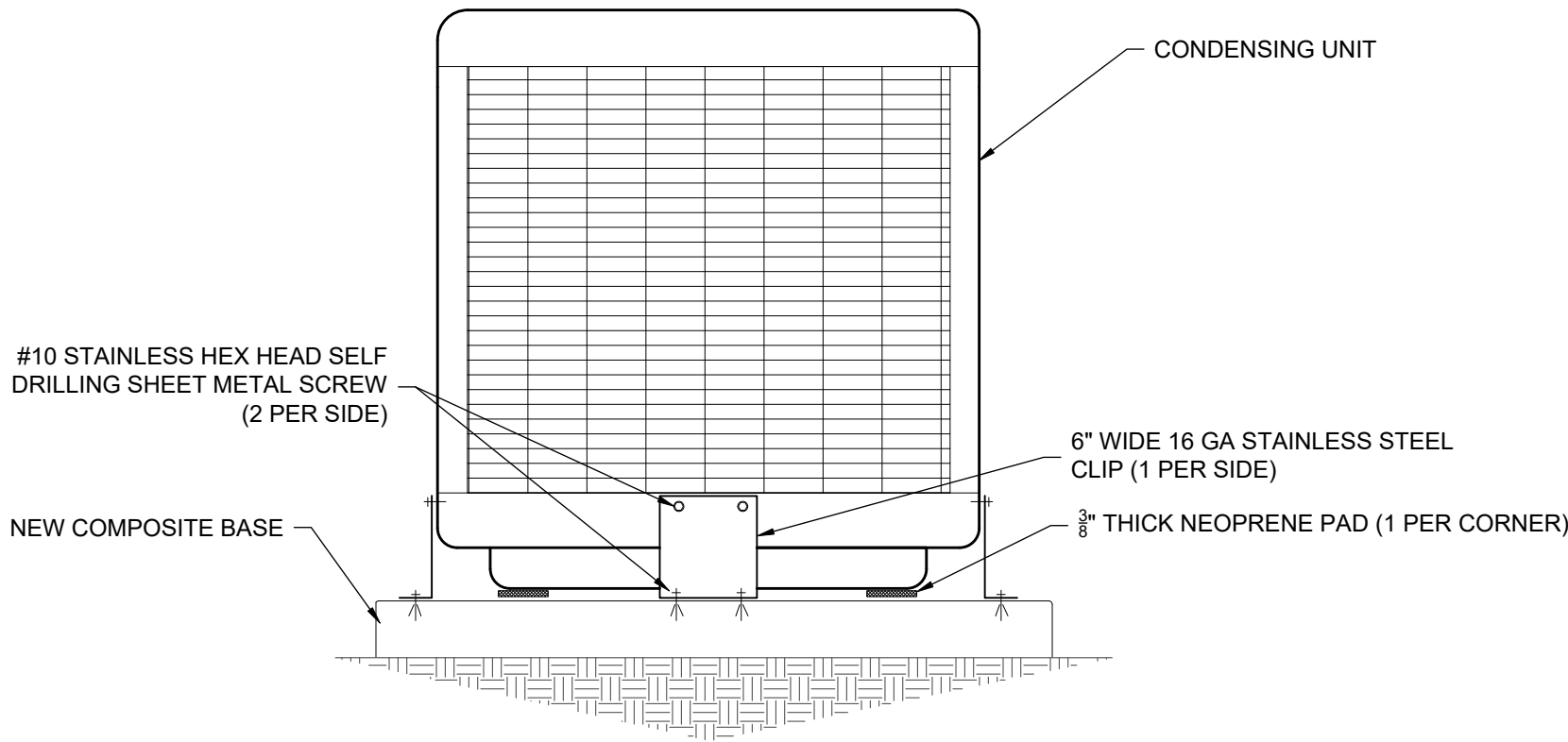
DX SPLIT SYSTEM HEAT PUMP SCHEDULE - NEW			
DESIGNATION	-	A/C-3 / A/C-3	
AREA SERVED	-	OFFICE	
TYPE UNIT	-	HT PUMP	
BASIS OF DESIGN MANUFACTURER	-	TRANE	
CONDENSING UNIT MODEL	-	5TWR5024A1	
COMPRESSOR TYPE/STAGES	-	SCROLL / 2	
FAN COIL UNIT MODEL	-	5TEM4D04AC31	
COIL TYPE	-	A	
SUPPLY AIR FLOW RATE	CFM	720	
VENTILATION AIR FLOW RATE	CFM	200	
FAN STATIC (EXTERNAL)	IN W.G.	0.9	
FAN NOMINAL MOTOR SIZE	HP	1/3	
TOTAL COOLING CAPACITY	MBH	24.0	
SEER / EER	BTUH/WATT	15.8 / 12.0	
HEATING CAPACITY (@ 47°F)	MBH	24.8	
HEATING HSPF / COP	BTUH/WATT	7.50 / 3.70	
ELECTRIC HEAT STRIP	KW @ 208V	3.60	
FCU-ELECTRICAL CHARACTERISTICS	V/Ø/HZ	208/1/60	
FCU-FAN MIN CIRCUIT AMPS	AMPS	20 **	
FCU-MAX. CIRCUIT BRKR (208/230V)	AMPS	30	
FCU F.L.A.	AMPS	17.3	
CU-ELECTRICAL CHARACTERISTICS	V/Ø/HZ	208/1/60	
CU-MIN. CIRCUIT AMPS	MCA	15	
CU-MAX. CIRCUIT BREAKER	AMPS	25	
COMPRESSOR R.L.A.	AMPS	11.7	
SUCTION/LIQUID LINE SIZE (ID)	IN	5/8 & 3/8	
NOTES/OPTIONS		1-8	
NOTES/OPTIONS: ** CONFIRM CIRCUIT SIZES WITH NEW REGRIGERANTS AND COORDINATE WITH ELECTRICAL CONTRACTOR. 1. UNIT CONTROLS SHALL INCLUDE PROGRAMMABLE SMART THERMOSTAT. FAN COIL UNIT SHALL VARY FAN SPEED FOR CAPACITY CONTROL OF THE TWO-SPEED COMPRESSOR OUTDOOR UNIT. 2. ELECTRIC HEAT WITH INTERNAL CIRCUIT BREAKER PROTECTION. 3. VARIABLE-SPEED INDOOR (ECM) FAN . 4. EXTERNAL INSULATED FILTER RACK TO ACCEPT 2" MERV 13 FILTER. (SIZE TO MATCH AHU) 5. PROVIDE SUPPORT BASE FOR VERTICAL AHU WITH ALLOWANCE FOR R/A PLENUM. 6. CONDENSING UNIT SHALL HAVE SALT SPRAY COATING. 7. INSTALL AIR HANDLERS IN A SECONDARY DRAIN PAN, COMPLETE WITH FLOAT SWITCH 8. MANUFACTURERS AND MODELS LISTED ARE BASIS OF DESIGN, EQUALS MAY BE USED WITH ENGINEER APPROVAL.			

LAY-IN SUPPLY AIR GRILLE NECK SIZES	
AIR FLOW RANGE (CFM)	NECK SIZE SIZE (IN)
25-120	6"Ø
125-225	8"Ø
230-350	10"Ø
351-500	12"Ø
NOTES: 1. EQUIVALENT SQUARE/RECT SIZES ARE ACCEPTABLE.	

LAY-IN RETURN/EXHAUST/TRANSFER AIR GRILLE CONNECTION SIZES (UOS)	
AIR FLOW RANGE (CFM)	NECK/DUCT CONNECTION SIZE (UOS) (IN)
0-100	6"Ø
101-175	8"Ø
176-300	10"Ø
301-450	12"Ø
451-750	14"Ø

EXHAUST FAN SCHEDULE			
DESIGNATION		EF-1, 2	
AREA/ROOM SERVED & BUILDING		RESTROOMS	
		TOILET EXHAUST	
SERVICE			
BASIS OF DESIGN MANUFACTURER		GREENHECK	
MODEL		SP-A125	
TYPE		CEILING	
FAN CONSTRUCTION		PP & GALV.	
DRIVE TYPE		DIRECT	
DIAMETER	IN	N/A	
AIR FLOWRATE DESIGN	CFM	104	
DESIGN STATIC PRESSURE	IN	0.27	
DESIGN FAN SPEED	RPM	1100	
RADIATED SOUND POWER	SONES	0.7	
ELECTRICAL CHARACTERISTICS	V/Ø/HZ	115/1/60	
MOTOR POWER	HP / W	21 W	
OPTIONS		1,2,3,4	
CONTROL NOTES		1	
PROJECT QTY.	# FANS	2	
OPTIONS 1. ALUMINUM GRILLE. 2. PREWIRED MOTOR DISCONNECT SWITCH, NEMA-1. 3. BACKDRAFT DAMPER 4. VARI-GREEN MOTOR CONTROL NOTES: 1. FAN SHALL OPERATE VIA OCCUPANCY SENSOR.			
NOTE MANUFACTURERS AND MODELS LISTED ARE BASIS OF DESIGN, EQUALS MAY BE USED WITH ENGINEER APPROVAL.			

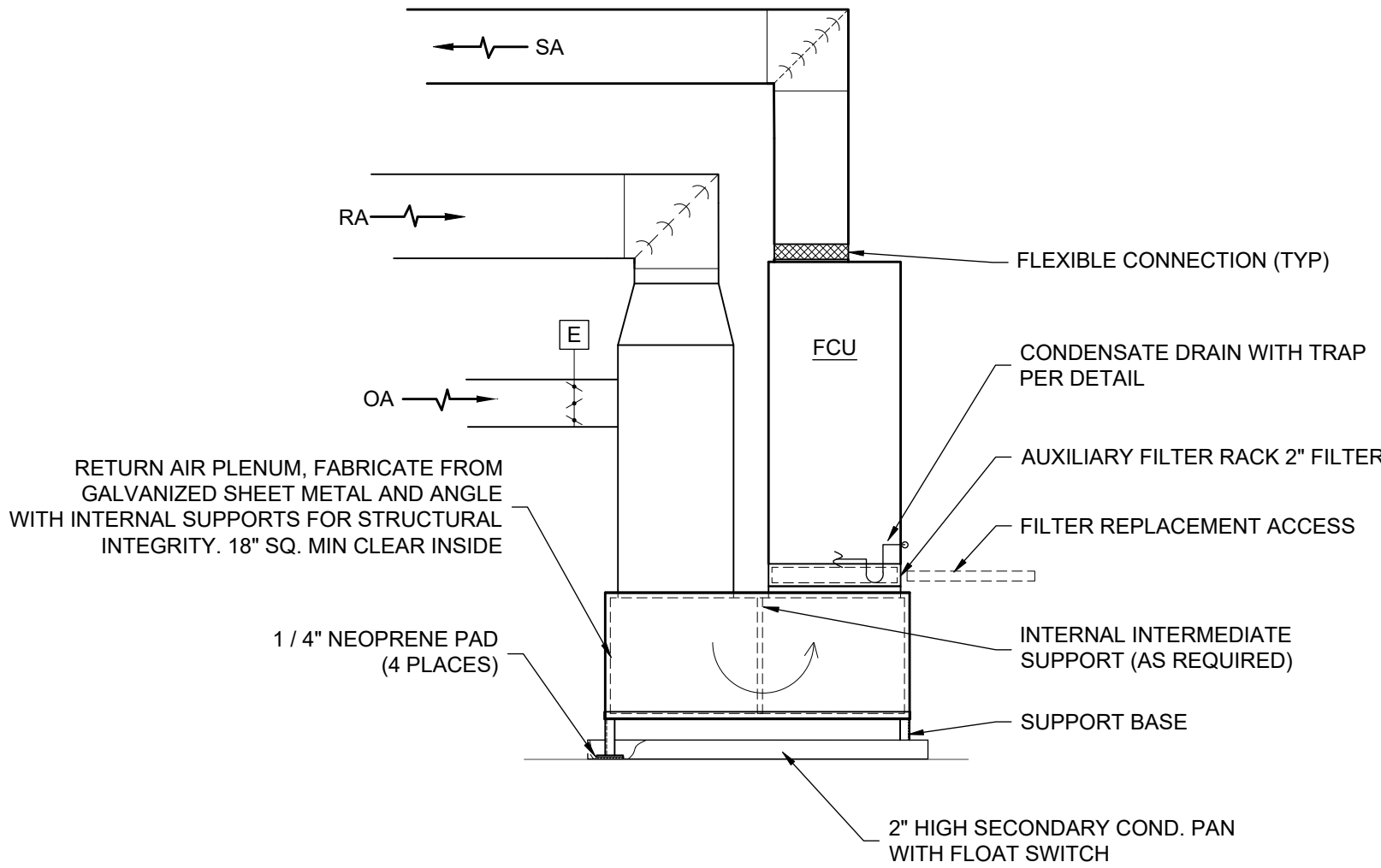
GRAVITY VENTILATOR SCHEDULE			
DESIGNATION		GV-1	
		EXHAUST	
SERVICE			
NOMINAL SIZE (WXH)	IN	10	
FREE AREA (DESIGN MINIMUM)	SQ FT	1.0	
AIR FLOW RATE	CFM	200	
MAXIMUM PRESSURE DROP	IN	0.1	
THROAT VELOCITY	FPM	608	
MATERIAL/CONSTRUCTION		ALUMINUM	
CURB CAP	IN	19X19	
ROOF CURB		YES	
CURB HEIGHT	IN	15", F.V.	
ROOF OPENING	IN	12.5 X 12.5	
BASIS OF DESIGN MANUFACTURER		GREENHECK	
BASIS OF DESIGN MODEL		GRSR	
PROJECT QTY.		1	
NOTES: 1. HEAVY-GAUGE ALUMINUM CONSTRUCTION, STANDARD FINISH 2. EXISTING ROOF CURB TO BE REUSED. VERIFY DIMENSIONS AND PROVIDE CURB ADAPTER AS REQUIRED. 3. CURB CAP TO BE PRE-PUNCHED FOR MOUNTING TO CURB 4. BIRD SCREEN, 1/2" ALUMINUM MESH 5. VENTILATOR & CURB ARE TO BE RATED FOR HIGH WIND APPLICATION 6. MANUFACTURERS AND MODELS LISTED ARE BASIS OF DESIGN, EQUALS MAY BE USED WITH ENGINEER APPROVAL.			



CONDENSING UNIT ANCHORING DETAIL

SCALE: NTS

- NOTES:
1. PLACE UNIT ON 3/8" X 4" SQ. THICK NEOPRENE ISOLATION PADS, ONE AT EACH CORNER UNDER EACH SUPPORT/STANDOFF. USE ADDITIONAL PADS TO RAISE UNIT AS NEEDED TO MAKE THE SIDES PLUMB.
2. SECURE UNIT TO BASE WITH STAINLESS STEEL CLIP ANGLES AS SHOWN.

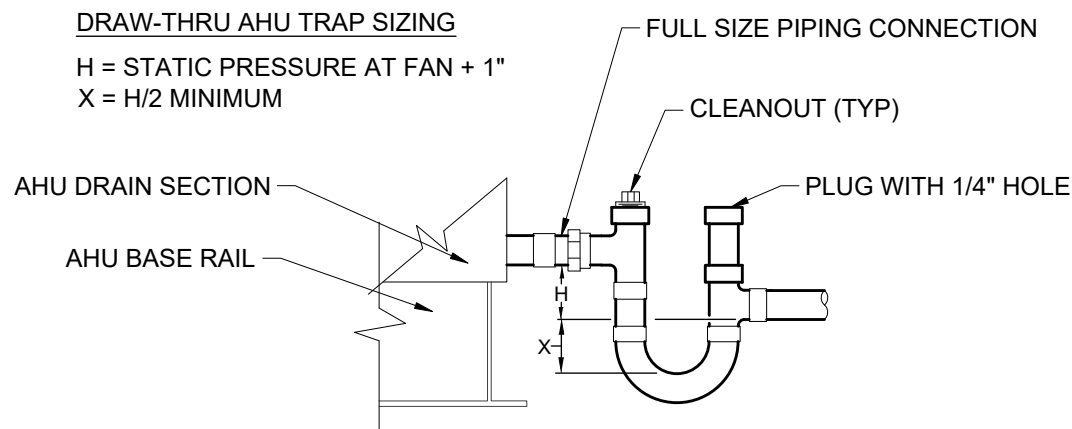


DX VERTICAL RETURN DUCT DETAIL

SCALE: NTS

NOTES:

- LOCATE UNITS AND PROVIDE ACCESS PER THE MANUFACTURER'S RECOMMENDATIONS.
- LOCATE UNITS TO ALLOW FOR FILTER REMOVAL/REPLACEMENT.
- SET UNIT ON AUXILIARY PREINSULATED FILTER RACK. SEAL OFF FCU FACTORY FILTER OPENING WITH SHEET METAL.
- INSULATE PLENUM INTERIOR WITH 1" THK SEMI-RIGID DUCT BOARD WITH FOIL/SCRM FACE. FOIL FACE TOWARDS AIR STREAM. SECURE WITH MECHANICAL FASTENERS (STICK PINS). TAPE AND MASTIC INSULATION JOINTS, SEAMS, ETC. INSULATE EXTERIOR AREAS/SURFACES IN SIMILAR FASHION IF CONDENSATION FORMS. ALTERNATE INSULATION - 1.5" THK ELASTOMERIC FOAM INSULATION WITH JOINTS, SEAMS, ETC. SEALED AIR TIGHT.
- SEAL ALL DUCT/WALL PENETRATIONS SMOKE TIGHT.
- PIPE CONDENSATE WITH P-TRAP TO FLOOR DRAIN.



CONDENSATE P-TRAP DETAIL

SCALE: NTS

- NOTES:
1. CONDENSATE PIPING SHALL BE PVC OR DWV OR TYPE L COPPER WITH CAST DWV OR PRESSURE SOLDER JOINTS.

DATE	REVISION	SYMBOL	DATE	REVISION	SYMBOL	ISSUE DATE: 02/25/2025	COMP. FILE No:	STATE PROJECT No: 61531C	DESIGNER: MH	DRAWN BY: MH	REVIEWED BY: JB	Consultant:
Department of Environmental Protection Division of Recreation and Parks Bureau of Design and Construction 3800 Commonwealth Blvd., Tallahassee, FL 32309 (850) 245-2300 MCGINNIS + FLEMING ENGINEERING JOHN M. BARBER LICENSE No. 55427 STATE OF FLORIDA PROFESSIONAL ENGINEER 2018 BARBER IS 5027 - JOHN M. BARBER, PE d. 2/28/25 2018 FLEMING IS 5027 - JOHN M. BARBER, PE d. 2/28/25 2018 FLEMING IS 5027 - JOHN M. BARBER, PE d. 2/28/25 2018 FLEMING IS 5027 - JOHN M. BARBER, PE d. 2/28/25												
WINDLEY KEY FOSSIL REEF GEOLOGICAL STATE PARK												
MECHANICAL DETAILS AND SCHEDULES												
ADA RESTROOM & BOARDWALK												
SHEET NO. M501												