# INDIAN RIVER COUNTY ADMINISTRATION COMPLEX ALTERATIONS TO BUILDING 'A'

FOR

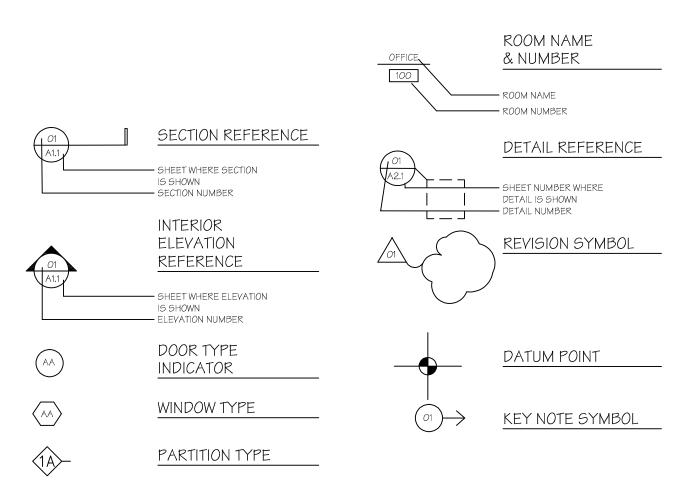
# BUILDING / FIRE DEPARTMENTS

1801 27th STREET, VERO BEACH, FLORIDA 32960

AUGUST 23, 2020 BID SET

IRC BID NO. 2020057

## ARCHITECTURAL SYMBOLS





609 17th Street
Vero Beach, FL 32960
Tel.772.794.2929
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License No. AA0002238

MECHANICAL & ELECTRICAL ENGINEER

KAMM CONSULTING, INC.

1408 Orange Ave

Ft. Pierce, FL 34950

Tel.: 772/595-1744

Fax.: 772/595-1745

#### INDEX OF DRAWINGS

1/0	Dwg. No	Drawing Name
	A <i>O</i> .10	COVER SHEET / INDEX OF DRAWINGS

#### ARCHITECTURAL DRAWINGS

1/0	Dwg. No	Drawing Name
$\boxtimes$	A1.10	LIFE SAFETY PLAN
$\boxtimes$	A1.12	CODE REVIEW
$\boxtimes$	A2.10	DEMOLITION PHASING PLAN
$\boxtimes$	A2.11	PROPOSED FLOOR PLAN
	A2.11A	CONSTRUCTION PHASING PLAN
	A2.12	REFLECTED CEILING PLAN
	A2.13	CARD ACCESS CONTROL PLAN
$\boxtimes$	A5.10	INTERIOR ELEVATIONS
$\boxtimes$	A6.10	SCHEDULES AND DETAILS

#### MECHANICAL DRAWINGS

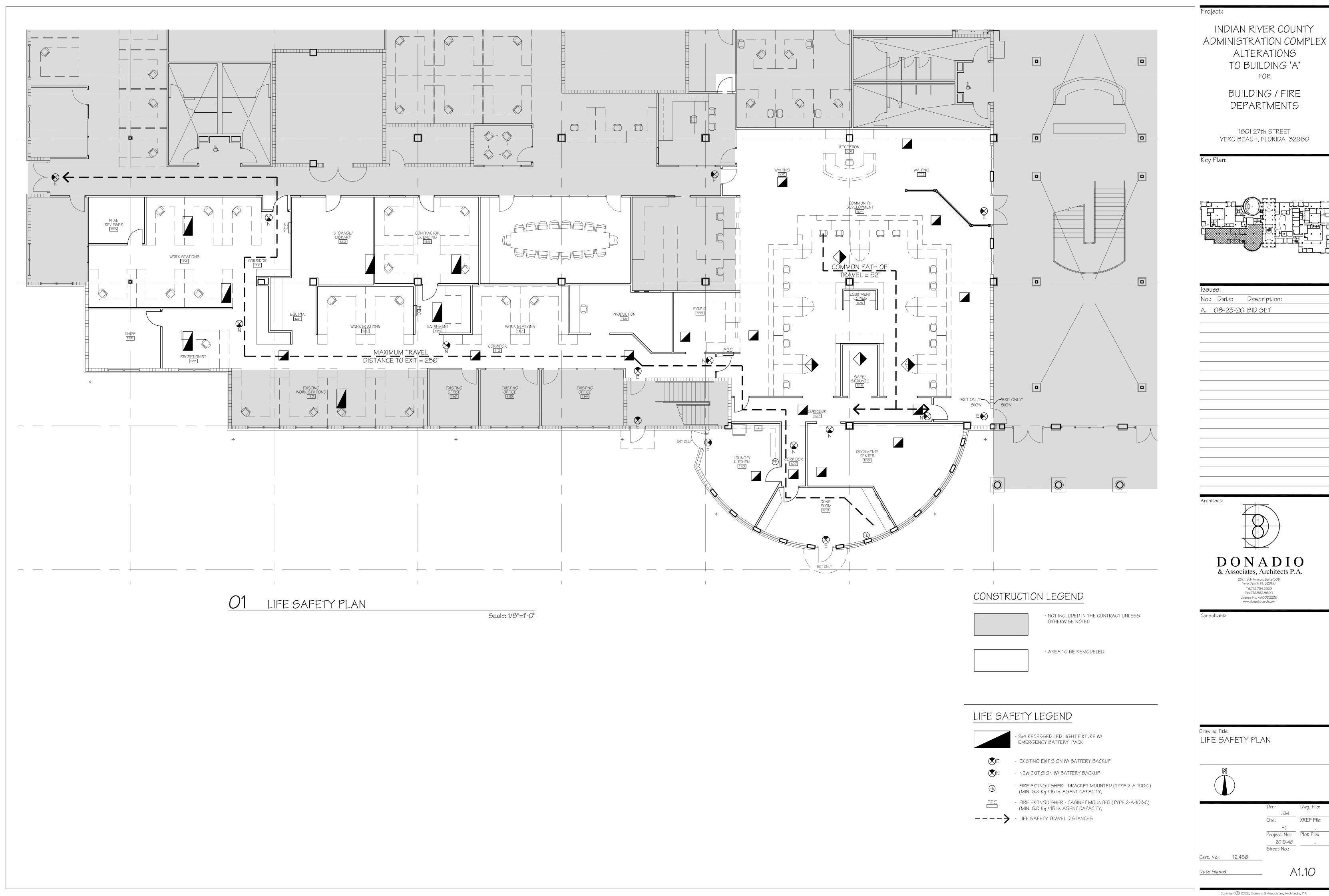
1/0	Dwg. No	Drawing Name
	M <i>O</i> .1	MECHANICAL NOTES
$\boxtimes$	M2.1	MECHANICAL PLAN
	M6.1	MECHANICAL SCHEDULES

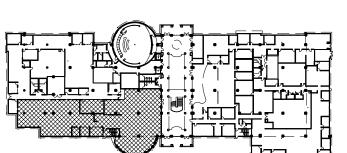
#### ELECTRICAL DRAWINGS

1/0	Dwg. No	Drawing Name
	E0.1	ELECTRICAL NOTES
	E2.1	LIGHTING PLAN
	E3.1	POWER PLAN

#### PLUMBING DRAWINGS

1/0	Dwg. No	Drawing Name
	PO.1	PLUMBING NOTES
$\boxtimes$	P2.1	SANITARY PLAN
	P3.1	DOMESTIC WATER PLAN





CODE REVIEW FOR RENOVATIONS TO THE COMMUNITY DEVELOPMENT/BUILDING DEPARTMENT BUILDING "A" AT THE INDIAN RIVER COUNTY ADMINISTRATION COMPLEX, 1801 27TH STREET, VERO BEACH, FLORIDA 32960 ARCHITECT'S PROJECT #2019-48/2 DATE: AUGUST 4, 2020

#### SCOPE OF WORK

The Project involves Complete Interior Renovation of the Building and Fire Department areas of the Community Development office location. Expansion into and taking over the existing Deli Area. Re arranging the functions of the Departments to provide better function and flow. Rearranging areas to provide better customer service, add working space, security, and employee protection. Demolition of existing areas to accommodate the new floor plan and layout. This involves new walls, ceilings, finishes and mechanical, electrical, and plumbing work. This project will need to be conducted in phases in order to keep the office functions running during regular business hours. This project will also involve night and weekend work to accomplish the phasing and operation.

- A. The Demolition Work consist of the following:
- i) Demolition of existing Gypsum Board/Metal Stud partitions.
- ii) Salvaging existing Doors for possible re-use.
- iii) Removal of the existing Ceiling Tile grid and Acoustical tiles.
- iv) Removal of existing Fluorescent fixtures and safely securing all associated electrical wiring.
- v) Removal of all Electrical Outlets. Secure and cap-off at service.
- vi) Remove all Floor finishes, Carpet, VCT, and Porcelain Tile.
- vii) Remove all Kitchen fixtures, Cabinets Equipment, Appliances and work surfaces.
- viii) American Business Interiors will be responsible for dis-assembling all Modular Furniture (workstations), storing and subsequently re-assembling the Modular furniture to comply with the new layout. The General Contractor will be responsible to terminate all Electrical systems, Power, Telephone and Data associated with the original layout.
- ix) Remove/modify existing Water/Plumbing lines in existing Kitchens.
- x) Remove existing Shelving, Cabinets and work surfaces for possible re-use.
- xi) Modify existing Electrical installation for proposed renovations per Kamm Consulting Drawings.
- xii) Modify existing HVAC installation per Kamm Consulting Drawings.
- xiii) Modify existing Plumbing per Kamm Consulting Drawings.

#### B. The New Renovation Work is as follows:

- i) There are three (3) existing Offices and four (4) existing Workstations that are to remain in place. See Architects Sheet A2.10 for location. In these locations' removal of all Flooring, Ceiling grid, etc. still applies, but stud partitions and modular furniture remain intact.
- ii) New Acoustical Ceiling Tile and grid throughout.
- iii) New Light fixtures, switches, power outlets and Data ports (See Kamm Consulting Drawing).
- iv) New 1 5/8" x 3 5/8" Galvanized Metal Studs, 25ga spaced 24" o.c. (max) with Acoustical Batts insulation and 5/8" Drywall both sides constructed from Floor to 12" (min) above Acoustical Tile Ceiling.
- v) Interior painting throughout.
- vi) Vinyl base to match existing.
- vii) Carpet Tile /Porcelain Tile where indicated.
- viii) VCT where indicated.
- ix) Re-used Doors/new Doors to match existing. x) Modified existing HVAC to accommodate renovation.
- xi) New lighting, power, plumbing and data where required.
- xii) Patch and repair existing Concrete Floor slab as required.
- xiii) Existing Ceiling mounted Data equipment to be removed and re-installed.
- xiv) Redesign existing Automatic Fire Sprinkler System to cover proposed renovation.
- xv) Add two new Metal Exterior Canopies over the Door exiting from Stair #3 and Exit Door from the current Café.
- xvi) Existing Automatic Fire Sprinkler System to be modified to suite new Floor layout.

The existing Building Construction appears to be FBC Type II; Sprinklered and NFPA 220 Type II (000). The proposed Construction will match the existing i.e. noncombustible.

This Project is considered a Level 2-Alteration.

#### REFERENCE CODES

Florida Building Code 2017 - Building Florida Building Code 2017 – Existing Buildings Florida Building Code 2017 - Accessibility Florida Building Code 2017 - Plumbing Florida Building Code 2017 - Energy Florida Building Code 2017 – Mechanical Florida Fire Prevention Code 2017 – 6th Edition NEC NFPA 70 2014

#### CODE REVIEW

#### 1) ALTERATION LEVEL 1 COMPLIANCE

FBC 801.2; 801.3; NFPA 101; 4.6.7 (5)

All work associated with the Project will comply with Chapter 7 and Chapter 8 of FBC 2017 Existing Buildings and FBC 2017 – Building and NFPA 101.

SPECIAL USE AND OCCUPANCY FBC 802.1; FBC 2017-Building CH.4; LSC 39.1

#### **BUILDING ELEMENTS AND MATERIALS**

FBC 803

Vertical Openings/Existing Vertical Openings FBC 803.2; 803.2.1

The existing Elevator is not affected by the proposed alterations.

#### ii) Supplemental Shaft and Floor Opening Requirements FBC 803.2.2

N/A (Work area does not exceed 50% of Floor area)

#### iii) Supplemental Stairway Enclosure Requirements

FBC 803.2.3; N/A (Work area does not exceed 50% of Floor area)

#### iv) Interior Finish FBC 803.4; FBC 2017-Building; FBC TABLE 803.11; LSC 10.2;

All interior Wall and Ceiling finishes to comply with the Table below:

#### BUSINESS OCCUPANCY (GROUP "B") SPRINKLERED Interior Exit Stairways Corridors and Enclosures And Ramps & Exit for Exit Access Stairways Rooms and Enclosed Passageways and Ramps Space

Class B Interior Finish: Flame Spread Index 26-75;

Smoke Developed Index 0-450

#### v) Interior Floor Finish

FBC 2017-Building; FBC 804; 804.4.2; LSC No Requirements The minimum critical radiant flux for new floor finishes shall not be less than Class II.

#### vi) Fire-Resistance Ratings

FBC803.6; FBC 2017-Building 1020; FBC Table 1020.1 Occupant load > 30; Building protected with an Automatic Fire Sprinkler System - No Corridor rating required.

### 4) FIRE PROTECTION

FBC 804

## i) <u>Corridor Ratings</u> FBC 804.1.1; FBC 2017 CH.10; TABLE 1020.01; LSC 39.3.6

(No Requirements) The Building is protected by an Automatic Fire Sprinkler System. No Corridor rating required.

#### ii) Automatic Sprinkler Systems

FBC 804.2; FBC 2017-Building; FBC CH.9 The existing Building is protected by an Automatic Fire Sprinkler System. = 11.500 sq. ft. Current Building Department Area Current Occupant Load; 11,500 sq. ft. ÷ 100 = 115 Occupants

#### iii) Fire Extinguishers

FBC 2017-Building; FBC 906.1 See Life Safety Plan for locations.

#### iv) Additional Occupant Load

FBC TABLE 1004.1.2; LSC 39.1.7; FBC 2017-Building Based on Use and Occupancy type there will be no additional Occupants.

v) Fire Alarm and Detection FBC 804.4; FBC 2017-Building; FBC 907; LSC 39.3.4

#### renovation.

The existing Fire Alarm and Detection system will be adjusted to include the

#### **MEANS OF EGRESS** FBC 805; LSC 39.2.4

#### i) Number of Exits

FBC 805.3; 805.4.1; FBC 2017-Building; FBC 1006; LSC 39.2.4

#### ii) Existing Exits

a) Existing number of Means of Egress

(discharge directly to the exterior)

b) Number of Exits required based on Occupant Load and Travel FBC 2017-Building; FBC 1006.2.1; FBC TABLE 1006.2.1

= 4

= 115

 $= 300^{\circ}$ 

= 256

i) Existing Occupant Load 115 > 49 - Single Exit not permitted

#### c) Maximum Travel Distance to Exit

FBC 805.4.1.1; FBC 2017-Building; LSC 39.2.6.3

a) Maximum Travel Distance to Exit permitted b) Actual maximum Travel Distance to an Exit (See Life Safety Plan)

#### iii) Illumination of Means of Egress

FBC 1008; LSC 7.8; 39.2.8

#### i) <u>Illumination Required</u> FBC 2017-Building; FBC 1008.2; LSC 39.2.8 The Means of Egress, including Exit Discharge, will be illuminated at all times during Building Occupancy.

#### ii) Illumination Level Under Normal Power

FBC 1008.2.1 The Means of Egress Illumination Level shall not be less than 1 Footcandle (11 LUX) at the walking surface.

#### iii) Emergency Power for Illumination

#### FBC 1008.3; LSC 39.2.9

Means of Egress components. The Emergency supply will provide power for a minimum of 90 minutes and will consist of storage batteries, Unit equipment or an on-site Generator.

An Emergency Power Supply will be provided to illuminate all

#### 6) ACCESSIBILITY

FBC 806; FBC 2017 - ACCESSIBILITY

The work surface/sink in the Lounge/Kitchen will be located 34" AFFL. The existing /new modular workstations will be provided with an accessible height section.

#### 7) STRUCTURAL

FBC 807

Aluminum Canopy to be designed to resist wind load criteria as follows: Exposure C, 160MPH

Risk Category II.

Provide shop drawings signed and sealed by a Florida registered Structural Engineer.

#### **ELECTRICAL FBC 808**

All new wiring, Electrical equipment etc. in the work areas will comply with

NFPA 70.

#### 9) MECHANICAL

**FBC 809** 

All new Mechanical appliances and equipment to comply with the Florida Building Code, Mechanical.

#### 10) PLUMBING

**FBC 810** 

The proposed renovation does not increase the existing Occupant content for the Departments. No additional Plumbing fixtures are required.

INDIAN RIVER COUNTY ADMINISTRATION COMPLEX ALTERATIONS TO BUILDING 'A' FOR

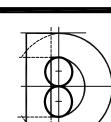
> BUILDING / FIRE DEPARTMENTS

1801 27th STREET VERO BEACH, FLORIDA 32960

Key Plan:

lssues: No.: Date: Description: A. 08/23/20 BID SET

Architect:



DONADIO & Associates, Architects P.A. 2001 9th Avenue, Suite 308

Vero Beach, FL 32960

Tel.772.794.2929

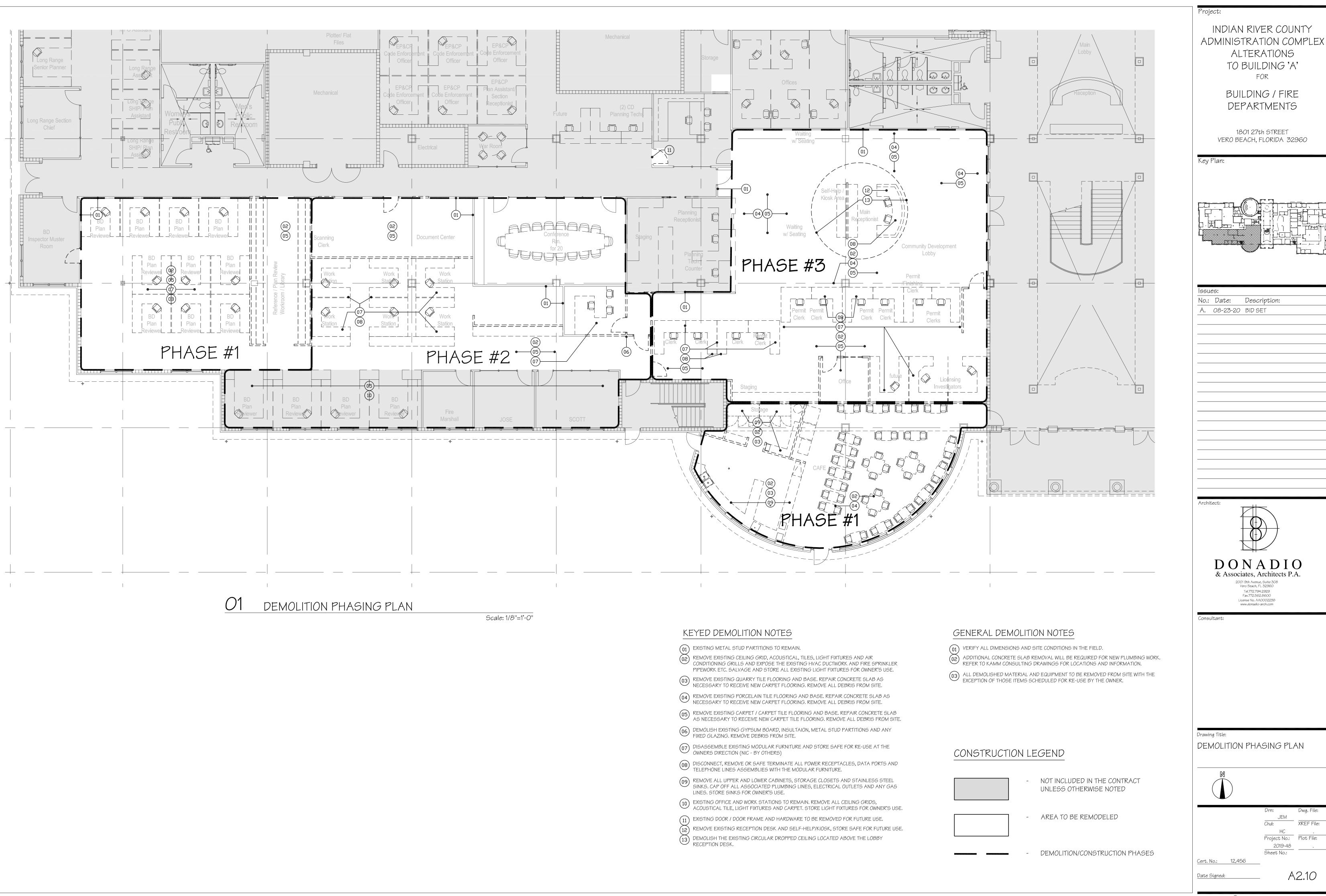
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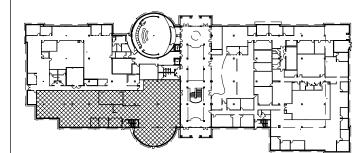
Consultant:

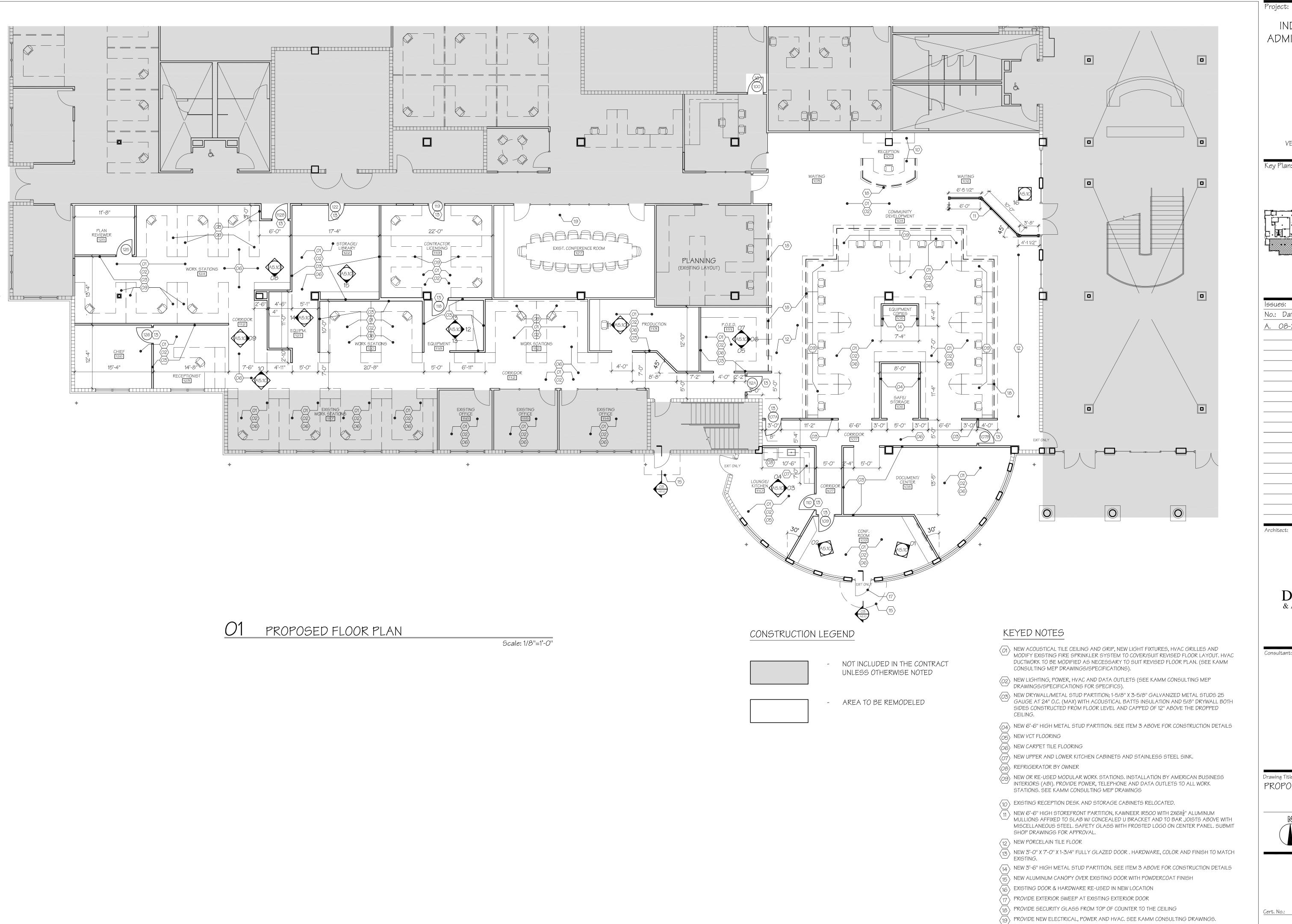
Drawing Title:

CODE REVIEW

Cert. No.: 12,456



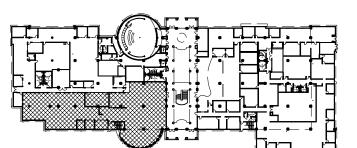




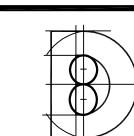
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1801 27th STREET VERO BEACH, FLORIDA 32960



No.: Date: Description: A. 08-23-20 BID SET



DONADIO & Associates, Architects P.A.

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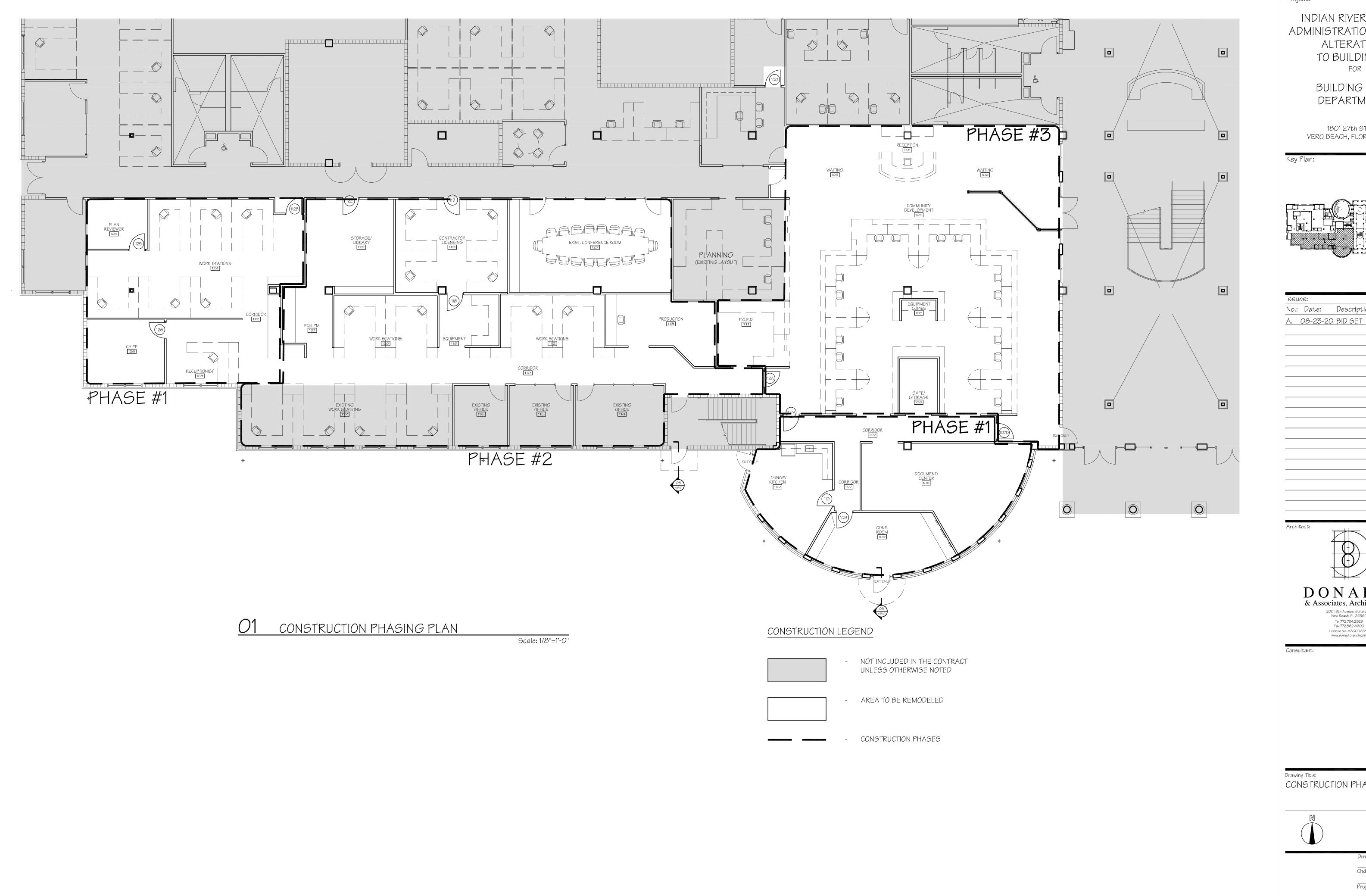
Consultant:

PROPOSED FLOOR PLAN



Cert. No.: 12,456

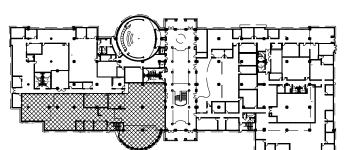
Date Signed:



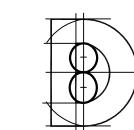
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CONSTRUCTION PHASING PLAN

Cert. No.: 12,456

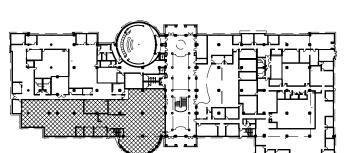
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INDIAN RIVER COUNTY ADMINISTRATION COMPLEX ALTERATIONS TO BUILDING 'A' FOR

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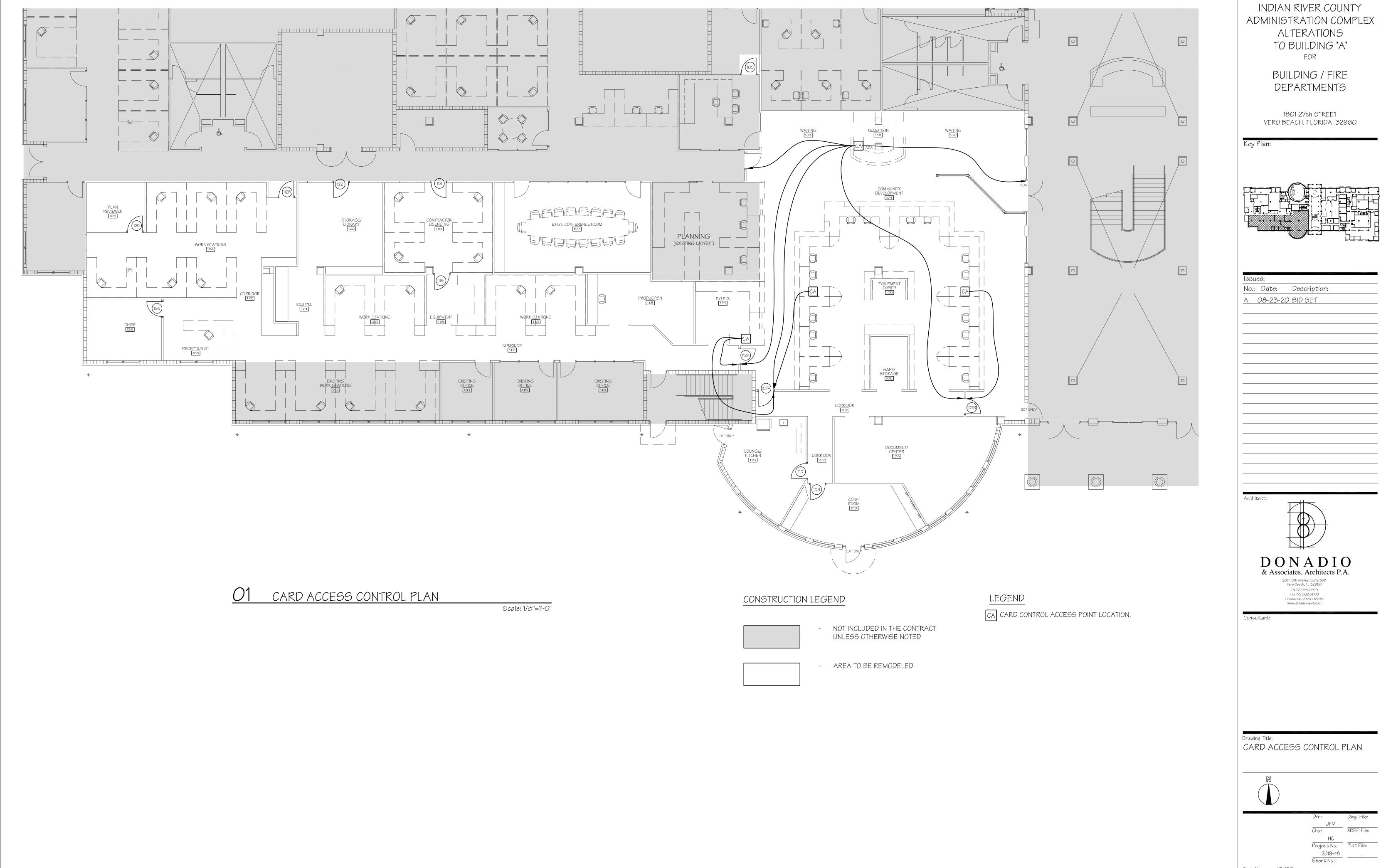
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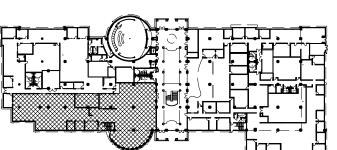
Drawing Title: REFLECTED CEILING PLAN



2019-48

Cert. No.: 12,456





Cert. No.: 12,456

A2.13

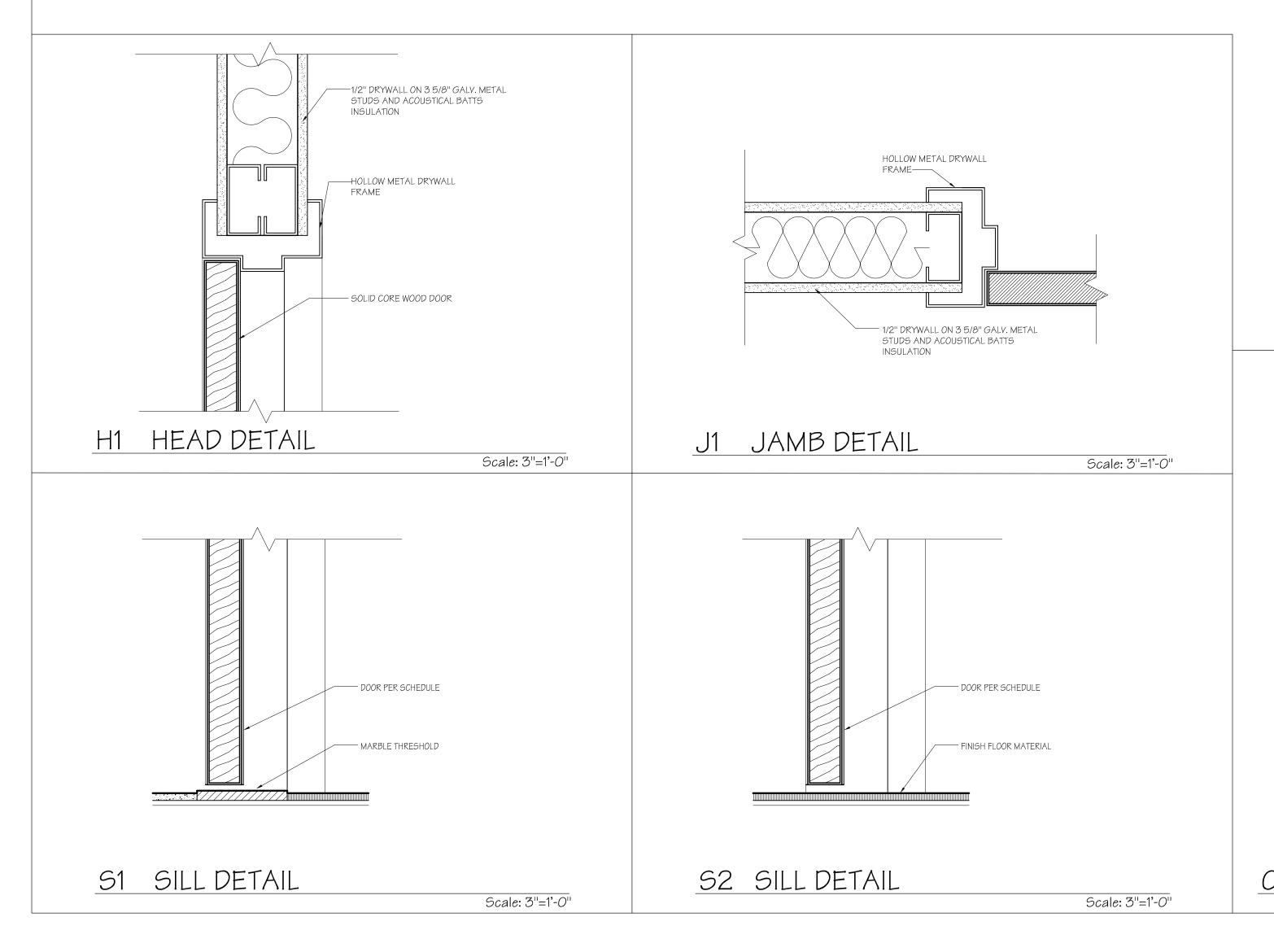


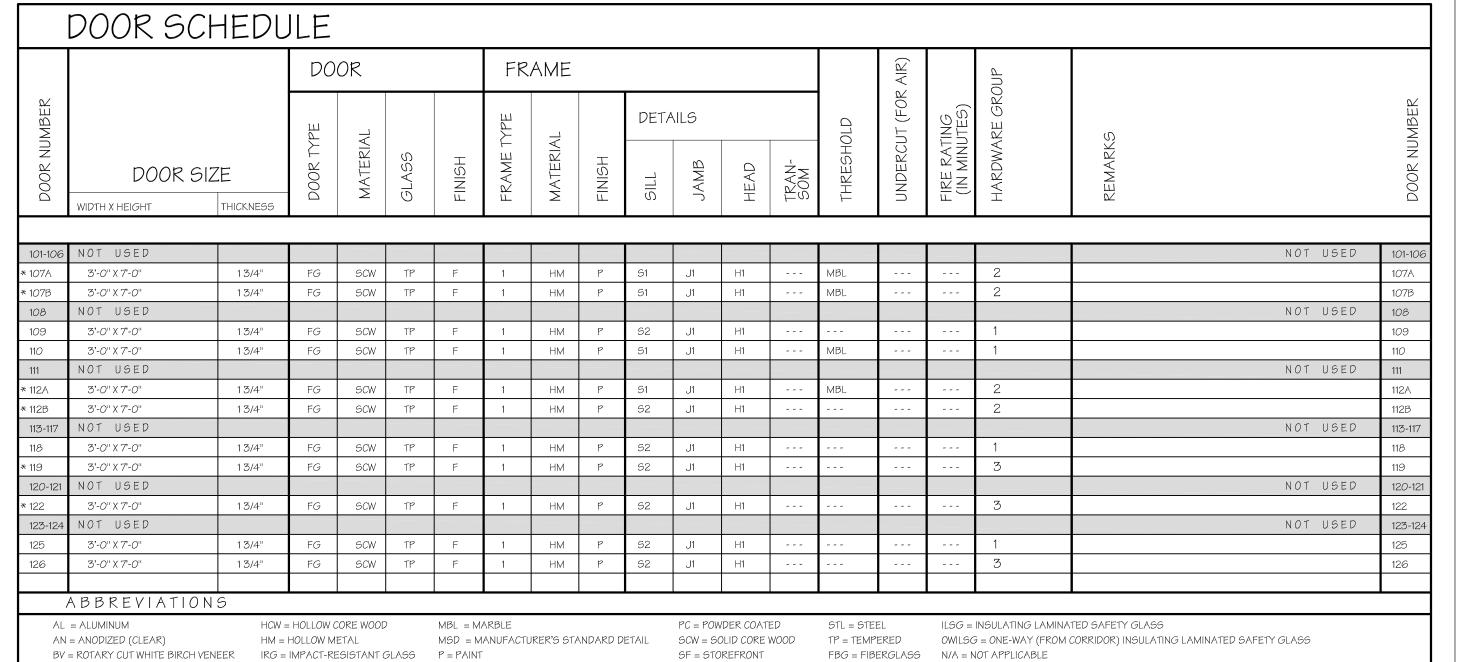
		FLOOR	BASE	WALL	-							CEILING				
BER				NOi	RTH	50	DUTH	EA	.ST	WES	ST					д П С
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	ROOM FINISH	HES	- M	ΑΠ	V F	LO	OR	•				•				•
)1	RECEPTION	PT	PTB	EX	PNT	-	-	-	-	-	-	ACT	FACT	8'-6"	DROPPED GYP. SOFFIT OVER RECEPTION DESK	101
	WAITING	PT	PTB	EX	PNT	-	-	-	-	-	-	ACT	FACT	8'-6"		102
	WAITING	PT	PTB	EX	PNT	-	-	-	-		-	ACT	FACT	8'-6"		103
	COMMUNITY DEVELOPMENT	CPT	RB	e e	-	-	-	e e	-	-	·	ACT/GYP	FACT/PNT	8'-6"	DROPPED GYP. HEADER OVER PERMITTING CLERKS	104
	EQUIPMENT	CPT	RB	GYP	PNT	-	-	GYP	PNT	GYP	PNT	ACT	FACT	8'-6"		105
	STORAGE/SAFE	CPT	RB	GYP	PNT	GYP	PNT	GYP	PNT	GYP	PNT	ACT	FACT	8'-6"		106
	CORRIDOR	CPT	RB	GYP	PNT	GYP	PNT	GYP	PNT	GYP	PNT	ACT	FACT	8'-6"		107
	DOCUMENT CENTER	CPT	RB	GYP	PNT	GYP	PNT	MRB	PNT	GYP	PNT	ACT	FACT	8'-6"		108
	CONFERENCE ROOM	CPT	RB	GYP	PNT	EX	EX	GYP	PNT	GYP	PNT	ACT/GYP	FACT/PNT	8'-6"	DROPPED GYP. SOFFIT	109
	LOUNGE/KITCHEN	VCT	RB	GYP	PNT	GYP	PNT	GYP	PNT	EX	EX	ACT	FACT	8'-6"		110
	P.O.E.D.	CPT	RB	EX	EX	GYP	PNT	GYP	PNT	GYP	FACT	ACT	FACT	8'-6"		111
	CORRIDOR	CPT	RB	-	-	-	-	-	-	-	-	ACT	FACT	8'-6"		112
	PRODUCTION	CPT	RB	EX	EX	GYP	PNT	GYP	PNT	EX	EX	ACT	FACT	8'-6"		113
	EX. OFFICE	CPT	RB	EX.	EX.	EX	EX	EX	EX	EX	EX	ACT	FACT	8'-6"		114
	EX. OFFICE	CPT	RB	EX.	EX.	EX	EX	EX	EX	EX	EX	ACT	FACT	8'-6"		115
	EX. OFFICE  EX. WORK STATIONS	CPT	RB	EX.	EX.	EX	EX	EX	EX	EX	EX	ACT	FACT	8'-6"		116 117
	EQUIPMENT	CPT CPT	RB RB	EX. GYP	EX.	EX GYP	EX PNT	EX GYP	EX	EX GYP	EX PNT	ACT ACT	FACT	8'-6" 8'-6"		118
	CONTRACTOR LICENSING	CPT	RB	GYP	PNT	GYP	PNT	GYP	PNT PNT	GYP	PNT	ACT	FACT FACT	8'-6"		119
	WORK STATIONS	CPT	RB	GYP	PNT	-	I IN I	GYP	PNT	GYP	PNT	ACT	FACT	8'-6"		120
	EQUIPMENT				+	GYP	PNIT	_		_	_					121
		_	1	<b>+</b>	1	<b>+</b>								<u> </u>		122
	RECEPTIONIST			•		+	EX	-	-	_	+		<u> </u>			123
	WORK STATIONS	-				+		MRB	CT		+	<b>+</b>				124
	PLAN REVIEWER	CPT	RB	EX.	EX.	GYP	PNT	GYP	PNT	EX	EX	ACT	FACT	8'-6"		125
	FIRE CHIEF	CPT	RB	GYP	PNT	EX.	EX.	MRB	CT	EX	EX	ACT	FACT	8'-6"		126
CC CT CF Sc EF	STORAGE/LIBRARY  RECEPTIONIST  WORK STATIONS  PLAN REVIEWER  FIRE CHIEF   CONC -CONCRETE (exterior)  CERAMIC TILE  CT -CARPET  CHECK -EPOXY FLOORING  PTB -EPOXY FLOORING  RD -CERAMIC TILE  CHECK -EPOXY FLOORING  PTB -EPOXY FLOORING  RD -CERAMIC TILE  RD -CERAMIC T	CPT	RB  BASE  E  LE BASE  CO  TILE BASE	GYP  WA  ALG  GYP  MRB  CBB	PNT  -ALUMIN -GYPSL -MOISTL -CEMEN -BRICK -CONCR	EX.  NUM & GL.  IM BOARD  JRE RESIG  ITITIOUS E  VENEER  ETE MASO  MPACT BO	PNT PNT EX.  ASS STANT BOAR BACKER BOA	MRB  C G A RD ARD S S VF	PNT CT  EILINC YP -G CP -AC CT -AC (P -EX F -GT -VIN	EX	EX  RD  CEILING P/ TILE  UCTURE  GYPSUM B	ACT  ANEL  OARD TILE		8'-6"  FINISH  CT -CERAMIC T  CTW -CERAMIC T  EPNT -EPOXY PAIN  PNT -PAINT	ILE WAINSCOT AWP -ACOUSTIC WALL PANELS  NT STC -STUCCO, PAINTED  FRP -FIBERGLASS REINFORCED  I TILE WAINSCOT EX -EXISTING NO, NONE OR NOT APPLICA	

#### GENERAL NOTES

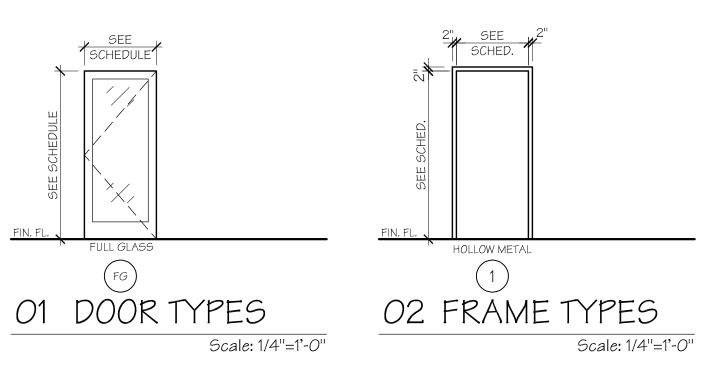
ASPH -ASPHALT

- 1 PATCH & REPAIR EXISTING GYPSUM BOARD PARTITIONS TO REMAIN.
- FIELD-VERIFY ALL CEILING HEIGHTS PRIOR TO CONSTRUCTION.
   COORDINATE THE LOCATION OF ALL WALL FIXTURES AROUND HVAC DUCTWORK AND FIRE SPRINKLER PIPING.





NOTE: ALL THRESHOLDS TO MEET ADA REQUIREMENTS.



F = PAINT

HARDWARE SCHEDULE

ST = STAINED --- = NO, NONE OR NOT APPLICABLE

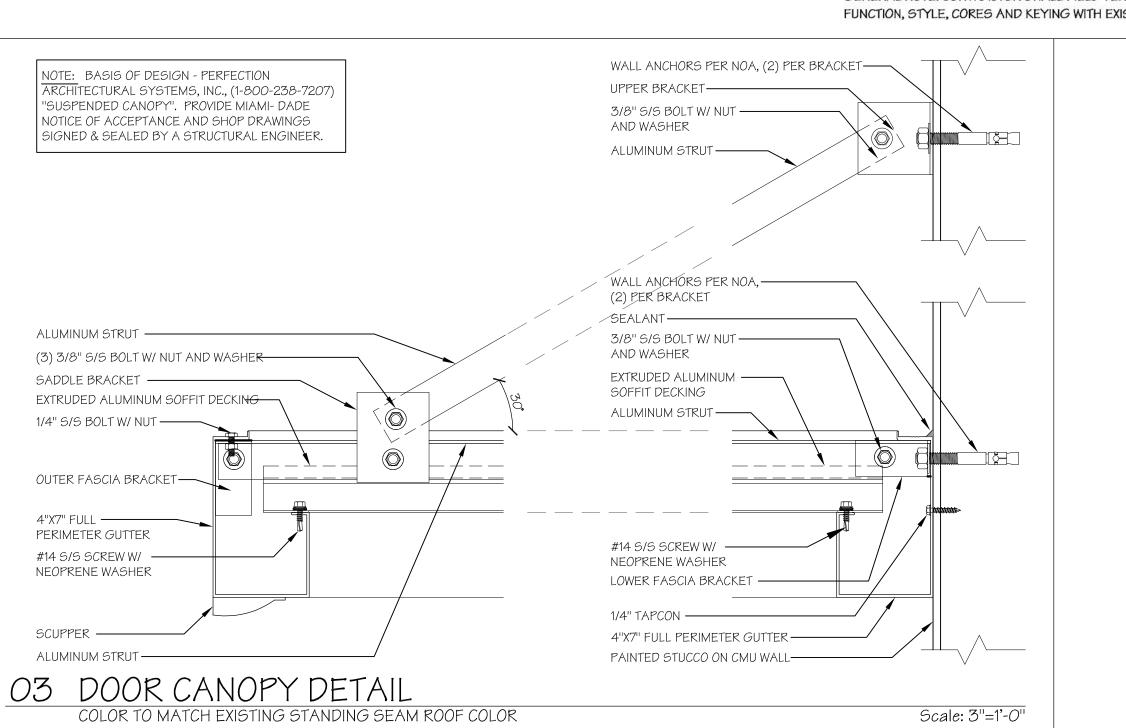
Do	ors: 109,1	10,118,125			
Ead	ch to Hav	re:			
Qty	/	Description	Catalog Number	Finish	Mfr
3	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	PASSAGE SET	ND109 RHO	626	SC
1	EA	SURFACE CLOSER	4040XP REG OR PA AS REQ	689	LCN
1	EA	WALL STOP	W5406/407CCV	630	IVE

		, 107B, 112A, 112B			
Ead	ch to Hav	ve:			
Qt	y	Description	Catalog Number	Finish	Mfr
3	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	POWER TRANSFER	EPT10 CON	689	VON
1	EA	ELEC CLASSROOM LOCK	AD-300-MS-70-MTK-RHO-JD 20-740	626	SCH
1	EA	PRIMUS CORE	20-740	626	SCH
1	EA	SURFACE CLOSER	4040XP REG OR PA AS REQ	689	LCN
1	EA	WALL STOP	W5406/407CCV	630	IVE
1	EA	CARD READER	CARD READER BY OWNER		

107A, 107B, 112A, 112B.
\*CONTRACTOR TO PROVIDE CONDUIT, JUNCTION BOX AND POWER SUPPLY AS NEEDED FOR OWNER PROVIDED CARD READER FOR EACH OF THE ABOVE LISTED DOORS.

Doc	ors: 119, 1	22, 126			
Eac	ch to Hav	re:			
Qty	/	Description	Catalog Number	Finish	Mfr
3	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	OFFICE/ENTRY LOCK	L9050T 06A L583-363	626	SCH
1	EA	PRIMUS CORE	20-740	626	SCH
1	EA	SURFACE CLOSER	1461 TBSRT	689	LCN
1	EA	WALL STOP	W5406/407CCV	630	IVE

GENERAL NOTE: CONTRACTOR SHALL FIELD VERIFY WITH OWNER ALL NEW DOOR HARDWARE FUNCTION, STYLE, CORES AND KEYING WITH EXISITNG IN PLACE DOOR HARDWARE.



Projec

INDIAN RIVER COUNTY
ADMINISTRATION COMPLEX
ALTERATIONS
TO BUILDING 'A'
FOR

BUILDING / FIRE DEPARTMENTS

1801 27th STREET VERO BEACH, FLORIDA 32960

Key Plan:

Issues:
No.: Date: Description:
A. 08/23/20 BID SET



Consultant:

Architect:

Drawing Title:
ROOM FINISH SCHEDULE
DOOR SCHEDULE
DOOR DETAILS

Date Signed:

		Drn:	Dwg. Fil
		JEM	
		Chd:	XREF Fi
		HC	
		Project No.:	Plot File
		2019-48	•
		Sheet No.:	
t. No.:	12,456	_ A	6.10
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#### MECHANICAL NOTES

- 1. THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY FOR THE INSTALLATION OF A COMPLETE SYSTEM IN ACCORDANCE WITH THESE DRAWINGS, THE FLORIDA BUILDING CODE 2017 AND ALL OTHER APPLICABLE STATE, COUNTY AND LOCAL ORDINANCES AND THE LATEST ADDITION OF THE FOLLOWING PUBLICATIONS; SMACNA-85, 92, 95; ASHRAE 15-01, 34-01, 62-04; NFPA 70-02, 72-02, 90A-02, 90B-02, 91-99, 96-01; ANSI Z10.1-98, Z10.3-98, Z21.8-94, Z21.83-98.
- 2. THE CONTRACTOR SHALL PAY ALL COSTS OF PERMIT, INSPECTIONS AND ALL OTHER COSTS INCIDENTAL TO THE COMPLETION AND TESTING OF THIS WORK.
- 3. THE CONTRACTOR SHALL VISIT THE SITE AND COORDINATE WORK WITH OTHER TRADES.
- 4. THE CONTRACTOR SHALL SUPPLY THE ARCHITECT WITH "AS-BUILT" DRAWINGS.
- 5. CONTRACTOR SHALL SUBMIT, FOR APPROVAL FIVE [5] COPIES OF MANUFACTURER'S DRAWINGS FOR EACH PIECE OF EQUIPMENT AND CONTROLS INCLUDED IN CONTRACT.
- 6. ALL MATERIAL SHALL BE NEW OF U.S. MANUFACTURER OF GOOD QUALITY. ALL WORK SHALL BE PERFORMED AT INDUSTRY STANDARD QUALITY LEVEL BY CERTIFIED PROFESSIONALS. ALL EQUIPMENT SHALL BE UL OR ETL LISTED. ALL INSTALLATIONS SHALL COMPLY WITH FMC 2017, CH. 3, GENERAL REGULATIONS. BUILDINGS
- LOCATED WITHIN 3,000 FT FROM THE OCEAN SHALL UTILIZE NON-FERROUS MATERIALS FOR ALL OUTDOOR EXPOSED SUPPORTS, STANDS, FASTENERS, ETC.
- A. ALL AIR CONDITIONING DUCT WORK SHALL BE OF 1-1/2" (R-6) HEAVY DUTY FOIL REINFORCED FIBERGLASS WITH MANUFACTURER'S LOGO PRINTED ON VAPOR BARRIER ALL FLEXIBLE DUCT TO BE R-6 WITH A MAX. TOTAL LENGTH NOT TO EXCEED 15 FT. INSTALL UL LISTED FOR PLENUM, FLEXIBLE DUCTWORK ELBOW SUPPORTS AT EACH DIFFUSER, GRILLE, AND REGISTER EQUAL TO "FLEXFLOW ELBOW" AS MANUFACTURED BY "THERMAFLEX". B. ALL OUTDOOR EXPOSED DUCTWORK SHALL BE GALVANIZED, DOUBLE WALL SHEETMETAL EQUAL TO UNITED McGILL "K-27", WITH MIN. R-8 INSULATION AND SEALED SEAMS AND JOINTS.
- PROVIDE SOLID LINER AND COAT WITH TWO COATS OF CORROSION-RESISTANT PAINT OR EQUIVALENT. PROVIDE OPTIONAL (OWNER'S DECISION) ALUMINUM OR STAINLESS STEEL CONSTRUCTION. <u>C.</u> ALL FLEX DUCT SHALL BE RATED CLASS I, UL—181 LISTED WITH METALLIZED INNER AND OUTER FOIL LINERS, MIN. R-6 WITH A MAX. TOTAL LENGTH NOT TO EXCEED 15 FT. FLEXIBLE DUCTWORK ELBOW SUPPORTS AT EACH DIFFUSER, GRILLE, AND REGISTER EQUAL TO "FLEXFLOW

THE CONTRACTOR SHALL PROVIDE ALL SHEETMETAL DUCTWORK, HANGERS, AUX. SUPPORT STEEL, ETC.

ELBOW" AS MANUFACTURED BY "THERMAFLEX". D. ALL METAL EXHAUST, MAKE-UP OR OTHERWISE DUCTS INSTALLED IN LOCATIONS WHERE DEWPOINT CONDITIONS CAN OCCUR INSIDE THE DUCT SHALL BE EXTERNALLY INSULATED WITH R-6 MIN. THE CONTRACTOR SHALL PROVIDE ALL SHEETMETAL DUCTWORK, HANGERS, AUX. SUPPORT STEEL, ETC.

ALL METAL DUCTS SHALL BE FABRICATED IN ACCORDANCE WITH LATEST EDITION OF S.M.A.C.N.A.

#### SPECIAL NOTE:

7. DUCTWORK:

- SMACNA DUCT PRESSURE CLASSES BASED ON OPERATING PRESSURE ARE: 1/2", 1", 2", 3", 4", 6", AND 10". EACH DUCT SYSTEM SHALL BE CONSTRUCTED FOR THE SPECIFIC DUCT PRESSURE CLASS SHOWN ON PLANS.
- WHERE NO PRESSURE CLASS IS SPECIFIED FOR CONSTANT VOLUME SYSTEMS, 1" W.G. PRESSURE CLASS IS THE BASIS OF COMPLIANCE WITH THE SMACNA STANDARDS REGARDLESS OF VELOCITY. WHERE NO PRESSURE CLASS IS SPECIFIED FOR VARIABLE VOLUME SYSTEMS, 2" W.G. PRESSURE CLASS IS THE BASIS OF COMPLIANCE WITH THE SMACNA STANDARDS FOR DUCTWORK UPSTREAM
- ALL DUCTWORK SHALL BE SEALED TO SMACNA "HVAC DUCT CONSTRUCTION STANDARDS" FOR ITS PRESSURE CLASS SEALING METHODS.
- 8. ALL EXHAUST DUCTS AND OUTSIDE AIR DUCTS SHALL BE GALVANIZED SHEET METAL WITH SEALED SEAMS AND JOINTS. ALL OUTSIDE AIR DUCT SHALL BE INSULATED WITH EXTERNAL BLANKET INSULATION R-6 MIN. ALL METAL EXHAUST, MAKE-UP OR OTHERWISE DUCTS INSTALLED IN LOCATIONS WHERE DEWPOINT CONDITIONS CAN OCCUR INSIDE THE DUCT SHALL BE EXTERNALLY INSULATED WITH R-6 MIN.
- 9. OUTSIDE AIR INTAKES SHALL BE SCREENED WITH A CORROSION RESISTANT MATERIAL NOT LARGER THAN 1/2" MESH. O/A INTAKES SHALL NOT BE TAKEN FROM A LOCATION CLOSER THAN 10 FT. FROM ANY CHIMNEY, VENT OUTLET OR SANITARY SEWER VENT OUTLET, UNLESS SUCH VENT IS NOT LESS THAN 24 INCHES ABOVE THE OUTSIDE AIR VENT. OUTSIDE AIR INTAKE VENTS LOCATED ON ROOFS WILL BE PROPERLY MARKED WITH A UNIVERSAL MARKING "INTAKE", PERMANENTLY ATTACHED PER FMC 2017, SEC. 401.5.1
- 10. DUCT SIZES SHOWN ARE INSIDE DIMENSIONS.
- 11. ALL AIR DEVICES (DIFFUSERS, REGISTERS AND GRILLES) SHALL BE ALL ALUMINUM CONSTRUCTION WITH EXPOSED SURFACE OFF WHITE BAKED ENAMEL FINISH OR AS SPECIFIED BY ARCHITECT. DEVICES SHALL BE AS SPECIFIED OR EQUAL TO TITUS OR METALAIRE. PROVIDE OPPOSED BLADE DAMPERS AT ALL DIFFUSERS AND REGISTERS AS INDICATED ON PLANS. PROVIDE BALANCING DAMPERS FOR ALL SUPPLY AND RETURN DIFFUSERS AND REGISTERS TO ENSURE COMPLAINCE WITH FMC 2017, PAR. 601.4 AND PAR. 603.15 FOR BALANCED AIR FLOW.
- 12. TEMPERATURE CONTROLS/THERMOSTAT: A. SHALL BE COMBINATION COOLING/HEATING, WITH SYSTEM "COOL-AUTO-HEAT-OFF" AND FAN "ON-AUTO" SELECTOR SWITCHES. PROVIDE PROGRAMMABLE TYPE AS
- RECOMMENDED BY MANUFACTURER, HONEYWELL OR EQUAL. PROVIDE TAMPER PROOF COVERS. 13. THERMOSTAT LOCATION SHALL BE APPROVED BY OWNER AND ENGINEER BEFORE INSTALLATION. INSTALL THERMOSTAT 48" TO 54" A.F.F. PER A.D.A REQUIREMENTS WHERE APPLICABLE. MECHANICAL CONTRACTOR SHALL COORDINATE WITH ELECTRICAL CONTRACTOR ALL REQUIREMENTS
- AND SCOPE OF WORK FOR EACH TRADE PRIOR TO ANY PURCHASING OR INSTALLATION. WHENEVER THERE ARE MORE THAN ONE SENSOR OR THERMOSTAT, SIDE BY SIDE, THEY SHALL BE GANGED TOGETHER WITHIN THE SAME COVER PLATE WHEREVER POSSIBLE. CONTRACTOR SHALL COORDINATE THIS ISSUE WITH ARCHITECT/OWNER PRIOR TO INSTALLATION AND SHALL BRING ANY DISCREPANCY TO THE ENGINEER'S ATTENTION.

FOR JUNCTION BOXES, CONDUITS, CONTROL WIRING, POWER, ETC. AND DEFINE RESPONSIBILITIES

4. REFRIGERANT LINES SHALL BE COPPER. TYPE "L" HARD DRAWN WITH WROUGHT COPPER BRAZING-JOINT TYPE FITTINGS, USE BRAZING MATERIALS FOR HIGH PRESSURE PIPING PER AWS A5.8: BCuP SERIES COPPER-PHOSPHORUS ALLOY OR BAg1 SILVER ALLOY. REFRIGERANT LINES SHALL BE SIZED PER MANUFACTURER'S RECOMMENDATIONS. SOFT COPPER TYPE "M" SHALL BE ALLOWED FOR RISER PIPING INSIDE CHASE TO LIMIT NUMBER OF JOINTS. COORDINATE WITH ENGINEER FOR PRIOR APPROVAL. ALL EXPOSED INSULATION SHALL BE PROTECTED WITH UV RESISTANT PAINT OR ALUMIN. SHIELD.

- 15. ARMAFLEX INSULATION SHALL BE USED FOR SUCTION LINES (1/2" FOR ABOVE 40° F AND 1" FOR BELOW 40° F) PER FLORIDA ENERGY CODE TABLE C403.2.8 FOR PIPING INSULATION. FILTER/DRYER AND SIGHT GLASS SHALL BE PROVIDED AT LIQUID LINES.
- 16. ALL BRANCH TAKE-OFFS TO BE PROVIDED W/ MANUAL VOLUME DAMPERS. PROVIDE RADIUS ELBOWS WHERE FEASIBLE, SQUARE ELBOWS AND TEE'S SHALL BE FURNISHED W/SINGLE FOIL TURNING VANES. PROVIDE MANUAL VOLUME DAMPERS WITH EXTRACTOR AT ALL FLEX TAKE-OFFS. PROVIDE REMOTE, CABLE OPERATED VOLUME DAMPERS IN INACCESIBLE AND HARD CEILING AREAS, "YOUNG REGULATOR" OR EQUAL.
- 17. PROVIDE NEW FILTERS FOR ALL AIR CONDITIONING EQUIPMENT BEFORE START-UP, REPLACE PRIOR TO FINAL ACCEPTANCE BY OWNER.
- 18. PROVIDE SMOKE DETECTORS WITH SERVICE ACCESS DOORS IN ALL RETURN AIR DUCTS FOR FANS AND AHU'S SERVING A COMMON PLENUM OF 2000 CFM OR ABOVE. FOR SMOKE DETECTORS NOT VISIBLE, IN CONCEALED SPACES, PROVIDE REMOTE ANNUNCIATION/TEST STATION AS REQUIRED BY AUTHORITY HAVING JURISDICTION, COORDINATE PRIOR TO INSTALLATION. DETECTORS SHALL BE BY ONE MANUFACTURER, COORDINATE VOLTAGE ETC. WITH ELECTRICAL CONTRACTOR AND FIRE ALARM SYSTEM BEFORE ORDERING. UPON DETECTION, SMOKE DETECTORS SHUT DOWN ASSOCIATED AIR MOVING EQUIPMENT AND ALL AIR MOVING EQUIPMENT SERVING THAT COMMON PLENUM.
- 19. PROVIDE TYPE "B" DYNAMIC FIRE DAMPERS WITH SERVICE ACCESS DOORS IN ALL DUCTS AND OPENINGS PENETRATING FIRE RATED WALLS, MECHANICAL AND ELECTRICAL EQUIPMENT ROOMS. TENANT SEPARATION, PARTITIONS, FLOOR OR ROOF SLABS AND AT OUTSIDE AIR INTAKES AS REQUIRED. PROVIDE RADIATION DAMPERS IN RATED CEILINGS FOR ALL CEILING OPENINGS. CEILING FANS, DIFFUSERS OR GRILLES RATED FOR USE IN THE CEILING ASSEMBLY. PROVIDE LOW-LEAKAGE CLASS DAMPERS FOR ALL SITUATIONS WHERE THE AIRFLOW CFM HAS TO BE CONTROLLED. VERIFY AND REPLACE AS REQUIRED FOR EXISTING SYSTEMS.
- 20. HVAC CONTRACTOR SHALL PROVIDE A T & B REPORT PER F.E.C. 2017, CH. C408.2.2, (THE T & B REPORT SHALL BE INDEPENDENT FOR SYSTEMS OVER 15 TONS) FOR ALL MECHANICAL EQUIPMENT, AIR DEVICES, DAMPERS, AHU'S AND FANS. THE TEST AND BALANCE REPORT SHALL BE IN ACCORDANCE WITH THE AIR BALANCE COUNCIL STANDARDS AND SHALL INCLUDE AIR QUANTITIES FOR ALL SUPPLY GRILLES, RETURN GRILLES AND EXHAUST GRILLES AND THE LEAVING AND ENTERING AIR TEMPERATURE ('F) FROM SUPPLY GRILLES AND EVAPORATORS. FOR (EXISTING) SMOKE EVACUATION SYSTEMS HVAC CONTRACTOR SHALL PROVIDE A T & B
- REPORT PRIOR TO ANY NEW WORK, PROVING THAT THE SMOKE EVACUATION SYSTEM PERFORMS PER ORIGINAL DESIGN DOCUMENTS AND IS COMPLIANT WITH LOCAL CODE REQUIREMENTS.
- 21. RUN INSULATED FIRE RATED CONDENSATE DRAINS AS REQUIRED.
- 22. ALL INSULATION WILL HAVE FIRE/SMOKE RATING LESS THAN 25/50.
- 23. MECHANICAL EQUIPMENT ON ROOF OR ELEVATED STRUCTURES SHALL COMPLY WITH FBC 2017 PAR. 306.5 IF INSTALLED HIGHER THAN 16 FEET A.F.F. MECHANICAL EQUIPMENT INSTALLED IN ATTICS SHALL MEET THE REQUIREMENTS OF FBC 2017 PAR. 306.3 IF THE EQUIPMENT CAN NOT BE SERVICED/REMOVED THROUGH REQUIRED OPENING. MECHANICAL EQUIPMENT SHALL BE PROTECTED WITH MECHANICAL BARRIERS IF EXPOSED TO MECH. DAMAGE. ALL EQUIPMENT SHALL BE INSTALLED ON 6" CONCRETE PAD AT GRADE LEVEL.
- SPECIAL NOTE: ALL WIND LOAD AND OTHER COMPLIANCE CALCULATIONS AND/OR INSTALLATION DETAILS FOR ROOF MOUNTED EQUIPMENT AS REQUIRED BY FBC 2017, SEC. 1509, 1522 AND CHAPTER 16, SHALL BE PROVIDED BY STRUCTURAL ENGINEER/ARCHITECT.
- 24. PROVIDE A MIN. OF 36" CLEARANCE IN FRONT OF ALL 120-208 VOLT PANELS AND MIN. 42" CLEARANCE IN FRONT OF ANY 240-480 VOLT PANEL. PROVIDE ADEQUATE SIDE CLEARANCE
- 25. MECHANICAL PLANS IN GENERAL, ARE DIAGRAMMATIC IN NATURE. AND ARE TO BE READ IN CONJUNCTION WITH ARCHITECTURAL, PLUMBING, ELECTRICAL, FIRE SPRINKLER, AND STRUCTURAL PLANS AND SHALL BE CONSIDERED AS ONE SET OF DOCUMENTS.
  DUCT AND PIPING OFFSETS, BENDS AND TRANSITIONS SHALL BE REQUIRED TO PROVIDE AND INSTALL A COMPLETE FUNCTIONAL SYSTEM AND SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. CHANGES IN DUCTWORK SIZE AND ROUTE WILL BE REQUIRED TO AVOID STRUCTURAL, PLUMBING, FIRE SPRINKLER AND ARCHITECTURAL BUILDING FEATURES. DUCTWORK CHANGES MAY BE MADE BY CONTRACTOR USING EQUIVALENT SIZED DUCT. CONTACT ENGINEER IF DUCT AREA WILL NOT FIT.
- 26. THE CONTRACTOR SHALL VERIFY EXISTING CONDITIONS PRIOR TO BIDDING, ORDERING, FABRICATION OR INSTALLATION OF MATERIALS OR FOUIPMENT. IN ORDER TO PROVIDE A FULLY INTEGRATED MECHANICAL AND CONTROLS SYSTEMS WITH THE EXISTING ONES. ANY DISCREPANCY BETWEEN EXISTING CONDITIONS AND PLANS, OR ADDITIONAL CLARIFICATION REQ'D SHALL BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO FINAL BIDDING AND WORK.
- 27. NO COMBUSTIBLE MATERIALS ARE ALLOWED IN RETURN AIR PLENUMS OR ABOVE CEILINGS USED AS RETURN AIR PLENUM. IF SPACE WITH RETURN AIR PLENUM HAS ANY DECK TO DECK PARTITIONS, AIR TRANSFER DUCTS MUST BE INSTALLED. WHEN CPVC PIPING IS USED FOR FIRE SPRINKLER SYSTEMS. THE R/A GRILLES LAYOUT SHALL BE (FIELD) COORDINATED WITH SUCH PIPING SO THAT NO PORTION OF THE GRILLES WILL BE DIRECTLY BELOW THE CPVC PIPING.
- 28. CONDENSATE DRAIN PIPING TO BE AS SPECIFIED PER PLUMBING PLANS, IF NOT SPECIFIED TO BE TYPE "L" COPPER OR PVC WHERE ALLOWED BY CODE WITH 1/2" ARMAFLEX INSULATION. PROVIDE APPROVED WATER LEVEL DETECTOR OR FLOAT SWITCH TO AUTOMATICALLY SHUT DOWN THE AIR COND. UNIT, AS A SECONDARY DRAIN SYSTEM TO COMPLY WITH FMC 2017, SEC. 307 SUPPLY CONDENSATE PUMP WHERE NECESSARY AS IMPOSED BY FIELD CONDITIONS OR INSTALLATION CHANGES AND PIPE TO CONDENSATE DRAIN PER PLUMBING PLANS.
- 29. MANUFACTURER'S WARRANTY: CONTRACTOR SHALL PROVIDE WARRANTY FOR A PERIOD OF (1) ONE YEAR AFTER BUILDING C.O. FOR ALL MECHANICAL SYSTEMS, DUCTWORK, CONTROLS ACCESSORIES AND ALL OTHER EQUIPMENT, PARTS AND LABOR UNDER THESE DRAWINGS AND AND SPECIFICATIONS. CONTRACTOR SHALL PROVIDE WARRANTY FOR COMPRESSORS FOR (5) FIVE YEARS. ANY REPAIRS REQUIRING SYSTEM SHUTDOWN WILL BE DONE DURING NON-OPERATIONAL PERIODS OR AS AGREED WITH OWNER.
- 30. CONTRACTOR SHALL PROVIDE 5 SETS OF COORDINATED DUCTWORK AND EQUIPMENT SHOP DRAWINGS. SHOP DRAWINGS TO REFLECT EQUIPMENT LOCATION AND DUCTWORK ROUTING IN COORDINATION WITH STRUCTURAL SHOP DRAWINGS, FIRE SPRINKLER SHOP DRAWINGS, PLUMBING SHOP DRAWINGS AND FINAL ARCHITECTURAL REFLECTED CEILING PLANS.

#### MECHANICAL SHEET INDEX SHEET# DESCRIPTION MECHANICAL NOTES, LEGEND & INDEX MECHANICAL FLOOR PLAN MECHANICAL SCHEDULES

MECHANICAL LEGEND					
SUPPLY AIR CEILING DIFFUSER  RETURN AIR CEILING GRILLE	EF CEILING OR INLINE EXHAUST FAN				
WALL LOUVER / WALL DIFFUSER.  LINEAR DIFFUSER  MANUAL VOLUME CONTROL DAMPER	(3'0" SERVICE CLEARANCE)  THERMOSTAT  HUMDISTAT				
MD MOTORIZED DAMPER  FD FIRE DAMPER	R REFRIGERANT SENSOR SP STATIC PRESSURE SENSOR DUCT SMOKE DETECTOR				
FLEX DUCT  SEXISTING FLEX DUCT	AP - ACCESS PANEL  AD - ACCESS DOOR				
EXISTING DUCTWORK  UP SUPPLY & OUTSIDE AIR SECTION (UP)	VCD VOLUME CONTROL DAMPER  MOD MANUALLY OPERATED DAMPER				
DN SUPPLY & OUTSIDE AIR SECTION (DN)  UP RETURN OR EXHAUST DUCT	SUPPLY AIR DIFFUSER OR GRILLE DESIGNATION  TAG  RETURN/EXHAUST AIR DIFFUSER OR GRILLE DESIGNATION				
SECTION (UP)  DN RETURN OR EXHAUST DUCT SECTION (DN)	VARIABLE FREQ. DRIVE CONTROL PANE  SUPPLY AIR  RETURN AIR				
SHOE TAP DAMPER	→ U/C DOOR UNDER CUT  TAG - ● EQUIPMENT TAG				
ROOFTOP UNIT	OARTU- OUTSIDE AIR ROOF TOP UNIT  RTU- ROOF TOP UNIT  VAV- VARIABLE VOLUME BOX  FF - EXHAUST FAN				
SOLENOID VALVE.  RE RELOCATE  NOT ALL SYMBOLS MAY APPLY TO THE	WALL CAP				

#### HVAC ABBREVIATION LEGEND

;	AIR CONDITIONING	МСА	MINIMUM CIRCUIT AMPS (FOR WIRE SIZING)
F	ABOVE FINISH FLOOR	MOD	MANUALLY OPERATED DAMPER
D	BACK DRAFT DAMPER	МОСР	MAXIMUM OVERCURRENT PROTECTION DEVICE AMP
)	CONDENSATE DRAIN	NC	NOISE CRITERIA
)P	COEFFICIENT OF PERFORMANCE	O/A	OUTSIDE AIR
3	DRY BULB	OBD	OPOSITE BLADE DAMPER
Α.	DIAMETER	PD	PRESSURE DROP.
	EXISTING TO REMAIN	R	EXISTING TO BE RELOCATED
R	ENERGY EFFICIENCY RATIO	R/A	RETURN AIR
Н	ELECTRIC DUCT HEATER	•	RATED LOAD AMPS.
•	EXHAUST FAN	RLA	
Р	EXTERNAL STATIC PRESSURE	SEER	STANDARD ENERGY EFFICIENCY RATIO
	FILTER	TSP	TOTAL STATIC PRESSURE
)	FIRE DAMPER	VD	VOLUME CONTROL DAMPER
Α	FULL LOAD AMPS.	VFD	VARIABLE FRECUENCY DRIVE
<b>I</b> S	FLOW MEASURING STATION	WB	WET BULB

INTEGRATED PART-LOAD VALUE.

INDIAN RIVER COUNTY **ADMINISTRATION** COMPLEX **ALTERATIONS** TO BUILDING 'A' **BUILDING / FIRE** 

> 1801 27th STREET VERO BEACH, FLORIDA 32960

**DEPARTMENTS** 

Key Plan

Issues			
No.:	Date:	Description:	

& Associates, Architects P.

2001 9th Avenue, Suite 308

Vero Beach, FL 32960

Tel.772.794.2929 Fax.772.562.8600

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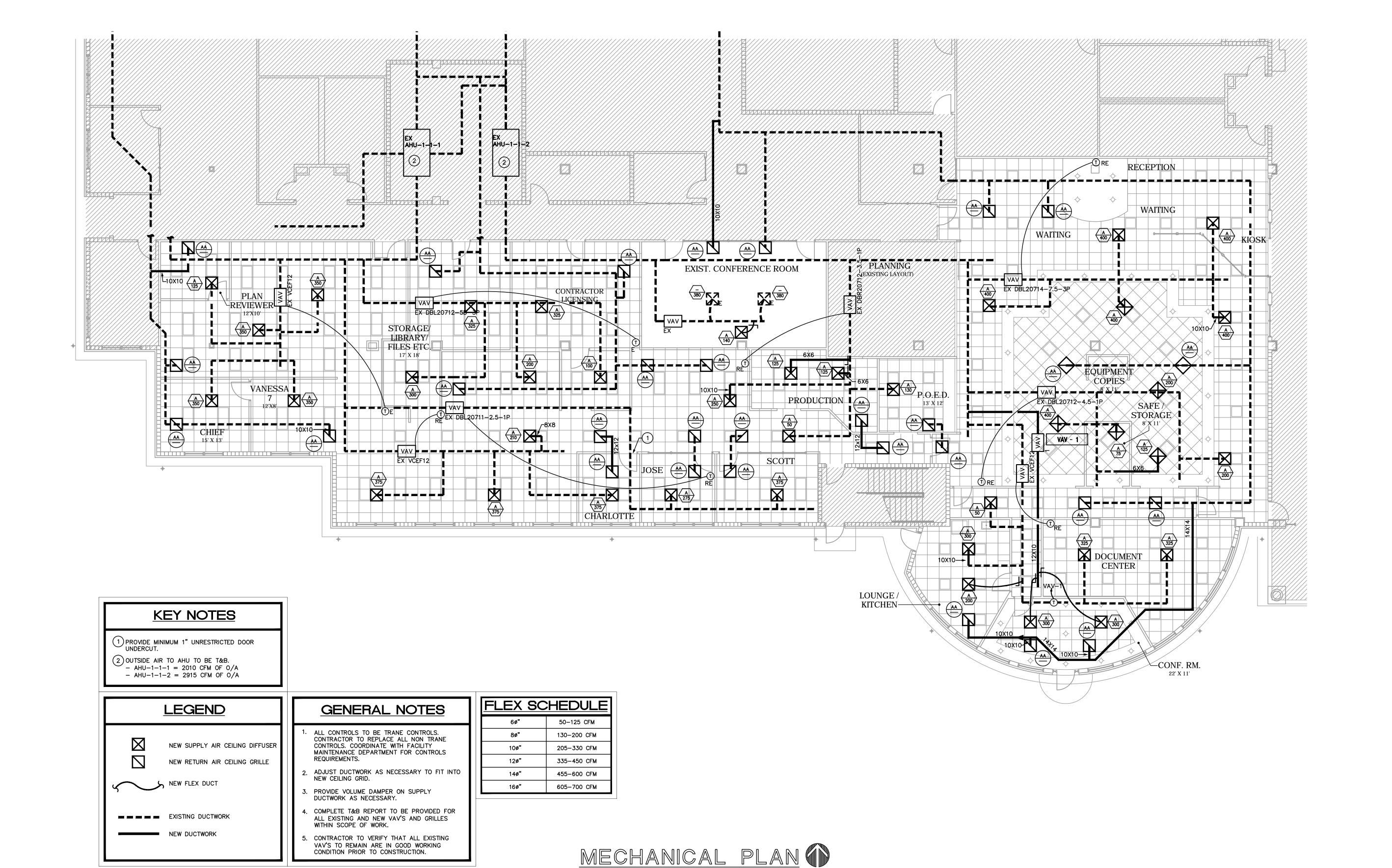
Consultant:

Architect:

Drawing Title: **MECHANICAL NOTES** 



NOTE: NOT ALL SYMBOLS MAY APPLY TO THESE PLAN.



INDIAN RIVER COUNTY ADMINISTRATION COMPLEX **ALTERATIONS** TO BUILDING 'A'

> BUILDING / FIRE **DEPARTMENTS**

1801 27th STREET VERO BEACH, FLORIDA 32960

Key Plan

Description:

DONADIO

& Associates, Architects P.A.

2001 9th Avenue, Suite 308 Vero Beach, FL 32960

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www.donadio-arch.com License No. AA0002238

Consultant:

Drawing Title: MECHANICAL PLAN



(	TAG	SUF	PPLY	AIR C	RILL	E SC	HEDUI	LE			
TAG	MANUF. & MODEL	FACE SIZE	NECK SIZE	MATERIAL	FRAME	FINISH	DAMPER	THROW	NC	CFM RANGE	NOTES
Α	TITUS/ TDCA-AA	24X24	SEE SCH.	ALUM.	NOTE #3	OFF WHITE	-	4-WAY	MAX. 30	SEE SCH.	1–6
` ′	EQUIVALENT MANUFAC	CTURER: ME	TALAIRE, PR	ICE, CARNE	S, T & B, 1	NAILOR					

PROVIDE SPIN-IN COLLAR AT TRUNK TO FLEX DUCT CONNECTION.

2. PROVIDE TYPICAL 4-WAY DIFFUSION, 2-WAY OR 3-WAY ONLY WHERE INDICATED ON PLAN 3. REFER TO ARCHITECT PLANS FOR CEILING TYPE.

4. CONTRACTOR TO COORDINATE FINAL SELECTION WITH ARCHITECT AND OWNER

5. FLEX DUCT SIZE TO BE SAME AS DIFFUSER NECK SIZE. 6. PROVIDE INSULATION ON THE BACK OF DIFFUSER IF IN UNCONDITIONED SPACE

> CONTRACTOR SHALL VERIFY WITH ARCHITECT AND TENANT/OWN PRIOR TO ANY PURCHASING OR INSTALLATION, IF A BULDING STANDARD HAS TO BE FOLLOWED REGARDING A SPECIFIC MODE OR MANUFACTURER AND SHALL BRING ANY DISCREPANCY TO THE ATTENTION OF ENGINEER.

	FLEX 9CH	HEDULE
	6ø"	50-125 CFM
	8ø"	130-200 CFM
	10ø"	205-330 CFM
NER,	12ø"	335-450 CFM
EL	14ø"	455-600 CFM
	16ø"	605-700 CFM

	AG FM	RE	TURN	AIR	GRILL	LE SC	CHEDU	JLE			
TAG	MANUF. & MODEL	FACE SIZE	NECK SIZE	MATERIAL	FRAME	FINISH	DAMPER	THROW	NC	CFM RANGE	NOTES
AA	TITUS/PAR-AA	24X24	SEE SCH.	ALUM.	NOTE #1	OFF WHITE	_	_	MAX. 30	SEE SCH.	1–3

(\*) EQUIVALENT MANUFACTURER: METALAIRE, PRICE, CARNES, T & B, NAILOR

#### **GENERAL NOTES:**

. REFER TO ARCHITECT PLANS FOR CEILING TYPE. 2. CONTRACTOR TO COORDINATE FINAL SELECTION WITH ARCHITECT AND

3. PROVIDE INSULATION ON THE BACK OF DIFFUSER IF IN UNCONDITIONED SPACE

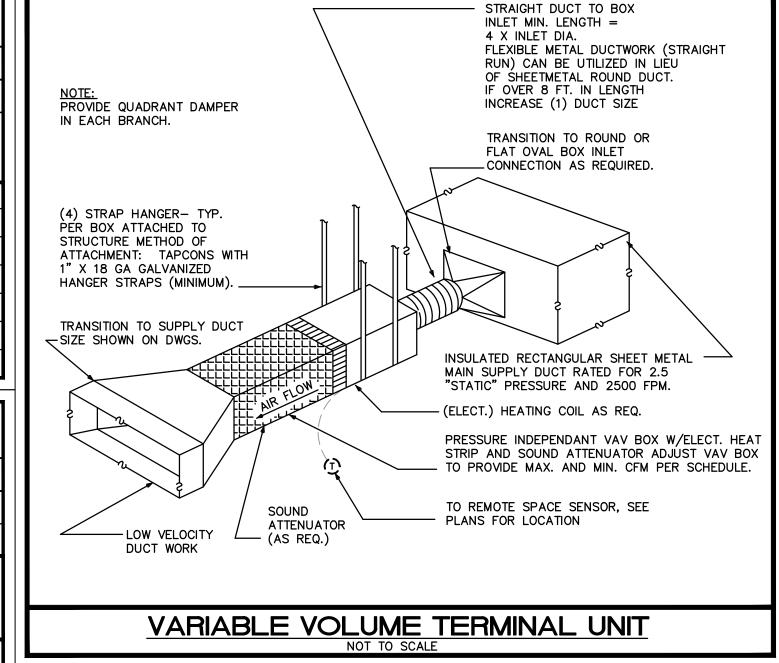
CONTRACTOR SHALL VERIFY WITH ARCHITECT AND TENANT OR OWNER, PRIOR TO ANY PURCHASING OR INSTALLATION, IF A BUILDING STANDARD HAS TO BE FOLLOWED REGARDING A SPECIFIC MODEL OR MANUFACTURER AND SHALL BRING ANY DISCREPANCY TO THE ATTENTION OF ENGINEER.
ANT DISCREPANCE TO THE ATTENTION OF ENGINEER.

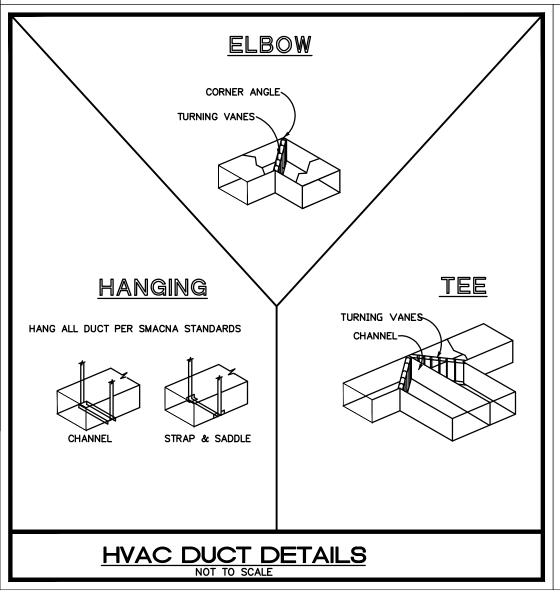
NECK SIZE	CFM RANGE	NECK SIZE	CFM RANGE
6X6	0-150 CFM	15X15	0-900 CFM
8X8	0-250 CFM	18X18	0-1350 CFM
10X10	0-400 CFM	22x22	0-2000 CFM
12X12	0-600 CFM		

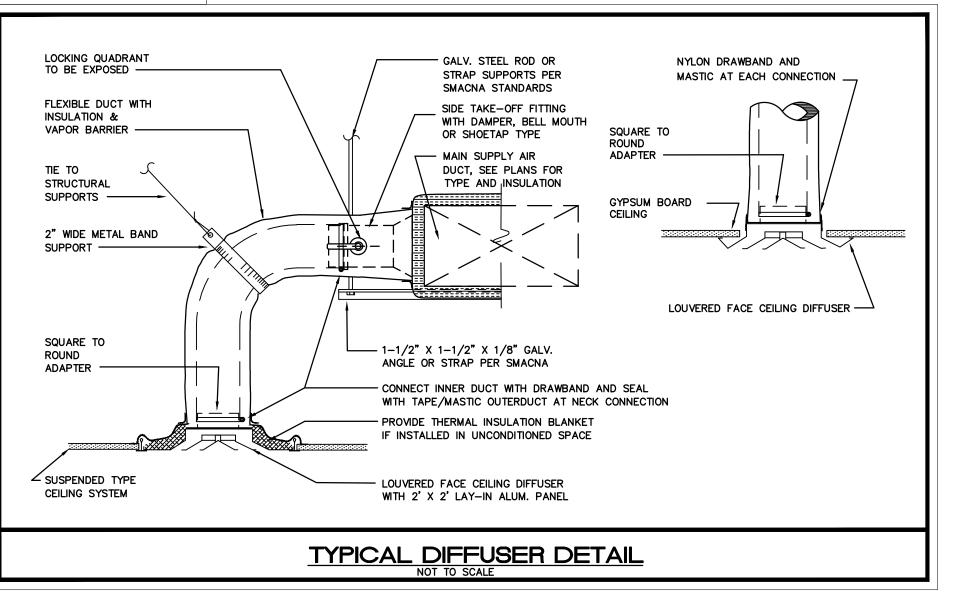
	VAV BOX UNIT SCHEDULE													
SELECTION	N DATA			PRIMARY A	IR DATA		HEATER D	ATA	GEN. DATA	\				
UNIT TAG	MANUF. & MODEL(*)	TYPE	INLET DIA.	MIN. CFM	MAX. CFM	MIN. Ps(")	KW	STEPS	VOLTAGE	LxHxW(*) W/ HEAT	WEIGHT(LB) W/ HEAT	LxHxW(") W/O HEAT	WEIGHT(LB) W/O HEAT	NOTES
VAV-1	TRANE VCEF	SGL. DUCT	10	350	1400	*	4.0	1	277/1/60	44X14X20	81	12X14X16	30	*

#### (\*) BOX MODEL IS "VCCF" FOR COOLING ONLY AND "VCEF" FOR COOLING WITH ELECTRIC HEATER

- 1. CONTROLS TO BE DDC, PROVIDE ROOM THERMOSTAT/SENSOR WITH OVERRIDE CAPABILITY. PROVIDE INTEGRATED CONTROL INTERFACE WITH EXISTING BUILDING EMS AS REQ'D. 2. POWER BY ELEC. CONTRACTOR, CONTROL WIRING BY MECH/CONTROL CONTRACTOR. CONTROL POWER TRANSFORMER BY VAV MANUFACTURER.
- 3. FOR LONGER DUCT CONNECTION TO BOX THAN RECOMMENDED INLET RUN, MAKE THE TAP FOR BOXES AT THE MAIN DUCTWORK SIZED FOR MAIN STATIC PRESSURE LOSS. REDUCE TAP DOWN TO BOXES INLET SIZE JUST BEFORE CONNECTION AND PROVIDE MIN. LENGTH OF DUCT TO INLET AS RECOMMENDED BY MANUFACTURER FOR PROPER PRESSURE READING
- . FOR BOXES WITH ELECTRIC HEATER, BOX SHALL BE FUSED BY MANUFACTURER IF REQUIRED MCA (AMPS) IS BELOW THE MIN. AVAILABLE SIZE OF COMMERCIAL BREAKER. CONTRACTOR SHALL COORDINATE PRIOR TO PURCHASING. PROVIDE ELECTRIC HEATER WITH MIN. 2 STAGES IF OVER 10 KW CAPACITY. . BOX ACTUATORS SHALL BE EITHER SPRING-RETURN TYPE TO ALLOW BOXES TO FAIL FULLY OPEN IN EMERGENCY (SMOKE EVACUATION) MODE OR COMBINATION CONTROLLER-ACTUATOR WITH INTEGRATED, PROGRAMMABLE LOGIC AND PROVIDED WITH AN EMERGENCY POWER CIRCUIT







INDIAN RIVER COUNTY ADMINISTRATION COMPLEX **ALTERATIONS** 

> BUILDING / FIRE **DEPARTMENTS**

TO BUILDING 'A'

1801 27th STREET VERO BEACH, FLORIDA 32960

Key Plan

10000.		
No.:	Date: [	Description:
Architect:		
		A D I O s, Architects P.A.

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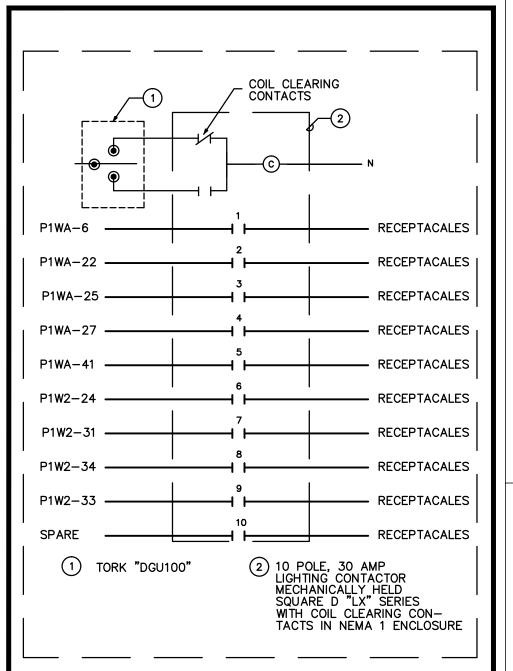
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Drawing Title:

MECHANICAL SCHEDULES

Consultant:





CONTACTOR "RC-1"

#### SCHEDULE OF EXISTING BRANCH CIRCUIT PANEL "PIWA" 225 AMP / 3 POLE MAIN CIRCUIT BREAKER VOLTAGE: 208/120V, 3ø, 4 WIRE SPEC: MOUNTING: EXISTING WIRE GND. COND. TRIP CKT. A PHASE B PHASE C PHASE CKT. TRIP COND. GND. WIRE DESCRIPTION | WIRE | GND. | COND. | IRIP | CK | KVA KVA KVA ISTING RECEPTACLE ISTING RECEPTACLE ISTING RECEPTACLES ISTING RECEPTACLE ISTING RECEPTACLES ISTING RECEPTACLES ISTING RECEPTACLE - - 20 17 - 21 0.7 18 20 - - EXISTING LIGHTING - - - 20 19 2.1 0.8 - 20 20 - - EXISTING LIGHTING #12 #12 1/2" 20 21 - 1.0 0.8 - 22 20 - - EXISTING LIGHTING #12 #12 1/2" 20 23 - - 1.0 0.9 24 20 - - EXISTING LIGHTING #12 #12 1/2" 20 25 1.0 0.8 - 26 20 - - EXISTING LIGHTING #12 #12 1/2" 20 25 1.0 0.8 - 26 20 - - EXISTING LIGHTING - - - 20 27 - - - 28 20 - - EXISTING LIGHTING - - - 20 29 - - 0.7 0.8 30 20 - - EXISTING LIGHTING - - - 20 31 0.8 0.8 - 32 20 - - EXISTING LIGHTING - - - 20 33 - 0.8 0.2 - 52 20 - - EXISTING LIGHTING - - - 20 33 - 0.8 0.2 - 52 EXISTING LIGHTING - - - 20 35 - - 20 8 1.0 36 20 1/2" #12 #12 MODULAR FURNITURE - - - 20 37 0.7 1.0 - 38 20 1/2" #12 #12 MODULAR FURNITURE - - - 20 39 - 1.4 1.0 - 40 20 1/2" #12 #12 MODULAR FURNITURE #12 #12 1/2" 20 41 - - SPARE 15.8 10.2 13.4 KVA PER PHASE 131.6 85.0 11.6 AMPS PER PHASE 131.6 AMPS PER PHASE 131.6 AMPS PER PHASE XISTING RECEPTACLES STING RECEPTACLES ECEPTION REC SPECTION DESK RE FFICE RECEPTACLE STING RECEPTACLES STING RECEPTACLES XISTING RECEPTACLES EXISTING RECEPTACLES WAITING RECEPTACLES

SCHEDUL	E	OF	E	XIS	TI	NG E	BRAN	ICH	C	IRC	CIUC	ΓР	AN	IEL "P1W2"
MAIN: 100 AMP / 3 POLE	MAIN C	CIRCUIT	BREAKE	ER .							VOLTA	GE:	208/12	OV, 3ø, 4 WIRE
SPEC: EXISTING MOUNTING: EXISTING											AIC S	YMM:	EXISTIN	G
DESCRIPTION	WIRE	GND.	COND.	TRIP	скт.	A PHASE KVA	B PHASE KVA	C PHASE KVA	скт.	TRIP	COND.	GND.	WIRE	DESCRIPTION
EXISTING REC	-	-	- 1	20	1	1.0 -			2	20	-	-	-	SPARE
EXISTING REC	-	-	- 1	20	3		1.0 1.0		4	20	_	-	-	EXISTING COPIER
EXISTING REC	-	_	-	20	5			1.0 -	6	20	_	-	_	SPARE
EXISTING REC	_	-	- 1	20	7	1.0 -			8	20	_	_	_	SPARE
EXISTING REC	_	_	-	20	9		1.0 -		10	20	_	-	_	SPARE
EXISTING REC	_	_		20	11			1.0 -	12	20			_	SPARE
SPARE	_	_	_	20	13	-			14	20	_	-	_	SPARE
SPARE	_	_		20	15				16	20	_		_	SPARE
SPARE	_	_	<b>–</b> –	20	17			-   -	18	20		-	_	SPARE
SPARE	_	_	<u> </u>	20	19	-   -			20	20	_	-	_	SPARE
SPARE	_	_		20	21		- 1.0	l —	22	20	1/2"	#12	#12	MODULAR FURNITURE
SPARE	_	_	<b>–</b> –	20	23			- 1.0	24	20	1/2"	#12	#12	MODULAR FURNITURE
KISOK	#12	#12	1/2"	20	25	1.0 1.0			26	9	3/4"	#12	2#12	COPIER DOCUMENT CENTER
KISOK	#12	#12	1/2"	20	27		1.0 1.0	l —	28	2				
SPARE	_	_	<u> </u>	20	29			- 2.8	30	730	3/4"	#10	2#10	IWH
POED REC	#12	#12	1/2"	20	31	1.0 2.8			32	2				
CONF RM REC	#12	#12	1/2"	20	33		1.2 1.0		34	20	1/2"	#12	#12	MODULAR FURNITURE
REF	#12	#12	1/2"	20	35			1.0 1.0	36	20	1/2"	#12	#12	MODULAR FURNITURE
BREAK RM REC	#12	#12	1/2"	20	37	1.0 1.0			38	20	1/2"	#12	#12	MODULAR FURNITURE
BREAK RM REC	#12	#12	1/2"	20	39		1.0 –	l —	40	20		_	_	SPARE
SPARE	_	_	_	20	41		-	_   _	42	20	_	_	-	SPARE
		_				8.4	8.2	7.4	KVA	PER F	PHASE			
						70.0	70.2	61.6	AMF	'S PER	PHASE		]	
							24.0		TOT	AL KVA	\			
													-	

<u>SCHEDUL</u>	<u>_E</u>	<u>OF</u>	= E	XIS	TI	NG E	BRAN	ICH	C	IRC		ΓР	AN	IEL "LCP1"
	,													
SPEC: EXISTING MOUNTING: EXISTING											AIC S	YMM:	EXISTIN	G
DESCRIPTION	WIRE	GND.	COND.	TRIP	скт.	A PHASE KVA	B PHASE KVA	C PHASE KVA	скт.	TRIP	COND.	GND.	WIRE	DESCRIPTION
EXISTING RECEPTACLES	-	_	-	20	1	1.0 1.0			2	20	_	_	_	EXISTING RECEPTACLES
EXISTING RECEPTACLES	-	_	_	20	3		1.0 1.0		4	20	_	_	_	EXISTING RECEPTACLES
EXISTING RECEPTACLES	_	_	_	20	5			1.0   1.0	6	20	-	_	_	EXISTING RECEPTACLES
EXISTING RECEPTACLES	-	_	_	20	7	1.0 1.0			8	20	_	_	-	EXISTING RECEPTACLES
EXISTING RECEPTACLES	-	_	_	20	9		1.0 –		10	20	-	_	_	SPARE
CONFERENCE ROOM RECEPTACLES	#12	#12	1/2"	20	11			0.4 -	12	20	_	_	_	SPARE
						4.0	3.0	2.4	KVA	PER F	PHASE			
						66.6	25.0	20.0	AMF	S PER	PHASE	•		
							9.4		TOT	AL KV	١		]	

	LIGHTII	NG CC	DE CO	OMPLIAN	CE CAL	CULATIO	NS
ROOM NAME	AREA (SQ.FT.)	NUMBER OF FIXTURES	FIXTURE TYPE	INPUT WATTS PER FIXTURE	TOTAL DESIGNED WATTS	ALLOWED LIGHTING POWER DENSITY	TOTAL ALLOWED WATTS
OFFICE	9200	75	A	30	2250	0.9	8280
		57	B	41.4	2360		
		35	C	23	805		
TOTALS	9200	_			5415		8280

#### ELECTRICAL SPECIFICATIONS

#### <u>PART 1 – GENERAL</u>

A. THE CONTRACTOR SHALL SUPPLY AND INSTALL ALL NEW ELECTRICAL WORK INDICATED.
CONSTRUCTION SHALL BE IN ACCORDANCE WITH DRAWINGS AND APPLICABLE SPECIFICATIONS.
IF A PROBLEM IS ENCOUNTERED IN COMPLYING WITH THIS REQUIREMENT, CONTRACTOR SHALL NOTIFY
THE ARCHITECT/ENGINEER AS SOON AS POSSIBLE AFTER DISCOVERY OF THE PROBLEM AND
SHALL NOT PROCEED WITH THAT PORTION OF THE WORK UNTIL ARCHITECT/ENGINEER HAS DIRECTED
CORRECTIVE ACTION TO BE TAKEN.

B. THE CONTRACTOR SHALL VISIT THE JOB SITE PRIOR TO BID AND FAMILIARIZE HIMSELF WITH ALL CONDITIONS AFFECTING ELECTRICAL AND COMMUNICATIONS INSTALLATION AND MAKE PROVISIONS AS TO THE COST THEREOF.

C. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRIC CODE (AS ADOPTED BY THE AUTHORITY HAVING JURISDICTION) AND ALL CODES AND ORDINANCES OF THE AUTHORITY HAVING JURISDICTION. THE SPECIFICATION, CODES AND STANDARDS LISTED BELOW ARE UTILIZED IN THIS PROJECT.

1. NATIONAL ELECTRICAL CODE (NFPA-70)

- CODE FOR SAFETY TO LIFE (NFPA\_101)
   STANDARD FOR THE INSTALLATION, MAINTENANCE AND USE OF LOCAL PROTECTIVE SIGNALING SYSTEMS (NFPA-72)
- 4. UNDERWRITERS' LABORATORIES (UL)
- 5. NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA)
- 5. AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)
  7. FEDERAL SPECIFICATION (FED. SPEC.)
- 8. INSULATED POWER CABLE ENGINEERS ASSOCIATION (IPCEA)
- 9. FLORIDA BUILDING CODE. FBC 2017 EDITION
  10. INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS (IEEE)
- 11. CITY OF BOYNTON BEACH BUILDING CODE. (AMENDMENTS TO FLORIDA BUILDING CODE FBC 2017)
  12. ADDITIONALLY, DESIGNS, WORK PRACTICES AND CONDITIONS MUST CONFORM WITH THE
- OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 (OSHA)

  D. DO NOT SCALE THE ELECTRICAL DRAWINGS. REFER TO ARCHITECTURAL PLANS AND ELEVATIONS
- FOR EXACT LOCATION OF ALL EQUIPMENT. CONFIRM WITH OWNER'S REPRESENTATIVE.

  E. IT IS NOT THE INTENT OF THESE PLANS TO SHOW EVERY MINOR DETAIL OF CONSTRUCTION. THE CONTRACTOR IS EXPECTED TO FURNISH AND INSTALL ALL ITEMS FOR A COMPLETE ELECTRICAL SYSTEM
- AND PROVIDE ALL REQUIREMENTS NECESSARY FOR EQUIPMENT TO BE PLACED IN PROPER WORKING ORDER.

  F. CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND WORKMANSHIP FREE FROM DEFECTS FROM A PERIOD OF NOT LESS THAN ONE YEAR FROM DATE OF ACCEPTANCE.
- G. CORRECTION OF ANY DEFECTS SHALL BE COMPLETED WITHOUT ADDITIONAL CHARGE AND SHALL INCLUDE REPLACEMENT OR REPAIR OF ANY OTHER PHASE OF THE INSTALLATION WHICH MAY HAVE BEEN DAMAGED
- THERE BY.

  H. ALL REQUIRED INSURANCE SHALL BE PROVIDED FOR PROTECTION AGAINST PUBLIC LIABILITY AND PROPERTY DAMAGE FOR THE DURATION OF THE WORK.
- CONTRACTOR SHALL PAY FOR ALL PERMITS, FEES, INSPECTIONS AND TESTING. CONTRACTOR TO OBTAIN PERMIT AND APPROVED SUBMITTALS PRIOR TO BEGINNING WORK OR ORDERING EQUIPMENT. THE TERM "PROVIDE" USED IN THE CONSTRUCTION DOCUMENTS AND SPECIFICATIONS SHALL MEAN THAT THE CONTRACTOR IS TO FURNISH, INSTALL AND CONNECT COMPLETE.

#### PART 2 — PRODUCTS

A. MINIMUM WIRE SIZE SHALL BE #12 A.W.G. (EXCEPT AS NOTED OTHERWISE FOR CONTROL WIRING). ALL CONDUCTORS SHALL BE 98% CONDUCTIVITY, COPPER WITH "THHN-THWN" INSULATION UNLESS OTHERWISE NOTED.

- B. ELECTRICAL METALLIC TUBING (EMT) SHALL BE OF BEST QUALITY STEEL, SMOOTH INSIDE AND OUT AND SHALL BE HOT-DIPPED GALVANIZED.
- C. OUTLET BOXES SHALL BE PRESSED STEEL IN DRY LOCATIONS, CAST ALLOY WITH THREADED HUBS

  1. IN WET OR DAMP LOCATIONS AND SPECIAL ENCLOSURES FOR OTHER CLASSIFIED AREAS.
- D. RIGID NONMETALIC CONDUIT SHALL BE SCHEDULE 40 PVC.
  E. ALL MATERIALS SHALL BE NEW AND BEAR UNDERWRITERS' LABELS WHERE APPLICABLE.
- F. PANELBOARDS:
  1. CURRENT CARRYING BUSES SHALL BE COPPER. GROUND BUS BARS SHALL BE COPPER.
- CORRENT CARRYING BUSES SHALL BE COPPER. GROUND BUS BARS SHALL BE COPPER.
   ALL CIRCUIT BREAKERS SHALL BE BOLT ON. PLUG—IN BREAKERS ARE NOT ACCEPTABLE.
   CIRCUIT BREAKERS USED AS SWITCHES IN FLUORESCENT OR HID LIGHTING CIRCUITS SHALL BE LISTED AND MARKED "SWD"
- 4. ALL CIRCUIT BREAKERS FEEDING MECHANICAL EQUIPMENT SHALL BE HACR TYPE.
- A.I.C. RATINGS SHALL BE AS INDICATED ON PANELBOARD SCHEDULES.
   ALL PANELBOARDS SHALL BE FURNISHED WITH PLASTIC LAMINATE NAMEPLATES WITH 1/4" ENGRAVED LETTERING FOR PANEL IDENTIFICATION.
- 7. ALL PANELBOARDS SHALL BE PROVIDED WITH TYPE-WRITTEN DIRECTORY OF BRANCH CIRCUIT DESIGNATIONS.
- G. DISCONNECT SWITCHES SHALL BE H.P. RATED, HEAVY DUTY, QUICK—MAKE, QUICK—BREAK. ENCLOSURES SHALL BE NEMA—1 FOR INDOOR LOCATIONS, NEMA 3R FOR OUTDOOR LOCATIONSOR AS OTHERWISE NOTED. H. MOTOR STARTERS SHALL BE MANUAL OR MAGNETIC AS INDICATED ON THE ELECTRICAL DRAWINGS, WITH OVERLOAD RELAYS IN EACH PHASE.
- WRING DEVICES (GENERAL PURPOSE RECEPTACLES AND WALL SWITCHES) COLOR SHALL BE COORDINATED WITH CLIENT

#### PART 3 - EXECUTION

- A. COLOR CODING OF CONDUCTORS SHALL BE AS FOLLOWS:
- 208/120 VOLTS, 3 PHASE, 4-WIRE SYSTEM: UNGROUNDED CONDUCTORS: 1 BLACK, 1 RED AND 1 BLUE. GROUNDED (NEUTRAL) CONDUCTOR; WHITE. GROUNDING CONDUCTORS SHALL BE GREEN.
   480/277 VOLT, 3-PHASE, 4-WIRE SYSTEM: UNGROUNDED CONDUCTORS: 1 BROWN, 1 YELLOW, AND 1 PURPLE. GROUNDED (NEUTRAL) CONDUCTORS; GREY. GROUNDING CONDUCTORS SHALL BE GREEN.
- 3. BRANCH CIRCUIT WIRING (#6 AND SMALLER) SHALL BE COLOR CODED BY CONTINUOUS INSULATION COLOR AND FEEDERS AND SERVICES (#4 AND LARGER) SHALL BE CODED AT ALL JUNCTION OR PULL POINTS (EXCEPT LB'S OR LBD'S) USING COLOR MARKERS OR PLASTIC TAPE MANUFACTURED FOR THE PURPOSE.
- B. WIRING METHODS

  1. ALL CONDUCTORS SHALL BE INSTALLED IN ELECTRICAL METALLIC TUBING (EMT) UNLESS

  OTHERWISE NOTED, SPECIFIED OR AS SPECIFICALLY PROHIBITED BY THE AUTHORITY HAVING
  JURISDICTION. ALL FITTINGS AND COUPLINGS FOR EMT CONDUIT SHALL BE ALL STEEL
  - JURISDICTION. ALL FITTINGS AND COUPLINGS FOR EMT CONDUIT SHALL BE ALL STEEL RAIN TIGHT COMPRESSION TYPE OR ALL STEEL CONCRETE TIGHT SET SCREW TYPE.

    2. SCHEDULE 40 PVC CONDUIT, WITH FITTINGS AND COUPLINGS APPROPRIATE FOR THE USE, SHALL
  - BE INSTALLED UNDERGROUND OR BELOW SLABS ON GRADE.

    3. TYPE MC CABLE WITH ALUMINUM ARMOR AND INTERNAL GROUND IS ACCEPTABLE FOR USE AS GENERAL BRANCH CIRCUIT WIRING FOR CIRCUITS 20 AMPERES OR LESS AND CONCEALED IN WALLS OR ABOVE SUSPENDED CEILING AND AS APPROVED BY THE AUTHORITY HAVING
- C. ELECTRICAL SYSTEM SHALL BE COMPLETE AND EFFECTIVELY GROUNDED AS REQUIRED BY THE LATEST
- EDITION OF THE N.E.C. AND LOCAL CODES.

  D. ALL WORK SHALL BE PERFORMED BY A LICENSED ELECTRICAL CONTRACTOR IN A FIRST CLASS WORKMANLIKE MANNER. THE COMPLETED SYSTEM SHALL BE FULLY OPERATIVE AND ACCEPTED BY
- E. ALL WORK SHALL BE COORDINATED WITH OTHER TRADES TO AVOID INTERFERENCE WITH THE PROGRESS OF CONSTRUCTION.
- OF CONSTRUCTION.

  F. THE ELECTRICAL INSTALLATION SHALL MEET ALL STANDARD REQUIREMENTS OF POWER AND TELEPHONE COMPANIES, AND SHALL BE FULLY COORDINATED WITH THEM PRIOR TO COMMENCEMENT OF WORK.

  G. PROVIDE AND INSTALL CONDUIT, CONDUCTORS, PULL WIRES, BOXES, COVER PLATES, AND WIRING
- DEVICES, FOR ALL OUTLETS AS INDICATED.

  H. MATERIALS, PRODUCTS, AND EQUIPMENT, INCLUDING ALL COMPONENTS THEREOF, SHALL BE NEW AND SUCH AS APPEAR ON THE ULLIST OF APPROVED ITEMS AND SHALL MEET OR EXCEED THE
- REQUIREMENTS OF NEC, NEMA, AND IECE.

  CONTRACTOR SHALL SUBMIT AT LEAST FIVE (5) SETS OF SHOP DRAWINGS OR CUT SHEETS OF LIGHTING
  FIXTURES, SWITCHES, AND OTHER ELECTRICAL ITEMS FOR APPROVAL BY ENGINEER/ARCHITECT.

  CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING REQUIRED OF HIS WORK.
- K. ALL LAY-IN LIGHTING FIXTURES SHALL BE SECURED TO THE SUSPENDED CEILING GRID AT EACH CORNER.
   L. CONTRACTOR SHALL COORDINATE WITH MECHANICAL DRAWINGS AND PROVIDE ALL NECESSARY CONTROL WIRING.
- M. ALL ELECTRICAL POWER WIRING FOR THE HVAC SYSTEM INCLUDING WIRING THRU LINE VOLTAGE CONTROL DEVICES SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
- N. THE CONTRACTOR SHALL CONFIRM WITH THE ELECTRICAL UTILITY COMPANY ANY AND ALL REQUIREMENTS SUCH AS: METERING EQUIPMENT REQUIREMENTS AND METERING EQUIPMENT LOCATION, TRANSFORMER SIZE AND LOCATION OR SERVICE POINT, CONDUIT ENTRY AND LUG SIZE RESTRICTIONS. THE CONTRACTOR SHALL SCHEDULE ALL REQUIRED DOWN TIME FOR THE OWNERS CONFIRMATION.

  ANY CONFLICTS AND DESCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE
- O. PROCEEDING WITH ANY WORK.

  PER NEC 210.8(B)(2) ALL 15— AND 20—AMPERE, 125—VOLT RECEPTACLES IN NONDWELLING—TYPE KITCHENS TO BE GFCI PROTECTED.

P.BRANCH CIRCUIT CONDUCTORS SHALL BE SIZED FOR A MAXIMUM VOLTAGE DROP OF 3% DESIGN LOAD. FBC 2017 FBC ENERGY CONSERVATION SECTION 405.7.3.

Q. FEEDER CONDUCTORS SHALL BE SIZED FOR A MAXIMUM OF 2% VOLTAGE DROP PER 405.7.3.

#### **ELECTRICAL SHEET INDEX**

E0.1	ELECTRICAL NOTES, LEGEND & INDEX
E2.1	LIGHTING PLAN
E3.1	POWER PLAN

#### ELECTRICAL LEGEND

- 7 TELEPHONE OUTLET WITH 3/4" CONDUIT STUBBED OUT FROM WALL 6" ABOVE CEILING. MOUNT 18" A.F.F. TO CENTER LINE OF OUTLET UNLESS OTHERWISE NOTED.
- DATA OUTLET WITH 3/4" CONDUIT STUBBED OUT FROM WALL 6" ABOVE CEILING. MOUNT 18" A.F.F. TO CENTER LINE OF OUTLET UNLESS OTHERWISE NOTED.
- TELEPHONE/DATA OUTLET WITH 3/4" CONDUIT STUBBED OUT FROM WALL 6" ABOVE CEILING. MOUNTED ABOVE COUNTER, SEE ARCHITECTURAL DRAWING FOR SPECIFIC REQUIREMENTS.
- TELEPHONE/DATA OUTLET WITH 3/4" CONDUIT STUBBED OUT FROM WALL 6" ABOVE CEILING. MOUNT 18" A.F.F. TO CENTER LINE OF OUTLET UNLESS OTHERWISE NOTED.
- TELEPHONE/DATA OUTLET WITH 3/4" CONDUIT RUN TO THE NEAREST STUD WALL AND STUBBED OUT FROM WALL 6" ABOVE CEILING. PROVIDE BRASS COVER PLATE AND
- TELEVISION OUTLET WITH 1-1/4" CONDUIT STUBBED OUT FROM WALL 6" ABOVE CEILING.
  MOUNT AT 18" A.F.F. TO CENTER LINE OF OUTLET UNLESS OTHERWISE NOTED.
- 20 AMP SINGLE RECEPTACLE (NEMA 5-20R) MOUNTED AT 18" A.F.F. TO CENTER LINE OF OUTLET UNLESS NOTED OTHERWISE.
- 20 AMP DUPLEX RECEPTACLE (NEMA 5-20R) MOUNTED AT  $18^{\prime\prime}$  A.F.F. TO CENTER LINE OF OUTLET UNLESS NOTED OTHERWISE.
- 20 AMP QUADRUPLEX RECEPTACLE (NEMA 5-20R) MOUNTED AT 18" A.F.F. TO CENTER LINE OF OUTLET UNLESS NOTED OTHERWISE.
- MOUNT AT 18" A.F.F. TO CENTER LINE OF OUTLET. UNLESS NOTED OTHERWISE.

  20 AMP DUPLEX RECEPTACLE (NEMA 5-20R) MOUNTED ABOVE COUNTER
- SEE ARCHITECTURAL DRAWINGS FOR SPECIFIC REQUIREMENTS.

  20 AMP DUPLEX RECEPTACLE (NEMA 5-20R) WITH ISOLATED GROUND, MOUNT AT 18" A.F.F.
- TO CENTERLINE OF OUTLET UNLESS OTHERWISE NOTED.

  20 AMP QUADRUPLEX RECEPTACLE (NEMA 5-20R) WITH ISOLATED GROUND, MOUNT AT 18"
  A.F.F. TO CENTERLINE OF OUTLET UNLESS OTHERWISE NOTED.
- 20 AMP DUPLEX RECEPTACLE (NEMA 5-20R), RECESS FLOOR MOUNTED. PROVIDE BRASS COVER PLATE AND CARPET FLANGE.
- 20 AMP DUPLEX RECEPTACLE (NEMA 5-20R), CEILING MOUNTED.
- SPECIAL-PURPOSE RECEPTACLE
- ) JUNCTION BOX
- J<sub>P</sub> SINGLE GANG JUNCTION BOX FOR POWER CONNECTION TO MODULAR FURNITURE SYSTEM INSTALL IN EXACT MANNER AS DIRECTED BY FURNITURE SUPPLIER.
- DOUBLE GANG JUNCTION BOX FOR TELEPHONE/DATA CONNECTION TO MODULAR FURNITURE SYSTEM. INSTALL IN EXACT MANNER AND LOCATION AS DIRECTED BY FURNITURE SUPPLIER. EXTEND (2) 3/4" EMPTY CONDUITS FROM JUNCTION BOX TO ABOVE CEILING AND TERMINATE WITH INSULATING BUSHING 6" FROM WALL.
- TELE/POWER POLE FOR TELEPHONE/DATA/POWER CONNECTION TO MODULAR FURNITURE 8 WIRE SYSTEM (SEE DETAIL THIS SHEET). INSTALL IN EXACT MANNER AND LOCATION
- AS DIRECTED BY FURNITURE SUPPLIER, WIREMOLD CATALOG # 25DTP-4D W/IVORY FINISH.

  SPECIAL PURPOSE RECEPTACLE MOUNTED BELOW RAISE FLOOR.
- EXHAUST FAN. SEE MECHANICAL DRAWINGS FOR SPECIFICATIONS.
- SINGLE POLE, 20 AMP, SWITCH. MOUNT 46" A.F.F. TO CENTERLINE OF SWITCH UNLESS
- OTHERWISE NOTED.  $\$_3$  3-WAY, 20 AMP, SWITCH. MOUNT 46" A.F.F. TO CENTERLINE OF SWITCH UNLESS
- OTHERWISE NOTED.
- $\$_{\text{D}}$  Single pole, 20 amp, switch with dimmer. Mount 46" a.f.f. to centerline of switch unless otherwise noted.
- $\$_{M}$  motor rated switch
- VACANCY SENSOR SWITCH, WATTSTOPPER, MOUNT 46" A.F.F. TO CENTERLINE OF SWITCH UNLESS OTHERWISE NOTED.
- \$ TWO POLE, 30 AMP SWITCH. MOUNT ADJACENT EQUIPMENT TO BE CONTROLLED.
- FACTORY MOUNTED DISCONNECT/STARTER (SEE MECHANICAL SCHEDULE)
- FUSIBLE DISCONNECT SWITCH A = POLES, B= FRAME SIZE, C= FUSE RATING
- Arr A 
  Arr B fusible motor starter disconnect switch A = poles, B= nema size, C= fuse rating
  - GROUNDING ELECTRODE & CONDUCTOR SYSTEM
- TRANSFORMER
- ELECTRICAL PANELBOARD
- TELEPHONE WOOD BACKBOARD
- WP WEATHERPROOF
- /C TIME CLOCK
- RE RELOCATED
- E EXISTING TO REMAIN
- A.F.F. ABOVE FINISH FLOOR
- CEILING MOUNTED DUAL TECHNOLOGY MOTION SENSOR BY WATTSTOPPER.
- CEILING MOUNTED LOW VOLTAGE DUAL TECHNOLOGY MOTION SENSOR BY WATTSTOPPER.
- CARD ACCESS. COORDINATE WITH TENANT.

Project:
INDIAN RIVER COUNTY
ADMINISTRATION
COMPLEX
ALTERATIONS
TO BUILDING 'A'
FOR
BUILDING / FIRE
DEPARTMENTS

1801 27th STREET
VERO BEACH FLORIDA 32960
Key Plan

| Issues:
| No.: Date: Description: |

Architect:

DONADIO

& Associates, Architects P.A.

2001 9th Avenue, Suite 308

Vero Beach, FL 32990
Tel.772.794.3290
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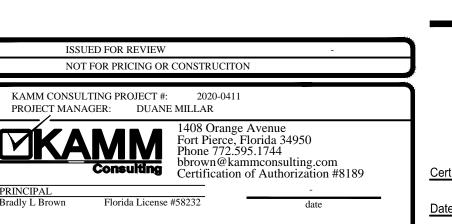
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Consultant:

Drawing Title:

ELECTRICAL NOTES



Drn:

JEM
Chd:

HC
Project No.:

2019-48
Sheet No.:

Cert. No.:

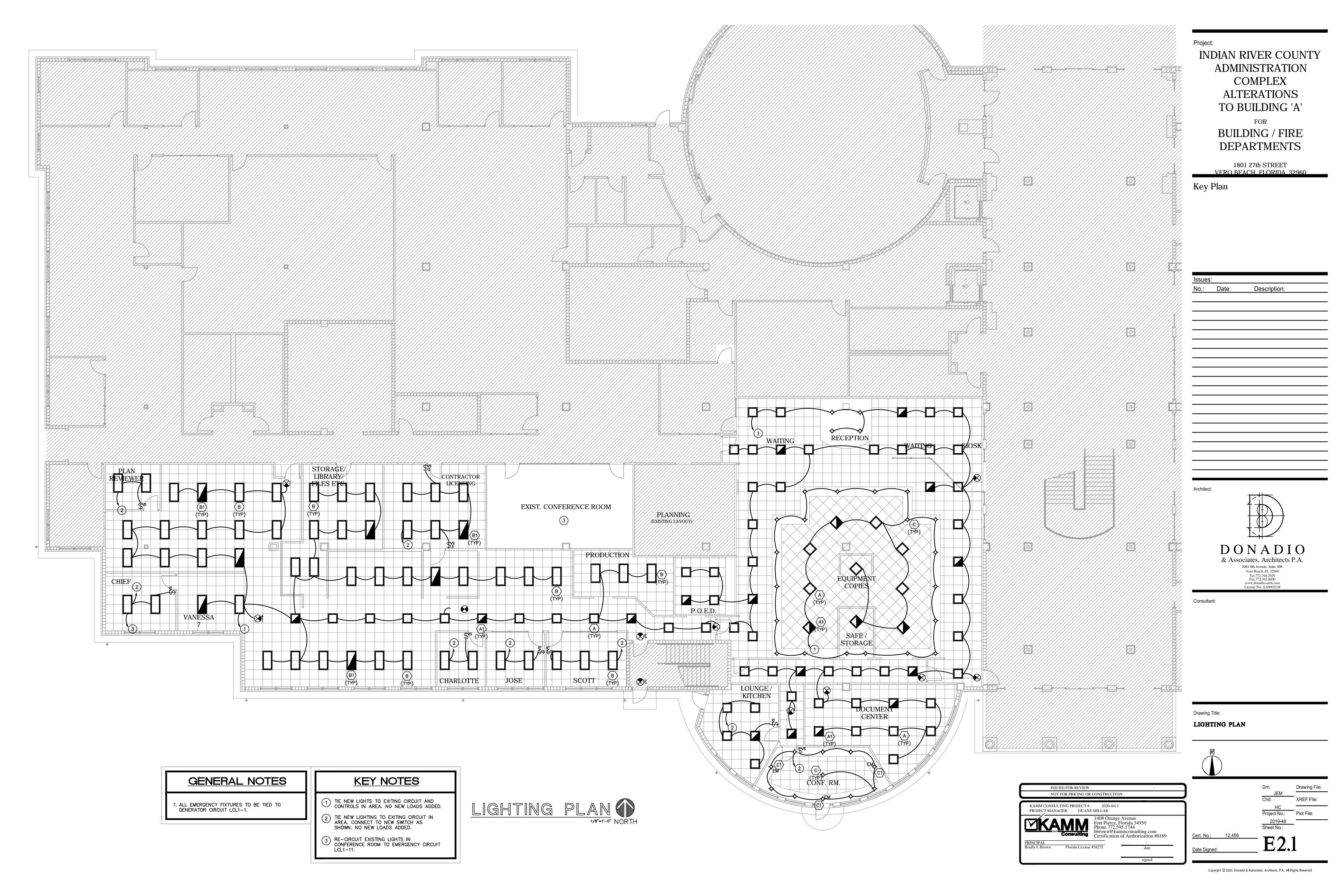
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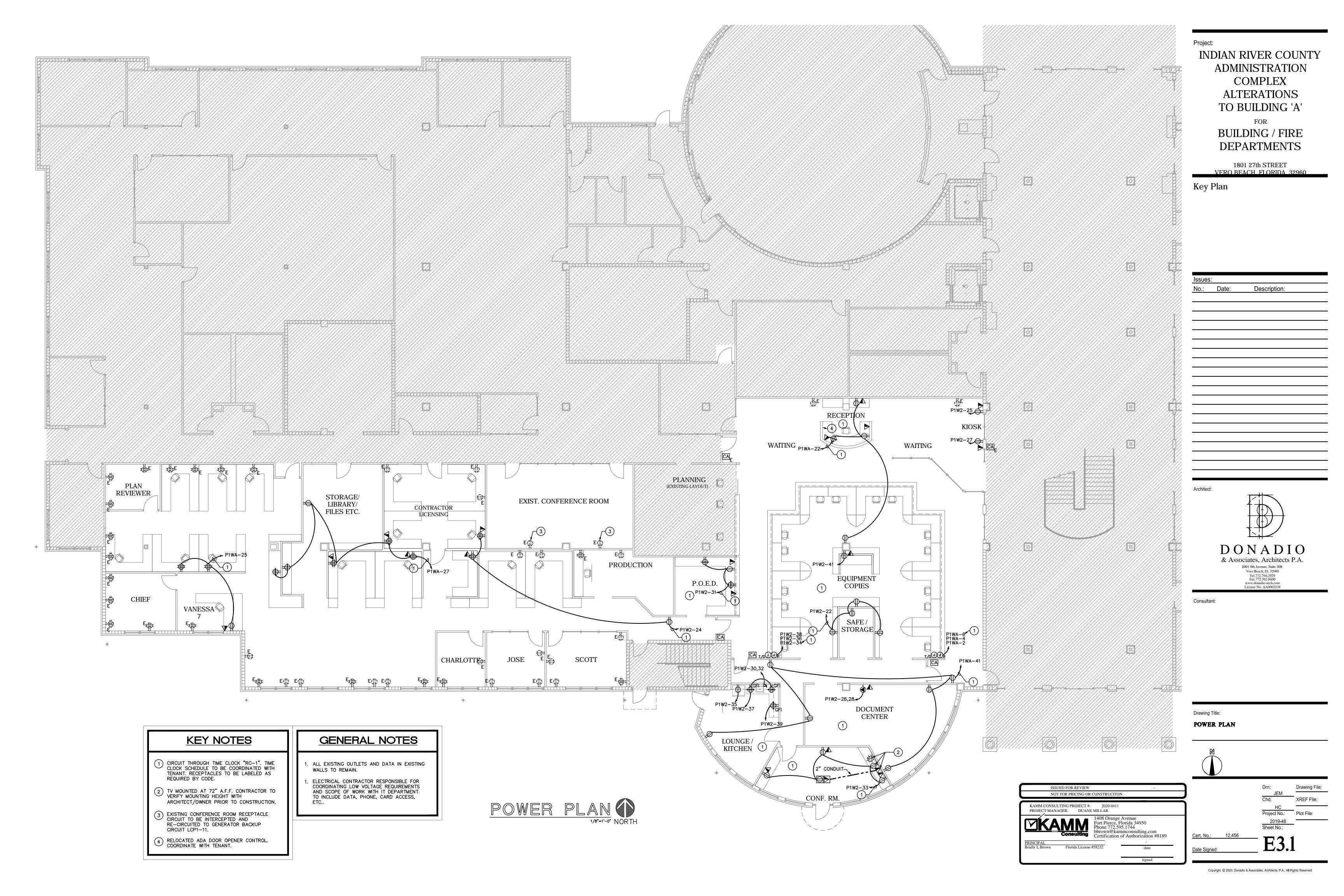
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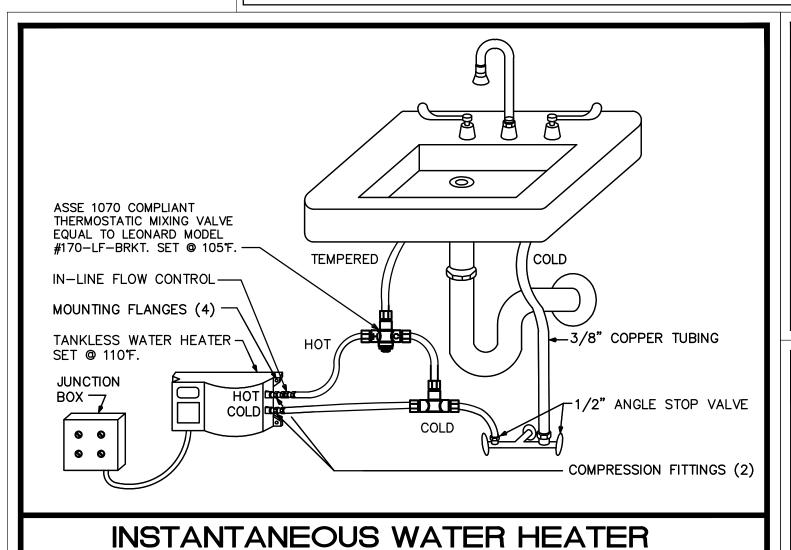
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	TYPICAL PLUMBING FIXTURE CONNECTION SCHEDULE					
TYPE	SOIL / WASTE	VENT	TRAP	CW	HW	REMARKS
COFFEE MAKER/WATER FILTER	-	-	_	½"	-	PROVIDE WITH VACUUM BREAKER.
SINK	2"	2"	1½"	½"	1/2"	1.0 GPM AT 60 PSI MAXIMUM.
REFRIGERATOR	_	ı	1	½"	1	PROVIDE WITH VACUUM BREAKER.
WATER CLOSET (FLUSH VALVE)	3" OR 4"	2"	INTEGRAL	1"	-	1.28 GALLONS PER FLUSHING CYCLE MAXIMUM.

NOTE: PLUMBING FIXTURE CONNECTION SCHEDULE IS SHOWN FOR CONVENIENCE ONLY. PLUMBING CONTRACTOR TO CONFIRM FINAL PLUMBING FIXTURE CONNECTION SIZES WITH PLUMBING FIXTURE MANUFACTURER'S REQUIREMENTS. ALL FIXTURES SHALL COMPLY WITH REQUIREMENTS OF LOCAL WATER-USE EFFICIENCY ORDINANCES.



CONNECTIONS FOR PUBLIC LAVATORIES

NOT TO SCALE

#### **KEY NOTES**

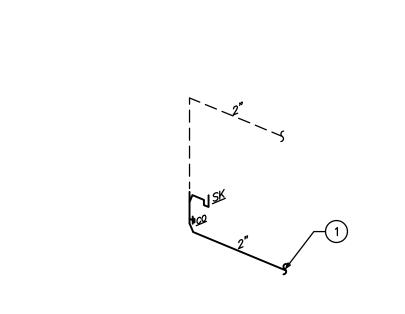
(1) TIE NEW SANITARY LINE TO EXISTING IN AREA. CONTRACTOR TO FIELD VERIFY LOCATION AND SIZE PRIOR TO CONSTRUCTION.

TIE NEW DOMESTIC LINE TO EXISTING IN AREA. CONTRACTOR TO FIELD VERIFY LOCATION AND SIZE PRIOR TO CONSTRUCTION.

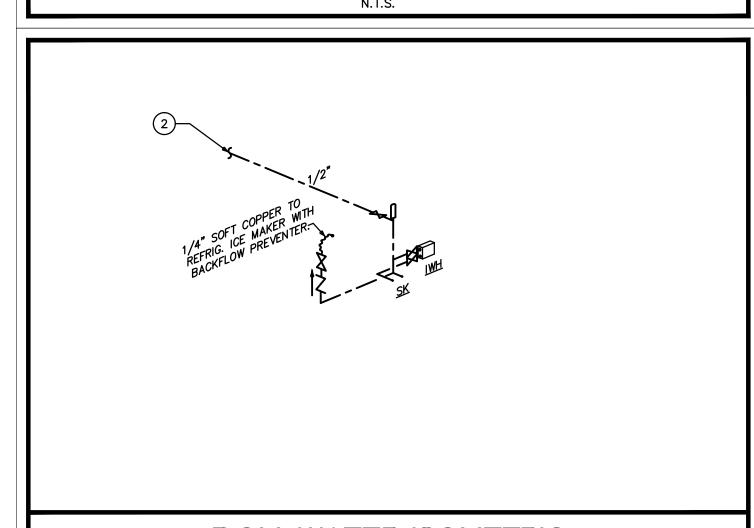
#### PLUMBING FIXTURE SCHEDULE

SINGLE STAINLESS STEEL SINK, 25 X 22 ELKAY MODEL #ELUHAD19165S WITH A ESSA SINGLE HANDLE TOUCH TECH FAUCET MODEL #9113T-BL-DTS WITH A 5-11/16" SPREAD GOOSENECK WITH 4" BLADES BLADE FAUCET HANDLES. WITH INSINKERATOR AND FAUCET RO SYST INDULGE MODEL F-HZ3300MBLK FANKLESS WATER HEATER SHALL BE CROMEMITE MODEL # SR-30 208V, 1 PHASE, 6.2 KW.

- FIXTURES SHALL BE AS SHOWN OR EQUAL. - ALL FIXTURES SHALL COMPLY WITH TABLE 604.4 OF FBC 2017
- ALL FIXTURE TRIM PACKAGES INCLUDING BUT NOT LIMITED TO TRAP, ANGLE STOP, FLUSH VALVE, SUPPLY TUBES, AND CLEANOUT COVER PLATES SHALL BE OF THE SAME FINISH AS THE ABOVE SPECIFIED FAUCET AND PER ARCHITECTURAL FINISH SCHEDULE.
- ALL FIXTURES SHALL BE ROUGHED IN PER MANUFACTURER CUT SHEET TO MAINTAIN UNIFORMITY. - GENERAL CONTRACTOR TO CONFIRM BASE STANDARD SINK AND FAUCET SPECIFICATIONS.



#### SANITARY ISOMETRIC



#### DOM. WATER ISOMETRIC

OVER 251 TONS & LARGER OF REFRIGERATION

CONDENSATE DRAIN PIPE SIZING HVAC EQUIPMENT CAPACITY MINIMUM CONDENSATE PIPE DIAMETER UP TO 20 TONS OF REFRIGERATION OVER 21 TONS TO 40 TONS OF REFRIGERATION 1-1/4" OVER 41 TONS TO 60 TONS OF REFRIGERATION 1-1/2" OVER 61 TONS TO 100 TONS OF REFRIGERATION **3"** OVER 101 TONS TO 250 TONS OF REFRIGERATION

4"

#### PLUMBING NOTES

- THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY FOR THE INSTALLATION OF A COMPLETE SCOPE OF WORK. ALL WORKMANSHIP AND MATERIALS SHALL BE IN STRICT ACCORDANCE WITH THE FLORIDA BUILDING CODE 5th EDITION (2017) - PLUMBING. APPLICABLE LOCAL CODES, RULES, AND ORDINANCES.
- 2. PLUMBING CONTRACTOR SHALL VISIT THE JOB SITE AND THOROUGHLY FAMILIARIZE HIMSELF WITH ALL EXISTING CONDITIONS.
- 3. ALL MATERIALS SHALL BE NEW AND OF GOOD QUALITY.
- 4. ALL WORK SHALL BE PERFORMED BY A LICENSED PLUMBING CONTRACTOR IN A FIRST CLASS WORKMANLIKE MANNER. THE COMPLETED SYSTEM SHALL BE FULLY-OPERATIONAL. ALL EXCAVATION AND BACKFILL AS REQUIRED FOR THIS PHASE OF CONSTRUCTION SHALL BE A PART OF THIS
- REQUIRED INSURANCE SHALL BE PROVIDED BY THE PLUMBING CONTRACTOR FOR PROTECTION AGAINST PUBLIC LIABILITY AND PROPERTY DAMAGE FOR THE DURATION OF THE WORK.
- PLUMBING CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS, FEES, INSPECTIONS AND TESTS. PLUMBING CONTRACTOR SHALL OBTAIN PERMIT AND APPROVED SUBMITTALS PRIOR TO BEGINNING WORK OR ORDERING EQUIPMENT. PLUMBING CONTRACTOR MUST BE PRESENT FOR ALL INSPECTIONS OF HIS WORK BY REGULATORY AUTHORITIES.
- CONTRACTOR SHALL SUBMIT TO ARCHITECT/ENGINEER, FOR REVIEW & APPROVAL, FIVE (5) SETS OF MANUFACTURER'S CUT SHEETS FOR EACH FIXTURE, PIPING/FITTING MATERIAL AND EQUIPMENT ITEM WITH ASSOCIATED CONTROLS, THAT ARE INCLUDED IN THE CONTRACT.
- 8. DRAWINGS ARE DIAGRAMMATIC. DO NOT SCALE FOR THE EXACT LOCATION OF FIXTURES, PIPING, EQUIPMENT, ETC.
- 9. ALL WORK SHALL BE COORDINATED WITH OTHER TRADES TO AVOID INTERFERENCE WITH THE PROGRESS OF CONSTRUCTION. REPORT ANY DISCREPANCY TO ARCHITECT/ENGINEER PRIOR TO
- 10. VERIFY LOCATION, SIZE, DIRECTION OF FLOW AND INVERT ELEVATIONS OF ALL EXISTING UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION. ADVISE ARCHITECT/ENGINEER OF ANY DISCREPANCIES.
- 11. WATER DISTRIBUTION PIPING ABOVE AND BELOW GROUND SHALL BE TYPE "L" COPPER. ALTERNATE PIPING & FITTING MATERIALS MAY BE USED IN ACCORDANCE WITH FLORIDA BUILDING CODE 5th EDITION (2017) - PLUMBING, TABLES 605.3, 605.4 & 605.5, WHEN APPROVED BY ENGINEER OF RECORD AND LOCAL AUTHORITY HAVING JURISDICTION. PROVIDE ALTERNATE FOR CPVC PIPING & FITTINGS EQUAL TO LUBRIZOL CORZAN OR FLOW-GUARD GOLD. PROVIDE ALTERNATE FOR PEX TYPE 'A' PIPING & FITTINGS EQUAL TO UPONOR. ALTERNATES ARE PERTINENT FOR WATER SERVICES KNOWN OR DETERMINED TO HAVE ACIDIC CHARACTERISTICS OR OTHER PARTICULAR CIRCUMSTANCES AS DEEMED APPROPRIATE BY DIRECTIVE FROM THE OWNER. CONTRACTOR SHALL PERFORM A WATER TEST TO DETERMINE WATER CHEMISTRY PRIOR TO ANY WORK OR PIPING INSTALLATION AND SHALL SUBMIT TEST RESULTS TO THE ARCHITECT/ENGINEER FOR REVIEW AND APPROVAL. DISINFECTION OF POTABLE WATER SYSTEM SHALL COMPLY WITH FLORIDA BUILDING CODE 5th EDITION (2017) -PLUMBING, SECTION 610. ALL WATER PIPING & FITTINGS SHALL BE OF DOMESTIC MANUFACTURE; SPECIFICALLY IN THE UNITED STATES OF AMERICA.
- 12. SOIL, WASTE, VENT, AND RAINWATER (DWV) PIPING & FITTINGS SHALL BE CAST IRON OR PVC, WHERE CODE ALLOWS. PVC MAY NOT BE USED THRU RATED ASSEMBLIES OR IN PLENUMS. PVC PIPING SHALL BE SOLID-CORE ONLY; FOAM-CORE PIPING SHALL NOT BE ACCEPTED. CAST IRON PIPING & FITTINGS SHALL BEAR THE CISPI-301 MARK. ALL DWV PIPING & FITTINGS SHALL BE OF DOMESTIC MANUFACTURE; SPECIFICALLY IN THE UNITED STATES OF AMERICA.
- 13. ALL FIXTURES MUST BE PROVIDED WITH READILY ACCESSIBLE ANGLE STOPS AND APPROPRIATELY MARKED ACCESS PANELS (WHERE REQUIRED). COORDINATE LOCATIONS WITH GENERAL CONTRACTOR
- 14. PROVIDE APPROVED WATER HAMMER ARRESTORS FOR ALL (GROUP) PLUMBING FIXTURES, SIZED &
- 15. PROVIDE DIELECTRIC COUPLINGS OR FLANGES BETWEEN ALL DISSIMILAR METALS IN PIPING AND
- EQUIPMENT CONNECTIONS.
- 16. ISOLATE COPPER PIPING FROM METALLIC HANGERS OR SUPPORTS WITH ISOLATOR PADS OR

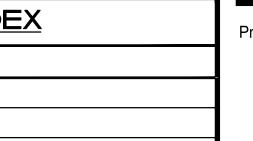
LOCATED PER MANUFACTURER'S INSTALLATION INSTRUCTIONS & PDI-WH201.

- 17. ALL FIRE RATED FLOOR AND WALL PENETRATIONS SHALL BE PROPERLY PROTECTED FROM FIRE, SMOKE AND WATER PENETRATION BY FILLING ANNULAR SPACE BETWEEN PIPING AND SLEEVES WITH INTUMESCENT CAULK, TO ACHIEVE THE SAME RATING AS WALLS OR FLOORS, AS PART OF THE PLUMBING CONTRACTOR'S WORK.
- 18. PLUMBING CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND WORKMANSHIP FREE FROM DEFECTS FOR A PERIOD OF NOT LESS THAN ONE (1) YEAR FROM DATE OF ACCEPTANCE BY OWNER. CORRECTION OF ANY DEFECTS SHALL BE COMPLETED WITHOUT ADDITIONAL CHARGE AND SHALL INCLUDE REPLACEMENT OR REPAIR OF ANY OTHER PHASE OF THE INSTALLATION WHICH MAY HAVE BEEN DAMAGED.
- 19. PROVIDE ACCESS PANELS FOR ALL CONCEALED VALVES. ACCESS PANELS IN RATED WALLS SHALL MAINTAIN THE SAME RATING AND SHALL MATCH THE FINISH OF THE WALL IN WHICH IT IS INSTALLED.
- 20. PROVIDE COMBINATION CLEANOUT PLUG AND COVER PLATE OR ACCESS PANEL FOR ALL WALL CLEANOUTS. FINISH TO MATCH NEARBY FIXTURE TRIM.
- 21. NO COMBUSTIBLE MATERIAL SHALL BE INSTALLED IN MECHANICAL ROOMS NOR IN CEILING SPACES WHERE USED AS RETURN AIR PLENUMS.
- 22. NO WATER, SANITARY OR DRAINAGE PIPING SHALL BE INSTALLED IN ELECTRICAL OR ELEVATOR
- 23. ALL CONTROL VALVES SHALL BE TAGGED AND MARKED. A REPRODUCIBLE DIAGRAM LOCATING ALL
- VALVES SHALL BE FURNISHED FOR OWNER/OPERATOR. 24. CONDENSATE DRAIN PIPING SHALL BE TYPE "L" COPPER WITH ARMAFLEX INSULATION AND A
- VAPOR-BARRIER JACKET PER FLORIDA BUILDING CODE 5th EDITION (2017) ENERGY CONSERVATION, TABLE C403.2.8. PVC WITHOUT INSULATION IS ACCEPTABLE FOR RISERS AND BELOW GRADE PIPING. WHEN USED IN A RETURN AIR PLENUM, PVC PIPING WITH INSULATION IS ACCEPTABLE IN LOCATIONS WHERE ALLOWED BY LOCAL CODES. CONDENSATE PIPING SHALL NOT DRAIN ONTO THE ROOFING SYSTEM NOR ANY OF ITS COMPONENTS. CONDENSATE PIPING ARRANGEMENT IS EXEMPT FROM MINIMUM EQUIPMENT CLEARANCE REQUIREMENTS PER FLORIDA BUILDING CODE 5th EDITION (2017), SECTION 1522.3.5. ALL HORIZONTAL RAINWATER PIPING RUN ABOVE FINISHED FLOOR THAT RECEIVES CONDENSATE DISCHARGE SHALL BE INSULATED WITH ARMAFLEX AND A VAPOR-BARRIER JACKET.
- 25. HOT WATER PIPING INSULATION SHALL BE PROVIDED IN ACCORDANCE WITH FLORIDA BUILDING CODE 5th EDITION (2017) - PLUMBING, TABLE 607.5 & FLORIDA BUILDING CODE 5th EDITION (2017) -ENERGY CONSERVATION, TABLE C403.2.8. CONTRACTOR SHALL USE ARMAFLEX OR EQUAL WHERE APPLICABLE. WHERE DOMESTIC WATER TEMPERATURES CAN CAUSE SWEATING, ALL COLD WATER PIPING SHALL BE INSULATED WITH ARMAFLEX INSULATION AND A VAPOR-BARRIER JACKET, PER FLORIDA BUILDING CODE 5th EDITION (2017) - ENERGY CONSERVATION, TABLE C403.2.8.
- 26. AIR ADMITTANCE VALVES MAY BE USED AS AN ALTERNATE TO VENT PIPING THRU ROOF WHERE ACCEPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION. INSTALLATION METHODS SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND REQUIREMENTS.
- 27. PROVIDE ANGLE STOPS ON ALL WATER SERVICE LINES TO FIXTURES FOR INDIVIDUAL SHUT-OFF.
- 28. STUDOR MINI/MAXI AIR ADMITTANCE VALVES MAY BE USED AS AN ALTERNATE TO VENT PIPING THRU ROOF WHERE ACCEPTABLE BY THE PLUMBING OFFICIAL AND LOCAL CODES. INSTALLATION SHALL BE AS PER MANUFACTURER'S RECOMMENDATIONS.
- 29. ALL HORIZONTAL RAINWATER PIPING THE RECEIVES CONDENSATE DISCHARGE FROM AIR CONDITIONING EQUIPMENT SHALL BE INSULATED WITH 1" THK. ARMAFLEX.
- 30. PLUMBING PLANS IN GENERAL, ARE DIAGRAMMATIC IN NATURE, AND ARE TO BE READ IN CONJUNCTION WITH ARCHITECTURAL, MECHANICAL, ELECTRICAL, FIRE SPRINKLER, STRUCTURAL AND CIVIL PLANS AND SHALL BE CONSIDERED AS ONE SET OF DOCUMENTS. PIPING MODIFICATIONS SUCH AS OFFSETS, BENDS, TRANSITIONS, AND SIZES SHALL BE REQUIRED TO PROVIDE AND INSTALL A COMPLETE FUNCTIONAL SYSTEM AND SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. CHANGES IN PIPE SIZES AND ROUTING SHALL BE REQUIRED BY THE CONTRACTOR TO AVOID CONFLICTS AND TO ADAPT TO EXISTING FIELD CONDITIONS PROVIDED THAT INSTALLATION MEETS ALL APPLICABLE CODES.
- 31. SUPPLY TRAP PRIMER FOR ALL FLOOR DRAINS, FLOOR SINKS, HUB DRAINS, ETC. SHOWN ON PLANS. 32. CONTRACTOR TO FIELD VERIFY ALL SUPPLY PRESSURE REQUIREMENTS AND LIMITATIONS. PROVIDE PRESSURE REDUCING VALVE IF REQUIRED.
- 33. ANY REFERENCE OR APPLICATION OF DENTAL COMPRESSED AIR AS NOTED ON THIS PLAN IS NOT USED OR INTENDED FOR LIFE-SUPPORT PURPOSES SUCH AS RESPIRATORS, IPPB MACHINES, ANALGESIA, ANESTHESIA, ETC. THE ONLY USE IS AS INCIDENTAL AIR DISCHARGE INTO THE ORAL CAVITY AND NOT A PRIMARY OR SECONDARY SOURCE OF AIR TO SUSTAIN LIFE.

PLUMBING SHEET INDEX						
SHEET#	DESCRIPTION					
P0.1	PLUMBING NOTES, LEGENDS, AND DETAILS					
P2.1	SANITARY PLAN					
P3.1	DOMESTIC WATER PLAN					

#### PLUMBING LEGEND

CO	CLEAN OUT	5	SANITARY SEWER PIPING
S.O.V.	SHUT-OFF VALVE	55	VENT PIPING
сотс	CLEAN OUT TO GRADE	<b>5—-</b> —\$	DOMESTIC COLD WATER PIPING
FS	FLOOR SINK	<b>5—</b>	HOT WATER PIPING (110°)
CW	DOMESTIC COLD WATER	<b>⊱</b>	HOT WATER PIPING (140°)
HW	DOMESTIC HOT WATER	<b>⊱</b> ⊀	HOT WATER RECIRCULATING PIPING
HWR	DOMESTIC HOT WATER RECIRCULATING	<b>5</b> — CD <b>─</b>	CONDENSATE PIPING
НВ	HOSE BIBB	<b>5</b> — CA — <b>5</b>	COMPRESSED AIR PIPING
VTR	VENT THRU ROOF	<b>5</b> — T&P <b>──</b> \$	TEMPERATURE AND PRESSURE RELIEF
	GATE VALVE	<b>⊱</b> SD <b>-</b>	STORM DRAIN PIPING
M	GLOBE VALVE	<b>5</b> — G — <b>√</b>	GAS PIPING
Z	CHECK VALVE	5-0-3	PIPE RISE UP
×	GAS SOLENOID VALVE	⊱⋺⊀	PIPE DOWN OR DROP
<b>▼</b>	GAS COCK	<b>E</b> —	CAPPED END OF PIPE
P#	WATER HAMMER ARRESTER (PDI No.)	<b>\$</b> —	POINT OF CONNECTION
● <sub>FD</sub>	FLOOR DRAIN	一一	P-TRAP
		i	



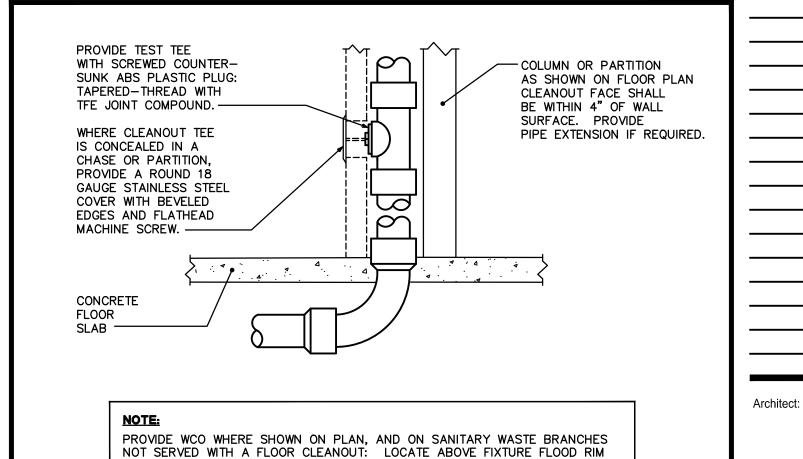
INDIAN RIVER COUNTY **ADMINISTRATION COMPLEX ALTERATIONS** TO BUILDING 'A'

> **BUILDING / FIRE DEPARTMENTS**

**1801 27th STREET** VERO BEACH, FLORIDA 32960

Key Plan

	155005.						
	No.:	Date:	Description:				
,							



#### WALL CLEANOUT DETAIL NOT TO SCALE

WITHIN 4' OF FLOOR. CONSULT LOCAL CODES FOR OTHER WCO REQUIREMENTS.

TABLE 704.1 OF THE FLORIDA PLUMBING CODE 2017

SHOCK ARRESTOR SCHEDULE P.D.I. DESIGNATION | MANUF. & MODEL | FIXTURE UNITS CONNECTION SIOUX CHIEF 652-A SIOUX CHIEF 653-B 3/4" 12-32 SIOUX CHIEF 654-C 33-60 SIOUX CHIEF SHOCK ARRESTORS APPROVED FOR INSTALLATION WITH NO

ACCESS DOOK REQUIRED. CONFORMS TO ANSI/ASSE TOTO STANDARDS.		
SLOPE OF HORIZ. DRAINAGE PIPE		
SIZE (inches)	MINIMUM SLOPE (inch per foot)	
2-1/2 or less	1/4	
3 to 6	1/8	
8 or larger	1/16	

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Drawing Title: PLUMBING NOTES



