

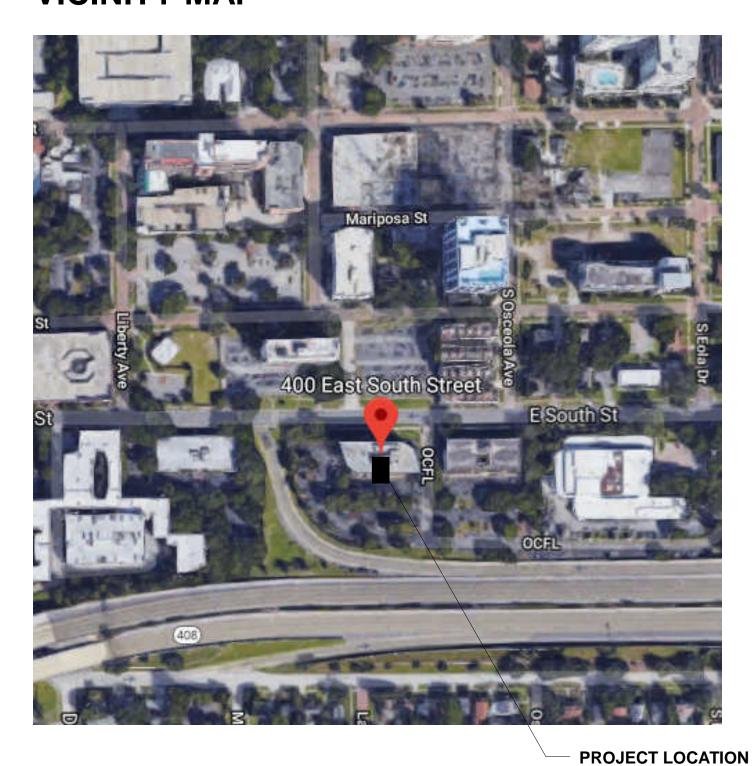
# INTERNAL OPERATIONS CENTER II - ELEVATOR MODERNIZATION

400 EAST SOUTH STREET ORLANDO, FL 32801

### PROJECT SCOPE

**ELEVATOR MODERNIZATION AND ASSOCIATED ELECTRICAL** 

## **VICINITY MAP**



# CONSTRUCTION DOCUMENTS

June 19, 2018

# **Orange County Government**

400 East South Street, Suite 500 Orlando, FL 32801

### **BOARD OF COUNTY COMMISSIONERS**

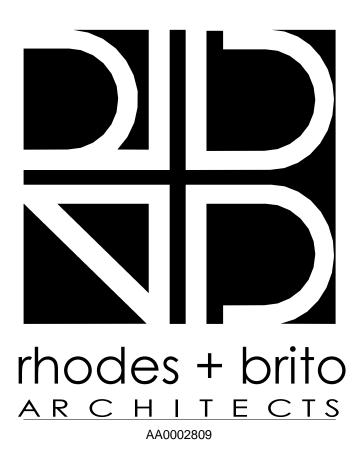
TERESA JACOBS **COUNTY MAYOR** 

BETSY VANDERLEY District 1 Commissioner

JENNIFER THOMPSON District 4 Commissioner

**BRYAN NELSON** District 2 Commissioner **EMILY BONILLA** District 5 Commissioner

PETE CLARKE District 3 Commissioner VICTORIA P. SIPLIN District 6 Commissioner



PROJECT DESIGN TEAM

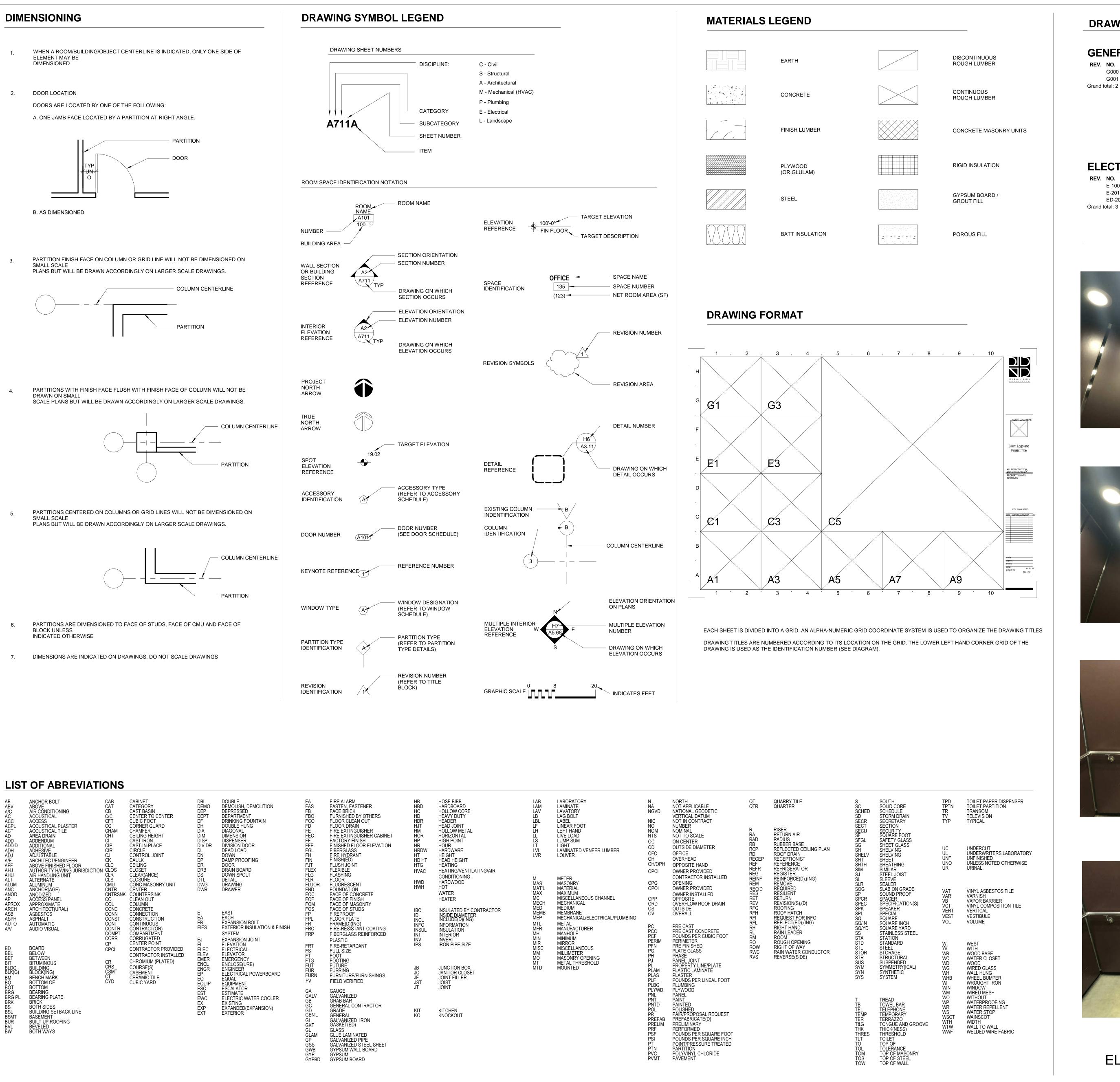
**ELEVATOR** 

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3802 EHRLICH ROAD, SUITE 304 605 E. ROBINSON STREET, SUITE ORLNDO, FL 32801 PH: (407) 422.1118 CONTACT: TRAVIS COMERS, P.E.

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DATE | SUBMISSION / REVISION | NO.



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#### **DRAWING INDEX**

#### **GENERAL**

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**COVER SHEET** GENERAL INFORMATION AND DRAWING INDEX G001 Grand total: 2

#### **ELECTRICAL**

General Notes, Legends and Electrical Plans E-201 Electrical New Work Plan ED-201 Electrical Demolition Plan



RETURN PANEL -**RE-CLAD IN MIRROR STAINLESS** AND PROVIDE CUT-OUTS FOR SIGNAL AND OPERATING FIXTURES. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION



**ELEVATOR CAB PHOTOS** 

- CEILING -PROVIDE NEW LED DOWNLIGHTS. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION

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**CAPITAL PROJECTS** 

DIVISION

**Orange County** 

Government

**INTERNAL OPERATIONS** 

**CENTER II - ELEVATOR** 

**MODERNIZATION** 

400 E. South Street

Orlando, FL 3280<sup>2</sup>

Consultants

CONSTRUCTION DOCUMENTS

DATE SUBMISSION/REVISION NO.

HANDRAILS - AT REAR WALL - MIN. 1 1/4" DIA. STAINLESS STEEL - FLAT GRAB BAR WITH RETRUNED ENDS. PROVIDE STANDOFFS WITH THREADED

WALL PANELS-FLAT LAMINATE -

SUBMITTAL

STANDARD WILSONART - COLOR AND PATTERN TO BE SELECTED UPON

SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION

FLOOR - EXISTING TO REMAIN

SCALE: 12" = 1'-0" DRAWN BY: **CWS** CHECK BY: DATE: June 19, 2018 PROJECT NUMBER: 15012.0029

**INFORMATION AND** 

**DRAWING INDEX** 

**GENERAL** 

AFF	ABOVE FINISHED FLOOR
AU	AT UNIT
CT	CURRENT TRANSFORMER
DP	DISTRIBUTION PANEL
EMT	ELECTRIC METALLIC TUBING
EX	EXISTING TO REMAIN
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
GF	GROUND FAULT INTERRUPTER TYPE
GND	GROUND
JB	JUNCTION BOX
KA	KILO AMP
KV	KILO VOLT
KVA	KILO VOLT AMP
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
PF	POWER FEEDER
REM	REMARKS
RGS	RIGID GALVANIZED STEEL CONDUIT
VFD	VARIABLE FREQUENCY DRIVE

WEATHER PROOF

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#### ABBREVIATIONS SCALE: NOT TO SCALE

- ALL WORK SHALL COMPLY WITH NEC 2014.
- 2. ALL WORK SHALL COMPLY WITH FBC 2017.
- 3. ALL ELECTRICAL WORK SHALL CONFORM TO ALL STATE, LOCAL, AND NATIONAL ELECTRICAL
- 4. ELECTRICAL CHARACTERISTICS SHALL BE VERIFIED WITH EQUIPMENT MANUFACTURER.
- 5. ITEMS OF SPECIFIC MANUFACTURERS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S PRINTED INSTRUCTIONS AND/OR MANUFACTURER'S REPRESENTATIVE'S
- 6. THE CONTRACTOR SHALL FIELD VERIFY ALL LOCATIONS AND DIMENSIONS SHOWN ON
- 7. ALL CONDUIT AND WIRING SCHEDULES SHALL BE VERIFIED BEFORE INSTALLATION.
- 8. ALL AREAS DISTURBED BY WORK SHALL BE RESTORED TO A CONDITION EQUAL TO OR BETTER THAN ORIGINAL AS DETERMINED BY THE ENGINEER.
- 9. THE CONTRACTOR SHALL PROVIDE RACEWAYS, WIRING, AND CONNECTIONS FOR ALL CONTROL
- CIRCUITS AND INTERLOCK.
- 10. ALL ELECTRICAL CONDUIT AND CONDUCTORS DISCONNECTED AND NOT TO BE REUSED SHALL BE REMOVED.
- 11. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS BEFORE STARTING WORK, IF ONLY A PORTION OF AN EXISTING CIRCUIT IS BEING REMOVED FOR DEMOLITION, CONTINUITY SHALL BE MAINTAINED TO THE REST OF THE REMAINING CIRCUIT.
- 12. ALL NEW CIRCUIT BREAKERS SHALL BE RATED AND UL LISTED FOR USE IN EXISTING PANEL AND SHALL AT MINIMUM MATCH THE SHORT CIRCUIT RATING OF THE PANEL.
- 13. THESE PLANS ARE DIAGRAMMATIC AND ARE INTEND TO CLARIFY THE SCOPE OF WORK. PROVIDE ALL NECESSARY EQUIPMENT, ACCESSORIES, FITTINGS, TRANSITIONS, ETC. FOR A COMPLETE AND OPERATIONAL INSTALLATION AS PER THESE PLANS AND ANY SPECIFICATIONS. ALL WORK IS NEW UNLESS OTHERWISE NOTED.
- 14. COORDINATE ANY AND ALL WORK WITH OTHER TRADES PRIOR TO INSTALLATION IN ORDER TO AVOID CONFLICTS DURING CONSTRUCTION.
- 15. ALL DISCONNECTS SHALL HAVE A GROUND BAR. ALL DISCONNECTS SHALL BE CLEARLY LABELED WITH THE NAME AND LOCATION OF THE EQUIPMENT THAT THEY SERVE.
- 16. ALL ELECTRICAL EQUIPMENT SHALL BE INSTALLED SUCH THAT THERE IS SUFFICIENT CLEAR SPACE FOR MAINTENANCE, PROVIDE MINIMUM NEC WORKING CLEARANCE IN FRONT OF ALL PANELBOARDS, SWITCHES, ETC.
- 17. ALL ELECTRICAL PANELS, SWITCHGEAR, DISCONNECTS AND TERMINAL CABINETS SHALL BE IDENTIFIED WITH A PERMANENTLY AFFIXED NAME PLATE INDICATING VOLTAGE, AMPERES, MANUFACTURER, MODEL NUMBER AND THE NAME AND THE LOCATION OF THE EQUIPMENT THAT THEY SERVE.
- 18. THE CONTRACTOR SHALL FIRESTOP ALL PENETRATIONS OF FIRE-RATED PARTITIONS (WALLS, FLOORS OR CEILINGS) WITH AN APPROVED FIRESTOP SYSTEM RATED FOR THE APPLICATION. THE FIRESTOP SYSTEM SHALL BE UL LISTED AND INSTALLED IN STRICT COMPLIANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
- AND ALL OTHER APPLICABLE LOCAL CODES AND ORDINANCES ENFORCED BY THE AUTHORITY HAVING JURISDICTION.

19. INSTALLATION SHALL CONFORM TO THE NATIONAL ELECTRICAL CODE, FLORIDA BUILDING CODE,

- 20. ALL RACEWAY SYSTEMS SHALL HAVE A MAXIMUM OF (4) 90-DEGREE BENDS BETWEEN PULL
- 21. PROVIDE A PULL STRING IN ALL EMPTY CONDUIT RUNS.
- 22. FLEXIBLE CONDUIT CONNECTIONS TO EQUIPMENT SHALL BE LIMITED TO 6'-0" IN LENGTH OR TO BE SUPPORTED PER NEC.

23. JUNCTION AND PULL BOXES SHALL BE SIZED WITH AT LEAST 50% MORE CAPACITY ABOVE AND

- BEYOND THE MINIMUM REQUIRED BY THE NEC.
- 24. PROVIDE WATERTIGHT CONDUIT HUB FITTINGS FOR ALL CONDUITS ENTERING/EXITING ENCLOSURE TO MAINTAIN NEMA RATING AS SPECIFIED FOR ENCLOSURE.
- 25. PROVIDE WATERTIGHT SEALING FOR WALL PENETRATION.
- 26. ALL CONVENIENCE OUTLETS SHALL BE MOUNTED AT 18" AFF UNLESS OTHERWISE NOTED.
- 27. ALL COUNTERTOP OUTLETS SHALL BE MOUNTED AT 6" ABOVE THE COUNTER UNLESS OTHERWISE NOTED.
- 28. ALL CONVENIENCE OUTLETS IN RESTROOMS SHALL BE MOUNTED AT 44" AFF UNLESS OTHERWISE NOTED.
- 29. THE ELECTRICAL CONTRACTOR SHALL FIELD VERIFY ALL EQUIPMENT CONNECTION TYPES AND REQUIREMENTS PRIOR TO ROUGH-IN AND INSTALLATION OF DEVICES. THE ELECTRICAL CONTRACTOR SHALL MAKE ADJUSTMENTS IN FIELD TO MATCH ACTUAL EQUIPMENT BEING INSTALLED. CONTRACTOR IS RESPONSIBLE FOR MAKING ALL FINAL CONNECTIONS TO EQUIPMENT PROVIDED BY OTHERS.
- 30. THE PLANS REFLECT SYSTEM VOLTAGES DROP AS PER 2017 FBC ENERGY CONSERVATION FBC-EC C405.6.3 - SIXTH EDITION. THE CONDUCTORS FOR FEEDERS AND BRANCH CIRCUITS COMBINED SHALL BE SIZED FOR A MAXIMUM OF 5 PERCENT VOLTAGE DROP TOTAL AT DESIGN

B1	<b>GENERAL NOTES</b>	
	SCALE: NOT TO SCALE	
	Ф	DUPLEX RECEPTACLE, MOUNT 18" AFF UNLESS OTHERWISE NOTED
	<b>₽</b> GFI	GROUND FAULT CIRCUIT INTERRUPTER TYPE, MOUNT 48" AFF UNLESS OTHERWISE NOTED
	\$	SINGLE POLE TOGGLE SWITCH
	$\square_1$	FUSED DISCONNECT SWITCH
		SURFACE MOUNTED PANEL
		BRANCH CIRCUIT HOME RUN WITH CIRCUIT NUMBER SEE PANEL

SCHEDULES FOR DETAILS

A1 LEGEND
SCALE: MOE TOPS

SCALE: NOT TO SCALE

	AMPS	MAIN BREA	AKER		. AMI				INSTALLATION	SURFACE
208/120	VOLTS	LUGS			. AMI	PS			LOCATION	<del>-</del>
3	PHASE	GND. BAR		CU	•				PANEL FEEDER	<del>-</del>
4 WIRE SC RATING		10 KAIC					NOTES:	BOLD INDICATES NEW WORK		
30 POLE SPACES ENCLOSU			JRE <u>NEMA 1</u>							
	DESCRIPTION		CB. AMPS	DMD.	CIR #	CIR #	DMD.	CB. AMPS	D	ESCRIPTION
BAT	T CHARGER & GEN HEATER		30/2	_	1	2	-			
DATI CHARGER & GEN HEATER			30/2	-	3	4	-	20/3 EL	EVATOR FAN	
SHUNT TRIP				-	5	6	-			
CAB LIGHTS B			20/1	-	7	8	-	20/1	FIRE	ALARM PANEL
SHUNT TRIP			20/1	-	9	10	-	20/1		SPARE
CAB LIGHTS B			20/1	-	11	12	-	20/1	D	OOR LOCKS
SPARE			20/1	-	13	14	-	20/1		PIT LIGHTS
RECEPTACLE			20/1	-	15	16	-	20/1	PUMP RO	OOM EXHAUST FAN
FOUNTAIN CONTROLLER			20/1	-	17	18	-	20/1	JOHN	SON CONTROLS
SHUNT TRIP			20/1	-	19	20	-	20/1		SPARE
ELEVATOR ROOM EXH. FAN			20/1	-	21	22	-	20/1		SPARE
BAS			20/1	-	23	24	=	20/1		SPARE
SPARE 20			20/1	-	25	26	-	20/1	R	ECEPTACLE
FOUNTAIN GFI RECEPTACLE 20			20/1	-	27	28	-	20/1	R	ECEPTACLE
SPARE 20				_	29	30	_	20/1	R	ECEPTACLE

LOAD NOTE: NO LOAD INCREASE IS EXPECTED SO NO LOAD STUDY IS BEING CONDUCTED. EQUIPMENT ON THIS PANEL IS BEING REPLACE ONE TO ONE.

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E3 PANEL EQLDP SCHEDULE

A3 PANEL EQHDP SCHEDULE
SCALE: NOT TO SCALE

SCALE: NOT TO SCALE

225	AMPS	MAIN BREA	AKER		_ <b>AM</b> I	PS			INSTALLATION	SURFACE	
480/277	VOLTS	LUGS		225	_ <b>A</b> MI	PS			LOCATION	<u>-</u>	
3	PHASE	GND. BAR		CU	-				PANEL FEEDER	<u>-</u>	
4	WIRE	SC RATING	<b>;</b>		_ KAI	С			NOTES:	BOLD INDICATES NEW WOR	
42	POLE SPACES	ENCLOSUF	ENCLOSURE		NEMA 1						
	DESCRIPTION		CB.	DMD.	CIR #	CIR #	DMD.	CB.	D	ESCRIPTION	
	SPACE		-	-	1	2	-	-	SPACE		
	SPACE		-	-	3	4	-	20/1		SPARE	
	SPARE		20/1	-	5	6	-	20/1		SPARE	
	SPARE		20/1	-	7	8	-	20/1		SPARE	
	SPARE		20/1	-	9	10	-				
	SPARE		20/1	-	11	12	-	15/3		SPARE	
STAIRWELL FAN 1			-	13	14	ı					
			15/3	-	15	16	ı				
		-	17	18	ı	15/3		SPARE			
STAIRWELL FAN 2				-	19	20	ı				
		15/3	-	21	22	-					
				-	23	24	-	15/3	J	OCKEY PUMP	
				_	25	26	-				
STAIRWELL FAN 3			15/3	-	27	28	-				
	- 29 30 - 100/3		E	ELEVATOR A							
				-	31	32	-				
	STAIRWELL FAN 4	STAIRWELL FAN 4		-	33	34	-	-		SHUNT TRIP	
				-	35	36	-				
			15/3	-	37	38	-	100/3	ELEVATOR B		
	TRANSFORMER			-	39	40	ı				
			_	41	42	_	_		SHUNT TRIP		

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O 8 O 9



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> C&S Engineers, Inc. 605 E. Robinson Street, Suite 210 Orlando, Florida 32801 Fax: 407-841-9149 FL. L.B. No. 7513, COA No. 7602



CAPITAL PROJECTS DIVISION

ORANGE COUNTY **GOVERNMENT** 

INTERNAL OPERATIONS **CENTER II - ELEVATOR MODERNIZATION** 

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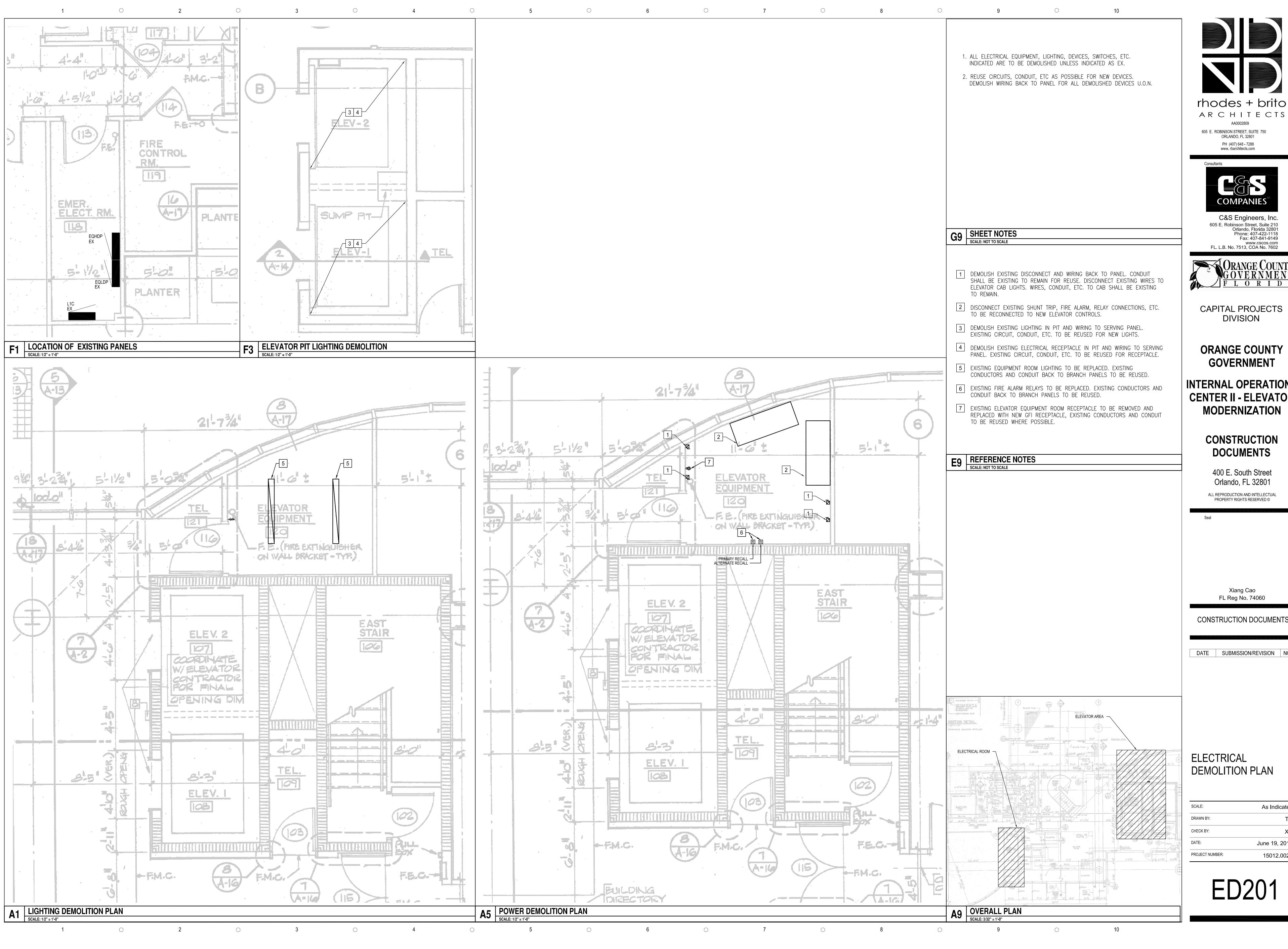
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CONSTRUCTION DOCUMENTS

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LEGEND, NOTES, ABBREVIATIONS, AND PANEL SCHEDULES

As Indicated
TC
XC
June 19, 2018
15012.0029



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**ORANGE COUNTY GOVERNMENT** 

INTERNAL OPERATIONS **CENTER II - ELEVATOR MODERNIZATION** 

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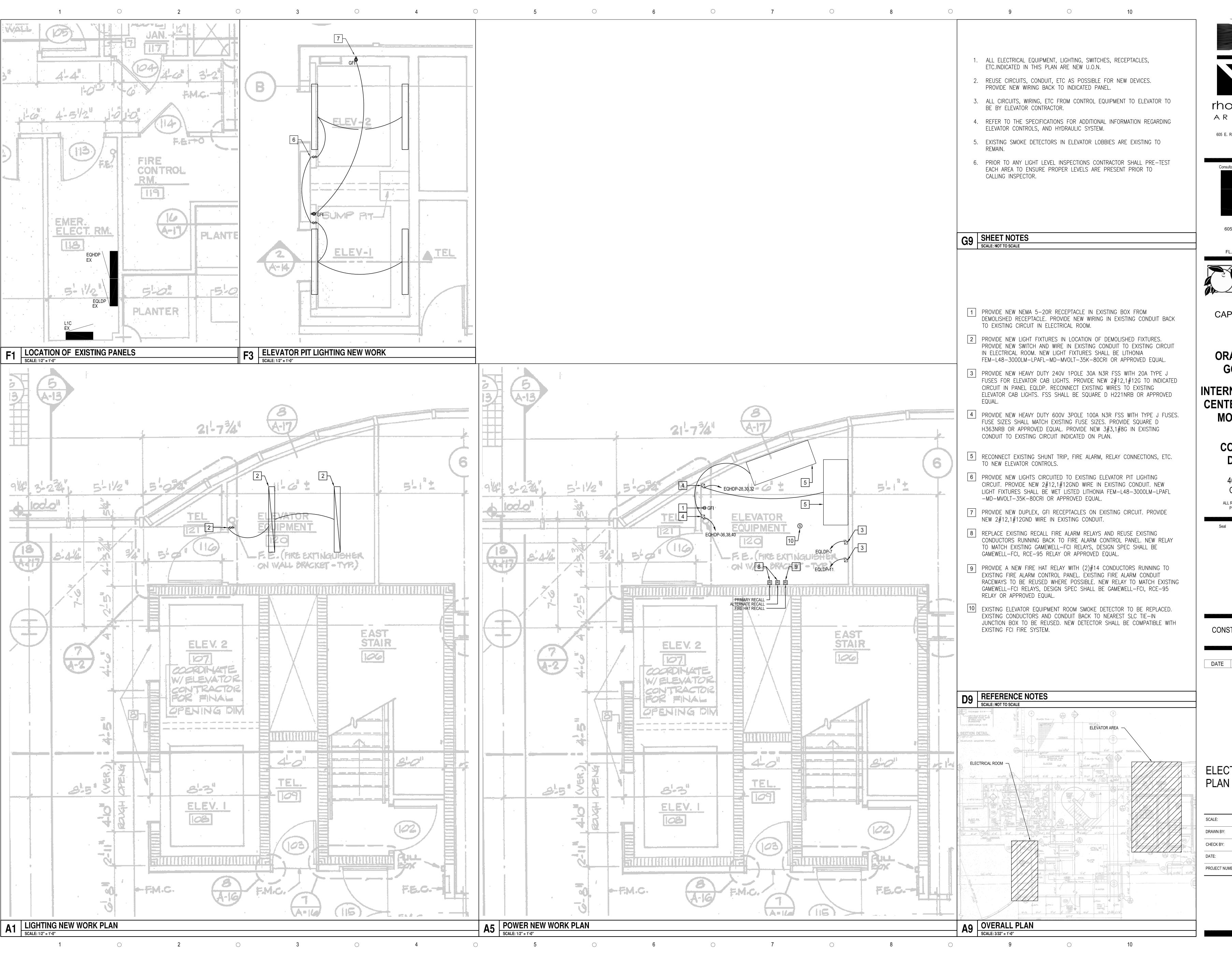
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### ELECTRICAL **DEMOLITION PLAN**

CALE:	As Indicated
RAWN BY:	TC
HECK BY:	XC
ATE:	June 19, 2018
ROJECT NUMBER:	15012.0029
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# ELECTRICAL NEW WORK

SCALE:	As Indicated
DRAWN BY:	TC
CHECK BY:	XC
DATE:	June 19, 2018
PROJECT NUMBER:	15012.0029
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E201