

SCALE: 1/8" = 1'-0"
DATE: 8-95
DESIGN BY: JINZHONG JIANG
DRAWN BY: JINZHONG JIANG

DATE
REVISIONS

CITY HALL RENOVATION
SIXTH FLOOR
ELECTRICAL POWER PLAN

PROJECT NO.
DRAWING NO.
521-237
SHEET OF 20
14

* PANEL TP6 3Ø 4 WIRE 120/208 VOLTS 225A MLO SURFACE MOUNTED
MIN INTERRUPTING RATING RMS SYN AMPS LOCATION 6TH FLOOR NEMA 1

R = RECEPTACLES M = MECHANICAL EQUIPMENT SO = SPACE ONLY SC = SPARE CIRCUIT
MLO = MAIN LUSE ONLY MCR = MAIN CIRCUIT BREAKERS

POLE SPACE Ckt #	CIRCUIT USE	CKT BKR RATING	CONNECTED LOAD VA			CKT BKR RATING	CIRCUIT USE	POLE SPACE Ckt #
			A	B	C			
1	R- ALONG EAST & SOUTH WALL	20	1080	1080	1080	20	R- ALONG WEST WALL & PRIMARY CIRCULATION	2
3	R- "	20	1080	1080	1080	20	R- "	4
5	R- "	20	1080	1080	1080	20	R- "	6
7	R- RM 45-50	20	1760	1940	1080	20	R- RM 12-15	8
9	R- "	20	1940	1940	1940	20	R- "	10
11	R- "	20	1940	1940	1580	20	R- "	12
13	R- RM 34,35,42,43	20	1940	1760	1080	20	R- RM 17,19-23	14
15	R- "	20	1940	1420	1080	20	R- "	16
17	R- "	20	1940	1940	1080	20	R- "	18
19	R- RM 32,34,36,37	20	1760	1940	1080	20	R- RM 21-23	20
21	R- "	20	1940	1760	1600	20	R- "	22
23	R- "	20	1940	1760	1780	20	R- RM 30-32,37	24
25	R- RM 34,35	20	1400	1470	1470	20	R- "	26
27	R- "	20	1400	2000	1400	20	R- COPY MACHINE	28
29	R- "	20	1580	1940	1940	20	R- RM 16,24-28	30
31	R- RM 38-41	20	1760	1940	1940	20	R- "	32
33	R- "	20	1940	1940	1940	20	R- "	34
35	R- "	20	1420	830	1420	20	R- REFRIGERATOR	36
37	SO		1000			20	R- MICROWAVE OVEN	38
39	SO		530			20	R- KITCHEN EQUIP.	40
41	SO		530			20	R- KITCHEN EQUIP.	42
* EXIST PANEL			20780	20570	18720			
			60070					

NOTES:

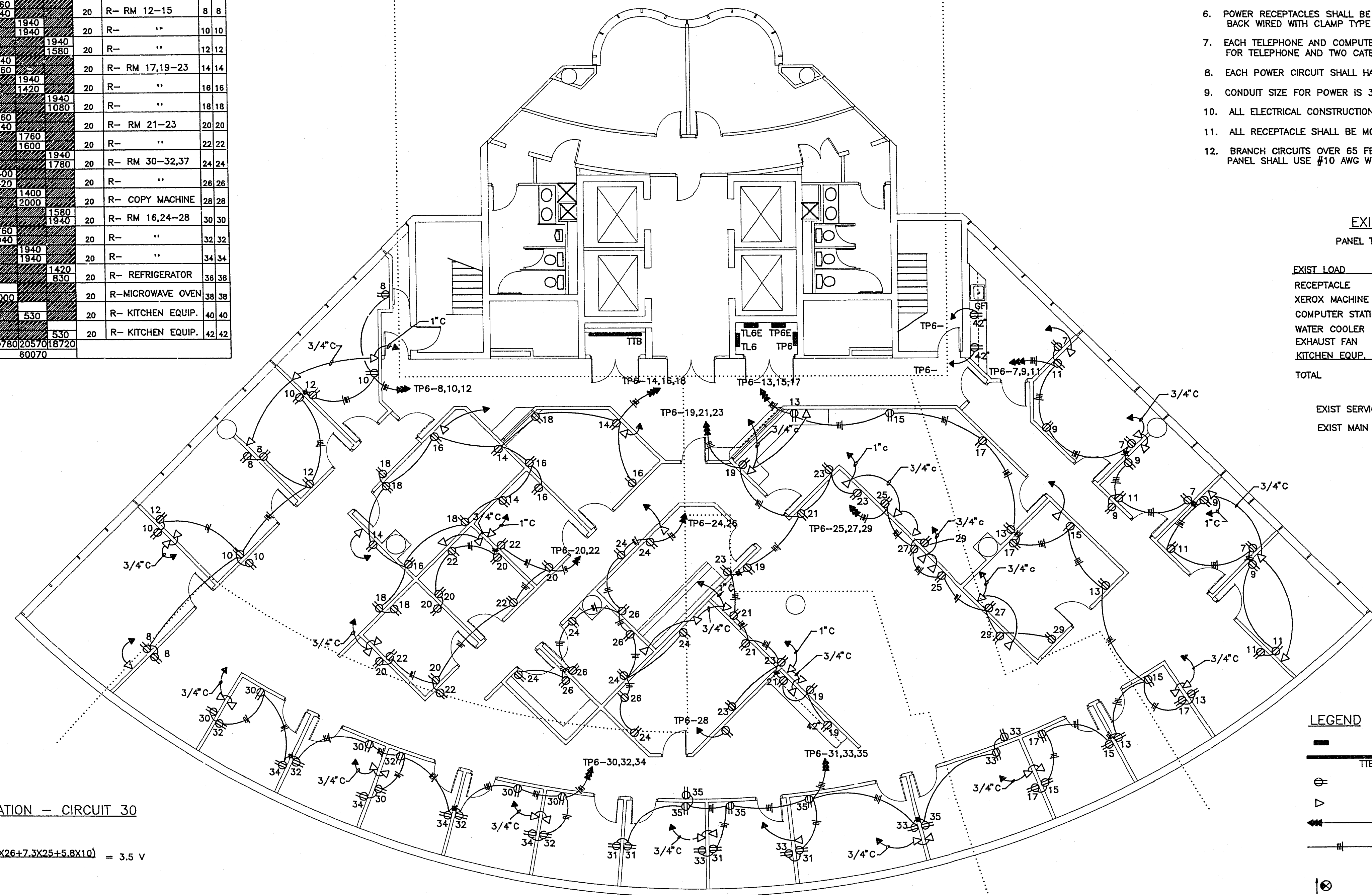
- CONDUIT SIZE FOR TELEPHONE AND COMPUTER IS 1/2" UNLESS NOTED OTHERWISE.
- ALL CONDUIT SHALL BE EMT TYPE WITH COMPRESSION OR SET SCREW FITTINGS.
- POWER CONDUCTOR SHALL BE COPPER, TYPE THHN/THWN 75 DEGREE WITH MINIMUM SIZE OF #12 AWG.
- TELEPHONE AND COMPUTER CABLE SHALL BE CATEGORY 5 UTP 4 PAIR/24 GAGE.
- ALL HOME RUNS FROM TELEPHONE AND COMPUTER OUTLETS ARE DESTINATED AT EXIST TTB IN TELEPHONE ROOM.
- POWER RECEPTACLES SHALL BE 120V, 20A, NEMA 5-20R, SPECIFICATION GRADE, SIDE AND BACK WIRED WITH CLAMP TYPE TERMINALS, NYLON, IVORY, 2 POLE, 3 WIRE GROUNDING.
- EACH TELEPHONE AND COMPUTER OUTLET SHALL HAVE ONE FTJ MINIATURE MODULAR JACK FOR TELEPHONE AND TWO CATEGORY 5, 5110 MODULAR JACKS FOR COMPUTER.
- EACH POWER CIRCUIT SHALL HAVE ITS OWN NEUTRAL WIRE.
- CONDUIT SIZE FOR POWER IS 3/4" UNLESS NOTED OTHERWISE.
- ALL ELECTRICAL CONSTRUCTION WORK SHALL MEET NEC REQUIREMENTS.
- ALL RECEPTACLE SHALL BE MOUNTED 18" AFF UNLESS NOTED OTHERWISE.
- BRANCH CIRCUITS OVER 65 FEET IN LENGTH FROM THE CENTER OF THE LOAD TO THE PANEL SHALL USE #10 AWG WIRES.

EXISTING LOAD ANALYSIS

PANEL TP6, 120/208V, 3Ø, 4 WIRE, 225A.

EXIST LOAD	CONNECTED	DF	DEMAND
RECEPTACLE	11225 SF X 1 VA	1.0	11225 VA
XEROX MACHINE	1 X 2000 VA	1.0	2000 VA
COMPUTER STATION	50 X 700 VA	1.0	35000 VA
WATER COOLER	1 X 500 VA	1.0	500 VA
EXHAUST FAN	4 X 200 VA	1.0	800 VA
KITCHEN EQUIP.	2880 VA	0.8	2300 VA
TOTAL			51825 VA

EXIST SERVICE: 51825 VA / (208X1.732) = 144 A
EXIST MAIN FEEDER: 4 #2/0 (175 A)



VOLTAGE DROP CALCULATION - CIRCUIT 30

VD = 24X(16.2X80+14.7X6+8.6X26+7.3X25+5.8X10) / 10380 = 3.5 V

LEGEND

- EXIST PANELBOARD
- EXIST TELEPHONE TERMINAL BOARD
- DUPLEX RECEPTACLE OUTLET
- TELEPHONE AND COMPUTER OUTLET
- BRANCH CIRCUIT HOME RUNS TO PANEL BOARD; NUMBER OF ARROWS = NUMBER OF CIRCUITS.
- BRANCH CIRCUIT - SHORT SLASHES INDICATE NUMBER OF PHASE OR SWITCH LEGS, LONG SLASHES INDICATE NEUTRALS.
- EXIT FIXTURE - SHADED AREA DENOTES LIGHTED FACE, ARROW INDICATES DIRECTION.
- FLUORESCENT FIXTURE - LETTER DENOTES TYPE.
- FLUORESCENT DOWN LIGHTING.
- SINGLE POLE SWITCH.
- S3 THREE WAY SWITCH.
- S4 FOUR WAY SWITCH.
- SA OCCUPANCY SENSOR.

ELECTRICAL POWER PLAN

ALL WORK THIS SHEET TO BE PERFORMED BY OWNER