\$	0	SINGLE POLE V	WALL SWITCH	RATED AT 20 AMP ES SWITCHING COM	PS, 120 VOLTS.					•		REVIATIONS
Ф				S SWITCHING CON	NTROL.			AT OR EACH	AI			HUNG CEILING
\$	3	SINGLE POLE S 3=THREE	E-WAY	_ET OR FIXTURE "				ABOVE COUNTER	२			HORSEPOWER
		0-0000			u .			AMPERE FRAME				HIGH VOLTAGE
\$ <sub>1</sub>	יד	DISCONNECT SV HORSEPOWER F	WITCH-TOGGLE RATED, WITH	E TYPE THERMAL OVERLOA	AD				) FLOOR			HERTZ INTERRUPTING CAPACITY
VS		COMBINATION VI MANUFACTURER:	ACANCY SENS	SOR SWITCH (800V	W MAX)		ALM	ALARM			INST	INSTANTANEOUS
		MODEL: WSX PE						ASYMMETRICAL				JUNCTION BOX
н				AT 20-AMPS 120				AMPERE TRIP AUTOMATIC TRAI	NSFER SWIT	СН		KILOVOLT KILOVOLT AMPERE
Ф	) EM	AC = AE	BOVE COUNTE	R (APPROXIMATEL)	Y 2'-8" A.F.F)		AUTO	AUTOMATIC			кw	KILOWATT
Ф	) <sub>wp</sub>	GROUND FAULT 20 AMPS, 120	i interruptei Volts. WP I	D WALL DUPLEX F INDICATES WEATHE	RECEPTACLE RATI	ED AT ACLE.		AMERICAN WIRE	GAUGE			KILOWATT HOUR
0				RATED AT 20-AMF WITCH.				BREAKER BUILDING				LIGHTING LOW VOLTAGE
							С	CONDUIT				MAXIMUM
OD				ECIFIED BY THEATE BY ELECTRICAL CO				DEGREE CELSIU CIRCUIT BREAKE				MAIN CIRCUIT BREAKER THOUSAND CIRCULAR MILS
OD		CEILING MOUNT CONSULTANT. CONTRACTOR.	FURNISHED A REFER TO TI	DEVICE BOX SPECI AND INSTALLED BY E DRAWINGS.	IFIED BY THEATEI Y ELECTRICAL	R						MECHANICAL
J	)			N BOX (J-BOX) W TO EQUIPMENT.				CEILING				MAIN FUSED SWITCH
-			CONNECTION	TO EQÙIPMENT.				CLOSET COMMUNICATION				MINIMUM MAIN LUGS ONLY
	88	PULL BOX						CONTINUATION				NEUTRAL
	—	CONCEALED CO	)NDUIT						SFORMER			NOT IN CONTRACT
		CONDUIT BURIE	ED IN NEW CO	ONCRETE FLOOR S	SLAB			COPPER CABINET UNIT H	IEATER			NOT TO SCALE PULLBOX
		CONDUIT CUT	IN TO FLOOR	SLAB CHOP SLAE	В ТО АССОММОЛ	IATE		DECIBEL				PHASE
				IER INSTALLATION								PANEL
M		PIPE GRID MOT INSTALLED BY	FOR. FURNISI ELECTRICAL C	HED BY RIGGING ( CONTRACTOR. REF	CONTRACTOR AN FER TO TR DRAW	D VINGS.		DISCONNECT DOWN				POWER
	Ъ	UNFUSED DISC <sup>,</sup> THAN OR FOLL	ONNECT SWIT(	CH; SWITCH SIZE CURRENT PROTECT	TO BE GREATER			DISTRIBUTION P	ANELBOARD			REQUIRED
					1014. 0.0.14.			DRAWING				ROOM
ER		EXISTING TO BE	E REMOVED					EMERGENCY EACH				SCHEDULE SECTION
			PB-101S/31,3					ELECTRICAL CON	NTRACTOR			SIGNAL
HOMERUN NOT	TATION	PANEL DESIGNATION	<b>1</b> − −1	 				ELEVATION				SINGLE POLE
		CKT NUMBEF	ا بـ ـ ـ ـ ـ ـ ـ ـ R- ـ ـ ـ	i				ELECTRICAL				SPECIFICATION SWITCH
								EMERGENCY				SYMMETRICAL
								EQUIPMENT				SYSTEMS
				RAWING LIST				EXISTING EXTERIOR				TO BE DETERMINED TIME DELAY
		IBOLS LIST, ABBREVIA IOLITION AND POWER		NG LIST, GENERAI	L NOTES AND C	ODE COMPLIANCE		DEGREE FAHREN	NHEIT		TEL	
	ECTRICAL LIGH ECTRICAL DET	HTING PLAN AND PAN AILS 1 OF 2	IEL SCHEDULE					FIRE ALARM				TEMPERATURE
E-201 ELE	ECTRICAL DET	AILS 2 OF 2						FIRE ALARM PAI FURNISHED BY			TRANSF	TRANSFORMER TAMPER SWITCH
	EUTRICAL SPE							FUSED DISCONN		Н		TELEVISION
			2015 COM					FIXTURE				TYPICAL
		ROOM AREA (SQ. FT.	,	,		,		FLOOR FLEXIBLE				UNFUSED
	HOP 0068F	510	120	0.235	1.59			FLUORESCENT				VOLT OR VOLTAGE
	GE 0068C	99	40	0.4	0.63			FEET OR FOOT				VOLT AMPERE
	CE 0068A	99	40	0.4	0.6							VACUUM WATT
	GE 0068D	99	40	0.4	0.6			GROUND FAULT	INTERUPTE	R		WEATHERPROOF
VESTIB WORKSH STORAC OFFICE GREEN R	BULE 109 HOP 0068F GE 0068C CE 0068A ROOM 0068B GE 0068D	56 510 99 99 99 99	28 120 40 40 40 40 40	0.5 0.235 0.4 0.4 0.4 0.4 0.4	0.66 1.59 0.63 1.11 0.6 <sup>3</sup> 0.63	5 9 3 1 1	FLEX FLUOR FT G GEN	FLEXIBLE FLUORESCENT FEET OR FOOT GROUND GENERATOR	INTERUPTE	R	UON V VA VAC W	UNLESS OTHERWISE NOTED VOLT OR VOLTAGE VOLT AMPERE VACUUM WATT
	CHEDULE								1	1		
	1	Manufacturer	Ca	talog Number	C	Description	Lamp	,	Number Lamps	Lumens per Lamp	Wattage	NOTE
IT FIXTURE SO	Label			 ∂12-LED35-SO-V'	WA-TMW-X1T	2" RECESSED CEILING MOUNT FIXTURE		LED				
ibol		PRUDENTIAL LIGH	HING P8					LED	1	1100	28	TRIM: RD-FT-WHT-91A
ibol Ф <sub>А</sub>	A	PRUDENTIAL LIGH		20-F-35-FL-S1	6	" RECESSED ROUND DOWNLIGHT						
ibol		SPECIALTY LIGHT	ring cz						1	2265	20	GENERAL CONTRACTOR TO COORDINATE MOI AND HOUSING BASED ON CEILING CONDITION
ibol Ф <sub>А</sub>	A		ring cz	220-F-35-FL-S1 220-F-35-FL-EM	6	" RECESSED ROUND DOWNLIGHT " RECESSED ROUND DOWNLIGHT WITH BATTERY BACKUP		LED	1	2265 2265	20	GENERAL CONTRACTOR TO COORDINATE MOD AND HOUSING BASED ON CEILING CONDITION TRIM: RD-FT-WHT-91A GENERAL CONTRACTOR TO COORDINATE MOD
ibol $\Phi_A$ $\Phi_B$	A B	SPECIALTY LIGHT	ring cz		6 E	" RECESSED ROUND DOWNLIGHT WITH			1			GENERAL CONTRACTOR TO COORDINATE MON AND HOUSING BASED ON CEILING CONDITION TRIM: RD-FT-WHT-91A
ibol $\Phi_A$ $\Phi_B$	A B B-EM C	SPECIALTY LIGHT	FING CZ		6 E F	S" RECESSED ROUND DOWNLIGHT WITH BATTERY BACKUP HI-BAY LED LAMP, PROVIDED BY OTHERS WALL-MOUNT LIGHTING FIXTURE WITH			1			GENERAL CONTRACTOR TO COORDINATE MOD AND HOUSING BASED ON CEILING CONDITION TRIM: RD-FT-WHT-91A GENERAL CONTRACTOR TO COORDINATE MOD
ibol $\Phi_A$ $\Phi_B$	A B B-EM	SPECIALTY LIGHT	TING CZ	20-F-35-FL-EM	6 E F V (; 2	S" RECESSED ROUND DOWNLIGHT WITH BATTERY BACKUP HI-BAY LED LAMP, PROVIDED BY OTHERS		LED	1 1 20			GENERAL CONTRACTOR TO COORDINATE MOD AND HOUSING BASED ON CEILING CONDITION TRIM: RD-FT-WHT-91A GENERAL CONTRACTOR TO COORDINATE MOD

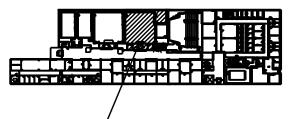
## ELECTRICAL GENERAL NOTES

- 1. DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF SYSTEMS AND WORK. FOLLOW DRAWING IN LAYING OUT WORK AND CHECK DRAWINGS OF OTHER TRADES TO VERIFY SPACE CONDITIONS. MAINTAIN HEADROOM AND SPACE CONDITIONS.
- 2. SECURE ALL SUPPORTS TO BUILDING STRUCTURE UTILIZING TOGGLE BOLTS (HOLLOW MASONRY), EXPANSION SHIELDS OR INSERTS (CONCRETE AND BRICK), MACHINE SCREWS (METAL), OR PAN THRU STRAPS (METAL DECK). NAILS, RAWL PLUGS AND WOOD PLUGS ARE NOT PERMITTED. WHERE REQUIRED BY STRUCTURE, PROVIDE THRU BOLTS AND FISH PLATES. SUPPORT HORIZONTAL RUNS OF METALLIC RACEWAYS NOT MORE THAN 10 FT APART.
- RACEWAYS SHALL BE ALLOWED TO PASS OVER WATER, STEAM OR OTHER 3. PIPING WHEN PULL BOXES ARE NOT REQUIRED. NO RACEWAY SHALL BE ROUTED WITHIN 3 INCHES OF STEAM OR HOT WATER PIPES, OR APPLIANCES, EXCEPT PERPENDICULAR CROSSINGS WHERE RACEWAY SHALL BE A MINIMUM OF 1 INCH FROM PIPE COVER.
- 4. CUT CONDUIT ENDS SQUARE, REAM SMOOTH. PAINT MALE THREADS OF FIELD THREADED RACEWAYS WITH GRAPHITE BASE PIPE COMPOUND. DRAW UP TIGHT WITH RACEWAY COUPLING.
- 5. HORIZONTAL OR CROSS RUNS IN PARTITIONS AND WALLS ARE NOT PERMITTED.
- 6. LEAVE WIRES WITH SUFFICIENT SLACK TO PERMIT MAKING FINAL CONNECTIONS. 7. SET BOXES SQUARE AND TRUE WITH BUILDING FINISH. ERECT WALL AND
- SWITCH OUTLETS IN ADVANCE OF FURRING AND FIREPROOFING. SECURE TO BUILDING STRUCTURE BY ADJUSTABLE STRAP IRONS.
- VERIFY LOCATIONS OF OUTLETS AND SWITCHES IN FINISHED ROOMS WITH 8. ARCHITECTURAL DRAWINGS OF INTERIOR DETAILS AND FINISH. IN CENTERING OUTLETS AND LOCATING BOXES AND OUTLETS, ALLOW FOR OVERHEAD PIPES, DUCTS AND MECHANICAL EQUIPMENT, VARIATIONS IN FIREPROOFING AND PLASTERING, WINDOW AND DOOR TRIM, PANELING, HUNG CEILINGS AND THE LIKE. CORRECT ANY INACCURACY RESULTING FROM FAILURE TO DO SO WITHOUT EXPENSE TO OWNER.
- LOCATIONS INDICATED FOR LOCAL WALL SWITCHES ARE SUBJECT TO 9 MODIFICATIONS AT OR NEAR DOORS. COORDINATE WITH ARCHITECT AND INSTALL SWITCH ON SIDE OPPOSITE HINGE. VERIFY FINAL HINGE LOCATIONS IN FIELD PRIOR TO SWITCH OUTLET INSTALLATION.
- 10. COVERS OF JUNCTION AND PULLBOXES SHALL BE READILY ACCESSIBLE.
- 11. PROVIDE PULLBOXES AS REQUIRED BY CODE AND WHEREVER NECESSARY TO FACILITATE PULLING OF WIRE. COORDINATE PULLBOX LOCATIONS WITH OTHER TRADES.
- 12. JUNCTION AND PULL BOXES SHOULD NOT BE LOCATED EXPOSED IN FINISHED SPACES. WHERE NECESSARY, REROUTE RACEWAYS OR MAKE OTHER ARRANGEMENTS FOR CONCEALMENT.
- 13. SUPPORT PANEL, JUNCTION AND PULL BOXES INDEPENDENTLY TO BUILDING STRUCTURE WITH NO WEIGHT BEARING ON RACEWAYS.
- 14. CONNECT CONDUIT TO MOTOR CONDUIT TERMINAL BOXES WITH FLEXIBLE CONDUIT; MINIMUM 18 IN. IN LENGTH AND 50% SLACK. DO NOT TERMINATE IN OR FASTEN RACEWAYS TO MOTOR FOUNDATION.
- 15. DO NOT PULL THERMOPLASTIC WIRES AT TEMPERATURES LOWER THAN 32°F (0°C) PROVIDE CABLE SUPPORTS FOR WIRE IN RISER CONDUITS AS REQUIRED BY CODE.
- 16. HEIGHTS OF OUTLETS FROM FINISHED FLOOR TO CENTERLINE OF OUTLET: RECEPTACLES AND TELEPHONES: 1' 0" GENERALLY

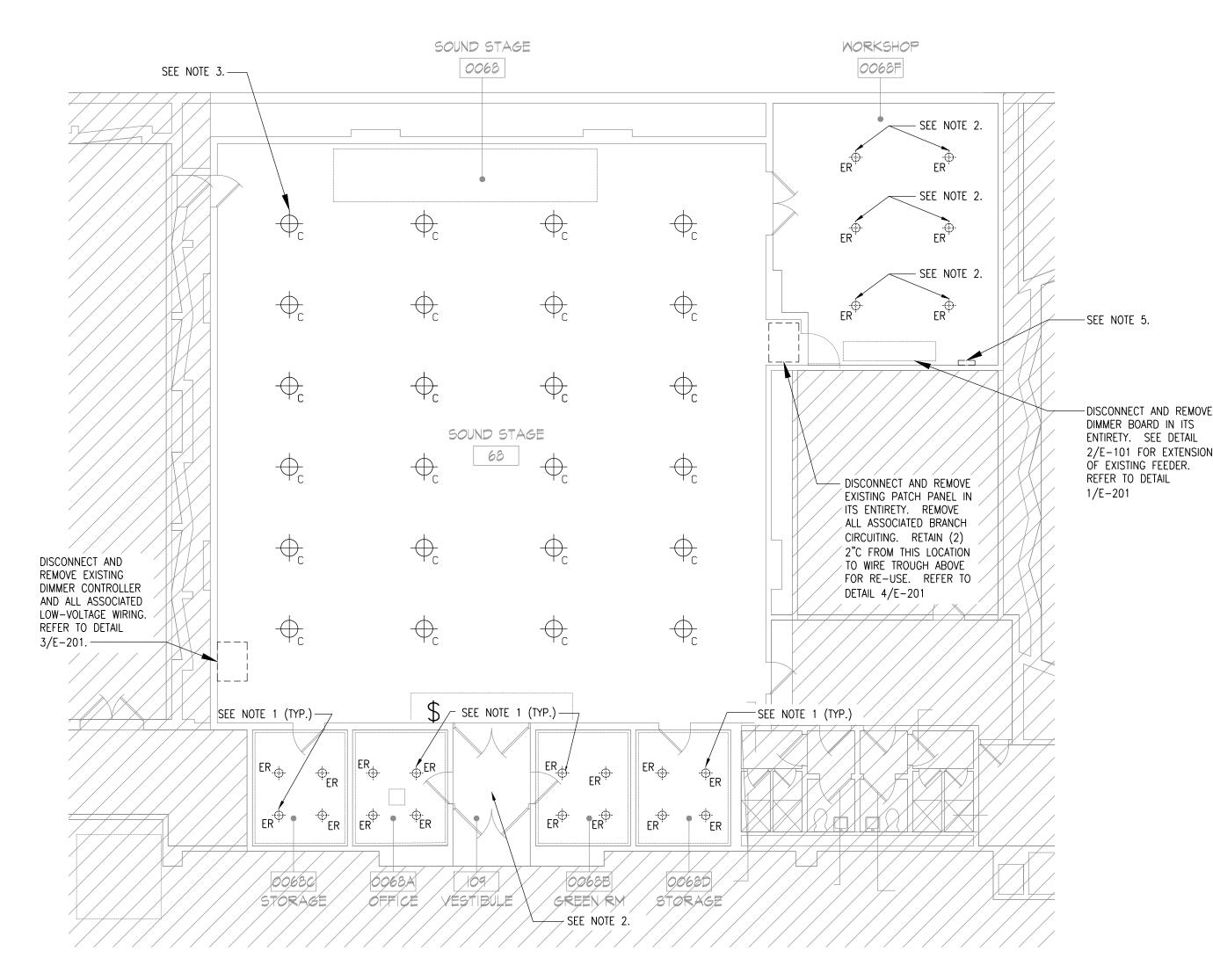
GENERALLY	1 -0
OVER WORK BENCHES	3'-6"
WALL SWITCHES	4'-0"
MOTOR CONTROLLERS	5'-0"

- EXCEPTIONS: AT JUNCTION OF DIFFERENT WALL FINISH MATERIALS; ON MOLDING OR BREAK IN WALL SURFACE; IN VIOLATION OF CODE REQUIREMENTS; AS NOTED OR DIRECTED.
- 17. WIRE COLOR CODING: AS PER CODE. WHERE COLOR-CODED CABLE IS NOT AVAILABLE, CERTIFY IN WRITING AND REQUEST PERMISSION FOR OVERLAP COLOR TAPING OF CONDUCTORS (MINIMUM LENGTH 6") IN ACCESSIBLE LOCATIONS. COLOR CODING, ONCE SELECTED, MUST BE USED CONSISTENTLY FOR THE ENTIRE PROJECT.
- 18. INSTALL NEW WORK AND CONNECT TO EXISTING WORK WITH MINIMUM INTERFERENCE TO EXISTING FACILITIES. TEMPORARY SHUTDOWNS: ONLY WITH WRITTEN CONSENT OF OWNER. MAINTAIN CONTINUOUS OPERATION OF EXISTING FACILITIES. ALARM AND EMERGENCY SYSTEMS ARE NOT TO BE INTERRUPTED.
- 19. ALL LIGHT FIXTURES AND INSTRUMENTS THAT ARE REMOVED SHOULD BE CAREFULLY STORED FOR FUTURE USE. COORDINATE REMOVAL AND STORAGE OF ALL EQUIPMENT WITH SUNY PURCHASE.
- 20. RUN EXPOSED RACEWAYS PARALLEL WITH OR AT RIGHT ANGLES TO WALLS.
- 21. FIRESTOPPING SHALL BE INSTALLED WHENEVER WIRING OR RACEWAYS CROSS FIRE RATED CONSTRUCTION.
- 22. POWER INTERRUPTIONS AND CORE DRILLING ONLY PERMITTED BETWEEN THE HOURS OF 6 PM AND 8 AM. AS APPROVED BY BUILDING MANAGER.
- 23. SUPPORT RACEWAY RISERS AT EACH FLOOR LEVEL.
- 24. DO NOT SWITCH POWER TO BATTERY BALLAST FOR EMERGENCY FIXTURES SHOWN SWITCH CONTROLLED.
- 25. COORDINATE ALL EXPOSED CONDUIT RUNS WITH ARCHITECT PRIOR TO EXPOSED CONDUIT INSTALLATION.
- 26. FOR THE NEW ELECTRICAL PANEL, THE CONTRACTOR SHALL PROVIDE A TYPE WRITTEN DIRECTORY CARD TO REFLECT NEW CIRCUITING.
- 27. UPON COMPLETION OF THE WORK, A MARKED UP SET OF "AS-BUILT" DRAWINGS SHALL BE SUBMITTED TO THE BUILDING MANAGER AND TENANT.

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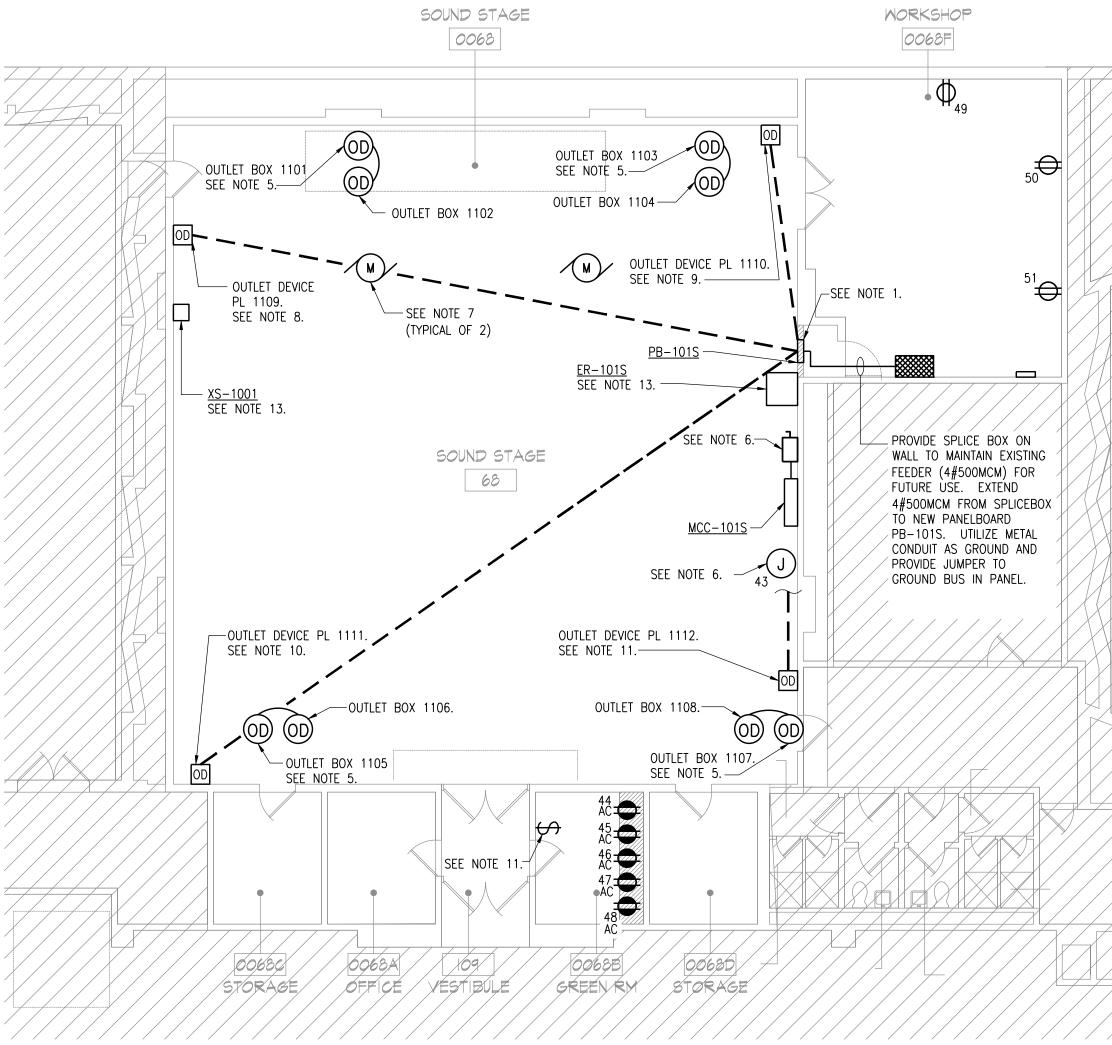




## ELECTRICAL DEMOLITION PLAN SCALE: 1/8" = 1'-0"

ELECTRICAL NOTES:

- 1. EXISTING LIGHTING FIXTURE TO BE REMOVED. MAINTAIN CIRCUIT CONTINUITY TO ALL DOWNSTREAM LIGHT FIXTURES. ASSOCIATED WIRING, SWITCHES AND CONDUIT TO REMAIN FOR RE-USE.
- 2. EXISTING LIGHTING FIXTURE TO BE REMOVED. MAINTAIN CIRCUIT CONTINUITY TO ALL DOWNSTREAM LIGHT FIXTURES.
- 3. ALL HI-BAY LIGHT FIXTURES IN SOUND STAGE 0068 SHALL BE RELAMPED (24 TOTAL, LAMPS PROVIDED BY OTHERS). MAINTAIN EXISTING CIRCUIT (ORIGINATING IN DIMMER BOARD). PREPARE EXTENSION OF CIRCUIT FROM EXISTING LOCATION TO NEW PANEL (REFER TO DRAWING E-102).
- 4. ALL EXISTING WALL-MOUNTED RECEPTACLES WITHIN AREA OF WORK TO REMAIN. ALL RECEPTACLES MOUNTED TO PIPE GRID AND ALL FLOOR BOXES IN SOUND STAGE TO BE REMOVED. REMOVE WIRING AND CONDUIT BACK TO SOURCE OF POWER. THE (2) 2" CONDUITS THAT TRAVEL FROM THE EXISTING PATCH PANEL LOCATION TO THE EXISTING WIRE TROUGH SHALL BE RETAINED.
- 5. HOUSE LIGHTING (TYPE C LIGHTS) ARE ON EMERGENCY POWER AND CONTROLLED VIA EXISTING CONTACTOR. CONTACTOR HAS A NORMAL POWER BRANCH CIRCUIT INPUT, AN EMERGENCY POWER BRANCH CIRCUIT INPUT AND A NORMAL POWER SENSING INPUT. CONTACTOR AND ALL ASSOCIATED CIRCUITING SHALL REMAIN INTACT THROUGHOUT CONSTRUCTION. REFER TO DETAIL 1/E-102 FOR EXTENSION OF NORMAL BRANCH CIRCUIT.



ELECTRICAL P SCALE: 1/8" = 1'-0"

## ELECTRICAL NOTES:

- 1. REFER TO DETAIL 2/E-200 FOR LOW VOLTAGE CONTROL WIRING DIAGRAM.
- 2. FOR SPECIFICATIONS FOR ALL THEATRICAL EQUIPMENT (INCLUDING RACK, MOTOR CONTROLLER, CONTRO REFER TO TE AND TR DRAWINGS.
- 3. DO NOT SUPPORT CONDUITS DIRECTLY TO ACOUSTIC PADDED CEILING. RACK ALL CONDUITS ALONG W OUTLET DEVICE BOX LOCATIONS.
- 4. ALL CIRCUITS SHALL BE CONNECTED TO PANEL <u>PB-101S</u> UNLESS OTHERWISE NOTED. RE-USE (2) BEHIND PB-101S UP TO EXISTING WIRE TROUGH AT CATWALK LEVEL. (REFER TO DETAIL 6/E-201) 12#10G) IN EACH 2" CONDUIT FOR A TOTAL OF 24 BRANCH CIRCUITS TO FEED OD BOXES AT CEILING FROM ER-101S, THROUGH SAME VERTICAL SHAFT BEHIND PB-101S, TO NEW JUNCTION BOX AT CATWA
- 5. REFER TO DETAIL 2/E-200 FOR OUTLET DEVICE BOX LOW VOLTAGE WIRING DIAGRAM AND DETAIL 1/E-CONNECTION DETAIL.
- 6. PROVIDE 208V, 3-POLE 30A DISCONNECT SWITCH FEEDING PIPE GRID MOTOR CONTROLLER MCC-101S RIGGING CONTRACTOR AND INSTALLED BY ELECTRICAL CONTRACTOR, REFER TO TR DRAWINGS. PROVIDE (PB-101S/43) AND JUNCTION BOX ADJACENT TO MOTOR CONTROLLER FOR INTEGRAL ELECTRONICS.
- 7. PROVIDE 3#12 + 1#12G IN 3/4"C FROM MOTOR CONTROLLER MCC-101S TO EACH PIPE GRID MOTOR
- 8. PROVIDE (1) 20A/120V CIRCUIT FROM PANEL PB-101S/25 AND (1) 60A/208V 3P CIRCUIT FROM PAN OUTLET DEVICE 1109, FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR. REFER TO TE DRAWIN 3#4 + 1#8G) SHALL RUN WITHIN NEW CONCRETE FLOOR SLAB IN THE SAME 1-1/4"C. ALSO PROVID SAME LOCATION IN 3/4"C (WITHIN SLAB).
- 9. PROVIDE (1) 20A/120V CIRCUIT FROM PANEL PB-101S/26 AND (1) 60A/208V 3P CIRCUIT FROM PAN TO OUTLET DEVICE 1110.ALL POWER WIRING (3#4 + 1#8G, 2#10 + 1#10G) SHALL RUN WITHIN NEW 1-1/4"C. ALSO PROVIDE (2) CAT60 CABLES FROM ER-101S TO SAME LOCATION IN 3/4"C (WITHIN
- 10. PROVIDE (1) 20A/120V CIRCUIT FROM PANEL PB-101S/27 AND (1) 60A/208V 3P CIRCUIT FROM PAN TO OUTLET DEVICE 1111. ALL POWER WIRING (3#4 + 1#8G, 2#10 + 1#10G) SHALL RUN WITHIN N 1-1/4"C. ALSO PROVIDE (2) CAT6a CABLES FROM ER-101S TO SAME LOCATION IN 3/4"C (WITHIN
- 11. PROVIDE (1) 20A/120V CIRCUIT FROM PANEL PB-101S/28 AND (1) 60A/208V 3P CIRCUIT FROM PAN TO OUTLET DEVICE 1112. ALL POWER WIRING (3#4 + 1#8G, 2#10 + 1#10G) SHALL RUN WITHIN N 1-1/4"C. ALSO PROVIDE (2) CAT60 CABLES FROM ER-101S TO SAME LOCATION IN 3/4"C (WITHIN
- 12. 1P SWITCH SHALL CONTROL ALL NEW ABOVE-COUNTER RECEPTACLES IN DRESSING ROOM AND PILOT SWITCH SHALL BE CLEARLY LABELED "ABOVE-COUNTER OUTLETS." SEE DETAIL 3/DWG E-200 FOR WIF
- 13. PROVIDE (4) CAT6a CABLES FROM ER-101S TO XS-1001. ER-101S AND XS-1001 FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR, REFER TO TE DRAWINGS.

WER PLAN
DL CONSOLE AND OUTLET DEVICE BOXES),
VALL FROM WIRE TROUGH TO ALL CEILING
EXISTING 2" CONDUIT TRAVELING FROM SPACE PROVIDE 12 BRANCH CIRCUITS (24#8 + G. PROVIDE (8) CAT6a CABLES IN 1–1/4"C /ALK LEVEL. REFER TO DETAIL 2/E–200.
-200 FOR ELECTRICAL OUTLET DEVICE BOX
<u>S.</u> MOTOR CONTROLLER FURNISHED BY E DEDICATED <u>MCC–101S</u> CIRCUIT
R (2 TOTAL).
NEL <u>PB-101S</u> /31,33,35 FOR CONNECTION TO NGS. ALL POWER WIRING (2#10 + 1#10G, DE (2) CAT6a CABLES FROM ER-101S TO
NEL <u>PB-101S</u> /32,34,36 FOR CONNECTION CONCRETE FLOOR SLAB IN THE SAME SLAB).
NEL <u>PB-101S</u> /37,39,41 FOR CONNECTION NEW CONCRETE FLOOR SLAB IN THE SAME SLAB).
NEL <u>PB-101S</u> /38,40,42 FOR CONNECTION NEW CONCRETE FLOOR SLAB IN THE SAME SLAB).
LIGHT IN VESTIBULE 109 VIA CONTACTOR.

OWER	PLAN

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€	ARCHITEC	dimovskiarchit 59 Kensico Road, Thornwood (914) 747-3500   (914) 747 www.dimovskiarchitecture.co	d, NY 10594 7-3588 fax
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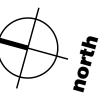
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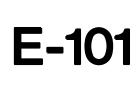
ELECTRICAL DEMOLITION AND POWER PLANS

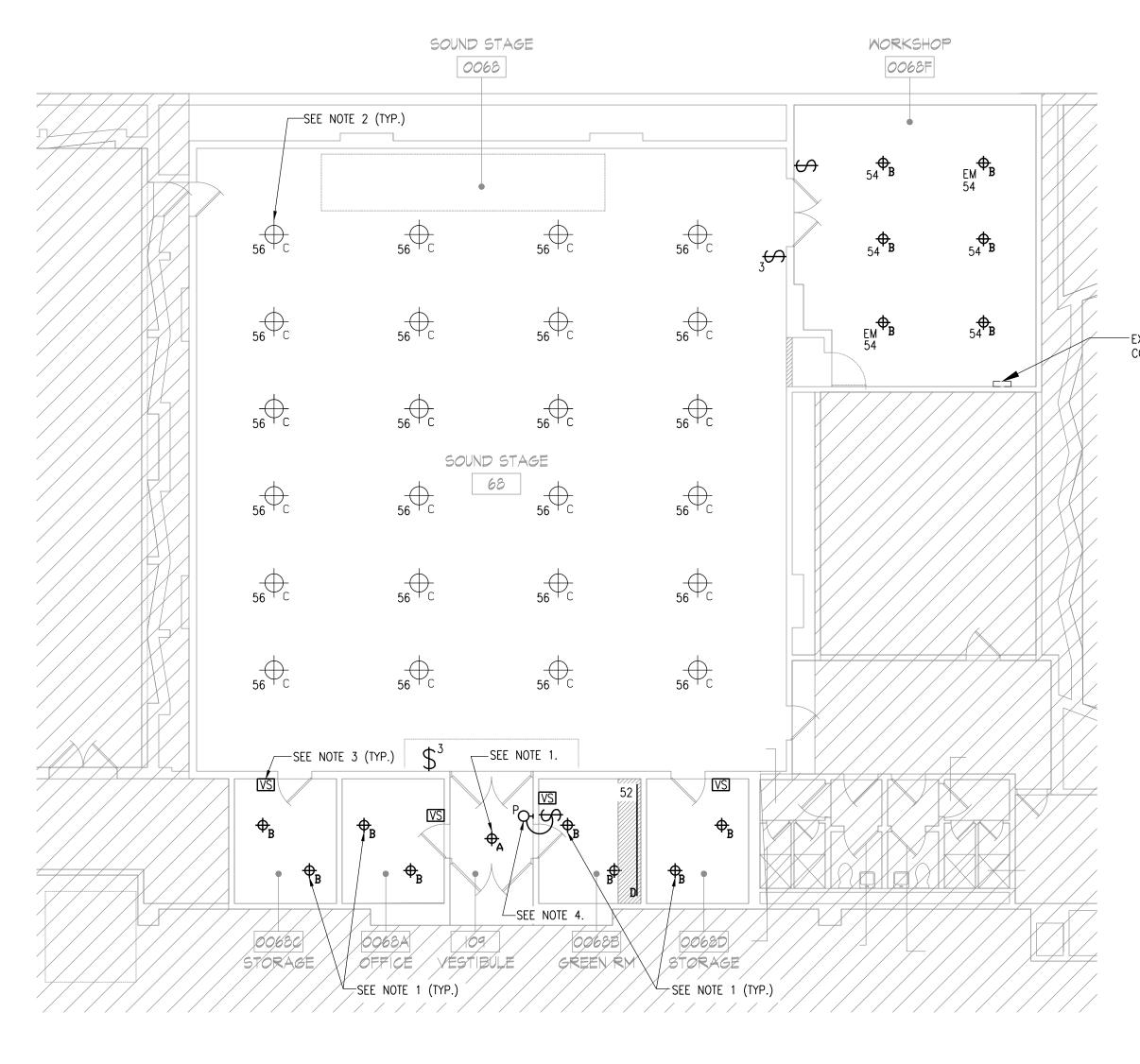
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ELECTRICAL NOTES:

- 1. PROVIDE NEW LIGHT FIXTURE AND CONNECT TO EXISTING CIRCUIT.
- EXTEND EXISTING NORMAL BRANCH CIRCUIT AND POWER SENSING CIRCUIT FROM EXISTING LIGHTING CONTACTOR TO PANEL PB-101S/56. EXISTING EMERGENCY CIRCUIT TO CONTACTOR SHOULD BE INTACT THROUGH DEMOLITION PROCESS. PROVIDE NEW 3-WAY SWITCHING FOR HOUSE LIGHTING.
- 3. PROVIDE COMBINATION VACANCY SENSOR/SWITCH TO CONTROL LIGHTING. MODIFY EXISTING WIRING AS NECESSARY TO ACCOMMODATE NEW LIGHTING CONTROLS.
- 4. PILOT LIGHT FOR GREEN ROOM RECEPTACLES. REFER TO DETAIL 3/E-200.

		<u>PB-101S SECTION</u> 0/208 PH3 W4 G	1			⊴RECES ⊒SURF#	
		<u> </u>		NG			
CKT			LOAD		PHASE		LOAD
	(AMPS)	DESCRIPTION OF LOAD	(AMPS)	A	В	С	(AMPS
1	20	OUTLET BOX PL 1102 PIPE GRID RECEPTACLE	0	0			0
3	20	OUTLET BOX PL 1102 PIPE GRID RECEPTACLE	0		0		0
5	20	OUTLET BOX PL 1102 PIPE GRID RECEPTACLE	0			0	0
7	20	OUTLET BOX PL 1104 PIPE GRID RECEPTACLE	0	0			0
9	20	OUTLET BOX PL 1104 PIPE GRID RECEPTACLE	0		0		0
11	20	OUTLET BOX PL 1104 PIPE GRID RECEPTACLE	0			0	0
13	20	OUTLET BOX PL 1106 PIPE GRID RECEPTACLE	0	0			0
15	20	OUTLET BOX PL 1106 PIPE GRID RECEPTACLE	0		0		0
17	20	OUTLET BOX PL 1106 PIPE GRID RECEPTACLE	0			0	0
19	20	OUTLET BOX PL 1108 PIPE GRID RECEPTACLE	0	0			0
21	20	OUTLET BOX PL 1108 PIPE GRID RECEPTACLE	0		0		0
23	20	OUTLET BOX PL 1108 PIPE GRID RECEPTACLE	0			0	0
25	20	OUTLET DEVICE PL 1109 RECEPTACLE	0	0			0
27	20	OUTLET DEVICE PL 1111 RECEPTACLE	0		0		0
29	20	BOX 1001 UTILITY CIRCUIT	0			0	0
31			0	0			0
33	60	OUTLET DEVICE PL 1109 3PH PIN & SLEEVE 4#6 +1#10G IN 1"C	0		0		0
35			0			0	0
37			0	0			0
39	60	OUTLET DEVICE PL 1111 3PH PIN & SLEEVE 4#6 +1#10G IN 1"C	0		0		0
41			0			0	0
43	40	MCC-101S INTEGRAL LOADS 2#12 + 1#12G IN 3/4"C	16.7	18.2			1.5
45	20	GREEN ROOM RECEPTACLE	1.5		3		1.5
47	20	GREEN ROOM RECEPTACLE	1.5			3	1.5
49	20	WORKSHOP_RECEPTACLE 2#12 + 1#12G_IN_3/4"C	15	30			15
51	20	WORKSHOP RECEPTACLE 2#12 + 1#12G IN 3/4"C	15		25		10
53	20	LIGHTING CONTACTOR AND PILOT LIGHT	.01			1.01	1
55			16.7	16.7			0
57	40	MOTORIZED PIPE GRID VIA MCC-101S 3#10 + 1#10G IN 3/4"C	16.7		16.7		0
59			16.7			16.7	0
I	L		1	64.9	44.7	20.71	

PANEL PB	-101S LOAD SUM
LOAD	CONNECTED KVA
THEATRICAL LIGHTING	81
MOTORIZED PIPE GRID	6
LIGHTING	1.7
WORKSHOP EQUIPMENT	5.4
GENERAL RECEPTACLE	1.6
TOTAL:	90.3

PANEL SCHEDULE NOTES:

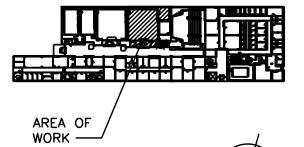
1. ALL 20A, 120V CIRCUITS SHALL CONSIST OF 2#10 +1

- EXISTING LIGHTING CONTACTOR

SSED ACE MC	□MAIN LUG ONLY REV. DATE _ UNTED ⊠MAIN CB REV. DATE _		
SYMM.	FEED THRU LUG REV. DATE _		
LOAD (AMPS)	DESCRIPTION OF LOAD	TRIP (AMPS)	CKT NO.
0	OUTLET BOX PL 1102 PIPE GRID RECEPTACLE	20	2
0	OUTLET BOX PL 1102 PIPE GRID RECEPTACLE	20	4
0	OUTLET BOX PL 1102 PIPE GRID RECEPTACLE	20	6
0	OUTLET BOX PL 1104 PIPE GRID RECEPTACLE	20	8
0	OUTLET BOX PL 1104 PIPE GRID RECEPTACLE	20	10
0	OUTLET BOX PL 1104 PIPE GRID RECEPTACLE	20	12
0	OUTLET BOX PL 1106 PIPE GRID RECEPTACLE	20	14
0	OUTLET BOX PL 1106 PIPE GRID RECEPTACLE	20	16
0	OUTLET BOX PL 1106 PIPE GRID RECEPTACLE	20	18
0	OUTLET BOX PL 1108 PIPE GRID RECEPTACLE	20	20
0	OUTLET BOX PL 1108 PIPE GRID RECEPTACLE	20	22
0	OUTLET BOX PL 1108 PIPE GRID RECEPTACLE	20	24
0	OUTLET DEVICE PL 1110 RECEPTACLE	20	26
0	OUTLET DEVICE PL 1112 RECEPTACLE	20	28
0	ER-101S CIRCUIT	20	30
0		60	32
0	OUTLET DEVICE PL 1110 3PH PIN & SLEEVE 4#6 +1#10G IN 1"C		34
0			36
0			38
0	OUTLET DEVICE PL 1112 3PH PIN & SLEEVE 4#6 +1#10G IN 1"C	60	40
0			42
1.5	GREEN ROOM RECEPTACLE	20	44
1.5	GREEN ROOM RECEPTACLE	20	46
1.5	GREEN ROOM RECEPTACLE	20	48
15	WORKSHOP RECEPTACLE 2#12 + 1#12G IN 3/4"C	20	50
10	GREEN ROOM MIRROR LIGHTING	20	52
1	WORKSHOP 0068F LIGHTING	20	54
0	SOUND STAGE 68 LIGHTING	20	56
0	SPARE	20	58
0	SPARE	20	60

UMMARY						
Ą	DEMAND KVA					
	41					
	6					
	1.7					
	5.4					
	1.6					
	50.3					

-1#10G	UNLESS	OTHERWISE	NOTED.	



KEY PL

SCALE: N.T.S.

<b>COLLEGE</b> STATE UNIVERSITY OF NEW YORK			
ARCHITECT dimovskiarchitecture.com			
AVON, TEL: 86 szewczakass	INEERS IK NORTH ER DRIVE CT 06001 0.677.4570		
300 Raritan Ave, 2nd Flr Highland Park, NJ 08904 Rate Consultant Stagesco			
Image: Constraint of the second se	06/18/2018		
NO. REVISION/ISSUE	DATE		
PROJECT INTERIOF RENOVATIO MUSIC SOUND S	ON		
DRAWN BY: CHECKED BY: SCALE:	05/19/2018 5 / SU 062518 YK PD AS NOTED		
DRAWING TITLE	NG		

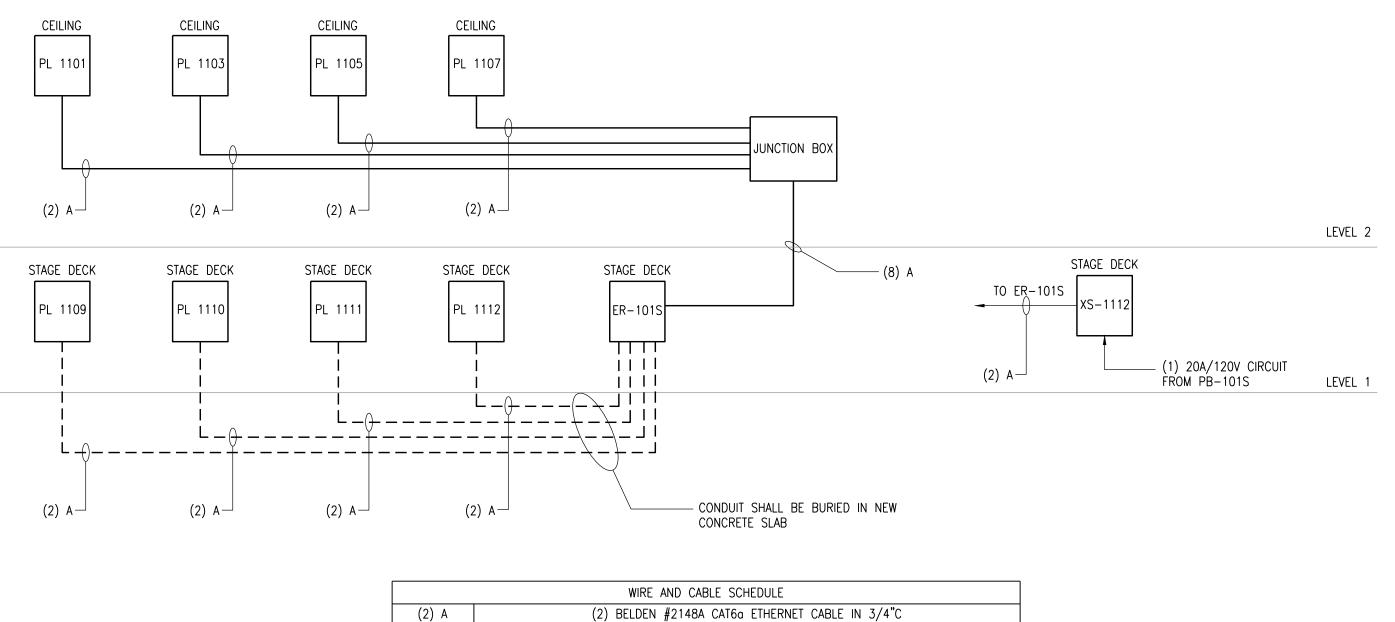
PURCHASE

SHEET NO.

E-102

SCHEDULE

PLAN AND PANEL

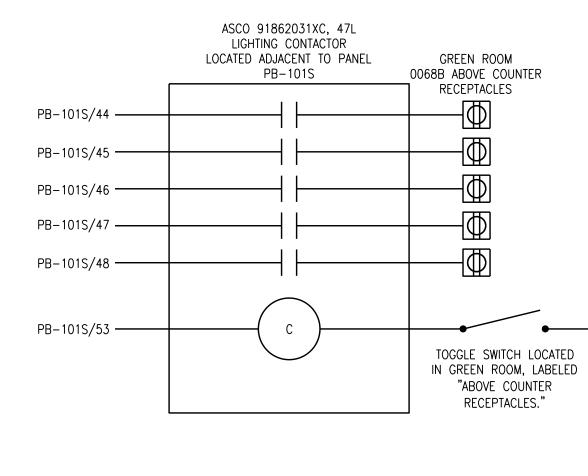


LOW VOLTAGE CONTROL WIRING DIAGRAM SCALE: N.T.S.

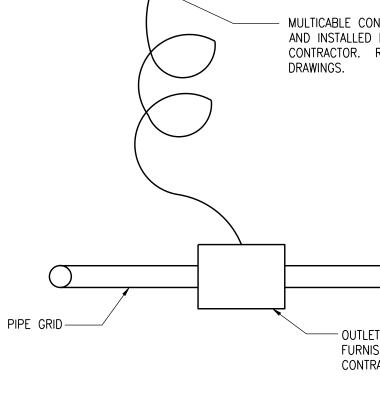
ELECTRICAL NOTES:

SCALE: N.T.S.

- 1. THIS DIAGRAM SHOWS THE LAYOUT AND INTERCONNECTION OF THE COMPONENTS IN THE THEATER LIGHTING CONTROL SYSTEMS TO CONVEY DESIGN INTENT ONLY. FINAL WIRE QUANTITIES, TYPES AND TOPOLOGY SHALL BE DETERMINED BY THE EQUIPMENT MANAGER.
- 2. LOW VOLTAGE WIRING SHALL BE RUN IN SEPARATE CONDUIT FROM ANY VIDEO AND LINE VOLTAGE WIRING.
- 3. MAXIMUM ACCEPTABLE CABLE LENGTH FOR CAT6a ETHERNET CABLE (BELDEN #2148A) IS 300'-0". INSTALLATION AND TERMINATION PRACTICES SHALL BE IN COMPLIANCE WITH ANSI/TIA/EIA 568A AND AS/NZS 3080 STANDARDS.



(2) BELDEN #2148A CAT6o ETHERNET CABLE IN 3/4"C (8) A (8) BELDEN #2148A CAT6a ETHERNET CABLE IN 1-1/4"C FROM ER-101S TO JUNCTION BOX



ACOUSTIC PADDED

CEILING ------

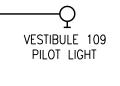
OUTLET DEVICE E	BOX POWER CIRCUIT	'ING IN
OUTLET BOX NAME	CIRCUIT NUMBER	FEE
OUTLET DEVICE 1101	PB-101S/1,3,5 PB-101S/2,4,6	6#8 +.
OUTLET DEVICE 1103	PB-101S/7,9,11 PB-101S/8,10,12	6#8 +.
OUTLET DEVICE 1105	PB-101S/13,15,17 PB-101S/14,16,18	6#8 +
OUTLET DEVICE 1107	PB-101S/19,21,23 PB-101S/20,22,24	6#8 +.

ELECTRICAL OUTLET DEVICE SCALE: N.T.S.

ELECTRICAL NOTES:

1. PROVIDE (2) BELDEN #2148A CAT6a ETHERNET CABLES IN 3 BOX

2. ALL POWER WIRING AND CONDUIT SHALL BE FED VIA EXISTING WALL AT CATWALK LEVEL.

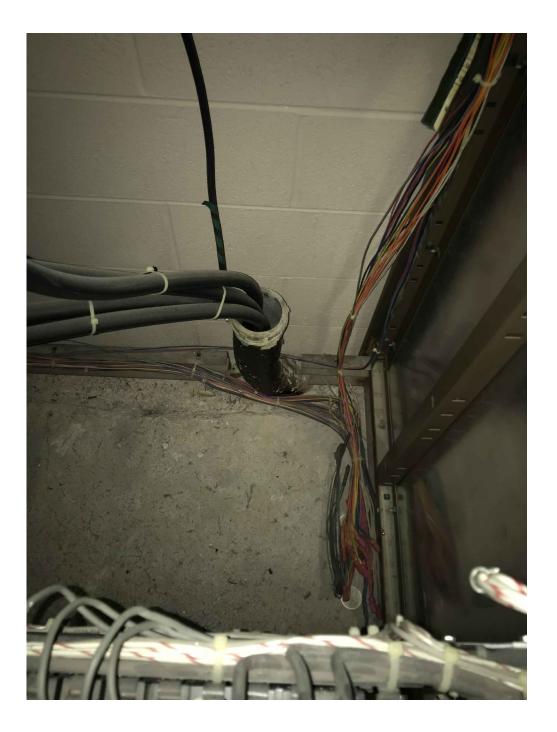


# GREEN ROOM RECEPTACLE WIRING DIAGRAM

	<b>PURCHASE</b> <b>COLLEGE</b> STATE UNIVERSITY OF NEW YORK 735 ANDERSON HILL RD PURCHASE, NY 10577-1400
	ARCHITECT dimovskiarchitecture 59 Kensico Road, Thornwood, NY 10594 (914) 747-3500   (914) 747-3588 fax www.dimovskiarchitecture.com
	MEP ENGINEER CONTACTOR ENGENERATION 2 HOLLAND AVENUE WHITE PLAINS NY 10603 (914) 332-7658
— OUTLET DEVICE BOX (1101, 1103, 1105, 1107) FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR. REFER TO TE DRAWINGS.	STRUCTURAL ENGINEER SZEWCZAK ASSOCIATES CONSULTING ENGINEERS AVON PARK NORTH 200 FISHER DRIVE AVON, CT 06001 TEL: 860.677.4570 Szewczakassociates.com
TICABLE CONNECTOR FURNISHED INSTALLED BY ELECTRICAL TRACTOR. REFER TO TE WINGS.	STAGE CONSULTANT STAGE CONSULTANT STAGE CONSULTANT Stages 300 Raritan Ave, 2nd Flr Highland Park, NJ 08904 732.333.8003 stagesconsultants.com
OUTLET DEVICE BOX (1102, 1104, 1106, 1108) FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR. REFER TO TE DRAWINGS.	
JITING INFORMATION	2.ISSUE FOR BID06/18/20181.ISSUE FOR BUDGETING06/04/2018NO.REVISION/ISSUEDATESEAL
FEEDER SIZE         6#8 +3#10G IN 1"C         6#8 +3#10G IN 1"C         6#8 +3#10G IN 1"C	
6#8 +3#10g in 1°C	PROJECT INTERIOR RENOVATION MUSIC SOUND STAGE
ABLES IN 3/4"C TO EACH OUTLET DEVICE VIA EXISTING WIRE TROUGH ON SOUTH	DATE:05/19/2018PROJECT NO:DA 1845 / SU 062518DRAWN BY:YKCHECKED BY:PDSCALE:AS NOTED
	DRAWING TITLE ELECTRICAL DETAILS 1 OF 2
AREA OF WORK KEY PLAN SCALE: N.T.S.	SHEET NO. <b>E-200</b>







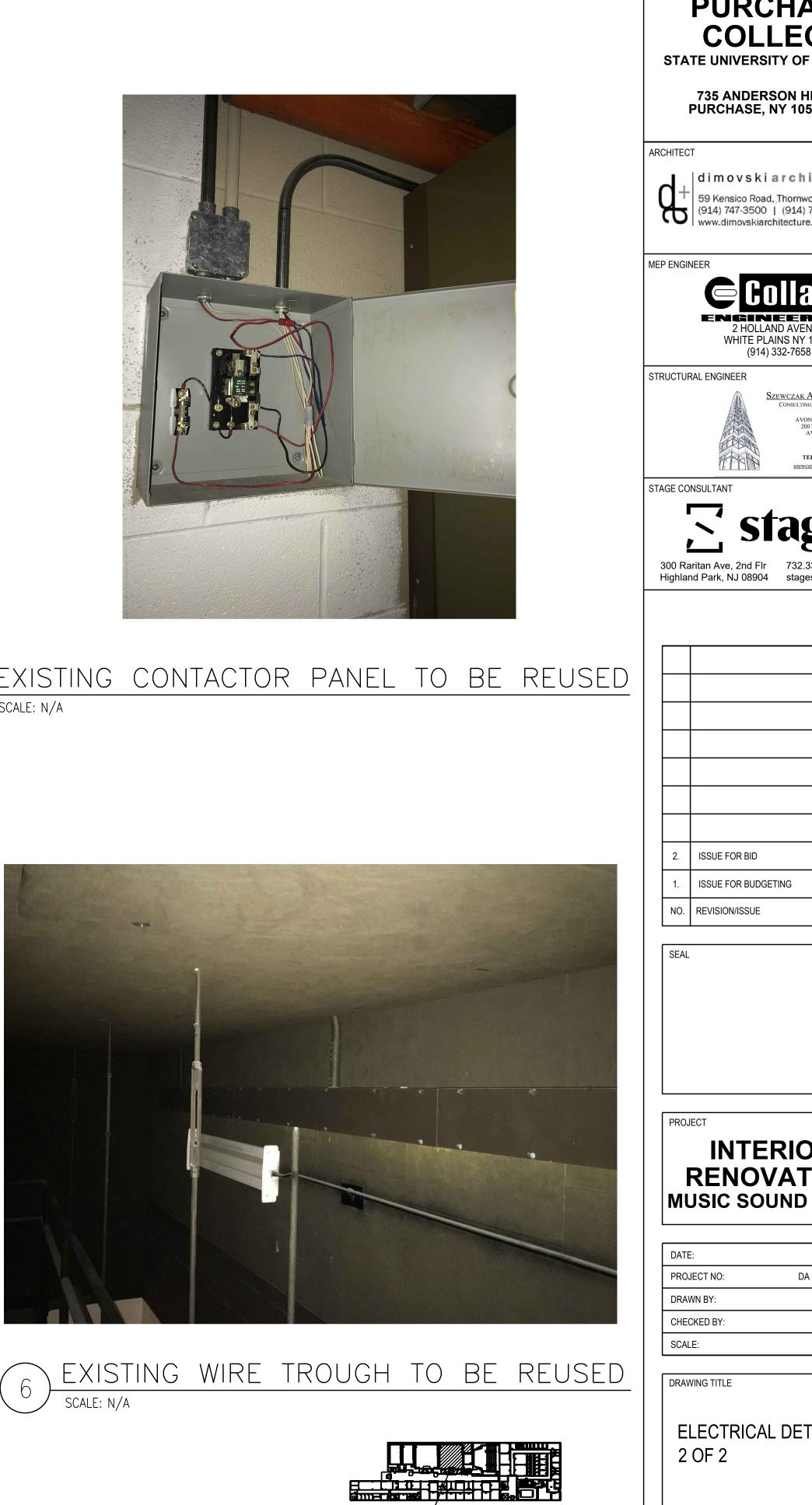
# EXISTING DIMMERBOARD FEEDER TO BE EXTENDED

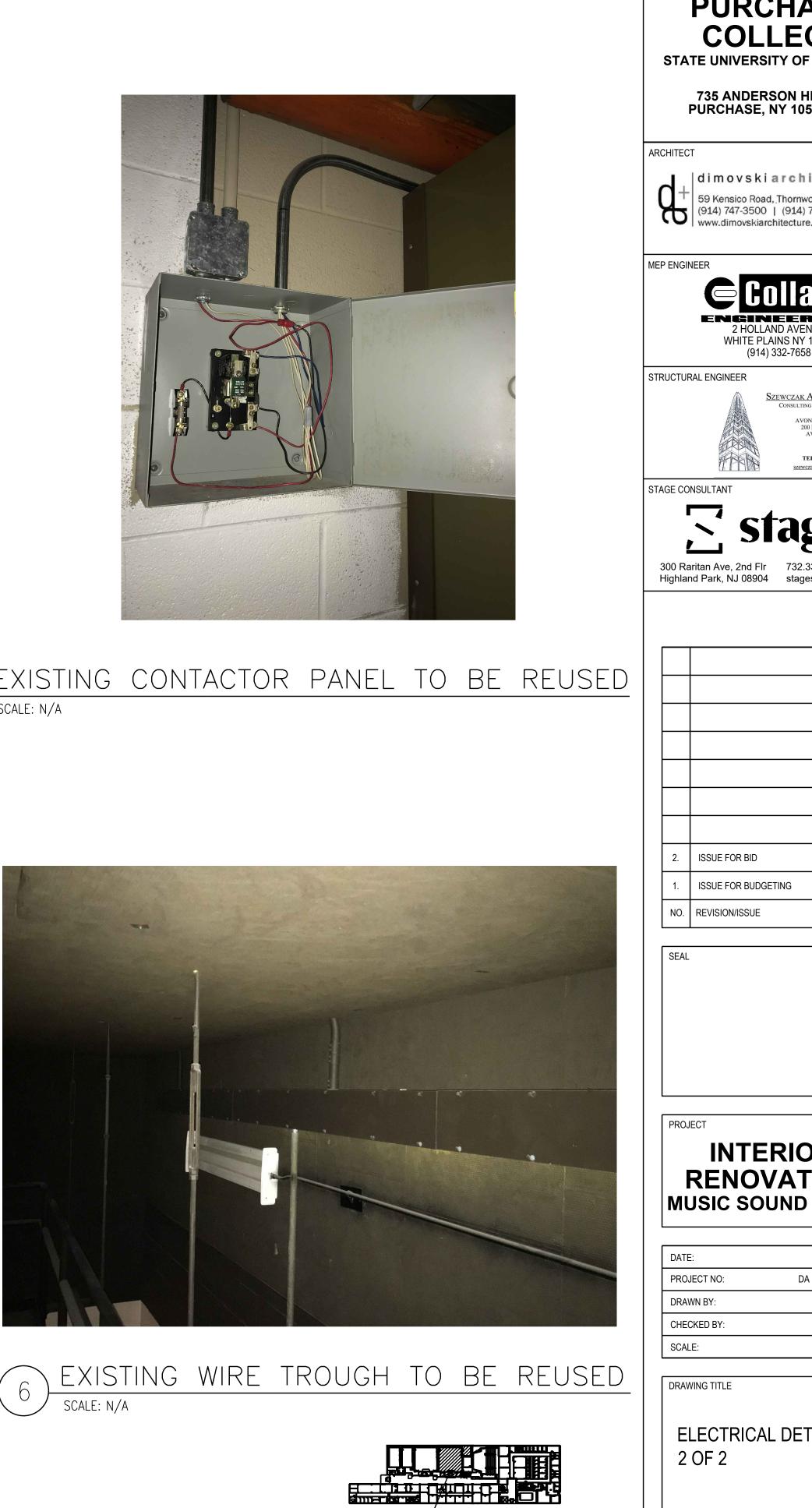


AREA OF WORK -----

KEY PLAN SCALE: N.T.S.

# EXISTING DIMMER CONTROLLER TO BE REMOVED





SHEET NO.



06/18/2018

06/04/2018

DATE

05/19/2018

PD

AS NOTED

### 1. GENERAL:

- A. THE "GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION." AIA DOCUMENT A201. LATEST EDITION. AND THESE SPECIFICATIONS AS APPLICABLE ARE PART OF THIS CONTRACT.
- B. ALL APPLICABLE CODES, LAWS AND REGULATIONS GOVERNING OR RELATING TO ANY PORTION OF THIS WORK ARE HEREBY INCORPORATED INTO AND MADE A PART OF THESE SPECIFICATIONS, AND THEIR PROVISIONS SHALL BE CARRIED OUT BY THE CONTRACTOR.
- C. INVESTIGATE EACH SPACE THROUGH WHICH EQUIPMENT MUST BE MOVED. ASCERTAIN FROM BUILDING OWNER AND TENANT AT WHAT TIMES OF DAY EQUIPMENT MAY BE MOVED THROUGH ALL AREAS.
- D. DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF SYSTEMS AND WORK. CONDUIT ROUTING IS SHOWN DIAGRAMMATICALLY AND DOES NOT SHOW ALL OFFSETS, DROPS AND RISES OF RUNS. THE CONTRACTOR SHALL ALLOW IN HIS PRICE FOR ROUTING OF CONDUIT TO AVOID OBSTRUCTIONS. COORDINATION WITH EXISTING SERVICES, INCLUDING THOSE OF OTHER TRADES, IS REQUIRED. MAINTAIN HEADROOM AND SPACE CONDITIONS.
- E. INSTALL WORK SO AS TO BE READILY ACCESSIBLE FOR OPERATION, MAINTENANCE AND REPAIR. MINOR DEVIATIONS FROM DRAWINGS MAY BE MADE TO ACCOMPLISH THIS, BUT CHANGES WHICH INVOLVE EXTRA COST SHALL NOT BE MADE WITHOUT APPROVAL.
- F. REMOVAL AND RELOCATION OF CERTAIN EXISTING WORK MAY BE NECESSARY FOR THE PERFORMANCE OF THE GENERAL WORK. ALL EXISTING CONDITIONS CANNOT BE COMPLETELY DETAILED ON THE DRAWINGS. THE CONTRACTOR SHALL SURVEY THE SITE AND INCLUDE ALL CHANGES AND CHARGES IN MAKING UP THE WORK PROPOSAL.
- G. CONNECTIONS TO EXISTING WORK: INSTALL NEW WORK AND CONNECT TO EXISTING WORK WITH MINIMUM INTERFERENCE TO EXISTING FACILITIES. TEMPORARY SHUTDOWNS OF EXISTING SERVICES SHALL BE PERFORMED AT NO ADDITIONAL CHARGES, AT TIMES NOT TO INTERFERE WITH NORMAL OPERATION OF EXISTING FACILITIES AND ONLY WITH WRITTEN CONSENT OF OWNER. ALARM AND EMERGENCY SYSTEMS SHALL NOT BE INTERRUPTED. MAINTAIN CONTINUOUS OPERATION OF EXISTING FACILITIES AS REQUIRED WITH NECESSARY TEMPORARY CONNECTIONS BETWEEN NEW AND EXISTING WORK. CONNECT NEW WORK TO EXISTING WORK IN NEAT AND ACCEPTABLE MANNER. RESTORE EXISTING DISTURBED WORK TO ORIGINAL CONDITION, INCLUDING MAINTENANCE OF WIRING CONTINUITY AS REQUIRED.
- H. DISCONNECT, REMOVE AND/OR RELOCATE EXISTING MATERIAL, EQUIPMENT AND OTHER WORK AS NOTED OR REQUIRED FOR PROPER INSTALLATION OF NEW WORK.
- I. THE CONTRACTOR SHALL KEEP ALL EQUIPMENT AND MATERIALS, AND ALL PARTS OF THE BUILDING, EXTERIOR SPACES AND ADJACENT STREETS, SIDEWALKS AND PAVEMENTS, FREE FROM MATERIAL AND DEBRIS RESULTING FROM THE EXECUTION OF THIS WORK. EXCESS MATERIALS WILL NOT BE PERMITTED TO ACCUMULATE EITHER ON THE INTERIOR OR THE EXTERIOR.
- J. SEAL OPENINGS THROUGH PARTITIONS, WALLS AND FLOORS WITH MINERAL WOOL OR OTHER NONCOMBUSTIBLE MATERIAL.
- K. ALL EXISTING MATERIAL, EQUIPMENT AND CONSTRUCTION DEBRIS TO BE REMOVED UNDER THIS CONTRACT SHALL BECOME THE PROPERTY OF THE CONTRACTOR WITH THE EXCEPTION OF SPECIFIC EQUIPMENT AND APPARATUS REQUESTED BY THE BUILDING REPRESENTATIVE. ARCHITECT OR AS NOTED TO BE RELOCATED ON THE DRAWINGS. REMOVED EQUIPMENT SHALL BE PROPERLY DISPOSED OF BY THIS CONTRACTOR.
- L. THE CONTRACTOR'S PROPOSAL FOR ALL WORK SHALL BE PREDICATED ON THE PERFORMANCE OF THE WORK DURING REGULAR WORKING HOURS. WHEN SO DIRECTED. HOWEVER. THE CONTRACTOR SHALL INSTALL WORK DURING OVERTIME HOURS AND THE ADDITIONAL COST TO BE CHARGED THEREFORE SHALL BE ONLY THE "PREMIUM" PORTION OF THE WAGES PAID
- M. UNLESS OTHERWISE SPECIFICALLY NOTED OR SPECIFIED, INCLUDE ALL CUTTING AND PATCHING OF EXISTING FLOORS, WALLS, PARTITIONS AND OTHER MATERIALS IN THE EXISTING BUILDING. THE CONTRACTOR SHALL RESTORE THESE AREAS TO ORIGINAL CONDITION.
- N. ALL MATERIAL AND EQUIPMENT SHALL BE NEW UNLESS OTHERWISE NOTED AND SHALL BE IN ACCORDANCE WITH BUILDING STANDARDS.
- O. SUBMISSION OF A PROPOSAL SHALL BE CONSTRUED AS EVIDENCE THAT A CAREFUL EXAMINATION OF THE PORTIONS OF THE EXISTING BUILDING. EQUIPMENT, ETC., WHICH AFFECT THIS WORK, AND THE ACCESS TO SUCH SPACES, HAS BEEN MADE AND THAT THE CONTRACTOR IS FAMILIAR WITH EXISTING CONDITIONS AND DIFFICULTIES THAT WILL AFFECT THE EXECUTION OF THE WORK. THE CONTRACTOR IS RESPONSIBLE TO INDICATE ANY DISCREPANCIES BETWEEN THE CONTRACT DRAWINGS AND ACTUAL FIELD CONDITIONS PRIOR TO SUBMITTAL OF BID. SUBMISSION OF A PROPOSAL WILL BE CONSTRUED AS EVIDENCE THAT SUCH AN EXAMINATION HAS BEEN MADE. LATER CLAIMS SHALL NOT BE MADE FOR LABOR, EQUIPMENT OR MATERIALS REQUIRED BECAUSE OF DIFFICULTIES ENCOUNTERED WHICH COULD HAVE BEEN FORESEEN DURING SUCH AN EXAMINATION. THE ON-SITE INSPECTION SHALL VERIFY EXISTING CONDUIT (SIZES, CLEARANCES, ETC) AND CONDITIONS.
- P. INSURANCE: IN ACCORDANCE WITH BUILDING REQUIREMENTS AND SHALL INCLUDE A HOLD HARMLESS CLAUSE FOR OWNER AND ENGINEER.
- Q. THE FINAL ACCEPTANCE SHALL BE MADE AFTER THE CONTRACTOR HAS ADJUSTED HIS EQUIPMENT, TESTED THE VARIOUS SYSTEMS, DEMONSTRATED THAT IT FULFILLS THE REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS AND HAS FURNISHED ALL THE REQUIRED CERTIFICATES OF INSPECTION AND APPROVAL.

2. SCOPE OF WORK:

- A. SCOPE OF WORK SHALL CONSIST OF PROVIDING LABOR, MATERIALS, EQUIPMENT, SERVICES AND FEES NECESSARY FOR COMPLETE AND SAFE INSTALLATION IN CONFORMITY WITH THE NATIONAL ELECTRICAL CODE (NEC) AND ALL OTHER APPLICABLE INDUSTRY, NATIONAL AND LOCAL CODES AND AUTHORITIES HAVING JURISDICTION, AS INDICATED ON DRAWINGS AND HEREIN SPECIFIED.
- B. ALL DRAWINGS, PLANS, DETAILS, SPECIFICATIONS AND SPECIFICATION ADDENDA ARE MADE PART OF THIS CONTRACT AND SHALL APPLY TO ALL WORK UNDER THE CONTRACT UNLESS OTHERWISE AMENDED, MODIFIED, SUPPLEMENTED OR SPECIFIED HEREIN.
- C. THE CONTRACTOR SHALL FURNISH A WRITTEN GUARANTEE TO REPLACE OR REPAIR PROMPTLY AND ASSUME RESPONSIBILITY FOR ALL EXPENSES INCURRED FOR ANY WORKMANSHIP AND EQUIPMENT IN WHICH DEFECTS DEVELOP WITHIN ONE YEAR FROM THE DATE OF FINAL CERTIFICATE FOR PAYMENT AND/OR FROM DATE OR ACTUAL USE OF EQUIPMENT OR OCCUPANCY OF SPACES BY OWNER INCLUDED UNDER THE VARIOUS PARTS OF THE WORK, WHICHEVER DATE IS EARLIER. THIS WORK SHALL BE DONE AS DIRECTED BY THE OWNER. THIS GUARANTEE SHALL ALSO PROVIDE THAT WHERE DEFECTS OCCUR. THE CONTRACTOR WILL ASSUME RESPONSIBILITY FOR ALL EXPENSES INCURRED IN REPAIRING AND REPLACING WORK OF OTHER TRADES AFFECTED BY DEFECTS, REPAIRS OR REPLACEMENTS IN EQUIPMENT SUPPLIED BY THE CONTRACTOR.
- D. THE CONTRACTOR SHALL GIVE NECESSARY NOTICE, FILE DRAWINGS AND SPECIFICATIONS WITH ALL DEPARTMENTS HAVING JURISDICTION, OBTAIN PERMITS OR LICENSES NECESSARY TO CARRY OUT THIS WORK AND PAY ALL FEES THEREFORE. THE CONTRACTOR SHALL ARRANGE FOR

INSPECTION AND TESTS OF ANY OR ALL PARTS OF THE WORK REQUIRED BY AUTHORITIES AND PAY ALL CHARGES FOR SAME. CONTRACTOR SHALL PAY ALL COSTS FOR, AND FURNISH TO TH BEFORE FINAL BILLING, ALL CERTIFICATES NECESSARY AS EVIDE THE WORK INSTALLED CONFORMS WITH ALL REGULATIONS WHEI APPLY TO THIS WORK.

3. SHOP DRAWINGS

- A. PRIOR TO THE INSTALLATION OF ANY WORK AND PROCUREMEN EQUIPMENT, CONTRACTOR SHALL PROVIDE COMPLETE SETS OF COORDINATED SHOP DRAWINGS OF ALL NEW AND EXISTING EQU INDICATING CAPACITY, DIMENSIONS AND SEQUENCE OF OPERATION WRITTEN APPROVAL BY THE ARCHITECT AND ENGINEER.
- B. INDICATE ON EACH SHOP DRAWINGS SUBMITTED:
- 1) PROJECT NAME AND LOCATION
- NAME OF ARCHITECT AND ENGINEER
- 3) ITEM IDENTIFICATION 4) APPROVAL STAMP OF PRIME CONTRACTOR

C. SUBMISSIONS:

- 1) SUBMISSIONS 11 IN. X 17 IN. OR SMALLER: IF THE SUBMISSION IS A CATALOG CUT, THEN THE CONTRAC SUBMIT ONE ORIGINAL AND TWO COPIES. OTHERWISE SHALL SUBMIT THREE COPIES. THE ARCHITECT WILL THE ORIGINAL AND ONE COPY (TWO COPIES WHEN N ORIGINAL IS RECEIVED) TO THE ENGINEER. ALL CATA SHALL BE COMPLETE.
- 2) SUBMISSIONS LARGER THAN 11 IN. X 17 IN.: SUBM PRINTS TO THE ARCHITECT. THE ARCHITECT WILL FOR TWO PRINTS TO THE ENGINEER.

D. SUBMIT SHOP DRAWINGS FOR THE FOLLOWING:

- CIRCUIT BREAKERS PANELBOARDS (INCLUDING DIMENSIONS, SCHEDULES
- CATALOG CUTS). RACEWAYS
- WIRE AND CABLE
- WALL SWITCHES
- INSERTION RECEPTACLES 7) LIGHTING FIXTURES.

4. AS-BUILT DRAWINGS AND EQUIPMENT OPERATIONAL INSTRUCTIONS

- A. UPON COMPLETION AND ACCEPTANCE OF WORK, CONTRACTOR FURNISH WRITTEN INSTRUCTIONS AND EQUIPMENT MANUALS ANI DEMONSTRATE TO THE OWNER THE PROPER OPERATION AND MAINTENANCE OF ALL EQUIPMENT AND APPARATUS FURNISHED THIS CONTRACT.
- B. THESE INSTRUCTIONS SHALL BE TYPED ON 8-1/2 IN. X 11 II AND BOUND IN THREE RING BINDERS WITH CLEAR ACETATE CO CONTRACTOR SHALL GIVE THREE COPIES OF THE INSTRUCTIONS OWNER AND ONE COPY TO THE ENGINEER.
- C. THE INSTRUCTION BOOKLET SHALL BEAR THE NAME, ADDRESS TELEPHONE NUMBER OF THE PROJECT, ARCHITECT AND ENGINE
- D. REPRODUCIBLE "AS-BUILT" DRAWINGS SHALL BE PROVIDED INDI THE AS INSTALLED CONDITIONS OF THE WORK. "AS-BUILT" D SHALL BE PROVIDED TO THE ARCHITECT AFTER COMPLETION OF INSTALLATION.

5. GENERAL PROVISIONS FOR ELECTRICAL WORK:

A. SPECIFICATIONS ARE OF SIMPLIFIED FORM AND INCLUDE INCOM SENTENCES. WORDS OR PHRASES SUCH AS "THE CONTRACTO "SHALL BE," "FURNISH," "PROVIDE," "A," "THE," AND "ALL" HAV OMITTED FOR BREVITY.

**B. DEFINITIONS:** 

- 1) "PROVIDE": TO SUPPLY, INSTALL AND CONNECT UP AND READY FOR SAFE AND REGULAR OPERATION THE PARTICULAR WORK REFERRED TO UNLESS SPECIFICALI OTHERWISE NOTED.
- 2) "INSTALL": TO ERECT, MOUNT AND CONNECT COMPL RELATED ACCESSORIES.
- 3) "FURNISH" OR "SUPPLY: TO PURCHASE, PROCURE,
- AND DELIVER COMPLETE WITH RELATED ACCESSORIES 4) "WORK": LABOR, MATERIALS, EQUIPMENT, APPARATUS
- PROPER AND COMPLETE INSTALLATION. 5)
- ITEMS 6)
- SPACES, OR IN ENCLOSURES. "EXPOSED": NOT INSTALLED UNDERGROUND OR "CON

- 1) QUALITY AND GAUGE OF MATERIALS: NEW, BEST OF RESPECTIVE KINDS, FREE FROM DEFECTS AND LISTED UNDERWRITERS LABORATORIES, INC., OR OTHER NATIO APPROVED TESTING AGENCY AND BEARING THEIR LABE MATERIALS AND EQUIPMENT OF SIMILAR APPLICATION OF SAME MANUFACTURER, EXCEPT AS NOTED.
- GUARANTEE: ALL MATERIALS AND WORKMANSHIP SHA GUARANTEED AS DEFINED IN PARAGRAPH 2.C. CURRENT CHARACTERISTICS:
- a. DISTRIBUTION: 120/208 VOLT, 3 PHASE, 4 WIRE, 60 HERTZ WITH GROUNDED NEUTRAL. 4) HEIGHTS OF OUTLETS: FROM FINISHED FLOOR TO CENTERLINE
- OF OUTLETS FOR: a. RECEPTACLES: 1 FT-6 IN.
- b. WALL SWITCHES: 4 FT-0 IN. c. MOTOR CONTROLLERS: 5 FT-0 IN.

EXCEPTIONS: AT JUNCTION OF DIFFERENT WALL FINISH MATERIALS, ON MOLDING OR BREAK IN WALL SURFACE,

E. PRODUCT DELIVERY, STORAGE AND HANDLING

1) ACCESSIBILITY: FOR OPERATION, MAINTENANCE AND REPAIR. MINOR DEVIATIONS SHALL BE PERMITTED. CHANGES OF MAGNITUDE OR INVOLVING EXTRA COST ARE NOT PERMISSIBLE WITHOUT REVIEW. GROUP CONCEALED ELECTRICAL EQUIPMENT REQUIRING ACCESS WITH EQUIPMENT FREELY ACCESSIBLE THROUGH ACCESS DOORS.

- CONTROLS, ACCESSORIES AND OTHER ITEMS REQUIRED
- "WIRING": RACEWAY, FITTINGS, WIRE, BOXES AND REL
- AS DEFINED ABOVE.

- "CONCEALED": EMBEDDED IN MASONRY OR OTHER CONSTRUCTION, INSTALLED IN FURRED SPACES, WITH PARTITIONS OR HUNG CEILINGS, IN TRENCHES, IN CRA

- 8) "SIMILAR" OR "EQUAL": EQUAL IN MATERIALS, WEIGHT DESIGN AND EFFICIENCY OF SPECIFIED PRODUCT.
- C. TEMPORARY LIGHT AND POWER: PROVIDE TEMPORARY LIGHT A SYSTEMS AT EARLIEST POSSIBLE DATE WITHIN THE CONSTRUCT FOR THE REQUIREMENTS OF ALL TRADES AS HEREIN DESCRIBE EXTEND SYSTEMS TO NEW CONSTRUCTION AS SOON AS PHYSIC
- POSSIBLE. MAINTAIN SYSTEM DURING WORKING HOURS OF AL COST OF ENERGY WILL BE PAID FOR BY OWNER. PROVIDE AL REQUIRED MAINTENANCE, INCLUDING LAMPS AND SOCKETS.

D. QUALITY ASSURANCE

IF SO THE	F. MATERIALS
HE OWNER ENCE THAT	1) NAMEPLATES: PROVIDE BLACK LAMICOID SHEET WITH 3/4 IN.
RE THEY	WHITE LETTERING, FASTENED WITH EPOXY CEMENT FOR EACH DISCONNECT SWITCH, CIRCUIT BREAKER, PANEL, ENCLOSURE, MOTOR CONTROLLER AND THE LIKE. NAMEPLATES SHALL
	DESCRIBE THE NAME AND NUMBER OF EACH COMPONENT. 2) CABLE TAGS: TAG EACH CONDUCTOR PASSING THROUGH
IT OF UIPMENT,	SPLICE OR PULLBOX WITH A WHITE LINEN TAG, INDICATING POINT OF ORIGIN AND TERMINATION OF THE CIRCUIT.
ION FOR	3) INSERTS AND SUPPORTS:
	a. INSERTS: STEEL, SLOTTED TYPE, FACTORY PAINTED. - SINGLE ROD: SIMILAR TO GRINNELL FIG. 281. - MULTI-ROD: SIMILAR TO FEE AND MASON SERIES 9000
	WITH END CAPS AND CLOSURE STRIPS. – CLIP FORM NAILS FLUSH WITH INSERTS.
	<ul> <li>MAXIMUM LOADING 75 PERCENT OF RATING.</li> <li>b. SUPPORTS FROM BUILDING CONSTRUCTION: INSERTS,</li> </ul>
	BEAM CLAMPS, STEEL FISHPLATES (IN CONCRETE FILL ONLY), CANTILEVER BRACKETS OR OTHER MEANS.
	SUBMIT FOR REVIEW. c. GROUPED LINES AND SERVICES: TRAPEZE HANGERS OF
E ITOR SHALL	BOLTED ANGLES OR CHANNELS. d. WHERE BUILDING CONSTRUCTION IS INADEQUATE:
E, HE FORWARD NO	PROVIDE ADDITIONAL FRAMING. SUBMIT FOR REVIEW. G. PAINT SHALL BE THE BEST GRADE FOR ITS PURPOSE. DELIVER IN
ALOG CUTS	ORIGINAL SEALED CONTAINERS AND APPLY IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. COLORS SHALL BE AS SELECTED BY
/IT_THREE DRWARD	ARCHITECT OR ENGINEER. UTILIZE GALVANIZED IRON PRIMER ON PANEL AND PULL BOXES, AFTER FABRICATION. UTILIZE HOT DIPPED GALVANIZED
	OR DIPPED IN ZINC BASED PRIMER FOR: OUTLET BOXES, JUNCTION BOXES, CONDUIT HANGERS, RODS, INSERTS AND SUPPORTS. ZINC BASED DRIMED WITH FINISH TO MATCH SUPPORTINGS SHALL BE USED.
	BASED PRIMER WITH FINISH TO MATCH SURROUNDINGS SHALL BE USED FOR MARRED SURFACES OF STEEL EQUIPMENT AND RACEWAYS. A FIELD–APPLIED ZINC BASED PRIME COAT SHALL BE UTILIZED FOR STEEL
AND	OR IRONWORK.
	H. BRUSH AND CLEAN WORK PRIOR TO CONCEALING, PAINTING AND ACCEPTANCE. PAINTED EXPOSED WORK SOILED OR DAMAGED; CLEAN
	AND REPAIR TO MATCH ADJOINING WORK BEFORE FINAL ACCEPTANCE. REMOVE DEBRIS FROM INSIDE AND OUTSIDE OF MATERIAL AND EQUIPMENT.
	I. FINAL LOCATIONS AND MOUNTING ORIENTATIONS OF ALL SWITCHES,
	RECEPTACLES AND LIGHT FIXTURES SHALL BE VERIFIED WITH ARCHITECT.
SHALL D	J. ALL ACCESS DOOR LOCATIONS SHALL BE REVIEWED BY ARCHITECT PRIOR TO INSTALLATION.
UNDER	6. LOW-VOLTAGE DISTRIBUTION EQUIPMENT:
N. PAPER	A. PROVIDE COMPLETE EQUIPMENT INCLUDING: SWITCHES, FUSES, CIRCUIT BREAKERS, PANELS.
OVERS. S TO THE	B. ALL EQUIPMENT SHALL CONFORM TO NEMA, ANSI AND IEEE STANDARDS.
AND	<ul> <li>C. DISCONNECT SWITCHES SHALL BE NONFUSED AS NOTED. VOLTAGE SHALL BE AS REQUIRED. SWITCHES SHALL BE HEAVY DUTY, EXCEPT AS NOTED, AND HORSEPOWER RATED FOR MOTOR LOADS. TOGGLE TYPE SWITCHES SHALL BE NONFUSED, LOAD BREAK, HAVING MAXIMUM RATING OF 30 AMP AT 240 VOLTS. TWO-POLE SWITCHES SHALL BE SIMILAR TO HART AND HEGEMAN NO. 6808F. THREE-POLE SWITCHES SHALL BE SIMILAR TO HART AND HEGEMAN NO. 7810F.</li> <li>KNIFE-BLADE TYPE SWITCHES SHALL BE LOAD BREAK, QUICK-MAKE-QUICK-BREAK, UL CLASS R UP TO 600 AMP. SWITCHES SHALL BE SIMILAR TO GENERAL ELECTRIC QMR. ALL SWITCH ENCLOSURES SHALL BE DEAD FRONT, NEMA TYPE 1, EXCEPT AS NOTED.</li> </ul>
EER.	NOTED, AND HORSEPOWER RATED FOR MOTOR LOADS. TOGGLE TYPE SWITCHES SHALL BE NONFUSED, LOAD BREAK, HAVING MAXIMUM RATING OF 30 AMP AT 240 VOLTS. TWO-POLE SWITCHES SHALL BE SIMILAR TO
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)R SHALL,"	D. CIRCUIT BREAKERS: MOLDED CASE BREAKERS SHALL BE
VE BEEN	THERMAL-MAGNETIC, QUICK-MAKE-QUICK-BREAK, BOLT-ON TYPE, MANUALLY OPERATED WITH INSULATED TRIP-FREE HANDLE. MULTI-POLE
	TYPE BREAKERS SHALL CONTAIN INTERNAL TRIP BAR. TERMINALS SHALL BE SUITABLE FOR COPPER OR ALUMINUM CABLE. FURNISH AUXILIARY DEVICES WHERE REQUIRED FOR SHUNT—TRIPPING, OPEN AND CLOSE
COMPLETE E	MOTOR OPERATOR AND ALARM INDICATION. ENCLOSURES SHALL BE DEAD FRONT, NEMA TYPE 1, EXCEPT AS NOTED. FRAMES, IC AND
LY	INTERCHANGEABLE TRIPS SHALL BE AS FOLLOWS, UNLESS OTHERWISE NOTED:
	1) 120 VOLTS, 100-AMP FRAME: 10,000 AMPS, 1 POLE.
ACQUIRE 5. 5,	<ul><li>208 VOLTS, 100-AMP FRAME: 18,000 AMPS, 2 AND 3 POLES.</li><li>E. BALANCE THE LOAD OVER PHASES WHEN NEW CIRCUITS ARE ADDED TO</li></ul>
ED FOR	NEW PANELS. MOUNTING HEIGHT SHALL BE A MAXIMUM OF 6 FT-6 IN. FROM FLOOR TO TOP SWITCH UNIT.
LATED	F. TESTS: OPEN AND CLOSE LOAD BREAK SWITCHING DEVICES UNDER
IN DOUBLE RAWL	LOAD. 7. RACEWAYS:
NCEALED"	A. PROVIDE RACEWAYS COMPLETE WITH BOXES, FITTINGS AND ACCESSORIES.
IT, SIZE,	CONDUIT OR TUBING SIZES REFERRED TO IN SPECIFICATIONS AND ON DRAWINGS ARE NOMINAL DIAMETERS. MINIMUM DIAMETER SHALL BE 3/4
	IN. B. MATERIALS
AND POWER ION AREAS ED.	1) RACEWAYS:
CALLY L TRADES.	a. RIGID STEEL CONDUIT: FULL-WEIGHT PIPE, GALVANIZED, THREADED.
LL	<ul> <li>b. ELECTROMETALLIC TUBING (EMT): THIN WALL PIPE, GALVANIZED, THREADLESS.</li> <li>c. FLEXIBLE STEEL CONDUIT: CONTINUOUS SINGLE STRIP,</li> </ul>
	c. FLEXIBLE STEEL CONDUIT: CONTINUOUS SINGLE STRIP, GALVANIZED. 2) FITTINGS AND ACCESSORIES:
Their ) by	a. RIGID STEEL: NONSPLIT, THREADED, STEEL OR MALLEABLE IRON. ZINC DIE CAST NOT PERMITTED.
ONALLY BEL.	b. ELECTROMETALLIC TUBING: COMPRESSION TYPE. GALVANIZED RIGID STEEL ELBOWS, 2 IN. OR LARGER.
SHALL BE	<ul> <li>c. FLEXIBLE METALLIC CONDUIT: ANGLE WEDGE TYPE WITH INSULATED THROAT.</li> <li>d. BUSHINGS: METALLIC INSULATED TYPE.</li> </ul>
ALL BE	<ul> <li>a. OUTLET BOXES: EXCEPT AS OTHERWISE REQUIRED BY</li> </ul>

IN VIOLATION OF CODE, OR AS NOTED OR DIRECTED.

PROVIDE RISER CLAMPS AT EACH FLOOR LEVEL OF RISER RACEWAYS AND RESTING ON SLAB. FOR ABOVE FLOOR FITTINGS TELEPHONE SHALL BE BUSHED HOLE AND POWER SHALL BE DUPLEX RECEPTACLE OR OTHER AS NOTED. PROVIDE SEPARATION BARRIER BETWEEN POWER AND TELEPHONE COMPARTMENTS.

SECURE ALL RACEWAYS TO SUPPORTS WITH PIPE STRAPS OR U-BOLTS. SPACING OF SUPPORTS SHALL BE A MINIMUM OF 10 FT ON CENTER FOR METALLIC RACEWAY AND AS REQUIRED FOR NONMETALLIC RACEWAY. MOUNT SUPPORTS TO STRUCTURE MASONRY WITH TOGGLE BOLTS ON HOLLOW MASONRY, EXPANSION SHIELDS OR INSERTS IN CONCRETE AND BRICK, MACHINE SCREWS ON METAL, BEAM CLAMPS ON FRAMEWORK, AND PAN THROUGH STRAPS IN METAL DECK. NAILS, RAWL PLUGS OR WOOD PLUGS SHALL NOT BE PERMITTED. WHERE REQUIRED BY STRUCTURE, FURNISH THROUGH BOLTS AND FISHPLATES.

EXPOSED RACEWAYS SHALL BE RUN PARALLEL WITH OR AT RIGHT ANGLES TO WALLS. PROVIDE CLEARANCE WITH WATER, STEAM OR OTHER PIPING (MINIMUM 3 IN. SEPARATION FROM STEAM AND HOT WATER PIPES, EXCEPT 1 IN. FROM PIPE COVER AT CROSSINGS AND 18 IN. FOR PARALLEL RUNS). FOR HUNG CEILING OUTLETS, RUN IN HUNG CEILING AND CONNECT TO CEILING SUPPORT CHANNELS. IN MASONRY AND POURED CONCRETE, RUN VERTICALLY ONLY.

PROVIDE DEDICATED GROUNDING CONDUCTOR WITH EACH BRANCH CIRCUIT AND FEEDER.

EMPTY RACEWAYS OVER 10 FT LONG: PROVIDE FISH OR PULL WIRE, GALVANIZED OR NYLON ROPE.

RIGID STEEL CONDUIT SHALL BE PERMITTED FOR FEEDERS AND BRANCH CIRCUITS. PAINT MALE THREADS OF FIELD-THREADED CONDUIT WITH GRAPHITE-BASE PIPE COMPOUND AND BUTT CONDUIT ENDS. TOUCH UP MARRED SURFACES AND FIELD-CUT THREADS, CRC-COLD GALVANIZED.

EMT SHALL BE PERMITTED FOR BRANCH CIRCUITS ONLY, IN DRY LOCATIONS, DRY WALLS, HUNG CEILINGS, HOLLOW BLOCK WALLS AND FURRED SPACES.

FLEXIBLE STEEL CONDUIT SHALL BE UTILIZED FOR SHORT CONNECTIONS WHERE RIGID CONDUIT IS IMPRACTICAL. FROM OUTLET BOX TO RECESSED LIGHTING FIXTURE: PROVIDE MINIMUM 4 FT AND MAXIMUM 6 FT LENGTHS. FOR FINAL CONNECTION TO MOTOR TERMINAL BOX AND OTHER VIBRATING EQUIPMENT: PROVIDE WITH POLYVINYL SHEATHING AND GROUND CONDUCTOR. MINIMUM LENGTH: 18 IN. WITH SLACK. CONNECT GROUND CONDUCTOR TO ENCLOSURE OR RACEWAY AT EACH END.

CUT CONDUIT ENDS SQUARE. REAM SMOOTH. PAINT MALE THREADS OF FIELD THREADED RACEWAYS WITH GRAPHITE BASE PIPE COMPOUND. DRAW UP TIGHT WITH RACEWAY COUPLING.

ALL COUPLINGS SHALL BE COMPRESSION TYPE. NO SET SCREW FITTINGS.

RACEWAYS PASSING THROUGH FIRE-RATED CONSTRUCTION: SEAL OPENING WITH FIRE SEALANT.

- D. ERECT WALL AND SWITCH OUTLETS IN ADVANCE OF FURRING AND FIREPROOFING. OUTLET BOXES SHALL BE SET SQUARE AND TRUE WITH BUILDING FINISH. SECURE TO BUILDING STRUCTURE BY ADJUSTABLE STRAP IRON OR GROUT IN WITH MASONRY. VERIFY OUTLET LOCATIONS IN FINISHED SPACES WITH ARCHITECTURAL DRAWINGS OF INTERIOR DETAILS AND FINISHES.
- E. PANEL, JUNCTION AND PULL BOXES SHALL BE LOCATED CLEAR OF OTHER TRADES. CONCEAL JUNCTION AND PULL BOXES IN FINISHED SPACES. WHERE NECESSARY, REROUTE RACEWAYS OR MAKE OTHER ARRANGEMENTS FOR CONCEALMENT. BOXES SHALL BE ACCESSIBLE SUPPORT BOXES FROM BUILDING STRUCTURE, INDEPENDENT OF CONDUIT PROVIDE FLOOR-TO-CEILING CHANNELS FOR MOUNTING ON DRYWALL AND LIGHTWEIGHT CONSTRUCTION. OUTLET BOXES FOR FIXTURES RECESSED IN HUNG CEILINGS SHALL BE ACCESSIBLE THROUGH OPENING CREATED BY REMOVAL OF FIXTURE. SECURE TO BLACK IRON SUPPORT MOTOR TERMINAL BOXES: COORDINATE WITH MOTOR BRANCH CIRCUIT CONDUIT AND WIRING; ADD BOX VOLUME WHERE REQUIRED.
- F. FIRE SEALANTS: PROVIDE FOR RACEWAYS AND WIRE PASSING THROUGH FLOOR SLOTS, SLEEVES OR OPENINGS IN FIRE-PARTITIONS ROOMS.
- G. PERFORM CONTINUITY TESTS OF RESISTANCE OF FEEDER CONDUITS FROM SERVICE TO POINT OF FINAL DISTRIBUTION USING 1 CONDUCTOR RETURN. MAXIMUM RESISTANCE SHALL BE 25 OHMS.

8. WIRE AND CABLE:

- A. PROVIDE WIRE AND CABLE COMPLETE WITH ACCESSORIES. SIZE REFERENCE SHALL BE AWG EXCEPT AS NOTED.
- B. CONDUCTORS SHALL BE COPPER, ASTM STANDARD SOLID (NO. 10 AND SMALLER) OR STRANDED (NO. 8 AND LARGER). GENERAL USE CABLING SHALL BE NO. 12 MINIMUM. AT 120 VOLTS AND OVER 100 FT CIRCUIT LENGTH PROVIDE NO. 10 MINIMUM.

CONTROL AND ALARM CABLING, EXCEPT AS NOTED, SHALL BE NO. 14 MINIMUM.

OTHER VOLTAGES AND PHASES: ADJUST CABLE SIZING AS REQUIRED TO MAINTAIN VOLTAGE DROP. INCREASE RACEWAY SIZES FOR LARGER WIRE AS REQUIRED.

- C. INSULATION SHALL BE RUBBER AND THERMOPLASTIC MEETING ASTM AND IPCEA STANDARDS. TYPE THW OR THWN SHALL BE UTILIZED FOR FEEDERS AND BRANCH CIRCUITS EXCEPT AS NOTED.
- D. ARMORED CABLE (BX) SHALL BE UTILIZED FOR BRANCH CIRCUITS IN DRY HOLLOW LOCATIONS, HUNG CEILINGS, AND BLOCK WALLS. WHEN USED IN LIEU OF WIRING IN CONDUIT, STATE IN PROPOSAL THAT PRICE IS BASED UPON THE USE OF BX.
- E. COLOR CODING SHALL BE AS FOLLOWS:
  - 120/208 VOLT SYSTEM:
  - BLACK FOR A PHASE
  - RED FOR B PHASE BLUE FOR C PHASE
  - NEUTRAL WIRE SHALL UTILIZE WHITE OUTER COVERING THROUGHOUT. EQUIPMENT GROUND WIRE SHALL UTILIZE GREEN OUTER COVERING THROUGHOUT.

WHERE COLOR-CODED CABLE IS NOT AVAILABLE, CERTIFY IN WRITING AND REQUEST PERMISSION TO OVERLAP CONDUCTORS WITH 6 IN. OF COLOR TAPING IN ACCESSIBLE LOCATIONS.

- F. PROVIDE FLAMEPROOF LINEN OR FIBER TAGS IN ACCESSIBLE LOCATIONS. FOR FEEDERS INDICATE FEEDER NUMBER, SIZE, PHASE AND POINTS OF ORIGIN AND TERMINATIONS. FOR CONTROL AND ALARM WIRING INDICATE TYPE (CONTROL OR ALARM), SIZE OF WIRE, AND POINTS OF ORIGIN AND TERMINATIONS.
- G. TERMINATIONS, SPLICES AND TAPS UNDER 600 VOLTS: COPPER CONDUCTORS NO. 10 AND SMALLER SHALL UTILIZE COMPRESSION-TYPE OF TWIST-ON SPRING-LOADED CONNECTORS AND CLEAR NYLON-INSULATED COVERING. COPPER CONDUCTORS NO. 8 AND LARGER SHALL UTILIZE MECHANICAL BOLTED PRESSURE OR HYDRAULIC COMPRESSION TYPE USING MANUFACTURER'S RECOMMENDED TOOLING. CABLE LUGS AND CONNECTORS SHALL UTILIZE COMPRESSION TYPE OF SAME METAL AS CONDUCTOR. PROVIDE TO MATCH CABLE. WITH MARKING INDICATING SIZE AND TYPE. COPPER LUG CONNECTIONS TO BUS BARS: USE ANTISEIZE COMPOUND ON TANG.

PROVIDE RACEWAY SUPPORT UTILIZING CEILING TRAPEZE, STRAP HANGERS, OR WALL BRACKETS. PROVIDE U-BOLTS AT EACH FLOOR LEVEL OF RISER RACEWAYS AND CONNECTED TO ACCEPTABLE SUPPORTS.

C. PROVIDE RACEWAYS ONLY AS HEREIN SPECIFIED, EXCEPT AS NOTED.

RACEWAYS SHALL BE RUN CONCEALED, EXCEPT AS NOTED.

- CONSTRUCTION, DEVICES OR WIRING, BOXES SHALL BE STAMPED STEEL, 4 IN. SQUARE OR OCTAGON FOR FIXTURES. BOXES ABOVE CEILING SHALL BE 1-1/2
- IN. DEEP. BOXES IN CEILING OR SLAB SHALL BE 3 IN. DEEP. BOXES IN WALL FOR FIXTURES SHALL BE
- 2-3/4 IN. DEEP. FURNISH WITH FIXTURE STUDS
- WHERE REQUIRED. WITHOUT FIXTURE OR DEVICE: FURNISH BLANK COVER. OFFSET BACK-TO-BACK
- OUTLETS WITH MINIMUM 6 IN. SEPARATION. b. JUNCTION AND PULL BOXES: GALVANIZED SHEET STEEL WITH SCREW-ON COVERS, EXCEPT AS NOTED. FURNISH WITH INSULATED SUPPORTS FOR CABLES. LOCATIONS

SHALL BE AS NOTED OR REQUIRED AND ACCESSIBLE.

- H. NOT MORE THAN 3 LIGHTING OR CONVENIENCE OUTLET CIRCUITS SHALL BE INSTALLED IN ONE CONDUIT UNLESS OTHERWISE INDICATED. PULL NO THERMOPLASTIC WIRES AT TEMPERATURES LOWER THAN 32 DEG F/
- I. LEAVE WIRES WITH SUFFICIENT SLACK TO PERMIT MAKING FINAL CONNECTIONS.
- J. PERFORM CONTINUITY AND INSULATION TESTS. MEGGER TEST 100 PERCENT OF FEEDERS AND 10 PERCENT OF BRANCH CIRCUITS.

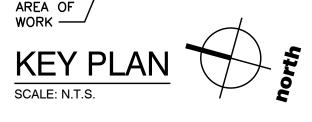
PERFORM TESTS PRIOR TO CONNECTING EQUIPMENT AND IN PRESENCE OF AUTHORIZED REPRESENTATIVES. SUBMIT WRITTEN REPORT OF RESULTS. CORRECT OR REPLACE CABLE TESTING BELOW MANUFACTURER'S STANDARDS.

- 9. DEVICES:
- A. PROVIDE COMPLETE MATERIAL AND ACCESSORIES AS NOTED.
- B. LOCAL WALL SWITCHES SHALL BE SPECIFICATION GRADE, TOGGLE, QUIET TYPE, RATED 20 AMP, 120 VOLT, AC. SIMILAR TO HUBBELL NOS. 1221 (SINGLE POLE), 1222 (DOUBLE POLE), 1223 (3-WAY) AND 1224 (4-WAY).
- C. INSERTION RECEPTACLES SHALL BE SPECIFICATION GRADE DUPLEX CONVENIENCE 125 VOLTS, 2 POLE, 3 WIRE, U GROUND SLOT. GROUNDED, EXCEPT AS NOTED. MEETING NEMA STANDARDS, PUBLICATION WD-1-1971. SIMILAR TO HUBBELL NOS. 5362 (20 AMP) AND 5262 (15 AMP).
- 1) SINGLE, EXCEPT AS NOTED:
  - a. 20 AMP STRAIGHT BLADE, SIMILAR TO HUBBELL NO.
  - b. 125 VOLT, 2 POLE, 3 WIRE, GROUNDED.
- 2) SPECIAL USE: NONINTERCHANGEABLE TYPES AND RATINGS
- D. DEVICE PLATES: SEE ARCHITECT FOR TYPE. FOR RECEPTACLES WITH OTHER THAN 120 VOLT, INSCRIBED VOLTAGE AVAILABLE.
- E. COLORS: COORDINATE COLORS WITH ARCHITECT.
- F. MOUNTING ORIENTATION OF RECEPTACLES (HORIZONTAL OR VERTICAL): COORDINATE WITH ARCHITECT.
- 10. LIGHTING FIXTURES:
  - A. PROVIDE FIXTURES ("LUMINARIES"), COMPONENTS AND LAMPS. FIXTURES SHALL BE COMPLETELY FACTORY ASSEMBLED, WIRED AND EQUIPPED WITH ALL NECESSARY SOCKETS, BALLASTS, SUPPORTING HARDWARE AND ACCESSORIES. REFER TO DRAWINGS FOR INDIVIDUAL FIXTURE DESCRIPTIONS.
  - B. FIXTURE CATALOG NUMBERS USED TO ILLUSTRATE EQUIPMENT TYPE DO NOT NECESSARILY DENOTE REQUIRED MOUNTING EQUIPMENT OR ACCESSORIES. PROVIDE ACCESSORIES TO SUIT.
- 11. TELEPHONE CONDUIT SYSTEM:
  - A. PROVIDE COMPLETE SYSTEM OF: CONTROLS CABLING CONDUIT, PULL BOXES, OUTLETS, SLEEVES AND FISHWIRES.
  - B. CONTROLS CABLING: BELDEN #2148A CAT6a ETHERNET CABLE.
    - 1) LOW VOLTAGE WIRING SHALL BE RUN IN SEPARATE CONDUIT FROM VIDEO AND LINE VOLTAGE WIRING
    - 2) MAXIMUM ACCEPTABLE CABLE LENGTH FOR CAT6a ETHERNET CABLE (BELDEN #2148A) IS 300'-0". INSTALLATION AND TERMINATION PRACTICES SHALL BE IN COMPLIANCE WITH ANSI/TIA/EIA 568A AND AS/NZS 3080 STANDARDS.
  - C. OUTLETS SHALL BE:
  - ALL: 4 IN. SQUARE WITH BUSHED COVER PLATE
  - D. PROVIDE FISHWIRES, IN RACEWAYS OVER 10 FT LONG.
  - E. CONDUIT SHALL BE 3/4 IN. MINIMUM.

### 12. GROUNDING

- A. GROUND CABLES SHALL BE BARE OR GREEN COLOR CODED, INSULATED, ANNEALED STRANDED TINNED COPPER WIRE AS INDICATED ON DRAWINGS.
- B. PROVIDE CONTINUOUS GROUND PATH FOR ALL ELECTRICAL CIRCUITS, FROM POINT OF UTILIZATION BACK TO SOURCE THROUGH GROUND WIRES, CONDUIT RUNS, AND RELATED ITEMS.
- C. ALL GROUND WIRES AND BONDING JUMPERS SHALL BE STRANDED COPPER INSTALLED IN CONDUIT. ALL GROUND WIRES SHALL BE WITHOUT JOINTS AND SPLICES OVER ITS ENTIRE LENGTH.
- D. MECHANICAL EQUIPMENT SHALL BE BONDED TO THE BUILDING EQUIPMENT GROUNDING SYSTEM, INCLUDING FANS, PUMPS, ETC.
- E. PROVIDE GROUNDING TYPE BUSHINGS FOR CONDUIT TERMINATED THROUGH MULTIPLE CONCENTRIC KNOCKOUTS NOT FULLY KNOCKED OUT, ON INSIDE OF PANELBOARDS AND LOAD CENTERS, GROUND BUSHING WITH #12 BARE COPPER TO PANELBOARD GROUND BUS.
- F. PROVIDE GROUNDING FOR PIPE GRID AND ALL METALLIC COMPONENTS OF THEATER LIGHTING EQUIPMENT.





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