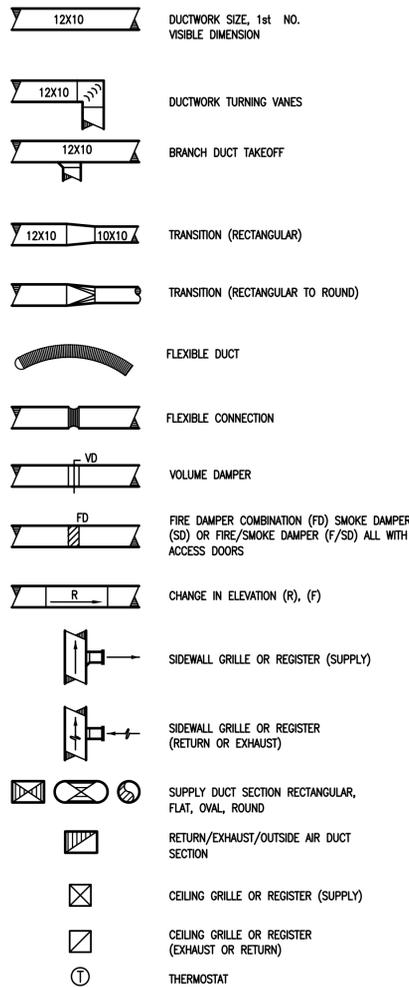


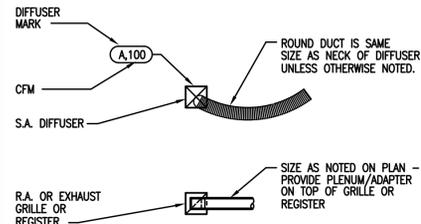
MECHANICAL LEGEND

(NOTE: ALL SYMBOLS SHOWN ARE NOT NECESSARILY USED ON DRAWINGS)

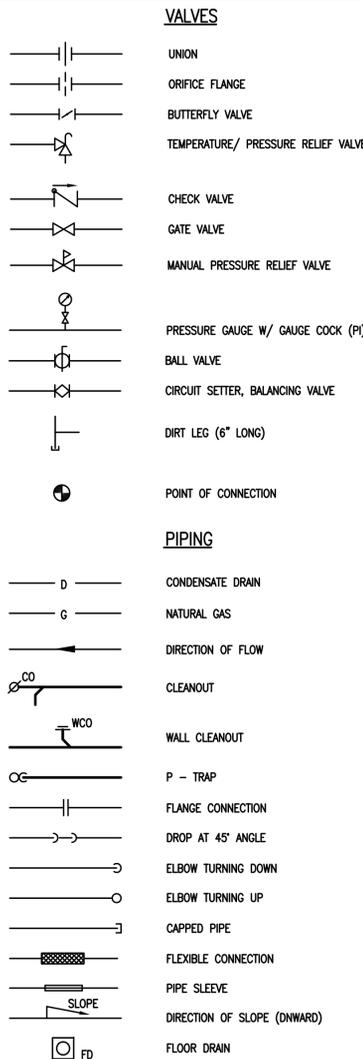
DUCTWORK



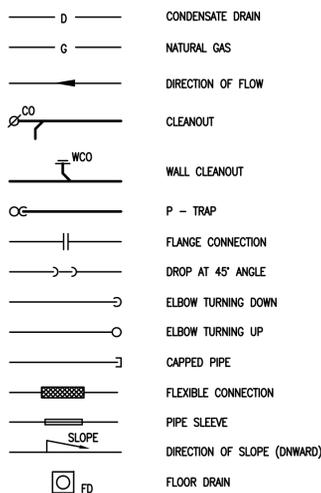
DIFFUSER KEY



SYMBOLS



PIPING



GENERAL NOTES

HVAC GENERAL NOTES:

- THESE GENERAL NOTES APPLY TO ALL SHEETS
- IN ANY CASE WHERE A PIPE OR DUCT SHOWN ON A PLAN SHEET DIFFERS FROM THAT SHOWN IN A SCHEMATIC OR DETAIL, USE THE LARGER OF THE TWO SIZES SHOWN.
- PIPING SHOWN ON EACH PLAN IS RUN ABOVE THE CEILING ON THE FLOOR WHERE IT IS SHOWN UNLESS OTHERWISE NOTED.
- MOUNT THERMOSTATS 48 INCHES ABOVE FINISHED FLOOR AND 8 INCHES TO ONE SIDE OF THE LIGHT SWITCHES WHERE BOTH OCCUR IN THE SAME LOCATION, UNLESS OTHERWISE NOTED.
- NORMAL DESIGN CONDITIONS:

	OUTSIDE	INSIDE
SUMMER:	100F DB, 78F WB	75F, 50% RH
WINTER:	25F	72F
- ALL DUCT DIMENSIONS SHOWN ARE CLEAR AIRSTREAM SHEETMETAL DIMENSIONS.
- COORDINATE LOCATION OF THERMOSTATS WITH ARCHITECT.
- DO NOT RUN AIR HANDLERS OR EXHAUST FANS UNTIL ALL INTERIOR CLEANING AND PAINTING IS COMPLETE. THE CLEANING OF FOULED COILS OR FAN ASSEMBLIES DUE TO PAINT OR CONSTRUCTION DEBRIS IS TO BE THE RESPONSIBILITY OF THE HVAC CONTRACTOR.
- CONTRACTOR SHALL VISIT JOBSITE AND FAMILIARIZE HIMSELF WITH EXISTING CONDITIONS PRIOR TO SUBMITTING BID.
- THE DRAWINGS ARE DIAGRAMMATIC ONLY AND SHALL NOT BE SCALED. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH OTHER TRADES AND WITH EXISTING CONDITIONS. THE CONTRACTOR SHALL NOT INSTALL OR FABRICATE ANY WORK SHOWN UNTIL ALL SUCH WORK IS FULLY COORDINATED. NOT ALL OFFSETS AND FITTINGS ARE SHOWN. PROVIDE OFFSETS AND FITTINGS AS REQUIRED BY FIELD CONDITIONS AS PART OF THE WORK.
- GUARANTEE WORK FOR 1 YEAR FROM THE DATE OF FINAL ACCEPTANCE OF THE PROJECT AND DURING THAT PERIOD MAKE GOOD ANY FAULTS OR IMPERFECTIONS THAT MAY ARISE DUE TO DEFECTS OR OMISSIONS IN MATERIALS OR WORKMANSHIP.
- ENTIRE INSTALLATION SHALL BE IN ACCORDANCE WITH IBC, IMC, IPC, NFC, AND NFPA: THE STATE OF TEXAS AND THE APPROVING AUTHORITIES.
- CONSTRUCT ALL DUCTWORK DOWNSTREAM OF UNITS TO SMACNA 2-INCH PRESSURE CLASSIFICATION. SEAL ALL DUCTWORK TO A SMACNA TYPE "A" SEAL CLASS.
- ALL DUCTWORK SHALL BE GALVANIZED STEEL WITH BLANKET WRAP INSULATION AS SPECIFIED.
- FLEX DUCT SHALL BE FLEXMASTER TYPE 8 INSULATED OR EQUIVALENT; 6-FEET MAXIMUM INSTALLED LENGTH. MIN. R-VALUE EQUAL TO R-6.
- COORDINATE EXACT LOCATION OF DIFFUSERS WITH ARCHITECT. DIFFUSERS MAY HAVE TO BE SHIFTED TO FIT WITHIN ROOMS AS SHOWN. PROVIDE ADDITIONAL FLEX AND DUCT WORK AS REQUIRED TO MOVE DIFFUSERS.

ABBREVIATIONS

ABBREVIATION	DESCRIPTION	ABBREVIATION	DESCRIPTION
AFF	ABOVE FINISHED FLOOR	KW	KILOWATTS
AHU	AIR HANDLING UNIT	LB	POUNDS
ARCH	ARCHITECT	MAX	MAXIMUM
BLDG	BUILDING	MECH	MECHANICAL
BTUH	BRITISH THERMAL UNITS PER HOUR	MEZZ	MEZZANINE
B VA	BALL VALVE	MIN	MINIMUM
EAT	ENTERING AIR TEMPERATURE	NC	NORMALLY CLOSED
EFFIC	EFFICIENCY	NO	NORMALLY OPEN
EXH	EXHAUST	OA	OUTSIDE AIR
F	DEGREES FAHRENHEIT	PD	PRESSURE DROP
FD	FIRE DAMPER	PH	PHASE
F/SD	COMBINATION FIRE/SMOKE DAMPER	PLBG	PLUMBING
G	NATURAL GAS	RH	RELATIVE HUMIDITY
GA	GAUGE	RPM	REVOLUTIONS PER MINUTE
HP	HORSEPOWER	SCH	SCHEDULE
HR	HOUR	SIM	SIMILAR
HZ	HERTZ	STRUC	STRUCTURAL
IN	INCHES	S P	STATIC PRESSURE
		TOT	TOTAL
		TYP	TYPICAL
		UON	UNLESS OTHERWISE NOTED
		VD	VOLUME DAMPER
		WB	WET BULB

FAN SCHEDULE

TAG	SERVICE	TYPE	CFM	S.P. (IN.H2O)	MOTOR HP	VOLTS/PH /HZ	FAN RPM	MAX. SONES	INTERLOCK WITH	DRIVE TYPE	REFERENCES SELECTION - GREENHECK (U.N.O.)	NOTES
F-1	MENS	INLINE	100	0.50	128 W	120/1/60	950	3	LIGHT SWITCH	DIRECT	SP-B150	1,2,3
F-2	WOMENS	INLINE	100	0.50	128 W	120/1/60	950	3	LIGHT SWITCH	DIRECT	SP-B150	1,2,3

- NOTES:
- FURNISH WITH DISCONNECT SWITCH, BACKDRAFT DAMPER, AND ALL REQUIRED SWITCHES AND RELAYS FOR PROPER INTERLOCK.
 - REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
 - FURNISH AND INSTALL WITH FAN SPEED CONTROLLER.

AIR DEVICE SCHEDULE

TAG	CFM RANGE	SUPPLY	RETURN	EXHAUST	INLET SIZE (IN.)	MODULE SIZE	P.D. (IN.H2O)	THROW @ 100 FPM	O.B.D. REQUIRED	MAX N.C	MATERIAL	REFERENCES SELECTION - PRICE (U.N.O.)	NOTES
A	0-120	X			6"Ø	24x24	0.03	3	NO	15	ALUMNUM	ASPD	1,2
B	125-250	X			8"Ø	24X24	0.06	4	NO	15	ALUMNUM	ASPD	1,2
C	255-380	X			10"Ø	24X24	0.09	6	NO	18	ALUMNUM	ASPD	1,2
D	385-550	X			12"Ø	24X24	0.13	7	NO	21	ALUMNUM	ASPD	1,2
E	555-850	X			14"Ø	24X24	0.23	10	NO	27	ALUMNUM	ASPD	1,2
F	0-2000		X	X	22X22	24X24	0.05	-	NO	20	ALUMNUM	80	1,2
G	0-120	X			6"Ø	12X12	0.09	4	NO	15	ALUMNUM	ASPD	1,2
H	125-220	X			8"Ø	12X12	0.15	6	NO	17	ALUMNUM	ASPD	1,2
J	0-480		X	X	10X10	12X12	0.05	-	NO	19	ALUMNUM	80	1,2
L	0-600	X			26X10	28X12	0.04	20	NO	15	ALUMNUM	SDGE	1
M	1200-1800		X	X	30X24	30X24	0.10	-	NO	22	ALUMNUM	530	1

- NOTES:
- FURNISH AND INSTALL AIR DEVICE WITH LAY-IN BORDER FRAME FOR LAY-IN CEILINGS OR SURFACE MOUNTING FRAME FOR MOUNTING IN GYP. BOARD CEILINGS OR WALL.

LOUVER SCHEDULE

TAG	SERVICE	TYPE	CAPACITY CFM	FACE VELOCITY FPM	MAX S.P. DROP	SIZE (IN) WIDTH HEIGHT	MIN FREE AREA (SQ.FT.)	REFERENCES SELECTION GREENHECK (U.N.O.)	NOTES
L-1	MECHANICAL ROOM 112	INTAKE	450	464	0.031	30 15	0.97	EHH-501	1,2

- NOTES:
- FURNISH AND INSTALL LOUVER WITH BIRD SCREEN AND FLANGE FRAME. INSTALL LOUVER PER MANUFACTURERS INSTRUCTIONS FOR ASSOCIATED WALL TYPE. COORDINATE LOUVER FINISH WITH ARCHITECT. FURNISH LOUVER WITH FULL SPECTRUM OF COLORS.
 - HVAC INSTALLER SHALL FURNISH THE LOUVER.

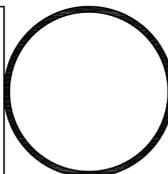
SPLIT DX FAN COILS

TAG	AC-1	AC-2	AC-3
SUPPLY CFM	1200	2000	2000
MIN. O.A. CFM	0	225	225
EXT. STATIC INCHES WC	0.75	0.5	0.5
MINIMUM HP	0.75	1	1
DRIVE TYPE	DIRECT	DIRECT	DIRECT
MOTOR (VOLTS/PHASE)	230/1	230/1	230/1
COOLING			
ENTERING AIR DBWB	75.0/64.7	77.2/63.9	77.2/63.9
LEAVING AIR DBWB	58/56	55/54	55/54
MIN. TOTAL CAPACITY (MBH)	41.3	56	56
MIN. SENSIBLE CAPACITY (MBH)	28	41	41
HEATING			
EAT /LAT (F)	61.4 /90	65.8 /90	65.8 /90
HEATING KW	6.90	17.60	17.60
MCA /MOCP	43.6/50	108.75/125	108.75/125
SINGLE POINT POWER CONNECTION	YES	YES	YES
UNIT INFORMATION			
REFERENCE MANUFACTURER	YORK	YORK	YORK
MODEL	MX16CN21	AVG60D	AVG60D
WEIGHT (LBS)	180	188	188
NOTES:	1,3,4,	1,3,4,5	1,3,4,5
OUTDOOR UNIT			
TAG	CU-1	CU-2	CU-3
VOLTAGE/PHASE	230/1	230/1	230/1
QUANTITY OF COMPRESSOR(S)	1	1	1
MCA	21.50	34.30	34.30
MOCP	35	60	60
AMBIENT AIR °F	100	100	100
MIN. CONDENSING UNIT EFFICIENCY AT ARI EER / (SEER)	14.2	13.5	13.5
MANUFACTURER	YORK	YORK	YORK
MODEL	YCJD42	YCJD60	YCJD60
NOTES:	1,2,3,	1,2,3,4,5	1,2,3,4,5

- NOTES:
- FURNISH AND INSTALL UNITS WITH 7 DAY PROGRAMMABLE T-STAT. ALSO FURNISH HUMIDISTAT FOR AC-2 AND AC-3.
 - SIZE, INSULATE AND PROVIDE TRAPS IN REFRIGERANT LINES PER MANUFACTURERS RECOMMENDATIONS.
 - PROVIDE SINGLE-POINT ELECTRICAL CONNECTION.
 - PROVIDE SCR FOR ELECTRIC HEAT.
 - HUMIDISTAT WILL BE SET AT 55% IF HUMIDITY EXCEEDS SETPOINT THE AC UNIT WILL GO TO FULL COOLING AND ENERGIZE THE HEATER TO MAINTAIN TEMPERATURE SETPOINT.



CONSTRUCTION DOCUMENTS



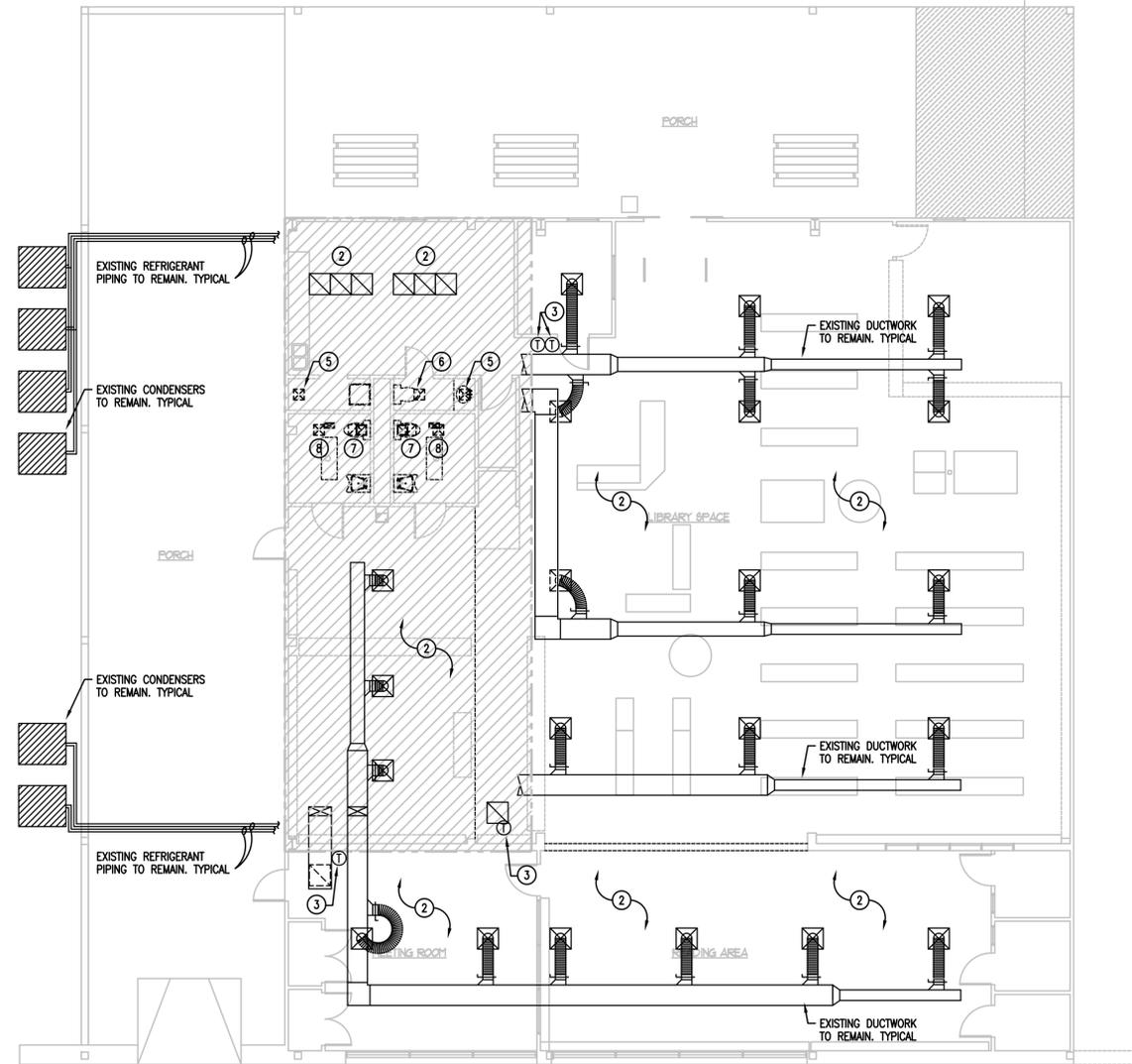
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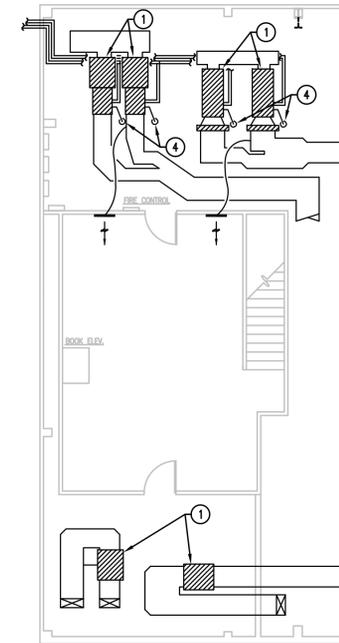
SHEET TITLE
MECHANICAL LEGEND,
SYMBOLS & ABBREV.

SHEET:
M-0.1
OF 18
Date: NOV 16, 2012

11/16/12



1 FLOOR PLAN - DEMOLITION - HVAC
 MD-1.1 SCALE: 1/8" = 1'-0"



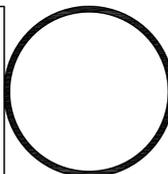
1 MEZZANINE PLAN - DEMOLITION - HVAC
 MD-1.1 SCALE: 1/8" = 1'-0"

GENERAL NOTES

1. CONTRACTOR SHALL VISIT JOBSITE AND FAMILIARIZE HIMSELF WITH EXISTING CONDITIONS PRIOR TO SUBMITTING BID.
2. THE DRAWINGS ARE DIAGRAMMATIC. ALL EQUIPMENT LOCATION SHOWN ON PLAN ARE APPROXIMATED LOCATION. CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH OTHER TRADES AND WITH EXISTING CONDITIONS. CONTRACTOR SHALL NOT INSTALL OR FABRICATE ANY WORK SHOWN UNTIL ALL SUCH WORK IS FULLY COORDINATED. NOT ALL OFFSETS AND FITTINGS ARE SHOWN. PROVIDE OFFSETS AND FITTINGS AS REQUIRED BY FIELD CONDITIONS AS PART OF THE WORK.
3. CONSTRUCT ALL DUCTWORK DOWNSTREAM OF AIR TERMINAL UNITS TO A MINIMUM SMACNA 2-INCH PRESSURE CLASSIFICATION. SEAL ALL DUCTWORK TO A MINIMUM SMACNA TYPE "A" SEAL CLASS.
4. ALL RIGID DUCTWORK SHALL BE GALVANIZED STEEL WITH EXTERNAL FIBERGLASS INSULATION. MINIMUM R-VALUE 6.0.
5. FLEX DUCT SHALL BE FLEXMASTER TYPE 8M INSULATED OR EQUIVALENT; 6 FEET MAXIMUM INSTALLED LENGTH. FLEX DUCT SHALL BE INSTALLED IN ACCORDANCE WITH CURRENT SMACNA REQUIREMENTS.
6. COORDINATE EXACT LOCATION OF DIFFUSERS WITH THE CEILING GRID. DIFFUSERS MAY HAVE TO BE SHIFTED TO FIT WITHIN CEILING LAYOUTS AND ROOMS AS SHOWN. PROVIDE ADDITIONAL FLEX AND RIGID DUCTWORK AS REQUIRED TO MOVE DIFFUSERS.
7. ALL EXISTING HVAC DUCT GRILLES, EQUIPMENT, CONTROLS, ETC. ARE TO REMAIN UNLESS OTHERWISE NOTED.

KEYED NOTES

- 1 EXISTING AC UNITS TO REMAIN.
- 2 ALL EXISTING AIR DEVICES SHALL BE RE-INSTALLED AS REQUIRED. CONTRACTOR SHALL COORDINATE WITH NEW LIGHTING LAYOUT AND ARCHITECTURAL REFLECTED CEILING PLAN.
- 3 EXISTING THERMOSTATS TO REMAIN.
- 4 EXISTING CONDENSATE DRAIN TO REMAIN ABOVE MEZZANINE SUB-FLOOR. REMOVE CONDENSATE DRAIN PIPING BELOW MEZZANINE SUB-FLOOR IN PLENUM ABOVE SUSPENDED CEILING IN ITS ENTIRETY. REFER TO NEW WORK FOR COLLECTION OF CONDENSATE AND ROUTING.
- 5 REMOVE EXISTING SUPPLY AIR DEVICE AND DUCTWORK BACK TO MAIN SUPPLY DUCT. CONTRACTOR TO SEAL OPENING AIR TIGHT.
- 6 REMOVE EXISTING EXHAUST FAN. CAP DUCT ABOVE CEILING.
- 7 REMOVE EXISTING EXHAUST FAN; PREPARE DUCT ROUGH-IN FOR NEW FAN; REFER TO NEW WORK.
- 7 REMOVE EXISTING AIR DEVICE TO BE RE USED; REFER TO NEW WORK.



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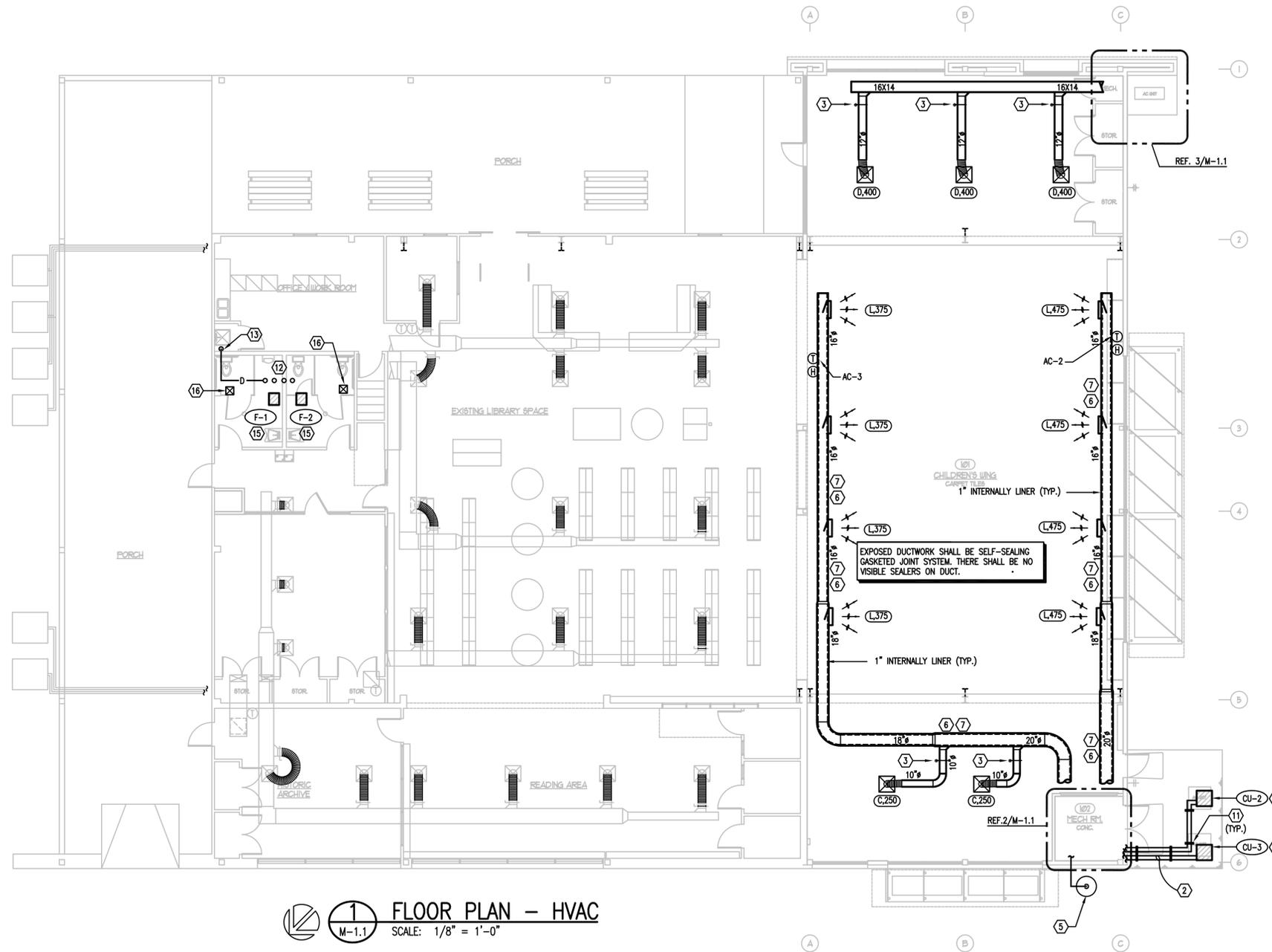
SHEET TITLE
 FLOOR PLAN
 DEMO - HVAC

SHEET:
MD-1.1
 OF 18
 Date: NOV 16, 2012

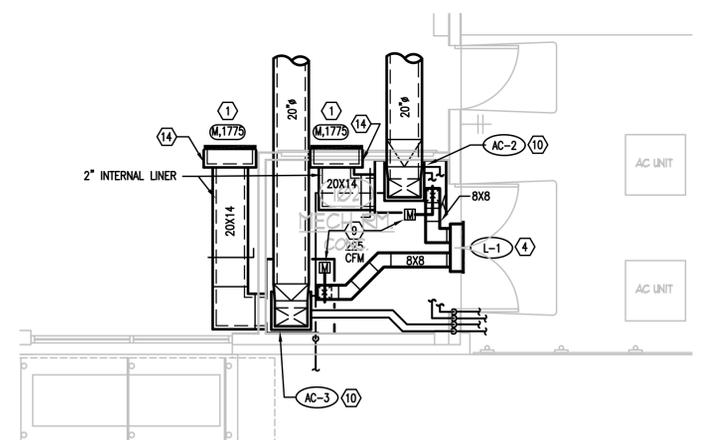
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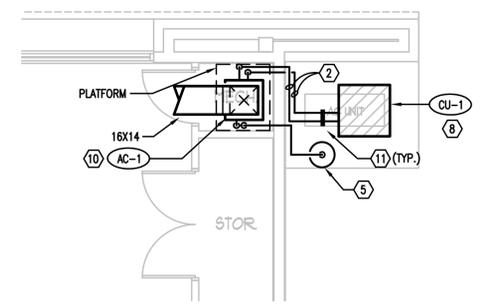
11/16/12



1 FLOOR PLAN - HVAC
 M-1.1 SCALE: 1/8" = 1'-0"



2 MECHANICAL ROOM 112
 M-1.1 SCALE: 1/4" = 1'-0"



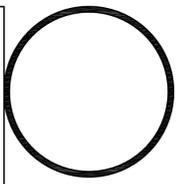
3 AC-1 MECHANICAL ROOM PLAN
 M-1.1 SCALE: 1/4" = 1'-0"

GENERAL NOTES

1. UNLESS OTHERWISE NOTED ON PLAN; BRANCH DUCT SIZE TO AIR DEVICES SHALL MATCH INLET SIZE OF ASSOCIATED DEVICE. NOT ALL AIR DEVICES ARE DRAWN TO SCALE REFER TO DIFFUSER AND GRILLE SCHEDULE.
2. PROVIDE AIR DEVICES WITH OPPOSED BLADE DAMPERS WHERE AIR DEVICE IS INSTALLED IN AN INACCESSIBLE LOCATION UNLESS NOTED OTHERWISE ON PLAN. COORDINATE WITH REFLECTED CEILING PLAN.
3. NOT ALL DUCT/PIPE OFFSETS ARE INDICATED ON PLAN. COORDINATE ROUTING OF DUCTWORK WITH OTHER HVAC SYSTEMS AND OTHER DISCIPLINES. OFFSET AND RISE IN JOIST WHERE REQUIRED TO AVOID CONFLICTS.
4. FURNISH AIR VENTS AT ALL HIGH SPOTS ON CHILLED WATER AND HOT WATER HEATING PIPING.
5. COORDINATE LOCATION OF ALL HVAC EQUIPMENT, DUCT PENETRATIONS, AND PIPE PENETRATIONS WITH STRUCTURAL ENGINEER PRIOR TO CREATING OPENINGS OR SETTING EQUIPMENT.
6. PAINT ALL DUCT PLENUMS ATTACHED TO AIR DEVICES THAT ARE VISIBLE FROM FLOOR LEVEL FLAT BLACK.

KEYED NOTES

- 1 MOUNT RETURN AIR GRILLE AT 6" A.F.F.
- 2 ROUTE REFRIGERANT PIPING FROM CONDENSING UNIT TO ASSOCIATED AIR HANDLING UNIT. SLEEVE REFRIGERANT PIPING THROUGH WALL AND SEAL WEATHER TIGHT.
- 3 FURNISH ROTO-TWIST. BALANCE DAMPER MODEL RT-100 SP/CC.
- 4 BUILD AN INSULATED SHEET METAL PLENUM ON BACK OF LOUVER FULL SIZE OF LOUVER 6" DEEP. COORDINATE EXACT MOUNTING HEIGHT OF LOUVER WITH ARCHITECT.
- 5 ROUTE FULL SIZE CONDENSATE PIPE WITH P-TRAP TO DRY WELL. REFER TO DETAIL SHEET FOR DRY WELL DETAIL.
- 6 SUSPEND DUCT FROM STRUCTURE.
- 7 FURNISH WITH 1" ACOUSTICAL LINER EQUAL TO JOHNS-MANSVILLE SPIRACOUSTIC PLUS.
- 8 REFER TO 3/M-2.1 MAINTAIN MANUFACTURERS RECOMMENDATION CLEARANCES
- 9 FURNISH AND INSTALL 120V/1 MOTORIZED DAMPER. BALANCE DAMPER AT CFM INDICATED. REFER TO 7/M-2.1.
- 10 BUILD GALVANIZED SHEET METAL PLENUM UNDER ENTIRE UNIT. FURNISH A MICRO SAFETY SWITCH TO SHUT UNIT OFF WHEN CONDENSATE IS DETECTED IN AUXILIARY DRAIN PAN. REFER TO 10/M-2.1.
- 11 REFER TO 3/M-2.1 FOR PIPE SUPPORT.
- 12 EXISTING CONDENSATE DRAIN LINES FROM ABOVE.
- 13 ROUTE CONDENSATE DRAIN LINE MAIN DOWN TO HUB DRAIN BELOW SINK. REFER TO PLUMBING DRAWINGS FOR LOCATION OF HUB DRAIN.
- 14 30X24X12 INSULATED PLENUM WITH 2" LINER.
- 15 INSTALL NEW EXHAUST FAN; CONNECT TO EXISTING EXHAUST DUCT.
- 16 CLEAN AND PAINT EXISTING AIR DEVICE AND INSTALL IN NEW CEILING.



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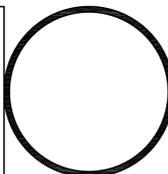
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 FLOOR PLAN
 HVAC

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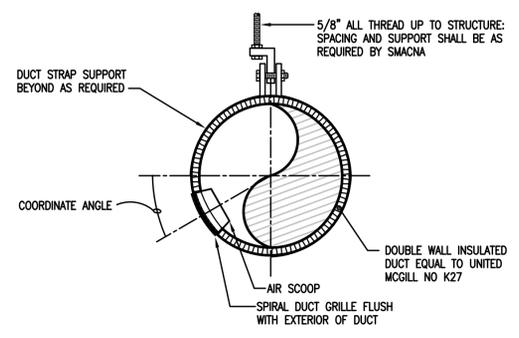
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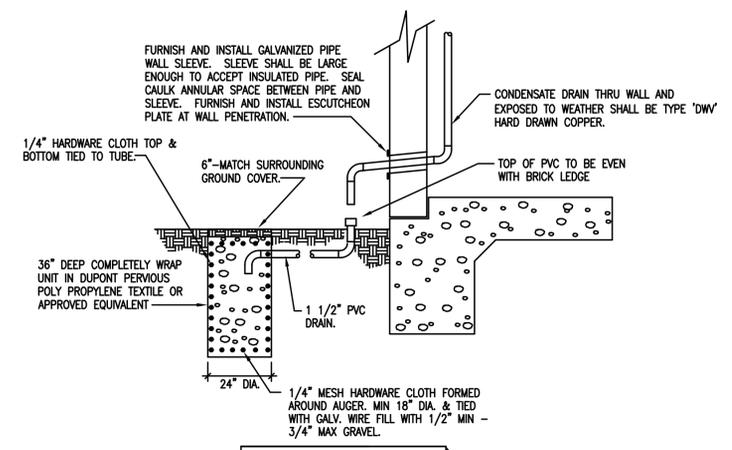
SHEET TITLE
MECHANICAL DETAILS

SHEET:
M-2.1
OF 18
Date: NOV 16, 2012

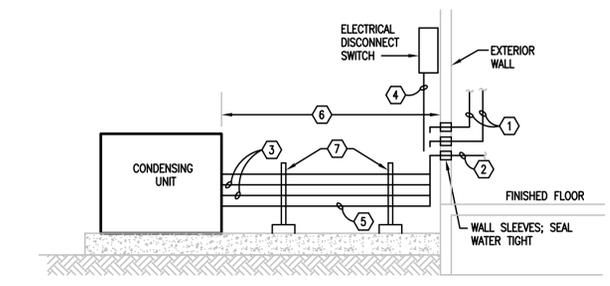
CONSTRUCTION DOCUMENTS



1 SPIRAL DUCT GRILLE DETAIL
M-2.1 SCALE: NOT TO SCALE

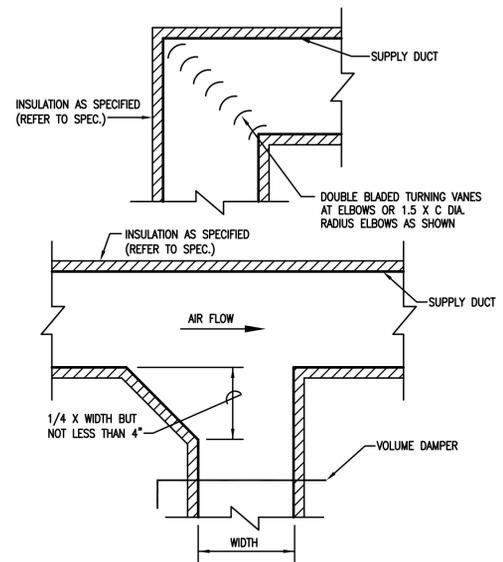


2 DRY WELL DETAIL
M-2.1 SCALE: NOT TO SCALE

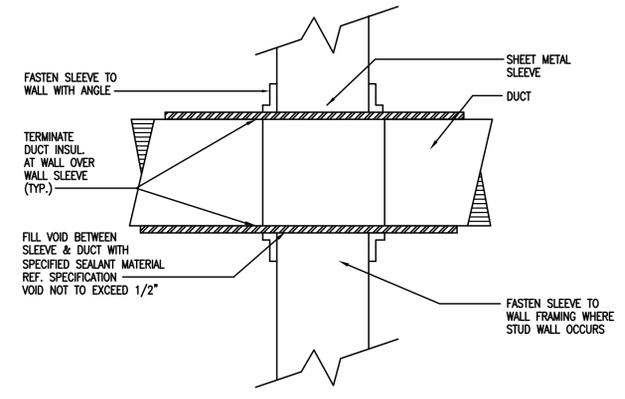


3 CONDENSING UNIT DETAIL - SIDE VIEW
M-2.1 SCALE: NOT TO SCALE

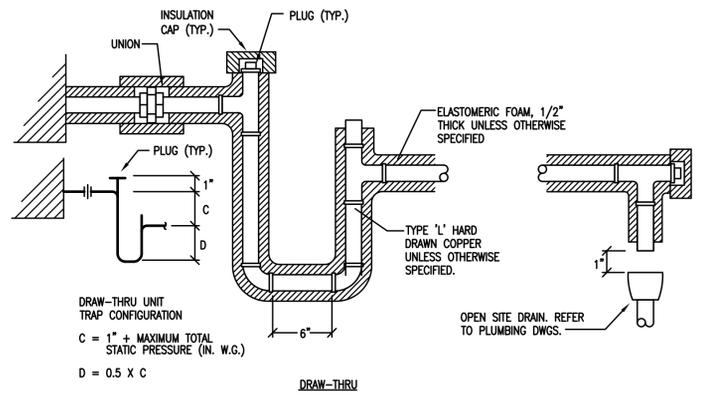
- KEYED NOTES FOR DETAIL**
CONDENSING UNIT
- 1 REFRIGERANT PIPING ROUTED AS SHOWN ON PLANS.
 - 2 CONTROLS CONDUIT ROUTED TO INDOOR UNIT.
 - 3 REFRIGERANT PIPING, TYPE 'L' HARD DRAWN COPPER; SECURE PIPE ADJACENT TO BUILDING WITH UNISTRUT FRAMING. PAINT INSULATION JACKET, PIPING, CONDUIT, AND PIPE SUPPORTS TO MATCH BUILDING COLOR.
 - 4 POWER CONDUIT, RIGID STEEL, OUTSIDE BUILDING, ROUTED ON METAL FRAMING, WITH LIQUID TIGHT FLEX CONDUIT AT OUTDOOR UNIT (MAX 24").
 - 5 CONTROLS CONDUIT OUTSIDE, RIGID STEEL, ROUTED ON METAL FRAMING, WITH LIQUID TIGHT FLEX CONDUIT AT OUTDOOR UNIT (MAX. 24").
 - 6 DISTANCE FROM BUILDING PER MANUFACTURER'S RECOMMENDATIONS (NOMINAL 30").
 - 7 METAL FRAMING TO BE B-LINE B22TH CHANNEL, PS-1400 CUSHIONED CLAMPS, B234R FOUR HOLE CORNER GUSSET WITH FRAMING CHANNEL ATTACHED TO CONCRETE BLOCK (OR APPROVED EQUAL). ALL CHANNELS AND ACCESSORIES TO BE HOT DIP GALVANIZED STEEL OR ALLOY 6063-T6 ALUMINUM.



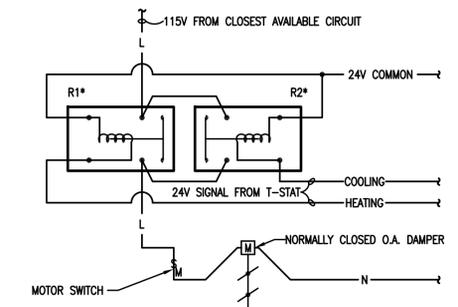
4 DUCT & ELBOW TAKE-OFF DETAIL
M-2.1 SCALE: NOT TO SCALE



5 TYPICAL DUCT WALL PENETRATION
M-2.1 SCALE: NOT TO SCALE



6 CONDENSATE DRAIN TRAP DETAIL
M-2.1 SCALE: NOT TO SCALE

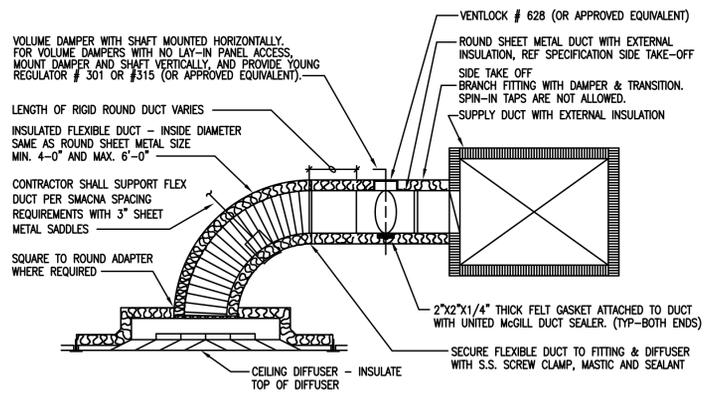


* R1 AND R2 ARE EQUAL TO A SPST N.O. RELAY WITH 24 VOLT COIL AND 120V 5AMP CONTACT RATING.

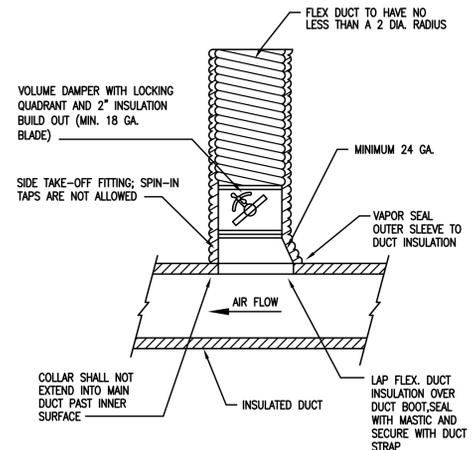
SEQUENCE OF OPERATION:

1. WHEN THERE IS A CALL FOR COOLING RELAY "R2" WILL ENERGIZE CIRCUIT AND OPEN DAMPER; WHEN COOLING IS SATISFIED R2 WILL DE-ENERGIZE CIRCUIT AND DAMPER WILL CLOSE
2. R1 WILL OPERATE SIMILAR EXCEPT UPON HEATING DEMAND.

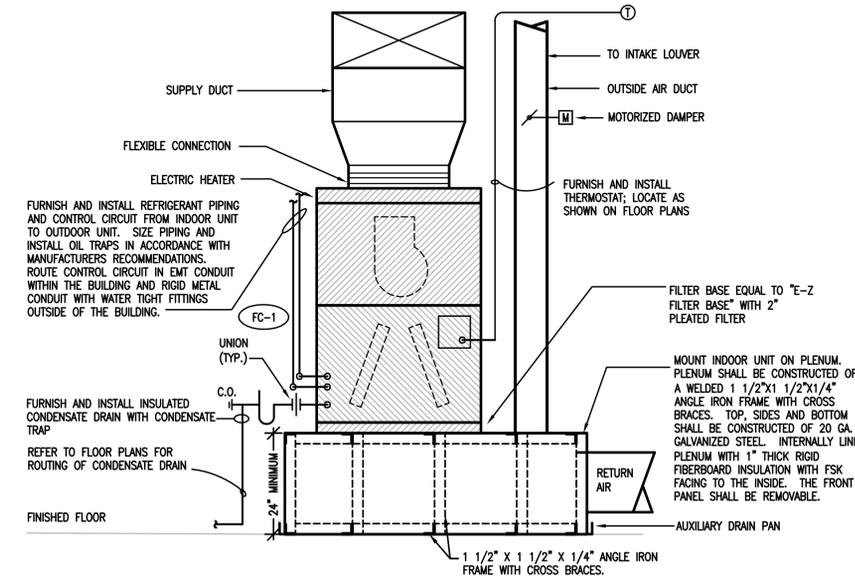
7 MOTORIZED O.A. WIRING SCHEMATIC
M-2.1 SCALE: NOT TO SCALE



8 CEILING DIFFUSER CONNECTION DETAIL
M-2.1 SCALE: NOT TO SCALE



9 TYPICAL BRANCH TAP DETAIL
M-2.1 SCALE: NOT TO SCALE



10 TYPICAL FAN COIL UNIT SCHEMATIC (VERTICAL)
M-2.1 SCALE: NOT TO SCALE

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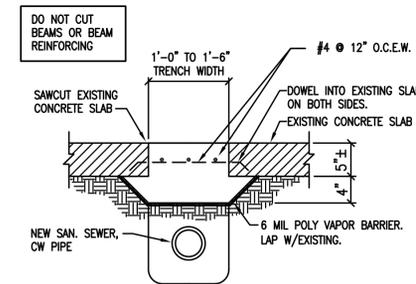
PLUMBING LEGEND	
(NOTE: ALL SYMBOLS SHOWN ARE NOT NECESSARILY USED ON DRAWINGS)	
VALVES	
	UNION
	TEMPERATURE/ PRESSURE RELIEF VALVE
	CHECK VALVE
	GATE VALVE
	GATE VALVE IN C.I. VALVE BOX
	STRAINER W/ BLOWDOWN GATE VALVE
	THERMOWELL W/ THERMOMETER
	THERMOMETER WELL
	PRESSURE GAUGE W/ GAUGE COCK (PI)
	EXTERIOR 2-WAY FLOOR CLEANOUT IN CONCRETE PAD
	EXTERIOR FLOOR CLEANOUT IN CONCRETE PAD
	FLOOR CLEANOUT
	WALL CLEANOUT
	P - TRAP
	DROP AT 45° ANGLE
	ELBOW TURNING DOWN
	ELBOW TURNING UP
	CAPPED PIPE
	FLEXIBLE CONNECTION
	PIPE SLEEVE
	DIRECTION OF SLOPE (DNWARD)
	FLOOR DRAIN
	SANITARY WASTE OR VENT STACK
	BALL VALVE
	VALVE IN VERTICAL
	DIRT LEG (6" LONG)

SYMBOL LEGEND	
	EXISTING COLD WATER (POTABLE)
	EXISTING DOMESTIC HOT WATER (POTABLE)
	EXISTING DOMESTIC HOT WATER RETURN (POTABLE)
	EXISTING SANITARY VENT
	EXISTING SANITARY SEWER
	DOMESTIC COLD WATER (POTABLE)
	DOMESTIC HOT WATER (POTABLE)
	DOMESTIC HOT WATER RETURN (POTABLE)
	CONDENSATE DRAIN
	NATURAL GAS
	NON-POTABLE WATER
	DIRECTION OF FLOW
	WATER HAMMER ARRESTOR
	HIGH PRESSURE GAS

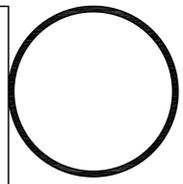
ABBREVIATION			
ABBREVIATION	DESCRIPTION	ABBREVIATION	DESCRIPTION
AC	ABOVE CEILING	IN	INCHES
AFF	ABOVE FINISHED FLOOR	IE	INVERT ELEVATION
AHU	AIR HANDLING UNIT		
ARCH	ARCHITECT		
BFF	BELOW FINISHED FLOOR	KW	KILOWATTS
BLDG	BUILDING	LB	POUNDS
BTUH	BRITISH THERMAL UNITS PER HOUR		
B VA	BALL VALVE	MAX	MAXIMUM
BF	BELOW FLOOR	MECH	MECHANICAL
		MEZZ	MEZZANINE
CAP	CAPACITY	MFR	MANUFACTURER
CFH	CUBIC FEET PER HOUR	MIN	MINIMUM
CH VA	CHECK VALVE	MTD	MOUNTED
CI	CAST IRON	MTR	MOTOR
CO	CLEANOUT		
CONC	CONCRETE	NC	NORMALLY CLOSED
COND	CONDENSING	NO	NORMALLY OPEN
CONN	CONNECTION		
CONT	CONTINUATION	OS&Y	OUTSIDE STEM & YOKE ON CENTERS
CU	COPPER	OC	ON CENTERS
CW	DOMESTIC COLD WATER (POTABLE)	OH	OVERHEAD
		PD	PRESSURE DROP
D	CONDENSATE DRAIN LINE	PH	PHASE
DIA	DIAMETER	PLBG	PLUMBING
DV	DIVISION	PR VA	PRESSURE REDUCING VALVE
DN	DOWN	PSIG	POUNDS PER SQUARE INCH GAUGE
DWGS	DRAWINGS		
		RE:	REFERENCE
EFFIC	EFFICIENCY	RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
ELEC	ELECTRICAL	RPM	REVOLUTIONS PER MINUTE
EXH	EXHAUST		
EXT	EXTERIOR		
EXT	EXTERNAL		
		SAN	SOIL & WASTE (ABOVE GRADE)
F	DEGREES FAHRENHEIT	SCH	SCHEDULE
FCO	FLOOR CLEANOUT	SM	SIMILAR
FD	FLOOR DRAIN	SQ FT	SQUARE FEET
FIN	FINISHED	SS	STAINLESS STEEL
FLEX	FLEXIBLE	STL	STEEL
FLR	FLOOR	STRUC	STRUCTURAL
FT	FEET		
		TI	TEMPERATURE INDICATOR (THERMOMETER)
G	NATURAL GAS	TOT	TOTAL
GALV	GALVANIZED	TYP	TYPICAL
GA	GAUGE	T&P	TEMPERATURE & PRESSURE RELIEF VALVE
GPH	GALLONS PER HOUR		
GPM	GALLONS PER MINUTE		
GT VA	GATE VALVE	UON	UNLESS OTHERWISE NOTED
		HP	HORSEPOWER
HR	HOUR	V	SANITARY VENT
HW	DOMESTIC HOT WATER (140F)	VD	VOLUME DAMPER
HZ	HERTZ	VTR	VENT THROUGH ROOF
		WCO	WALL CLEANOUT
		W/	WITH

NOTES	
PLUMBING GENERAL NOTES:	
<ol style="list-style-type: none"> CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO CONSTRUCTION. REFER TO ARCHITECTURAL DRAWING FOR MOUNTING HEIGHT OF PLUMBING FIXTURES. CONTRACTOR SHALL REVIEW AND FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO SUBMITTING BID. CONTRACTOR SHALL COORDINATE WITH ALL TRADES DURING CONSTRUCTION. SLOPE ALL WASTE PIPING AT 1/4" PER FOOT. REFER TO ARCHITECTURAL ELEVATION AND SECTIONS PRIOR TO ROUTING OF PIPING. INSTALL FLUSH LEVER HANDLES ON OPEN SIDE OF ADA WATER CLOSET STALLS. 	

PLUMBING FIXTURE CONNECTION SCHEDULE						
MARK	DESCRIPTION	CONNECTION SIZE (IN)				REMARKS
		CW	HW	WASTE	VENT	
UR-1	URINAL	3/4	-	2	2	WALL HUNG
EDF-1	ELECTRIC DRINKING FOUNTAIN	1/2	-	2	2	SINGLE ELECTRIC DRINKING FOUNTAIN
WH-1	WALL HYDRANT	3/4	-	-	-	NON-FREEZE
-	-	-	-	-	-	-



1 PIPE IN TRENCH DETAIL
P-0.1 SCALE: NOT TO SCALE



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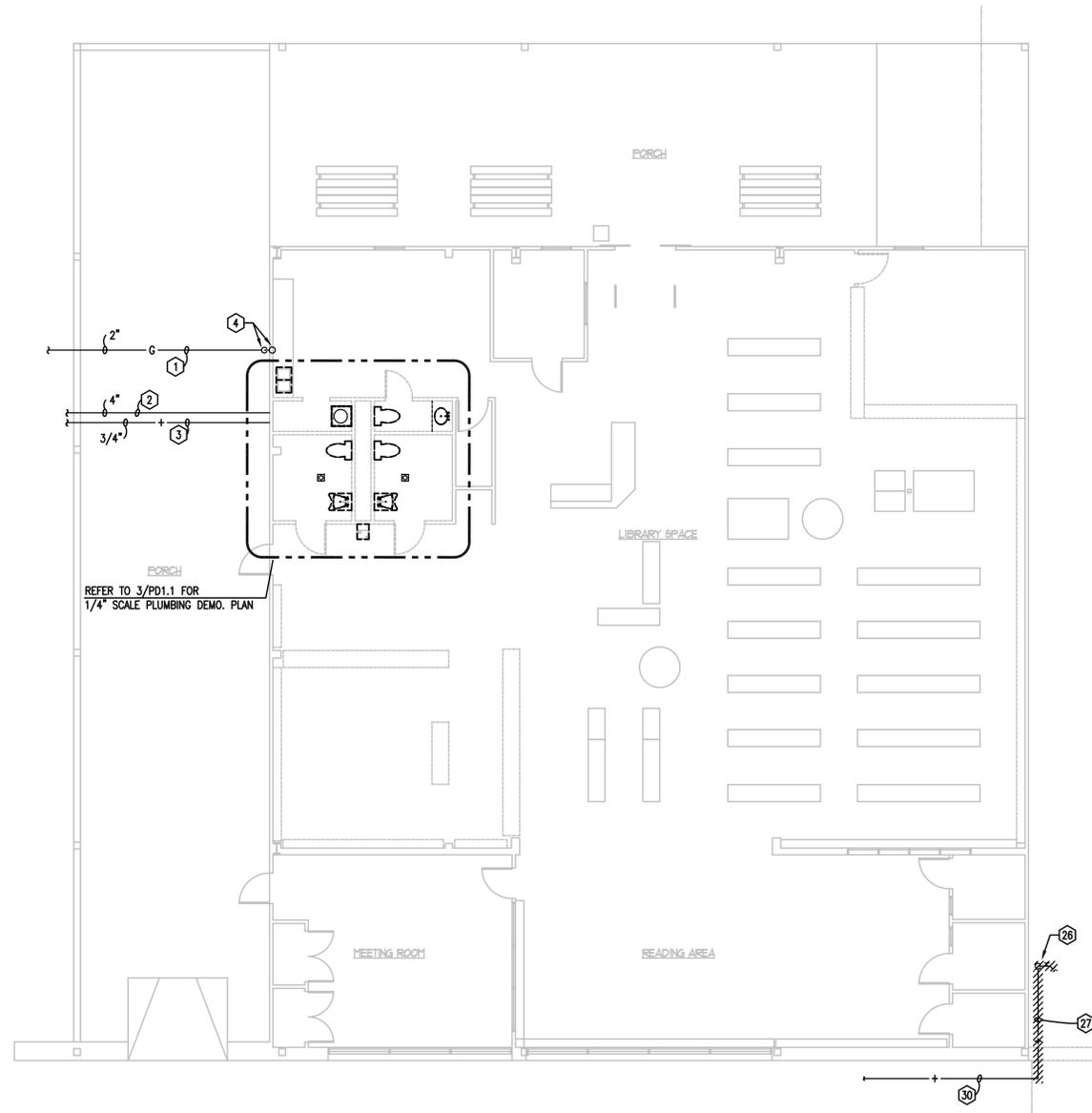
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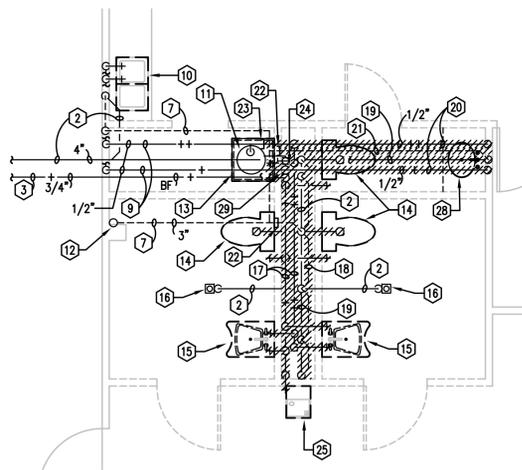
SHEET TITLE
PLUMBING LEGEND
SYMBOLS & ABBREV.

SHEET:
P-0.1
OF 18
Date: NOV 16, 2012

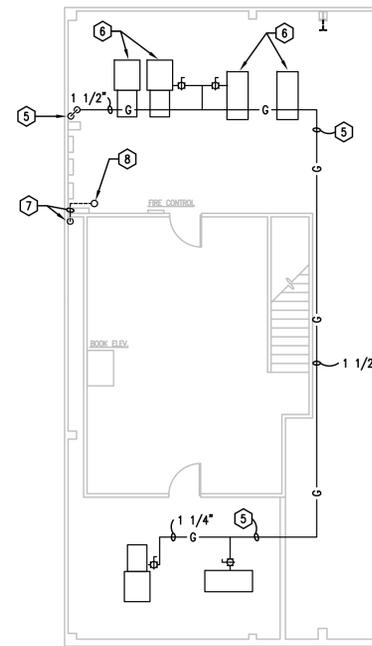
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1 FLOOR PLAN - DEMO.- PLUMBING
 PD-1.1 SCALE: 1/8" = 1'-0"



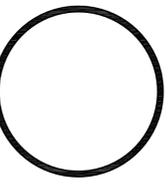
3 ENLARGED FLOOR PLAN - DEMO.- PLUMBING
 PD-1.1 SCALE: 1/4" = 1'-0"



2 MEZZANINE PLAN - DEMO.- PLUMBING
 PD-1.1 SCALE: 1/8" = 1'-0"

KEYED NOTES

- 1 EXISTING GAS PIPING BELOW GRADE TO REMAIN.
- 2 EXISTING WASTE PIPING TO REMAIN. CONTRACTOR SHALL FIELD VERIFY EXACT DEPTH & LOCATION OF EXISTING WASTE PIPING
- 3 EXISTING COLD WATER PIPING BELOW GRADE TO REMAIN.
- 4 EXISTING GAS PIPING FROM BELOW GRADE UP TO MEZZANINE LEVEL TO REMAIN.
- 5 EXISTING GAS PIPING TO REMAIN.
- 6 EXISTING A/C UNIT. REFER TO HVAC DWGS.
- 7 EXISTING VENT PIPING TO REMAIN.
- 8 EXISTING 3"VTR TO REMAIN.
- 9 EXISTING HOT WATER & COLD WATER PIPING ABOVE CEILING TO REMAIN.
- 10 RELOCATE EXISTING SINK & TRIM. SEE NEW WORK FOR NEW LOCATION OF SINK.
- 11 EXISTING ELECTRIC WATER HEATER ABOVE CEILING TO REMAIN.
- 12 EXISTING VENT PIPE RISE TO MEZZANINE LEVEL TO REMAIN.
- 13 RELOCATE EXISTING SERVICE SINK & TRIM AND REMOVE ALL ASSOCIATED PIPING. CAP EXISTING WASTE PIPING AT FLOOR. SEE NEW WORK FOR NEW LOCATION OF SERVICE SINK.
- 14 RELOCATE EXISTING WATER CLOSET AND REMOVE ALL ASSOCIATED PIPING. CAP EXISTING WASTE PIPING AT FLOOR. SEE NEW WORK FOR NEW LOCATION OF WATER CLOSET
- 15 RELOCATE EXISTING LAVATORY & TRIM AND REMOVE ALL ASSOCIATED PIPING. CAP EXISTING WASTE PIPING AT FLOOR. SEE NEW WORK FOR NEW LOCATION OF LAVATORY
- 16 EXISTING FLOOR DRAIN TO REMAIN. ABANDON EXISTING WASTE PIPING BELOW FLOOR & REROUTE WITH NEW WASTE & VENT PIPING
- 17 REMOVE EXISTING HOT & COLD WATER PIPING IN CHASE.
- 18 REMOVE EXISTING VENT PIPING IN CHASE.
- 19 ABANDON EXISTING WASTE PIPING BELOW FLOOR.
- 20 REMOVE EXISTING HOT & COLD WATER PIPING ABOVE CEILING.
- 21 REMOVE EXISTING VENT PIPING ABOVE CEILING.
- 22 CAP EXISTING VENT PIPING ABOVE CEILING.
- 23 CAP EXISTING HOT WATER PIPING ABOVE CEILING.
- 24 CAP EXISTING COLD WATER PIPING ABOVE CEILING.
- 25 RELOCATE EXISTING ELECTRIC DRINKING FOUNTAIN AND REMOVE ALL ASSOCIATED PIPING. CAP EXISTING WASTE PIPING AT FLOOR. SEE NEW WORK FOR NEW LOCATION OF ELECTRIC DRINKING FOUNTAIN.
- 26 REMOVE EXISTING POST HYDRANT.
- 27 REMOVE EXISTING COLD WATER PIPING IN NEW CONSTRUCTION AREA ALLOWING FOR CONNECTION OF NEW CW PIPING BELOW. CONTRACTOR SHALL FIELD VERIFY EXACT ROUTING OF EXISTING COLD WATER LINE.
- 28 REMOVE EXISTING LAVATORY & ALL ASSOCIATED PIPING. CAP WASTE PIPING BELOW FLOOR.
- 29 REMOVE EXISTING CW PIPING FROM BELOW FLOOR TO ABOVE CEILING ALLOWING FOR RECONNECTION OF NEW CW PIPING. CONTRACTOR SHALL FIELD VERIFY EXACT LOCATION OF EXISTING CW PIPING.
- 30 EXISTING CW PIPING BELOW GRADE TO REMAIN. CONTRACTOR SHALL FIELD VERIFY EXACT LOCATION & SIZE OF EXISTING CW PIPING.



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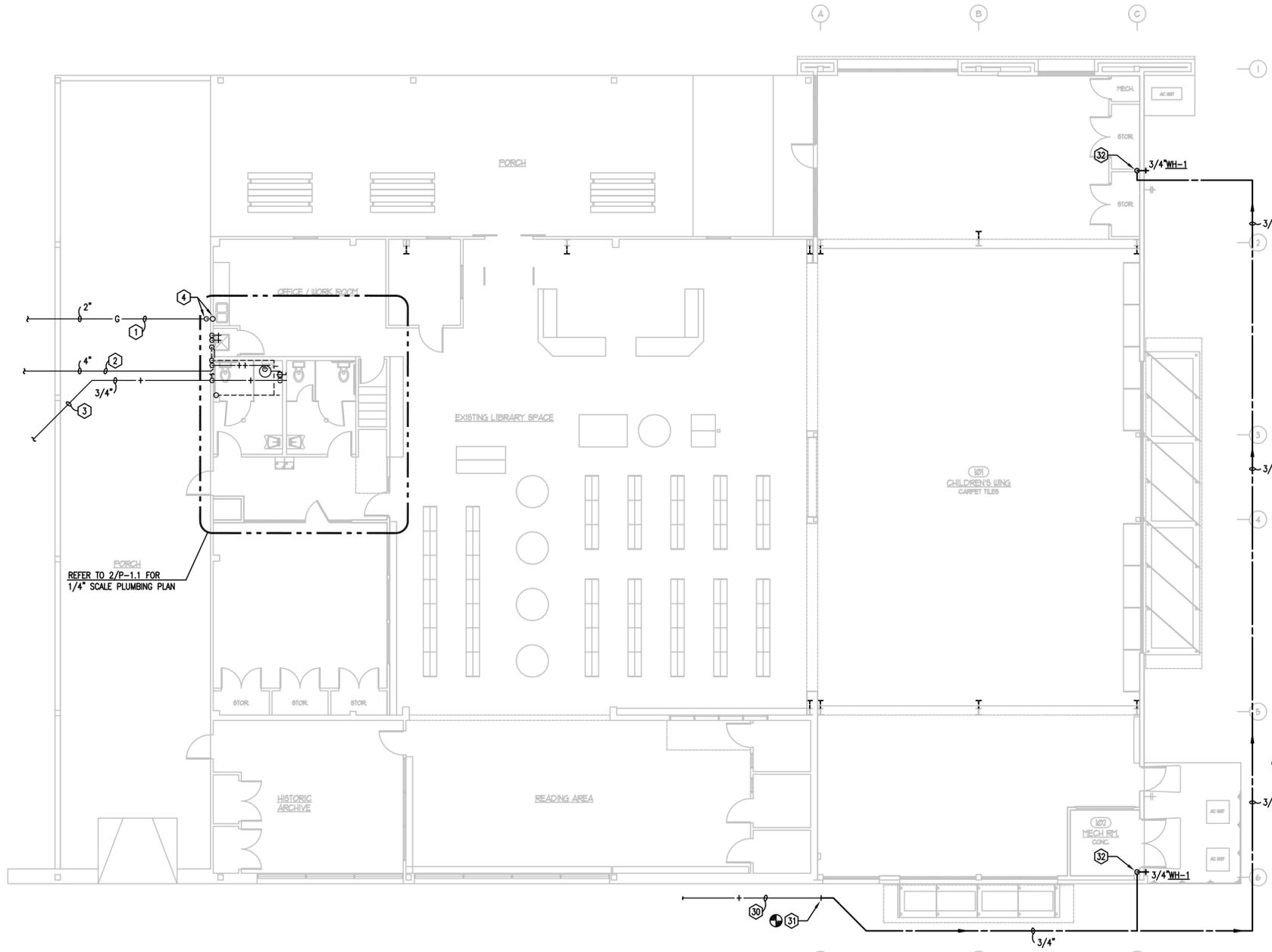
CONSTRUCTION DOCUMENTS

SHEET TITLE
 FLOOR PLAN
 DEMO - PLUMBING

SHEET:
PD-1.1

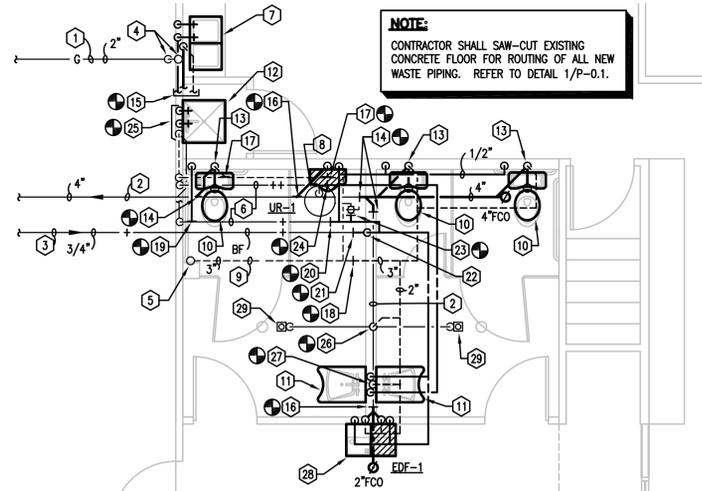
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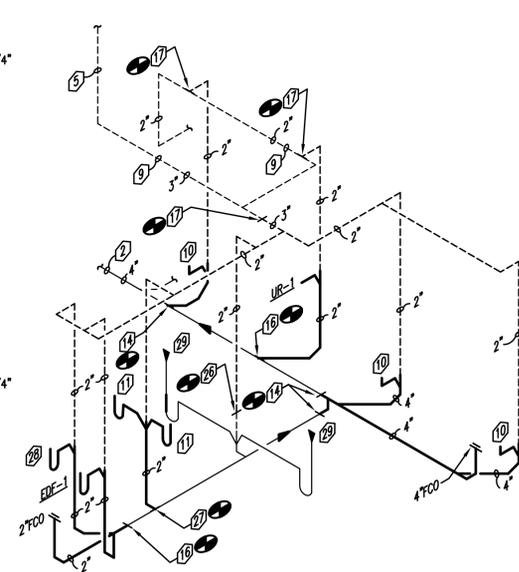


REFER TO 2/P-1.1 FOR 1/4\"/>

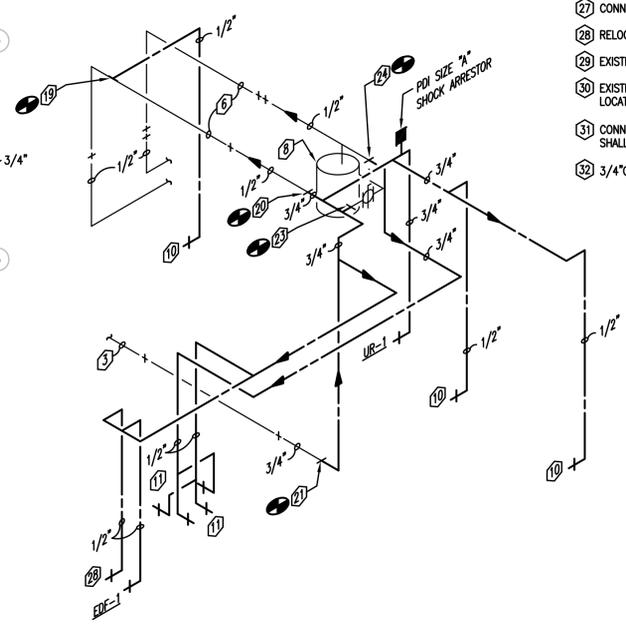
1 FLOOR PLAN - PLUMBING
 P-1.1 SCALE: 1/8\"/>



2 ENLARGED FLOOR PLAN - PLUMBING
 P-1.1 SCALE: 1/4\"/>



WASTE & VENT RISER

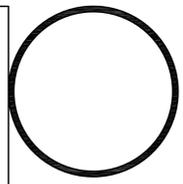


HOT & COLD WATER RISER

3 PLUMBING RISER DIAGRAMS
 P-1.1 SCALE: NOT TO SCALE

KEYED NOTES

- 1 EXISTING GAS PIPING BELOW GRADE TO REMAIN.
- 2 EXISTING WASTE PIPING TO REMAIN. CONTRACTOR SHALL FIELD VERIFY EXACT DEPTH & LOCATION OF EXISTING WASTE PIPING.
- 3 EXISTING COLD WATER PIPING BELOW GRADE TO REMAIN.
- 4 EXISTING GAS PIPING FROM BELOW GRADE, THROUGH WALL UP TO MEZZANINE LEVEL TO REMAIN.
- 5 EXISTING 3\"/>



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SHEET TITLE
 FLOOR PLAN
 PLUMBING

CAD

SHEET:
P-1.1
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LEGEND (NOTE: ALL SYMBOLS SHOWN ARE NOT NECESSARILY USED ON DRAWINGS)

FA	FLUORESCENT LIGHT FIXTURE, LETTER(S) DENOTES TYPE.
OB	INCANDESCENT, FLUORESCENT OR HIGH INTENSITY DISCHARGE LIGHT FIXTURE, LETTER(S) DENOTES TYPE. BRACKET "L" WHEN USED INDICATES WALL MOUNTED.
↑XA	EXIT LIGHT FIXTURE, LETTER(S) DENOTES TYPE. ARROW(S) WHEN USED, INDICATE DIRECTION OF CHEVRONS. SHADED AREAS INDICATE FACE(S). BRACKET "L" WHEN USED INDICATES WALL MOUNTED.
FB or CG	FIXTURE EQUIPPED WITH BATTERY PACK.
XB	EMERGENCY BATTERY BACKED UNIT EQUIPMENT, W/HEADS AS INDICATED.
S	SINGLE POLE SWITCH, INSTALL 48" AFF UON.
S_K	KEYED SINGLE POLE SWITCH, INSTALL 48" AFF UON.
S₂	DOUBLE POLE SWITCH, INSTALL 48" AFF UON.
S₃	THREE-WAY SWITCH, INSTALL 48" AFF UON.
S₄	FOUR-WAY SWITCH, INSTALL 48" AFF UON.
S_P	SWITCH AS DESCRIBED ABOVE WITH RED PILOT LIGHT, LIGHTED WHEN "ON" UON, INSTALL 48" AFF UON.
S_{WP}	SWITCH WITH WEATHER PROOF COVER. INSTALL 48" AFF UON.
S_D	DIMMER, 600W UON, INSTALL 48" AFF UON.
OS	OCCUPANCY SENSOR SWITCH. WATT STOPPER DT-300 WITH POWER PACK, UON. CEILING MOUNTED, UON. (USE WATT STOPPER DT-205 FOR WALL MOUNT.)
S_{IR}	OCCUPANCY SENSOR SWITCH. WATT STOPPER PW-100, WALL MOUNTED IN SWITCH BOX AT 48" AFF UON.
S_T	TIMER SWITCH. WATT STOPPER TS-400, WALL MOUNTED IN SWITCH BOX AT 48" AFF UON.
C	WIRING DEVICES
CF	DUPLEX RECEPTACLE, 18" AFF UON. ('C' INDICATES CEILING MOUNTED). NEMA 5-20R, UON.
CF^{WP}	DUPLEX RECEPTACLE WITH INTERNAL GROUND FAULT PROTECTION, INSTALL 18" AFF UON. ('WP' INDICATES WEATHERPROOF).
CF^{IG}	ISOLATED GROUND DUPLEX RECEPTACLE, INSTALL 18" AFF UON.
SPD	SURGE PROTECTION DEVICE DUPLEX RECEPTACLE, INSTALL 18" AFF UON.
Q	QUADRUPLX RECEPTACLE AS DESCRIBED ABOVE, 18" AFF UON.
CLK	SIMPLEX RECEPTACLE, INSTALL 96" AFF UON. 'CLK' INDICATES CLOCK HANGER RECEPTACLE, INSTALL 96" AFF UON.
SP	SPECIAL PURPOSE RECEPTACLE, SIZE AND NEMA CONFIGURATION AS INDICATED, INSTALL 18" AFF UON.
R	RECEPTACLE AS DESCRIBED ABOVE, INSTALLED IN A FLUSH FLOOR BOX.
H	DUPLEX RECEPTACLE HORIZONTALLY MOUNTED 6" ABOVE COUNTER TOP, UON.
SD	COMBINATION RECEPTACLE AND TELE/DATA OUTLET INSTALLED IN FLUSH FLOOR BOX.
LA-1,3,5	CONDUIT AND WIRE
LA-1,3,5	CONDUIT RUN CONCEALED IN CEILING, WALL, FLOOR, OR ABOVE SUSPENDED CEILING.
LA-1,3,5	CONDUIT RUN IN OR BELOW SLAB OR GROUND.
LA-1,3,5	SWITCH LEG.
LA-1,3,5	HOMERUN TO PANEL AND CIRCUIT DESIGNATION. BRANCH CIRCUIT SHALL BE MINIMUM 3#12 AWG EXCLUDING NEUTRALS AND GROUND, 1/2"C. U.O.N. ON DRAWINGS OR SPECIFICATIONS.
E	EMPTY CONDUIT WITH PULLING LINE, SIZE AS INDICATED.
E	CAPPED CONDUIT.
E	CONDUIT TURNED UP.
E	CONDUIT TURNED DOWN.
E	SURFACE MOUNTED MULTI-OUTLET ASSEMBLY, 6" ABOVE COUNTER TOP, UON.
E	CABLE TRAY
E	POWER/DATA POLE
C	GROUNDING
C	3/4" DIAMETER BY 10'-0" LONG COPPER CLAD GROUND ROD.
C	GROUND CONDUCTOR. SIZE AS INDICATED.
C	GROUND CONNECTION.
C	GROUND BUS AS NOTED ON DRAWINGS AND SPECIFICATIONS
UP	SITE
UP	UNDERGROUND PRIMARY ELECTRIC UTILITY
US	UNDERGROUND SECONDARY ELECTRIC UTILITY
UT	UNDERGROUND TELEPHONE UTILITY
HA	LIGHTING STANDARD WITH LUMINAIRE. LETTERS DENOTE TYPE.
P	UTILITY POLE
P	PAD MOUNTED UTILITY SERVICE TRANSFORMER
P	PRECAST MANHOLE OR HANDHOLE AS INDICATED FOR POWER (P) OR COMMUNICATIONS (C) CABLES. SIZE AS NOTED.

EP	DISTRIBUTION & CONTROLS
EP	ELECTRICAL PANELBOARD (480Y/277 VOLT).
EP	ELECTRICAL PANELBOARD (208Y/120 VOLT).
EP	ENCLOSED CIRCUIT BREAKER, RATING AND NO. OF POLES AS INDICATED.
EP	NON-FUSED DISCONNECT SWITCH. 30A/3P NEMA 1 UON. 30A = SWITCH RATING, 3P = NO. OF POLES, NEMA 1 = ENCLOSURE STYLE.
EP	FUSED DISCONNECT SWITCH. 30A/3P NEMA 1 UON. FUSE SIZE AS NOTED. 30A = SWITCH RATING, 3P = NO. OF POLES, NEMA 1 = ENCLOSURE STYLE.
EP	MAGNETIC MOTOR STARTER. SIZE 1, NEMA 1 UON.
EP	COMBINATION DISCONNECT AND MAGNETIC STARTER. SIZE 1, NEMA 1 UON.
EP	CONTROLLER PROVIDED WITH EQUIPMENT (HVAC, ELEVATOR, ETC.) INSTALLED BY DIVISION 16.
EP	MANUAL MOTOR STARTER WITH THERMAL OVERLOAD(S) UON, SIZED PER ACTUAL NAMEPLATE RATING.
EP	CONTACTOR, RATING AND NO. OF POLES AS INDICATED.
EP	PHOTO-ELECTRIC SWITCH. INSTALL WITH SENSOR ELEMENT FACING NORTH, FLUSH MOUNTED WHERE POSSIBLE, UON.
EP	TIME SWITCH.
EP	JUNCTION BOX.
EP	MOTOR.
EP	MOTORIZED DAMPER.
EP	TRANSFORMER, RATING AS INDICATED.
EP	CURRENT TRANSFORMER, RATING AND NO. AS INDICATED.
EP	DRAW-OUT POWER CIRCUIT BREAKER, RATING AND NO. OF POLES, AS INDICATED.
EP	THERMAL AND/OR MAGNETIC CIRCUIT BREAKER, RATING AND NO. OF POLES AS INDICATED.
EP	FUSE, RATING AS INDICATED.
EP	SURGE ARRESTER, RATING AS INDICATED.
EP	DIGITAL SOLID STATE MULTI-FUNCTION METER.
EP	UTILITY COMPANY REVENUE METER UON.
EP	PUSHBUTTON, TYPE AS SPECIFIED ON DRAWING.
EP	SELECTOR SWITCH.
EP	EQUIPMENT CONNECTION. COORDINATE WITH MANUFACTURERS' REPRESENTATIVE.
EP	SURGE PROTECTION DEVICE SYSTEM.
EP	PULL BOX, SIZE PER NEC, UON.
EP	FIRE ALARM SYSTEM
EP	FIRE ALARM CONTROL PANEL.
EP	FIRE ALARM REMOTE ANNUNCIATOR.
EP	FIRE ALARM MANUAL STATION, INSTALL 48" AFF.
EP	FIRE ALARM AREA SMOKE DETECTOR, INSTALL ON CEILING UON. "F", INDICATES UNDER RAISED FLOOR.
EP	DUCT MOUNTED SMOKE DETECTOR.
EP	DUCT MOUNTED SMOKE DETECTOR REMOTE INDICATING LIGHT, INSTALL 54" AFF.
EP	FIRE ALARM FIXED-TEMPERATURE RATE-OF-RISE HEAT DETECTOR, 135°C UON.
EP	FIRE ALARM AUDIO/VISUAL DEVICE, INSTALL 80" AFF, UON.
EP	FIRE ALARM VISUAL DEVICE, INSTALL 80" AFF, UON.
EP	FIRE ALARM AUDIO/VISUAL DEVICE, CEILING MOUNTED, UON.
EP	FIRE ALARM VISUAL DEVICE, CEILING MOUNTED, UON.
EP	SPRINKLER SYSTEM FLOW SWITCH BY DIVISION 15.
EP	SPRINKLER SYSTEM SUPERVISORY SWITCH BY DIVISION 15.
EP	COMBINATION FIRE AND SMOKE DAMPER BY DIVISION 15.
EP	MAGNETIC DOOR HOLDER.
EP	FIREFIGHTERS EMERGENCY PHONE JACK. INSTALL 44" AFF.
EP	KITCHEN HOOD EXTINGUISHING STATION.
EP	COMMUNICATIONS AND DATA
EP	TELEPHONE TERMINAL BOARD, 4' X 8' X 3/4" THICK, UON.
EP	TELEPHONE OUTLET. INSTALL 18" AFF UON. 4" SQUARE BOX WITH A SINGLE DEVICE PLASTER RING AND 3/4"C WITH PULLING LINE STUBBED OUT TO ABOVE NEAREST ACCESSIBLE CEILING. P = PAYPHONE WITH OUTLET @ 44" AFF; W = WALL MOUNTED @ 48" AFF.
EP	DATA OUTLET. INSTALL 18" AFF UON. 4" SQUARE BOX WITH A SINGLE DEVICE PLASTER RING AND 3/4"C WITH PULLING LINE STUBBED OUT TO ABOVE NEAREST ACCESSIBLE CEILING.
EP	COMBINATION TELEPHONE AND DATA OUTLET. INSTALL 18" AFF UON. 4" SQUARE BOX WITH A SINGLE DEVICE PLASTER RING AND 3/4"C WITH PULLING LINE STUBBED OUT TO ABOVE NEAREST ACCESSIBLE CEILING.
EP	OUTLET AS DESCRIBED ABOVE, INSTALLED IN A FLUSH FLOOR BOX.
EP	OUTLET BOX WITH 3/4" CONDUIT WITH PULLING LINE STUBBED OUT TO ABOVE ACCESSIBLE CEILING FOR CATV, INSTALL 18" AFF, UON.

GENERAL ELECTRICAL NOTES

- (APPLIES TO ALL DRAWINGS.)
- EACH RECEPTACLE ON THE EXTERIOR OF THE BUILDING SHALL BE PROVIDED WITH ITS OWN GROUND FAULT TRIP DEVICE.
 - IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE TO THE PROPER SIDE OF THE DOOR ANY SWITCH, RECEPTACLE OR DEVICE BEING AFFECTED BY ANY CHANGE IN DIRECTION OF DOOR SWINGS AS SHOWN ON THE ARCHITECTURAL FLOOR PLAN.
 - LIGHTING IN MECHANICAL AND ELECTRICAL ROOMS SHALL BE ADJUSTED IN THE FIELD FOLLOWING INSTALLATION OF MECHANICAL AND ELECTRICAL EQUIPMENT TO PROVIDE RELATIVELY UNIFORM LIGHTING AS GENERALLY OUTLINED ON THE DRAWINGS. RECEPTACLES IN MECHANICAL & ELECTRICAL ROOMS, SHALL BE INSTALLED AT 44" AFF, UON.
 - MECHANICAL EQUIPMENT SIZES ARE AS DESIGNED, BREAKERS, CONDUIT, STARTERS, CONDUCTORS, ETC., SHALL BE ADJUSTED TO THE EQUIPMENT SUBMITTED AND APPROVED FOR INSTALLATION ON THIS PROJECT.
 - REMOTE MOUNTED MOTORS SHALL BE PROVIDED WITH RECEPTACLES AND PLUGS OR DISCONNECT SWITCHES TO BE COMPATIBLE WITH THE CONSTRUCTION TYPE AND THE NEC.
 - EACH MOTOR BEING INSTALLED ON THIS CONTRACT SHALL BE PROVIDED WITH THERMAL PROTECTION IN EITHER A MANUAL OR MAGNETIC STARTER. THERMAL ELEMENTS SHALL BE SIZED AND INSTALLED ACCORDING TO THE NAMEPLATE FULL LOAD AMP RATING OF THE MOTOR.
 - KILOWATT (KW) RATINGS FOR EQUIPMENT MOTOR LOADS ARE AS DESIGNED WITH 90% POWER FACTOR RATING ASSUMED (EXCEPT ON THE CHILLER). THE CONTRACTOR SHALL BE RESPONSIBLE FOR INCREASING THE SIZE, AS REQUIRED, OF ALL FEEDERS AND PROTECTIVE DEVICES SERVING ANY ITEMS OF EQUIPMENT SUPPLIED WITH POWER FACTOR RATINGS LESS THAN 90% EFFICIENCY.
 - IN ALL AREAS THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION BETWEEN THE ELECTRICAL AND MECHANICAL TRADES TO PROVIDE CLEARANCE ABOVE CEILING BETWEEN RECESSED LIGHTING FIXTURES AND THERMAL INSULATION OR DUCTWORK IN ACCORDANCE WITH THE NEC, PARAGRAPH 410.116.
 - ALL COUNTERTOP RECEPTACLES WITHIN SIX FEET OF A SINK, SHALL BE GFI TYPE, UON.

GEN. ELECTRICAL DEMO. NOTES

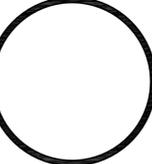
- PRIOR TO BIDDING, THE DIVISION 16 INSTALLER SHALL VISIT THE SITE TO FAMILIARIZE HIMSELF WITH EXISTING CONDITIONS, AND TO VERIFY LOCATION SIZE AND QUANTITY OF ITEMS TO BE REMOVED. SUBMITTAL OF HIS BID SHALL SIGNIFY HIS WILLINGNESS TO COMPLY WITH THE DESIGN AND HIS ACCEPTANCE OF ON-SITE CONDITIONS AS THEY EXIST.
- SALVAGE ITEMS AND MATERIALS SHALL REMAIN THE PROPERTY OF THE OWNER AND AS A PART OF THIS CONTRACT, THE CONTRACTOR SHALL DELIVER THESE TO A DESTINATION AS DIRECTED BY THE OWNER. VERIFY WITH OWNER'S REPRESENTATIVE FOR SALVAGE ITEMS. DELIVER TO OWNER IN UN-DAMAGED CONDITION WHERE POSSIBLE.
- EACH ITEM OF EQUIPMENT, RECEPTACLES, LIGHT FIXTURES, SIGNAL EQUIPMENT, MOTORS, ETC., SHOWN TO BE DEMOLISHED SHALL HAVE ITS ASSOCIATED CIRCUITRY REMOVED BACK TO THE PROTECTIVE DEVICE IN THE PANEL, ETC., EXCEPT AS OTHERWISE MENTIONED BY NOTES 4, 5, AND 9 BELOW.
 - ASSOCIATED CIRCUITRY SHALL BE DEFINED TO INCLUDE ALL CONDUIT, CONDUCTORS, BOXES, WIRING DEVICES, COVERPLATES, LAMPS, FIXTURES, WIREWAYS, SWITCHES, STARTERS, ETC., WHICH ARE ASSOCIATED WITH THE ITEM SHOWN TO BE REMOVED.
 - THE PROTECTIVE DEVICE SHALL REMAIN AS AN INTEGRAL PART OF THE EXISTING PANEL, SWITCHBOARD, ETC., AND SHALL BE LABELED AS A SPARE OR BE USED FOR NEW CIRCUITRY AS SHOWN.
 - WHERE CONDUIT, ASSOCIATED WITH AN ITEM SHOWN TO BE REMOVED, IS IN AN INACCESSIBLE AREA, SUCH AS ENCASED IN CONCRETE, THIS INACCESSIBLE CONDUIT ONLY SHALL BE ABANDONED IN PLACE. ALL CONDUCTORS SHALL BE REMOVED, THEN CONDUIT SHALL BE SEALED, CAPPED OR OTHERWISE TERMINATED IN A SAFE MANNER ACCEPTABLE TO THE OWNER, OR AS OTHERWISE STATED IN ITEM 3D BELOW.
 - WHERE SUCH INACCESSIBLE CONDUIT ENDS OR MUST BE TERMINATED IN FINISHED SPACE, THE CONDUIT OR J-BOX SHALL BE REMOVED TO BELOW THE FINISHED SURFACE OF WALL, CEILING OR FLOOR, THEN THE VOID SHALL BE FILLED WITH NON-SHRINKING GROUT, THEN RESURFACED AND REFINISHED TO MATCH SURROUNDING SURFACES.
- WHERE ONLY A PORTION OF CIRCUIT'S LOAD IS SCHEDULED TO BE REMOVED, ONLY THAT PORTION ASSOCIATED WITH THE DEMOLISHED DEVICE SHALL BE REMOVED TO A POINT WHERE THE REMAINING LOAD IS ACTIVE AND IN A GOOD OPERATING CONDITION, UNLESS INDICATED OTHERWISE.
- WHERE THE EXTENSION OF AN EXISTING CIRCUIT IS REQUIRED, CONDUIT AND WIRE SHALL BE RUN (CONCEALED WHERE POSSIBLE) FROM THE ITEM'S EXISTING LOCATION TO ITS NEW LOCATION. CONDUIT SHALL BE ROUTED SO AS NOT TO INTERFERE WITH THE USE OF, OR MAR THE AESTHETICS OF THE AREA, WHERE NECESSARY, THE CONTRACTOR SHALL RELOCATE AND RECONNECT CIRCUITRY ASSOCIATED WITH THE RELOCATION OF THE ITEM.
- WHERE AN ITEM OF EQUIPMENT IS SCHEDULED TO BE REMOVED AND RELOCATED, ITS ASSOCIATED CIRCUITRY SHALL ALSO BE REMOVED AS PER NOTE 3 ABOVE ALONG WITH ITS ASSOCIATED SWITCHGEAR AND DEVICES, ETC., TO BE RELOCATED TO THE NEW LOCATION. PROVIDE CONNECTION OF SUCH RELOCATED ITEMS TO NEW OR EXTENDED CIRCUITRY AS SHOWN ON THE DRAWINGS.
- ALL EXISTING ABANDONED CONDUIT, CABLES, ETC. ABOVE EXISTING CEILINGS SHALL BE REMOVED.
- PRIOR TO REMOVAL OF EXISTING FIRE ALARM EQUIPMENT FOR RELOCATION, TEST EXISTING SYSTEMS AND PROVIDE A DETAILED LIST OF DEFICIENCIES INCLUDING ANY DEVICES THAT ARE NOT FUNCTIONING PROPERLY. SUBMIT LIST TO A/E AND OWNER PRIOR TO DEMOLITION WITH ESTIMATED PROBABLE COST FOR ANY REQUIRED REPAIR. THE FIRE ALARM SYSTEM MAY NOT BE DISABLED WITHOUT APPROVAL OF THE FIRE MARSHAL.
- ALL EXISTING CIRCUITS IDENTIFIED TO BE REUSED FOR REPLACEMENT LIGHTING AND NEW DEVICES UTILIZING CONDUIT FOR GROUND, SHALL HAVE A GREEN INSULATED GROUNDING CONDUCTOR PROVIDED FOR ALL REUSED BRANCH CIRCUITS.
- IN ALL AREAS WHERE THE EXISTING CEILING WILL BE EXPOSED FOR DEMOLITION AND/OR NEW WORK, PROPERLY SUPPORT EXISTING J/BOXES AND CONDUITS AS REQUIRED BEFORE NEW CEILING ARE INSTALLED. PROVIDE COVERS AND K.O. CLOSURES TO J/BOXES THAT DO NOT HAVE COVERS.

LIGHTING FIXTURE SCHEDULE

NOTE: IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONFIRM COMPATIBILITY BETWEEN THE CEILING TYPE, AS DEFINED ON THE ARCHITECTURAL ROOM FINISH SCHEDULE, AND THE LIGHT FIXTURE TRIM AS DEFINED ON THE FIXTURE SCHEDULE. NO CHANGES OR DEVIATIONS SHALL BE MADE FROM THE CONTRACT DOCUMENTS, HOWEVER, WITHOUT WRITTEN APPROVAL OF THE ENGINEER/ARCHITECT.

TYPE	MANUFACTURER AND MODEL NUMBER	LAMPS	VA	VOLTAGE	DESCRIPTION	REMARKS
FA	SHAPER #1300-18-SJCAC-CFL/4/42-120NA	4-42W CFL TRIPLE 3500K	186	120	18" DIAMETER PENDANT DOWNLIGHT W/ ALUMINUM REFLECTOR	PROVIDE BATTERY PACK WHERE INDICATED. VERIFY MOUNTING HEIGHT W/ ARCHITECT SEE NOTE 2
FB	FC LIGHTING #CC914W-120-32T-E-XX	1-26W PL 3500K	29	120	WALL SCONCE W/ ALUMINUM HOUSING FINISH WET LOCATION	VERIFY MOUNTING HEIGHT W/ ARCHITECT EXTERIOR
FC	NOT USED					
FD	PORTFOLIO #C8042E-8001-LI	1-26TRIPLE VERTICAL 3500K	29	120	RECESSED VERTICAL DOWNLIGHT, 8" OPENING, ELECTRONIC BALLAST, CLEAR ALZAK REFLECTOR	CORRIDOR, RESTROOM, STORAGE PROVIDE EMERGENCY BATTERY PACK WHERE INDICATED SEE NOTE 2
FE	METALUX #SSF-228TB-UNV-WG/SSF-4FT	2-26TB 3500K	65	120	4' LONG OPEN STRIP WITH WIRE GUARD SURFACE OR PENDANT WHERE NOTED.	ELECTRICAL ROOM, RESTROOMS DELETE WIRE GUARD IN COVE
FF	LITHONIA #SST-1-28-MVOLT-BIHP	1-26TB 3500K	33	MVOLT	LINEAR FLUORESCENT TELESCOPING COVE MOUNTED BARE LAMP STRIP	ILLUMINATED SIGN ABOVE ENTRANCE TO NEW ADDITION REFER TO ARCHITECTURAL DRAWINGS
A	LUMIERE #904-12LEDW-12-CS W/ T300 TRANSFORMERS, SEE PLANS.	1-12W LED	12	120	LOW VOLTAGE WALL MOUNTED DOWNLIGHT W/ SILVER FINISH	VERIFY MOUNTING HEIGHT W/ ARCHITECT
B	\$200 ALLOWANCE			277	WALL SCONCE	ALLOWANCE IS LIGHTING FIXTURE AND LAMP. INSTALLATION SHALL BE IN BASE BID. REFER TO ARCH. DWGS. FOR MOUNTING HEIGHT
XA	ALL PRO #AP70R	LEDS FURNISHED W/ FIXTURE	10	120	UNIVERSAL EXIT LIGHT - RED LETTERS, WHITE HOUSING AND STENCIL WITH NICKEL CADMIUM BATTERY.	WITH NUMBER OF FACES AND DIRECTIONAL CHEVRONS AS INDICATED ON THE DRAWINGS. CONNECT TO NORMALLY ENERGIZED CIRCUIT - DO NOT SWITCH. CEILING OR WALL MOUNTED 8" AFF.
XB	LITHONIA AFN-CBA-EXT	2-6W XENON FURNISHED W/ FIXTURE	15	120/277	EMERGENCY EGRESS LIGHT ONLY OPERATE UPON POWER FAILURE	CBA - COLOR BY ARCHITECT CONNECT TO NORMALLY ENERGIZED CIRCUIT - DO NOT SWITCH. WALL MOUNTED 8" AFF.

- NOTES:**
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONFIRM COMPATIBILITY BETWEEN THE CEILING TYPE, AS DEFINED ON THE ARCHITECTURAL ROOM FINISH SCHEDULE, AND THE LIGHT FIXTURE TRIM AS DEFINED ON THE FIXTURE SCHEDULE. NO CHANGES OR DEVIATIONS SHALL BE MADE FROM THE CONTRACT DOCUMENTS, HOWEVER, WITHOUT WRITTEN APPROVAL OF THE ENGINEER/ARCHITECT.
 - PROVIDE DUAL BALLASTS WHERE TWO LEVEL SWITCHING IS INDICATED.
 - EQUIVALENT PRODUCTS FROM THE FOLLOWING MANUFACTURERS MAY BE ACCEPTABLE AS ALTERNATE SUBSTITUTIONS: (SUBSTITUTE PRODUCTS SHALL HAVE SUFFICIENT DATA) USI/COLUMBIA, HUBBELL, COOPER/METALUX, GENLYTE/LIGHTOLIER, LITHONIA, LUMINAIRE, KIM, GARCO, WILLIAMS, DAYBRITE. REFER ALSO TO SPECIFICATION 265100.
 - FINAL RAL COLOR FINISH ON ALL LIGHTING FIXTURES WILL BE DETERMINED BY ARCHITECT DURING SUBMITTAL REVIEW.



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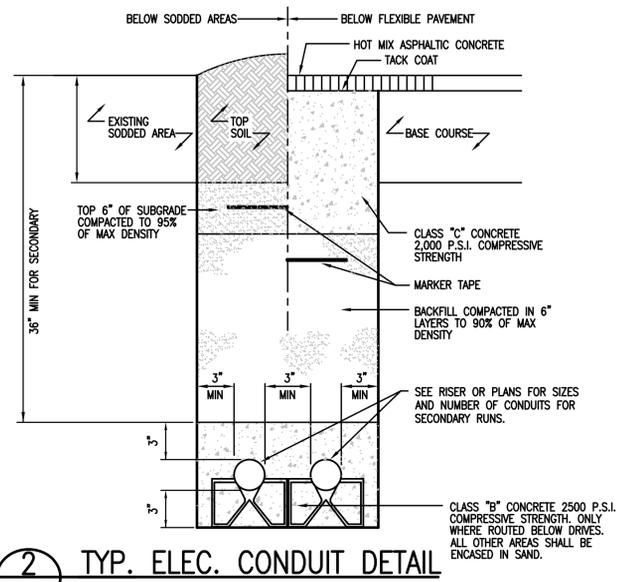
SHEET TITLE
 SYMBOLS & ABBREV.

SHEET:
E-0.1
 OF 18
 Date: NOV 16, 2012

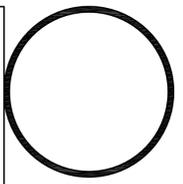
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CONSTRUCTION DOCUMENTS

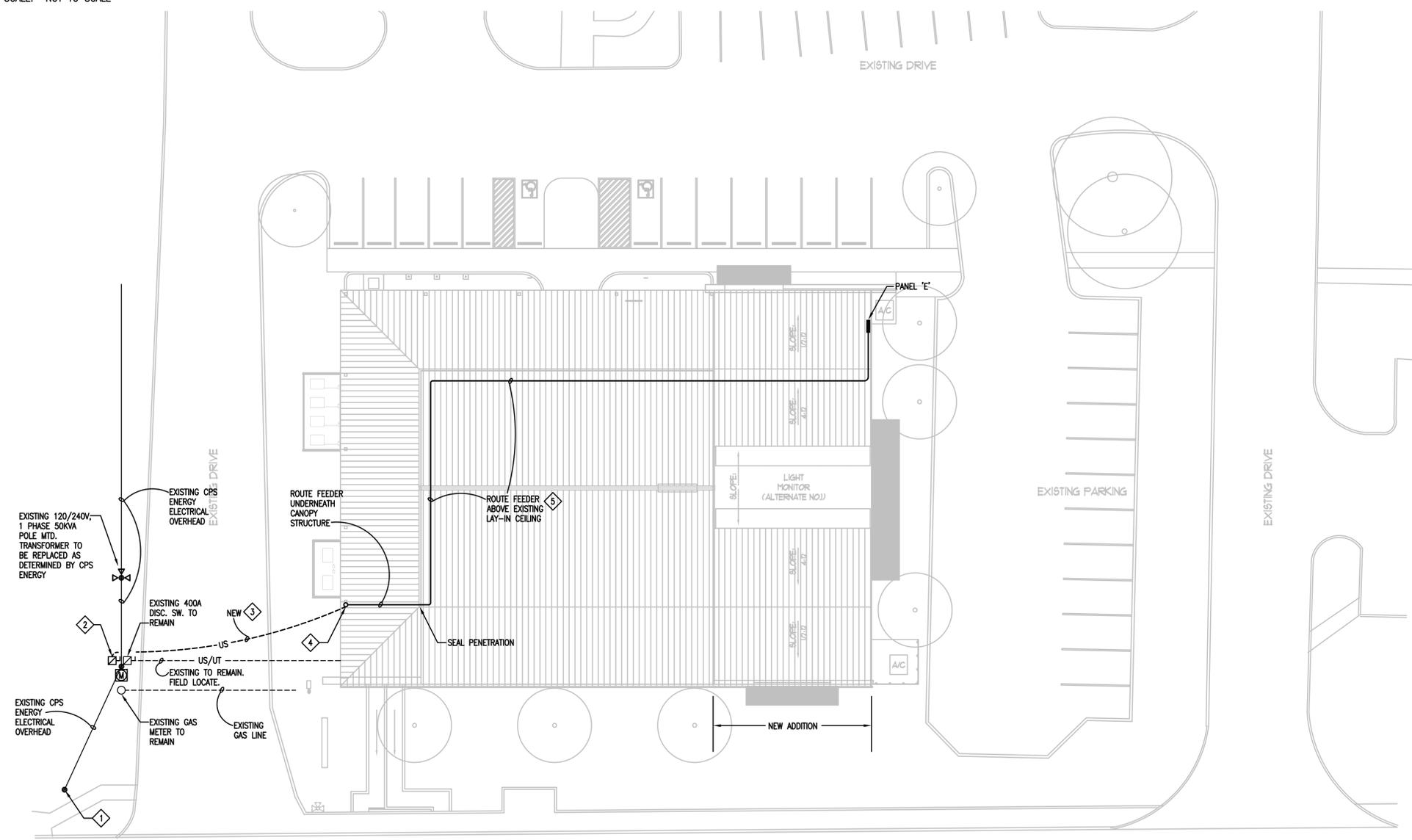


- GENERAL NOTES**
- CONTACT RICHARD RODRIGUEZ WITH CPS ENERGY AT (210)353-2366 FOR COORDINATION OF ELECTRICAL SERVICE TO PROJECT.
 - CONTRACTOR TO ADJUST RACEWAY ROUTING, LOCATIONS AND HANDHOLE LOCATIONS AS REQUIRED TO SUIT FIELD CONDITIONS.
 - MARKING TAPE SHALL BE INSTALLED 12" ABOVE ALL UNDERGROUND PVC CONDUIT INSTALLATION.
 - WHERE REQUIRED CUT AND PATCH PAVEMENT TO MATCH EXISTING OR BETTER CONDITIONS.
- KEYED NOTES**
- EXISTING UTILITY POLE TO REMAIN.
 - NEW FUSED DISCONNECT SW. ON GALVANIZED METAL FRAMING RACK. SEE ONE-LINE DIAGRAM.
 - SAW CUT AND REPAVE DRIVEWAY AND PATCH CURBS TO EQUAL OR BETTER CONDITION. SEE DETAIL 2 THIS SHEET.
 - RISE FEEDER UP ALONGSIDE EXISTING COLUMN.
 - COORDINATE ROUTING WITH EXISTING DUCTWORK AND PLUMBING LINES. PROVIDE PULL BOXES AS REQUIRED.



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1 SITE PLAN - ELECTRICAL
E-0.2 SCALE: 1" = 16'-0"
EVERS ROAD

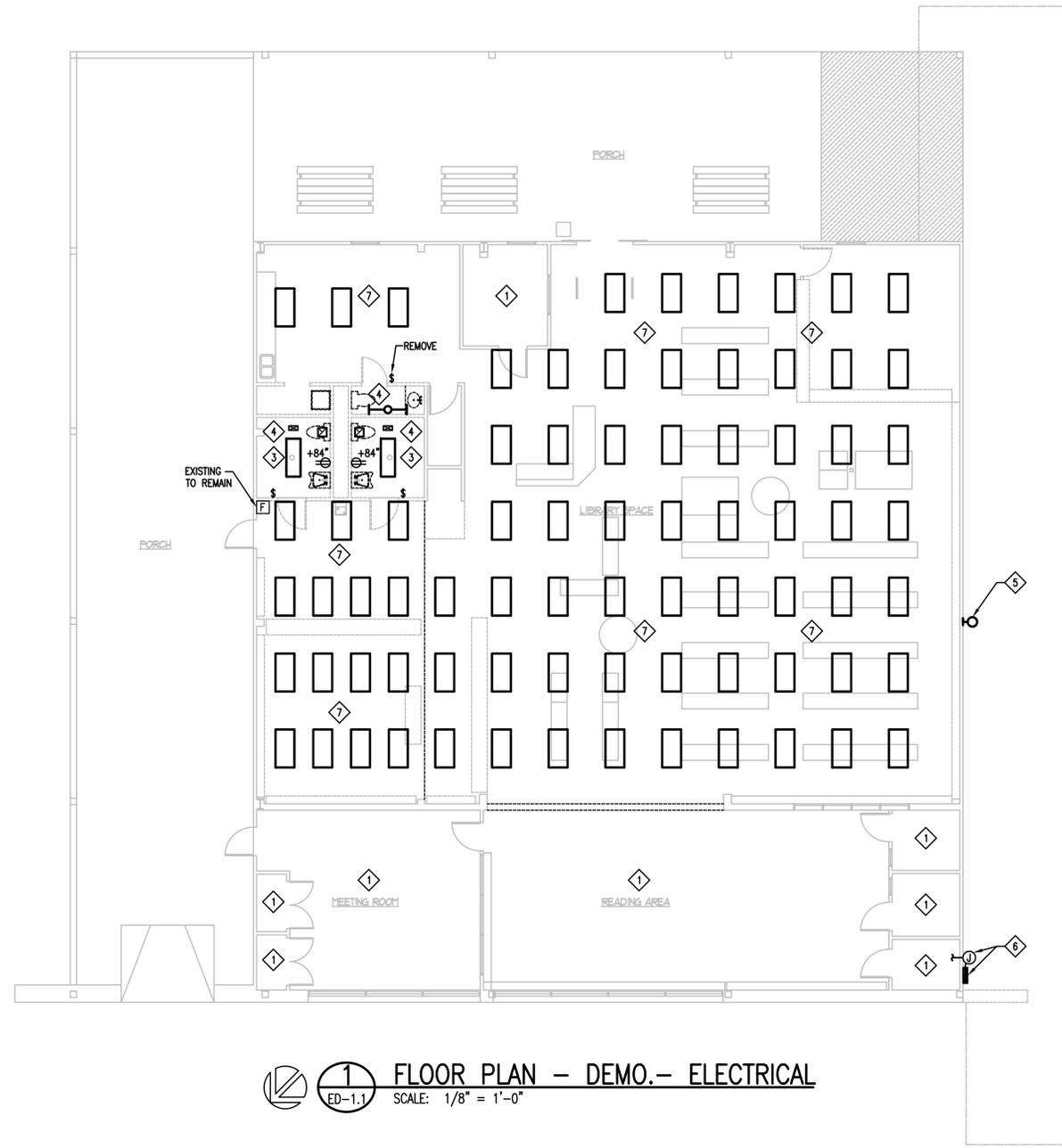
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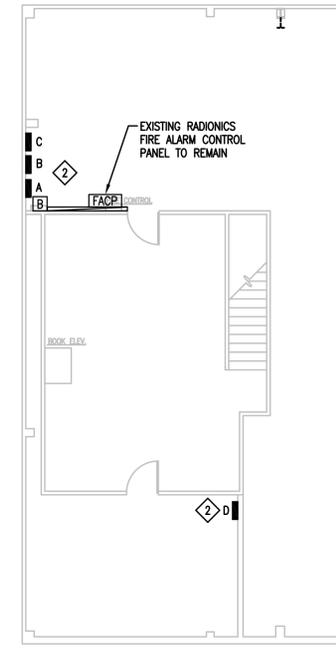
CONSTRUCTION DOCUMENTS

SHEET TITLE
SITE PLAN - ELECTRICAL

SHEET:
E-0.2
OF 18
Date: NOV 16, 2012



1 FLOOR PLAN - DEMO. - ELECTRICAL
 ED-1.1 SCALE: 1/8" = 1'-0"



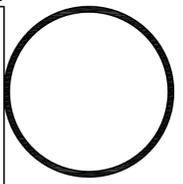
2 MEZZANINE PLAN - DEMOLITION ELECTRICAL
 ED-1.1 SCALE: 1/8" = 1'-0"

GENERAL NOTES

1. REFER TO GENERAL ELECTRICAL DEMOLITION NOTES, SHEET E-1.
2. PATCH FLOOR/WALLS WHERE CONDUITS ARE REMOVED.
3. EXISTING RACEWAY SYSTEMS MAY BE REUSED WHERE APPROPRIATE FOR NEW WORK.
4. ALL EXISTING WIRING DEVICES, AND LIGHTING FIXTURES TO REMAIN UNLESS OTHERWISE NOTED. CLEAN AND RELAMP REUSED OR EXISTING REMAINING FIXTURES IN REMODELED SPACES.

KEYED NOTES

- 1 NO DEMOLITION WORK THIS AREA, U.O.N.
- 2 EXISTING ELECTRICAL EQUIPMENT TO REMAIN.
- 3 ALL EXISTING WIRING DEVICES (RECEPTACLES AND ASSOCIATED CIRCUITRY, PHONE, TV, DATA, SWITCHES, ETC) IN THIS ROOM SHALL BE REMOVED. (TYP.) UNLESS NOTED OTHERWISE.
- 4 REMOVE LIGHTING FIXTURE(S), AND BRANCH CIRCUIT TO J/BOX ABOVE CEILING. RELOCATE LIGHTING FIXTURE(S) AS SHOWN ON NEW WORK.
- 5 REMOVE EXISTING EXTERIOR LTG WALL PACK AND SALVAGE TO OWNER.
- 6 MODIFY EXISTING COMMUNICATIONS EQUIPMENT AND RACEWAY AS REQUIRED FOR NEW INTERIOR WALL.
- 7 EXISTING LIGHTING FIXTURES TO REMAIN.



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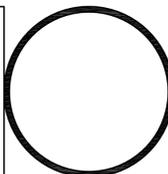
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 FLOOR PLAN
 DEMO - ELECTRICAL

SHEET:
ED-1.1

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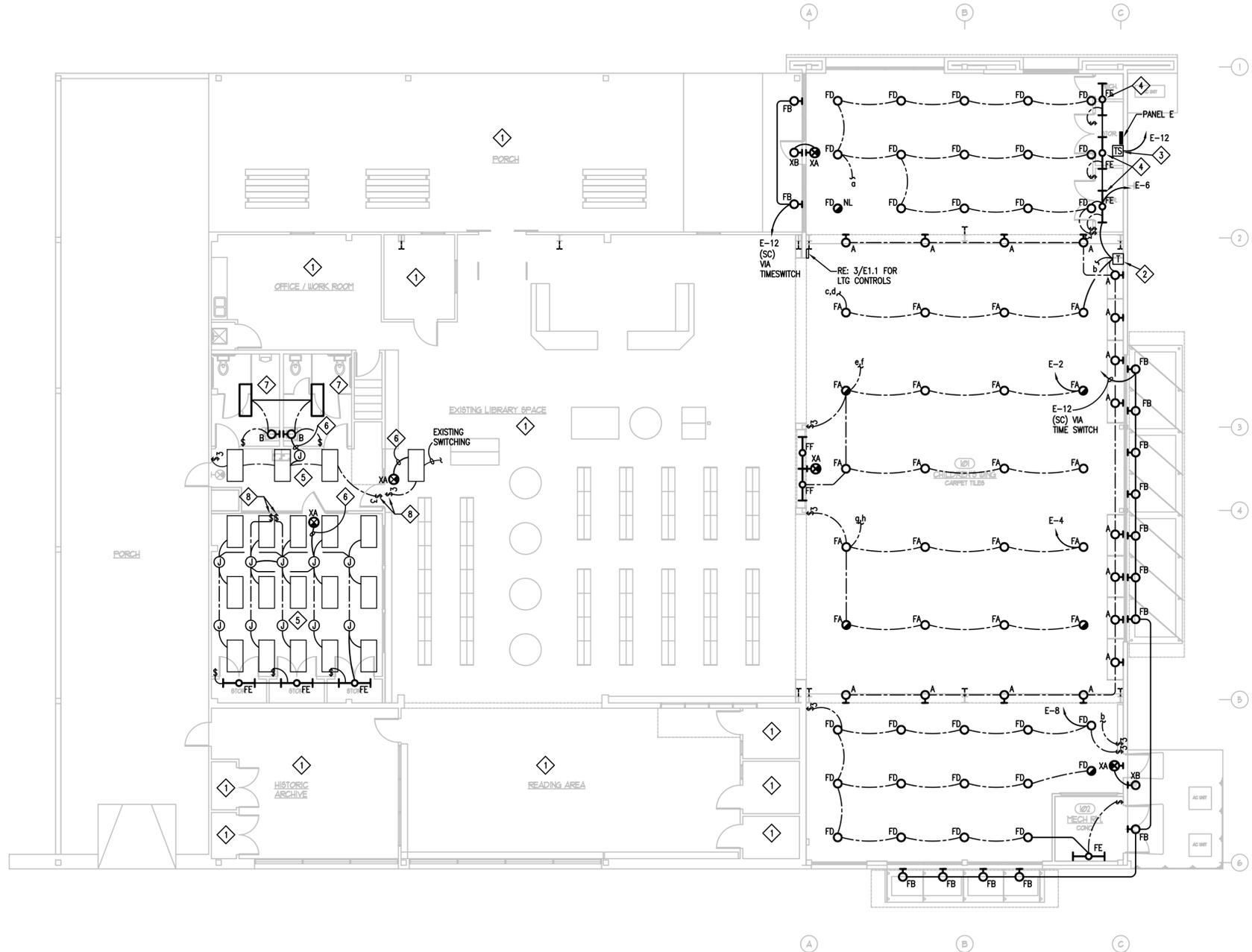
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SHEET TITLE
FLOOR PLAN LIGHTING
SHEET:
E-1.1
OF 18
Date: NOV 16, 2012

GENERAL NOTES

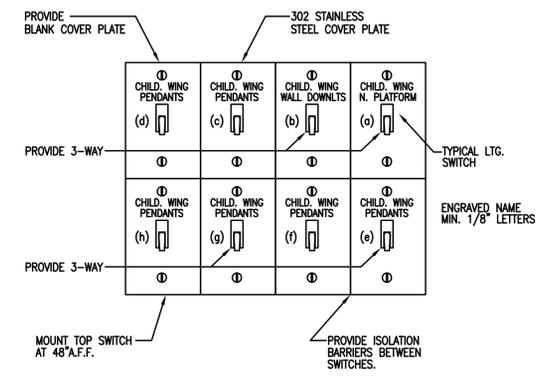
- CONTRACTOR SHALL CONCEAL ALL RACEWAYS, ON EXISTING CMU WALLS WHERE IMPOSSIBLE TO CONCEAL, PROVIDE WIREMOLD 700 SERIES SURFACE RACEWAY SYSTEM. EXISTING DEVICE BOXES AND CONCEALED RACEWAY MAY BE REUSED AS APPROPRIATE FOR NEW DEVICES. IF NOT REUSED, REMOVE CONDUCTORS AND PROVIDE BLANK PLATE.
- CONTRACTOR TO VERIFY EXISTING CKTS. PRIOR TO START OF NEW WORK.
- CONNECT ALL RELOCATED AND NEW EXIT (XA), & EGRESS (XB), AND NIGHT LIGHTS (NL) LIGHTING FIXTURES UNSWITCHED U.O.N. TO CKT. E-10. SINGLE BATTERY POWERED LAMP SHALL OPERATE ON POWER FAILURE. EXIT SIGNS SHALL BURN 24 HOURS/DAY. PROVIDE HANDLE LOCKING DEVICE.

KEYED NOTES

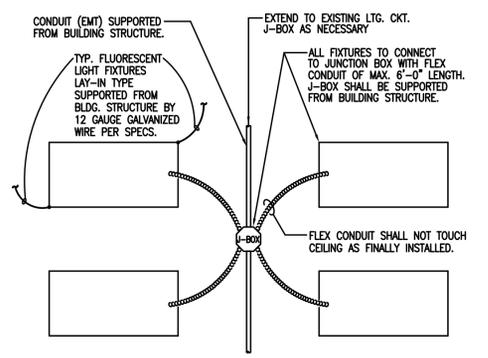
- NO NEW LIGHTING WORK THIS AREA, U.O.N.
- SECURE LOW VOLTAGE TRANSFORMER TO STRUCTURE.
- PROVIDE 7 DAY ASTRONOMIC TIME SWITCH INTERMATIC ET8015C.
- MOUNT ABOVE DOOR.
- EXISTING LIGHTING FIXTURE(S) TO REMAIN. CLEAN AND RELAMP.
- CONNECT TO EXISTING LIGHTING CKT.
- RELOCATED LIGHTING FIXTURE(S). CLEAN AND RELAMP.
- PROVIDE NEW SWITCHING FOR INDICATED EXISTING LIGHTING FIXTURES.



1 FLOOR PLAN - LIGHTING
E-1.1 SCALE: 1/8" = 1'-0"



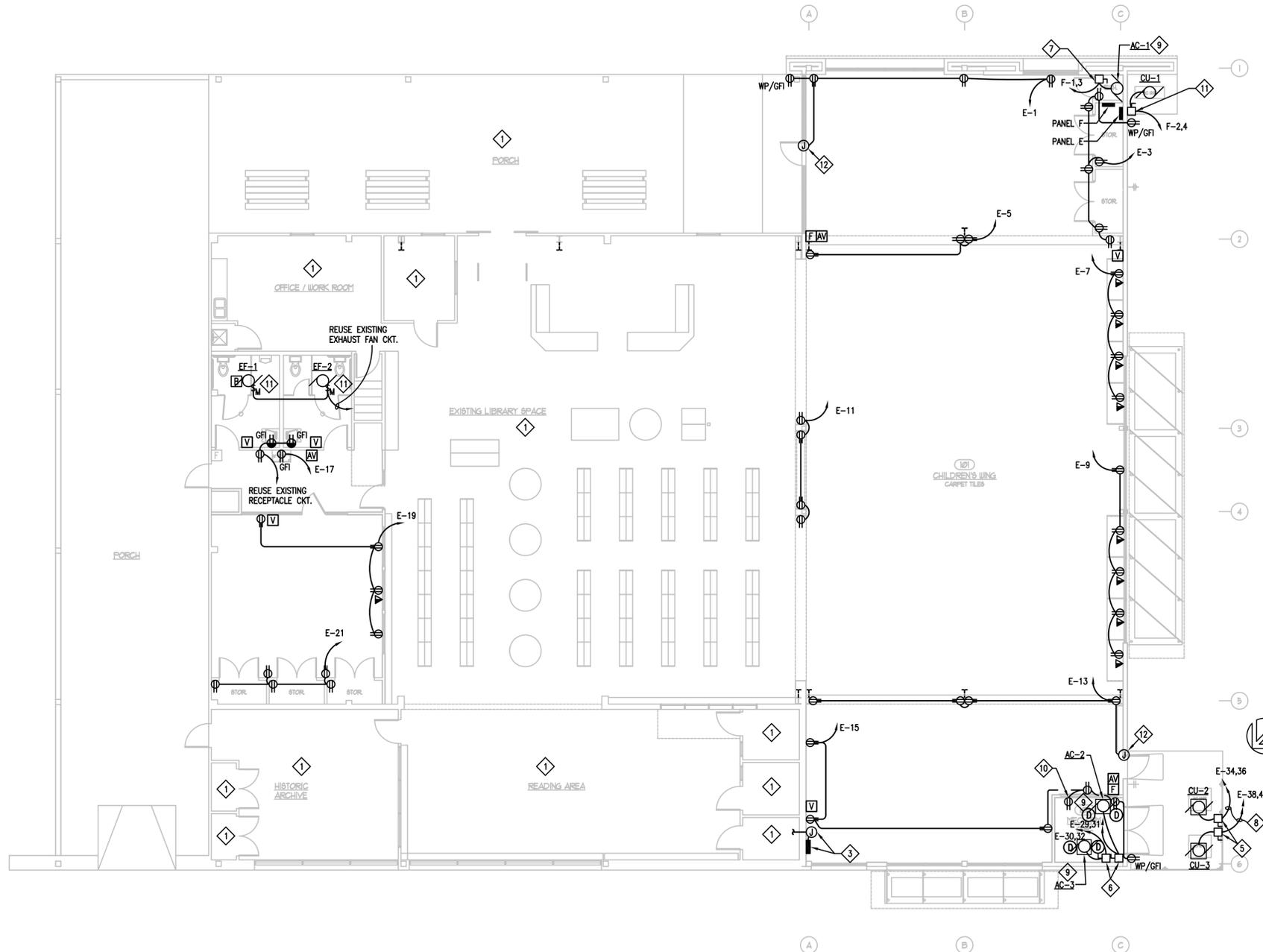
3 SWITCH PLATE DETAIL
E-1.1 SCALE: NTS



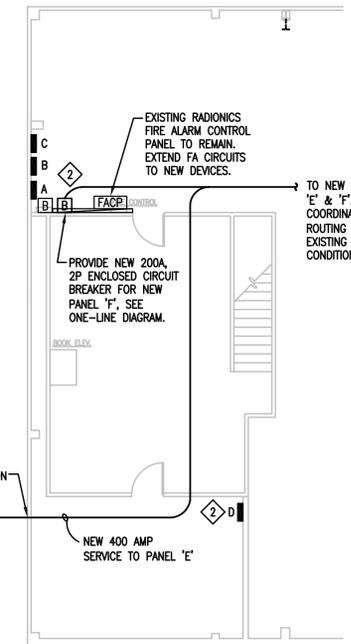
2 TYPICAL LIGHTING BRANCH CIRCUIT DETAIL
E-1.1 SCALE: NONE

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1 FLOOR PLAN - POWER/SIGNAL
E-2.1 SCALE: 1/8" = 1'-0"



2 MEZZANINE PLAN - NEW WORK
E-2.1 SCALE: 1/8" = 1'-0"

GENERAL NOTES

1. CONTRACTOR TO VERIFY EXISTING CKTS. PRIOR TO START OF NEW WORK.
2. CONTRACTOR SHALL CONCEAL ALL RACEWAYS. ON EXISTING CMU WALLS OR WHERE IMPOSSIBLE TO CONCEAL, PROVIDE WIREMOLD 700 SERIES SURFACE RACEWAY SYSTEM. EXISTING DEVICE BOXES AND CONCEALED RACEWAY MAY BE REUSED AS APPROPRIATE FOR NEW DEVICES. IF NOT REUSED, REMOVE CONDUCTORS AND PROVIDE BLANK PLATE.
3. COMMUNICATIONS CABLING WORK WILL BE DONE BY OWNER.

KEYED NOTES

- 1 NO NEW POWER/SIGNAL WORK THIS AREA, U.O.N.
- 2 EXISTING ELECTRICAL EQUIPMENT TO REMAIN.
- 3 MODIFY EXISTING COMMUNICATIONS EQUIPMENT AND RACEWAY AS REQUIRED FOR NEW INTERIOR WALLS. DO NOT DISCONNECT COMMUNICATIONS.
- 4 PROVIDE 120V, 20A, 1P MMS, 2#12, 1#12GND, 1/2". INTERLOCK PER MECHANICAL SCHEDULES AND SPECIFICATIONS.
- 5 PROVIDE 60A, 2P, NEMA 3R, DISCONNECT SWITCH, 2#6, #10GND, 1".
- 6 PROVIDE 200A, 2P, NEMA 1, DISCONNECT SWITCH, 2#1, #6GND, 1 1/4". INTERLOCK PER MECHANICAL SCHEDULES AND SPECIFICATIONS.
- 7 PROVIDE 60A, 2P, NEMA 1, DISCONNECT SWITCH, 2#6, #10GND, 1". INTERLOCK PER MECHANICAL SCHEDULES AND SPECIFICATIONS.
- 8 ROUTE W/ REFRIGERATE PIPING INTO MECHANICAL RM. REFER TO HVAC DETAIL FOR CONDENSING UNITS.
- 9 PROVIDE 120V CONNECTION FOR MOTORIZED DAMPERS ON AC-1, AC-2, AND AC-3 W/ 2#12, 1#12GND, 1/2". TO CIRCUIT E-18. COORDINATE W/ HVAC INSTALLER.
- 10 PROVIDE 120V POWER FOR HVAC CONTROLS. COORDINATE W/ HVAC INSTALLER.
- 11 PROVIDE 60A, 2P, NEMA 3R, DISCONNECT SWITCH, 2#6, #10GND, 3/4". INTERLOCK PER MECHANICAL SCHEDULES AND SPECIFICATIONS.
- 12 PROVIDE POWER FOR DOOR ALARM. COORDINATE CONNECTIONS WITH HARDWARE AND DOOR INSTALLERS.

TO NEW PANELS 'E' & 'F'. COORDINATE ROUTING W/ EXISTING CONDITIONS.

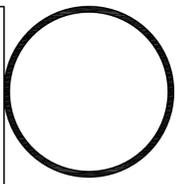
SEAL PENETRATION
SEE ED.1 FOR CONT.

NEW 400 AMP SERVICE TO PANEL 'E'

EXISTING RADIONICS FIRE ALARM CONTROL PANEL TO REMAIN. EXTEND FA CIRCUITS TO NEW DEVICES.

PROVIDE NEW 200A, 2P ENCLOSED CIRCUIT BREAKER FOR NEW PANEL 'F'. SEE ONE-LINE DIAGRAM.

TO NEW PANELS 'E' & 'F'. COORDINATE ROUTING W/ EXISTING CONDITIONS.

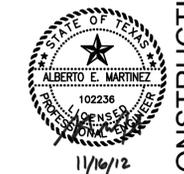


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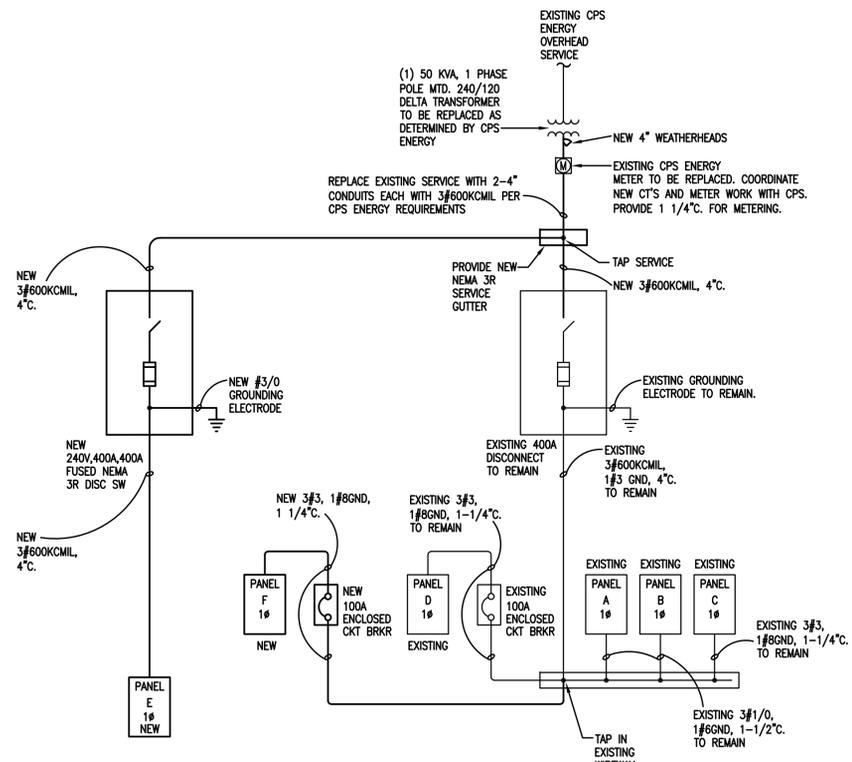
Proposal for 2013-1
LEON VALLEY LIBRARY
CHILDREN'S WING ADDITION
6425 Evers, Leon Valley, Texas 78238

CONSTRUCTION DOCUMENTS
SHEET TITLE
FLOOR PLAN
POWER/SIGNAL
SHEET:
E-2.1
OF 18
Date: NOV 16, 2012

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Texas Firm Registration #1-2597 Copyright 2012



11/16/12

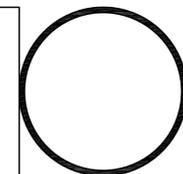


ONE LINE DIAGRAM - NEW WORK

ELECTRICAL LOAD ANALYSIS LEON VALLEY LIBRARY ADDITION			
SERVICE VOLTAGE : 120/240V, 1 PHASE, 3 WIRE			
OCCUPANCY : OFFICE			
LOAD DESCRIPTION	CONN LOAD KVA	DIV. %	DESIGN LOAD KVA
1 LIGHTS			
(a) CONNECTED LOADS	5.64	125%	0.00
(b) 4231 SF X 3.0 VA/SF	12.69	125%	15.86 Code load larger than connected
2 RECEPTACLES			
	8.58		8.58
3 HVAC LOADS			
COOL	24.70		0.00
HEAT	78.12		78.12 NEC220.60 HEATING GREATER
4 MISC. EQUIPMENT			
	0.40		0.40
5 25% LARGEST MOTOR			
25% x 109 Amp x 0.240	6.54		6.54
SUBTOTAL: 136.67 KVA 109.50 KVA 456.26 AMP.			
EXISTING DEMAND 49.00 125% 61.25			
TOTAL DEMAND 171 KVA 711 AMP.			
EXISTING 400A SERVICE AT 120/240V TO BE REPLACED BY 800A SERVICE			

NEW PANELBOARD E												LOCATION: INTERIOR			
VOLTAGE: 240/120V 1 PHASE 3 WIRE												MOUNTING SURFACE			
400A MAIN LUGS ONLY												Isc = 10KA RMS SYM BRACING			
BUSES: 400A; NEUTRAL - 100%; EQUIPMENT GROUND.															
VA:L	VA:R	VA:A/C	VA:O	LOAD	BKR	CKT	CKT	BKR	LOAD	VA:L	VA:R	VA:A/C	VA:O		
540				R- CHILDRENS WING N. PLATFORM	20/1	1	X	2	20/1	L- CHILDRENS WING			1488		
1080				R- CHILDRENS WING - STORAGE	20/1	3	X	4	20/1	L- CHILDRENS WING			1488		
540				R- CHILDRENS WING - WORKSTATION	20/1	5	X	6	20/1	L- CHILDRENS WING N. PLATFORM			1537		
			1600	CHILDRENS WING - WORKSTATION	20/1	7	X	8	20/1	L- CHILDRENS WING S. PLATFORM			471		
			1600	CHILDRENS WING - WORKSTATION	20/1	9	X	10	20/1	EXIT LTG			100		
180				R- CHILDRENS WING	20/1	11	X	12	20/1	EXTERIOR LTG, TIME SWITCH			406		
720				R- CHILDRENS WING S. PLATFORM	20/1	13	X	14	20/1	SPARE					
1080				R- CHILDRENS WING S. PLATFORM	20/1	15	X	16	20/1	F.1, F.2, F.3			291		
			400	EDF	20/1	17	X	18	20/1	MOTORIZED DAMPERS			200		
720				R- MEETING ROOM	20/1	19	X	20		SPACE					
900				R- MEETING ROOM	20/1	21	X	22		SPACE					
				SPARE	20/1	23	X	24		SPACE					
				SPARE	20/1	25	X	26		SPACE					
				SPARE	20/1	27	X	28		SPACE					
13050				AC-2 (17.6KW HEATER)	125/2	29	X	30	125/2	AC-3 (17.6KW HEATER)			13050		
13050				SPARE	20/1	31	X	32					13050		
				SPARE	20/1	33	X	34	60/2	CU-2			4116		
				SPARE	20/1	35	X	36					4116		
				SPARE	20/1	37	X	38	60/2	CU-3			4116		
				SPARE	20/1	39	X	40					4116		
VA:L (LIGHTING)					5490 CONNECTED				6863 DEMAND						
VA:R (RECEPTACLES)					5760 CONNECTED				5760 DEMAND						
VA:A/C(H/VAC)					68955 CONNECTED				68955 DEMAND						
VA:O (OTHER)					3800 CONNECTED				3800 DEMAND						
VA: TOTAL					84005 CONNECTED				85378 DEMAND						
AMPS: TOTAL					350 CONNECTED				356 DEMAND						
L	R	A/C	O	TOTAL											
3125	2700	34332	2200	42357 VA =				353							
2365	3060	34623	1600	41648 VA =				347							
					TOTAL										
5490	5760	68955	3800	84005											

NEW PANELBOARD F												LOCATION: INTERIOR			
VOLTAGE: 240/120V 1 PHASE 3 WIRE												MOUNTING SURFACE			
100A MAIN LUGS ONLY												Isc = 10KA RMS SYM BRACING			
BUSES: 200A; NEUTRAL - 100%; EQUIPMENT GROUND.															
VA:L	VA:R	VA:A/C	VA:O	LOAD	BKR	CKT	CKT	BKR	LOAD	VA:L	VA:R	VA:A/C	VA:O		
			5232	AC-1 (6.9KW HEATER)	50/2	1	X	2	35/2	CU-1			2580		
			5232	SPACE		3	X	4					2580		
				SPACE		5	X	6							
				SPACE		7	X	8							
VA:L (LIGHTING)					0 CONNECTED				0 DEMAND						
VA:R (RECEPTACLES)					0 CONNECTED				0 DEMAND						
VA:A/C(H/VAC)					15624 CONNECTED				15624 DEMAND						
VA:O (OTHER)					0 CONNECTED				0 DEMAND						
VA: TOTAL					15624 CONNECTED				15624 DEMAND						
AMPS: TOTAL					65 CONNECTED				65 DEMAND						
L	R	A/C	O	TOTAL											
0	0	7812	0	7812 VA =				65							
0	0	7812	0	7812 VA =				65							
					TOTAL										
0	0	15624	0	15624											



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