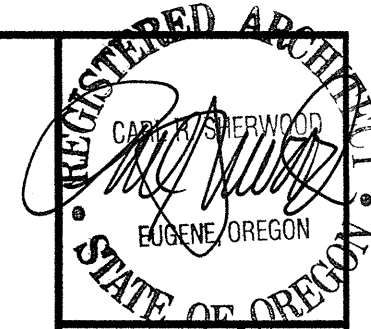


# MUSEUM OF NATURAL & CULTURAL HISTORY EXHIBIT EXPANSION PROJECT-PHASE 2 UNIVERSITY OF OREGON - EUGENE, OREGON



## PROJECT TEAM

### OWNER

STATE BOARD OF HIGHER EDUCATION  
  
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GEORGE BLEEKMAN, PROJECT MANAGER

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EUGENE OR 97405  
(541) 285-1680

### MECHANICAL ENGINEER

MOULDS MECHANICAL  
2190 W 11TH AVENUE  
EUGENE, OR 97401  
(541) 484-0241

## SHEET INDEX

### GENERAL

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M1.2 HVAC SCHEDULES AND DETAILS

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E1.2 ELECTRICAL POWER AND SIGNAL PLAN  
E1.3 LIGHTING PLAN  
E2.1 ONE LINE DIAGRAM AND PANEL SCHEDULE

## ABBREVIATIONS/SYMBOLS

REFER TO EACH DISCIPLINE FOR ADDITIONAL ABBREVIATIONS AND SYMBOLS.

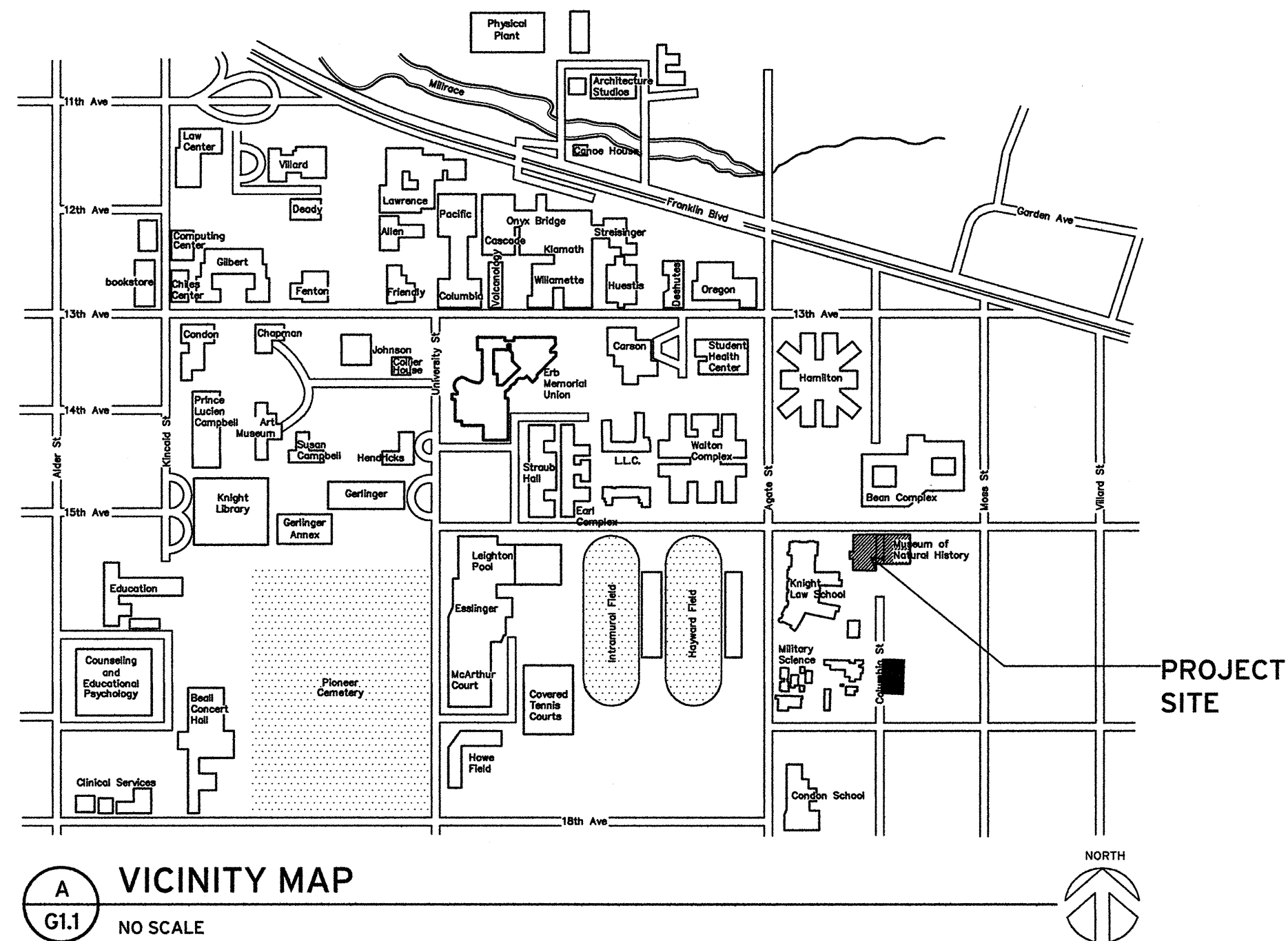
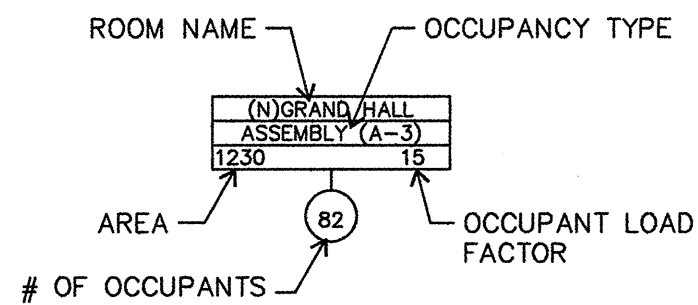
ADJ	ADJUSTABLE/ADJACENT	OC	ON CENTER
AFF	ABOVE FINISHED FLOOR	OFCl	OWNER-FURNISHED, CONTRACTOR-INSTALLED
BLKG	BLOCKING	OPP	OPPOSITE
CLG	CEILING	PL	STEEL PLATE
CLR	CLEAR	PLAM	PLASTIC LAMINATE
CONC	CONCRETE	PLYWD	PLYWOOD
CPT	CARPET	EQ	EQUAL
(E)	EXISTING	REQ'D	REQUIRED
EA	EACH	SIM	SIMILAR
EQ	EQUAL	SM	SHEET METAL
FRTW	FIRE-RETARDANT TREATED WOOD	TYP	TYPICAL
GA	GAGE	UNO	UNLESS NOTED OTHERWISE
INSUL	INSULATION	VP	VENEER PLASTER
MIN	MINIMUM	W/	WITH
MTL	METAL		
N.I.C.	NOT IN CONTRACT		

DETAIL REFERENCE

INTERIOR ELEVATION

OFFICE  
ROOM NAME  
ROOM NUMBER

KEYED NOTE REFERENCE



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EXHIBIT EXPANSION PROJECT - PHASE 2**  
 1680 E. 15th AVENUE  
 EUGENE, OREGON

**TITLE SHEET**  
 Drawn By: BJT  
 Checked: [Signature]  
 Date: 24 JAN 2013  
 Project: 1117-1  
**G1.1**



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CODE ANALYSIS

Drawn By BJT  
Checked [Signature]  
Date 24 JAN 2013  
Project 1117-1

G1.2

# CODE INFORMATION

The following information is based on the 2010 Edition of the State of Oregon Structural Specialty Code

## BUILDING OCCUPANCY -- OSSC Chapter 3

Occupancy(s) for this building: A3, B, S-1

Occupancy Separation(s): No

## TYPES OF CONSTRUCTION -- OSSC Chapter 6

Construction type for this building is: VB, fully sprinklered

## MEANS OF EGRESS -- IBC Chapter 10

### Occupant Load:

Room Name	Use	Area Sq.Ft.	Load Factor	Occupant Load	> than:	Exits Req'd
Existing Exhibit	Assembly (A-3)	2,283	5	457	50	2
Existing Offices	Business (B)	2,365	100	24	50	1
Existing Conf	Assembly (A-3)	750	15	50	50	1
Existing Lobby	Assembly (A-3)	390	5	78	50	1
Existing Exhibit	Assembly (A-3)	2,200	5	440	50	2
Existing Small Gallery	Assembly (A-3)	320	5	64	50	2
Existing Secure Stg	Storage (S-1)	391	500	1	50	1
Existing Storage	Storage (S-1)	140	500	1	50	1
Existing Gift Shop	Business (B)	420	100	5	50	1
Grand Hall	Assembly (A-3)	1,510	5	302	50	2
Offices	Business (B)	1,025	100	11	50	1
Vaults	Storage (S-1)	4,000	500	8	50	1

Total Occupant Load: 1,441

Total Area: 15,794

## PLUMBING FIXTURE REQUIREMENTS -- OSSC Chapter 29

Plumbing Fixture Requirements:

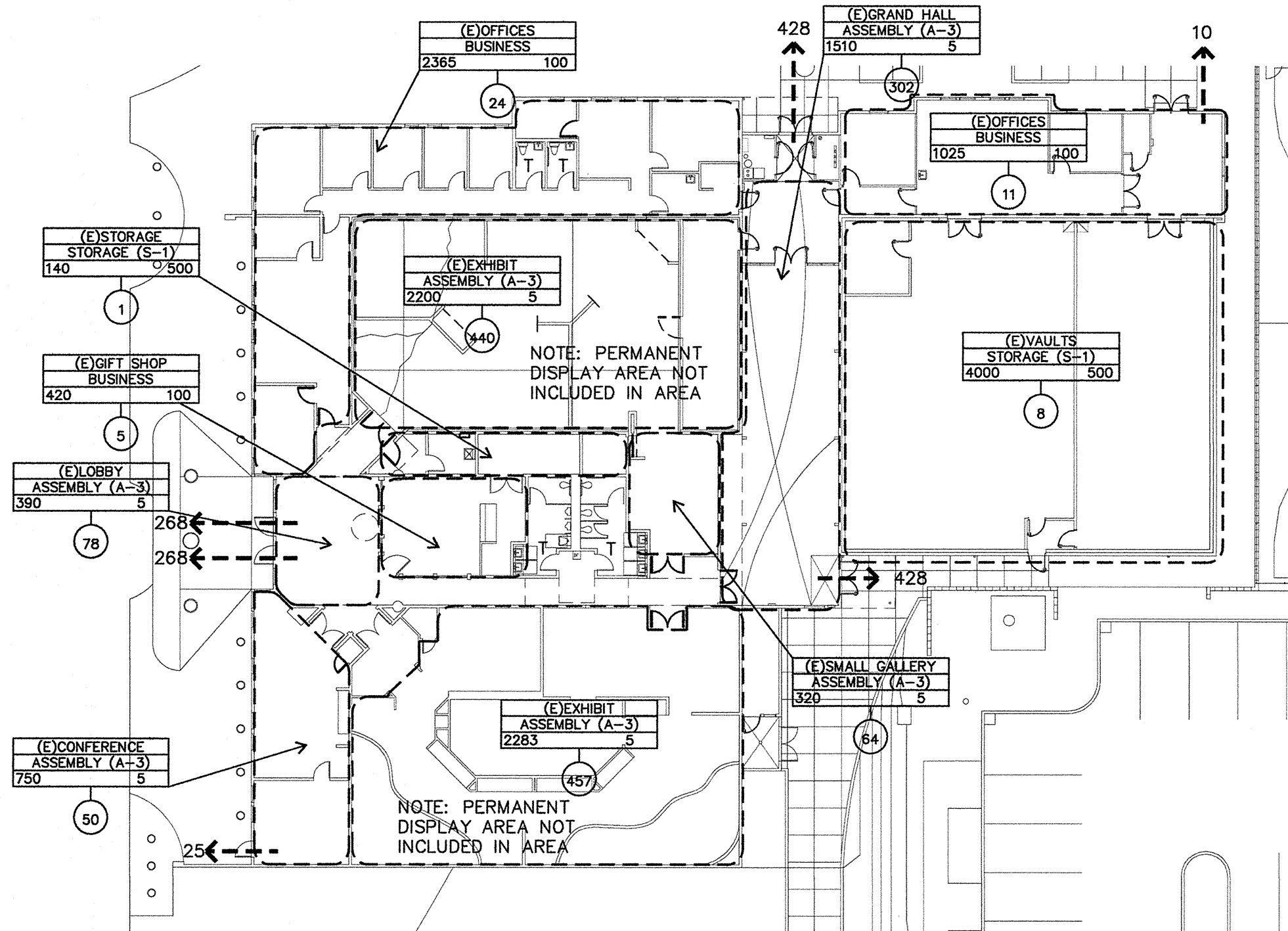
Room Name	Use	Area (Sq.Ft.)	Load Factor	Load	Male	Female
Existing Exhibit	Assembly (A-3)	2,283				
Existing Conf	Assembly (A-3)	750				
Existing Lobby	Assembly (A-3)	390				
Existing Exhibit	Assembly (A-3)	2,200				
Existing Small Gallery	Assembly (A-3)	320				
Existing Grand Hall	Assembly (A-3)	1,510				
Existing Offices	Business (B)	2,365				
Existing Gift Shop	Business (B)	465				
Existing Offices	Business (B)	1,025				
	Assembly (A-3)	7,453	30	248	124	124
	Business (B)	3,855	200	19	10	10
				Total:	134	134

Required # of WCs Male= 3  
Required # of Lavs Male= 3

Required # of WCs Female= 3  
Required # of Lavs Female= 3

Drinking Fountains 1 (Existing)

Storage occupancy has been ignored, staff only access



**B EXITING DIAGRAM**  
GO.1 NO SCALE



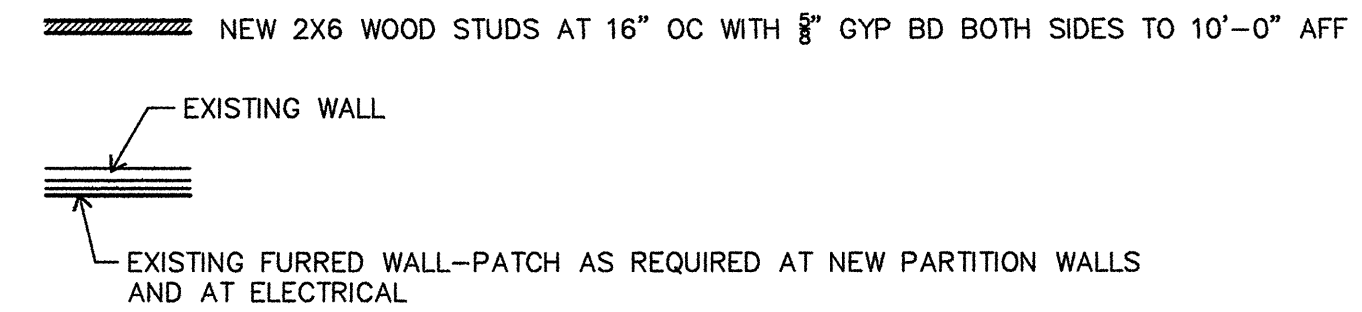
**GENERAL NOTES**

1. DIMENSIONS ARE FROM FACE OF FRAMING UNLESS NOTED OTHERWISE.
2. PAINT ALL NEW ITEMS ABOVE 10'-0" BLACK, MATCH EXISTING.
3. FILL CRACKS, JOINTS AND PATCH EXISTING FLOOR. PREP FLOOR FOR APPLICATION OF NEW SHEET FLOORING.
4. REFER TO ELECTRICAL FOR NEW ELECTRICAL.
5. REFER TO MECHANICAL FOR NEW MECHANICAL.
6. PAINT SPRINKLER PIPING TO MATCH ADJACENT WALL/CEILING COLOR

**PLAN NOTES**

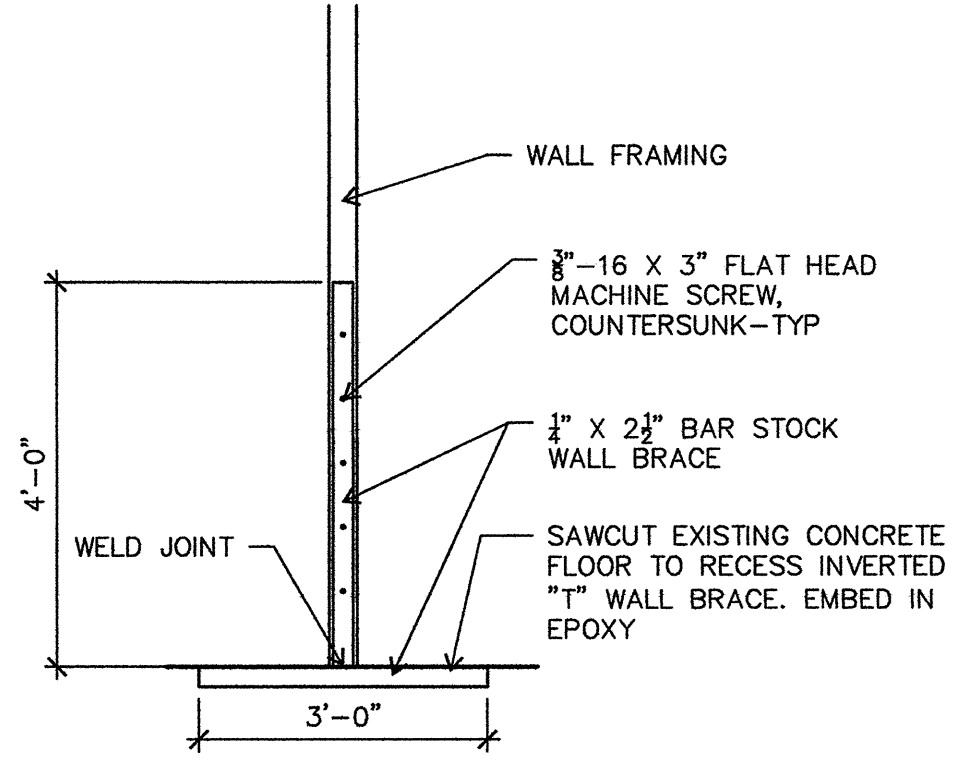
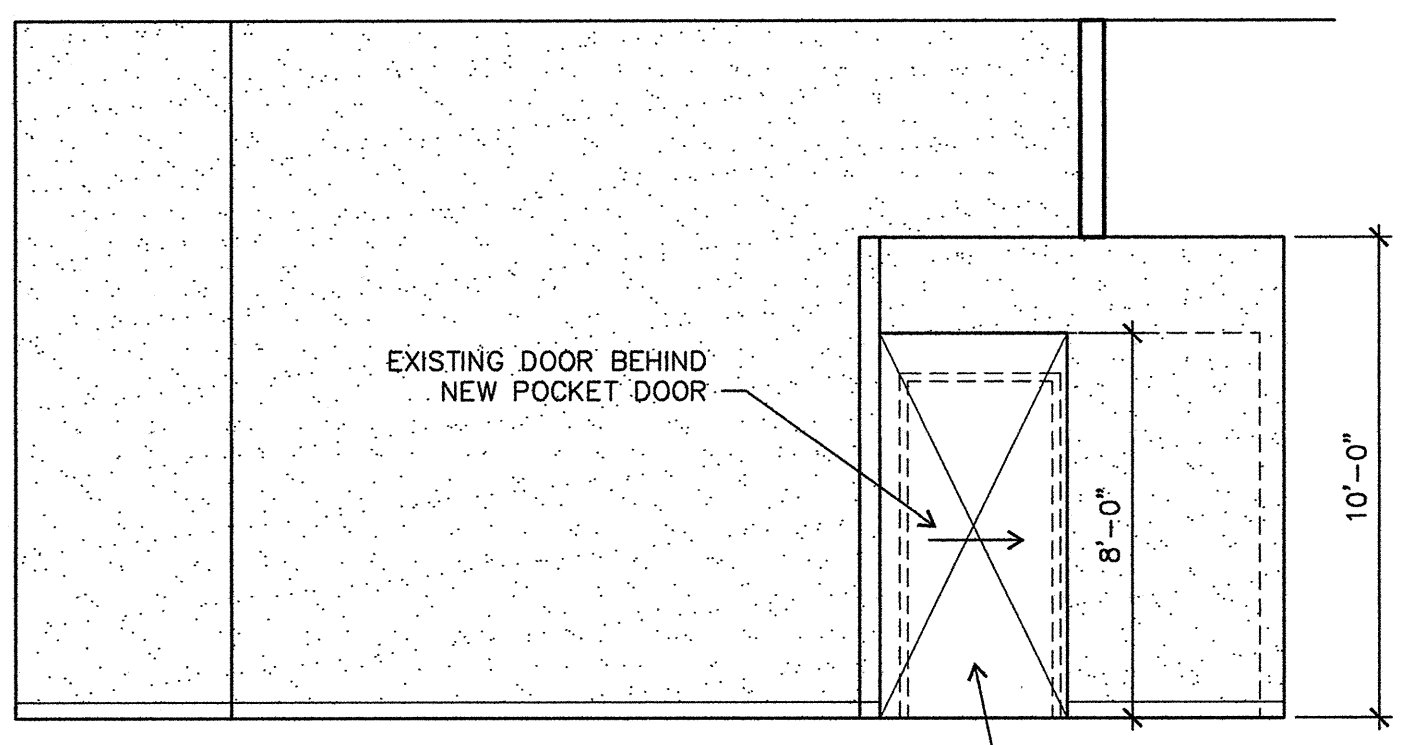
1. PAINT ALL NEW ITEMS (DUCTWORK, PIPING, ELECTRICAL, ETC) ABOVE 10'-0" BLACK, MATCH EXISTING-TYP. PAINT EXISTING WALLS PER FINISH SCHEDULE
2. REMOVE EXISTING LINOLEUM SHEET FLOORING AND RUBBER BASE AT SMALL GALLERY
3. NEW WALL AND 4'-0" X 8'-0" POCKET DOOR - WALL TO 10'-0" AFF
4. REMOVE EXISTING DOOR, DOOR FRAME AND HARDWARE. INFILL OPENING TO MATCH ADJACENT WALL CONSTRUCTION
5. INFILL EXISTING TRANSFER GRILLS (2) - MATCH ADJACENT WALL CONSTRUCTION
6. DISPLAY PLATFORM AT 28" ABOVE FINISH FLOOR. TOP OF WALL AT LEADING EDGE AT 38" ABOVE FINISH FLOOR. PROVIDE 2X6s AT 16" OC WITH 3/4" PLYWOOD DECKING

**LEGEND**



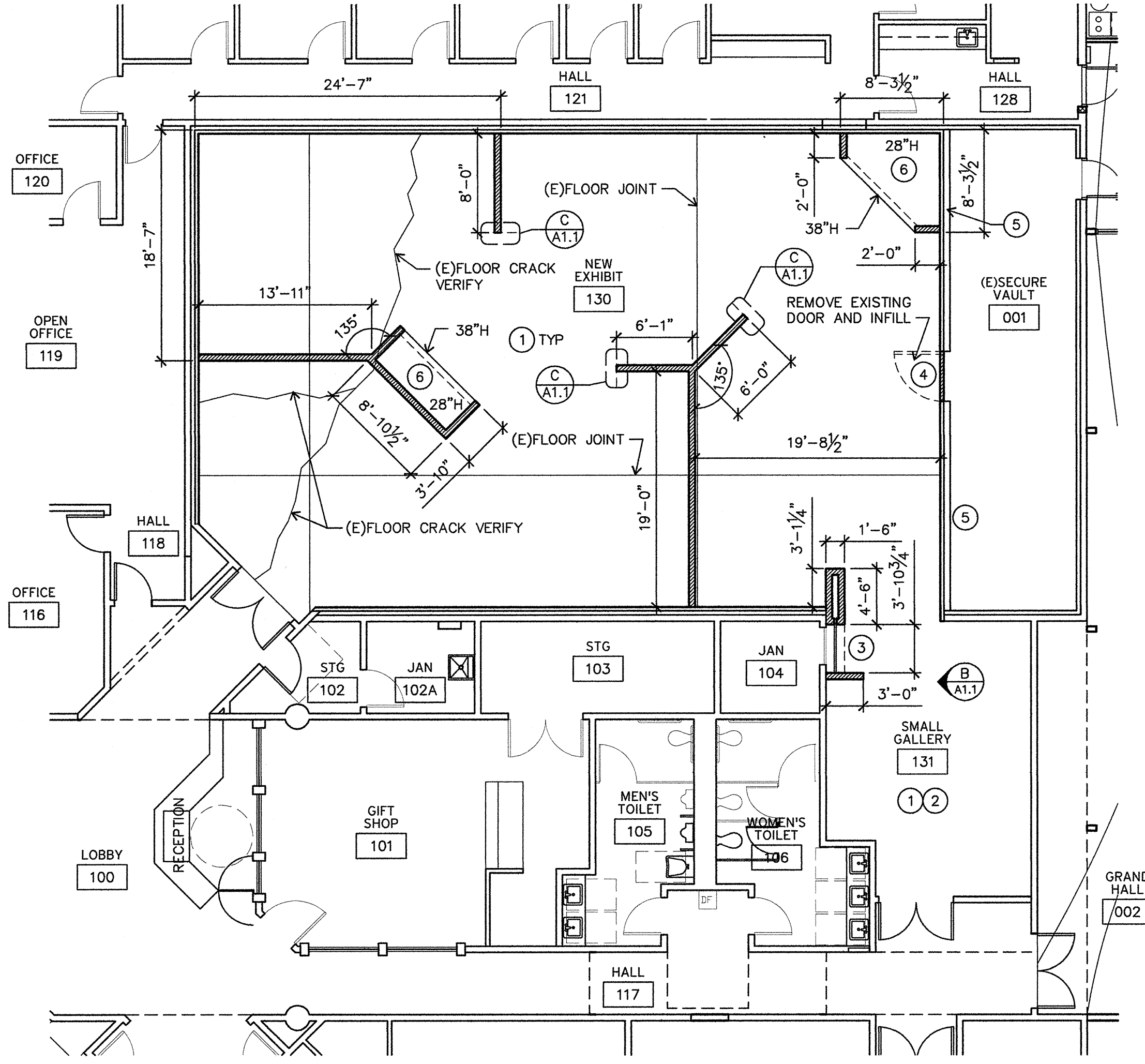
**FINISH SCHEDULE**

<b>SMALL GALLERY 131</b>	
FLOORING:	LINOLEUM
BASE:	RUBBER BASE
EXISTING WALLS:	PAINT
NEW WALLS:	PAINT
CEILING:	PAINT ALL NEW EQUIPMENT/DUCTWORK AND ANY NEW ITEM ABOVE 10'-0". PAINT SPRINKLER PIPING
<b>NEW EXHIBIT 130</b>	
FLOORING:	LINOLEUM
BASE:	RUBBER BASE
EXISTING WALLS:	PAINT
NEW WALLS:	PAINT
CEILING:	PAINT ALL NEW EQUIPMENT/DUCTWORK AND ANY NEW ITEM ABOVE 10'-0". PAINT SPRINKLER PIPING



**B**  
A1.1  
1/4"=1'-0"

**C**  
A1.1  
1/2"=1'-0"



**A**  
A1.1  
1/8"=1'-0"



**LEGEND**

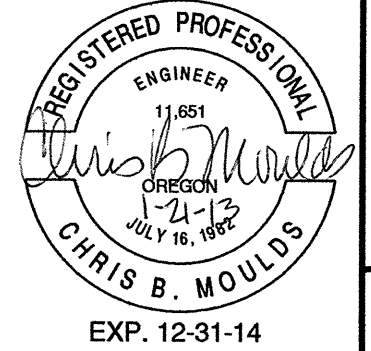
(E)	EXISTING
200 SDC 8X12-4W	CFM, GRILLE & SIZE DESIGNATION
	SINGLE LINE DUCTWORK
	DUCTWORK TO BE REMOVED
	SA SUPPLY AIR DUCTWORK
	RA, OSA RETURN, OUTSIDE AIR DUCTWORK
	EA EXHAUST AIR
	AHU-1 SENSOR WITH UNIT NUMBER
	BALANCING DAMPER
	AHU AIR HANDLING UNIT
	HC HEATING COIL
	SDC SUPPLY DIFFUSER CEILING
	RGW RETURN GRILLE WALL
-x-x-x-x-x-x-x-x-x-x-	REMOVE/DEMO

**PLAN NOTES**

- ① ADJUST AHU-1 OUTSIDE AIR FROM 590 TO 845 CFM. AHU-1 LOCATED ON ROOF ABOVE SMALL GALLERY. ROOF ACCESS THROUGH JANITOR ROOM.
- ② AHU-1 SHALL NOT OPERATE DURING CONSTRUCTION. STARTUP SHALL BE APPROVED BY OWNER. COVER EXISTING RGW'S WITH PLASTIC DURING CONSTRUCTION.
- ③ REMOVE EXISTING EGC IN SMALL GALLERY AND STORE DURING CONSTRUCTION AND PROVIDE FILTER ON DUCT. OPERATE EXHAUST SYSTEM DURING CONSTRUCTION PERIODS AND CONTINUALLY WHEN ODORS OR DUST ACTIVITIES ARE OCCURRING.
- ④ COORDINATE WITH OWNER FOR REMOVAL OF FINAL FILTERS PRIOR TO BALANCING.

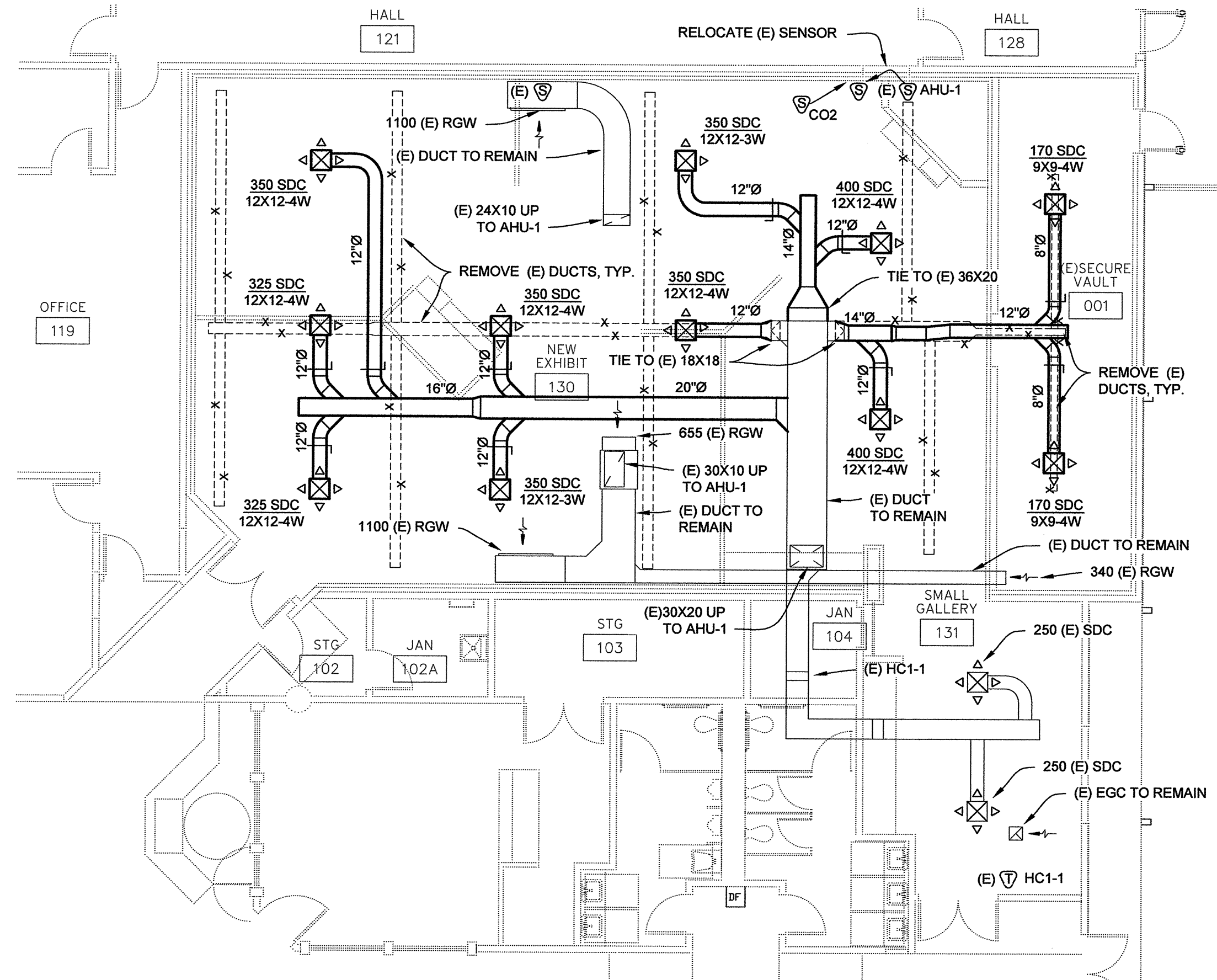
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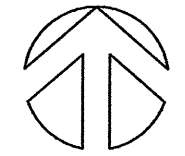


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**A**  
**M1.1**  
**HVAC FLOOR PLAN**  
1/8"=1'-0"



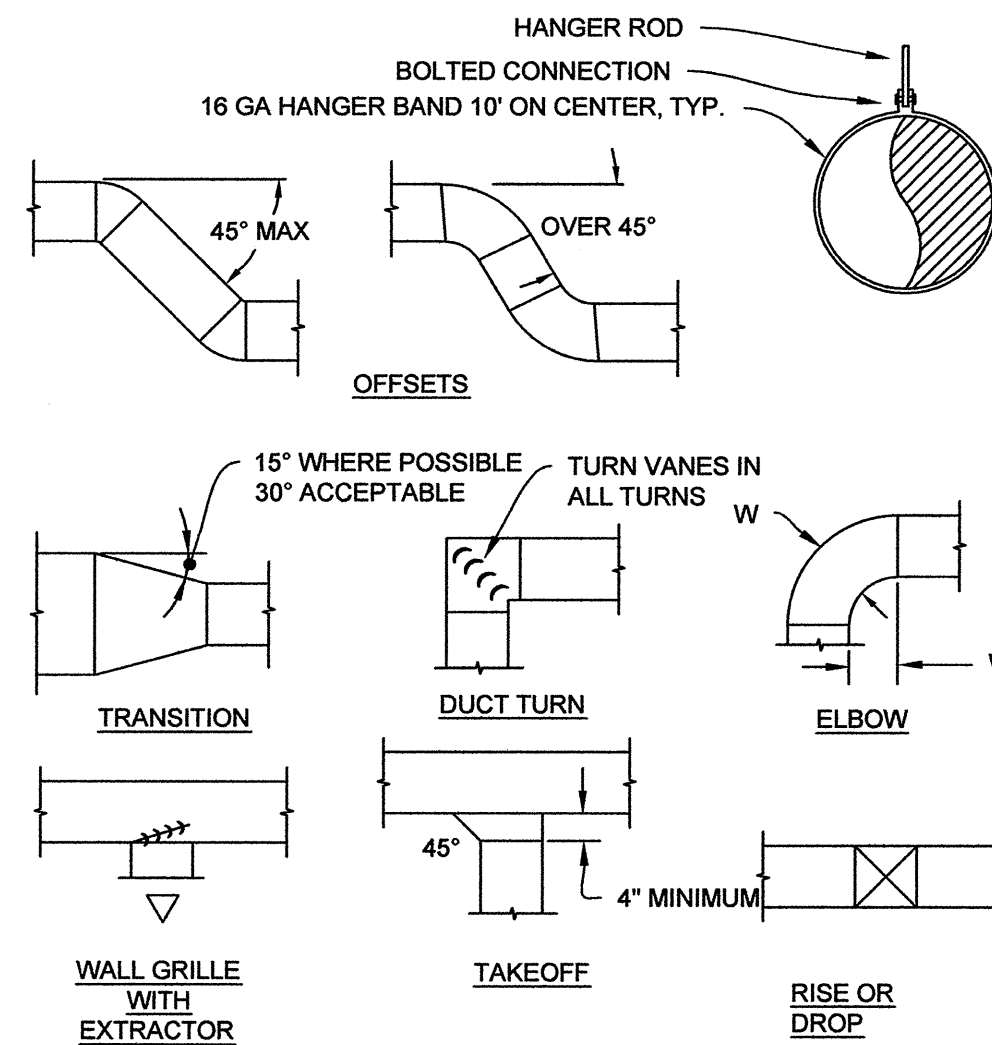
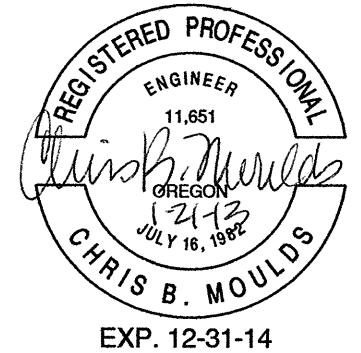
**HVAC FLOOR PLAN**

Drawn By	CM
Checked	CM
Date	18 JAN 2013
Project	0626-5

**M1.1**

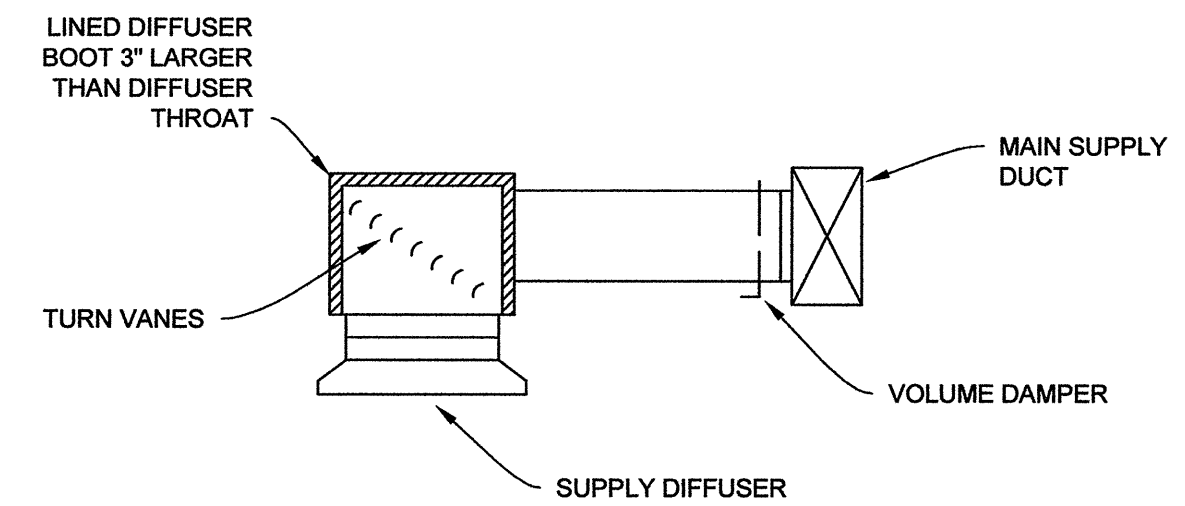
**MOULDS  
MECHANICAL  
ENGINEERING**

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(541) 484-0241  
FAX 484-0191



REFER TO SMACNA STANDARDS.

**A**  
M1.2  
**DUCT CONSTRUCTION**  
NO SCALE



**B**  
M1.2  
**SUPPLY DIFFUSER CONNECTION**  
NO SCALE

REGISTER & GRILLE SCHEDULE				
CODE	MANUFACTURER MODEL	OBD	FINISH	REMARKS
SDC	KRUEGER SH	NO	FLAT BLACK	SUPPLY DIFFUSER CEILING FRAME STYLE 21

OUTSIDE AIR SCHEDULE										
OCCUPANCY OMSC 403.3	OCCUPANT DENSITY PERSONS/ 1000 SF OMSC 403.0	OUTDOOR AIR CFM/ PERSON Rp OMSC 403.0	OUTDOOR AIR CFM/SF Ra OMSC 403.0	AREA SQ FT Az	ZONE POPULATION # OF OCCUPANTS Pz	BREATHING ZONE OUTDOOR AIR Vbz OMSC 403.3.1.1	ZONE OUTDOOR AIR Voz OMSC 03.3.1.3	ZONE AIRFLOW CFM Vpz	PRIMARY OUTDOOR AIR FRACTION Zp OMSC 403.3.2.3.1	REQUIRED OUTDOOR AIR CFM Vot OMSC 403.3.2.3.4 (3)
NEW EXHIBIT 130	40	7.5	0.06	2310	46	484	605	3200	0.19	
SMALL GALLERY 131	40	7.5	0.06	356	7	74	92	500	0.18	
STORAGE VAULT 001	-	-	0.12	429	-	51	64	340	0.19	
UNCORRECTED OUTDOOR AIR, Vou OMSC 403.3.2.3.3							761	AHU-1 REQUIRED OSA Ev=9		845
								AHU-1 PROVIDED OSA		845

**NOTES:**

1. ZONE AIR EFFECTIVENESS  $E_z=0.8$  PER OMSC 403.3.1.2.
2. OCCUPANT DIVERSITY  $D=1$  PER OMSC 403.3.2.3.3.
3. OCCUPANT LOADS REDUCED TO AVERAGE OCCUPANCY, BUT NO LESS THAN 50% OF CODE MINIMUM.



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**HVAC  
SCHEDULES & DETAILS**

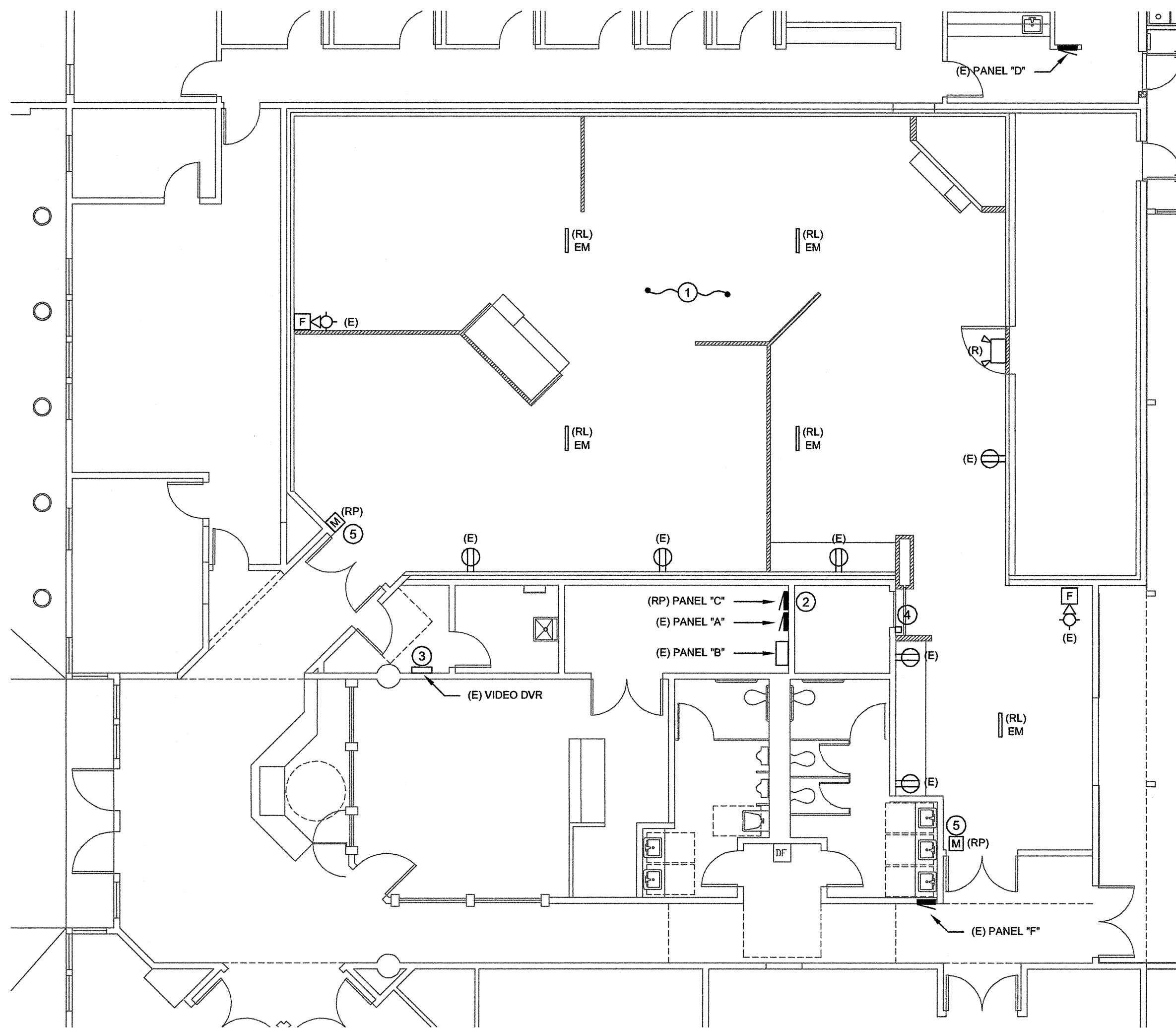
Drawn By CM

Checked CM

Date 18 JAN 2013

Project 0626-5

**M1.2**



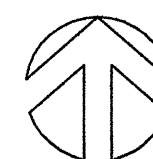
### SYMBOL LIST

	PANEL BOARD
	DUPLEX OUTLET
	MOTION SENSOR
	EMERGENCY LIGHT
	FIRE ALARM HORN STROBE
	FIRE ALARM STROBE
	JUNCTION BOX
	LIGHT TRACK
	SURFACE FLUORESCENT
	THREE WAY SWITCH
	SINGLE POLE SWITCH
	POWER LOSS RELAY
	NOTE REFERENCE
	HOME RUN TO PANEL
	EXISTING
	EXISTING TO BE RELOCATED
	NEW LOCATION OF ELECTRICAL DEVICE

### PLAN NOTES

- ① REMOVE (12) EXISTING CEILING MOUNTED FLUORESCENT WORK LIGHT FIXTURES. RELOCATE (4) EXISTING EMERGENCY FIXTURES.
- ② EXISTING 18 POLE PANEL BOARD TO BE REPLACED. SEE POWER & SIGNAL PLAN, ONE LINE DIAGRAM AND PANEL SCHEDULE.
- ③ EXISTING 24 ZONE PELCO DVR UNIT WITH (9) SPARE CAMERA ZONES.
- ④ EXISTING BOILER SHUT DOWN PUSH BUTTON TO REMAIN.
- ⑤ SECURITY SYSTEM MOTION DETECTOR TO REMAIN.

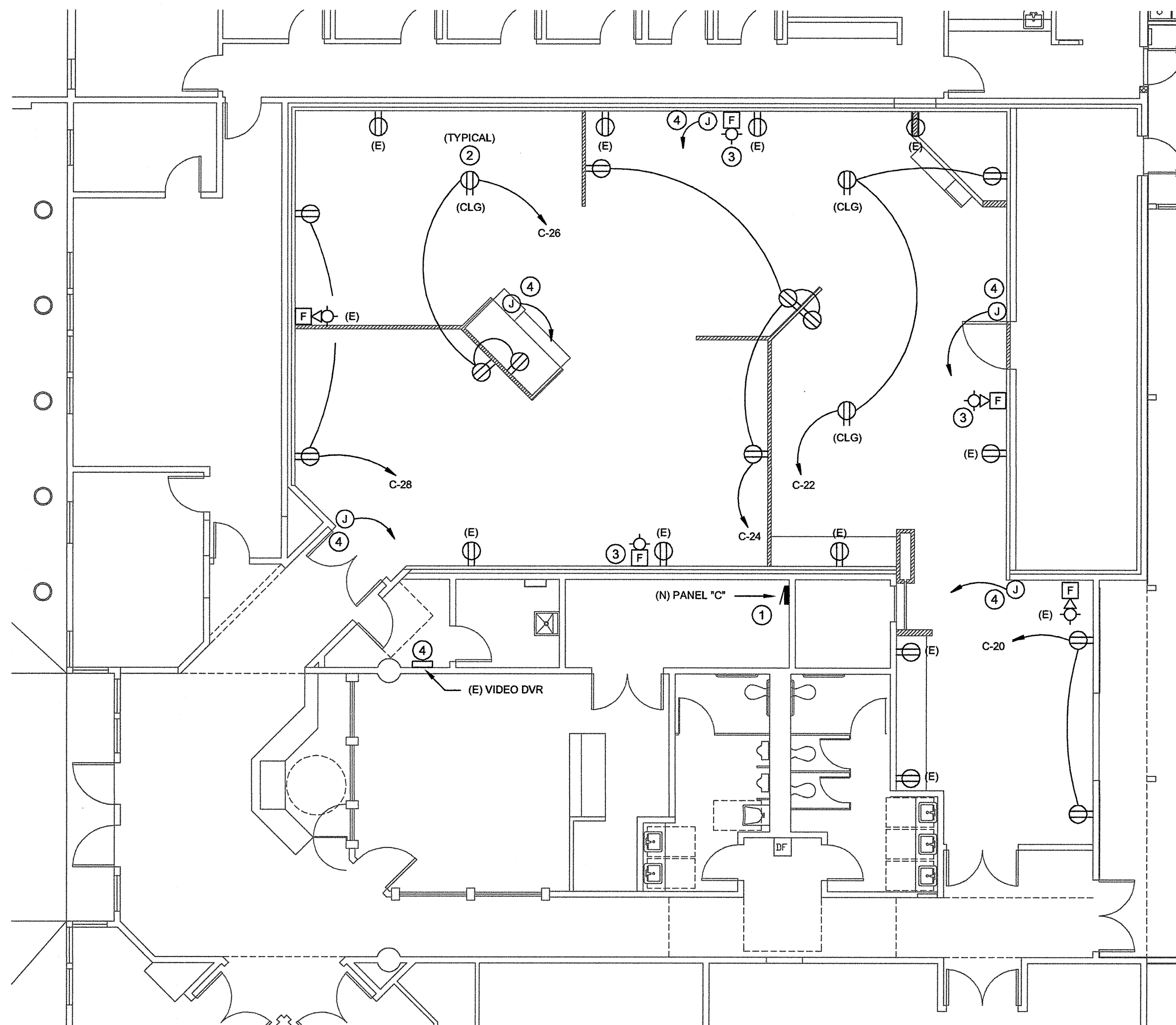
**A**  
**E1.1**  
 ELECTRICAL DEMOLITION PLAN  
 1/8"=1'-0"



**ELECTRICAL  
 DEMOLITION  
 PLAN**

Drawn By	RGM DRAFTING
Checked	JK
Date	23 JAN 2013
Project	0626-5

**E1.1**



**A**  
**E1.2** ELECTRICAL POWER & SIGNAL PLAN  
 1/8"=1'-0"



**PLAN NOTES**

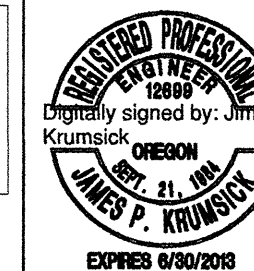
- ① REPLACE EXISTING 18 CIRCUIT PANEL WITH NEW (42) CIRCUIT PANEL. RECONNECT EXISTING BRANCH CIRCUIT LOADS TO CIRCUITS 1-18. CONNECT NEW POWER AND LIGHTING CIRCUITS AS INDICATED.
- ② VERIFY EXACT NEW RECEPTACLE LOCATIONS WITH EXHIBIT SUBCONTRACTOR.
- ③ EXTEND EXISTING FIRE ALARM NOTIFICATION CIRCUIT TO NEW FIRE ALARM STROBE.
- ④ HOME RUN 3/4" CONDUIT FROM FUTURE CAMERA LOCATION TO EXISTING DVR. VERIFY CAMERA JUNCTION BOX LOCATIONS WITH EXHIBIT SUBCONTRACTOR.

**ELECTRICAL  
 POWER & SIGNAL  
 PLAN**

Drawn By	RGM DRAFTING
Checked	JK
Date	23 JAN 2013
Project	0626-5

**E1.2**





**A** LIGHTING PLAN  
 E1.3 1/8"=1'-0"



**PLAN NOTES**

- ① HOME RUN TO ② ZONE OUTPUTS AT GRAFIK EXE PANEL. CONNECT ① ZONE TO EACH TRACK CIRCUIT.
- ② SIX ZONE LUTRON GRAFIK EXE QS PANEL WITH ④ PRESETS.
- ③ POWER LOSS RELAY. CONNECT TO NEW AND RELOCATED TYPE EM LIGHT FIXTURES.
- ④ REUSE EXISTING LIGHT TRACK. RECONNECT TO NEW GRAFIK EXE CONTROL SYSTEM.
- ⑤ TRACK FIXTURES TO BE PROVIDED AND AIMED BY EXHIBIT CONTRACTOR.
- ⑥ REPLACE EXISTING SWITCH WITH NEW 3 WAY SWITCH. USE TO CONTROL WORK LIGHTS.
- ⑦ GRAFIK EXE ④ ZONE PRESET STATION.

**LIGHTING PLAN**

Drawn By	RGM DRAFTING
Checked	JK
Date	23 JAN 2013
Project	0626-5

**E1.3**



**PANEL SCHEDULE**

PANEL: C  
 TYPE: CH Type PB AMPS: 100  
 VOLTS: 120/208  
 PHASE: 3 WIRE: 4  
 LOCATION: Equipment Room  
 MOUNTING: Surface  
 MAIN: Lugs

DATE: January 23, 2013  
 PROJECT:

LOAD CLASS	Conn. VA	Demand Factor	Demand Load VA
LIGHTING	2960	125%	3700
OUTLETS	2520	*	2520
MOTOR LOADS	0	**	0
RESISTANCE LOADS	0	100%	0
SUBFEED	0	100%	0
MISC. LOADS	14400	100%	14400

	Connected	Demand
TOTAL VOLT-AMPS	19,880	20,620
MAXIMUM PHASE AMPS	60.2	64.3

NOTES: Existing panel C to be replaced. Reconnect existing 100 amp feeder serving existing Panel C. Reconnect 16 existing branch circuits currently connected to existing panel C.

BREAKER A	P	DESCRIPTION	WATTS	CIR. NO.	PHASE	CIR. NO.	WATTS	DESCRIPTION	BREAKER P	A
20	1	Existing Load	900	1	A	2	900	Existing Load	1	20
20	1	Existing Load	900	3	B	4	900	Existing Load	1	20
20	1	Existing Load	900	5	C	6	900	Existing Load	1	20
20	1	Existing Load	900	7	A	8	900	Existing Load	1	20
20	1	Existing Load	900	9	B	10	900	Existing Load	1	20
20	1	Existing Load	900	11	C	12	900	Existing Load	1	20
20	1	Existing Load	900	13	A	14	900	Existing Load	1	20
20	1	Existing Load	900	15	B	16		Spare	1	20
20	1	Existing Load	900	17	C	18		Spare	1	20
20	1	Spare		19	A	20	360	Exhibit Outlets	1	20
20	1	Work Lighting	960	21	B	22	540	Ceiling Outlets	1	20
20	1	GratEye Panel	2000	23	C	24	720	Exhibit Outlets	1	20
20	1	Spare		25	A	26	540	Ceiling Outlets	1	20
20	1	Spare		27	B	28	360	Ceiling Outlets	1	20
20	1	Spare		29	C	30		Space		
20	1	Spare		31	A	32		Space		
20	1	Spare		33	B	34		Space		
20	1	Spare		35	C	36		Space		
20	1	Spare		37	A	38		Space		
20	1	Spare		39	B	40		Space		
20	1	Spare		41	C	42		Space		

PHASE TOTALS	Connected VA	A	B	C
	6300	6300	6360	7220
	Demand VA	6300	6600	7720
	Connected Amps	52.5	53.0	60.2
	Demand Amps	52.5	55.0	64.3

\* 10kVA at 100%, remainder at 50%  
 \*\* 100% plus 25% of the largest Motor

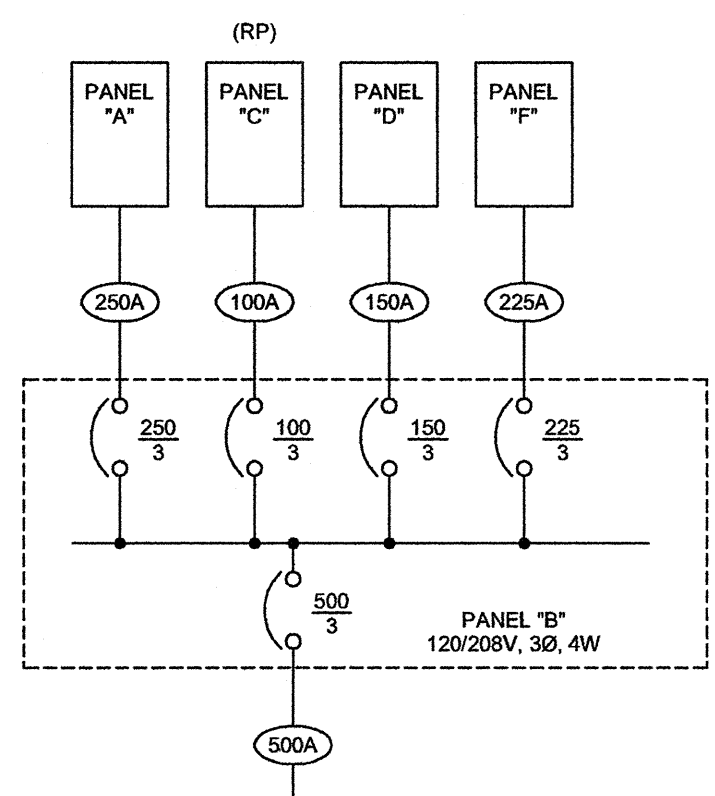
Type	Description	Manufacturer Series	Lamps / Ballast	Remarks
EM	Existing Surface Mounted Wraparound Fluorescent with			Relocate to locations indicated on Drawings
F	Wraparound Fluorescent, Surface Mounted Work Light	Lithonia LB 232 Series	F32 T8 with Nema Premium Electronic Ballast	Surface mounted on Structure
LT	Heavy Duty Extruded Aluminum 2 Circuit Light Track, Length as Indicated - Black Finish	LSI 322 Series	Fixtures to be Provided by Exhibit Contractor	Pendant Mounted to Height Designated by Exhibit Contractor

**D**  
E2.1

**LIGHT FIXTURE SCHEDULE**

**B**  
E2.1

**PANEL SCHEDULE**



**A**  
E2.1

**ONE LINE DIAGRAM**

**C**  
E2.1

**FEEDER SCHEDULE**

TYPE	AMPACITY	SIZE
100A	100 AMP, 4 WIRE	1 1/4", 4 #2, #6 G
150A	150 AMP, 4 WIRE	EXISTING
225A	225 AMP, 4 WIRE	EXISTING
500A	500 AMP, 4 WIRE	EXISTING



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**ELECTRICAL  
 ONE LINE DIAGRAM  
 AND PANEL SCHEDULES**

Drawn By: RGM DRAFTING  
 Checked: JK  
 Date: 23 JAN 2013  
 Project: 0626-5

**E2.1**