

REFRIGERANT PIPE SIZE SCHEDULE			
SPLIT SYSTEMS MARK NUMBERS	TONNAGE	REFRIGERANT PIPE SIZE	
		SUCTION	LIQUID
FC-1 / HP-1	2	5/8"	3/8"
FC-2 / HP-2	3.5	7/8"	3/8"
FC-3 / HP-3	4	7/8"	3/8"

FAN COIL KEY NOTE SCHEDULE

- 1 PROVIDE FAN COIL WITH THE FOLLOWING OPTIONS:
A) PROVIDE KFCEH0501N08 8 KW STRIP
B) HEAT STRIP HEATER POWER IS IN ADDITION TO FAN HEAT PUMP.
- 2 PROVIDE FAN COIL WITH THE FOLLOWING OPTIONS:
A) PROVIDE KFCEH0801N08 8 KW STRIP
B) HEAT STRIP HEATER POWER IS IN ADDITION TO FAN HEAT PUMP.
- 3 PROVIDE FAN COIL WITH THE FOLLOWING OPTIONS:
A) PROVIDE KFCEH0901N10 10 KW STRIP
B) HEAT STRIP HEATER POWER IS IN ADDITION TO FAN HEAT PUMP.

HEAT PUMP UNIT EQUIPMENT SCHEDULE														
MARK	MAKE & MODEL	DESCRIPTION	CFM	MIN OA	SP	CAPACITY		SEER	ELECT. CHARACTERISTICS				REMARKS	
						HEATING IN	COOLING OUT		ITEM	LOAD	VOLTS	Ø		
HP-1	CARRIER 25HPA424A003	AIR COOLED HEAT PUMP	--	--	--	--	--	17.00 22.01	14.5	FLA MCA	13.5 16.73	208/ 230	1	OPER.WT. = 230#
HP-2	CARRIER 25HPA442A003	AIR COOLED HEAT PUMP	--	--	--	--	--	30.24 39.49	14.0	FLA MCA	21.0 25.94	208/ 230	1	OPER.WT. = 280#
HP-3	CARRIER 25HPA448A003	AIR COOLED HEAT PUMP	--	--	--	--	--	34.77 44.63	14.0	FLA MCA	23.10 28.64	208/ 230	1	OPER.WT. = 310#




FAN COIL UNIT SCHEDULE															
MARK	MAKE & MODEL	DESCRIPTION	CAPACITY							ELECT. CHARACTERISTICS				REMARKS	
			CFM	MIN	ESP	HEATING MBH	AFUE	COOLING MBH	SEER	EER	ITEM	LOAD	VOLTS		Ø
1	FC-1	CARRIER FX4B030005	HORIZ. FAN COIL UNIT	797	115	.50	23.8	--	REFER TO HP-1	--	HP	1/3	240	1	OPER.WT.= 150#
2	FC-2	CARRIER FX4B042008	HORIZ. FAN COIL UNIT	1375	115	.50	42.0	--	REFER TO HP-2	--	HP	1/2	240	1	OPER.WT.= 185#
3	FC-3	CARRIER FX4B048010	HORIZ. FAN COIL UNIT	1480	343	.50	48.0	--	REFER TO HP-3	--	HP	3/4	240	1	OPER.WT.= 190#

FAN SCHEDULE											
MARK	MAKE & MODEL	CONTROL	CFM	E.S.P.	RPM	SONES	ELECT.CHARACTERISTICS				REMARKS
							ITEM	LOAD	VOLTS	Ø	
① CEF-1	BROAN L200	INTERLOCK W/ LIGHTSWITCH	210	--	--	1.7	FLA	1.8	115	1	OP.WT.=35#
① CEF-2	BROAN L150	INTERLOCK W/ LIGHTSWITCH	160	--	--	1.5	FLA	1.3	115	1	OP.WT.=35#

KITCHEN HOOD SCHEDULE												
MARK	MAKE & MODEL	CONTROL	SIZE	CFM	E.S.P.	RPM	SONES	ELECT.CHARACTERISTICS				REMARKS
								ITEM	LOAD	VOLTS	Ø	
RH-1	BROAN 4224	THRU SWITCH ON HOOD	24" WIDE	190	---	----	6.0	AMPS	2.5	115	1	CONFIRM COLOR WITH ARCHITECT

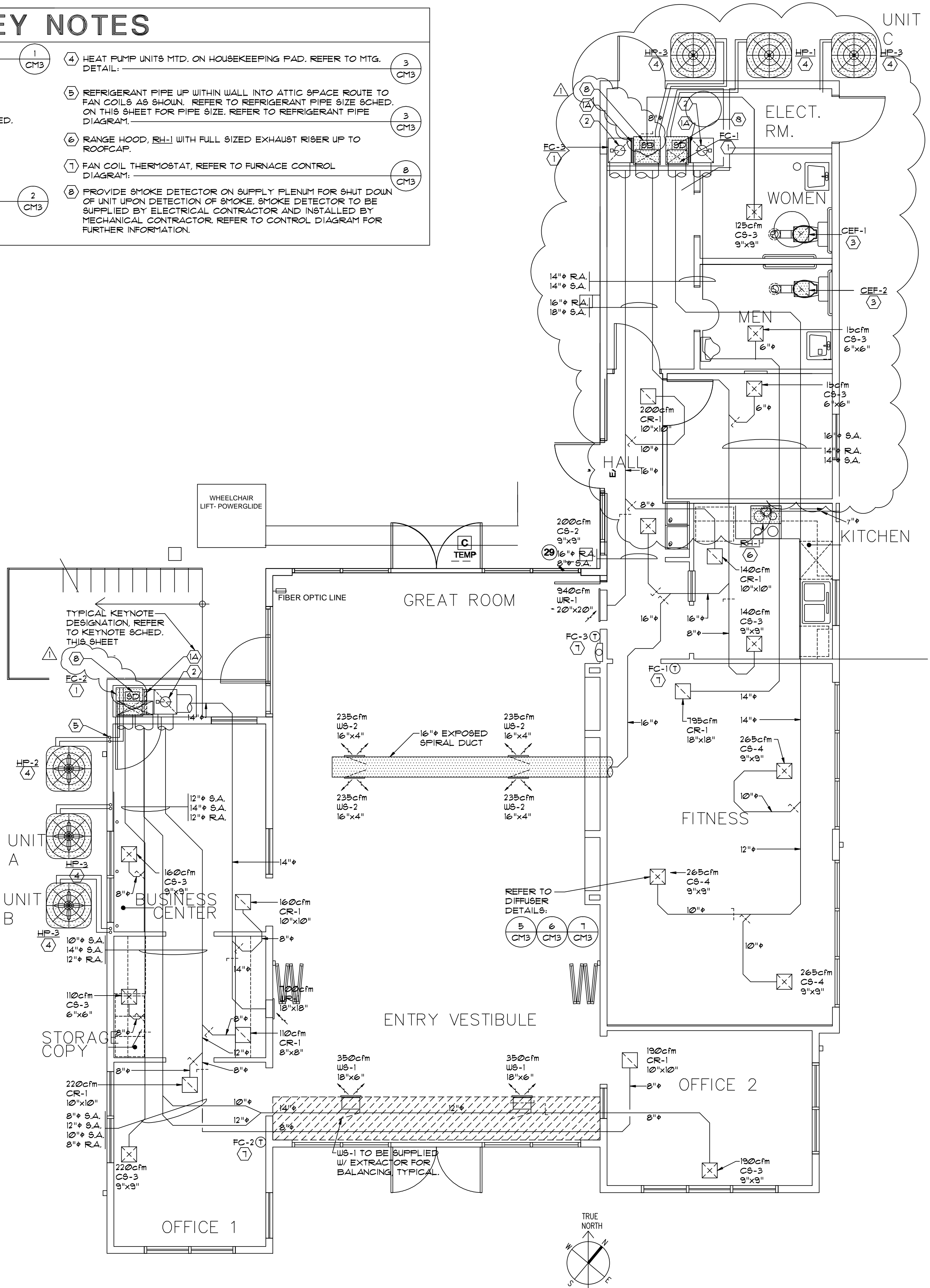
EXHAUST FAN SCHEDULE
KEYNOTE SCHEDULE

- 1 PROVIDE CEILING MOUNTED EXHAUST FAN W/ THE FOLLOWING OPTIONS:
A) BAROMETRIC BACKDRAFT DAMPER
B) WALL OR ROOFCAP
C) TIME DELAY SWITCH FAN TO OPERATE FOR 15 MINUTES AFTER THE LIGHTS ARE TURNED OFF.

GRILLE, REGISTER & DIFFUSER SCHEDULE									
MARK	MAKE	MODEL	SIZE	DEFLECTION	MOUNTING	T-BAR PANEL	OBD	REMARKS (SEE BELOW)	
CS-4	NAILOR	7500-0-- BS-AW	SEE PLAN		CEILING	NO	YES	W/ AW APPLIANCE WHITE FINISH	
CS-3	NAILOR	7500-0-- BS-AW	SEE PLAN		CEILING	NO	YES	W/ AW APPLIANCE WHITE FINISH	
CS-2	NAILOR	7500-0-- BS-AW	SEE PLAN		CEILING	NO	YES	W/ AW APPLIANCE WHITE FINISH	
CR-1	NAILOR	5145H	---	---	CEILING	NO	---	W/ AW APPLIANCE WHITE FINISH	
WR-1	NAILOR	5145H	SEE PLAN	---	WALL	NO	---	TO BE PRIME PAINTED	
WS-1	NAILOR	61DH	SEE PLAN	---	WALL	NO	---	TO BE PRIME PAINTED	
WS-2	NAILOR	61DHC--S --AW-ADEX	SEE PLAN	---	DUCT	NO	DAMPER EXTRACTOR	W/ AW APPLIANCE WHITE FINISH	

KEY NOTES

- 1 VERTICAL FAN COIL UNIT. REFER TO MTG. DETAIL: 1 CM3
- 2 PROVIDE O.A. DUCT W/ MOTORIZED DAMPER AND QUADRANT DAMPER BALANCE OUTSIDE AIR QUANTITIES TO CFM INDICATED.
FAN COIL UNIT DUCT SIZE FIXED OUTSIDE UNIT QUANTITY
FC-1 8" 115cfm
FC-2 8" 115cfm
FC-3 10" 343cfm
- 3 CEILING EXHAUST FAN W/ FULL SIZE EXHAUST UP THRU ROOF TO ROOFCAP. REFER TO MOUNTING DETAIL: 2 CM3
- 4 HEAT PUMP UNITS MTD. ON HOUSEKEEPING PAD. REFER TO MTG. DETAIL: 3 CM3
- 5 REFRIGERANT PIPE UP WITHIN WALL INTO ATTIC SPACE ROUTE TO FAN COILS AS SHOWN. REFER TO REFRIGERANT PIPE SIZE SCHED. ON THIS SHEET FOR PIPE SIZE. REFER TO REFRIGERANT PIPE DIAGRAM: 3 CM3
- 6 RANGE HOOD, RH-1 WITH FULL SIZED EXHAUST RISER UP TO ROOFCAP. 8 CM3
- 7 FAN COIL THERMOSTAT, REFER TO FURNACE CONTROL DIAGRAM: 8 CM3
- 8 PROVIDE SMOKE DETECTOR ON SUPPLY PLENUM FOR SHUT DOWN OF UNIT UPON DETECTION OF SMOKE. SMOKE DETECTOR TO BE SUPPLIED BY ELECTRICAL CONTRACTOR AND INSTALLED BY MECHANICAL CONTRACTOR. REFER TO CONTROL DIAGRAM FOR FURTHER INFORMATION.



REVISIONS	BY

REGISTERED ARCHITECT
JOSEPH OAKLEY JR.
No. 15457
REN. 9-30-11
STATE OF CALIFORNIA

PROJECT TITLE:
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969 PORTER STREET, VALLEJO, CA 94560

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COMMUNITY CENTER HVAC SECOND FLOOR PLAN

SCALE: 3/16" = 1'-0'

EQUIPMENT SCHEDULE-RESIDENCES

GAS FURNACE UNIT EQUIPMENT SCHEDULE.															
MARK	MAKE & MODEL	DESCRIPTION	CAPACITY					ELECT. CHARACTERISTICS					REMARKS		
			CFM	SP	HEATING MBH	COOLING MBH	ROW	BLOWER MOTOR HP	AFUE	ITEM	LOAD VOLTS	Ø			
GF-1	RRM-04-MAS	GAS FURNACE	1200 GLO 850 HTG	10 10.80	45	42	---	11X7	12X16	95.0%	FCA MCA	8.7 —	110/60	1	SHIPPING WT-117 LBS

COOLING COIL EQUIPMENT SCHEDULE APARTMENT UNITS															
MARK	MAKE & MODEL	DESCRIPTION	CAPACITY							ELECT. CHARACTERISTICS				REMARKS	
			CFM	MIN. GA.	ESP.	HEATING MBH	AFUE	COOLING MBH		EER	ITEM	LOAD	VOLTS		Ø
GF-1	RHEEM RFCA NM.24 1A. A	CASED COOLING COIL	1200	--	.46	--	--	18	24	16	--	--	--	--	OPER. WT. = 56 #












EXHAUST FAN SCHEDULE											
							ELECT. CHARACTERISTICS				
MARK	MAKE & MODEL	CONTROL	CFM	E.S.P.	RPM	SONES	ITEM	LOAD VOLTS	ϕ	REMARKS	
EF4	BROAN 688	SWITCH	50	1"	--	1.5	FLA	.8	115	1	OP.WT.=35#

MECHNICAL & ELECTRICAL LEGEND













ELECTRICAL NOTES:

1. ALL OUTLETS SERVING KITCHEN COUNTERTOPS TO HAVE GFCI PROTECTION. CEC 210-8(a)-3.
 2. PROVIDE 2 SEPARATE 20 AMP CIRCUITS FOR KITCHEN SMALL APPLIANCES, WITH NO OTHER OUTLETS ON THE CIRCUITS. CEC 220-4(b), 210-52(b).
 3. PROVIDE AT LEAST ONE 20 AMP CIRCUIT FOR BATHROOM OUTLETS, WITH NO OTHER OUTLETS ON THE CIRCUITS. CEC 210-52(d).
 4. PRIMARY LIGHTING FOR KITCHEN AND BATHROOMS SHALL BE FLUORESCENT.
 5. CLOTHES CLOSET LAMPS SHALL BE ENCLOSED IF INCANDESCENT TYPE. LIGHT FIXTURE CLEARANCES SHALL CONFORM TO CEC 410-8.
 6. ALL EXTERIOR LIGHTS TO BE WEATHERPROOF.
- ~~~~~
7. OUTLETS ALONG WALL TO BE MAX 12 FT ON CENTER INCLUDING WALL SPACES 2' WIDE OR MORE (NO POINT ALONG THE WALL SHALL BE MORE THAN 6 FT FROM AN OUTLET).

9. EXHAUST FANS AT BATHROOM SHALL COMPLY WITH
CBC 1203.3.

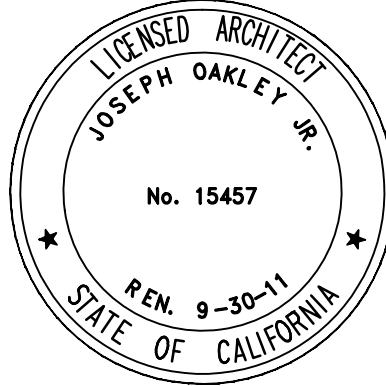
- | | |
|--|---------------------------|
|  | SUPPLY AIR DUCT |
|  | RETURN AIR DUCT |
|  F.D. | FIRE DAMPER |
|  | SUPPLY AIR DIFFUSER |
|  | RETURN AIR DIFFUSER |
|  | AIR REGISTER IN FLOOR |
|  | AIR REGISTER IN TOE SPACE |
|  | AIR REGISTER IN CEILING |
|  | (E) VENT |
|  H.B. | HOSE BIBB |
|  G | GAS |


ELECTRICAL

- | | |
|---|---|
|  | HARD WIRED INTERCONNECTED SMOKE
DETECTOR WITH BATTERY BACK UP. |
|  | RECESSED CAN LIGHT FIXTURE |
|  | 26 WATT FLUORESCENT FIXTURE, WITH 13' DIA. MATTE WHITE LENS
1175BN SATURN CEILING FIXTURE BY LITHONIA-13" DIA. |
|  | CEILING FIXTURE |
|  | WALL MOUNTED LIGHT FIXTURE |
|  | WALL MOUNTED FLOOD LIGHTS |
|  | MINI-FLUORESCENT FIXTURE MOUNTED
UNDER CABINET (I.E. IN KITCHEN) |
|  | FLUOR. FIXTURE IN LIGHTS SOFFIT
WITH DIFFUSER (I.E. IN BATHROOMS) |
|  | SURFACE MOUNTED FLUOR. FIXTURE W/
ENCLOSED DIFFUSER AT LAUNDRY &
EXPOSED TUBE IN GARAGE |
|  | DUPLEX RECEPTACLE +12" TYP. |
|  | SWITCH W/ DIMMER +54 TYP. |
|  | SWITCH +54 TYP. |
|  | TELEPHONE RECEPTACLE +48" TYP |
|  | TELEPHONE RECEPTACLE +12" TYP. |
|  | FAX JACK +48" TYP., U.O.N. |
|  | 220 V RECEPTACLE +12" TYP. |
|  | INTERCOM |
|  | DOOR BELL |
|  | ELECTRICAL PANEL BD. |
|  | SCONCE |
|  | 3-WAY OUTLET +12" TYP., U.O.N. |
|  | ELECTRICAL PANEL BOARD |
|  | GARBAGE DISPOSER |

- ALL 125 AMP CIRCUITS SHALL BE ARC-FAULT INTERRUPTER
PROTECTED INCLUDING ALL OUTLETS & SWITCHES

REVISIONS	BY



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Job No.: 2011-09

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MECHNICAL & ELECTRICAL LEGEND

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- SUPPLY AIR DUCT
- RETURN AIR DUCT
- F.D. FIRE DAMPER
- SUPPLY AIR DIFFUSER
- RETURN AIR DIFFUSER
- AIR REGISTER IN FLOOR
- AIR REGISTER IN TOE SPACE
- AIR REGISTER IN CEILING
- (E) VENT
- HOSE BIBB
- GAS

ELECTRICAL

- HARD WIRED INTERCONNECTED SMOKE DETECTOR WITH BATTERY BACK UP.
- RECESSED CAN LIGHT FIXTURE
- 26 WATT FLUORESCENT FIXTURE, WITH 13" DIA. MATTE WHITE LENS.
- 1175BN SATURN CEILING FIXTURE BY LITHONIA-13" DIA.
- CEILING FIXTURE
- WALL MOUNTED LIGHT FIXTURE
- WALL MOUNTED FLOOD LIGHTS
- MINI-FLUORESCENT FIXTURE MOUNTED UNDER CABINET (I.E. IN KITCHEN)
- FLUOR. FIXTURE IN LIGHTS SOFFIT WITH DIFFUSER (I.E. IN BATHROOMS)
- SURFACE MOUNTED FLUOR. FIXTURE W/ ENCLOSED DIFFUSER AT LAUNDRY & EXPOSED TUBE IN GARAGE
- DUPLEX RECEPTACLE +12" TYP.
- SWITCH W/ DIMMER +54 TYP.
- SWITCH +54 TYP.
- TELEPHONE RECEPTACLE +48" TYP
- TELEVISION RECEPTACLE +12" TYP.
- FAX JACK +48" TYP., U.O.N.
- 220 V RECEPTACLE +12" TYP.
- INTERCOM
- DOOR BELL
- ELECTRICAL PANEL BD.
- SCONCE
- 3-WAY OUTLET +12" TYP., U.O.N.
- ELECTRICAL PANEL BOARD
- GARBAGE DISPOSER
- ALL 125 AMP CIRCUITS SHALL BE ARC-FAULT INTERRUPTER PROTECTED INCLUDING ALL OUTLETS & SWITCHES

REVISIONS

BY

LICENSED ARCHITECT

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REN. 9-30-11

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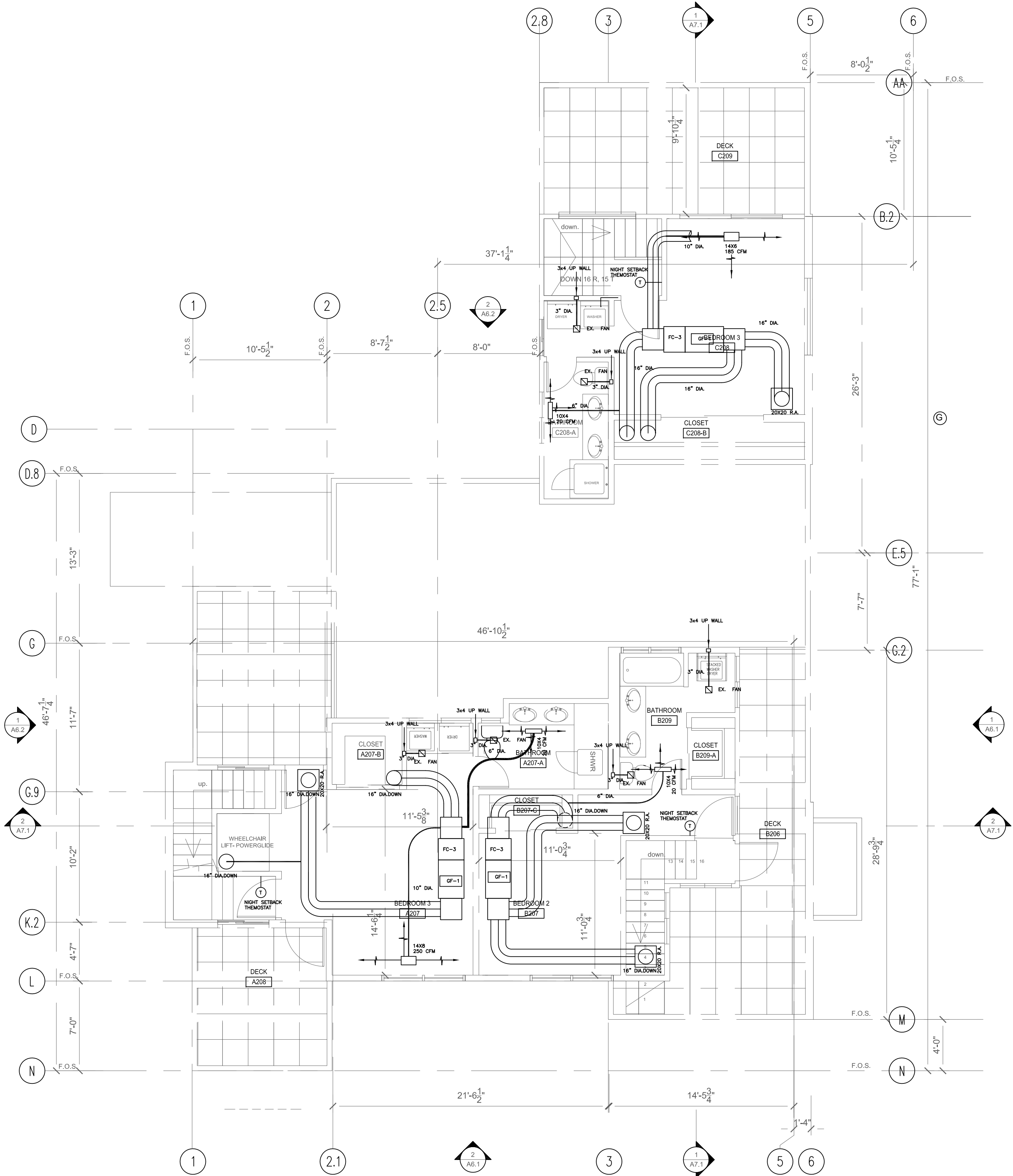
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Sheets

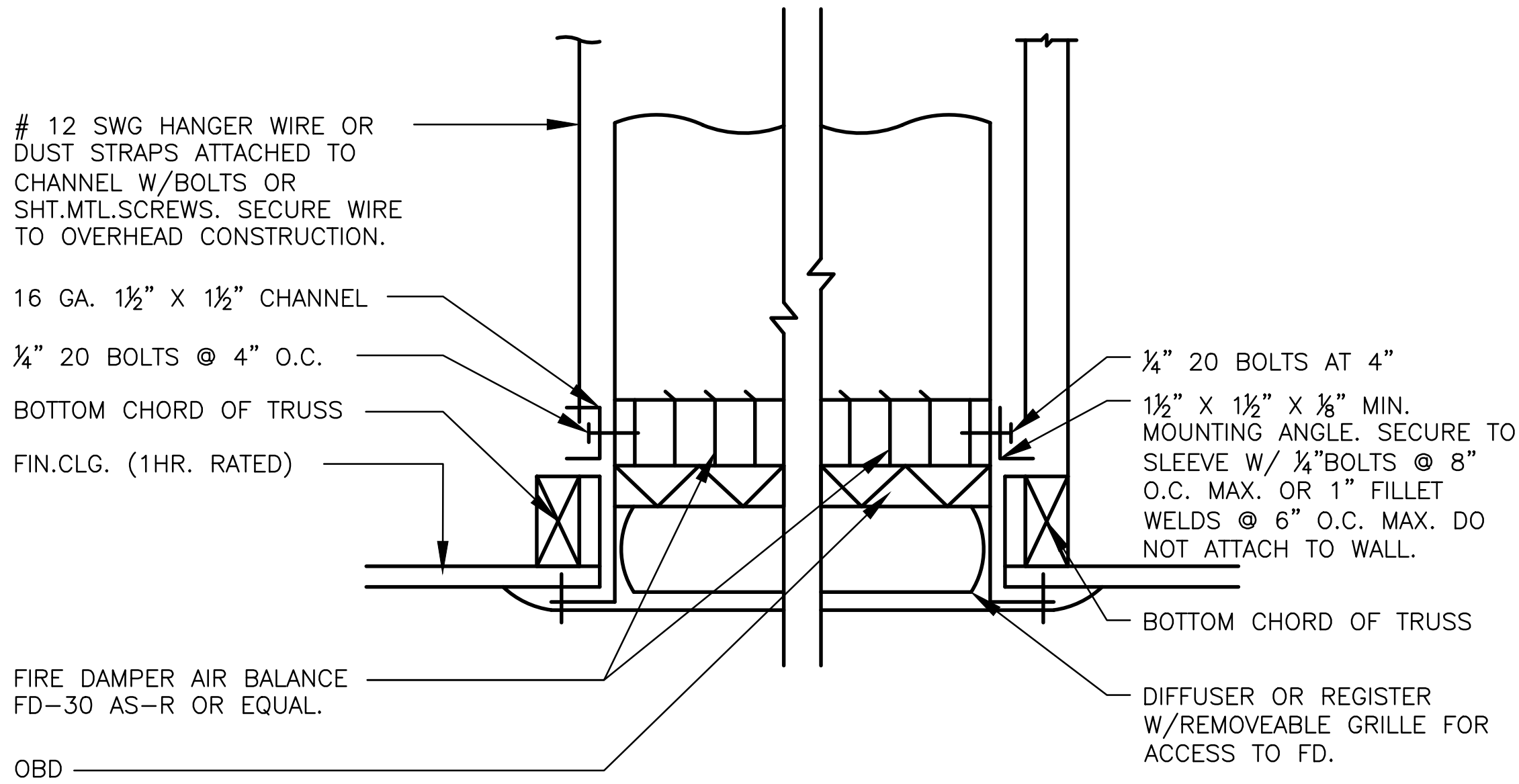


COMMUNITY CENTER HVAC THIRD FLOOR PLAN

SCALE: 3/16" = 1'-0"

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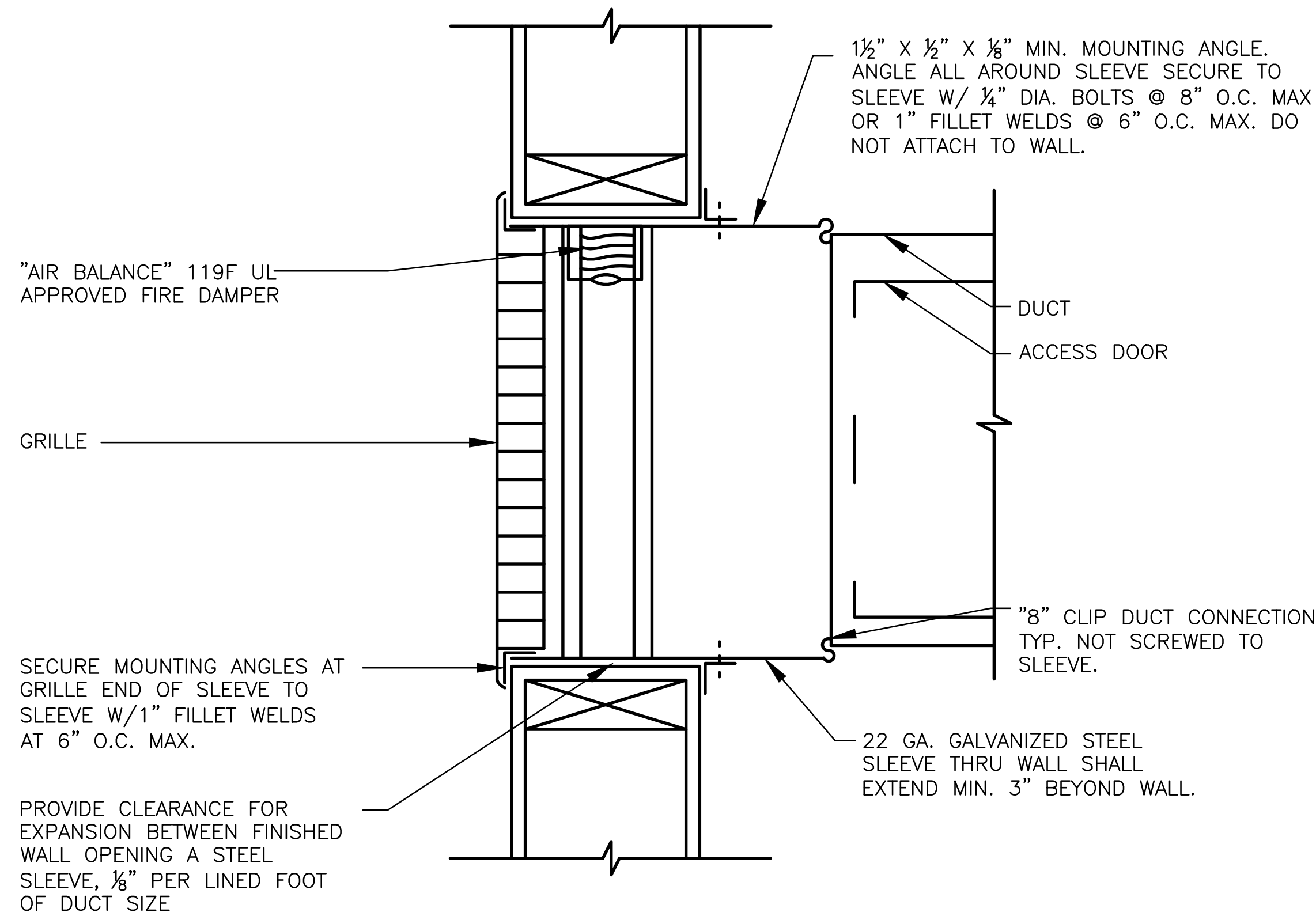
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NOTE:
COMPLETE INSTALLATION SHALL BE
PER STATE FIRE MARSHALL'S LISTING.

1 CEILING FIRE DAMPER DETAIL

NOT TO SCALE



NOTE:
1. COMPLETE INSTALLATION SHALL BE AS PER STATE FIR MARSHALL'S LISTING.
2. REFER TO ARCHITECT FOR MOUNTING HEIGHT.

2 GRILLE & FIRE DAMPER DETAIL

NOT TO SCALE

REVISIONS	BY
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<div><div><div><div><div></div><div>OAKLEY & OAKLEY</div></div><div><div></div><div>ARCHITECTS & MECHANICAL ENGINEERS</div></div></div><div><div><div></div><div>2700 EDGEMONT DRIVE, SUITE 615</div></div><div><div></div><div>OAKLAND, CA 94621</div></div></div><div><div><div></div><div>TEL: 510.962.6044</div></div><div><div></div><div>FAX: 510.962.6043</div></div></div></div></div>	
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COMMUNITY BUILDING WATER HEATER SIZING

FIXTURES	NO. UNITS x GPH	TOTAL GPH
100" WATER	2 x 5 = 10	
LAVATORY	1 x 20 = 20	
SINK		
	TOTAL = 30	

CALCULATING THE BTU (BRITISH THERMAL UNIT) FOR KITCHEN GAS WATER HEATER:

$$30 \text{ GPH} \times (10-60) \text{ DEGREES RISE} \times 8.33 = 12,495 \text{ BTU}$$

* 8.33 lbs./gal. OF WATER

$$12,495 \text{ BTU} \div \text{WATT} \div \text{KW} = 3.66 \text{ KW}$$

$$* 8.33 \text{ lbs./gal. OF WATER} \div 111 \text{ (ROUNDED OFF = 11)}$$

THE GAS HOT WATER HEATER WITH AT LEAST A RATING OF 16,500 BTU

THE ELECTRIC HOT WATER HEATER WITH AT LEAST A RATING OF 3.66 KW

USE STATE INDUSTRIES E66 40 DORS INPUT = 45 KW

RESIDENTIAL UNITS WATER HEATER SIZING

FIXTURES	NO. UNITS x GPH	TOTAL GPH
100" WATER	2 x 5 = 10	
LAVATORY	1 x 20 = 20	
SINK		
BATHUBS	1 x 20 = 20	
SHOWERS	1 x 20 = 20	
	TOTAL = 70	

CALCULATING THE BTU (BRITISH THERMAL UNIT) FOR KITCHEN GAS WATER HEATER:

$$70 \text{ GPH} \times (10-60) \text{ DEGREES RISE} \times 8.33 = 23,324 \text{ BTU}$$

* 8.33 lbs./gal. OF WATER

$$23,324 \text{ BTU} \div \text{WATT} \div \text{KW} = 6.83 \text{ KW}$$

$$* 8.33 \text{ lbs./gal. OF WATER} \div 111 \text{ (ROUNDED OFF = 11)}$$

THE GAS HOT WATER HEATER WITH AT LEAST A RATING OF 24,000 BTU

THE ELECTRIC HOT WATER HEATER WITH AT LEAST A RATING OF 6.83 KW

USE 3 RINNAI RC981 TANKLESS WATER

HEATERS (UNIT A, B, & C)

PLUMBING ENGINEERING DATA

DESIGN REQUIREMENTS
THE FOLLOWING IS FOR COMMERCIAL USE OF BUILDING

AMOUNT	FIXTURE	FIXTURE UNIT VALUES
		COLD WATER
		F.U. EACH F.U. TOTAL F.U. EACH F.U. TOTAL
8	WATER CLOSET (F.T.)	2.5 20 4.0 32
8	LAVATORIES	1.0 8 1.0 8
4	KITCHEN SINK w/ DSH WASHER & GRINDER	3.0 12 2.0 8
2	URINALS	4.0 2 2.0 2
2	DRINKING FOUNTAIN	0.5 2 0.5 2
2	HOSE BIBBS	2.5 2 2.5 2
2	EACH ADDITIONAL HOSE BIBB	1.0 2 1.0 2
2	FLOOR DRAIN	2.0 2 2.0 2
	TOTAL UNITS	TOTAL 50 TOTAL 56
50	TOTAL FIXTURE UNITS EQUALS	30 GPM.

1. PRESSURE AVAILABLE AT STREET MAIN 40.00 PSI
2. PRESSURE LOSS DUE TO HEIGHT 4 ft. x 0.434 1.74 PSI
3. PRESSURE LOSS THRU METER 3.00 PSI
4. PRESSURE LOSS DUE THRU OTHER DEVICES (i.e. Water Softener, Backflow Preventer) 12.00 PSI
5. TOTAL PRESSURE LOSS (odd lines 2 thru 4) 18.34 PSI
6. PRESSURE REQUIRED AT HIGHEST FIXTURE 8.00 PSI
7. PRESSURE AVAILABLE FOR FRICTION LOSS 15.46 PSI
8. TOTAL DEVELOPED LENGTH OF RUN 150 ft.

FRICTION LOSS CALCULATION
From line 7 (15.46) PSI x 100 = 10.17 / 100 ft. USE 2" MAIN SERVICE
From line 8 (150) ft.

DOMESTIC COLD WATER SIZING CHART		
PIPE SIZE	F.U.	
	F.T.	F.V.
1/2"	3	--
3/4"	10	--
1"	15	--
1 1/4"	54	13
1 1/2"	90	30
2"	236	116
2 1/2"	431	205

THE SIZING CHART IS BASED ON THE 2001 CPC APPENDIX 'A' WITH A G.P. OF 100 PSI PER 100 FT. w/ MAXIMUM VELOCITY OF 8 ft./SEC.

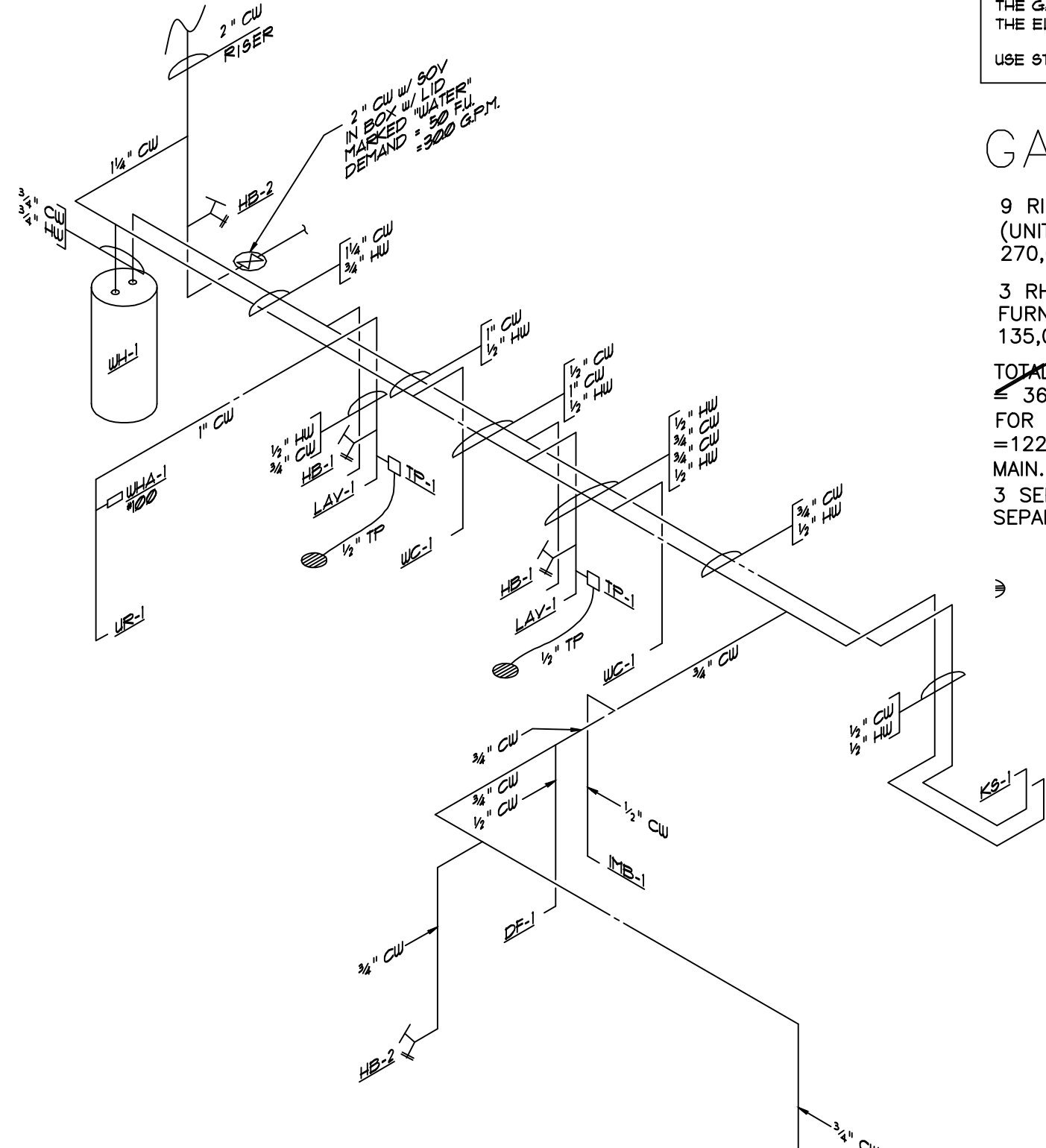
WATER PRESSURE
INFORMATION OBTAINED
FROM A VALLEJO FIRE
DEPARTMENT HYDRANT
PRESSURE TEST TAKEN
ON AUGUST 4, 2010.

GENERAL NOTES

1. REFER TO SHEET CP3 FOR GENERAL NOTES, MATERIALS AND FIXTURE REQUIREMENTS
2. REFER TO ARCHITECTURAL DWG'S FOR INDICATION OF WHICH UNITS WILL BE HANDICAP ADAPTABLE & MAKE NECESSARY ADJUSTMENTS.
3. CLEANOUTS SHALL BE INSTALLED AS PER SECTIONS 101.0 AND 110.0 OF THE CALIFORNIA PLUMBING CODE.
4. CLEANOUTS REQUIRED ON ALL HORIZONTAL WASTE LINES OVER 5'-0" FROM THE MAIN LINE AND ON ALL HORIZONTAL SINK AND URINALS REGARDLESS OF LENGTH PER CPC 101.4
5. EACH PLUMBING VENT SHALL TERMINATE NOT LESS THAN TEN (10) FEET OR AT LEAST (3) FT ABOVE ANY WINDOW, DOOR, OPENING, AIR INTAKE OR VENT SHAFT.
6. REFER TO PIPE TRENCHING AND PENETRATION DETAILS 8.3 & 10 ON SHEET CP3.
7. SLOPE ALL SANITARY SEWER LINES WITHIN BUILDING AT 1/4" FT.

KEY NOTES

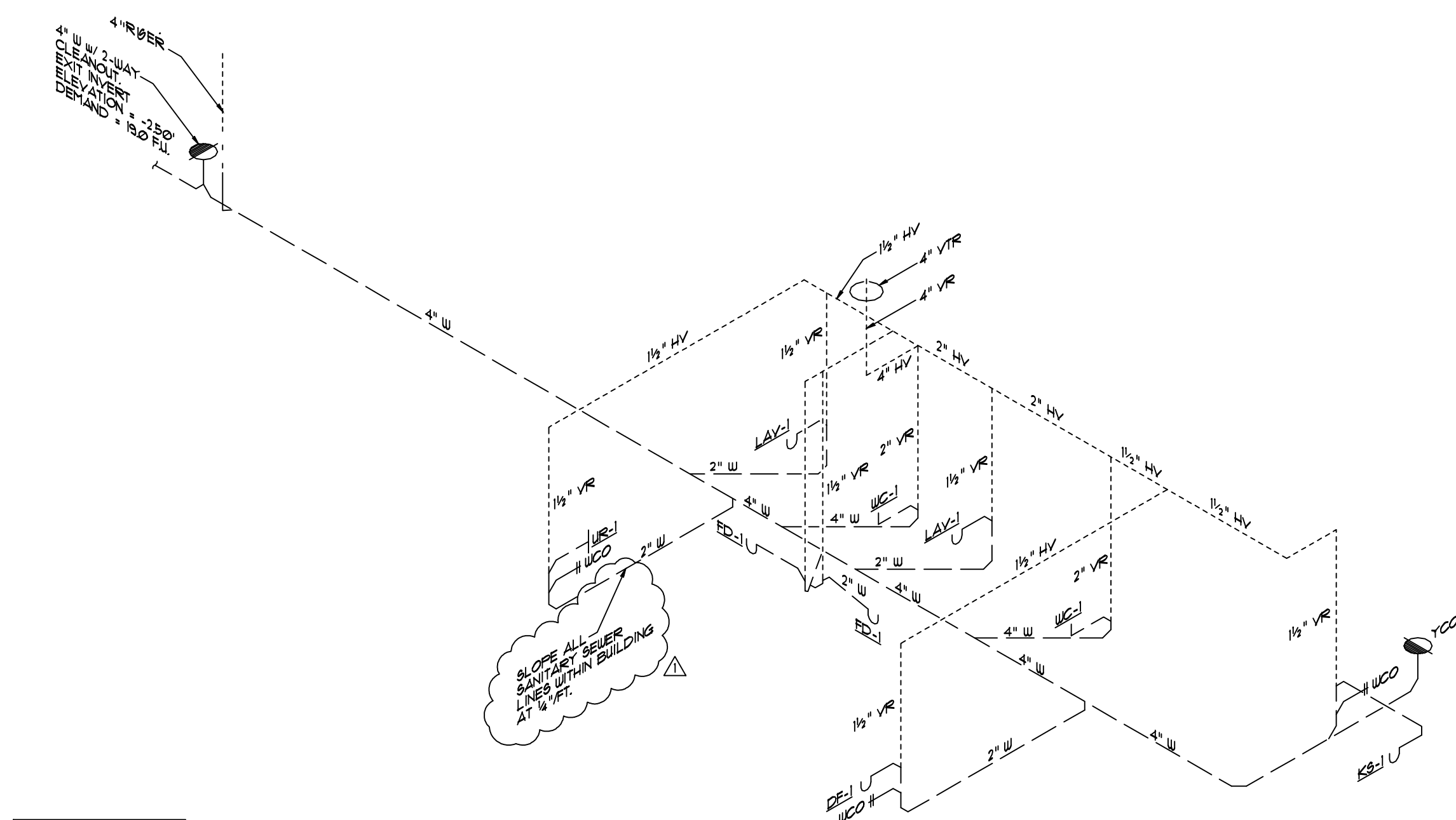
1. 2" CW w/ 2-WAY IN BOX w/ LID MARKED "WATER" DEMAND = 50 F.U. / 100 G.P.M. REFER TO DETAIL: 1 CP3
2. 4" W w/ 2-WAY CLEANOUT. EXIT INVERT ELEVATION = -7.50' FINISHED FLOOR ELEVATION = 0.00' DEMAND = 150 F.U. REFER TO DETAIL: 2 CP3
3. BUILDING w/ 3/4" CW & HW CONNECTIONS. SPILL FULL SIZED TYP RELIEF THRU WALL AT 12" AFG. w/ ELBOW TURNED DOWN. REFER TO WATER HEATER DETAIL: 6 CP3
4. PROVIDE 3/4" CD w/ TRAP AS REQUIRED BY UNIT MFR. REFER TO DETAIL: 3 CP3
5. SPILL CONDENSATE WITH SIZE AS INDICATED ON FLOOR PLAN TO GRADE w/ ELBOW TURNED DOWN w/ REQUIRED AIR GAP: 3 CP3



NOTE:
ALL ISOMETRICS ARE
DIAGRAPHIC

PLUMBING COMMUNITY BUILDING ISOMETRIC

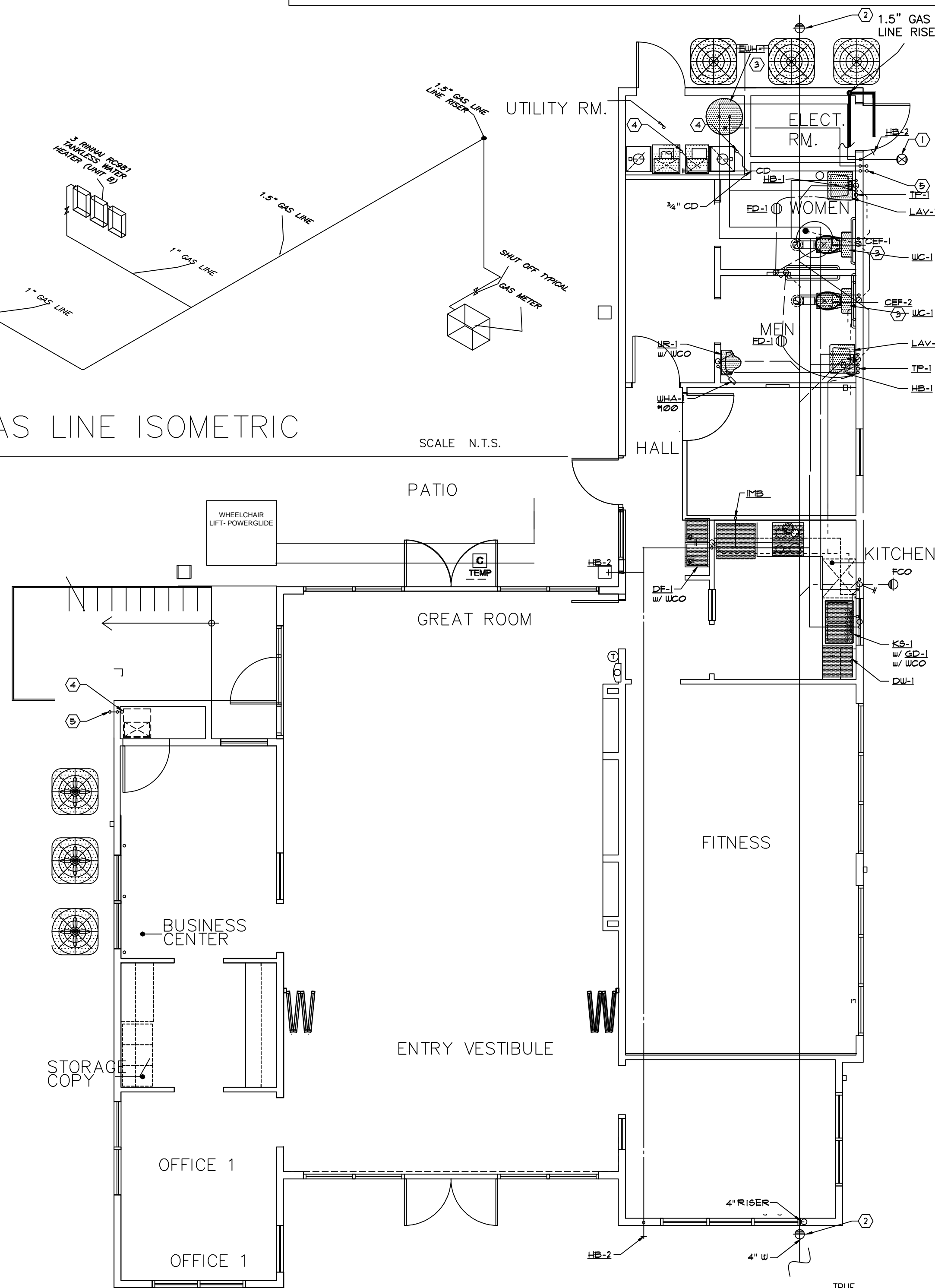
SCALE N.T.S.



NOTE:
ALL ISOMETRICS ARE
DIAGRAPHIC

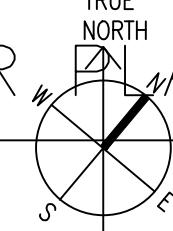
PLUMBING COMMUNITY BUILDING WASTE AND VENT ISOMETRIC

SCALE N.T.S.

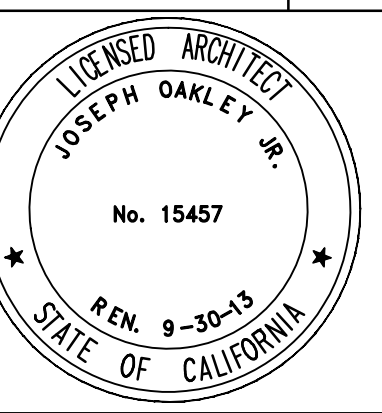


COMMUNITY CENTER PLUMBING FLOOR PLAN

SCALE 3/16" = 1'-0"



REVISIONS	BY



OAKLEY & OAKLEY
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7700 EDGECREST DRIVE, SUITE 615
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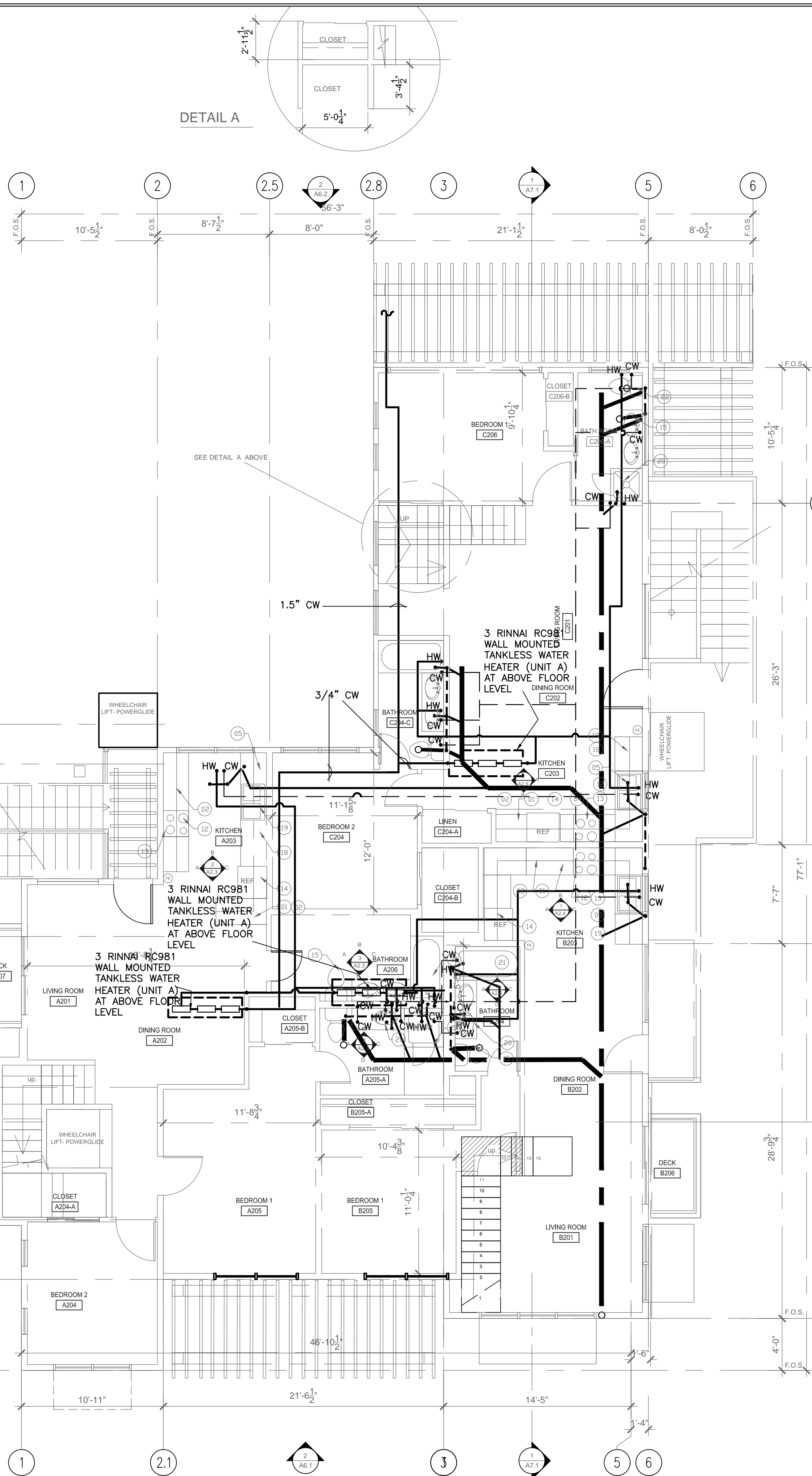
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COMMUNITY CENTER
HARBOR PARK APARTMENTS
959 PORTER STREET, VALLEJO, CA 94560
DRAWING TITLE:

Date: 08/30/2011
Scale: AS NOTED
Drawn: STAFF
Checked: RY
Job No.: 2011-09
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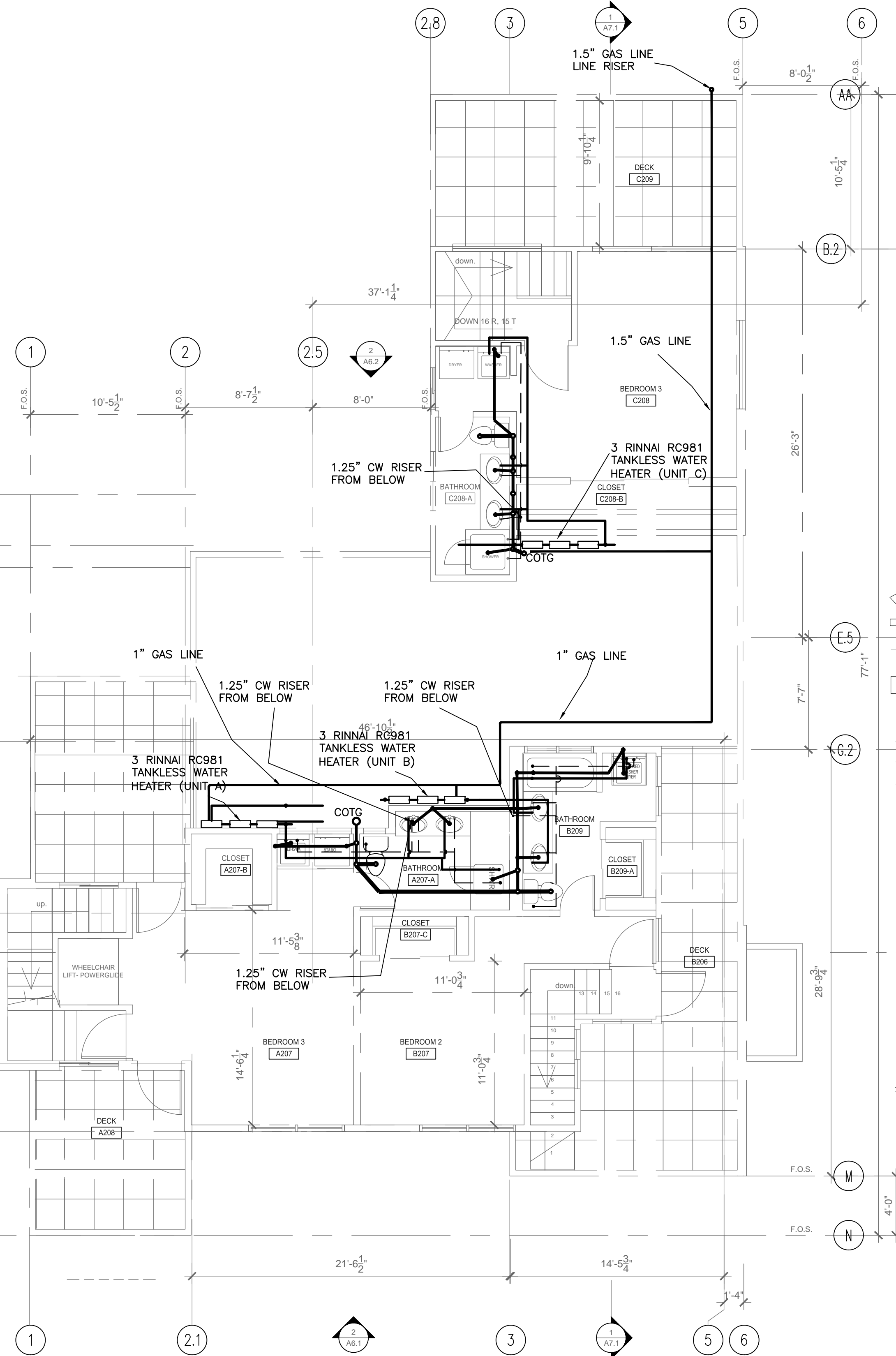
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01 COMMUNITY CENTER SECOND FLOOR PLUMBING PLAN
SCALE: 1/4" = 1'-0"



02 COMMUNITY CENTER THIRD FLOOR PLUMBING PLAN
SCALE: 1/4" = 1'-0"

MECHNICAL & ELECTRICAL LEGEND

ELECTRICAL NOTES:

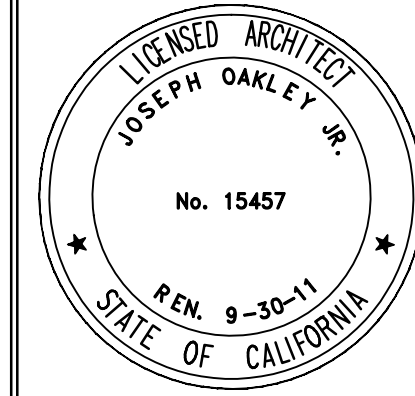
1. ALL OUTLETS SERVING KITCHEN COUNTERTOPS TO HAVE GFCI PROTECTION. CEC 210-8(a)-3.
2. PROVIDE 2 SEPARATE 20 AMP CIRCUITS FOR KITCHEN SMALL APPLIANCES, WITH NO OTHER OUTLETS ON THE CIRCUITS. CEC 220-4(b), 210-52(b).
3. PROVIDE AT LEAST ONE 20 AMP CIRCUIT FOR BATHROOM OUTLETS, WITH NO OTHER OUTLETS ON THE CIRCUITS. CEC 210-52(d).
4. PRIMARY LIGHTING FOR KITCHEN AND BATHROOMS SHALL BE FLUORESCENT.
5. CLOTHES CLOSET LAMPS SHALL BE ENCLOSED IF INCANDESCENT TYPE. LIGHT FIXTURE CLEARANCES SHALL CONFORM TO CEC 410-8.
6. ALL EXTERIOR LIGHTS TO BE WEATHERPROOF.
7. OUTLETS ALONG WALL TO BE MAX 12 FT ON CENTER INCLUDING WALL SPACES 2' WIDE OR MORE (NO POINT ALONG THE WALL SHALL BE MORE THAN 6 FT FROM AN OUTLET).
9. EXHAUST FANS AT BATHROOM SHALL COMPLY WITH CBC 1203.3.

- SUPPLY AIR DUCT
- RETURN AIR DUCT
- F.D. FIRE DAMPER
- SUPPLY AIR DIFFUSER
- RETURN AIR DIFFUSER
- AIR REGISTER IN FLOOR
- AIR REGISTER IN TOE SPACE
- AIR REGISTER IN CEILING
- (E) VENT
- H.B. HOSE BIBB
- GAS

ELECTRICAL

- HARD WIRED INTERCONNECTED SMOKE DETECTOR WITH BATTERY BACK UP.
- RECESSED CAN LIGHT FIXTURE
- 26 WATT FLUORESCENT FIXTURE, WITH 13" DIA. MATTE WHITE LENS.
- 1175BN SATURN CEILING FIXTURE BY LITHONIA-13" DIA.
- CEILING FIXTURE
- WALL MOUNTED LIGHT FIXTURE
- WALL MOUNTED FLOOD LIGHTS
- MINI-FLUORESCENT FIXTURE MOUNTED UNDER CABINET (I.E. IN KITCHEN)
- FLOOR, FIXTURE IN LIGHTS SOFFIT WITH DIFFUSER (I.E. IN BATHROOMS)
- SURFACE MOUNTED FLUOR. FIXTURE W/ ENCLOSED DIFFUSER AT LAUNDRY & EXPOSED TUBE IN GARAGE
- DUPLEX RECEPTACLE +12" TYP.
- SWITCH W/ DIMMER +54 TYP.
- SWITCH +54 TYP.
- TELEPHONE RECEPTACLE +48" TYP.
- TELEVISION RECEPTACLE +12" TYP.
- FAX JACK +48" TYP., U.O.N.
- 220 V RECEPTACLE +12" TYP.
- INTERCOM
- DOOR BELL
- ELECTRICAL PANEL BD.
- SCONCE
- 3-WAY OUTLET +12" TYP., U.O.N.
- ELECTRICAL PANEL BOARD
- GARBAGE DISPOSER
- ALL 125 AMP CIRCUITS SHALL BE ARC-FAULT INTERRUPTER PROTECTED INCLUDING ALL OUTLETS & SWITCHES

REVISIONS	BY



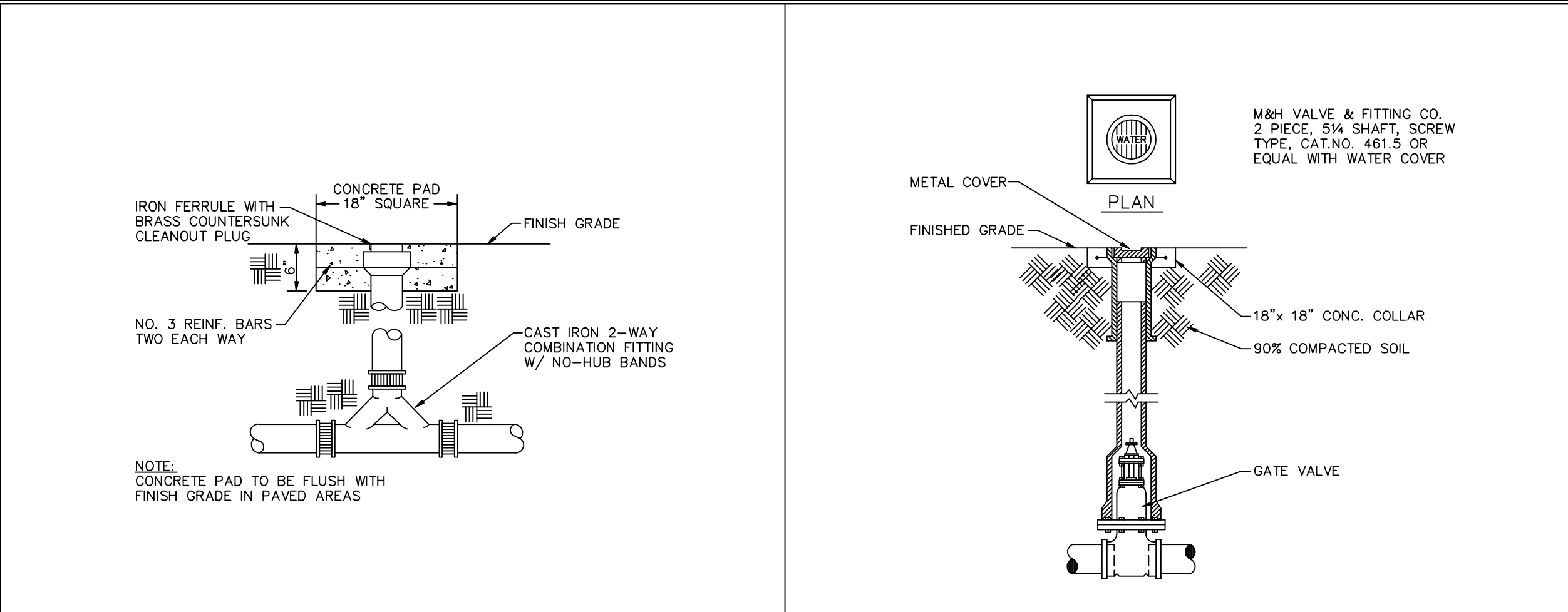
OAKLEY & OAKLEY
REGISTERED PROFESSIONAL ENGINEERS
7700 EDGEMONT DRIVE, SUITE 615
DUBLIN, CA 94568
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PROJECT TITLE:
COMMUNITY CENTER
HARBOR PARK APARTMENTS
969 PORTER STREET, VALLEJO, CA 94560
DRAWING TITLE:

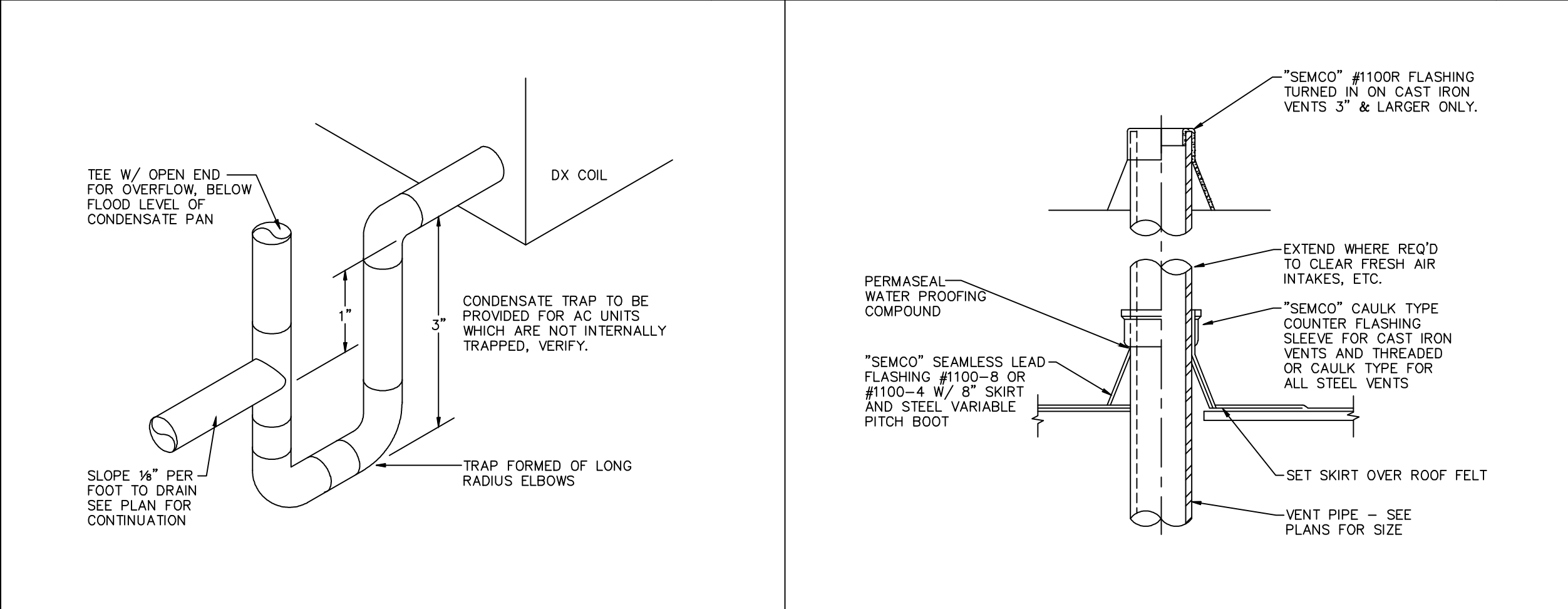
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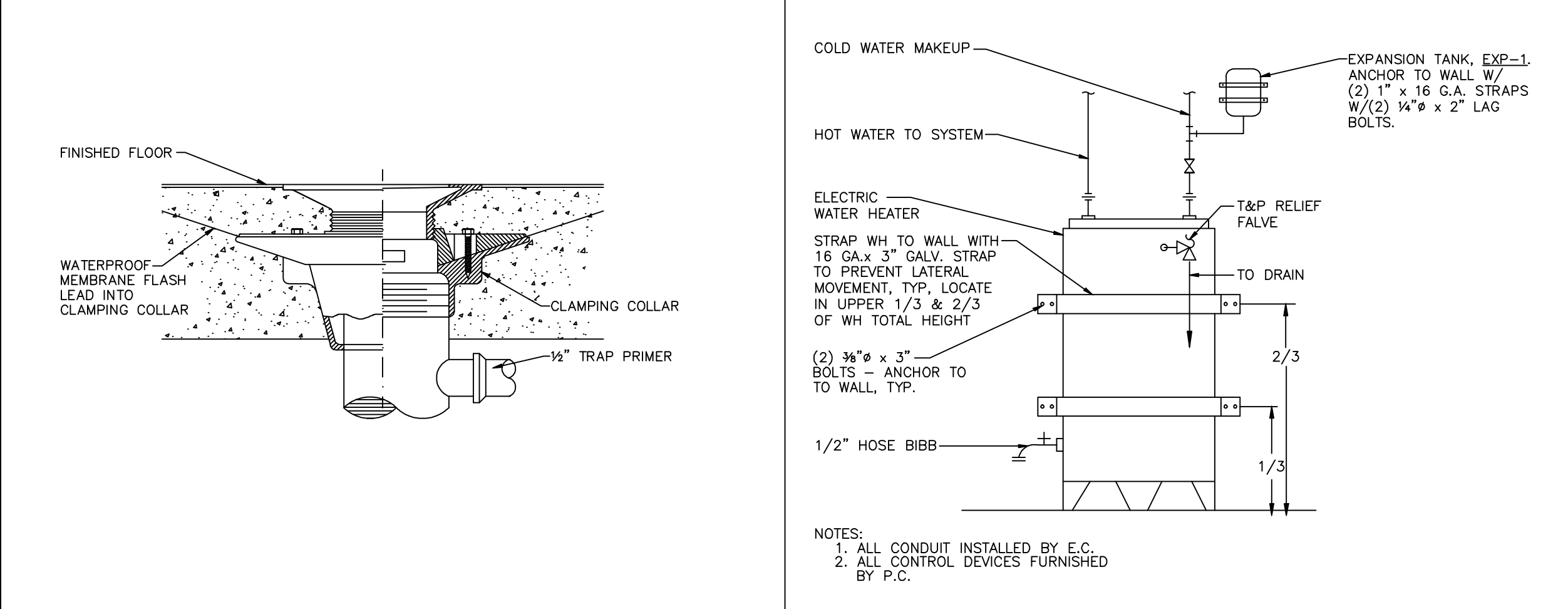
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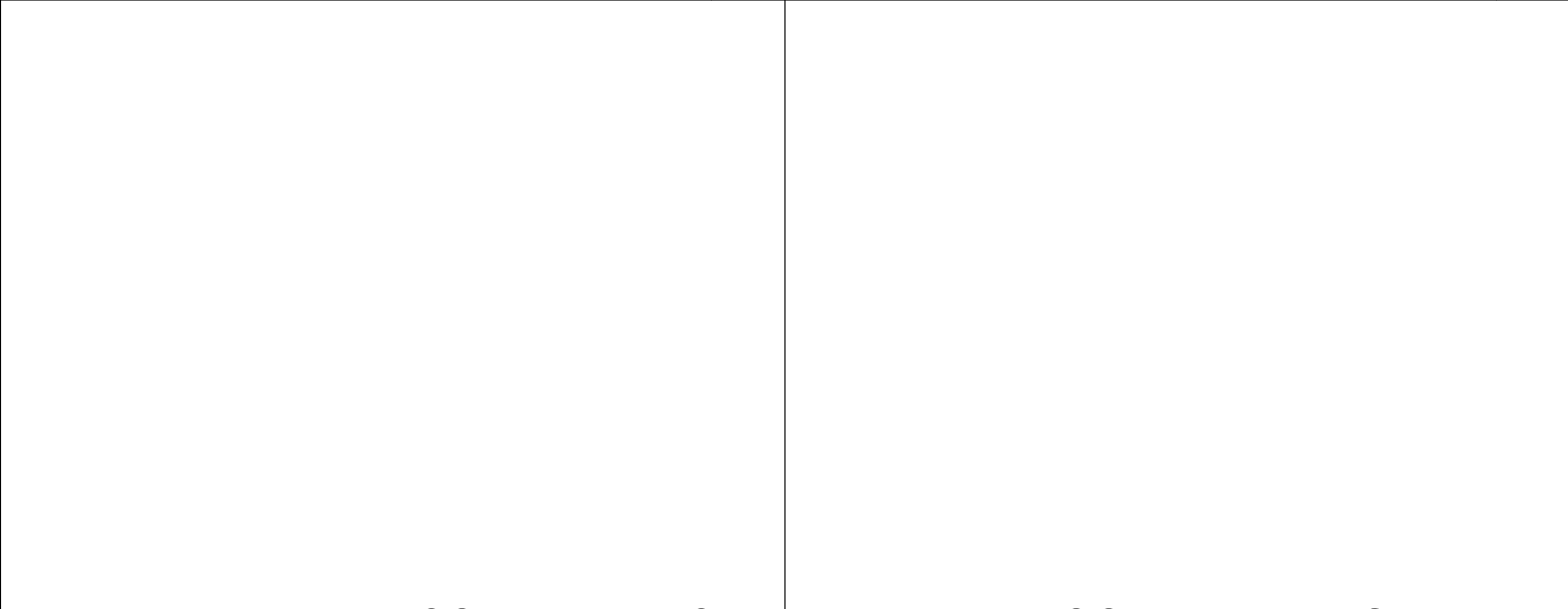
2-WAY CLEANOUT TO GRADE DETAIL NOT TO SCALE 1 VALVE BOX DETAIL NOT TO SCALE 2



CONDENSATE DRAIN DETAIL NOT TO SCALE 3 VENT PIPE FLASHING DETAIL NOT TO SCALE 4



FLOOR DRAIN DETAIL NOT TO SCALE 5 GAS WATER HEATER MOUNTING DETAIL NOT TO SCALE 6

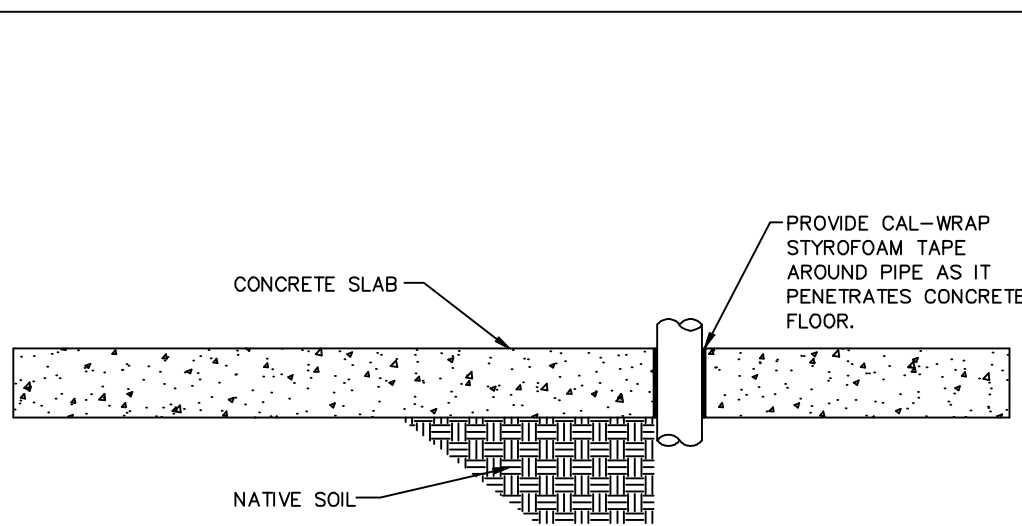


TRENCHING NEAR FOOTINGS DETAIL NOT TO SCALE 8 PIPES THRU FOOTINGS DETAIL NOT TO SCALE 9

COMMUNITY BUILDING FIXTURE / CONNECTION SIZE									
MARK	MAKE & MODEL	FIXTURE	TRIM	ROUGH-IN CONNECTIONS					REMARKS
				WASTE	TRAP	VENT	COLD WATER	HOT WATER	
WC-1	KOHLER CIMARRON K-3496	WATER CLOSET ACCESSIBLE	OLSONITE 10SSCT WHITE SEAT	4"	INT	2"	3/4"	--	
LAV-1	KOHLER KINGSTON K-2005	ACCESSIBLE LAVATORY WALL HUNG	CHICAGO 2200-4CP FAUCET	1 1/2"	1 1/4"	1 1/2"	1/2"	1/2"	ZURN Z1231 CARRIER, DEARBORN BRASS 704N Z-TRAP AND JUST J-ADA-115-FS DRAIN TRUBRO LAV-GUARD #103 E-2
KS-1	JUST SL-ADA-2225-A-GR	ACC 18 GA. S/S SINK 22"x25"x6.5 DEEP	ZURN Z7870C-XL FAUCET	2"	1 1/2"	1 1/2"	3/4"	3/4"	(2) JUST J-ADA-35 DRAIN SYSTEM COMPLETE W/ TRUBRO HANDLAV-GUARD #107 E-2 W/ #105 ACCESSORY
GD-1	IN-SINK-ERATOR BADGER 5X8	3/4 HP GARBAGE DISPOSER	3/4 HP, 120V, 1ø	1 1/2"	1 1/2"	--	--	--	3/4 HP, 120V 1ø 60Hz
UR-1	KOHLER BARDON K-4960-ET	ACCESSIBLE URINAL (TOP SPUD)	SLOAN ROYAL II 186-1.0 F.V.	2"	1 1/2"	1 1/2"	1"	--	ZURN Z-1222 CARRIER MOUNT PER ADA REQUIREMENTS
WHA-1	ZURN Z-1700	WATER HAMMER	SEE PLAN FOR SIZE	--	--	--	--	--	PROVIDE ELMODR DW-SS-CL 12"x12" STAINLESS STEEL ACCESS PANEL
FD-1	ZURN Z-415-B	SQUARE FLOOR DRAIN	w/ TRAP PRIMER CONNECTION	2"	2"	1 1/2"	--	--	NICKEL BRONZE HEEL-PROOF STRAINER
TP-1	ZURN Z-1022	AUTOMATIC TRAP PRIMER	PROVIDE w/ STAINLESS STEEL ACCESS DOOR	--	--	--	--	--	PROVIDE WITH ACCESS PANEL. ZURN Z-1023 TRAP PRIMER CONNECTION AT FLOOR DRAIN
HB-1		HOSE BIBB (INTERIOR)	w/ LOOSE KEY	--	--	--	3/4"	--	POLISHED CHROME w/ VACUUM BREAKER
HB-2		HOSE BIBB (EXTERIOR)	w/ LOOSE KEY	--	--	--	3/4"	--	ROUGH BRONZE w/ VACUUM BREAKER
ENH-1	STATE INDUSTRIES ES6 40 DORS	40 GALLON ELEC. WATER HEATER	WATTS 40XL T & P RELIEF VALVE	SEE PLAN FOR SIZE					OPER. WT. = 448# INPUT = 4500 WATTS @ 240V-1ø RECOVERY = 21 GPH @ 90° RISE
EXP-1	STATE INDUSTRIES ETC-2X	WATER HEATER EXPANSION TANK	ACCEPTANCE VOLUME=1.96 GALLON	--	--	--	--	--	OPER. WT. = 22#
DW-1		DISHWASHER BY OTHERS		--	--	--	--	--	PROVIDE WHA-1 #100 ON HOT WATER SERVICE
DF-1	HAWS HWUACPB	ADA HI-LOW FDC DRINKING FOUNTAIN		2"	1 1/2"	1 1/2"	1/2"	--	ELECTRIC = 4.6 FLA @ 115V-1ø PROVIDE CONCEALED HARD WIRED CONNECTION
IMB-1	SPECIALTY PRODUCTS OB-800-1	ICE MAKER BOX		--	--	--	1/2"	--	
YCO	ZURN ZN-1400	YARD CLEANOUT		--	--	--	--	--	SEE SPECIFICATIONS FOR TOP
WCO	ZURN ZS-1446	WALL CLEANOUT		--	--	--	--	--	SEE SPECIFICATIONS FOR TOP

PIPE MATERIAL SCHEDULE									
		SERVICES							REMARKS
		A.G.	B.G.	ABS PLASTIC	SCH. 40 BLACK STEEL	COPPER TYPE M	COPPER TYPE L	SCH. 40 PVC	
WATER	A.G.			•					IAMPO IS 3-89
	B.G.				•				IAMPO IS 3-89 NO JOINTS
WASTE	A.G.	•							IAMPO IS 5-90 •
	B.G.	•							IAMPO IS 5-90 •
VENT	A.G.								SEE WASTE PIPE
	B.G.	•							
INDIRECT WASTE	A.G.				•	•			CONDENSATE DRAIN
	B.G.				•	•			CONDENSATE DRAIN
GAS	A.G.		•						
	B.G.		•						

* PROVIDE METALLIC PENETRATIONS AT 1-HR. WALLS AND ALL METALLIC PIPE IN 2-HR WALLS (I.S. 5-90).



PIPES PASSING THRU CONCRETE FLOOR DETAIL NOT TO SCALE 7

- PLUMBING MANDATORY MEASURES
- SCOPE
PROVIDE A COMPLETE DOMESTIC PLUMBING SYSTEM AS DELINEATED ON THE PLUMBING DRAWINGS, INCLUDING SERVICE PIPING & FINAL CONNECTIONS TO EQUIPMENT FURNISHED & INSTALLED BY OTHER TRADES AS SHOWN ON ARCHITECTURAL, ELECTRICAL, MECHANICAL OR OTHER DRAWING OF THE CONTRACT DOCUMENT.
 - CODE
A. ALL WORK AND MATERIALS SHALL BE IN FULL ACCORDANCE WITH THE LATEST CODES, RULES, AND REGULATIONS OF THE FOLLOWING:
 - NATIONAL FIRE PROTECTION ASSOCIATION.
 - STATE FIRE MARSHAL.
 - STATE CODES AND ORDINANCES.
 - STATE HEALTH DEPARTMENT.
 - STATE INDUSTRIAL ACCIDENT COMMISSION'S SAFETY ORDERS.
 - RULES OF LOCAL UTILITY.
 - LOCAL CITY AND/OR COUNTY ORDINANCES.
 - CALIFORNIA BUILDING AND MECHANICAL CODE, 2002 EDITION.
 - CALIFORNIA PLUMBING CODE, 2002 EDITION.
 - NATIONAL ELECTRIC CODE.
 - RULINGS AND INTERPRETATIONS OF THE ENFORCING AGENCY WILL BE CONSIDERED PART OF THE REGULATIONS.
 - NOTHING IN THESE SPECIFICATIONS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THE ABOVE, AND EXPENSE IN COMPLIANCE WITH THE ABOVE SHALL BE BORNE BY THE CONTRACTOR.
 - WHENEVER THE SPECIFICATIONS AND DRAWINGS REQUIRE HIGHER STANDARDS OR LARGER SIZES THAN THOSE REQUIRED BY THE ORDINANCES AND STATUTES, THE SPECIFICATIONS AND DRAWINGS SHALL TAKE PRIORITY OVER THE SPECIFIC ORDINANCES AND STATUTES.
 - WATER HEATING
ALL SERVICE WATER HEATING SYSTEMS AND EQUIPMENT MAY BE INSTALLED ONLY IF THE MANUFACTURER OF THE EQUIPMENT HAS CERTIFIED THAT THE EQUIPMENT MEETS OR EXCEEDS ALL APPLICABLE EFFICIENCY REQUIREMENTS LISTED IN SECTION 113 OF THE ENERGY EFFICIENCY STANDARDS.
 - LAVATORIES IN RESTROOM FACILITIES
A. SHALL BE EQUIPPED WITH OUTLET DEVICES THAT LIMIT THE FLOW OF HOT WATER TO A MAXIMUM OF .5 GPM.
B. LAVATORIES IN RESTROOM OF PUBLIC FACILITIES SHALL BE EQUIPPED WITH CONTROLS TO LIMIT THE OUTLET TEMPERATURE TO 110° F.
 - PROVIDE CP CLEANOUT COVERS AT ALL CLEANOUT LOCATIONS.
 - NOT USED
 - NOT USED
 - VERIFY LOCATIONS AND DEPTH FOR ALL UTILITIES BEFORE COMMENCING PROJECTS.
 - PLUMB. DWG'S ARE DIAGRAMATIC AND DO NOT SHOW ROUGH-IN HEIGHTS & LOCATIONS.
 - INSTALL ALL PLUMBING IN CONFORMANCE WITH CPC 2010 EDITION.
 - COND. DRAINS TO BE TERMINATED IN AN APPROVED LOCATION.
 - PROVIDE SUBMITTALS AND CATALOG CUTS IN AN APPROVED LOCATION.
 - MAINTAIN AS BUILT DRAWINGS ON JOBSITE & PROVIDE ONE SET OF SEPIA DRAWINGS SHOWN DIMENSIONED LOCATIONS OF ALL CONCEALED PIPING.
 - WATER HEATER AND OTHER APPLIANCES SHALL BE CALIFORNIA ENERGY COMMISSION APPROVAL.
 - NEW WATER CLOSETS AND ASSOCIATED FLUSHOMETER VALVES, SHALL USE NO MORE THAN 1.6 GALLONS PER FLUSH AND SHALL MEET STANDARDS SET BY A.N.S.I. STANDARD A112.19.2. URINALS AND ASSOCIATED FLUSH VALVES SHALL USE NO MORE THAN 1 GALLON, 1 GALLON PER FLUSH AND SHALL MEET STANDARDS SET BY A.N.S.I. STANDARD A112.19.2 & SECTION 17921.3(B).

PLUMBING MANDATORY NOTES

- VENT EACH PLUMBING PER SECTION 904.0 CPC.
- SIZE VENTS PER TABLE 7-5 CPC.
- INSTALL CLEANOUTS ON HORIZONTAL DRAINAGE PIPING PER SECTION 719, 707.4 CPC. CLEANOUTS SHALL BE REQUIRED ON HORIZONTAL DRAIN LINES SERVING SINKS AND URINALS.
- INSTALL BUILDING SEWER CLEANOUTS PER CPC.
- PROVIDE PROPER CROSS-CONNECTION CONTROL PER CPC.
- WATER HEATER T&P RELIEF VALVES SHALL DRAIN TO AN APPROVED LOCATION OR TO OUTSIDE OF BUILDING AND TERMINATE 6 TO 24 INCHES ABOVE GROUND PER CPC.
- PROVIDE WATER HEATER COMBUSTION AIR PER CMC.
- ACCESS TO WATER HEATER TO BE PER CPC.

PLUMBING LEGEND	
SYMBOL	DESCRIPTION
---	CW COLD WATER LINE
---	HW HOT WATER LINE
---	W WASTE LINE
---	HV HORIZONTAL VENT
---	RWL RAIN WATER LEADER
---	CD CONDENSATE DRAIN
---	CO CLEAN OUT
---	FCO FLOOR CLEAN OUT
---	YCO YARD CLEAN OUT TO GRADE
---	FD FLOOR DRAIN
---	FS FLOOR SINK
---	TP TRAP PRIMER
---	HB HOSE BIBB
---	SOV SHUT OFF VALVE
---	GV GAS COCK
---	GV GLOVE VALVE
---	EXP EXPANSION JOINT
---	WA WATER HAMMER ARRESTER WITH SIZE
---	V, VR, VTR VENT, VENT RISER, VENT THRU ROOF
---	W, WD WASTE, WASTE DROP
---	CW, D, R COLD WATER (DROP)(RISER)
---	HW, D, R HW SUPPLY (DROP)(RISER)
---	HWR HOT WATER RETURN
---	THW TEMPERED HOT WATER
---	G NATURAL GAS LOW PRESSURE
---	MPG MEDIUM PRESSURE GAS
---	HPG HIGH PRESSURE GAS
---	LPG PROPANE GAS
---	CA COMPRESSED AIR
---	DL DRAIN LINE
---	DS DOWN SPOUT
---	RD ROOF DRAIN
---	AD AREA DRAIN
---	AC ABOVE CEILING
---	BG BELOW GRADE
---	MV MIXING VALVE
---	WC WATER CLOSET
---	UR URINAL
---	LAV LAVATORY
---	S SINK
---	SS SERVICE SINK
---	WM WASHING MACHINE
---	DF DRINKING FOUNTAIN
---	F GARGAGE DISPOSAL
---	F FIRE PROTECTION LINE
---	FHC FIRE HOSE CABINET
---	FHS FIRE HOSE STANDPIPE
---	INV INVERT ELEVATION
---	FG FINISHED GARDE
---	P.O.C. POINT OF CONNECTION
---	AP ACCESS PANEL
---	CI CAST IRON
---	VC VITRIFIED CLAY
---	CL CENTER LINE
---	HDR HEADER
---	DN DOWN
---	MBH THOUSANDS OF BTU PER HOUR
---	NIPC NOT IN PLUMBING CONTRACT
---	CP UNDER PLUMBING CONTRACT
---	D.L. DEVELOPED LENGTH

REVISIONS

BY

NO. 15457

JOSEPH OAKLEY JR.

STATE OF CALIFORNIA

EXPIRES 9-30-11

PROJECT TITLE:

COMMUNITY CENTER

HARBOR PARK APARTMENTS

969 PORTER STREET, VALLEJO, CA 94560

DRAWING TITLE:

THIRD FLOOR PLUMBING PLAN

Date:

08/30/2011

Scale:

AS NOTED

Drawn:

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Job No.:

2011-09

Sheet:

P5

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Sheets

NOTE TO CONTRACTOR

THE CONTRACTOR SHALL THOROUGHLY REVIEW THESE ELECTRICAL CONSTRUCTION DOCUMENTS PRIOR TO PREPARING A BID FOR THE ELECTRICAL WORK SHOWN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFICATION OF EXISTING ELECTRICAL SERVICES AND CONNECTION REQUIREMENTS. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY OF ANY CONFLICTS OR DISCREPANCIES FOUND PRIOR TO BID. BY SUBMITTING A BID FOR THE ELECTRICAL WORK THE CONTRACTOR IS AFFIRMING THAT THE REQUIRED FIELD VERIFICATION OF EXISTING CONDITIONS HAS BEEN COMPLETED AND ASSUMES FULL RESPONSIBILITY FOR CONFLICTS FOUND AFTER THE AWARD OF THE ELECTRICAL CONTRACT. NO ADDITIONAL COMPENSATION WILL BE CONSIDERED FOR CONFLICTS AND/OR DISCREPANCIES FOUND TO EXIST AFTER THE AWARD OF THE ELECTRICAL CONTRACT.

GENERAL NOTES

- ELECTRICAL CONTRACTOR SHALL VERIFY ALL ON-SITE UTILITY COMPANY REQUIREMENTS WITH THE ELECTRIC UTILITY COMPANY AND THE TELEPHONE COMPANY PRIOR TO SUBMITTING BID. INCLUDE ALL PULLBOXES, CONDUITS, SPLICES, TRANSFORMER PADS, TERMINAL BOXES, RISERS, TRENCHING, ETC. AS REQUIRED FOR COMPLETE AND OPERATIONAL SERVICES TO UNITS WHETHER INDICATED ON DRAWINGS OR NOT. VERIFY POINT OF SERVICE FEED WITH UTILITY COMPANIES AT JOBSITE.
- REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS. DO NOT SCALE FROM ELECTRICAL DRAWINGS. VERIFY EXACT LOCATION FOR TRANSFORMER PAD AND TRAFFIC BARRIERS WITH ARCHITECT.
- CONTRACTOR SHALL INSTALL A #14 AWO OR 3/16" POLYETHYLENE PULL LINE IN ALL EMPTY CONDUITS.
- PROVIDE A WEATHERPROOF CAP ON ALL ENDS OF CONDUITS TERMINATED OUTSIDE OF A BUILDING. STAKE AND RECORD ALL CONDUIT LOCATIONS. PLACE AN ELECTRONIC MARKER FOR ALL STUB UPS.

NUMBERED NOTES:

- PER THE NEC, ALL 120V, 1500 AMP KITCHEN RECEPTACLES SHALL BE GFCI RATED. ALL RECEPTACLES TO BE MOUNTED AT 4'4" A.F.F. UNLESS OTHERWISE NOTED.
- PROVIDE HALF-SWITCHED OUTLET BELOW SINK FOR GARBAGE DISPOSAL AND DISHWASHER.
- LOCATE SWITCH FOR GARBAGE DISPOSAL CONTROL. SEE ARCHITECTURAL PLANS FOR ADDITIONAL INFORMATION.
- PROVIDE OUTLET FOR GAS RANGE AND CONNECT. VERIFY WITH RANGE INSTALLER PRIOR TO ROUGH-IN.
- PROVIDE OUTLET AND CONNECTION TO RANGE HOOD. VERIFY WITH RANGE INSTALLER PRIOR TO ROUGH-IN.
- LOCATE OUTLET FOR REFRIGERATOR. VERIFY EXACT LOCATION WITH ARCHITECT PRIOR TO ROUGH-IN.
- "LCC" SEE LIGHTING SHEET FOR FURTHER INFORMATION. PROVIDE POWER AND PHONE CONNECTION.
- FIRE ALARM CONTROL PANEL "FACP" PROVIDE POWER AND PHONE CONNECTION.

MECHANICAL GENERAL NOTES

- REFER TO MECHANICAL DRAWINGS FOR EXACT HVAC EQUIPMENT LOCATIONS AND SPECIFICATIONS. VERIFY EQUIPMENT WIRE SIZE, CONDUIT SIZES, CIRCUIT BREAKER AND DISCONNECT SIZES WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN OF ELECTRICAL.
- PROVIDE CONTROL CONDUIT FROM EACH UNIT TO THERMOSTAT LOCATIONS. SEE MECHANICAL DRAWINGS FOR THERMOSTAT LOCATIONS.
- ALL CONNECTIONS TO HVAC EQUIPMENT SHALL BE MADE WITH COPPER CONDUCTORS ONLY. SIZE CONDUCTORS PER UNIT NAMEPLATE SPECIFICATIONS. VERIFY PRIOR TO INSTALLATION OF CONDUCTORS.
- ALL DISCONNECT SWITCHES SHALL BE FUSIBLE NEMA 3R SIZE AS REQUIRED. ALL HVAC UNITS SHALL BE FUSED PER EQUIPMENT NAMEPLATE SPECIFICATIONS. ELECTRICAL CONTRACTOR SHALL VERIFY DISCONNECT AND FUSE SIZING WITH MECHANICAL CONTRACTOR PRIOR TO ORDERING MATERIALS.
- ALL FUSES FOR THIS PROJECT SHALL BE BUSSMAN CLASS RK5 DUAL ELEMENT CURRENT LIMITING WITH AMPERAGES AS INDICATED OR REQUIRED.
- REFER TO MECHANICAL DRAWINGS FOR CONTROL WIRING. ELECTRICAL CONTRACTOR SHALL PROVIDE CONDUIT AND PENETRATIONS FOR CONTROL WIRING AS REQUIRED. COORDINATE WITH MECHANICAL CONTRACTOR AT JOBSITE.
- FIRE SEAL ALL FIRE WALL PENETRATIONS FOR CONDUITS WITH AN APPROVED FIRE SEALANT AFTER CONDUIT INSTALLATION. FIRE SEAL SHALL PROVIDE EQUAL FIRE RATING AS WALL.

FEEDER CALCULATIONS

PANEL "C2"	
LIGHTING (CONNECTED)	= 3,324 W
RECEPTACLES - 50 @ 180W EACH	= 9,000 W
SMALL APPLIANCE RECEPTS	= 3,000 W
COPPER	= 1,500 W
DISHWASHER	= 1,556 W
CEILING EXHAUST FAN "CEF-1"	= 1,200 W
RANGE HOOD	= 150 W
DRINKING FOUNTAIN	= 600 W
EXERCISE EQUIPMENT - 6 @ 1,000W EACH	= 6,000 W
"FACP" & "LCC" PANELS	= 400 W
SUBTOTAL	= 27,415 W
25% CONTINUOUS LOADS	= 6,854 W
25% LARGEST MOTOR	= 414 W
TOTAL	= 26,666 W

FOR 120/240V-10-3W
26,666 W ÷ 240V = 111.11 A
PROVIDE A 125A FEEDER.

PANELS "C3, C4, C5"

LIGHTING (CONNECTED)	= 3,600 W
SMALL APPLIANCE RECEPTS	= 3,000 W
DRYER	= 5,000 W
DISPOSAL	= 1,556 W
DISHWASHER	= 1,200 W
WASHER	= 2,400 W
RANGE	= 12,000 W
AC	= 4,800 W
RANGE HOOD	= 288 W
SUBTOTAL	= 33,944 W
25% CONTINUOUS LOADS	= 8,486 W
25% LARGEST MOTOR	= 414 W
TOTAL	= 35,189 W

FOR 120/240V-10-3W
35,189 W ÷ 240V = 146.62 A
PROVIDE A 150A FEEDER.

MAIN FEEDER

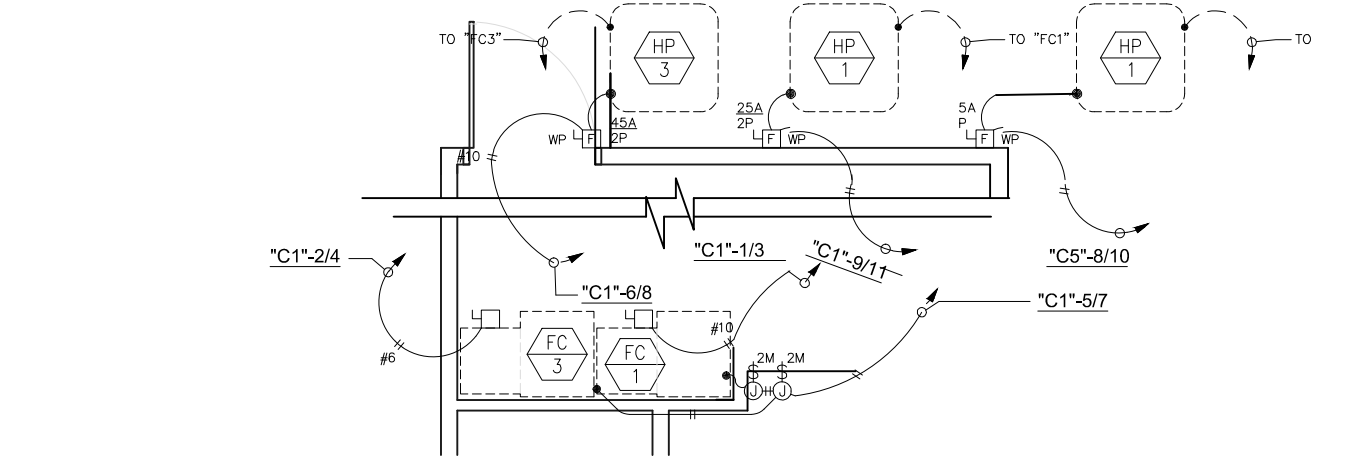
PANEL "C1"

HEAT PUMP "HP-1"	= 2,808 W
FAN COIL "FC-1"	= 864 W
"FC-1" STRIP HEATER	= 5,000 W
HEAT PUMP "HP-2"	= 4,368 W
FAN COIL "FC-2"	= 1,176 W
"FC-2" STRIP HEATER	= 6,000 W
HEAT PUMP "HP-3"	= 4,805 W
FAN COIL "FC-3"	= 1,656 W
"FC-3" STRIP HEATER	= 10,000 W
WATER HEATER "WH-1"	= 4,500 W
DRIVE GATE	= 1,376 W
PANEL "C2"	= 27,415 W
PANEL "C1"	= 35,189 W
PANEL "C4"	= 35,189 W
PANEL "C5"	= 35,189 W
SUBTOTAL	= 177,535 W
25% CONTINUOUS LOADS	= 831 W
25% LARGEST MOTOR	= 26,866 W
TOTAL	= 180,866 W

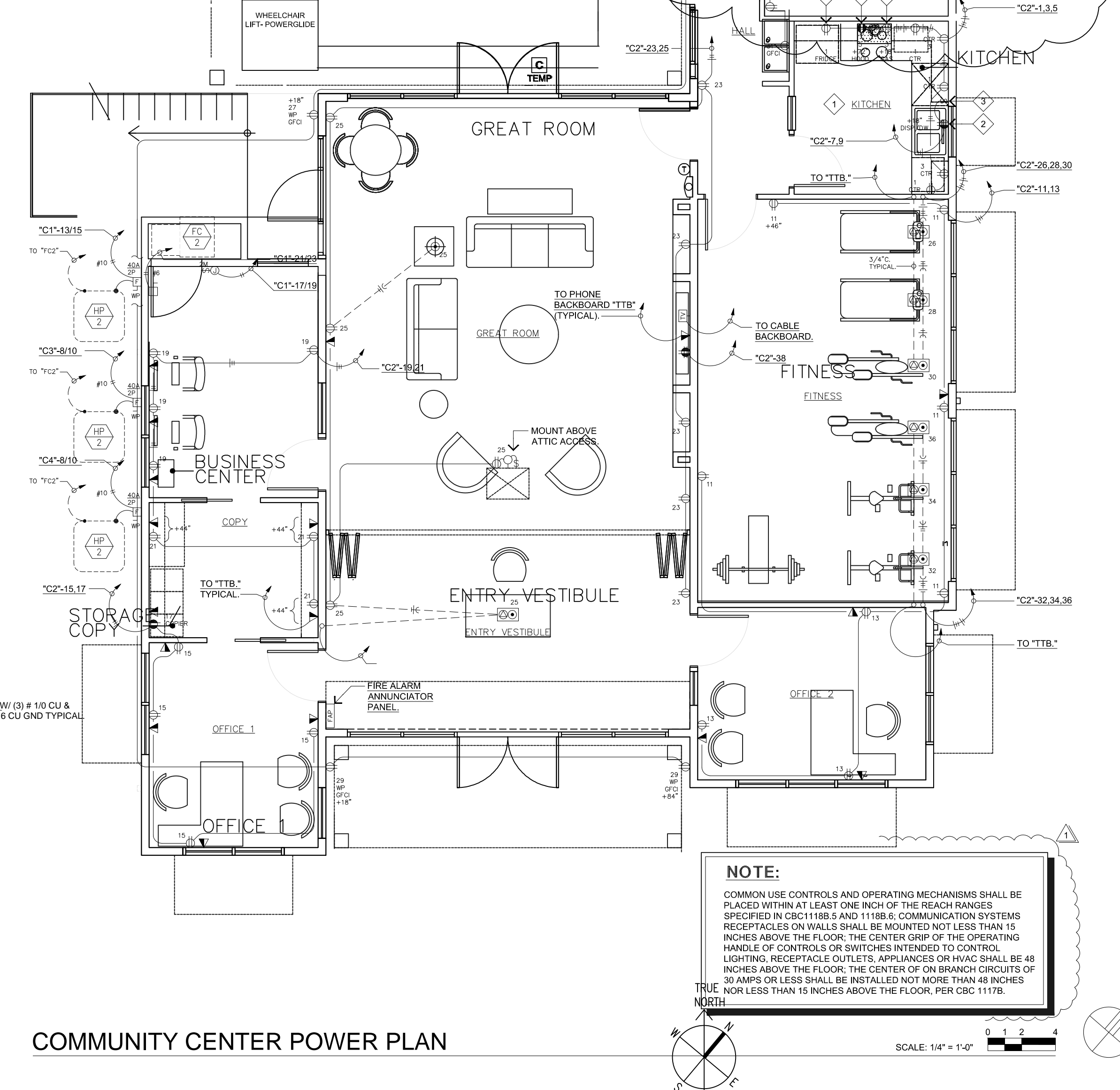
FOR 120/240V-10-3W
180,866 W ÷ 240V = 753.60 A
PROVIDE A 800A FEEDER, 5 GANG METER PANEL.

UTILITY ROOM MECHANICAL POWER PLAN

SCALE: 1/4" = 1'-0"



MAINTAIN CLEARANCE AT ELECTRICAL EQUIPMENT IN ACCORDANCE WITH CALIFORNIA ELECTRICAL CODE, 2010 EDITION. SUBMIT EQUIPMENT DIMENSIONS TO ARCHITECT PRIOR TO FOUNDATION POUR FOR VERIFICATION OF EQUIPMENT CLEARANCES REQUIRED.



NOTE:

COMMON USE CONTROLS AND OPERATING MECHANISMS SHALL BE PLACED WITHIN AT LEAST ONE INCH OF THE REACH RANGES SPECIFIED IN CBC 11B8.5 AND 11B8.6. COMMUNICATION SYSTEMS RECEPTACLES ON WALLS SHALL BE MOUNTED NOT LESS THAN 15 INCHES ABOVE THE FLOOR. THE CENTER GRIP OF THE OPERATING HANDLE OF CONTROLS OR SWITCHES INTENDED TO CONTROL LIGHTING, RECEPTACLE OUTLETS, APPLIANCES OR HVAC SHALL BE 48 INCHES ABOVE THE FLOOR. THE CENTER OF ON-BRANCH CIRCUITS OF 30 AMPS OR LESS SHALL BE INSTALLED NOT MORE THAN 48 INCHES NOR LESS THAN 15 INCHES ABOVE THE FLOOR. PER CBC 11B7.6.

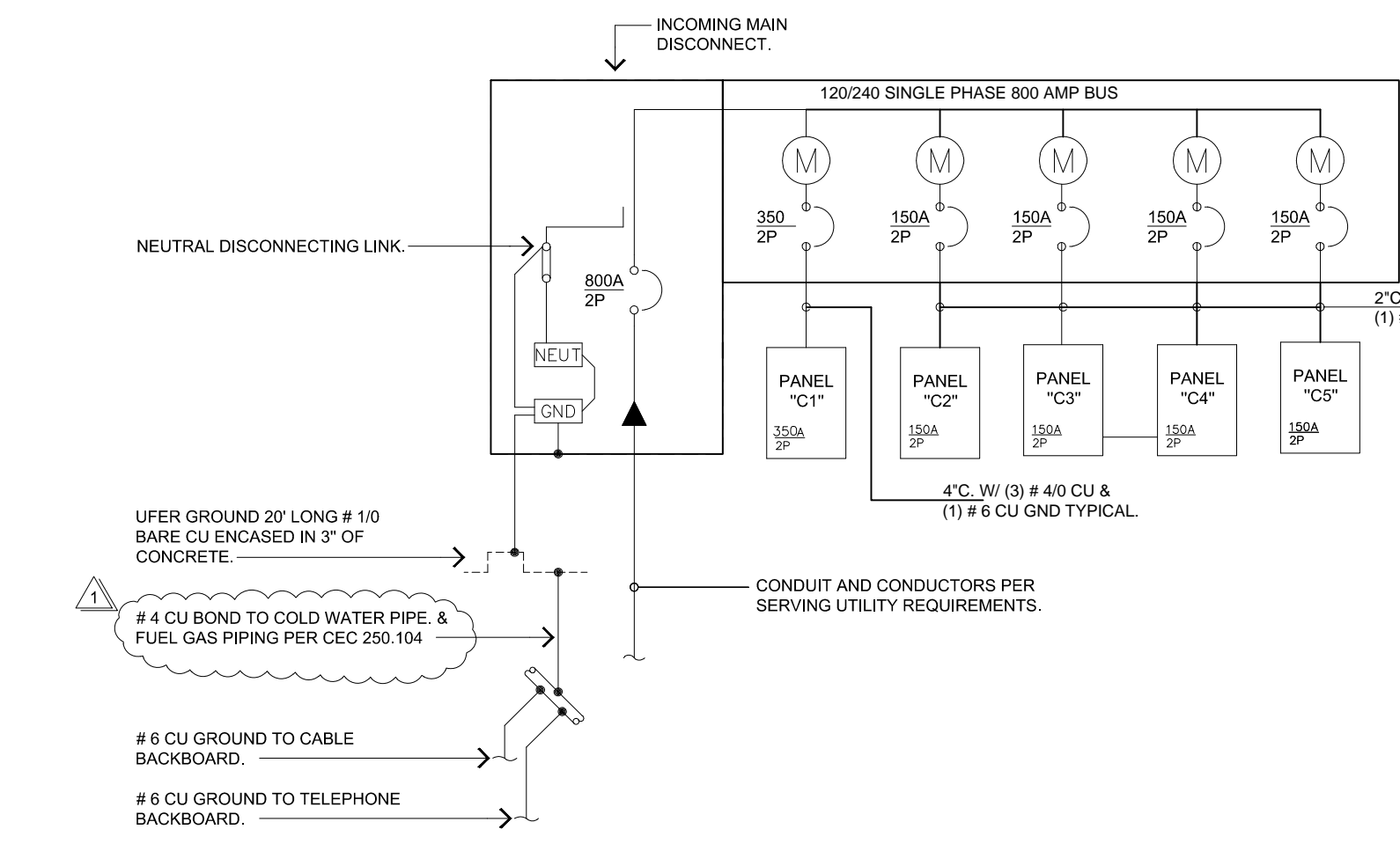


SCALE: 1/4" = 1'-0"

COMMUNITY CENTER POWER PLAN

ONE-LINE DIAGRAM

SCALE: NONE



NEUTRAL DISCONNECTING LINK.

UPPER GROUND 20' LONG # 1/0 BARE CU ENCASED IN 3" OF CONCRETE.

4 CU BOND TO COLD WATER PIPE & FUEL GAS PIPING PER CEC 250.104

6 CU GROUND TO CABLE BACKBOARD.

6 CU GROUND TO TELEPHONE BACKBOARD.

CONDUIT AND CONDUCTORS PER SERVING UTILITY REQUIREMENTS.

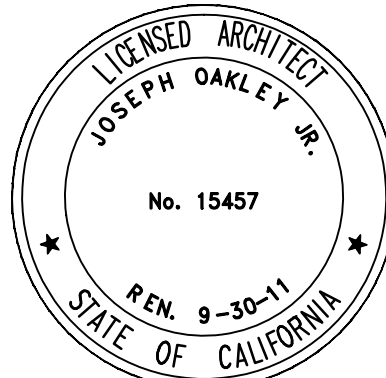
COMMUNITY CENTER GROUND FLOOR POWER PLAN

01

SCALE: 3/16" = 1'-0"

REVISIONS

BY



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PROJECT TITLE:
COMMUNITY CENTER
HARBOR PARK APARTMENTS
959 PORTER STREET, VALLEJO, CA 94560

DRAWING TITLE:
COMMUNITY CENTER GROUND FLOOR POWER PLAN

Date: 08/30/2011

Scale: AS NOTED

Drawn: STAFF

Checked: RY

Job No.: 2011-09

Sheet:

E01

Of Sheets

NOTE: FIXTURES MUST COMPLY WITH CEC 314.27, WHEN APPLICABLE

Diagram illustrating the installation of a recessed fluorescent downlight into a gypsum board ceiling. The diagram shows a cross-section of the ceiling structure, including the gypsum board, a metal support frame, and the downlight fixture. Labels indicate the following components:

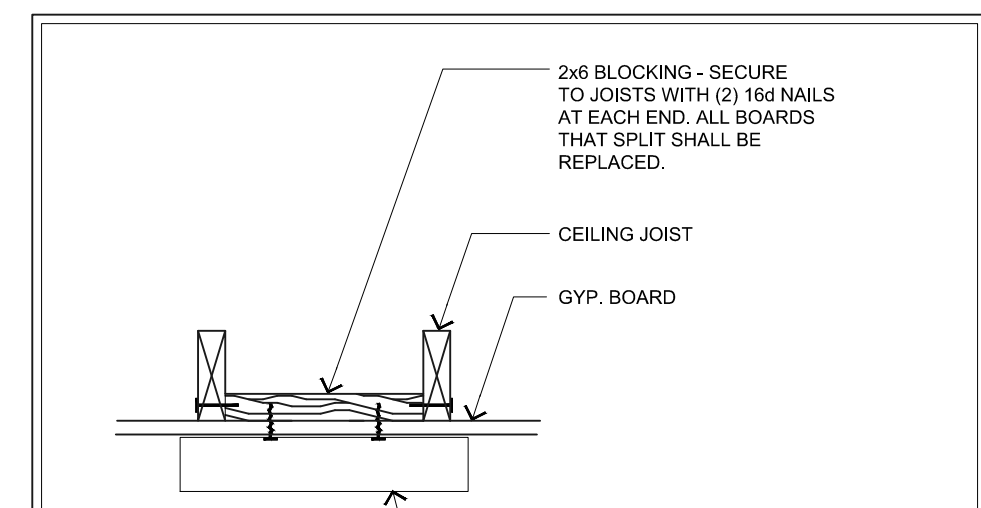
- 6d NAIL TYPICAL.
- 1" GYPBOARD.
- RECESSED FLUORESCENT DOWNLIGHT.
- GYPSON BOARD CEILING.

NOTES

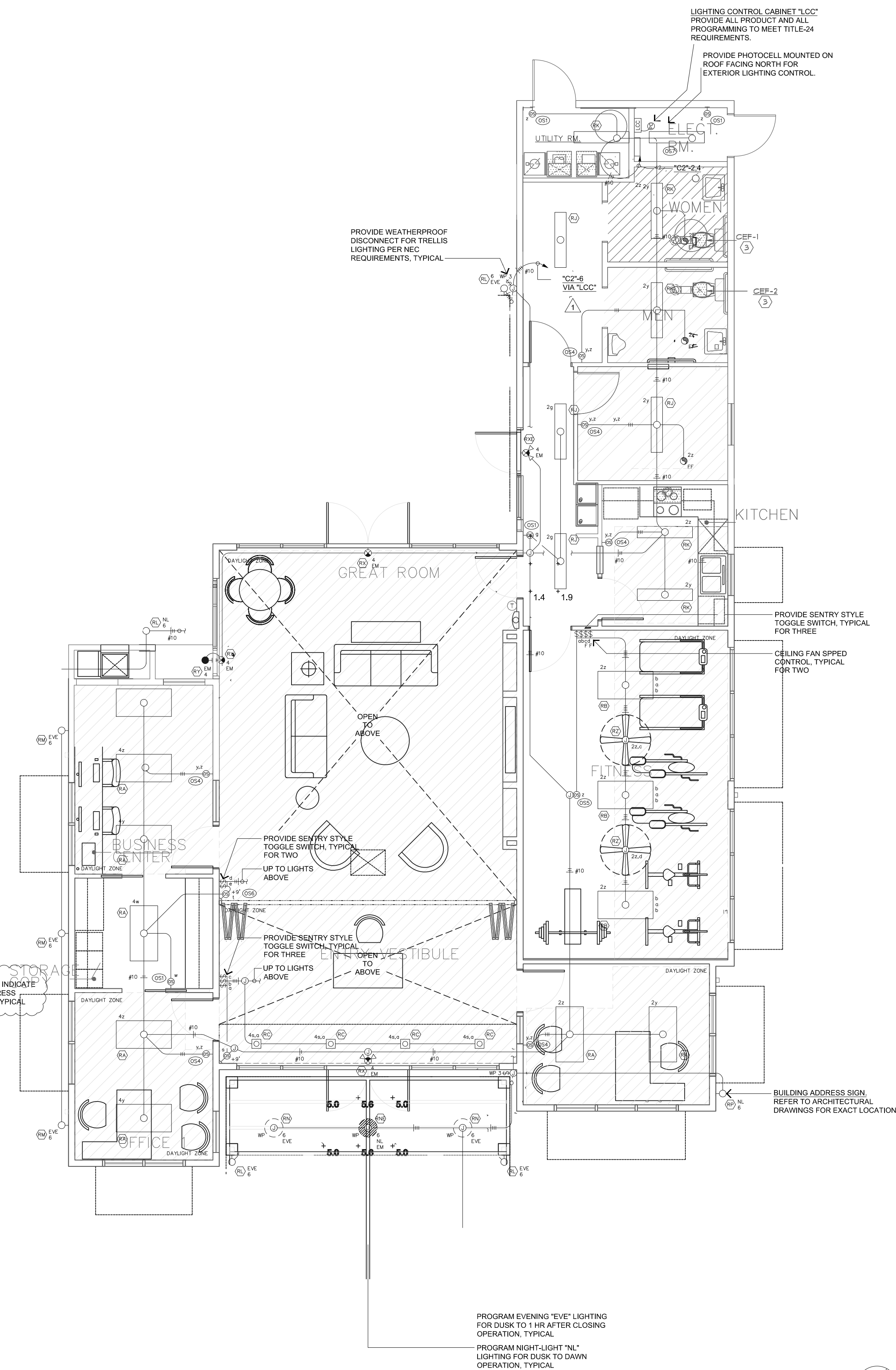
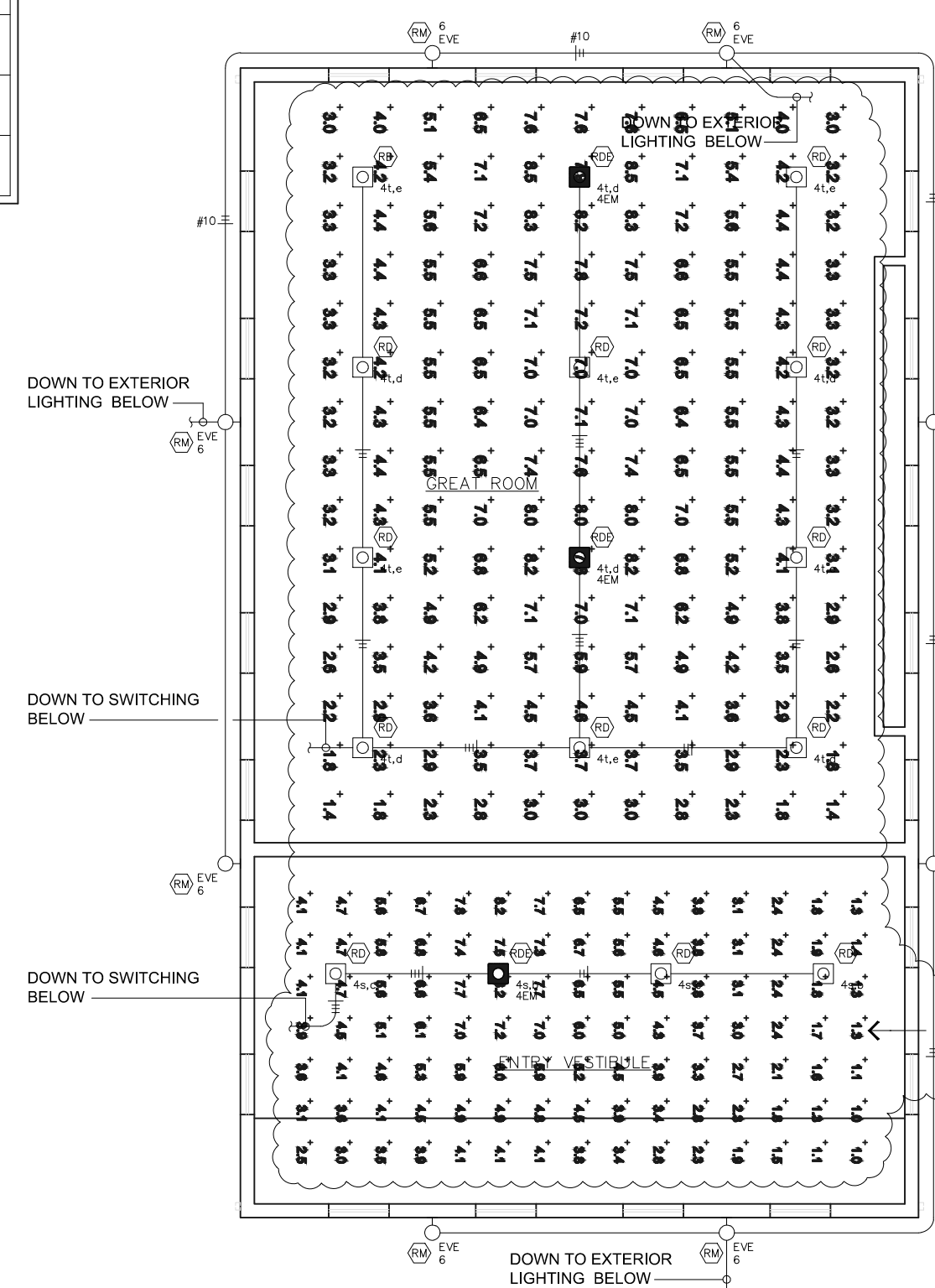
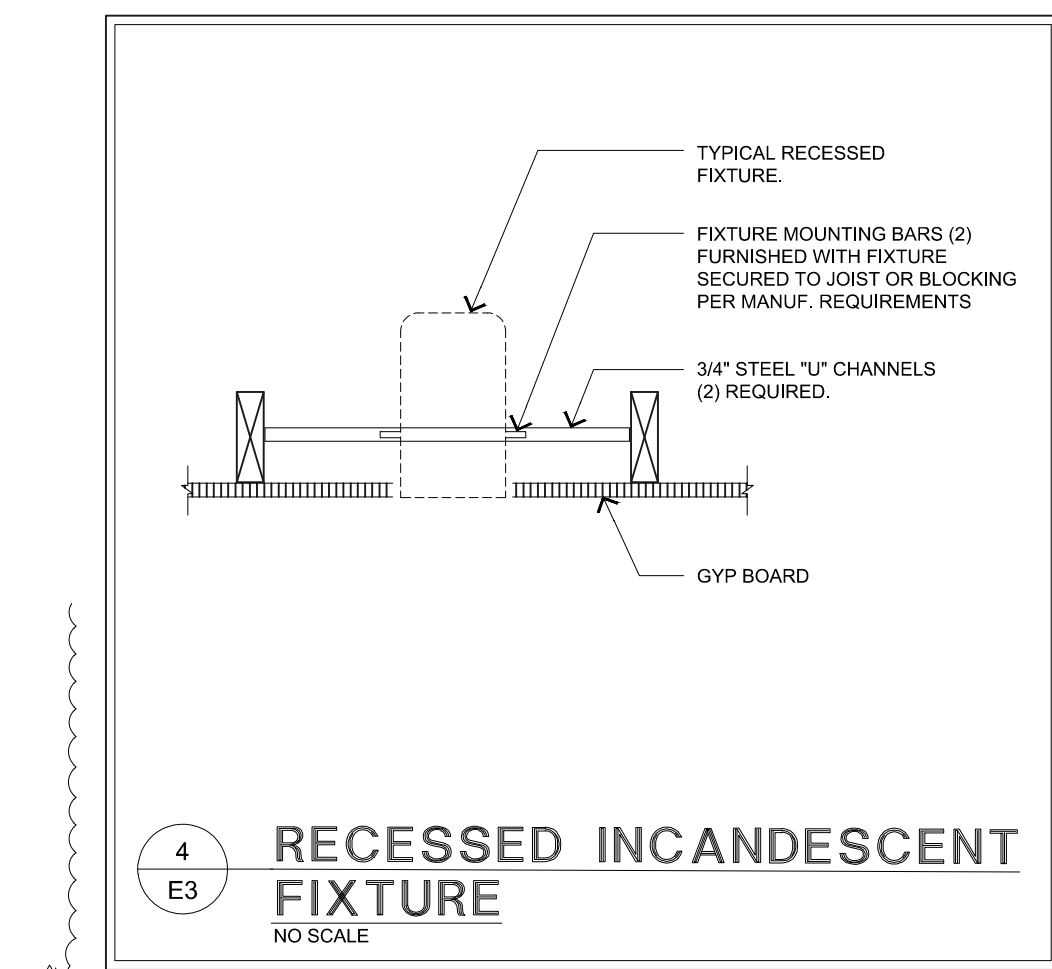
GYPSUM BOARD 1/2" THICK CUT INTO PIECES TO FORM A FIVE (5) SIDED ENCLOSURE, RECTANGULAR IN CROSS SECTION, APPROXIMATELY 3' LONGER AND WIDER THAN THE FIXTURE WITH SUFFICIENT DEPTH TO PROVIDE AT LEAST 3" CLEARANCE BETWEEN THE FIXTURE AND THE ENCLOSURE. THE PIECES ARE HELD TOGETHER BY 6d COMMON NAILS 6" O.C. MINIMUM. CAREFULLY NOTCH PIECES TO SLIDE OVER HANGER BARS.

THE ABOVE CONSTRUCTION IS U.L. FIRE RESISTANT RATED @ 1½ HOUR FOR RESTRAINED ASSEMBLY AND, 1¼ HOUR FOR UNRESTRAINED ASSEMBLY.

SCALE



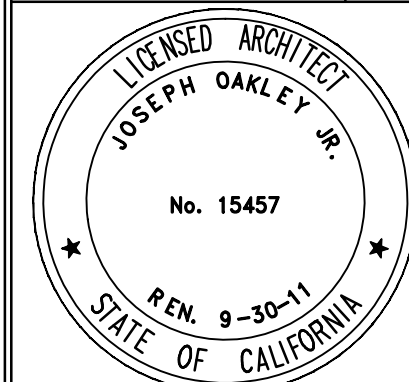
NO SCALE




SCALE: 1/4" = 1'-0"

REVISIONS	BY
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BY



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Sheet:	

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Of Sheets

COMMUNITY CENTER GOUND FLOOR LIGHTING PLAN

ELECTRICAL LEGEND

 ALL 125 AMP CIRCUITS SHALL BE ARC-FAULT INTERRUPTER
PROTECTED INCLUDING ALL OUTLETS & SWITCHES

Date:	08/30/2011
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Job No.:	2011-09
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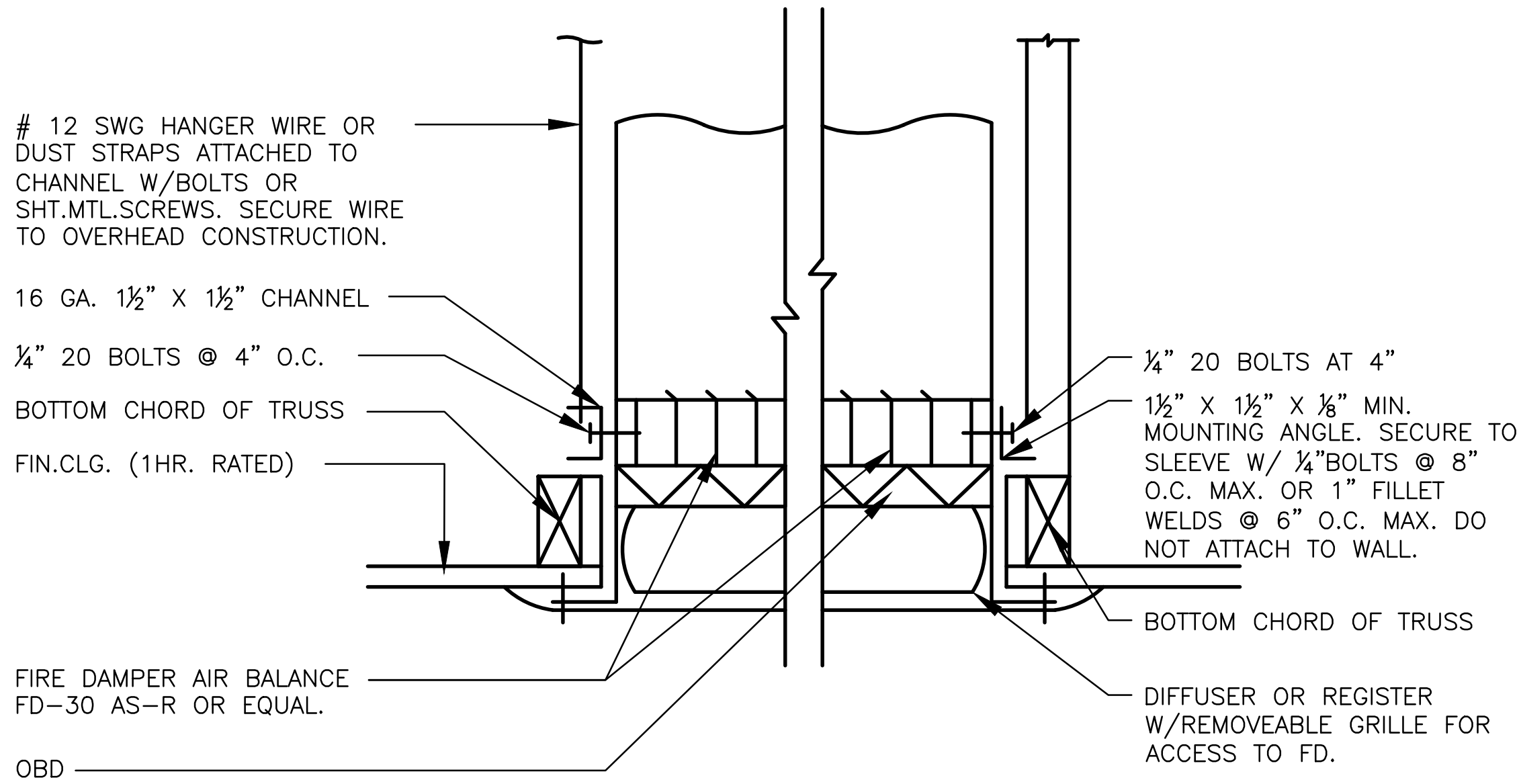
ELECTRICAL NOTES:

- ELECTRICAL

- ALL 125 AMP CIRCUITS SHALL BE ARC-FAULT INTERRUPTER
PROTECTED INCLUDING ALL OUTLETS & SWITCHES

E0.4

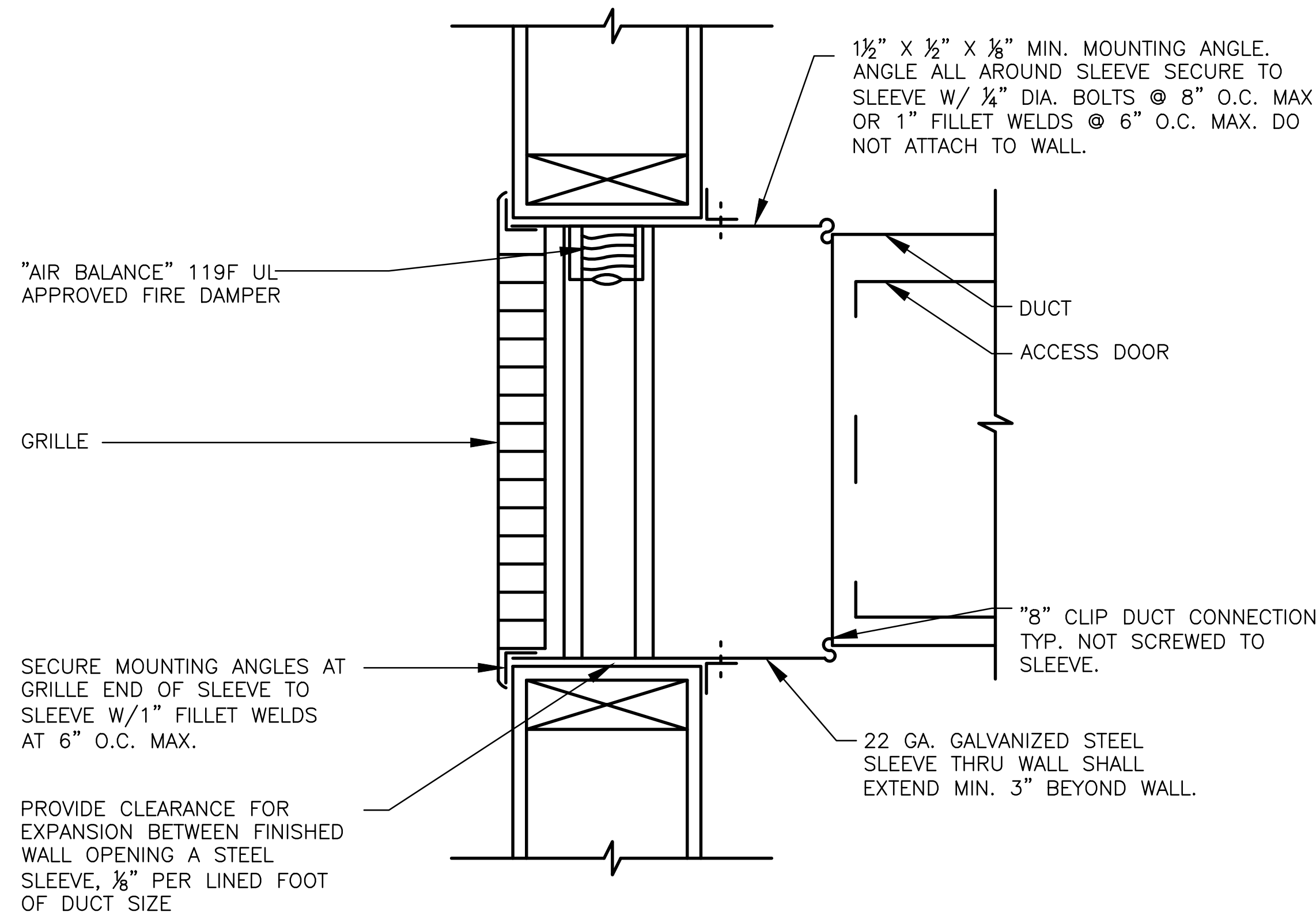
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NOTE:
COMPLETE INSTALLATION SHALL BE PER STATE FIRE MARSHALL'S LISTING.

1 CEILING FIRE DAMPER DETAIL

NOT TO SCALE



NOTE:
1. COMPLETE INSTALLATION SHALL BE AS PER STATE FIR MARSHALL'S LISTING.
2. REFER TO ARCHITECT FOR MOUNTING HEIGHT.

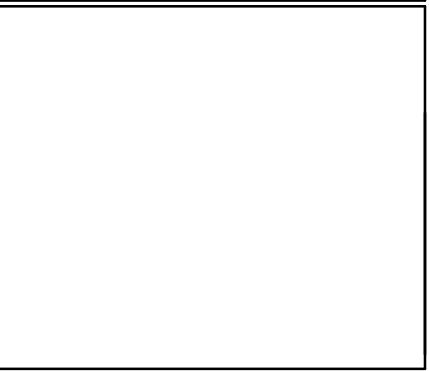
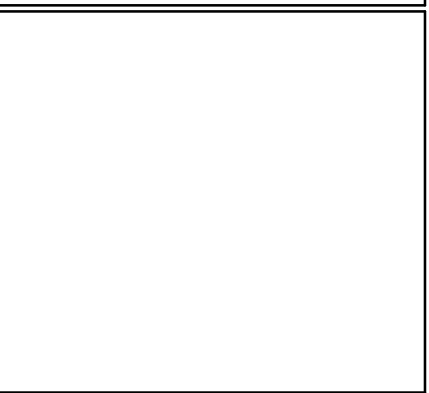
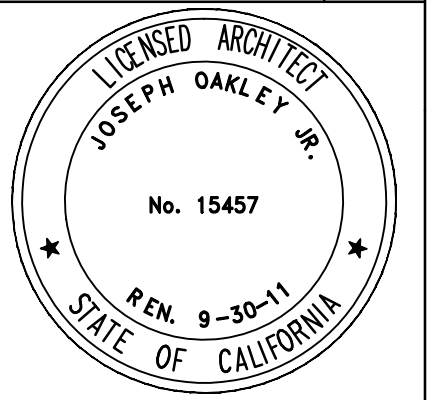
2 GRILLE & FIRE DAMPER DETAIL


NOT TO SCALE

NOTES:

1. ALL ELECTRICAL WIRING IN 1-HOUR CORRIDOR SHALL BE PLACED IN CONDUIT.
2. NO RESIDENTIAL FEEDERS ARE TO CHASE THROUGH ANY COMMERCIAL OCCUPANCY AND NO COMMERCIAL FEEDERS ARE TO CHASE THROUGH ANY RESIDENTIAL OCCUPANCY.
3. AREAS BETWEEN FLOORS SHALL BE CONSIDERED INCLUSIVE OF THE OCCUPANCY ABOVE AND BELOW.

REVISIONS	BY



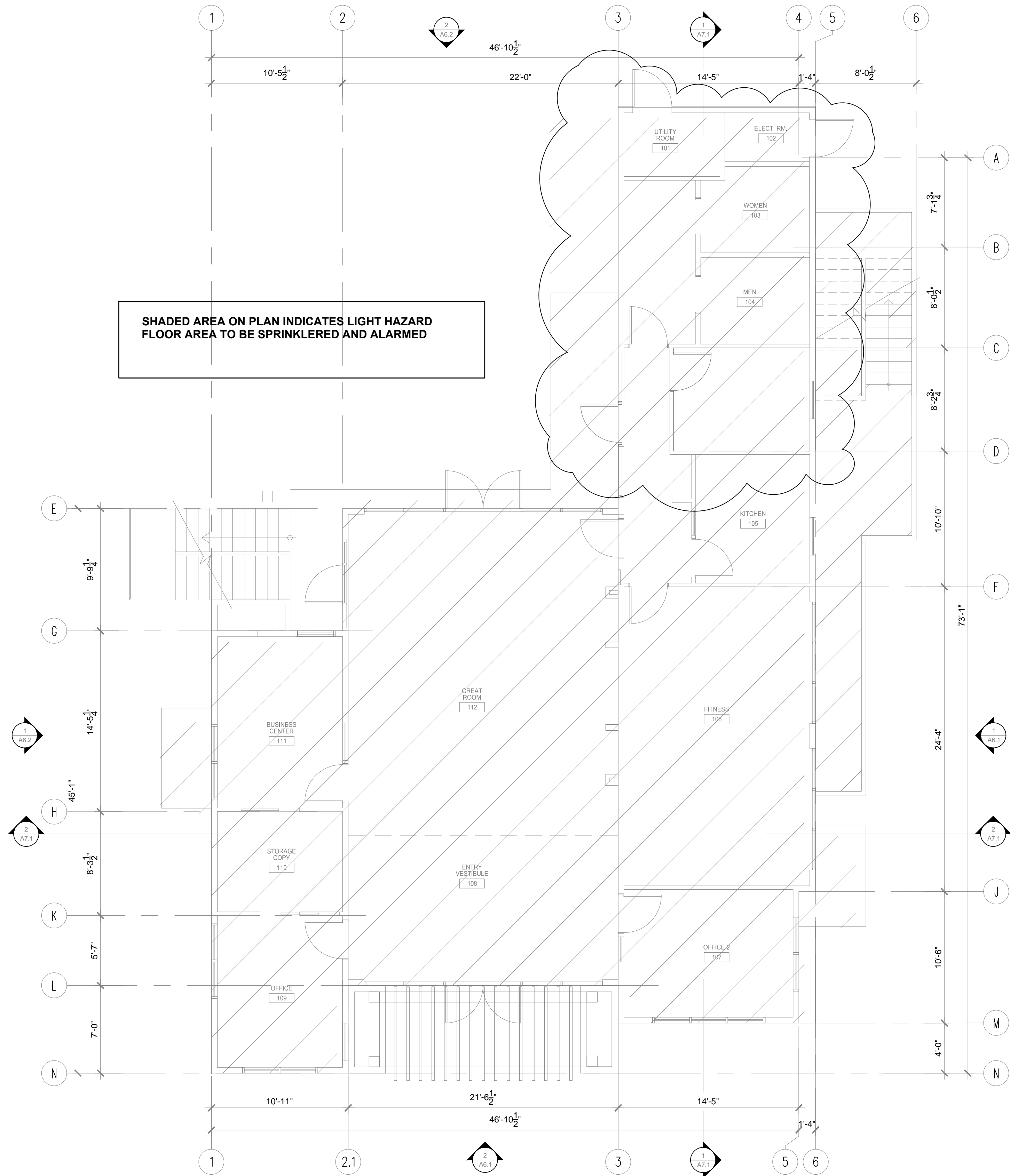
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DRAWING TITLE:



Date:	08/30/2011
Scale:	AS NOTED
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APPLICABLE CODES

CALIFORNIA BUILDING CODE 2010 EDITION
CALIFORNIA FIRE CODE 2010 EDITION
CALIFORNIA ELECTRIC CODE 2010 EDITION
CALIFORNIA MECHANICAL CODE 2010 EDITION
NFPA 72 2010 EDITION AS AMENDED IN CHAPTER
35 OF THE CALIFORNIA BUILDING CODE.

TYPE OF FIRE ALARM SYSTEM

THE FIRE ALARM SYSTEM IS ADDRESSABLE AND AUTOMATIC DETECTION. THE NEW BUILDING IS SPRINKLERED.

SIGNALING LINE CIRCUITS AND NOTIFICATION APPLIANCE CIRCUITS ARE POWER LIMITED.

SIGNALING LINE CIRCUITS ARE CLASS B/STYLE 4 PER NFPA 72.

NOTIFICATION APPLIANCE CIRCUITS ARE CLASS B/ STYLE Y PER NFPA 72.



01 COMMUNITY CENTER ALARM & SPRINKLER PLAN - GROUND FLOOR PLAN

SCALE: 1/4" = 1'-0"

FIRE ALARM GENERAL NOTES

1. EXAMINE ALL DRAWINGS AND FIELD VERIFY (E) ELECTRICAL CONDITIONS INCLUDING VOLTAGES, EXISTING CIRCUITS AND EXACT ROUTING OF ALL CONDUITS AND CONDITIONS IN AND AROUND CONDUIT RUNS.
2. COORDINATE ALL WORK SO THAT INTERFERENCE BETWEEN ALL TRADES WILL BE AVOIDED.
3. PERFORM WORK IN ACCORDANCE WITH THE LATEST EDITIONS OF THE CALIFORNIA CODE OF REGULATIONS (CCR) TITLES 19 AND 24 AS APPLICABLE TO THIS PROJECT AND THE FOLLOWING CODES AND STANDARDS:
 - CBC 2010; CFEC 2010; CFC 2010
 - STATE FIRE MARSHAL TITLE 19, PUBLIC SAFETY
 - NFPA 72, 2010 EDITION WITH CALIFORNIA AMENDMENTS
4. REPORT ANY DISCREPANCY TO ARCHITECT/ENGINEER PRIOR TO ANY WORK.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION AND PROVIDE REPAIR OF ADJACENT EXISTING SURFACES, AREAS AND PROPERTY THAT MAY BE DAMAGED AS A RESULT OF NEW WORK.
6. COORDINATE ALL WORK AND SHUTDOWNS WITH THE OUSD REPRESENTATIVE.
7. THE INSTALLATION OF THIS PROJECT SHALL BE MADE IN COMPLIANCE WITH THE LATEST AND APPLICABLE CODES AND STANDARDS.
8. ALL CONCEALED RACEWAY SHALL BE ELECTRICAL METALLIC TUBING (EMT). ALL EXPOSED RACEWAY SHALL BE GALVANIZED RIGID STEEL OR LIQUIDTIGHT FLEXIBLE CONDUIT, ALL UNDERGROUND CONDUIT SHALL BE PVC SCHEDULE 40, UNLESS OTHERWISE NOTED. PROVIDE PULL STRING IN ALL UNDERGROUND CONDUITS.
9. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS AND MOUNTING HEIGHTS PRIOR TO ELECTRICAL EQUIPMENT/DEVICE INSTALLATION.
10. VERIFY (E) CIRCUITING PRIOR TO ANY WORK. MAINTAIN POWER TO EXISTING BUILDINGS.
11. MAINTAIN EXISTING BUILDINGS SECURITY, FIRE ALARM & FIRE PROTECTION SYSTEMS AT ALL TIME.
12. ALL CONDUITS THROUGH FIRE RATED WALL AND FLOOR SHALL BE SEALED WITH CODE APPROVED FIRE STOP MATERIAL.
13. 120VAC IS NOT PERMITTED IN SAME CONDUIT WITH LOW VOLTAGE WIRING.
14. ANY SMOKE DETECTOR INSTALLED BEFORE BUILDING IS CLEANED AND ACCEPTED SHALL BE COVERED TO PROTECT FROM DUST. ANY PENALTIES OF THE DEVICE REPLACEMENT REQUIRED AS A RESULT OF FALSE ALARMS DUE TO DIRT-CONTAMINATED DETECTORS SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
15. AUDIBLE FIRE ALARM SOUND LEVEL SHALL BE AT LEAST 15 dBA ABOVE THE AVERAGE AMBIENT SOUND LEVEL BUT NOT LESS THAN 75dBA AT 10'-0" OR MORE THAN 110 dBA IN TOTAL THROUGHOUT.
16. AUDIBLE DEVICES SHALL SOUND THE EMERGENCY EVACUATION SIGNAL IN A "THREE PULSE TEMPORAL PATTERN" PER THE REQUIREMENTS OF CFC.
17. VISUAL DEVICES SHALL NOT EXCEED 2 FLASHES PER SECOND AND SHALL NOT BE SLOWER THAN 1 FLASH EVERY SECOND.
18. ALL CIRCUITS SHALL BE SUPERVISED AGAINST OPENS, SHORTS AND GROUNDS.
19. BACKUP BATTERIES SHALL SUPPLY 24 HOURS OF STANDBY AND 5 MINUTES OF ALARM.
20. FIRE ALARM CIRCUITS SHALL BE IDENTIFIED AND MARKED IN ACCORDANCE WITH NEC SECTION 760.
21. ALL OUTSIDE FIRE ALARM DEVICES SHALL BE CSFM LISTED AS WEATHERPROOF TYPE.
22. ALL FIRE ALARM WIRING SHALL BE CONTINUOUS WITHOUT SPLICES AND TERMINATED AT TERMINALS IN THE DEVICE OR APPROVED TERMINAL BLOCKS IN TERMINAL CABINETS OR JUNCTION BOXES. SPLICES SHALL NOT BE PERMITTED IN UNDERGROUND PULL BOXES.
23. FIRE ALARM CONTRACTOR SHALL PROVIDE A COMPLETED AND SIGNED "RECORD OF COMPLETION" TO THE INSPECTOR OF RECORD (IOR)/DSA AFTER COMPLETION OF OPERATIONAL ACCEPTANCE TESTS.
24. AREA SMOKE DETECTORS SHALL BE INSTALLED PER NFPA 72 AND SHALL MAINTAIN A MINIMUM 3'-0" SEPARATION FROM ANY SOURCE OF AIR SUPPLY REGISTERS.
25. ALL NEW FIRE ALARM WIRING SHALL BE INSTALLED IN CONDUIT MINIMUM 3/4" UON. FIELD VERIFY EXISTING CONDUIT ROUTING.
26. ALL NEW FA CIRCUITS ARE SHOWN ON PLANS ARE DIAGRAMMATICAL. EXACT CIRCUIT RACEWAYS AND CONDUIT ROUTING SHALL BE DETERMINED IN THE FIELD.
27. UPON COMPLETION OF SYSTEM INSTALLATION, THE SYSTEM SHALL BE TESTED IN THE PRESENCE OF AND IN A MANNER ACCEPTABLE TO THE INSPECTOR OF RECORD. THE CONTRACTOR SHALL SUPPLY NECESSARY TESTING EQUIPMENT INCLUDING A "SOUND LEVEL METER" TO CHECK ACCEPTABLE DECIBEL LEVELS OF AUDIBLE DEVICES.
28. THE "END OF LINE RESISTANCE" FOR EACH CIRCUIT SHALL BE TESTED IN THE PRESENCE OF THE INSPECTOR OF RECORD AND SHALL NOT EXCEED A MAXIMUM OF 10% OF THE 24 VOLT SYSTEM. EACH COMPONENT OF THE CIRCUIT SHALL NOT EXCEED THE LISTED MANUFACTURER'S MINIMUM OPERATING VOLTAGES.



REVISONS		BY
26/2011 - PLAN CHECK		G.O.
		
		OAKLEY & OAKLEY ARCHITECTS & STRUCTURAL ENGINEERS 1000 CALIFORNIA DRIVE, STE. 615 OAKLAND, CA 94621 P 510.562.6028 FAX 510.562.6043
COMMUNITY CENTER HARBOR PARK APARTMENTS 989 PORTER STREET, VALLEJO, CA 94560 DRAWING TITLE:		FIRST FLOOR PLAN
Date:	08/30/2011	
Date:	AS NOTED	
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FIRE ALARM WIRE LIST (POWER LIMITED)

ID	NO. OF CONDUCTORS	SIZE. AWG.	WIRE TYPE	DESCRIPTION
M	1 PAIR	#18	FPL TWISTED SHIELDED	SIGNALING LINE CIRCUIT
S	1 PAIR	#12	FPL	NOTIFICATION APPLIANCE CIRCUITS
P	1 PAIR	#14	FPL	24VDC POWER

NOTES: ALL WIRE SHALL BE PROTECTED IN DEDICATED FIRE ALARM CONDUIT UNLESS OTHERWISE NOTED.
MAINTAIN 40% MAXIMUM CONDUIT FILL.

UNDERGROUND CABLES AND CONDUCTORS SHALL BE LISTED FOR USE IN WET LOCATIONS.
(WEST PENN AQUASEAL OR APPROVED EQUAL.)

SEQUENCE OF OPERATION

	SMOKE DETECTOR	HEAT DETECTOR	GENERAL SYSTEM TROUBLE	WIRING SHORT OR OPEN CIRCUIT	VALVE FLOW SWITCH	VALVE TAMPER SWITCH	PULL STATION
INDICATE ALARM @ FACU	X	X			X		X
INDICATE TROUBLE @ FACU			X	X			
INDICATE SUPERVISORY SIGNAL @ FACU						X	
ACTIVATE NOTIFICATION HORN AND STROBES	X	X			X		X
TRANSMIT OFF-SITE COMMON ALARM SYSTEM	X	X			X		X
TRANSMIT OFF-SITE COMMON TROUBLE SYSTEM			X	X			
TRANSMIT OFF-SITE SUPERVISORY SIGNAL						X	

UNDERGROUND

PROVIDE:

- DETAILS FOR NEW FIRE HYDRANT-FROM LOCAL FIRE AUTHORITY AND FLOW DATA. (GPM / PSI AND CALCULATIONS) PER CFC APPENDIX B AND TABLE B105.1, AND APPENDIX C FOR DISTRIBUTION AND LOCATIONS.
- FDC, PIV, THRUST BLOCKS, CHECK VALVES, CHECK DETECTOR CHECK VALVE BFP ASSEMBLY (PROVIDE DETAILS FROM LOCAL FIRE AUTHORITY) AND SIZE OF WATER FEED AN LATERAL, AND SHOW ALL DEVICES ON PLAN.
- DUCTILE PIPING WITH LAST 5 FEET OF BUILDING.
- PRELIMINARY FIRE SPRINKLER CALCULATIONS
- LOCATION OF PIV AND FDC BY LOCAL FIRE AUTHORITY.

Calculation results for Design Area 1 - ATTIC UPRIGHTS	
This system as shown on	company print no. dated
for HARBOR APARTMENTS	at 969 PORTER STREET
contract no.	is designed to discharge at a rate of 0.1 gpm/ft ² (L/min/m ²) of floor area over a maximum area of 1554 ft ² when supplied with water at a rate of 358.6 gpm at 95 psi at the base of the riser.
Hose stream allowance of	is included in the above.
Occupancy classification:	LIGHT
Commodity classification:	
Maximum storage height:	
Storage arrangement:	
Flow from In-Rack sprinklers:	0 gpm
Flow from Overhead sprinklers:	358.6 gpm
Flow from Inside Hoses:	0 gpm
Flow from Outside Hoses:	0 gpm
Other fixed flows:	0 gpm
Total flow in system piping:	358.6 gpm
Additional flow at/beyond source:	100 gpm
Total of all flows:	458.6 gpm
Pressure Required at Source:	95 psi
Pressure Available at Source:	
Surplus Pressure at Source:	
Number of heads flowing:	15
System Type:	Wet
Maximum velocity:	21.1 f/s

DESIGN BUILD AND WATER FLOW DATA

1. CONTRACTOR SHALL DESIGN AND BUILD SPRINKLER, AND FIRE ALARM SYSTEMS. SUBMIT DESIGN AND SHOP DRAWINGS TO ARCHITECT FOR REVIEW AND APPROVAL PRIOR TO SUBMITTAL TO BUILDING AND FIRE DEPARTMENT. WATER FLOW DATA MUST BE SUBMITTED WITH THE ORIGINAL BUILDING PLANS, MUST NOT BE OLDER THAN 3 MONTHS.

2. THE ORIGINAL WATER FLOW DATA WILL HELP TO IDENTIFY I ADEQUATE DPM/PSI IS AVAILABLE, AND HELP TO DETERMINE IF OTHER SOURCES OF WATER OR EQUIPMENT WILL BE REQUIRED OR ACCEPTABLE. IE: WATER TANKS, FIRE PUMPS, ETC. ADDITIONALLY, THIS DATA CAN BE USED TO APPROVE OR REJECT PLANS, FOR EXAMPLE THOSE THAT USE A SPRINKLER SYSTEM IN LIEU OF ONE-HOUR CONSTRUCTION OR TAKE THE SPRINKLER INCREASE. IF THE WATER DPM/PSE IS NOT AVAILABLE THEN ADDITIONAL MEASURES MUST BE PROVIDED OR THE BUILDING MUST BE CONSTRUCTED WITH ONE-HOUR CONSTRUCTION, REDUCE THE SIZE, ETC.

3. THE SPRINKLER PLANS ARE TO BE SUBMITTED AS A "DEFERRED SUBMITTAL" AND THE WATER FLOW DATA MUST BE ALSO BE SUBMITTED WITH THE SPRINKLER PLANS AND BE NO OLDER THAN 6 MONTHS, REGARDLESS OF WHEN THE ORIGINAL BUILDING PLANS AND WATER FLOW DATA WERE SUBMITTED. A COPY OF THE ORIGINAL TEST DATA MAY BE USED IF THE TEST DATA IS LESS THAN SIX MONTHS OLD.

EXAMPLE: THE BUILDING PLANS ARE SUBMITTED WITH WATER FLOW DATA THAT IS 2 MONTHS OLD. THIS MEETS THE TIME FRAME AND IS ACCEPTABLE. THE DEFERRED SUBMITTAL OF THE SPRINKLER PLANS IS SUBMITTED 9 MONTHS LATER. AN ADDITIONAL TEST WOULD BE REQUIRED AND THE WATER FLOW DATA FROM THAT TEST WOULD BE INCLUDED WITH THE DEFERRED SUBMITTAL SINCE THE TOTAL TIME FROM THE LAST TEST EXCEEDS THE SIX MONTH TIME FRAME.

4. ALL WATER FLOW DATA (TESTS) MUST BE CONDUCTED OR WITNESSED AND "WET" SIGNED BY THE LOCAL WATER PERVEYOR OR THE LOCAL FIRE AUTHORITY HAVING JURISDICTION.

5. ALL INFORMATION MUST BE LEGIBLE AND DATES SHOWN.

6. 2002 NFPA 13 FIGURE 10.10.1: A COPY OF COMPLETED AND SIGNED "CONTRACTOR'S MATERIALS & TEST CERTIFICATE FOR UNDERGROUND PIPING" SHALL BE INCLUDED IN THE SUBMITTAL

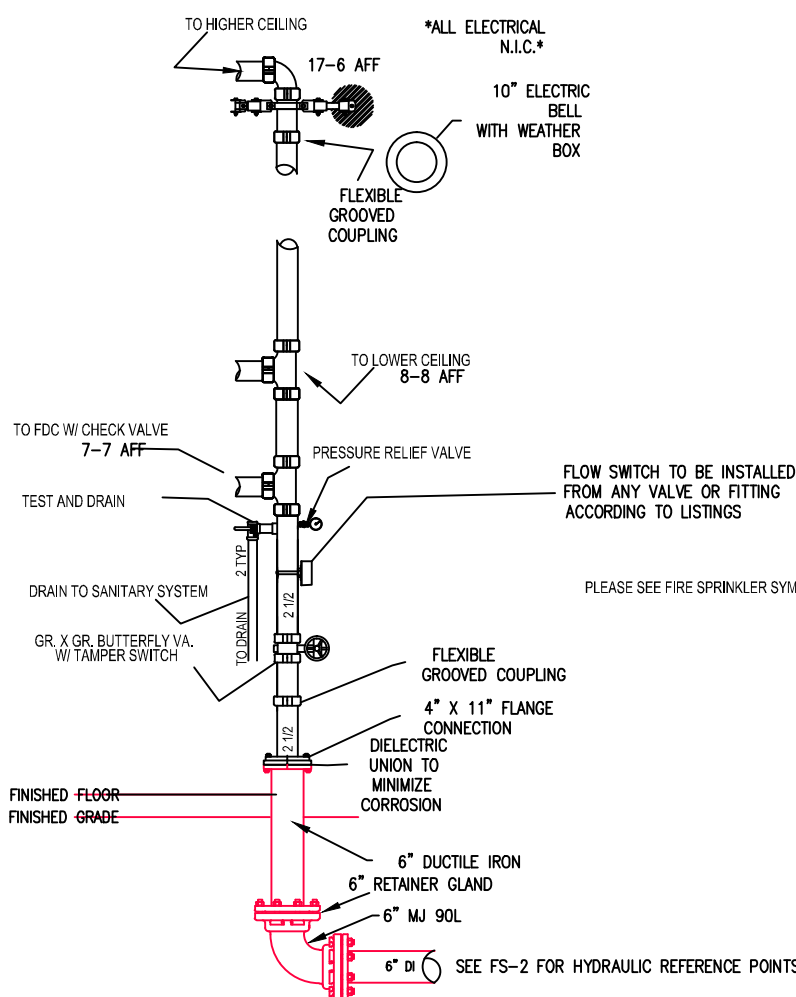
7. 2002 NFPA 13 SECTION 10.10.2.2: ALL PIPING AND ATTACHED APPURTENANCES SUBJECTED TO SYSTEM WORKING PRESSURE SHALL BE HYDROSTATICALLY TESTED AT 200 PSI OR 50 PSI IN EXCESS OF THE SYSTEM WORKING PRESSURE, WHICHEVER IS GREATER, AND SHALL MAINTAIN THAT PRESSURE WITHOUT LOSS FOR 2 HOURS. (WITNESSED BY PROJECT INSPECTOR).

8. 2002 NFPA 13 SEC. 6.2.9: PROVIDE SPARE SPRINKLER HEAD CABINET, SPRINKLER WRENCH AND NO FEWER THAN 6 SPARE SPRINKLER HEADS MATCHING THE TYPES AND TEMPERATURE RATING IN EACH PROTECTED AREA FOR SYSTEMS LESS THAN 300 SPRINKLERS. (12 SPARE SPRINKLER HEADS FOR SYSTEMS 300 TO 1000)

9. 2002 NFP1 13 SEC 9.3.6.3: THE END SPRINKLER ON EACH LINES SHALL BE RESTRAINED AGAINST EXCESSIVE VERTICAL AND LATERAL MOVEMENT.

10. 2007 CBC 903.4.2 AND NFPA 13 8.16.4.2.1-8.16.4.2.3: THE INSPECTOR'S TEST VALVE LOCATION SHALL BE INSTALLED WITHIN THE MOST HYDRAULICALLY REMOTE SYSTEM AREA. THE PIPE SIZE SHALL BE NO LESS THAN 1 INCH WITH A SMOOTH BORE, CORROSION-RESISTANT ORIFICE, PROVIDING THE EQUIVALENT FLOW OF THE SMALLEST ORIFICE OF THE SPRINKLER TYPES INSTALLED WITHIN THE SYSTEM. THE DISCHARGE SHALL BE TO THE EXTERIOR OF THE BUILDING.

11. 2002 NFPA 25.5.3.3.6: THE SPRINKLER FLOW SWITCH SHALL BE TESTED TO CONFIRM THAT WHEN THE INSPECTOR'S TEST VALVE IS ACTIVATED AN ALARM WILL SOUND NO MORE THAN 90 SECONDS AFTER INITIAL FLOW (WITNESSED BY THE PROJECT INSPECTOR)



NOTE: ALL "A" AND "B" NODES DENOTE THE BEGINNING AND ENDING OF VALVES.

4 MINIMUM RISER DETAIL
FS-2 SCALE: N.T.S.

REVISIONS

BY

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JOSEPH OAKLEY JR.

No. 15457

STATE OF CALIFORNIA

EXPIRATION DATE: 9-30-11

OAKLEY & OAKLEY

ARCHITECTS & STRUCTURAL ENGINEERS

1000 CALIFORNIA STREET, SUITE 615

OAKLAND, CA 94612

PAV 510.962.6043

PROJECT TITLE:

COMMUNITY CENTER

HARBOR PARK APARTMENTS

969 PORTER STREET, VALLEJO, CA 94560

DRAWING TITLE:

COMMUNITY CENTER ALARM & SPRINKLER PLAN - SECOND FLOOR PLAN

Date:

08/30/2011

Scale:

AS NOTED

Drawn:

STAFF

Checked:

RY

Job No.:

2011-09

Sheet:

FS2

Of

Sheets

Dec 12, 2012 - 4:42pm Z:\Year 2011 Jobs\2011-09.3 - Community Bldg\Drawings\Fire Sprinklers\FIRE-ALARM SPRINKLER FS3.dwg

FIRE ALARM WIRE LIST (POWER LIMITED)

ID	NO. OF CONDUCTORS	SIZE. AWG.	WIRE TYPE	DESCRIPTION
M	1 PAIR	#18	FPL TWISTED SHIELDED	SIGNALING LINE CIRCUIT
S	1 PAIR	#12	FPL	NOTIFICATION APPLIANCE CIRCUITS
P	1 PAIR	#14	FPL	24VDC POWER

NOTES: ALL WIRE SHALL BE PROTECTED IN DEDICATED FIRE ALARM CONDUIT UNLESS OTHERWISE NOTED. MAINTAIN 40% MAXIMUM CONDUIT FILL.

UNDERGROUND CABLES AND CONDUCTORS SHALL BE LISTED FOR USE IN WET LOCATIONS. (WEST PENN AQUASEAL OR APPROVED EQUAL.)

SEQUENCE OF OPERATION

	SMOKE DETECTOR	HEAT DETECTOR	GENERAL SYSTEM TROUBLE	WIRING SHORT OR OPEN CIRCUIT	VALVE FLOW SWITCH	VALVE TAMPER SWITCH	PULL STATION
INDICATE ALARM @ FACU	X	X			X		X
INDICATE TROUBLE @ FACU			X	X			
INDICATE SUPERVISORY SIGNAL @ FACU						X	
ACTIVATE NOTIFICATION HORN AND STROBES	X	X			X		X
TRANSMIT OFF-SITE COMMON ALARM SYSTEM	X	X			X		X
TRANSMIT OFF-SITE COMMON TROUBLE SYSTEM			X	X			
TRANSMIT OFF-SITE SUPERVISORY SIGNAL						X	

UNDERGROUND

PROVIDE:

1. DETAILS FOR NEW FIRE HYDRANT-FROM LOCAL FIRE AUTHORITY AND FLOW DATA. (GPM /PSI AND CALCULATIONS) PER CFC APPENDIX B AND TABLE B105.1, AND APPENDIX C FOR DISTRIBUTION AND LOCATIONS.
2. FDC, PIV, THRUST BLOCKS, CHECK VALVES, CHECK DETECTOR CHECK VALVE BFP ASSEMBLY (PROVIDE DETAILS FROM LOCAL FIRE AUTHORITY) AND SIZE OF WATER FEED AN LATERAL, AND SHOW ALL DEVICES ON PLAN.
3. DUCTILE PIPING WITH LAST 5 FEET OF BUILDING.
4. PRELIMINARY FIRE SPRINKLER CALCULATIONS
5. LOCATION OF PIV AND FDC BY LOCAL FIRE AUTHORITY.

Calculation results for Design Area 1 - ATTIC UPRIGHTS	
This system as shown on	company print no. dated
for HARBOR APARTMENTS	at 969 PORTER STREET
contract no.	is designed to discharge at a rate of 0.1 gpm/ft ² (L/min/m ²) of floor area over a maximum area of 1554 ft ² when supplied with water at a rate of 358.6 gpm at 95 psi at the base of the riser.
Hose stream allowance of	is included in the above.
Occupancy classification:	LIGHT
Commodity classification:	
Maximum storage height:	
Storage arrangement:	
Flow from In-Rack sprinklers:	0 gpm
Flow from Overhead sprinklers:	358.6 gpm
Flow from Inside Hoses:	0 gpm
Flow from Outside Hoses:	0 gpm
Other fixed flows:	0 gpm
Total flow in system piping:	358.6 gpm
Additional flow at/beyond source:	100 gpm
Total of all flows:	458.6 gpm
Pressure Required at Source:	95 psi
Pressure Available at Source:	
Surplus Pressure at Source:	
Number of heads flowing:	15
System Type:	Wet
Maximum velocity:	21.1 ft/s

DESIGN BUILD AND WATER FLOW DATA

1. CONTRACTOR SHALL DESIGN AND BUILD SPRINKLER, AND FIRE ALARM SYSTEMS. SUBMIT DESIGN AND SHOP DRAWINGS TO ARCHITECT FOR REVIEW AND APPROVAL PRIOR TO SUBMITTAL TO BUILDING AND FIRE DEPARTMENT. WATER FLOW DATA MUST BE SUBMITTED WITH THE ORIGINAL BUILDING PLANS, MUST NOT BE OLDER THAN 3 MONTHS.

2. THE ORIGINAL WATER FLOW DATA WILL HELP TO IDENTIFY I ADEQUATE DPM/PSI IS AVAILABLE, AND HELP TO DETERMINE IF OTHER SOURCES OF WATER OR EQUIPMENT WILL BE REQUIRED OR ACCEPTABLE. IE: WATER TANKS, FIRE PUMPS, ETC. ADDITIONALLY, THIS DATA CAN BE USED TO APPROVE OR REJECT PLANS, FOR EXAMPLE THOSE THAT USE A SPRINKLER SYSTEM IN LIEU OF ONE-HOUR CONSTRUCTION OR TAKE THE SPRINKLER INCREASE. IF THE WATER DPM/PSE IS NOT AVAILABLE THEN ADDITIONAL MEASURES MUST BE PROVIDED OR THE BUILDING MUST BE CONSTRUCTED WITH ONE-HOUR CONSTRUCTION, REDUCE THE SIZE, ETC.

3. THE SPRINKLER PLANS ARE TO BE SUBMITTED AS A "DEFERRED SUBMITTAL" AND THE WATER FLOW DATA MUST BE ALSO BE SUBMITTED WITH THE SPRINKLER PLANS AND BE NO OLDER THAN 6 MONTHS, REGARDLESS OF WHEN THE ORIGINAL BUILDING PLANS AND WATER FLOW DATA WERE SUBMITTED. A COPY OF THE ORIGINAL TEST DATA MAY BE USED IF THE TEST DATA IS LESS THAN SIX MONTHS OLD.

EXAMPLE: THE BUILDING PLANS ARE SUBMITTED WITH WATER FLOW DATA THAT IS 2 MONTHS OLD. THIS MEETS THE TIME FRAME AND IS ACCEPTABLE. THE DEFERRED SUBMITTAL OF THE SPRINKLER PLANS IS SUBMITTED 9 MONTHS LATER. AN ADDITIONAL TEST WOULD BE REQUIRED AND THE WATER FLOW DATA FROM THAT TEST WOULD BE INCLUDED WITH THE DEFERRED SUBMITTAL SINCE THE TOTAL TIME FROM THE LAST TEST EXCEEDS THE SIX MONTH TIME FRAME.

4. ALL WATER FLOW DATA (TESTS) MUST BE CONDUCTED OR WITNESSED AND "WET" SIGNED BY THE LOCAL WATER PERVEYOR OR THE LOCAL FIRE AUTHORITY HAVING JURISDICTION.

5. ALL INFORMATION MUST BE LEGIBLE AND DATES SHOWN.

6. 2002 NFPA 13 FIGURE 10.10.1: A COPY OF COMPLETED AND SIGNED "CONTRACTOR'S MATERIALS & TEST CERTIFICATE FOR UNDERGROUND PIPING" SHALL BE INCLUDED IN THE SUBMITTAL

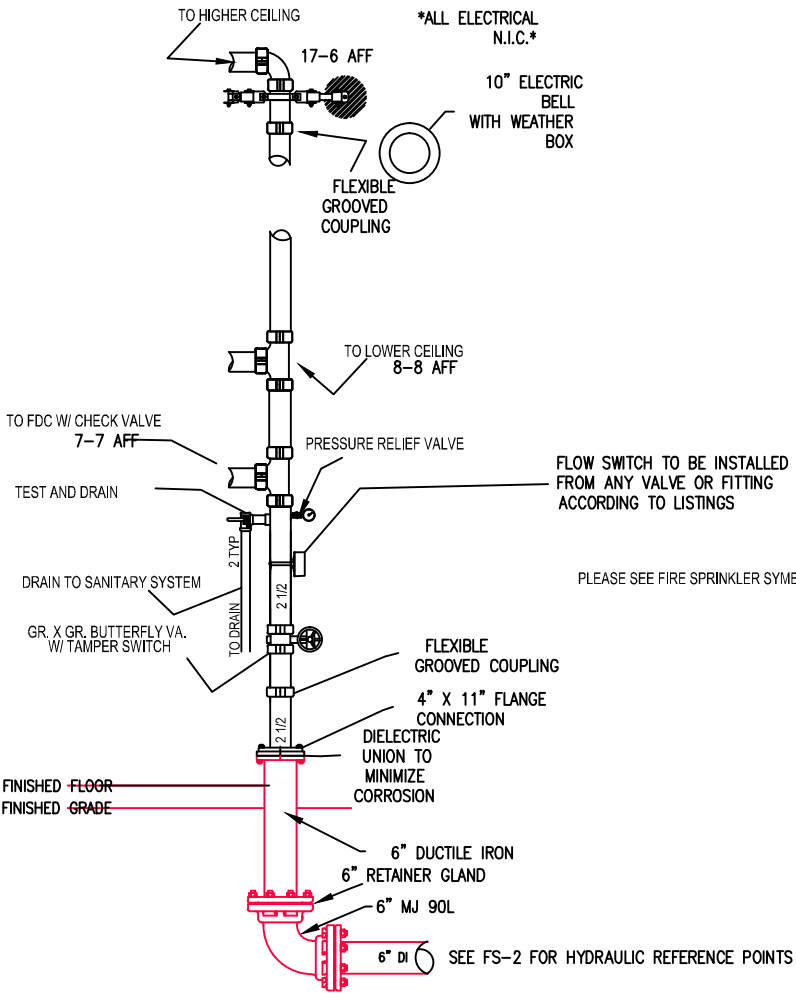
7. 2002 NFPA 13 SECTION 10.10.2.2: ALL PIPING AND ATTACHED APPURTENANCES SUBJECTED TO SYSTEM WORKING PRESSURE SHALL BE HYDROSTATICALLY TESTED AT 200 PSI OR 50 PSI IN EXCESS OF THE SYSTEM WORKING PRESSURE, WHICHEVER IS GREATER, AND SHALL MAINTAIN THAT PRESSURE WITHOUT LOSS FOR 2 HOURS. (WITNESSED BY PROJECT INSPECTOR).

8. 2002 NFPA 13 SEC. 6.2.9: PROVIDE SPARE SPRINKLER HEAD CABINET, SPRINKLER WRENCH AND NO FEWER THAN 6 SPARE SPRINKLER HEADS MATCHING THE TYPES AND TEMPERATURE RATING IN EACH PROTECTED AREA FOR SYSTEMS LESS THAN 300 SPRINKLERS. (12 SPARE SPRINKLER HEADS FOR SYSTEMS 300 TO 1000)

9. 2002 NFP1 13 SEC 9.3.6.3: THE END SPRINKLER ON EACH LINES SHALL BE RESTRAINED AGAINST EXCESSIVE VERTICAL AND LATERAL MOVEMENT.

10. 2007 CBC 903.4.2 AND NFPA 13 8.16.4.2.1-8.16.4.2.3: THE INSPECTOR'S TEST VALVE LOCATION SHALL BE INSTALLED WITHIN THE MOST HYDRAULICALLY REMOTE SYSTEM AREA. THE PIPE SIZE SHALL BE NO LESS THAN 1 INCH WITH A SMOOTH BORE, CORROSION-RESISTANT ORIFICE, PROVIDING THE EQUIVALENT FLOW OF THE SMALLEST ORIFICE OF THE SPRINKLER TYPES INSTALLED WITHIN THE SYSTEM. THE DISCHARGE SHALL BE TO THE EXTERIOR OF THE BUILDING.

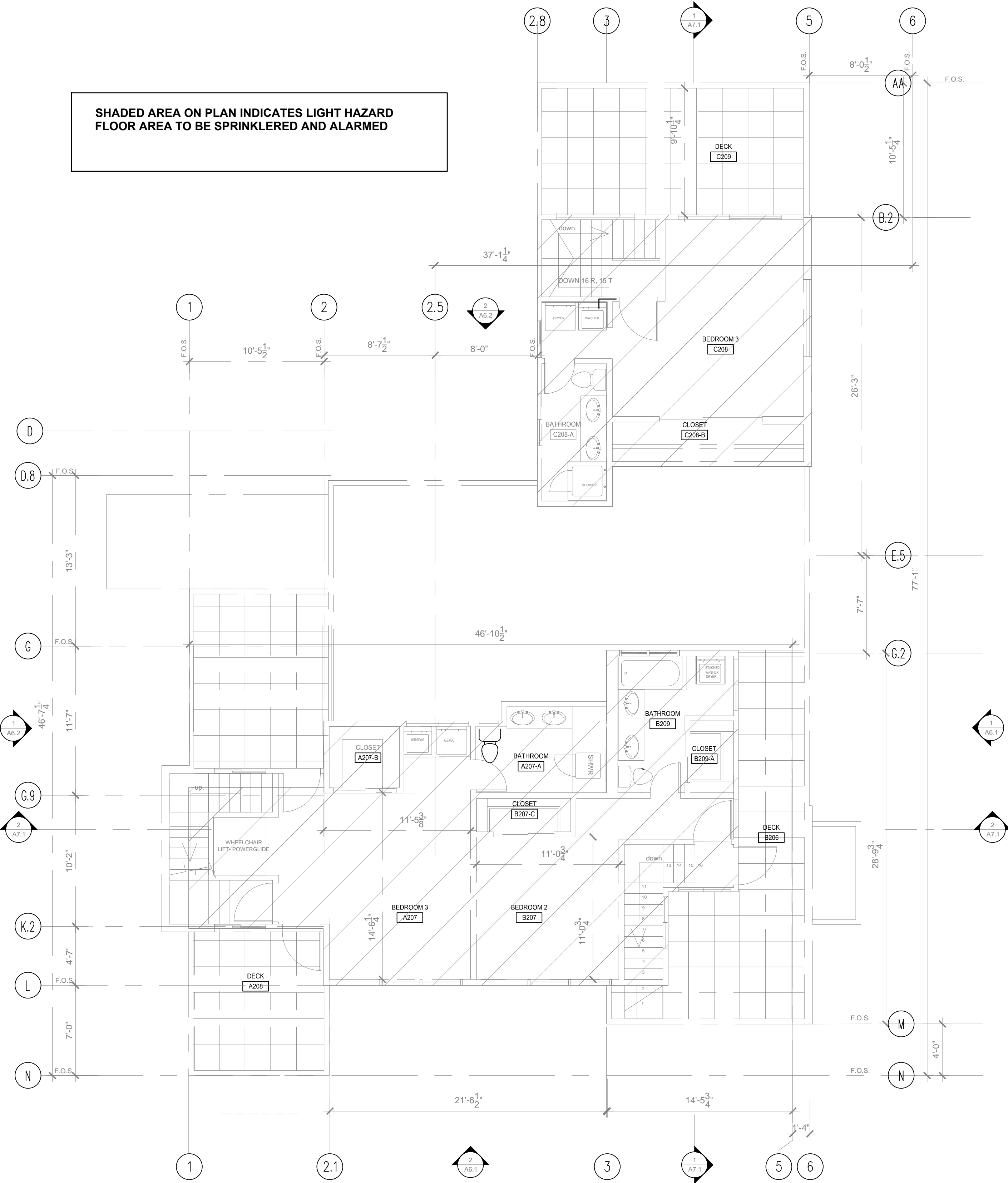
11. 2002 NFPA 25.5.3.3.6: THE SPRINKLER FLOW SWITCH SHALL BE TESTED TO CONFIRM THAT WHEN THE INSPECTOR'S TEST VALVE IS ACTIVATED AN ALARM WILL SOUND NO MORE THAN 90 SECONDS AFTER INITIAL FLOW (WITNESSED BY THE PROJECT INSPECTOR)



NOTE: ALL "A" AND "B" NODES DENOTE THE BEGINNING AND ENDING OF VALVES.

4 MINIMUM RISER DETAIL
FS-2 SCALE: N.T.S.

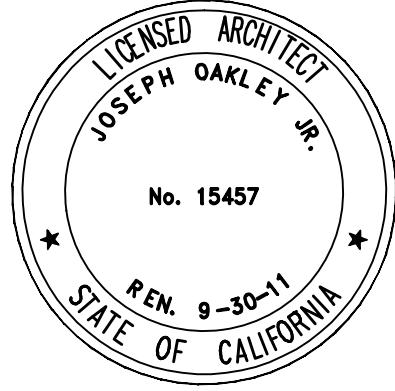
SHADED AREA ON PLAN INDICATES LIGHT HAZARD FLOOR AREA TO BE SPRINKLERED AND ALARMED



COMMUNITY CENTER ALARM & SPRINKLER PLAN - SECOND FLOOR PLAN

SCALE: 1/4" = 1'-0"

REVISIONS	BY



OAKLEY & OAKLEY
ARCHITECTS & STRUCTURAL ENGINEERS
1000 CALIFORNIA STREET, SUITE 615
OAKLAND, CA 94612
P.O. BOX 9621
P.O. BOX 9621
P.O. BOX 9621

PROJECT TITLE:
COMMUNITY CENTER
HARBOR PARK APARTMENTS
969 PORTER STREET, VALLEJO, CA 94560
DRAWING TITLE:

Date:	08/30/2011
Scale:	AS NOTED
Drawn:	STAFF
Checked:	RY
Job No.:	2011-09

Sheet:

FS3

Cf Sheets

CERTIFICATE OF COMPLIANCE

(Part 1 of 2) MECH-1

PROJECT NAME

Community Building

PROJECT ADDRESS

969 Porter Street

PRINCIPAL DESIGNER-MECHANICAL

Joseph Oakley

TELEPHONE

510-562-6043

DOCUMENTATION AUTHOR

Joseph Oakley

DATE OF PLANS

8/30/2011

BUILDING TYPE

☒ NONRESIDENTIAL

PHASE OF CONSTRUCTION

☒ NEW CONSTRUCTION

METHOD OF MECHANICAL COMPLIANCE

☒ PRESCRIPTIVE

PROOF OF ENVELOPE COMPLIANCE

☐ PREVIOUS ENVELOPE PERMIT

STATEMENT OF COMPLIANCE

This Certificate of Compliance lists the building features and performance specifications need to comply with Title 24, Parts 1 and 6 of the California Code of Regulations. This certificate applies only to building mechanical requirements.

The documentation preparer hereby certifies that the documentation is accurate and complete.

The Principal Mechanical Designer hereby certifies that the proposed building design represented in this set of construction documents is consistent with the other compliance forms and worksheets, with the specifications, and with any other calculations submitted with this permit application. The proposed building has been designed to meet the mechanical requirements contained in the applicable parts of Sections 110 through 115, 120 through 124, 140 through 142, 144 and 145.

Please check one:

☒ I hereby affirm that I am eligible under the provisions of Division 3 of the Business and Professions Code to sign this document as the person responsible for its preparation; and that I am licensed in the State of California as a civil engineer or mechanical engineer, or I am a licensed architect.

☐ I affirm that I am eligible under the exemption to Division 3 of the Business and Professions Code by Section 5537.2 or 6737.3 to sign this document as the person responsible for its preparation; and that I am a licensed contractor performing this work.

☐ I affirm that I am eligible under the exemption to Division 3 of the Business and Professions Code to sign this document because it pertains to a structure or type of work described pursuant to Business and Professions Code sections 5537, 5538, and 6737.1.

(These sections of the Business and Professions Code are printed in full in the Nonresidential Manual.)

DATE

1-14-2012

BUILDING PERMIT

CHECKED BY/DATE

ENFORCEMENT AGENCY USE

DOCUMENTATION AUTHOR

Joseph Oakley

SIGNATURE

Joseph Oakley

DATE

1-14-2012

LIC. #

C15457

MECHANICAL MANDATORY MEASURES

Indicate location on plans of Note Block for Mandatory Measures

INSTRUCTIONS TO APPLICANT

For Detailed Instructions on the use of this and all Energy Efficiency Standards compliance forms, please refer to the Nonresidential Manual published by the California Energy Commission.

MECH-1: Required on plans for all submittals. Part 2 may be incorporated in schedules on plans.

MECH-2: Required for all submittals, but may be incorporated in schedules on plans.

MECH-3: Required for all submittals unless required ventilation rates and airflow are shown on plans, see 4.3.4.

MECH-4: Required for all prescriptive submittals.

MECH-5: Optional. Performance use only for mechanical distribution summary.

Nonresidential Compliance Forms

August 2001

CERTIFICATE OF COMPLIANCE

(Part 2 of 2) MECH-1

PROJECT NAME

COMMUNITY BUILDING

DATE

01-14-2012

SYSTEM FEATURES

SYSTEM NAME	MECHANICAL SYSTEMS	NOTE TO FIELD Bldg. Dept. Use
TIME CONTROL		
SETBACK CONTROL		
ISOLATION ZONES		
HEAT PUMP THERMOSTAT?		
ELECTRIC HEAT?		
FAN CONTROL		
VAV MINIMUM POSITION CONTROL?		
SIMULTANEOUS HEAT/COOL?		
HEAT AND COOL SUPPLY RESET?		
HEAT REJECTION CONTROL		
VENTILATION		
OUTDOOR DAMPER CONTROL?		
ECONOMIZER TYPE		
DESIGN O.A. CFM (MECH-3, COLUMN H)		
HEATING EQUIPMENT TYPE		
HIGH EFFICIENCY? IF YES ENTER EFF. #		
MAKE AND MODEL NUMBER		
COOLING EQUIPMENT TYPE		
HIGH EFFICIENCY? IF YES ENTER EFF. #		
MAKE AND MODEL NUMBER		
PIPE INSULATION REQUIRED?		
PIPE/DUCT INSULATION PROTECTED?		
HEATING DUCT LOCATION		
COOLING DUCT LOCATION		
VERIFIED SEALED DUCTS IN CEILING/ROOF SPACE		

TABLE OF CODES: Enter code from table below into columns above.

	Y:Yes	N:No
HEAT PUMP THERMOSTAT?		
ELECTRIC HEAT?		
VAV MINIMUM POSITION CONTROL?		
HEAT AND COOL SUPPLY RESET?		
SIMULTANEOUS HEAT/COOL?		
HIGH EFFICIENCY?		
PIPE INSULATION REQUIRED?		
PIPE/DUCT INSULATION PROTECTED?		
HEATING DUCT LOCATION		
COOLING DUCT LOCATION		
SEALED DUCTS IN CEILING/ROOF SPACE?		

TIME CONTROL

SETBACK CTRL.

ISOLATION ZONES

FAN CONTROL

VENTILATION

OUTDOOR DAMPER

ECONOMIZER

O.A. CFM

Nonresidential Compliance Forms

August 2001

CERTIFICATE OF COMPLIANCE

(Part 2 of 2) MECH-1

PROJECT NAME

COMMUNITY BUILDING

DATE

01-14-2012

SYSTEM FEATURES

SYSTEM NAME	MECHANICAL SYSTEMS	NOTE TO FIELD Bldg. Dept. Use
TIME CONTROL		
SETBACK CONTROL		
ISOLATION ZONES		
HEAT PUMP THERMOSTAT?		
ELECTRIC HEAT?		
FAN CONTROL		
VAV MINIMUM POSITION CONTROL?		
SIMULTANEOUS HEAT/COOL?		
HEAT AND COOL SUPPLY RESET?		
HEAT REJECTION CONTROL		
VENTILATION		
OUTDOOR DAMPER CONTROL?		
ECONOMIZER TYPE		
DESIGN O.A. CFM (MECH-3, COLUMN H)		
HEATING EQUIPMENT TYPE		
HIGH EFFICIENCY? IF YES ENTER EFF. #		
MAKE AND MODEL NUMBER		
COOLING EQUIPMENT TYPE		
HIGH EFFICIENCY? IF YES ENTER EFF. #		
MAKE AND MODEL NUMBER		
PIPE INSULATION REQUIRED?		
PIPE/DUCT INSULATION PROTECTED?		
HEATING DUCT LOCATION		
COOLING DUCT LOCATION		
VERIFIED SEALED DUCTS IN CEILING/ROOF SPACE		

TABLE OF CODES: Enter code from table below into columns above.

	Y:Yes	N:No
HEAT PUMP THERMOSTAT?		
ELECTRIC HEAT?		
VAV MINIMUM POSITION CONTROL?		
HEAT AND COOL SUPPLY RESET?		
SIMULTANEOUS HEAT/COOL?		
HIGH EFFICIENCY?		
PIPE INSULATION REQUIRED?		
PIPE/DUCT INSULATION PROTECTED?		
HEATING DUCT LOCATION		
COOLING DUCT LOCATION		
SEALED DUCTS IN CEILING/ROOF SPACE?		

TIME CONTROL

SETBACK CTRL.

ISOLATION ZONES

FAN CONTROL

VENTILATION

OUTDOOR DAMPER

ECONOMIZER

O.A. CFM

Nonresidential Compliance Forms

August 2001

WATER SIDE SYSTEM REQUIREMENTS

(Part 2 of 3) MECH-2C

PROJECT NAME

COMMUNITY BUILDING

DATE

01-14-2012

WATER SIDE SYSTEMS: Chillers, Towers, Boilers, Hydronic Loops

Item or System Tags (i.e. AC-1, RTU-1, HP-1, CT-1, etc...)	No. of Systems

MANDATORY MEASURES

Equipment Efficiency

Pipe Insulation

PRESCRIPTIVE MEASURES

Cooling Tower Fan Controls

Cooling Tower Flow Controls

Variable Flow System Design

Chiller and Boiler Isolation

CHW and HHW Reset Controls

WLHP Isolation Valves

YSD on CHW, CW & WLHP Pumps >5HP

DP Sensor Location

1. The Proposed equipment need to match the building plans schedule or specifications. If a requirement is not applicable, put "N/A" in the column next to applicable section.

2. For each chiller, cooling tower, boiler, and hydronic loop (or groups of similar equipment) fill in the reference to sheet number and/or specification section and paragraph number where the required features are documented. If a requirement is not applicable, put "N/A" in the column next to applicable section.

Nonresidential Compliance Forms

March 2010

SERVICE HOT WATER & POOL/SPA REQUIREMENTS

(Part 3 of 3) MECH-2C

PROJECT NAME

COMMUNITY BUILDING

DATE

01-14-2012

Service Hot Water, Pool Heating

Item or System Tags (i.e. WH-1, WHP, DHW, etc...)	No. of Systems

MANDATORY MEASURES

SERVICE HOT WATER

Certified Water Heater

Water Heater Efficiency

Service Water Heating Installation

Pipe Insulation

POOL AND SPA

Pool and Spa Efficiency and Control

Pool and Spa Electric Resisting Heating

Pool and Spa Installation

Pool Heater - No Pilot Light

Spa Heater - No Pilot Light

Pipe Insulation

1. The Proposed equipment need to match the building plans schedule or specifications. If a requirement is not applicable, put "N/A" in the column next to the measure.

2. For each water heater, pool heat and domestic water loop (or groups of similar equipment) fill in the reference to sheet number and/or specification section and paragraph number where the required features are documented. If a requirement is not applicable, put "N/A" in the column.

Nonresidential Compliance Forms

August 2009

REVISIONS

BY

JOSEPH OAKLEY JR.

No. 15457

REN. 9-30-11

STATE OF CALIFORNIA

PROJECT TITLE:

COMMUNITY CENTER

HARBOR PARK APARTMENTS

969 PORTER STREET, VALLEJO, CA 94560

DRAWING TITLE:

Date:

08/30/2011

Scale:

AS NOTED

Drawn:

STAFF

Checked:

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Job No.:

2011-09

Sheet:

OF

T24.3

SHEETS

Mandatory Measures Summary				MF-1R
Residential				(Page 1 of 3)
Site Address:	HARBOR PARK APARTMENTS	Enforcement Agency:	3	Date: 12-10-2012

NGLC: Low-rise residential buildings subject to the Standards must comply with all applicable mandatory measures listed, regardless of the compliance approach. More stringent energy measures listed on the Certificate of Compliance (CF-1R, CF-1R-ADD, or CF-1R-ALT Form) shall supersede the items marked with an asterisk () below. This Mandatory Measures Summary shall be incorporated into the permit documents and the applicable features shall be considered by all parties as minimum component performance specifications whether they are shown elsewhere in the documents or in this summary. Submit all applicable sections of the MF-1R Form with plans.*

DESCRIPTION

Building Envelope Measures:

- (1160a1): Doors and windows between conditioned and unconditioned spaces are manufactured to limit air leakage.
(1160a4): Fenestration products (except field-fabricated windows) have a label listing the certified U-factor, certified Solar Heat Gain Coefficient (SHGC), and infiltration that meets the requirements of 110-111(a).
(117): Exterior doors and windows are weather-stripped; all joints and penetrations are caulked and sealed.
(118a): Insulation specified or installed meets Standards for Insulating Material. Indicate type and include on CF-4R Form.
(118b): The thermal emittance and solar reflectance values of the cool roofing material meets the requirements of (118)(c) when the installation of a Cool Roof is specified on the CF-1R Form.

*§150(a): Minimum R-19 insulation in wood-frame ceiling or equivalent U-factor.
(150b): Loose fill insulation shall conform with manufacturer's installed design labeled R-Value.
(1510c): Minimum R-13 insulating wall or equivalent U-factor.
(1510d): Minimum R-13 insulation in rafter wood-frame floor or equivalent U-factor.
(1510e): Air sealing system is tested, labeled, and installed according to ASTM E1707-95(2000) when specified on the CF-1R Form.

(1510f): Mandatory Vapor barrier installed in Climate Zones 14 or 16.
(1510g): Water vapor permeance rate for slab edge insulation material does not exceed 1.0 perm (greater than 0.3% water vapor permeance rate is no greater than 2.0 perm) and shall be protected from physical damage and UV light deterioration.

Fireplaces, Decorative Gas Appliances and Gas Log Measures:

- (150a)(1A): Masonry or factory-built fireplaces have a closable metal or glass door covering the entire opening of the firebox.
(1510)(1B): Masonry or factory-built fireplaces have a combustion outside air intake, which is at least six square inches in area and is equipped with a readily accessible, operable, and light-tight damper and/or an combustion-air control device.
(150c2): Continuous burning pilot lights and the use of indoor air for cooling a firebox jacket, when that indoor air is vented to the outside of the building, are prohibited.

Space Conditioning, Water Heating and Plumbing System Measures:

- (110-111): HVAC equipment, water heaters, showereads, faucets and all other regulated appliances are certified by the Energy Commission.
(1130e5): Water heating recirculation loops serving multiple dwelling units and High-Rise residential occupancies meet the air release valve, backflow prevention, pump isolation valve, and recirculation loop connection requirements of (1130c5).
(115): Continuously burning pilot lights are prohibited for natural gas; fan-type central furnaces, baseboard cooling appliances (appliances with an electrical supply voltage connection with pilot lights that consume less than 150 Btu/hr are exempt), and pool and spa heaters.

(1510b): Heating and/or cooling loads are calculated in accordance with ASHRAE, SMACNA or ACCA.
(1510c): Heating systems are equipped with thermostats that meet the setback requirements of Section 112(c).
(150)(1A): Storage gas water heaters rated with an Energy Factor no greater than the federal minimal standard are externally wrapped with insulation having an installed thermal resistance of R-12 or greater.

(1510)(1B): Unfired storage tanks, such as storage tanks or backup tanks for solar water-heating systems, or other indirect hot water tanks have R-12 external insulation or R-16 internal insulation where the internal insulation R-value is indicated on the exterior of the tank.
(1510)(2): First 5 feet of hot and cold water pipes closest to water heaters are, non-recirculating systems, and entire length of recirculating sections of hot water pipes are insulated per Standards Table 150-A.

(1510)(2): Cooling system piping (including, but not limited to, or brine lines) land piping installed between heating source and indirect heat water tank shall be insulated to Table 150-B and Equation 150-A.
(1510)(2): Pipe insulation for steam hydronic heating systems or hot water systems >15 psi, meet the requirements of Standards Table 123-A.
(150)(3A): Insulation is protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind.

(150)(3A): Insulation for chilled water piping and refrigerant suction lines includes a vapor retardant or is enclosed entirely in conditioned space.
(150)(3A): Insulation for chilled water piping and refrigerant suction lines includes a vapor retardant or is enclosed entirely in conditioned space.

2008 Residential Compliance Form

Mandatory Measures Summary				MF-1R
Residential				(Page 2 of 3)
Site Address:	HARBOR PARK APARTMENTS	Enforcement Agency:	3	Date: 2

(150)(4): Solar water-heating systems and/or collectors are certified by the Solar Rating and Certification Corporation.

Ducts and Fans Measures:

(1510m1): All air-distribution system ducts and plenums installed, are sealed and insulated to meet the requirements of CMC Sections 601, 602, 603, 604, 605 and Standard 6-5, supply-air and return-air ducts and plenums are insulated to a minimum installed level of R-4.2 or enclosed entirely in conditioned space. Openings shall be sealed with mastic, tape or other duct-closure system that meets the applicable requirements of UL 181, UL 181A, or UL 110B internal insulation where the internal insulation R-value is indicated on the exterior of the tank.
(1510m2): First 5 feet of hot and cold water pipes closest to water heaters are, non-recirculating systems, and entire length of recirculating sections of hot water pipes are insulated per Standards Table 150-A.

(1510m3): Building cavities, support platforms for air handlers, and plenums defined or constructed with materials other than sealed sheet metal, duct board or flexible duct shall not be used for conveying conditioned air. Building cavities and support platforms may contain ducts installed in cavities and support platforms shall not be compressed to cause reductions in the cross-sectional area of the ducts.
(1510m3): Joints and seams of duct systems and their components shall not be sealed with cloth back rubber adhesive duct tapes unless such tape is used in combination with mastic and draw bands.

(1510m7): Exhaust fan systems have back draft or automatic dampers.
(1510m8): Gravity ventilating systems serving conditioned space have either automatic or readily accessible, manually operated dampers.
(1510m9): Insulation shall be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind, and from insulation shall be protected as above or painted with a coating that is water resistant and provides shielding from solar radiation that can cause degradation of the material.

(1510m10): Flexible ducts cannot have porous inner cores.
(1510m): All dwelling units shall meet the requirements of ANSI/ASHRAE Standard 62.2-2007 Ventilation and Acceptable Indoor Air Quality in Low-Rise Residential Buildings. Window opening is not a permissible method of providing the Whole Building Ventilation required in Section 6 of that Standard.

Pool and Spa Heating Systems and Equipment Measures:

(1146a): Any pool or spa heating system shall be certified to have a thermal efficiency that complies with the Appliance Efficiency Regulations.
(1146b): Pools shall have directional inlets that adequately mix the pool water, and a time switch that will allow all pumps to be set or programmed to run only during off-peak electric demand periods.

(1146c): Outdoor pools or spas that have a heat pump or gas heater shall have a cover.
(1146d): Pools shall have directional inlets that adequately mix the pool water, and a time switch that will allow all pumps to be set or programmed to run only during off-peak electric demand periods.

(1510b): Residential pool systems or equipment meet the pump sizing, flow rate, piping, filters, and valve requirements of (1510b).
(1510b): Residential pool systems or equipment meet the pump sizing, flow rate, piping, filters, and valve requirements of (1510b).

Residential Lighting Measures:

(1510)(3): High-efficiency luminaires or LED Light Engine with Integral Heat Sink has an efficacy that is no lower than the efficacies contained in Table 150-C and is not a low efficacy luminaire as determined by (1510)(2).
(1510)(3): The wattage of permanently installed luminaires shall be determined as specified by (1510)(2).
(1510)(3): Ballasts for fluorescent lamps rated 15 Watts or greater shall be electronic and shall have an output frequency no less than 20 kHz.
(1510)(3): Permanently installed night lights and night lights integral to a permanently installed luminaire or exhaust fan shall contain only high efficacy lamps meeting the minimum efficacies contained in Table 150-C and shall contain a line-voltage socket or low-voltage lamp holder. OR shall be rated to consume no more than five watts of power as determined by (1510)(2), and shall contain a medium screw-base socket.

(1510)(3): Lighting integral to exhaust fans, in rooms other than kitchens, shall meet the applicable requirements of (1510)(3).
(1510)(3): All switching devices and controls shall meet the requirements of (1510)(3).
(1510)(3): A minimum of 50 percent of the total rated wattage of permanently installed lighting in kitchens shall be high efficiency.
(EXCEPTION): Up to 50 Watts for dwelling units less than or equal to 2,500 ft² or 100 Watts for dwelling units larger than 2,500 ft² may be exempt from the 50% high efficiency requirement where all low efficacy luminaires in the kitchen are controlled by a manual on-occupant sensor, dimmer, energy management system (EMCS), or a multi-sensor programmable control system; and all permanently installed luminaires in garages, laundry rooms, closets greater than 70 square feet, and utility rooms are high efficiency and controlled by a manual-on-occupant sensor.

(1510)(3): Permanently installed lighting that is internal to cabinets shall use no more than 20 watts of power per linear foot of illuminated cabinet.
(1510)(3): Permanently installed luminaires in bathrooms, attached and detached garages, laundry rooms, closets and utility rooms shall be high efficiency.

2008 Residential Compliance Form

Mandatory Measures Summary				MF-1R
Residential				(Page 3 of 3)
Site Address:	HARBOR PARK APARTMENTS	Enforcement Agency:	3	Date: 2

(EXCEPTION 1): Permanently installed low efficacy luminaires shall be allowed provided that they are controlled by a manual-on-occupant sensor certified to comply with the applicable requirements of (119).
(EXCEPTION 2): Permanently installed low efficacy luminaires in closets less than 70 square feet are not required to be controlled by a manual-on-occupant sensor.

(1510)(3): Permanently installed luminaires located in rooms or areas other than in kitchens, bathrooms, garages, laundry rooms, closets, and utility rooms shall be high efficiency luminaires.
(EXCEPTION 1): Permanently installed low efficacy luminaires shall be allowed provided they are controlled by either a dimmer switch that complies with the applicable requirements of (119), or by a manual-on-occupant sensor that complies with the applicable requirements of (119).
(EXCEPTION 2): Lighting in detached storage building less than 1000 square feet located on a residential lot is not required to comply with (1510)(3).

(1510)(3): Luminaires recessed into installed ceilings shall be listed for zero clearance installation (C) by Underwriters Laboratories or other nationally recognized testing laboratory; and have a label that certifies the luminaire is airtight with air leakage less than 2 CFM at 25 Pascals when tested in accordance with ASTM E283; and be sealed with a gasket or caulk between the luminaire housing and ceiling.
(1510)(3): Luminaires providing outdoor lighting, including lighting for private patios in two-story residential buildings with four or more dwelling units, entrances, balconies, and porches, which are permanently mounted to a residential building or to other buildings on the same lot shall be high efficiency.
(EXCEPTION 1): Permanently installed outdoor low efficacy luminaires shall be allowed provided that they are controlled by a manual-on-occupant sensor, a photocell not having an override or bypass switch that disables the photocell; OR an automatic time clock not having an override or bypass switch that disables the automatic time clock; OR an energy management control system (EMCS) not having an override or bypass switch that allows the luminaire to be always on.
(EXCEPTION 2): Outdoor luminaires used to comply with Exception to (1510)(3) may be controlled by a temporary override switch which bypasses the motion sensing function provided that the motion sensor is automatically deactivated within six hours.

(EXCEPTION 3): Permanently installed luminaires in or around swimming pool, water features, or other location subject to Article 680 of the California Electrical Code need not be high efficiency luminaires.
(1510)(4): Internally illuminated address signs shall comply with Section 148. OR not contain a screw-base socket, and consume no more than five watts of power as determined according to (1510)(2).

(1510)(5): Lighting for parking lots and spaces with a total of 10 or more vehicles per stall shall comply with the applicable requirements in Sections 130, 132, 134, and 147. Lighting for parking garages for 8 or more vehicles shall comply with the applicable requirements of Sections 130, 131, 134, and 146.
(1510)(6): Permanently installed lighting in the enclosed, non-dwelling spaces of low-rise residential buildings with four or more dwelling units shall be high efficiency luminaires.
(EXCEPTION): Permanently installed low efficacy luminaires shall be allowed provided that they are controlled by an occupant sensor(s) certified to comply with the applicable requirements of (119).

Prescriptive Certificate of Compliance: Residential				CF-1R
Newly Constructed Buildings and Additions Greater Than 1,000 ft ²				(Page 1 of 5)
Project Name:	HARBOR PARK APARTMENTS	Climate Zone #	3	# of Stories 2

Site Address: 969 PORTER ST., Enforcement Agency: Date: 12-10-2012

Building Type (Single Family, Multi-Family, Conditional Floor Area (CFA): 2504

Project Type (B New Building Construction, C New Addition, greater than 1,000 ft² or less than 1,000 ft² must comply with Component Package D

Component Package (Check one) (1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12) (13) (14) (15) (16) (17) (18) (19) (20) (21) (22) (23) (24) (25) (26) (27) (28) (29) (30) (31) (32) (33) (34) (35) (36) (37) (38) (39) (40) (41) (42) (43) (44) (45) (46) (47) (48) (49) (50) (51) (52) (53) (54) (55) (56) (57) (58) (59) (60) (61) (62) (63) (64) (65) (66) (67) (68) (69) (70) (71) (72) (73) (74) (75) (76) (77) (78) (79) (80) (81) (82) (83) (84) (85) (86) (87) (88) (89) (90) (91) (92) (93) (94) (95) (96) (97) (98) (99) (100) (101) (102) (103) (104) (105) (106) (107) (108) (109) (110) (111) (112) (113) (114) (115) (116) (117) (118) (119) (120) (121) (122) (123) (124) (125) (126) (127) (128) (129) (130) (131) (132) (133) (134) (135) (136) (137) (138) (139) (140) (141) (142) (143) (144) (145) (146) (147) (148) (149) (150) (151) (152) (153) (154) (155) (156) (157) (158) (159) (160) (161) (162) (163) (164) (165) (166) (167) (168) (169) (170) (171) (172) (173) (174) (175) (176) (177) (178) (179) 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CERTIFICATE OF COMPLIANCE

(Part 1 of 2) MECH-1

PROJECT NAME

Community Building

PROJECT ADDRESS

969 Porter Street

PRINCIPAL DESIGNER-MECHANICAL

Joseph Oakley

DOCUMENTATION AUTHOR

Joseph Oakley

TELEPHONE

510-562-6043

TELEPHONE

510-562-6043

Building Permit

Checked by/Date

Enforcement Agency Use

GENERAL INFORMATION

DATE OF PLANS

8/30/2011

BUILDING CONDITIONED FLOOR AREA

2175

CLIMATE ZONE

3

BUILDING TYPE

☒ NONRESIDENTIAL ☐ HIGH RISE RESIDENTIAL ☐ HOTEL/MOTEL/GUEST ROOM

PHASE OF CONSTRUCTION

☒ NEW CONSTRUCTION ☐ ADDITION ☐ ALTERATION ☐ UNCONDITIONED (file affidavit)

METHOD OF MECHANICAL COMPLIANCE

☒ PRESCRIPTIVE ☐ PERFORMANCE

PROOF OF ENVELOPE COMPLIANCE

☐ PREVIOUS ENVELOPE PERMIT ☒ ENVELOPE COMPLIANCE ATTACHED

STATEMENT OF COMPLIANCE

This Certificate of Compliance lists the building features and performance specifications need to comply with Title 24, Parts 1 and 6 of the California Code of Regulations. This certificate applies only to building mechanical requirements.

The documentation preparer hereby certifies that the documentation is accurate and complete.

DOCUMENTATION AUTHOR

Joseph Oakley

SIGNATURE

Joseph Oakley

DATE

1-14-2012

The Principal Mechanical Designer hereby certifies that the proposed building design represented in this set of construction documents is consistent with the other compliance forms and worksheets, with the specifications, and with any other calculations submitted with this permit application. The proposed building has been designed to meet the mechanical requirements contained in the applicable parts of Sections 110 through 115, 120 through 124, 140 through 142, 144 and 145.

Please check one:

☒ I hereby affirm that I am eligible under the provisions of Division 3 of the Business and Professions Code to sign this document as the person responsible for its preparation; and that I am licensed in the State of California as a civil engineer or mechanical engineer, or I am a licensed architect.

☐ I affirm that I am eligible under the exemption to Division 3 of the Business and Professions Code by Section 5537.2 or 6737.3 to sign this document as the person responsible for its preparation; and that I am a licensed contractor performing this work.

☐ I affirm that I am eligible under the exemption to Division 3 of the Business and Professions Code to sign this document because it pertains to a structure or type of work described pursuant to Business and Professions Code sections 5537, 5538, and 6737.1.

(These sections of the Business and Professions Code are printed in full in the Nonresidential Manual.)

PRINCIPAL MECHANICAL DESIGNER-NAME

Joseph Oakley

SIGNATURE

Joseph Oakley

DATE

1-14-2012

LIC. #

C15457

MECHANICAL MANDATORY MEASURES

Indicate location on plans of Note Block for Mandatory Measures

T24.2

INSTRUCTIONS TO APPLICANT

For Detailed Instructions on the use of this and all Energy Efficiency Standards compliance forms, please refer to the Nonresidential Manual published by the California Energy Commission.

MECH-1: Required on plans for all submittals. Part 2 may be incorporated in schedules on plans.

MECH-2: Required for all submittals, but may be incorporated in schedules on plans.

MECH-3: Required for all submittals unless required ventilation rates and airflow are shown on plans, see 4.3.4.

MECH-4: Required for all prescriptive submittals.

MECH-5: Optional. Performance use only for mechanical distribution summary.

Nonresidential Compliance Forms

August 2001

CERTIFICATE OF COMPLIANCE

(Part 2 of 2) MECH-1

PROJECT NAME

COMMUNITY BUILDING

DATE

01-14-2012

SYSTEM FEATURES

SYSTEM NAME	MECHANICAL SYSTEMS	NOTE TO FIELD Bldg. Dept. Use
TIME CONTROL		
SETBACK CONTROL		
ISOLATION ZONES		
HEAT PUMP THERMOSTAT?		
ELECTRIC HEAT?		
FAN CONTROL		
VAV MINIMUM POSITION CONTROL?		
SIMULTANEOUS HEAT/COOL?		
HEAT AND COOL SUPPLY RESET?		
HEAT REJECTION CONTROL		
VENTILATION		
OUTDOOR DAMPER CONTROL?		
ECONOMIZER TYPE		
DESIGN O.A. CFM (MECH-3, COLUMN H)		
HEATING EQUIPMENT TYPE		
HIGH EFFICIENCY? IF YES ENTER EFF. #		
MAKE AND MODEL NUMBER		
COOLING EQUIPMENT TYPE		
HIGH EFFICIENCY? IF YES ENTER EFF. #		
MAKE AND MODEL NUMBER		
PIPE INSULATION REQUIRED?		
PIPE/DUCT INSULATION PROTECTED?		
HEATING DUCT LOCATION R-VALUE		
COOLING DUCT LOCATION R-VALUE		
VERIFIED SEALED DUCTS IN CEILING/ROOF SPACE %FAN FLOW		

TABLE OF CODES: Enter code from table below into columns above.

	Y:Yes	N:No	TIME CONTROL	SETBACK CTRL.	ISOLATION ZONES	FAN CONTROL
HEAT PUMP THERMOSTAT?			S: Prog. Switch O: Occupancy Sensor M: Manual Timer	B: Both C: Cooling H: Heating	Enter number of Isolation Zones	I: Inlet Vanes P: Variable Pitch V: VFD O: Other C: Curve
ELECTRIC HEAT?						
VAV MINIMUM POSITION CONTROL?						
HEAT AND COOL SUPPLY RESET?						
SIMULTANEOUS HEAT/COOL?						
HIGH EFFICIENCY?						
PIPE INSULATION REQUIRED?						
PIPE/DUCT INSULATION PROTECTED?						
HEATING DUCT LOCATION						
COOLING DUCT LOCATION						
SEALED DUCTS IN CEILING/ROOF SPACE?						

Nonresidential Compliance Forms

August 2001

CERTIFICATE OF COMPLIANCE

(Part 2 of 2) MECH-1

PROJECT NAME

COMMUNITY BUILDING

DATE

01-14-2012

SYSTEM FEATURES

SYSTEM NAME	MECHANICAL SYSTEMS	NOTE TO FIELD Bldg. Dept. Use
TIME CONTROL		
SETBACK CONTROL		
ISOLATION ZONES		
HEAT PUMP THERMOSTAT?		
ELECTRIC HEAT?		
FAN CONTROL		
VAV MINIMUM POSITION CONTROL?		
SIMULTANEOUS HEAT/COOL?		
HEAT AND COOL SUPPLY RESET?		
HEAT REJECTION CONTROL		
VENTILATION		
OUTDOOR DAMPER CONTROL?		
ECONOMIZER TYPE		
DESIGN O.A. CFM (MECH-3, COLUMN H)		
HEATING EQUIPMENT TYPE		
HIGH EFFICIENCY? IF YES ENTER EFF. #		
MAKE AND MODEL NUMBER		
COOLING EQUIPMENT TYPE		
HIGH EFFICIENCY? IF YES ENTER EFF. #		
MAKE AND MODEL NUMBER		
PIPE INSULATION REQUIRED?		
PIPE/DUCT INSULATION PROTECTED?		
HEATING DUCT LOCATION R-VALUE		
COOLING DUCT LOCATION R-VALUE		
VERIFIED SEALED DUCTS IN CEILING/ROOF SPACE %FAN FLOW		

TABLE OF CODES: Enter code from table below into columns above.

	Y:Yes	N:No	TIME CONTROL	SETBACK CTRL.	ISOLATION ZONES	FAN CONTROL
HEAT PUMP THERMOSTAT?			S: Prog. Switch O: Occupancy Sensor M: Manual Timer	B: Both C: Cooling H: Heating	Enter number of Isolation Zones	I: Inlet Vanes P: Variable Pitch V: VFD O: Other C: Curve
ELECTRIC HEAT?						
VAV MINIMUM POSITION CONTROL?						
HEAT AND COOL SUPPLY RESET?						
SIMULTANEOUS HEAT/COOL?						
HIGH EFFICIENCY?						
PIPE INSULATION REQUIRED?						
PIPE/DUCT INSULATION PROTECTED?						
HEATING DUCT LOCATION						
COOLING DUCT LOCATION						
SEALED DUCTS IN CEILING/ROOF SPACE?						

Nonresidential Compliance Forms

August 2001

WATER SIDE SYSTEM REQUIREMENTS

(Part 2 of 3) MECH-2C

PROJECT NAME:

COMMUNITY BUILDING

DATE:

01-14-2012

Item or System Tags
(i.e. AC-1, RTU-1, HP-1, CT-1, etc...)

No. of Systems

MANDATORY MEASURES

Equipment Efficiency

Pipe Insulation

PRESCRIPTIVE MEASURES

Cooling Tower Fan Controls

Cooling Tower Flow Controls

Variable Flow System Design

Chiller and Boiler Isolation

CHW and HHW Reset Controls

WLHP Isolation Valves

YSD on CHW, CW & WLHP Pumps >5HP

DP Sensor Location

Indicate Page Reference on Plans or Specification²

T-24 Sections

112(a)

123

144(h)

144(h)

144(j)

144(j)

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144(j)

1. The Proposed equipment need to match the building plans schedule or specifications. If a requirement is not applicable, put "N/A" in the column next to applicable section.

2. For each chiller, cooling tower, boiler, and hydronic loop (or groups of similar equipment) fill in the reference to sheet number and/or specification section and paragraph number where the required features are documented. If a requirement is not applicable, put "N/A" in the column next to applicable section.

2008 Nonresidential Compliance Forms

March 2010

SERVICE HOT WATER & POOL/SPA REQUIREMENTS

(Part 3 of 3) MECH-2C

PROJECT NAME:

COMMUNITY BUILDING

DATE:

01-14-2012

Item or System Tags
(i.e. WH-1, WHP, DHW, etc...)

No. of Systems

MANDATORY MEASURES

SERVICE HOT WATER

Certified Water Heater

Water Heater Efficiency

Service Water Heating Installation

Pipe Insulation

POOL AND SPA

Pool and Spa Efficiency and Control

Pool and Spa Electric Resisting Heating

Pool and Spa Installation

Pool Heater - No Pilot Light

Spa Heater - No Pilot Light

Pipe Insulation

Indicate Page Reference on Plans or Schedule²

T-24 Section

§111, §113 (a)

§113 (b)

§113 (c)

§123

§114 (a)

§114 (b)

Exception

§114 (b)

§115 (c)

§115 (d)

§123

1. The Proposed equipment need to match the building plans schedule or specifications. If a requirement is not applicable, put "N/A" in the column next to the measure.

2. For each water heater, pool heat and domestic water loop (or groups of similar equipment) fill in the reference to sheet number and/or specification section and paragraph number where the required features are documented. If a requirement is not applicable, put "N/A" in the column.

2008 Nonresidential Compliance Forms

August 2009

REVISIONS

BY

JOSEPH OAKLEY JR.

No. 15457

REN. 9-30-11

STATE OF CALIFORNIA

PROJECT TITLE:

COMMUNITY CENTER

HARBOR PARK APARTMENTS

969 PORTER STREET, VALLEJO, CA 94560

DRAWING TITLE:

T24.3

Date:

08/30/2011

Scale:

AS NOTED

Drawn:

STAFF

Checked:

RY

Job No.:

2011-09

Sheet:

T24.3

July 2010August 2009July 2010

Field Inspector's Notes or Discrepancies:

August 2009July 2010August 2009

Sheet:

T24.4

Of Sheets