NEW ADDITION & REMODELING

863 PINON AVE MILLBRAE, CALIF. 94030

DESIGN DATA

2019 CALIFORNIA ADMINISTRATIVE CODE
2019 CALIFORNIA BUILDING CODE
2019 CALIFORNIA PLUMBING CODE
2019 CALIFORNIA MECHANICAL CODE
2019 CALIFORNIA ELECTRIC CODE
2019 CALIFORNIA RESIDENTIAL CODE
2019 CALIFORNIA ENERGY CODE
2019 CALIFORNIA GREEN BUILDING STANDARDS CODE
2019 CALIFORNIA FIRE CODE
2019 CALIFORNIA EXISTING BUILDING CODE
2019 CALIFORNIA REFERENCED STANDARDS CODE
ALONG WITH ALL OTHER LOCAL AND STATE LAWS AND REGULATIONS.
ADOPTION OF THE 2019 EDITION OF THE CALIFORNIA STATE BUILDING CODES, TITLE 24, CALIFORNIA CODE OF REGULATIONS IS MANDATED BY PART 2.5 OF DIVISION 13 OF THE CALIFORNIA HEALTH & SAFETY CODE (SECTION 18901 ET SEQ.) THE FOLLOWING LOCAL AMENDMENTS TO THE CALIFORNIA STATE BUILDING CODES WERE FILED WITH THE BUILDING STANDARDS COMMISSION.

GENERAL NOTES:

1. ALL DETAILS, MATERIALS, FINISHES AND ASSEMBLIES ARE NOT NECESSARILY SHOWN. THESE FINAL FINISH DETAILS INCLUDING CASEWORK AND MATERIAL SELECTIONS WILL BE COORDINATED BY THE OWNER.

2. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CALIFORNIA BUILDING CODE, APPLICABLE EDITION, AND ALL OTHER PERTINENT CODES, LAWS AND REQUIREMENTS OF THE LOCAL BUILDING OFFICIALS, WHETHER OR NOT SPECIFICALLY SHOWN ON THESE DOCUMENTS. THESE DOCUMENTS ARE NOT INTENDED TO SHOW EVERY DETAIL OR CONDITION. MANY DETAILS IN RESIDENTIAL CONSTRUCTION ARE BUILT ACCORDING TO PROFESSIONAL CONSTRUCTION PRACTICES, AND ARE THEREFORE NOT DETAILED IN THESE DOCUMENTS. CONTACT CHU DESIGN AND ASSOCAITES INC. IF CONDITIONS OR OTHER CIRCUMSTANCES REQUIRE CHANGES IN THE WORK SHOWN, OR REQUIRE CLARIFICATION. ALL WORK SHALL BE DONE IN A HIGH QUALITY MANNER, ACCORDING TO THE PREVAILING STANDARDS OF THE INDUSTRY FOR EACH TRADE.

3. THE CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, EQUIPMENT, SUPERVISION AND CLEAN-UP TO ACCOMPLISH ALL OF THE WORK SHOWN, INCLUDING ALL WARRANTIES AND INSTRUCTIONS, TO PROVIDE A COMPLETE WORKING INSTALLATION, AND TO LEAVE THE OWNER WITH AN APPROVED PRODUCT.

4. CONTRACTOR SHALL ASSUME COMPLETE AND SOLE RESPONSIBILITY FOR MEANS AND METHODS OF CONSTRUCTION, AND FOR ALL SAFETY MEASURES TO PROTECT ALL PROPERTY, PERSONNEL AND THIRD PARTIES FROM DAMAGE OR INJURY. THIS RESPONSIBILITY SHALL BE CONTINUOUS AND NOT SOLELY DURING WORKING HOURS. CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD HARMLESS CHU DESIGN AND ENGINEERING INC. AND RELATED ENGINEERS FROM ANY CLAIMS OF LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF HIS WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF CHU DESIGN AND ENGINEERING INC. AND RELATED ENGINEERS.

5. THESE DOCUMENTS DO NOT CONTAIN PROVISIONS FOR THE HANDLING OR REMOVAL OF ANY HAZARDOUS MATERIALS. SHOULD ANY SUCH MATERIALS BE SUSPECTED OR ENCOUNTERED, SPECIALISTS SHALL BE CALLED IN TO MAKE RECOMMENDATIONS.

6. PROVIDE ALL MANDATORY FEATURES REQUIRED BY THE T-24 ENERGY CODE, INCLUDING WEATHER-STRIPPING, BUILDING INSULATION, PIPE INSULATION, LIGHTING AND APPLIANCE MEASURES, AND OTHER FEATURES REQUIRED BY TITLE 24 OR OTHER STATE, FEDERAL OF LOCAL CODES.

7. NO PERSON SHALL ERECT (INCLUDING EXCAVATION AND GRADING), DEMOLISH, ALTER OR REPAIR ANY BUILDING OR STRUCTURE OTHER THAN BETWEEN THE HOURS PERMITTED BY THE LOCAL JURISDICTION.

PROJECT DATA

1. LOT LOCATION:	863 PINON AVENUE MILLBRAE, CA 94030
2. A.P.N. :	025-034-050
3. OCCUPANCY GROUP :	R-3 DWELLING/ U GARAGE
4. CONSTRUCTION TYPE:	TYPE V-B
5. ZONING DISTRICT:	R-1
6. LOT SIZE:	70.0' x 120.0'
7. SITE AREA (BASED ON THE COUNTY RECORD) :	8,400.00 SF.
8. MAXIMUM FLOOR COVERAGE RATIO :	55 % or 4,620.0 SQ. FT.
9. BUILDING DATA:	
EXISTING GARAGE AREA :	378.89 SF.
EXISTING CONDITIONED FLOOR AREA :	1,831.01 SF.
TOTAL EXISTING FLOOR AREA :	2,209.90 SF.
PROPOSED FIRST FLOOR ADDITION AREA :	709.18 SF.
PROPOSED SECOND FLOOR ADDITION AREA :	1,583.93 SF.
TOTAL ADDITIONAL AREA :	2,293.11 SF.
(EXISTING + NEW) CONDITIONED FLOOR AREA :	4,124.12 SF.
TOTAL FLOOR AREA :	4,503.01 SF.
(EXISTING + NEW) FLOOR AREA / RATIO (F.A.R.) :	4,503.01 SF. / 53.61 %

STRUCTURAL OBSERVATION/ SPECIAL INSPECTION IS REQUIRED FOR
1. SHEAR WALLS WITH DESIGN LOAD OF 300 PLF, OR GREATER.
2. INSTALLATION OF EPOXY INSTALLED ANCHOR BOLTS.
3. ALL UTILITY TRENCHES, BUILDING PAD SHALL BE PROPERLY BACK-FILLED AND COMPACTED.
4. THE FOUNDATION EXCAVATION, HOLDOWN.
5. INSTALLATION OF SIMPSON STRONG WALL

ILLUMINATED STREET ADDRESS

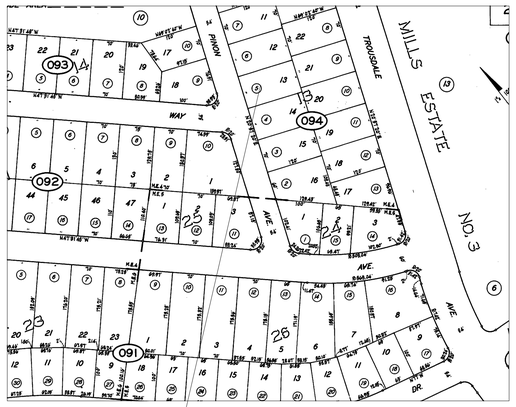
ADDRESS NUMBERS ASSIGNED BY THE PLANNING AND BUILDING DIVISION SHALL BE POSTED ON ALL DWELLING UNITS.
Provide an illuminated street address at the entry door per City ordinance. Approved numbers or addresses shall be placed in such a position as to be plainly visible and legible from the street or road fronting the property. Said numbers shall contrast with their background, and shall be a minimum of 1/2 inch stroke by 4 inches high, shall be either internally or externally illuminated. The power of such illumination shall not be normally switchable.
ADDRESS NUMBER AND DIRECTIONAL SIGNS MAY BE REQUIRED AT THE ENTRANCE TO THE DRIVEWAY/ ACCESS ROAD, ROAD FORKS, AND INTERSECTIONS. WHEN LOCATED ON THE STREET THE NUMBERS SHALL BE VISIBLE FROM EACH DIRECTION OF TRAVEL.

SHEET INDEX

ARCHITECTURAL

A.0	COVER SHEET
A.1	EXISTING AND PROPOSED SITE/ ROOF PLAN
A.2	EXISTING FLOOR AND GARAGE PLAN
A.3	PROPOSED FIRST FLOOR PLAN
A.3.1	PROPOSED SECOND FLOOR PLAN
A.4	EXISTING & PROPOSED FRONT ELEVATION
A.5	EXISTING & PROPOSEDLEFT SIDE ELEVATION
A.6	EXISTING & PROPOSED RIGHT SIDE ELEVATION
A.7	EXISTING & PROPOSED REAR ELEVATION
A.8	ARCHITECTURAL DETAILS AND NOTES
AC.1	EXISTING FLOOR AREA CALCULATION
AC.2	PROPOSED FLOOR AREA CALCULATION
BMP	CONSTRUCTION BEST MANAGEMENT PRACTICES

LOCATION MAP



NOTE :

AN ENCROACHMENT PERMIT WILL BE REQUIRED FOR ALL WORK IN THE PUBLIC RIGHT OF WAY.

PROJECT DIRECTORY

PROPERTY OWNER:
MR. & MRS. FREEMAN & CARISSA PENG
863 PINON AVE
MILLBRAE, CA 94030
TEL : 650-686-7007

BUILDING DESIGN:
CHU DESIGN ASSOCIATES INC.
55 W. 43RD AVE.
SAN MATEO, CA 94403
TEL: (650) 345-9286, EXT. 100
E-MAIL: jack@chudesign.com

TITLE 24:
NRG Compliance, LLC
Mr. Rick Rocklewitz
P.O. BOX #3777
SANTA ROSA, CA 95402
TEL: (707) 237-6957

STRUCTURAL:
CHU DESIGN ASSOCIATES INC.
55 W. 43RD AVE.
SAN MATEO, CA 94403
TEL: (650) 345-9286, EXT. 101
E-MAIL: jane@chudesign.com

SPECIAL INSPECTION:
CAPEX ENGINEERING INC.
P.O. BOX 14198
FREMONT, CA 94539
TEL: (510) 668-1815
FAX: (510) 490-8690

FIRE SPRINKLER:
PENINSULA FIRE PROTECTION
MR. BILL MAO
SAN MATEO, CA 94403
CELL : (650) 773-0108
TEL: (650) 358-0167

SCOPE OF WORK :

1. ADD NEW GREAT ROOM AND DINING ROOM OFF EXISTING KITCHEN
2. ADD NEW FOYER FOR THE NEW ACCESSORY DWELLING UNIT
3. ADD NEW ACCESSORY DWELLING UNIT AT SECOND FLOOR (AREA : 1,197.91 SQ.FT.)
4. ADD NEW POWDER ROOM AT EXISTING FLOOR NOOK AREA.

FIRE SPRINKLER NOTE & TRUSS NOTE :

FIRE SPRINKLER DESIGN PER CITY OF MILLBRAE FIRE DEPARTMENT ORDINANCE #2019-001, CFC SECTION 903 SHALL BE DEFERRED SUBMITTAL.

THE ENGINEERING TRUSS SHALL BE DEFERRED SUBMITTAL UNDER SEPARATE PERMIT

REVISIONS	BY

CHU DESIGN ASSOCIATES INC.
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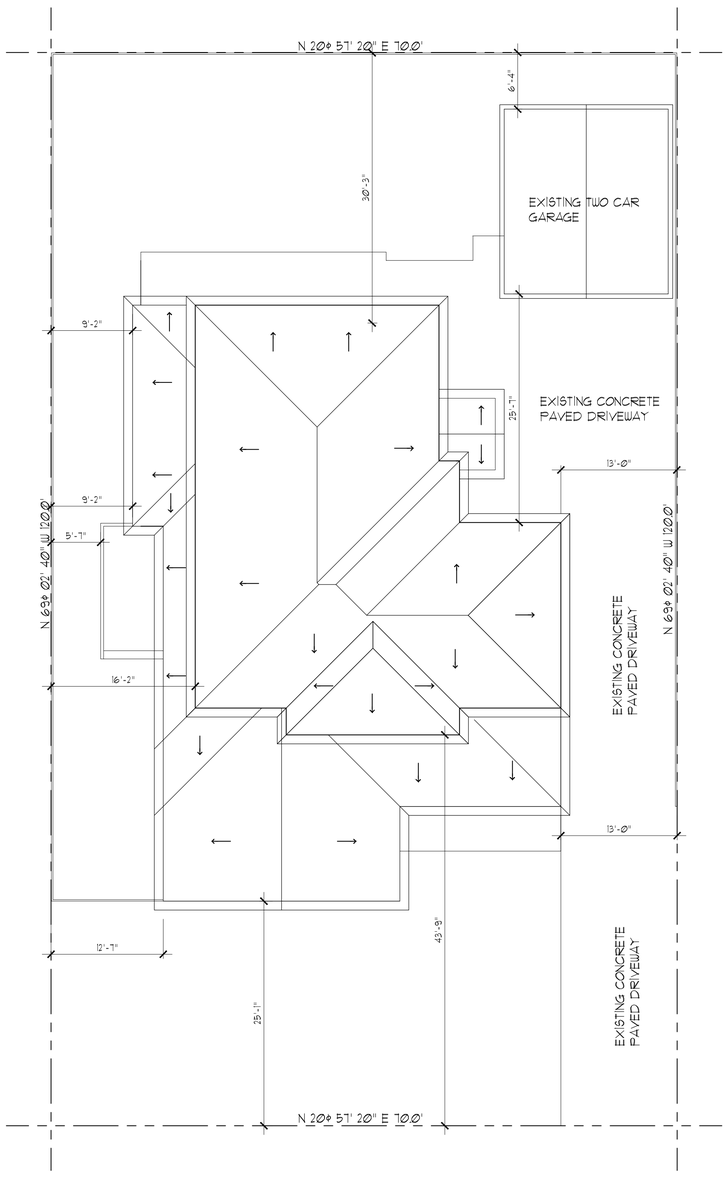
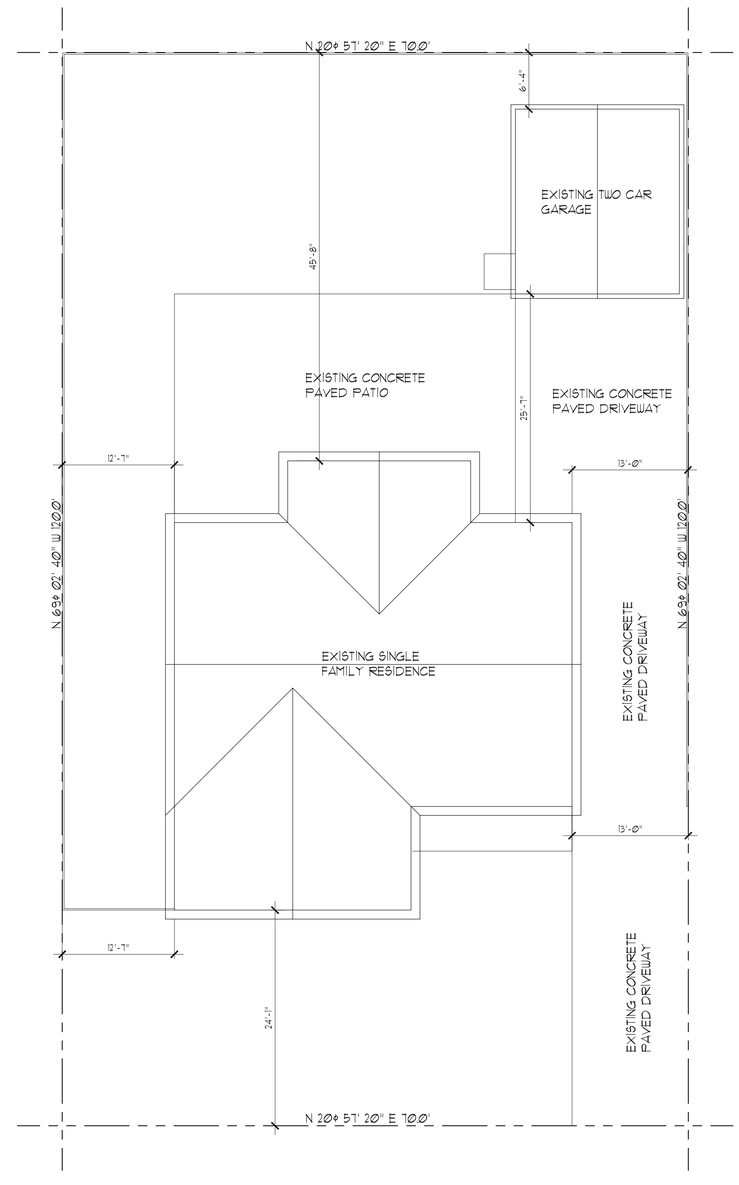
REGISTERED PROFESSIONAL ENGINEER
TSA-SHYI CHU
NO. C-29056
Exp. 3-31-2020
CIVIL
STATE OF CALIFORNIA

NEW ADU ADDITION & REMODELING
Owner : Mr. & Mrs. Freeman & Carissa L. Peng
863 Pinon Avenue
Millbrae, Calif., 94030
Tel. : 650-686-7007, 415-812-7963

DATE:	Mar. 4, 2020
SCALE:	AS NOTED
DRAWN:	JC
JOB:	Peng & Luo
SHEET NO.	A.0
	OF SHEETS



PROPOSED SITE/ ROOF PLAN
SCALE: 1/8"=1'-0"



EXISTING SITE/ ROOF PLAN
SCALE: 1/8"=1'-0"

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DATE:	Mar. 4, 2020
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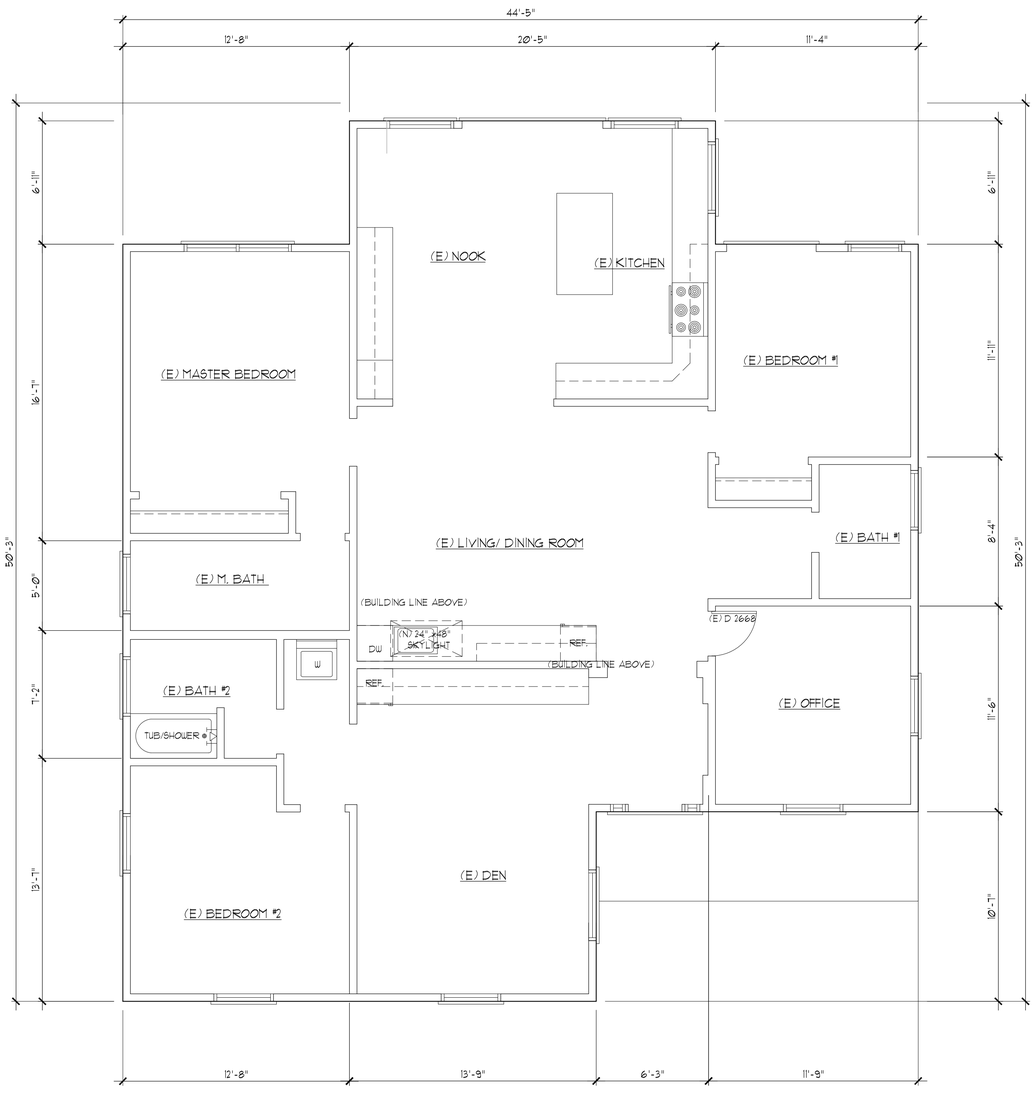
JOB:	Peng & Luo
SHEET NO.	A.1
OF SHEETS	



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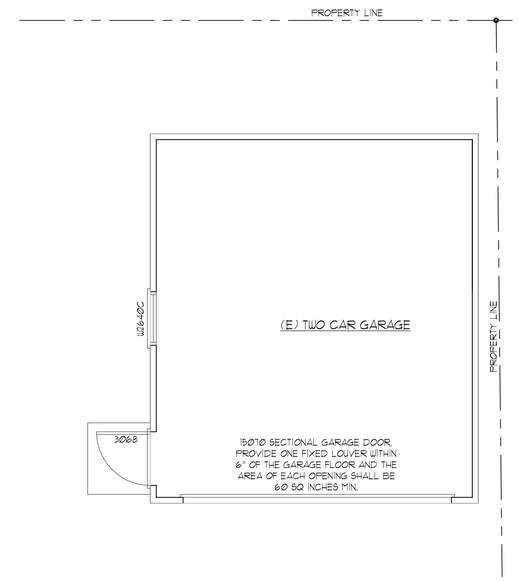
EXISTING FLOOR PLAN

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



N

EXISTING DETACHED GARAGE PLAN

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

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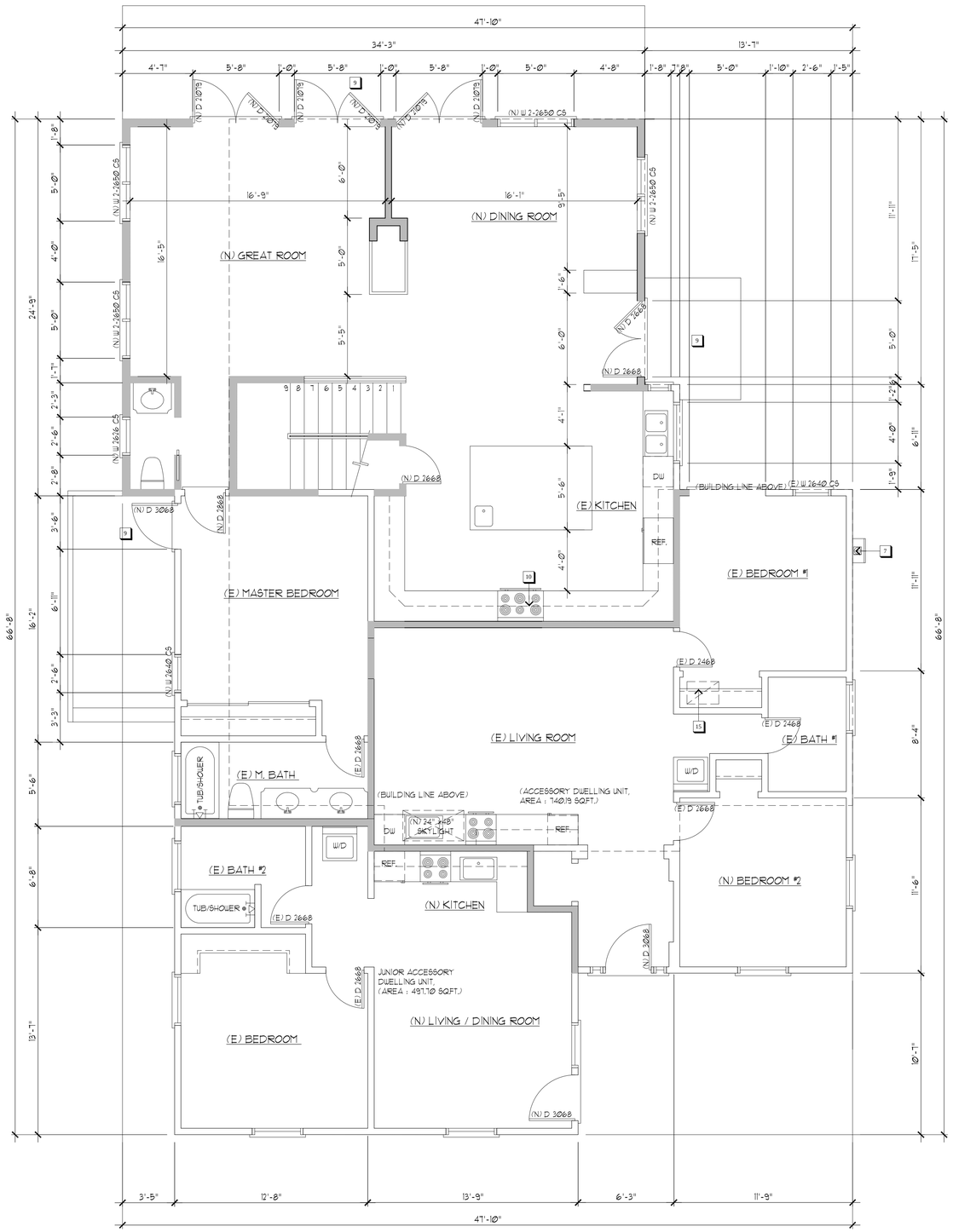
SHEET NO.	A.2

OF SHEETS



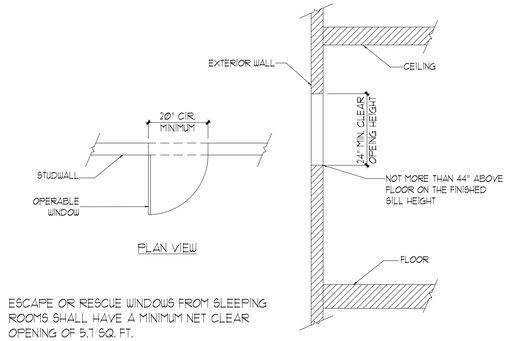
PROPOSED FIRST FLOOR PLAN

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

N

KEYNOTES:

1. VELUX SKYLIGHT, CURB MOUNTED.
2. NEW HORIZONTAL FURNACE IN THE ATTIC : RHEEM CLASSIC 90 PLUS, MODEL NO. : RGTC-08EMAES OR EQ. RATED INPUT : 80,000 BTUH, HEATING OUTPUT : 76,000 BTUH, AFUE. : 95.0 %. PROVIDE A "TEMPER PROOF" RECEPTACLES AND LIGHTING AT ATTIC FURNACE.
3. DRYER
   1. PROVIDE A SMOOTH METAL DUCT FOR DRYER EXHAUST EXTENDING TO OUTSIDE W/ BACK DRAFT DAMPER (36" MIN. AWAY FROM OPENING).
   2. MAX. VENT DUCT LENGTH OF 14', SEE HVAC & PLUMBING NOTES.
4. PROVIDE ALL SHOWER HEAD TO HAVE A MAX. FLOW OF 2.0 GPM @ 80 PSI AND LAVATORY FAUCETS TO HAVE A MAX. 1.5 GPM @ 60 PSI PER CalGreen SEC. 4.303.1
5. 30" x 30" ATTIC ACCESS.
6. PROVIDE ⅝" TYPE'X' GYPSUM WALLBOARD FROM FOUNDATION RO ROOF SHEATHING AT SEPARATION WALL BETWEEN GARAGE AND RESIDENCE. (TYPICAL, U.N.O.)
7. EXISTING TANKLESS WATER HEATER : RHEEM RTGH-95XN OR. EQ. GAS INPUT : 11,000-199,000 BTU/HR. ENERGY FACTOR : 0.94.
8. HANDRAILS MUST BE SET AT A HEIGHT OF 34"-38" MEASURED FROM THE NOSING OF THE STAIRWAY TREAD, THE GUARDRAIL ON THE SIDE OF STAIRWAY CONSISTING OF VERTICAL OR HORIZONTAL RAIL SPACED SO A 4 ⅜" SPHERE CANNOT PASS THROUGH. SEE ARCHITECTURAL DETAILS ON SHEET A.8.
9. MINIMUM 36" DEEP LANDING AT ALL EXTERIOR DOORS.
10. NEW GRAVITY HOOD ABOVE THE STOVE TOP, WILL BE INSTALLED AND VENTED TO THE OUTSIDE ATMOSPHERE.
11. PROVIDE KITCHEN FAUCETS TO HAVE A MAX. FLOW OF 1.8 GPM @ 60 psi PER CalGreen SEC. 4.303.1.
12. PROVIDE ALL TOILETS SHALL HAVE MAX. 1.28 GALLONS PER FLUSH.
13. WALL COVERING SHALL BE CEMENT PLASTER, TILE OR APPROVED MATERIAL EQUAL TO 72" ABOVE DRAIN AT SHOWERS OR TUB WITH SHOWERS, MATERIALS OTHER THAN STRUCTURAL ELEMENTS TO BE MOISTURE RESISTANT.
14. SHOWERS AND TUB-SHOWER COMBINATIONS IN BUILDINGS SHALL BE PROVIDED WITH INDIVIDUAL CONTROL VALVES OF THE PRESSURE BALANCE, THERMOSTATIC, OR COMBINATION PRESSURE BALANCE/ THERMOSTATIC MIXING VALVE TYPE THAT PROVIDE SCALD AND THERMAL SHOCK PROTECTION. THESE VALVES SHALL CONFIRM TO ASSE 1016 OR ASME A112.18.1/CSA INSTRUCTIONS TO DELIVER A MAXIMUM MIXED WATER SETTING OF 120 DEGREES. THE WATER HEATER THERMOSTAT SHALL NOT BE CONSIDERED A SUITABLE CONTROL FOR MEETING THIS PROVISION.
15. 22" X 24" CRAWL SPACE ACCESS.



ESCAPE OR RESCUE WINDOWS FROM SLEEPING ROOMS SHALL HAVE A MINIMUM NET CLEAR OPENING OF 5.7 SQ. FT.
EVERY SLEEPING ROOM BELOW THE FOURTH STORY SHALL HAVE AT LEAST ONE OPERABLE WINDOW OR EXTERIOR DOOR APPROVED FOR EMERGENCY ESCAPE OR RESCUE. THE UNITS SHALL BE OPERABLE FROM THE INSIDE TO PROVIDE A CLEAR OPENING WITHOUT THE USE OF SEPARATE TOOLS.

EMERGENCY EGRESS

REVISIONS	BY

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NEW ADU ADDITION & REMODELING

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DATE:	Mar. 4, 2020
SCALE:	AS NOTED
DRAWN:	JC
JOB:	Peng & Luo
SHEET NO.	A.3

OF SHEETS

ALL VENTILATION SYSTEM WILL BE TESTED USING AN AIRFLOW MEASURING DEVICE AFTER COMPLETION OF THE INSTALLATION OF SYSTEM THAT THE DELIVERED VENTILATION AIRFLOW MEETS THE REQUIREMENT.

BATHROOM NOTE:

EXHAUST FANS MUST BE CONTROLLED BY A HUMIDISTAT CONTROL CAPABLE OF ADJUSTMENT BETWEEN A RELATIVE HUMIDITY RANGE OF 50 TO 80%. 2016 CGBSC SECTION 4.506. FOR CONTINUOUS OPERATING BATHROOM FAN (LOCAL EXHAUST), IT MUST OPERATE AT A MINIMUM OF 20 CFM AND CONTINUOUSLY OPERATING KITCHEN DANS MUST OPERATE AT 5 AIR CHANGES PER HOUR. PER ASHRAE 62.2-2010 SECTION 4.6.5.

FOR INTERMITTENT LOCAL EXHAUST, THE MINIMUM BATHROOM INTERMITTENT VENTILATION AIRFLOW SHALL BE 50 cfm AND FOR KITCHEN HOOD EXHAUST SHALL BE 100 cfm (OR AS AN ALTERNATE, PROVIDE CEILING OR WALL MOUNTED EXHAUST FAN OR DUCTED VENTILATION SYSTEM THAT PROVIDES AT LEAST 5 AIR CHANGES OF THE KITCHEN VOLUME PER HOUR). ASHRAE 62.2-2010, SEC. 4.6.5.

LOCAL VENTILATION RATE SUMMARY

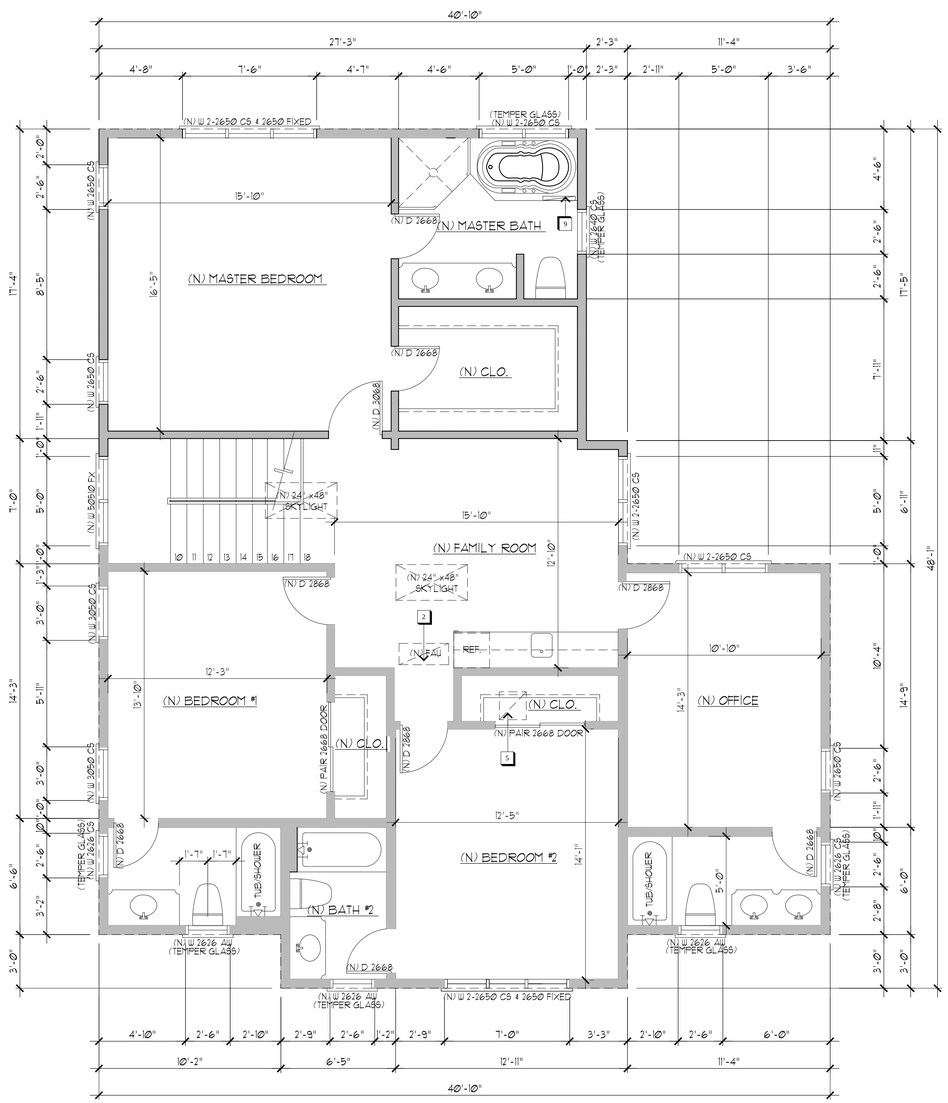
ENTER THE REQUIRED FAN FLOW RATE (CFM)

BATHROOM FAN FLOW (CFM) = 100 # OF BATHROOM = _____

USE THE FAN FLOW RATE FROM THIS SUMMARY FOR SELECTION OF THE WHOLE-BUILDING VENTILATION FAN AND FOR THE DUCT DESIGN FOR THE WHOLE-BUILDING VENTILATION SYSTEM FROM TABLE 1.)

DUCT SIZE (INCHES) = 6"

MAXIMUM ALLOWABLE DUCT LEGTH (FT) = 125



N PROPOSED SECOND FLOOR PLAN

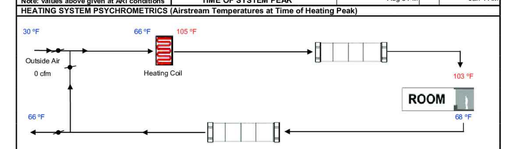
SCALE: 1/4"=1'-0"

HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

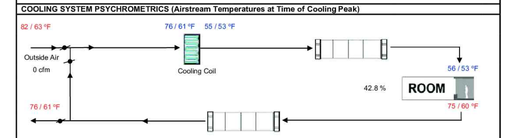
Project Name: Peng, Freeman Addition & ADU
Date: 6/3/2020
System Name: HVAC System
Floor Area: 2,507

ENGINEERING CHECKS		SYSTEM LOAD	COIL COOLING PEAK CFM	COIL COOLING PEAK Sensible	COIL COOLING PEAK Latent	COIL HTG. PEAK CFM	COIL HTG. PEAK Sensible
Number of Systems	1						
Heating System							
Output per System	63,360	Total Room Loads	1,694	34,373	792	1,395	52,727
Total Output (Btuh)	63,360	Return Vented Lighting		0			
Output (Btuh/sqft)	25.3	Return Air Ducts		1,627			2,853
Cooling System		Return Fan		0			0
Output per System	48,000	Ventilation	0	0	0	0	0
Total Output (Btuh)	48,000	Supply Fan		0			0
Total Output (Tons)	4.0	Supply Air Ducts		1,627			2,853
Total Output (Btuh/sqft)	19.1						
Total Output (sqft/Ton)	626.7	TOTAL SYSTEM LOAD		37,626	792		58,433
Air System							
CFM per System	0	HVAC EQUIPMENT SELECTION					
Airflow (cfm)	0	(New) Gas FAU w/ AC-First Floor		46,386	0		63,360
Airflow (cfm/sqft)	0.00						
Airflow (cfm/Ton)	0.0						
Outside Air (%)	0.0 %	Total Adjusted System Output (Adjusted for Peak Design conditions)		46,386	0		63,360
Outside Air (cfm/sqft)	0.00						
Note: values above given at ARI conditions		TIME OF SYSTEM PEAK			Aug 3 PM		Jan 1 AM

HEATING SYSTEM PSYCHROMETRICS (Airstream Temperatures at Time of Heating Peak)



COOLING SYSTEM PSYCHROMETRICS (Airstream Temperatures at Time of Cooling Peak)

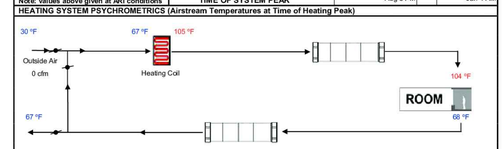


HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

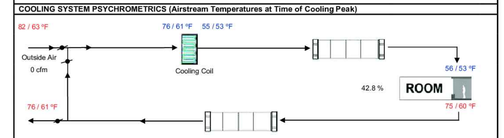
Project Name: Peng, Freeman Addition & ADU
Date: 6/3/2020
System Name: HVAC System
Floor Area: 1,198

ENGINEERING CHECKS		SYSTEM LOAD	COIL COOLING PEAK CFM	COIL COOLING PEAK Sensible	COIL COOLING PEAK Latent	COIL HTG. PEAK CFM	COIL HTG. PEAK Sensible
Number of Systems	1						
Heating System							
Output per System	17,280	Total Room Loads	724	14,779	379	276	10,772
Total Output (Btuh)	17,280	Return Vented Lighting		0			
Output (Btuh/sqft)	14.4	Return Air Ducts		699			583
Cooling System		Return Fan		0			0
Output per System	24,000	Ventilation	0	0	0	0	0
Total Output (Btuh)	24,000	Supply Fan		0			0
Total Output (Tons)	2.0	Supply Air Ducts		699			583
Total Output (Btuh/sqft)	20.0						
Total Output (sqft/Ton)	599.0	TOTAL SYSTEM LOAD		16,178	379		11,938
Air System							
CFM per System	0	HVAC EQUIPMENT SELECTION					
Airflow (cfm)	0	(New) Gas FAU w/ AC-ADU		23,178	0		17,280
Airflow (cfm/sqft)	0.00						
Airflow (cfm/Ton)	0.0						
Outside Air (%)	0.0 %	Total Adjusted System Output (Adjusted for Peak Design conditions)		23,178	0		17,280
Outside Air (cfm/sqft)	0.00						
Note: values above given at ARI conditions		TIME OF SYSTEM PEAK			Aug 3 PM		Jan 1 AM

HEATING SYSTEM PSYCHROMETRICS (Airstream Temperatures at Time of Heating Peak)



COOLING SYSTEM PSYCHROMETRICS (Airstream Temperatures at Time of Cooling Peak)



WATER USE WORKSHEET

EXIST + ADDED = SUM	TYPE OF FIXTURE	FIXTURE MULTIPLIER	UNITS
+ 3 = 3	BATH TUB (WITH OR WITHOUT SHOWER)	x 4	12.0
+ 1 = 1	CLOTHES WASHER	x 4	4.0
+ 1 = 1	DISH WASHER	x 1.5	1.5
+ 4 = 4	LAVATORY (BATHROOM SINK)	x 1	4.0
+ 2 = 2	STALL SHOWER (COUNT EACH HEAD)	x 2	4.0
+ 1 = 1	SINK (KITCHEN SINK OR OTHER SINK)	x 1.5	1.5
+ 3 = 3	TOILET (WATER CLOSET)	x 2.5	7.5
		FIXTURE UNIT TOTAL:	34.5

BATHROOM VENT CALCULATION:

REQUIRED:

LOCATION	AREA	RATE	TOTAL REQUIRED
BATH #1	38.75 SQFT.	8%	3.10 SQFT.
BATH #2	43.75 SQFT.	8%	3.50 SQFT.
MASTER BATH	97.50 SQFT.	8%	7.80 SQFT.

PROVIDED:

LOCATION	OPENING SIZE / MECH. VENT	QTY.	TOTAL PROVIDED
(N) BATH #1	2'-0"x2'-0"	1	4.00 SQFT.
(N) BATH #2	2'-0"x2'-0"	1	4.00 SQFT.
MASTER BATH	2'-0"x4'-0"	1	8.00 SQFT.

CRAWL SPACE VENTILATION CALC.@ NEW FIRST FLOOR :

NEW AREA : 660.12 SQ. FT.
REQ. VENT : 660.12 / 150 = 4.40 (144)
= 633.60 SQ. IN.
(8) (14"x 6" VENT) OR 84.0 SQ. IN. = 672.0 SQ. IN.
672.0 SQ.IN. > 633.60 SQ. IN.

ATTIC SPACE VENTILATION CALC. @ ADU & FIRST FL. ADDITION :

NEW AREA : 654.78 + 1,295.71 SQ. FT. = 1,950.49 SQ. FT.
REQ. VENT : 1,950.49 / 150 = 13.0 (144)
= 1,872.0 SQ. IN.
PROVIDE (38) 3-3" Dia. HOLE OR 212.0 SQ. IN. = 805.6 SQ. IN.
(12) (45"x15" EYEBROW VENT) OR 92.0 SQ. IN. = 1,104.0 SQ. IN.
1,104.0 + 805.6 = 1,909.60 SQ. IN.
1,909.60 SQ.IN. > 1,872.0 SQ. IN.

REVISIONS	BY

CHU DESIGN ASSOCIATES INC.
55 W. 43rd AVENUE
SAN MATEO, CALIFORNIA 94403
TEL.: (650) 345-9286
FAX: (650) 345-9287

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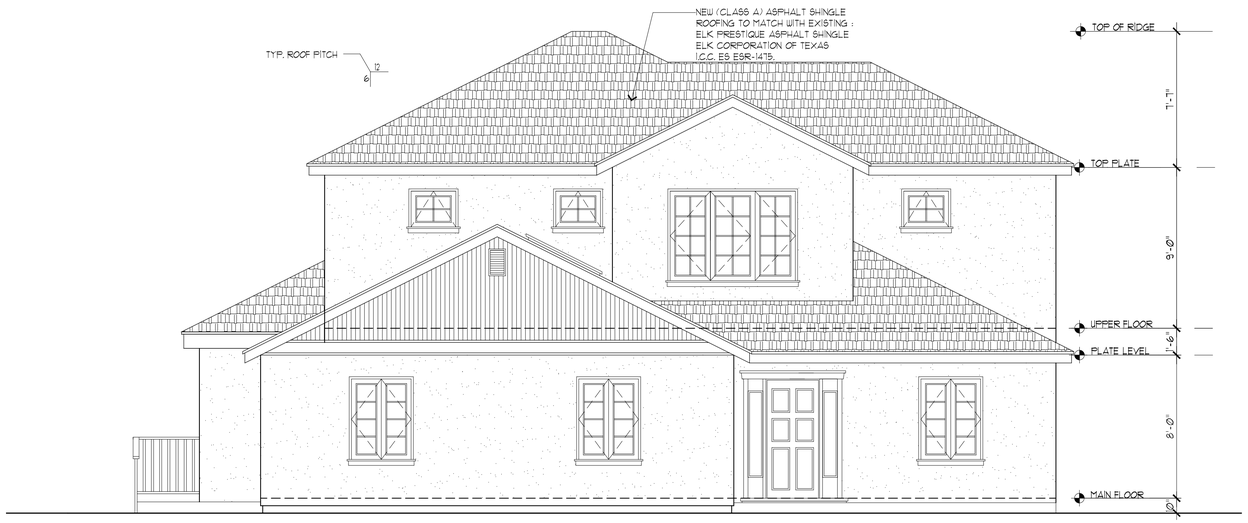
REGISTERED PROFESSIONAL ENGINEER TSA-SHYI CHU NO. C-29056 Exp. 3-31-2021 CIVIL STATE OF CALIFORNIA

NEW ADU ADDITION & REMODELING

Owner : Mr. & Mrs. Freeman & Carissa L. Peng
863 Pinon Avenue
Millbrae, Calif., 94030
Tel. : 650-686-7007, 415-812-7963

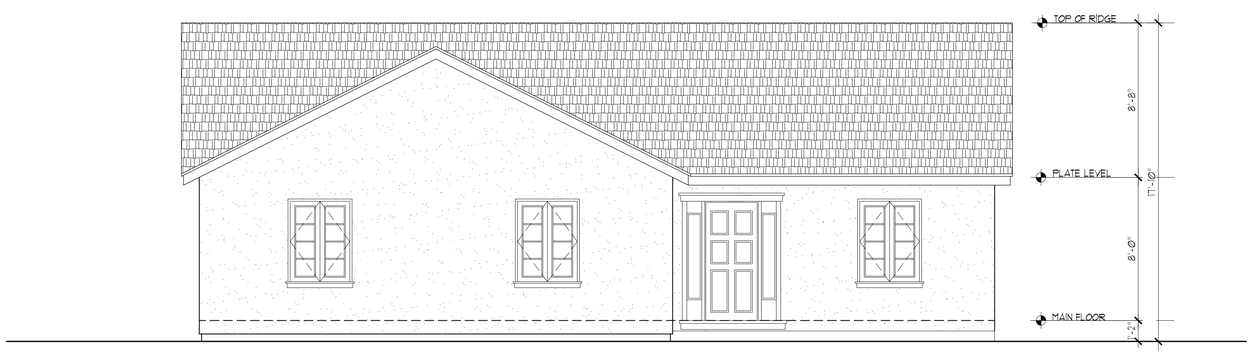
DATE: Mar. 4, 2020
SCALE: AS NOTED
DRAWN: JC
JOB: Peng & Luo
SHEET NO.: A.3.1
OF SHEETS



N

PROPOSED FRONT ELEVATION

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



N

EXISTING FRONT ELEVATION

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

REVISIONS	BY

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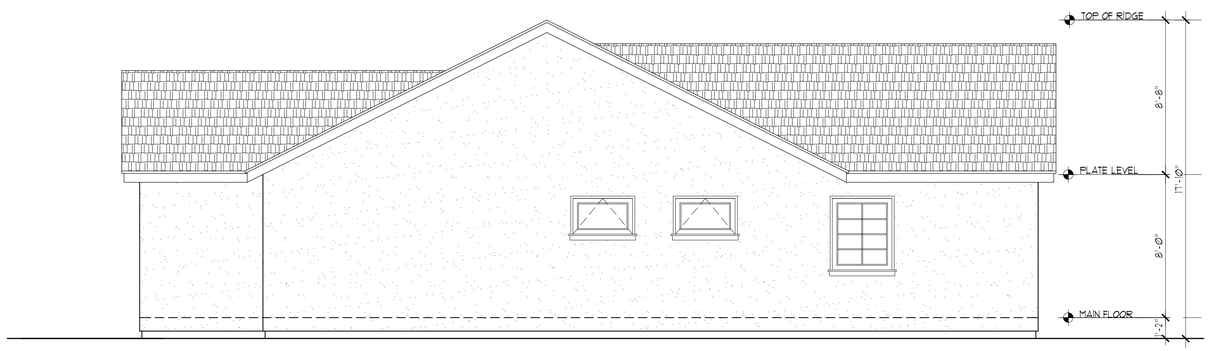
DATE:	Mar. 4, 2020
SCALE:	AS NOTED
DRAWN:	JC
JOB:	Peng & Luo
SHEET NO.	A.4

OF SHEETS

N

PROPOSED LEFT SIDE ELEVATION

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



N

EXISTING LEFT SIDE ELEVATION

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

REVISIONS	BY

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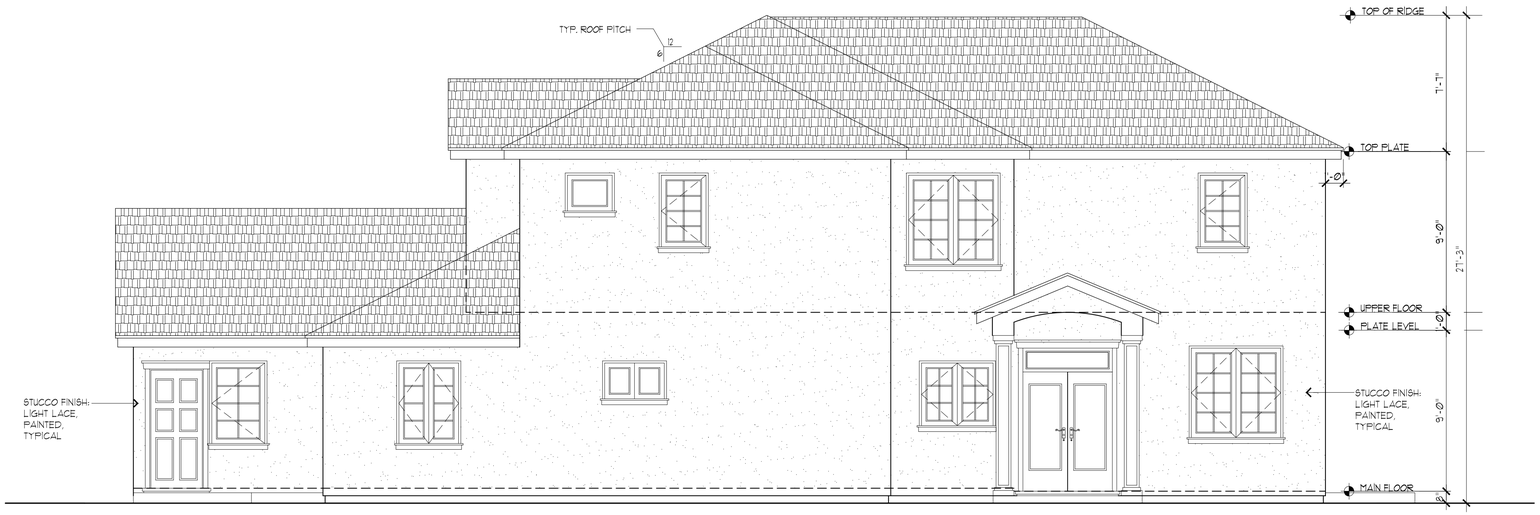
DATE:	Mar. 4, 2020
SCALE:	AS NOTED
DRAWN:	JC
JOB:	Peng & Luo
SHEET NO.	A.5
OF SHEETS	



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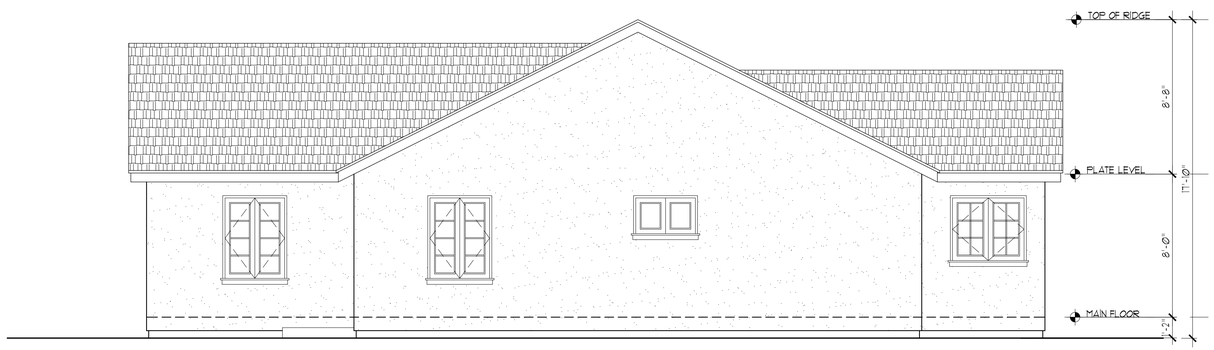
PROPOSED RIGHT SIDE ELEVATION

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



N

EXISTING RIGHT SIDE ELEVATION

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

REVISIONS	BY

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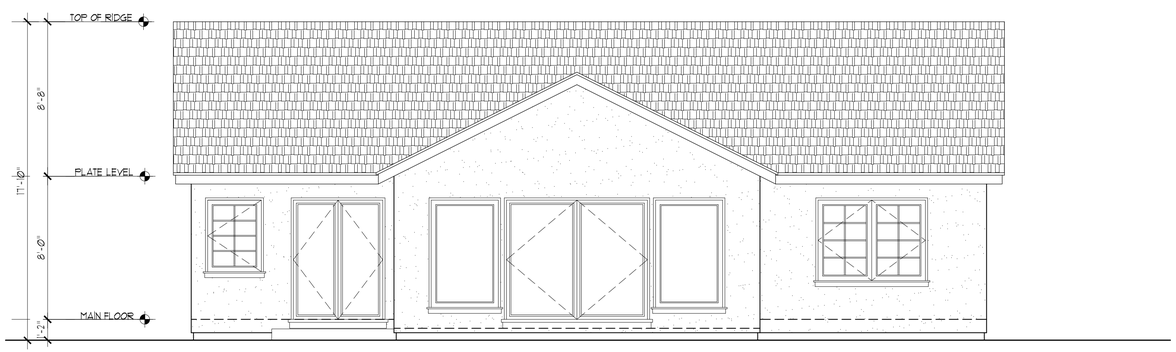
DATE:	Mar. 4, 2020
SCALE:	AS NOTED
DRAWN:	JC
JOB:	Peng & Luo
SHEET NO.	A.6

OF SHEETS

N

PROPOSED REAR ELEVATION

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



N

EXISTING REAR ELEVATION

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

REVISIONS	BY

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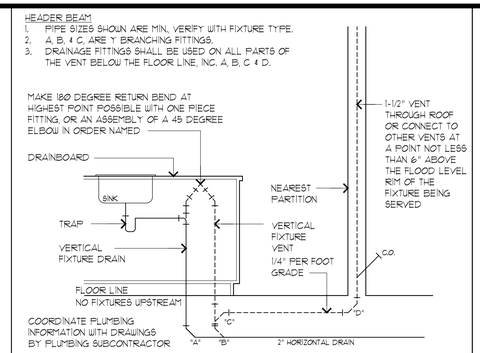
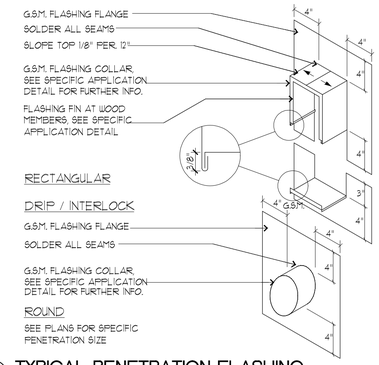
DATE:	Mar. 4, 2020
SCALE:	AS NOTED
DRAWN:	JC
JOB:	Peng & Luo
SHEET NO.	A.7

OF SHEETS

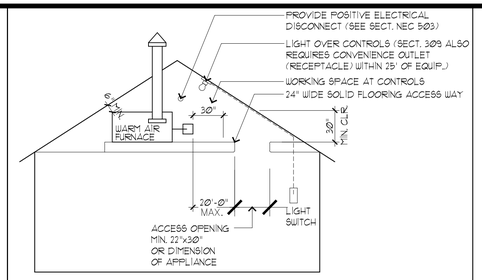
HEADER BEAM
1. PIPE SIZES SHOWN ARE MIN. VERIFY WITH FIXTURE TYPE.
2. A, B, & C, ARE Y BRANCHING FITTINGS.
3. DRAINAGE FITTINGS SHALL BE USED ON ALL PARTS OF THE VENT BELOW THE FLOOR LINE, INC. A, B, C & D.



13 ISLAND VENTING
SCALE: N.T.S.

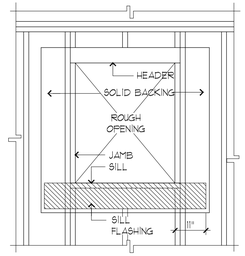


9 TYPICAL PENETRATION FLASHING
SCALE: N.T.S.

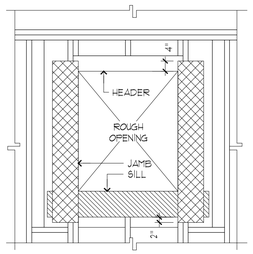


RELATED CODES SECTIONS: UMC 307.3 CENTRAL WARM-AIR FURNACES INSTALLED IN THE ATTIC MUST BE ACCESSIBLE FOR ROUTINE INSPECTION AND MAINTENANCE BY THE OWNER, OCCUPANT AND FOR SERVICE AND REPAIR AS NEEDED. CHANGING FILTERS, LUBRICATING MOTOR AND FAN BEARINGS, CHECKING BELT TENSIONS AND RELIGHTING THE PILOT FOLLOWING A SERVICE INTERRUPTION ARE NORMAL OWNER FUNCTIONS. ADEQUATE LIGHT, AN ELECTRICAL OUTLET, SAFE ACCESS WAY AND SUFFICIENT WORKING SPACE ON THE CONTROL SIDE ALL ENCOURAGE AND FACILITATE MAINTENANCE AND ENABLE RAPID EGRESS IN AN EMERGENCY.

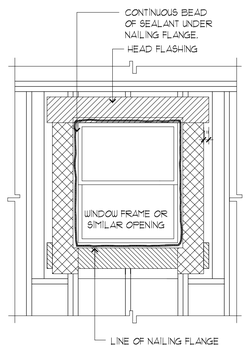
5 FURNACE @ ATTIC
SCALE: N.T.S.



STEP 1:
- ATTACH SILL STRIP OF 9" WIDE VYCOR V40 WEATHER BARRIER STRIP WITH TOP EDGE EVEN WITH THE TOP OF THE ROUGH SILL.
- PROVIDE SOLID BACKING AT ALL AREAS WHERE FLASHING MATERIAL LAPPING WILL OCCUR.
- EXTEND THIS STRIP AT LEAST 11" BEYOND THE EDGE OF THE ROUGH OPENING.
- ATTACH FLASHING MATERIAL WITH GALVANIZED ROOFING NAILS OR CORROSION-RESISTANT STAPLES.

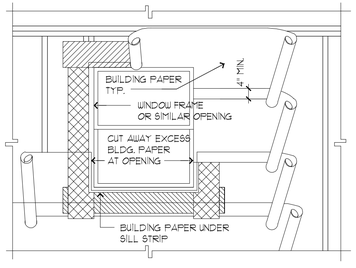


STEP 2:
- ATTACH JAMB STRIPS OF 9" WIDE MOISTOP FLASHING MATERIAL WITH INSIDE EDGE EVEN WITH THE JAMB OF THE ROUGH OPENING.
- START JAMB STRIPS 2" BELOW SILL STRIP AND EXTEND 4" ABOVE LOWER EDGE OF HEADER.



STEP 3:
- APPLY A CONTINUOUS BEAD OF SEALANT TO THE BACK OF THE FRAME NAILING FLANGE
- PLACE AND SECURE FRAME INTO ROUGH OPENING WITH FLANGES OVER THE INSTALLED JAMB AND SILL MOISTOP FLASHING MATERIAL.
- APPLY AN ADDITIONAL LAYER OF 9" WIDE VICOR V40 WEATHER OVER THE JAMB NAILING FLANGE
- ATTACH 9" WIDE VYCOR V40 WEATHER BARRIER STRIP OVER THE HEAD FLANGE. EXTEND THIS STRIP 2" BEYOND THE OUTER EDGE OF THE JAMB FLASHING MATERIAL.

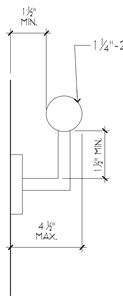
STEP 4:



-STARTING FROM THE BASE OF THE WALL, APPLY BUILDING PAPER UNDER THE SILL STRIP AND CUT ANY EXCESS BUILDING PAPER THAT MAY EXTEND ABOVE THE SILL AND BETWEEN THE JAMBS OF THE OPENING.
-APPLY THE NEXT COURSE OF BUILDING PAPER (BUTTING TO THE FRAME OPENING) OVER THE JAMB FLASHING MATERIAL.
-APPLY SUCCEEDING LAYERS OF BUILDING PAPER IN SHINGLE BOARD FASHION UP THE WALL, LAPPING COURSES A MINIMUM OF 6".

NOTES :
1. SECTION 1402 OF THE 2007 EDITION OF THE U.B.C. STATES "EXTERIOR OPENINGS EXPOSED TO THE WEATHER SHALL BE FLASHED IN A MANNER AS TO MAKE THEM WEATHERPROOF." THE PROCEDURE ABOVE IS RECOMMENDED TO ACHIEVE THIS INTENT FOR THE FLASHING OF WALL OPENINGS TO INCLUDE BUT NOT LIMITED TO: WINDOWS, DOORS, VENTS, ETC.
2. ALL MATERIALS SHALL BE IN STRICT CONFORMANCE WITH U.B.C. STANDARD 14-1
3. APPLICATION OF FINISH MATERIALS OVER FLASHING MATERIALS SHOWN SHALL BE AS SPECIFIED BY CODE REQUIREMENTS, MANUFACTURER'S INSTRUCTIONS AND THE BEST PRACTICES OF THE TRADE.
4. ADDITIONAL MATERIALS, IE. METAL HEAD FLASHING, ELASTOMERIC SHEET WATERPROOFING ETC. MAY OCCUR DEPENDING ON THE SPECIFIC FINISH MATERIALS BEING USED. REFER TO INDIVIDUAL DETAILS FOR ADDITIONAL INFORMATION.

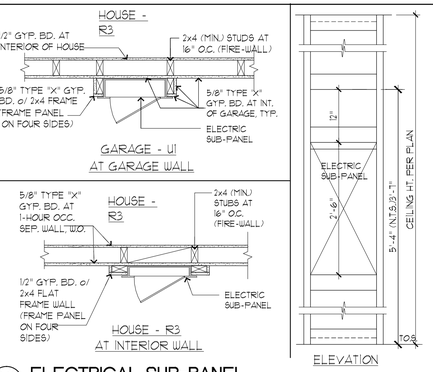
1 FLASHING AT EXTERIOR WALL OPENINGS
SCALE: N.T.S.



THE HANDGRIP PORTION OF HANDRAILS SHALL BE ROUNF AND NORT LESS THAN 1-1/4" OR MORE THAN 2" IN CROSS-SECTIONAL DIMENSION. IF NOT ROUND THEN THE HANDGRIP PORTION MUST HAVE A 2-1/4" MAXIMUM CROSS SECTION ANS A DIAMETER OF 4" MINIMUM TO 6.25" MAXIMUM.

THE HANDGRIP PORTION OF HANDRAILS SHALL HAVE A SMOOTH SURFACE WITH NO SHARP CORNERS. OTHER SHAPES MAY BE ACCEPTABLE IF THEY PROVIDE AN EQUIVALENT GRIPPING.

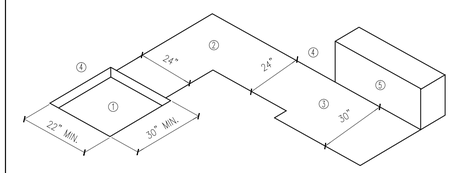
HANDRAIL



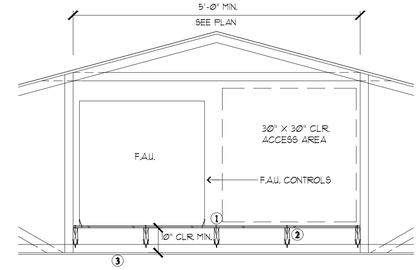
10 ELECTRICAL SUB-PANEL
SCALE: N.T.S.

WARM AIR FURNACES INSTALLED IN ATTICS OR FURRED SPACES SHALL BE INSTALLED AS PER UMC 307.3 AND SHALL INCLUDE THE FOLLOWING:

1. A MINIMUM 30"X30" ACCESS (20 FEET MAXIMUM FROM FURNACE)
2. CONTINUOUS SOLID FLOORING (5/8" CDX OR EQ.) 24" MIN. WIDE FROM ACCESS TO FURNACE
3. A LEVEL WORKING PLATFORM 30" MIN. IN DEPTH ALONG THE ENTIRE FIREBOX SIDE OF FURNACE
4. A PERMANENT 110V ELECTRICAL OUTLET AND LIGHTING FIXTURE LOCATED AT OR NEAR FURNACE LIGHTING FIXTURE TO BE CONTROLLED BY A SWITCH LOCATED AT ACCESS.
5. THE FAU SHALL BE LISTED FOR INSTALLATION IN ATTICS AND ON COMBUSTIBLE FLOORING. CLEARANCES SHALL BE AS PER MANUFACTURER'S SPECIFICATIONS AND PER UBC 304.



6 ACCESS FURNACE @ ATTIC
SCALE: N.T.S.



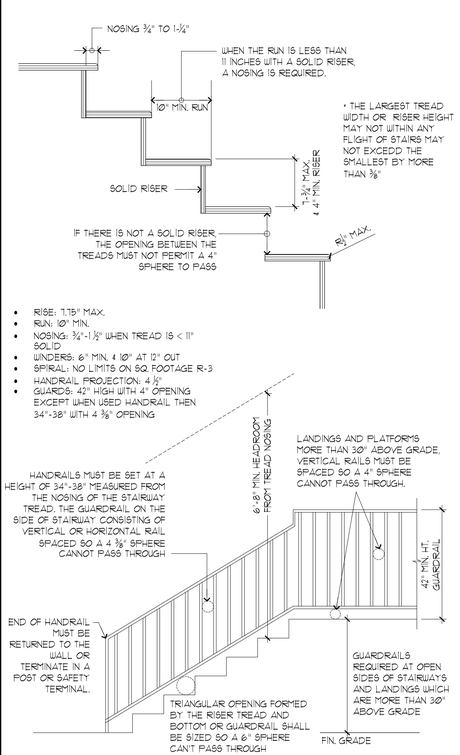
NOTE: TRUSS DESIGN BY TRUSS MFR.

SEE DET. 12/AD1 FOR ADDITIONAL INFO.

NOTE: VERIFY LENGTH OF PLATFORM w/ HVAC CONTRACTOR SEE DETAIL 12/AD1 FOR ADDITIONAL REQUIREMENTS PER UMC 319

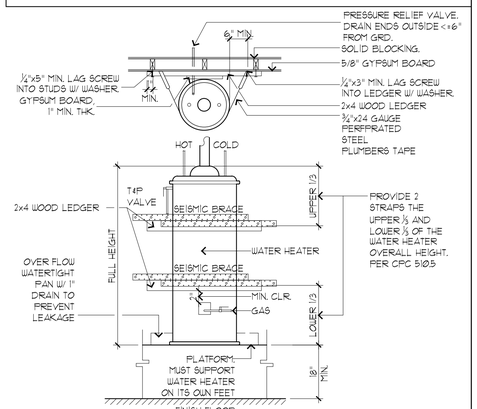
1. FRAMING SPAN o/ MIN. 3 TRUSSES, S.S.D.
2. 3/4" PLYWD.
3. 3/8" GYPSUM BD. AT CEILING

7 F.A.U. PLATFORM
SCALE: N.T.S.



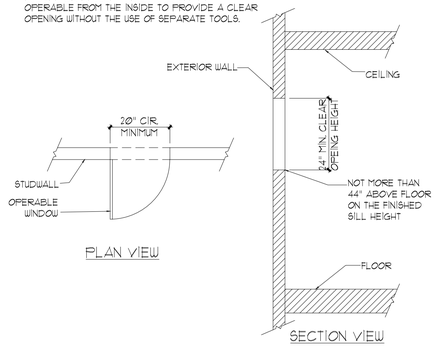
- RISE: 7.75" MAX.
- RUN: 10" MIN.
- NOSING: 3/4"-1 1/2" WHEN TREAD IS < 11" SOLID
- WINDERS: 6" MIN. & 10" AT 12" OUT
- SPIRAL: NO LIMITS ON SQ. FOOTAGE R-3
- HANDRAIL PROJECTION: 4 1/2"
- GUARDS: 42" HIGH WITH 4" OPENING EXCEPT WHEN USED HANDRAIL THEN 34"-38" WITH 4 3/8" OPENING

19 STAIR REQUIREMENT
SCALE: N.T.S.

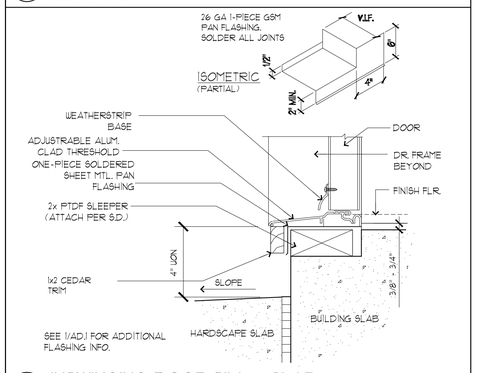


15 WATER HEATER SEISMIC BRACE
SCALE: N.T.S.

ESCAPE OR RESCUE WINDOWS FROM SLEEPING ROOMS SHALL HAVE A MINIMUM NET CLEAR OPENING OF 5.7 SQ. FT.
EVERY SLEEPING ROOM BELOW THE FOURTH STORY SHALL HAVE AT LEAST ONE OPERABLE WINDOW OR EXTERIOR DOOR APPROVED FOR EMERGENCY ESCAPE OR RESCUE. THE UNITS SHALL BE OPERABLE FROM THE INSIDE TO PROVIDE A CLEAR OPENING WITHOUT THE USE OF SEPARATE TOOLS.



14 EMERGENCY EGRESS DETAIL
SCALE: N.T.S.



SEE 1/AD.1 FOR ADDITIONAL FLASHING INFO.

8 INSWINGING DOOR SILL @ SLAB
SCALE: N.T.S.

REVISIONS	BY

CHU DESIGN ASSOCIATES INC.
55 W. 43rd AVENUE
SAN MATEO, CALIFORNIA 94403
TEL: (650) 345-9286
FAX: (650) 345-9287

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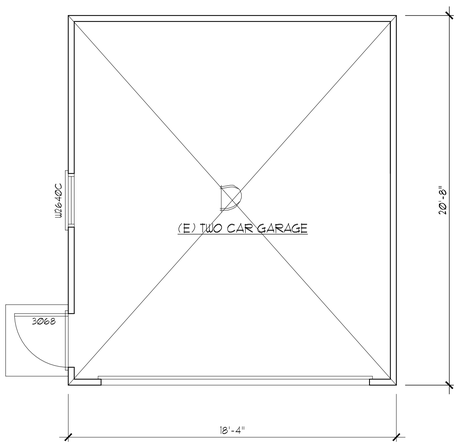
REGISTERED PROFESSIONAL ENGINEER
TSAKASHY, CHU
NO. C-29056
Exp. 3-31-2020
CIVIL
STATE OF CALIFORNIA

NEW ADU ADDITION & REMODELING
Owner : Mr. & Mrs. Freeman & Carissa L. Peng
863 Pinon Avenue
Millbrae, Calif., 94030
Tel. : 650-686-7007, 415-812-7963

DATE:	Mar. 4, 2020
SCALE:	AS NOTED
DRAWN:	JC
JOB:	Peng & Luo
SHEET NO.	A.8
OF SHEETS	



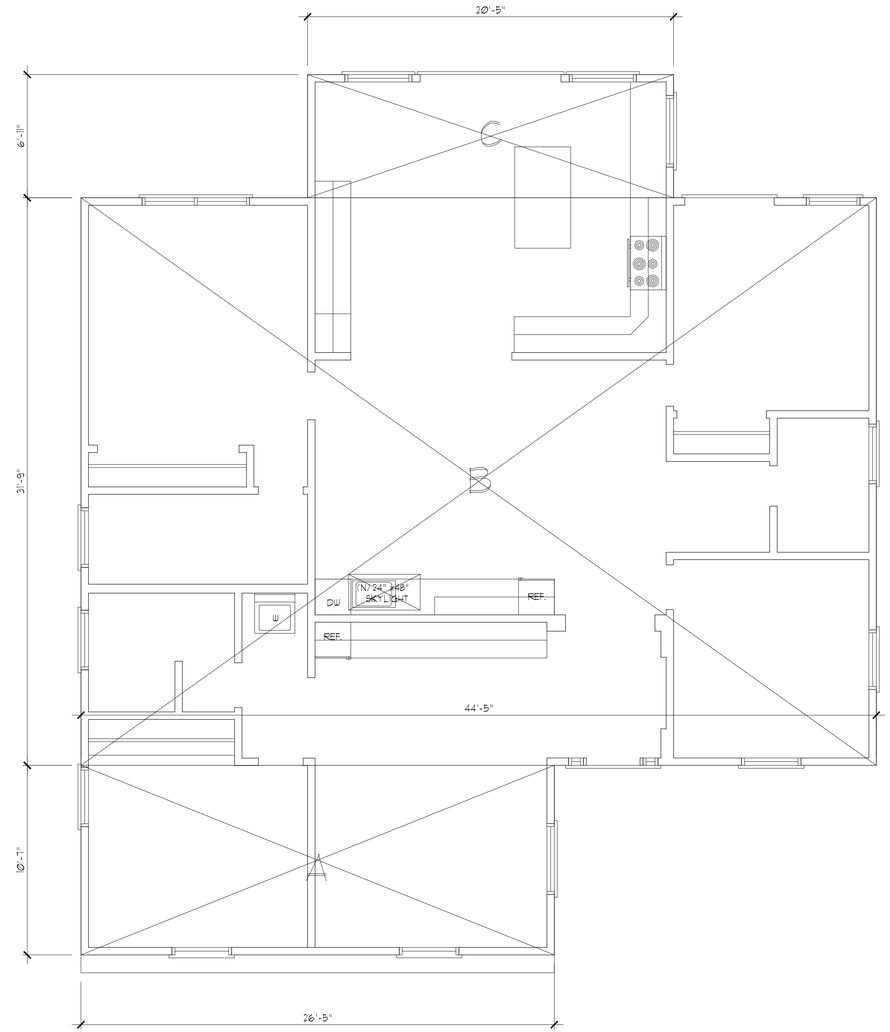
N

DETACHED GARAGE AREA CALCULATION

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

EXISTING DETACHED GARAGE AREA:

D	18'-4" x 20'-8"	=	378.89 SF
GARAGE AREA:			378.89 SF



N

EXISTING FLOOR AREA CALCULATION

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

EXISTING FLOOR AREA:

A	26'-5" x 10'-7"	=	279.57 SF
B	44'-5" x 31'-9"	=	1,410.23 SF
C	20'-5"x 6'-11"	=	141.21 SF
TOTAL EXISTING AREA:			1,831.01 SF

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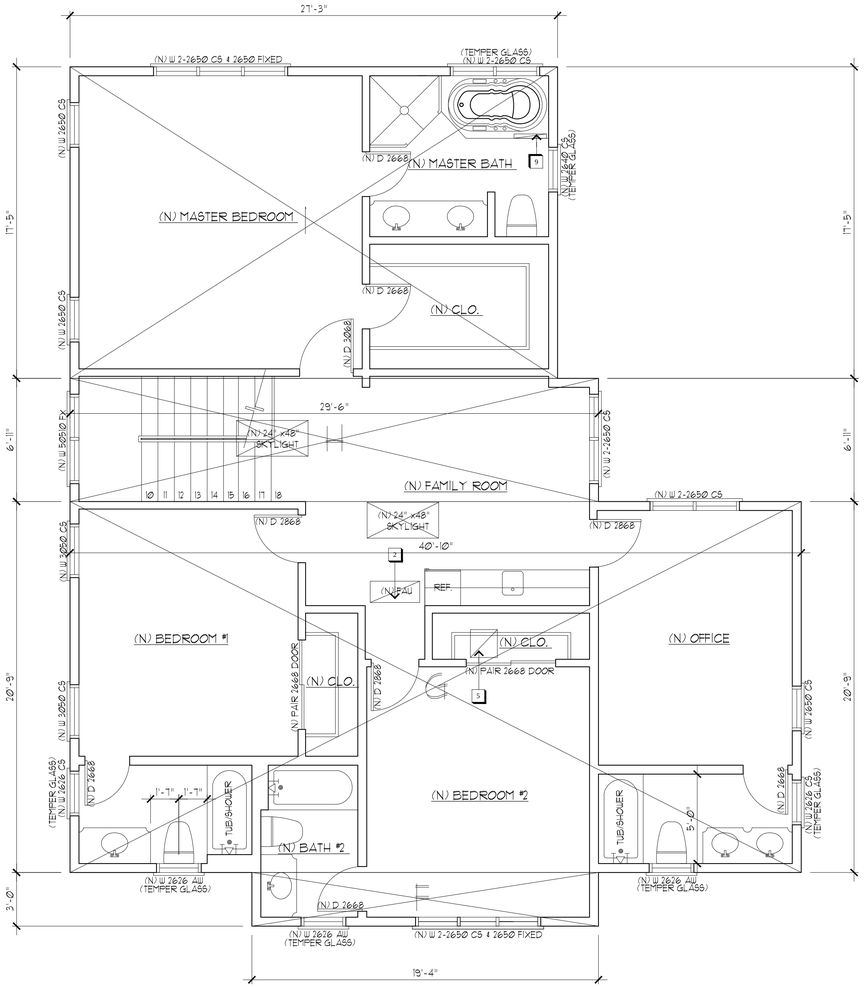
SHEET NO.	AC.1

OF SHEETS



PROPOSED SECOND AREA " ADU" CALCULATION

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

N

EXISTING + PROPOSED FIRST FLOOR AREA:

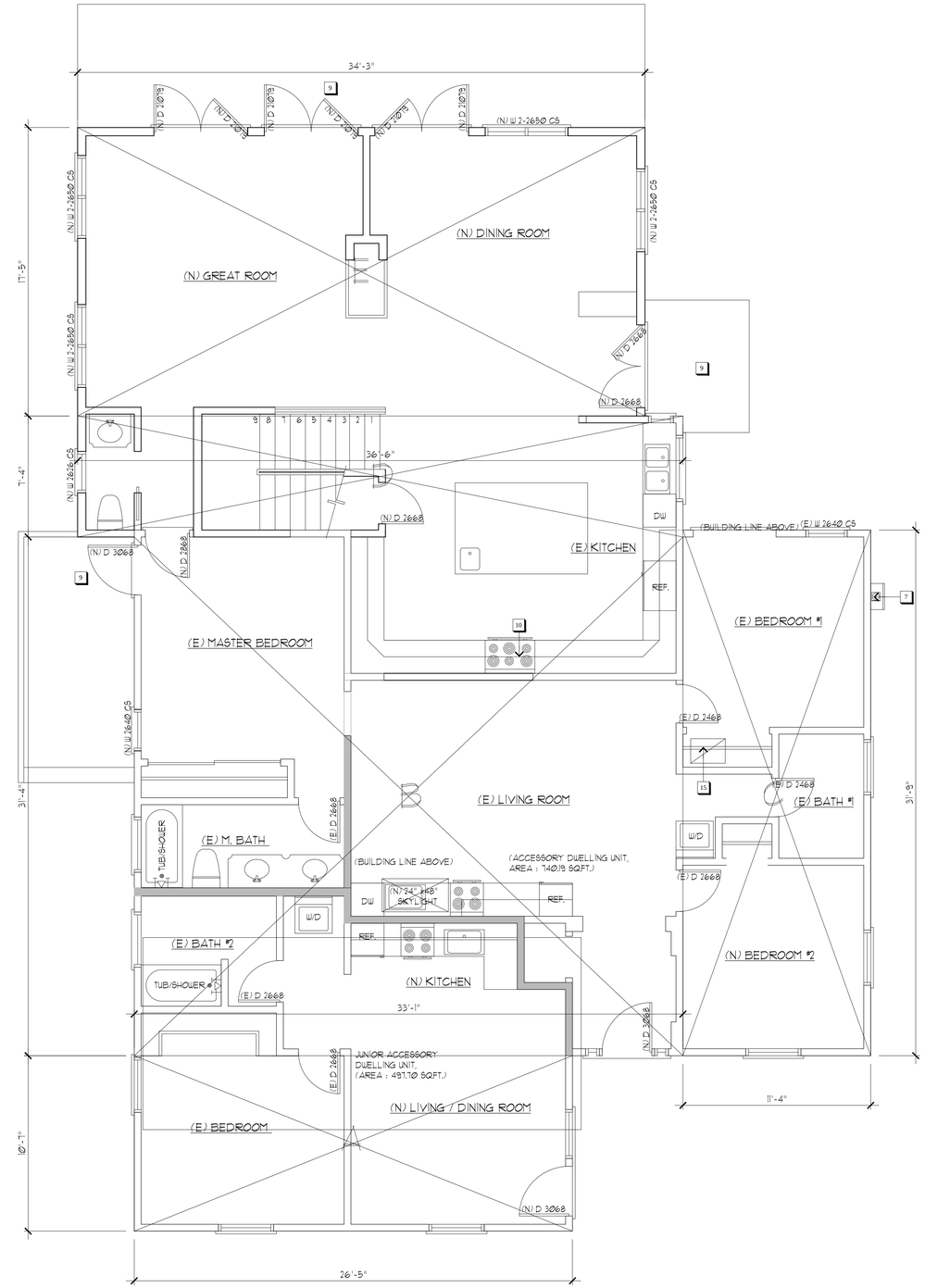
A	26'-5" x 10'-7"	=	279.57 SF
B	33'-1" x 31'-4"	=	1,036.60 SF
C	11'-4" x 31'-9"	=	359.83 SF
D	36'-6" x 7'-4"	=	267.67 SF
E	34'-3"x 17'-5"	=	596.52 SF

TOTAL EXISTING + PROPOSED AREA: 2,540.19 SF

NEW "ADU" FLOOR AREA:

F	19'-4" x 3'-0"	=	58.0 SF
G	40'-10" x 20'-9"	=	847.29 SF
H	29'-6"x 6'-11"	=	204.04 SF
I	27'-3" x 17'-5"	=	474.60 SF

TOTAL EXISTING AREA: 1,583.93 SF



PROPOSED FIRST FLOOR AREA CALCULATION

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

N

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SHEET NO.	AC.2

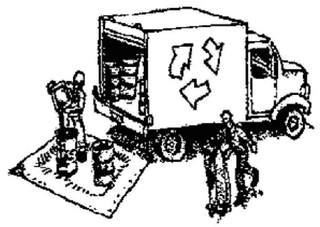
OF SHEETS

SAN MATEO COUNTYWIDE
Water Pollution Prevention Program
Clean Water. Healthy Community.

Construction Best Management Practices (BMPs)

Construction projects are required to implement the stormwater best management practices (BMP) on this page, as they apply to your project, all year long.

Materials & Waste Management



Non-Hazardous Materials

- ❑ Berm and cover stockpiles of sand, dirt or other construction material with tarps when rain is forecast or if not actively being used within 14 days.
- ❑ Use (but don't overuse) reclaimed water for dust control.

Hazardous Materials

- ❑ Label all hazardous materials and hazardous wastes (such as pesticides, paints, thinners, solvents, fuel, oil, and antifreeze) in accordance with city, county, state and federal regulations.
- ❑ Store hazardous materials and wastes in water tight containers, store in appropriate secondary containment, and cover them at the end of every work day or during wet weather or when rain is forecast.
- ❑ Follow manufacturer's application instructions for hazardous materials and be careful not to use more than necessary. Do not apply chemicals outdoors when rain is forecast within 24 hours.
- ❑ Arrange for appropriate disposal of all hazardous wastes.

Waste Management

- ❑ Cover waste disposal containers securely with tarps at the end of every work day and during wet weather.
- ❑ Check waste disposal containers frequently for leaks and to make sure they are not overfilled. Never hose down a dumpster on the construction site.
- ❑ Clean or replace portable toilets, and inspect them frequently for leaks and spills.
- ❑ Dispose of all wastes and debris properly. Recycle materials and wastes that can be recycled (such as asphalt, concrete, aggregate base materials, wood, gyp board, pipe, etc.)
- ❑ Dispose of liquid residues from paints, thinners, solvents, glues, and cleaning fluids as hazardous waste.

Construction Entrances and Perimeter

- ❑ Establish and maintain effective perimeter controls and stabilize all construction entrances and exits to sufficiently control erosion and sediment discharges from site and tracking off site.
- ❑ Sweep or vacuum any street tracking immediately and secure sediment source to prevent further tracking. Never hose down streets to clean up tracking.

Equipment Management & Spill Control

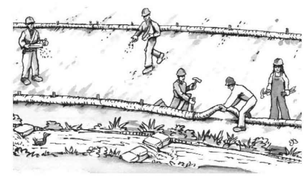
Maintenance and Parking

- ❑ Designate an area, fitted with appropriate BMPs, for vehicle and equipment parking and storage.
- ❑ Perform major maintenance, repair jobs, and vehicle and equipment washing off site.
- ❑ If refueling or vehicle maintenance must be done onsite, work in a bermed area away from storm drains and over a drip pan big enough to collect fluids. Recycle or dispose of fluids as hazardous waste.
- ❑ If vehicle or equipment cleaning must be done onsite, clean with water only in a bermed area that will not allow rinse water to run into gutters, streets, storm drains, or surface waters.
- ❑ Do not clean vehicle or equipment onsite using soaps, solvents, degreasers, steam cleaning equipment, etc.

Spill Prevention and Control

- ❑ Keep spill cleanup materials (rags, absorbents, etc.) available at the construction site at all times.
- ❑ Inspect vehicles and equipment frequently for and repair leaks promptly. Use drip pans to catch leaks until repairs are made.
- ❑ Clean up spills or leaks immediately and dispose of cleanup materials properly.
- ❑ Do not hose down surfaces where fluids have spilled. Use dry cleanup methods (absorbent materials, cat litter, and/or rags).
- ❑ Sweep up spilled dry materials immediately. Do not try to wash them away with water, or bury them.
- ❑ Clean up spills on dirt areas by digging up and properly disposing of contaminated soil.
- ❑ Report significant spills immediately. You are required by law to report all significant releases of hazardous materials, including oil. To report a spill: 1) Dial 911 or your local emergency response number, 2) Call the Governor's Office of Emergency Services Warning Center, (800) 852-7550 (24 hours).

Earthwork & Contaminated Soils



Erosion Control

- ❑ Schedule grading and excavation work for dry weather only.
- ❑ Stabilize all denuded areas, install and maintain temporary erosion controls (such as erosion control fabric or bonded fiber matrix) until vegetation is established.
- ❑ Seed or plant vegetation for erosion control on slopes or where construction is not immediately planned.

Sediment Control

- ❑ Protect storm drain inlets, gutters, ditches, and drainage courses with appropriate BMPs, such as gravel bags, fiber rolls, berms, etc.
- ❑ Prevent sediment from migrating offsite by installing and maintaining sediment controls, such as fiber rolls, silt fences, or sediment basins.
- ❑ Keep excavated soil on the site where it will not collect into the street.
- ❑ Transfer excavated materials to dump trucks on the site, not in the street.
- ❑ Contaminated Soils
- ❑ If any of the following conditions are observed, test for contamination and contact the Regional Water Quality Control Board:
  - ■ Unusual soil conditions, discoloration, or odor.
  - ■ Abandoned underground tanks.
  - ■ Abandoned wells
  - ■ Buried barrels, debris, or trash.

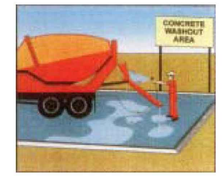
Paving/Asphalt Work

- ❑ Avoid paving and seal coating in wet weather, or when rain is forecast before fresh pavement will have time to cure.
- ❑ Cover storm drain inlets and manholes when applying seal coat, tack coat, slurry seal, fog seal, etc.
- ❑ Collect and recycle or appropriately dispose of excess abrasive gravel or sand. Do NOT sweep or wash it into gutters.
- ❑ Do not use water to wash down fresh asphalt concrete pavement.

Sawcutting & Asphalt/Concrete Removal

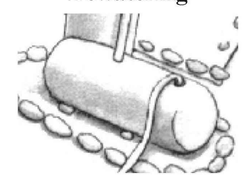
- ❑ Completely cover or barricade storm drain inlets when saw cutting. Use filter fabric, catch basin inlet filters, or gravel bags to keep slurry out of the storm drain system.
- ❑ Shovel, abosorb, or vacuum saw-cut slurry and dispose of all waste as soon as you are finished in one location or at the end of each work day (whichever is sooner!).
- ❑ If sawcut slurry enters a catch basin, clean it up immediately.

Concrete, Grout & Mortar Application



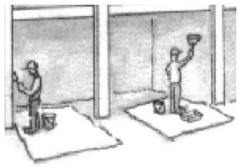
- ❑ Store concrete, grout and mortar under cover, on pallets and away from drainage areas. These materials must never reach a storm drain.
- ❑ Wash out concrete equipment/trucks offsite or in a contained area, so there is no discharge into the underlying soil or onto surrounding areas. Let concrete harden and dispose of as garbage.
- ❑ Collect the wash water from washing exposed aggregate concrete and remove it for appropriate disposal offsite.

Dewatering



- ❑ Effectively manage all run-on, all runoff within the site, and all runoff that discharges from the site. Divert run-on water from offsite away from all disturbed areas or otherwise ensure compliance.
- ❑ When dewatering, notify and obtain approval from the local municipality before discharging water to a street gutter or storm drain. Filtration or diversion through a basin, tank, or sediment trap may be required.
- ❑ In areas of known contamination, testing is required prior to reuse or discharge of groundwater. Consult with the Engineer to determine whether testing is required and how to interpret results. Contaminated groundwater must be treated or hauled off-site for proper disposal.

Painting & Paint Removal



Painting cleanup

- ❑ Never clean brushes or rinse paint containers into a street, gutter, storm drain, or surface waters.
- ❑ For water-based paints, paint out brushes to the extent possible. Rinse to the sanitary sewer once you have gained permission from the local wastewater treatment authority. Never pour paint down a drain.
- ❑ For oil-based paints, paint out brushes to the extent possible and clean with thinner or solvent in a proper container. Filter and reuse thinners and solvents. Dispose of residue and unusable thinner/solvents as hazardous waste.

Paint removal

- ❑ Chemical paint stripping residue and chips and dust from marine paints or paints containing lead or tributyltin must be disposed of as hazardous waste.
- ❑ Paint chips and dust from non-hazardous dry stripping and sand blasting may be swept up or collected in plastic drop cloths and disposed of as trash.

Landscape Materials

- ❑ Contain stockpiled landscaping materials by storing them under tarps when they are not actively being used.
- ❑ Stack erodible landscape material on pallets. Cover or store these materials when they are not actively being used or applied.
- ❑ Discontinue application of any erodible landscape material within 2 days before a forecast rain event or during wet weather.

Storm drain polluters may be liable for fines of up to $10,000 per day!

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