REPLACEMENT HOME

MAIER RESIDENCE

APN 027-171-30

100 – 7TH AVE., SANTA CRUZ, CALIFORNIA

GENERAL NOTES

LIFE-SAFETY

Provide combustion air for all gas-fired appliances. (CMC Chapter 7)

Vent dryer to outside of building (not to under-floor area). Vent length shall be 14' maximum or vent size shall be increased. (CMC 504.3)

Provide Tempered glass at all hazardous locations per CBC 2406.4 & CRC 308.4

Safety glazing shall be required within 24" of a door edge or within 36" of a stairway, landing or ramp when the bottom edge of the glazing is less than 60" from the floor or walking surface. Safety glazing is required in all fixed and operable panels of swinging, sliding and bi-fold doors.

Skylights shall comply with CRC R 308.6

Safety glazing is required in enclosures and walls facing hot tubs, saunas, steam rooms, showers and tubs where the bottom edge of the glazing is less than 60" from any standing or walking surface.

Fire blocking shall be provided in concealed spaces of stud walls and partitions, including furred spaces, and parallel rows of studs or staggered studs; vertically at floor and ceiling levels, horizontally at intervals not to exceed 10'. Openings around gas vents, ducts, chimneys and fireplaces at ceiling and floor levels shall have fire blocking per CBC 717.1 & CRC 302.11.

Provide minimum 22" x 30" access opening to attic. In attics in which an appliance is installed, an opening and passageway at least as large as the largest component of the appliance shall be required. (CMC 904.11)

Floor and ceiling assemblies shall be draft stopped so that the area of concealed space does not exceed 1000 SF. The draft stops shall divide the concealed space into approximately equal spaces per CBC 718.2 & CRC 302.12.

LIGHT & VENTILATION

Provide ventilation for products of combustion to outside air. (CMC 801.1)

Attic ventilation: 1/150 of attic area. If a Class I or II vapor barrier is applied to warm-in winter side of ceiling, or, if 50% - 80% of the vents are at least 3' above the eaves and the remaining vents are in the eaves then the ratio may be reduced to 1/300. Enclosed rafter spaces shall have cross ventilation (min. 1" clear)

Under-floor space shall have a ventilation opening area of 1/150 square feet of under-floor area. If a Class I vapor retarder is used the ratio may be reduced to 1/1500. One opening shall be placed within 3 feet of each building corner. Openings shall be covered with a covering having openings no greater than 1/4".

Air infiltration, insulation, space heating, space cooling, water heating...etc. shall meet CA Energy Commission Standards.

HERS certification testing is required for Indoor Air Quality.

DOORS, STAIRWAYS AND LANDINGS

Stairways shall comply with CBC 1009 & CRC R311.7

Required egress door shall be side hinged and have a minimum net clear width of 32" and a minimum height of 78".

There shall be a landing at each side of all doors. The landing shall be at least as wide as the door served and 36"min length measured in the direction of travel. There may one step down of no more than 7.75" provided the door does not swing over the landing.

Stairway rise shall be 4" min and 7.75" max. Run shall be 10" min. Headroom shall be 80" min. Width shall be 36" min. Handrails shall be 34" to 38" above tread nosing with openings less than 4" clear.

Enclosed useable space under interior stairs shall be finished with 1/2" gypsum board.

Fire blocking is required in concealed spaces between stair stringers at the top and bottom of the run.

There shall be a floor or landing at the top and bottom of each stairway. Width and length of landings shall be not less than the width of the stairway and shall be at least 36" in the direction of travel. A floor or landing is not required at the top of an interior flight of stairs, including stairs in an enclosed garage, provided a door does not swing over the stairs.

Guardrails shall comply with CBC 1013.4 & CRC R 312. Guards shall be located along open sided walking surfaces, including stairs, ramps, landings, and decks, that are more than 30" above the floor or grade. Required guards shall be not less than 42" above the adjacent walking surface. Except that handrails may be considered as guards at stairways. Openings in guards shall not exceed 4". Handrails shall comply with CBC 1012 & CRC R 311.7

Glazing used in doors, sidelights and panels of the shower enclosure shall be fully tempered, laminated safety glass or approved plastic. Per CRC R308.3 & R308.4.1.

WEATHER & CORROSION DAMAGE PREVENTION MEASURES

Naturally durable wood or preservative treated wood shall be required in the following locations:

a. Wood joists and girders closer than 18" or 12" respectively, to the exposed ground.

b. Wood framing members that rest on concrete or masonry and are less than 8" from the exposed ground.

c. Sills and sleepers on a concrete or masonry slab that is in direct contact with the ground unless separated by an impervious moisture barrier.

d. Wood siding, sheathing and wall framing on the exterior of the building having a clearance of less than 6" from the ground or less than 2" from a horizontal concrete surface.

GARAGE

Common wall between garage and dwelling shall have 5/8" gypsum board applied on the garage side. Garage ceiling with habitable space above shall have 5/8" type 'X' gypsum board applied to the ceiling.

No openings may be provided between a garage and a sleeping room. Other openings shall be equipped with solid wood or steel doors 1-3/8" in thickness and shall be self-closing and self-latching, 20 min. labeled assembly.

Garage floor surfaces shall be of approved noncombustible material.

Appliances and receptacles installed in garages and carports generating a glow, spark, or flame shall be located 18" min. above the floor. Provide protective bollard or other impact barrier. (CMC 307.1)

ELECTRICAL

Do not install electrical panels larger than 16 square inches in rated fire walls. Never install electrical panels in closet. Maintain a clearance of 36" in front of the panels. (CEC 110.26)

Provide a minimum of one 20 Amp receptacle in laundry areas. (CEC 210.52(F))

Kitchens and dining areas must have a minimum of two 20 Amp branch circuits (CEC 210.11). Kitchen counter outlets must be installed in every counter space 12" or wider, not greater than 4' o.c. and within 24" of the end of any counter space. (CEC 210.52)

GFCI outlets are required for all kitchen receptacles that are designed to serve countertop surfaces, in bathroom, in under-floor spaces or below grade level, in exterior outlets, and in all garage outlets not dedicated to a single device or appliance. (CEC 210.8) All dwellings must have at least one exterior outlet at the front and the back of the dwelling. (CEC 210.52(E))

Receptacles must be installed at 12' o.c. maximum in walls. Walls longer than 2 feet and halls longer than 10' must have a receptacle. A receptacle must be provided within 3' of bathroom sinks. (CEC 210.52) . Spacing of kitchen and dining room countertop receptacles shall meet minimum requirements of CEC 210.52(C), Parts 1-5. Bond all metal gas and water pipes to ground. All ground clamps must be accessible and of an approved type. (CEC 250.104)

Furnaces installed in attics and crawl spaces must have an access platform (catwalk in attics), light, light switch, and receptacle in the space. (CMC 904.11)

Smoke detector alarms are to be provided with battery back-up and audible in all sleeping areas and shall be hard-wired and inter-connected per CRC R314.5. When alterations, repairs, or additions require a permit smoke alarms shall be installed where required in new dwellings.

An approved carbon monoxide alarm shall be installed in dwellings within which fuel-burning appliances are installed, and in dwellings with an attached garage. Carbon monoxide detector/ alarms on all habitable levels and shall be hard-wired and inter-connected per CRC R315.1

Arc-Fault Circuit-Interrupter (AFCI) protected receptacles shall be installed in all rooms not requiring GFCI protection. The maximum length of the branch circuit to the AFCI is 50 feet for 14 AWG conductors or 70 feet for #12 AWG conductor.

Receptacles on 120- volt 15 & 20 amp circuits shall be listed tamper resistant. (CEC 406.11) Except when located more than 5.5' above the floor; within cabinets or cupboards; or when part of a luminaire or appliance.

Provide exhaust fans in bathrooms vented to outside and sized as follows: >= 50 CFM intermittent, >/= 20 CFM continuous. Exhaust fan ratings to be <= 1 sone continuous, <= 3 sones intermittent. Bath fans are to be Energy Star compliant and equipped with humidistat controls for adjustment of relative humidity from 50- to 80%. CalGreen Code 4.505.1

Provide a whole building mechanical exhaust system to outdoor air, with a properly labeled, accessible off/ on switch. Covers or louvers are to have min. R 4.2 insulation. **Whole House Ventilation Calculation** per CEC 150(O) & ASHRAE 62.2: heated area / 100 + 7.5 x (# of bedrooms + 1) = minimum required CFM exhaust fan, with 2 sone maximum sound rating.

The whole house fan shall be continuously on, unless there are exterior air contaminates present. The on/off mechanism shall be labeled to identify it as controlling the whole house fan.

Any new appliances (installed as part of any remodel, addition or new construction) shall be Energy Star appliances per Santa Cruz County Code 4.201.1.2.

Provide a listed raceway to accommodate a dedicated 208/240-volt branch circuit for future electric vehicle charging. The raceway shall be not less than the trade size (nominal 1-inch inside diameter). The panel or sub-panel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging as "EV CAPABLE". The raceway termination location shall be permanently and visibly marked as "EV CAPABLE".

LIGHTING

Kitchen lighting shall be high efficacy or up to 50% of lighting can be low efficacy. High efficacy & low efficacy must be switched separately.

Lighting in bathrooms, garages, laundry, utility rooms to be high efficacy or low efficacy with vacancy sensor switches.

Lighting in all other interior rooms like living, dining, bedrooms, etc. (except closets of less than 70 sq. ft.) shall be high efficacy or low efficacy with vacancy sensor switches or dimmers.

Outdoor lighting attached to the building shall be high efficacy or controlled by a motion sensor with photo-control or controlled by an astronomical time clock.

Garage, Laundry Rooms, and Utility Rooms (including storage rooms & crawl space) must be high efficacy and must be controlled by a vacancy sensor per CA Energy Standard 150(k).

PLUMBING

Fuel burning water heater is not allowed in bedroom or bathroom unless direct vent type or complying with CPC 506.1.

Water closet shall be located in a space not less than 30" in width with 24" minimum clearance in front. (CPC 407.5)

Provide 18" x 24" foundation access within 20' of plumbing cleanout. (CPC 707.9)

Provide anti-siphon valves on all hose bibs. (CPC 603.4.7) Strap water heater at points within upper and lower third of tank and 4" min. above controls.

Copper, galvanized or plastic piping shall not be installed under building slab. All solder joints to be lead free. Type M copper tubing shall not be used for water piping.

Provide low flow showerheads and water closets consuming 1.28 gallons per flush or less. (CPC 402.2.2). Install chlorine filters on showerheads, or whole house chlorine filter.

Showers shall be finished with a smooth, hard non-absorbent surface to a height of at least 72 in. above the drain outlet per CBC 1210.3 & CRC R 307.2. Provide curtain rod or approved enclosure material

All new waterlines ¾" dia. or larger and all new hot waterlines to the kitchen will be insulated per CEnC150(j)2.A & minimum insulation Table 120.3-A.

Appliances (water heater, F.A.U.) in garages and in adjacent spaces that open to the garage shall be installed so that burners and burner ignition devices are located no less than 18" above floor. Per CMC 3038.1, CPC 507.13, NFPA 54:9.1.10.1.

GREEN BUILDING NOTES

1 Conduct Preconstruction Green Building Conference.

2 Provide Construction Waste Management Plan for 65% Recycling Job Site Construction & Demolition Waste.

3 Use low or no VOC paint on all exterior, interior walls and ceilings.

4 Donate Unused materials.

5 Protect annular spaces around openings in plates at exterior wall per Cal Green sec. 4.505.2.

6 Substitution of solid sawn lumber with engineered lumber for Structural Beams and Headers including non-structural Headers is acceptable. Acquire final approval by Architect & Structural Engineer where applicable.

7 Substitution of Plywood with OSB for sheathing is acceptable. Acquire final approval by Architect & Structural Engineer where applicable.

8 Install Energy Star rated Appliances.

9 Insulate all hot water pipes.

10 Install Insulation after building is Weather-Tight and outside of the rainy season. Insulation shall be recycled-content, formaldehyde-free fiberglass insulation.

11 Cover duct openings/ air distribution openings during construction. Clean ducts before occupancy. Use Duct Mastic on all duct joints.

12 Check moisture content materials for walls & floor before enclosure.

13 Install Low VOC carpet systems (where applicable).

14 Develop Homeowner Manual including Green Measures & Benefits.

PROJECT DESCRIPTION

Proposal to replace an existing single-family dwelling (approximately 1,100 square feet) and to construct a 2-story dwelling (approximately 1,837 square feet) with an attached garage (approximately 224 square feet). Requires a Coastal Development Permit and Variances to increase the Floor Area Ratio from 50% to 60%, to increase the Lot Coverage from 40% to 41.4%, to reduce the street side yard setback (at the alley) from 10 feet to 5 feet, and to reduce the distance to the garage entrance from 20 feet to 8.25 feet. Property is located on the east side of 7th Avenue (100 – 7th Avenue) approximately 80 feet north of the intersection with East Cliff Drive.

PARCEL INFORMATION

APN	027-171-30
Parcel Size:	3,090 square feet
Existing Land Use – Parcel:	Residential
Existing Land Use – Surrounding:	Residential and Commercial
Project Access:	7th Avenue between East Cliff and Bonnie Street
Planning Area:	Live Oak
Land Use Designation:	R-UH (Urban High Residential)
Zone District:	R-1-3.5 (Single-family residential, 3,500 Square foot minimum parcel size)
Coastal Zone:	Inside
Appealable to Cal. Coastal Comm.	Yes

ENVIRONMENTAL INFORMATION

Geologic Hazards:	Not mapped/ no physical evidence on site
Soils:	Soils Report – REQUIRED
Fire Hazard:	Not a mapped constraint
Slopes:	0-2%
Env. Sen. Habitat:	Not mapped/ no physical evidence on site
Grading:	No Grading required
Tree Removal:	None
Scenic:	Not a mapped resource
Drainage:	Existing drainage adequate
Archeology:	Not mapped/ no physical evidence on site

SERVICES INFORMATION

Urban/Rural Services Line:	Inside
Water Supply:	City of Santa Cruz
Sewage Disposal:	County of Santa Cruz
Fire District:	Central Fire Protection District
Drainage District:	Zone 5

APPLICABLE CODES

ALL WORK INDICATED ON THE PLANS SHALL COMPLY WITH THE FOLLOWING GOVERNING CODES:

2016 CALIFORNIA BUILDING CODE
2016 CALIFORNIA RESIDENTIAL CODE
2016 CALIFORNIA ELECTRICAL CODE
2016 CALIFORNIA PLUMBING CODE
2016 CALIFORNIA MECHANICAL CODE
2016 CALIFORNIA ENERGY CODE
2016 CALIFORNIA GREEN BUILDING STANDARDS CODE
2016 CALIFORNIA FIRE CODE

DEFERRED SUBMITTAL

SUBMITTAL DOCUMENTS FOR DEFERRED SUBMITTAL ITEMS SHALL BE SUBMITTED TO THE ARCHITECT OR ENGINEER OF RECORD, WHO SHALL REVIEW THEM AND FORWARD THEM TO THE BUILDING OFFICIAL WITH A NOTATION INDICATING THAT THE DEFERRED SUBMITTAL DOCUMENTS HAVE BEEN REVIEWED AND THAT THEY HAVE BEEN FOUND TO BE IN GENERAL CONFORMANCE WITH THE DESIGN OF THE BUILDING. THE DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THE DESIGN AND SUBMITTAL DOCUMENTS HAVE BEEN APPROVED BY THE BUILDING OFFICIAL. THE FOLLOWING ITEMS WILL BE SUBMITTED SEPARATELY FOR THIS PROJECT:

1 PROVIDE COMPLETE DESIGN CALCUATIONS, DRAWINGS AND SPECIFICATIONS FOR FIRE SPRINKLER SYSTEM

2 PROVIDE DESIGN AND DOCUMENTATION FOR A COMPLETE HEATING SYSTEM. PLANS AND SPECIFICATIONS TO INCLUDE APPLIANCE MODELS, SPECIFICATIONS, BTU VALUES, DUCT LAYOUT, MATERIALS AND SIZES, ETC. HEATING AND/OR AIR-CONDITIONING SYSTEMS SHALL BE SIZED, DESIGNED AND HAVE THE EQUIPMENT SELECTED USING THE FOLLOWING METHODS:

A) THE HEAT LOSS AND HEAT GAIN IS ESTABLISHED ACCORDING TO ANSI/ACCA 2 MANUAL J-2011, ASHRAE HANDBOOKS OR OTHER EQUIVALENT DESIGN SOFTWARE OR METHODS.

B) DUCT SYSTEMS ARE SIZED ACCORDING TO ANSI/ACCA 1 MANUAL D-2014, ASHRAE HANDBOOKS OR OTHER EQUIVALENT DESIGN SOFTWARE OR METHODS.

C) SELECT HEATING AND COOLING EQUIPMENT ACCORDING TO ANSI/ACCA 3 MANUAL S-2014 OR OTHER EQUIVALENT DESIGN SOFTWARE OR METHODS.

Fire Protection Notes

These plans are in compliance with the California Building and Fire Codes (2016) and Central District Amendments.

Occupancy Classification	R-3 / U
Building Construction	V-B
Fire Rating	Sprinklered

This project shall be equipped with a Type 13-D residential fire sprinkler system. Automatic fire sprinkler system shall be installed in accordance with currently adopted edition of NFPA-13D, and adopted standards of the authority having jurisdiction. All fire protection equipment shall be installed per the latest edition of the National Fire Code.

Sprinkler system designer/installer shall submit three (3) sets of plans and calculations for the underground and overhead Residential Automatic Sprinkler System to the Central Fire Protection District for approval. Installation shall follow guide sheet.

Underground Fire Protection System working drawings must be prepared by the designer / installer. These plans shall comply with the UNDERGROUND FIRE PROTECTION SYSTEM INSTALLATION POLICY HANDOUT.

Address numbers will be posted to the right of the entry door @ eye level. Numbers shall be a minimum of 4 inches in height and of a color contrasting to their background. Where numbers are not visible from street, additional numbers shall be installed on a directional sign at the property driveway and the street.

Install an approved spark arrestor at the top of chimney, with wire mesh not to exceed ½-inch openings.
Roof coverings shall be no less than class "B" fire rated roof.
Install smoke detectors per CBC sections 907.2.10.1.1 & CRC R 314
Install carbon-monoxide detectors per CBC 420 & CRC R 315.2

Maintain a 30-foot clearance with non-combustible vegetation around all structures.

Any electric gates shall be equipped with the Central Fire District key entry system.

Job copies of the building and fire system plans must be on-site during inspections.

As a condition of submittal of these plans, the submitter, designer, and installer certify that these plans and details comply with applicable Specifications, Standards, Codes, and Ordinances, agree that they are solely responsible for compliance with the applicable Specifications, Standards, Codes, and Ordinances, and further agree to correct any deficiencies noted by this review, subsequent review, inspection or other source, and to hold harmless and without prejudice, the reviewer and the Central FPD of Santa Cruz County.

SOILS REPORT

ALL SOILS WORK AND FOUNDATION PLACEMENT SHALL CONFORM TO THE RECOMMENDATIONS IN THE GEOTECHNICAL INVESTIGATION, FILE NO. 19-7078-S, DATED MAY 29, 2019, BY AMERICAN SOIL TESTING & ENGINEERING

STORMWATER MANAGEMENT & MAINTENANCE AGREEMENT NOTES

OWNER CONSENTS AND AGREES TO INSPECT AND MAINTAIN ANNUALLY 'PRIOR TO THE RAINY SEASON' THE ON-SITE DRAINAGE SYSTEMS AND STORMWATER MANAGEMENT FACILITIES ON THE SUBJECT PROPERTY.

VICINITY MAP

NTS

PROJECT DATA

OWNER	JOETTA & DANIEL MAIER 10161 PHAR LAP DRIVE CUPERTINO, CA 95014 408-836-5828
APN	027-171-30
ZONING	R-1-3.5
OCCUPANCY CL.	R-3 / U
CONST. TYPE	V-B
FIRE RATING	SPRINKLERED
LOT AREA	3,060 SF

LOT COVERAGE — 40% MAX. ALLOW. = 1224 SF

	EXISTING	PROPOSED
HOUSE	1114	1007.5
GARAGE	0	224
COVERED PORCHES	0	37.5
DECKS (> 18" to Grade)	0	0
TOTAL	1114 = 36.4 %	1269 = 41.4%

FAR — 50% MAX. ALLOW. = 1530 SF

	EXISTING	PROPOSED
LOWER FLR	1114	1007.5
UPPER FLR	0	829.25
GARAGE (225 SF CREDIT)	0	not counted
TOTAL	1114 = 36.4%	1836.75 = 60.0 %

BUILDING AREA

	EXISTING	PROPOSED
LOWER FLR	1114	1007.5
UPPER FLR	0	829.25
GARAGE	0	224
TOTAL	1114 SF	2060.75 SF
DECKS	0	378.5 SF

PARKING REQUIRED — 5 BDRM = 4 SPACES

EXISTING	PROPOSED
3 BDRM = 2 SPACES	5 BDRM = 4 SPACES

No Grading is required for this project. Areas disrupted during Construction shall be restored to be consistent with native vegetation species and patterns.

PROJECT CONSULTANTS

ARCHITECT	Michael Helm, Architect Michael Helm & Associates 200 Seventh Ave., #110 Santa Cruz, CA 95062 831-476-5386
STRUCTURAL	George Reynolds, S. E. 111 Youngiove Ave. Santa Cruz, CA 95060 831-425-3637
ENERGY	Monterey Energy Group 26465 Carmel Rancho Blvd., #3 Carmel, CA 93923 831-372-8328
SOILS	American Soil Testing & Engineering 705 E. Brokaw Road San Jose, CA 95112 408-559-9400

SHEET INDEX

Michael Helm, AIA Architect & Associates
200 Seventh Avenue, #110 Santa Cruz, California 95062 (831) 476-5386

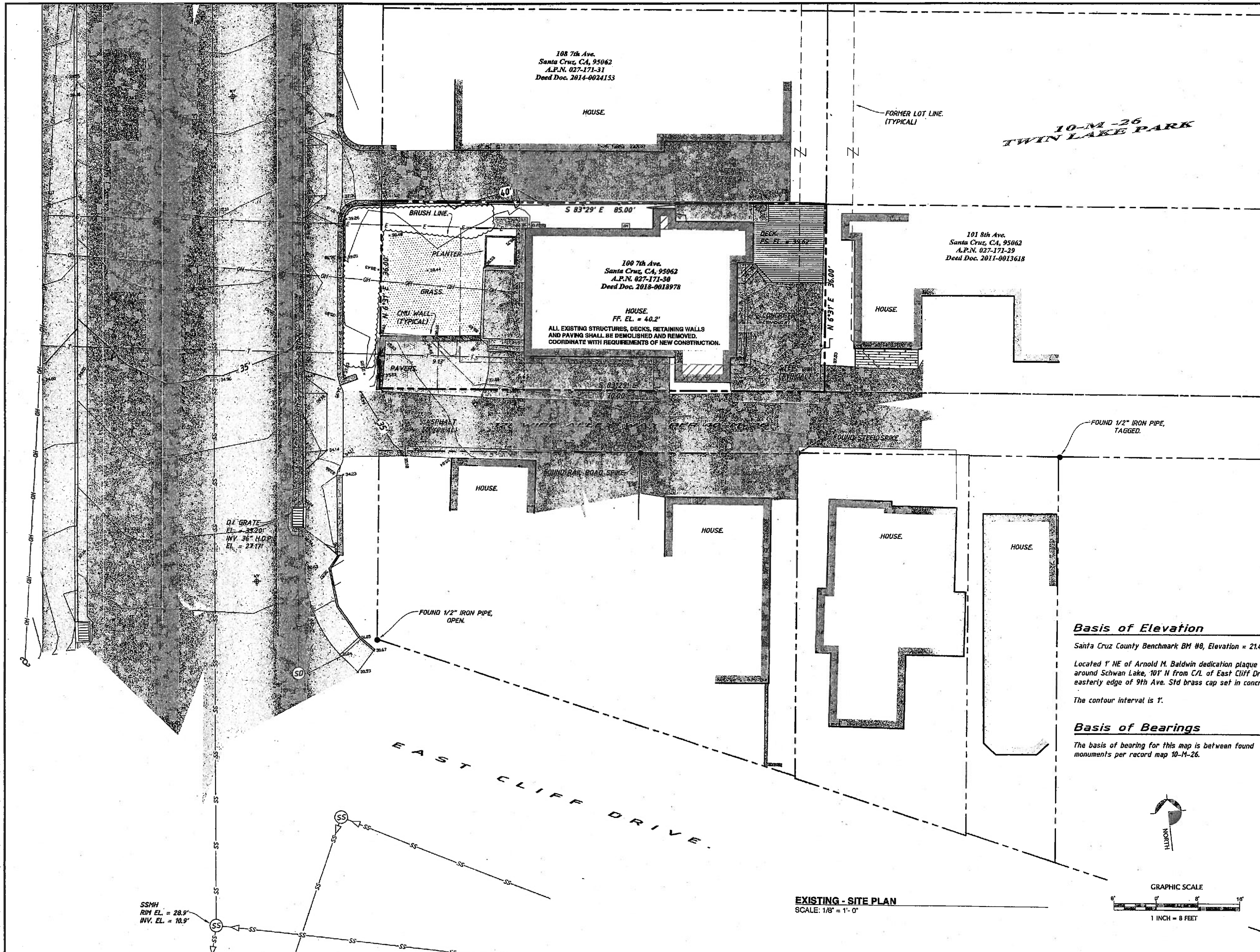
ZA Resubmittal 9.16.19 MSH

REPLACEMENT HOME
MAIER RESIDENCE
APN 027-171-30
100 – 7TH AVE., SANTA CRUZ, CALIFORNIA

COVER SHEET

5.11.19
NTS
MSH
1902

1



Basis of Elevation

Santa Cruz County Benchmark BM #8, Elevation = 21.43'.

Located 1' NE of Arnold M. Baldwin dedication plaque to the lands around Schwan Lake, 101' N from C/L of East Cliff Dr. and at the easterly edge of 9th Ave. Std brass cap set in concrete.

The contour interval is 1'.

Basis of Bearings

The basis of bearing for this map is between found monuments per record map 10-M-26.

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

PROFESSIONAL LAND SURVEYOR
PAUL J. HANAGAN
NO. 7797
EXP. 12-31-19
STATE OF CALIFORNIA

REVISION

APPROVED
Paul Hanagan LS 7797

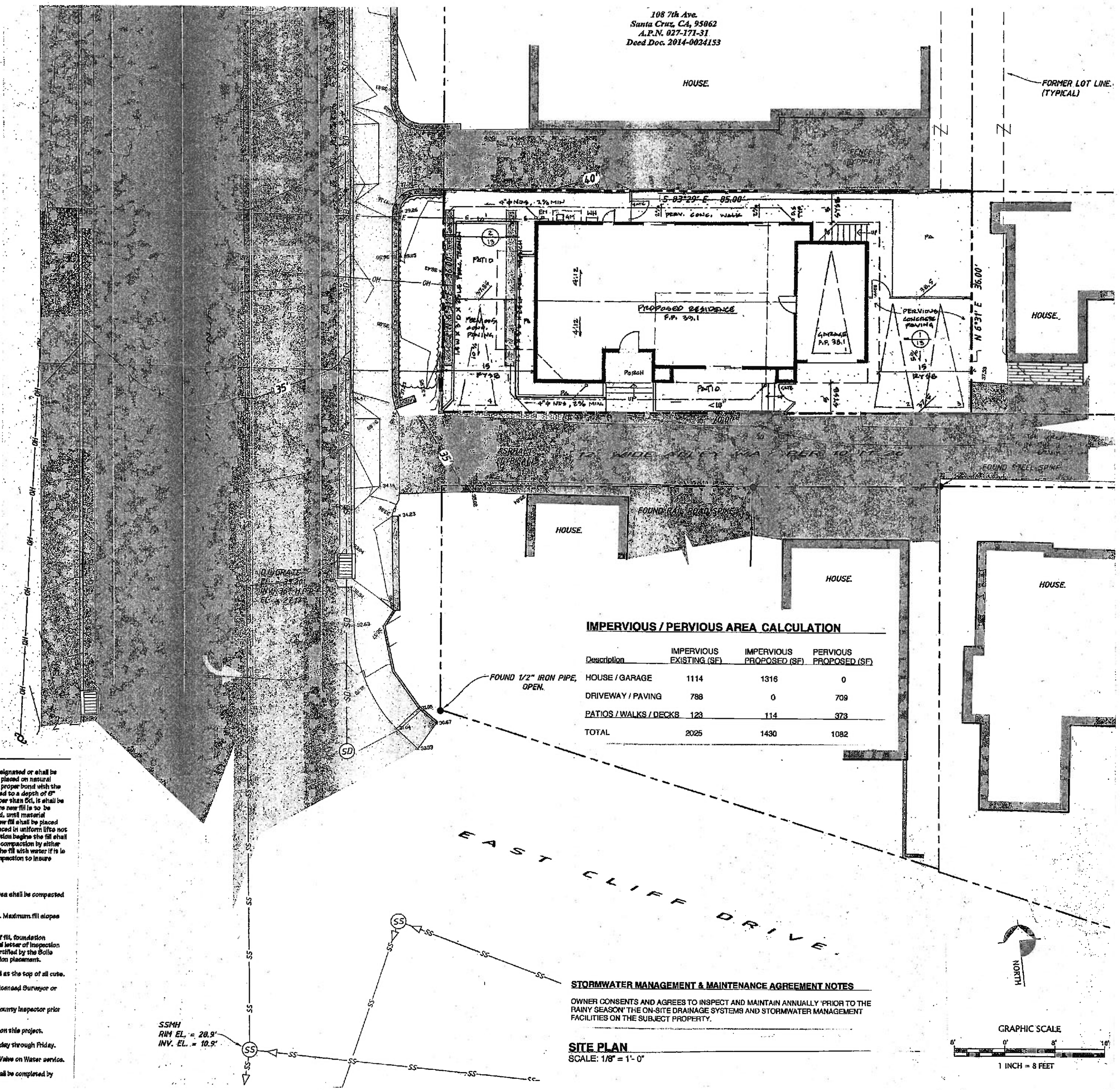
HANAGAN LAND SURVEYING
305-C SOQUEL AVE.,
SANTA CRUZ, CA 95062
PHONE (831) 469-3428

REPLACEMENT HOME
MAIER RESIDENCE
APN 027-171-30
100 - 7TH AVE., SANTA CRUZ, CALIFORNIA

Santa Cruz County
A.P.N. 027-171-30
DATE 10-19-2018
SCALE 1" = 8'
DESIGN
DRAWN P. Hanagan

2

S:\PROJECTS\2018\18120 100 7th Avenue\dwg\100 7th Ave.dwg, Plotted By: paul, Plotted: Oct 22, 2018 - 10:23am



IMPERVIOUS / PERVIOUS AREA CALCULATION

Description	IMPERVIOUS EXISTING (SF)	IMPERVIOUS PROPOSED (SF)	PERVIOUS PROPOSED (SF)
HOUSE / GARAGE	1114	1316	0
DRIVEWAY / PAVING	788	0	709
PATIOS / WALKS / DECKS	123	114	373
TOTAL	2025	1430	1082

STORMWATER MANAGEMENT & MAINTENANCE AGREEMENT NOTES

OWNER CONSENTS AND AGREES TO INSPECT AND MAINTAIN ANNUALLY 'PRIOR TO THE RAINY SEASON' THE ON-SITE DRAINAGE SYSTEMS AND STORMWATER MANAGEMENT FACILITIES ON THE SUBJECT PROPERTY.

SITE PLAN

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

GRADING NOTES

1 Excavated material shall be placed in the fill areas designated or shall be hauled away from the site. Where fill material is to be placed on natural grade it shall be stripped of all vegetation. To achieve proper bond with the fill material, the surface of the ground shall be scarified to a depth of 6" before the fill is placed. Where natural ground is steeper than 5:1, it shall be benched and the fill keyed in to achieve stability. Where new fill is to be placed on existing fill, the existing fill shall be removed, until material compacted to 90% relative density is exposed. The new fill shall be placed per these construction notes. Fill material shall be placed in uniform lifts not exceeding 6" in compacted thickness. Before compaction begins the fill shall be brought to a water content that will permit proper compaction by either (1) aerating the fill if it is too wet, or (2) moistening the fill with water if it is too dry. Each lift shall be thoroughly mixed before compaction to insure uniform distribution of moisture.

2 No organic material shall be placed in any fill.

3 The upper 6" of subgrade below driveway or parking area shall be compacted to 95% relative density.

4 Maximum cut slopes shall be 2 horizontal to 1 vertical. Maximum fill slopes shall be 2 horizontal to 1 vertical.

5 Soils Engineer to be retained to inspect compaction of fill, foundation placement, slopes of all cuts and fills, and provide final letter of inspection on all Grading and Soils Work. Compaction shall be certified by the Soils Engineer to the Building Department prior to foundation placement.

6 A minimum of 15 ft. of slope rounding shall be provided at the top of all cuts.

7 Residence location and pad elevation to be done by a licensed Surveyor or Civil Engineer prior to grading.

8 Contractor shall arrange a pre-grading meeting with County Inspector prior to beginning any work.

9 No potable water to be used for any grading purposes on this project.

10 Permitted hours of work are 7:30AM to 6:00PM, Monday through Friday.

11 All utilities to be underground, typical. Provide Check Valve on Water service.

12 Erosion control planting or permanent landscaping shall be completed by October 15, 2019.

13 Soils investigation project #

VICINITY MAP

NTS

PROJECT DATA

OWNER	JOETTA & DANIEL MAIER 10161 PHAR LAP DRIVE CUPERTINO, CA 95014 408-836-5828	
APN	027-171-30	
ZONING	R-1-3.5	
OCCUPANCY CL.	R-3 / U	
CONST. TYPE	V-B	
FIRE RATING	SPRINKLERED	
LOT AREA	3,060 SF	

LOT COVERAGE — 40% MAX. ALLOW. = 1224 SF

	EXISTING	PROPOSED
HOUSE	1114	1007.5
GARAGE	0	224
COVERED PORCHES	0	37.5
DECKS (> 18" to Grade)	0	0
TOTAL	1114 = 36.4 %	1269 = 41.4%

FAR — 50% MAX. ALLOW. = 1530 SF

	EXISTING	PROPOSED
LOWER FLR	1114	1007.5
UPPER FLR	0	829.25
GARAGE (225 SF CREDIT)	0	not counted
TOTAL	1114 = 36.4%	1836.75 = 60.0 %

BUILDING AREA

	EXISTING	PROPOSED
LOWER FLR	1114	1007.5
UPPER FLR	0	829.25
GARAGE	0	224
TOTAL	1114 SF	2060.75 SF
DECKS	0	378.5 SF

PARKING REQUIRED — 5 BDRM = 4 SPACES

EXISTING	PROPOSED
3 BDRM = 2 SPACES	5 BDRM = 4 SPACES

No Grading is required for this project. Areas disrupted during Construction shall be restored to be consistent with native vegetation species and patterns.

PROJECT DESCRIPTION

Proposal to replace an existing single-family dwelling (approximately 1,100 square feet) and to construct a 2-story dwelling (approximately **1,837** square feet) with an attached garage (approximately **224** square feet). Requires a Coastal Development Permit and Variances to increase the Floor Area Ratio from 50% to **60%**, to increase the Lot Coverage from 40% to **41.4%**, to reduce the street side yard setback (at the alley) from 10 feet to **5** feet, and to reduce the distance to the garage entrance from 20 feet to **8.25** feet. Property is located on the east side of 7th Avenue (100 – 7th Avenue) approximately 60 feet north of the intersection with East Cliff Drive.

PARCEL INFORMATION

APN	027-171-30
Parcel Size:	3,060 square feet
Existing Land Use – Parcel:	Residential
Existing Land Use – Surrounding:	Residential and Commercial
Project Access:	7th Avenue between East Cliff and Bonnie Street
Planning Area:	Live Oak
Land Use Designation:	R-UH (Urban High Residential)
Zone District:	R-1-3.5 (Single-family residential, 3,500 Square foot minimum parcel size)
Coastal Zone:	Inside
Appealable to Cal. Coastal Comm.	Yes

ENVIRONMENTAL INFORMATION

Geologic Hazards:	Not mapped/ no physical evidence on site
Soils:	Soils Report – REQUIRED
Fire Hazard:	Not a mapped constraint
Slopes:	0-2%
Env. Sen. Habitat:	Not mapped/ no physical evidence on site
Grading:	No Grading required
Tree Removal:	None
Scenic:	Not a mapped resource
Drainage:	Existing drainage adequate
Archeology:	Not mapped/ no physical evidence on site

SERVICES INFORMATION

Urban/Rural Services Line:	Inside
Water Supply:	City of Santa Cruz
Sewage Disposal:	County of Santa Cruz
Fire District:	Central Fire Protection District
Drainage District:	Zone 5

ZA RESUBMITTAL 9-16-19 MSH

Michael Helm, AIA Architect & Associates
200 Seventh Avenue, #110 Santa Cruz, California 95062 (831) 476-5386

REPLACEMENT HOME
MAIER RESIDENCE
APN 027-171-30
100 – 7TH AVE., SANTA CRUZ, CALIFORNIA

PROPOSED - SITE PLAN

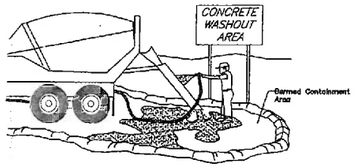
3-11-19

1/8" = 1'-0"

MSH

1902

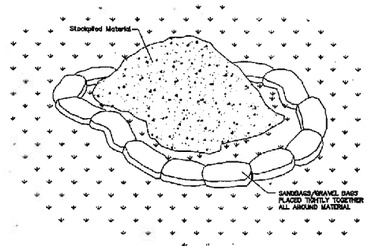
2.1



Notes:

1. Excess and waste concrete shall not be washed into the street or into a drainage system.
2. For washout of concrete and mortar products, a designated containment facility of sufficient capacity to retain liquid and solid waste shall be provided on site and disposed of properly off site.
3. Slurry from concrete and asphalt saw cutting shall be vacuumed or contained, dried, picked up and disposed of properly.

(F) CONCRETE WASTE MANAGEMENT



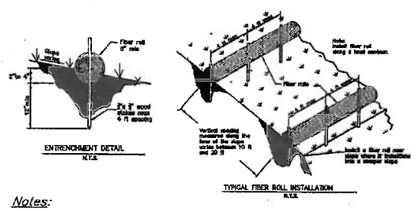
Notes:

Stockpile management procedures and practices are designed to reduce or eliminate air and storm water pollution from stockpiles of soil, and paving materials such as portland cement concrete (PCC) rubble, asphalt concrete (AC), asphalt concrete rubble, aggregate base, aggregate subbase or pre-mixed aggregate, asphalt binder (i.e. cold mix) and pressure treated wood.

Notes:

1. *Protection of stockpiles is a year-round requirement.*
2. *Locate stockpiles a minimum of 50 feet away from concentrated flows of storm water, drainage courses, and drain inlets.*
3. *Implement wind erosion/transport control practices as appropriate.*
4. *All stockpiles shall be covered, stabilized, or protected with a temporary linear barrier (i.e. sandbags, etc.) prior to the onset of precipitation.*

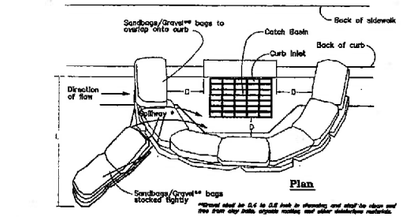
(E) MATERIAL STORAGE



Notes:

1. *Place along the toe, top, face, and at grade breaks of exposed and erodible slopes.*
2. *Place on the down-slope of exposed soil areas.*
3. *Place around temporary stockpiles.*
4. *Place along the perimeter of a project.*
5. *Slopes greater than 1:5 may require the use of 20 inch diameter fiber rolls at the top of slopes.*
6. *Fiber rolls shall be either prefabricated or rolled tubes of erosion control blankets with a minimum 9 inch diameter.*
7. *Slopes 1:4 or flatter require fiber rolls to be placed no more than 20 feet apart.*
8. *Slopes 1:4 to 1:2 require fiber rolls to be placed no more than 15 feet apart.*
9. *Slopes 1:2 or greater require fiber rolls to be placed no more than 10 feet apart.*
10. *Fiber rolls shall be placed in a 2 to 4 inch deep trench.*
11. *Wooden commercial grade stakes, ¾" X 3½", shall be used to secure the fiber roll to the ground surface. Stakes shall be a minimum length of 24 inches and driven a minimum of 12 inches.*
12. *A single-stake installation requires the stakes to be placed no more than 2 feet apart.*
13. *If more than one fiber roll is placed in a row, the rolls shall be overlapped, not abutted, a minimum of 1 foot.*

(I) FIBER ROLL



Notes:

1. *Catch Basin/inlet protection shall be installed wherever there is a potential of stormwater or non-stormwater being discharged into it.*
2. *Inlet protection is required along with other pollution prevention measures such as: erosion control, soil stabilization, and measures to prevent tracking onto paved surfaces.*
3. *Modify inlet protection as needed to avoid creating traffic hazards.*
4. *Include inlet protection measures at hillside v-ditches and mtns. drainage swales.*
5. *Inlet protection shall be inspected and accumulated sediments removed. Sediment shall be disposed of properly and in a manner that assures that the sediment does not enter the storm drain system*
6. *Damaged bags shall be replaced immediately.*
7. *Additional sandbag sediment traps shall be placed at intervals as indicated on site plan.*

(A) CATCH BASIN/INLET PROTECTION

EROSION CONTROL NOTES

1. Erosion control planning or permanent landscaping shall be completed by October 15.
2. Permanent landscape areas require auto-irrigation.
3. Hydro-mulching is the best effective seeding method for large areas. Best time for planting is September-October, unless there is a sprinkler system.
4. Broadcast is approved for small areas. In this case apply fertilizer before seeding, after seeding apply straw or hay mulch.
5. Apply erosion control material on all drainage swales, cuts and fill, also any location where any existing vegetation has been removed.
6. If mulching, seeding, or fertilizing manually, mulch with straw or hay at 4000 lbs/acre. Fertilize with Ammonium Phosphate with Sulphur (16-20-0) at 350 lbs/acre. If Hydro-mulching, use wood fiber mulch at 2000 lbs/acre.

GRASS/LEGUME SEED MIX FOR EROSION CONTROL

Seed Mix	Rate of Application
Blando Brome	15 lbs/acre
Rose Clover	12 lbs/acre
Zorro Annual Fescue	5 lbs/acre
Creeping Red Fescue	5 lbs/acre
Apply seed mix at rate of	35 lbs/acre or 8 lbs/ 10,000 Sq. Ft. or 3/ lbs/ 1000 Sq. Ft.
Fertilizer (16-20-0)	350 lbs/acre or 8 lbs/1000 Sq. Ft.

Construction Materials

- All loose stockpiled construction materials that are not actively being used (i.e. soil, spoils, aggregate, fly-ash, stucco, hydrated lime, etc.) shall be covered and bermed.
- All chemicals shall be stored in watertight containers (with appropriate secondary containment to prevent any spillage or leakage) or in a storage shed (completely enclosed).
- Exposure of construction materials to precipitation shall be minimized. This does not include materials and equipment that are designed to be outdoors and exposed to environmental conditions (i.e. poles, equipment pads, cabinets, conductors, insulators, bricks, etc.).
- Best Management Practices to prevent the off-site tracking of loose construction and landscape materials shall be implemented.

Waste Management

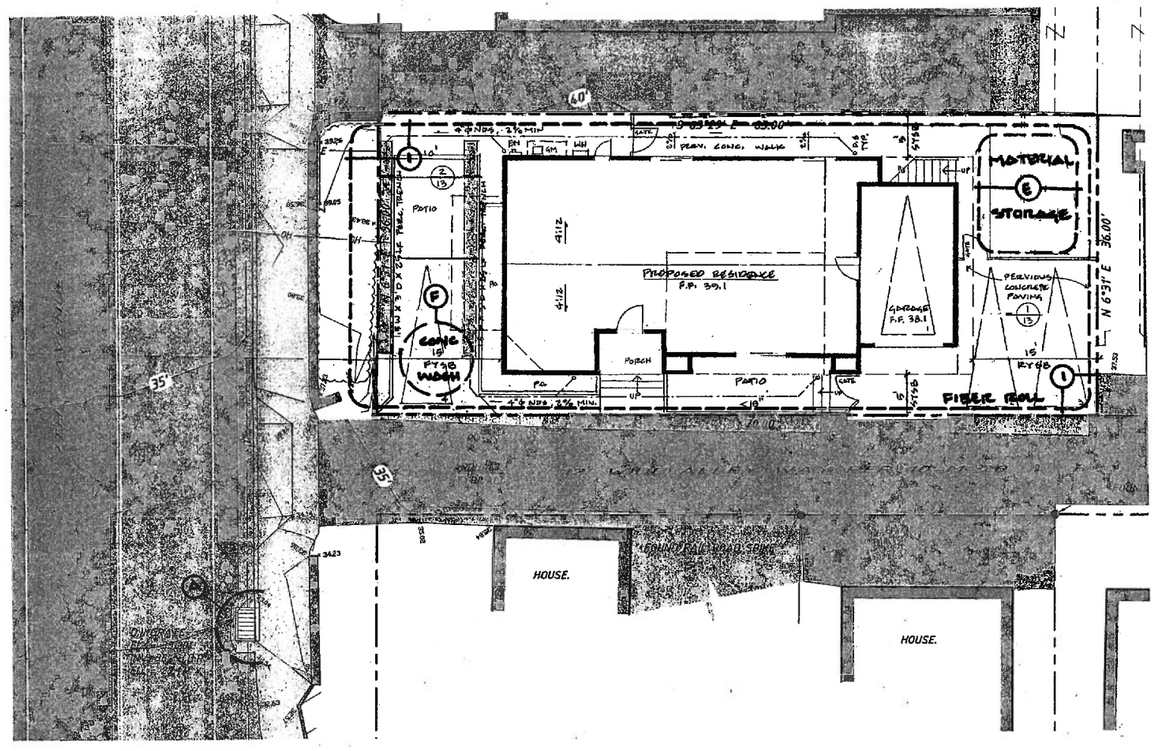
- Disposal of any rinse or wash waters or materials on impervious or pervious site surfaces or into the storm drain system shall be prevented.
- Sanitation facilities shall be contained (e.g., portable toilets) to prevent discharges of pollutants to the storm water drainage system or receiving water, and shall be located a minimum of 20 feet away from an inlet, street or driveway, stream, riparian area or other drainage facility.
- Sanitation facilities shall be inspected regularly for leaks and spills and cleaned or replaced as necessary.
- Cover waste disposal containers at the end of every business day and during a rain event.
- Discharges from waste disposal containers to the storm water drainage system or receiving water shall be prevented.
- Stockpiled waste material shall be contained and securely protected from wind and rain at all times unless actively being used.
- Procedures that effectively address hazardous and non-hazardous spills shall be implemented.
- Equipment and materials for cleanup of spills shall be available on site and that spills and leaks shall be cleaned up immediately and disposed of properly; and
- Concrete washout areas and other washout areas that may contain additional pollutants shall be contained so there is no discharge into the underlying soil and onto the surrounding areas.

Vehicle Storage and Maintenance

- Measures shall be taken to prevent oil, grease, or fuel to leak in to the ground, storm drains or surface waters.
- All equipment or vehicles, which are to be fueled, maintained and stored onsite shall be in a designated area fitted with appropriate BMPs.
- Leaks shall be immediately cleaned and leaked materials shall be disposed of properly.

Landscape Materials

- Contain stockpiled materials such as mulches and topsoil when they are not actively being used.
- Contain fertilizers and other landscape materials when they are not actively being used.
- Discontinue the application of any erodible landscape material within 2 days before a forecasted rain event or during periods of precipitation.
- Apply erodible landscape material at quantities and application rates according to manufacturer recommendations or based on written specifications by knowledgeable and experienced field personnel.
- Store erodible landscape material on pallets and covering or storing such materials when not being used or applied.



STORMWATER POLLUTION PREVENTION PLAN

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

VICINITY MAP

NTS

PROJECT DATA

OWNER	JOETTA & DANIEL MAIER 10181 PHAR LAP DRIVE CUPERTINO, CA 95014 408-838-5828
APN	027-171-30
ZONING	R-1-3.5
OCCUPANCY CL.	R-3 / U
CONST. TYPE	V-B
FIRE RATING	SPRINKLERED
LOT AREA	3,050 SF

Erosion Control Requirements

Any project that involves ground disturbance shall include the following minimum erosion control measures on the stormwater pollution control plan. The minimum erosion control measures shall be shown in plan view and shall include installation details and/or notes as shown herein.

1. Cover of Bare Soils. At least one of the following erosion control measures must be indicated on the stormwater pollution control plan as a means to cover bare soils during the winter season.

   - Seed and Straw Mulch
     Seed and straw mulch is to be used for soil disturbed areas as a means for temporary protection until permanent stabilization is established. It may be used on slopes up to 3:1 H:V (33%).

     Seed and straw mulch shall consist of spreading seed (a minimum of 5 lbs/1000 sq. ft.) over disturbed areas and then placing a uniform layer of straw (2-3 bales/1000 sq. ft.) incorporating it into the soil with a studded roller or mechanic it with a tackifier stabilizing emulsion.

     Note: In areas that are not sensitive habitat, the seed shall be annual winter barley and the straw shall be derived from rice, barley or wheat.

Sediment Control Requirements

Any project that involves ground disturbance shall include the following minimum sediment control measures on their stormwater pollution control plan. The minimum sediment control measures shall be shown in plan view and shall include installation details and/or notes as shown herein.

1. Perimeter Control At least one of the following sediment control measures must be indicated on the stormwater pollution control plan as a means to prevent soil/sediment from leaving the site during the winter season.

   - Fiber Rolls (or Wattles)
     Fiber rolls are to be placed at the down slope perimeter of the disturbance limits to prevent or limit sediment from leaving the site, in urban areas or sites directly adjacent to streets, fiber rolls shall be placed at the back of a sidewalk or curb to limit sediment from entering the street. *Fiber rolls or wattles are generally preferred over silt fences.*

     Fiber rolls are best used in low-exposure/low-sediment load areas. Fiber rolls at the toe of slopes greater than 5:1 (H:V) may require the use of 20 inch diameter ROLLS or installations achieving the same protection (e.g., stacked smaller diameter fiber rolls, etc.). Fiber rolls must be adequately trenched to be effective.

2. Storm Drain Inlet Protection

   Projects that include storm drain inlets or projects that drain into storm drains shall include measures on the stormwater pollution control plan to protect the inlets so silt and other pollutants do not enter the storm drain system.

   Storm drain inlet protection consists of a sediment filter or an impounding area around or upstream of a storm drain, drop inlet, or curb inlet. Storm drain inlet protection measures temporarily pond runoff before it enters the storm drain, allowing sediment to settle. Some filter configurations also remove sediment by filtering, but usually the ponding action results in the greatest sediment reduction.

Z.D. Submittal 9-16-19 MSH

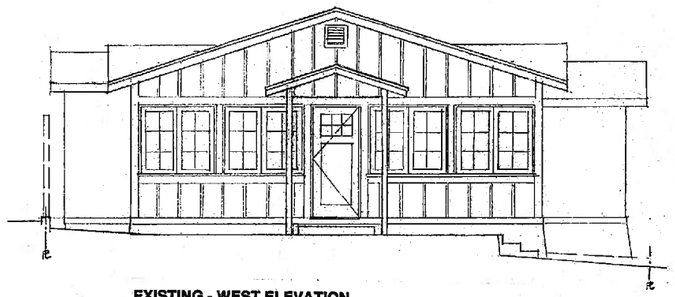
Michael Helm, AIA Architect & Associates
200 Seventh Avenue, #110 Santa Cruz, California 95062 (831) 476-5386

REPLACEMENT HOME
MAIER RESIDENCE
APN 027-171-30
100 – 7TH AVE., SANTA CRUZ, CALIFORNIA

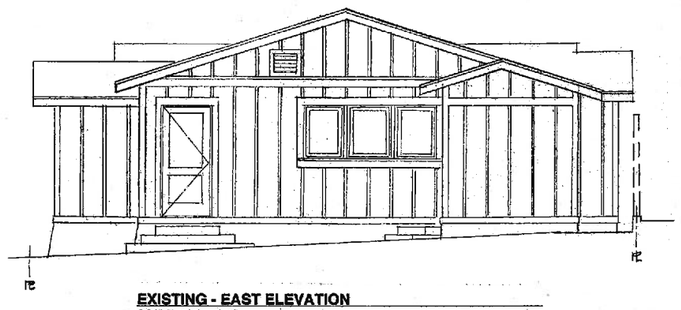
STORMWATER POLLUTION PREVENTION PLAN

3-11-19
1/8"=1'-0"
MSH
1902

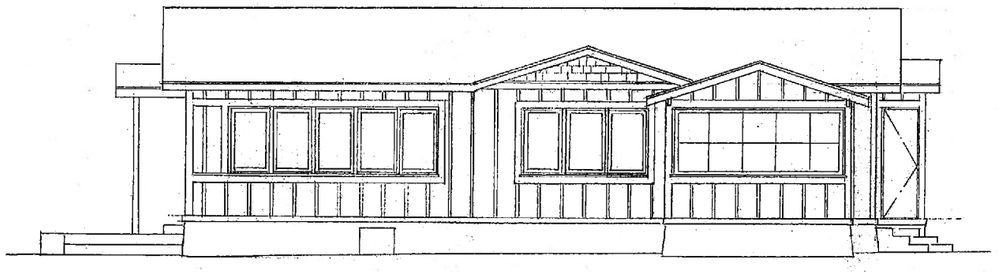
2.2



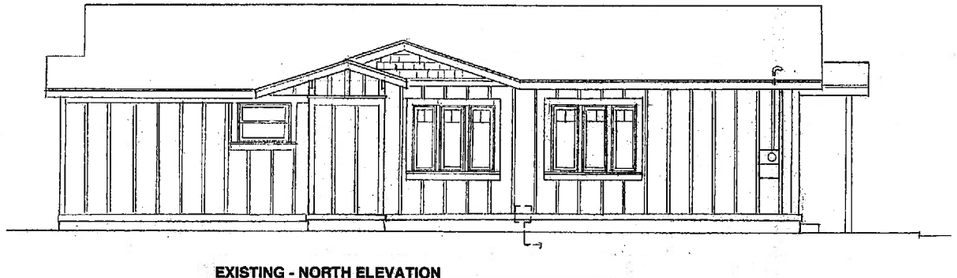
EXISTING - WEST ELEVATION
SCALE: 1/4" = 1'- 0"



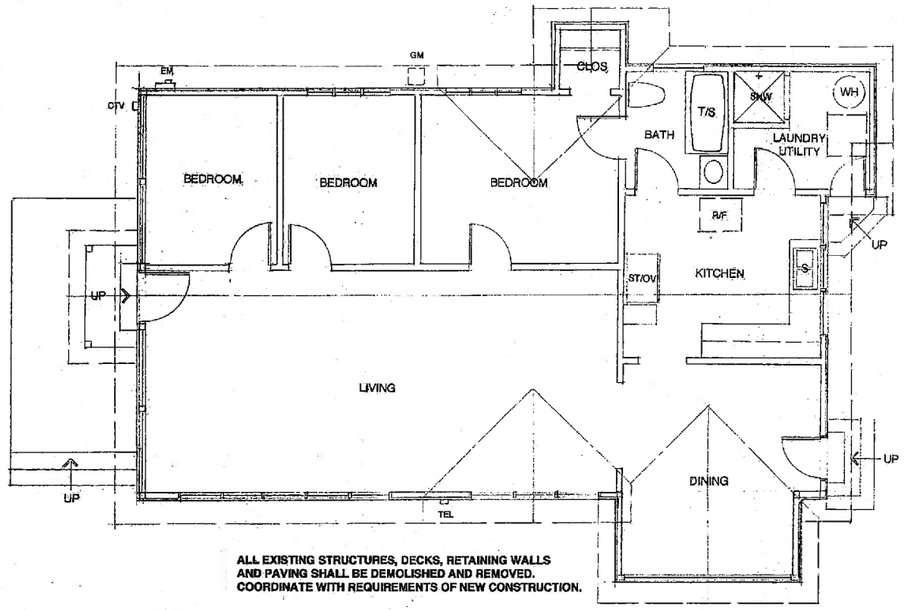
EXISTING - EAST ELEVATION
SCALE: 1/4" = 1'- 0"



EXISTING - SOUTH ELEVATION
SCALE: 1/4" = 1'- 0"



EXISTING - NORTH ELEVATION
SCALE: 1/4" = 1'- 0"



ALL EXISTING STRUCTURES, DECKS, RETAINING WALLS AND PAVING SHALL BE DEMOLISHED AND REMOVED. COORDINATE WITH REQUIREMENTS OF NEW CONSTRUCTION.

EXISTING - FLOOR PLAN
SCALE: 1/4" = 1'- 0"

Michael Helm, AIA Architect & Associates
200 Seventh Avenue, #110 Santa Cruz, California 95062 (831) 476-5386

REPLACEMENT HOME
MAIER RESIDENCE
APN 027-171-30
100 - 7TH AVE., SANTA CRUZ, CALIFORNIA

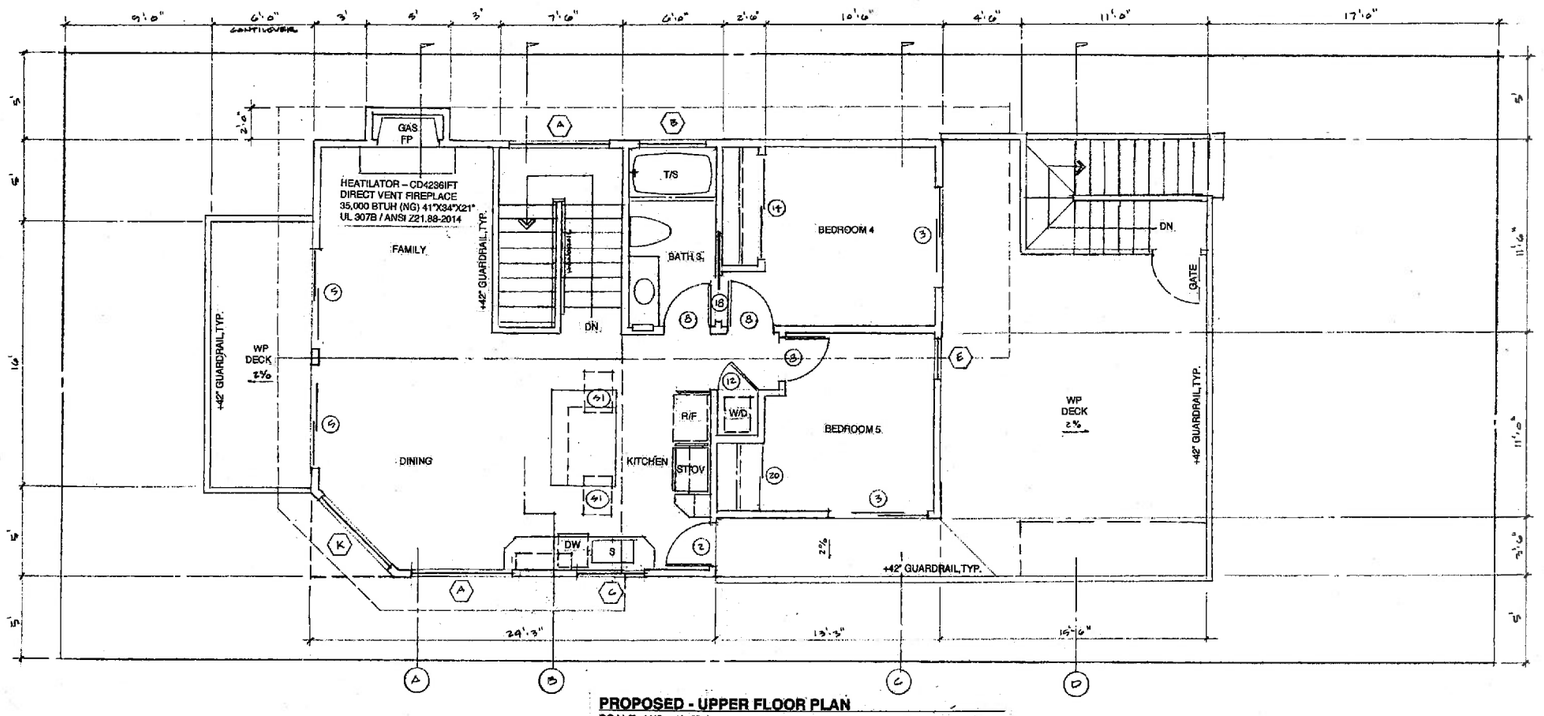
EXISTING - FLOOR PLAN & EXTERIOR ELEVATIONS

3.11.19

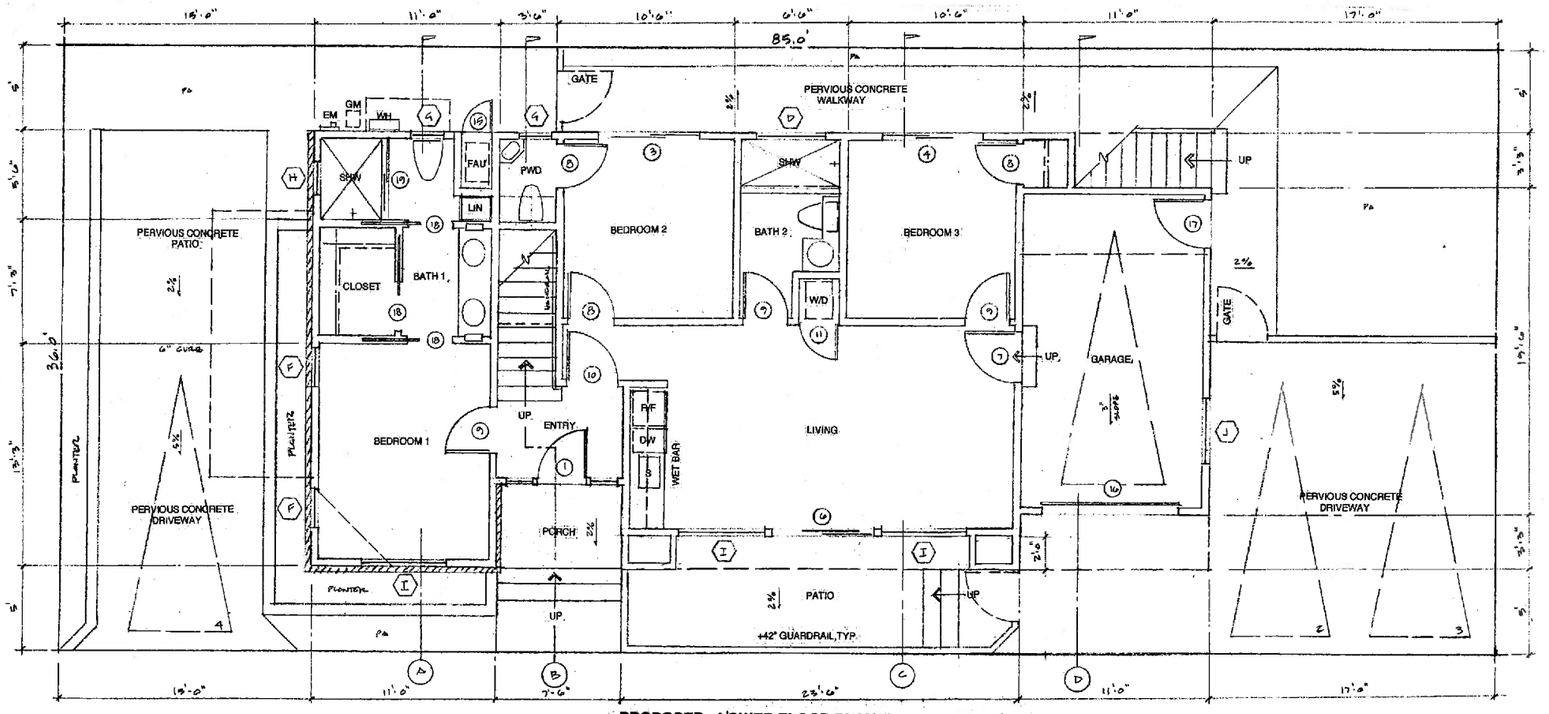
1/4" = 1'-0"

1702

3



PROPOSED - UPPER FLOOR PLAN
SCALE: 1/4" = 1'- 0"



PROPOSED - LOWER FLOOR PLAN
SCALE: 1/4" = 1'- 0"

WINDOW SCHEDULE

SYM	SIZE	TYPE	QUAN.	REMARKS
A	6046	Dbl Casement	4	Vinyl Sash, Dbl. Insulated Low-E glass
B	4016	Awning	1	Vinyl Sash, Dbl. Insulated **Tempered**, Low-E glass
C	4030	Dbl Casement	1	Vinyl Sash, Dbl. Insulated Low-E glass
D	4026	Dbl Casement	1	Vinyl Sash, Dbl. Insulated **Tempered**, Low-E glass
E	2446	Casement	1	Vinyl Sash, Dbl. Insulated Low-E glass
F	2466	2420 Fixed Transom over 2446 Casement Below	2	Vinyl Sash, Mulled together Dbl. Insulated Low-E glass
G	2050	2020 Fixed Transom over 2030 Casement Below	2	Vinyl Sash, Mulled together Dbl. Insulated Low-E glass
H	2020	Fixed	1	Vinyl Sash, Dbl. Insulated **Tempered**, Low-E glass
I	5096	2W-2620 Fixed Transom over 2W-2646 Casement Below	3	Vinyl Sash, Mulled together Dbl. Insulated Low-E glass
J	4080	2W-2020 Fixed Transom over 2W-2040 Casement Below	1	Vinyl Sash, Mulled together Dbl. Insulated Low-E glass
K	6046	Fixed	1	Vinyl Sash, Dbl. Insulated Low-E glass
L	4610	Fixed Clerestory	2	Vinyl Sash, Dbl. Insulated Low-E glass

Milgard 'Tuscany Series' vinyl sash windows overall standards comply with ANSI/ AAMA/ NWWDA/ 101/I.S.2.
a. All units are Gold Label Certified with label attached to frame per AAMA requirements. Installation per AAMA 2400.
b. All insulated glass units conform to ASTM E2188 / E2190. NFRC certified and labeled.

Note: The NFRC label which states the required U-value and SGHC for all fenestration products shall not be removed prior to inspection or the removal by a building inspector and shall reflect the values listed in the energy report.

DOOR SCHEDULE

SYM	SIZE	TYPE	QUAN.	REMARKS
1	3080 w/ 1680 sidelights each side of door w/ 1620/3020/1620 transoms above	Ext., Custom Entry Door w/ sidelights & transoms	1	Solid Core, Stain Grade Wood To be Owner approved **Tempered** Low E Dbl. Insulated fixed glass sidelights / transoms
2	2868	Ext., Single lite French Door	1	Vinyl Sash, **Tempered**, Low E Dbl. Insulated glass
3	6068	XO Ext., Single lite Sliding, Patio Door	3	Vinyl Sash, **Tempered**, Low E Dbl. Insulated glass
4	6080	XO Ext., Single lite Sliding, Patio Door	1	Vinyl Sash, **Tempered**, Low E Dbl. Insulated glass
5	6068 w/ 2W-3020 transom abv.	XO Ext., Single lite Sliding, Patio Doors	2	Vinyl Sash, **Tempered**, Low E Dbl. Insulated glass
6	6080 w/ 2W-3020 transom abv.	XO Ext., Single lite Sliding, Patio Doors	1	Vinyl Sash, **Tempered**, Low E Dbl. Insulated glass
7	3080	Interior, Garage Door	1	Stain Grade Birch, Flat Flush, 20 min. labeled, solid core w/ self-closer & Weatherstrip
8	2868	Interior, wood	6	Stain Grade Birch, Flat Flush, solid core
9	2880	Interior, wood	2	Stain Grade Birch, Flat Flush, solid core
10	3080	Interior, wood	1	Stain Grade Birch, Flat Flush, solid core
11	2480	Interior, wood	2	Stain Grade Birch, Flat Flush, solid core
12	2468	Interior, wood	1	Stain Grade Birch, Flat Flush, solid core
13	2060	Interior, wood	1	Paint Grade, Flat Flush, solid core
14	2W 3068	Interior, Mirror Sliding Closet	1	Use Heavy-Duty Track & Rollers White Alum. Frame & Track
15	2068	Exterior Metal Louvered	1	Paint grade, set in metal jamb
16	8010	Sectional Garage 'Carriage' style	1	Paint grade wood To be Owner approved
17	3068	Exterior, 2-panel Garage Door	1	Paint Grade, Solid core, Weatherstrip
18	2868	Interior, wood Pocket	4	Stain Grade Birch, Flat Flush, solid core, Use Heavy-Duty Track & Rollers
19	5060	Custom Bi-pass Shower Doors	1	3/8" Clear, 'Frameless' **Tempered Glass**, Provide Shop drawings for approval
20	2W 2068	Interior, Mirror Sliding Closet	1	Use Heavy-Duty Track & Rollers White Alum. Frame & Track

SKYLIGHT SCHEDULE

SYM	MFG / SIZE	TYPE	QUAN.	REMARKS
S1	Velux, FSE-C01 21" X 28-7/8"	Deck mounted Electric 'Fresh Air'	2	Dbl. Insul., tinted, Low-E w/ Laminated glass & blind

Michael Helm, AIA Architect & Associates
200 Seventh Avenue, #110 Santa Cruz, California 95062 (831) 476-5386

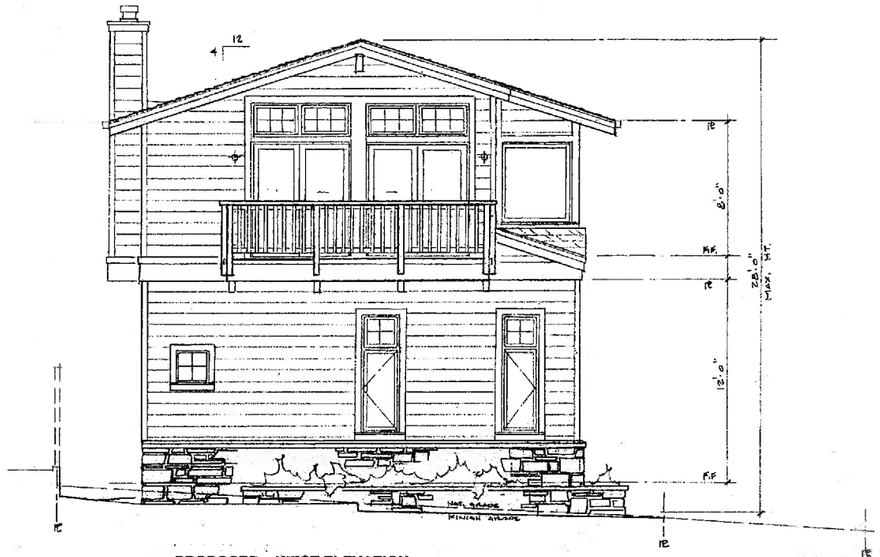
REPLACEMENT HOME
MAIER RESIDENCE
APN 027-171-30
100 – 7TH AVE., SANTA CRUZ, CALIFORNIA

PROPOSED FLOOR PLANS

1/4"=1'-0"
MSH
1902

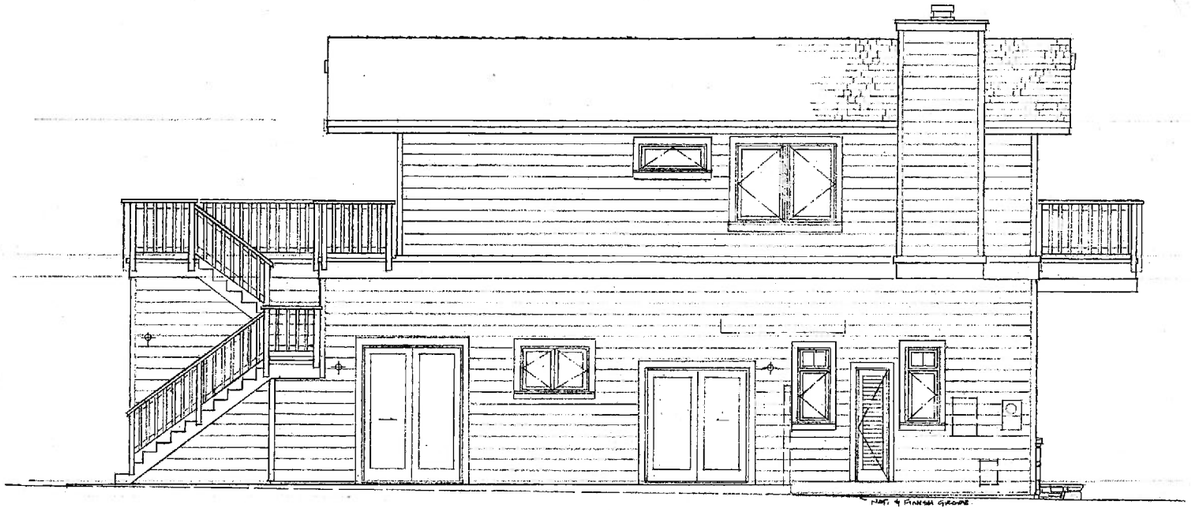
4

PROPOSED – SOUTH ELEVATION
SCALE: 1/4" = 1'- 0"

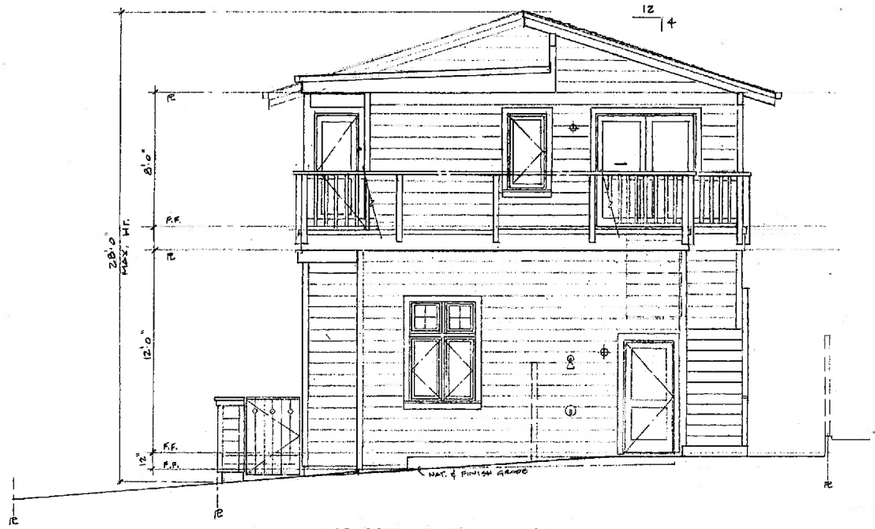


PROPOSED – WEST ELEVATION
SCALE: 1/4" = 1'- 0"

ROOF:	ASPHALT COMPOSITION SHINGLE ROOFING COLOR: CHARCOAL
GUTTERS, FASCIA, & TRIM	4" – 26 GA. BEVELED 2X REDWOOD COLOR: WHITE
WALLS:	JAMES HARDIE HORIZONTAL FIBER CEMENT SIDING, PAINTED COLOR: BLUE GREY
WINDOWS & DOORS	VINYL SASH W/ DBL. INSUL GLASS COLOR: WHITE



PROPOSED – NORTH ELEVATION
SCALE: 1/4" = 1'- 0"



PROPOSED – EAST ELEVATION
SCALE: 1/4" = 1'- 0"

2ND RESUBMITTAL 9/16/19 MSH

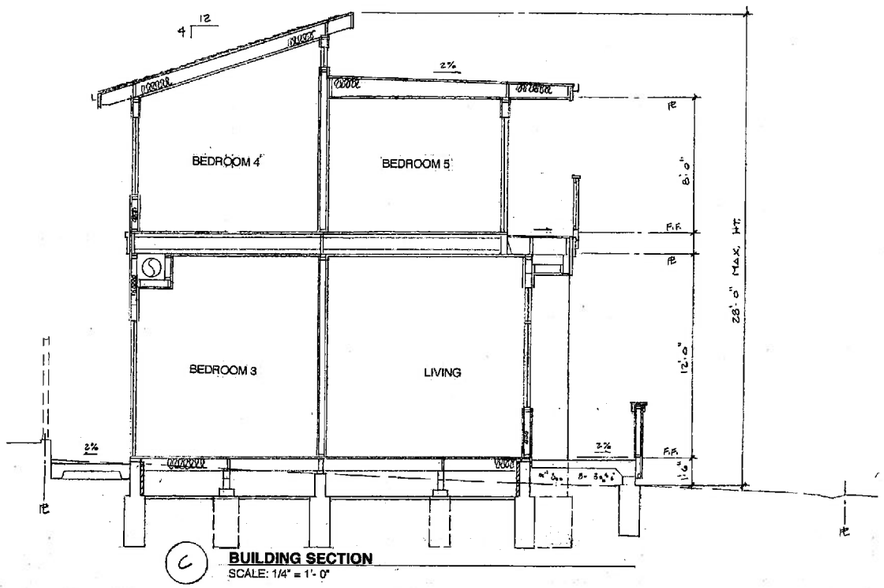
Michael Helm, AIA Architect & Associates
200 Seventh Avenue, #110 Santa Cruz, California 95062 (831) 476-5386

REPLACEMENT HOME
MAIER RESIDENCE
APN 027-171-30
100 – 7TH AVE., SANTA CRUZ, CALIFORNIA

EXTERIOR ELEVATIONS

3.11.19
1/4"=1'-0"
MSH
1702

5



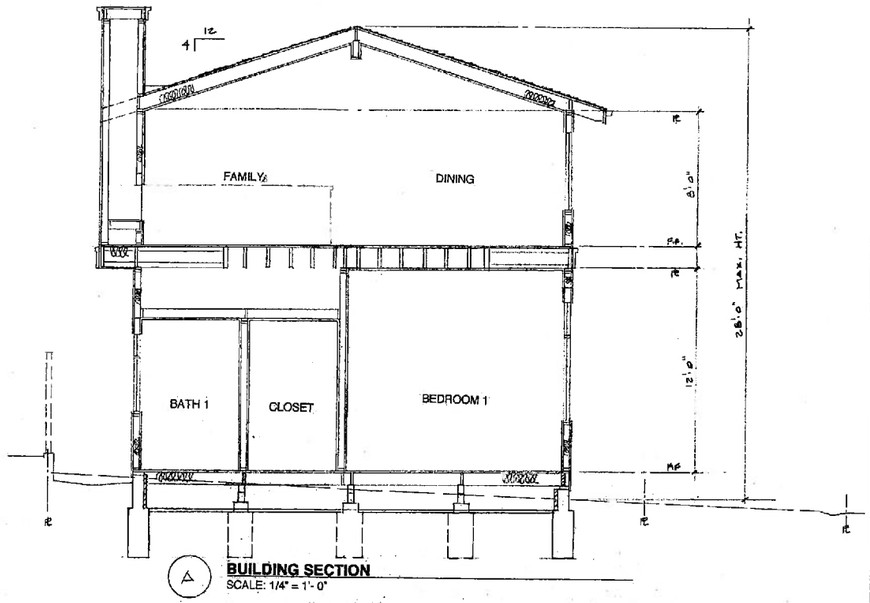
C **BUILDING SECTION**
SCALE: 1/4" = 1'-0"

CONSTRUCTION SCHEDULE

FOUNDATIONS	(N) 8" thick perimeter Concrete stem wall with 8" X 18" Footing CONCRETE SLABS: 5" thick concrete slab w/ #4 bars @ 16" o.c. each way, on 15 mil vapor barrier on 12" crushed rock. CONCRETE MIX: Substitute Portland Cement with recycled flyash, 35% by volume, typical. Keep receipts for Inspector verification. TREATED LUMBER: Substitute ACQ pressure treatment for CCA products, typical. FORM BOARDS: Clean and re-use for scaffolding, forms, blocking, etc... FORM RELEASE AGENT: Use Non-toxic soy based 0-VOC form release agent by BIO-GUARD CO. or Architect approved equal.
FLOORS	(N) TJI joists @ 16" o.c., with ¾" T&G plywood subfloor glued and nailed w/ 10d @ 6" o.c. edges & 10" o.c. field, U.N.O. with (N) R-19 Batt insulation.
WALLS	(N) 5/16" James Hardie cedarmill siding over 'TYVEK' house wrap on 1/2" CDX plywood sheathing, nailed 10d @ 6" o.c. edges and 12" o.c. field, U.N.O., on 2X6 studs @ 16" o.c. with R-19 batt insulation, 1/2" gypsum board interior finish, typical. Use low/No VOC exterior/interior paints.
ROOF	Class B (min.) Asphalt Composition Shingle Roofing, install per mfg. specs over Dbl. layer 30 lb. felt over 5/8" CDX plywood sheathing nailed w/ nailed 10d @ 6" o.c. edges and 12" o.c. field, U.N.O., to 2X10 DF #1 rafters @ 24" o.c. with R-30 fiberglass batt insulation. Use plywood clips at all unsupported edges, typical.
DECKS & FLAT ROOF	Class A Westcoat ALX waterproof deck system w/ metal lath and installed with three separate polymer-modified cementitious applications and sealed with Westcoat SC-10 Acrylic topcoat, install per mfg. specs over ¾" T&G plywood glued and nailed w/ 10d @ 6" o.c. edges and 12" o.c. field, U.N.O., to 1-3/4" X 11-7/8" LSL joists @ 16" o.c., ripped w/ 1/4:12 slope with 5" thick (R-30 min.) SWD Quik-Shield 112 Spray applied Polyurethane foam insulation.
GUTTERS & DOWNSPOUTS	4" – 28 ga. G.I. beveled gutters with 2"X3" downspouts. Downspouts are to deposit into on-site Percolation Trench
VALLEY, STEP & ROOF / WALL FLASHINGS	26 ga. G.I where shown or required. Pan flash all ext. door sills and deck flashings with 16 oz. Copper, solder all joints, typical
WINDOWS & EXT. GLASS DRS.	MILGARD – Vinyl sash with Dbl. insulated Low-E glass, provide screens at all operable windows. White finish

INSULATION		
	FLOORS	(N) R-19 fiberglass batts
	EXT. WALLS	(N) R-19 fiberglass batts
	INT. WALLS	(N) 3-1/2" fiberglass sound batts
	ROOFS	(N) R-30 fiberglass batts
	FLAT ROOF / DECK	(N) 5" thick (R-30 min.) SWD Quik-Shield 112 Spray applied Polyurethane foam

ROOF JACKS	Provide neoprene gaskets and 26 ga. G. I. roof jack / rain cap, typical. All exhaust vents shall be located a min. of 4' from or 1' above all roof or wall openings per CMC. All plumbing vents shall be located a min. of 10' from or 3' above all roof or wall openings per CPC.
WALL PENETRATIONS	Use weatherproof wall jacks by QUICKFLASH or approved equal for plumbing, electrical and mechanical penetrations.
PAINTS, STAINS, ADHESIVES & SEALERS	Use Low / No VOC, water based products and solvent-free adhesives, typical.
HVAC	Install gas-fired furnace with >90% AFUE, provide High Efficiency Filter (MerV8+)
APPLIANCES	Provide ENERGY STAR rated, typical, provide cut sheets for inspector verification
PLUMBING	Install Low-flow toilets. Install Low-flow shower heads with chlorine filters.
CABINETS & TRIM	Use formaldehyde-free particle board and MDF by MEDITE or approved equal for all cabinets and trim applications.

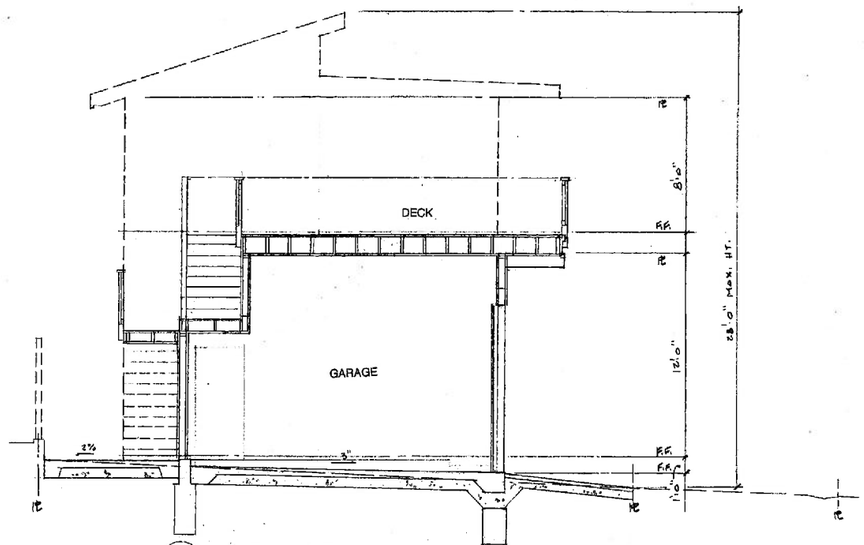


A **BUILDING SECTION**
SCALE: 1/4" = 1'-0"

UNVENTED INSULATED CRAWL SPACE NOTES:

PROVIDE CONDITIONED AIR SUPPLY AT CRAWL SPACE SIZED TO DELIVER AT A RATE EQUAL TO 1 CUBIC FOOT PER MINUTE FOR EACH 50 SQUARE FEET OF UNDERFLOOR AREA, INCLUDING A RETURN AIR PATHWAY TO THE COMMON AREA (SUCH AS A DUCT OR TRANSFER GRILL) PER CRC R406.3 (2.2).

CRAWL SPACE PERIMETER WALLS AND EXPOSED FOUNDATION STEMWALL SHALL BE INSULATED WITH 2" THICK R-10 (MIN.) POLYSTYRENE RIGID FOAM INSULATION PER THE CALIFORNIA ENERGY CODE. PROVIDE 2" CONCRETE FAT SLAB ON 15 MIL VAPOR BARRIER AT CRAWL SPACE SUBGRADE. PROVIDE TAPE SEAL ON ALL SEAMS, 6" MINIMUM VERTICALLY AROUND ALL PIERS AND UP FOUNDATION STEMWALL TO CONTROL SUBGRADE MOISTURE FROM MIGRATING UP INTO THE RESIDENCE.



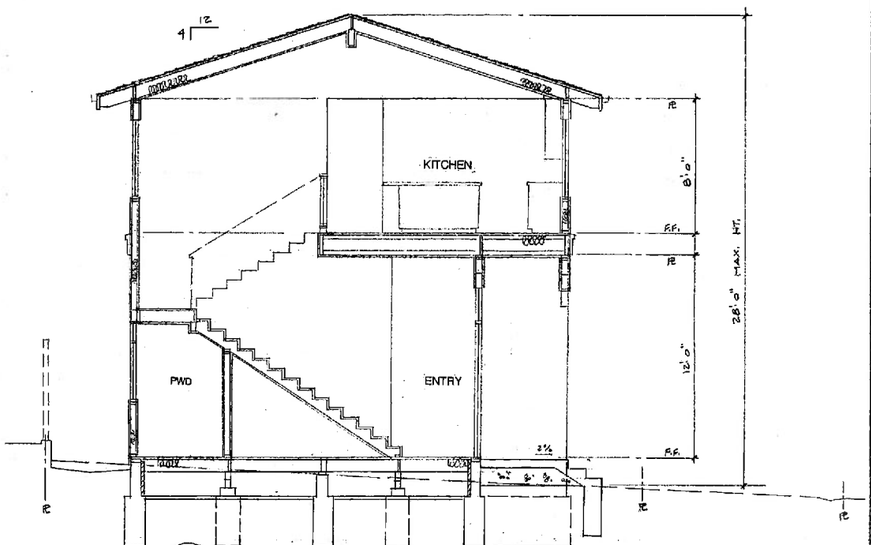
D **BUILDING SECTION**
SCALE: 1/4" = 1'-0"

FINISH SCHEDULE

ROOM NAME	FLOOR: HARDWOOD	FLOOR: CERAMIC TILE	FLOOR: VINYL	FLOOR: CARPET	FLOOR: CONCRETE	WALLS: PAINT, GYP. BD.	WALLS: CERAMIC TILE	WALLS: STUCCO	CEILING: PAINT, GYP. BD.	CEILING: WOOD	CEILING: STUCCO	BASE: WOOD	BASE: CERAMIC TILE	BASE: VINYL	BASE: NO BASE	NOTES
ENTRY	○					●			●			●				
LIVING	○					●			●			●				
BEDROOMS				○		●			●			●				2
BATHROOMS	○					●			●				●			3, 4
KITCHEN	○					●			●			●				
FAMILY	○					●			●			●				
DINING	○					●			●			●				
STAIR	○					●			●			●				
HALL	○					●			●			●				
PORCH		○					●			●					○	1
GARAGE					○				●						○	

FINISH SCHEDULE NOTES:

1. VERIFY ALL FINISHES WITH OWNER
2. ALL CLOSET FLOORING AND BASEBOARDS SHALL MATCH THE ADJACENT ROOM
3. PROVIDE A SMOOTH, HARD, NON-ABSORBANT SURFACE OVER MOISTURE RESISTANT UNDERLAYMENT TO A HEIGHT OF 72" ABOVE THE DRAIN OUTLET IN ALL SHOWER AND TUB LOCATIONS.
4. UNDERLYING BASE FOR ALL TILE SHALL BE CEMENT, FIBER-CEMENT OR GLASS MAT GYPSUM BACKER BOARDS IN COMPLIANCE WITH ASTM C1178, C1288 OR C1325 AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER RECOMMENDATIONS. IT SHALL BE USED AS A BASE FOR WALL TILE IN TUB AND SHOWER AREAS AND AS CEILING PANELS IN SHOWER AREAS.



B **BUILDING SECTION**
SCALE: 1/4" = 1'-0"

ZA RESIDENTIAL 9.16.19 MSH

Michael Helm, AIA Architect & Associates
200 Seventh Avenue, #110 Santa Cruz, California 95062 (831) 476-5586

REPLACEMENT HOME
MAIER RESIDENCE
APN 027-171-30
100 – 7TH AVE., SANTA CRUZ, CALIFORNIA

BUILDING SECTIONS, CONSTRUCTION SCHEDULE, FINISH SCHEDULE

3.11.19
1/4" = 1'-0"
MSH
1902.

6

ELECTRICAL NOTES

General

1 All Electrical work to comply with the latest adopted edition of the California Electrical Code.

2 Electrical contractor to submit load calculations and panel diagrams to the Building Department prior to beginning work.

3 Do not install electrical panels larger than 16 square inches in rated fire walls. Maintain a clearance of 36" in front of the panels.

4 Bond all metal gas and water pipes to ground. All ground clamps must be accessible and of an approved type. (CEC 250.104)

5 All joints and penetrations to be caulked and sealed.

Circuits

1 Central heating equipment shall be supplied by an individual branch circuit. Verify electrical requirements for all mechanical equipment.

2 All exterior, garage, kitchen and bathroom circuits shall be on GFCI circuits. Combination AFCI/GFCI outlets are required at kitchen and laundry areas.

3 All 120-volt 15 & 20 amp branch circuits in dwelling units except those in kitchens, bathrooms, unfinished basements, garages and outdoors shall have AFCI protection. (CEC 210.12)

4 One 20A circuit shall be provided to supply the bathroom receptacle outlets. Such circuit shall have no other outlets CEC 210.11(C).

5 Provide two small appliance branch circuits for Kitchen refrigerator and counter outlets only, not to include outside plugs, range hood, disposal, dishwasher or microwave.

6 Provide a dedicated 20 amp circuit to serve the required bathroom outlets. This circuit cannot serve any other receptacles, lights, fans, etc... Exception: where the circuit supplies a single bathroom, outlets for other equipment within the bathroom shall be permitted.

7 Provide a dedicated 20 amp circuit to supply laundry receptacle outlets. Dryer and cooking units shall have a four-prong outlet with four conductor wires with an insulated neutral.

Switches

1 Wall switches to be 42" @ centerline above finish floor. All outlets to be 12" @ centerline above finish floor, unless noted otherwise.

2 Dimmers or vacancy sensors shall control all luminaires required to have light source compliant with Reference Joint Appendix JA8 per Table 150.0-A Exceptions are provided for closets smaller than 70 sq. ft. floor area and light fixtures in hallways per CA Energy 150.0(k)2.K

3 Exterior lighting attached to any building shall be high efficacy, controlled by a manual ON and OFF switch that does not override to ON, and controlled by a motion sensor with photo-control, or other methods allowed by CEnC 150.0(k)3

Receptacles

1 Receptacles on 125-volt 15 & 20 amp circuits shall be listed tamper resistant. (CEC 406.12) Except when located more than 5.5' above the floor; within cabinets or cupboards; or when part of a luminaire or appliance.

2 Receptacles must be installed at 12' o.c. maximum in walls. Walls longer than 2 feet and halls longer than 10' must have a receptacle. A receptacle must be provided within 3' of bathroom sinks. (CEC 210.52). Spacing of kitchen and dining room countertop receptacles shall meet minimum requirements of CEC 210.52(C), Parts 1-5.

3 Ground-Fault Circuit-Interrupter (GFCI) protected receptacles shall be installed in bathrooms, garages, outdoors, crawl spaces, kitchen, unfinished basements, and receptacles within 6 ft. of the outside edge of laundry, utility, and wet sinks. All dwellings must have at least one exterior outlet at the front and the back of the dwelling. (CEC 210.52(E)

4 GFCI outlets are required for all kitchen receptacles that are designed to serve countertop surfaces, in bathroom, in under-floor spaces or below grade level, in exterior outlets, and in all garage outlets not dedicated to a single device or appliance. (CEC 210.8)

5 Arc-Fault Circuit-Interrupter (AFCI) protected receptacles shall be installed in all rooms not requiring GFCI protection. The maximum length of the branch circuit to the AFCI is 50 feet for 14 AWG conductors or 70 feet for a 12 AWG conductor.

6 Exterior Outlets @ Grade: At least one readily accessible outlet from grade and not more than 6-1/2 feet above grade level shall be installed at the front and back of dwelling, be GFCI protected, and have a weatherproof enclosure.

7 Exterior Outlets @ Balconies, Decks, and Porches: Each balcony, deck, and porch shall have at least one readily accessible outlet not more than 6-1/2 feet above the walking surface, be GFCI protected, and have a weatherproof enclosure.

Light Fixtures

1 Lighting in bathrooms, garages, laundry rooms & utility rooms must be controlled by a vacancy sensor per CA Energy Standard 150.0(k)2.K.

2 Lighting in all other interior rooms like living, dining, bedrooms, etc. (except closets of less than 70 sq. ft.) shall be high efficacy with manual on occupancy switches or dimmers.

3 All installed lighting shall be high efficacy in accordance with Table 150.0-A of the California Energy Code. Exterior lighting shall be high efficacy or controlled by a photo/motion sensor per CEnC 150.0(k)9A

4 All LED lighting shall be California Energy Commission certified to quality as high efficacy.

5 All recessed light fixtures shall be IC listed per CEnC 150.0(k)8

6 Fixtures installed in wet or damp locations shall be installed so that water cannot enter or accumulate in wiring compartments, lamp holders, or other electrical parts. Fixtures in wet or damp locations will be marked for such use. Lighting fixtures located within 3 feet horizontally and 8 feet vertically of the bathtub rim or shower stall threshold shall be listed for a damp location, or listed for wet locations where subject to shower spray per CEC 410.10

JA8 marking is required for the following:

7 All lighting must be high efficacy. High efficacy luminaires may require JA8-2016 or JA8-2016E labeling. Per CEnE 150.0(k)1A, 150.0(K)1B, 150.0(K)2K Table 150.0-A

8 Fixtures recessed into ceilings shall be listed for zero clearance insulation contact (IC) have a label that certifies that the fixture is airtight with air leakage less than 2.0CFMN at 75 Pascal's (AT), be sealed with a gasket or caulk to the ceiling, have an accessible ballasts/drivers if hardwired, and not contain a screw base socket. They shall contain light sources that comply with Reference Joint Appendix JA8, including the elevated temperature requirements, and that are marked "JA8-2100-E" Per CenC 150.0(K)(1)(C).

9 Recessed Down-light Luminaires in Ceilings: Recessed downlight luminaires in ceilings must be installed per CEnC150.0(k)1C, be listed IC rated, labeled for air leakage less than 2.0 CFM, be sealed with a gasket or caulk to the ceiling, have accessible ballasts/drivers if hardwired, not contain a screw base sockets, comply with JA8, and marked JA8-2016-E as specified in Reference Appendix JA8.

10 Screw Based Luminaires: Screw based luminaires shall be high efficacy and controlled by dimmers or vacancy sensors. Installed lamps shall be marked with 'JA8-2025' or JA8-2016-E' as specified in Reference Joint appendix JA8. Light sources not marked 'JA8-2016-E' shall not be installed in enclosed luminaires.

11 A GU-24 lamp fitting is a 2-pin connector for compact fluorescent lamps (CFL) or LED lamps that use bayonet mount-like twist-lock 2-pin connector instead of an Edison screw fitting.

12 Any light source not otherwise listed above and certified to the Commission as complying with Joint Appendix 8.

Alarms

1 Contractor must install or verify the existence of smoke alarms and carbon monoxide alarms outside each bedroom as well as one on every level. An additional smoke alarm is required inside each bedroom. Alarms in existing areas where access to the area above the ceiling is not possible may be powered by a D/C battery source. In the areas of new construction or existing rooms where the area above the ceiling is accessible, alarms must be powered by an A/C power source with a battery back-up and be interconnected.(CRC 314, 315).

2 Smoke detector/ alarms are to be provided with battery back-up and audible in all sleeping areas and shall be hard-wired and inter-connected per CRC R314.5.

3 An approved carbon monoxide alarm shall be installed in dwellings within which fuel-burning appliances are installed, and in dwellings with an attached garage. Carbon monoxide detector/ alarms on all habitable levels and shall be hard-wired and inter-connected per CRC R315.1

HVAC

1 Provide exhaust fans in kitchen and each bathroom vented to outside and sized as follows.
Kitchen: >/= 100 CFM intermittent, >/= 5 AC/h continuous.
Bathrooms: >/= 50 CFM intermittent, >/= 20 CFM continuous.
Exhaust fan ratings to be </= 1 sone continuous, </= 3 sones intermittent.
Bath fans to be Energy Star compliant and equipped with humidistat controls for adjustment of relative humidity from 50 to 80%, per CalGreen code 4.506.1.

2 Bathroom exhaust fans shall be switched separately from lighting system per CA Energy Code 150.0(k)2B.

3 Provide a whole-building mechanical exhaust system to outdoor air at the rate of 25 CFM or greater. System to have an accessible off/on switch that is properly labeled. Covers and louvers for the whole house ventilation fan(s) shall be provided so that they close when the system is turned off. Covers or louvers to have min. R 4.2 insulation value.

WHOLE HOUSE VENTILATION CALCULATION per CEC 150 (O) & ASHRAE 62.2

1999 SF Hld. Area / 100 + 7.5 X (5 bedrms + 1) = 65 CFM req'd

LIGHTING FIXTURE SCHEDULE

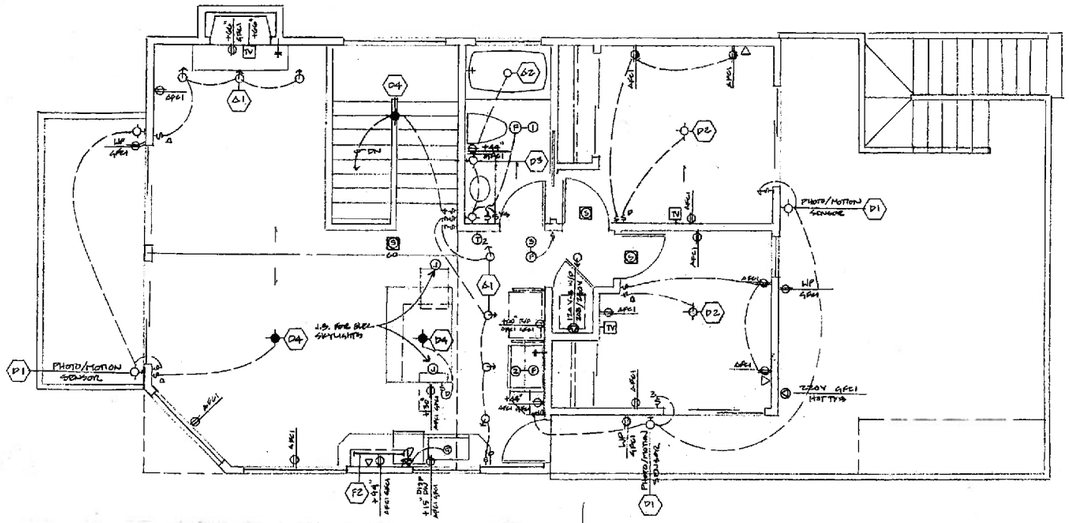
Tag	Description
P1	Surface mounted 1' X 4' wrap around for (2) – F32 T8 lamps with electronic ballast. Manufacturer: Lithonia, Litepuffs 10840 Lamp & Mfg: GE F32 T8 / SPX 35 Ballast: Electronic
F2	Surface mounted under cabinet task LED light. Manufacturer: WAC Lighting, Lina, 3000K Lamp & Mfg: 30" LN-LED30-30AL 24" LN-LED24-30-AL 12.25" LN-LED12-30-AL
A1	Recessed adjustable retractable LED downlight. Manufacturer: WAC Lighting, Precision Multiplex, 2700K Housing, MT-4LD116N-S-27-BK Trim, MT-4LD116T-WT
A2	6" recessed shower light for LED- lamp with drop opal lens. Manufacturer: Halo, To be determined Lamp & Mfg: 3500K Remarks: Order with bar hangers
D1	Wall mounted exterior light fixture. Manufacturer: To be determined Lamp & Mfg: Remarks: Provide photo/motion sensor on exterior circuits, Verify location of sensor prior to installation Owner approval required prior to ordering.
D2	Ceiling mounted decorative light fixture. Manufacturer: To be determined Lamp & Mfg:
D3	Wall mounted LED decorative bath strip light. Manufacturer: WAC Lighting, Brink, WS-77616-AL Lamp & Mfg: Remarks: Mount vertically
D4	Ceiling Pendant mounted ceiling fan or light fixture. Manufacturer: To be determined Lamp & Mfg:

Ventilation Notes:

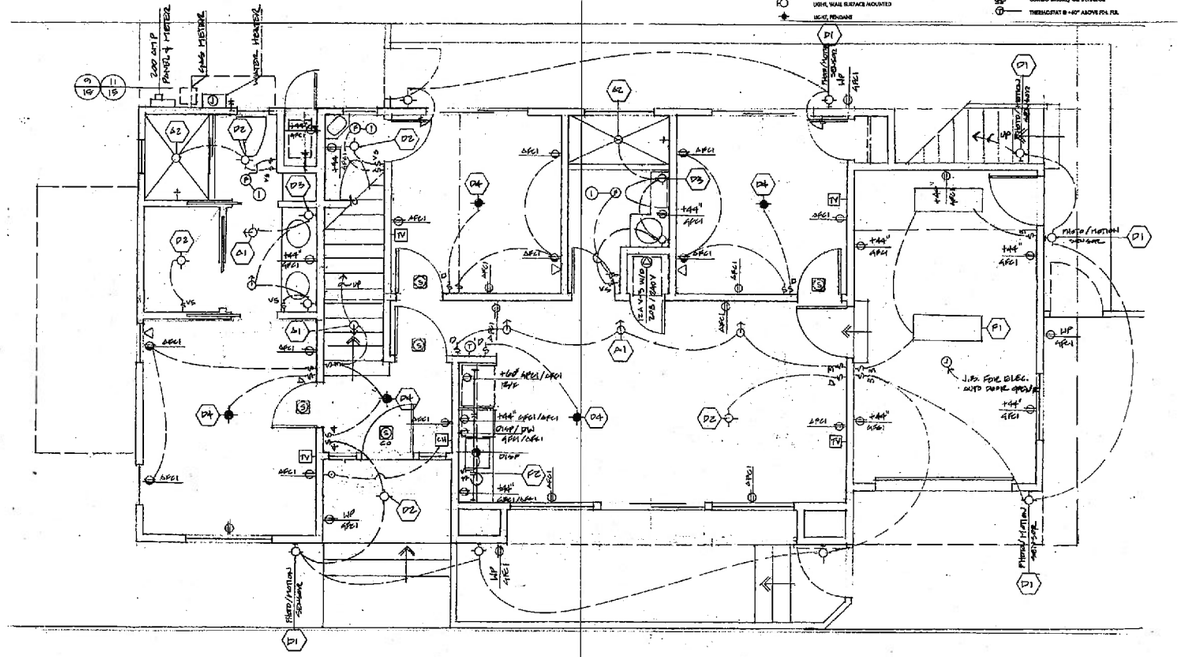
1 All **bathroom fans** are to be used for **Local Ventilation Exhaust.** Minimum 50 CFM fan tested at a static pressure of .25 wc and rated @ 3 sones or less required to be installed. Fan must be attached to a minimum 4" duct and no longer than 70' of flex duct. Subtract 15' of allowed length for each elbow.

2 All **kitchen range hoods** are to be used for **Local Ventilation Exhaust.** Minimum 100 CFM tested at a static pressure of .25 wc and rated @ 3 sones or less required to be installed. Fan must be attached to a minimum 5" smooth duct and no longer than 85'. Subtract 15' of allowed length for each elbow.

3 This fan is to be used for **Whole Building Ventilation.** Minimum 70 CFM fan tested at a static pressure of .25 wc and rated @ 1 sone or less required to be installed. Fan must be attached to a minimum 5" duct and no longer than 70'. Subtract 15' of allowed length for each elbow. Switch for fan must be labeled to indicate the fan's required function such as "Fan is to be left on to ensure indoor air quality".



UPPER FLOOR ELECTRICAL SCHEMATIC
SCALE: 1/4" = 1'- 0"



LOWER FLOOR ELECTRICAL SCHEMATIC
SCALE: 1/4" = 1'- 0"

ELECTRICAL SYMBOL LEGEND

- DUPLEX OUTLET, +12" ABOVE FIN. FLR., TAMPER RESISTANT, TYPICAL
- DUPLEX OUTLET W/ ARC FAULT INTERRUPT CIRCUIT
- DUPLEX OUTLET W/ GROUND FAULT INTERRUPT CIRCUIT
- DUPLEX OUTLET W/ GROUND FAULT & ARC FAULT INTERRUPT CIRCUIT
- DUPLEX OUTLET W/ WEATHERPROOF COVER
- DUPLEX OUTLET W/ ½ SWITCHED
- SPECIAL PURPOSE FOR 'X' OUTLET
- LIGHT SWITCH, +42" ABOVE FIN. FLR. TYPICAL
- LIGHT SWITCH, 3 WAY
- LIGHT SWITCH W/ DIMMER
- LIGHT SWITCH W/ VACANCY SENSOR
- LIGHT, CEILING SURFACE MOUNTED
- LIGHT, WALL SURFACE MOUNTED
- LIGHT, PENDANT
- LIGHT, RECESSED DOWNLIGHT
- LIGHT, RECESSED WALL WASHER
- LIGHT, RECESSED ADJUSTABLE
- LIGHT, RECESSED EYE
- LIGHT, LINEAR STRIP
- FAN/LIGHT COMBO
- EXHAUST FAN
- GARBAGE DISPOSER
- TELEPHONE OUTLET
- TV OUTLET
- DATA OUTLET
- SMOKE DETECTOR
- COMBO SMOKE/CO DETECTOR
- THERMOSTAT @ +60" ABOVE FIN. FLR.

Michael Helm, AIA Architect & Associates
200 Seventh Avenue, #110 Santa Cruz, California 95062 (831) 476-5386

REPLACEMENT HOME
MAIER RESIDENCE
APN 027-171-30
100 – 7TH AVE., SANTA CRUZ, CALIFORNIA

ELECTRICAL SCHEMATIC

3-11-19
1/4"=1'-0"
MSH
1702

7

MECHANICAL NOTES

1 The System shall be installed in accordance with the latest edition of the California Mechanical Code. Provide all equipment shown on drawings and as needed for a complete and working system. Use Manufacturer as scheduled or Equal approved by the Architect. Install all equipment in accordance with the Manufacturer's instructions and within all applicable codes and standards. Maintain Manufacturer's required clearances around equipment. Contractor shall provide and install all controls necessary to operate the system as required by the California Energy Efficiency Standards.

2 For the purpose of clarity and legibility, these drawings are essentially diagrammatic to the extent that many offsets, bends, special fittings and exact locations are not indicated. Contractor shall verify all conditions at the site before proceeding with installation. It is the responsibility of the Contractor to install the system such that the integrity of the building is maintained.

3 All exhaust fans and fan systems must have damper controls.

4 All joints and penetrations must be sealed.

5 Mechanical equipment and water heaters must be certified and labeled by the California Energy Commission.

6 Termination of all environmental air ducts shall be a minimum of 3 feet from any openings into the building (ie., dryers, bath & utility fans, etc., must be 3 feet away from doors, windows, opening skylights, or attic vents) CMC 504.5.

8 Duct connections to be wrapped with UL listed 181 tape in accordance with the following:
- A) Attach the inner core to the collar with at least two wraps of approved duct tape and secure with an approved clamp.
- B) Pull jacket and insulation back over the core and use two wraps of an approved tape or an approved clamp.

8 All equipment, materials and installation techniques shall meet or surpass local codes and Title 24 requirements.

NOTE:

HERS registered forms are required by installing mechanical contractor for the central furnace. Installing contractor to register project with HERS provider and submit to jurisdiction before beginning work; HERS duct testing is required and must pass with ducts having less than 5% leakage.

DEFERRED SUBMITTAL

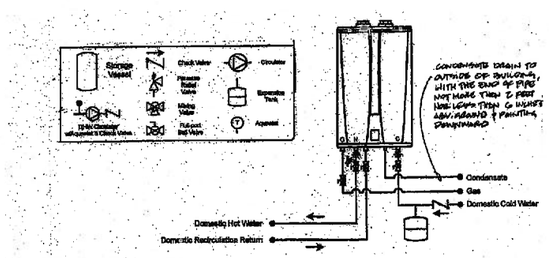
SUBMITTAL DOCUMENTS FOR DEFERRED SUBMITTAL ITEMS SHALL BE SUBMITTED TO THE ARCHITECT OR ENGINEER OF RECORD, WHO SHALL REVIEW THEM AND FORWARD THEM TO THE BUILDING OFFICIAL WITH A NOTATION INDICATING THAT THE DEFERRED SUBMITTAL DOCUMENTS HAVE BEEN REVIEWED AND THAT THEY HAVE BEEN FOUND TO BE IN GENERAL CONFORMANCE WITH THE DESIGN OF THE BUILDING. THE DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THE DESIGN AND SUBMITTAL DOCUMENTS HAVE BEEN APPROVED BY THE BUILDING OFFICIAL. THE FOLLOWING ITEMS WILL BE SUBMITTED SEPARATELY FOR THIS PROJECT:

1 PROVIDE DESIGN AND DOCUMENTATION FOR A COMPLETE HEATING SYSTEM. PLANS AND SPECIFICATIONS TO INCLUDE APPLIANCE MODELS, SPECIFICATIONS, BTU VALUES, DUCT LAYOUT, MATERIALS AND SIZES, ETC. HEATING AND/OR AIR-CONDITIONING SYSTEMS SHALL BE SIZED, DESIGNED AND HAVE THE EQUIPMENT SELECTED USING THE FOLLOWING METHODS:

- A) THE HEAT LOSS AND HEAT GAIN IS ESTABLISHED ACCORDING TO ANSI/ACCA 2 MANUAL J-2011, ASHRAE HANDBOOKS OR OTHER EQUIVALENT DESIGN SOFTWARE OR METHODS.
- B) DUCT SYSTEMS ARE SIZED ACCORDING TO ANSI/ACCA 1 MANUAL D-2014, ASHRAE HANDBOOKS OR OTHER EQUIVALENT DESIGN SOFTWARE OR METHODS.
- C) SELECT HEATING AND COOLING EQUIPMENT ACCORDING TO ANSI/ACCA 3 MANUAL S-2014 OR OTHER EQUIVALENT DESIGN SOFTWARE OR METHODS.

Ventilation Notes:

1. All **bathroom fans** are to be used for **Local Ventilation Exhaust.** Minimum 50 CFM fan tested at a static pressure of .25 wc and rated @ 3 sones or less required to be installed. Fan must be attached to a minimum 4" duct and no longer than 70' of flex duct. Subtract 15' of allowed length for each elbow.
2. All **kitchen range hoods** are to be used for **Local Ventilation Exhaust.** Minimum 100 CFM tested at a static pressure of .25 wc and rated @ 3 sones or less required to be installed. Fan must be attached to a minimum 5" **smooth** duct and no longer than 85'. Subtract 15' of allowed length for each elbow.
3. This fan is to be used for **Whole Building Ventilation.** Minimum 70 CFM fan tested at a static pressure of .25 wc and rated @ 1 sone or less required to be installed. Fan must be attached to a minimum 5" duct and no longer than 70'. Subtract 15' of allowed length for each elbow. Switch for fan must be labeled to indicate the fan's required function such as "Fan is to be left on to ensure indoor air quality".



1 TANKLESS WATER HEATER - INSTALLATION SCHEMATIC
NTS

PLUMBING NOTES

1 The Plumbing System shall be installed in accordance with the latest edition of the Plumbing Code. Provide all equipment as shown on drawings and as needed for a complete and working system. Use Manufacturer as scheduled or Equal approved by the Architect. Install all equipment in accordance with the Manufacturer's instructions and within all applicable codes and standards.

2 Provide clean outs for every aggregate change in direction exceeding 135 degrees. If the water supply pressure exceeds 80 PSI, install an approved pressure regulator in an accessible location to reduce the service pressure to 80 PSI or less. Hose bibbs shall be protected by a backflow prevention device. Pressure relief valve shall extend to the outside of the building and terminate not more than two feet nor less than six inches above the ground and pointed downward.

3 Waste lines shall be ABS. Water supply piping shall be Type L copper below grade and Type L copper within the building. Gas piping shall be Schedule 40 black iron.

4 For the purpose of clarity and legibility, these drawings are essentially diagrammatic to the extent that many offsets, bends, special fittings and exact locations are not indicated. Contractor shall verify all conditions at the site before proceeding with installation. It is the responsibility of the Contractor to install the system such that the integrity of the building is maintained.

5 Provide pressure balance or thermostatic mixing valves at tub / shower (120F max.). Verify at rough plumbing inspection per CPC sec. 420.

6 All building water supply systems in which quick acting valves (washing machines, dishwashers, etc., are installed, shall be provided with devices to absorb high pressures resulting from the quick closing of these valves.

7 Water lines shall be insulated per CA Energy Code 150.0(j)2 as follows;
- a. With a minimum thickness of piping insulation based on the conductivity per Table 120.3-A
- b. Hot and cold water line within the first 8ft from the storage tank
- c. All hot water piping from the source to the kitchen fixtures
- d. All buried insulated hot water lines in a crush proof sleeve

8 Water Pipe Insulation: Install 1.5 inch minimum piping insulation: the first 5 feet of hot and cold water pipes from the storage tank, all piping with a nominal diameter of 3/4 inch or larger, all piping associated with recirculation system regardless of pipe diameter, piping buried below grade, all hot water pipes from the heating source to the kitchen fixtures. Hot water pipes buried below grade must be installed in a water proof and non-crushable casing or sleeve. Insulation outside conditioned space shall be protected per CEnC 150.0(j)3.

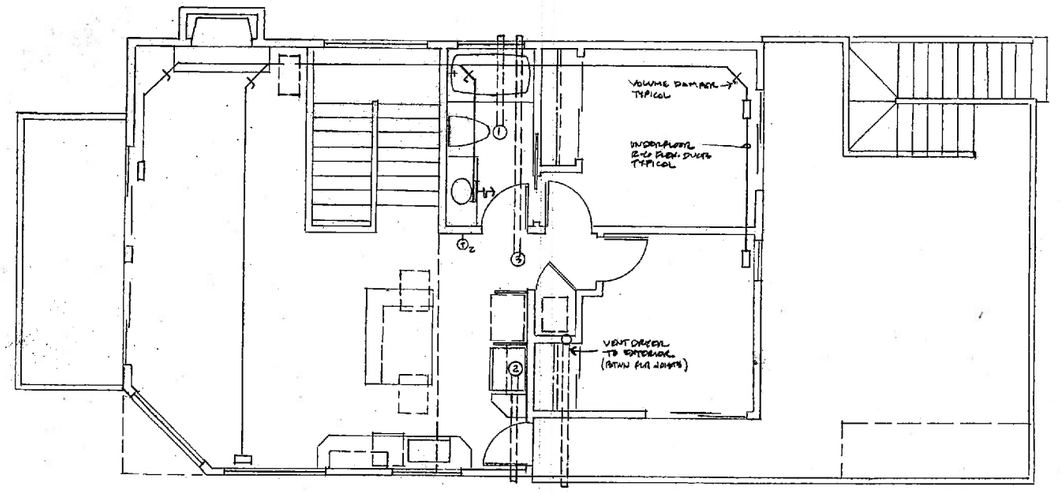
9 Provide a "DSA Certified" earthquake actuated gas shut off valve at the gas meter or regulator.

PLUMBING FIXTURE MAXIMUM FLOW RATES

TOILET	1.28 GPF
LAVATORY FAUCETS	1.5 GPM @ 60 PSI
TUB / SHOWER VALVES	1.8 GPM @ 80 PSI
KITCHEN FAUCETS	1.8 GPM @ 60 PSI

PLUMBING FIXTURE CONNECTION SCHEDULE

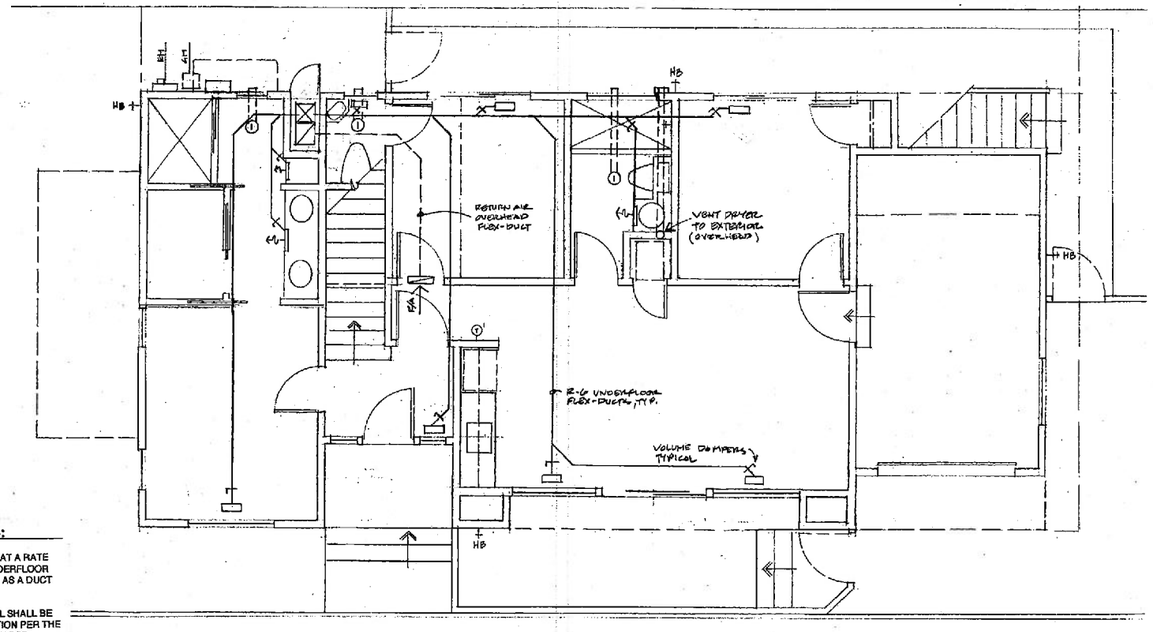
SYMBOL	TYPE	WASTE	VENT	HOT	COLD
LV	LAVATORY	1-1/2"	1-1/2"	1/2"	1/2"
WC	TOILET	3"	2"	-	1/2"
T/SH	TUB / SHOWER	2"	1-1/2"	1/2"	1/2"
KS	KITCHEN SINK	2"	1-1/2"	1/2"	1/2"
WS	WASHER	1-1/2"	1-1/2"	1/2"	1/2"
HB	HOSE BIBB				3/4"



UPPER FLOOR PLUMBING / MECHANICAL SCHEMATIC
SCALE: 1/4" = 1'- 0"

MECHANICAL SYMBOL LEGEND

- Supply Air, 4" X 14" Floor Mounted
- Supply Air, 2-1/4" X 14" Toe-Kick Mounted
- Supply Air, 4" X 10" Wall Mounted
- Supply Air, 4" X 10" Ceiling Mounted
- Return Air, 18 X 18", Min.
- (T) Thermostat, + 60" above finish floor
- Oval Wall Duct



LOWER FLOOR PLUMBING / MECHANICAL SCHEMATIC
SCALE: 1/4" = 1'- 0"

UNVENTED INSULATED CRAWL SPACE NOTES:

PROVIDE CONDITIONED AIR SUPPLY AT CRAWL SPACE SIZED TO DELIVER AT A RATE EQUAL TO 1 CUBIC FOOT PER MINUTE FOR EACH 50 SQUARE FEET OF UNDERFLOOR AREA, INCLUDING A RETURN AIR PATHWAY TO THE COMMON AREA (SUCH AS A DUCT OR TRANSFER GRILL) PER CRC R408.3 (2.2).

CRAWL SPACE PERIMETER WALLS AND EXPOSED FOUNDATION STEMWALL SHALL BE INSULATED WITH 2" THICK R-10 (MIN.) POLYSTYRENE RIGID FOAM INSULATION PER THE CALIFORNIA ENERGY CODE. PROVIDE 2" CONCRETE RAT SLAB ON 15 MIL VAPOR BARRIER AT CRAWL SPACE SUBGRADE. PROVIDE TAPE SEAL ON ALL SEAMS, 6" MINIMUM VERTICALLY AROUND ALL PIERS AND UP FOUNDATION STEMWALL TO CONTROL SUBGRADE MOISTURE FROM MIGRATING UP INTO THE RESIDENCE.

ZA RESUBMITTAL 9/16/19 MSH

Michael Helm, AIA Architect & Associates
200 Seventh Avenue, #110 Santa Cruz, California 95062 (831) 476-5386

REPLACEMENT HOME
MAIER RESIDENCE
APN 027-171-30
100 – 7TH AVE., SANTA CRUZ, CALIFORNIA

PLUMBING / MECHANICAL

3.11.19
1/4"=1'0"
MSH
1902

8

ARCHITECTURAL SPECIFICATIONS

GENERAL REQUIREMENTS

The Work under this contract includes furnishing all labor, equipment's, appliances, and materials required for construction of this home in strict accordance with these specifications and the applicable drawings subject to the terms of the contract.

GENERAL CONDITIONS

1. Before commencing any work under this contract, the CONTRACTOR shall have in his possession the necessary and required insurance as governed by the State of California policies as follows:

   a. Workmen's Compensation Insurance's: This policy shall cover the full liability of the contractor and his workmen. Each sub-contractor shall be required to provide the same for his workmen.

   b. Public Liability Insurance: This policy shall cover the full liability and claims for damages for personal injury including accidental death.

2. The Construction of this building shall comply with all applicable requirements and regulations set forth by the latest of the California Building Code; and all applicable requirements and regulations set forth by Labor Codes and local Ordinances.

3. The CONTRACTOR shall inspect the site and familiarize himself with all local conditions and take full responsibility for maintaining ingress to and egress from the site at all times.

4. Temporary water and electricity shall be provided by the CONTRACTOR and he shall pay all installation and meter charges.

5. Temporary toilet facilities shall be installed and maintained by the CONTRACTOR.

6. The CONTRACTOR shall provide, procure, and pay for all building permits required for the execution of the contract and the completion of the job.

7. During the execution of the work called for on the plans and in these specifications, the CONTRACTOR will be held responsible for any and all damage to existing adjacent property, structures, sidewalks, curbs, and gutters.

8. Upon the completion of the work, the building shall be broom cleaned and ready for occupancy. Finished surfaces scratched or damaged shall be refinished, resurfaced or replaced, as the case may be. The entire premises shall be clean and free from all debris and evidence of construction. Temporary facilities, construction and equipment shall be removed.

9. All concrete slabs, walls and driveways shall be adequately protected from damage from any source until acceptance of the work.

10. The CONTRACTOR shall check and verify drawings as to scale and dimensions; and if errors appear in the drawings or conflicts in these specifications, the CONTRACTOR shall bring them to the attention of the OWNER.

11. THE CONTRACTOR shall layout the building in accordance with the general location of the building as shown on the drawings. The CONTRACTOR shall furnish all engineering services necessary to the proper layout and construction of the building.

12. The CONTRACTOR shall make no deviations from the drawings unless such deviations are approved by the OWNER.

EXCAVATION, GRADING, AND PAVING

See plans for extent of work. In general, this consists of preparing the site, excavation of foundation trenches, all fills and backfills, removal of excess material to area designated, spreading same and finish grading and paving on areas designated. Slope finish grade to drain away from building. All filled areas are to be keyed into hillside and compacted as required.

CONCRETE WORK

1. MATERIALS

   The quality of the materials used in the concrete and the quality of the concrete shall conform to the physical and chemical properties as specified in C.B.C.

   a. Reinforcing wire Welded wire fabric 6" x 6" #10 (ASTM A185)
   b. Design mix for 2,500 pounds per square inch concrete at 28 days. (unless noted otherwise)
   c. Sill anchors to be 5/8" x 12" anchor bolts embedded 9" minimum, and located 3'-0" O.C. for two story structures and 4'-0" O.C. for single story structures. Place anchors within 12" of corners.
   d. Reinforcing steel shall be deformed, intermediate grade, conforming to ASTM A615-40

FIREPLACE AND BLOCK WORK

See plans for extent of masonry work to be included in this building OWNER is to select type of rocks or bricks prior to construction. The Masonry Contractor will design the lintel and flue as required by code.

FRAMING MATERIALS

All framing lumber shall be graded in conformance with the West Coast Lumber Inspection Bureau Grading Rules No. 18 as amended to date. Grades to be as follows unless noted otherwise on the plans:

1. Mudsills-foundation grade redwood or equivalent treated materials.
2. Posts and Beams- 4" & thicker D.F. #1(Para. 130-b) F.O.H.C.
3. Joists and rafters- 2" to 4" thick, 6" & wider construction grade Douglas Fir #2 (Para. 125-c)
4. Girders- construction grade Douglas Fir #1
5. Studs- construction grade Douglas Fir #2 (Para 121-c)
6. Plywood Flooring - 3/4" Douglas Fir T & G exterior plywood CDX
7. Sub-flooring- Douglas Fir 2" x 6" T & G utility decking
8. Exposed beams- Douglas Fir #1 select F.O.H.C. (Para. 130-b)
9. Exposed ceiling -select Pine T & G decking
10. Exterior decking- select "A" grade Redwood
11. Sheathing Paper- #30 Bldg. paper Kraft type or equal

GENERAL FRAMING NOTES

1. Floors to be level within 3/16" ± all around.
2. Structural members shall not be cut for pipes, etc. unless specifically shown or noted.
3. Provide washers for all bolts.
4. Use aluminum or galvanized nails for all exterior siding or trim.
5. Use anchor hold type nails for all plywood flooring.
6. All plywood floors and exterior decking to be glued with F.I.-400 or equal.
7. Use cement coated 16^{d} sinker nails for framing.
8. Provide an 18" x 24" minimum access area to underside of home.
9. Provide access for bath tub trap; 20' maximum distance to all plumbing in crawl area.
10. All stairways to have a maximum rise of 7½ and a minimum tread width of 10". Provide headroom clearance of 7'-0" min. Install handrails as required 34" to 38" above treads.
11. Unless indicated otherwise all headers are to be 4" x 12" D.F. #2.
12. Double floor joists under all parallel wall partitions.
13. All required handrails are to be 36" high and constructed to withstand a horizontal force of 20 pounds per lineal foot, applied at the top of the railing. Maximum spacing in handrails shall not exceed 6".
14. Provide an attic access of a t least 22" x 30".
15. Open flame for furnace and water heater shall be 18" above floor level if they are to be located in the garage.
16. Provide combustion air for furnace and water heaters required. Combustion air intakes to be located within 6" of floor and ceiling. Provide 6" clearance between furnace and combustible.
17. If home has an underfloor crawl area, provide 2 square feet of vent space per each 25 linear feet of exterior wall.
18. Provide fire blocking at floor, ceiling, eaves, and mid-height of walls over 10'-0" in height.
19. Provide 50 square inches of fixed vents per car to outside air within 6" of garage floor.

TRIM WORK

All external fascias shall be scarfed. No butt joints or spaced boards will be allowed. All trim connections should be tight and fit flush against the exterior.

All exterior redwood decking is to be installed in a craftsmanlike manner. Sand all mitered corners and exposed edges. Remove all sharp edges from handrails.

WOOD BASE: 5/0" X 5¼" PAINT GRADE, CASING 1/2" X 3¼" PAINT GRADE

CLOSETS:

a. Shelves - 3/4" plywood or particle board with glued-on solid edge or plastic ld. Solid pine shelves may be used as a substitute.
b. Clothes Pole-Hardwood 1-5/8" diameter. Provide an intermediate support for spans longer than 4'-0".
c. Hook Strip - 1" x 4" acts also as shelf support.
d. Floor: MATCH ADJACENT ROOM

UNDERLAYMENT: Use 3/8" particle board under all resilient flooring except for slab areas. Nail 3" at edge 1/2" in and 6" in field each way.

DRYWALL:

Includes a complete gypsum board wall and ceiling installation as indicated on the drawings. Wall board shall be 5/8" recessed edge type board such as manufactured by U.S. Gypsum Co. or equal. Nails 5d-15 1/2 gauge, cement coated, flathead, 1 5/8" long. Taping, "Perfatape" joint reinforcing tape and cement as manufactured by U.S. Gypsum Co. Use 5/8", type "X" one hour fire-rated gypsum board between garage and home where indicated on the drawings, and under stairways.

All Exterior corners to have metal edges. The best workmanship and construction practices are required. In the event the Drywall Contractor finds crooked walls or bad joints occurring in the frame structure then these should not be covered but brought to the attention of the CONTRACTOR so they may be fixed prior to covering with drywall. Special care must be taken to protect and preserve the finish wood surfaces. All doors and window sills to be trimmed flush with openings. All scrapes to be hauled away within 5 days of hanging. Do not break joints at places in stairwells, header connections, or at places on two story high walls. All recessed kitchen lights to have clean straight lines. Keep sheetrock within 3/16" of all rough in boxes.

THERMAL INSULATION:

FLOORS	(N) R-19 fiberglass batts
EXT. WALLS	(N) R-19 fiberglass batts
INT. WALLS	(N) 3-1/2" fiberglass sound batts
ROOFS	(N) R-30 fiberglass batts
FLAT ROOF / DECK	(N) 5" thick (R-30 min.) SWD Cwik-Shield 112
	Spray applied Polyurethane foam

Weather-stripping: At all windows and doors, typical.

Special Notes: Provide 5-1/2" sound insulation between floors and in walls around all bathrooms, all bedrooms and laundry room.

SHEET METAL:

All sheet metal shall be 16 Oz. Copper unless indicated otherwise on the drawings. Sheet metal work includes chimney saddles, gutters, downspouts, flashing, counter flashing and all other sheet metal not specifically a part of other trades. Fabrication and installation in accordance with the best workmanship standards is required. Soldered joints shall have continuous solder and be watertight. Free edges projecting from adjoining surfaces shall have metal bent on itself. Nails shall be copper.

Downspouts shall be of round design unless noted otherwise. Offsets shall be fully soldered. Connection to gutter shall be rigid and watertight. Fascia gutter to be straight with all intersection soldered. Do not use short pieces.

Provide vents to kitchen fans, bath fans, gas ranges, gas heaters, and any other areas indicated on the drawings.

SPECIAL NOTES:

ROOFING:

SPECIAL NOTES: TO BE OWNER APPROVED

DOORS:

See drawings for size, location, and type of doors needed. Interior doors shall be 1 3/8" solid core flush type unless indicated otherwise. Provide 13/8" solid core door with self-closing hinge between home and garage. Sliding doors shall have tempered glass panels with operable screen panel. Sizes as indicated on drawings. Pocket door frames to be Nordal or equal.

SPECIAL NOTES: TO BE OWNER APPROVED

WINDOWS:

MILGARD

See drawings for size and location of windows. Windows to be "A" or approved equal. Provide screens for all openings. Windows shall be straight, plumb, and true, and shall operate easily without binding.

SPECIAL NOTES:

FIXED GLASS:

See drawings for size and location of fixed glass. All glazing shall be guaranteed water tight and any glass which leaks shall be re-glazed. Size glass to meet minimum C. B. C. requirements.

SPECIAL NOTES:

SHOWER DOORS AND MIRRORS:

See drawings for size and location of shower doors and mirrors. Shower doors to have approved shatter-proof glass. Mirrors to be 1/4" polished plate glass.

SPECIAL NOTES: PROVIDE SHOP DRAWINGS FOR ALL CUSTOM SHOWER DOORS & MIRRORS

HARDWARE:

An allowance of $ 1500 is to be made for finish hardware. This is to include all door knobs, cabinet handles, door, pulls, towel bars, paper holders, etc.

SPECIAL NOTES: TO BE OWNER APPROVED

PAINTING:

MATERIALS: Paint materials shall be as manufactured by the Kelly-Moore Co. or an approved equal, unless otherwise noted.

WORKMANSHIP: No painting or finishing shall be done under conditions which jeopardize the quality of the work. Surfaces to be finished shall be in proper condition to receive same. Each coat shall be applied at the proper consistency, free of runs, sags, brush marks, spattering, or any other evidence of poor workmanship. Surfaces shall be sanded smooth. Nail holes and imperfections in the wood shall be filled with material of the same color as the finish. All items having factory finish will not be painted. All other surfaces shall be painted or finished whether specifically mentioned herein or not.

EXTERIOR SURFACES: Wood siding, trim, fascia, decks, beams, railings, treat with a semi-transparent or heavy body penetrating stain unless noted otherwise. Exterior doors use two coats of exterior type spar varnish. Prime all galvanized metal and coat with exterior flat enamel.

INTERIOR SURFACES: Natural woods use semi-transparent stain and sealer. Cabinets and wood doors to be sanded, stained, sealed, and lacquered. Drywall in kitchen and bath areas to be sealed and stippled. Other drywall areas to have one coat of interior flat latex wall finish. Special care should be taken to preserve natural woodwork. Work shall be neat, clean and accurate so as not to damage finish of natural wood surfaces. All surfaces not intended to have paint shall be left in clean condition.

SPECIAL NOTES: COLORS TO BE OWNER APPROVED

TILE:

Tile shall be installed in accordance with the best methods and construction practices. Tiles are to be soaked before applying and joints are to be kept neat, symmetrical and all lines true and straight. Joints and tile shall be thoroughly washed. Owner to select color.

SPECIAL NOTES: TO BE OWNER APPROVED

FLOORING MATERIALS:

An allowance of $ 75/SQ.FT. is to be made for floor coverings. This is to include all resilient flooring, carpets, and wood floors used in the project. Ceramic tile floors are not included in this allowance.

SPECIAL NOTES: TO BE OWNER APPROVED

KITCHEN APPLIANCES:

Furnish and install the following: TO BE OWNER APPROVED

PLUMBING:

The Plumbing Contractor shall design and install a complete plumbing system as indicated on the drawings. Pipes shall be sized adequately to accommodate the fixtures served. The Plumbing Contractor shall make all necessary connections to utilities shown on plot plan and install all piping, etc. required. Stop valves should be at each fixture or appliance. Plumb system for future soft water system. Plumb for a least 4 exterior hose bibs or more if the size of the house indicates. Provide plumbing for automatic dishwasher. Provide a pressure relief valve at water heater. Provide a pressure reducer if water pressure exceeds 50 PSI.

SPECIAL NOTES: TO BE OWNER APPROVED

ELECTRICAL:

The Electrical Contractor will design his system for a complete and operating system. The drawings show only the location and type of outlets, lighting, including control switches. No extra charges will be paid for furnishing items not specified in the plans but required by the local electrical codes. Provide doorbell as standard item. Provide all recessed, under counter, and soffit lighting if indicated on plans.

ELECTRICAL FIXTURES:

Provide an allowance of $ 100/PER. for fixtures not specified on plans and normal installation.

HEATING SYSTEM:

This system to be designed and installed by the Contractor doing the installation. Type of system:

GAS-FIRED FAU W/ HIGH EFFICIENCY FILTER (MERV 16)

GENERAL NOTES:

1. The CONTRACTOR and all sub-contractors shall guarantee and be responsible for and make good all defects due to faults of labor or materials in the work included in the contract for one year following the completion of the structure.

2. All sub-contractors will be responsible for damages caused by: poor workmanship, system failures, breakage, or their employees' irresponsibilities that cause additional time and expense to the general contractor. Sub-contractors will be charged for such items as they may occur for a period of one year after the home is completed.

TABLE 4.504.1
ADHESIVE VOC LIMIT[1]
Less Water and Less Exempt Compounds in Grams per Liter

ARCHITECTURAL APPLICATIONS	CURRENT VOC LIMIT
Indoor carpet adhesives	50
Carpet pad adhesives	50
Outdoor carpet adhesives	150
Wood flooring adhesives	100
Rubber floor adhesives	60
Subfloor adhesives	50
Ceramic tile adhesives	65
VCT and asphalt tile adhesives	50
Drywall and panel adhesives	50
Cove base tile adhesives	50
Multipurpose construction adhesives	70
Structural glazing adhesives	100
Single-ply roof membrane adhesives	250
Other roofing adhesives not specifically listed	50
SPECIALTY APPLICATIONS	
PVC welding	510
CPVC welding	490
ABS welding	325
Plastic cement welding	250
Adhesive primer for plastic	550
Contact adhesive	80
Special purpose contact adhesive	250
Structural wood member adhesive	140
Top and trim adhesive	250
SUBSTRATE BONDING APPLICATIONS	
Metal to metal	30
Plastic foams	50
Porous material (except wood)	50
Wood	30
Fiberglass	80

1. If an adhesive is used to bond dissimilar substrates together, the adhesive with the highest VOC content shall be allowed.
2. For additional information regarding methods to measure the VOC content specified in this table, see South Coast Air Quality Management District Rule 1168.

TABLE 4.504.2
SEALANT VOC LIMIT
Less Water and Less Exempt Compounds in Grams per Liter

SEALANTS	CURRENT VOC LIMIT
Architectural	250
Marine deck	760
Nonmembrane roof	300
Roadway	250
Single-ply roof membrane	450
Other	420
SEALANT PRIMERS	
Architectural	
Nonporous	250
Porous	775
Modified bituminous	500
Marine deck	760
Other	750

TABLE 4.504.5
FORMALDEHYDE LIMITS[1]
Maximum formaldehyde emissions in parts per million

PRODUCT	CURRENT LIMIT	JANUARY 1, 2012	JULY 1, 2012
Hardwood plywood veneer core	0.05		
Hardwood plywood composite core	0.08		0.05
Particleboard	0.09		
Medium density fiberboard	0.11		
Thin medium density fiberboard[2]	0.32	0.25	

1. Values in this table are derived from those specified by the California Air Resources Board, Airborne Toxic Control Measure for Composite Wood as tested in accordance with ASTM E 1333-96(2002). For additional information.

TABLE 4.504.3
VOC CONTENT LIMITS FOR ARCHITECTURAL COATINGS[1,2]
Grams of VOC per Liter of Coating,
Less Water and Less Exempt Compounds

COATING CATEGORY	EFFECTIVE 1/1/2010	EFFECTIVE 1/1/2011
Flat coatings	< 50	
Nonflat coatings	100	
Nonflat high gloss coatings	150	
Specialty Coatings		
Aluminum roof coatings	400	
Basement specialty coatings	400	
Bituminous roof coatings	50	
Bituminous roof primers	350	
Bond breakers	350	
Concrete curing compounds	350	
Concrete/masonry sealers	100	
Driveway sealers	50	
Dry fog coatings	150	
Faux finishing coatings	350	
Fire resistive coatings	350	
Floor coatings	100	
Form-release compounds	250	
Graphic arts coatings (sign paints)	500	
High temperature coatings	420	
Industrial maintenance coatings	250	
Low solids coatings[3]	120	
Magnesite cement coatings	450	
Mastic texture coatings	100	
Metallic pigmented coatings	500	
Multicolor coatings	250	
Pretreatment wash primers	420	
Primers, sealers, and undercoaters	100	
Reactive penetrating sealers	350	
Recycled coatings	250	
Roof coatings	50	
Rust preventative coatings	400	250
Shellacs		
Clear	730	
Opaque	550	
Specialty primers, sealers and undercoaters	350	100
Stains	250	
Stone consolidants	450	
Swimming pool coatings	340	
Traffic marking coatings	150	
Tub and tile refinish coatings	420	
Waterproofing membranes	250	
Wood coatings	275	
Wood preservatives	350	
Zinc-rich primers	340	

1. Grams of VOC per liter of coating, including water and including exempt compounds.
2. The specified limits remain in effect unless revised limits are listed in subsequent columns in the table.
3. Values in this table are derived from those specified by the California Air Resources Board, Architectural Coatings Suggested Control Measure, February 1, 2008. More information is available from the Air Resources Board.

Michael Helm, AIA Architect & Associates
200 Seventh Avenue, #110 Santa Cruz, California 95062 (831) 476-5386

REPLACEMENT HOME
MAIER RESIDENCE
APN 027-171-30
100 – 7TH AVE., SANTA CRUZ, CALIFORNIA

ARCHITECTURAL SPECIFICATIONS

3.11.19
N.T.S.
MSH
1902

9

ZA Architectural 9.16.19 MSH

GENERAL

WHERE NOTED, SPECIAL INSPECTION AND TESTING SHALL BE PROVIDED BY A QUALIFIED INDEPENDANT SPECIAL INSPECTION AND TESTING AGENCY. THE SPECIAL INSPECTION AND TESTING AGENCY SHALL BE SELECTED FROM THE BUILDING DEPARTMENT'S APPROVED RECOGNITION LIST. SITE VISITS BY GEORGE REYNOLDS AND ASSOCIATES, STRUCTURAL ENGINEERS ARE NOT SPECIAL INSPECTIONS.

NO STRUCTURAL MEMBER SHALL BE CUT OR NOTCHED UNLESS SPECIFICALLY SHOWN, NOTED, OR APPROVED BY THE STRUCTURAL ENGINEER. ALL WORK SHALL COMPLY WITH THE 2016 CALIFORNIA BUILDING CODE, AND ALL APPLICABLE LOCAL CODES AND ORDINANCES.

CONTRACTOR SHALL SUBMIT COPIES OF TEST AND INSPECTION REPORTS TO THE ENGINEER AND BUILDING DEPARTMENT.

FOUNDATIONS

ALL GRADING AND SITE WORK SHALL BE DONE IN ACCORDANCE WITH THE GEOTECHNICAL REPORT BY AMERICAN SOIL TESTING & ENGINEERING, FILE #R-7018-S, MAY 29, 2019

THE CONTRACTOR SHALL NOTIFY THE GEOTECHNICAL ENGINEERS OFFICE A MINIMUM OF 48 HOURS PRIOR TO ALL FOOTING EXCAVATIONS TO ENSURE THAT THE ANTICIPATED SOIL AND ROCK CONDITIONS ARE CONSISTENT WITH THOSE NOTED IN THE GEOTECHNICAL REPORT. THE GEOTECHNICAL ENGINEER IS TO BE RETAINED TO PROVIDE OBSERVATION OF THE SITE PREPARATION AND RECOMPACTION, THE FOOTING EXCAVATIONS, AND THE PLACEMENT AND COMPACTION OF THE BASE ROCK.

THE GEOTECHNICAL ENGINEER SHALL PROVIDE A LETTER OF ACCEPTANCE FOR ALL FOUNDATION PREPARATION, BACKFILL, COMPACTION , ETC., PRIOR TO THE PLACEMENT OF ANY FOUNDATION CONCRETE. HE SHALL ALSO PREPARE A FINAL COMPREHENSIVE REPORT FOR THE BUILDING DEPARTMENT STATING THAT ALL WORK WAS DONE PER HIS GEOTECHNICAL REPORT, AND WHAT, IF ANY CHANGES WERE DONE DURING FOUNDATION CONSTRUCTION THAT WERE DIFFERENT FROM THE REVISED GEOTECHNICAL REPORT.

THE CONTRACTOR SHALL DIRECTLY CONTACT THE GEOTECHNICAL ENGINEER TO COORDINATE SITE VISITS, OBSERVATIONS, TESTS, ETC. THAT ARE REQUIRED BY THEIR OFFICE.

EXCAVATIONS SHALL CONFORM AS NEARLY AS POSSIBLE TO THE NEAT LINES REQUIRED BY THE SIZE AND SHAPE OF THE FOOTINGS SHOWN ON THE DRAWINGS. FOOTINGS SHALL BE CAST IN EARTH TRENCHES WITHOUT FORMING. OVER EXCAVATION SHALL BE BACK FILLED WITH CONCRETE. WET TRENCHES IMMEDIATELY BEFORE PLACING CONCRETE.

IF FILL IS REQUIRED, IT SHALL BE COMPACTED WITH OBSERVATION AND COMPACTION TESTING PERFORMED BY A REPRESENTATIVE OF THE GEOTECHNICAL ENGINEER. PROVIDE NON-EXPANSIVE FILL AND PERFORM GRADING IN ACCORDANCE WITH GEOTECHNICAL REQUIREMENTS.

CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY SLOPES, TRENCHES, AND FOUNDATIONS EXCAVATED AT THE SITE AND THE DESIGN OF ANY REQUIRED TEMPORARY SHORING. SHORING, BRACING, AND BENCHING SHALL BE PERFORMED BY THE CONTRACTOR IN ACCORDANCE WITH THE STRICTEST GOVERNING SAFETY STANDARDS.

ALL FILL AREAS UNDER BUILDING AND PARKING AREAS SHALL BE COMPACTED TO MINIMUM 90% DENSITY AND CERTIFIED BY A GEOTECHNICAL ENGINEER. PROVIDE NON-EXPANSIVE FILL AND PERFORM GRADING IN ACCORDANCE WITH GEOTECHNICAL REPORT.

DEEP EXCAVATIONS SHALL BE CUT AND SUPPORTED PER DIRECTION OF GEOTECHNICAL ENGINEER. DRILLED PIER HOLES SHALL BE INSPECTED BY THE GEOTECHNICAL ENGINEER, WHO WILL DETERMINE THEIR FINAL DEPTH. NOTIFY STRUCTURAL ENGINEER BEFORE SHORTENING ANY PIERS. ALL GROUND WATER SHALL BE REMOVED FROM THE PIER HOLES PRIOR TO PLACING CONCRETE.

FOOTING EXCAVATIONS SHALL BE OBSERVED BY THE PROJECT GEOTECHNICAL ENGINEER PRIOR TO PLACING REINFORCING STEEL.

FOOTINGS SHALL NOT HAVE PLUMBING, CONDUIT, OR OTHER PENETRATIONS WITHOUT THE PRIOR APPROVAL BY GEORGE REYNOLDS AND ASSOCIATES, STRUCTURAL ENGINEERS. SUPPLEMENTAL REINFORCING AND / OR OTHER MODIFICATIONS SHALL BE REQUIRED FOR FOOTING PENETRATIONS PER THE DIRECTION OF GEORGE REYNOLDS AND ASSOCIATES, STRUCTURAL ENGINEERS.

DO NOT BACK FILL STEM WALL / PIERS OR REMOVE SHORING UNTIL 75% DESIGN STRENGTH HAS BEEN OBTAINED.

FOOTINGS SHALL NOT BE EXPOSED AT THE LOWEST FINISH GRADE.

DIMENSIONS

DIMENSIONS, UNLESS OTHERWISE SHOWN, ARE TO THE CENTER LINE OF COLUMNS AND BEAMS OR ROUGH CONCRETE SURFACES.

CONTRACTOR SHALL VERIFY, AND BE RESPONSIBLE FOR, ALL DIMENSIONS AND CONDITIONS ON THE JOB. NOTIFY THIS OFFICE OF ANY VARIATIONS FROM THE DIMENSIONS AND CONDITIONS SHOWN ON THESE DRAWINGS PRIOR TO ANY CONSTRUCTION.

CONCRETE

CONCRETE WORK SHALL CONFORM TO ALL REQUIREMENTS OF ACI 318-(LATEST EDITION), "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE", EXCEPT AS MODIFIED BELOW.

ALL CONCRETE SHALL BE REGULAR WEIGHT HARD ROCK, AND HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 2500 PSI. MAXIMUM SLUMP SHALL BE FOUR INCHES. USE TYPE II CEMENT PER ASTM C150. MAXIMUM AGGREGATE SIZE SHALL BE ¾ INCH. CONCRETE STRENGTH CHOSEN FOR QUALITY CONTROL ONLY. NO SPECIAL INSPECTION REQ'D.

THE WATER / CEMENT RATIO FOR ALL CONCRETE POURED DIRECTLY ONTO THE VAPOR BARRIER SHALL BE 0.45

CONCRETE AND CONCRETE FOR SITE FLATWORK SHALL HAVE A MINIMUM OF 2500 PSI, 28-DAY COMPRESSIVE STRENGTH. SPECIAL INSPECTION IS NOT REQUIRED FOR CONCRETE OR SITE FLATWORK, UNLESS NOTED OTHERWISE.

PLACE CONCRETE IN LAYERS NOT EXCEEDING 18 INCHES IN DEPTH. FREE FALL OF CONCRETE SHOULD NOT EXCEED 5 FEET IN UNEXPOSED WORK NOR 3 FEET IN EXPOSED WORK. PLACE CONCRETE IN LEVEL LIFTS THROUGHOUT FORM WORK RECEIVING THE MATERIAL.

ALL CONCRETE WORK SHALL BE CAST-IN-PLACE UNLESS NOTED OTHERWISE. ALL FORMS SHALL BE THOROUGHLY MOISTENED BEFORE CONCRETE IS PLACED.

BEFORE DEPOSITING NEW CONCRETE ON OR AGAINST SET CONCRETE, CLEAN, SATURATE, AND SLUSH A COAT OF CONCRESIVE LIQUID 1001PL BY MASTER BUILDERS OVER THE EXISTING CONCRETE, PER MANUFACTURER'S INSTRUCTIONS.

CONSTRUCTION JOINT CONTACT SURFACES SHALL BE ROUGHENED TO ¼".

CONSOLIDATE ALL CONCRETE BY VIBRATION, SPADING, RODDING OR FORKING. THOROUGHLY WORK CONCRETE AROUND REINFORCEMENT AND EMBEDDED ITEMS. ELIMINATE ALL AIR OR STONE POCKETS WHICH MAY CAUSE HONEYCOMBING, PITTING OR PLANES OF WEAKNESS.

OPERATE VIBRATORS ONLY WITH EXPERIENCED PERSONNEL. LIMIT DURATION OF VIBRATION TO THAT NECESSARY TO PRODUCE SATISFACTORY CONSOLIDATION WITHOUT CAUSING OBJECTIONABLE SEGREGATION. DO NOT INSERT VIBRATOR INTO LOWER COURSES THAT HAVE BEGUN TO SET. UNDER NO CONDITION IS VIBRATOR TO BE PLACED AGAINST REINFORCING STEEL.

MINIMUM ANCHOR BOLT IS 5/8" DIA. X 12" @ 48" O.C. WITH A MINIMUM OF TWO BOLTS PER SILL PIECE, WITHIN 12" OF EACH END, BUT NO CLOSER THAN 4" FROM EACH END. ANCHOR BOLTS LESS THAN 1-1/2" FROM SILL EDGE SHALL BE REPLACED WITH EPOXY SET ANCHOR BOLT (EMBED 6" MIN). PROVIDE PL 3" SQUARE x ¼" WASHER WITH ALL ANCHOR BOLTS. ALL BOLTS & PLATES SHALL BE HOT DIP GALVANIZED. MINIMUM ANCHOR BOLT EMBEDMENT SHALL BE 9 INCHES.

SET ALL POST BASES FLUSH WITH TOP OF CONCRETE.

EXPANSION ANCHOR BOLTS AND POWER DRIVEN NAILS SHALL NOT BE INSTALLED UNTIL CONCRETE HAS REACHED DESIGN STRENGTH.

REINFORCING STEEL

FURNISH AND ERECT REINFORCING STEEL IN ACCORDANCE WITH THE ACI MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES.

USE DEFORMED REINFORCED BAR PER ASTM A615. FOR #3 BAR AND SMALLER, USE GRADE 40. FOR #4 BAR AND LARGER, USE GRADE 60.

ALL REINFORCEMENT SHALL BE CONTINUOUS, STAGGER SPLICES IN ADJACENT BARS. CONTACT SPLICES SHALL LAP 40 DIAMETERS MINIMUM.

HOLD REINFORCEMENT IN ITS TRUE HORIZONTAL AND / OR VERTICAL POSITION WITH DEVICES SUFFICIENT TO PREVENT DISPLACEMENT.

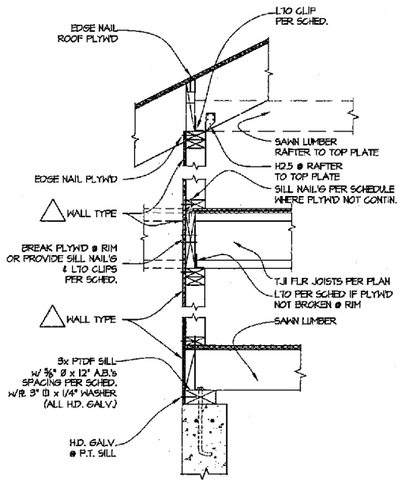
REINFORCING STEEL SHALL NOT BE WELDED. NO EXCEPTIONS.

SUPPORT HORIZONTAL STEEL AT BOTTOM OF FOOTING ON MORTAR BLOCKS. MINIMUM 3-INCH CLEARANCE FOR SURFACES POURED AGAINST EARTH, 2" CLEARANCE AT FORMED SURFACES EXPOSED TO EARTH, AND MINIMUM 1.5 INCH U.N.O.

48	MST48 @ 4x POST. LAP & NAIL TO POST BELOW W/ ⅝" Ø ROD THROUGH FLOOR OR
2	HDU2 @ 4x POST MIN., W/SSTB24 ANCHOR @ FND
5	HDU5 @ 4x POST W/ ⅝" Ø ROD THROUGH FLOOR OR SSTB24 ANCHOR @ FND.
8	HDU8 @ 4x MIN. POST SEE PLANS, W/ SSTB28 ANCHOR @ FND.

1. LOCATE HD'S AT ENDS OF SHEAR PANELS (2/S10) & (3/S10)
2. EDGE NAIL SHEAR WALL PLYWD TO ALL POSTS @ HD'S
3. HARDMOUNT ANCHORS TO FORMWORK PRIOR TO CONCRETE POUR

(7) HOLDOWN SCHEDULE

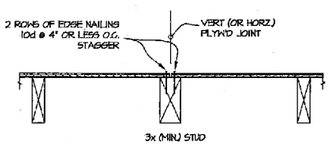


(6) TYPICAL SHEAR TRANSFER DETAILS

REFER TO SHEAR TRANSFER DETAILS							
SHEAR WALL TYPE	PLYWD	EDGE NAIL'G	FIELD NAIL'G	SHEAR TRANSFER		BLK'G @ FLOOR	ANCHOR BOLTS
				SILL NAIL	L70 CLIPS		
1	½" CDX	10d @ 6"	10d @ 12"	16d @ 4"	16" O.C.	2x	⅝" Ø @ 48"
2*	½" CDX	10d @ 4"	10d @ 12"	16d @ 3"	12" O.C.	4x	⅝" Ø @ 32"
3*	½" CDX	10d @ 3"	10d @ 12"	(2) x 16d @ 4"	9" O.C.	4x	⅝" Ø @ 24"
4*	½" CDX	10d @ 2"	10d @ 12"	(2) x 16d @ 4"	7" O.C.	4x	⅝" Ø @ 18"

NOTE:
- BLOCK ALL EDGES OF PLYWD
- * PROVIDE 3x (MIN.) STUDS & BLK'G @ ALL PLYWD BUTT JOINTS AS PER DETAIL (4/10)
- DO NOT BREAK PLYWD SKIN BY OVERDRIVING NAILS
- PRE-DRILL AS REQ'D TO AVOID SPLITTING SILLS, ETC.
- SHEAR TRANSFER BLOCK'G & CLIPS MAY BE OMITTED IF PLYWD @ SHEAR WALL IS CONTINUOUS PAST FLOOR FRAMING (I.E. @ EXTERIOR WALLS)

(5) SHEAR WALL SCHEDULE



(4) PLYW'D JOINT DETAIL

TIMBER

ALL WOOD BOLT CONNECTIONS SHALL HAVE A WASHER UNLESS A STEEL PLATE IS SPECIFIED. NO COUNTERSINKING PERMITTED WITHOUT ENGINEER'S APPROVAL.

LUMBER SHALL CONFORM TO GRADING RULES OF WWPA, W.C.L.I.B. RULES #17, OR OTHER PER C.B.C. 2303.1. MAXIMUM MOISTURE CONTENT SHALL NOT EXCEED 19%.

ALL EXPOSED JOISTS, BEAMS, & GLULAMS SHALL HAVE A PRESSURE PRESERVATIVE TREATMENT UNLESS ALL-HEART REDWOOD IS SPECIFIED.

ALL FIELD CUTS AND DRILLED HOLES FOR EXPOSED MEMBERS SHALL BE TREATED IN ACCORDANCE WITH AMERICAN WOOD PRESERVERS ASSOCIATION AWPA M4.

LUMBER SHALL BE GRADE MARKED DOUGLAS FIR.

JOISTS, LEDGERS, PURLINS, AND BEAMS	NO.1 OR BETTER
RAFTERS AND POSTS	NO.1 OR BETTER
STUDS, SILLS, & PLATES	NO.2 OR BETTER

ALL SILLS AND FRAMING MEMBERS IN CONTACT WITH CONCRETE SHALL BE PRESSURE-TREATED DOUGLAS FIR. THE PRESERVATIVE TREATMENT UTILIZED SHALL BE PERFORMED IN ACCORDANCE WITH AWPA STANDARD C-2.

THE MANUFACTURE AND FABRICATION OF ANY STRUCTURAL GLUED LAMINATED TIMBER SHALL BE UNDER THE SUPERVISION OF QUALIFIED PERSONNEL. PROVIDE APA-EWS CERTIFICATES TO THE APPLICABLE BUILDING INSPECTOR.

PROVIDE A.I.T.C. CERTIFICATE WITH ALL GLULAM BEAMS. PROVIDE NO CAMBER WITH GLULAM BEAMS UNLESS NOTED OTHERWISE. PROVIDE (24F-V4) STRESS GRADE UNLESS NOTED OTHERWISE.

ALL HANGERS, ETC. SHALL BE ATTACHED DIRECTLY TO THE FRAMING MEMBERS. DO NOT NAIL HARDWARE OVER PLYWOOD OR SHIMS, U.N.O.

OSB PANELS MAY BE USED IN LIEU OF PLYWOOD FOR GREEN POINTS OR ECONOMIC REASONS. ALL NOTES FOR PLYWOOD APPLY TO SUBSTITUTED OSB PANELS.

ALL PLYWOOD SHEATHING APPLIED TO WALLS, FLOORS, AND / OR ROOFS SHALL HAVE A ⅛-INCH GAP BETWEEN ADJACENT SHEETS.

TYPICAL PLYWOOD NAILING: SET ALL NAIL GUNS TO AVOID BREAKING THE TOP PLYWOOD LAYER. USE A HAMMER TO SEAT NAILS FLUSH TO THE PLYWOOD. NAILS THAT BREAK THE SURFACE OF THE PLYWOOD ARE UNACCEPTABLE AND REQUIRE SUPPLEMENTAL NAILS. NAILS SHALL BE ¾" MINIMUM FROM THE PLYWOOD EDGES AND SHALL BE INSTALLED PERPENDICULAR TO THE PLYWOOD SURFACE. NAILS LOCATED TOO CLOSE TO A PANEL EDGE ARE UNACCEPTABLE AND REQUIRE SUPPLEMENTAL NAILS. NUMEROUS NAILING VIOLATIONS WILL VOID THE SHEET AND REQUIRE THE PANEL TO BE REPLACED.

ROOF PLYWOOD SHALL BE OF THICKNESS AS PER PLANS WITH A MIN. A.P.A. RATING OF 24 / 0 U.N.O. MIN. NAILING IS TO BE 10d @ 6" O.C. INTERMEDIATE FRAMING U.N.O. UNSUPPORTED PLY EDGES SHALL BE SUPPORTED BY BLOCKING OR PLYWOOD CLIPS.

FLOOR AND DECK PLYWOOD SHALL BE ¾" WITH A MIN. A.P.A. RATING OF 40 / 20, U.N.O. WHERE NOTED ON THE PLANS, DECK PLYWOOD SHALL HAVE A C-C EXTERIOR EXPOSURE RATING. OTHERWISE EXPOSURE 1 CDX PLYWOOD SHALL BE USED. MIN. NAILING IS TO BE 10d @ 6" O.C. EACH EDGE, EACH SHEET, AND 10d @ 10" O.C. AT INTERMEDIATE FRAMING U.N.O. UNSUPPORTED PLYWOOD EDGES SHALL BE EITHER T&G OR SUPPORTED BY BLOCKING. FLOOR PLYWOOD SHALL BE GLUED TO SUPPORTING JOISTS AND BLOCKING.

ALL ROOF AND FLOOR PLYWOOD SHALL BE APPLIED WITH THE FACE GRAIN ORIENTED PERPENDICULAR TO THE DIRECTION OF THE SUPPORTIVE FRAMING U.N.O.

ALL FLOORS AND ROOFS SHALL BE CONSTRUCTED WITH PLYWOOD SHEETS NOT LESS THAN FOUR FEET BY EIGHT FEET. EACH PANEL SHALL BE AT LEAST 24 INCHES IN WIDTH, THE ADJACENT SHEET MAY HAVE TO BE TRIMMED TO ACCOMODATE THIS REQUIREMENT. PANELS LESS THAN 24 INCHES IN WIDTH SHALL HAVE ALL EDGES SUPPORTED BY EITHER FRAMING MEMBERS OR BLOCKING.

ALL ROOF OR FLOOR FRAMING SHALL BE 3-INCH NOMINAL OR WIDER AND NAILS SHALL BE STAGGERED WHERE DIAPHRAGM NAILS ARE SPACED 2 INCHES, 2½ AND 3 INCHES ON CENTER AS PER TABLE 2306.2(1) OF THE 2016 C.B.C.

THE EDGES OF ALL SHEAR WALL PLYWOOD PANELS SHALL BE BLOCKED WITH A MINIMUM OF 2x MATERIAL. EACH PANEL SHALL BE AT LEAST 24 INCHES IN WIDTH -- THE ADJACENT SHEET MAY HAVE TO BE TRIMMED TO ACCOMODATE THIS REQUIREMENT. ALL SHEAR WALL PANEL EDGES SHALL BE BACKED WITH 3x MATERIAL WHERE DESIGNATED, PER C.B.C. TABLE 2306.3

PLYWOOD SHEAR WALL HOLDOWN LOCATIONS: THE NEW HOLDOWN LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE. THE HOLDOWNS AND HOLDOWN STUDS SHALL BE LOCATED AS CLOSE TO THE SHEAR WALL ENDS AS POSSIBLE, U.N.O. HOLDOWNS AND HOLDOWN STUDS SHALL NOT BE LOCATED GREATER THAN 12-INCHES FROM THE END OF THE SHEAR WALL, U.N.O.

ALL SOLID-SAWN RECTANGULAR LUMBER BEAMS, RAFTERS AND JOISTS SHALL BE SUPPORTED LATERALLY TO PREVENT ROTATION OR LATERAL DISPLACEMENT IN ACCORDANCE WITH N.D.S. 3.3.3

ROOF JOISTS OR RAFTERS OF MORE THAN 8-INCH DEPTH SHALL BE PROVIDED WITH BRIDGING EVERY 10 FEET. BRIDGING SHALL BE IN ACCORDANCE WITH N.D.S. 3.3.3

ALL BLOCKING SHALL BE FIRMLY ATTACHED TO THE SUPPORTING FRAMING WITH TOE NAILS OR FRAMING CLIPS.

USE COMMON NAILS. WHERE NOT SPECIFIED OTHERWISE, THE NAILING REQUIREMENTS OF CBC PERTAIN.

USE STRONG-TIE METAL CONNECTORS BY SIMPSON CO. OR APPROVED EQUAL. PROVIDE NAILING AS PER SIMPSON CO. SPECIFICATIONS.

ALL FRAMING HARDWARE AND FASTENERS EXPOSED TO WEATHER OR AT PRESSURE TREATED LUMBER SHALL BE HOT-DIPPED GALVANIZED 2.0 oz/SF, STAINLESS STEEL OR SILICON BRONZE.

BOLT HOLES SHALL BE NOMINAL DIAMETER OF BOLT PLUS 1/16 INCH. ALL WOOD BOLT CONNECTIONS SHALL HAVE A WASHER UNLESS STEEL PLATE IS SPECIFIED. DO NOT COUNTERSINK.

TYPICAL TOP PLATE SPLICE: MINIMUM LAP SHALL BE FOUR FEET LONG NAILED WITH 16d @ 4" O.C. UNLESS NOTED OTHERWISE.

PROVIDE DOUBLE JOIST UNDER ALL PARALLEL WALLS U.N.O.

FOR SHEAR WALL NAILING, ANCHOR BOLTS, AND SHEAR TRANSFER NAILING, SEE SHEAR WALL SCHEDULE.

MANUFACTURED WOOD PRODUCTS SUPPLIED BY (WEYERHAEUSER ILEVEL (OR APPROVED EQUAL) SHALL BE "SILENT FLOOR SYSTEM" TJI FLOOR JOISTS, (LSE & LSE) TIMBERSTRAND LSL BEAMS, (VERSA) MICRO=LAM LVL, AND (2.0E) PARALLAM PSL IN THE PLANS. PROVIDE ALL BLOCKING, BRACING, WEB STIFFENERS & FILLER BLOCKS @ WEBS AS REQUIRED BY MANUFACTURER & BUILDING CODE FOR A COMPLETE STRUCTURAL SYSTEM.

GLULAM BEAMS (24 F-V4) OF WIDTHS 3 ½" & 5 ½" SHALL BE "X-BEAMS" AS SUPPLIED BY ROSBORO SPRINGFIELD, OR, PHONE: 1-888-323-2304, info@rosboro.com OR APPROVED EQUAL

EPOXY CONNECTIONS (IF REQ'D)

USE "SIMPSON" SET-XP EPOXY FOR ALL EPOXYSET THREADED RODS, BOLTS, AND / OR REINFORCING BARS SET INTO CONCRETE. EPOXY INJECTION SHALL BE PERFORMED IN ACCORDANCE WITH THE MANUFACTURER'S PROCEDURES. PROVIDE SPECIAL INSPECTION, DURING THE INSTALLATION OF THE ANCHORS, IN ACCORDANCE WITH SECTION 1704.4 OF THE 2016 C.B.C.

"SIMPSON" SET EY, ETF, AND / OR ETR EPOXY SHALL NOT BE USED IN SUBSTITUTION FOR "SIMPSON" SET-XP EPOXY. THE USE OF "SIMPSON" EY, ETF, AND / OR ETR EPOXY IS UNACCEPTABLE AND WILL BE REJECTED.

OMISSIONS

CONTRACTOR SHALL FAMILIARIZE HIMSELF / HERSELF WITH ALL CONDITIONS OF THE PROJECT AND BE RESPONSIBLE FOR ALL WORK REQUIRED TO COMPLETE THE PROJECT EVEN IF NOT SPECIFICALLY MENTIONED ON DRAWINGS.

IN THE EVENT THAT CERTAIN FEATURES OF THE WORK ARE NOT FULLY SHOWN ON THE DRAWINGS OR CALLED FOR IN THE GENERAL NOTES, THEN THEIR CONSTRUCTION SHALL BE OF THE SAME CHARACTER AS FOR SIMILAR CONDITIONS THAT ARE SHOWN OR CALLED FOR.

SPECIAL INSPECTIONS & TESTING

1. SPECIAL GRADING, EXCAVATION, AND FILLING
   - PERIODIC INSPECTION - PER GEOTECHNICAL ENGINEER
   - SUBGRADE TESTS
   - COMPACTION TESTS
2. SHEAR WALL NAILS:
   - ☒ ALL WALLS NAILED @ 4" O.C. OR LESS

NOTES:
- A. SPECIAL INSPECTIONS DO NOT NEGATE THE C.B.C. REQUIREMENTS FOR THE APPLICABLE BUILDING DEPARTMENT INSPECTIONS.
- B. REFER TO THE GENERAL NOTES FOR MORE INFORMATION.
- C. SITE VISITS BY G. REYNOLDS AND ASSOC. WILL ONLY BE CONSIDERED "SPECIAL INSPECTIONS" WHEN ALLOWED BY THE BUILDING DEPT. (LIMITED TO INSPECTIONS OF EPOXY SET ANCHORS AND NAILING OF PLYWOOD SHEAR WALLS) AND ARRANGED WITH THE OWNER / CONTRACTOR PRIOR TO THE SITE VISIT.

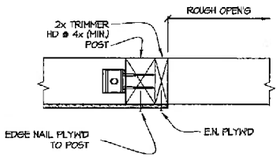
PROJECT DESIGN INFORMATION:

ROOF LIVE LOAD:	20 PSF
FLOOR LIVE LOAD:	40 PSF
ALLOWABLE SOIL BEARIG CAPACITY: NO GEOTECH. REPORT	1500 PSF

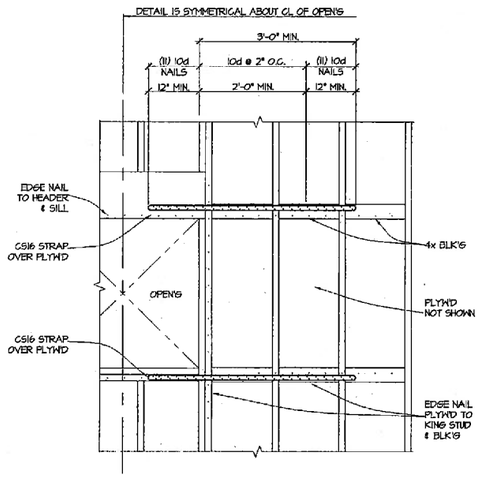
WIND AND EARTHQUAKE DESIGN DATA PURSUANT TO 2016 CBC SECTIONS 1603.1.4 AND 1603.1.5

BASIC WIND SPEED:	110 MPH
WIND EXPOSURE:	'C'
RISK CATEGORY	IV
SEISMIC IMPORTANCE FACTOR	1.0
Ss	1.5
S1	0.6
SITE CLASS	D
Sds	1.0
Sd1	0.8
SITE DESIGN CATEGORY	D
DESIGN BASE SHEAR	14,600 LBS
Cs	0.15
R	6.5
ANALYSIS PROCEDURE USED:	ASD

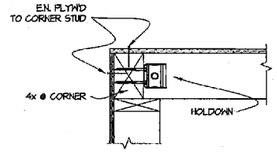
BASIC SEISMIC FORCE-RESISTING SYSTEM: LIGHT FRAMED WALLS SHEATHED WITH WOOD STRUCTURAL PANELS



(2) TYPICAL PHD @ OPEN'G



(1) REINFORCED OPEN'G



(3) TYPICAL PHD @ CORNER

G. REYNOLDS & ASSOCIATES
STRUCTURAL ENGINEERS
831 426 3857
111 Youngfove Avenue
Santa Cruz, CA 95060

REPLACEMENT HOME
MAIER RESIDENCE
APN 027-171-30
100 - 7th AVE., SANTA CRUZ, CALIFORNIA
GENERAL NOTES

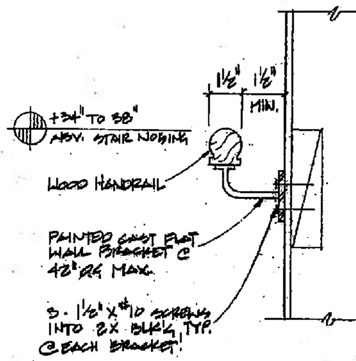
DRAWING DATE
SEPTEMBER 10, 2019

CONSTRUCTION RELEASE

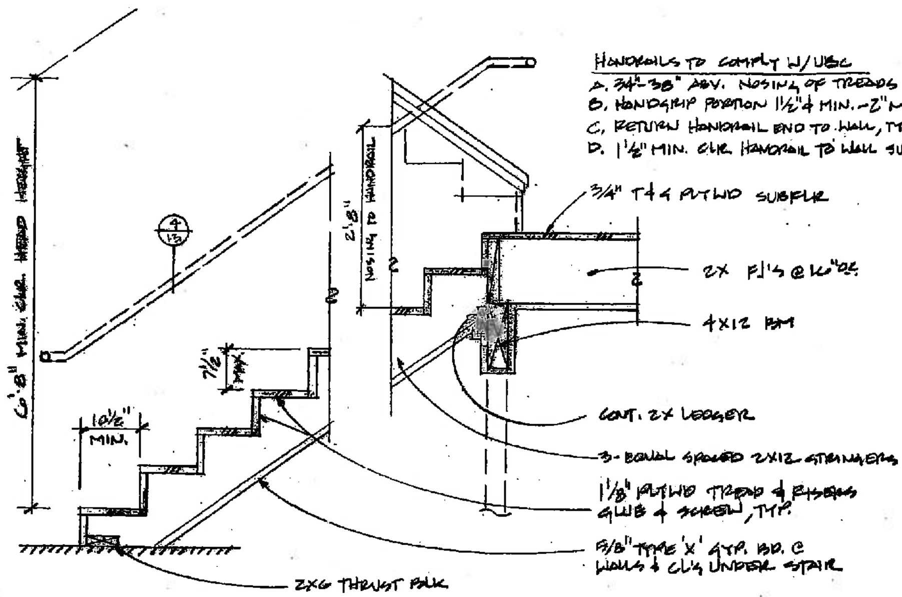
REVISIONS

PROJECT NO. 1917

10

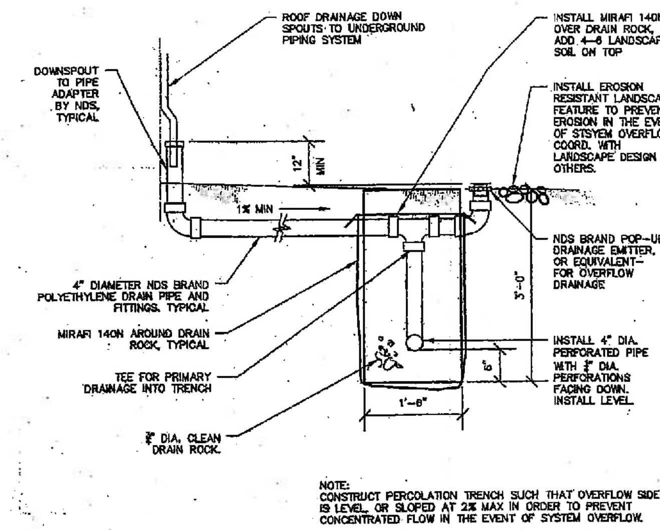


(4) INTERIOR HANDRAIL
NTS



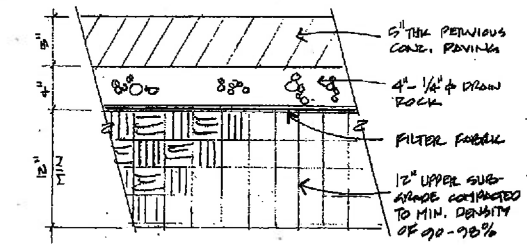
HANDRAILS TO COMPLY W/ UBC
A. 34"-38" ABV. NOSING OF TREADS
B. HANDGRIP PORTION 1 1/4" MIN. - 2" MAX.
C. RETURN HANDRAIL END TO WALL, TYP.
D. 1 1/2" MIN. CLR. HANDRAIL TO WALL SURF.
3/4" T&G PLYWD SUBFLR
2X FJ'S @ 16" OC
4X12 BM
CONT. 2X LEDGER
3 - EQUAL SPACED 2X12 STRINGERS
1 1/8" PLYWD TREAD & RISERS GLUE & SCREW, TYP.
5/8" TYPE 'X' GYP. BD. @ WALLS & CL'G UNDER STAIR
2X6 THRUST BLK
10 1/2" MIN.
7 1/2" MAX.
6'-8" MIN. CLR. HEAD HEIGHT

(3) WOOD STAIR DETAIL
3/4" = 1'-0"

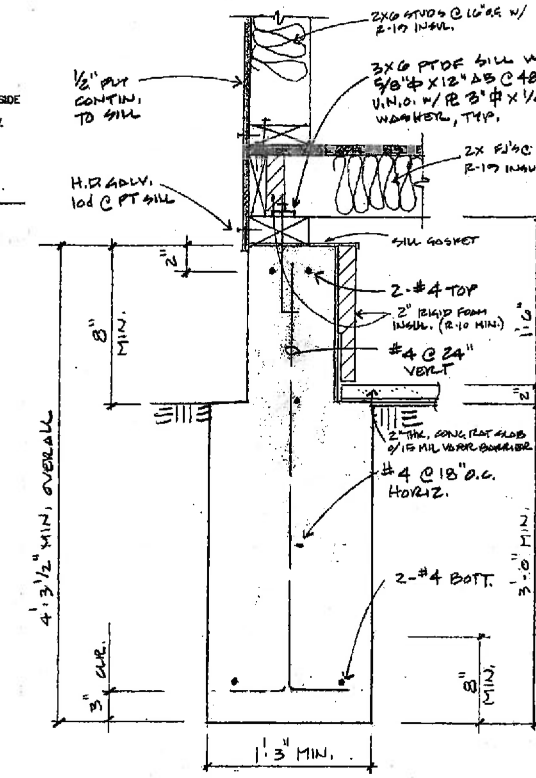


DOWNSPOUT TO PIPE ADAPTER BY NDS, TYPICAL
ROOF DRAINAGE DOWN SPOUTS TO UNDERGROUND PIPING SYSTEM
INSTALL MIRAFI 140N OVER DRAIN ROCK, THEN ADD 4-6 LANDSCAPE SOIL ON TOP
INSTALL EROSION RESISTANT LANDSCAPE FEATURE TO PREVENT EROSION IN THE EVENT OF SYSTEM OVERFLOW. COORD. WITH LANDSCAPE DESIGN BY OTHERS.
1% MIN
NDS BRAND POP-UP DRAINAGE EMITTER, OR EQUIVALENT- FOR OVERFLOW DRAINAGE
4" DIAMETER NDS BRAND POLYETHYLENE DRAIN PIPE AND FITTINGS, TYPICAL
MIRAFI 140N AROUND DRAIN ROCK, TYPICAL
TEE FOR PRIMARY DRAINAGE INTO TRENCH
INSTALL 4" DIA. PERFORATED PIPE WITH 3" DIA. PERFORATIONS FACING DOWN. INSTALL LEVEL.
3" DIA. CLEAN DRAIN ROCK.
1'-6"
3'-0"
NOTE: CONSTRUCT PERCOLATION TRENCH SUCH THAT OVERFLOW SIDE IS LEVEL, OR SLOPED AT 2% MAX IN ORDER TO PREVENT CONCENTRATED FLOW IN THE EVENT OF SYSTEM OVERFLOW.

(2) DOWNSPOUT TO PERCOLATION TRENCH

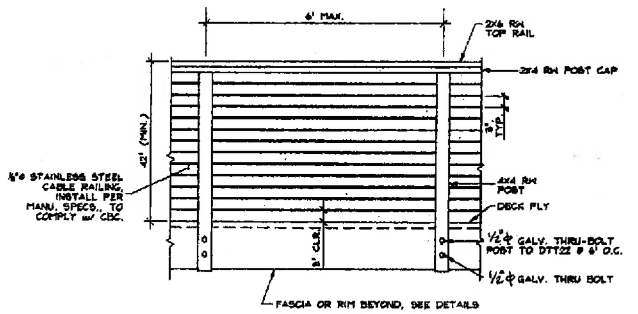


(1) PERVIOUS PAVING DETAIL



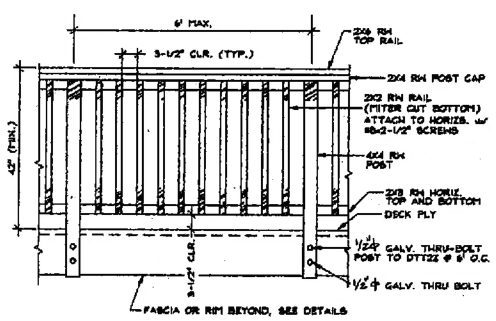
2X6 STUDS @ 16" OC W/ R-19 INSUL.
1/2" PLY CONTIN. TO SILL
3X6 PTDF SILL W/ 5/8" ϕ X 12" AB @ 48" O.C. U.N.O. W/ PL 3" ϕ X 1/4" STL WASHER, TYP.
2X FJ'S @ 16" OC W/ R-19 INSUL.
H.D. GALV. 16d @ PT SILL
SILL GASKET
2-#4 TOP
2" RIGID FOAM INSUL. (R-10 MIN.)
#4 @ 24" VERT
2" THK. CONC. RAT SLAB O/ 15 MIL VAPOR BARRIER
#4 @ 18" O.C. HORIZ.
2-#4 BOTT.
4'-3 1/2" MIN. OVERALL
1'-3" MIN.

(5) TYPICAL FOUNDATION DETAIL
1 1/2" = 1'-0"



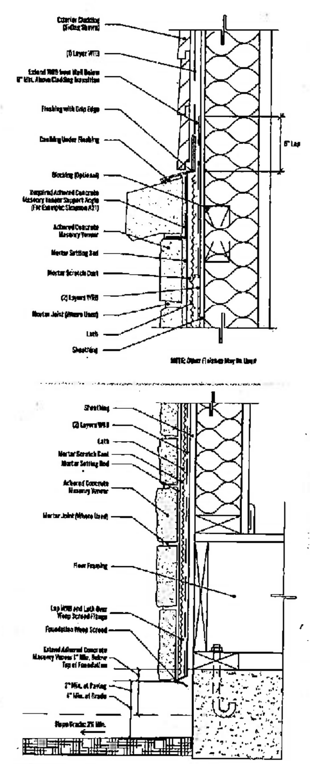
CABLE RAIL NOTES:
1. CABLE RAILING (BY FEENEY, INC. OR APPROVED EQUAL) TO COMPLY W/ CBC 1013.4 & CRC R 312. CABLE SPACING = 3" MAX. RAILING SHALL BE LOCATED ALONG ALL OPEN SIDES OF DECK & BE NO LESS THAN 42" ABOVE WALKING SURFACES.
2. SEE MANUFACTURERS CATALOG FOR INSTALLATION.

CABLE RAIL OPTION

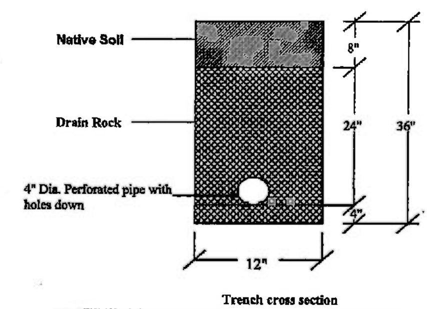


WOODEN RAIL OPTION

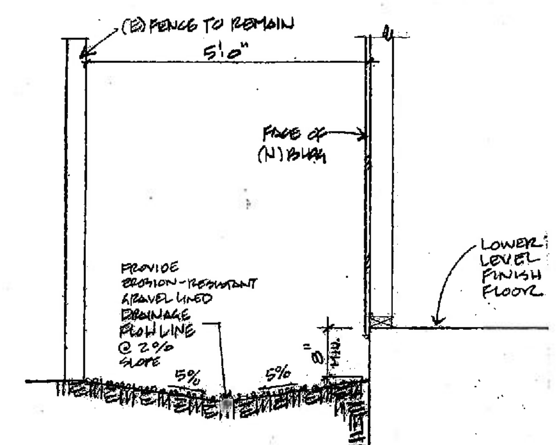
(9) TYP. DECK GUARDRAIL



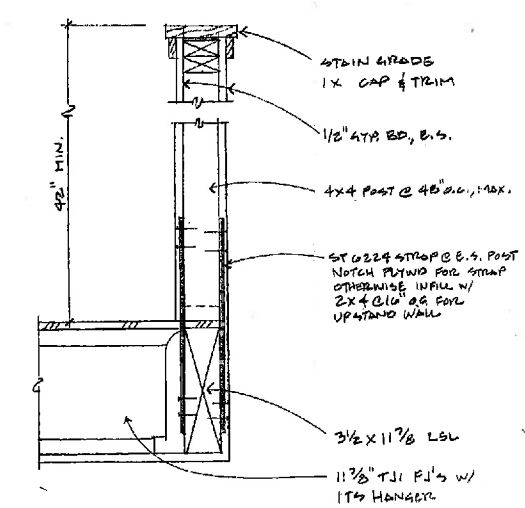
(8) ADHERED CONCRETE MASONRY VENEER



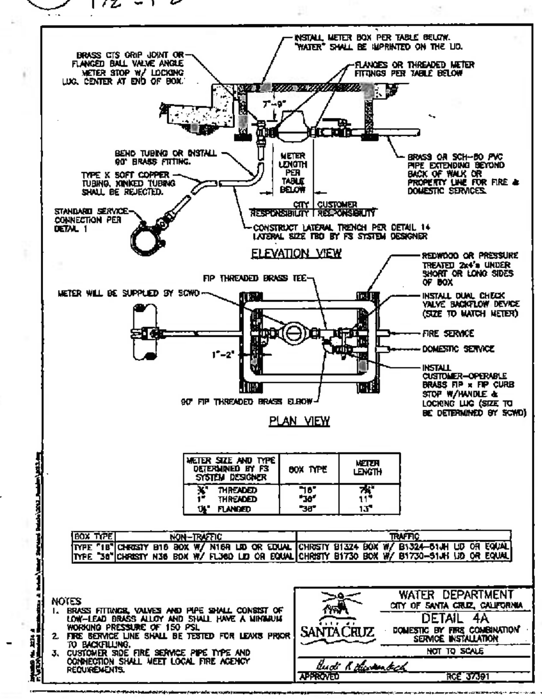
(7) SUB DRAIN DETAIL



(6) DRAINAGE SWALE
NTS



(10) INTERIOR GUARDRAIL
1 1/2" = 1'-0"

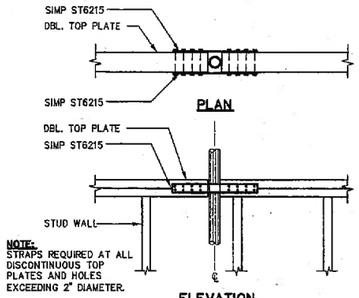


Michael Helm, AIA Architect & Associates
200 Seventh Avenue, #110 Santa Cruz, California 95062 (831) 476-5386

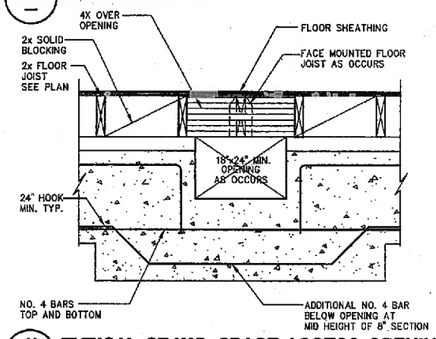
REPLACEMENT HOME
MAIER RESIDENCE
APN 027-171-30
100 - 7TH AVE., SANTA CRUZ, CALIFORNIA

2A RESUBMITTAL 9-16-19 MH

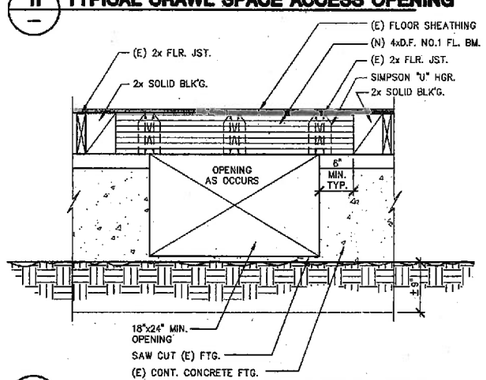
CONSTRUCTION DETAILS
3-11-19
AS NOTED
MH
1902



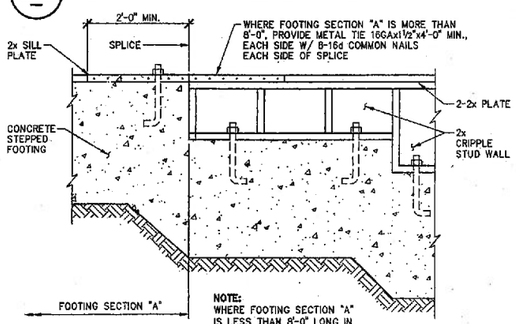
10 — TYPICAL TOP PLATE STRAPS



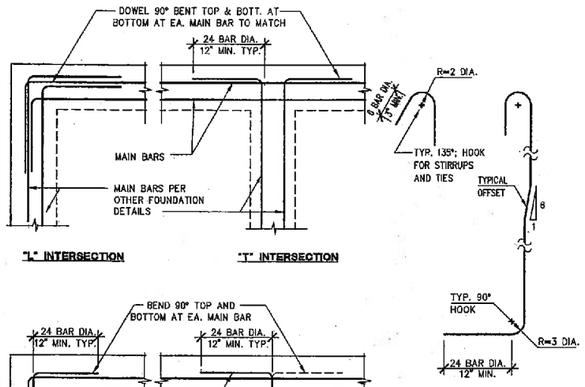
11 — TYPICAL CRAWL SPACE ACCESS OPENING



12 — TYPICAL CRAWL SPACE ACCESS OPENING

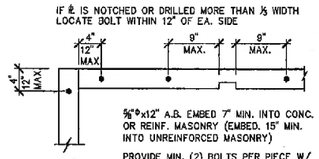


13 — STEPPED FOOTING CONNECTION

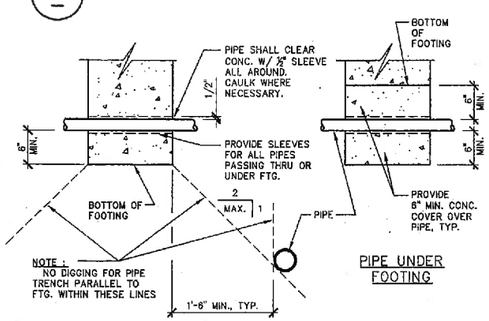


HORIZONTAL SPLICE SCHED.		
BAR SIZE	BAR DIA.	40 DIA.
#3	0.375"	1'-3"
#4	0.5"	1'-8"
#5	0.625"	2'-1"
#6	0.75"	2'-6"
#7	0.875"	2'-11"

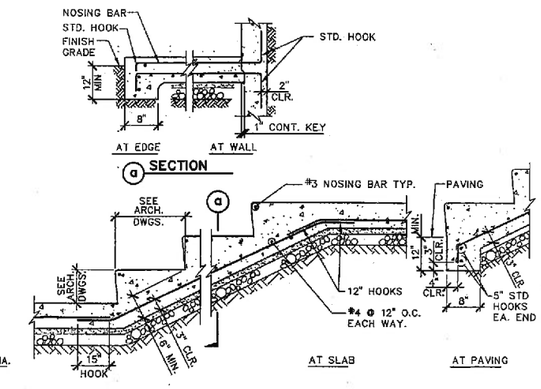
7 — TYP. HORIZONTAL CONCRETE REINFORCEMENT



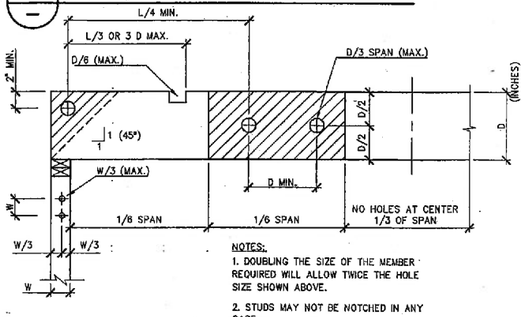
8 — SILL PLATE DETAIL



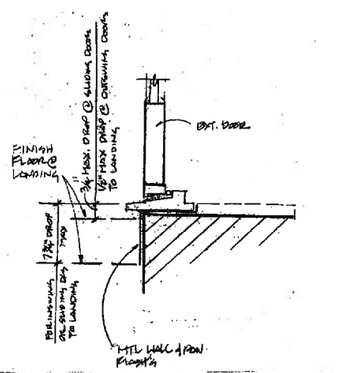
9 — PIPE THRU FTG. AND PARALLEL TO FTG.



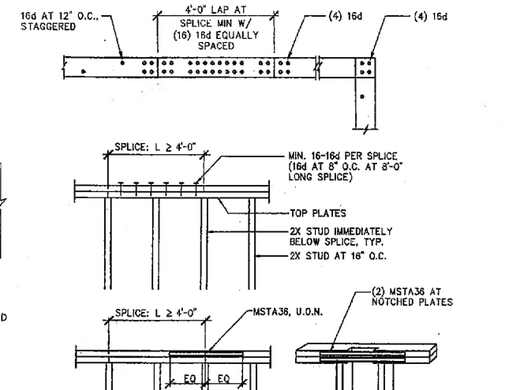
4 — SLAB ON GRADE



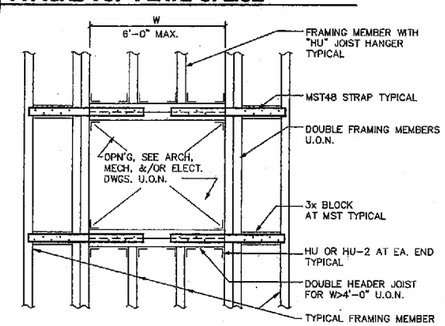
5 — HOLES & NOTCHES AT JOIST & STUD



6 — EXTERIOR THRESHOLD

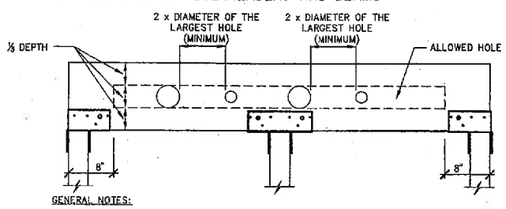


1 — TYPICAL TOP PLATE SPLICE



2 — OPENING IN FRAME AROUND HORIZ. DIAPHRAGM SEE PLAN FOR LOCATION

1.55E TIMBERSTRAND® LSL HEADERS AND BEAMS

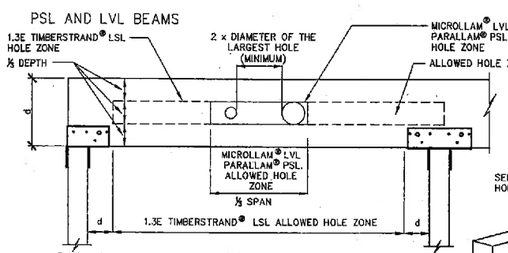


HEADER DEPTH	MAXIMUM ROUND HOLE SIZE
9½"-9¼"	3"
11¼"-11⅞"	3⅜"
14" TO 16"	4⅝"

GENERAL NOTES:
No rectangular holes
No holes in headers or beams in plank orientation

SEE ILLUSTRATION FOR ALLOWED HOLE ZONE

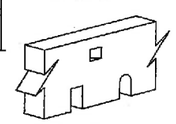
PSL AND LVL BEAMS



BEAM DEPTH	MAXIMUM ROUND HOLE SIZE
4⅛"	1"
5⅛"	1⅜"
7¼" TO 20"	2"

SEE ILLUSTRATION FOR ALLOWED HOLE ZONE

GENERAL NOTES:
Allowed hole zone suitable for uniformly loaded headers and beams only.
No rectangular holes
No holes in cantilevers.
No holes in headers or beams in plank orientation



DO NOT cut, notch, or drill holes in headers except as indicated in the illustrations and tables above.

3 — ALLOWABLE HOLES

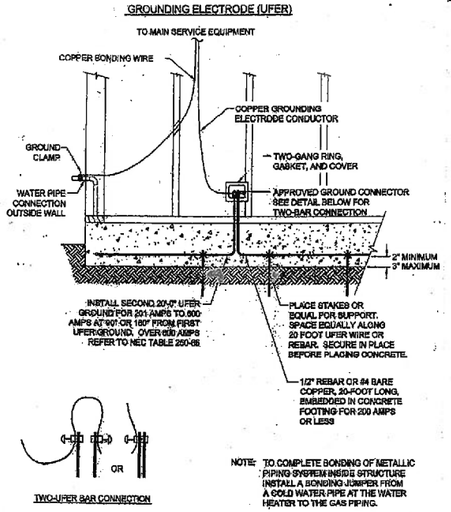
Michael Helm, AIA Architect & Associates
200 Seventh Avenue, #110 Santa Cruz, California 95062 (831) 476-5386

REPLACEMENT HOME
MAIER RESIDENCE
APN 027-171-30
100 – 7TH AVE., SANTA CRUZ, CALIFORNIA

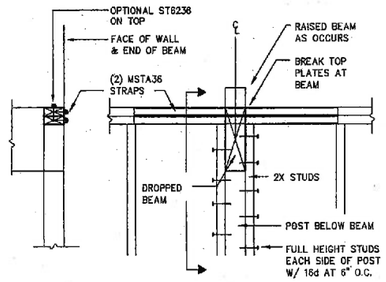
STANDARD CONSTRUCTION DETAILS

3.11.19
NTS
MH
1902

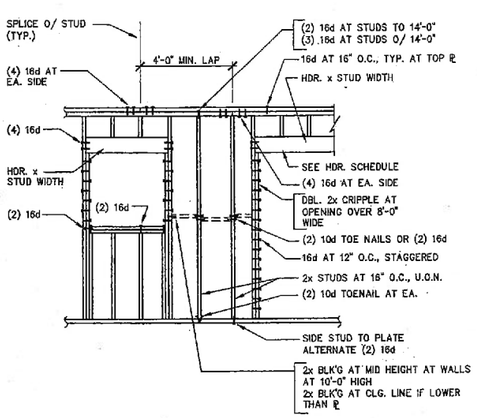
14



11 — UFER GROUNDING DETAIL

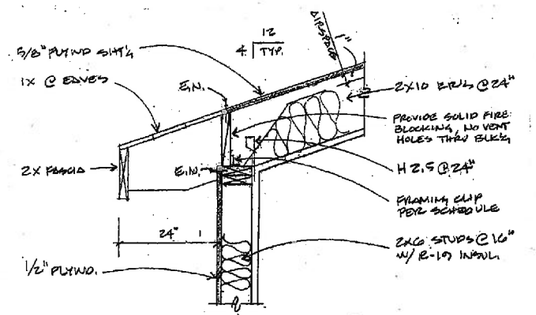


12 — TYPICAL TOP PLATE SPLICE AT BEAM CONNECTION

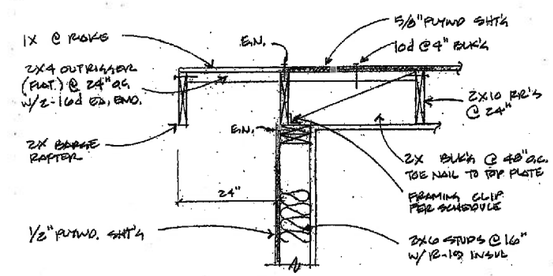


8 — TYPICAL STUD WALL DETAIL

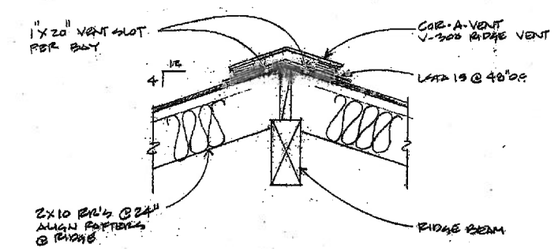
9 — METER SET SEPARATION CLEARANCES
N.T.S.



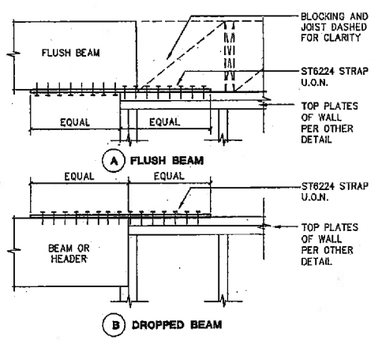
4 — TYPICAL EDGE DETAIL
1"=1'-0"



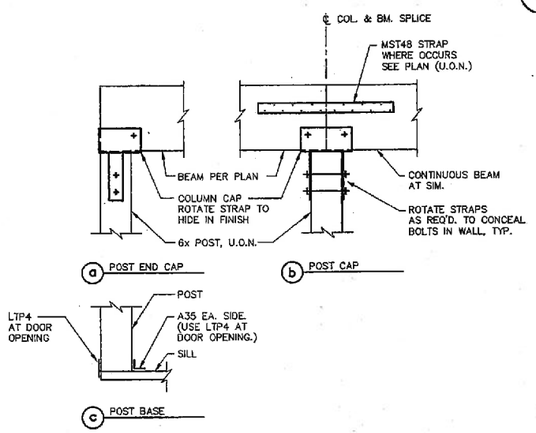
5 — TYPICAL RAKE DETAIL
1"=1'-0"



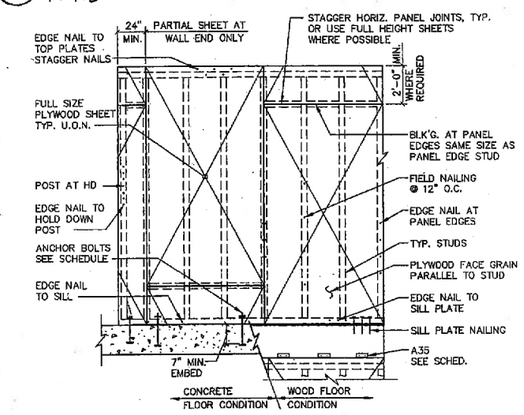
6 — TYPICAL RIDGE DETAIL
1"=1'-0"



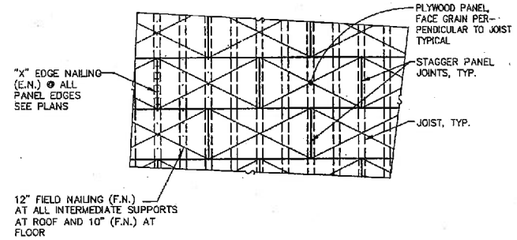
13 — TYPICAL SHEAR COLLECTOR STRAP



10 — BEAM AND POST CONNECTION

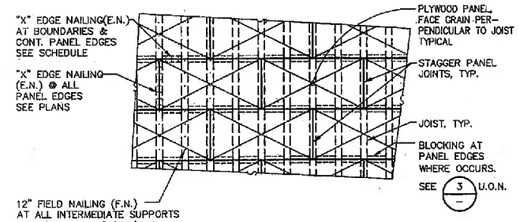


7 — SHEAR WALL FRAMING ELEVATION



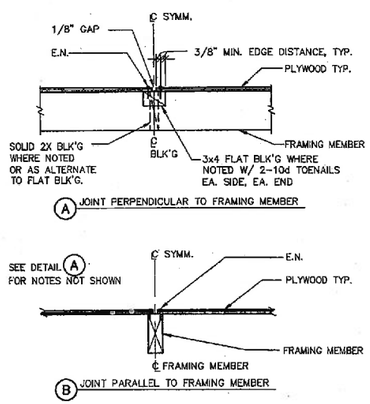
NOTES
1. USE 10d COMMON NAILS AT FLOORS; 8d COMMON NAILS AT ROOFS.
2. GLUE PLYWOOD TO FLOOR FRAMING MEMBERS PRIOR TO NAILING.
3. MINIMUM PLYWOOD WIDTH IS 24".
4. SEE GENERAL NOTES FOR PLYWOOD THICKNESS & GRADE.

1 — PLYWOOD SHEATHING AT ROOF AND FLOORS UNBLOCKED



NOTES
1. USE 10d COMMON NAILS AT FLOORS; 8d COMMON NAILS AT ROOFS.
2. GLUE PLYWOOD TO FLOOR FRAMING MEMBERS PRIOR TO NAILING.
3. MINIMUM PLYWOOD WIDTH IS 24".
4. SEE GENERAL NOTES FOR PLYWOOD THICKNESS & GRADE.

2 — PLYWOOD SHEATHING AT ROOF AND FLOORS REQUIRING SPECIAL BLOCKING AND EDGE NAIL SEE PLAN FOR LOCATION



3 — PLYWOOD NAILING

Michael Helm, AIA Architect & Associates
200 Seventh Avenue, #110 Santa Cruz, California 95062 (831)-476-5886

2A RESUBMITTAL - 9.16.19 MH

REPLACEMENT HOME
MAIER RESIDENCE
APN 027-171-30
100 - 7TH AVE, SANTA CRUZ, CALIFORNIA

FOR PLANNING CONSTRUCTION DETAILS

3.11.19
N.T.S.
MH
1902

15