GENERAL NOTES

1 Intent

The intent of these drawings is to provide a complete and finished job in all respects. Contractor is to make accurate field inspections of all aspects of the job, verify all dimensions and site conditions prior to starting work, and notify the architect of any discrepancies or required information that does not appear in the contract documents. Additional information will be provided by the architect as requested by the contractor in specific areas, but any such provision shall in no way relieve the contractor of his responsibility to provide the building described in the contract documents.

2 Contract Documents

The contract documents consist of the following:
a. "General Conditions of the Contract for Construction" AIA DocumentA201 1997 Edition
b. Drawings listed in the Sheet Index.
c. Specifications, either in separate 8.5" x 11" booklet with headings as listed in the keynotes or as included herein.
d. Structural Calculations
e. Title 24 energy calculations
f. All addenda and modification issued prior to and after execution of the contract.

3 Document Conflicts, Errors and Omissions

These documents are known to contain conflicts, errors and omissions. Professionals knowledgeable of construction and the documentation of proposed work have prepared these documents. These documents have been prepared in conformance with the best standards of practice of this industry. Every effort has been made to create these documents free of error or omission, however no guarantee is made or implied that the documents are free of such errors or omissions. This shall in no way relieve the contractor of his responsibility to provide the building described in the contract documents. It is the owner's and the contractor's responsibility to notify the architect in writing of any perceived errors or omissions in the construction documents prior to commencement of construction.

4 Access

The owner reserves the right to enter upon the site and into the building, and to occupy portions of the building prior to the date of substantial completion, provided same does not interfere with the work under the contract. Exercise of this right shall in no way be deemed to be acceptance by the owner of the work.

5 Changes in the Work

The owner reserves the right, without invalidating the contract, to order extra work or make changes by altering, adding to or deducting from the work, with the contract sum being adjusted accordingly. Any addition, deletion or change in scope of work shall be by written change order only.

6 Separate Contracts

The owner expressly reserves the right to let other contracts and to employ other contractors in connection with this project. In addition, the owner reserves the right to furnish various materials, fixtures and equipment to be installed by the contractor in connection with this project.

7 Code Compliance

All work, construction and materials shall comply with all provisions of the current edition of all Building, Zoning, Mechanical, Plumbing, Electrical, Accessibility and Fire Safety Codes in effect and with all other rules, regulations and ordinances governing the place of the building. Code requirements take precedence over the drawings, and it shall be the responsibility of anyone supplying labor or materials or both to install or perform his work in conformance with the aforementioned codes, and to bring to the attention of the architect any discrepancies or conflicts between the drawings and the provisions of the code prior to construction.

8 Conflicts in Laws

Where any conflict occurs between the requirements of federal, state or local laws, codes ordinances, rules or regulations, the most stringent shall govern.

9 Permits

a. The Owner shall pay for the plan check and building permit fees; contractor shall pay for all other permits and fees.
b. Obtain any necessary permit from the State of California Division of Industrial Safety prior to the issuance of grading permits or for trenches greater than 5 feet in depth into which a person is required to descend.

10 Demolition Permits and Procedures

Contractor shall secure necessary demolition permits prior to the excavation of the work and shall take full responsibility for any and all shoring, cribbing, scaffolding and any and all other temporary supporting devices required for the excavation of this work.

11 Notices

Contractor shall make necessary arrangements with the governing power, phone, cable, sewer, water, storm drain, gas and all other municipal, state, county and utility agencies for on-site service interruption, location of new and existing to be relocated utilities, temporary services, realignments of surface meters, vaults and plates or any aspect of the project requiring similar liaison and coordination. All utility equipment, meters, panels, overhead lines and exposed piping shall be located precisely as shown on the drawings. When not shown, coordinate location with the architect prior to commencing work. No extras will be allowed for relocating incorrectly positioned visible equipment, meters, panels, wiring, piping and the like.

12 Safety

Contractor shall be responsible for initiating, maintaining and supervising all safety and security precaution programs in connection with the work.

13 Existing Conditions

Contractor shall verify all conditions and measurements at the job site. Discrepancies in the drawings or between the drawings and actual field conditions shall be reported to the architect prior to commencing with the work. The architect prior to the execution of the work shall issue corrections or instructions. By submitting a bid for the work the contractor verifies that he and appropriate sub contractors have familiarized themselves with actual site conditions visible from the exterior or interior of the premises, or from accessible attic and under floor areas. Bids shall take into consideration all such conditions and limitation, whether or not the same are specifically shown or mentioned in the contract documents, and bids submitted shall be construed as including sums necessary to complete the work in every part shown, described or reasonably required or implied. No extras will be allowed for rectifying conditions visible at the time of bidding.

14 Verification of Conditions

Prior to installation of any product, contractor shall inspect existing conditions to receive materials to be installed and arrange for correction of defects in the existing workmanship, material or conditions that may adversely affect work to be installed. Installation of materials shall constitute acceptance of existing conditions as being in proper condition to receive the materials to be applied and waiver of claim that existing conditions are defective as pertains to warrantee requirements.

15 Temporary Facilities

Contractor shall provide and pay for temporary telephone, sanitary, water, fencing, security and other services as required to complete the work for the duration of the project.

16 Materials and Workmanship

GENERAL NOTES

All materials and equipment furnished under this contract shall be new and free from faults and defects. Engage fully licensed and insured mechanics and specialists in their trade for first class workmanship throughout all visible areas of the project.

17 Quality Control and Inspections

a. Materials to be furnished under the contract are subject to test and inspection for compliance with contract documents.
b. Tests shall be performed under the supervision of California licensed professional engineer(s).
c. Contractor shall schedule, initiate and coordinate tests and inspections required by the contract documents and public authorities having jurisdiction over the work.
d. Costs of testing: Contractor shall arrange and pay for materials qualifications and conformance tests, concrete and masonry mix designs and other tests and inspections to be performed at the jobsite, unless otherwise specified. Test samples shall be provided to the owner at no cost.
e. Compliance: The owner may request that materials be tested. If materials are found to be in compliance with the contract documents then the owner will pay for the tests, if the materials are not found in compliance, then the costs of tests shall be paid by the contractor or deducted from payments due to him. The contractor shall reimburse the Owner all or any part, as the owner may deem proper, of the test and inspections costs incurred by the Owner due to the following:

1. Retesting costs caused by failure of materials to pass initial tests.
2. Covering of work before the required inspections or tests are performed.
3. Additional inspections required for Contractor's correction of defective work.

18 Submittals

Shop drawings, samples, catalogue cuts, project data, performance charts, instruction manuals, brochures and other information shall be submitted to the architect and / or owner when requested. No portion of such work or such materials shall be commenced or ordered until the architect and owner have approved the submittal. Prior to submission to the architect, the contractor shall check all shop drawings and other such data for quantity, size and dimensions. Architect will answer questions raised and will make determinations regarding quality of material and equipment, design and arrangement decisions and color selections, but will not be responsible for quantity, size or dimensional errors. Submit three copies of submittals requested, one to be retained by the architect.

19 Substitutions

No substitutions shall be made without the Architect's and Owner's written authorization. Any request or substitution shall be made in advance to avoid any delay to the project schedule. In making request for a substitution, the contractor acknowledges that he has reviewed the requested substitution and has determined and guarantees that the substituted item shall provide for equivalent performance as the original specified item. Contractor shall assume all responsibility for costs related to installation of substituted items, and shall be responsible for the coordination of the substituted item with all other aspects of the project that they may impact including costs of adjustments required in other work.

20 Guarantee

The contractor shall guarantee all aspects of his work against defects in material and workmanship for a period of one year from the date of completion of the project. This is in addition to any other equipment and material warranties and guarantees in effect.

21 Purchasing Schedule

All materials, equipment or trades requiring lead-time or ordering shall be scheduled by contractor to allow for the timely execution of the work. NO changes or extras will be granted for material ordered with insufficient time for their proper construction and implementation. Contractor shall notify the architect within 7 days of signing the contract for construction of any problems in obtaining the materials and finishes specified.

22 Construction Schedule

Contractor shall submit to the architect and owner within three weeks of signing the contract for construction a week-by-week schedule for the project as it is outlined at that time. Substantial revisions in the schedule shall be reported to the architect during the course of construction.

23 Responsibility for Damage

Contractor shall be responsible for all damages done to existing work during construction, and shall repair and refinish such damages to former condition at no expense to the owner. Contractor shall protect work and adjacent non-work areas from weather, equipment, dust and debris, and shall be responsible for maintaining the premises in a clean and safe condition at all times.

24 Superintendent

Contractor shall employ a competent superintendent in attendance at the project site at all times during the progress of the work.

25 Dimensions, Notes and Conflicts in the Drawings

a. Unless noted otherwise in the drawings, all dimensions are to the outside face of stud of the dimensioned assembly. It is the Contractor's responsibility to allow for the finish materials when positioning wall, floor and roof framing as required to yield the visible lines and planes described in the drawings.
b. In the case of conflicting information within the contract documents:

1. Larger scale drawings shall have precedence over smaller scale drawings.
2. Notes in the specifications shall have precedence over smaller scale drawings.
3. Notes in the drawings shall have precedence over notes in the specifications.
4. Dimensions in the drawings shall have precedence over scaled dimensions.

26 Soils Report

27 Product Handling, Storage and Protection

a. Deliver material to the project site or place of fabrication in 'manufacturer's original containers' with seals unbroken and labels intact until incorporated into the work. Materials shall clearly bear the manufacturer's name and trademark and UL or FM label when applicable.
b. Protect materials from damage when moving and storing on site or in the building. Provide durable protection as required to protect materials from damage from weather or damage from contact.
c. Store materials and equipment in strict accordance with manufacturer's written instructions.
d. Remove damaged or otherwise unsuitable material and equipment promptly from the site and replace with satisfactory material at no additional cost to the owner.

28 Installation: General Requirements

a. Use experienced installers and tradesmen.
b. Install materials and systems in accordance with their manufacturer's printed instructions and approved submittals in proper relation with adjacent construction and with uniform appearance.
c. Install assemblies complete with all hardware, anchors, inserts, supports and accessories. Attach securely to supports. Test and adjust operation.
d. Clean and protect work from damage.

29 Cleaning

Keep work and adjacent areas free from accumulations of waste, debris and rubbish caused by construction operations. Do not allow opened containers of combustible materials to remain in the building overnight. At completion of work, remove all waste materials, rubbish, tools, equipment, machinery and surplus materials and clean all exposed surfaces. Leave project clean and ready for occupancy. Repair, patch and touch-up marred surfaces to specified finish as original.

ABBREVIATIONS

ABV	Above
AFF	Above Finished Floor
ALUM	Aluminum
ANOD	Anodized
AS	Acoustical Sealant
B / O	Bottom of
BLK	Blocking
BLW	Below
BYND	Beyond
C / C	Center to Center
CJ	Control Joint
CL	Center Line
CLNG	Ceiling
CLAD	Cladding
CLR	Clear
COL	Column
CONC	Concrete
CONST	Construction
CONT	Continuous
CONTR	Contractor
CORR	Corridor
CPT	Carpet
CT	Ceramic Tile
DIAM	Diameter
Ø	Diameter
DIM	Dimension
DN	Down
DTL	Detail
DWG	Drawing
(E)	Existing
EA	Each
EQ	Equal
ETR	Existing To Remain
F / O	Full Overlay
FLR	Floor
GA	Gauge
GALV	Galvanized
GC	General Contractor
GL	Glass
GR	Granite
GWB	Gypsum Wall Board
HRZNTL	Horizontal
HR	Hour
HT	Height
INFO	Information
INSUL	Insulation
INT	Interior
LAM	Laminated
LAV	Lavatory
LP	Low Point
MAX	Maximum
MECH	Mechanical
MFR	Manufacturer
MIN	Minimum
MISC	Miscellaneous
MP	Metal Panel
MTL	Metal
(N)	New
NIC	Not in Contract
NOM	Nominal
NTS	Not to Scale
OC	On Center
OPNG	Opening
OTB	Opent to Below / Beyond
PLAM	Plastic Laminate
PLBG	Plumbing
PLWD	Plywood
PREFAB	Prefabricated
PTD	Painted
RD	Roof Drain
REINF	Reinforced
REQD	Required
REV	Revision
RO	Rough Opening
SIM	Similar
SPEC	Specification
SQ	Square
SS	Stainless Steel
STD	Standard
STL	Steel
STR	Stair
STRUC	Structurel
TBR	To be Removed / To be Replaced
T / O	Top of
TYP	Typical
U.N.O	Unless Noted Otherwise
VIF	Verify in Field
VRTCL	Vertical
WD	Wood
WPR	Waterproofing
WVNR	Wood Veneer

LEGAL INFORMATION

1	ASSESSOR PARCEL NUMBER	03612222
2	MAP BOOK	036
3	TAX CODE AREA	3-108
4	SECT/TOWN/RANGE	T11S-R1W,SEC15
5	EXISTING USE	SINGLE FAMILY RESIDENCE
6	PROPOSED USE	SINGLE FAMILY RESIDENCE
7	OCCUPANCY	R-3
8	YEAR BUILT	1910
9	EFFECTIVE YEAR BUILT	2001
10	NUMBER OF STORIES	EX 1 STORY WITH ATTIC ROOM. NEW 2 STORY
11	CONSTRUCTION	V-B
12	LOT AREA	4486SF
13	F.A.R.	52%
14	ALLOWED R.F.A.	2,333SF
15	EXISTING R.F.A.	1,398SF
16	PROPOSED R.F.A.	2,330SF
17	EXISTING CONDITIONED F.A.	1065SF
18	PROPOSED CONDITIONED F.A.	1997SF
19	SPRINKLERED	YES
20	SCOPE OF WORK	162SF 1ST FLOOR AND 770SF 2ND FLOOR ADDITION AND REMODEL. NEW HVAC

DRAWING INDEX

G100	PROJECT INFORMATION / GENERAL NOTES
A100	EX PLANS
A101	SITE/ROOF PLAN
A102	DRAINAGE PLAN
A103	N FLOOR PLAN
A200	EX ELEVATIONS
A201	N ELEVATIONS
A300	SECTIONS
A301	DETAILS
A700	CEC
A700.1	CEC
A700.2	CEC
A702	MANDATORY MEASURES
A800	PRODUCT SPECS
L100	LANDSCAPE PLAN
S1	STRUCTURAL NOTES AND TYPICAL DETAILS
S2	LOWER FLOOR FRAMING AND FOUNDATION PLAN
S3	SECOND FLOOR FRAMING PLAN
S4	UPPER ROOF FRAMING PLAN
S5	FOUNDATION DETAILS
S6	CEILING, SECOND FLOOR, AND ROOF FRAMING DETAILS

APPLICABLE CODES

ALL WORK UNDER THIS CONTRACT SHALL COMPLY WITH THE PROVISIONS OF THE SPECIFICATIONS AND DRAWINGS, AND SHALL SATISFY ALL APPLICABLE CODES, ORDINANCES AND REGULATIONS OF ALL GOVERNING BODIES

CODES

2019 CAL BUILDING CODE
2019 CAL PLUMBING CODE
2019 CAL MECHANICAL CODE
2019 CAL ELECTRIC CODE
2019 CAL RES CODE
2019 CAL ENERGY EFFICIENCY STANDARDS CODE & LOCAL AMMENDMENTS

THESE PLANS ARE IN COMPLIANCE WITH CALIFORNIA BUILDING AND FIRE CODES (2019) AND CENTRAL FIRE PROTECTION DISTRICT AMENDMENTS.

SMOKE DETECTOR

SMOKE/CO2 DETECTOR

EXHAUST FAN MIN. 50CFM ENERGY STAR CERTIFIED

DOOR TAG

WINDOW TAG

WALL TAG

ELEVATION TARGET

SECTION TARGET

FLOOR ELEVATION

AREA OF DETAIL

PROPERTY LINE

OPEN TO BELOW

ANNOTATION SYMBOLS
N.T.S.

1 AERIAL VIEW
3/4" = 1'-0"

gigante AG

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F 323 276 0988

CLIENT

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OWNER

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ENGINEER

STREETER GROUP, INC.
2571 Main Street, Suite C,
Soquel, CA 95073 (831) 477-1781

SURVEYOR

N/A

GENERAL CONTRACTOR

LIC#

LEGEND

(E) TO REMAIN

(E) DEMO / TO BE REMOVED (TBR)

(N) CONSTRUCTION

(E) NOT IN CONTRACT (NIC)

NO.	ISSUE	DATE

PROJECT

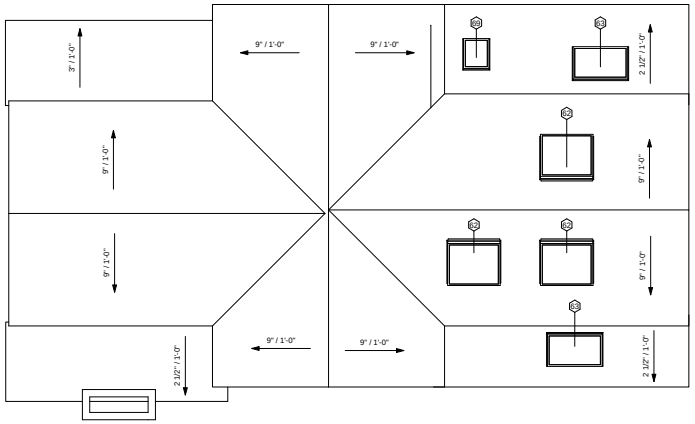
CENTRAL
216 CENTRAL AVE. CAPITOLA, CA 95010

SHEET TITLE

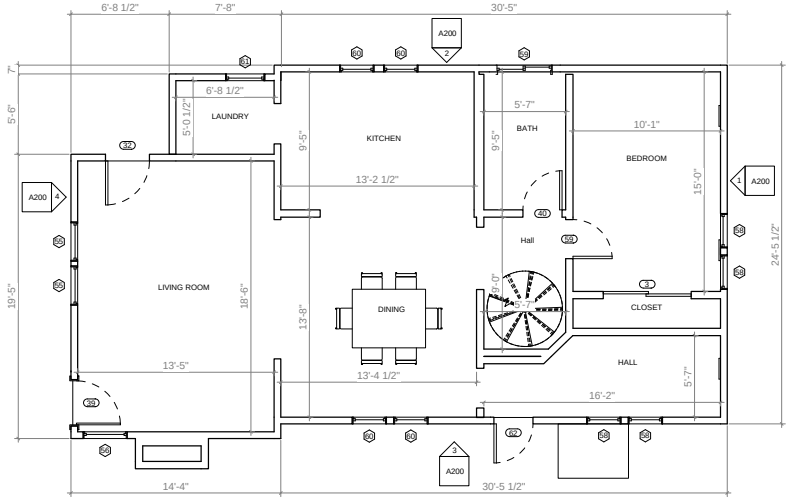
PROJECT INFORMATION / GENERAL NOTES

SHEET NUMBER

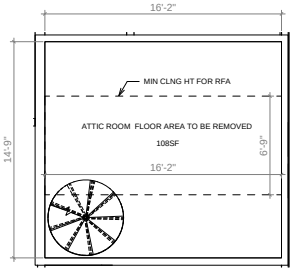
G100



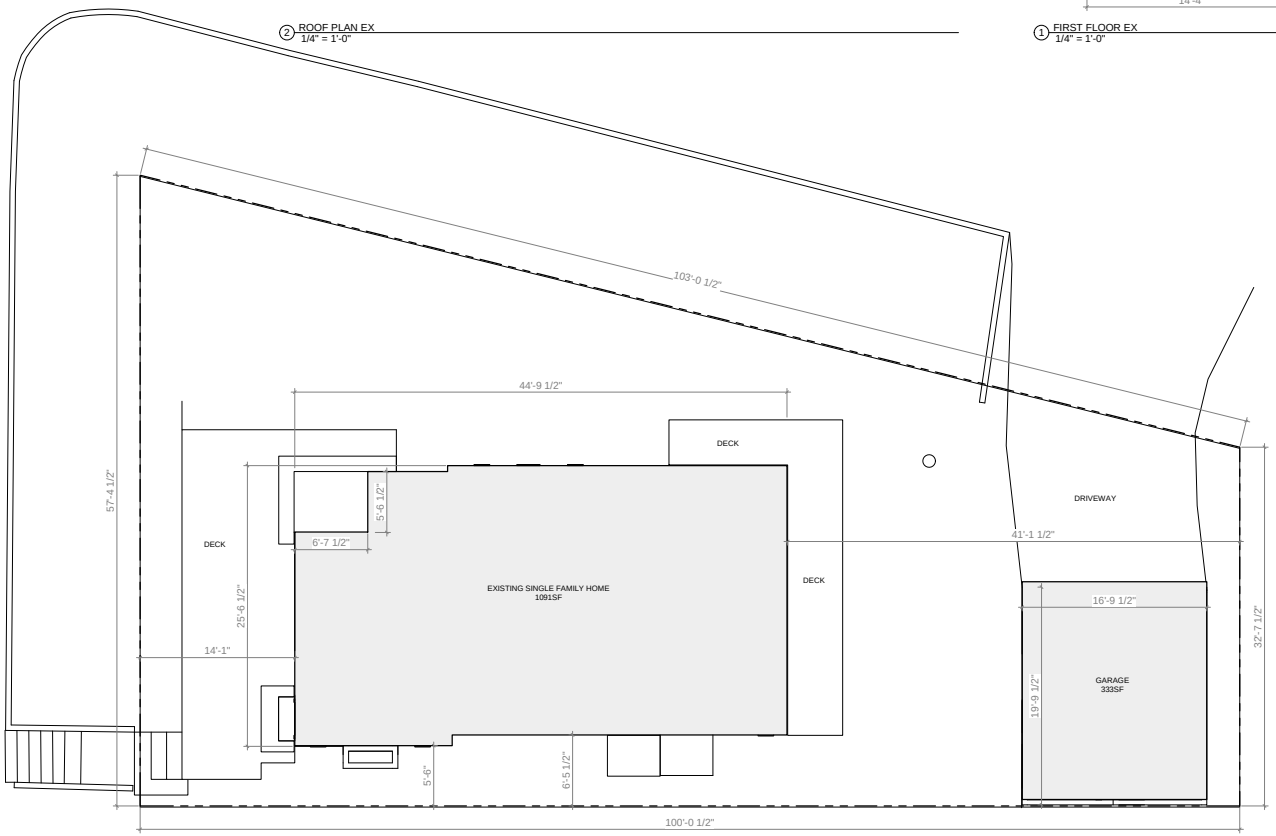
2 ROOF PLAN EX
1/4" = 1'-0"



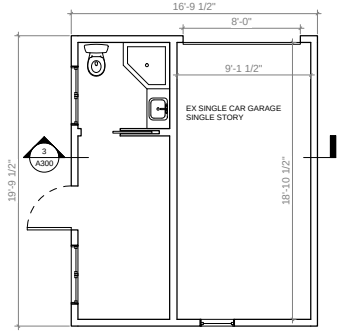
1 FIRST FLOOR EX
1/4" = 1'-0"



3 SECOND FLOOR EX
1/4" = 1'-0"



4 SITE PLAN EX
3/16" = 1'-0"



5 GARAGE FLOOR
1/4" = 1'-0"

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ENGINEER

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SURVEYOR

N/A

GENERAL CONTRACTOR

LIC#

LEGEND

- (E) TO REMAIN
- (E) DEMO / TO BE REMOVED (TBR)
- (N) CONSTRUCTION
- (E) NOT IN CONTRACT (NIC)

NO.	ISSUE	DATE

PROJECT

CENTRAL
216 CENTRAL AVE. CAPITOLA, CA 95010

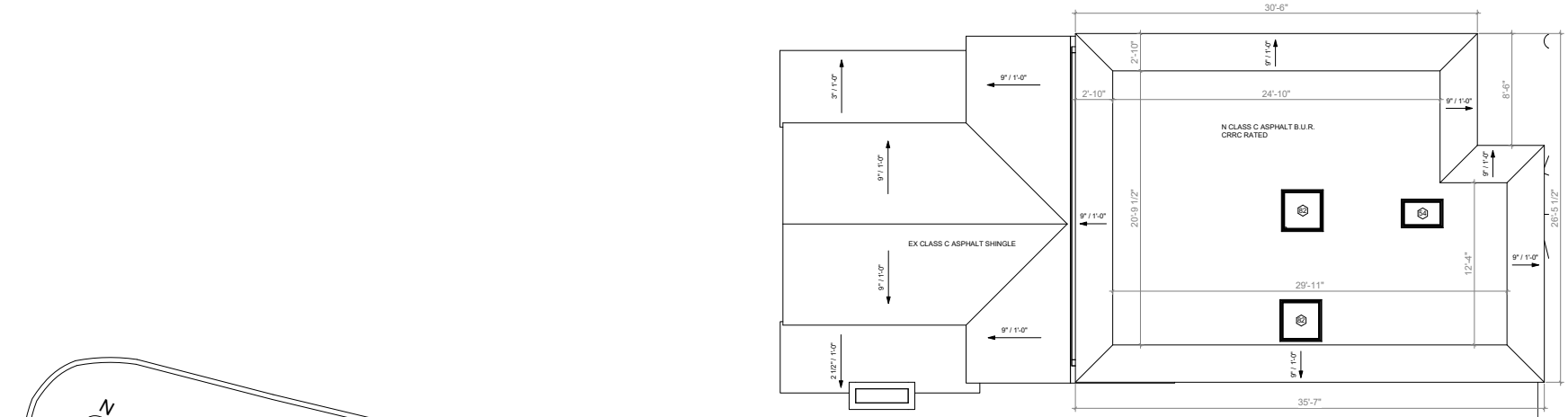
SHEET TITLE

EX PLANS

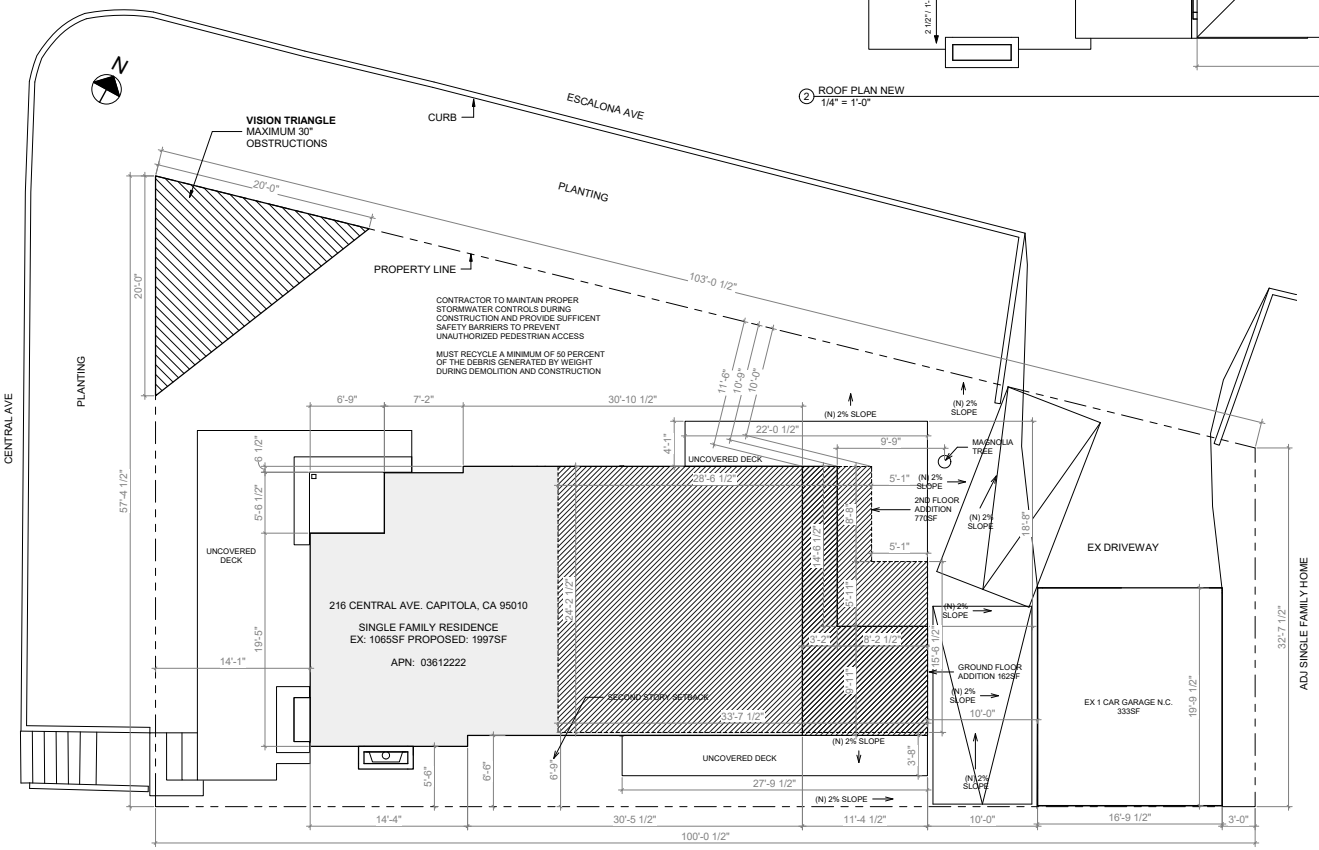
SHEET NUMBER

A100

2/26/2021 4:01:38 PM



2 ROOF PLAN NEW
1/4" = 1'-0"



1 SITE PLAN NEW
3/16" = 1'-0"

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SURVEYOR

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GENERAL CONTRACTOR

LIC#

LEGEND

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- (N) CONSTRUCTION
- (E) NOT IN CONTRACT (NIC)

NO.	ISSUE	DATE

PROJECT

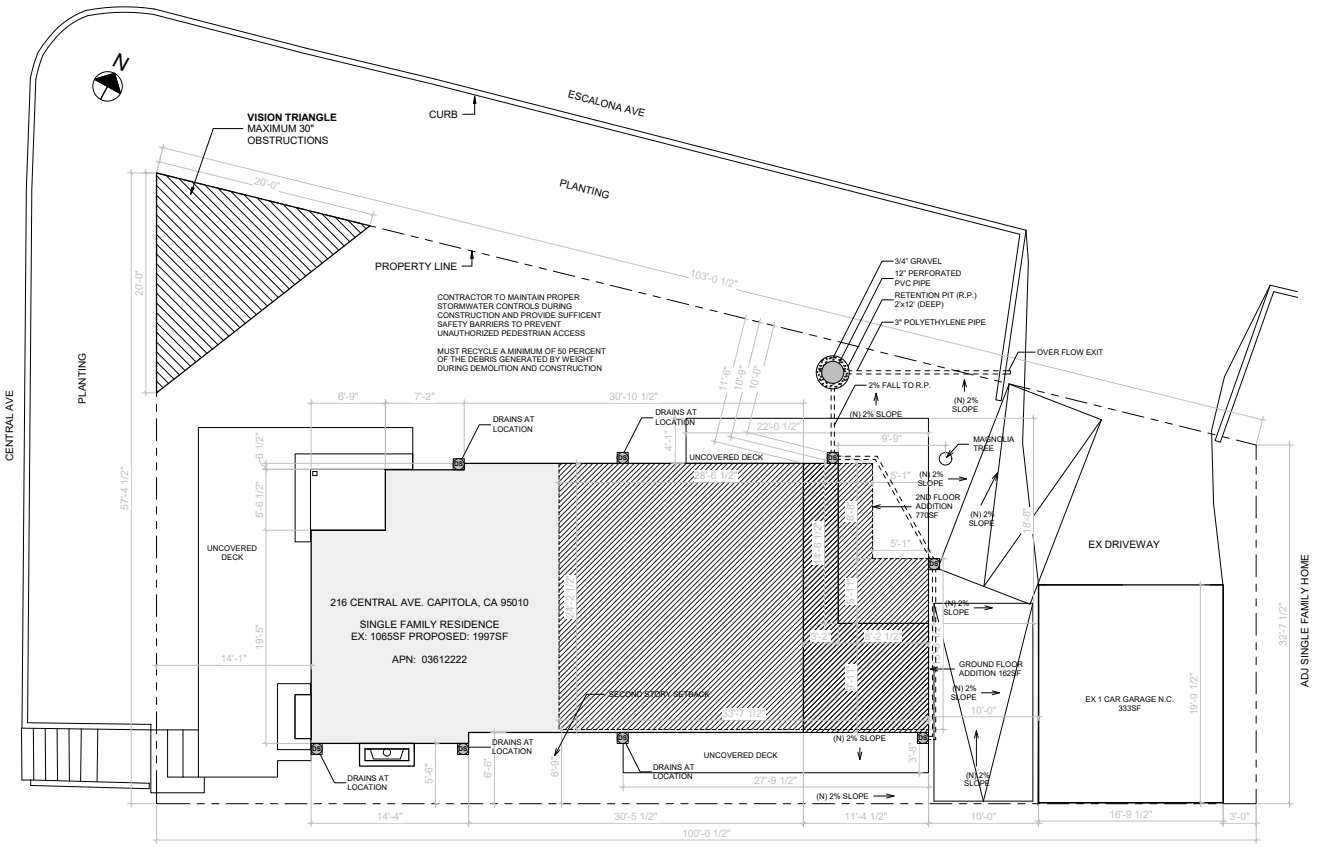
CENTRAL
216 CENTRAL AVE. CAPITOLA, CA 95010

SHEET TITLE

SITE/ROOF PLAN

SHEET NUMBER

A101



1 DRAINAGE PLAN
3/16" = 1'-0"

gigante AG

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SURVEYOR

N/A

GENERAL CONTRACTOR

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LEGEND

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- (N) CONSTRUCTION
- (E) NOT IN CONTRACT (NIC)

NO.	ISSUE	DATE

PROJECT

CENTRAL
216 CENTRAL AVE. CAPITOLA, CA 95010

SHEET TITLE

DRAINAGE PLAN

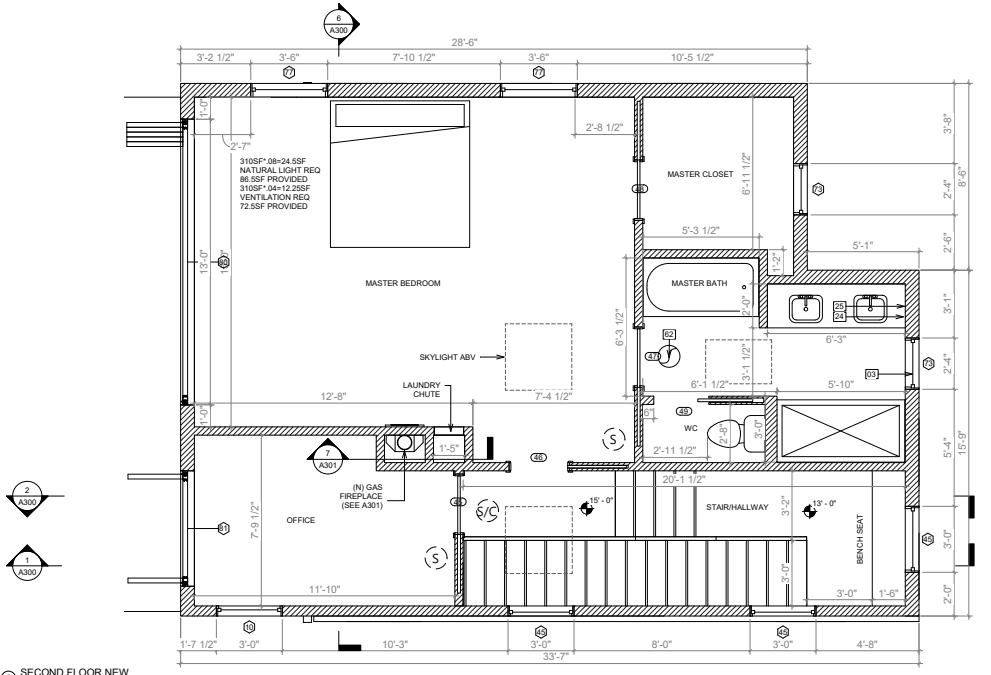
SHEET NUMBER

A102

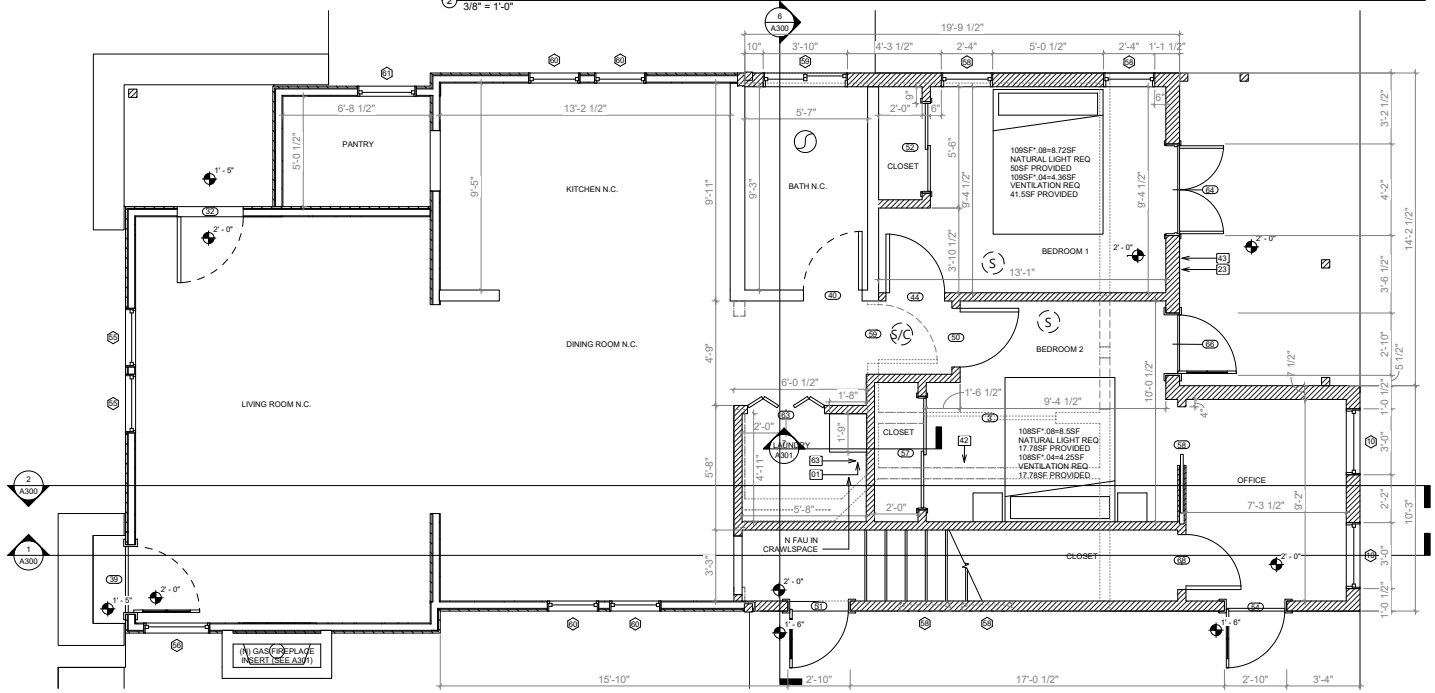
NEW WINDOW SCHEDULE									
Type Mark	Count	Operation	Rough Opening Width	Rough Opening Height	Head Height	Sill Height	Phase Created	Phase Demolished	Comments
10	1	DBL HUNG	3' - 0"	4' - 0"	6' - 10"	2' - 10"	New Construction	None	.25 SHGC .32 U-VALUE
10	2	DBL HUNG	3' - 0"	4' - 0"	7' - 0"	3' - 0"	New Construction	None	.25 SHGC .32 U-VALUE
45	1	DBL HUNG	3' - 0"	4' - 6"	5' - 0"	0' - 6"	New Construction	None	.25 SHGC .32 U-VALUE
45	2	DBL HUNG	3' - 0"	4' - 6"	7' - 6"	3' - 0"	New Construction	None	.25 SHGC .32 U-VALUE
54	1	SKYLIGHT	2' - 0"	3' - 0"			New Construction	None	.25 SHGC .32 U-VALUE
58	4	DBL HUNG	2' - 4"	3' - 8"	6' - 8"	3' - 0"	Existing	New Construction	
58	2	DBL HUNG	2' - 4"	3' - 8"	7' - 8"	4' - 0"	New Construction	None	.25 SHGC .32 U-VALUE
62	3	SKYLIGHT	3' - 6"	3' - 6"			Existing	New Construction	
63	2	SKYLIGHT	3' - 8"	2' - 2"			Existing	New Construction	
69	1	SKYLIGHT	1' - 8"	2' - 0"			Existing	New Construction	
73	2	DBL HUNG	2' - 4"	3' - 4"	6' - 8"	3' - 4"	New Construction	None	.25 SHGC .32 U-VALUE
77	2	DBL HUNG	3' - 6"	4' - 0"	6' - 10"	2' - 10"	New Construction	None	.25 SHGC .32 U-VALUE
80	1	FOLDING WALL	13' - 0"	4' - 0"	6' - 10"	2' - 10"	New Construction	None	.25 SHGC .32 U-VALUE
81	1	FOLDING WALL	5' - 3"	4' - 0"	6' - 10"	2' - 10"	New Construction	None	.25 SHGC .32 U-VALUE
82	2	SKYLIGHT	3' - 0"	3' - 0"			New Construction	None	.25 SHGC .32 U-VALUE

NEW DOOR SCHEDULE					
Door Number	Operation	Height	Width	Phase Created	Phase Demolished
3	CLOSET SLIDING	6' - 8"	6' - 0"	Existing	New Construction
44	INT SWING	6' - 8"	2' - 8"	New Construction	None
45	INT POCKET	6' - 8"	2' - 8"	New Construction	None
46	INT POCKET	6' - 8"	2' - 8"	New Construction	None
47	INT POCKET	6' - 8"	2' - 8"	New Construction	None
48	INT POCKET	6' - 8"	2' - 8"	New Construction	None
49	INT POCKET	6' - 8"	2' - 6"	New Construction	None
50	INT SWING	6' - 8"	2' - 8"	New Construction	None
51	EXT SWING GLASS	6' - 8"	2' - 8"	New Construction	None
52	CLOSET SLIDING	6' - 8"	4' - 0"	New Construction	None
54	EXT SWING GLASS	6' - 8"	2' - 8"	New Construction	None
57	CLOSET SLIDING	6' - 8"	5' - 0"	New Construction	None
58	INT POCKET	6' - 8"	2' - 8"	New Construction	None
59	INT SWING	6' - 8"	2' - 8"	Existing	New Construction
62	EXT SWING GLASS	6' - 8"	2' - 8"	Existing	New Construction
63	INT BIFOLD 4 PANEL	6' - 8"	3' - 6"	New Construction	None
64	EXT DBL SWING	6' - 8"	4' - 0"	New Construction	None
66	EXT SWING GLASS	6' - 8"	2' - 8"	New Construction	None
68		6' - 8"	2' - 6"	New Construction	None

KEYNOTE LEGEND	
Key Value	Keynote Text
01	18" x 24" Under floor access and 30"X30" attic access above
03	Glazing in bathrooms shall be tempered
23	Where branch-circuit wiring is modified, replaced or extended in areas specified in CEC 210.12(A), the branch circuit shall be protected by either a listed combination-type AFCI located at the origin of the branch circuit or a listed outlet branch-circuit type AFCI located at the first receptacle of the existing branch circuit.
24	All non-locking type 125-volt, 15 and 20 ampere receptacles in a dwelling unit shall be listed tamperresistant receptacles. (Exceptions: (1) receptacles more than 5'-6" above the floor, (2) receptacles part of a luminaire or appliance, (3) a single receptacle or a duplex receptacle for two appliances that are not easily moved and located within dedicated space and are chord-and-plug connected as per CEC 400.7, and (4) non-grounding receptacles used for replacements as permitted in CEC 406.4 (D) (2) (a).
25	GFCI Power in wet locations
42	Permanently installed luminaires in rooms other than kitchens, bathrooms, garages, laundry rooms, and utility rooms are to be high efficacy, or controlled by a dimmer switch, or controlled by an occupancy sensor that does not turn on automatically or have an always-on option.
43	Exterior lighting is to be high efficacy or must be controlled by a motion sensor. Also, the lighting must by one of the following methods: i) Photocontrol not having an override or bypass switch that disables the photocontrol, or ii) Astronomical time clock not having an override or bypass switch that disables the astronomical time clock, and which is programmed to automatically turn the outdoor lighting OFF during daylight hours; or iii) Energy management control system which meets all of the following requirements. At a minimum provides the functionality of an astronomical time clock in accordance with Section 110.9 of the standards; meets the Installation Certification requirements in Section 130.4 of the standards; meets the requirements for an EMCS in Section 130.5 of the standards; does not have an override or bypass switch that allows the luminaire to be always ON; and, is programmed to automatically turn the outdoor lighting OFF during daylight hours.
62	i. Fans shall be ENERGY STAR compliant and be ducted to terminate to the outside of the building. ii. Fans, not functioning as a component of a whole house ventilation system, must be controlled by a humidity control.
63	Heater shall be capable of maintaining a minimum room temperature of 68°F at a point 3 feet above the floor and 2 feet from exterior walls in all habitable rooms at the design temperature. (R303.9)



2 SECOND FLOOR NEW
3/8" = 1'-0"



1 FIRST FLOOR NEW
3/8" = 1'-0"

gigante AG

R. SCOTT MITCHELL

176B N SAN FERNANDO ROAD
LOS ANGELES, CA 90031

T 323 843 2201
F 323 276 0988

CLIENT

LYNN JACKSON

OWNER

LYNN JACKSON
216 CENTRAL AVE. CAPITOLA, CA 95010

ENGINEER

STREETER GROUP, INC.
2571 Main Street, Suite C,
Soquel, CA 95073 (831) 477-1781

SURVEYOR

N/A

GENERAL CONTRACTOR

LIC#

LEGEND

- (E) TO REMAIN
- (E) DEMO / TO BE REMOVED (TBR)
- (N) CONSTRUCTION
- (E) NOT IN CONTRACT (NIC)

NO.	ISSUE	DATE

PROJECT

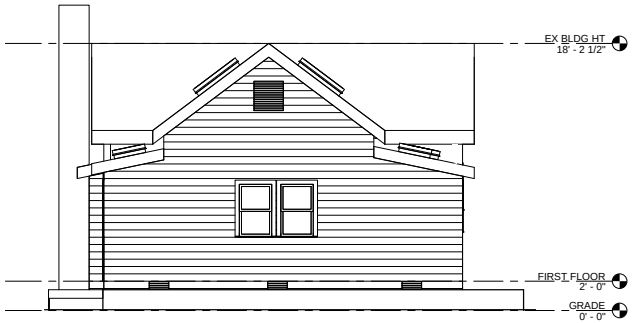
CENTRAL
216 CENTRAL AVE. CAPITOLA, CA 95010

SHEET TITLE

N FLOOR PLAN

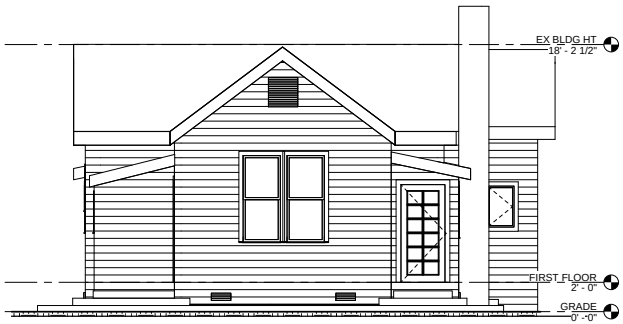
SHEET NUMBER

A103

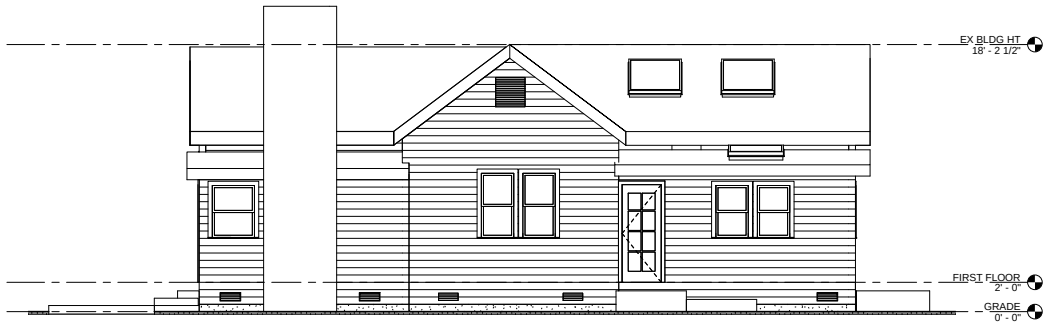


1 EAST EL EX
1/4" = 1'-0"

2 NORTH EL EX
1/4" = 1'-0"



4 WEST EL EX
1/4" = 1'-0"



3 SOUTH EL EX
1/4" = 1'-0"

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(N) CONSTRUCTION

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NO.	ISSUE	DATE

PROJECT

CENTRAL
216 CENTRAL AVE. CAPITOLA, CA 95010

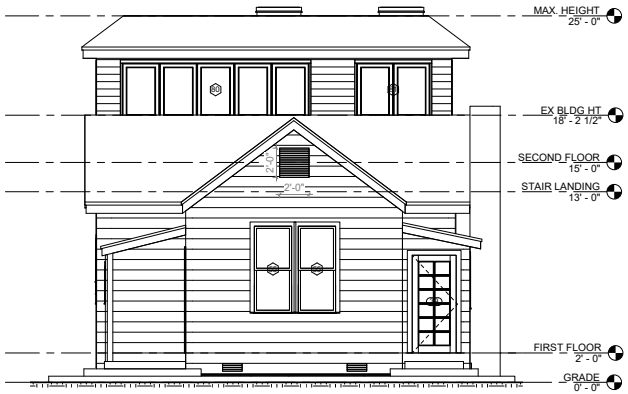
SHEET TITLE

EX ELEVATIONS

SHEET NUMBER

A200

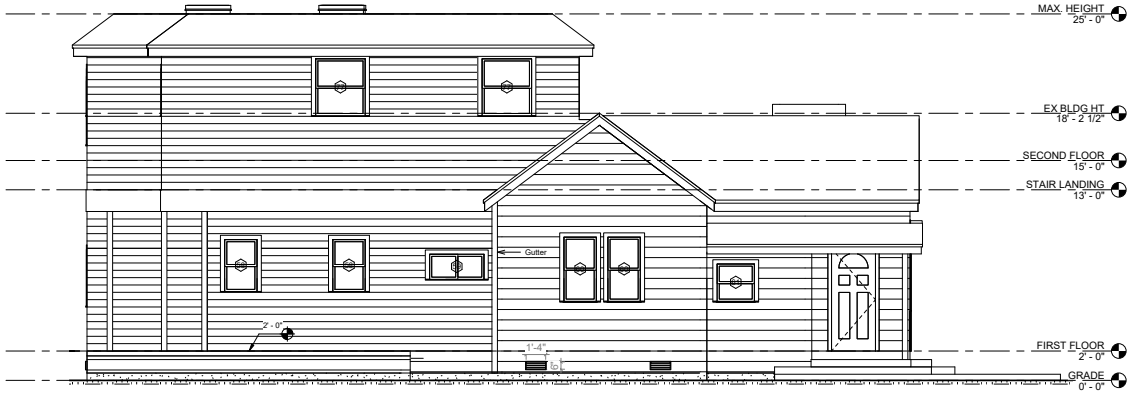
CRAWLSPACE VENTILATION
1213SF / 150 = 8SF
MIN QTY 12, .667SF VENTS = 8SF



1 WEST EL
1/4" = 1'-0"

2 SOUTH EL
1/4" = 1'-0"

3 EAST EL
1/4" = 1'-0"



4 NORTH EL
1/4" = 1'-0"

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SURVEYOR

N/A

GENERAL CONTRACTOR

LIC#

LEGEND

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(E) DEMO / TO BE REMOVED (TBR)

(N) CONSTRUCTION

(E) NOT IN CONTRACT (NIC)

NO.	ISSUE	DATE

PROJECT

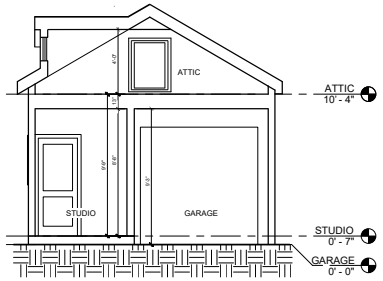
CENTRAL
216 CENTRAL AVE. CAPITOLA, CA 95010

SHEET TITLE

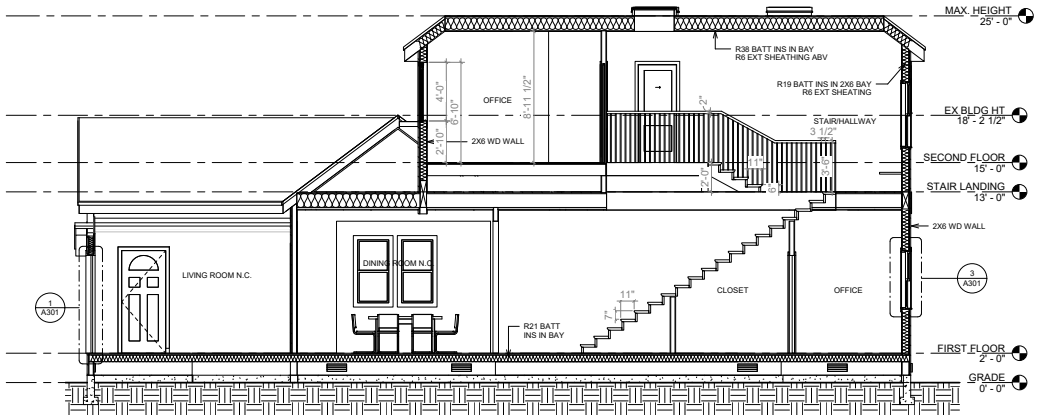
N ELEVATIONS

SHEET NUMBER

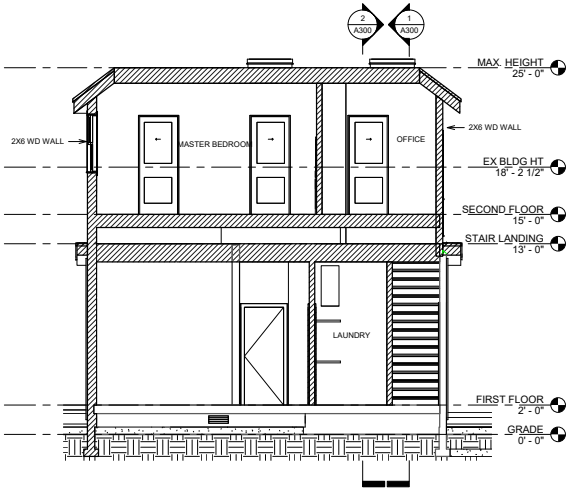
A201



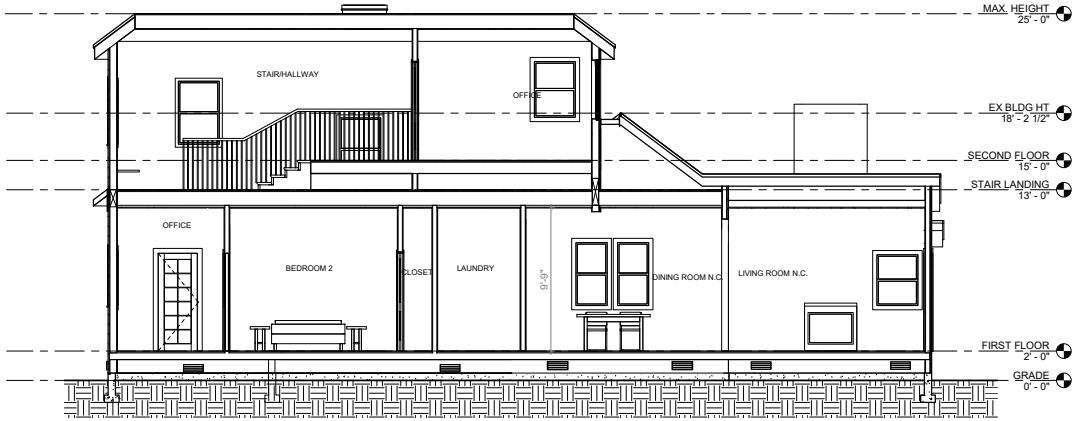
3 GARAGE SECTION
1/4" = 1'-0"



1 LONG SECTION FACING NORTH
1/4" = 1'-0"



6 SHORT SECTION FACING EAST
1/4" = 1'-0"



2 LONG SECTION FACING SOUTH
1/4" = 1'-0"

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SURVEYOR
N/A

GENERAL CONTRACTOR
LIC#

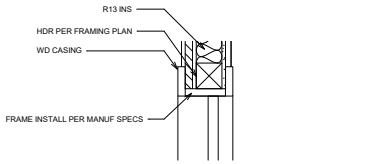
LEGEND
(E) TO REMAIN
(E) DEMO / TO BE REMOVED (TBR)
(N) CONSTRUCTION
(E) NOT IN CONTRACT (NIC)

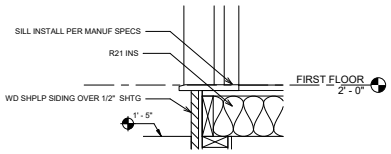
NO.	ISSUE	DATE

PROJECT
CENTRAL
216 CENTRAL AVE. CAPITOLA, CA 95010

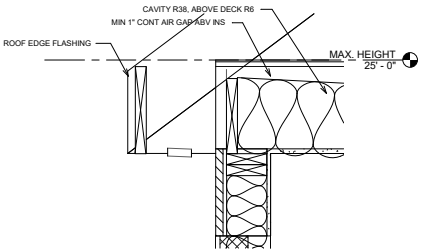
SHEET TITLE
SECTIONS

SHEET NUMBER
A300

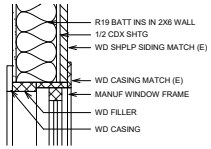


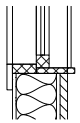


1 DOOR HEAD/SILL DETAIL
1 1/2" = 1'-0"

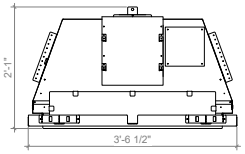


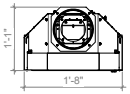
2 ROOF VENTILATION DETAIL
1 1/2" = 1'-0"

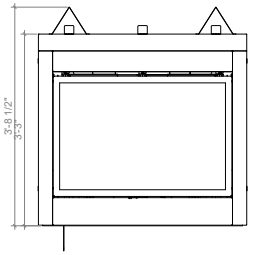


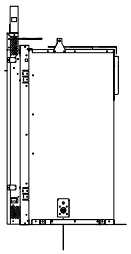


3 WINDOW HEAD/SILL DETAIL
1 1/2" = 1'-0"

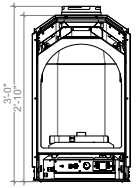


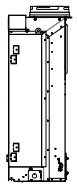






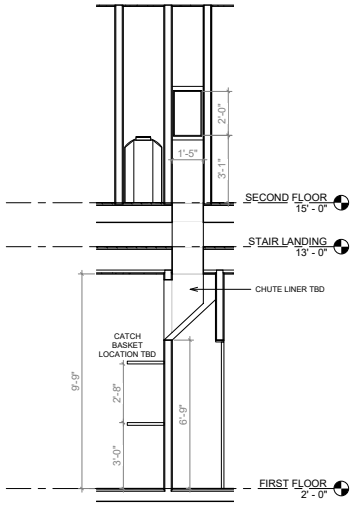
Model 564 Space Saver Clean Face GSR2 (SEE A800)



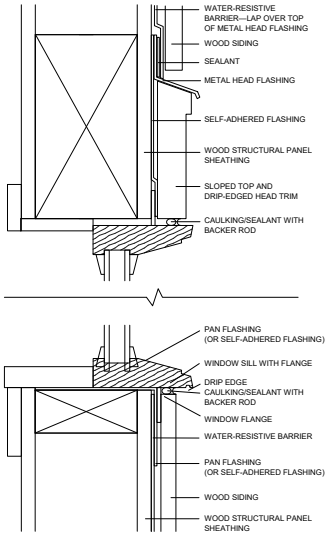


Model Bed and Breakfast GSR2 (SEE A800)

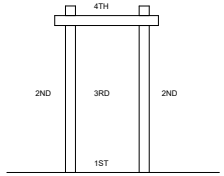
4 FIREPLACE DETAILS
1" = 1'-0"



7 LAUNDRY CHUTE LOCATION
3/8" = 1'-0"



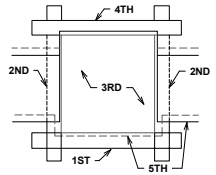
5 WINDOW FLASHING (TYP)
N.T.S.



S.A.S.M. = SELF ADHESIVE SHEET MEMBRANE

NOTE:
PROVIDE SOLID BACKING TO SUPPORT S.A.S.M.
STAPLE PERIMETER OF S.A.S.M. TO FRAMING
MEMBERS 1" FROM OUTSIDE EDGE TO
PREVENT WIND DAMAGE.

TYPICAL DOOR FLASHING



MATERIALS SPECIFIED:

S.A.S.M. = SELF ADHESIVE SHEET MEMBRANE
-"SUPER JUMBO TEX" 60 MINUTE PAPER
MANUFACTURED BY FORTIFIBER CORPORATION
PORTLAND, OREGON
-SHEET METAL SHALL BE INSTALLED PER
SMACNA RECOMMENDED SPECIFICATIONS
-PROVIDE SOLID BACKING TO SUPPORT S.A.S.M.
-STAPLE PERIMETER OF S.A.S.M. TO FRAMING
MEMBERS 1" FROM OUTSIDE EDGE TO PREVENT
WIND DAMAGE.

TYPICAL WINDOW FLASHING

6 WINDOW/DOOR FLASHING (TYP)
N.T.S.

gigante AG

R. SCOTT MITCHELL

176B N SAN FERNANDO ROAD
LOS ANGELES, CA 90031

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CLIENT

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95010

ENGINEER

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2571 Main Street, Suite C,
Soquel, CA 95073 (831) 477-1781

SURVEYOR

N/A

GENERAL CONTRACTOR

LIC#

LEGEND

(E) TO REMAIN

(E) DEMO / TO BE REMOVED (TBR)

(N) CONSTRUCTION

(E) NOT IN CONTRACT (NIC)

NO.	ISSUE	DATE

PROJECT

CENTRAL
216 CENTRAL AVE. CAPITOLA, CA
95010

SHEET TITLE

DETAILS

SHEET NUMBER

A301

CERTIFICATE OF COMPLIANCE **CF1R-PRF-01E**

Project Name: CENTRAL AVE **Calculation Date/Time:** 2020-03-05T21:21:31-08:00 **(Page 1 of 14)**

Calculation Description: **Input File Name:** CENTRAL AVE_03.05.20.ribd19

GENERAL INFORMATION					
01	Project Name	CENTRAL AVE			
02	Run Title				
03	Project Location	216 CENTRAL AVE			
04	City	CAPITOLA, CA	05	Standards Version	2019
06	Zip code	95010	07	Software Version	CBECC-Res 2019.1.2
08	Climate Zone	3	09	Front Orientation (deg/ Cardinal)	270
10	Building Type	Single family	11	Number of Dwelling Units	1
12	Project Scope	Addition/Alteration	13	Number of Bedrooms	3
14	Addition Cond. Floor Area (ft^2)	1009	15	Number of Stories	1
16	Existing Cond. Floor Area (ft^2)	942	17	Fenestration Average U-factor	0.32
18	Total Cond. Floor Area (ft^2)	1951	19	Glazing Percentage (%)	23.18%
20	ADU Bedroom Count	n/a	21	ADU Conditioned Floor Area	n/a
22	Is Natural Gas Available?	Yes			

COMPLIANCE RESULTS	
01	Building Complies with Computer Performance
02	This building incorporates features that require field testing and/or verification by a certified HERS rater under the supervision of a CEC-approved HERS provider.
03	This building incorporates one or more Special Features shown below

ENERGY USE SUMMARY

Energy Use (kTDV/ft^2-yr)	Standard Design	Proposed Design	Compliance Margin	Percent Improvement
Space Heating	21.1	20.34	0.76	3.6
Space Cooling	0.98	1.6	-0.62	-63.3
IAQ Ventilation	2.65	2.65	0	0
Water Heating	13.4	13.53	-0.13	-1
Self Utilization Credit	n/a	0	0	n/a
Compliance Energy Total	**38.13**	**38.12**	**0.01**	**0**

Registration Number: 420-P010027159A-000-000-0000000-0000 Registration Date/Time: 03/05/2020 21:30 HERS Provider: Cal Energy

CA Building Energy Efficiency Standards - 2019 Residential Compliance Report Version: 2019.1.108 Schema Version: rev 20200101 Report Generated: 2020-03-05 21:26:05

CERTIFICATE OF COMPLIANCE **CF1R-PRF-01E**

Project Name: CENTRAL AVE **Calculation Date/Time:** 2020-03-05T21:21:31-08:00 **(Page 2 of 14)**

Calculation Description: **Input File Name:** CENTRAL AVE_03.05.20.ribd19

REQUIRED PV SYSTEMS - SIMPLIFIED

01	02	03	04	05	06	07	08	09	10	11	12
DC System Size (kWdc)	Exception	Module Type	Array Type	Power Electronics	CFI	Azimuth (deg)	Tilt Input	Array Angle (deg)	Tilt: (x in 12)	Inverter Eff. (%)	Annual Solar Access (%)
5	NA	Standard	Fixed (roof mount)	none	true	150-270	n/a	n/a	<=7:12	96	100

REQUIRED SPECIAL FEATURES

The following are features that must be installed as condition for meeting the modeled energy performance for this computer analysis.

- Zonal heating controls
-
- Cool roof
- Floor has high level of insulation
- Window overhangs and/or fins
- No cooling system included
- Ducts in crawl space

HERS FEATURE SUMMARY

The following is a summary of the features that must be field-verified by a certified HERS Rater as a condition for meeting the modeled energy performance for this computer analysis. Additional detail is provided in the building tables below. Registered CF2Rs and CF3Rs are required to be completed in the HERS Registry

Building-level Verifications:
- Indoor air quality ventilation

Cooling System Verifications:
- -- None --

Heating System Verifications:
- -- None --

HVAC Distribution System Verifications:
- Duct leakage testing

Domestic Hot Water System Verifications:
- -- None --

Registration Number: 420-P010027159A-000-000-0000000-0000 Registration Date/Time: 03/05/2020 21:30 HERS Provider: Cal Energy

CA Building Energy Efficiency Standards - 2019 Residential Compliance Report Version: 2019.1.108 Schema Version: rev 20200101 Report Generated: 2020-03-05 21:26:05

CERTIFICATE OF COMPLIANCE **CF1R-PRF-01E**

Project Name: CENTRAL AVE **Calculation Date/Time:** 2020-03-05T21:21:31-08:00 **(Page 3 of 14)**

Calculation Description: **Input File Name:** CENTRAL AVE_03.05.20.ribd19

BUILDING - FEATURES INFORMATION

01	02	03	04	05	06	07
Project Name	Conditioned Floor Area (ft^2)	Number of Dwelling Units	Number of Bedrooms	Number of Zones	Number of Ventilation Cooling Systems	Number of Water Heating Systems
CENTRAL AVE	1951	1	3	12	0	1

ZONE INFORMATION

01	02	03	04	05	06	07
Zone Name	Zone Type	HVAC System Name	Zone Floor Area (ft^2)	Avg. Ceiling Height	Water Heating System 1	Water Heating System 2
LIVING ROOM	Living	HVAC System 1	275	9.75	DHW System 1	N/A
PANTRY	Living	HVAC System 1	41	9.75	DHW System 1	N/A
KITCHEN	Living	HVAC System 1	353	9.75	DHW System 1	N/A
BATH	Living	HVAC System 1	62	9.75	DHW System 1	N/A
LAUNDRY	Living	HVAC System 1	78	9.75	DHW System 1	N/A
BED 1	Sleeping	HVAC System 1	110	9.75	DHW System 1	N/A
BED 2	Sleeping	HVAC System 1	101	9.75	DHW System 1	N/A
OFFICE 1	Living	HVAC System 1	145	9.75	DHW System 1	N/A
M BED	Sleeping	HVAC System 1	392	8.5	DHW System 1	N/A
M BATH	Living	HVAC System 1	114	8.25	DHW System 1	N/A
M OFFICE	Living	HVAC System 1	115	8.5	DHW System 1	N/A
STAIR/HALLWAY	Living	HVAC System 1	165	13	DHW System 1	N/A

Registration Number: 420-P010027159A-000-000-0000000-0000 Registration Date/Time: 03/05/2020 21:30 HERS Provider: Cal Energy

CA Building Energy Efficiency Standards - 2019 Residential Compliance Report Version: 2019.1.108 Schema Version: rev 20200101 Report Generated: 2020-03-05 21:26:05

CERTIFICATE OF COMPLIANCE **CF1R-PRF-01E**

Project Name: CENTRAL AVE **Calculation Date/Time:** 2020-03-05T21:21:31-08:00 **(Page 4 of 14)**

Calculation Description: **Input File Name:** CENTRAL AVE_03.05.20.ribd19

OPAQUE SURFACES

01	02	03	04	05	06	07	08	09	10	11
Name	Zone	Construction	Azimuth	Orientation	Gross Area (ft^2)	Window and Door Area (ft2)	Tilt (deg)	Wall Exceptions	Status	Verified Existing Condition
LIVING ROOM WEST	LIVING ROOM	EXTERIOR WALL	270	Front	185	51.9	90	none	Existing	No
LIVING ROOM SOUTH	LIVING ROOM	EXTERIOR WALL	0	Left	136	10.98	90	none	Existing	No
LIVING ROOM NORTH	LIVING ROOM	EXTERIOR WALL	180	Right	68	17.78	90	none	Existing	No
PANTRY WEST	PANTRY	EXTERIOR WALL	270	Front	54	0	90	none	Existing	No
PANTRY NORTH	PANTRY	EXTERIOR WALL	180	Right	73	7.0756	90	none	Existing	No
KITCHEN NORTH	KITCHEN	EXTERIOR WALL	180	Right	136	20.97	90	none	Existing	No
KITCHEN SOUTH	KITCHEN	EXTERIOR WALL	0	Left	175	38.6856	90	none	Existing	No
BATH NORTH	BATH	EXTERIOR WALL 2X6	180	Right	59	7.41	90	none	New	n/a
BED 1 NORTH	BED 1	EXTERIOR WALL 2X6	180	Right	105	17.0556	90	none	Existing	No
BED 1 EAST	BED 1	EXTERIOR WALL 2X6	90	Back	100	33.3	90	none	New	n/a
BED 2 EAST	BED 2	EXTERIOR WALL 2X6	90	Back	40	17.7156	90	none	New	n/a
OFFICE SOUTH	OFFICE 1	EXTERIOR WALL 2X6	0	Left	97.5	17.7156	90	none	New	n/a
OFFICE EAST	OFFICE 1	EXTERIOR WALL 2X6	90	Back	97.5	20.97	90	none	New	n/a
M BED WEST	M BED	EXTERIOR WALL 2X6	270	Front	130	58.5	90	none	New	n/a
M BED NORTH	M BED	EXTERIOR WALL 2X6	180	Right	255	28	90	none	New	n/a
M BED EAST	M BED	EXTERIOR WALL 2X6	90	Back	76.5	7.7588	90	none	New	n/a
M BATH EAST	M BATH	EXTERIOR WALL 2X6	90	Back	70	7.7588	90	none	New	n/a
M BATH NORTH	M BATH	EXTERIOR WALL 2X6	180	Right	35	0	90	none	New	n/a
M OFFICE WEST	M OFFICE	EXTERIOR WALL 2X6	270	Front	77	30	90	none	New	n/a
M OFFICE SOUTH	M OFFICE	EXTERIOR WALL 2X6	0	Left	106	12	90	none	New	n/a
STAIR SOUTH	STAIR/HALLWAY	EXTERIOR WALL 2X6	0	Left	273	27	90	none	New	n/a
STAIR EAST	STAIR/HALLWAY	EXTERIOR WALL 2X6	90	Back	91	13.5	90	none	New	n/a

Registration Number: 420-P010027159A-000-000-0000000-0000 Registration Date/Time: 03/05/2020 21:30 HERS Provider: Cal Energy

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CERTIFICATE OF COMPLIANCE **CF1R-PRF-01E**

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Calculation Description: **Input File Name:** CENTRAL AVE_03.05.20.ribd19

OPAQUE SURFACES

01	02	03	04	05	06	07	08	09	10	11
Name	Zone	Construction	Azimuth	Orientation	Gross Area (ft^2)	Window and Door Area (ft2)	Tilt (deg)	Wall Exceptions	Status	Verified Existing Condition
LIVING ROOM CEILING	LIVING ROOM	CEILING BELOW ATTIC	n/a	n/a	275	n/a	n/a		Existing	No
KITCHEN CEILING	KITCHEN	CEILING BELOW ATTIC	n/a	n/a	353	n/a	n/a		Existing	No
BATH CEILING	BATH	CEILING BELOW ATTIC	n/a	n/a	62	n/a	n/a		Existing	No
LIVING ROOM FLOOR	LIVING ROOM	FLOOR OVER CRAWLSPACE	n/a	n/a	275	n/a	n/a		Existing	No
PANTRY FLOOR	PANTRY	FLOOR OVER CRAWLSPACE	n/a	n/a	41	n/a	n/a		Existing	No
KITCHEN FLOOR	KITCHEN	FLOOR OVER CRAWLSPACE	n/a	n/a	353	n/a	n/a		Existing	No
BATH FLOOR	BATH	FLOOR OVER CRAWLSPACE	n/a	n/a	62	n/a	n/a		Existing	No
LAUNDRY FLOOR	LAUNDRY	FLOOR OVER CRAWLSPACE	n/a	n/a	78	n/a	n/a		New	No
BED 1 FLOOR	BED 1	FLOOR OVER CRAWLSPACE	n/a	n/a	142	n/a	n/a		Existing	No
BED 2 FLOOR	BED 2	FLOOR OVER CRAWLSPACE	n/a	n/a	135	n/a	n/a		Existing	No
OFFICE FLOOR	OFFICE 1	FLOOR OVER CRAWLSPACE	n/a	n/a	80	n/a	n/a		New	n/a
LAUNDRY CEILING	LAUNDRY	INTERIOR CEILING	n/a	n/a	78	n/a	n/a		New	No
BED 1 CEILING	BED 1	INTERIOR CEILING	n/a	n/a	110	n/a	n/a		Existing	No
BED 2 CEILING	BED 2	INTERIOR CEILING	n/a	n/a	101	n/a	n/a		Existing	No
OFFICE CEILING	OFFICE 1	INTERIOR CEILING	n/a	n/a	145	n/a	n/a		New	n/a
M BED FLOOR	M BED	INTERIOR FLOOR	n/a	n/a	392	n/a	n/a		New	n/a
M BATH FLOOR	M BATH	INTERIOR FLOOR	n/a	n/a	114	n/a	n/a		New	n/a

Registration Number: 420-P010027159A-000-000-0000000-0000 Registration Date/Time: 03/05/2020 21:30 HERS Provider: Cal Energy

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OPAQUE SURFACES

01	02	03	04	05	06	07	08	09	10	11
Name	Zone	Construction	Azimuth	Orientation	Gross Area (ft^2)	Window and Door Area (ft2)	Tilt (deg)	Wall Exceptions	Status	Verified Existing Condition
M OFFICE FLOOR	M OFFICE	INTERIOR FLOOR	n/a	n/a	115	n/a	n/a		New	n/a
STAIR FLOOR	STAIR/HALLWAY	INTERIOR FLOOR	n/a	n/a	165	n/a	n/a		New	n/a

OPAQUE SURFACES - CATHEDRAL CEILINGS

01	02	03	04	05	06	07	08	09	10	11	12	13	14
Name	Zone	Construction	Azimuth	Orientation	Area (ft^2)	Skylight Area (ft^2)	Roof Rise (x in 12)	Roof Reflectance	Roof Emittance	Cool Roof	Status	Verified Existing Condition	Existing Construction
Cathedral Ceiling PANTRY	PANTRY	CATHEDRAL CEILING	270	Right	41	0	5	0.1	0.85	No	Existing	No	
M BED CEILING	M BED	CATHEDRAL CEILING	270	Right	392	18	0.5	0.1	0.85	No	New	n/a	
M BATH CEILING	M BATH	CATHEDRAL CEILING	270	Right	114	6	0.5	0.1	0.85	No	New	n/a	
M OFFICE CEILING	M OFFICE	CATHEDRAL CEILING	270	Right	115	0	0.5	0.1	0.85	No	New	n/a	
STAIR CEILING	STAIR/HALLWAY	CATHEDRAL CEILING	270	Right	165	0	0.5	0.1	0.85	No	New	n/a	

ATTIC

01	02	03	04	05	06	07	08	09	10
Name	Construction	Type	Roof Rise (x in 12)	Roof Reflectance	Roof Emittance	Radiant Barrier	Cool Roof	Status	Verified Existing Condition
Attic	Asphalt Shingle Roof	Ventilated	5	0.25	0.9	Yes	Yes	Existing	No

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SURVEYOR

N/A

GENERAL CONTRACTOR

LIC#

LEGEND

(E) TO REMAIN

(E) DEMO / TO BE REMOVED (TBR)

(N) CONSTRUCTION

(E) NOT IN CONTRACT (NIC)

NO.	ISSUE	DATE

PROJECT

CENTRAL
216 CENTRAL AVE. CAPITOLA, CA 95010

SHEET TITLE

CEC

SHEET NUMBER

A700

CERTIFICATE OF COMPLIANCE **CF1R-PRF-01E**

Project Name: CENTRAL AVE **Calculation Date/Time:** 2020-03-05T21:21:31-08:00 **(Page 7 of 14)**

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FENESTRATION / GLAZING

01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
Name	Type	Surface	Orientation	Azimuth	Width (ft)	Height (ft)	Mult.	Area (ft^2)	U-factor	U-factor Source	SHGC	SHGC Source	Exterior Shading	Status	Verified Existing Condition
LIVING ROOM 55	Window	LIVING ROOM WEST	Front	270	2.66	6	1	15.96	0.32	NFRC	0.5	NFRC	Bug Screen	Existing	No
LIVING ROOM 55-2	Window	LIVING ROOM WEST	Front	270	2.66	6	1	15.96	0.32	NFRC	0.5	NFRC	Bug Screen	Existing	No
39	Window	LIVING ROOM WEST	Front	270	3	6.66	1	19.98	0.32	NFRC	0.5	NFRC	Bug Screen	Existing	No
Window 4	Window	LIVING ROOM SOUTH	Left	0	3	3.66	1	10.98	0.32	NFRC	0.5	NFRC	Bug Screen	Existing	No
PANTRY 61	Window	PANTRY NORTH	Right	180	2.66	2.66	1	7.08	0.32	NFRC	0.5	NFRC	Bug Screen	Existing	No
KITCHEN 60	Window	KITCHEN NORTH	Right	180	2.33	4.5	1	10.48	0.32	NFRC	0.5	NFRC	Bug Screen	Existing	No
KITCHEN 60-2	Window	KITCHEN NORTH	Right	180	2.33	4.5	1	10.48	0.32	NFRC	0.5	NFRC	Bug Screen	Existing	No
KITCHEN 60-3	Window	KITCHEN SOUTH	Left	0	2.33	4.5	1	10.48	0.32	NFRC	0.5	NFRC	Bug Screen	Existing	No
KITCHEN 60-4	Window	KITCHEN SOUTH	Left	0	2.33	4.5	1	10.48	0.32	NFRC	0.5	NFRC	Bug Screen	Existing	No
KITCHEN DOOR 51	Window	KITCHEN SOUTH	Left	0	2.66	6.66	1	17.72	0.32	NFRC	0.25	NFRC	Bug Screen	New	n/a
BATH 59	Window	BATH NORTH	Right	180	3.9	1.9	1	7.41	0.32	NFRC	0.5	NFRC	Bug Screen	Existing	No
BED 1 SB-1	Window	BED 1 NORTH	Right	180	2.33	3.66	1	8.53	0.32	NFRC	0.25	NFRC	Bug Screen	New	n/a
BED 1 SB-2	Window	BED 1 NORTH	Right	180	2.33	3.66	1	8.53	0.32	NFRC	0.25	NFRC	Bug Screen	New	n/a
BED 1 64	Window	BED 1 EAST	Back	90	5	6.66	1	33.3	0.32	NFRC	0.25	NFRC	Bug Screen	New	n/a
BED 2 66	Window	BED 2 EAST	Back	90	2.66	6.66	1	17.72	0.32	NFRC	0.25	NFRC	Bug Screen	New	n/a

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FENESTRATION / GLAZING

01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
Name	Type	Surface	Orientation	Azimuth	Width (ft)	Height (ft)	Mult.	Area (ft^2)	U-factor	U-factor Source	SHGC	SHGC Source	Exterior Shading	Status	Verified Existing Condition
OFFICE 54	Window	OFFICE SOUTH	Left	0	2.66	6.66	1	17.72	0.32	NFRC	0.25	NFRC	Bug Screen	New	n/a
OFFICE 66-1	Window	OFFICE EAST	Back	90	2.33	4.5	1	10.48	0.32	NFRC	0.25	NFRC	Bug Screen	New	n/a
OFFICE 66-2	Window	OFFICE EAST	Back	90	2.33	4.5	1	10.48	0.32	NFRC	0.25	NFRC	Bug Screen	New	n/a
M BED 80	Window	M BED WEST	Front	270	13	4.5	1	58.5	0.32	NFRC	0.25	NFRC	Bug Screen	New	n/a
M BED 77-2	Window	M BED NORTH	Right	180	3.5	4	1	14	0.32	NFRC	0.25	NFRC	Bug Screen	New	n/a
M BED 77-3	Window	M BED NORTH	Right	180	3.5	4	1	14	0.32	NFRC	0.25	NFRC	Bug Screen	New	n/a
M BED 73	Window	M BED EAST	Back	90	2.33	3.33	1	7.76	0.32	NFRC	0.25	NFRC	Bug Screen	New	n/a
M BATH 73	Window	M BATH EAST	Back	90	2.33	3.33	1	7.76	0.32	NFRC	0.5	NFRC	Bug Screen	New	n/a
M OFFICE 81	Window	M OFFICE WEST	Front	270	6	5	1	30	0.32	NFRC	0.25	NFRC	Bug Screen	New	n/a
M OFFICE 10	Window	M OFFICE SOUTH	Left	0	3	4	1	12	0.32	NFRC	0.25	NFRC	Bug Screen	New	n/a
STAIR 45	Window	STAIR SOUTH	Left	0	3	4.5	1	13.5	0.3	NFRC	0.25	NFRC	Bug Screen	New	n/a
STAIR 45-3	Window	STAIR SOUTH	Left	0	3	4.5	1	13.5	0.3	NFRC	0.25	NFRC	Bug Screen	New	n/a
STAIR 45-2	Window	STAIR EAST	Back	90	3	4.5	1	13.5	0.3	NFRC	0.25	NFRC	Bug Screen	New	n/a
M BED SKYLIGHT 82-1	Skylight	M BED CEILING	Right	180			1	9	0.32	NFRC	0.25	NFRC	None	New	n/a
M BED SKYLIGHT 82-2	Skylight	M BED CEILING	Right	180			1	9	0.32	NFRC	0.25	NFRC	None	New	n/a
M BATH SKYLIGHT 54	Skylight	M BATH CEILING	Right	180			1	6	0.32	NFRC	0.25	NFRC	None	New	n/a

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OPAQUE DOORS

01	02	03	04	05	06
Name	Side of Building	Area (ft^2)	U-factor	Status	Verified Existing Condition
32	LIVING ROOM NORTH	17.78	0.5	Existing	No

OPAQUE SURFACE CONSTRUCTIONS

01	02	03	04	05	06	07	08
Construction Name	Surface Type	Construction Type	Framing	Total Cavity R-value	Interior / Exterior Continuous R-value	U-factor	Assembly Layers
EXTERIOR WALL	Exterior Walls	Wood Framed Wall	2x4 @ 16 in. O. C.	R-13	None / None	0.088	Inside Finish: Gypsum Board Cavity / Frame: R-13 / 2x4 Sheathing / Insulation: Wood Siding/sheathing/decking Exterior Finish: Wood Siding/sheathing/decking
EXTERIOR WALL 2X6	Exterior Walls	Wood Framed Wall	2x6 @ 16 in. O. C.	R-19	R-5 / None	0.047	Inside Finish: Gypsum Board Sheathing / Insulation: R-6 Sheathing Cavity / Frame: R-19 in 5-1/2 in. (R-18) / 2x6 Exterior Finish: Wood Siding/sheathing/decking
CATHEDRAL CEILING	Cathedral Ceilings	Wood Framed Ceiling	2x12 @ 16 in. O. C.	R-38	None / R-6	0.025	Roofing: Light Roof (Asphalt Shingle) Above Deck Insulation: R-6 Sheathing Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: R-38 in 11-1/4 in. (R-37) / 2x12 Inside Finish: Gypsum Board
INTERIOR WALL	Interior Walls	Wood Framed Wall	2x4 @ 16 in. O. C.	R-0	None / None	0.277	Inside Finish: Gypsum Board Cavity / Frame: no insul. / 2x4 Other Side Finish: Gypsum Board

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OPAQUE SURFACE CONSTRUCTIONS

01	02	03	04	05	06	07	08
Construction Name	Surface Type	Construction Type	Framing	Total Cavity R-value	Interior / Exterior Continuous R-value	U-factor	Assembly Layers
Asphalt Shingle Roof	Attic Roofs	Wood Framed Ceiling	2x4 @ 16 in. O. C.	R-0	None / None	0.629	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x4
FLOOR OVER CRAWLSPACE	Floors Over Crawlspace	Wood Framed Floor	2x8 @ 16 in. O. C.	R-21	None / None	0.047	Floor Surface: Hardwood Floor Deck: Wood Siding/sheathing/decking Cavity / Frame: R-21 / 2x8
CEILING BELOW ATTIC	Ceilings (below attic)	Wood Framed Ceiling	2x12 @ 16 in. O. C.	R-30	None / None	0.035	Attic Floor: Wood Siding/sheathing/decking Cavity / Frame: R-29.2 / 2x12 Inside Finish: Gypsum Board
INTERIOR FLOOR	Interior Floors	Wood Framed Floor	2x12 @ 16 in. O. C.	R-0	None / None	0.276	Floor Surface: Hardwood Floor Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x12 Ceiling Below Finish: Gypsum Board
INTERIOR CEILING	Interior Ceiling	Wood Framed Ceiling	2x6 @ 16 in. O. C.	R-0	None / None	0.35	Floor Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x6 Ceiling Below Finish: Gypsum Board

BUILDING ENVELOPE - HERS VERIFICATION

01	02	03	04
Quality Insulation Installation (QII)	Quality Installation of Spray Foam Insulation	Building Envelope Air Leakage	CFM50
Not Required	Not Required	Not Required	n/a

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WATER HEATING SYSTEMS

01	02	03	04	05	06	07	08	09	10
Name	System Type	Distribution Type	Water Heater Name (#)	Solar Heating System	Compact Distribution	HERS Verification	Status	Verified Existing Condition	Existing Water Heating System
DHW System 1	Domestic Hot Water (DHW)	Standard Distribution System	Water Heater 1 (1)	n/a	None	n/a	New	NA	

WATER HEATERS

01	02	03	04	05	06	07	08	09	10	11	12	13	14
Name	Heating Element Type	Tank Type	# Units	Tank Vol. (gal)	Energy Factor or Efficiency	Input Rating or Pilot	Tank Insulation R-value (Int/Ext)	Standby Loss or Recovery Eff.	1st Hr. Rating or Flow Rate	NEEA Heat Pump Brand or Model	Tank Location or Ambient Condition	Status	Verified Existing Condition
Water Heater 1	Gas	Consumer Instantaneous	1	0	0.81-UEF	<= 200 kBtu/hr	0	n/a	n/a	n/a	n/a	New	

WATER HEATING - HERS VERIFICATION

01	02	03	04	05	06	07	08
Name	Pipe Insulation	Parallel Piping	Compact Distribution	Compact Distribution Type	Recirculation Control	Central DHW Distribution	Shower Drain Water Heat Recovery
DHW System 1 - 1/1	Not Required	Not Required	Not Required	None	Not Required	Not Required	Not Required

SPACE CONDITIONING SYSTEMS

01	02	03	04	05	06	07	08	09	10	11
Name	System Type	Heating Unit Name	Cooling Unit Name	Fan Name	Distribution Name	Required Thermostat Type	Status	Verified Existing Condition	Heating Equipment Count	Cooling Equipment Count
HVAC System 1	Heating and cooling system other	Heating System NG	Cooling System 1	HVAC Fan System 1	Distribution System 1	Setback	New	No	1	1

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Calculation Description: **Input File Name:** CENTRAL AVE_03.05.20.ribd19

HVAC - HEATING UNIT TYPES

01	02	03	04
Name	System Type	Number of Units	Heating Efficiency
Heating System NG	Central gas furnace	1	AFUE-92

HVAC - COOLING UNIT TYPES

01	02	03	04	05	06	07	08
Name	System Type	Number of Units	Efficiency EER	Efficiency SEER	Zonally Controlled	Multi-speed Compressor	HERS Verification
Cooling System 1	No Cooling	1			Not Zonal	Single Speed	n/a

HVAC - DISTRIBUTION SYSTEMS

01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
			Duct Ins. R-value		Duct Location		Surface Area								
Name	Type	Design Type	Supply	Return	Supply	Return	Supply	Return	Bypass Duct	Duct Leakage	HERS Verification	Status	Verified Existing Condition	Existing Distribution system	New Ducts 40 ft
Distribution System 1	Unconditioned crawl space	Non-Verified	R-6	R-6	Crawl Space	Crawl Space	n/a	n/a	No Bypass Duct	Sealed and Tested	Distribution System 1-hers-dist	New	n/a	n/a	n/a

HVAC DISTRIBUTION - HERS VERIFICATION

01	02	03	04	05	06	07	08	09
Name	Duct Leakage Verification	Duct Leakage Target (%)	Verified Duct Location	Verified Duct Design	Buried Ducts	Deeply Buried Ducts	Low-leakage Air Handler	Low Leakage Ducts Entirely in Conditioned Space
Distribution System 1-hers-dist	Yes	5.0	Not Required	Not Required	Not Required	Credit not taken	Not Required	No

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SURVEYOR

N/A

GENERAL CONTRACTOR

LIC#

LEGEND

(E) TO REMAIN

(E) DEMO / TO BE REMOVED (TBR)

(N) CONSTRUCTION

(E) NOT IN CONTRACT (NIC)

NO.	ISSUE	DATE

PROJECT

CENTRAL
216 CENTRAL AVE. CAPITOLA, CA 95010

SHEET TITLE

CEC

SHEET NUMBER

A700.1

CERTIFICATE OF COMPLIANCE **CF1R-PRF-01E**

Project Name: CENTRAL AVE **Calculation Date/Time:** 2020-03-05T21:21:31-08:00 **(Page 13 of 14)**

Calculation Description: **Input File Name:** CENTRAL AVE_03.05.20.ribd19

HVAC - FAN SYSTEMS

01	02	03	04
Name	**Type**	**Fan Power (Watts/CFM)**	**Name**
HVAC Fan System 1	HVAC Fan	0.45	n/a

IAQ (INDOOR AIR QUALITY) FANS

01	02	03	04	05	06
Dwelling Unit	**IAQ CFM**	**IAQ Watts/CFM**	**IAQ Fan Type**	**IAQ Recovery Effectiveness (%)**	**IAQ Recovery Effectiveness - SRE/IAQ Recovery Effectiveness - SRE**
5Fam IAQVentRpt	85	0.25	Default	0	n/a

Registration Number: 420-P010027159A-000-000-0000000-0000 Registration Date/Time: 03/05/2020 21:30 HERS Provider: Cal Energy

CA Building Energy Efficiency Standards - 2019 Residential Compliance Report Version: 2019.1.108 Schema Version: rev 20200101 Report Generated: 2020-03-05 21:26:05

CERTIFICATE OF COMPLIANCE **CF1R-PRF-01E**

Project Name: CENTRAL AVE **Calculation Date/Time:** 2020-03-05T21:21:31-08:00 **(Page 14 of 14)**

Calculation Description: **Input File Name:** CENTRAL AVE_03.05.20.ribd19

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I, I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Scott John Davis	Documentation Author Signature: Scott John Davis
Company: ATSTUDIO	Signature Date: 03/05/2020
Address: PO Box 31017	CEA/ HERS Certification Identification (If applicable):
City/State/Zip: Los Angeles, CA 90031	Phone: (562) 715-1535

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design identified on this Certificate of Compliance.
2. I certify that the energy features and performance specifications identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
3. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.

Responsible Designer Name: Scott John Davis	Responsible Designer Signature: Scott John Davis
Company: ATSTUDIO	Date Signed: 03/05/2020
Address: PO Box 31017	License: C35902
City/State/Zip: Los Angeles, CA 90031	Phone: (562) 715-1535

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gigante AG

R. SCOTT MITCHELL

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CLIENT

LYNN JACKSON

OWNER

LYNN JACKSON
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ENGINEER

STREETER GROUP, INC.
2571 Main Street, Suite C,
Soquel, CA 95073 (831) 477-1781

SURVEYOR

N/A

GENERAL CONTRACTOR

LIC#

LEGEND

(E) TO REMAIN

(E) DEMO / TO BE REMOVED (TBR)

(N) CONSTRUCTION

(E) NOT IN CONTRACT (NIC)

NO.	ISSUE	DATE

PROJECT

CENTRAL
216 CENTRAL AVE. CAPITOLA, CA 95010

SHEET TITLE

CEC

SHEET NUMBER

A700.2

2019 Low-Rise Residential Mandatory Measures Summary

NOTE: Low-rise residential buildings subject to the Energy Standards must comply with all applicable mandatory measures, regardless of the compliance approach used. Review the respective section for more information. "Exceptions may apply.
(01/2020)

Building Envelope Measures:	
§ 110.6(a)1:	**Air Leakage.** Manufactured fenestration, exterior doors, and exterior pet doors must limit air leakage to 0.3 CFM per square foot or less when tested per NFRC-400, ASTM E283 or AAMA/WDMA/CSA 101/I.S.2/A440-2011.`
§ 110.6(a)6:	**Labeling.** Fenestration products and exterior doors must have a label meeting the requirements of § 10-111(a).
§ 110.6(b):	**Field fabricated exterior doors and fenestration** products must use U-factors and solar heat gain coefficient (SHGC) values from Tables 110.6-A, 110.6-B, or JA4.5 for exterior doors. They must be caulked and/or weather-stripped.`
§ 110.7:	**Air Leakage.** All joints, penetrations, and other openings in the building envelope that are potential sources of air leakage must be caulked, gasketed, or weather stripped.
§ 110.8(a):	**Insulation Certification by Manufacturers.** Insulation must be certified by the Department of Consumer Affairs; Bureau of Household Goods and Services (BHGS).
§ 110.8(g):	**Insulation Requirements for Heated Slab Floors.** Heated slab floors must be insulated per the requirements of § 110.8(g).
§ 110.8(i):	**Roofing Products Solar Reflectance and Thermal Emittance.** The thermal emittance and aged solar reflectance values of the roofing material must meet the requirements of § 110.8(i) and be labeled per §10-113 when the installation of a cool roof is specified on the CF1R.
§ 110.8(j):	**Radiant Barrier.** When required, radiant barriers must have an emittance of 0.05 or less and be certified to the Department of Consumer Affairs.
§ 150.0(a):	**Ceiling and Rafter Roof Insulation.** Minimum R-22 insulation in wood-frame ceiling; or the weighted average U-factor must not exceed 0.043. Minimum R-19 or weighted average U-factor of 0.054 or less in a rafter roof alteration. Attic access doors must have permanently attached insulation using adhesive or mechanical fasteners. The attic access must be gasketed to prevent air leakage. Insulation must be installed in direct contact with a continuous roof or ceiling which is sealed to limit infiltration and exfiltration as specified in § 110.7, including but not limited to placing insulation either above or below the roof deck or on top of a drywall ceiling.`
§ 150.0(b):	**Loose-fill Insulation.** Loose fill insulation must meet the manufacturer's required density for the labeled R-value.
§ 150.0(c):	**Wall Insulation.** Minimum R-13 insulation in 2x4 inch wood framing wall or have a U-factor of 0.102 or less, or R-20 in 2x6 inch wood framing or have a U-factor of 0.071 or less. Opaque non-framed assemblies must have an overall assembly U-factor not exceeding 0.102. Masonry walls must meet Tables 150.1-A or B.`
§ 150.0(d):	**Raised-floor Insulation.** Minimum R-19 insulation in raised wood framed floor or 0.037 maximum U-factor.`
§ 150.0(f):	**Slab Edge Insulation.** Slab edge insulation must meet all of the following: have a water absorption rate, for the insulation material alone without facings, no greater than 0.3 percent; have a water vapor permeance no greater than 2.0 perm per inch; be protected from physical damage and UV light deterioration; and, when installed as part of a heated slab floor, meet the requirements of § 110.8(g).
§ 150.0(g)1:	**Vapor Retarder.** In climate zones 1 through 16, the earth floor of unvented crawl space must be covered with a Class I or Class II vapor retarder. This requirement also applies to controlled ventilation crawl space for buildings complying with the exception to § 150.0(d).
§ 150.0(g)2:	**Vapor Retarder.** In climate zones 14 and 16, a Class I or Class II vapor retarder must be installed on the conditioned space side of all insulation in all exterior walls, vented attics, and unvented attics with air-permeable insulation.
§ 150.0(q):	**Fenestration Products.** Fenestration, including skylights, separating conditioned space from unconditioned space or outdoors must have a maximum U-factor of 0.58, or the weighted average U-factor of all fenestration must not exceed 0.58.`
Fireplaces, Decorative Gas Appliances, and Gas Log Measures:	
§ 110.5(e)	**Pilot Light.** Continuously burning pilot lights are not allowed for indoor and outdoor fireplaces.
§ 150.0(e)1:	**Closable Doors.** Masonry or factory-built fireplaces must have a closable metal or glass door covering the entire opening of the firebox.
§ 150.0(e)2:	**Combustion Intake.** Masonry or factory-built fireplaces must have a combustion outside air intake, which is at least six square inches in area and is equipped with a readily accessible, operable, and tight-fitting damper or combustion-air control device.`
§ 150.0(e)3:	**Flue Damper.** Masonry or factory-built fireplaces must have a flue damper with a readily accessible control.`
Space Conditioning, Water Heating, and Plumbing System Measures:	
§ 110.0-§ 110.3; § 110.2(a):	**Certification.** Heating, ventilation and air conditioning (HVAC) equipment, water heaters, showerheads, faucets, and all other regulated appliances must be certified by the manufacturer to the California Energy Commission.`
§ 110.2(b):	**HVAC Efficiency.** Equipment must meet the applicable efficiency requirements in Table 110.2-A through Table 110.2-K.`
§ 110.2(c):	**Controls for Heat Pumps with Supplementary Electric Resistance Heaters.** Heat pumps with supplementary electric resistance heaters must have controls that prevent supplementary heater operation when the heating load can be met by the heat pump alone, and in which the cut-on temperature for compression heating is higher than the cut-on temperature for supplementary heating, and the cut-off temperature for compression heating is higher than the cut-off temperature for supplementary heating.`
§ 110.3(c)4:	**Thermostats.** All heating or cooling systems not controlled by a central energy management control system (EMCS) must have a setback thermostat.`
§ 110.3(c)4:	**Water Heating Recirculation Loops Serving Multiple Dwelling Units.** Water heating recirculation loops serving multiple dwelling units must meet the air release valve, backflow prevention, pump priming, pump isolation valve, and recirculation loop connection requirements of § 110.3(c)4.
§ 110.3(c)6:	**Isolation Valves.** Instantaneous water heaters with an input rating greater than 6.8 kBtu per hour (2 kW) must have isolation valves with hose bibbs or other fittings on both cold and hot water lines to allow for flushing the water heater when the valves are closed.
§ 110.5:	**Pilot Lights.** Continuously burning pilot lights are prohibited for natural gas: fan-type central furnaces; household cooking appliances (except appliances without an electrical supply voltage connection with pilot lights that consume less than 150 Btu per hour); and pool and spa heaters.`
§ 150.0(h)1:	**Building Cooling and Heating Loads.** Heating and/or cooling loads are calculated in accordance with the ASHRAE Handbook, Equipment Volume, Applications Volume, and Fundamentals Volume; the SMACNA Residential Comfort System Installation Standards Manual; or the ACCA Manual J using design conditions specified in § 150.0(h)2.

2019 Low-Rise Residential Mandatory Measures Summary

Requirements for Ventilation and Indoor Air Quality:	
§ 150.0(o)1:	**Requirements for Ventilation and Indoor Air Quality.** All dwelling units must meet the requirements of ASHRAE Standard 62.2, Ventilation and Acceptable Indoor Air Quality in Residential Buildings subject to the amendments specified in § 150.0(o)1.
§ 150.0(o)1C:	**Single Family Detached Dwelling Units.** Single family detached dwelling units, and attached dwelling units not sharing ceilings or floors with other dwelling units, occupiable spaces, public garages, or commercial spaces must have mechanical ventilation airflow provided at rates determined by ASHRAE 62.2 Sections 4.1.1 and 4.1.2 and as specified in § 150.0(o)1C.
§ 150.0(o)1E:	**Multifamily Attached Dwelling Units.** Multifamily attached dwelling units must have mechanical ventilation airflow provided at rates in accordance with Equation 150.0-B and must be either a balanced system or continuous supply or continuous exhaust system. If a balanced system is not used, all units in the building must use the same system type and the dwelling-unit envelope leakage must be ≤ 0.3 CFM at 50 Pa (0.2 inch water) per square foot of dwelling unit envelope surface area and verified in accordance with Reference Residential Appendix RA3.8.
§ 150.0(o)1F:	**Multifamily Building Central Ventilation Systems.** Central ventilation systems that serve multiple dwelling units must be balanced to provide ventilation airflow for each dwelling unit served at a rate equal to or greater than the rate specified by Equation 150.0-B. All unit airflows must be within 20 percent of the calculated unit airflow rate as it relates to the individual unit's minimum required airflow rate needed for compliance.
§ 150.0(o)1G:	**Kitchen Range Hoods.** Kitchen range hoods must be rated for sound in accordance with Section 7.2 of ASHRAE 62.2.
§ 150.0(o)2.	**Field Verification and Diagnostic Testing.** Dwelling unit ventilation airflow must be verified in accordance with Reference Residential Appendix RA3.7. A kitchen range hood must be verified in accordance with Reference Residential Appendix RA3.7.4.3 to confirm it is rated by HVI to comply with the airflow rates and sound requirements as specified in Section 5 and 7.2 of ASHRAE 62.2.
Pool and Spa Systems and Equipment Measures:	
§ 110.4(a):	**Certification by Manufacturers.** Any pool or spa heating system or equipment must be certified to have all of the following; a thermal efficiency that complies with the Appliance Efficiency Regulations; an on-off switch mounted outside of the heater that allows shutting off the heater without adjusting the thermostat setting; a permanent weatherproof plate or card with operating instructions; and must not use electric resistance heating.`
§ 110.4(b)1:	**Piping.** Any pool or spa heating system or equipment must be installed with at least 36 inches of pipe between the filter and the heater, or dedicated suction and return lines, or built-up connections to allow for future solar heating.
§ 110.4(b)2:	**Covers.** Outdoor pools or spas that have a heat pump or gas heater must have a cover.
§ 110.4(b)3.	**Directional Inlets and Time Switches for Pools.** Pools must have directional inlets that adequately mix the pool water, and a time switch that will allow all pumps to be set or programmed to run only during off-peak electric demand periods.
§ 110.5:	**Pilot Light.** Natural gas pool and spa heaters must not have a continuously burning pilot light.
§ 150.0(p):	**Pool Systems and Equipment Installation.** Residential pool systems or equipment must meet the specified requirements for pump sizing, flow rate, piping, filters, and valves.`
Lighting Measures:	
§ 110.9:	**Lighting Controls and Components.** All lighting control devices and systems, ballasts, and luminaires must meet the applicable requirements of § 110.9.`
§ 150.0(k)1A:	**Luminaire Efficacy.** All installed luminaires must meet the requirements in Table 150.0-A.
§ 150.0(k)1B:	**Blank Electrical Boxes.** The number of electrical boxes that are more than five feet above the finished floor and do not contain a luminaire or other device must be no greater than the number of bedrooms. These electrical boxes must be served by a dimmer, vacancy sensor control, or fan speed control.
§ 150.0(k)1C:	**Recessed Downlight Luminaires in Ceilings.** Luminaires recessed into ceilings must meet all of the requirements for: insulation contact (IC) labeling; air leakage; sealing; maintenance; and socket and light source as described in § 150.0(k)1C.
§ 150.0(k)1D:	**Electronic Ballasts for Fluorescent Lamps.** Ballasts for fluorescent lamps rated 13 watts or greater must be electronic and must have an output frequency no less than 20 kHz.
§ 150.0(k)1E:	**Night Lights, Step Lights, and Path Lights.** Night lights, step lights and path lights are not required to comply with Table 150.0-A or be controlled by vacancy sensors provided they are rated to consume no more than 5 watts of power and emit no more than 150 lumens.
§ 150.0(k)1F:	**Lighting Integral to Exhaust Fans.** Lighting integral to exhaust fans (except when installed by the manufacturer in kitchen exhaust hoods) must meet the applicable requirements of § 150.0(k).`
§ 150.0(k)1G:	**Screw based luminaires.** Screw based luminaires must contain lamps that comply with Reference Joint Appendix JA8.`
§ 150.0(k)1H:	**Light Sources in Enclosed or Recessed Luminaires.** Lamps and other separable light sources that are not compliant with the JA8 elevated temperature requirements, including marking requirements, must not be installed in enclosed or recessed luminaires.
§ 150.0(k)1I.	**Light Sources in Drawers, Cabinets, and Linen Closets.** Light sources internal to drawers, cabinetry or linen closets are not required to comply with Table 150.0-A or be controlled by vacancy sensors provided that they are rated to consume no more than 5 watts of power, emit no more than 150 lumens, and are equipped with controls that automatically turn the lighting off when the drawer, cabinet or linen closet is closed.
§ 150.0(k)2A:	**Interior Switches and Controls.** All forward phase cut dimmers used with LED light sources must comply with NEMA SSL 7A.
§ 150.0(k)2B:	**Interior Switches and Controls.** Exhaust fans must be controlled separately from lighting systems.`
§ 150.0(k)2C:	**Interior Switches and Controls.** Lighting must have readily accessible wall-mounted controls that allow the lighting to be manually turned ON and OFF.`
§ 150.0(k)2D:	**Interior Switches and Controls.** Controls and equipment must be installed in accordance with manufacturer's instructions.
§ 150.0(k)2E:	**Interior Switches and Controls.** Controls must not bypass a dimmer, occupant sensor, or vacancy sensor function if the control is installed to comply with § 150.0(k).
§ 150.0(k)2F:	**Interior Switches and Controls.** Lighting controls must comply with the applicable requirements of § 110.9.

2019 Low-Rise Residential Mandatory Measures Summary

§ 150.0(h)3A:	**Clearances.** Air conditioner and heat pump outdoor condensing units must have a clearance of at least five feet from the outlet of any dryer
§ 150.0(h)3B:	**Liquid Line Drier.** Air conditioners and heat pump systems must be equipped with liquid line filter driers if required, as specified by the manufacturer's instructions.
§ 150.0(j)1:	**Storage Tank Insulation.** Unfired hot water tanks, such as storage tanks and backup storage tanks for solar water-heating systems, must have a minimum of R-12 external insulation or R-16 internal insulation where the internal insulation R-value is indicated on the exterior of the tank.
§ 150.0(j)2A:	**Water Piping, Solar Water-heating System Piping, and Space Conditioning System Line Insulation.** All domestic hot water piping must be insulated as specified in Section 609.11 of the California Plumbing Code. In addition, the following piping conditions must have a minimum insulation wall thickness of one inch or a minimum insulation R-value of 7.7; the first five feet of cold water pipes from the storage tank; all hot water piping with a nominal diameter equal to or greater than 3/4 inch and less than one inch; all hot water piping with a nominal diameter less than 3/4 inch that is: associated with a domestic hot water recirculation system, from the heating source to storage tank or between tanks, buried below grade, and from the heating source to kitchen fixtures.*
§ 150.0(j)3:	**Insulation Protection.** Piping insulation must be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind as required by Section 120.3(b). Insulation exposed to weather must be water retardant and protected from UV light (no adhesive tapes). Insulation covering chilled water piping and refrigerant suction piping located outside the conditioned space must include, or be protected by, a Class I or Class II vapor retarder. Pipe insulation buried below grade must be installed in a waterproof and non-crushable casing or sleeve.
§ 150.0(n)1:	**Gas or Propane Water Heating Systems.** Systems using gas or propane water heaters to serve individual dwelling units must include all of the following: A dedicated 125 volt, 20 amp electrical receptacle connected to the electric panel with a 120/240 volt 3 conductor, 10 AWG copper branch circuit, within three feet of the water heater without obstruction. Both ends of the unused conductor must be labeled with the word "spare" and be electrically isolated. Have a reserved single pole circuit breaker space in the electrical panel adjacent to the circuit breaker for the branch circuit and labeled with the words "Future 240V Use"; a Category III or IV vent, or a Type B vent with straight pipe between the outside termination and the space where the water heater is installed; a condensate drain that is no more than two inches higher than the base of the water heater, and allows natural draining without pump assistance; and a gas supply line with a capacity of at least 200,000 Btu per hour.
§ 150.0(n)2:	**Recirculating Loops.** Recirculating loops serving multiple dwelling units must meet the requirements of § 110.3(c)5.
§ 150.0(n)3:	**Solar Water-heating Systems.** Solar water-heating systems and collectors must be certified and rated by the Solar Rating and Certification Corporation (SRCC), the International Association of Plumbing and Mechanical Officials, Research and Testing (IAPMO R&T), or by a listing agency that is approved by the Executive Director.
Ducts and Fans Measures:	
§ 110.8(d)3:	**Ducts.** Insulation installed on an existing space-conditioning duct must comply with § 604.0 of the California Mechanical Code (CMC). If a contractor installs the insulation, the contractor must certify to the customer, in writing, that the insulation meets this requirement.
§ 150.0(m)1:	**CMC Compliance.** All air-distribution system ducts and plenums must meet the requirements of the CMC §§ 601.0, 602.0, 603.0, 604.0, 605.0 and ANSI/SMACNA-006-2006 HVAC Duct Construction Standards Metal and Flexible 3rd Edition. Portions of supply-air and return-air ducts and plenums must be insulated to a minimum installed level of R-6.0 or a minimum installed level of R-4.2 when ducts are entirely in conditioned space as confirmed through field verification and diagnostic testing (RA3.1.4.3.8). Portions of the duct system completely exposed and surrounded by directly conditioned space are not required to be insulated. Connections of metal ducts and inner core of flexible ducts must be mechanically fastened. Openings must be sealed with mastic, tape, or other duct-closure system that meets the applicable requirements of UL 181, UL 181A, or UL 181B. Building cavities cannot be used as duct transfer ducts. For the requirements of UL 723. If mastic or tape is used to seal openings greater than ¼ inch, the combination of mastic and either mesh or tape must be used. Building cavities, support platforms for air handlers, and plenums designed or constructed with materials other than sealed sheet metal, duct board or flexible duct must not be used to convey conditioned air. Building cavities and support platforms may contain ducts. Ducts installed in cavities and support platforms must not be compressed to cause reductions in the cross-sectional area.`
§ 150.0(m)2:	**Factory-Fabricated Duct Systems.** Factory-fabricated duct systems must comply with applicable requirements for duct construction, connections, and closures; joints and seams of duct systems and their components must not be sealed with cloth back rubber adhesive duct tapes unless such tape is used in combination with mastic and draw bands.
§ 150.0(m)3:	**Field-Fabricated Duct Systems.** Field-fabricated duct systems must comply with applicable requirements for: pressure-sensitive tapes. mastics, sealants, and other requirements specified for duct construction.
§ 150.0(m)7:	**Backdraft Damper.** Fan systems that exchange air between the conditioned space and outdoors must have backdraft or automatic dampers.
§ 150.0(m)8:	**Gravity Ventilation Dampers.** Gravity ventilating systems serving conditioned space must have either automatic or readily accessible, manually operated dampers in all openings to the outside, except combustion inlet and outlet air openings and elevator shaft vents.
§ 150.0(m)9:	**Protection of Insulation.** Insulation must be protected from damage, sunlight, moisture, equipment maintenance, and wind. Insulation exposed to weather must be suitable for outdoor service. For example, protected by aluminum, sheet metal, painted canvas, or plastic cover. Cellular foam insulation must be protected as above or painted with a coating that is water retardant and provides shielding from solar radiation.
§ 150.0(m)10:	**Porous Inner Core Flex Duct.** Porous inner core flex ducts must have a non-porous layer between the inner core and outer vapor barrier.
§ 150.0(m)11:	**Duct System Sealing and Leakage Test.** When space conditioning systems use forced air duct systems to supply conditioned air to an occupiable space, the ducts must be sealed and duct leakage tested, as confirmed through field verification and diagnostic testing, in accordance with § 150.0(m)11 and Reference Residential Appendix RA3.
§ 150.0(m)12:	**Air Filtration.** Space conditioning systems with ducts exceeding 10 feet and the supply side of ventilation systems must have MERV 13 or equivalent filters. Filters for space conditioning systems must have a two inch depth or can be one inch if sized per Equation 150.0-A. Pressure drops and labeling must meet the requirements in §150.0(m)12. Filters must be accessible for regular service.*
§ 150.0(m)13:	**Space Conditioning System Airflow Rate and Fan Efficacy.** Space conditioning systems that use ducts to supply cooling must have a hole for the placement of a static pressure probe, or a permanently installed static pressure probe in the supply plenum. Airflow must be ≥ 350 CFM per ton of nominal cooling capacity, and an air-handling unit fan efficacy ≤ 0.45 watts per CFM for gas furnace air handlers and ≤ 0.58 watts per CFM for all others. Small duct high velocity systems must provide an airflow ≥ 250 CFM per ton of nominal cooling capacity, and an air-handling unit fan efficacy ≤ 0.62 watts per CFM. Field verification testing is required in accordance with Reference Residential Appendix RA3.3.*

2019 Low-Rise Residential Mandatory Measures Summary

§ 150.0(k)2G:	**Interior Switches and Controls.** An energy management control system (EMCS) may be used to comply with control requirements if it: provides functionality of the specified control according to § 110.9; meets the Installation Certificate requirements of § 130.4; meets the EMCS requirements of § 130.0(e); and meets all other requirements in § 150.0(k)2.
§ 150.0(k)2H:	**Interior Switches and Controls.** A multiscene programmable controller may be used to comply with dimmer requirements in § 150.0(k) if it: provides the functionality of a dimmer according to § 110.9, and complies with all other applicable requirements in § 150.0(k)2.
§ 150.0(k)2I:	**Interior Switches and Controls.** In bathrooms, garages, laundry rooms, and utility rooms, at least one luminaire in each of these spaces must be controlled by an occupant sensor or a vacancy sensor providing automatic-off functionality. If an occupant sensor is installed, it must be initially configured to manual-on operation using the manual control required under Section 150.0(k)2C.
§ 150.0(k)2J:	**Interior Switches and Controls.** Luminaires that are or contain light sources that meet Reference Joint Appendix JA8 requirements for dimming, and that are not controlled by occupancy or vacancy sensors, must have dimming controls.`
§ 150.0(k)2K:	**Interior Switches and Controls.** Under cabinet lighting must be controlled separately from ceiling-installed lighting systems.
§ 150.0(k)3A:	**Residential Outdoor Lighting.** For single-family residential buildings, outdoor lighting permanently mounted to a residential building, or to other buildings on the same lot, must meet the requirement in Item § 150.0(k)3Ai (ON and OFF switch) and the requirements in either § 150.0(k)3Aii (photocell and either a motion sensor or automatic time switch control) or § 150.0(k)3Aiii (astronomical time clock), or an EMCS.
§ 150.0(k)3B:	**Residential Outdoor Lighting.** For low-rise residential buildings with four or more dwelling units, outdoor lighting for private patios, entrances, balconies, and porches; and residential parking lots and carports with less than eight vehicles per site must comply with either § 150.0(k)3A or with the applicable requirements in Sections 110.9, 130.0, 130.2, 130.4, 140.7 and 141.0.
§ 150.0(k)3C:	**Residential Outdoor Lighting.** For low-rise residential buildings with four or more dwelling units, any outdoor lighting for residential parking lots or carports with a total of eight or more vehicles per site and any outdoor lighting not regulated by § 150.0(k)3B or § 150.0(k)3D must comply with the applicable requirements in Sections 110.9, 130.0, 130.2, 130.4, 140.7 and 141.0.
§ 150.0(k)4:	**Internally illuminated address signs.** Internally illuminated address signs must comply with § 140.8; or must consume no more than 5 watts of power as determined according to § 130.0(c).
§ 150.0(k)5:	**Residential Garages for Eight or More Vehicles.** Lighting for residential parking garages for eight or more vehicles must comply with the applicable requirements for nonresidential garages in Sections 110.9, 130.0, 130.1, 130.4, 140.6, and 141.0.
§ 150.0(k)6A:	**Interior Common Areas of Low-rise Multifamily Residential Buildings.** In a low-rise multifamily residential building where the total interior common area in a single building equals 20 percent or less of the floor area, permanently installed lighting for the interior common areas in that building must be comply with Table 150.0-A and be controlled by an occupant sensor.
§ 150.0(k)6B:	**Interior Common Areas of Low-rise Multifamily Residential Buildings.** In a low-rise multifamily residential building where the total interior common area in a single building equals more than 20 percent of the floor area, permanently installed lighting for the interior common areas in that building must: i. Comply with the applicable requirements in Sections 110.9, 130.0, 130.1, 140.6 and 141.0; and ii. Lighting installed in corridors and stairwells must be controlled by occupant sensors that reduce the lighting power in each space by at least 50 percent. The occupant sensors must be capable of turning the light fully on and off from all designed paths of ingress and egress.
Solar Ready Buildings:	
§ 110.10(a)1:	**Single Family Residences.** Single family residences located in subdivisions with 10 or more single family residences and where the application for a tentative subdivision map for the residences has been deemed complete and approved by the enforcement agency, which do not have a photovoltaic system installed, must comply with the requirements of § 110.10(b) through § 110.10(e).
§ 110.10(a)2:	**Low-rise Multifamily Buildings.** Low-rise multi-family buildings that do not have a photovoltaic system installed must comply with the requirements of § 110.10(b) through § 110.10(d).
§ 110.10(b)1:	**Minimum Solar Zone Area.** The solar zone must have a minimum total area as described below. The solar zone must comply with access, pathway, smoke ventilation, and spacing requirements as specified in Title 24, Part 9 or other parts of Title 24 or in any requirements adopted by a local jurisdiction. The solar zone total area must be comprised of areas that have no dimension less than 5 feet and are no less than 80 square feet each for buildings with roof areas less than or equal to 10,000 square feet or no less than 160 square feet each for buildings with roof areas greater than 10,000 square feet. For single family residences, the solar zone must be located on the roof or overhang of the building and have a total area no less than 250 square feet. For low-rise multi-family buildings the solar zone must be located on the roof or overhang of the building, or on the roof or overhang of another structure located within 250 feet of the building, or on covered parking installed with the building project, and have a total area no less than 15 percent of the total roof area of the building excluding any skylight area. The solar zone requirement is applicable to the entire building, including mixed occupancy.`
§ 110.10(b)2:	**Azimuth.** All sections of the solar zone located on steep-sloped roofs must be oriented between 90 degrees and 300 degrees of true north.
§ 110.10(b)3A:	**Shading.** The solar zone must not contain any obstructions, including but not limited to: vents, chimneys, architectural features, and roof mounted equipment.
§ 110.10(b)3B:	**Shading.** Any obstruction located on the roof or any other part of the building that projects above a solar zone must be located at least twice the distance, measured in the horizontal plane, of the height difference between the highest point of the obstruction and the horizontal projection of the nearest point of the solar zone, measured in the vertical plane.`
§ 110.10(b)4:	**Structural Design Loads on Construction Documents.** For areas of the roof designated as a solar zone, the structural design loads for roof dead load and roof live load must be clearly indicated on the construction documents.
§ 110.10(c):	**Interconnection Pathways.** The construction documents must indicate: a location reserved for inverters and metering equipment and a pathway reserved for routing of conduit from the solar zone to the point of interconnection with the electrical service; and for single family residences and central water-heating systems, a pathway reserved for routing plumbing from the solar zone to the water-heating system.
§ 110.10(d):	**Documentation.** A copy of the construction documents or a comparable document indicating the information from § 110.10(b) through § 110.10(c) must be provided to the occupant.
§ 110.10(e)1:	**Main Electrical Service Panel.** The main electrical service panel must have a minimum busbar rating of 200 amps.
§ 110.10(e)2:	**Main Electrical Service Panel.** The main electrical service panel must have a reserved space to allow for the installation of a double pole circuit breaker for a future solar electric installation. The reserved space must be permanently marked as "For Future Solar Electric".

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SURVEYOR

N/A

GENERAL CONTRACTOR

LIC#

LEGEND

(E) TO REMAIN

(E) DEMO / TO BE REMOVED (TBR)

(N) CONSTRUCTION

(E) NOT IN CONTRACT (NIC)

NO.	ISSUE	DATE

PROJECT

CENTRAL
216 CENTRAL AVE. CAPITOLA, CA 95010

SHEET TITLE

MANDATORY MEASURES

SHEET NUMBER

A702

FIREPLACE XTRORDINAIR

SECTION 10 31 16
MANUFACTURED FIREPLACES
Display hidden notes to specifier. (Don't know how? Click Here)

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Manufactured Gas Fireplaces.

1.2 RELATED SECTIONS

A. Section 04 22 00.16 - Surface-Bonded Concrete Unit Masonry.

B. Section 06 10 00 - Rough Carpentry.

C. Section 09 29 00 - Gypsum Board.

D. Section 22 10 00 - Plumbing Piping.

E. Section 26 05 00 - Common Work Results for Electrical

1.3 REFERENCES

A. ANSI Z21.44 - Gas-Fired Gravity and Fan Type Direct Vent Wall Furnaces.

B. ANSI Z21.88 - Vented Gas Fireplace Heaters.

C. Z21.50b - Vented Gas Fireplaces.

D. ANSI Z223.1 - National Fuel Gas Code.

E. CSA 2.22b - Vented Gas Fireplaces.

F. CSA 2.33 - Vented Gas Fireplace Heaters.

G. CAN/ULC S610 - Factory-Built Fireplaces.

H. UL 127 - Standard for Factory-Built Fireplaces.

I. UL 907 - Standard for Fireplace Accessories

J. UL 1482 - Standard for Safety for Solid-Fuel Type Room Heaters.

1.4 SUBMITTALS

A. Submit under provisions of Section 01 30 00 - Administrative Requirements.

B. Product Data: Manufacturer's data sheets on each product to be used, including:
1. Preparation instructions and recommendations.
2. Storage and handling requirements and recommendations.
3. Installation methods.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Store products in manufacturer's unopened packaging until ready for installation.

B. Store products in covered area, well protected from weather.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturer: Fireplace X - a division of Travis Industries; 12521 Harbour Reach Drive, Mukilteo, WA 98275. ASD. Tel. Toll Free: (800) 654-1177. Tel: (425) 609-2500. Fax: (425) 609-2781. Email: request info (stoveinfo@travis-inc.com). Web: www.travisindustries.com.

B. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.

2.2 GAS BURNING MANUFACTURED FIREPLACES

A. General: Travis Industries Fireplace Xtrordinair gas burning manufactured fireplaces.
1. Comply with applicable building codes.
2. Comply with ANSI Z21.88/CSA 2.33 or Z21.50b/CSA 2.22b.
3. WHI listed.

B. Model Bed and Breakfast GSR2: Top or Rear vent, portrait style gas fireplace. Ideal for small tight locations such as bedrooms and baths. No. 98500236.
1. Framing Dimensions: 20-1/4 inches (514 mm) wide by 34-1/4 inches (869 mm) high by 12-3/4 inches (324 mm) deep when installed as a Rear Vent and 13-1/2 inches (335 mm) deep when installed as a Top Vent.
2. Vent: 8 inches (203 mm) outer diameter. Use Simpson Dura-Vent only.
3. Provided Ember Fyre burner.
4. Heater Input: Up to 16,500 BTU/hr with natural gas or propane.
5. Faces, Bed & Breakfast:
   a. Artisan, Charcoal No. 95700169.
6. Interiors:
   a. Brick Beehive No. 98500669.
7. Accessories:
   a. Vent, 21RV No. 98900166.

C. Model 564 Space Saver Clean Face GSR2: Direct Vent. No. 98500251.
1. Framing Dimensions: 38-1/4 inches (972 mm) wide by 36-3/4 inches (934 mm) high by 19-1/8 inches (486 mm) deep.
2. Vent: 8 inches (203 mm) outer diameter. Use Simpson Dura-Vent with horizontal or vertical Duravent terminations only.
3. Provide Two Stage Pan Burner.
4. Heater Input: Up to 20,500 BTU/hr with natural gas or propane.
5. Tile Trim:
   a. Flat, 2 inch, Black No. 95900370.
6. Interior Style:
   a. Fireback - Black Enamel No. 96100203.
7. Accessories:

   a. Flue Adapter, DV No. 98900165.
   b. GS Remote Control No. 99300690 (NG).

PART 3 EXECUTION

3.1 EXAMINATION

A. Do not begin installation until substrates have been properly prepared.

B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

C. Verify proper power supply and fuel source are available.

3.2 PREPARATION

A. Clean surfaces thoroughly prior to installation.

B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

A. Install in accordance with manufacturer's instructions, ANSI Z21.44 and the requirements of authorities having jurisdiction.

B. Use manufacturer's guidelines for minimum clearances to combustibles, walls, and finishes.

C. Anchor all components firmly in position for long life under hard use.

D. Upon completion of installation, visually inspect all exposed surfaces. Touch up scratches and abrasions with touch up paint recommended by the manufacturer; make imperfections invisible to the unaided eye from a distance of 5 feet (1.5 m).

3.4 PROTECTION

A. Protect installed products until completion of project.

B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION

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(N) CONSTRUCTION

(E) NOT IN CONTRACT (NIC)

NO.	ISSUE	DATE

PROJECT

CENTRAL
216 CENTRAL AVE. CAPITOLA, CA 95010

SHEET TITLE

PRODUCT SPECS

SHEET NUMBER

A800

CertainTeed SAINT-GOBAIN

Technical Data Sheet

Landmark®, Landmark® Premium, Landmark® Pro Shingles, Landmark® Pro/Architect 80 (NW Region Only) Shingles

PRODUCT INFORMATION

Landmark shingles reflect the same high manufacturing standards and superior warranty protection as the rest of CertainTeed's line of roofing products. Landmark Premium (and Algae Resistant-AR), Landmark PRO (and AR) and Landmark (and AR) are built with the industry's toughest fiber glass mat base, and their strict dimensional tolerance assures consistency. Complex granule color blends and subtle shadow lines produce a distinctive color selection. Landmark is produced with the unique NailTrak® nailing feature. ***Please see the installation instruction section below for important information regarding NailTrak.***

In the Northwest Region Landmark PRO (AR) is double-branded as Landmark PRO/Architect 80 (AR).

Landmark algae-resistant (AR) shingles are algae-resistant and help protect against dark or black discoloration, sometimes called staining or streaking, caused by blue-green algae. AR shingles are not available in all regions.

Colors: Please refer to the product brochure or CertainTeed website for the colors available in your region.

Limitations: Use on roofs with slopes greater than 2" per foot. Low-slope applications (2:12 to < 4:12) require additional underlayment. In areas where icing along eaves can cause the back-up of water, apply CertainTeed WinterGuard® Waterproofing Shingle Underlayment, or its equivalent, according to application instructions provided with the product and on the shingle package.

Product Composition: Landmark Series shingles are composed of a fiber glass mat base, Ceramic-coated mineral granules are tightly embedded in carefully refined, water-resistant asphalt. Two pieces of the shingle are firmly laminated together in a special, tough asphaltic cement. All Landmark shingles have self-sealing adhesive strips.

Applicable Standards

ASTM D3018 Type I
ASTM D3462
ASTM E108 Class A Fire Resistance
ASTM D3161 Class F Wind Resistance
ASTM D7158 Class H Wind Resistance
UL 790 Class A Fire Resistance
ICC-ES ESR-1389 and ESR-3537
CSA Standard A123.5 (Regional)
Miami-Dade Product Control Approved
Florida Product Approval # FL5444
Meets TDI Windstorm Requirements

Technical Data:

	Landmark (and AR)	Landmark PRO* (and AR)	Landmark Premium (and AR)
Weight/Square (approx.)	219 to 238 lb **	240 to 267 lb **	300 lb
Dimensions (overall)	13 1/4" x 38 3/4"	13 1/4" x 38 3/4"	13 1/4" x 38 3/4"
Shingles/Square (approx.)	66	66	66
Weather Exposure	5 5/8"	5 5/8"	5 5/8"

*Includes Landmark PRO AR/Architect 80
**Dependent on manufacturing location

SECTION 07 31 13

ASPHALT SHINGLES

Display hidden notes to specifier by using "Tools"/"Options"/"View"/"Hidden Text".

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Granule surfaced asphalt shingle roofing.
B. Moisture shedding underlayment, eaves, valley and ridge protection
C. Associated metal flashing

1.2 RELATED SECTIONS

A. Section 06 10 00 – Rough Carpentry: Plywood Roof Sheathing
B. Section 06 15 00– Wood Decking
C. Section 07 26 00 – Vapor Retarders
D. Section 07 13 54 – Sheet Waterproofing.
E. Section _____ -- _____: Attic Space Ventilation
F.Section 07 60 00 – Flashing and Sheet Metal.
G. Section 08 62 00 – Unit Skylights
H. Section _____ - _____: Chimney Flue
I. Section 07 40 00 – Roofing and Siding Panels: Siding and Roofing
J.Section 07 72 53 – Snow Guards

1.3 REFERENCES

A. ASTM A 653/A 653M – Standard Specification for Steel Sheets, Zinc-Coated (Galvanized) or Zinc-Iron-Alloy-Coated (Galvannealed) by the Hot-Dip Process
B. ASTM B 209 – Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate
C. ASTM B 370 – Standard Specification for Copper Sheet and Strip for Building Construction.
D. ASTM D 225 – Standard Specification for Asphalt Shingles (Organic Felt) Surfaced with Mineral Granules.
E. ASTM D 226 – Standard Specification for Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing.
F. ASTM D 1970 – Standard Specification for Self-Adhering Polymer Modified Bituminous Sheet Materials used as Steep Roofing Underlayment for Ice Dam Protection.
G. ASTM D 3018 – Standard Specification for Class A Shingles Surfaced with Mineral Granules.
H. ASTM D 3161 – Standard Test Method for Wind Resistance of Asphalt Shingles (Fan-Induced Method).
I. ASTM D 3462 – Standard Specification for Asphalt Shingles Made from Glass Felt and Surfaced with Mineral Granules.
J. ASTM D 4586 – Standard Specification for Asphalt Roof Cement, Asbestos-Free.
K. ASTM D-4869 – Standard Specification for Asphalt-Saturated Organic Felt Shingle Underlayment Used in Roofing.
L. ASTM D 6757 – Standard Specification for Inorganic Underlayment for Use

with Steep Slope Roofing Products.
M. ASTM D7158 – Standard Test Method for Wind Resistance of Asphalt Shingles (Uplift Force/Uplift Resistance Method)
N. ASTM E 108 – Standard Test Methods for Fire Test of Roof Coverings
O. ASTM G 21 – Determining Resistance of Synthetic Polymers to Fungi

1.4 1.4 SUBMITTALS

A. Submit under provisions of Section 01 30 00.
B. Product Data: Provide manufacturer's printed product information indicating material characteristics, performance criteria and product limitations.
C. Manufacturer's Installation Instructions: Provide published instructions that indicate preparation required and installation procedures.
D. Certificate of Compliance: Provide Certificate of Compliance from an independent laboratory indicating that the asphalt fiberglass shingles made in normal production meet or exceed the requirements of the following:

1. ASTM E 108/UL 790 Class A Fire Resistance
2. ASTM D 3161/D 7158/UL 997 Wind Resistance.
3. ASTM D 3462

E. Shop Drawings: Indicate specially configured metal flashing, jointing methods and locations, fastening methods and locations and installation details as required by project conditions indicated.

1.5 QUALITY ASSURANCE

A. Installer Minimum Qualifications: Installer shall be licensed or otherwise authorized by all federal, state and local authorities to install all products specified in this section. Installer shall perform work in accordance with NRCA Roofing and Waterproofing Manual. Work shall be acceptable to the asphalt shingle manufacturer.

B. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
1. Finish areas designated by architect
2. Do not proceed with remaining work until workmanship, color and pattern are approved by Architect.
3. Rework Mock-Up area as required to produce acceptable work.

C. Pre-Installation Meeting – Conduct a pre-installation meeting at the site prior to commencing work of this section: Require attendance of entities directly concerned with roof installation. Agenda will include:
1. Installation methods and manufacturer's requirements and recommendations
2. Safety procedures
3. Coordination with installation of other work
4. Availability of roofing materials.
5. Extra Material – Furnish under provision of section 01 70 00
6. Provide _____ square feet (____ square m) of extra shingles of each color specified.
7. Preparation and approval of substrate and penetrations through roof.
8. Other items related to successful execution of work.
9. Product Compliance – Verify that products conform with all requirements specified by local Authority Having Jurisdiction (AHJ).

D. Maintain one copy of manufacturer's application instructions on the project site.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Store Products in manufacturer's unopened packaging until ready for installation.
B. Store and dispose of solvent-based materials and materials used with solvent based materials in accordance with requirements of Authorities Having Jurisdiction.
C. Deliver shingles to site in manufacturer's unopened labeled bundles. Promptly verify quantities and conditions. Immediately remove damaged products from site.

1.7 1.7 PROJECT ENVIRONMENTAL CONDITIONS

A. Anticipate and observe environmental conditions (temperature, humidity and moisture) within limits recommended by manufacturer for optimum results. Do not install products under environment conditions outside manufacturer's limits.
B. Take special care when applying WinterGuard Waterproofing Shingle Underlayment and shingles when ambient or wind chill temperature is below 45 degrees F (7 degrees C). Tack WinterGuard in place if it does not adhere immediately to the deck.

1.8 WARRANTY

A. Manufacturer's Warranty: Furnish shingle manufacturer's warranty for the product listed below:
1. CertainTeed **Landmark**: Lifetime limited warranty.
B. Warranty Supplement: Provide manufacturer's supplemental warranty (CertainTeed's SureStart or SureStart PLUS) to cover labor and materials in the event of a material defect for the following period after completion of application of shingles:
1. First Ten Years (**Landmark** Shingles)
2. No SureStart or SureStart PLUS for any shingle applied to inadequately ventilated roof deck.
C. SureStart PLUS Extended Warranty Protection (can only be provided by a CertainTeed Credentialed Contractor): **Landmark** shingles carry:
1. 3-Star Coverage (20 years) material and labor costs for repair or replacement and tear off.
2. 4-Star Coverage (50 years*) material and labor costs for repair or replacement, tear off and disposal costs.
25 years for premises not used by individual homeowners
3. 5-Star Coverage (50 years**) material and labor costs for repair or replacement, tear off and disposal costs, and workmanship defects (25 years).
***30 years for premises not used by individual homeowners*
D. Warranty Transferability Clause: Make available to Owner shingle manufacturer's standard option for transferring warranty to a new owner.
E. Refer to manufacturer's warranty for adjustments for commercial applications.
F. Provide Upgraded Wind Warranty from 110 to 130 mph on L AR shingles for first 15 years by complying with all manufacturers' conditions and instructions (see section 2.2-B below).

PART 2 PRODUCTS

2.1 MANUFACTURERS

Acceptable Manufacturer: Provide products manufactured by the CertainTeed Corporation. Contact Sales Support Group, P.O. Box 860, Valley Forge, PA 19482, Toll Free 800-233-8990

A. Substitutions: Not permitted

B. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00

2.2 ASPHALT FIBERGLASS SHINGLES

A. CertainTeed **Landmark**: Conforming to ASTM D 3018 Type I – Self-Sealing, UL Certification of ASTM D 3462, ASTM D 3161/UL997 110-mph Wind Resistance and UL Class A Fire Resistance, glass fiber mat base, ceramically colored/UV resistant mineral surface granules across entire face of shingle; algae-resistance; two piece laminate shingle.

B Wind warranty upgrade – These products are warranted to resist blow-off due to wind velocities, including gusts, up to a maximum of 130 miles per hour during the first fifteen (15) years, provided all of the following conditions are met:
1. CertainTeed shingles are not applied over existing roof shingles (roof-covers are not permitted).
2. CertainTeed specified corresponding hip and ridge accessory products are installed as cap shingles (Shadow Ridge™, Cedar Crest™, Mountain Ridge™ (& IR).
3. CertainTeed specified corresponding starter shingles are installed along the roof eaves and rakes (Swiftstart™ and High-Performance Starter). (Note: In Florida, CertainTeed will waive the requirement of applying starter shingles along the roof rake if all of the following conditions are met: The applicable building code requires that asphalt roof shingles be embedded in an 8-inch-wide bed of asphalt roofing cement applied along the roof rake edges. And, the shingles are installed and embedded in an 8-inch-wide bed of asphalt roofing cement along the roof rake edges in accordance with the code.)

C. Weight: 229 / 240 pounds per square (dependent on manufacturing location) (100 square feet).

NOTE Retain one of the following two sub-paragraphs depending on color selection method.

D. Color: _____
E. Color: As selected by Architect from manufacturer's standards

2.3 SHEET MATERIALS

Note Delete paragraph below and installation instructions in Part 3 if climatic conditions are such that ice dam protection is not required.

A. Eaves Protection: CertainTeed "WinterGuard"; ASTM D1970 sheet barrier of self-adhering rubberized asphalt membrane shingle underlayment having internal reinforcement and "split" back plastic release film; provide material warranty equal in duration to that of shingles being applied.

B. Asphalt Roofing Cement: ASTM D 4586, Type I or II

2.6 FLASHING FABRICATION

A. Form flashing to profiles indicated on Drawings and to protect roofing materials from physical damage and shed water.

C. Form sections square and accurate to profile, in maximum possible lengths, free from distortion or defects detrimental to appearance or performance.

2.7 ATTIC VENTILATION

Note: Delete any attic ventilation products from the listing below that are not required by architect / specifier.

A. CertainTeed Rolled Ridge Vent (28 lf) Filtered or Unfiltered

1 Shingle over low profile ridge vent designed with external baffle to deflect wind and weather over the vent. The external baffle creates low pressure over the vent openings to "pull" air from the attic.
2 Internal weather filter helps protect the attic from wind driven rain, snow, dust and insects.
3 Each vent will provide 12 sq inches of net free area per lineal foot.
4 Accommodates roof pitches of 3/12 to 20/12.
5 The vent carries an approval report with the Texas Department of Insurance
6 Limited Lifetime Warranty and 5-year Sure Start Protection.

B. CertainTeed Ridge Vent (4 lf) Filtered or Unfiltered, 9 in and 12 in. width.

1 Shingle over ridge vent designed with an external baffle to deflect wind and weather over the vent. The external baffle creates low pressure over the vent openings to "pull" air from the attic.
2 Internal weather filter helps protect the attic from wind driven rain, snow, dust and insects.
3 12" vent provides 18 sq inches of net free area per linear foot; 9" vent provides 16 sq inches of net free area per linear foot.
4 CertainTeed Ridge Vent is pre-formed to a 4/12 pitch, and fits pitches from 3/12 to 18/12.
5 Limited Lifetime Warranty and 5-Year SureStart™ Protection.

C. CertainTeed Intake Vent (4 lf)

1 Designed for homes with little or no intake ventilation in the soffit area.
2 Each vent has 9 sq inches of net free area per linear foot.
3 Minimum 3/12 roof pitch with no maximum.
4 Lifetime Limited Warranty; 5-Year SureStart™ Protection.

1. EXECUTION

3.1 EXAMINATION

A. Verify existing site conditions under provisions of Section 01 70 00.

B. Verify that roof penetrations and plumbing stacks are in place and flashed to deck surfaces.

C. Verify deck surfaces are dry and free of ridges, warps or voids.

3.2 ROOF DECK PREPARATION

A. Follow shingle manufacturer's recommendations for acceptable roof deck material.

B. Broom clean deck surfaces under eave protection and underlayment prior to their application.

3.3 INSTALLATION – EAVE ICE DAM PROTECTION

A. Place eave edge and gable metal edge flashing tight with fascia boards. Weather-lap joints 2 inches (50mm). Secure flange with nails spaced 8 inches (200 mm) on center.

B. Apply CertainTeed "WinterGuard" Waterproofing Shingle Underlayment as eave protection in accordance with manufacturer's instructions.

NOTE Change dimensions below to 48 inches (1220 mm) or greater for low slope roofs or severe climatic conditions.

C. Extend eave protection membrane minimum 24 inches (640 mm) up slope beyond interior face of exterior wall.

3.4 INSTALLATION – PROTECTIVE UNDERLAYMENT

NOTE Delete first three paragraphs below if all roof slopes are greater than 4:12 Otherwise, select either complete WinterGuard underlayment, Roofers Select, Diamond Deck or D4869 underlayment in combination with eave ice damn protection.

A. Roof Slopes between 2:12 and 4:12: Apply one layer of "WinterGuard" over all areas not protected by WinterGuard at eaves, with end and edges weather lapped minimum of 19 inches (480 mm) Stagger end laps each consecutive layer. Nail in place

B. Roof Slopes between 2:12 and 4:12: Apply two layers of Roofer's Select or D4869 underlayment over areas not protected my WinterGuard at eaves, with ends and edges weather-lapped 19 inches (480 mm) .Stagger end laps each consecutive layer. Nail in place.

C. Roof Slopes between 2:12 and 4:12 – Use of Diamond Deck Synthetic Roofing Underlayment. Follow manufacturer's printed instructions for low slope application of this product. Do not use staples on this product.

D. Roof Slopes 4:12 or Greater: Install one layer of asphalt felt shingle underlayment perpendicular to slope of roof and lap minimum 4 inches (100 mm) over eave protection.

E. Weather-lap and seal waterlight with asphalt roofing cement items projecting through or mounted on roof. Avoid contact or solvent-based cements with WinterGuard and Diamond Deck

3.5 INSTALLATION – VALLEY PROTECTION

A. For "closed-cut," "woven," and "open" valleys, first place one ply of WinterGuard, minimum 36 inches (910 mm) wide, centered over valleys. Lap joints minimum of 6 inches (152 mm) Follow instructions of shingle and waterproofing membrane manufacturer.

3.6 INSTALLATON – METAL FLASHING

A. Weather-lap joints minimum 2 inches (50 mm).

B. Seal work projecting through or mounted on roof with asphalt roofing cement and make weather tight.

3.7 INSTALLATION – ASPHALT SHINGLES

A. Install shingles in accordance with manufacturer's instructions for product type and application specified.

3.8 FIELD QUALITY CONTROL

A. Field inspection will be performed under provisions of Section 01 45 16.

B. Visual inspection of the work will be provided by Owner. If conditions are unacceptable, Owner will notify the Architect.

3.9 PROTECTION OF FINISHED WORK

A. Protect finished work under provisions of Section 01 76 00.

B. Do not permit traffic over finished roof surface.

END OF SECTION

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SURVEYOR

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LEGEND

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(E) DEMO / TO BE REMOVED (TBR)

(N) CONSTRUCTION

(E) NOT IN CONTRACT (NIC)

NO.	ISSUE	DATE

PROJECT

CENTRAL
216 CENTRAL AVE. CAPITOLA, CA 95010

SHEET TITLE

ROOF SPECIFICATION

SHEET NUMBER

A801

Trees

1 Malus domestica 'Gala'
2 Persea americana 'Gwen'
3 Accacia cognata
4 Brugmansia x can
5 Brachychiton populensis
6 Cercis candensis 'F.P.'
7 Cornus capitata 'Mountain Moon'
8 Crataegus Lae.
9 Eucalyptus cinerea
10 Euonymas europ.
11 Fagus sylvan. 'Purple fountain'
12 Jacaranda mimosifolia
13 Leptosperum 'Dark Shadows'
14 Magnolia grandifolia
15 Magnolia 'Butterflies'
16 Melaleuaca sp.
17 Paulownia tomentosa
18 Prunus salicina 'Santa Rosa'
19 Prunus salicina 'Shiro'
20 Persimmon fuyu
21 Pyrus calleryana
22 Pinus sp.

Shrubs

1 Azellia sp
2 Banksia sp.
3 Cantua bux.
4 Cestrum auran.
5 Citrus calamondin
6 Citrus cara cara
7 Citrus meyer lemon
8 Citrus trovolia
9 Fuchsia sp
10 Fuchsia paniculata
11 Garrya elliptica
12 Guava chilienese
13 Hebe sp
14 Hypernicum fon. 'Hidicote'
15 Leucodendron sp
16 Leucaperum sp
17 Hibiscus syr.
18 Pittosporum ovalifolia
19 Paeonia Itoh sp
20 Pittosporum crass. var
21 Rosa sp.
22 Senecio past.
23 Sarcococca con.
24 Spiraea x van.
25 Viburnium opulus
26 Heptacodium miconioides

Small Plants

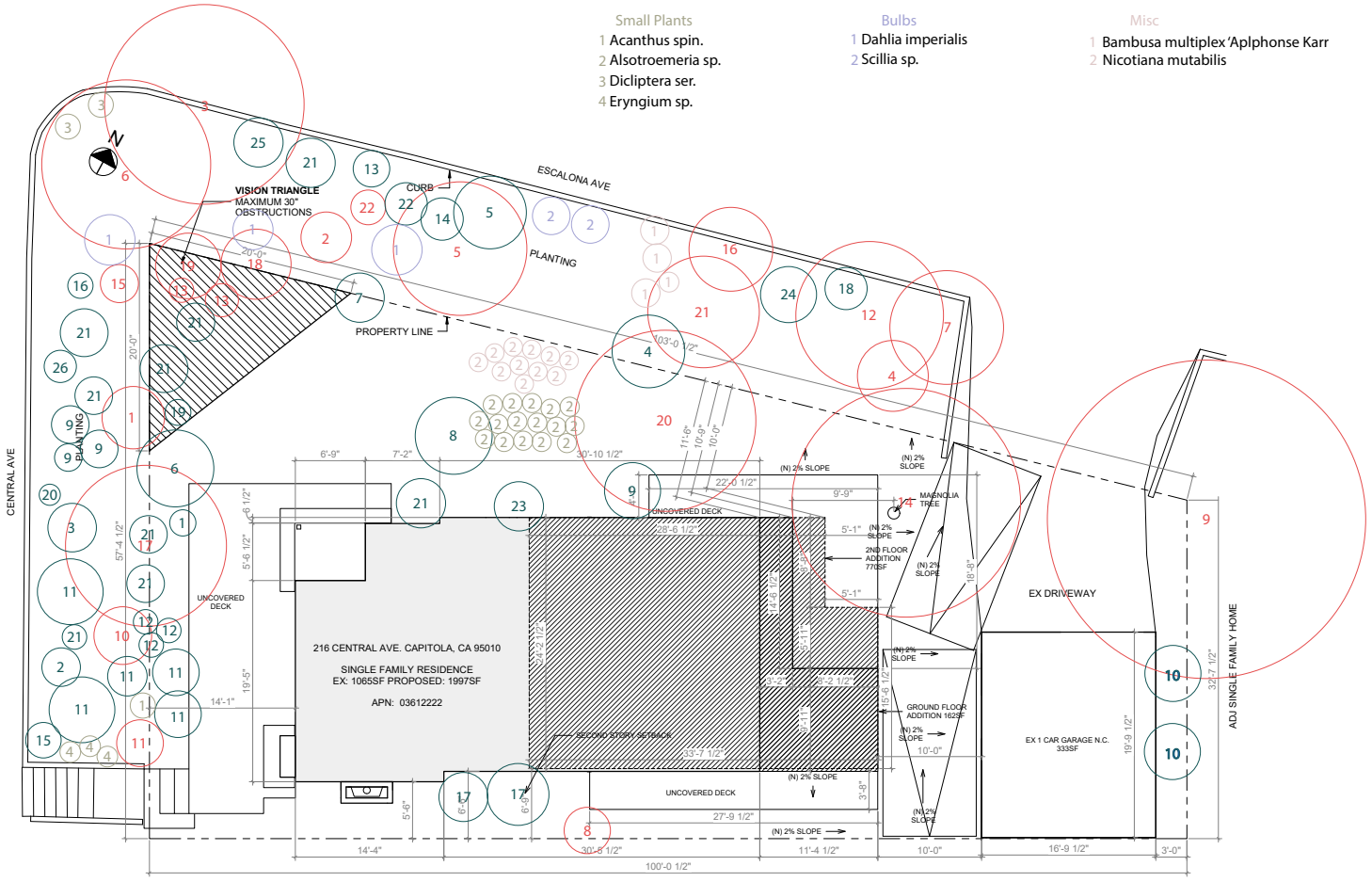
1 Acanthus spin.
2 Alsotroemeria sp.
3 Dicliptera ser.
4 Eryngium sp.

Bulbs

1 Dahlia imperialis
2 Scillia sp.

Misc

1 Bambusa multiplex 'Aplphonse Karr
2 Nicotiana mutabilis



1 SITE PLAN NEW
3/16" = 1'-0"

gigante AG

R. SCOTT MITCHELL

176B N SAN FERNANDO ROAD
LOS ANGELES, CA 90031

T 323 843 2201
F 323 276 0988

CLIENT

LYNN JACKSON

OWNER

LYNN JACKSON
216 CENTRAL AVE. CAPITOLA, CA 95010

ENGINEER

STREETER GROUP, INC.
2571 Main Street, Suite C,
Soquel, CA 95073 (831) 477-1781

SURVEYOR

N/A

GENERAL CONTRACTOR

LIC#

LEGEND

(E) TO REMAIN

(E) DEMO / TO BE REMOVED (TBR)

(N) CONSTRUCTION

(E) NOT IN CONTRACT (NIC)

NO.	ISSUE	DATE

PROJECT

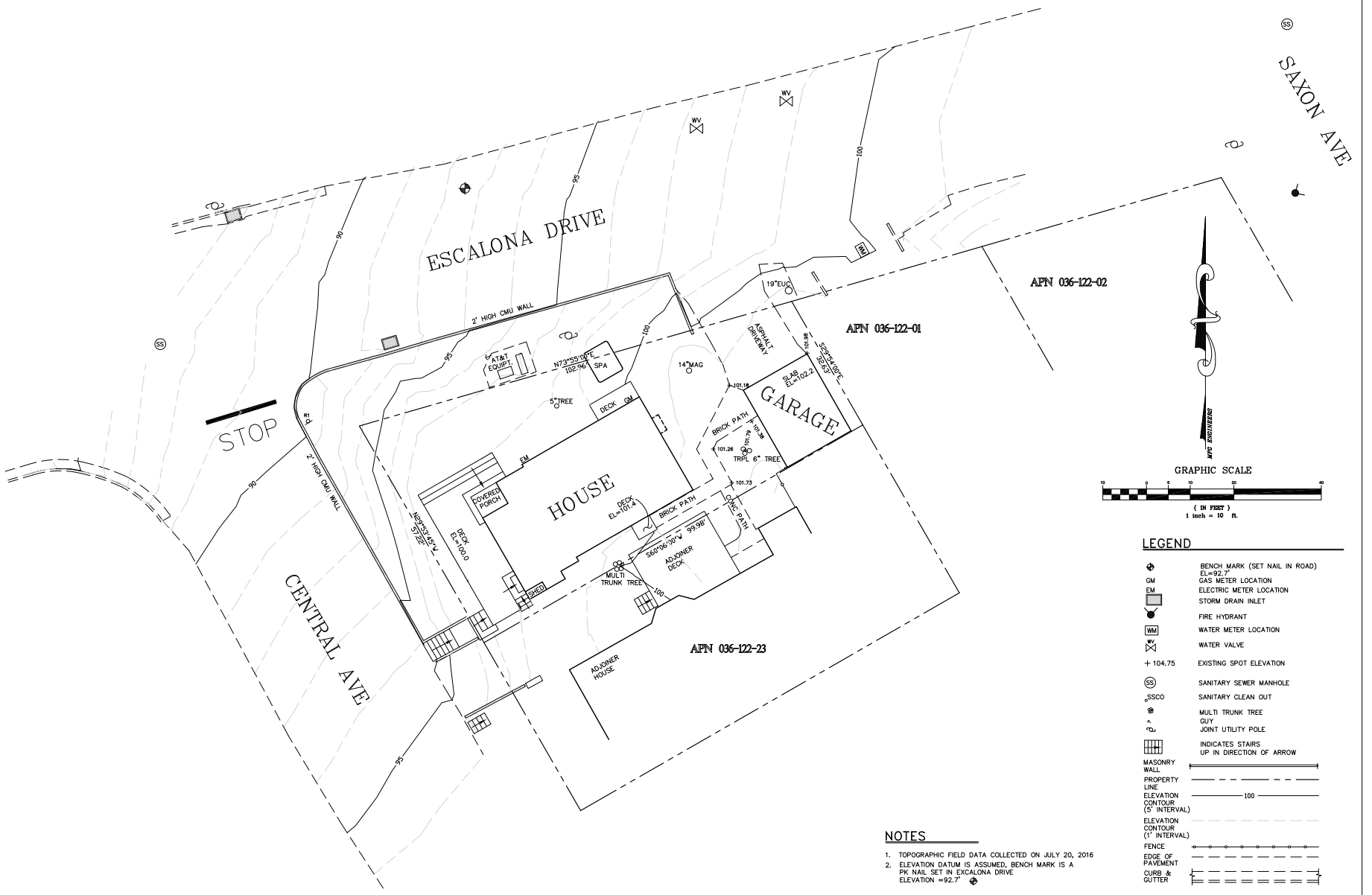
CENTRAL
216 CENTRAL AVE. CAPITOLA, CA 95010

SHEET TITLE

LANDSCAPE PLAN

SHEET NUMBER

L100



LEGEND

- BENCH MARK (SET NAIL IN ROAD) EL=92.7'
- GM — GAS METER LOCATION
- EM — ELECTRIC METER LOCATION
- STORM DRAIN INLET
- FIRE HYDRANT
- WM — WATER METER LOCATION
- WV — WATER VALVE
- + 104.75 — EXISTING SPOT ELEVATION
- SS — SANITARY SEWER MANHOLE
- SSCO — SANITARY CLEAN OUT
- MULTI TRUNK TREE
- GUY
- JOINT UTILITY POLE
- INDICATES STAIRS UP IN DIRECTION OF ARROW
- MASONRY WALL
- PROPERTY LINE
- ELEVATION CONTOUR (5' INTERVAL) — 100
- ELEVATION CONTOUR (1' INTERVAL)
- FENCE
- EDGE OF PAVEMENT
- CURB & GUTTER

NOTES

1. TOPOGRAPHIC FIELD DATA COLLECTED ON JULY 20, 2016
2. ELEVATION DATUM IS ASSUMED, BENCH MARK IS A PK NAIL SET IN EXCALONA DRIVE ELEVATION =92.7'

FOR REDUCED PLANS ORIGINAL SCALE IN INCHES 0 1 2 3

SHEET NAME:

DRAWING NAME:

BY	REVISION	DATE

PROJECT ENGINEER
MFG Engineers, Inc
PO BOX 1914
APTOS, CA. 95001
CEL (831) 763-1661
(831) 601-9519

APN 036-122-22
TOPOGRAPHIC MAP
216 CENTRAL AV, CAPITOLA, CA

DRAWN: MFG
CHECKED: MFG
DATE: 7/2016
SCALE: 1"=10'
JOB NO.
SHEET 1 OF 1