

2018 IECC ENERGY CONSERVATION REQUIREMENTS

CLIMATE ZONE 2B 1000-1499
WINDOW AREA IS LESS THAN 10% OF TOTAL WALL AREA

USE PRESCRIPTIVE REQUIREMENTS 2018 IRC CHAPTER 12, ENERGY CONSERVATION

ELEMENT	REQUIRED	PROPOSED
WALL INSULATION	R-13	R-24
ROOF INSULATION	R-38	R-38
FLOOR INSULATION (SLAB ON GRADE)	R-0	R-0
WINDOWS		
MAX. U FACTOR	0.40 MAX.	< 0.40
MAX SHGC	0.25 MAX.	< 0.25
MAX AIR INFILTRATION	0.3 CFM / SF	< 0.3 CFM / SF
DOORS		
MAX. U FACTOR	0.40 MAX.	< 0.40
MAX. AIR INFILTRATION	0.5 CFM / SF	< 0.5 CFM / SF
HEAT PUMP MIN SEER		
SPLIT SYSTEM	14.0 SEER	14.0 SEER MIN.
PACKAGE SYSTEM	14.0 SEER	14.0 SEER MIN.
DUCTWORK IN ATTICS MIN. R VALUE	R-8	R-8

3.7 ENERGY CONSERVATION

3.7.1 THIS RESIDENCE SHALL BE CONSTRUCTED TO MEET THE REQUIREMENTS OF THE 2018 INTERNATIONAL ENERGY CONSERVATION CODE, (IECC), INCLUDING BUT NOT LIMITED TO THE FOLLOWING:

3.7.2 CAULKING, SEALANTS AND GASKETING.
ALL JOINTS, SEAMS, PENETRATIONS (SITE-BUILT WINDOWS, DOORS AND SKY-LIGHTS), OPENINGS BETWEEN WINDOW AND DOOR ASSEMBLIES AND THEIR RESPECTIVE JAMBS AND FRAMING, AND OTHER SOURCES OF AIR LEAKAGE (INFILTRATION AND EXFILTRATION) THROUGH THE BUILDING ENVELOPE SHALL BE CAULKED, GASKETED, WEATHERSTRIPPED, WRAPPED OR OTHERWISE SEALED TO LIMIT UNCONTROLLED AIR MOVEMENT.

3.7.3 MECHANICAL EQUIPMENT SHALL CONFORM TO SECTION 403 OF THE IECC

3.7.4 WATER HEATING EQUIPMENT AND APPLIANCES SHALL MEET THE REQUIREMENTS OF IECC SECTION 403

DESIGN CRITERIA

RESIDENTIAL CODES	CITY OF MESA	
BUILDING CODE	2018	INTERNATIONAL RESIDENTIAL CODE
ELECTRICAL CODE	2017	NATIONAL ELECTRICAL CODE
ENERGY CONSERVATION CODE	2018	INTERNATIONAL ENERGY CONSERVATION CODE

GROUND SNOW LOAD	BASIC WIND SPEED	EXPOSURE CATEGORY	SEISMIC DESIGN CATEGORY	CLIMATE ZONE
0	90	B	B	2-B

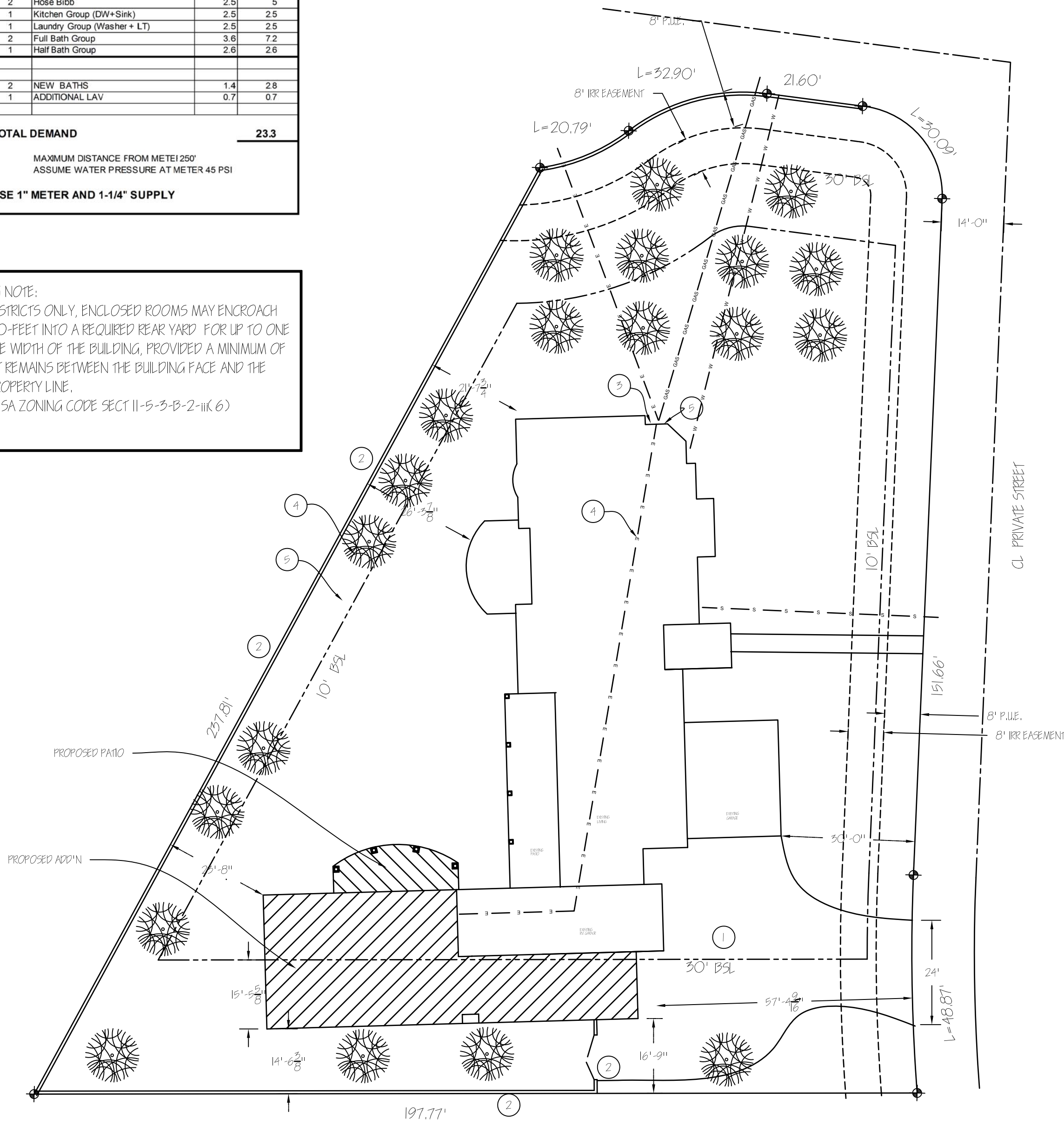
OCCUPANCY	R-3	CONSTRUCTION TYPE	V-B
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DESIGN LOADS	LIVE LOADS	DEAD LOADS
ROOF LOADS (TILE)	20 PSF	24 PSF
ROOF LOADS (SHINGLES OR BUILT UP)	20 PSF	20 PSF
FLOOR LOADS	40 PSF	15 PSF

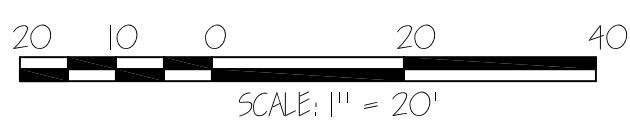
NO SITE SPECIFIC SOILS REPORT PROVIDED TO DESIGNER BY OWNER OR BUILDER. FOUNDATION DESIGN ASSUMES 1500 PSF ALLOWABLE SOIL BEARING STRESS ON UNDISTURBED NATURAL SOIL (NOT FILL) AT A MINIMUM 18" BELOW EXTERIOR FINISH GRADE. DESIGNER HAS NO KNOWLEDGE OF AND THEREFORE ASSUMES NO RESPONSIBILITY FOR SOIL CONDITIONS AND ABILITY OF SITE SOILS TO SUPPORT STRUCTURE BEYOND THE ASSUMED ALLOWABLE SOIL BEARING STRESS ONLY. DESIGNER ASSUMES NO RESPONSIBILITY FOR CRACKED FOUNDATIONS, SLABS, STUCCO, ETC. DUE TO UNKNOWN SOIL CONDITIONS WHEN NO SPECIFIC SOILS REPORT IS MADE AVAILABLE TO DESIGNER PRIOR TO FOUNDATION DESIGN.

WATER METER CALCULATION			
FIXTURES		FIXTURE	TOTAL DEMAND
No. each			
EXISTING			
2	Hose Bibb	2.5	5
1	Kitchen Group (Dish-Sink)	2.5	2.5
1	Laundry Group (Washer + Lt)	2.5	2.5
2	Full Bath Group	3.6	7.2
1	Half Bath Group	2.6	2.6
NEW			
2	NEW BATHS	1.4	2.8
1	ADDITIONAL LAV	0.7	0.7
TOTAL DEMAND			23.3
MAXIMUM DISTANCE FROM METER 125'			
ASSUME WATER PRESSURE AT METER 45 PSI			
USE 1" METER AND 1-1/4" SUPPLY			

ZONING NOTE:
IN RS DISTRICTS ONLY, ENCLOSED ROOMS MAY ENCR OACH UP TO 10- FEET INTO A REQUIRED REAR YARD FOR UP TO ONE HALF THE WIDTH OF THE BUILDING, PROVIDED A MINIMUM OF 10- FEET REMAINS BETWEEN THE BUILDING FACE AND THE REAR PROPERTY LINE.
MESA ZONING CODE SECT 11-5-3-B-2-11(K.6)



SITE PLAN



KEYED SITE NOTES:

1. CONCRETE DRIVE
2. 6" HIGH CMU WALL
3. EXISTING GAS METER.
4. NEW 2" Ø PVC CONDUIT THRU ATTIC W/ (3) #5 AWG THHN CU CONDUCTORS AND (1) #8 AWG CU BOND WIRE
5. NEW 400 AMP SES TO REPLACE EXISTING 200 AMP SES

THIS RESIDENCE SHALL MEET THE CITY OF MESA
NOISE ATTENUATION STIPULATIONS.

1. PROVIDE EXTERIOR WALL INSULATION EQUAL TO A VALUE OF R-19 OR GREATER WHERE ADJACENT TO LIVING AREAS.
2. PROVIDE CEILING INSULATION EQUAL TO A VALUE OF R-30, OR GREATER OVER LIVABLE AREAS.
3. ALL EXTERIOR DOORS EXITING FROM LIVABLE AREAS SHALL BE SOLID CORE OR INSULATED, WITH WEATHER TIGHT GASKETS AND THRESHOLDS OR SEALED GLASS.
4. ALL EXTERIOR WINDOWS ADJACENT TO LIVABLE AREAS SHALL BE DOUBLE GLAZED, (DUAL PANE).
5. SOLE PLATES OF ALL EXTERIOR WALLS ADJACENT TO LIVABLE AREAS SHALL BE CAULKED OR SEALED AT THE FLOOR LINE.

NOTE:
OWNER OR CONTRACTOR SHALL VERIFY UTILITY TAP LOCATIONS WITH THE UTILITY COMPANY PRIOR TO EXCAVATING

Contact Arizona 811 at least two full working days before you begin excavation



Call 811 or click Arizona811.com

PROJECT DATA

OWNER: KRISTEN KETTERSON
OWNERS ADDRESS: 4040 E MCLELLAN #18 MESA AZ
PROJECT ADDRESS: 4040 E MCLELLAN #18 MESA, AZ
PROJECT LEGAL: LOT 18 LOS ESTADOS
PARCEL NO.: 141-29-051
ZONING: RS-35 MESA

AREA TABULATION

	EXISTING	PROPOSED / FINAL CHANGES	
LIVING AREA	3498	0	3498
MAIN FLOOR	3498	0	3498
GARAGE	546	0	546
RV GARAGE	690		690
COVERED PATIO 1	248		248
COVERED PATIO 2	540	0	540
ENTRY PORCH	150	0	150
NEW ADDITION		1960	1960
NEW PATIO		251	251
TOTAL UNDER ROOF	5672		7883
ADDITION			1990
TOTAL FOOTPRINT	5672		7883
WALKS AND DRIVES			2588
LOT AREA	30555		30555
BUILDING COVERAGE			25.80%
LOT COVERAGE			34.27%
MAXIMUM BUILDING COVERAGE ALLOWED			35 %
MAXIMUM LOT COVERAGE ALLOWED			50 %

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REVISIONS

1/ 23/ 23

PROJECT ADDRESS

4040 E MCLELLAN #18

MESA, AZ

A NEW ADDITION

FOR:

KRISTEN KETTERSON

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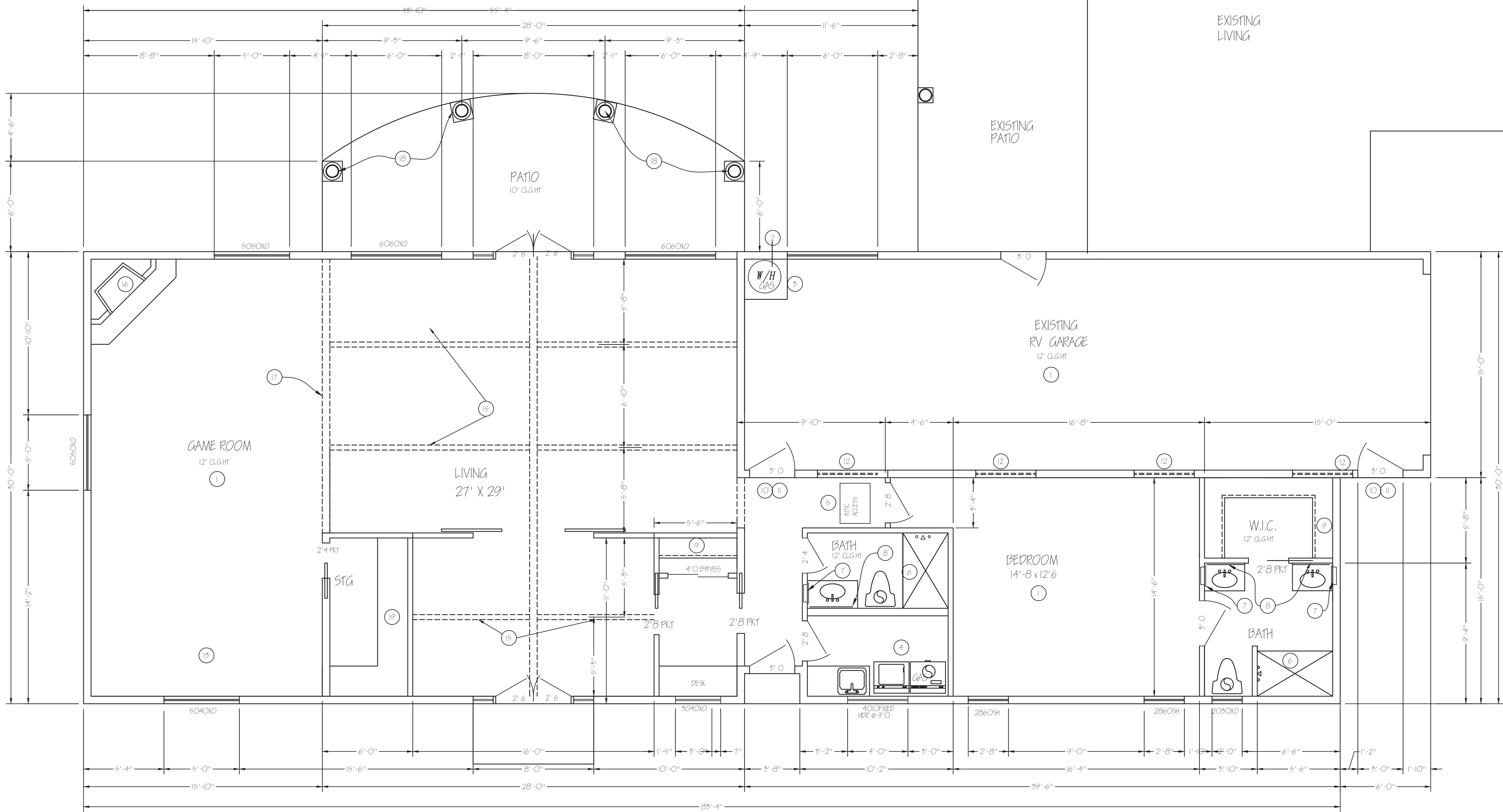
DIMENSION 4 DESIGN AND CONSULTING, INC.

(480) 649-1346 EMAIL - D4D@CCK.NET

SHEET

C

OF SHEETS



NOTE: THE ARCHITECTURAL DESIGN, EXTERIOR MATERIALS AND COLORS, ROOF PITCH AND STYLE, TYPE OF WINDOWS AND TRIM DETAILS SHALL BE SUBSTANTIALLY THE SAME AS AND COMPATIBLE WITH THE PRIMARY DWELLING UNIT.

FLOOR PLAN

SCALE 1/4" = 1'

- KEYED NOTES
- 1/2" DRYWALL CEILING AND WALLS
 - 3/4" COPPER TEMPERATURE AND PRESSURE RELIEF LINE TO EXTERIOR TERMINATING IN A DOWNWARD DIRECTION, NOT MORE THAN 6" ABOVE GRADE
 - 8" HIGH PLATFORM AT WATER HEATER. WATER HEATER SHALL BE INSTALLED IN A GALV METAL PAN WITH A SECONDARY DRAIN TO THE EXTERIOR
 - VENT DRYER THROUGH WALL
 - 22" X 32" SCUTLE HOLE
 - CERAMIC TILE SHOWER TO MIN 6" AFF
 - MEDICINE CABINET 14"X24" R.O.
 - 1/4" PLATE GLASS MIRROR
 - ROD AND SHELF
 - CUT INTO EXISTING GARAGE WALL NEW OPENING W/ NEW (2) 2X6 D.F. #2 HEADERS
 - NEW 1-3/4" SOLIC CORE DOOR W/ SELF CLOSER
 - REMOVE EXISTING GARAGE WINDOWS AND FRAME IN OPENINGS W/ 1/ 2" DRYWALL EA SIDE
 - NEW KITCHEN CABINETS
 - N/A
 - 6X12 R.S. D.F. #2 NON-STRUCTURAL BEAMS
 - FACTORY BUILT GAS FIREPLACE
 - WOOD STRUCTURAL BEAM PER FRAMING PLAN
 - PRECAST CONCRETE COLUMN TO MATCH EXISTING COLUMNS
 - SHELVES- VERIFY LAYOUT W/ OWNER

REVISIONS	

PROJECT ADDRESS
4040 E MCLELLAN #18
MESA, AZ

A NEW CASITA ADDITION
FOR:
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