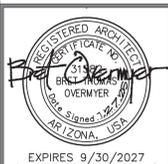


# Sivarajan Residence

7899 East Mary Sharon Drive  
Scottsdale, Arizona 85266



DATE	11/26/2024
12/2/25 - REVIEW   COMMENTS	



## GENERAL NOTES

### CITY OF SCOTTSDALE GENERAL NOTES

- \*DOORS AND WINDOWS SHALL BE SEPARATED FROM THE SWIMMING POOL/SPA BY AN APPROVED POOL BARRIER. IFSG 305.4
- \*LUMING FIXTURES SHALL COMPLY WITH THE FOLLOWING CONSERVATION REQUIREMENTS. LAVATORY FAUCETS: 1.5 GAL/MINUTE, SHOWER HEADS: 2.0 GAL/MINUTE, KITCHEN FAUCET: 1.8 GAL/MINUTE, WATER CLOSETS: 1.28 GAL/FLUSH (TABLE F209.2 AMENDED).
- \*A DEMAND-CONTROLLED HOT WATER CIRCULATION SYSTEM SHALL BE PROVIDED IN ACCORDANCE WITH SECTION N103.5.1.1 AMENDED.
- \*COOL/LIGHT REFLECTIVE COATED ROOFS. ROOF SOLAR REFLECTANCE AND THERMAL EMITTANCE FOR ROOF SLOPES LESS THAN 2:12. THREE-YEAR-AGED SOLAR REFLECTANCE INDEX (SRI) OF 64, THREE-YEAR-AGED SOLAR REFLECTANCE OF 0.55 AND A THREE-YEAR AGED THERMAL EMITTANCE OF 0.75 OVER CONDITIONED AND NON-CONDITIONED SPACES. N102.6 AMENDED.
- \*THE BUILDING THERMAL ENVELOPE SHALL COMPLY WITH CLIMATE ZONE 2. ENERGY COMPLIANCE SHALL BE DEMONSTRATED BY UA TRADE-OFF (RESHECK) OR PERFORMANCE (REMRATE, ERI, HERS) COMPLIANCE PATH OR BY THE FOLLOWING PRESCRIPTIVE VALUES (TABLE N102.1.3). PRESCRIPTIVE MINIMUM R-VALUES: (\*CEILING=R-49) / (WALLS=R-13). PRESCRIPTIVE MAXIMUM WINDOW FENESTRATION VALUES: (U-FACTOR=0.40) / (SHGC=0.55).
- \*EXTERIOR LIGHTING OVER 30 WATTS SHALL INCLUDE AN AUTOMATIC SHUT-OFF. (N104.3).
- \*ALL PERMANENTLY INSTALLED LIGHTING FIXTURES SHALL CONTAIN ONLY HIGH-EFFICACY LAMPS. (N104.1).
- \*ALL PERMANENTLY INSTALLED INTERIOR LIGHTING FIXTURES SHALL BE CONTROLLED WITH EITHER A DIMMER, AN OCCUPANT SENSOR CONTROL, OR OTHER CONTROL, SUCH AS AN AUTOMATIC TIMER SHUT-OFF SWITCH. EXCEPTIONS INCLUDE BATHROOMS AND HALLWAYS. (N104.2).
- \*E3606.5 SURGE PROTECTION. ALL ELECTRICAL SERVICES SUPPLYING ONE- AND TWO-FAMILY DWELLING UNITS SHALL BE PROVIDED WITH A SURGE PROTECTIVE DEVICE (SPD) INSTALLED IN ACCORDANCE WITH SECTIONS E3606.5.1 THROUGH E3606.5.3.
- \*ELECTRIC VEHICLE CHARGING CAPACITY. RESERVE ELECTRICAL SERVICE PANEL SPACE FOR A FULL SIZE 2-POLE CIRCUIT BREAKER LABELED "FUTURE EV CHARGING". A RACEWAY SHALL BE INSTALLED FROM THE ELECTRICAL SERVICE PANEL TO A LOCATION WITHIN THE GARAGE, WHERE IT SHALL TERMINATE IN A JUNCTION BOX OR OUTLET AND BE LABELED "FUTURE EV CHARGING".
- \*SOLAR-READY ZONES - RESI03. MINIMUM 10% OF ROOF AREA BUT NOT LESS THAN 300 SQ. FT. FREE AND CLEAR OF OBSTRUCTIONS AND MECHANICAL EQUIPMENT AND VENTS. PROVIDE ELECTRICAL PATHWAY FROM CONDUIT RUN FROM SOLAR-READY ZONE TO ELECTRICAL SERVICE PANEL WITH RESERVED SPACE FOR 2-POLE CIRCUIT BREAKER. CAPPED ROOF PENETRATION SLEEVE SHALL BE PROVIDED ON ROOFS WITH A SLOPE OF 1 IN 12 OR LESS.
- \*THE FOLLOWING THREE NOTES ARE APPLICABLE TO NEW CONSTRUCTION ONLY (BPI CERTIFIED PROFESSIONALS ARE APPROVED FOR TESTING AIR LEAKAGE IN EXISTING BUILDINGS, OTHERWISE RESNET PROFESSIONALS ARE APPROVED FOR NEW AND EXISTING):
  - \*THE BUILDING SHALL BE PROVIDED WITH A WHOLE-HOUSE MECHANICAL VENTILATION SYSTEM THAT MEETS THE REQUIREMENTS OF SECTION M103.5. OUTDOOR AIR INTAKES AND EXHAUSTS SHALL HAVE AUTOMATIC OR GRAVITY DAMPERS THAT CLOSE WHEN THE VENTILATION SYSTEM IS NOT OPERATING. (N103.6).
  - \*THE BUILDING OR DWELLING UNIT SHALL BE TESTED AND VERIFIED AS HAVING AN AIR LEAKAGE RATE NOT EXCEEDING FIVE AIR CHANGES PER HOUR FOR DETACHED DWELLING UNITS AND SEVEN AIR CHANGES PER HOUR FOR ATTACHED DWELLING UNITS. TESTING SHALL BE CONDUCTED IN ACCORDANCE WITH ASTM E 774 OR ASTM E 1827 AND REPORTED AT A PRESSURE OF 0.2 INCH W.G. (50 PASGALS). TESTING SHALL BE CONDUCTED BY AN APPROVED THIRD PARTY (RESNET CERTIFIED). A WRITTEN REPORT OF THE RESULTS OF THE TEST SHALL BE SIGNED BY THE PARTY CONDUCTING THE TEST AND PROVIDED TO THE CODE OFFICIAL. TESTING SHALL BE PERFORMED AT ANY TIME AFTER CREATION OF ALL PENETRATIONS OF THE BUILDING THERMAL ENVELOPE. (N102.4.1.2).
  - \*DUCTS, AIR HANDLERS, AND FILTER BOXES SHALL BE SEALED IN ACCORDANCE WITH N103.B.4. JOINTS AND SEAMS SHALL COMPLY WITH SECTION M601.4.1. DUCTS SHALL BE PRESSURE TESTED TO DETERMINE LEAKAGE BY ONE OF THE FOLLOWING METHODS (N103.B.5):
    - ROUGH-IN TEST. TOTAL LEAKAGE SHALL BE MEASURED WITH A PRESSURE DIFFERENTIAL OF 0.1 INCHES W.G. (25 PA) ACROSS THE SYSTEM, INCLUDING THE MANUFACTURER'S AIR HANDLER ENCLOSURE IF INSTALLED AT THE TIME OF THE TEST. ALL REGISTERS SHALL BE TAPED OR OTHERWISE SEALED DURING THE TEST.
    - POST-CONSTRUCTION TEST. TOTAL LEAKAGE SHALL BE MEASURED WITH A PRESSURE DIFFERENTIAL OF 0.1 INCHES W.G. (25 PA) ACROSS THE SYSTEM, INCLUDING THE MANUFACTURER'S AIR HANDLER ENCLOSURE. REGISTERS SHALL BE TAPED OR OTHERWISE SEALED DURING THE TEST.
 A WRITTEN REPORT OF THE RESULTS SHALL BE SIGNED BY THE PARTY CONDUCTING THE TEST AND PROVIDED TO THE CODE OFFICIAL PRIOR TO THE FINAL BUILDING INSPECTION.
- ALL PRODUCTS LISTED BY AN EVALUATION SERVICE REPORT (ESR) SHALL BE INSTALLED PER THE REPORT AND THE MANUFACTURER'S WRITTEN INSTRUCTIONS. PRODUCT SUBSTITUTIONS SHALL ALSO BE LISTED BY AN ESR.
- PROVIDE FIRE SPRINKLER SYSTEM PER SCOTTSDALE FIRE CODE (IRC R313 AMENDED).
- SEPARATE PERMITS REQUIRED: POOLS, SPAS, FENCES, SITE WALLS, RETAINING WALLS, AND GAS STORAGE TANKS.
- FOUNDATION & FOOTING DEPTH SHALL BE A MINIMUM OF 18 INCHES BELOW GRADE (OR PER PROPERTY SOIL REPORT), PROVIDE A MINIMUM OF 3-INCH CLEARANCE BETWEEN REBAR AND SOIL. (R403.1) AMENDED.
- DOORS BETWEEN THE GARAGE AND RESIDENCE SHALL BE SELF-CLOSING MINIMUM 1 3/8" THICK SOLID CORE OR 20-MINUTE FIRE RATED. (R302.5.1).
- WOOD SILL PLATES SHALL BE PRESSURE TREATED OR DECAY RESISTANT. EXTERIOR SILL PLATES SHALL BEAR A MINIMUM OF 6 INCHES ABOVE FINISH GRADE. (R311.1).
- GYPSUM BOARD APPLIED TO A CEILING SHALL BE 1/2" WHEN FRAMING MEMBERS ARE 16" O.C. OR 5/8" WHEN FRAMING MEMBERS ARE 24" O.C. OR USE LABELED 1/2" SAG-RESISTANT GYPSUM CEILING BOARD. (TABLE R702.3.5 (D)).
- SHOWERS AND TUB-SHOWER COMBINATIONS SHALL BE PROVIDED WITH INDIVIDUAL CONTROL VALVES OF THE PRESSURE BALANCE OR THERMOSTATIC MIXING VALVE TYPE. (P2103.4).
- SHOWER AREA WALLS SHALL BE FINISHED WITH A SMOOTH, HARD NON-ABSORBENT SURFACE, SUCH AS CERAMIC TILE, TO A HEIGHT OF NOT LESS THAN 72 INCHES ABOVE THE DRAIN INLET. CEMENT, FIBER-CEMENT, OR GLASS MAT GYPSUM BACKERS INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS SHALL BE USED AS BACKERS FOR WALL TILE IN TUB AND SHOWER AREAS AND WALL PANELS IN SHOWER AREAS. (R702.4.2).
- STORAGE-TANK TYPE WATER HEATERS SHALL BE INSTALLED WITH A DRAIN PAN AND DRAIN LINE. (P2801.6).
- PROVIDE ROOF/ATTIC VENTILATION UNLESS INSULATION IS APPLIED DIRECTLY TO UNDERSIDE OF THE ROOF-SHEATHING, OR THE DEPTH IS 24 INCHES OR LESS BETWEEN THE CEILING AND BOTTOM OF ROOF SHEATHING. (R806.1) AMENDED.
- PROVIDE MINIMUM R-3 INSULATION ON HOT WATER PIPES. (N103.5.2).
- SUPPLY AND RETURN DUCTS LOCATED OUTSIDE CONDITIONED SPACE SHALL BE INSULATED TO A MINIMUM R-3. DUCTS AND AIR HANDLERS LOCATED COMPLETELY WITHIN THE CONTINUOUS AIR BARRIER AND WITHIN THE BUILDING THERMAL ENVELOPE ARE EXEMPT FROM INSULATION. (N103.3.1) AND N103.3.2).
- EXHAUST AIR FROM KITCHENS, BATHROOMS AND TOILET ROOMS SHALL BE EXHAUSTED DIRECTLY TO THE OUTDOORS, NOT RECIRCULATED, OR DISCHARGED INDOORS. (M103.4.4) AMENDED.
- EXHAUST FANS IN BATHROOMS WITH A SHOWER OR TUB SHALL BE PROVIDED WITH A DELAY TIMER OR HUMIDITY/CONDENSATION CONTROL SENSOR. EXHAUST FANS SHALL BE SWITCHED SEPARATELY FROM LIGHTING SYSTEMS. (R803.3).
- PROVIDE A WALL MOUNTED GFCI PROTECTED RECEPTACLE OUTLET WITHIN 36" OF A BATHROOM OR POWDER ROOM LAVATORY. (E3901.6).
- RECEPTACLES SERVING KITCHEN COUNTERTOPS INSTALLED IN BATHROOMS, GARAGES, UNFINISHED ACCESSORY BUILDINGS, OUTDOORS AND LOCATED WITHIN 6 FEET OF SINKS SHALL HAVE GFCI PROTECTION FOR PERSONNEL. (E3902).
- ALL BRANCH CIRCUITS THAT SUPPLY 15- AND 20-AMPERE OUTLETS INSTALLED IN KITCHENS, FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, PARLORS, LIBRARIES, DEN, BEDROOMS, SUNROOMS, RECREATIONS ROOMS, CLOSETS, HALLWAYS, LAUNDRY AREAS AND SIMILAR ROOMS OR AREAS SHALL BE PROTECTED BY A COMBINATION TYPE ARC-FAULT CIRCUIT INTERRUPTER (AFCI) INSTALLED TO PROVIDE PROTECTION OF THE BRANCH CIRCUIT. (E3902.1.2).
- GENERAL PURPOSE 15- AND 20-AMPERE RECEPTACLES SHALL BE LISTED TAMPER-RESISTANT. (E4002.1.4).
- PROVIDE INTERCONNECTED AND HARDWIRED SMOKE ALARMS IN NEW AND EXISTING AREAS OF HOME. (R314).
- APPROVED CARBON MONOXIDE ALARMS, HARDWIRED AND INTERCONNECTED, SHALL BE INSTALLED OUTSIDE OF EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS IN DWELLING UNITS WITHIN WHICH FUEL-FIRED APPLIANCES ARE INSTALLED AND IN DWELLING UNITS THAT HAVE ATTACHED GARAGES. (R315).
- RECESSED LUMINAIRES INSTALLED IN THE BUILDING THERMAL ENVELOPE SHALL BE IC-RATED AND LABELED AS HAVING AN AIR LEAKAGE RATE NOT MORE THAN 2.0 CFM. ALL RECESSED LUMINAIRES SHALL BE SEALED WITH A GASKET OR CAULK BETWEEN THE HOUSING AND THE INTERIOR WALL OR CEILING COVERING. (N102.4.5).
- PROVIDE ILLUMINATION WITH WALL SWITCHES FOR STAIRWAYS WHEN THERE ARE 6 OR MORE RISERS. (R303.7).
- RECEPTACLE OUTLETS SHALL BE INSTALLED SO THAT NO POINT ALONG THE FLOOR LINE IN ANY WALL SPACE IS MORE THAN 6 FEET, MEASURED HORIZONTALLY, FROM AN OUTLET IN THAT SPACE, INCLUDING ANY WALL SPACE 2 FEET OR MORE IN WIDTH. (E3901.2).
- PROVIDE A MINIMUM OF TWO 20-AMP SMALL APPLIANCE BRANCH CIRCUITS FOR THE KITCHEN/DINING/BREAKFAST. (E3103.2).
- PROVIDE OUTSIDE COMBUSTION AIR TO ALL INDOOR FIREPLACES PER MANUFACTURER'S SPECIFICATIONS. (R1006.1).
- AT LEAST ONE THERMOSTAT SHALL BE PROVIDED FOR EACH SEPARATE HEATING AND COOLING SYSTEM. (N103.1).

### GENERAL NOTES MISC.

- BARBECUE UNIT TO BE UL LISTED AND APPROVED. UNIT TO BE INSTALLED IN ACCORDANCE WITH THE LISTING AND WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. THE UNIT SHALL CONFORM TO ANSI Z21.58-1993 AND SHALL BE APPROVED BY A NATIONALLY RECOGNIZED TESTING AGENCY.
  - GAS LINES ARE NOT PERMITTED UNDER SLABS OR STRUCTURES AND SHALL CONFORM TO UPC CHAPTER 12 FOR MATERIALS, INSTALLATION, AND TESTING.
  - PROVIDE A UL LISTED AND APPROVED RANGE AND/OR COOKTOP UNIT INSTALLED IN ACCORDANCE WITH THE LISTING AND WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. VERIFY AND MAINTAIN REQUIRED HORIZONTAL AND VERTICAL CLEARANCES ABOVE THE FINISHED COUNTERTOP SURFACE BEFORE ORDERING OR INSTALLING CABINETS.
- IF SUBCONTRACTOR SHOULD FIND ANY DISCREPANCIES IN AND/OR OMISSION FROM THESE DRAWINGS, OR IF HE/SHE SHOULD BE IN QUESTION AS TO THEIR MEANING OR INTENT, HE/SHE SHOULD CONTACT THIS OFFICE IMMEDIATELY FOR INTERPRETATION OR CLARIFICATION.
- DIMENSIONS TAKE PRECEDENCE OVER SCALE.
  - ALL LABOR AND MATERIALS USED SHALL BE EQUAL TO OR EXCEED ALL APPLICABLE STATE OR LOCAL CODE REQUIREMENTS.
  - SUBCONTRACTORS SHALL TAKE ALL NECESSARY PRECAUTIONARY MEASURES TO PROTECT THE PUBLIC AND ADJACENT PROPERTIES FROM DAMAGE THROUGHOUT CONSTRUCTION.
  - ALL EXISTING UTILITIES TO BE ABANDONED SHALL BE PROPERLY DISCONNECTED, PLUGGED OR CAPPED AS REQUIRED BY CODE AND SOUND CONSTRUCTION PRACTICES.
  - SUBCONTRACTORS SHALL VERIFY LOCATION OF UTILITY EASEMENTS AND PROTECT THE SAME.
  - SUBCONTRACTORS TO VERIFY LOCATION OF ALL N.A.O.S. EASEMENTS (AS THEY EXIST) AND PROTECT THESE AREAS THROUGHOUT THE CONSTRUCTION PROCESS.

### EMERGENCY EGRESS

SLEEPING ROOMS SHALL HAVE AT LEAST ONE OPERABLE WINDOW OR DOOR ADJACENT FOR EMERGENCY ESCAPE OR RESCUE WHICH SHALL OPEN DIRECTLY INTO A PUBLIC STREET, PUBLIC ALLEY, YARD OR EXIT COURT. THE EMERGENCY DOOR OR WINDOW SHALL BE OPERABLE FROM THE INSIDE TO PROVIDE A FULL CLEAR OPENING WITHOUT THE USE OF SEPARATE TOOLS. ESCAPE OR RESCUE WINDOWS SHALL HAVE A MINIMUM NET CLEAR OPERABLE AREA OF 5.7 SQUARE FEET. THE MINIMUM NET CLEAR OPERABLE HEIGHT DIMENSION SHALL BE 24 INCHES. THE MINIMUM NET CLEAR OPERABLE WIDTH DIMENSION SHALL BE 20 INCHES. WHEN WINDOWS ARE PROVIDED AS A MEANS OF ESCAPE OR RESCUE, THEY SHALL HAVE A FINISHED SILL HEIGHT NOT MORE THAN 44 INCHES ABOVE THE FLOOR.

### FIRE BLOCKS

- FIRE BLOCKING SHALL BE PROVIDED IN THE FOLLOWING LOCATIONS:
- IN CONCEALED SPACES OF STUD WALLS AND PARTITIONS, INCLUDING FURRED SPACES, AT THE CEILING AND FLOOR LEVELS AND AT MAXIMUM 10-FOOT INTERVALS BOTH VERTICAL AND HORIZONTAL.
  - AT ALL INTERCONNECTIONS BETWEEN CONCEALED VERTICAL AND HORIZONTAL SPACES SUCH AS OCCUR AT SOFFITS, DROP CEILINGS, COVE CEILINGS AND TOPS OF FRAMED COLUMNS.
  - IN CONCEALED SPACES BETWEEN STAIR STRINGERS AT THE TOP AND BOTTOM OF THE RUN AND BETWEEN STUDS ALONG AND IN LINE WITH THE RUN OF STAIRS IF THE WALLS UNDER THE STAIRS ARE UNFINISHED.
  - IN OPENINGS AROUND VENTS, PIPES, DUCTS, CHIMNEYS, FIREPLACES AND SIMILAR OPENINGS WHICH AFFORD A PASSAGE FOR FIRE AT CEILING AND FLOOR LEVELS, WITH NON-COMBUSTIBLE MATERIALS.
  - AT OPENINGS BETWEEN ATTIC SPACES AND CHIMNEY CHASES FOR FACTORY-BUILT CHIMNEYS.

### SAFETY GLAZING

- SAFETY GLAZING SHALL BE PROVIDED IN THE FOLLOWING LOCATIONS:
- INGRESS AND EGRESS DOORS.
  - GLAZING IN FIXED AND SLIDING PANELS OF SLIDING DOOR ASSEMBLIES AND PANELS IN SWINGING DOORS OTHER THAN WARDROBE DOORS.
  - GLAZING IN DOORS AND ENCLOSURES FOR BATHTUBS AND SHOWERS. GLAZING IN ANY PORTION OF A BUILDING WALL ENCLOSED THESE COMPARTMENTS WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 60 INCHES ABOVE A STANDING SURFACE AND DRAIN INLET.
  - GLAZING IN FIXED OR OPERABLE PANELS ADJACENT TO A DOOR WHERE THE NEAREST EXPOSED EDGE OF THE GLAZING IS WITHIN A 24-INCH ARC OF EITHER VERTICAL EDGE OF THE DOOR IN A CLOSED POSITION, AND WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 60 INCHES ABOVE THE WALKING SURFACE.
  - GLAZING IN RAILINGS REGARDLESS OF HEIGHT ABOVE A WALKING SURFACE.

### STUCCO

EXTERIOR STUCCO SYSTEM TO BE WESTERN I-KOTE STUCCO SYSTEM OR APPROVED EQUAL, WIRE LATH ON 1" THICK, 1-1/2 LB. T45 E. P. S. BOARD OVER MIN. 2 LAYERS OF GRADE "D" BLDG PAPER AS SET FORTH IN IBC SECT. 2510.6 OR EQUIVALENT IN CURRENT ICC-ES.

### SECURITY

- ALL EXITS TO BE OPERABLE FROM THE INSIDE WITHOUT USE OF A KEY OR SPECIAL KNOWLEDGE. MANUALLY OPERATED EDGE OR SURFACE MOUNTED FLUSH BOLTS AND SURFACE BOLTS ARE PROHIBITED.
- ALL EXTERIOR DOOR HINGES SHALL BE MOUNTED WITH THE HINGE ON THE INTERIOR OF THE BUILDING OR HAVE NON-REMOVABLE HINGE PINS.
- THE STRIKE PLATE OR HOLDING DEVICE FOR PROJECTING DEADBEATS IN WOOD CONSTRUCTION SHALL BE SECURED TO THE JAMB WITH MINIMUM OF 2 SCREWS 1-1/2" MINIMUM IN LENGTH.
- DEAD BOLTS SHALL PROJECT ONE INCH WHEN EXTENDED IN THE LOCKED POSITION.
- DEAD BOLTS SHALL BE MADE OF CASE HARDENED STEEL, POWDERED STAINLESS STEEL, BAR BRASS, BRONZE OR ZINC ALLOY.
- CYLINDER GUARD SHALL BE CONSTRUCTED OF A METAL, NOT A HOLLOW SHELL.
- NO DOUBLE KEYED LOCKS SHALL BE ALLOWED.
- THE INACTIVE LEAF OF A PAIR OF DOORS SHALL BE EQUIPPED WITH CANE BOLTS, EDGE OR SURFACE MOUNTED FLUSH BOLTS TOP AND BOTTOM, WITH 1/2" MINIMUM PROJECTION TO HOLD FIRM THIS PORTION OF THE DOOR.
- ALL DOORS FROM GARAGE INTO THE DWELLING SHALL BE EQUIPPED WITH A SELF-CLOSING DEVICE.
- OVERHEAD GARAGE DOORS SHALL HAVE THROU BOLT, FLUSH BOLT, CYLINDER TYPE LOCK, OR ELECTRICAL OPERATOR WITH AUTOMATIC LOCKING MEANS. ALL LOCKS ON INSIDE OF GARAGE AND SHALL BE CAPABLE OF BEING OPENED AT ALL TIMES FROM INSIDE THE GARAGE WITHOUT THE USE OF A KEY OR ELECTRICAL POWER.

### WATER PROOFING

"THOROSEAL" WATERPROOF COATING TO BE APPLIED OVER STUCCO BROWN COAT, PRIOR TO SYNTHETIC COATING, UNDER WALL CAPS, BRICK VENEERS, ETC. WHERE SYNTHETIC COATING MAY NOT BE APPLIED.

### SMOKE DETECTORS

A SMOKE DETECTOR SHALL BE INSTALLED IN EACH SLEEPING ROOM AND AT A POINT CENTRALLY LOCATED IN THE CORRIDOR OR AREA GIVING ACCESS TO EACH SEPARATE SLEEPING AREA. WHEN THE DWELLING UNIT HAS MORE THAN ONE STORY, A DETECTOR SHALL BE INSTALLED ON EACH STORY. IN DWELLING UNITS WHERE A STORY IS SPLIT INTO TWO OR MORE LEVELS, THE SMOKE DETECTOR SHALL BE INSTALLED ON THE UPPER LEVEL, EXCEPT THAT WHEN THE LOWER LEVEL CONTAINS A SLEEPING AREA. A DETECTOR SHALL BE INSTALLED ON EACH LEVEL. WHEN SLEEPING ROOMS ARE ON AN UPPER LEVEL, THE DETECTOR SHALL BE PLACED AT THE CEILING OF THE UPPER LEVEL IN CLOSE PROXIMITY TO THE STAIRWAY. IN DWELLING UNITS WHERE THE CEILING HEIGHT OF A ROOM OPEN TO THE HALLWAY SERVING THE BEDROOMS EXCEEDS THAT OF THE OPENINGS INTO HALLWAY AND IN THE ADJACENT ROOM, DETECTORS SHALL SOUND AN ALARM AUDIBLE IN ALL SLEEPING AREAS OF THE DWELLING UNIT IN WHICH THEY ARE LOCATED. REQUIRED SMOKE DETECTORS SHALL RECEIVE THEIR PRIMARY POWER FROM THE BUILDING WIRING WHEN SUCH WIRING IS SERVED FROM A COMMERCIAL SOURCE AND SHALL BE EQUIPPED WITH A BATTERY BACKUP. THE DISTANCE FROM H.V.A.C. GRILLES AND CEILING FANS IS PER MANUFACTURER'S WRITTEN INSTRUCTIONS.

### CONSTRUCTION NOTES

- CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AT THE SITE AND ALL INCONSISTENCIES SHALL BE BROUGHT TO THE ATTENTION OF THE DEVELOPER AND THE ARCHITECT BEFORE PROCEEDING WITH WORK.
- ALL TRADES SHALL FURNISH ALL LABOR EQUIPMENT, MATERIALS AND PERFORM ALL WORK NECESSARY, INDICATED, REASONABLY INFERRED OR REQUIRED BY ANY CODE WITH JURISDICTION TO COMPLETE THEIR SCOPE OF WORK.
- ALL ALTERNATES AND FINISHES ARE AT THE OPTION OF THE OWNER AND SHALL BE CONSTRUCTED IN ADDITION TO OR IN LIEU OF THE TYPICAL CONDITION AS PER THE SPECIFIC JOB SITE SELECTIONS AND ADDENDUM AVAILABLE THROUGH THE FIELD MANAGER.
- ANY ERRORS OR OMISSIONS FOUND IN THESE DRAWINGS SHALL BE BROUGHT TO DEVELOPERS AND ARCHITECTS ATTENTION IMMEDIATELY.
- DO NOT SCALE DRAWINGS WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS.
- ALL DIMENSIONS ARE TO FACE OF STUD OR TO FACE OF FRAMING UNLESS OTHERWISE NOTED.
- ALL TRUSS DRAWINGS TO BE REVIEWED AND APPROVED BY THE STRUCTURAL ENGINEER PRIOR TO ISSUANCE OF BUILDING PERMIT.
- ALL OR EQUAL SUBSTITUTIONS MUST BE SUBMITTED TO AND APPROVED BY CITY BUILDING OFFICIAL PRIOR TO INSTALLATION.
- ANY DEVIATIONS OR DISCREPANCIES WITHIN THE PLANS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND/OR THE GENERAL CONTRACTOR PRIOR TO PROCEEDING WITH ANY WORK RELATED TO THIS PROJECT.

CLIMATIC & GEOGRAPHIC DESIGN CRITERIA							
WIND	SEISMIC DESIGN CATEGORY	SUBJECT TO DAMAGE FROM				WINTER DESIGN TEMP	FLOOD HAZARDS
SPEED (MPH)		WEATHERING	FROST LINE DEPTH	TERMITE	DECAY		
115 EXPOSURE C	B	NEGLIGIBLE	BELOW FINISH GRADE	MODERATE TO HEAVY	NONE TO SLIGHT	34 DEGREES	NFIP C40049

## PROJECT DATA

ADDRESS:	7899 E MARY SHARON DR SCOTTSDALE, AZ 85266
TAX ASSESSORS PARCEL NO.:	2-66-096
PARCEL AREA:	6,508 SF (0.15 ACRES)
BUILDER:	GMK BUILDING & DEVELOPMENT 15455 E TREVINO DR FOUNTAIN HILLS, AZ 85268 480.262.6883 KASNOFF@GOL.COM GEORGE KASNOFF
CIVIL ENGINEER:	SSE ENGINEERING 11650 SOUTH VIEWPOINTE WAY YUMA, AZ 85367 (480)225-4420 SSEAZ2004@GMAIL.COM CLINT B SCHERT
ARCHITECT:	BT ARCHITECTURAL, LLC 8425 WEST EL CORTEZ PLACE PEORIA, AZ 85383 602.292.6350 BRET.BTA@GMAIL.COM BRET OVERMYER
STRUCTURAL ENGINEER:	GILBERT STRUCTURAL LLC 414 EAST SOUTHERN AVE TEMPE, AZ 85282 480-348-8144 ROBERTTLOK@YAHOO.COM ROBERT OTTO FLORI
MECHANICAL ENGINEER:	FLORI ENGINEERING & DESIGN LLC 5536 E ANGELA DRIVE SCOTTSDALE, AZ 85254 (480) 433-0764 ROBERTTLOK@YAHOO.COM ROBERT OTTO FLORI

## CODE COMPLIANCE

CONSTRUCTION TYPE: VB OCCUPANCY: R311  
BUILDING CODES - 2021 EDITION OF THE INTERNATIONAL BUILDING CODE:

- ALL CONSTRUCTION SHALL COMPLY WITH THE FOLLOWING CODES AND AMENDMENTS PER THEIR ADOPTING ORDINANCES.
- 2021 INTERNATIONAL BUILDING CODE (IBC)
  - 2021 INTERNATIONAL RESIDENTIAL CODE (IRC)
  - 2021 INTERNATIONAL BUILDING CODE ADMINISTRATIVE PROVISIONS
  - 2021 INTERNATIONAL MECHANICAL CODE (IMC)
  - 2021 INTERNATIONAL OR UNIFORM PLUMBING CODE (UPC)
  - 2021 INTERNATIONAL FIRE CODE
  - 2021 INTERNATIONAL FUEL GAS CODE (IFGC)
  - 2020 NATIONAL ELECTRICAL CODE (NEC)
  - CURRENT ZONING CODES

OWNER TO VERIFY EXACT TYPE AND LOCATION OF ELECTRICAL FIXTURES. CODE REQUIREMENTS MUST STILL BE SATISFIED. ENFORCEMENT SHALL BE PROVIDED BY CITY FIELD INSPECTORS.

WHERE REFERENCE IS MADE TO THE VARIOUS TEST STANDARDS FOR MATERIALS, SUCH STANDARDS SHALL BE THE LATEST EDITIONS AND/ OR APPENDA.

## SHEET INDEX

AREA SCHEDULE	
UPPER LEVEL	3246 SQ. FT.
LOWER LEVEL	3107 SQ. FT.
TOTAL LIVABLE	6402 SQ. FT.
GARAGE 1	899 SQ. FT.
GARAGE 2	728 SQ. FT.
MAIN PATIO	348 SQ. FT.
BED 2 PATIO	188 SQ. FT.
BED 4 PATIO	200 SQ. FT.
FRONT PATIO	246 SQ. FT.
FRONT DECK	342 SQ. FT.
MAIN DECK	344 SQ. FT.
PORCH	64 SQ. FT.
RESIDENCE TOTAL	4824 SQ. FT.
LOT AREA	14564 SQ. FT.
FOOTPRINT	4824 SQ. FT.
COVERAGE	6.75 %



**Sivarajan Residence**  
 7899 East Mary Sharon Drive  
 Scottsdale 85266  
 Lone Mountain Vista Tract A - Lot 93

**GENERAL NOTES**  
 SHEET NO. **A0**



**GRADING & DRAINAGE NOTES**

1. AN APPROVED GRADING AND DRAINAGE PLAN SHALL BE ON THE JOB SITE AT ALL TIMES. DEVIATIONS FROM THE PLAN MUST BE PRECEDED BY AN APPROVED PLAN REVISION.
2. ALL DRAINAGE PROTECTIVE DEVICES SUCH AS SWALES, PIPES, PROTECTIVE BERMS OR OTHER MEASURES DESIGNED TO PROTECT BUILDINGS OR PROPERTY FROM STORM RUNOFF MUST BE COMPLETED PRIOR TO ANY STRUCTURE BEING BUILT.
3. FOUNDATIONS SHALL BEAR ON NATIVE SOIL OR COMPACTED FILL w/ MIN 95% COMPACTION PER ASTM D698.
4. PREPARATION OF GROUND: THE AREA OVER WHICH FILLS ARE TO BE MADE SHALL BE CLEARED OF ALL TRASH, TREES, STUMPS, DEBRIS OR OTHER MATERIAL NOT SUITABLE AS A FOUNDATION FOR FILL.
5. LOCATIONS OF ALL UTILITIES SHOWN ON THIS PLAN ARE BASED ON INFORMATION SUPPLIED TO THE ENGINEER BY A FIELD SURVEY OR AVAILABLE MAPS. NO GUARANTEE ON LOCATIONS OR ACCURACY IS IMPLIED OR GIVEN. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT BLUE STAKE (263-1100) AND ANY OTHER INVOLVED AGENCIES TO LOCATE ALL UTILITIES PRIOR TO CONSTRUCTION.
6. DISTURBED AREAS SHALL BE REPLANTED WITH DESERT PLANTS OR DROUGHT-RESISTANT PLANTS. EXISTING VEGETATION SHALL BE RELOCATED IF DISTURBED BY CONSTRUCTION.
7. CONTRACTOR/BUILDER SHALL NOTIFY THE ENGINEER OF ANY VARIANCES BETWEEN THESE PLANS AND ON-SITE CONDITIONS.
8. ALL DRAINAGE SWALES SHALL BE MAINTAINED BY OWNER TO BE FREE OF TRASH, SILT, VEGETATION AND DEBRIS.
9. CONTRACTOR SHALL VERIFY PROPERTY LINE LOCATIONS PRIOR TO PROCEEDING WITH WORK.
10. ARCHITECTURAL, STRUCTURAL, ELECTRICAL, MECHANICAL AND PLUMBING ARE NOT A PART OF THIS SITE PLAN.
11. LOCATIONS OF ANY VEGETATION NOTED ARE APPROXIMATE AND SHOULD NOT BE USED FOR ARCHITECTURAL LANDSCAPE PLANNING.
12. FINISH GRADE SHALL SLOPE 5% FOR A DISTANCE OF 10' TO AN APPROVED WATER DISPOSAL AREA.
13. UTILITIES SHALL NOT BE LOCATED IN NATURAL AREA OPEN EASEMENTS (NAOS).
14. FINISH FLOOR ELEVATION SHALL BE PROVIDED BY THE C.O.S. FOR FEMA WHERE REQUIRED.
15. SWIMMING POOLS, SPAS, FENCES, SITE WALLS, AND RETAINING WALLS REQUIRE SEPARATE PERMITS.
16. ALL MECHANICAL EQUIPMENT (AIR CONDITIONER, POOL EQUIPMENT, ETC.) SHALL BE SCREENED A MINIMUM OF ONE FOOT HIGHER THAN THE HIGHEST PORTION OF THE EQUIPMENT, AND SHALL BE COMPATIBLE WITH THE ADJACENT BUILDING.
17. GUESTHOUSES ON LOTS LESS THAN 35,000 Sq. Ft. SHALL NOT PROVIDE COOKING FACILITIES AND WILL NEVER BE OFFERED FOR RENT. GUESTHOUSES ON LOTS GREATER THAN 35,000 Sq. Ft. MAY PROVIDE COOKING FACILITIES. (AND WILL NEVER BE OFFERED FOR RENT)
18. LAND DESIGNATED AS NAOS SHALL BE PERMANENTLY MAINTAINED AS NATURAL OPEN SPACE THROUGH EASEMENT, DONATION OR DEDICATION TO THE CITY OR OTHER ENTITY. NAOS SHALL BE MAINTAINED BY THE PROPERTY OWNER.
19. ENSURE NO CONSTRUCTION OFF PROPERTY.
20. POOLS SHALL NOT BE EMPTIED OR BACKWASHED INTO WASHES, STREETS, NAOS, SCENIC CORRIDORS, ON TO AN ADJACENT LOT, OR TRACT OF LAND.
21. A GUESTHOUSE OR ACCESSORY STRUCTURE SHALL NOT EXCEED A GROSS SIZE GREATER THAN 50% OF THE FOOTPRINT SIZE OF THE PRINCIPAL BUILDING.
22. REFLECTIVE BUILDING MATERIALS ARE PROHIBITED.
23. THE OWNER AND/OR CONTRACTOR INCORPORATED DEVELOPERED DESIGN AND CONSTRUCTION TECHNIQUES THAT BLEND SCALE, FORM AND VISUAL CHARACTER INTO THE NATURAL LANDFORM AND MINIMIZE EXPOSED SCARS TO THE SATISFACTION OF THE PLANNING AND DEVELOPMENT SERVICES DEPARTMENT.
24. EXTERIOR LIGHTING SHOULD BE LOW SCALE AND DIRECTED DOWNWARD, RECESSED OR SHIELDED SO THAT THE LIGHT SOURCE IS NOT VISIBLE FROM RESIDENTIAL DEVELOPMENTS IN THE AREA OR FROM PUBLIC VIEWPOINT. EXTERIOR FIXTURES SHALL NOT GENERALLY EXCEED A HEIGHT OF 6 FEET MEASURED FROM THE NEAREST ADJACENT GRADE TO THE TOP OF THE FIXTURE (LOWER HEIGHTS MAY BE REQUIRED BY THE INSPECTION OR CODE ENFORCEMENT STAFF).
25. LAND DESIGNATED AS NAOS SHALL BE PERMANENTLY MAINTAINED AS OPEN SPACE. THE PROPERTY OWNER SHALL MAINTAIN ALL DESIGNATED NAOS.
26. A REGISTERED SURVEYOR SHALL STAKE AND ROPE OR FENCE THE CONSTRUCTION ENVELOPE AND NAOS EASEMENT IN ACCORDANCE WITH THE SITE PLAN. THE CONSTRUCTION ENVELOPE AND NAOS AREA STAKED IS THE MUST BE THE MOST RESTRICTIVE IN ACCORDANCE WITH THE ZONING ORDINANCE.

**CITY OF SCOTTSDALE SITE PLAN NOTES (ESL & FO OVERLAY)**

55. POOLS REQUIRE SEPARATE APPROVAL AND PERMIT.
56. POOLS SHALL NOT BE EMPTIED OR BACKWASHED INTO WASHES, STREETS, NAOS, SCENIC CORRIDORS, ON TO AN ADJACENT LOT, OR TRACT OF LAND.
57. ALL MECHANICAL EQUIPMENT (AIR CONDITIONER, POOL EQUIP. ETC.) SHALL BE SCREENED A MINIMUM OF 1 FOOT ABOVE THE HIGHEST PORTION OF THE EQUIPMENT FROM ALL SIDES AND SHALL BE COMPATIBLE WITH THE ADJACENT BUILDING. SHOW LOCATION OF EQUIPMENT ON SITE PLAN.
58. A GUESTHOUSE SHALL NEVER BE OFFERED FOR RENT.
59. A GUESTHOUSE SHALL NOT EXCEED A GROSS FOOTPRINT SIZE GREATER THAN 50% OF THE FOOT PRINT SIZE OF THE PRINCIPAL BUILDING.
60. EXTERIOR MATERIALS AND PAINT COLORS SHALL NOT EXCEED A VALUE AND/OR CHROMA OF 6 AS INDICATED IN THE MUNSSEL BOOK OF COLOR ON FILE IN THE CITY OF SCOTTSDALE'S PLANNING & DEVELOPMENT DEPARTMENT. THE CITY MAY REQUIRE COLOR SAMPLES TO VERIFY COMPLIANCE.
61. MATERIALS USED FOR EXTERIOR SURFACES OF ALL STRUCTURES SHALL BLEND IN COLOR, HUE, AND TONE WITH THE SURROUNDING NATURAL DESERT SETTING TO AVOID HIGH CONTRAST.
62. SURFACE MATERIALS OF WALLS, RETAINING WALLS OR FENCES SHALL BE SIMILAR TO AND COMPATIBLE WITH THOSE OF THE ADJACENT MAIN BUILDINGS.
63. PLANT MATERIALS NOT INDIGENOUS TO THE ESL AREA SHALL BE LIMITED TO ENCLOSED YARD AREAS AND NON-INDIGENOUS PLANTS THAT HAVE THE POTENTIAL OF EXCEEDING TWENTY (20) FEET IN HEIGHT ARE PROHIBITED. TURF SHALL BE LIMITED TO ENCLOSED AREAS NOT VISIBLE FROM A LOWER ELEVATION.
64. REFLECTIVE BUILDING MATERIALS ARE PROHIBITED.
65. REFLECTIVE BUILDING AND ROOFING MATERIALS (OTHER THAN WINDOWS AND SOLAR PANELS) INCLUDING MATERIALS WITH HIGH GLOSS FINISHES AND BRIGHT, UNTARNISHED COPPER, ALUMINUM, GALVANIZED STEEL OR OTHER METALLIC SURFACES, SHALL BE TEXTURED OR HAVE A MATTE OR NON-REFLECTIVE SURFACE TREATMENT TO REDUCE THE REFLECTIONS OF SUNLIGHT ONTO OTHER PROPERTY.
66. MIRRORRED SURFACES OR ANY TREATMENTS THAT CHANGE ORDINARY GLASS INTO A MIRRORRED SURFACE ARE PROHIBITED.
67. THE OWNER SHALL INCORPORATE DEVELOPMENT DESIGN AND CONSTRUCTION TECHNIQUES THAT BLEND IN SCALE, FORM AND VISUAL CHARACTER TO MINIMIZE EXPOSED SCARS TO THE SATISFACTION OF THE PLANNING & DEVELOPMENT DEPARTMENT.
68. ANY PROPOSED MODIFICATIONS TO NATURAL WATERCOURSES AND ALL WALLS AND FENCES CROSSING NATURAL WATERCOURSES SHALL BE DESIGNED IN ACCORDANCE WITH THE STANDARDS AND POLICES SPECIFIED IN CHAPTER 37 (DRAINAGE AND FLOODPLAIN ORDINANCE) OF THE SCOTTSDALE REVISED CODE.
69. LAND DESIGNATED AS NAOS SHALL BE PERMANENTLY MAINTAINED AS OPEN SPACE. THE PROPERTY OWNER SHALL MAINTAIN ALL DESIGNATED NAOS.
70. ALL EXTERIOR LIGHTING BELOW 3 FEET IN HEIGHT SHALL BE FULLY SHIELDED. ALL EXTERIOR LIGHTING ABOVE 3 FEET IN HEIGHT SHALL CONSIST OF HORIZONTAL FULL-CUTOFF FIXTURES AND DIRECTED DOWNWARD, EXCEPT LIGHTS UTILIZED FOR SECURITY PURPOSES.
71. ALL EXTERIOR LIGHTS INCLUDING THOSE MOUNTED TO BUILDINGS/STRUCTURES AND ON POLES SHALL NOT EXCEED A HEIGHT OF SIXTEEN (16) FEET. EXEMPTION: LIGHTS THAT ARE CONNECTED TO A DELAY SWITCH THAT DO NOT STAY ON MORE THAN 15 MINUTES FOR SECURITY PURPOSES SHALL NOT BE REQUIRED TO BE SHIELDED OR CONTAIN HORIZONTAL CUTOFFS.
72. EXTERIOR LIGHTING SHOULD BE LOW SCALE AND DIRECTED DOWNWARD, RECESSED OR SHIELDED SO THAT THE LIGHT SOURCE IS NOT VISIBLE FROM RESIDENTIAL DEVELOPMENTS IN THE AREA OR FROM A PUBLIC VIEWPOINT. EXTERIOR FIXTURES SHALL NOT GENERALLY EXCEED A HEIGHT OF 6 FEET MEASURED FROM THE NEAREST ADJACENT GRADE TO THE TOP OF THE FIXTURE (LOWER HEIGHTS MAY BE REQUIRED BY THE INSPECTION OR CODE ENFORCEMENT STAFF).
73. WHERE ON-SITE WALLS ARE PLACED ADJACENT TO NAOS AREAS AT LEAST 50 PERCENT OF THE WALL SURFACE SHALL BE A VIEW FENCE.
74. TEMPORARY/SECURITY FENCING THAT IS REQUIRED OR IS OPTIONALLY PROVIDED SHALL BE IN ACCORDANCE WITH THE ZONING ORDINANCE AND THE DESIGN STANDARDS AND POLICES MANUAL.
75. IN ACCORDANCE WITH THE ZONING ORDINANCE, A REGISTERED SURVEYOR SHALL STAKE AND ROPE THE MOST RESTRICTIVE AREA DEFINED BY THE CONSTRUCTION ENVELOPE AND NAOS EASEMENT AS SHOWN ON THE SITE PLAN.
76. NO PAINT COLOR OR SURFACE TREATMENT SHALL BE USED WHICH HAS A LIGHT REFLECTIVE VALUE (LRV) GREATER THAN 35%.
79. SITE WALLS MUST BE SETBACK 15 FEET FROM SIDE AND REAR PROPERTY LINES. THIS APPLIES ONLY TO RESIDENTIAL PARCELS CONTAINING AN AREA OF 35,000 SQ FT OR LARGER.
80. WASHES OF 50 CFS OR GREATER FLOW SHALL BE IDENTIFIED AND WATERCOURSE(S) SHALL BE UNALTERED. IF WATERCOURSE(S) ARE ALTERED, PROVIDE A COPY OF THE WASH MODIFICATION APPROVAL LETTER AND REFERENCE THE CASE NUMBER ON THE SITE PLAN.
81. APPLICATIONS THAT HAVE RECEIVED A HARSHIP EXEMPTION SHALL PROVIDE THE CASE NUMBER ON THE SITE PLAN.
82. SITE WALLS SHALL NOT BE PROVIDED IN NAOS AREAS OR DISRUPT THE CONTINUITY OF NAOS CORRIDORS.
83. IDENTIFY THE SPECIFIC LOCATION OF THE CONSTRUCTION ENVELOPE ON SITE PLAN. THE CONSTRUCTION ENVELOPE CONSISTS OF AN AREA ENCLOSED BY A LINE EXTENDING 15 FEET OUT FROM ALL DISTURBANCES ON LOT.

**SCOTTSDALE FIRE DEPARTMENT GUIDELINES FOR EMERGENCY VEHICLE ACCESS**

ACCESS GRADES FROM 0 TO 12% FOR ONE SINGLE FAMILY RESIDENCE						
Drive	Drive	Turn-a-round	Hose	Sprinkler Requirements		
Length	Width	Surface	Required	Lay	Mod-13d	Attic Pilot Heads & Patio Protection
Less < 200 feet	12'	Hard	No	More than 200 feet	Yes	Yes

**FLOOD INSURANCE RATE MAP (FIRM)**

COMMUNITY NUMBER	PANEL NUMBER (Panel Date)	SUFFIX	DATE OF FIRM (Panel Date)	FIRM ZONE	BASE FLOOD ELEVATION (IN AD ZONE USE R.F.P.R.)
045012	1306 7/20/21	M	2/08/24	X	N/A

**ENGINEER'S CERTIFICATION STATEMENT**

THE LOWEST FLOOR ELEVATION(S) AND/OR FLOODPROOFING ELEVATION(S) ON THIS PLAN ARE SUFFICIENTLY HIGH TO PROVIDE PROTECTION FROM FLOODING CAUSED BY A ONE-HUNDRED YEAR STORM, AND ARE IN ACCORDANCE WITH CITY OF SCOTTSDALE REVISED CODE, CHAPTER 37 - FLOODPLAIN & STORMWATER REGULATIONS.

**ENGINEERING NOTES:**

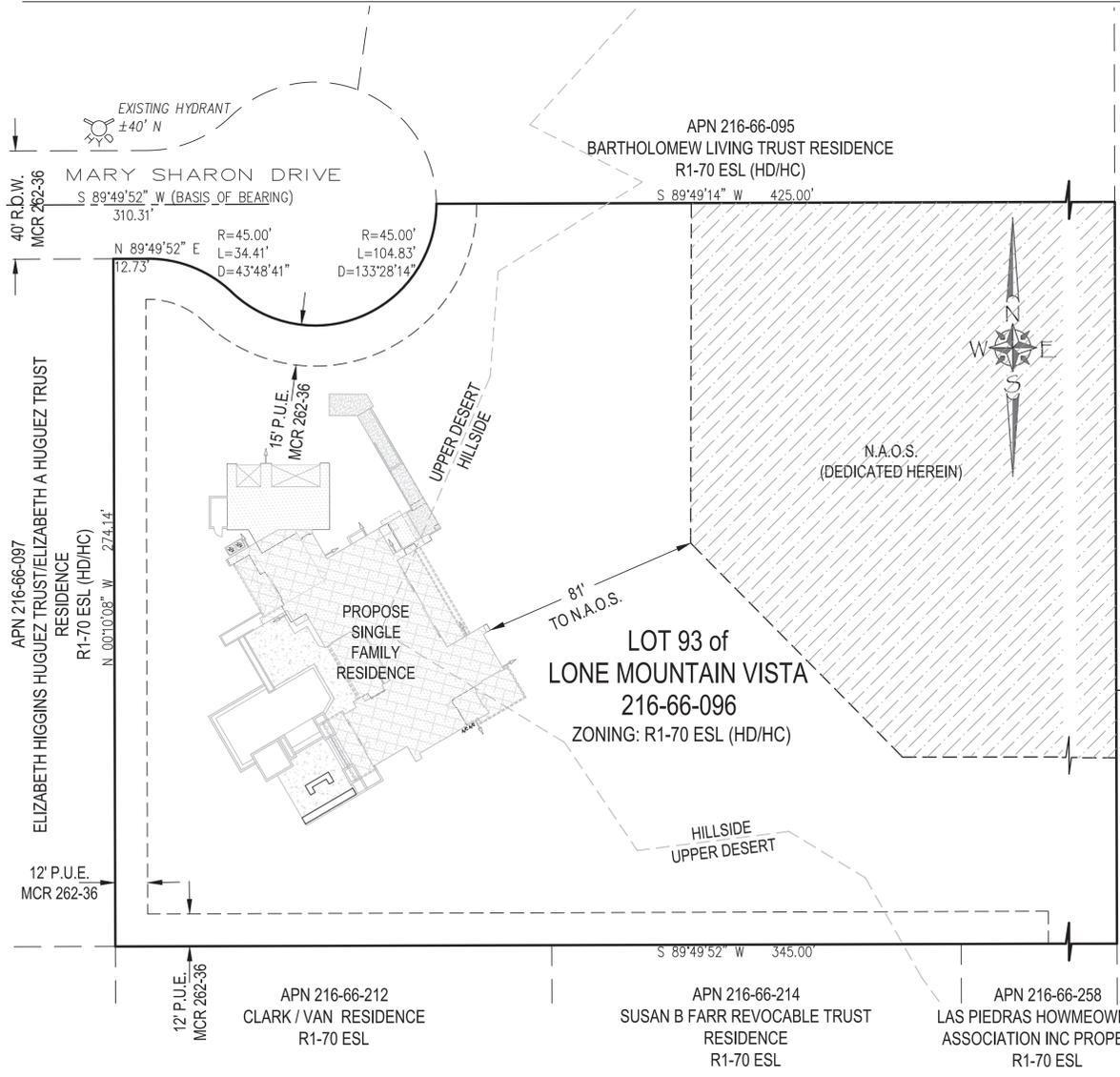
1. TOPOGRAPHIC/BOUNDARY SURVEY WAS DONE BY OTHERS, S.S.E. MAKES NO ASSURANCES TO THE ACCURACY OF CONTOURS, BOUNDARY LOCATIONS, OR EASEMENT LOCATIONS WITHIN SAID SURVEY.
2. THE BUILDING SETBACKS, ENVELOPE AND LOT COVERAGE ARE SHOWN PER THE ZONING DISTRICT. SETBACKS AND OTHER RESTRICTIONS CREATED BY AMENDED STANDARDS OR COVENANTS MAY BE APPLICABLE. FINAL INTERPRETATION IS THE RESPONSIBILITY OF THE OWNER OF SAID PROPERTY AND THE CORRESPONDING GOVERNMENTAL AGENCY OVERSEEING SAID PROPERTY.
3. WATERMAIN AND SEWER LOCATIONS ARE BASED ON INFORMATION PROVIDED BY THE CITY OF SCOTTSDALE AND MONUMENTS FOUND IN THE FIELD MAY NOT BE EXACT. CONTRACTOR TO VERIFY ACTUAL SIZES, LOCATIONS AND TYPES OF ALL UTILITIES PRIOR TO CONSTRUCTION.
4. CONTRACTOR TO ENSURE POSITIVE DRAINAGE FROM BUILDING FOUNDATION FOR A MINIMUM OF 5% SLOPE FOR 10 FEET, NOTIFY ENGINEER OF ANY DISCREPANCIES.
5. ALL COMPACTION, EXCAVATION AND BACK FILL SHALL BE DONE IN ACCORDANCE WITH GEOTECHNICAL REPORT OR AT MINIMUM A 95% COMPACTION RATE IS REQUIRED PER ASTM D698.
6. ALL SURFACE AND UNDERGROUND DRAINAGE SYSTEM, ARE TO BE MAINTAINED BY OWNER, INCLUDING MAINTENANCE AND CLEANING. PERIODIC MAINTENANCE WILL KEEP SYSTEM OPERATING PROPERLY.
7. POOL AND SPA BUILDING PERMIT TO BE OBTAINED BY OTHERS, AND DESIGN SPECS ARE NOT PART OF THIS PLAN. LOCATION OF SAID FACILITIES ON THIS PLAN ARE APPROXIMATIONS, AND ARE NOT FOR CONSTRUCTION.
8. ON-SITE PLANT SALVAGE INFORMATION SHOWN HEREON IS FOR CITY OF SCOTTSDALE PLAN APPROVAL PURPOSES
9. ONLY, S.S.E. ASSUMES NO LIABILITY FOR THE EVALUATION, SALVAGE ABILITY, REMOVAL, AND/OR RELOCATION OF
10. ON-SITE PLANT MATERIALS. CONTACT SALVAGE CONTRACTOR FOR MORE INFORMATION.
11. THE PAD ELEVATIONS OF ALL NEW A/C &/OR ELECTRO-MECHANICAL UNITS WILL BE SET AT OR ABOVE R.F.E.

**GRADING & DRAINAGE PLAN FOR SIVARAJAN PROPERTY**

A SINGLE FAMILY RESIDENCE at 7899 EAST MARY SHARON DRIVE

A PORTION OF THE SOUTHEAST QUARTER OF SECTION 23, TOWNSHIP 5 NORTH, RANGE 4 EAST OF THE GLA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA

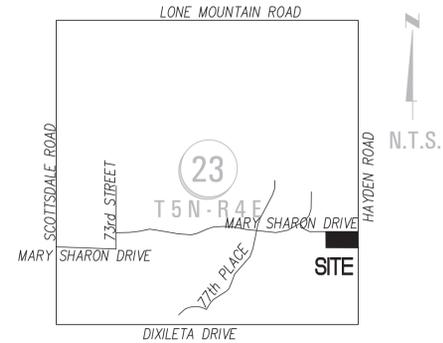
**PROJECT SITE**



**LEGEND**

- MONUMENT LINE
- PROPERTY LINE
- OTHERS PROPERTY LINE
- EASEMENT
- B.S.L. BUILDING SETBACK LINE
- SANITARY SEWER LINE
- WATER LINE
- HYDRANT
- WATER VALVE
- WATER METER
- TELEPHONE BOX
- CABLE TV BOX
- TRANSFORMER
- SANITARY MANHOLE
- FOUND REBAR (AS NOTED)
- FOUND BRASS CAP FLUSH
- SET REBAR (AS NOTED)
- P.U.E. PUBLIC UTILITIES EASEMENT
- D.E. DRAINAGE EASEMENT
- S.V.E. SIGHT VISIBILITY EASEMENT
- R/W RIGHT OF WAY
- BARREL CACTUS
- PALO VERDE
- MESQUITE
- N.A.O.S. UNDISTURBED
- N.A.O.S. REVEG
- OCOTILLO
- SAGUARO
- RIPRAP/ROCK

**LOCATION MAP**



**BENCHMARK**

GDACS POINT # 42533-21, 3" BRASS CAP AT INTERSECTION OF HAYDEN ROAD & DIXILETA DRIVE, HAVING AN ELEVATION OF 2,254.29 FEET NAVD '88.

I HEREBY CERTIFY THAT ALL ELEVATIONS REPRESENTED ON THIS PLAN ARE BASED ON THE NAVD 1988 AND MEET THE FEMA BENCHMARK MAINTENANCE (BMM) CRITERIA.

**SITE DATA**

**LEGAL DESCRIPTION**

DEED 2024-0357050 & LOT 93 OF LONE MOUNTAIN VISTA, ACCORDING TO THE RECORDED SURVEY OR RECORD IN THE OFFICE OF THE COUNTY RECORDER OF MARICOPA COUNTY, ARIZONA, RECORDED IN BOOK 262 OF MAPS, PAGE 36.

AREA:	145,641 SqFt (3.43 Ac)
APN:	216-66-096
MCR:	262-36
ZONING:	R1-70 ESL (HD/HC) & HC ESL
Q.S.:	53-46

**LANDFORM CLASSIFICATION:**

UPPER DESERT / HILLSIDE

**BUILDING SETBACKS (BSB):**

FRONT	60' (NORTHWEST)
SIDE	15'/40' AGGREGATE (NORTHEAST/SOUTH)
REAR	60' (WEST)

**NAOS REQUIREMENTS by SLOPE ANALYSIS**

0-5% SLOPE	= 21,456 SqFt (14.7% OF LOT)	@ 25% NAOS=	5,364 SqFt	
5-10% SLOPE	= 18,203 SqFt (12.5% OF LOT)	@ 35% NAOS=	6,371 SqFt	
HILLSIE	= 105,982 SqFt (72.8% OF LOT)	@ 50% NAOS=	52,991 SqFt	
			TOTAL NAOS REQUIRED=	64,726 SqFt

**PROPOSED**

PROVIDED:	66,750 SqFt (45.9% OF LOT)
UNDISTURBED:	66,750 SqFt (100% OF REQ'D NAOS)
DISTURBED(REVEGED AREA):	0 SqFt (0% OF REQ'D NAOS/30% MAX ALLOWED)
TOTAL NAOS CREDIT:	66,750 SqFt (100% OF REQUIRED)

**UNDER ROOF: \*\*\*REFERENCE BUILDING PLANS FOR DETAILS**

LOT COVERAGE: 9,750 SqFt PROPOSED UNDERROOF (6.69% TOTAL LOT COVERAGE)

**WALL QUANTITIES**

RETAINING WALL (PER DETAIL - SHEET GD 3)	65 LF
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**NATIVE PLANTS**

OWNER RESPONSIBLE FOR PROVIDING APPROVED NATIVE PLANT SURVEY TO CITY IF REQUIRED. NATIVE PLANT INFORMATION WILL NOT APPEAR ON GRADING & DRAINAGE PLAN.

**OWNER**

GANESH SIVARAJAN  
22230 N. 55<sup>th</sup> STREET  
PHOENIX, AZ 85054  
C/O: GEORGE KASNOFF  
(480) 816-3205  
KASNOFF@AOL.COM

**SURVEYOR**

BABBITT SMITH ENGINEERING  
1140 E. GREENWAY STREET, SUITE 2  
MESA, AZ 85203  
(480) 610-1341  
SURVEY DATE: MARCH, 2024

**ENGINEER**

GEORGE KASNOFF  
(480) 816-3205  
KASNOFF@AOL.COM

**DEVELOPER/BUILDER**

GEORGE KASNOFF  
(480) 816-3205  
KASNOFF@AOL.COM

S S E  
11350 SOUTH VIEWPOINTE WAY  
YUMA, ARIZONA 85367  
PRINCIPLE: STEVE SEITZ  
PROJECT MANAGER: CLINT SCHERF  
PH. 480-225-4920

**SHEET INDEX**

SHEET GD 1	COVER SHEET
SHEET GD 2	GRADING & DRAINAGE
SHEET GD 3	DETAILS & SITE SECTIONS
SHEET GD 4	SLOPE ANALYSIS (N.A.O.S.)

Contact Arizona 811 at least two full working days before you begin excavation  
**ARIZONA811**  
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FIRST SUBMITTAL - CITY OF SCOTTSDALE	
FINAL SUBMITTAL - CITY OF SCOTTSDALE	
11/14/24	
01/30/25	

11/14/24	
01/30/25	

531AZ2004@GMAIL.COM  
CIVIL ~ STRUCTURAL  
RESIDENTIAL ~ COMMERCIAL  
11350 SOUTH VIEWPOINTE WAY  
YUMA, ARIZONA 85367

CIVIL ENGINEER  
33862  
STATE OF ARIZONA  
REG. NO. 150  
DATE: 12/15/16  
EXPIRES: 3/31/18  
CLINT SCHERF (480) 225-4920

**Grading & Drainage Plan**

**COVER SHEET**

SCALE:	1 INCH = 30 FEET
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PROJECT No:	SSE-1049-2024
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SHEET:	GD 1 of 04
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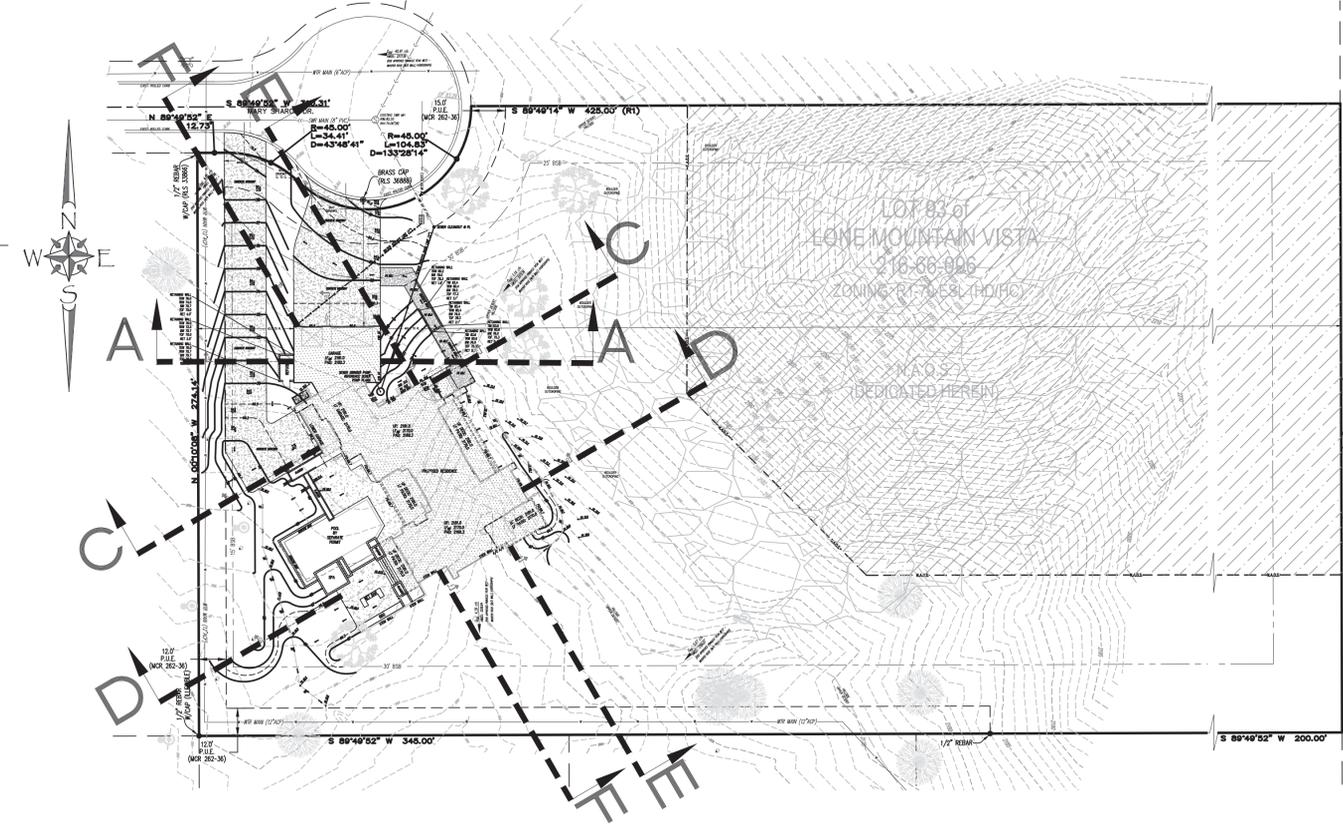
# GRADING & DRAINAGE PLAN FOR SIVARAJAN PROPERTY

A SINGLE FAMILY RESIDENCE  
at 7899 EAST MARY SHARON DRIVE

A PORTION OF THE SOUTHEAST QUARTER OF SECTION 23, TOWNSHIP 5 NORTH, RANGE 4  
EAST OF THE GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA

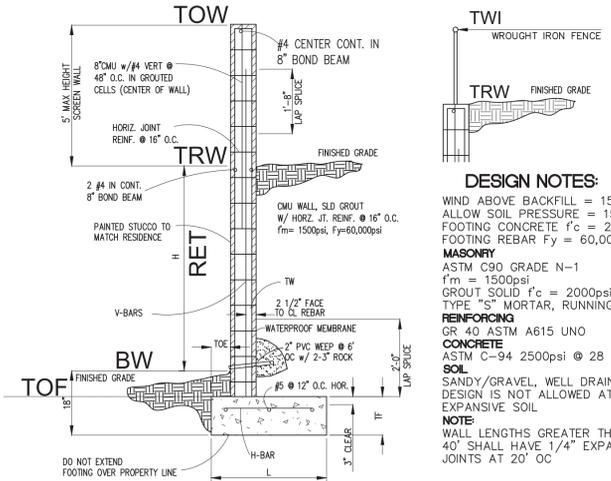
## SITE SECTIONS

## KEY MAP (SCALE 1" = 30')

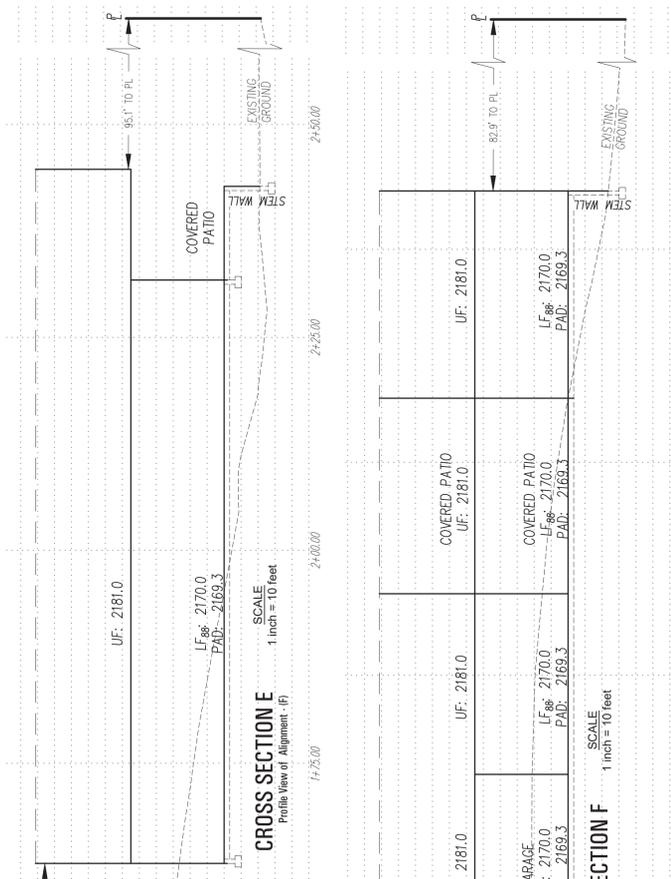
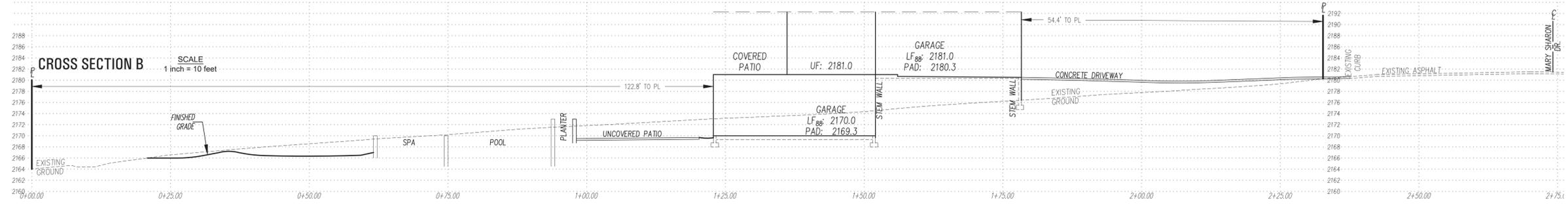
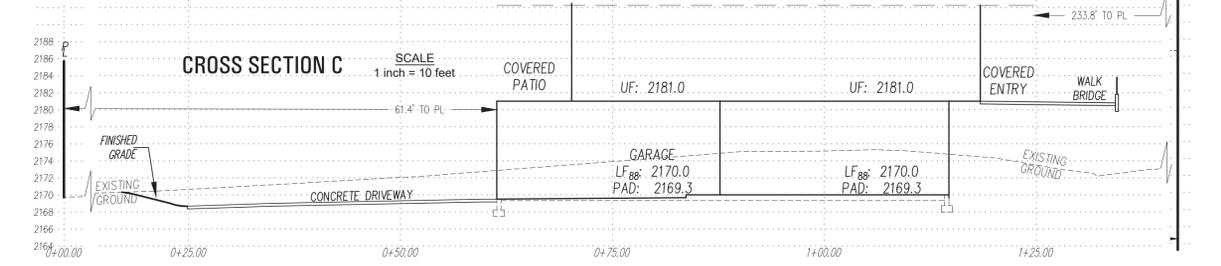
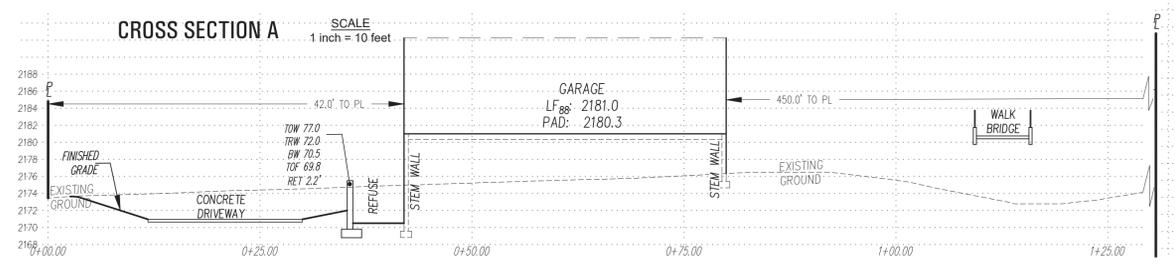


## RETAINING WALL DETAIL

### CMU WALL (Partial Retention)



H HEIGHT	TW	V-BAR	L LENGTH	TF TOE	H-BAR
3'-6"	8"	#4 @ 24" oc	3'-0"	12" 8"	---
5'-6"	8"	#5 @ 16" oc	4'-3"	12" 8"	#4 @ 32" oc



Contact Arizona 811 at least two full working days before you begin excavation  
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YUMA, ARIZONA 85367  
PROJECT MANAGER: CLINT SCHERF (480) 225-4920

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(480) 225-4920  
CIVIL ENGINEER

7899 EAST MARY SHARON DRIVE  
SCOTTSDALE, ARIZONA

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# Grading & Drainage Plan

## DETAILS & SITE SECTIONS

SCALE: 1 INCH = 30 FEET

PROJECT No: SSE-1049-2024

SHEET: GD 3 of 04

PLAN CHECK # 24

# GRADING & DRAINAGE PLAN FOR SIVARAJAN PROPERTY

A SINGLE FAMILY RESIDENCE  
at 7899 EAST MARY SHARON DRIVE

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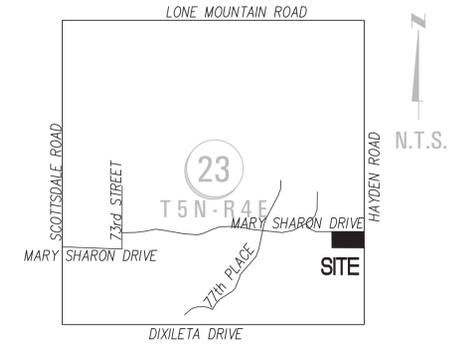


### SLOPE ANALYSIS

COLOR	SLOPE	AREA (SqFt)	N.A.O.S. REQUIRED AREA (%)	N.A.O.S. REQUIRED AREA (SqFt)
	0-5	21,456	25	5,364
	5-10	18,203	35	6,371
	HILLSIDE	105,982	50	52,991
<b>TOTAL N.A.O.S. REQUIRED:</b>				<b>64,726</b>



### LOCATION MAP



### SITE DATA

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(6.69% TOTAL LOT COVERAGE)

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FIRST SUBMITTAL - CITY OF SCOTTSDALE

---

11/14/24

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PROJECT INFO - PLEASE CONTACT PROJECT MANAGER CLINT SCHERF (480) 225-4920

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551427004@GMAIL.COM

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RESIDENTIAL ~ COMMERCIAL

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CIVIL ENGINEER

PROJECT MANAGER:  
CLINT SCHERF (480) 225-4920

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## Grading & Drainage Plan

### SLOPE ANALYSIS FOR N.A.O.S.

7899 EAST MARY SHARON DRIVE  
SCOTTSDALE, ARIZONA

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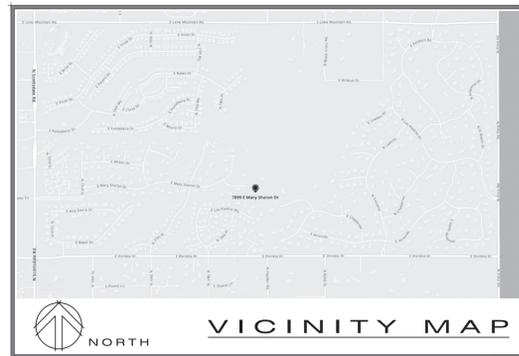
SCALE: N.T.S.

PROJECT No: SSE-1049-2024

SHEET: GD 4 of 04

PLAN CHECK #

AREA SCHEDULE	
UPPER LEVEL	3216 SQ. FT.
LOWER LEVEL	3107 SQ. FT.
TOTAL LIVABLE	6422 SQ. FT.
GARAGE 1	849 SQ. FT.
GARAGE 2	728 SQ. FT.
MAIN PATIO	345 SQ. FT.
BED 2 PATIO	155 SQ. FT.
BED 4 PATIO	200 SQ. FT.
FRONT PATIO	246 SQ. FT.
FRONT DECK	342 SQ. FT.
MAIN DECK	344 SQ. FT.
PORCH	64 SQ. FT.
RESIDENCE TOTAL	4824 SQ. FT.
LOT AREA	14564 SQ. FT.
FOOTPRINT	4824 SQ. FT.
COVERAGE	6.75 %



### NOTES

#### GENERAL INFORMATION

- SEE GRADING PLAN FOR HEIGHTS OF WALLS NOT NOTED ON THIS SHEET.
- SEE GRADING PLAN FOR FINAL FINISHED FLOOR ELEVATIONS.
- A/C SCREEN WALL TO BE 12" ABOVE THE TOP OF A/C COMPRESSOR.
- REFUSE AREA SCREEN WALL AND GATE TO BE A MIN. OF 5 FT. HIGH.
- WALL AT POOL EQUIPMENT TO BE A MIN. OF 12" ABOVE TOP OF EQUIPMENT.
- HEIGHTS OF MASONRY WALLS INDICATED SHALL BE MEASURED FROM ADJACENT FINISHED GRADE.
- ALL MASONRY SCREEN WALLS NOT RETAINING EARTH SHALL HAVE #4 BARS @ 48" O.C. IN SOLID GROUTED CELLS. ALL MASONRY SHALL HAVE 1/2" STUCCO - PAINT TO MATCH THE COLOR OF THE HOUSE.
- BOULDERS SHOWN ARE TO BE FREE FROM SCARS & SHALL BE SIMILAR IN APPEARANCE TO THOSE FOUND IN THE GENERAL VICINITY OF THIS PROJECT. DRILL AND/OR EPOXY TO PREVENT MOVEMENT.
- AREA BETWEEN CONSTRUCTION FENCE & BUILDING WALLS (INCLUDING LOW WALLS) SHALL BE LANDSCAPED AS TO BE INDISTINGUISHABLE FROM ADJACENT UNDISTURBED NATURAL DESERT AREAS.
- THE ROCK UTILIZED AT THE DRIVEWAY FOR EROSION CONTROL SHALL BE INDIGENOUS GRANITE ROCK THAT MATCHES THE NATIVE MATERIAL ON THIS SITE.
- BOULDERS WHICH ARE MOVED SHALL HAVE EXPOSED WEATHERED FACES SHALL BE TREATED TO SIMULATE THE NATURAL ROCK VARNISH OF THE AGED EXPOSED FACES.
- MISCELLANEOUS SITE STRUCTURES, GAS STORAGE TANKS, SWIMMING POOLS, SPAS, FENCES AND SITE WALLS (INCLUDING RETAINING WALLS) REQUIRE SEPARATE PERMITS.
- OUTDOOR SWIMMING POOL (UBDER SEPARATE PERMIT) SHALL BE PROVIDED WITH A BARRIER THAT SHALL BE INSTALLED, INSPECTED AND APPROVED PRIOR TO PLASTERING OR FILLING WITH WATER. THE BARRIER SHALL COMPLY WITH I.R.C. CODES AS AMENDED.

DATE: 11/26/2024

1/27/25 - REVIEW | COMMENTS

BT ARCHITECTURAL, LLC  
8425 West El Cortez Place  
Peoria, Arizona 85383  
(602) 292-8350  
Bret.BTA@GMAIL.COM

### EQUIPMENT

ALL EXTERIOR EQUIPMENT SHALL BE SCREENED BY A SOLID WALL AND SOLID GATE THAT ARE A MINIMUM OF 12" HIGHER THAN THE HIGHEST POINT OF THE EQUIPMENT. THE CONTRACTOR SHALL VERIFY THE HEIGHT OF THE EQUIPMENT PRIOR TO CONSTRUCTION OF THE SITE WALL TO ENSURE COMPLIANCE DURING CONSTRUCTION. FAILURE TO COMPLY WILL RESULT IN THE WORK HAVING TO BE REDONE UNTIL COMPLIANCE IS ACHIEVED RIGOROUS OF COST OR DELAY.

POOL EQUIPMENT SHALL BE SCREENED BY A SOLID WALL AND SOLID GATE THAT ARE A MINIMUM OF 12" TALLER THAN THE HIGHEST POINT OF THE EQUIPMENT. THE CONTRACTOR SHALL VERIFY THE HEIGHT OF THE POOL EQUIPMENT PRIOR TO CONSTRUCTION OF THE SITE WALL TO ENSURE COMPLIANCE DURING CONSTRUCTION. FAILURE TO COMPLY WILL RESULT IN THE WORK HAVING TO BE REDONE UNTIL COMPLIANCE IS ACHIEVED REGARDLESS OF COST OR DELAY.

THE SES PANEL SHALL BE SCREENED BY A SOLID WALL AND SOLID GATE THAT ARE A MINIMUM OF 4" TALLER THAN THE HIGHEST POINT OF THE SES PANEL. THE CONTRACTOR SHALL INSTALL THE SES PANEL AS LOW AS ALLOWED BY BUILDING CODE AND APS IN AN EFFORT TO MINIMIZE THE HEIGHT OF THE SCREEN WALL. THE CONTRACTOR SHALL VERIFY COMPLIANCE DURING CONSTRUCTION.

### EASEMENT

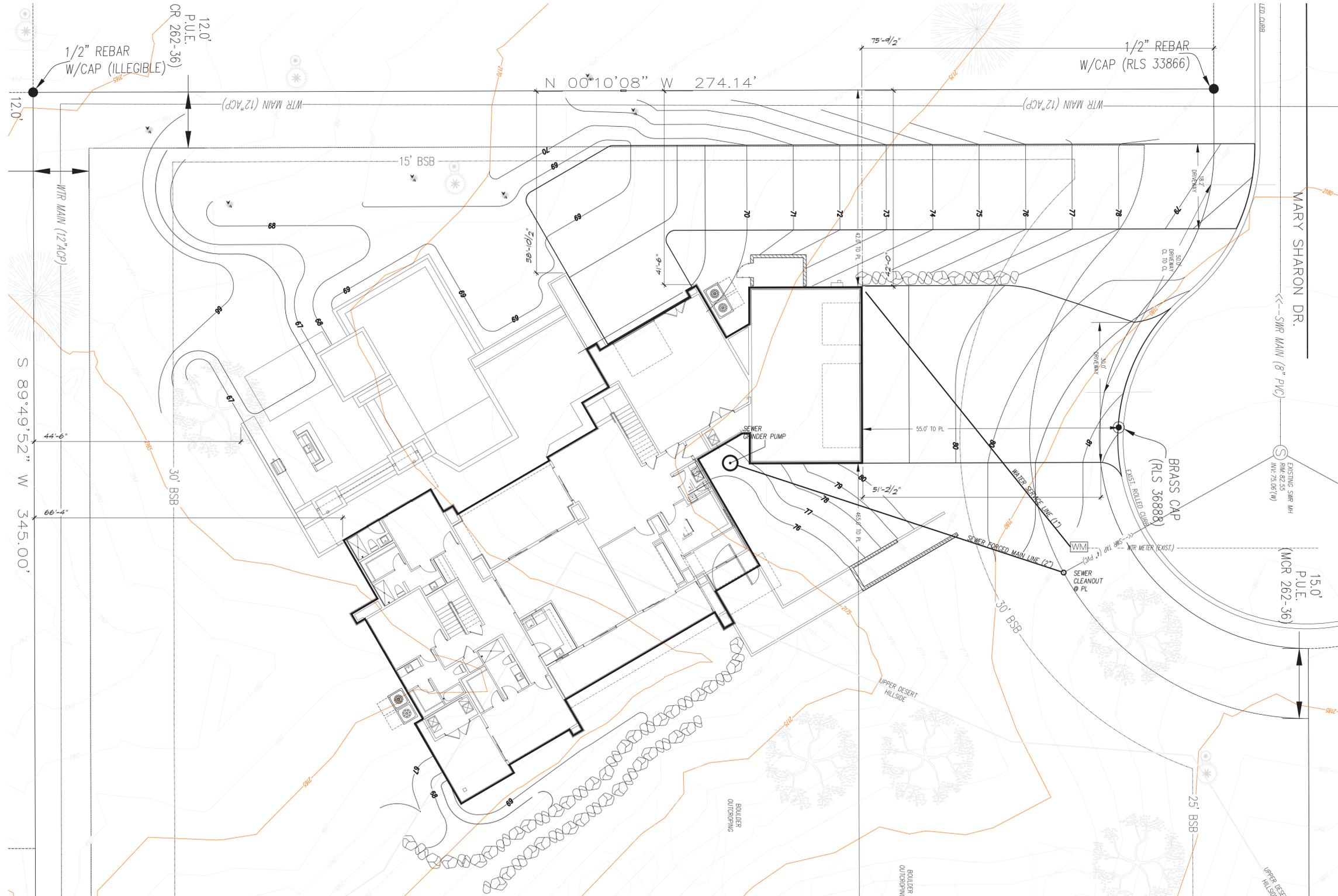
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### KEY NOTES

1	400 AMP ELECTRICAL SERVICE
2	BUILDING SETBACKS
3	SEPTIC SYSTEM REQUIRES SEPARATE PERMIT FROM MCDSD
4	CRUSHED GRANITE GRAVEL DRIVEWAY
5	WATER SERVICE FROM EXISTING WELL
6	ELECTRICAL SERVICE
7	EXISTING GRAVEL ROAD



**SITE PLAN**  
3/32" = 1'-0"



**Sivarajan Residence**  
7899 East Mary Sharon Drive  
Scottsdale 85266  
Lone Mountain Vista Tract A - Lot 93

**ARCHITECTURAL**  
**SITE PLAN**  
SHEET NO.  
**A1**

AREA SCHEDULE	
UPPER LEVEL	5246 SQ. FT.
LOWER LEVEL	3167 SQ. FT.
<b>TOTAL LIVABLE</b>	<b>6402 SQ. FT.</b>
GARAGE 1	849 SQ. FT.
GARAGE 2	728 SQ. FT.
MAIN PATIO	348 SQ. FT.
BED 2 PATIO	155 SQ. FT.
BED 4 PATIO	200 SQ. FT.
FRONT PATIO	246 SQ. FT.
FRONT DECK	342 SQ. FT.
MAIN DECK	344 SQ. FT.
PORCH	64 SQ. FT.
<b>RESIDENCE TOTAL</b>	<b>4824 SQ. FT.</b>
LOT AREA	14564 SQ. FT.
FOOTPRINT	4824 SQ. FT.
COVERAGE	6.75 %

- ### NOTES
- GENERAL INFORMATION**
- INSULATION:  
R-38 BLOW-IN @ ROOF - U.N.O. ON PLAN  
R-21 BATTS @ EXT. WALLS - U.N.O. ON PLAN
  - PROVIDE R-19 BATT (2x6 WALL) INSULATION BETWEEN GARAGE & ALL LIVABLE SPACES.
  - PROVIDE 5/8" TYPE 'X' GYPSUM BOARD ON WALLS & CEILING IN GARAGE PER CODE REQUIREMENTS.
  - MAINTAIN A MAXIMUM SILL HEIGHT OF 44" IN BEDROOM EGRESS WINDOWS.
  - SEE COVER SHEET FOR GENERAL NOTES AND SPECIFICATIONS. SEE DETAIL SHEETS FOR STANDARD CONSTRUCTION DETAILS.
  - PROVIDE BATT INSULATION AT WALL LOCATIONS SEPARATING CONDITIONED FROM NON-CONDITIONED AREAS.
  - PROVIDE FIRE / DRAFT STOPS IN ALL WALLS GREATER THAN 10'-0" IN HEIGHT & AT FIREPLACE.
  - SEE SHEET A6.2 FOR INTERIOR ELEVATIONS. (A) & (B) BOTTOM OF WINDOW ROUGH OPENINGS TO BE 34" OR MORE ABOVE FINISH FLOOR OR PROVIDE A GUARDRAIL AND WINDOW FALL PROTECTION PER IRC SECTION R312. WINDOWS AND DOORS TO BE FLASHED WITH APPROVED MATERIALS PER MANUFACTURER'S SPECIFICATIONS.
  - WINDOW EGRESS  
WINDOW CLEARANCE FROM THE INSIDE, CLEAR OPENING OF 5.7 SQ. FT. NET CLEAR OPENING 24" HIGH AND 20" WIDE W/ SILL HEIGHT NOT TO EXCEED 44".

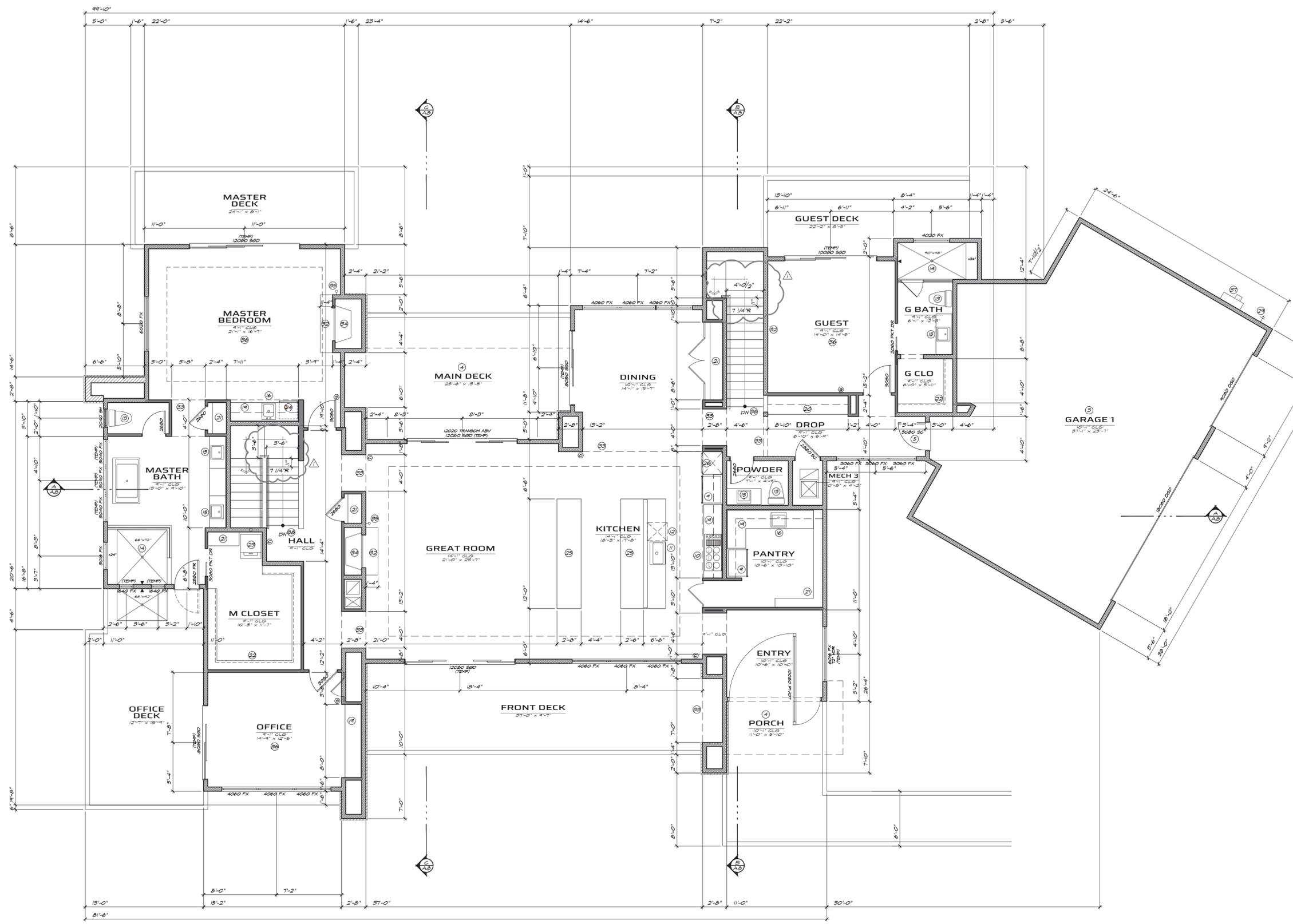
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1/27/25 - REVIEW | COMMENTS

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8425 West El Cortez Place  
Peoria, Arizona 85383  
(602) 292-6350  
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- ### KEY NOTES
- 2x4 STUDS AT 24" O.C. INTERIOR WALL W/ 1/2" GYP BD EA SIDE.
  - 2x6 STUDS - PLUMBING WALL / BEARING WALL WHERE OCCURS ON PLAN.
  - PROVIDE ONE LAYER 5/8" TYPE 'X' GYPSUM BOARD AT WALLS AND CEILING IN GARAGE. PENETRATIONS TO BE OF 1-HR RATING FOR ELEC BOXES.
  - PROVIDE 1/2" MOISTURE RESISTANT GYPSUM BOARD AND MOISTURE PROTECTIVE BARRIER AT ALL WET WALLS. AT BUILDING EXTERIOR USE 1/2" SOFFIT BOARD W/ WATER RESISTANT FACE PAPER.
  - 1-3/8" THICK SOLID CORE DOOR W/ SELF-CLOSING, TIGHT FITTING GASKETS & SNEAKERS.
  - PROVIDE A MINIMUM 36"x36" CONCRETE LANDING @ EACH EXTERIOR DOOR.
  - TANKLESS WATER HEATER & SOFT WATER LOOP WITH CIRCULATION PUMP. PROVIDE (2) 2.5 SF AIR VENTS WITHIN 12" OF FLOOR AND CEILING.
  - 1/4" P RELIEF LINE TO BE FULL SIZE STEEL PIPE OR HARD DRAIN COPPER TUBING TO THE EXTERIOR AND TERMINATING IN A DOWNWARD POSITION BETWEEN 6" AND 12" ABOVE GRADE.
  - REFRIGERATOR / FREEZER - PRE-PLUMB FOR ICE MAKER
  - COOKTOP W/ EXHAUST HOOD AND POT FILLER
  - SINK W/ DISPOSAL
  - DISHWASHER - PROVIDE APPROVED AIR GAP
  - 1/2" GALV. FLUSH WATER CLOSET PROVIDE A (MIN.) 15" ON EACH SIDE & 24" (MIN.) CLEAR IN FRONT
  - NONABSORBENT CEMENTITIOUS BACKER PANELS O/ WALL W/ TILE OR EQUAL TO +12" ABV. DRAIN LAY SINK WITH MIN. 60" HIGH MIRROR ABOVE VERIFY
  - LAUNDRY SINK
  - WASHER LOCATION - PROVIDE WATER HAMMER ARRESTOR
  - ELECTRIC DRYER - W/ 4" VENT THROUGH ROOF W/ RAINGAP NOT TO EXCEED 15'-0" W/ (2) 90° OFFSETS INSTALL PER IRC G2439
  - BASE CABINET W/ COUNTER TOP PER OWNER
  - 42" UPFERS WHERE SHOWN - SEE CABINET DRAWINGS. CABINET DROP ZONE PER OWNER
  - 5 SHELVES EQUALLY SPACED AT A MINIMUM 14" SEPARATION.
  - ROD AND SHELF OR CLOSET SYSTEM AT CLOSET PER SPECS
  - STACKABLE WASHER DRYER - PROVIDE WATER HAMMER ARRESTOR AND 4" DRYER VENT THROUGH ROOF W/ RAINGAP NOT TO EXCEED 15'-0" W/ (2) 90° OFFSETS INSTALL PER IRC G2439
  - UNDERCOUNTER BAR REFRIGERATOR
  - KITCHEN ISLAND COUNTERTOP ON BASE CABINETS
  - STACKABLE OVEN / MICROWAVE
  - CONCRETE A.G. COMPRESSOR PAD - VERIFY LOCATION WITH MECHANICAL
  - HOSE BIB W/ BACK FLOW PREVENTION
  - HOSE BIB W/ BACK FLOW PREVENTION & SHUT OFF VALVE
  - CEILING/WALL MOUNTED SMOKE ALARM WIRED TO HOUSE WIRING (S)
  - CEILING/WALL MOUNTED CARBON MONOXIDE / SMOKE ALARM WIRED TO HOUSE WIRING (S)
  - PROVIDE ADDITIONAL SUPPORT BLOCKING AT TELEVISION VERIFY HEIGHT AND SIZE
  - LINE OF SOFFIT / CEILING CHANGE - SEE ROOM CEILING HEIGHTS AND REFLECTED CEILING PLAN
  - GAS FIREPLACE W/ STANDARD CHIMNEY SYSTEM (I.R.C. ERS01) W/ NON-COMBUSTIBLE HEARTH OR FLOOR AREA SEE DTL. 10/D1 GAS KEY TO FIREPLACE
  - ALL BEDROOM ESCAPE WINDOWS SHALL COMPLY WITH THREE CONDITIONS 1) THE OPERABLE AREA SHALL BE 5.7 SQ. FT. OR GREATER 2) SHALL MEET A MINIMUM 24" HEIGHT AND 20" WIDTH 3) 44" MAX. FROM FINISH FLOOR TO FINISH WINDOW OPENING
  - ELECTRICAL SERVICE ENTRANCE PANEL AND METER
  - STAIRS - MAX. RISE 7 3/4", MIN. RUN 10", MIN. CLEAR WIDTH 36", HANDRAIL HEIGHT 34" ON 2x3B" PONY WALL, CONSTRUCT STAIRS PER IRC REQUIREMENTS - SEE DETAIL SHEET A5

**Sivarajan Residence**  
7899 East Mary Sharon Drive  
Scottsdale 85266  
Lone Mountain Vista Tract A - Lot 93

**UPPER FLOOR PLAN**  
SHEET NO. **A2.1**



**UPPER FLOOR PLAN**  
3/16" = 1'-0" NORTH

AREA SCHEDULE	
UPPER LEVEL	3246 SQ. FT.
LOWER LEVEL	3167 SQ. FT.
TOTAL LIVABLE	6402 SQ. FT.
GARAGE 1	849 SQ. FT.
GARAGE 2	728 SQ. FT.
MAIN PATIO	348 SQ. FT.
BED 2 PATIO	155 SQ. FT.
BED 4 PATIO	200 SQ. FT.
FRONT PATIO	246 SQ. FT.
MAIN DECK	344 SQ. FT.
PORCH	64 SQ. FT.
RESIDENCE TOTAL	4824 SQ. FT.
LOT AREA	14541 SQ. FT.
FOOTPRINT	4824 SQ. FT.
COVERAGE	6.75 %

- ### NOTES
- #### GENERAL INFORMATION
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  - MAINTAIN A MAXIMUM SILL HEIGHT OF 44" IN BEDROOM EGRESS WINDOWS.
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  - PROVIDE BATT INSULATION AT WALL LOCATIONS SEPARATING CONDITIONED FROM NON-CONDITIONED AREAS.
  - PROVIDE FIRE / DRAFT STOPS IN ALL WALLS GREATER THAN 10'-0" IN HEIGHT & AT FIREPLACE.
  - SEE SHEET A6.2 FOR INTERIOR ELEVATIONS. (A) BOTTOM OF WINDOW ROUGH OPENINGS TO BE 34" OR MORE ABOVE FINISH FLOOR OR PROVIDE A GUARDRAIL AND WINDOW FALL PROTECTION PER IRC SECTION R312.
  - WINDOWS AND DOORS TO BE FLASHED WITH APPROVED MATERIALS PER MANUFACTURER'S SPECIFICATIONS.
  - WINDOW EGRESS WINDOW OPERABLE FROM THE INSIDE, CLEAR OPENING OF 5.7 SQ. FT. NET CLEAR OPENING 24" HIGH AND 20" WIDE W/ SILL HEIGHT NOT TO EXCEED 44".

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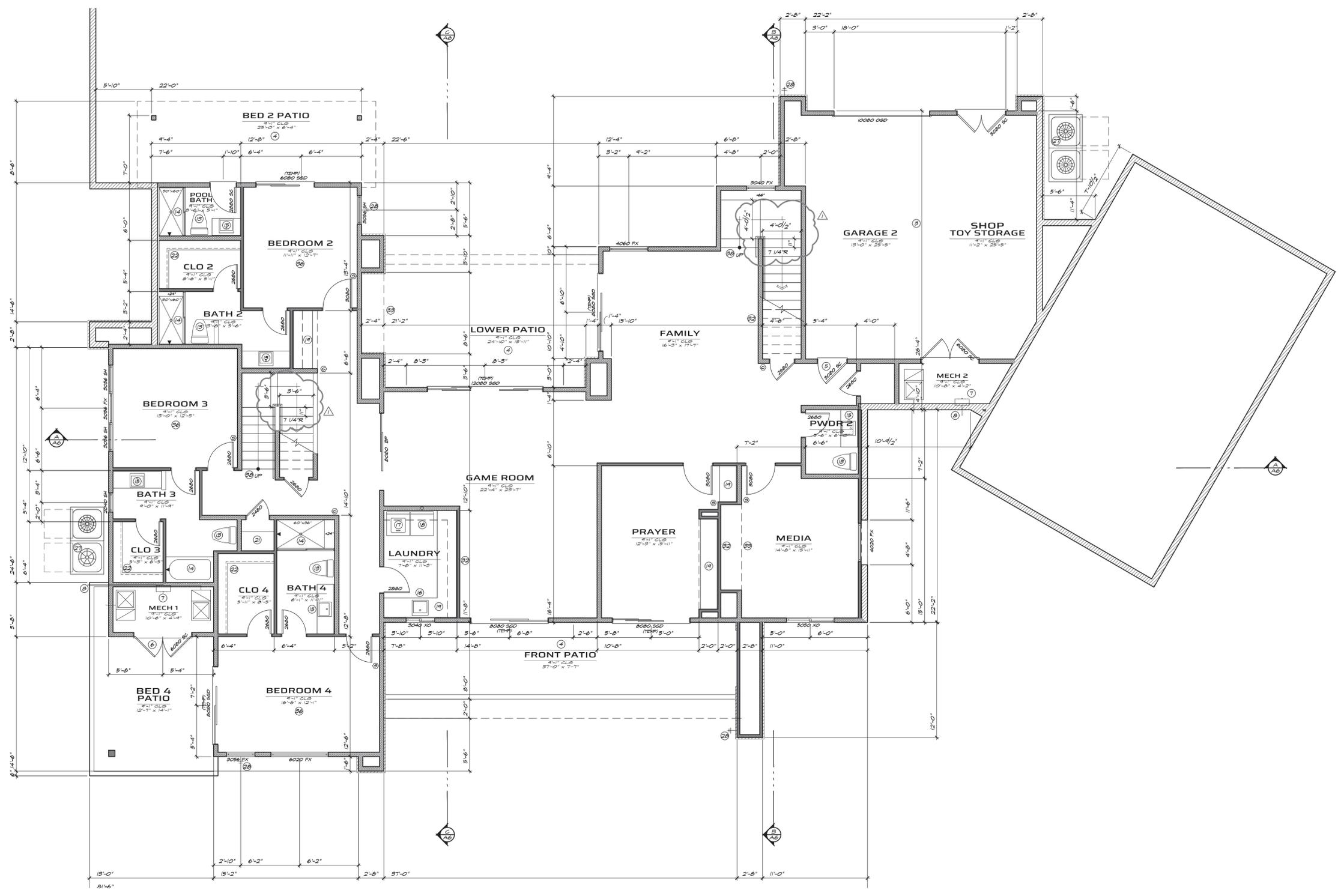
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- ### KEY NOTES
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  - PROVIDE A MINIMUM 56"x36" CONCRETE LANDING @ EACH EXTERIOR DOOR.
  - TANKLESS WATER HEATER & SOFT WATER LOOP WITH CIRCULATION PUMP. PROVIDE (2) 2.5 SF AIR VENTS WITHIN 12" OF FLOOR AND CEILING.
  - 7 & P RELIEF LINE TO BE FULL SIZE STEEL PIPE OR HARD DRAWN COPPER TUBING TO THE EXTERIOR AND TERMINATING IN A DOWNWARD POSITION BETWEEN 6" AND 12" ABOVE GRADE.
  - REFRIGERATOR / FREEZER - PRE-PLUMB FOR ICE MAKER
  - COOKTOP W/ EXHAUST HOOD AND POT FILLER
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  - 1.25 GAL/FLUSH WATER CLOSET PROVIDE A (MIN.) 15" ON EACH SIDE & 24" (MIN.) CLEAR IN FRONT
  - NONABSORBENT CEMENTITIOUS BACKER PANELS O/ WALL W/ TILE OR EQUAL TO 12" ABV. DRAIN
  - LAV SINK WITH MIN. 60" HIGH MIRROR ABOVE VERIFY
  - LAUNDRY SINK
  - WASHER LOCATION - PROVIDE WATER HAMMER ARRESTOR
  - ELECTRIC DRYER - W/ 4" VENT THROUGH ROOF W/ RAINGAP NOT TO EXCEED 15'-0" W/ (2) 90° OFFSETS INSTALL PER IRC 624.3.9
  - BASE CABINET W/ COUNTER TOP PER OWNER
  - 42" UPFERS WHERE SHOWN - SEE CABINET DRAWINGS, CABINET DROP ZONE PER OWNER
  - 5 SHELVES EQUALLY SPACED AT A MINIMUM 14" SEPARATION
  - ROD AND SHELF OR CLOSET SYSTEM AT CLOSET PER SPECS
  - STACKABLE WASHER DRYER - PROVIDE WATER HAMMER ARRESTOR AND 4" DRYER VENT THROUGH ROOF W/ RAINGAP NOT TO EXCEED 15'-0" W/ (2) 90° OFFSETS INSTALL PER IRC 624.3.9
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  - KITCHEN ISLAND COUNTERTOP ON BASE CABINETS
  - STACKABLE OVEN / MICROWAVE
  - CONCRETE A.C. COMPRESSOR PAD - VERIFY LOCATION WITH MECHANICAL
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**Sivarajan Residence**  
7899 East Mary Sharon Drive  
Scottsdale 85266  
Lone Mountain Vista Tract A - Lot 93

**LOWER FLOOR PLAN**

SHEET NO. **A2.2**



**LOWER FLOOR PLAN**  
3/16" = 1'-0"  
NORTH

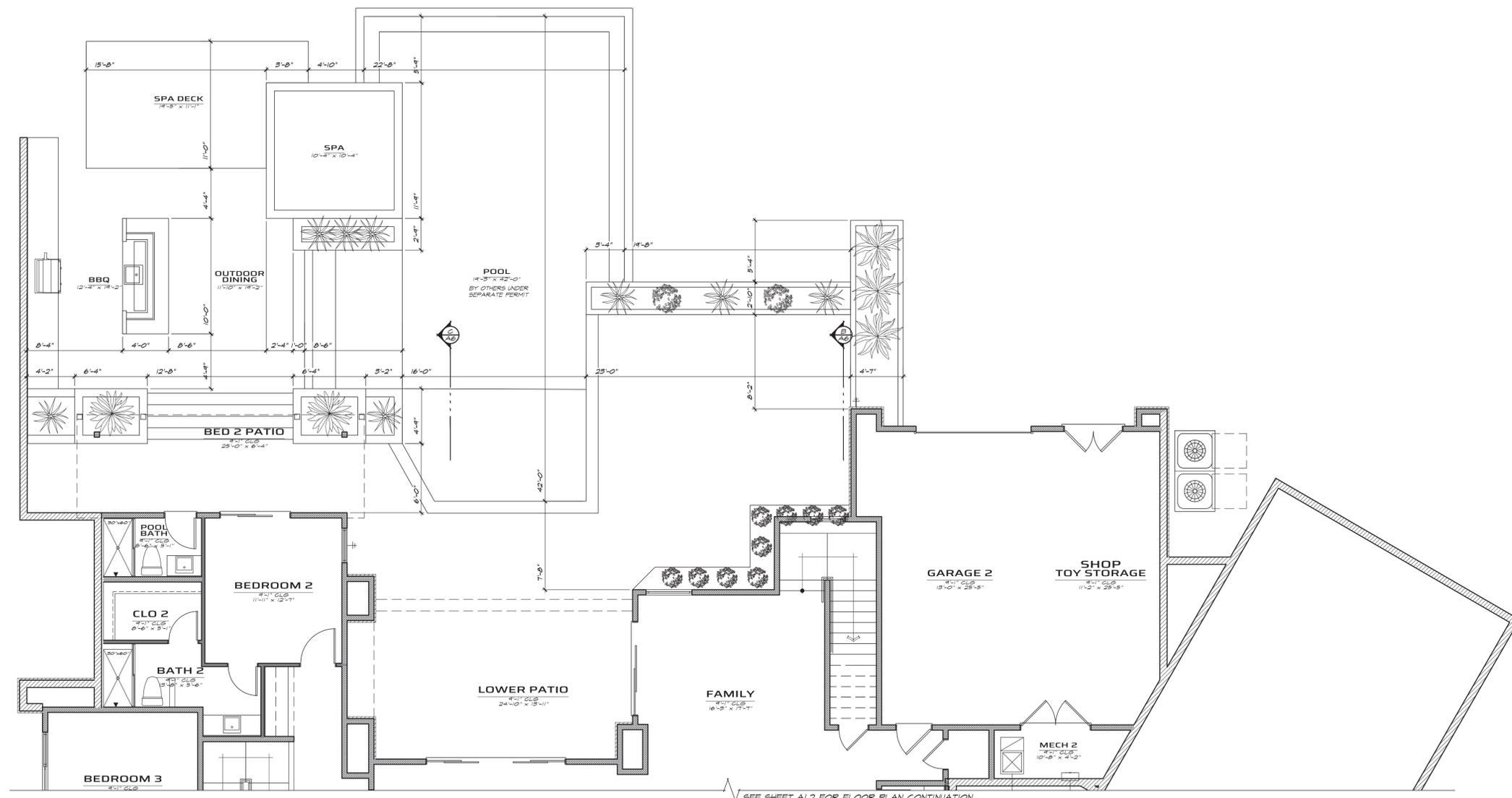
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FRONT DECK	342 SQ. FT.
MAIN DECK	344 SQ. FT.
PORCH	64 SQ. FT.
<b>RESIDENCE TOTAL</b>	<b>4824 SQ. FT.</b>
LOT AREA	145641 SQ. FT.
FOOTPRINT	4824 SQ. FT.
COVERAGE	6.75 %

**NOTES**

**GENERAL INFORMATION**

- INSULATION:  
R-38 BLOW-IN @ ROOF - U.N.O. ON PLAN  
R-21 BATTS @ EXT. WALLS - U.N.O. ON PLAN
- PROVIDE R-19 BATT (2x6 WALL) INSULATION BETWEEN GARAGE & ALL LIVABLE SPACES.
- PROVIDE 5/8" TYPE "X" GYPSUM BOARD ON WALLS & CEILINGS IN GARAGE PER CODE REQUIREMENTS.
- MAINTAIN A MAXIMUM SILL HEIGHT OF 44" IN BEDROOM EGRESS WINDOWS.
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- PROVIDE BATT INSULATION AT WALL LOCATIONS SEPARATING CONDITIONED FROM NON-CONDITIONED AREAS.
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- SEE SHEET A6.2 FOR INTERIOR ELEVATIONS. (A) BOTTOM OF WINDOW ROUGH OPENINGS TO BE 34" OR MORE ABOVE FINISH FLOOR OR PROVIDE A GUARDRAIL AND WINDOW FALL PROTECTION PER IRC SECTION R312.
- WINDOWS AND DOORS TO BE FLASHED WITH APPROVED MATERIALS PER MANUFACTURER'S SPECIFICATIONS.
- WINDOW EGRESS WINDOW OPERABLE FROM THE INSIDE, CLEAR OPENING OF 5.7 SQ. FT. NET CLEAR OPENING 24" HIGH AND 20" WIDE W/ SILL HEIGHT NOT TO EXCEED 44".

- KEY NOTES**
- 2x4 STUDS AT 24" O.C. INTERIOR WALL W/ 1/2" GYP BD EA SIDE.
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  - 1.25 GAL/FLUSH WATER CLOSET PROVIDE A (MIN.) 15" ON EACH SIDE & 24" (MIN.) CLEAR IN FRONT
  - NONABSORBENT CEMENTITIOUS BACKER PANELS O/ WALL W/ TILE OR EQUAL TO +12" ABV. DRAIN
  - LAV SINK WITH MIN. 60" HIGH MIRROR ABOVE VERIFY
  - LAUNDRY SINK
  - WASHER LOCATION - PROVIDE WATER HAMMER ARRESTOR
  - ELECTRIC DRYER - W/ 4" VENT THROUGH ROOF W/ RAINGAP NOT TO EXCEED 15'-0" W/ (2) 90° OFFSETS INSTALL PER IRC 624.3.4
  - BASE CABINET W/ COUNTER TOP PER OWNER
  - 42" UPPIERS WHERE SHOWN - SEE CABINET DRAWINGS, CABINET DROP ZONE PER OWNER
  - 5 SHELVES EQUALLY SPACED AT A MINIMUM 14" SEPARATION
  - ROD AND SHELF OR CLOSET SYSTEM AT CLOSET PER SPECS
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  - CONCRETE A.C. COMPRESSOR PAD - VERIFY LOCATION WITH MECHANICAL
  - HOSE BIB W/ BACK FLOW PREVENTION
  - HOSE BIB W/ BACK FLOW PREVENTION & SHUT OFF VALVE
  - CEILING/WALL MOUNTED SMOKE ALARM WIRED TO HOUSE WIRING (C)
  - CEILING/WALL MOUNTED CARBON MONOXIDE / SMOKE ALARM WIRED TO HOUSE WIRING (C)
  - PROVIDE ADDITIONAL SUPPORT BLOCKING AT TELEVISION VERIFY HEIGHT AND SIZE
  - LINE OF SOFFIT / CEILING CHANGE - SEE ROOM CEILING HEIGHTS AND REFLECTED CEILING PLAN
  - GAS FIREPLACE W/ STANDARD CHIMNEY SYSTEM (I.R.C. ERSO1), W/ NON-COMBUSTIBLE HEARTH OR FLOOR AREA SEE DTL 10/D1 GAS KEY TO FIREPLACE
  - ALL BEDROOM ESCAPE WINDOWS SHALL COMPLY WITH THREE CONDITIONS 1) THE OPERABLE AREA SHALL BE 5.7 SQ. FT. OR GREATER 2) SHALL MEET A MINIMUM 24" HEIGHT AND 20" WIDTH 3) 44" MAX. FROM FINISH FLOOR TO FINISH WINDOW OPENING
  - ELECTRICAL SERVICE ENTRANCE PANEL AND METER
  - STAIRS - MAX. RISE 7 3/4", MIN. RUN 10", MIN. CLEAR WIDTH 36", HANDRAIL HEIGHT 34" ON 2x 3B" PONY WALL, CONSTRUCT STAIRS PER IRC REQUIREMENTS



DATE 11/26/2024  
1/27/25 - REVIEW | COMMENTS



**Sivarajan Residence**  
7899 East Mary Sharon Drive  
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Lone Mountain Vista Tract A - Lot 93

**POOL DECK PLAN**  
SHEET NO. **A2.3**



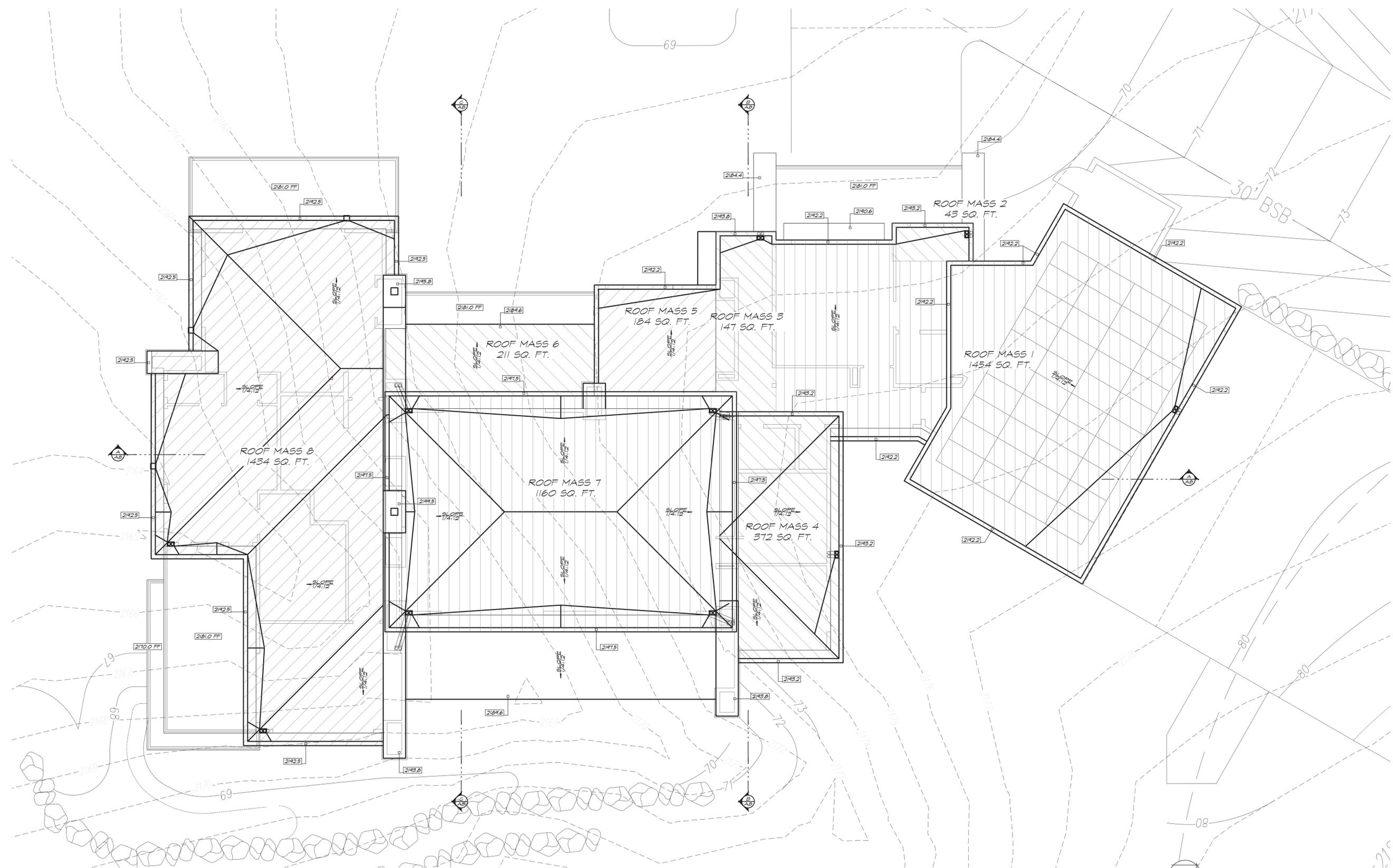
BUILDING MASSING CALCULATIONS					
MASS	AREA	TOP OF PARAPET/ROOF	HIGHEST ADJACENT NATURAL GRADE	DIFFERENCE	OVER 1/3 RULE
1	1454 SQ. FT.	2192.20	2177.10	15.10	NO
2	43 SQ. FT.	2193.20	2174.00	19.20	NO
3	147 SQ. FT.	2193.80	2174.80	19.00	NO
4	372 SQ. FT.	2193.20	2175.50	17.70	NO
5	184 SQ. FT.	2192.20	2174.25	17.95	NO
6	211 SQ. FT.	2189.60	2173.00	16.60	NO
7	1160 SQ. FT.	2197.50	2174.50	23.00	NO
8	1434 SQ. FT.	2192.50	2170.00	22.50	NO

DATE  
11/26/2024  
1/21/25 - REVIEW | COMMENTS

REGISTERED ARCHITECT  
BRETT OVERMYER  
EXPIRES 9/30/2027

**bta**  
ARCHITECTURAL

BTA ARCHITECTURAL, LLC  
8425 West El Cortez Place  
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**BUILDING MASSING PLAN**  
SHEET NO.  
**A3.2**

**BUILDING MASSING PLAN**  
3/16" = 1'-0" NORTH





**Sivarajan Residence**  
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**ELEVATIONS**

**NOTES**

**GENERAL INFORMATION**

- A. REFER TO GENERAL NOTE AND DETAIL SHEETS FOR TYPICAL REQUIREMENTS AND MATERIALS SPECIFIC TO THIS PROJECT.
- B. FLASHING OF EXTERIOR OPENINGS SHALL NOT BE LESS THAN #26 GA. CORROSION RESISTANT METAL & PER I.R.C. SEC. 703.8. ALL EXPOSED FLASHING SHALL BE PAINTED OR ANODIZED TO MATCH EXTERIOR COLOR.
- C. INSTALL ALL PRE-MANUFACTURED MATERIALS PER MANUFACTURERS REQUIREMENTS, RECOMMENDATIONS AND SPECIFICATIONS. INSTALLATION REQUIREMENTS TO BE PROVIDED BY BUILDER.
- D. ALL VENTS, FLASHING, ELECTRICAL PANEL(S), ETC. TO BE PAINTED TO MATCH HOUSE.
- E. WEEP SCREED SHALL BE OF #26 GAUGE CORROSION- RESISTANT METAL W/ A MINIMUM VERTICAL ATTACHMENT FLANGE OF 3 1/2" & PLACED A MINIMUM OF 3/4" BELOW FOUNDATION PLATE & A MIN. 6" A.F.G. @ ALL EXT. WALLS.
- F. ALL WINDOW FRAMES SHALL BE PAINTED OR ANODIZED TO MATCH EXTERIOR COLOR - NO EXPOSED WOOD OR METAL.
- G. CONTRACTOR TO VERIFY VENTILATION SYSTEM COMPLIANCE PER I.R.C.
- H. PER IRC SECTION R319.1.3 ALL EXPOSED WOOD SHALL BE PROTECTED WITH TWO (2) COATS OF STAIN OR PRIMED AND PAINTED.

SEE SITE PLAN FOR SITE WALL LOCATIONS.

**DOOR AND WINDOW FLASHING:**

PROVIDE 30# FELT AT ALL HEADS, JAMBS & SILLS OF WINDOW AND DOOR OPENINGS IN FRAME WALLS

- A. FLASH HORIZONTAL AND/OR SLOPED AREAS AND 6" MIN. VERT. WALL SURFACE AROUND OPENINGS.
- B. PROVIDE CONTINUOUS SEALANT BEAD WHERE STUCCO ABUTS WINDOW AND DOOR FRAMES SO AS TO PROVIDE A WEATHER-RESISTIVE BARRIER.

**ONE COAT STUCCO SYSTEM:**

ALL ONE COAT STUCCO SYSTEMS SHALL BE APPLIED BY MANUFACTURER APPROVED INSTALLERS. AN APPROVED WEATHER RESISTIVE BARRIER SHALL BE INSTALLED OVER ALL FRAMING AND WOOD BASED SHEATHING.

SEE BUILDER SPECS. FOR FINISH AND CORNER BEAD STYLE.

**WEATHER RESISTIVE BARRIER:**

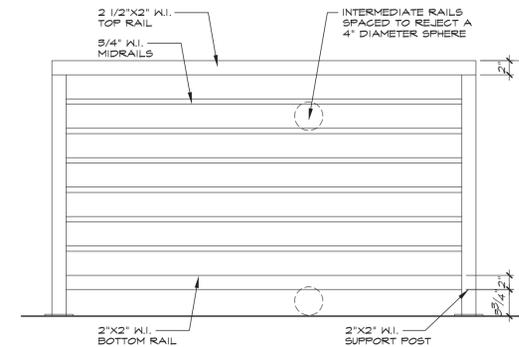
PROVIDE 1 LAYER 15LB ASPHALT SATURATED ORGANIC FELT OVER ALL EXTERIOR FRAMING/SHEATHING PRIOR TO STUCCO LATH.

**EXTERIOR WALL BRACING:**

UNLESS NOTED OTHERWISE ON THE "STRUCTURAL FLOOR PLAN", THE EXTERIOR SIDE OF ALL EXTERIOR WALLS SHALL BE BRACED PER SECTION R602.10 IRC - BRACING SHALL BE LOCATED AT EACH CORNER (OR AS NEAR TO AS POSSIBLE) AND EVERY 25' OF WALL LENGTH. BRACING SHALL CONSIST OF 1x4 DIAGONAL LET-IN SIMPSON RCMB DIAGONAL LET-IN OR SIMPSON WB X-BRACING.

**KEY NOTES**

- ① SAN KOTE STUCCO SYSTEM (ICC-ES-2729) O/ FOAM BOARD (ON AIS BOARD @ ATTIC AREAS).
- ② APPLIED STONE VENEER - SEE MANUFACTURER'S INSTALLATION INSTRUCTIONS AND DETAIL 2/D1.
- ③ WEEP SCREED TO MIN. 3/4" BELOW FINISHED FLOOR - PAINT CONCRETE STEM BELOW TO MATCH BUILDING.
- ④ #26 GAUGE CORROSION- RESISTANT METAL W/ A MINIMUM VERTICAL ATTACHMENT FLANGE OF 3 1/2" AND A MIN. 6" A.F.G. @ ALL EXT. WALLS.
- ⑤ FINISH GRADE - SLOPE AWAY FROM BUILDING
- ⑥ 6x4 GALVANIZED METAL SCUPPER
- ⑦ SEE DETAIL 1/D1.
- ⑧ ROOF DRAIN TO BE MAX 4" ABV FINISHED GRADE - BLOCKOUT STEM AS REQUIRED (TYP.) SEE DETAIL 6/D1 GARAGE DOOR PER OWNER
- ⑨ METAL HANDRAIL TO +36" A.F.F. SEE DETAIL 1/A4.2
- ⑩ FIREPLACE CHIMNEY CAP CONSTRUCTED WITH NON-COMBUSTIBLE MATERIALS BY CHIMNEY KING OR EQUAL. TOP OF CHIMNEY SHALL BE MIN. 2'-0" ABOVE ANY PART OF BUILDING WITHIN 10'-0" OF FLUE.



**1 TYPICAL GUARDRAIL**  
SCALE: 1"=1'-0"



**NORTHWEST ELEVATION**

3/16" = 1'-0"



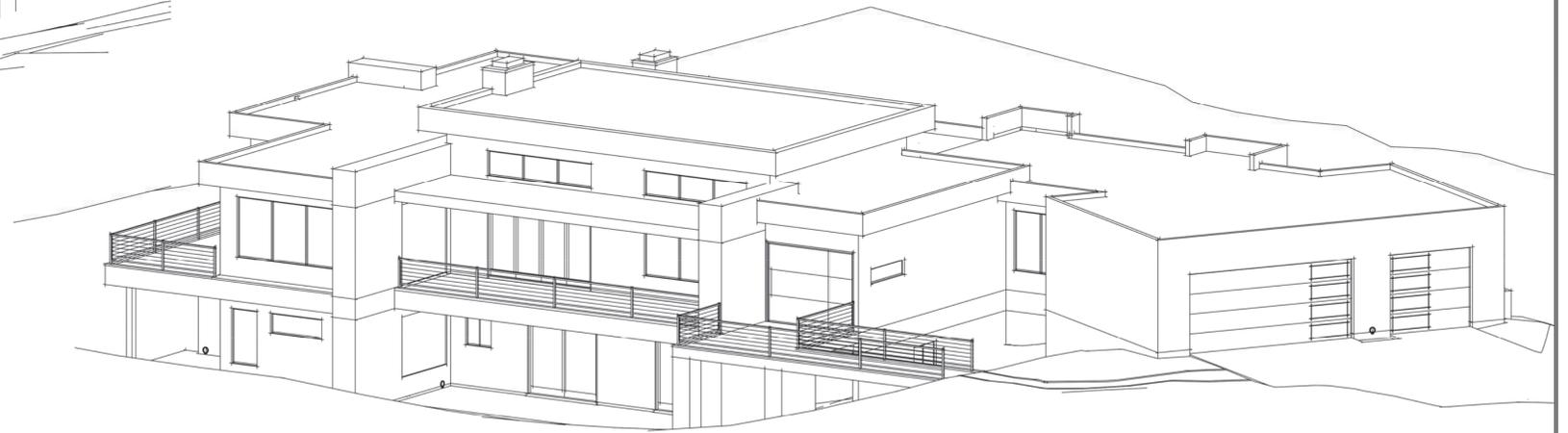
**NORTH ISOMETRIC**  
1/8" = 1'-0"



**WEST ISOMETRIC**  
1/8" = 1'-0"



**SOUTH ISOMETRIC**  
1/8" = 1'-0"



**EAST ISOMETRIC**  
1/8" = 1'-0"

DATE

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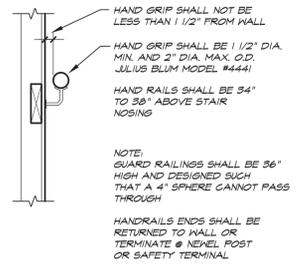
**EXTERIOR  
ISOMETRICS**

SHEET NO.

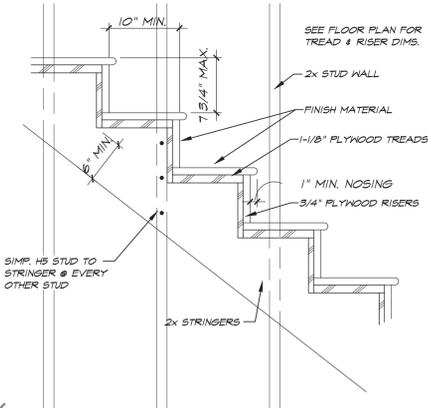
**A4.3**

**BUILDING THERMAL ENVELOPE**  
 THE BUILDING THERMAL ENVELOPE SHALL COMPLY WITH CLIMATE ZONE 2. ENERGY COMPLIANCE SHALL BE DEMONSTRATED BY UA TRADE-OFF (RESHECK) OR PERFORMANCE (REM/RATE, ERI, HERS) COMPLIANCE PATH OR BY THE FOLLOWING PRESCRIPTIVE VALUES (TABLE N102.1.3):  
 PRESCRIPTIVE MINIMUM R-VALUES: (\*CEILING=R-49) / (WALLS=R-13)  
 PRESCRIPTIVE MAXIMUM WINDOW FENESTRATION VALUES: (U-FACTOR=0.40) / (SHGC=0.25).  
 PLEASE CLARIFY WHETHER USING PRESCRIPTIVE ENERGY COMPLIANCE OR UA TRADE-OFF. PROVIDE RESCHECK IF UA TRADE-OFF IS USED.

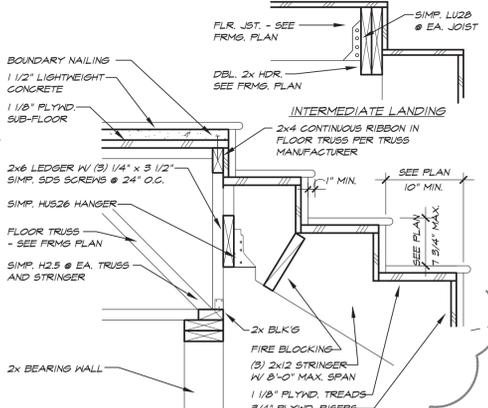
**2021 IRC (T. N102.1.3) PRESCRIPTIVE ENERGY COMPLIANCE**  
 FENESTRATION/GLAZING: 0.25 MAX. U-FACTOR: 0.40 MAX. INSULATION: FRAME WALLS: R-19 (2X6) R-13 (2X4) C/M/MASS WALLS: R-6 ATTIC: R49



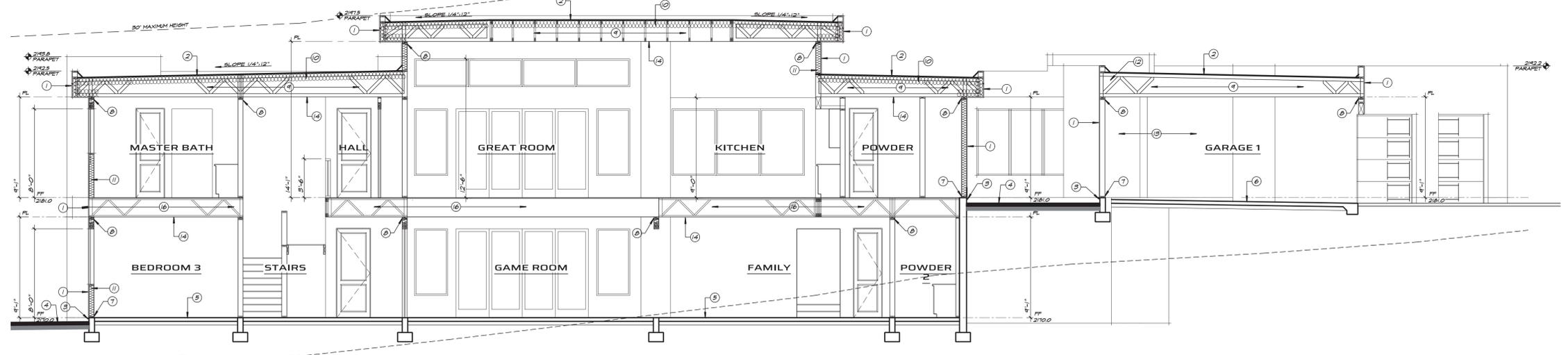
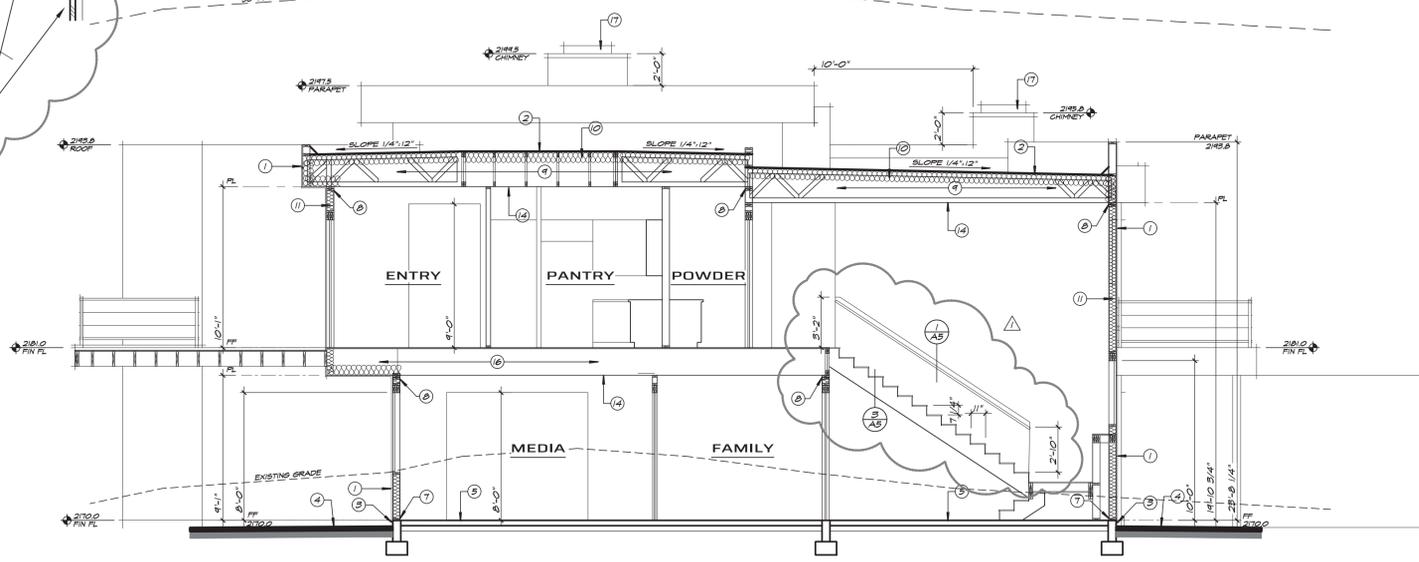
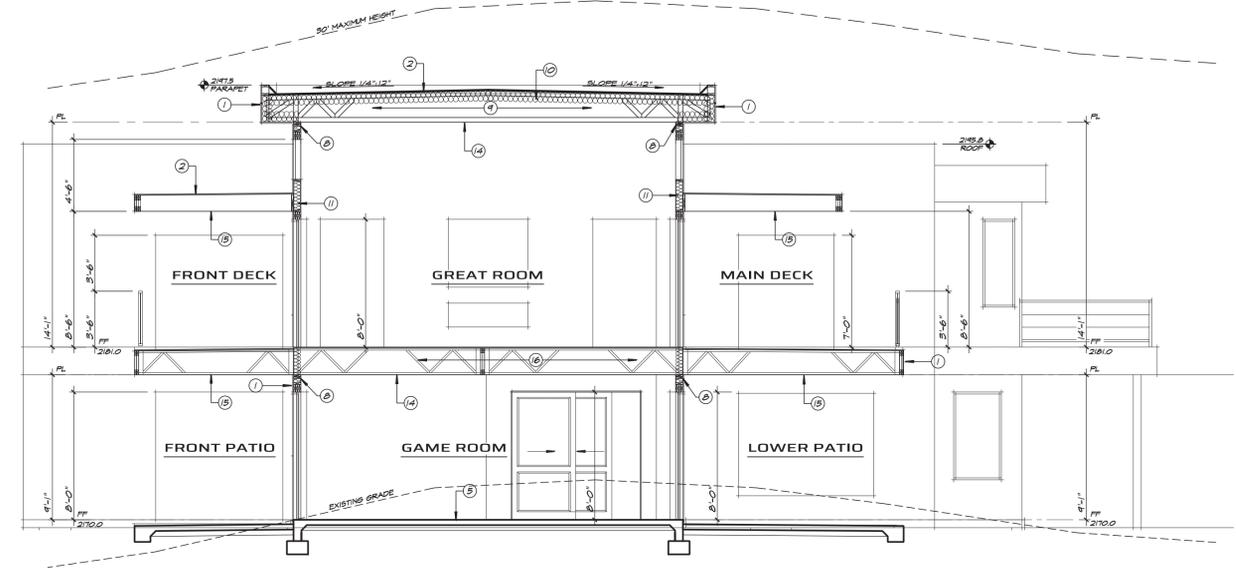
**1 STAIR RAIL CONNECTION DETAIL**  
 SCALE: 1 1/2" = 1'-0"



**3 STAIR STRINGER DETAIL**  
 SCALE: 1" = 1'-0"



**2 STAIR TO FLR JST CONN.**  
 SCALE: 1" = 1'-0"



**NOTES**

- GENERAL INFORMATION**
- ALL WEATHER EXPOSED SURFACES SHALL HAVE A WEATHER RESISTIVE BARRIER TO PROTECT THE INTERIOR WALL FINISH AND EXTERIOR OPENINGS SHALL BE FLASHED TO BE WATERPROOFED.
  - FLASHING OF EXTERIOR OPENINGS SHALL NOT BE LESS THAN #2 GA. CORROSION RESISTANT METAL # PER IRC, SEC. 602.9. ALL EXPOSED FLASHING SHALL BE PAINTED OR ANODIZED TO MATCH EXTERIOR COLOR.
  - INSTALL ALL PRE-MANUFACTURED MATERIALS PER MANUFACTURERS REQUIREMENTS, RECOMMENDATIONS AND SPECIFICATIONS.
  - ALL VENTS, FLASHING, ELECTRICAL PANEL(S), ETC. TO BE PAINTED TO MATCH HOUSE.
  - ALL EXPOSED WOOD SHALL BE PROTECTED WITH TWO COATS OF STAIN OR PRIMED AND PAINTED.
  - PROVIDE Z-BAR AND L-BAR METAL FLASHING AT ALL MATERIAL TRANSITIONS WHERE NECESSARY.
  - ALL TRUSSES TO BE DESIGNED AND MANUFACTURED BY AN ARIZONA APPROVED FABRICATOR. TRUSS MANUFACTURER TO COORDINATE TRUSS DESIGNS W/ SPECIFIED HANGERS.
  - 2x WOOD TRIMMER W/ KING STUD @ EA. END OF ALL BALCONY FLOOR OVER 1'-0" - U.N.O.
  - FRAMER TO PROVIDE 2x4 RIDGE POLES AS REQUIRED FOR TILED ROOF AREAS.
  - PROVIDE 2x4 OUT-LOOKERS @ 49" O.C. @ ALL GABLE- END WALLS - U.N.O. ON PLAN.
  - PROVIDE 2x BLOCKING / FIRE STOPS AT ALL FURRED AREAS.
  - PROVIDE 1/2" MOISTURE RESISTANT GYPSUM BOARD AND MOISTURE PROTECTIVE BARRIER AT ALL WET WALLS. AT BUILDING EXTERIOR USE 1/2" SOFFIT BOARD WITH WATER RESISTANT FACE PAPER. AT CEILINGS USE 1/2" SAG RESISTANT OR 5/8" GYPSUM BOARD WHEN SUPPORTED AT 24" O.C.
  - PROVIDE (1) LAYER 5/8" TYPE 'X' GYPSUM BOARD AT ALL WALLS AND CEILINGS AT GARAGE.
  - PROVIDE CONTINUOUS AIR LEAKAGE BUILDING THERMAL ENVELOPE TO BE DURABLY SEALED TO LIMIT INFILTRATION PER N112.4.1

**KEY NOTES**

- SAN KOTE STUCCO SYSTEM (ESR #2129) O/ FOAM BOARD (ON AIS BOARD @ ATTIC AREAS).
- FOAM ROOFING SYSTEM AND URETHANE ESR #2532 OR EQUAL - SLOPE 1/4" PER FOOT - MAX 80 LRV
- KEEP SCREED TO MIN. 3/4" BELOW FINISHED FLOOR - PAINT CONCRETE STEM BELOW TO MATCH BUILDING.
- #26 GAUGE CORROSION- RESISTANT METAL W/ A MINIMUM VERTICAL ATTACHMENT FLANGE OF 3 1/2" AND A MIN. 6" A.F.G. @ ALL EXT. WALLS. FINISH GRADE - SLOPE AWAY FROM BUILDING 2% FOR 10' W/ 6" SILL PLATE TO EARTH SEPARATION FINISH GRADE - SLOPE AWAY FROM BUILDING
- 4" CONC. SLAB W/ REINFORCING PER SPECS OVER 4" A.B.C. ON TERMITE TREATED SOIL
- 5" CONC. SLAB W/ REINFORCING PER SPECS OVER 4" A.B.C. AT GARAGE ON TERMITE TREATED SOIL
- PRESSURE TREATED BOTTOM PLATE
- DOUBLE TOP PLATE
- PRE-FAB TRUSSES AT 24" O.C. - SEE FRAMING PLAN & TRUSS CALCULATIONS
- R-49 SPRAY FOAM INSULATION CATHEDRALIZED TO UNDERSIDE OF ROOF PLANE AT ALL ATTIC AREAS ABOVE LIVEABLE SPACE
- R-21 SPRAY FOAM OR BATT INSULATION, CONTINUOUS TO ROOF
- INSULATION DRAFTSTOP BETWEEN GARAGE & LIVABLE AREAS - SEE ROOF PLAN
- 5/8" TYPE 'X' GYPS. BD. ON GARAGE SIDE OF WALLS SEPARATING GARAGE & RESIDENCE ON GARAGE CEILING & ON ALL WALLS SUPPORTING THE GARAGE CEILING PER IRC
- 1/2" SAG RESISTANT GYPSUM OR 5/8" GYPSUM BOARD TYP (ESR #1358) PER IRC TABLE R102.2.5
- 1/2" EXTERIOR GYPSUM BOARD 1-HOUR FIRE RATING PER IRC TABLE R102.2.5 (ESR #1358) ASTM C 1345 OR ASTM C 1346
- 20" FLOOR TRUSSES W/ 1/4" PLYWOOD & LIGHTWEIGHT CONCRETE SUBFLOORING RECESS SLAB 4" AT SHOWER
- FIREPLACE CHIMNEY CAP CONSTRUCTED WITH NON-COMBUSTIBLE MATERIALS BY CHIMNEY KINGS OR EQUAL. TOP OF CHIMNEY SHALL BE MIN. 2'-0" ABOVE MAX. ROOF FINISH.

DATE: 11/26/2024  
 1/21/25 - REVIEW | COMMENTS



EXPIRES 9/30/2027  
**BT ARCHITECTURAL**  
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 Lone Mountain Vista Tract A - Lot 93

**SECTIONS**  
 SHEET NO.  
**A5**

**DECORATIVE LIGHTING LEGEND:**

-  DECORATIVE WALL MOUNTED SCONCE
-  DECORATIVE FLUSH MOUNT CEILING FIXTURE
-  DECORATIVE CEILING MOUNTED HANGING PENDANT FIXTURE
-  PICTURE LIGHT
-  ELECTRIC MIRROR
-  UNDER CABINET LIGHTING
-  CEILING FAN

**NOTES**

-  THIS SYMBOL INDICATES LOCATION OF EXHAUST FANS.
  -  THIS SYMBOL INDICATES LOCATION OF CARBON MONOXIDE / SMOKE DETECTOR COMBO
1. DO NOT SCALE DRAWINGS, FIELD VERIFY ALL DIMENSIONS, NOTIFY THE CONTRACTOR OF DISCREPANCIES IMMEDIATELY.
  2. FIELD VERIFY ALL CONDITIONS AND DIMENSIONS PRIOR TO STARTING CONSTRUCTION.
  3. ALL CEILING FINISHES SHALL BE 1/2" SAG-RESISTANT GYP. BD, UNLESS NOTED OTHERWISE.
  4. REFER TO SPECS. FOR ALL INTERIOR FINISHES ON FLOORS, WALLS, CEILINGS AND CABINETRY.
  5. FIRE BLOCK STUD WALLS AT DROPPED CEILINGS, SOFFITS AND AT 10'-0" INTERVALS. SEAL PENETRATIONS OF FIRE BLOCKING W/ APPROVED CAULKING/SEALANT.
  6. SEE ELECTRICAL PLAN FOR ADDITIONAL INFORMATION AT ELECTRICAL FIXTURES.
  7. SEE MECHANICAL PLAN FOR ADDITIONAL INFORMATION AT MECHANICAL EQUIPMENT.

DATE

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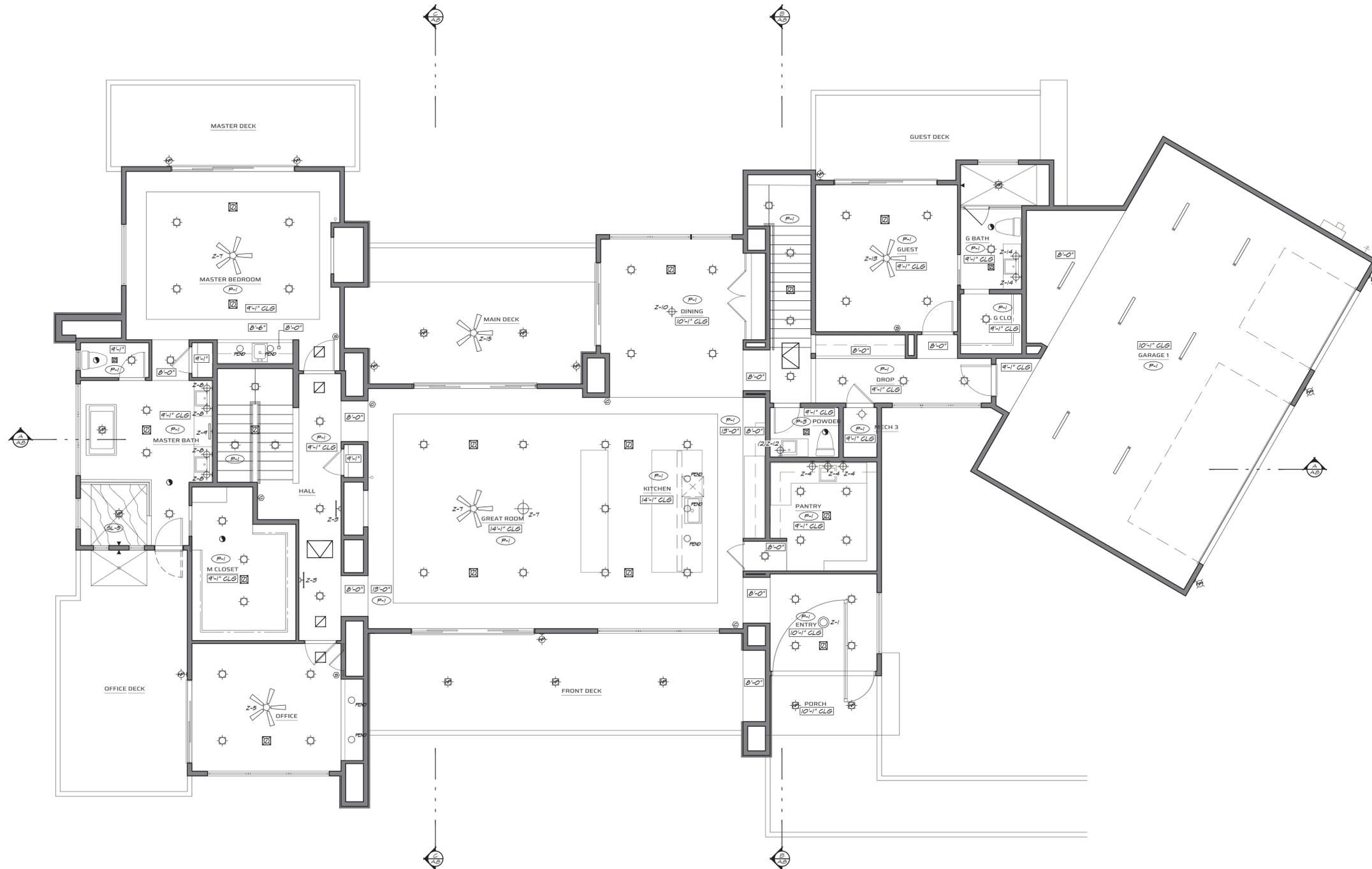
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**UPPER LEVEL REFLECTED CEILING PLAN**

SHEET NO.

**A6.1**

**UPPER LEVEL REFLECTED CEILING PLAN**

3/16" = 1'-0"



11/26/2024 10:58 AM  
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**NOTES**

- THIS SYMBOL INDICATES LOCATION OF EXHAUST FANS.
  - THIS SYMBOL INDICATES LOCATION OF CARBON MONOXIDE / SMOKE DETECTOR COMBO
1. DO NOT SCALE DRAWINGS, FIELD VERIFY ALL DIMENSIONS, NOTIFY THE CONTRACTOR OF DISCREPANCIES IMMEDIATELY.
  2. FIELD VERIFY ALL CONDITIONS AND DIMENSIONS PRIOR TO STARTING CONSTRUCTION.
  3. ALL CEILING FINISHES SHALL BE 1/2" SAG-RESISTANT GYP. BD, UNLESS NOTED OTHERWISE.
  4. REFER TO SPECS. FOR ALL INTERIOR FINISHES ON FLOORS, WALLS, CEILINGS AND CABINETRY.
  5. FIRE BLOCK STUD WALLS AT DROPPED CEILINGS, SOFFITS AND AT 10'-0" INTERVALS. SEAL PENETRATIONS OF FIRE BLOCKING W/ APPROVED CAULKING/SEALANT.
  6. SEE ELECTRICAL PLAN FOR ADDITIONAL INFORMATION AT ELECTRICAL FIXTURES.
  7. SEE MECHANICAL PLAN FOR ADDITIONAL INFORMATION AT MECHANICAL EQUIPMENT.

DATE

11/26/2024

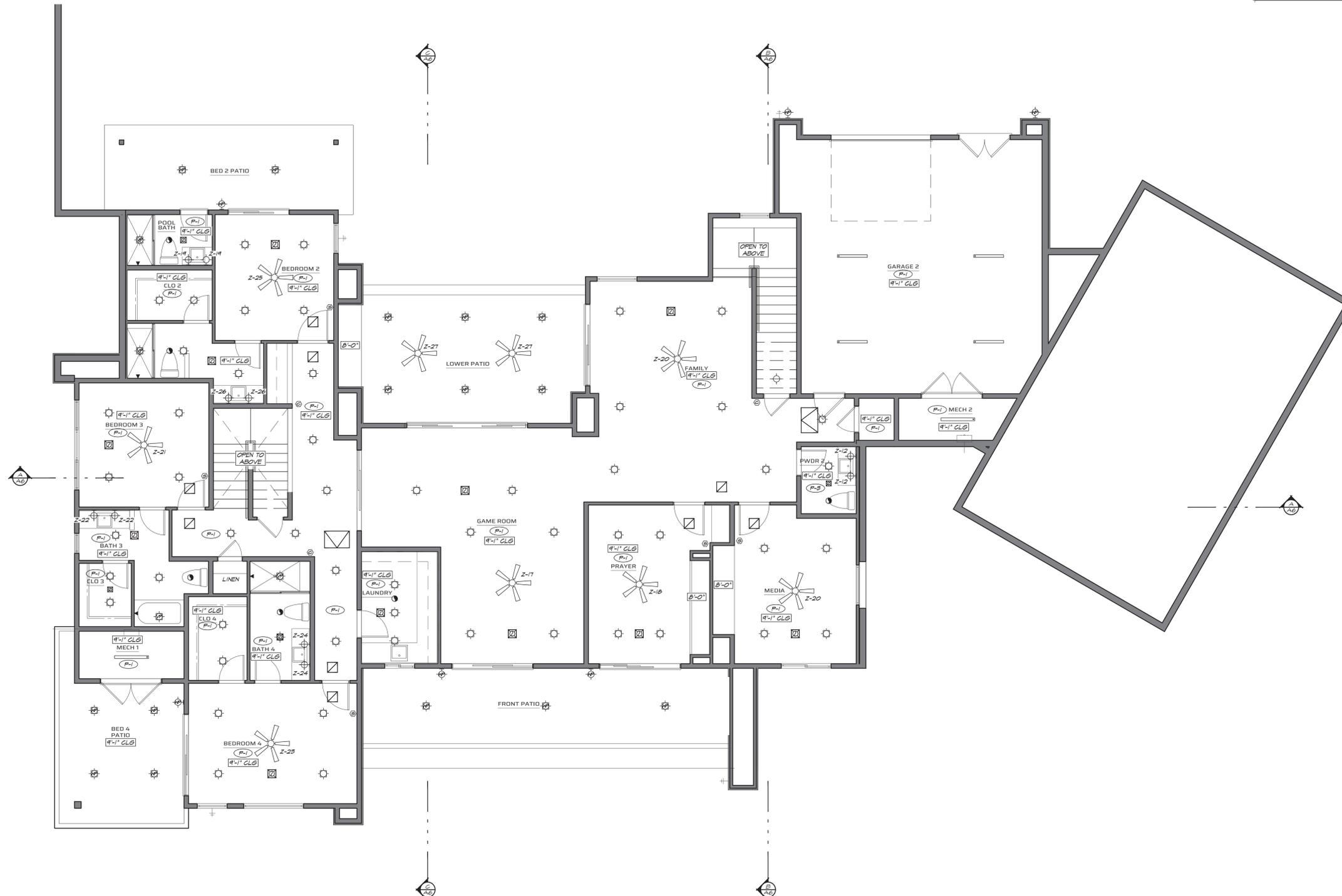
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**LOWER LEVEL REFLECTED CEILING PLAN**

SHEET NO.

**A6.2**

**LOWER LEVEL REFLECTED CEILING PLAN**

3/16" = 1'-0"



ALL DIMENSIONS SHOWN ON THIS PLAN ARE TO FACE UNLESS NOTED OTHERWISE.

**WOOD FLOORING**

**WD-1** LOCATION: REFER TO KEYED FLOORING FINISH PLAN  
 VENDOR: STUDIO RESSOURCE  
 CONTACT: 480-597-3142 | AMY@STUDIORESSOURCE.COM  
 FINISH/COLOR: DESERT FERLO | SPECIES: EUROPEAN OAK  
 ABCD GRADE | 5/8" ENGINEERED 10-14" WIDTHS X 2-7'  
 LENGTHS  
 FINISH: MATTE OIL  
 NOTES: FLOORING DIRECTION PER FLOORING FINISH PLAN

**WD-2** LOCATION: OFFICE  
 VENDOR: STUDIO RESSOURCE  
 CONTACT: 480-597-3142 | AMY@STUDIORESSOURCE.COM  
 FINISH/COLOR: DESERT FERLO | SPECIES: EUROPEAN OAK  
 ABCD GRADE | 5/8" ENGINEERED  
 SIZE: 4" x 28"  
 FINISH: MATTE OIL  
 NOTES: \*PATTERN: HERRINGBONE

**CONCRETE FLOORING**

**CON-1** LOCATION: OUTDOOR LIVING  
 VENDOR: BUILDER TO SUPPLY SOURCE  
 CONTACT: TBD  
 PRODUCT: POLISHED CONCRETE  
 COLOR/ FINISH: TBD  
 GROUT: TBD  
 NOTES: \*FINISH SAMPLES FOR APPROVAL

**SLAB**

**SL-5** COUNTERTOP, BACKSPLASH, SHOWER WALLS, SHOWER  
 CEILING + SHOWER FLOOR  
 LOCATION: PRIMARY BATHROOM  
 VENDOR: CRAFTSMAN COURT CERAMICS - CCC  
 CONTACT/PHONE: 623-748-0607  
 EDGE: 1.5" EASED  
 FINISH/COLOR: DYNASTY WHITE HONED  
 NOTES: SEE CONCEPT IMAGE + REFER TO ELEVATIONS FOR  
 LAYOUT + DETAILS. ALL SEAM LAYOUTS MUST BE  
 SUBMITTED FOR APPROVAL.

**TILE/STONE FLOORING**

**T-1** LOCATION: PRIMARY BATHROOM  
 VENDOR: CRAFTSMAN COURT CERAMICS- CCC  
 CONTACT: 480-970-6611 | LINDSEY CLUM OR ANDI SMITH  
 LINDSEY@CRAFTSMANCOURT.COM  
 PRODUCT: TAO LIMESTONE  
 SIZE: 16X24  
 COLOR/ FINISH: TUMBLED  
 GROUT: TBD  
 NOTES: REFER TO FLOORING FINISH PLAN FOR DIRECTION

**T-2** LOCATION: GUEST SUITE BATH  
 VENDOR: CLINE'S NATURAL STONE  
 CONTACT: WADE@CLINESNATURALSTONE.COM |  
 623-516-1516  
 PRODUCT: LIMESTONE  
 SIZE: 12X24  
 COLOR/ FINISH:  
 GROUT: TBD  
 NOTES: REFER TO FLOORING FINISH PLAN FOR DIRECTION

**T-2A** LOCATION: GUEST SUITE BATH -SHOWER FLOOR  
 VENDOR: CLINE'S NATURAL STONE  
 CONTACT: WADE@CLINESNATURALSTONE.COM |  
 623-516-1516  
 PRODUCT: LIMESTONE  
 SIZE: 12X24 CUT TO 4X4\*\*\*  
 COLOR/ FINISH:  
 GROUT: TBD  
 NOTES: REFER TO FLOORING FINISH PLAN FOR DIRECTION

**T-3** LOCATION: GUEST BATHROOM #1  
 VENDOR: BEDROSIANS TILE + STONE  
 CONTACT: 480-233-0339 | ILEANA.LOPEZ@BEDROSIANS.COM  
 PRODUCT: NOMAD PORCELAIN TILE  
 SIZE: 12X24  
 COLOR/ FINISH: BONE- BON  
 GROUT: TBD  
 NOTES: REFER TO FLOORING FINISH PLAN FOR DIRECTION

**T-5** LOCATION: GUEST BATHROOM #2 - SHOWER FLOOR  
 VENDOR: BEDROSIANS TILE + STONE  
 CONTACT: 480-233-0339 | ILEANA.LOPEZ@BEDROSIANS.COM  
 PRODUCT: NOMAD PORCELAIN TILE  
 SIZE: 12X24  
 COLOR/ FINISH: BONE- BON  
 GROUT: TBD  
 NOTES: REFER TO FLOORING FINISH PLAN FOR DIRECTION

**T-6** LOCATION: GUEST BATHROOM #3  
 VENDOR: VILLAGIO TILE + STONE  
 CONTACT: 480-422-6700  
 PRODUCT: VID 14 RETREAT  
 SIZE: 12X24  
 COLOR/ FINISH: IVORY  
 GROUT: TBD  
 NOTES: REFER TO FLOORING FINISH PLAN FOR DIRECTION

**T-7** LOCATION: GUEST BATHROOM #3 - SHOWER FLOOR  
 VENDOR: VILLAGIO TILE + STONE  
 CONTACT: 480-422-6700  
 PRODUCT: VID 14 RETREAT  
 SIZE: 2X2 MOSAIC | 12 X 12 SHEET  
 COLOR/ FINISH: IVORY  
 GROUT: TBD  
 NOTES: REFER TO FLOORING FINISH PLAN FOR DIRECTION

**T-8** LOCATION: LAUNDRY ROOM  
 VENDOR: FACINGS OF AMERICA  
 CONTACT: 562-708-5396 | NICOLE DAVIS  
 NDAVIS@FACINGSOFAMERICA.COM  
 PRODUCT: FOSSIL BONE PORCELAIN  
 SIZE: 12X24  
 COLOR/ FINISH: BONE  
 GROUT: TBD  
 NOTES:

**T-9** LOCATION: POOL POWDER  
 VENDOR: CRAFTSMAN COURT CERAMICS- CCC  
 CONTACT: 480-970-6611 | LINDSEY CLUM  
 LINDSEY@CRAFTSMANCOURT.COM  
 PRODUCT: ZELIGE ZIA  
 SIZE: 2X2  
 COLOR/ FINISH: PURE WHITE  
 GROUT: TBD  
 NOTES:

**NOTES**

**GENERAL INFORMATION**

- DO NOT SCALE DRAWINGS. WRITTEN DIMENSIONS GOVERN.
- ALL PARTITION LOCATIONS SHALL BE AS SHOWN ON FLOOR PLAN. IN CASE OF CONFLICT, NOTIFY ARCHITECT. ARCHITECT'S DRAWINGS TAKE PRECEDENCE OVER ALL OTHER PLANS.
- ALL INTERIOR FLOOR FINISHES AND EXTERIOR FLOOR FINISHES AS NOTED TO BE SELECTED BY INTERIOR DESIGNER UNO.
- FLOOR PATTERNS NTS. FLOOR PATTERNS TO INDICATE LOCATION AND DIRECTION OF MATERIAL INSTALLATION UNO.
- REFER TO ID-X FOR FULL DESCRIPTION OF FINISHES AND MATERIALS.
- ALL STONE SURFACES THROUGHOUT TO BE SEALED PER INDUSTRY STANDARDS.
- NO UNFINISHED EDGES OF FLOOR TILE TO BE LEFT EXPOSED.
- GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALLOWING FOR DELIVERY LEAD TIMES FOR ALL CUSTOM FINISHES WITHIN THE CONSTRUCTION SCHEDULE. ALL DELIVERY TIMES MUST BE CONFIRMED AND ANY EXCESSIVE LEAD TIMES MUST BE BROUGHT TO THE ARCHITECT'S / INTERIOR DESIGNER'S ATTENTION IMMEDIATELY TO ALLOW FOR RESPECIFICATION IF NECESSARY.
- TRANSITION INTERIOR FLOOR MATERIALS PER INDICATED DETAIL. TRANSITION INTERIOR TO EXTERIOR FLOOR MATERIALS PER ARCHITECT'S DRAWINGS.
- FLOORING SHALL CONTINUE UNDER OPEN MILLWORK OR WALL-HUNG SINKS TYP.
- SUBMIT CARPET SEAMING DIAGRAM TO ARCHITECT AND INTERIOR DESIGNER FOR REVIEW AND APPROVAL PRIOR TO ORDERING. DIAGRAM MUST BE SUBMITTED TO ARCHITECT AT LEAST FOUR (4) WEEKS PRIOR TO INSTALLATION.
- NO INTERIOR FINISHING SHALL BE DONE UNDER CONDITIONS WHICH WILL JEOPARDIZE THE QUALITY OR APPEARANCE OF SUCH WORK. ALL WORKMANSHIP WHICH IS JUDGED LESS THAN FIRST QUALITY BY THE ARCHITECT AND/OR INTERIOR DESIGNER WILL BE REJECTED.
- EXAMINE ALL FLOOR FINISH SURFACES AFTER COMPLETION OF WORK AND PROCEED WITH "TOUCH UP" AS REQUIRED.

**DATE**

11/26/2024

1/27/25 - REVIEW | COMMENTS



EXPIRES 9/30/2027



**BT ARCHITECTURAL, LLC**  
 8425 West El Cortez Place  
 Peoria, Arizona 85383  
 (602) 292-6350  
 Bret.BTA@GMAIL.COM



**UPPER FLOOR FINISH PLAN**

3/16" = 1'-0"



**Sivarajan Residence**  
 7899 East Mary Sharon Drive  
 Scottsdale 85266  
 Lone Mountain Vista Tract A - Lot 93

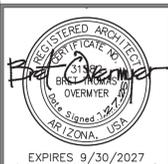
**UPPER FLOOR  
 FINISH PLAN**

SHEET NO.

**A7.1**

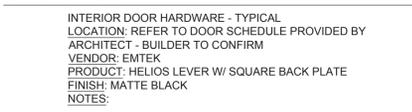
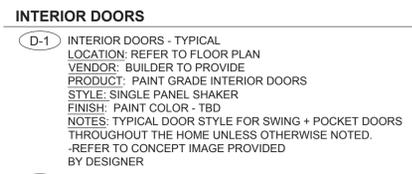
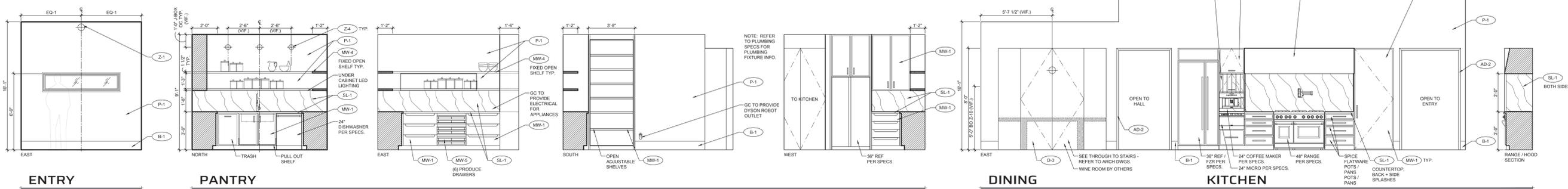
ALL DIMENSIONS UNLESS OTHERWISE NOTED TO BE IN ACCORDANCE WITH THE 2021 INTERNATIONAL RESIDENTIAL CODE BOOK



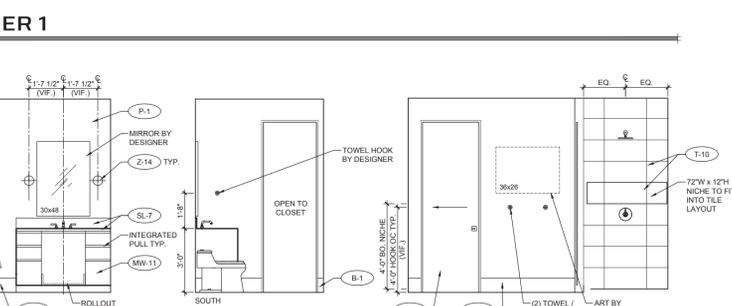
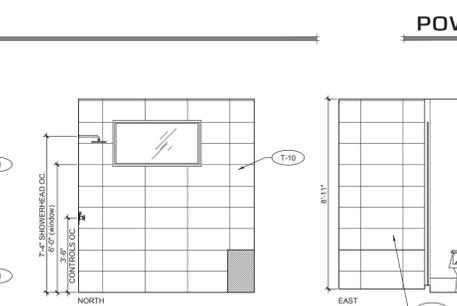
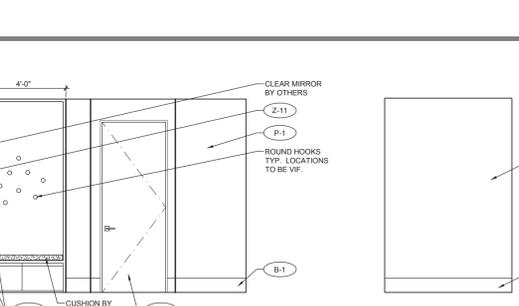
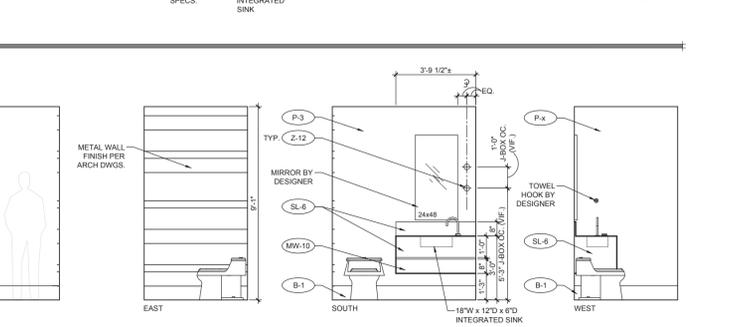
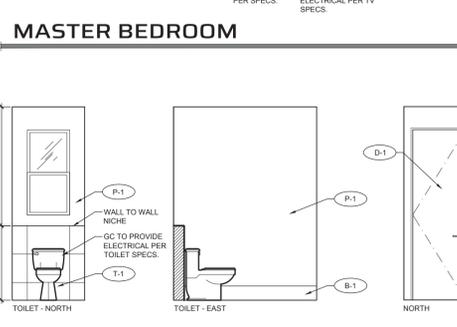
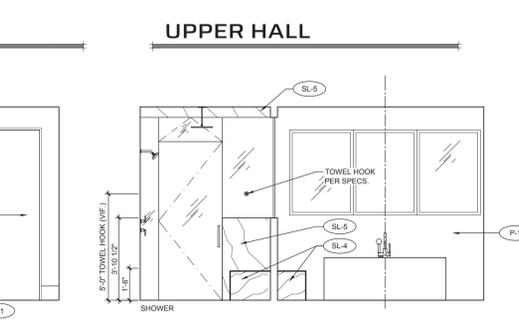
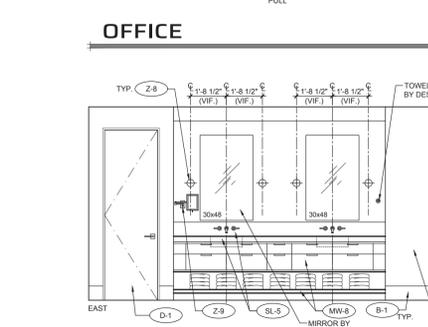
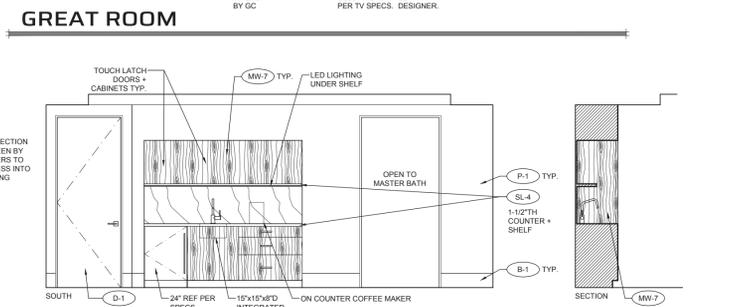
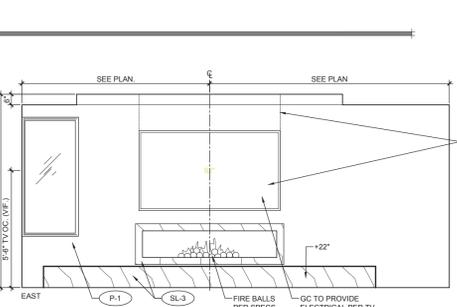
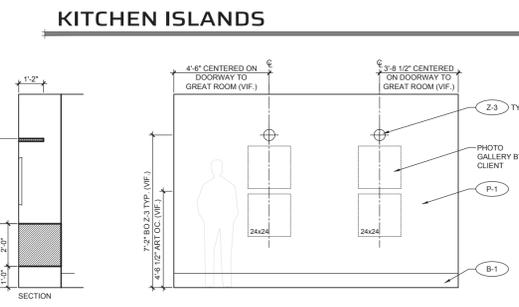
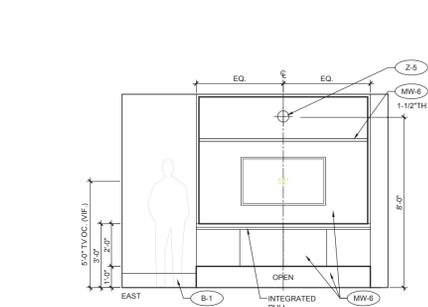
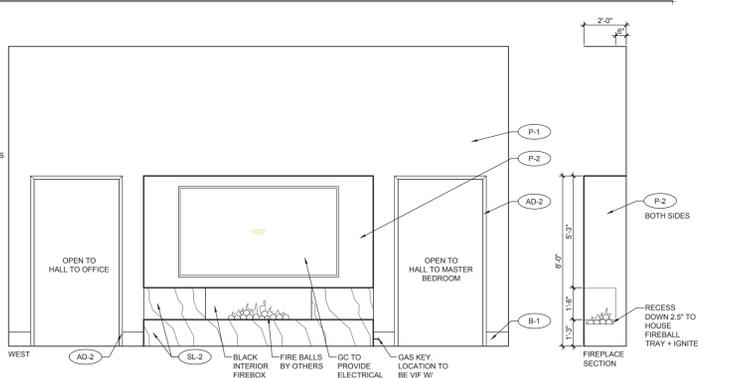
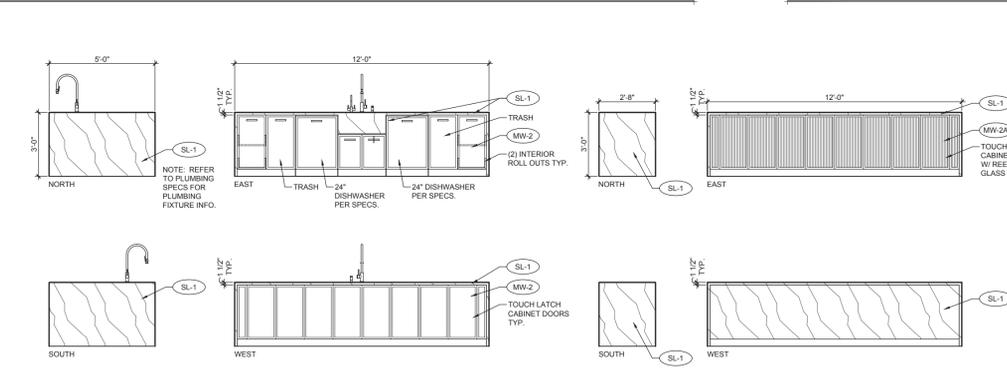


**Sivarajan Residence**  
7899 East Mary Sharon Drive  
Scottsdale 85266  
Lone Mountain Vista Tract A - Lot 93

**UPPER LEVEL  
INTERIOR  
ELEVATIONS**  
SHEET NO.  
**A8.1**  
1/4" = 1'-0"



- BASE**  
B-1 BASE  
LOCATION: TYPICAL THROUGHOUT HOME; UNLESS OTHERWISE NOTED  
VENDOR: BUILDER TO PROVIDE  
PRODUCT: PAINT GRADE BASEBOARD  
PAINT COLOR: TBD  
FINISH: SEMI GLOSS  
SIZE: 8" H  
NOTES: REFER TO CONCEPT IMAGE BELOW
- INTERIOR DOORS**  
D-1 INTERIOR DOORS - TYPICAL  
LOCATION: REFER TO FLOOR PLAN  
VENDOR: BUILDER TO PROVIDE  
PRODUCT: PAINT GRADE INTERIOR DOORS  
STYLE: SINGLE PANEL SHAKER  
FINISH: PAINT COLOR - TBD  
NOTES: TYPICAL DOOR STYLE FOR SWING + POCKET DOORS THROUGHOUT THE HOME UNLESS OTHERWISE NOTED. REFER TO CONCEPT IMAGE PROVIDED BY DESIGNER
- D-2 PIVOT DOOR  
LOCATION: FRONT DOOR  
VENDOR: BUILDER TO PROVIDE  
PRODUCT: TBD  
STYLE: TBD  
FINISH: TBD  
NOTES: SUPPLIER TO PROVIDE SHOP DWG'S + FINISH SAMPLES FOR APPROVAL
- INTERIOR DOOR HARDWARE**  
INTERIOR DOOR HARDWARE - TYPICAL  
LOCATION: REFER TO DOOR SCHEDULE PROVIDED BY ARCHITECT - BUILDER TO CONFIRM  
VENDOR: EMTEK  
PRODUCT: HELIOS LEVER W/ SQUARE BACK PLATE  
FINISH: MATTE BLACK  
NOTES:
- ARCH DETAILS**  
AD-1 METAL HOOD  
LOCATION: KITCHEN  
VENDOR: BUILDER TO SUPPLY  
SIZE: REFER TO INTERIOR ELEVATIONS  
FINISH: BLACK POWDERCOAT  
NOTES:  
- SUPPLIER TO PROVIDE SHOP DRAWINGS + FINISH SAMPLES FOR APPROVAL



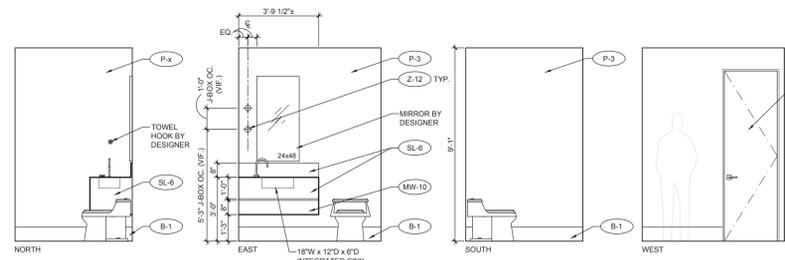
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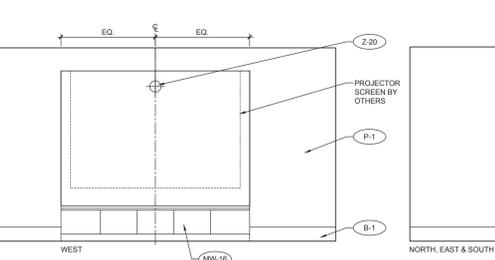
Bret ATA ARCHITECTURAL LLC  
8425 West El Cortez Place  
Peoria, Arizona 85383  
(602) 292-6350  
Bret.ATA@GMAIL.COM

**Sivarajan Residence**  
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Scottsdale 85266  
Lone Mountain Vista Tract A - Lot 93

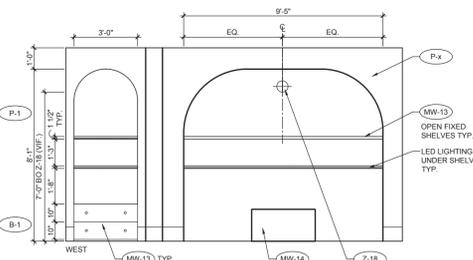
**LOWER LEVEL  
INTERIOR  
ELEVATIONS**  
SHEET NO.  
**A8.2**



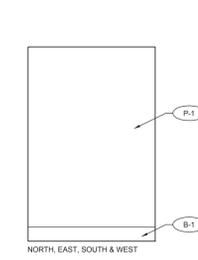
**POWDER 2**



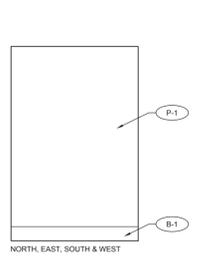
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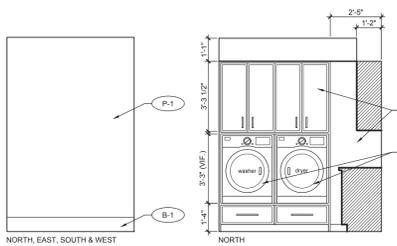
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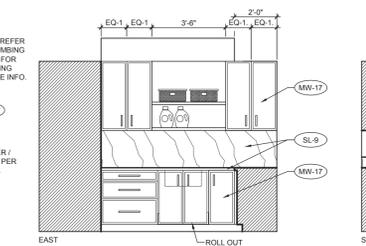
**FAMILY**



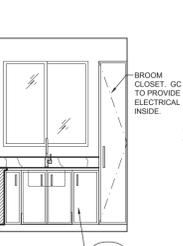
**GAME ROOM**



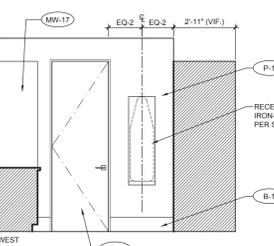
**EXERCISE**



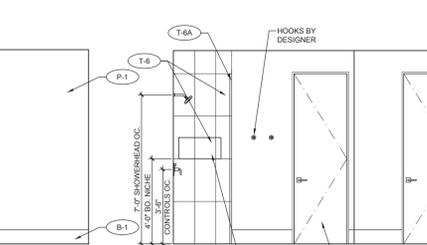
**LAUNDRY**



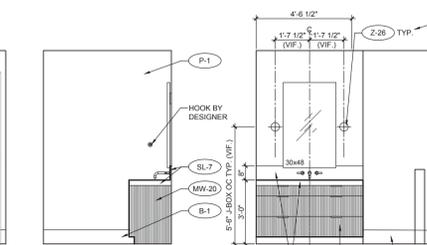
**BED 4 +  
CLOSET**



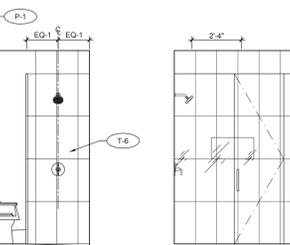
**BATH 4**



**BED 2 +  
CLOSET**

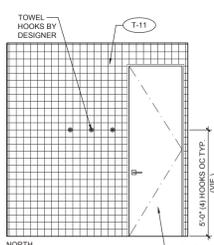


**BATH 2**



**BED 3 +  
CLOSET**

**BATH 3**



**POOL BATH**

**SLABS**

- SL-1** COUNTERTOP, BACKSPASH + WATERFALL EDGE  
LOCATION: KITCHEN + BUTLER PANTRY  
VENDOR: NEOLITH - THE STONE COLLECTION  
CONTACT/PHONE: 602-889-2067 NICK DOTY  
NICK@THESTONECOLLECTION.COM  
EDGE: 1.5" EASED  
FINISH/COLOR: CALACATTA ROYALE - ULTRA SOFT 12MM  
NOTES: SEE CONCEPT IMAGE + REFER TO ELEVATIONS FOR LAYOUT + DETAILS. ALL SEAM LAYOUTS MUST BE SUBMITTED FOR APPROVAL.
- SL-2** FIREPLACE SURROUND + HEARTH  
LOCATION: GREAT ROOM  
VENDOR: NEOLITH - THE STONE COLLECTION  
CONTACT/PHONE: 602-889-2067 NICK DOTY  
NICK@THESTONECOLLECTION.COM  
FINISH/COLOR: CALACATTA ROYALE - ULTRA SOFT 12MM  
NOTES: SEE CONCEPT IMAGE + REFER TO ELEVATIONS FOR LAYOUT + DETAILS. ALL SEAM LAYOUTS MUST BE SUBMITTED FOR APPROVAL.
- SL-3** FIREPLACE SURROUND + HEARTH  
LOCATION: PRIMARY BEDROOM  
VENDOR: TBD  
CONTACT/PHONE:  
FINISH/COLOR:  
NOTES: REFER TO INTERIOR ELEVATIONS FOR LAYOUT + DETAILS. ALL SEAM LAYOUTS MUST BE SUBMITTED FOR APPROVAL.
- SL-4** COUNTERTOP, INTEGRATED SINK + SHOWER BENCH  
LOCATION: PRIMARY SUITE  
VENDOR: TBD  
CONTACT/PHONE:  
EDGE: 1.5" EASED  
FINISH/COLOR: TBD  
NOTES: SEE CONCEPT IMAGE + REFER TO ELEVATIONS FOR LAYOUT + DETAILS. ALL SEAM LAYOUTS MUST BE SUBMITTED FOR APPROVAL.
- SL-5** COUNTERTOP, BACKSPASH, SHOWER WALLS, SHOWER CEILING + SHOWER FLOOR  
LOCATION: PRIMARY BATHROOM  
VENDOR: CRAFTSMAN COURT CERAMICS - CCC  
CONTACT/PHONE: 480-970-6611 LINDSEY CLUM  
LINDSEY@CRAFTSMANCOURT.COM  
PRODUCT: \*AGOR\* CARMEN GLAZED PORCELAIN  
SIZE: 2.5 X 8 X 3/8" THICKNESS  
FINISH/COLOR: BLANCO MATTE  
GROUT: TBD  
NOTES:
- SL-6** COUNTERTOP, BACKSPASH + INTEGRATED SINK  
LOCATION: POWDER ROOM  
VENDOR: DEKTON | COSENTINO  
CONTACT/PHONE: STEPHANIE 602-821-0561  
EDGE: EASED  
FINISH/COLOR: TK06 MARMORIO  
NOTES: SEE CONCEPT IMAGE + REFER TO ELEVATIONS FOR LAYOUT + DETAILS. ALL SEAM LAYOUTS MUST BE SUBMITTED FOR APPROVAL.
- SL-7** COUNTERTOP + BACKSPASH  
LOCATION: GUEST SUITE BATHROOM, GUEST BATH #1, GUEST BATH #3  
VENDOR: CAESARSTONE  
CONTACT/PHONE:  
EDGE: 1.5" EASED  
FINISH/COLOR: 4001 FRESH CONCRETE  
NOTES: SEE CONCEPT IMAGE + REFER TO ELEVATIONS FOR LAYOUT + DETAILS. ALL SEAM LAYOUTS MUST BE SUBMITTED FOR APPROVAL.

- SL-8** COUNTERTOP, BACKSPASH + SHELF  
LOCATION: GAME ROOM  
VENDOR: CAESARSTONE  
CONTACT/PHONE:  
EDGE: 1.5" EASED  
FINISH/COLOR: 5810 BLACK TEMPAL  
NOTES: REFER TO ELEVATIONS FOR LAYOUT + DETAILS. ALL SEAM LAYOUTS MUST BE SUBMITTED FOR APPROVAL.
- SL-9** COUNTERTOP + BACKSPASH  
LOCATION: LAUNDRY ROOM, GUEST BATH #2  
VENDOR: CAESARSTONE  
CONTACT/PHONE:  
EDGE: 1.5" EASED  
FINISH/COLOR: 4043 PRIMORDIA  
NOTES: REFER TO ELEVATIONS FOR LAYOUT + DETAILS. ALL SEAM LAYOUTS MUST BE SUBMITTED FOR APPROVAL.
- SL-10** COUNTERTOP  
LOCATION: BBQ  
VENDOR: T B D  
CONTACT/PHONE: \*  
EDGE: T B D  
FINISH/COLOR: \*  
NOTES: REFER TO ELEVATIONS FOR LAYOUT + DETAILS. ALL SEAM LAYOUTS MUST BE SUBMITTED FOR APPROVAL.

**MILLWORK**

- MW-5** PRODUCE DRAWERS (STAIN GRADE)  
LOCATION: PANTRY  
VENDOR: TBD  
CONTACT/PHONE:  
SPECIES: WHITE OAK PLAIN SAWN  
FINISH/COLOR: NATURAL STAIN - TO MATCH DESIGNER'S SAMPLE  
NOTES: PROVIDE SAMPLES FOR APPROVAL
- MW-6** MILLWORK (STAIN GRADE)  
LOCATION: OFFICE  
VENDOR: TBD  
CONTACT/PHONE:  
SPECIES: WALNUT  
FINISH/COLOR: TO MATCH DESIGNER'S SAMPLE  
DOOR STYLE: SLAB W/ INTEGRATED PULLS  
NOTES: PROVIDE SAMPLES FOR APPROVAL
- MW-7** MILLWORK (STAIN GRADE)  
LOCATION: PRIMARY COFFEE  
VENDOR: TBD  
CONTACT/PHONE:  
SPECIES: WHITE OAK PLAIN SAWN  
FINISH/COLOR: EBONY STAIN - TO MATCH DESIGNER'S SAMPLE  
DOOR STYLE: SLAB W/ TOUCH LATCH DOORS  
NOTES: PROVIDE SAMPLES FOR APPROVAL
- MW-7A** MILLWORK (STAIN GRADE)  
LOCATION: PRIMARY COFFEE  
VENDOR: TBD  
CONTACT/PHONE:  
SPECIES: WHITE OAK PLAIN SAWN  
FINISH/COLOR: NATURAL STAIN - TO MATCH DESIGNER'S SAMPLE  
NOTES: PROVIDE SAMPLES FOR APPROVAL
- MW-8** MILLWORK (STAIN GRADE)  
LOCATION: PRIMARY BATHROOM  
VENDOR: TBD  
CONTACT/PHONE:  
SPECIES: WHITE OAK RIFT CUT  
FINISH/COLOR: EBONY STAIN - TO MATCH DESIGNER'S SAMPLE  
DOOR STYLE: SLAB  
NOTES: PROVIDE SAMPLES FOR APPROVAL
- MW-8A** MILLWORK (STAIN GRADE)  
LOCATION: PRIMARY BATHROOM - PURSE STORAGE  
VENDOR: TBD  
CONTACT/PHONE:  
SPECIES: WHITE OAK RIFT CUT  
FINISH/COLOR: EBONY STAIN - TO MATCH DESIGNER'S SAMPLE  
DOOR STYLE: SLAB  
NOTES: PROVIDE SAMPLES FOR APPROVAL
- MW-9** MILLWORK (STAIN GRADE)  
LOCATION: OWNER ENTRY  
VENDOR: TBD  
CONTACT/PHONE:  
SPECIES: WHITE OAK PLAIN SAWN  
FINISH/COLOR: EBONY STAIN - TO MATCH DESIGNER'S SAMPLE  
DOOR STYLE: SLAB W/ INTEGRATED HANDLES ON DRAWERS, TOUCH LATCH UPERS  
NOTES: PROVIDE SAMPLES FOR APPROVAL
- MW-10** MILLWORK (STAIN GRADE)  
LOCATION: POWDER  
VENDOR: TBD  
CONTACT/PHONE:  
SPECIES: WHITE OAK RIFT CUT  
FINISH/COLOR: NATURAL STAIN - TO MATCH DESIGNER'S SAMPLE  
DOOR STYLE: SLAB W/ INTEGRATED PULL  
NOTES: PROVIDE SAMPLES FOR APPROVAL

- MW-11** MILLWORK (STAIN GRADE)  
LOCATION: GUEST SUITE BATH  
VENDOR: TBD  
CONTACT/PHONE:  
SPECIES: WHITE OAK PLAIN SAWN  
FINISH/COLOR: NATURAL STAIN - TO MATCH DESIGNER'S SAMPLE  
DOOR STYLE: SLAB W/ INTEGRATED PULL  
NOTES: PROVIDE SAMPLES FOR APPROVAL
- MW-12** MILLWORK (STAIN GRADE)  
LOCATION: GAME ROOM | BAR + MEDIA STORAGE  
VENDOR: TBD  
CONTACT/PHONE:  
SPECIES: WHITE OAK PLAIN SAWN  
FINISH/COLOR: EBONY STAIN - TO MATCH DESIGNER'S SAMPLE  
DOOR STYLE: SLAB  
NOTES: PROVIDE SAMPLES FOR APPROVAL
- MW-13** MILLWORK (PAINT GRADE)  
LOCATION: PRAYER ROOM  
VENDOR: TBD  
CONTACT/PHONE:  
SPECIES: TBD  
PAINT COLOR: TO MATCH DESIGNER'S SAMPLE  
DOOR STYLE: SLAB  
NOTES: PROVIDE SAMPLES FOR APPROVAL
- MW-14** PEDESTAL (PAINT GRADE)  
LOCATION: PRAYER ROOM  
VENDOR: TBD  
CONTACT/PHONE:  
SPECIES: WHITE OAK PLAIN SAWN  
STAIN COLOR: NATURAL STAIN - TO MATCH DESIGNER'S SAMPLE  
NOTES: PROVIDE SAMPLES FOR APPROVAL
- MW-15** FLOATING SHELF (STAIN GRADE)  
LOCATION: POOL BATH  
VENDOR: TBD  
CONTACT/PHONE:  
SPECIES: WHITE OAK PLAIN SAWN  
STAIN COLOR: NATURAL STAIN - TO MATCH DESIGNER'S SAMPLE  
NOTES: PROVIDE SAMPLES FOR APPROVAL
- MW-16** MILLWORK (STAIN GRADE)  
LOCATION: LL MEDIA ROOM  
VENDOR: TBD  
CONTACT/PHONE:  
SPECIES: WHITE OAK PLAIN SAWN  
STAIN COLOR: EBONY STAIN - TO MATCH DESIGNER'S SAMPLE  
DOOR STYLE: SLAB W/ INTEGRATED PULLS  
NOTES: PROVIDE SAMPLES FOR APPROVAL
- MW-17** MILLWORK (PAINT GRADE)  
LOCATION: LAUNDRY  
VENDOR: TBD  
CONTACT/PHONE:  
SPECIES: TBD  
PAINT COLOR: TO MATCH DESIGNER'S SAMPLE  
DOOR STYLE: 1" SKINNY SHAKER  
NOTES: PROVIDE SAMPLES FOR APPROVAL
- MW-18** MILLWORK (STAIN GRADE)  
LOCATION: BATH #2  
VENDOR: TBD  
CONTACT/PHONE:  
SPECIES: WHITE OAK PLAIN SAWN  
STAIN COLOR: NATURAL STAIN - TO MATCH DESIGNER'S SAMPLE  
DOOR STYLE: REEDED DRAWER FRONTS - 1"

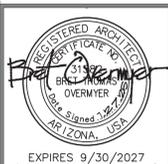
**WALL TILE / STONE**

- T-1** LOCATION: PRIMARY BATHROOM (WC.)  
VENDOR: CRAFTSMAN COURT CERAMICS- CCC  
CONTACT: 480-970-6611 | LINDSEY CLUM OR ANDI SMITH  
LINDSEY@CRAFTSMANCOURT.COM  
PRODUCT: TAO LIMESTONE  
SIZE: 16X24  
COLOR/ FINISH: TUMBLLED  
GROUT: TBD  
NOTES: REFER TO FLOORING FINISH PLAN FOR DIRECTION
- T-3** LOCATION: GUEST BATHROOM #1  
VENDOR: BEDOSIANS TILE + STONE  
CONTACT: 480-233-0339 | ILEANA.LOPEZ@BEDOSIANS.COM  
PRODUCT: NOMAD PORCELAIN TILE  
SIZE: 12X24  
COLOR/ FINISH: BONE- BON  
GROUT: TBD  
NOTES: REFER TO INTERIOR ELEVATIONS FOR LAYOUT
- T-3A** LOCATION: GUEST BATHROOM #1 - TRIM  
VENDOR: BEDOSIANS TILE + STONE  
CONTACT: 480-233-0339 | ILEANA.LOPEZ@BEDOSIANS.COM  
PRODUCT: NOMAD PORCELAIN TILE  
SIZE: 3X24 BULLNOSE  
COLOR/ FINISH: BONE- BON  
GROUT: TBD  
NOTES: REFER TO INTERIOR ELEVATIONS FOR LAYOUT
- T-4** LOCATION: GUEST BATHROOM #2  
VENDOR: BEDOSIANS TILE + STONE  
CONTACT: 480-233-0339 | ILEANA.LOPEZ@BEDOSIANS.COM  
PRODUCT: NOMAD PORCELAIN TILE  
SIZE: 12X24  
COLOR/ FINISH: ARGENT- ARG  
GROUT: TBD  
NOTES: REFER TO INTERIOR ELEVATIONS FOR LAYOUT
- T-4A** LOCATION: GUEST BATHROOM #2 - TRIM  
VENDOR: BEDOSIANS TILE + STONE  
CONTACT: 480-233-0339 | ILEANA.LOPEZ@BEDOSIANS.COM  
PRODUCT: NOMAD PORCELAIN TILE  
SIZE: 3X24 BULLNOSE  
COLOR/ FINISH: ARGENT- ARG  
GROUT: TBD  
NOTES: REFER TO INTERIOR ELEVATIONS FOR LAYOUT
- T-6** LOCATION: GUEST BATHROOM #3  
VENDOR: VILLAGIO TILE + STONE  
CONTACT: 480-422-6700  
PRODUCT: VID 14 RETREAT  
SIZE: 12X24  
COLOR/ FINISH: IVORY  
GROUT: TBD  
NOTES: REFER TO INTERIOR ELEVATIONS FOR LAYOUT
- T-6A** LOCATION: GUEST BATHROOM #3 - TRIM  
VENDOR: VILLAGIO TILE + STONE  
CONTACT: 480-422-6700  
PRODUCT: VID 14 RETREAT  
SIZE: 3X24 BULLNOSE  
COLOR/ FINISH: IVORY  
GROUT: TBD  
NOTES: REFER TO INTERIOR ELEVATIONS FOR LAYOUT
- T-10** LOCATION: GUEST SUITE SHOWER  
VENDOR: CLINE'S NATURAL STONE  
CONTACT/PHONE: WADE@CLINESNATURALSTONE.COM | 623-516-1516  
PRODUCT: LIMESTONE  
SIZE: 12X24  
FINISH/COLOR:  
GROUT: TBD  
NOTES: REFER TO INTERIOR ELEVATIONS FOR LAYOUT
- T-11** LOCATION: POOL POWDER  
VENDOR: CRAFTSMAN COURT CERAMICS- CCC  
CONTACT/PHONE: 480-970-6611 | LINDSEY CLUM  
LINDSEY@CRAFTSMANCOURT.COM  
PRODUCT: NOMAD PORCELAIN TILE  
SIZE: 12X24  
COLOR/ FINISH: ZELLIGE ZIA  
GROUT: TBD  
NOTES: REFER TO INTERIOR ELEVATIONS FOR LAYOUT
- T-12** LOCATION: POOL POWDER - TILED SINK  
VENDOR: CRAFTSMAN COURT CERAMICS- CCC  
CONTACT/PHONE: 480-970-6611 | LINDSEY CLUM  
LINDSEY@CRAFTSMANCOURT.COM  
PRODUCT: ZELLIGE ZIA  
SIZE: 2X2  
FINISH/COLOR: AGEAN  
GROUT: TBD  
NOTES: REFER TO INTERIOR ELEVATIONS FOR LAYOUT

- T-13** LOCATION: GUEST BATHROOM #1 - DECO  
VENDOR: BEDOSIANS TILE + STONE  
CONTACT: 480-233-0339 | ILEANA.LOPEZ@BEDOSIANS.COM  
PRODUCT: VID 14 RETREAT  
SIZE: 24X48 PARALLELO DECO  
COLOR/ FINISH: BONE- BON  
GROUT: TBD  
NOTES: REFER TO INTERIOR ELEVATIONS FOR LAYOUT
- T-14** LOCATION: GUEST BATH #2  
VENDOR: CRAFTSMAN COURT CERAMICS- CCC  
CONTACT/PHONE: 480-970-6611 | LINDSEY CLUM  
LINDSEY@CRAFTSMANCOURT.COM  
PRODUCT: \*AGOR\* CARMEN GLAZED PORCELAIN  
SIZE: 2.5 X 8 X 3/8" THICKNESS  
FINISH/COLOR: BLANCO MATTE  
GROUT: TBD  
NOTES:
- T-14A** LOCATION: GUEST BATH #2 - TRIM  
VENDOR: CRAFTSMAN COURT CERAMICS- CCC  
CONTACT/PHONE: 480-970-6611 | LINDSEY CLUM  
LINDSEY@CRAFTSMANCOURT.COM  
PRODUCT: \*AGOR\* CARMEN TRIM  
SIZE: 3" X 8"  
FINISH/COLOR: BLANCO MATTE  
GROUT: TBD  
NOTES: REFER TO INTERIOR ELEVATIONS FOR LAYOUT

**MILLWORK (cont'd)**

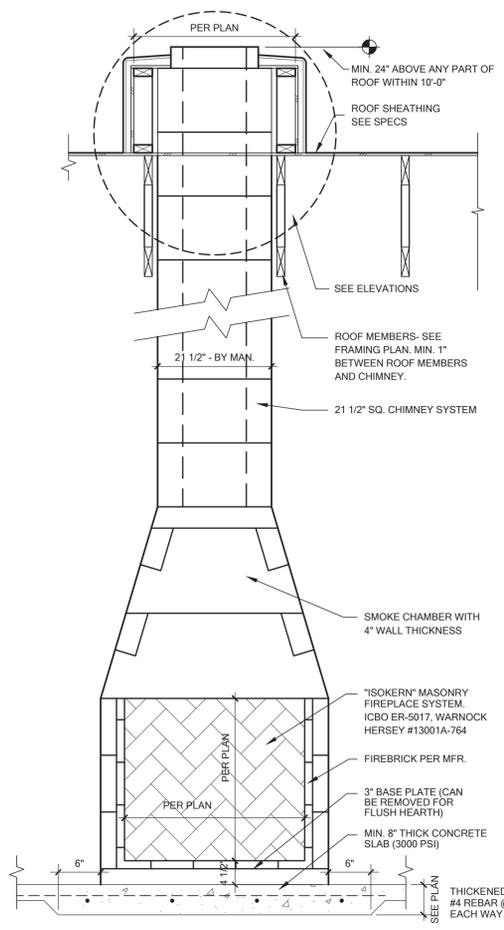
- MW-19** MILLWORK (STAIN GRADE)  
LOCATION: BATH #3  
VENDOR: TBD  
CONTACT/PHONE:  
SPECIES: WHITE OAK PLAIN SAWN  
STAIN COLOR: NATURAL STAIN - TO MATCH DESIGNER'S SAMPLE  
DOOR STYLE: SLAB W/ INTEGRATED PULLS  
NOTES: PROVIDE SAMPLES FOR APPROVAL
- MW-20** MILLWORK (STAIN GRADE)  
LOCATION: BATH #4  
VENDOR: TBD  
CONTACT/PHONE:  
SPECIES: WHITE OAK PLAIN SAWN  
STAIN COLOR: NATURAL STAIN - TO MATCH DESIGNER'S SAMPLE  
DOOR STYLE: REEDED DRAWER FRONTS - 1"  
NOTES: PROVIDE SAMPLES FOR APPROVAL



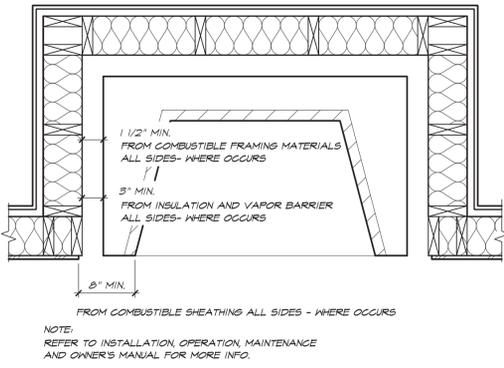
**BTA**  
REGISTERED ARCHITECT  
BT ARCHITECTURAL, LLC  
8425 West El Cortez Place  
Peoria, Arizona 85383  
(602) 292-6350  
Bret.BTA@GMAIL.COM

**Sivarajan Residence**  
7899 East Mary Sharon Drive  
Scottsdale 85266  
Lone Mountain Vista Tract A - Lot 93

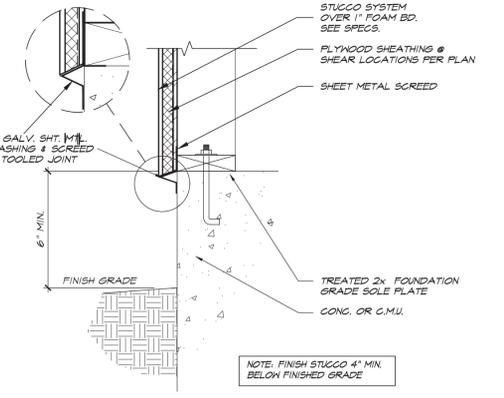
**ARCHITECTURAL  
DETAILS**  
SHEET NO.  
**D1**



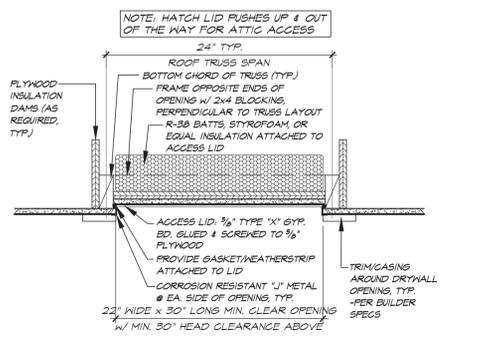
**10 ISOKERN FIREPLACE**  
SCALE: 3/4" = 1'-0"



**15 ISOKERN CLEARANCES**  
NOT TO SCALE



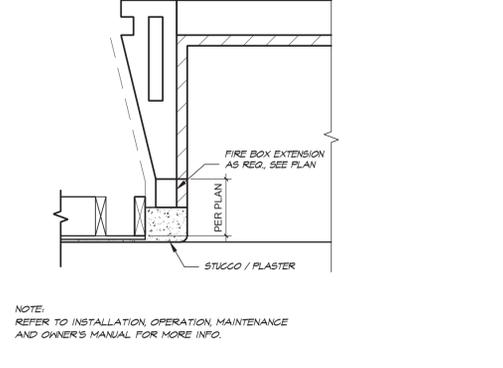
**20 WEEP SCREED (STUCCO)**  
SCALE: 1 1/2" = 1'-0"



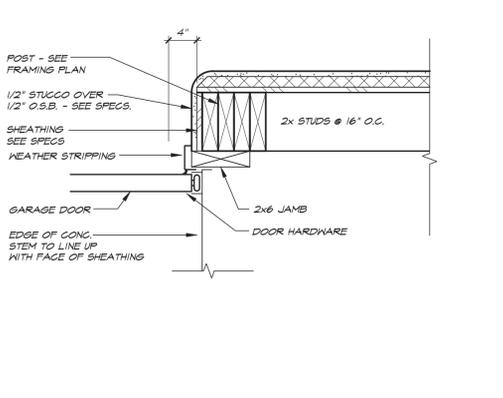
**3 ATTIC ACCESS SCUTTLE**  
SCALE: 1" = 1'-0"



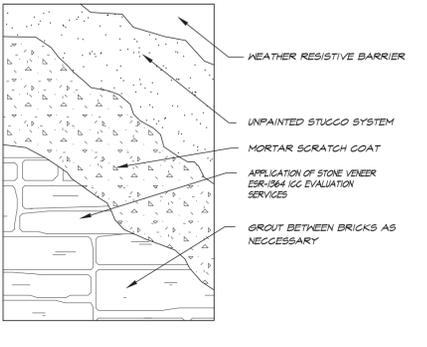
**9 SHOWER PAN / VAPOR BARRIER**  
SCALE: 1" = 1'-0"



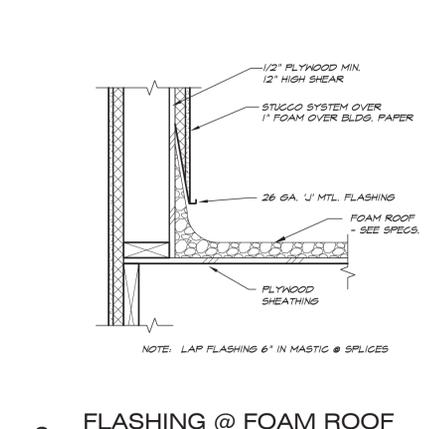
**14 FINISH @ ISOKERN FIREPLACE**  
SCALE: 1" = 1'-0"



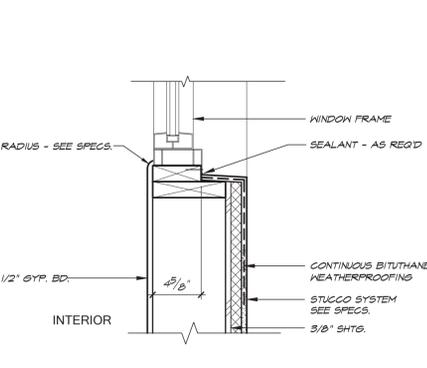
**19 GARAGE DOOR JAMB**  
SCALE: 1 1/2" = 1'-0"



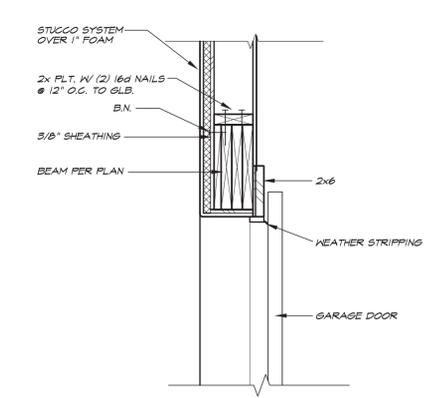
**2 STONE VENEER**  
SCALE: 1" = 1'-0"



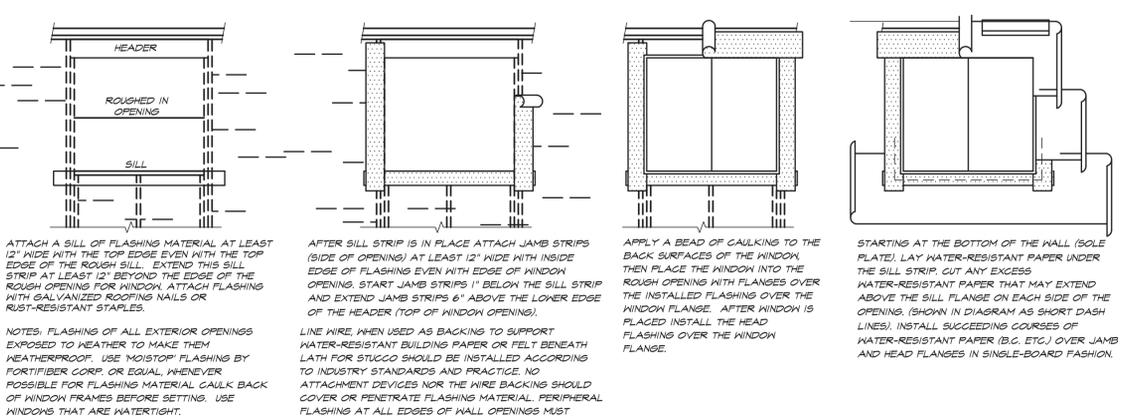
**8 FLASHING @ FOAM ROOF**  
NOT TO SCALE



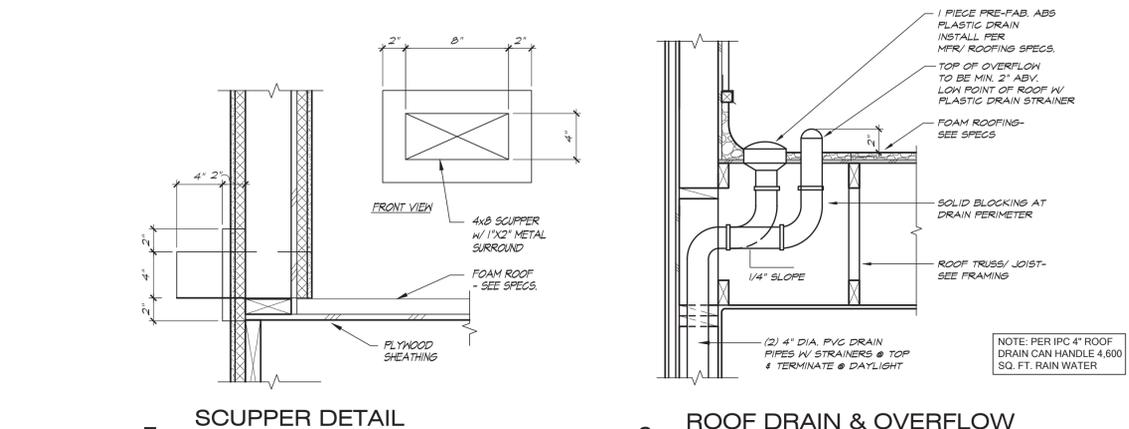
**13 WINDOW SILL**  
SCALE: 1 1/2" = 1'-0"



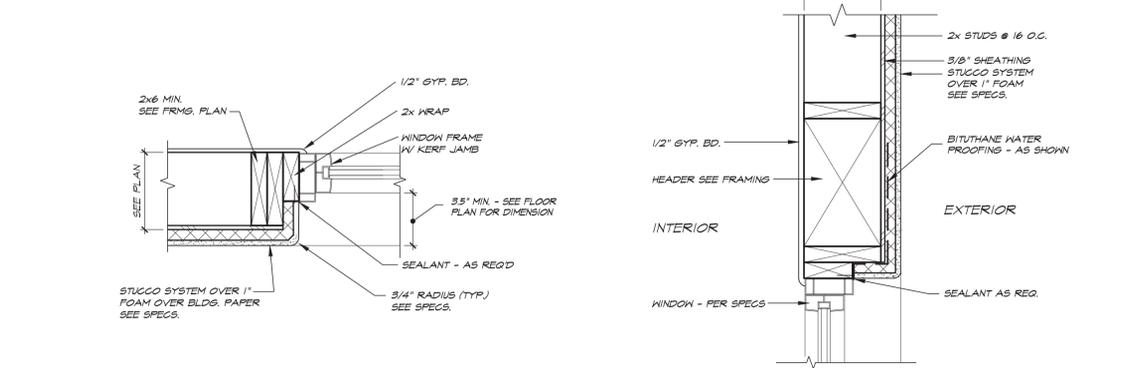
**18 GARAGE DOOR HEADER**  
SCALE: 1" = 1'-0"



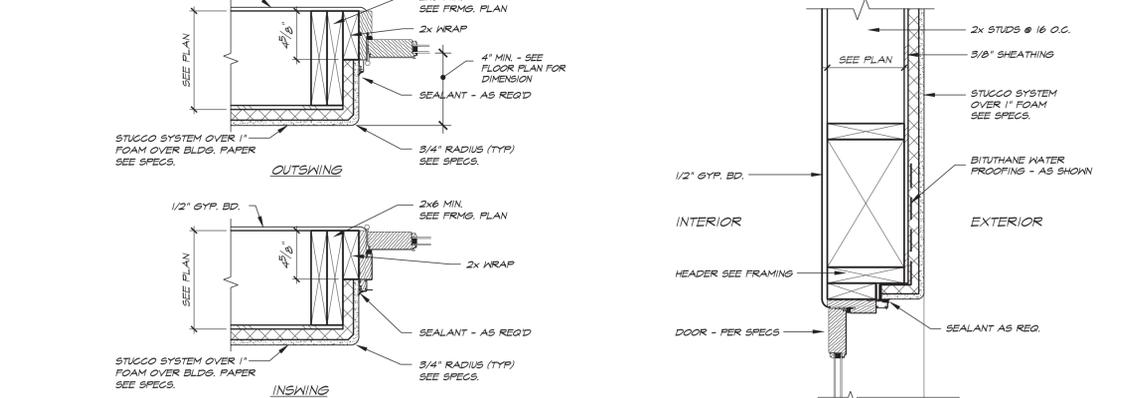
**1 TYP. DOOR & WINDOW FLASHING**  
NOT TO SCALE



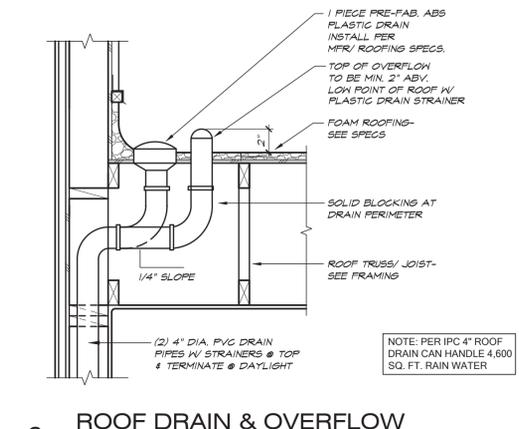
**7 SCUPPER DETAIL**  
NOT TO SCALE



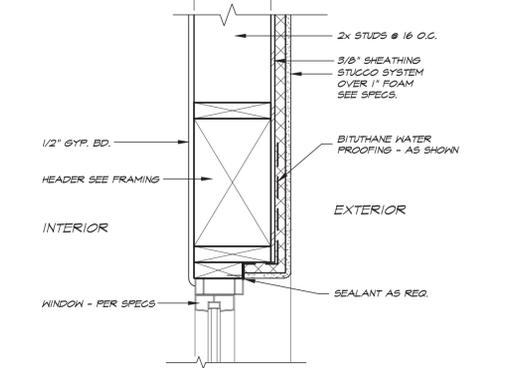
**12 WINDOW JAMB**  
SCALE: 1 1/2" = 1'-0"



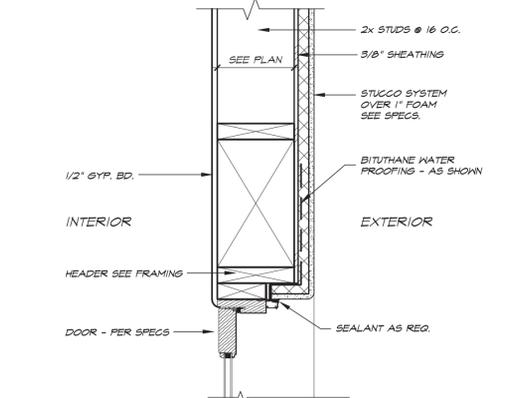
**11 WINDOW HEADER**  
SCALE: 1 1/2" = 1'-0"



**6 ROOF DRAIN & OVERFLOW**  
SCALE: 1" = 1'-0"



**16 DOOR JAMB (STUCCO)**  
SCALE: 1 1/2" = 1'-0"



**16 DOOR HEADER**  
SCALE: 1 1/2" = 1'-0"

# ELECTRICAL NOTES

ALL WORK IS TO BE PERFORMED IN ACCORDANCE WITH THE LATEST ADOPTED NATIONAL ELECTRIC CODE AND ALL APPLICABLE LOCAL CODES, ORDINANCES, AND AMENDMENTS TO THE NEC. ALL REFERENCES TO THE NEC IN THIS DRAWING CITE THE APPLICABLE ARTICLE FOR THE LATEST EDITION. IF AN EARLIER EDITION OF THE NEC IS THE ADOPTED EDITION FOR THE JURISDICTION THE PARALLEL ARTICLE FOR THE ADOPTED EDITION SHALL APPLY.

ALL WIRING IS TO BE COPPER UNLESS OTHERWISE NOTED. INSULATION SHALL BE TYPE XHHN OR THHN/THWN. WIRING FOR OUTSIDE LIGHTING SHALL BE A MINIMUM OF #10 AWG COPPER.

FOR CIRCUITS RUN IN CONDUIT OR RACEWAYS, PROVIDE A COPPER BOND WIRE SIZED PER NEC 250.66.

THE CONTRACTOR IS TO CONTACT THE POWER COMPANY REGARDING THE EXACT LOCATION OF ALL PRIMARY SERVICE EQUIPMENT, TRENCHES, TRANSFORMERS, METER, AND OTHER SERVICE EQUIPMENT.

THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL NECESSARY POWER TRENCHING, BACKFILL, SERVICE EQUIPMENT AND CONDUIT STUBS IN TRENCH REQUIRED BY THE POWER COMPANY, INSTALLED PER THE POWER COMPANY'S SPECIFICATIONS.

THE CONTRACTOR IS TO CONTACT THE TELEPHONE COMPANY REGARDING THE EXACT LOCATIONS OF ALL PRIMARY SERVICE EQUIPMENT, TRENCHES, ETC.

THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL NECESSARY TELEPHONE TRENCHING, BACKFILL, AND CONDUIT STUBS INTO TRENCH REQUIRED BY THE TELEPHONE COMPANY, INSTALLED PER THE TELEPHONE COMPANY'S SPECIFICATIONS.

THE CONTRACTOR IS TO COORDINATE EXACT LOCATIONS OF ALL METER ASSEMBLIES AND TELEPHONE SERVICE ENTRANCES WITH POWER AND TELEPHONE COMPANIES BEFORE ROUGH-IN.

SMOKE DETECTORS SHALL BE TYPE APPROVED BY THE AUTHORITY HAVING JURISDICTION. CONNECT SMOKE DETECTORS TO A LOCAL 120V GENERAL LIGHTING AND RECEPTACLE CIRCUIT. INSTALL PER NFPA 74, UBC AND OTHER CODES AS REQUIRED BY THE AUTHORITY HAVING JURISDICTION. LOCATIONS SHOWN ON PLANS SHALL BE VERIFIED AND APPROVED IN WRITING BY THE AUTHORITY HAVING JURISDICTION BEFORE ROUGH-IN.

THE ELECTRICAL CONTRACTOR IS TO COORDINATE WITH THE MECHANICAL CONTRACTOR FOR EXACT LOCATIONS AND REQUIREMENTS OF ALL MECHANICAL EQUIPMENT PRIOR TO ROUGH-IN. THE ELECTRICAL CONTRACTOR SHALL PROVIDE COMPLETE CONNECTIONS TO ALL MECHANICAL EQUIPMENT, AND SHALL PROVIDE STARTERS, CONNECTORS, DISCONNECTS AND ALL OTHER MATERIALS REQUIRED FOR A COMPLETE WORKING INSTALLATION. DISCONNECT SWITCHES AT MECHANICAL EQUIPMENT SHALL BE FUSED PER THE EQUIPMENT MANUFACTURER'S REQUIREMENTS. ALL DISCONNECTING MEANS MUST BE INSTALLED TO PROVIDE NEC 110.26 WORKING CLEARANCES.

ALL GENERAL USE RECEPTACLES MOUNTED WITHIN 6' OF A BASIN OR SINK SHALL BE GFCI PROTECTED. GENERAL USE RECEPTACLES IN KITCHENS, BATHROOMS, AND GARAGES SHALL BE GFCI PROTECTED. EXTERIOR RECEPTACLES SHALL BE GFCI PROTECTED AND SHALL HAVE WEATHERPROOF-IN-USE COVERS.

THE ELECTRICAL CONTRACTOR SHALL VERIFY LOCATIONS OF ALL FIXTURES AND DEVICES PRIOR TO ROUGH-IN. THE ELECTRICAL CONTRACTOR SHALL VERIFY THE SWITCHING SCHEMES AND LOCATIONS AND SHALL ADJUST SOME TO MEET OWNER'S REQUIREMENTS.

THE ELECTRICAL CONTRACTOR SHALL PROVIDE, INSTALL, AND WIRE TELEPHONE JACKS AND CABLE TV JACKS AS DIRECTED.

ALL ELECTRICAL BOXES IN THE WALL BETWEEN THE HOUSE AND THE GARAGE SHALL BE METAL OR SHALL BE LISTED FOR THE APPLICATION. RECEPTACLES IN THE GARAGE AND IN THE ADJACENT EQUIPMENT ROOM SHALL BE MOUNTED AT LEAST 18" TO BOTTOM A.F.F.

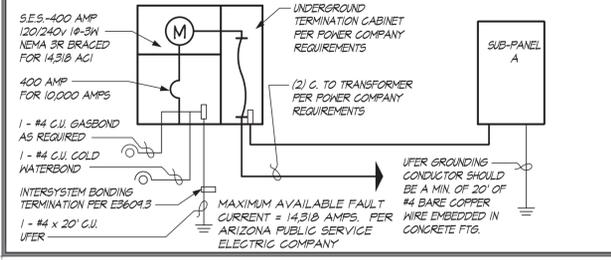
LIGHT FIXTURES AT SINKS SHALL BE MOUNTED ON THE SINK CENTERLINE.

CEILING FAN OUTLET BOXES SHALL BE LISTED FOR THE PURPOSE AND SHALL BE SECURELY FASTENED IN PLACE. PROVIDE SEPARATE WALL SWITCHES FOR FAN AND LIGHT.

CIRCUITS FEEDING BATHROOM RECEPTACLES SHALL FEED NO OTHER LOADS.

ALL APPLIANCES CALLED OUT BY NAME IN THE LOAD CALCULATION SHALL HAVE DEDICATED CIRCUITS. THE DEDICATED CIRCUITS SHALL NOT BE CONNECTED TO ANY OTHER LOADS.

# ONE LINE DIAGRAM - 400 AMP



**E3602.2 GARAGE AND ACCESSORY BUILDING RECEPTACLES.**  
ALL 125-VOLT, SINGLE-PHASE, 15- OR 20-AMPERE RECEPTACLES INSTALLED IN GARAGES AND GRADE-LEVEL PORTIONS OF UNFINISHED ACCESSORY BUILDINGS USED FOR STORAGE OR WORK AREAS SHALL HAVE GROUND-FAULT CIRCUIT-INTERRUPTER PROTECTION FOR PERSONNEL.

**E3602.3 OUTDOOR RECEPTACLES.**  
ALL 125-VOLT, SINGLE-PHASE, 15- AND 20-AMPERE RECEPTACLES INSTALLED OUTDOORS SHALL HAVE GROUND-FAULT CIRCUIT-INTERRUPTER PROTECTION FOR PERSONNEL.

**E3602.6 KITCHEN RECEPTACLES.**  
ALL 125-VOLT, SINGLE-PHASE, 15- AND 20-AMPERE RECEPTACLES THAT SERVE COUNTERTOP SURFACES SHALL HAVE GROUND-FAULT CIRCUIT-INTERRUPTER PROTECTION FOR PERSONNEL.

**E3602.7 SINK RECEPTACLES.**  
ALL 125-VOLT, SINGLE-PHASE, 15- AND 20-AMPERE RECEPTACLES THAT ARE LOCATED WITHIN 6 FEET (1829 MM) OF THE OUTSIDE EDGE OF A SINK THAT IS LOCATED IN AN AREA OTHER THAN A KITCHEN, SHALL HAVE GROUND-FAULT CIRCUIT INTERRUPTER PROTECTION FOR PERSONNEL.

# NOTES

- ELECTRICAL PLAN DESIGNATES SCHEMATIC LAYOUT ONLY. ALL ELECTRICAL ELEMENTS TO BE VERIFIED BY BUILDER PRIOR TO START OF CONSTRUCTION.
- ALL SMOKE DETECTORS SHALL BE INTERCONNECTED WITH A POWER SOURCE AND HAVE A BATTERY BACKUP.
- ALL BRANCH CIRCUITS THAT SUPPLY 125 VOLT, SINGLE-PHASE, 15 AND 20 AMP OUTLETS INSTALLED IN ALL LIVABLE AREAS, KITCHENS, FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, PARLORS, LIBRARIES, DEN, BEDROOMS, SUN-ROOMS, RECREATION ROOMS, CLOSETS, HALLWAYS, LAUNDRY AREAS AND SIMILAR ROOMS OR AREAS SHALL BE ON AN ARC-FAULT CIRCUIT INTERRUPTER INSTALLED FOR PROTECTION OF THE BRANCH CIRCUIT. (E3602.16)
- ALL RECEPTACLES THAT SUPPLY 125 VOLT, SINGLE-PHASE, 15 AND 20 AMP OUTLETS INSTALLED IN ALL LIVABLE AREAS SHALL BE TAMPER-RESISTANT EXCEPT FOR RECEPTACLES LOCATED 5'-6" ABOVE FINISH FLOOR, PART OF A LUMINAR OR APPLIANCE AND SINGLE RECEPTACLES USED SOLELY FOR A DEDICATED APPLIANCE.
- SURFACE MOUNTED INCANDESCENT LIGHT FIXTURES IN CLOSET SHALL MAINTAIN 12" BETWEEN FIXTURE & THE NEAREST POINT OF STORAGE.
- BATHROOM OUTLETS TO BE A MIN. OF 20 AMP BRANCH CIRCUIT w/ NO OTHER OUTLETS.
- OVEN/RANGE AND ELECT. DRYER SHALL BE SUPPLIED BY 4-WIRE RECEPTACLE.
- ALL RECEPTACLE AND FIXTURE BOXES IN THE GARAGE SHALL BE OF METAL OR MATERIAL TESTED FOR FIRE RESISTIVE ASSEMBLIES AND INSTALLED IN ACCORDANCE WITH THE TESTED ASSEMBLY.
- ALL PRE-WIRED, CEILING-MOUNTED OUTLET BOXES SHALL BE LISTED TO SUPPORT A CEILING FAN, WHERE ACCEPTABLE. CEILING FANS NOT EXCEEDING 150 LB. (68 KG) OR WITHOUT ACCESSORIES) MAY BE SUPPORTED BY OUTLET BOXES PROVIDED THE BOXES ARE IDENTIFIED FOR SUCH USE.
- CEILING FANS OR LIGHTS INSTALLED OUTDOORS OR UNDER PATIO COVERS MUST BE LISTED FOR DAMP LOCATION.
- CARBON MONOXIDE ALARMS SHALL BE INSTALLED OUTSIDE OF EACH SEPARATE SLEEPING AREA AND THE IMMEDIATE VICINITY OF THE BEDROOMS IN ACCORDANCE WITH R310.3.
- SMOKE ALARMS SHALL BE INSTALLED IN EACH SLEEPING ROOM. R314.3

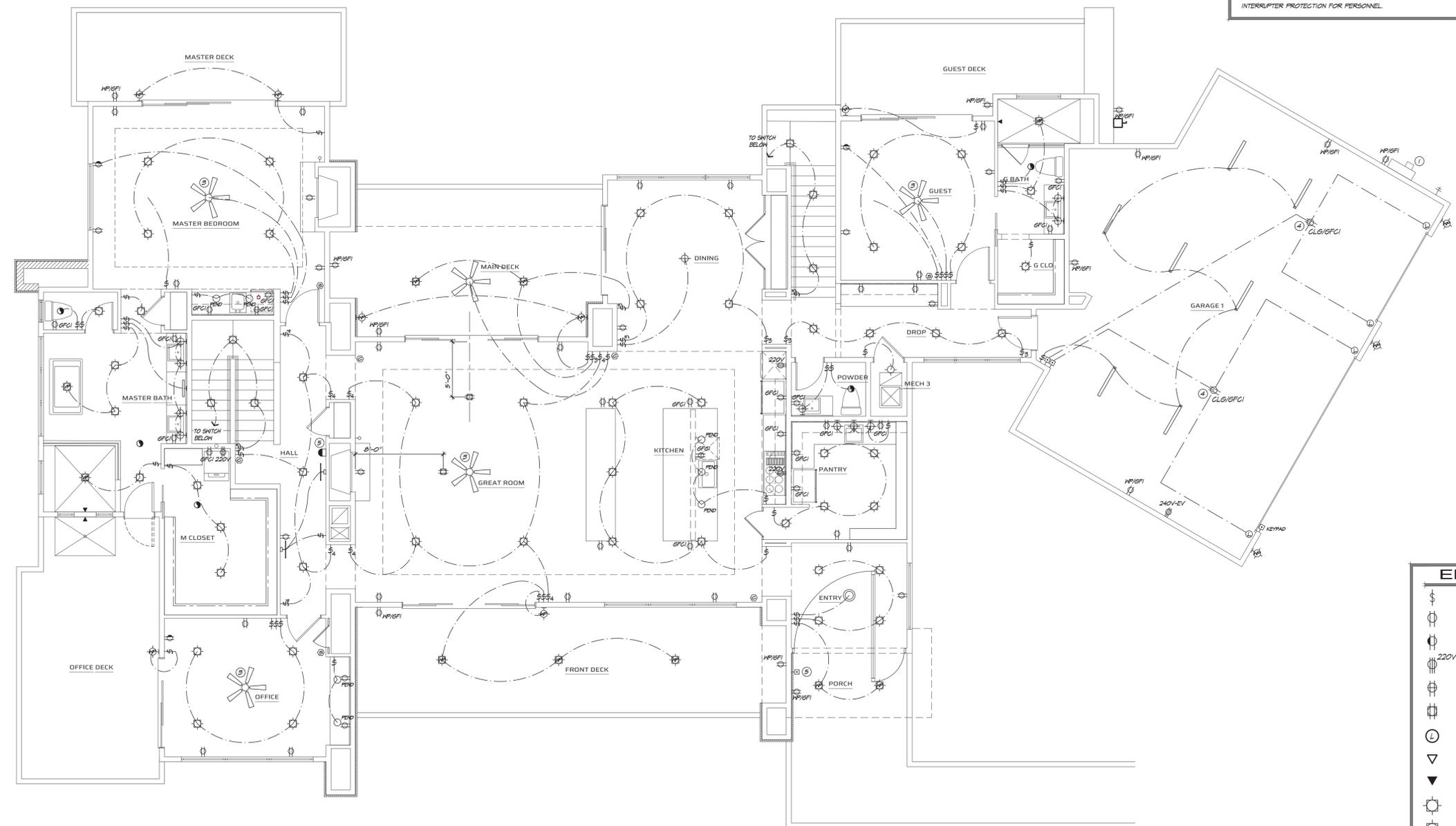
# FIXTURE HEIGHTS

EXTERIOR GFCI OUTLETS	12" TO GL
GARAGE GFCI OUTLETS	48" TO GL
GARAGE COACH LIGHTS	84" TO GL
FRONT DOOR COACH LIGHTS	72" TO GL
DOORBELL BUTTON	@ DOOR HANDLE
DOORBELL CHIMES	84" TO GL
TYPICAL SWITCHES	48" TO GL
TYPICAL WALL OUTLETS	12" TO GL
SWITCHES AT COUNTERS	48" TO GL
WALL OUTLETS AT COUNTERS	48" TO GL
TELEPHONE OUTLET	12" TO GL
TELEVISION OUTLET	12" TO GL
WASHER/DRYER OUTLETS	48" TO GL
THERMOSTAT	54" TO GL
KITCHEN REFRIGERATOR	48" TO GL
KITCHEN RANGE/OVEN	24" TO GL
KITCHEN DISHWASHER	24" TO GL
KITCHEN WALL HUNG MICROWAVE	76" TO GL
KITCHEN HOOD FAN	66" TO GL
FOYER & STAIRWAY FIXTURE	96" TO BTM
DINING & NOOK FIXTURE	64" TO BTM
BATH VANITY FIXTURE	80" TO GL

# KEYNOTES

- 200 AMP SERVICE PANEL W/ SURGE PROTECTION - LOCATE PER UTILITY CO.
- AVG COMPRESSOR DISCONNECT - COORDINATE LOCATION W/ MECHANICAL CONTRACTOR - 30"x30" WORKSPACE
- SCUTTLE ACCESS W/ SWITCH AND LIGHT. FORCED AIR UNIT IN ATTIC W/ 110V OUTLET. SEE TYPICAL ATTIC INSTALLATION DIAGRAM.
- CEILING OUTLET FOR AUTOMATIC GARAGE DOOR OPENER - GFCI
- DOORBELL / CHIMES - WIRE TO CONNECT
- REFRIGERATOR / FREEZER
- PROVIDE POWER FOR HOOD AND LIGHT
- 20 AMP. CIRCUIT BREAKER OUTLET - 1 LEG SWITCHED @ DISPOSAL, 1 LEG HOT @ DISHWASHER
- REINFORCE J-BOX FOR CEILING FAN

# ELECTRICAL SYMBOLS



# UPPER LEVEL ELECTRICAL PLAN

3/16" = 1'-0" NORTH

DATE 11/26/2024

1/21/25 - REVIEW | COMMENTS



**BTA ARCHITECTURAL, LLC**  
8425 West El Cortez Place  
Peoria, Arizona 85383  
(602) 282-6310  
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**Sivarajan Residence**  
7899 East Mary Sharon Drive  
Scottsdale 85266  
Lone Mountain Vista Tract A - Lot 93

**UPPER LEVEL ELECTRICAL PLAN**

SHEET NO.

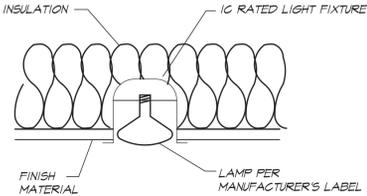
**E1.1**

DATE PLOTTED: 11/26/2024 10:58 AM PLOTTER: HP DesignJet T1300e

# CITY OF SCOTTSDALE CODE INTERPRETATION

BUILDING SHALL BE INSULATED IN ACCORDANCE WITH THE 2019 INTERNATIONAL RESIDENTIAL CODE CHAPTER 11 AND AS AMENDED BY THE CITY ORDINANCE. THE INSULATION INTEGRITY SHALL NOT BE COMPROMISED BY LIGHT FIXTURE PENETRATIONS.

LIGHT FIXTURES COVERED WITH INSULATION SHALL BE IC RATED AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AND THE 2014 NATIONAL ELECTRICAL CODE, NEC 110-3(b) 410-66(b).



**RECESSED LIGHT FIXTURE**  
NOT TO SCALE

**E3402.2 GARAGE AND ACCESSORY BUILDING RECEPTACLES.**  
ALL 125-VOLT, SINGLE-PHASE, 15- AND 20-AMPERE RECEPTACLES INSTALLED IN GARAGES AND GRADE-LEVEL PORTIONS OF UNFINISHED ACCESSORY BUILDINGS USED FOR STORAGE OR WORK AREAS SHALL HAVE GROUND-FAULT CIRCUIT-INTERRUPTER PROTECTION FOR PERSONNEL.

**E3402.3 OUTDOOR RECEPTACLES.**  
ALL 125-VOLT, SINGLE-PHASE, 15- AND 20-AMPERE RECEPTACLES INSTALLED OUTDOORS SHALL HAVE GROUND-FAULT CIRCUIT-INTERRUPTER PROTECTION FOR PERSONNEL.

**E3402.6 KITCHEN RECEPTACLES.**  
ALL 125-VOLT, SINGLE-PHASE, 15- AND 20-AMPERE RECEPTACLES THAT SERVE COUNTERTOP SURFACES SHALL HAVE GROUND-FAULT CIRCUIT-INTERRUPTER PROTECTION FOR PERSONNEL.

**E3402.7 SINK RECEPTACLES.**  
ALL 125-VOLT, SINGLE-PHASE, 15- AND 20-AMPERE RECEPTACLES THAT ARE LOCATED WITHIN 6 FEET (1829 MM) OF THE OUTSIDE EDGE OF A SINK THAT IS LOCATED IN AN AREA OTHER THAN A KITCHEN SHALL HAVE GROUND-FAULT CIRCUIT INTERRUPTER PROTECTION FOR PERSONNEL.

**NOTE:**  
ELECTRICAL SERVICE RESERVED SPACE (U/OS 1)  
THE MAIN ELECTRICAL SERVICE PANEL SHALL HAVE A RESERVED SPACE TO ALLOW INSTALLATION OF A DUAL POLE CIRCUIT BREAKER FOR FUTURE SOLAR ELECTRIC INSTALLATION AND SHALL BE LABELED AS SUCH

THE SWITCHGEAR MANUFACTURER SHALL PROVIDE A UL LISTED SERIES-RATED DISTRIBUTION SYSTEM BASED ON THE SHORT-CIRCUIT INFORMATION CONTAINED WITHIN THIS SINGLE-LINE DIAGRAM. IN LIEU OF A UL LISTED SERIES-RATED DISTRIBUTION SYSTEM THE SWITCHGEAR MANUFACTURER MAY PROVIDE A FULLY RATED SYSTEM BASED ON THE AVAILABLE UTILITY FAULT CURRENT INDICATED ON THE SINGLE-LINE DIAGRAM.

THE SERIES-RATED SYSTEM SHALL BE AS NOTED ON SINGLE-LINE DIAGRAM. MOTOR CONTRIBUTION IS LESS THAN 1% ON ALL SERIES-RATED PANELS (U.N.O.). NO DESIGN CHANGES MAY BE MADE TO THE SYSTEM WITHOUT THE PRIOR APPROVAL OF THE ELECTRICAL DESIGN ENGINEER AND THE ELECTRICAL INSPECTOR. THE MANUFACTURER SHALL PROVIDE THE APPROPRIATE TAGS AND LABELS ON ALL SWITCHBOARDS AND PANELBOARDS AS REQUIRED PER N.E.C. ARTICLES 110 AND 240, TO IDENTIFY THIS AS A SERIES-RATED SYSTEM.

WHERE THE INTERRUPTING RATINGS NOTED ON PANEL SCHEDULES IS LESS THAN THE AVAILABLE FAULT CURRENT A SERIES-RATED SYSTEM IS INTENDED. IT SHALL BE THE RESPONSIBILITY OF THE INSTALLING CONTRACTOR AND EQUIPMENT MANUFACTURER TO ENSURE THAT ALL OVERCURRENT DEVICES ARE APPLIED IN ACCORDANCE WITH THE RESPECTIVE EQUIPMENT LISTINGS. IF SERIES-RATED EQUIPMENT CANNOT BE PROVIDED, PANELS AND DEVICES SHALL BE RATED FOR THE AVAILABLE

SUB PANEL A		
METER PANEL TYPE - SQUARE D	USE / LOCATION	C/B
1	MECH A/C CONDENSOR 3	40
2	MECH A/C CONDENSOR 4	40
3	WATER HEATER	30
4	AIR HANDLER 3	1/20
5	AIR HANDLER 4	1/20
6	GARAGE 2 G.F.C.I.	1/20
7	GARAGE G.F.C.I.	1/20
8	GARAGE G.F.C.I.	1/20
9	SHOP G.F.C.I.	1/20
10	SHOP G.F.C.I.	1/20
11	RESERVED (U/OS 1)	1/20
12	SPACE	
13	SPACE	
14	SPACE	
15	SPACE	
16	SPACE	
17	SPACE	

MAIN PANEL SCHEDULE			
METER PANEL TYPE - SQUARE D	USE / LOCATION	C/B	USE / LOCATION
1	MECH A/C CONDENSOR 1	40	RANGE
2	MECH A/C CONDENSOR 2	40	DRYER
3	WATER HEATER	30	WATER HEATER
4	AIR HANDLER 1	1/20	BEDROOM 2 & 3 A.F.C.I.
5	AIR HANDLER 2	1/20	OFFICE A.F.C.I.
6	GREAT ROOM A.F.C.I.	1/20	AV / HALL A.F.C.I.
7	BEDROOM 1 A.F.C.I.	1/15	PORCH G.F.C.I.
8	KITCHEN G.F.C.I., A.F.C.I.	1/20	BATH 1 G.F.C.I.
9	KITCHEN G.F.C.I., A.F.C.I.	1/20	BATH 2 G.F.C.I.
10	LAUNDRY G.F.C.I., A.F.C.I.	1/20	BATH 3 G.F.C.I.
11	LAUNDRY G.F.C.I., A.F.C.I.	1/20	SMOKE DET A.F.C.I.
12	GARAGE 1 G.F.C.I.	1/20	RESERVED (U/OS 1)
13	SPACE		SPACE
14	GARAGE EV G.F.C.I.	2/50	SPACE
15	GARAGE EV G.F.C.I.	2/50	SPACE
16	SPACE		SPACE
17	SPACE		SPACE
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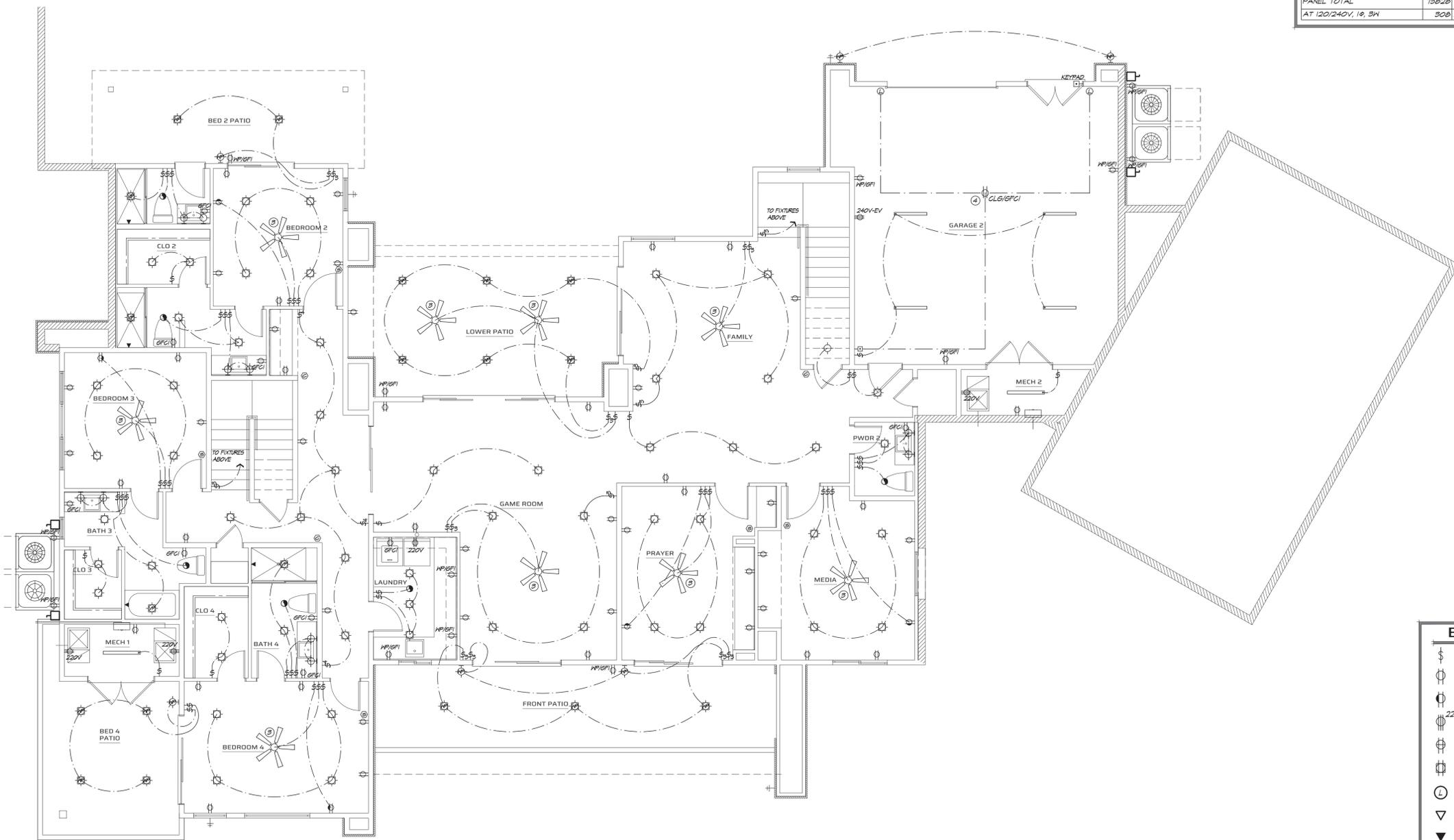
LOAD CALCULATIONS	
SIVARAJAN RESIDENCE	6402 SF
GENERAL LIGHTING AND RECEPTACLES (3 VA x LIVABLE SF)	19206 VA
2-SMALL APPLIANCE CIRCUITS	3000 VA
MICROWAVE	1500 VA
DISHWASHER	1500 VA
DISPOSER	720 VA
REFRIGERATOR	1500 VA
RANGE	12000 VA
RANGE HOOD	800 VA
ISLAND GFCI	1200 VA
BATHROOM CIRCUIT (2 @ 1500)	12000 VA
LAUNDRY	1500 VA
DRYER (2 @ 3000)	10000 VA
WASHER (2 @ 1500)	3000 VA
WATER HEATER (2 @ 4500)	9000 VA
WATER SOFTENER	1000 VA
GARAGE DOOR OPENER (4 @ 116)	4704 VA
ELECTRIC VEHICLE (2 @ 12000)	24000 VA
EXTERIOR LIGHTING (2 @ 800)	1600 VA
SUBTOTAL	108230 VA
FIRST 10 KVA AT 100%	10000 VA
REMAINER AT 40%	98230 VA
TOTAL	49230 VA
A/C UNIT 1 (3 TON)	5412 VA
A/C UNIT 2 (4 TON)	8750 VA
A/C UNIT 3 (3 TON)	4874 VA
A/C UNIT 3 (4 TON)	8715 VA
TOTAL HVAC	24536 VA
PANEL TOTAL	73826 VA
AT 120/240V, 1Ø, 3Ø	30Ø 4ØF

- ## NOTES
- ELECTRICAL PLAN DESIGNATES SCHEMATIC LAYOUT ONLY. ALL ELECTRICAL ELEMENTS TO BE VERIFIED BY BUILDER PRIOR TO START OF CONSTRUCTION.
  - ALL SMOKE DETECTORS SHALL BE INTERCONNECTED WITH A POWER SOURCE AND HAVE A BATTERY BACKUP.
  - ALL BRANCH CIRCUITS THAT SUPPLY 125 VOLT, SINGLE-PHASE, 15 AND 20 AMP OUTLETS INSTALLED IN ALL LIVABLE AREAS, KITCHENS, FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, PARLORS, LIBRARIES, DEN, BEDROOMS, SUN-ROOMS, RECREATION ROOMS, CLOSETS, HALLWAYS, LAUNDRY AREAS AND SIMILAR ROOMS OR AREAS SHALL BE ON AN ARC-FAULT CIRCUIT INTERRUPTER INSTALLED FOR PROTECTION OF THE BRANCH CIRCUIT (E3402.16).
  - ALL RECEPTACLES THAT SUPPLY 125 VOLT, SINGLE-PHASE, 15 AND 20 AMP OUTLETS INSTALLED IN ALL LIVABLE AREAS SHALL BE TAMPER-RESISTANT EXCEPT FOR RECEPTACLES LOCATED 5'-6" ABOVE FINISH FLOOR, PART OF A LUMINAR OR APPLIANCE AND SINGLE RECEPTACLES USED SOLELY FOR A MEDICAL APPLIANCE.
  - SURFACE MOUNTED INCANDESCENT LIGHT FIXTURES IN CLOTHES CLOSET SHALL MAINTAIN 12" BETWEEN FIXTURE & THE NEAREST POINT OF STORAGE.
  - BATHROOM OUTLETS TO BE A MIN. OF 20 AMP BRANCH CIRCUIT w/ NO OTHER OUTLETS.
  - OVEN/RANGE AND ELECT. DRYER SHALL BE SUPPLIED BY 4-WIRE RECEPTACLE.
  - ALL RECEPTACLE AND FIXTURE BOXES IN THE GARAGE SHALL BE OF METAL OR MATERIAL TESTED FOR FIRE RESISTIVE ASSEMBLIES AND INSTALLED IN ACCORDANCE WITH THE TESTED ASSEMBLY.
  - ALL PRE-WIRED, CEILING-MOUNTED OUTLET BOXES SHALL BE LISTED TO SUPPORT A CEILING FAN, WHERE ACCEPTABLE. CEILING FANS NOT EXCEEDING 10 POUNDS (WITH OR WITHOUT ACCESSORIES) MAY BE SUPPORTED BY OUTLET BOXES PROVIDED THE BOXES ARE IDENTIFIED FOR SUCH USE.
  - CEILING FANS OR LIGHTS INSTALLED OUTDOORS OR UNDER PATIO COVERS MUST BE LISTED FOR DAMP LOCATION.
  - CARBON MONOXIDE ALARMS SHALL BE INSTALLED OUTSIDE OF EACH SEPARATE SLEEPING AREA AND THE IMMEDIATE VICINITY OF THE BEDROOMS IN ACCORDANCE WITH R314.3.
  - SMOKE ALARMS SHALL BE INSTALLED IN EACH SLEEPING ROOM, R314.3.

### FIXTURE HEIGHTS

EXTERIOR GFCI OUTLETS	12" TO CL
GARAGE GFCI OUTLETS	48" TO CL
GARAGE COACH LIGHTS	84" TO CL
FRONT DOOR COACH LIGHTS	72" TO CL
DOORBELL BUTTON	@ DOOR HANDLE
DOORBELL CHIMES	84" TO CL
TYPICAL SWITCHES	48" TO CL
TYPICAL WALL OUTLETS	12" TO CL
SWITCHES AT COUNTERS	48" TO CL
WALL OUTLETS AT COUNTERS	48" TO CL
TELEPHONE OUTLET	12" TO CL
TELEVISION OUTLET	12" TO CL
WASHER/DRYER OUTLETS	48" TO CL
THERMOSTAT	54" TO CL
KITCHEN REFRIGERATOR	48" TO CL
KITCHEN RANGE/OVEN	24" TO CL
KITCHEN DISHWASHER	24" TO CL
KITCHEN WALL HUNG MICROWAVE	76" TO CL
KITCHEN HOOD FAN	66" TO CL
FOYER & STAIRWAY FIXTURE	96" TO BTM
DINING & NOOK FIXTURE	64" TO BTM
BATH VANITY FIXTURE	80" TO CL

- ### KEYNOTES
- 200 AMP SERVICE PANEL w/ SURGE PROTECTION - LOCATE PER UTILITY CO.
  - A/C COMPRESSOR DISCONNECT - COORDINATE LOCATION w/ MECHANICAL CONTRACTOR - 30" X 30" WORKSPACE
  - SCUTTLE ACCESS w/ SWITCH AND LIGHT. FORCED AIR UNIT IN ATTIC w/ 110V OUTLET. SEE TYPICAL ATTIC INSTALLATION DIAGRAM.
  - CEILING OUTLET FOR AUTOMATIC GARAGE DOOR OPENER - GFCI
  - DOORBELL / CHIMES - WIRE TO CONNECT
  - REFRIGERATOR / FREEZER
  - PROVIDE POWER FOR HOOD AND LIGHT
  - 20 AMP. CIRCUIT BREAKER OUTLET - 1 LEG SWITCHED @ DISPOSAL, 1 LEG HOT @ DISHWASHER
  - REINFORCE J-BOX FOR CEILING FAN



### ELECTRICAL SYMBOLS

⊕	= STD. SWITCH	⊕	= FLUORESCENT LIGHT
⊕	= STD. DUPLEX OUTLET	⊕	= MULTI-BULB LIGHT FIXTURE
⊕	= STD. SWITCHED OUTLET	⊕	= EYEBALL LIGHT
⊕	= STD. 220V. OUTLET	⊕	= CEILING FAN & LIGHT
⊕	= STD. UNDER COUNTER OUTLET	⊕	= EXHAUST FAN - 5 AIR CHANGES PER HOUR
⊕	= STD. FLOOR OUTLET	⊕	= FUSED DISCONNECT SWITCH
⊕	= LOW VOLTAGE OUTLET	⊕	= CONDENSER MOTOR
⊕	= COAXIAL OUTLET	⊕	= CHIMES
⊕	= CAT 5 OUTLET	⊕	= PUSH BUTTON SWITCH
⊕	= RECESSED CAN LIGHT	⊕	= TRANSFORMER
⊕	= EXT. REC. CAN - TYP.	⊕	= 120V WIRE-IN SMOKE ALARM w/ BATTERY BACK UP
⊕	= STD. HANGING LIGHT	⊕	= COMBINATION CARBON MONOXIDE / SMOKE ALARM w/ BATTERY BACK UP
⊕	= STD. WALL MOUNT LIGHT	⊕	

# LOWER LEVEL ELECTRICAL PLAN

3/16" = 1'-0" NORTH

DATE: 11/26/2024  
1/21/25 - REVIEW | COMMENTS



**BTA ARCHITECTURAL LLC**  
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Peoria, Arizona 85383  
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**Sivarajan Residence**  
7899 East Mary Sharon Drive  
Scottsdale 85266  
Lone Mountain Vista Tract A - Lot 93

**LOWER LEVEL  
ELECTRICAL  
PLAN**  
SHEET NO. **E1.2**

**MECHANICAL NOTES**

1. ADJUST CFM FOR DIFFUSERS BASED ON CAPACITY OF UNIT.
2. UNDERCUT ALL DOORS 1".
3. CLOTHES DRYER IS TO BE PROVIDED WITH AN EXHAUST DUCT 4" MIN. AND NOT TO EXCEED 35 FT. IN LENGTH. THE MAXIMUM LENGTH ALLOWED IS REDUCED BY 2.5 FT. FOR EACH 45-DEGREE BEND AND 5 FT. FOR EACH 90-DEGREE BEND. TERMINATE TO OUTSIDE OF BUILDING WITH A BACKDRAFT DAMPER, NO SCREENS. DUCTS SHALL BE MECHANICALLY FASTENED. SCREWS OR SIMILAR FASTENERS SHALL NOT PROTRUDE MORE THAN 1/8" INTO INSIDE OF THE DUCT. 2" OVER-SIZE NAIL PLATES. SEE IRC SECTION M502 FOR DETAILS AND EXCEPTIONS.

- DUCTWORK**
1. DUCTWORK SHALL BE GALVANIZED, PRIME-GRADE. DUCTWORK SHALL BE GALVANIZED, PRIME-GRADE, LOCK-FORMING QUALITY STEEL (LFO) HAVING A GALVANIZED COATING OF 1-3/4 OUNCES TOTAL FOR BOTH SIDES OF ONE SQUARE FOOT OF A SHEET.
  2. ALL ROUND DUCT BRANCH TAKEOFFS SHALL BE ALL ROUND DUCT BRANCH TAKEOFFS SHALL BE PROVIDED WITH SPIR-IN COLLAR AND BALANCING DAMPER.
  3. ALL DUCTS SHALL BE SUBSTANTIALLY SUPPORTED ALL DUCTS SHALL BE SUBSTANTIALLY SUPPORTED WITH HANGERS TO THE STRUCTURE OR OTHERWISE DEPENDING ON LOCATION CONDITIONS. FLANGING SUPPORTS NOT OVER 8 FEET APART ALONG THE LENGTH OF THE DUCT. HANGERS SHALL CONFORM TO ALL APPLICABLE MECHANICAL CODES AND SMACNA REQUIREMENTS.
  4. FLEXIBLE ROUND DUCTS TO OUTLETS SHALL BE FLEXIBLE ROUND DUCTS TO OUTLETS SHALL BE THERMAL-FLEX TYPE MAKE, A MAXIMUM LENGTH OF 8'-0" LONG (AND ALLOWED ONLY WHERE INDICATED ON THE DRAWINGS).

- GRILLES, REGISTERS AND DIFFUSERS**
1. FURNISH AND INSTALL ALL GRILLES,

- REGISTERS, FURNISH AND INSTALL ALL GRILLES, REGISTERS, CEILING DIFFUSERS AND DOOR GRILLES WHERE INDICATED. THEY SHALL BE OF SIZE CALLED FOR ON THE DRAWINGS.
2. ALL GRILLES, REGISTERS, AND CEILING DIFFUSERS ALL GRILLES, REGISTERS, AND CEILING DIFFUSERS MUST BE SET FLUSH AND TRUE TO WALL OR CEILING TO PREVENT AIR LEAKAGE AROUND EDGES. ALL UNITS SHALL BE PROVIDED WITH NEOPRENE GASKETING AROUND THE INSIDE OF THE FRAME AND BALANCING DAMPERS
  3. ALL UNITS SHALL BE FACTORY FINISHED, OF COLOR SELECTED BY THE ARCHITECT, OR AS OTHERWISE INDICATED.

- GENERAL**
1. THE DETAILS SHOWN ON THESE DOCUMENTS ARE TYPICAL. ALL DUCT, PIPE, AND EQUIPMENT CONNECTIONS AND/OR ASSEMBLIES SHALL BE PER THE SPECIFIED DETAIL. TYPICAL DETAILS INDICATE MINIMUM REQUIREMENTS. WHERE CODE AND/OR MANUFACTURER'S REQUIREMENTS ARE MORE STRINGENT THOSE REQUIREMENTS SHALL APPLY.
  2. REFER TO ARCHITECTURAL DRAWINGS (REFLECTED CEILING PLAN) FOR EXACT LOCATION OF THE DIFFUSERS AND GRILLES. MATCH FRAME TYPE WITH CEILING.
  3. ALL WORK SHALL COMPLY WITH CONSTRUCTION DOCUMENTS, AND 2018 IRC OR MECHANICAL CHAPTERS OF 2018 IRC.
  4. PROVIDE DUCT HANGER AT EACH JOINT AND/OR A MAXIMUM 4 FEET ON CENTER.
  5. SUPPORT ALL DUCTWORK, PIPING, AND OTHER MECHANICAL EQUIPMENT FROM THE STRUCTURE.
  6. FLEX DUCT SHALL BE "ATCO SERIES 30". INSTALL FLEX DUCT IN ACCORDANCE TO MANUFACTURER'S INSTALLATION INSTRUCTION WITHOUT ANY TURNS AND PER CONTRACT DOCUMENT. HANG FLEX DUCT FROM

- THE STRUCTURE USE 20 GAUGE 1-1/8" STRAP AND SADDLE
7. ALL REFRIGERANT PIPING SHALL BE SIZED, INSTALLED A PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
  8. PROVIDE FLASHING FOR REFRIGERANT PIPING PENETRATION THROUGH THE ROOF OR WALL.
  9. PROVIDE FLEX CONNECTION AT SUPPLY DISCHARGE OF THE UNITS.
  10. FILTERS SHALL BE "FARR" 2" 30/30 AT MAXIMUM 350 FEET PER MINUTE FACE VELOCITY. PROVIDE WEATHER PROOF FRAME AND ACCESS DOOR.
  11. CONTRACTOR SHALL PROVIDE TWO YEAR WARRANTY FOR ALL PARTS AND LABOR.

- NOTES:**
1. WHERE THE EXHAUST DUCT IS CONCEALED WITHIN THE BUILDING CONSTRUCTION, THE EQUIVALENT LENGTH OF THE EXHAUST DUCT SHALL BE IDENTIFIED ON A PERMANENT LABEL OR TAG. THE LABEL OR TAG SHALL BE LOCATED WITHIN 6 FEET OF THE EXHAUST DUCT CONNECTION.
  2. DUCT SEALING - EITHER A POST CONSTRUCTION DUCT LEAKAGE TEST OR A ROUGH-IN DUCT LEAKAGE TEST SHALL BE PERFORMED AND REQUIRED.
  3. AIR LEAKAGE - BUILDING ENVELOPE IS REQUIRE TO BE SEALED AT ALL THE COMPONENTS THAT MAKE UP THE THERMAL ENVELOPE
  4. ROOF BATT INSULATION - R-38 IS THE DEFAULT MINIMUM. R-50 MAY BE USED AS AN EXCEPTION IF SHOWN COMPLIANCE. TRUSS HEEL HEIGHT SHALL ALLOW FULL UNCOMPRESSED INSULATION TO COVER THE FULL TOP PLATE.
  5. CLOTHES DRYER - INDICATE THAT A PERMANENT LABEL SHALL BE INSTALLED WITHIN 6' FT OF THE DRYER INLET STATING THE SIZE AND DEVELOPMENT LENGTH WHEN THE DUCT IS CONCEALED WITHIN THE CONSTRUCTION MAXIMUM LENGTH 35 FT OR MANUFACTURER LISTED INSTRUCTIONS.

M1507.3.3(1) CONTINUOUS WHOLE HOUSE MECHANICAL VENTILATION SYSTEM AIRFLOW RATE REQUIREMENTS

DWELLING UNIT FLOOR AREA	NUMBER OF BEDROOMS				
	1	2-3	4-5	6-7	7+
< 1500 SF	30	45	60	75	90
1501-3000 SF	45	60	75	90	105
3001-4500 SF	60	75	90	105	120
4501-6000 SF	75	90	105	120	135
6001-7500 SF	90	105	120	135	150
7501+	105	120	135	150	165

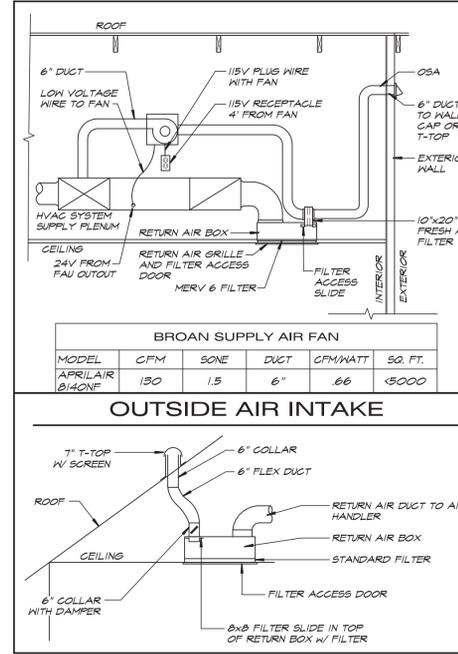
IECC R403.5.1 MECHANICAL VENTILATION SYSTEM FAN EFFICIENCY

FAN LOCATION	AIRFLOW MINIMUM (CFM)	MAXIMUM EFFICIENCY (CFM/WATT)	AIRFLOW RATE MAX (CFM)
RANGE HOOD	ANY	2.8	ANY
IN-LINE FAN	ANY	2.8	ANY
BATH / LAUNDRY	10	1.4	< 40
BATH / LAUNDRY	90	2.8	ANY

**EXHAUST FAN**

EF-1	50 CFM	5" VTR
EF-2	80 CFM	5 1/2" VTR
EF-3	110 CFM	6" VTR
EF-4	150 CFM	6" VTR

RIGHT-SIZING OF AN HVAC SYSTEM IS THE SELECTION OF EQUIPMENT AND THE DESIGN OF THE AIR DISTRIBUTION SYSTEM TO MEET THE ACCURATE PREDICTED HEATING AND COOLING LOADS OF THE HOUSE. EQUIPMENT SELECTION ARE ALL TAKEN FROM THE INPUTS USED IN THE MANUAL J, D & S PROCEDURE. REFER TO MANUAL J, D & S HVAC LOAD CALCULATION REPORT, FOR SYSTEM LOAD SUMMARY AND EQUIPMENT DATA AND MANUAL D DUCT SIZE GRID FOR ROOM CFM FLOWS.



**BROAN SUPPLY AIR FAN**

MODEL	CFM	SONE	DUCT	CFM/WATT	SQ. FT.
APRILAIR 0/140NE	130	1.5	6"	66	<5000

**NOTES**

1. THE DWELLING MUST BE PROVIDED WITH HEATING CAPABLE OF MAINTAINING ROOM TEMPERATURE OF 70° AT A POINT 3'-0" ABOVE FINISHED FLOOR - I.M.C. & I.R.G.
2. FOR GAS APPLIANCES & FIXTURES PROVIDE COMBUSTION AIR & VENTILATION AIR PER I.M.C. & I.R.G.
3. THE PASSAGEWAY OF DRYER EXHAUST DUCTS TERMINALS SHALL BE UNFINISHED IN SIZE AND SHALL PROVIDE AN OPEN AREA OF NOT LESS THAN 12.5 SQUARE INCHES (NOTE TREE-TOPS ARE NO LONGER PERMITTED DRYER DUCTS MUST BE INSTALLED IN WALL CAVITIES THAT ARE NOT LESS THAN 4" M502.3
4. PROVIDE BACK DRAFT DAMPERS ON THE DRYER EXHAUST VENTS PER M502.3

**NOTES:**  
TO COMPLY WITH THE CODE REQUIREMENT THAT DRYER EXHAUST VENTS NOT EXCEED A FIXED LENGTH, THE BUILDER MUST AFFIX A WARNING LABEL THAT APPRISES THE HOME OWNER OF THE RESPONSIBILITY TO INSTALL AN APPLIANCE THAT DOES NOT EXCEED A HAZARD. THIS WARNING IS TO BE PERMANENTLY ATTACHED TO THE WALL IN AN AREA WITHIN 6 FEET FROM WHERE THE DRYER WILL BE LOCATED AND SHOULD BE VISIBLE TO THE PURCHASER DURING AN INSPECTION / WALK-THROUGH. THE TAG SHOULD READ AS FOLLOWS:

**WARNING**  
DO NOT REMOVE  
TO AVOID THE RISK OF FIRE CAUSED BY LINT BUILD-UP IN THE EXHAUST DUCT, ALL DOMESTIC DRYERS INSTALLED AT THIS LOCATION SHALL BE MANUFACTURER APPROVED (AS LISTED) FOR CONNECTION TO AN EXHAUST DUCT THAT IS  
 WITH   
 FEET OR GREATER ELBOWS

**KEYNOTES**

1. OUTDOOR CONDENSING UNIT MOUNT ON CONCRETE EQUIPMENT PAD 4" MIN. ABOVE FINISH GRADE
2. ROUTE EXHAUST DUCT UP THRU ROOF TO AN APPROVED ROOF CAP
3. ROUTE 6" KITCHEN EXHAUST DUCT UP THRU ROOF TO AN APPROVED ROOF CAP. KITCHEN EXHAUST HOOD IS RESIDENTIAL TYPE WITH LESS THAN 400 CFM PER IRC SECTION M503.4. MAKEUP AIR IS NOT REQUIRED
4. ROUTE DRYER 4" EXHAUST DUCT UP THRU ROOF TO AN APPROVED ROOF CAP. INDICATE THAT A PERMANENT LABEL SHALL BE INSTALLED WITHIN 6' OF THE DRYER INLET STATING THE SIZE AND DEVELOPMENT LENGTH WHEN THE DUCT IS CONCEALED WITHIN THE CONSTRUCTION (A MAXIMUM LENGTH OF 35' OR MANUFACTURER LISTED INSTRUCTIONS PER IRC M502-41 & IRC M502-4
5. 3/4" CONDENSATE DRAIN FROM FAN COIL UNIT ROUTE TO EXTERIOR WALL AND DOWN TO SPILL OUTSIDE AT APPROXIMATELY 6" ABOVE FINISH GRADE
6. PROVIDE 4" OUTSIDE AIR DUCT UP THRU ROOF TO ROOF CAP BALANCED TO PROVIDE 50 CFM
7. MOUNT VERTICAL FAN ON TOP OF A MIN. 18" STAND. PROVIDE ACOUSTICAL Baffle LINED WITH MINIMUM R8 ACOUSTICAL LINER. MOUNT UNIT PER MANUFACTURER'S REQUIREMENTS. ROUTE 3/4" UNIT CONDENSATE DRAIN PIPE THRU EXTERIOR WALL TO DAYLIGHT TO 6" ABOVE FINISH GRADE. PROVIDE MINIMUM 1/8" PER FOOT SLOPE FOR DRAIN LINE AND IN ACCORDANCE WITH IRC REQUIREMENTS. MAINTAIN MANUFACTURER'S RECOMMENDED CLEARANCES TO COMBUSTIBLES

**MANUAL J CALCULATIONS**

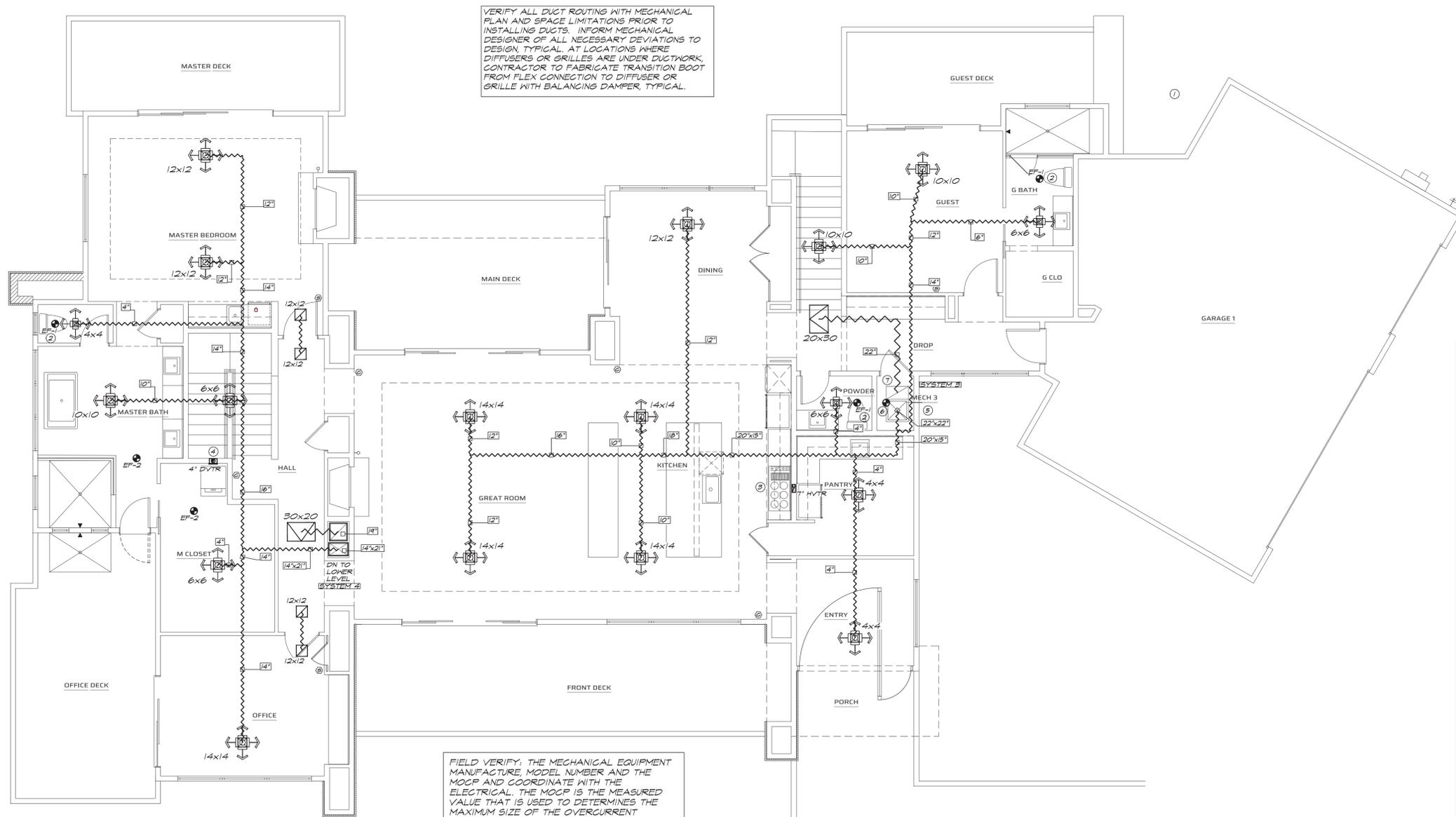
SIVARAJAN RESIDENCE

	COOLING LOAD	HEATING LOAD
SENSIBLE:	163493	
LATENT:	2999	
TOTALS:	166492	91719

**EQUIPMENT**

2.8 TON AIR SOURCE HEAT PUMP OUTDOOR MODEL: 14HPX-036-230-19 INDOOR MODEL: C33-48+TDR+TXV AHRI REFERENCE: 7044592 HEATING EFFICIENCY: 8.2 HSPF	LENOX MERIT 14HPX SERIES SEER: 15
4 TON AIR SOURCE HEAT PUMP OUTDOOR MODEL: 14HPX-048-230-19 INDOOR MODEL: C83-62+TDR+TXV AHRI REFERENCE: 7045193 HEATING EFFICIENCY: 8.7 HSPF	LENOX MERIT 14HPX SERIES SEER: 14.7
5 TON AIR SOURCE HEAT PUMP OUTDOOR MODEL: 14HPX-060-230-21 INDOOR MODEL: C84-62+TDR AHRI REFERENCE: 9140520 HEATING EFFICIENCY: 8.7 HSPF	LENOX MERIT 14HPX SERIES SEER: 15
3.7 TON AIR SOURCE HEAT PUMP OUTDOOR MODEL: 14HPX-042-230-21 INDOOR MODEL: C84-44+TDR AHRI REFERENCE: 9140576 HEATING EFFICIENCY: 8.5 HSPF	LENOX MERIT 14HPX SERIES SEER: 14.7

HOODS: ROUGH-IN      REGISTERS: RRAC 800-20/150  
FLEX: R-6                      GRILLES: RRAC 509H-5FF  
EF-1=50CFM, EF-2=80CFM, EF-3=110CFM, EF-4=150CFM  
DESIGN CONDITIONS      WINTER      SUMMER  
OUTSIDE TEMPERATURE      34DB      108DB-T1WB  
INSIDE TEMPERATURE      74DB      75DB-63WB  
LOAD CALCULATED IN ACCORDANCE WITH AIR CONDITIONING CONTRACTORS OF AMERICA MANUAL J 8TH EDITION



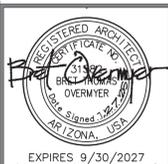
VERIFY ALL DUCT ROUTINGS WITH MECHANICAL PLAN AND SPACE LIMITATIONS PRIOR TO INSTALLING DUCTS. INFORM MECHANICAL DESIGNER OF ALL NECESSARY DEVIATIONS TO DESIGN. TYPICAL. AT LOCATIONS WHERE DIFFUSERS OR GRILLES ARE UNDER DUCTWORK, CONTRACTOR TO FABRICATE TRANSITION BOOT FROM FLEX CONNECTION TO DIFFUSER OR GRILLE WITH BALANCING DAMPER, TYPICAL.

FIELD VERIFY THE MECHANICAL EQUIPMENT MANUFACTURE MODEL NUMBER AND THE MOCP AND COORDINATE WITH THE ELECTRICAL. THE MOCP IS THE MEASURED VALUE THAT IS USED TO DETERMINE THE MAXIMUM SIZE OF THE OVERCURRENT PROTECTION DEVICES SUCH AS CIRCUIT BREAKER OR FUSE THAT IS USED TO PROTECT THE WIRE AND EQUIPMENT UNDER FAULT CONDITIONS. 2017 NEC ARTICLES 240 & 440. THIS IS REQUIRED TO COORDINATE ALSO AT THE ELECTRICAL PANEL.

**UPPER LEVEL MECHANICAL PLAN**  
3/16" = 1'-0" NORTH

DATE: 11/26/2024

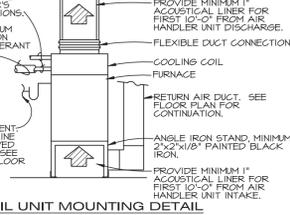
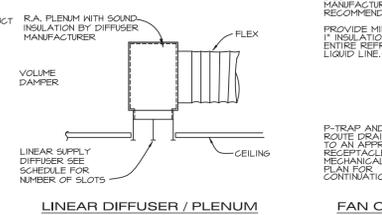
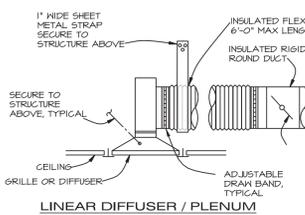
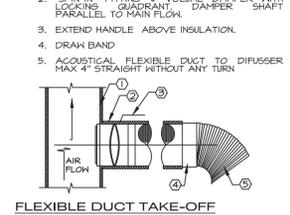
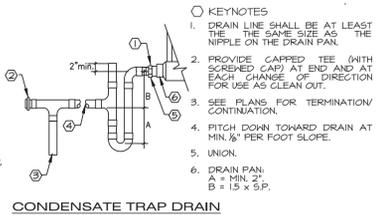
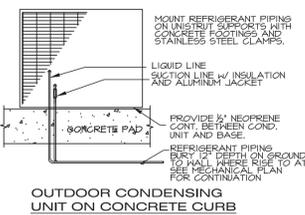
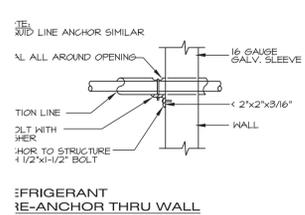
1/21/25 - REVIEW | COMMENTS



**Sivarajan Residence**  
7899 East Mary Sharon Drive  
Scottsdale 85266  
Lone Mountain Vista Tract A - Lot 93

**UPPER LEVEL MECHANICAL PLAN**

SHEET NO. **M1.1**



**2018 IECC COMPLIANCE NOTES**

1. PER 2018 IRC SECTION N103.1.1 (R403.1.1) PROVIDE AUTOMATIC CHANGEOVER 1-DAY PROGRAMMABLE THERMOSTATS FOR EACH ZONE WITH A 2-HOUR OCCUPANT OVERRIDE, INTELLIGENT RECOVERY, AND 10-HOUR MINIMUM BATTERY BACKUP. PROGRAM SETBACK TEMPERATURES TO 55°F (COOL) AND 55°F (HEAT). THERMOSTATS USED TO CONTROL BOTH HEATING AND COOLING SHALL PROVIDE A SETPOINT OVERLAP RESTRICTION SUCH AS A DEADBAND OF AT LEAST 5°F. THE THERMOSTAT SHALL INITIALLY BE PROGRAMMED WITH A HEATING TEMPERATURE SETPOINT NO HIGHER THEN 70°F (21°C) AND COOLING TEMPERATURE SETPOINT NO LOWER THEN 78°F (26°C). ALL TEMPERATURE CONTROLS ARE TO BE TESTED, ADJUSTED, AND CALIBRATED FOR PROPER OPERATION. MOUNT ALL THERMOSTATS AND TEMPERATURE SENSORS AS INDICATED ON THE DRAWINGS. COORDINATE EXACT LOCATION WITH THE OWNER. PROVIDE LOCKING COVER AS REQUIRED BY OWNER. MOUNT BETWEEN 48"-54" AFF.

2. WHERE MECHANICAL VENTILATION IS PROVIDED, THE SYSTEM SHALL PROVIDE THE CAPABILITY TO REDUCE THE OUTDOOR AIR SUPPLY TO THE MINIMUM REQUIRED BY CHAPTER 4 OF THE INTERNATIONAL ENERGY EFFICIENCY CODE. OUTDOOR AIR SUPPLY AND EXHAUST

DUCTS SHALL BE PROVIDED WITH AUTOMATIC MEANS TO REDUCE AND SHUT OFF AIRFLOW.

3. SEALING DUCTWORK: ALL JOINTS, LONGITUDINAL AND TRANSVERSE SEAMS AND CONNECTIONS IN DUCTWORK MUST BE SECURELY SEALED USING WELDMENTS, MECHANICAL FASTENERS WITH SEALS, GASKETS OR MASTICS, MESH AND MASTIC SEALING SYSTEMS, OR TAPES. TAPES AND MASTICS MUST BE LISTED AND LABELED IN ACCORDANCE WITH UL 181A OR 181B.

4. OUTDOOR AIR SUPPLY AND EXHAUST DUCTS SHALL BE EQUIPPED WITH MOTORIZED DAMPERS THAT WILL AUTOMATICALLY SHUT WHEN THE SYSTEMS OR SPACES SERVED ARE NOT IN USE. EXCEPTION - GRAVITY DAMPERS SHALL BE PERMITTED IN BUILDINGS LESS THAN 3 STORIES IN HEIGHT.

5. PROVIDE OWNER WITH COMPLETE OPERATION AND MAINTENANCE MANUALS FOR ALL EQUIPMENT AND CONTROLS INSTALLED. DOCUMENTATION MUST INCLUDE EQUIPMENT CAPACITY (INPUT & OUTPUT), REQUIRED MAINTENANCE ACTIONS, CONTROLS AND CALIBRATION INFORMATION INCLUDING WIRING DIAGRAMS, CONTROL SEQUENCE DESCRIPTIONS, DESIRED OR FIELD-DETERMINED SETPOINTS, AND A COMPLETE NARRATIVE OF HOW EACH SYSTEM IS INTENDED TO OPERATE.

**NOTES**

- THE DWELLING MUST BE PROVIDED WITH HEATING CAPABLE OF MAINTAINING ROOM TEMPERATURE OF 70° AT A POINT 3'-0" ABOVE FINISHED FLOOR - I.M.C. 4 I.R.G.
- FOR GAS APPLIANCES & FIXTURES PROVIDE COMBUSTION AIR & VENTILATION AIR PER I.M.C. & I.R.G.
- THE PASSAGEWAY OF DRYER EXHAUST DUCTS TERMINALS SHALL BE UNFINISHED IN SIZE AND SHALL PROVIDE AN OPEN AREA OF NOT LESS THAN 12.5 SQUARE INCHES (NOTE TREE-TOPS ARE NO LONGER PERMITTED). DRYER DUCTS MUST BE INSTALLED IN WALL CAVITIES THAT ARE NOT LESS THAN 4" MSO2.3
- PROVIDE BACK DRAFT DAMPERS ON THE DRYER EXHAUST VENTS PER MSO2.3

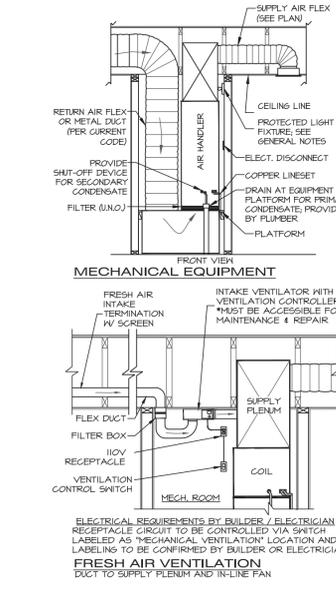
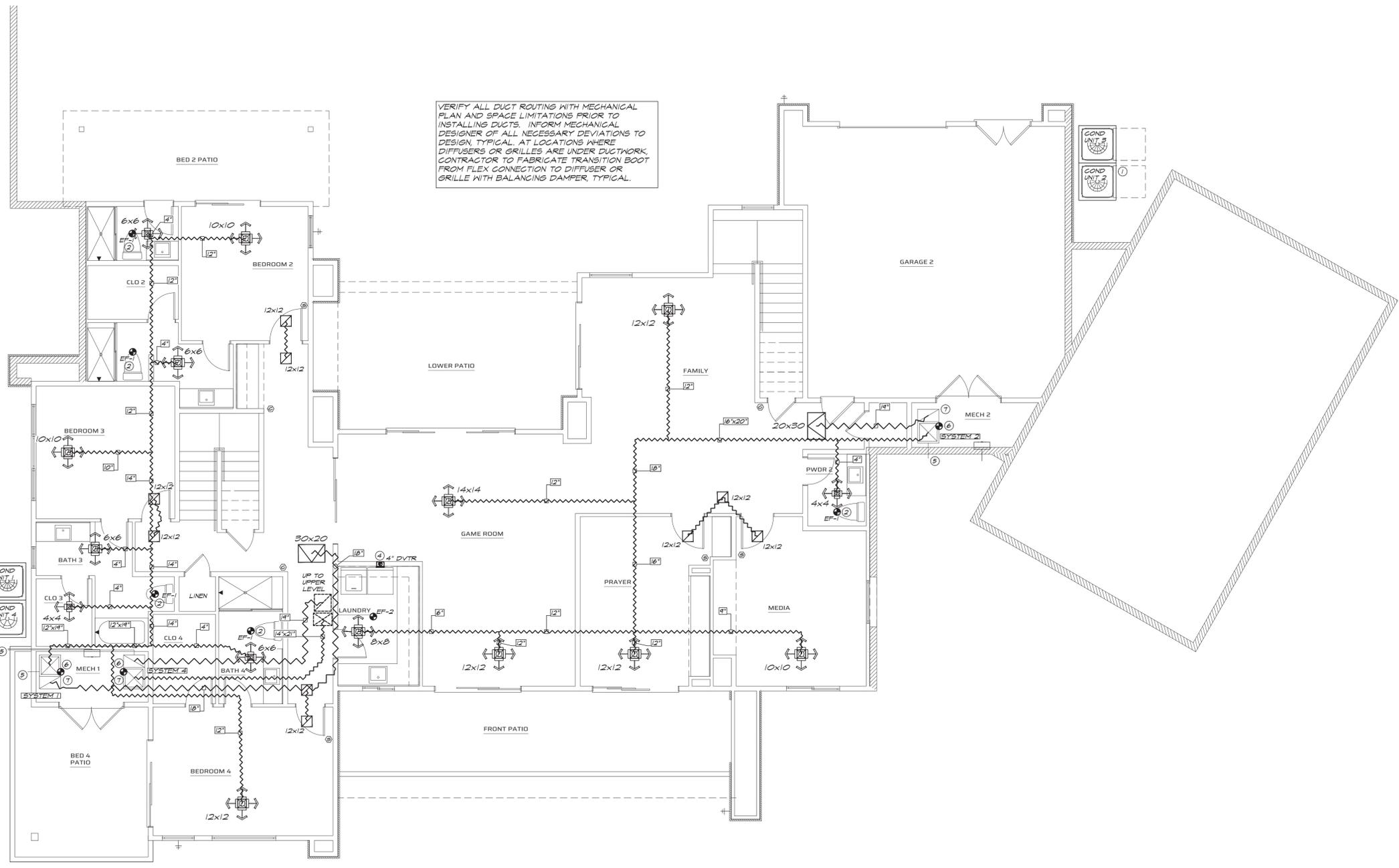
NOTE: TO COMPLY WITH THE CODE REQUIREMENT THAT DRYER EXHAUST VENTS NOT EXCEED A FIXED LENGTH, THE BUILDER MUST AFFIX A WARNING LABEL THAT APPRISES THE HOME OWNER OF THE RESPONSIBILITY TO INSTALL AN APPLIANCE THAT DOES NOT CREATE A HAZARD. THIS WARNING IS TO BE PERMANENTLY ATTACHED TO THE WALL IN AN AREA WITHIN 6 FEET FROM WHERE THE DRYER WILL BE LOCATED AND SHOULD BE VISIBLE TO THE PURCHASER DURING AN INSPECTION / WALK-THROUGH. THE TAG SHOULD READ AS FOLLOWS:

**WARNING**  
DO NOT REMOVE  
TO AVOID THE RISK OF FIRE CAUSED BY LINT BUILD-UP IN THE EXHAUST DUCT, ALL DOMESTIC DRYERS INSTALLED AT THIS LOCATION SHALL BE MANUFACTURER APPROVED (UL LISTED) FOR CONNECTION TO AN EXHAUST DUCT THAT IS

WITH [ ] FEET OR GREATER ELBOWS

**KEYNOTES**

- OUTDOOR CONDENSING UNIT MOUNTED ON CONCRETE EQUIPMENT PAD 4" MIN. ABOVE FINISH GRADE
- ROUTE EXHAUST DUCT UP THRU ROOF TO AN APPROVED ROOF CAP
- ROUTE 6" KITCHEN EXHAUST DUCT UP THRU ROOF TO AN APPROVED ROOF CAP. KITCHEN EXHAUST HOOD IS RESIDENTIAL TYPE WITH LESS THAN 400 CFM PERK (IRC SECTION M503.4. MAKEUP AIR IS NOT REQUIRED)
- ROUTE DRYER 4" EXHAUST DUCT UP THRU ROOF TO AN APPROVED ROOF CAP. INDICATE THAT A PERMANENT LABEL SHALL BE INSTALLED WITHIN 6" OF THE DRYER INLET STATING THE SIZE AND DEVELOPMENT LENGTH WHEN THE DUCT IS CONCEALED WITHIN THE CONSTRUCTION (A MAXIMUM LENGTH OF 35' OR MANUFACTURER LISTED INSTRUCTIONS PER IRC M502.4.1 & IRC M502.4)
- 3/4" CONDENSATE DRAIN FROM FAN COIL UNIT ROUTE TO EXTERIOR WALL AND DOWN TO SPILL OUTSIDE AT APPROXIMATELY 6" ABOVE FINISH GRADE
- PROVIDE 4" OUTSIDE AIR DUCT UP THRU ROOF TO ROOF CAP BALANCED TO PROVIDE 50 CFM
- MOUNT VERTICAL FAN ON TOP OF A MIN. 18" STAND. PROVIDE ACOUSTICAL Baffle LINED WITH MINIMUM R8 ACOUSTICAL LINER. MOUNT UNIT PER MANUFACTURER'S REQUIREMENTS. ROUTE 3/4" UNIT CONDENSATE DRAIN PIPE THRU EXTERIOR WALL TO DAYLIGHT TO 6" ABOVE FINISH GRADE. PROVIDE MINIMUM 1/8" PER FOOT SLOPE FOR DRAIN LINE AND IN ACCORDANCE WITH IRC REQUIREMENTS. MAINTAIN MANUFACTURER'S RECOMMENDED CLEARANCES TO COMBUSTIBLES



**LOWER LEVEL MECHANICAL PLAN**

3/16" = 1'-0" NORTH

DATE 11/26/2024

12/25 - REVIEW | COMMENTS

REGISTERED ARCHITECT

ROBERT OTTO FLORI

EXPIRES 9/30/2027

**bt**

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Professional Engineer

33483

ROBERT OTTO FLORI

EXPIRES 3/31/2026

MECHANICAL ONLY

**Sivarajan Residence**

7899 East Mary Sharon Drive

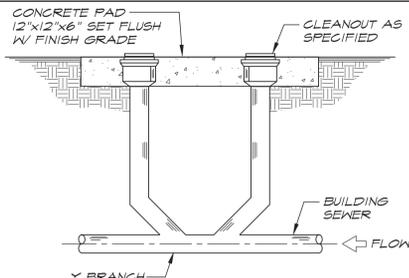
Scottsdale 85266

Lone Mountain Vista Tract A - Lot 93

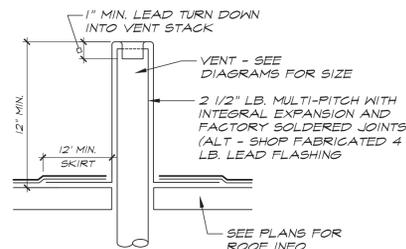
**LOWER LEVEL MECHANICAL PLAN**

SHEET NO. M1.2

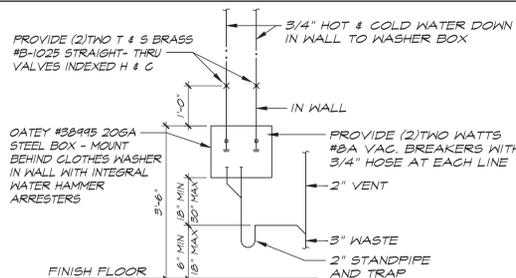
ELECTRICAL REQUIREMENTS BY BUILDER / ELECTRICIAN RECEPTACLE CIRCUIT TO BE CONTROLLED VIA SWITCH LABELLED AS MECHANICAL VENTILATION LOCATION AND LABELING TO BE CONFIRMED BY BUILDER OR ELECTRICIAN FRESH AIR VENTILATION DUCT TO SUPPLY PLENUM AND IN-LINE FAN



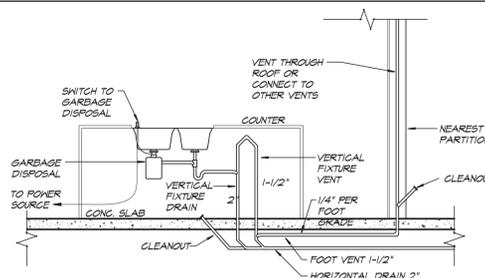
**1 2-WAY SURFACE CLEANOUT**  
NOT TO SCALE



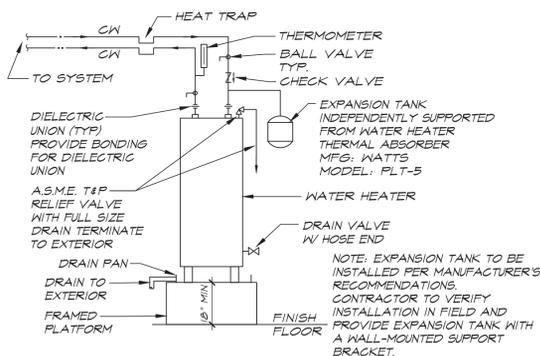
**2 VENT FLASHING**  
NOT TO SCALE



**3 WASHER BOX CONNECT**  
NOT TO SCALE



**5 ISLAND VENT DRAIN**  
NOT TO SCALE

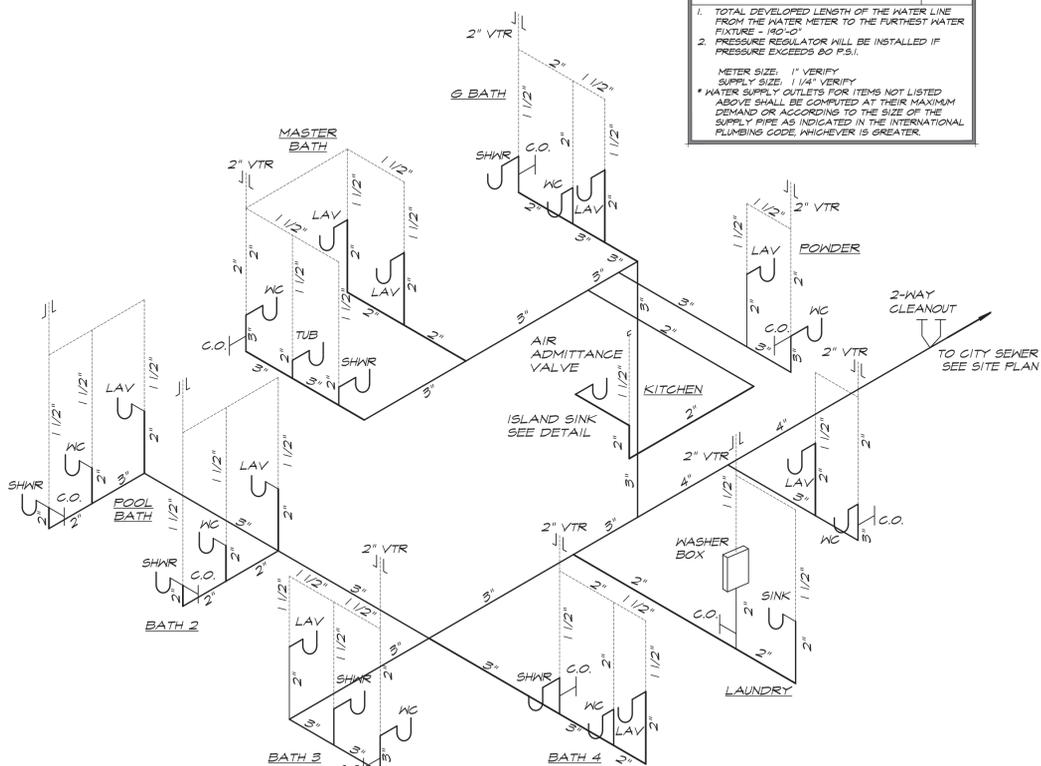


**4 ELECTRIC WATER HEATER DIAGRAM**  
NOT TO SCALE

**SEWAGE BACKFLOW**  
WHERE THE FLOOD LEVEL RIMS OF PLUMBING FIXTURES ARE BELOW THE ELEVATION OF THE MANHOLE COVER OF THE NEXT UPSTREAM MANHOLE IN THE PUBLIC SEWER, THE FIXTURES SHALL BE PROTECTED BY A BACKWATER VALVE INSTALLED IN THE BUILDING DRAIN BRANCH OF THE BUILDING DRAIN OR HORIZONTAL BRANCH SERVING SUCH FIXTURES. PLUMBING FIXTURES HAVING FLOOD LEVEL RIMS ABOVE THE ELEVATION OF THE MANHOLE COVER OF THE NEXT UPSTREAM MANHOLE IN THE PUBLIC SEWER SHALL NOT DISCHARGE THROUGH A BACKWATER VALVE.

DESCRIPTION	PLAN EACH	TOTAL
FULL-BATH GROUP	6	3.6
HALF-BATH GROUP	2	2.8
SHOWER	2	1.4
LAVATORY	1	0.7
KITCHEN GROUP	1	2.5
KITCHEN SINK	3	1.4
LAUNDRY GROUP	1	2.5
CLOTHES WASHER	1	1.4
HOSE BIBB (MAX 3)	3	2.5
* OTHER	0	0
TOTAL FIXTURE UNITS		48.4

- TOTAL DEVELOPED LENGTH OF THE WATER LINE FROM THE WATER METER TO THE FURTHEST WATER FIXTURE = 175'-0".
  - PRESSURE REGULATOR WILL BE INSTALLED IF PRESSURE EXCEEDS 80 P.S.I.
- METER SIZE: 1" VERIFY SUPPLY SIZE. 1 1/4" VERIFY WATER SUPPLY OUTLETS FOR ITEMS NOT LISTED ABOVE SHALL BE CONVERTED AT THEIR MAXIMUM DEMAND OR ACCORDING TO THE SIZE OF THE SUPPLY PIPE AS INDICATED IN THE INTERNATIONAL PLUMBING CODE, WHICHEVER IS GREATER.



**PLUMBING WASTE ISOMETRIC**  
NOT TO SCALE

**PLUMBING FIXTURE CONNECTIONS**

DESCRIPTION	COLD	HOT	WASTE	VENT
WATER CLOSET FLUSH TANK	3/4"	---	3"	2"
LAVATORY	1/2"	1/2"	2"	1 1/2"
SHOWER	1/2"	1/2"	2"	1 1/2"
BAR SINK	1/2"	1/2"	2"	1 1/2"
BATH TUB	1/2"	1/2"	2"	1 1/2"
KITCHEN SINK 1 COMPARTMENT	1/2"	1/2"	2"	1 1/2"
SINGLE SINK 1 COMPARTMENT	1/2"	1/2"	2"	1 1/2"
CLOTHES WASHER BOX	1/2"	1/2"	3"	2"
HOSEBIB	3/4"	---	---	---
LAUNDRY SINK	1/2"	1/2"	2"	1 1/2"
WATER HEATER	1"	1"	---	---

**6.0 PSI FROP**

PIPE SIZE	GPM	FU (FT)	FU (FV)
1/2"	25	2	---
3/4"	7	8	---
1"	15	21	---
1 1/4"	25	42	8
1 1/2"	41	88	30
2"	77	259	135
2 1/2"	120	479	365
3"	170	748	739

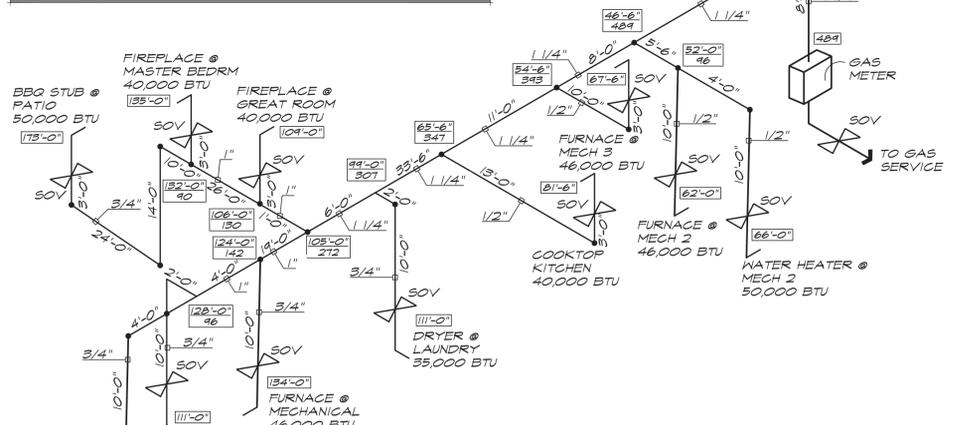
**NOTES**

- PLUMBING MATERIALS USED MUST COMPLY WITH SECTION G2404.
- COPPER TUBING USED IN WATER PIPING TO BE TYPE M MIN HEIGHT IN THE BUILDING ABOVE THE SLAB AND COPPER TUBING USED IN WATER PIPING BELOW SLAB TO BE TYPE L. MIN HEIGHT INSTALLED WITHOUT JOINTS - SECTION G2404.5.
- GAS PIPING MATERIALS MUST COMPLY WITH SECTION G2414.
- WATER CLOSETS TO BE 15 GALLONS PER FLUSH. SINKS AND SHOWER HEADS TO BE 2.2 GALLONS PER MINUTE PER LOW FLOW PLUMBING FIXTURE ORDINANCE.
- WATER HAMMER ARRESTORS ARE REQUIRED AT ALL QUICK-CLOSING VALVES (DISHWASHERS & CLOTHES WASHERS).
- STORAGE-TANK TYPE WATER HEATERS SHALL BE INSTALLED WITH A DRAIN PAN AND DRAIN LINE (P2801.5.1).
- WHPAN DRAIN-LINE SHALL TERMINATE PER (P2801.5.2).
- PROVIDE MINIMUM R-3 INSULATION TO HOT WATER PIPES. (N103.4)
- CIRCULATING HOT WATER SYSTEMS SHALL BE PROVIDED WHEN THE LENGTH OF HOT WATER PIPING OR TUBING FROM THE SOURCE OF HOT WATER TO THE FURTHEST FIXTURE EXCEEDS 21 FEET FOR A 3/4" LINE, 32 FEET FOR A 5/8" LINE, 43 FEET FOR A 1/2" LINE AND 50 FEET FOR A 3/8" OR LESS LINE. WHEN THE HOT WATER DISTRIBUTION SYSTEM CONTAINS MORE THAN ONE PIPE OR TUBE SIZE, THE LARGEST SIZE SHALL BE USED FOR DETERMINING THE MAXIMUM ALLOWABLE LENGTH BEFORE A CIRCULATING HOT WATER SYSTEM IS REQUIRED. THE CIRCULATING SYSTEM SHALL BE EQUIPPED WITH AN AUTOMATIC OR READILY ACCESSIBLE MANUAL ON SWITCH AND A TEMPERATURE SENSOR ACTIVATED SHUT-OFF THAT CAN AUTOMATICALLY TURN OFF THE HOT-WATER CIRCULATING PUMP WHEN THE SET TEMPERATURE IS REACHED. FOR THE PURPOSES OF THE SECTION, THE SOURCE OF HOT WATER SHALL BE CONSIDERED TO BE A WATER HEATER, BOILER, CIRCULATION LOOP PIPING, DISTRIBUTION MANIFOLD OR HEAT TRACED PIPING. (N103.4.1 AMEND)
- 1 1/2" COLD WATER COPPER PIPE TO EXTEND TO 1" WATER METER. SEE SITE PLAN FOR EXACT LOCATION. MINIMUM BURIAL DEPTH OF 12".
- 4" COPPER WASTE TO EXTEND TO WASTE STUB ON PROPERTY. VERIFY EXACT LOCATION IN THE FIELD.
- GAS INSTA-HOT WATER HEATER WITH FULL SIZE T1P RELIEF TO EXTERIOR TERMINATE WITH 90° ELBOW. INSTALL PER MANUFACTURER'S INSTRUCTIONS WITH 2" PVC INTAKE AND COMBUSTION AIR VENT TO EXTERIOR.
- PROVIDE 1/2" PEX FOR HOT & COLD WATER DOWN IN WALL TO FIXTURES UNO. BELOW.
- PROVIDE 3/4" PEX FOR COLD WATER DOWN IN WALL TO WATER CLOSETS.
- STUB DOWN 1" LINE WITH BACKFLOW PREVENTER FOR IRRIGATION SYSTEM. COORDINATE IN FIELD LOCATION OF IRRIGATION CONTROLLER.
- AT KITCHEN, PROVIDE 3/4" PEX FOR COLD WATER DOWN IN WALL TO REFRIGERATOR FOR SHUT OFF VALVE BOX WITH SHOCK ABSORBER.
- AT ISLAND, PROVIDE 1/2" HOT & COLD WATER UP FROM BELOW GRADE. 1/2" HOT & COLD WATER TO KITCHEN SINK AND 3/8" HOT WATER TO DISHWASHER. DISHWASHER TO HAVE A 3/4" MINIMUM DRAIN PIPE SECURELY FASTENED TO UNDERSIDE OF THE COUNTER BEFORE CONNECTING TO THE SINK TAIL PIECE.
- AT ISLAND, 1/2" HOT & COLD PEX DOWN IN WALL THEN ROUTE 1/2" HOT & COLD DOWN BELOW GRADE TO ISLAND SINK. (NO JOINTS BELOW GRADE)
- AT BATHS, PROVIDE 3/4" HOT & COLD PEX DOWN IN WALL TO FIXTURES. PROVIDE 1/2" HOT & COLD TO LAV, TUB OR SHOWER AND 3/4" COLD WATER TO WATER CLOSET. COORDINATE EACH SHOWER HEAD VALVE WITH OWNER.
- 3/4" COLD WATER PEX IN WALL TO HOSEBIBS. HOSEBIBS TO BE PROVIDED WITH VACUUM BREAKER. NOTE: SOFT WATER DOES NOT RUN TO HOSEBIBS.
- AT POWDER, 3/4" COLD WATER AND 1/2" HOT WATER PEX DOWN IN WALL TO FIXTURES. PROVIDE 1/2" HOT AND COLD WATER PEX TO LAV AND 3/4" COLD WATER PEX TO WATER CLOSET.
- AT LAUNDRY PROVIDE 3/4" HOT & COLD WATER PEX TO FIXTURES. PROVIDE 1/2" HOT & COLD WATER PEX TO CLOTHES WASHER AND LAUNDRY SINK. CLOTHES WASHER TO HAVE SHOCK ABSORBER.

**GAS PIPING SCHEDULE**

QTY	APPLIANCE	BTU EA	TOTAL	CFH
1	BARBECUE	50,000	50,000	50
1	COOKTOP	40,000	40,000	40
1	CLOTHES DRYER	35,000	35,000	35
2	WATER HEATER	50,000	100,000	100
2	DIRECT VENT FIREPLACE	40,000	80,000	80
4	FURNACE	46,000	184,000	184
TOTAL FIXTURE UNITS			489,000	489.0

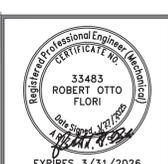
- DEVELOPED LENGTH = 175' (LINEAR FEET)
- GAS PIPING MATERIALS MUST COMPLY WITH SECTION G2414.
  - SEDIMENT STRAIPS ARE REQUIRED DOWNSTREAM OF THE SHUTOFF VALVE PER G2419.44.
  - GAS PIPING NOT PERMITTED UNDER STRUCTURE.
  - GAS PIPING NOT PERMITTED UNDER SLAB.
  - PROVIDE COMBUSTION AIR VENTILATION AS PER MITO2 - MITO3 IRC CHAPTER 17.
  - FIREPLACE DAMPERS SHALL BE WELDED OPEN ONE INCH OR PROVIDED WITH A THREE INCH DIAMETER HOLE.



**GAS ISOMETRIC**  
NOT TO SCALE

DATE: 11/26/2024

1/21/25 - REVIEW | COMMENTS



**Sivarajan Residence**  
7899 East Mary Sharon Drive  
Scottsdale 85266  
Lone Mountain Vista Tract A - Lot 93

**PLUMBING DIAGRAMS**  
SHEET NO. **P1**

# STRUCTURAL NOTES

## IN ACCORDANCE WITH INTERNATIONAL RESIDENTIAL CODE 2021

### GENERAL :

WHERE SPECIFIC INSTRUCTIONS IN THESE SPEC'S REQUIRE THAT A PARTICULAR PRODUCT AND/OR MATERIAL(S) BE INSTALLED AND/OR APPLIED BY AN APPROVED APPLICATOR OF THE MANUFACTURER, IT SHALL BE THE SUBCONTRACTOR'S RESPONSIBILITY TO ENSURE THE WORK BE DONE BY AN APPROVED APPLICATOR.

NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL STRUCTURAL NOTES AND TYPICAL DETAILS UNLESS GENERAL STRUCTURAL NOTES ARE MORE STRINGENT. WHERE NO DETAILS ARE SHOWN, CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ON THE PROJECT.

WRITTEN DIMENSIONS ON THESE DRAWINGS SHALL HAVE PRECEDENCE OVER SCALED DIMENSIONS. CONTRACTORS SHALL VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS AND CONDITIONS ON THE JOB AND SHALL NOTIFY THIS OFFICE OF ANY VARIATIONS FROM THE DIMENSIONS OR CONDITIONS SHOWN ON THE DRAWINGS.

TYPICAL DETAILS MAY NOT NECESSARILY BE PUT ON THE PLANS, BUT APPLY UNLESS NOTED OTHERWISE.

CONSTRUCTION MATERIALS SHALL BE SPREAD OUT IF PLACED ON FRAMED CONSTRUCTION. LOAD SHALL NOT EXCEED THE DESIGN LIVE LOAD PER SQUARE FOOT.

WHERE ANY DISCREPANCIES OCCUR BETWEEN PLANS, DETAILS, GENERAL STRUCTURAL NOTES, SPECIFICATIONS AND ALL APPLICABLE CODES, THE MOST STRINGENT REQUIREMENTS SHALL GOVERN. THIS OFFICE MUST BE NOTIFIED IN WRITING OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.

ANY STRUCTURAL DESIGN PROVIDED BY OTHERS AND SUBMITTED FOR REVIEW, SHALL BEAR THE SEAL OF AN ENGINEER REGISTERED IN THE STATE OF THE PROPOSED CONSTRUCTION.

ALL PRODUCTS LISTED BY I.C.C./N.E.R. NUMBER(S) SHALL BE INSTALLED PER THE REPORT AND MANUFACTURER'S WRITTEN INSTRUCTIONS. PRODUCT SUBSTITUTION(S) FOR PRODUCT(S) LISTED SHALL ALSO HAVE I.C.C. APPROVED EVALUATION REPORT(S) OR BE APPROVED AND LISTED BY OTHER NATIONALLY RECOGNIZED TESTING AGENCIES.

THE CONSTRUCTION DOCUMENTS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION. SUCH MEASURES WILL INCLUDE, BUT NOT BE LIMITED TO BRACING AND SHORING, THE PROJECT ARCHITECT OR THE STRUCTURAL ENGINEER SHALL NOT INCLUDE INSPECTION OF THE ABOVE ITEMS OR METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES OF CONSTRUCTION, OR THE SAFETY PRECAUTIONS AND PROGRAMS RELATING THERETO.

### DESIGN LOADS :

ROOF LIVE LOAD = 20 P.S.F.  
ROOF DEAD LOAD = 20 P.S.F.  
FLOOR LIVE LOAD = 40 P.S.F.  
FLOOR DEAD LOAD = 15 P.S.F.  
STAIR LIVE LOAD = 100 P.S.F.

WIND LOAD = Valt 115 mph, EXPOSURE C

SEISMIC DESIGN CATEGORY C (I.R.C. TABLE R301.2.1.1)

### SITE WORK :

FINISH GRADE SHALL SLOPE 5% FOR A DISTANCE OF 10 FEET TO AN APPROVED WATER DISPOSAL AREA.

### FOUNDATIONS :

FOUNDATIONS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE MINIMUM RECOMMENDATIONS STATED IN THE ABOVE MENTIONED BUILDING CODE. ALLOWABLE BEARING PRESSURE ASSUMED TO BE 1,500 P.S.F. AT 18" BELOW UNDISTURBED SOIL.

ALL RECOMMENDATIONS IN THE GEO-TECHNICAL REPORT (IF APPLICABLE) TAKE PRECEDENCE OVER ANY AND ALL GENERAL STRUCTURAL NOTES CONTAINED HEREIN.

PRIOR TO ANY BACK FILLING, ALL BASEMENT OR FOUNDATION WALLS ARE TO BE ADEQUATELY BRACED SO AS TO PREVENT EXCESSIVE PRESSURES DURING CONSTRUCTION, BACK FILLING AND COMPACTION. ALL BRACING TO REMAIN IN POSITION UNTIL MASONRY AND/OR CONCRETE REACHES FULL DESIGN STRENGTH.

### REINFORCED CONCRETE :

(THESE NOTES DO NOT APPLY TO POST TENSION OR PRE-STRESSED CONCRETE) DESIGNS BASED ON 2500 P.S.I., HOWEVER, MIX DESIGNED AS FOLLOWS:

MINIMUM 28 DAY CONCRETE COMPRESSIVE STRENGTH:  
FOUNDATIONS = 3,000 P.S.I., TYPE II CONCRETE  
WALKS, DRIVES AND EXTERIOR SLABS = 3,000 P.S.I.  
MAXIMUM SLUMP = 4 1/2"

ALL PROCEDURES, PLACEMENT, FORM WORK, LAP ETC. TO CONFORM WITH LATEST A.C.I. STANDARDS. MECHANICALLY VIBRATE ALL CONCRETE WHEN PLACED, EXCEPT THE SLABS ON GRADE NEED TO BE VIBRATED ONLY UNDER FLOOR DUCTS, ETC.

ALL CONCRETE SLABS ON GRADE SHALL BE BOUNDED BY CONSTRUCTION JOINTS (KEYED OR SAW CUT) SUCH THAT THE ENCLOSED AREA DOES NOT EXCEED 400 SQUARE FEET. KEYED CONSTRUCTION JOINTS NEED ONLY OCCUR AT EXPOSED EDGES DURING POURING. ALL OTHER JOINTS MAY BE SAW CUT OR MAY USE "ZIP-STRIPS".

### REINFORCEMENT :

ASTM A615 (Fy = 60,000 P.S.I.) LATEST ACI CODE AND DETAILING MANUAL APPLY.

UNLESS NOTED OTHERWISE ON THE DRAWINGS, THE CLEAR CONCRETE COVER PROVIDED FOR REINFORCEMENT SHALL BE :  
CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH : -3"

EXPOSED TO EARTH OR WEATHER : : 2"  
(1) NO. 6 AND LARGER : : 1 1/2"  
(2) NO. 5 AND SMALLER

NOT EXPOSED TO WEATHER OR IN CONTACT WITH THE GROUND (SLABS & WALLS) : : 3 1/4"

BEAMS, GIRDERS, COLUMNS, PRIMARY REINFORCEMENT TIES STIRRUPS, SPIRALS : : 1 1/2"

UNLESS NOTED OTHERWISE, LAP SPLICES IN CONCRETE SHALL BE CLASS "BT" TENSION LAP SPLICES 40 BAR DIAMETER MINIMUM. STAGGER ALTERNATE SPLICES A MINIMUM OF ONE LAP LENGTH. ALL SPLICE LOCATIONS SUBJECT TO APPROVAL. PROVIDE BENT CORNER BARS TO MATCH AND LAP WITH HORIZONTAL BARS AT CORNERS AND INTERSECTIONS OF FOOTINGS AND WALLS. REINFORCING BAR SPACING GIVEN ARE MAXIMUM ON VERTICAL REINFORCING TO FOUNDATION. SECURELY TIE ALL BARS IN LOCATION BEFORE PLACING CONCRETE.

MASONRY VENEER SHALL BE ANCHORED WITH A MINIMUM OF ONE 22 GA. GALVANIZED METAL ANCHOR FOR EACH TWO SQUARE FEET OF WALL AREA.

### STRUCTURAL STEEL :

ALL STRUCTURAL STEEL SHALL BE ASTM A992 (Fy = 50 KSI). ALL CHANNELS, ANGLES, AND PLATES SHALL BE ASTM A36 (Fy = 36 KSI). ALL TUBE STEEL SHALL BE ASTM A500 (Fy = 46 KSI). ALL BOLTS SHALL BE ASTM A307, UNLESS NOTED OTHERWISE. ALL CONSTRUCTION PER LATEST AISC HANDBOOK. ALL EXPANSION AND EPOXY BOLTS TO HAVE ICC RATING FOR MATERIAL INTO WHICH INSTALLATION TAKES PLACE. ALL BOLTS, ANCHOR BOLTS, EXPANSION BOLTS, ETC. SHALL BE INSTALLED WITH STEEL WASHERS AT SLOTTED Holes IN STEEL SECTIONS. ALL WELDS SHALL BE PERFORMED BY WELDERS HOLDING VALID CERTIFICATES AND HAVING CURRENT EXPERIENCE IN THE TYPE OF WELD SHOWN ON THE DRAWING OR NOTES. CERTIFICATES SHALL THOSE ISSUED BY AN ACCEPTED TESTING AGENCY. ALL WELDING DONE BY E70 SERIES LOW HYDROGEN RODS UNLESS NOTED OTHERWISE. FOR GRADE 60 REINFORCING BARS, USE E90 SERIES. ALL WELDING PER LATEST AMERICAN WELDING SOCIETY STANDARDS, [EXCEPT STEEL JOISTS SHALL COMPLY WITH SJI STANDARDS]. THESE DRAWINGS DO NOT DISTINGUISH BETWEEN SHOP AND FIELD WELDS, THE CONTRACTOR MAY SHOP WELD OR FIELD WELD AT HIS/HER DISCRETION. SHOP WELDS AND FIELD WELDS SHALL BE SHOWN ON THE SHOP DRAWINGS SUBMITTED FOR REVIEW. WHEN STRUCTURAL STEEL IS FURNISHED TO A SPECIFIED MINIMUM YIELD POINT GREATER THAN 36 KSI, THE ASTM OR OTHER SPECIFICATION DESIGNATION SHALL BE INCLUDED NEAR THE ERECTION MARK ON EACH SHIPPING ASSEMBLY OR IMPORTANT CONSTRUCTION COMPONENT, OVER ANY SHOP COAT OF PAINT, PRIOR TO SHIPMENT FROM FABRICATOR'S PLANT.

### STRUCTURAL LUMBER :

THE WESTERN WOOD PRODUCTS ASSOCIATION OR WEST COAST LUMBER INSPECTION GRADING (MUST COMPLY WITH LATEST ADOPTED N.D.S. STANDARDS)

FRAMING LUMBER SHALL COMPLY WITH THE LATEST EDITION OF THE GRADING RULES OF SAWN LUMBER.

FRAMING LUMBER SHALL COMPLY WITH THE LATEST EDITION OF THE GRADING RULES OF AGENCY. ALL LUMBER SHALL BEAR AN APPROVED GRADING STAMP.

### JOISTS AND HEADERS :

ALL STRUCTURAL FRAMING MEMBERS SHALL BE DFL-2 OR BETTER WITH THE FOLLOWING MINIMUM VALUES, UNLESS OTHERWISE NOTED:

Fb = 875 P.S.I.  
Ft (PARALLEL TO GRAIN) = 575 P.S.I.  
Fc (PERP. TO GRAIN) = 625 P.S.I.  
Fg (PARALLEL TO GRAIN) = 1300 P.S.I.  
Fv = 95 P.S.I.  
E = 1,600,000 P.S.I.

### TIMBERS :

ALL STRUCTURAL FRAMING MEMBERS SHALL BE DFL-1 OR BETTER WITH THE FOLLOWING MINIMUM VALUES, UNLESS OTHERWISE NOTED:

Fb = 1200 P.S.I.  
Ft (PARALLEL TO GRAIN) = 825 P.S.I.  
Fc (PERP. TO GRAIN) = 625 P.S.I.  
Fg (PARALLEL TO GRAIN) = 1000 P.S.I.  
Fv = 85 P.S.I.  
E = 1,600,000 P.S.I.

### STUDS AND POSTS :

ALL STUDS & POSTS SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES:

MEMBER E psi (MIN.) SPECIES AND GRADE  
POSTS 4x4, 4x6 1,600,000 DFL-2  
POSTS 6x6, 6x8 1,600,000 DFL-1  
STUDS 2x4, 3x4, 2x6 1,200,000 HEM-FIR-2 OR BETTER

INTERIOR BEARING WALLS 2x AT 16" O.C. U.N.O.

INTERIOR NON-BEARING WALLS 2x AT 24" O.C. U.N.O.

(FOR STUD SPACING AT 24" O.C., THREE-PLY PLYWOOD OR EQUAL WALL SHEATHING SHALL BE APPLIED WITH LONG DIMENSION ACROSS STUDS TO CONFORM WITH TABLE 602.3(3))

### GENERAL :

ALL LUMBER SHALL BE PROPERLY STORED OFF GROUND AND ADEQUATELY PROTECTED FROM THE ELEMENTS.

CONTRACTOR SHALL VERIFY THAT ALL FRAMING LUMBER HAS APPROPRIATE AGENCY STAMPS.

CONTRACTOR SHALL SUPERVISE LUMBER SUPPLIER WHILE OFF LOADING LUMBER MATERIAL TO PREVENT DAMAGE, SPLITTING AND / OR BREAKING OF ANY MATERIAL.

FRAMING CONNECTORS NOTED ARE MANUFACTURED BY SIMPSON STRONG TIE COMPANY, INC. SIMPSON STRONG TIE CONNECTORS ARE SPECIFICALLY REQUIRED TO MEET THE STRUCTURAL CALCULATIONS OF THESE PLANS. BEFORE SUBSTITUTING ANOTHER BRAND THE CONTRACTOR SHALL CONFIRM THE LOAD CAPACITY BASED ON RELIABLE PUBLISHED TESTING DATA OR CALCULATIONS FROM THE SUBSTITUTION BRAND COMPANY, PRIOR TO THEIR USE.

ALL LUMBER (INCLUDING POSTS, BEAMS AND LAMINATED LUMBER) EXPOSED TO THE ELEMENTS SHALL BE PRESSURE TREATED PER I.R.C. 2021. ALL FASTENERS FOR PRESSURE TREATED LUMBER SHALL BE AS PER I.R.C. 2021.

PROVIDE DIAGONAL LET IN BRACING AT ALL EXTERIOR CORNERS AT MAXIMUM 25' O.C. USE 3/8" PLYWOOD OR EQUAL SHEAR PANEL WHERE LET IN BRACING IS NOT APPLICABLE.

NON STRUCTURAL FIRE STOPPING AND / OR DRAFT STOPPING ARE NOT INDICATED ON THE STRUCTURAL DRAWINGS AND ARE PER THE ARCHITECTURAL DRAWINGS.

### GLU-LAM BEAMS :

GLU-LAM BEAMS SHALL HAVE THE FOLLOWING PROPERTIES:

Fb = 2,400 P.S.I.  
Fv = 265 P.S.I.  
Fc (PERP) = 650 P.S.I. (COMB. SYM. 24FV4)  
E = 1,800,000 P.S.I.

BEAMS CANTILEVERED OVER SUPPORTS SHALL HAVE THE SPECIFIED MINIMUM PROPERTIES TOP AND BOTTOM. (COMB. SYM. 24FV8)

ALL BEAMS SHALL BE FABRICATED USING WATERPROOF GLUE.

FABRICATION AND HANDLING PER LATEST AISC AND WCLA STANDARDS.

BEAMS TO BEAR AISC STAMP AND CERTIFICATE AND GRADE STAMP. CAMBER AS SHOWN ON DRAWINGS.

### SILL PLATE :

ALL INTERIOR AND EXTERIOR WALL SILL PLATES TO CONCRETE FOUNDATION WALLS SHALL BE PRESSURE TREATED WITH MINIMUM 2x4 MEMBERS, AND ANCHORED USING 3/8" DIAMETER ANCHOR BOLTS AT 4'-0" O.C. (MAXIMUM) OR AS SHOWN ON THE DRAWINGS, WHICHEVER IS LESS. THE STRUCTURAL ENGINEER PRIOR TO CONSTRUCTION SHALL TEST ANY ANCHORING METHOD SUBSTITUTION. CONTRACTOR SHALL NOTIFY THE STRUCTURAL ENGINEER IN WRITING DESCRIBING IN DETAIL THE ALTERNATIVE ANCHORING METHOD. MINIMUM BOLTS EMBEDDED SHALL NOT BE LESS THAN 7", WITH A MINIMUM OF TWO ANCHOR BOLTS PER SECTION OF SILL PLATE, AND SHALL BE PLACED 12 INCHES OR LESS THAN SEVEN BOLT DIAMETERS FROM THE END OF EACH SECTION OF SILL PLATE PER I.R.C. 2021.

### SHEATHING :

ALL PLYWOOD SHALL CONFIRM TO APA STAND. PSI AND PRP 108 EXPOSURE 1.

ICC APPROVED ORIENTED STRAND BOARD MAY BE USED IN PLACE OF PLYWOOD (PRP 108).

ALL PLYWOOD SHALL BE OF THE FOLLOWING THICKNESS, AND SHALL BE NAILED WITH COMMON NAILS AS FOLLOWS:

THICKNESS EDGE NAILING INTERIM NAILING  
ROOF 3/4" 8d AT 6" O.C. 8d AT 12" O.C. (U.N.O.)  
FLOOR 3/4" 10d AT 6" O.C. 10d AT 12" O.C. (U.N.O.)  
WALL 5/8" 8d AT 6" O.C. 8d AT 12" O.C. (U.N.O.)

### DEFERRED SUBMITTAL :

SHOP DRAWING SUBMITTALS REQUIRED BY THESE GENERAL STRUCTURAL NOTES WHICH CONTAIN DESIGN CALCULATIONS SEALED BY A REGISTERED ENGINEER OTHER THAN THE ENGINEER OF RECORD, SHALL BE SUBMITTED DURING CONSTRUCTION TO THE CITY FIELD INSPECTOR FOR REVIEW. THE DOCUMENTS WILL BE FIRST REVIEWED BY THE ENGINEER OF RECORD AND DETERMINED TO BE IN CONFORMANCE WITH THE BUILDING DESIGN. THESE DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THEIR DESIGN SUBMITTAL DOCUMENTS HAVE BEEN APPROVED BY THE BUILDING OFFICIAL.

### SPECIAL INSPECTIONS:

PER THE REQUIREMENTS OF THE INTERNATIONAL BUILDING CODE, SPECIAL INSPECTIONS ARE REQUIRED FOR STRUCTURAL ITEMS SUCH AS:

- EPOXY PROCEDURES
- EXPANSION BOLTS
- 3000 PSI CONCRETE
- MASONRY BASEMENT AND RETAINING WALLS
- FIELD WELDING (AS REQUIRED)

ALL PROCEDURES LISTED ABOVE REQUIRE CONSTANT ON-SITE STRUCTURAL SUPERVISION EXCEPT STRUCTURAL WELDING WHICH CAN BE DONE WHEN ALL WELDING IS COMPLETE AND PRIOR TO COVERING UP ANY WELDED ITEMS.

THE INSPECTOR SHALL BE A QUALIFIED PERSON WHO SHALL DEMONSTRATE COMPETENCE TO THE SATISFACTION OF THE BUILDING OFFICIAL, FOR THE INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION.

TABLE R602.3(1) - CONTINUED FASTENER SCHEDULE FOR STRUCTURAL MEMBERS			
ITEM	DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER (a,b,c)	SPACING AND LOCATION
ROOF			
1	BLOCKING BETWEEN JOISTS OR RAFTERS TO TOP PLATE	4-8d BOX (25" X 0.113") OR 3-8d COMMON (25" X 0.131") OR 3-10d BOX (3" X 0.128) OR 3-3" X 0.131" NAILS	TOE NAIL
2	CEILING JOISTS TO TOP PLATE	4-8d BOX (25" X 0.113") OR 3-8d COMMON (25" X 0.131") OR 3-10d BOX (3" X 0.128) OR 3-3" X 0.131" NAILS	PER JOIST, TOE NAIL
3	CEILING JOIST NOT ATTACHED TO PARALLEL RAFTER, LAPS OVER PARTITIONS (SEE SECTIONS R802.3.1, R802.3.2 AND TABLE R802.5.1(9))	4-10d BOX(3" X 0.128") OR 3-16d COMMON (35" X 0.162") OR 4-3" X 0.131" NAILS	FACE NAIL
4	CEILING JOIST NOT ATTACHED TO PARALLEL RAFTER (HEEL JOINT) (SEE SECTIONS R802.3.1, R802.3.2 AND TABLE R802.5.1(9))	TABLE 802.5.1(9)	FACE NAIL
5	COLLAR TIE TO RAFTER, FACE NAIL OR 1/2"x20 GAGE ROD STRAP	4-10d BOX(3" X 0.128") OR 3-10d COMMON (35" X 0.148") OR 4-3" X 0.131" NAILS	FACE NAIL EACH RAFTER
6	RAFTER OR ROOF TRUSS TO PLATE	3-16d BOX (35" X 0.135") OR 3-10d COMMON (3" X 0.148") OR 4-10d BOX (3" X 0.128) OR 4-3" X 0.131" NAILS	2 TOE NAILS ON ONE SIDE AND 1 TOE NAIL ON OPPOSITE SIDE OF EACH RAFTER OR TRUSS
7	ROOF RAFTERS TO RIDGE, VALLEY OR HP RAFTERS OR ROOF RAFTER TO MINIMUM 2" RIDGE BEAM	4-16d BOX (35" X 0.135") OR 3-10d COMMON (35" X 0.148") OR 4-10d BOX (3" X 0.128) OR 4-3" X 0.131" NAILS	TOE NAIL
		3-16d BOX (35" X 0.135") OR 2-16d COMMON (35" X 0.162") OR 3-10d BOX (3" X 0.128) OR 3-3" X 0.131" NAILS	END NAIL
WALL			
8	STUD TO STUD (NOT AT BRACED WALL PANELS)	16d COMMON (35" X 0.162") OR 10d BOX (3" X 0.128") OR 3" X 0.131" NAILS	24" O.C. FACE NAIL 16" O.C. FACE NAIL
9	STUD TO STUD AND ABUTTING STUDS AT INTERSECTING WALL CORNERS (AT BRACED WALL PANELS)	16d BOX (35" X 0.135") OR 3" X 0.131" NAILS 16d BOX (35" X 0.162")	12" O.C. FACE NAIL 16" O.C. FACE NAIL
10	BUILT-UP HEADER (2" TO 2" HEADER WITH 3/8" SPACER)	16d COMMON (35" X 0.162") 16d BOX (35" X 0.135")	16" O.C. EACH EDGE OF FACE NAIL 12" O.C. EACH EDGE OF FACE NAIL
11	CONTINUOUS HEADER TO STUD	5-8d BOX(25" X 0.113") OR 4-8d COMMON (25" X 0.131") OR 4-10d BOX (3" X 0.128)	TOE NAIL
12	TOP PLATE TO TOP PLATE	16d COMMON (35" X 0.162") 10d BOX (3" X 0.128") OR 3" X 0.131" NAILS	16" O.C. FACE NAIL 12" O.C. FACE NAIL
13	DOUBLE TOP PLATE SPLICE FOR SDOs-A-D2 WITH SEISMIC BRACED WALL LINE SPACING < 25'	8-16d COMMON (35" X 0.162") OR 12-16d BOX (35" X 0.135) OR 12-10d BOX (3" X 0.128) OR 12-3" X 0.131" NAILS	FACE NAIL ON EACH SIDE OF END JOINT (MINIMUM 24" LAP SPLICE LENGTH EACH SIDE OF END JOINT)
14	DOUBLE TOP PLATE SPLICE SDOs D0, D1, OR D2; AND BRACED WALL LINE SPACING < 25'	12-16d (35" X 0.135")	
14	BOTTOM PLATE TO JOIST, RIM JOIST, BAND JOIST OR BLOCKING (NOT AT BRACED WALL PANELS)	16d COMMON (35" X 0.162") 16d BOX (3" X 0.128") OR 3" X 0.131" NAILS	16" O.C. FACE NAIL 12" O.C. FACE NAIL
15	BOTTOM PLATE TO JOIST, RIM JOIST, BAND JOIST OR BLOCKING AT BRACED WALL PANELS)	3-16d BOX (35" X 0.135") OR 2-16d COMMON (35" X 0.162") OR 4-3" X 0.131" NAILS	3 EACH 16" O.C. FACE NAIL 2 EACH 16" O.C. FACE NAIL 4 EACH 16" O.C. FACE NAIL
16	TOP OR BOTTOM PLATE TO STUD	4-8d BOX (25" X 0.113") OR 3-8d COMMON (25" X 0.131") OR 4-8d COMMON (25" X 0.131") OR 4-10d BOX (3" X 0.128) OR 4-3" X 0.131" NAILS	TOE NAIL
		3-16d BOX (35" X 0.135") OR 2-16d COMMON (35" X 0.162") OR 3-10d BOX (3" X 0.128) OR 3-3" X 0.131" NAILS	END NAIL
17	TOP PLATES, LAPS AT CORNERS AND INTERSECTIONS	3-10d BOX (3" X 0.128") OR 2-16d COMMON (35" X 0.162") OR 3-3" X 0.131" NAILS	FACE NAIL
18	1" BRACE TO EACH STUD AND PLATE	3-8d BOX (25" X 0.113") OR 2-8d COMMON (25" X 0.131") OR 2-10d BOX (3" X 0.128") OR 2 STAPLES 19G	FACE NAIL
19	1" X 6" SHEATHING TO EACH BEARING	3-8d BOX (25" X 0.113") OR 3-8d COMMON (25" X 0.131") OR 3-10d BOX (3" X 0.128) OR 2 STAPLES, 1 CROWN, 16 GA. 19G	FACE NAIL
20	1" X 8" AND WIDER SHEATHING TO EACH BEARING WIDER THAN 1" X 8"	3-8d BOX (25" X 0.113") OR 3-8d COMMON (25" X 0.131") OR 3-10d BOX (3" X 0.128) OR 4 STAPLES, 1" CROWN, 16 GA. 19G	FACE NAIL

TABLE R602.3(1) - CONTINUED FASTENER SCHEDULE FOR STRUCTURAL MEMBERS			
ITEM	DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER (a,b,c)	SPACING AND LOCATION
FLOOR			
21	JOIST TO SILL TOP PLATE OR GRDER	4-8d BOX (25" X 0.113") OR 3-8d COMMON (25" X 0.131") OR 3-10d BOX (3" X 0.128) OR 3-3" X 0.131" NAILS	TOE NAIL
22	RIM JOIST, BAND JOIST OR BLOCKING TO SILL OR TOP PALTE (ROOF APPLICATIONS ALSO)	8d BOX (25" X 0.113") OR 8d COMMON (25" X 0.131") OR 10d BOX (3" X 0.128) OR 3-3" X 0.131" NAILS	4" O.C. FACE NAIL 6" O.C. FACE NAIL
23	1" X 6" SUBFLOOR OR LESS TO EACH JOIST	3-8d BOX (25" X 0.113") OR 2-8d COMMON (25" X 0.131") OR 3-10d BOX (3" X 0.128) OR 2 STAPLES, 1" CROWN, 16 GA. 19G	FACE NAIL
24	2" SUBFLOOR TO JOIST OR GRDER	3-16d BOX (35" X 0.135") OR 2-16d COMMON (35" X 0.162")	BLIND AND FACE NAIL
25	2" PLANKS (PLANK & BEAM - FLOOR & ROOF)	3-16d BOX (35" X 0.135") OR 2-16d COMMON (35" X 0.162")	AT EACH BEARING FACE NAIL
26	BAND OR RIM JOIST TO JOIST	3-16d COMMON (35" X 0.162") OR 4-10d BOX (3" X 0.128") OR 4-3" X 0.131" NAILS OR 3-3" X 0.131" NAILS OR 1/2" CROWN	END NAIL
		20d COMMON (4" X 0.92") OR 3-16d BOX (35" X 0.135") OR 2-16d COMMON (35" X 0.162")	NAIL EACH LAYER AS FOLLOWS: 32" O.C. AT TOP AND BOTTOM AND STAGGERED
27	BUILT-UP GIRDERS AND BEAMS, 2-INCH LUMBER LAYERS	3-16d BOX (35" X 0.135") OR 2-16d COMMON (35" X 0.162")	24" O.C. FACE NAIL AT TOP AND BOTTOM STAGGERED ON OPPOSITE SIDES
		AND 2-20d COMMON (4" X 0.92") OR 3-10d BOX (3" X 0.128") OR 3-3" X 0.131" NAILS OR	FACE NAIL AT ENDS AND AT EACH SPLICE
28	LEDGER STRIP SUPPORTING JOISTS OR RAFTERS	4-16d BOX (35" X 0.135") OR 3-16d BOX (35" X 0.162") OR 4-10d BOX (3" X 0.128") OR 4-3" X 0.131" NAILS	AT EACH JOIST OR RAFTER, FACE NAIL
29	BRODING TO JOIST	2-10d BOX (3" X 0.128") OR	EACH END, TOE NAIL
TABLE R602.3(1) - CONTINUED FASTENER SCHEDULE FOR STRUCTURAL MEMBERS			
ITEM	DESCRIPTION OF BUILDING MATERIALS	DESCRIPTION OF FASTENERS (b,c,d,e)	SPACING OF FASTENERS EDGES (INCHES) INTERMEDIATE SUPPORTS (c,e) (INCHES)
WOOD STRUCTURAL PANELS, SUBFLOOR, ROOF AND WALL SHEATHING TO FRAMING, AND PARTICLEBOARD WALL SHEATHING TO FRAMING			
30	3/8" - 1/2"	8d COMMON (2"X0.113") (SUBFLOOR, WALL) OR 8d COMMON (25"X0.131) NAIL (ROOF) (3)	6 12 (f)
31	3/8" - 1"	8d COMMON NAIL (25"X0.131")	6 12 (f)
32	1/8" - 1 1/4"	10d COMMON (3"X0.148") NAIL OR 8d (25"X0.131") DEFORMED NAIL	6 12
OTHER WALL SHEATHING (h)			
33	1/2" REGULAR CELLULOSE FIBERBOARD SHEATHING	19" GALVANIZED ROOFING NAIL, 3/4" CROWN OR 1" CROWN STAPLE 16 ga., 1 1/2" LONG.	3 6
34	5/8" STRUCTURAL CELLULOSE FIBERBOARD SHEATHING	19" GALVANIZED ROOFING NAIL, 3/4" CROWN OR 1" CROWN STAPLE 16 ga., 1 1/2" LONG.	3 6
35	1/2" GYPSUM SHEATHING(d)	19" GALVANIZED ROOFING NAIL, STAPLE GALVANIZED, 19" LONG, 1X" SCREWS, TYPE W OR S	7 7
36	3/8" GYPSUM SHEATHING(d)	19" GALVANIZED ROOFING NAIL, STAPLE GALVANIZED, 19" LONG, 1X" SCREWS, TYPE W OR S	7 7
A	WOOD STRUCTURAL PANELS, COMBINATION SUBFLOOR UNDERLAYMENT TO FRAMING		
37	3/4" AND LESS	8d DEFORMED (2" X 0.120") NAIL OR 8d COMMON (25" X 0.131) NAIL	6 12
38	3/8" - 1"	8d COMMON (25" X 0.131") NAIL OR 8d DEFORMED (25" X 0.120) NAIL	6 12
39	1/8" - 1 1/4"	10d COMMON (3" X 0.148") NAIL OR 8d DEFORMED (25" X 0.120) NAIL	6 12

FOR SI: 1 INCH = 25.4 mm, 1 FOOT = 304.8 mm, 1 MILE PER HOUR = 0.447 m/s; 1 ksi = 6.895 MPa.

d. NAILS ARE SMOOTH-CROWN, BOX OR DEFORMED SHANKS, EXCEPT WHERE OTHERWISE STATED. NAILS USED FOR FRAMING AND SHEATHING CONNECTIONS SHALL HAVE MINIMUM AVERAGE TENSILE YIELD STRENGTHS AS SHOWN: 80 ksi (550 MPa) FOR SHANK DIAMETER OF 0.192 INCH (20d COMMON NAIL), 90 ksi (620 MPa) FOR SHANK DIAMETERS LARGER THAN 0.142 INCH BUT NOT LARGER THAN 0.177 INCH, AND 100 ksi (689 MPa) FOR SHANK DIAMETERS OF 0.142 INCH OR LESS.

e. STAPLES ARE 16 GAGE WIRE AND HAVE A MINIMUM 3/4" ON DIAMETER CROWN WIDTH.

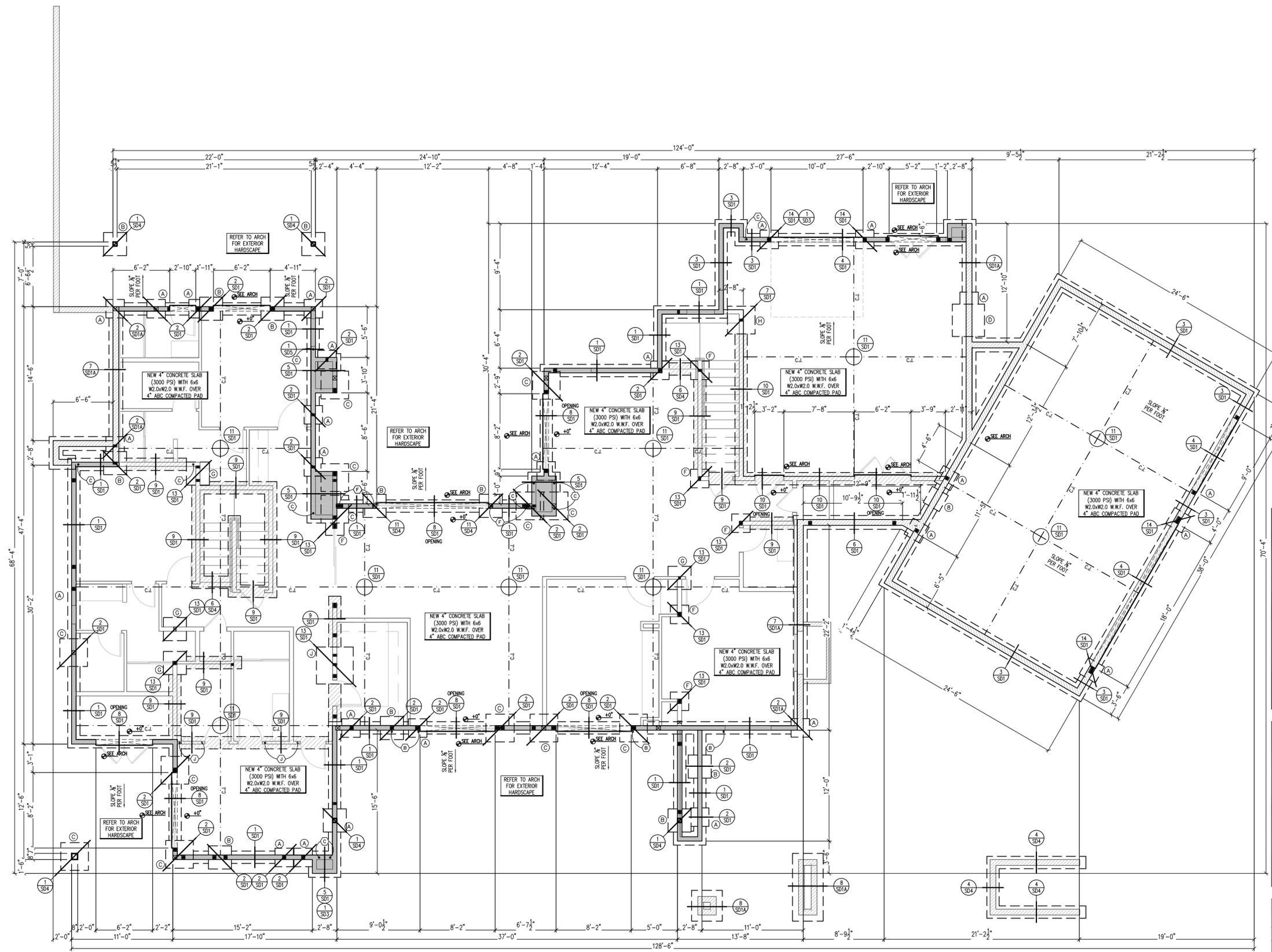
f. WHERE THE ULTIMATE DESIGN WIND SPEED IS 130 MPH OR LESS, NAILS FOR ATTACHING WOOD STRUCTURAL PANEL ROOF SHEATHING TO GABLE END WALL FRAMING BE SPACED 6" O.C. WHERE THE ULTIMATE DESIGN WIND SPEED IS GREATER THAN 130 MPH, NAILS FOR ATTACHING PANEL ROOF SHEATHING TO INTERMEDIATE SUPPORTS SHALL BE SPACED 6" O.C. FOR A MINIMUM 48" DISTANCE FROM RIDGES, EAVES AND GABLE END WALLS, AND 4" O.C. TO GABLE END WALL FRAMING.

g. GYPSUM SHEATHING SHALL CONFORM TO ASTM C 1396 AND SHALL BE INSTALLED IN ACCORDANCE WITH GA 253. FIBERBOARD SHEATHING SHALL CONFORM TO ASTM C 208.

h. SPACING OF FASTENERS ON FLOOR SHEATHING PANEL EDGES SUPPORTED BY FRAMING MEMBERS AND REQUIRED BLOCKING AND AT ALL FLOOR PERIMETERS ONLY. SPACING OF FASTENERS ON ROOF SHEATHING PANEL EDGES APPLIES TO PANEL EDGES SUPPORTED BY FRAMING MEMBERS AND REQUIRED BLOCKING. BLOCKING OF ROOF OR FLOOR SHEATHING PANEL EDGES PERPENDICULAR TO THE FRAMING

# SIVARAJAN RESIDENCE LONE MOUNTAIN VISTAS - LOT 93

7899 EAST MARY SHARON DRIVE  
SCOTTSDALE, ARIZONA 85266



A	24" x 24" x 12" W/ #4 BARS AT 12" O.C. EACH WAY
B	30" x 30" x 12" W/ #4 BARS AT 12" O.C. EACH WAY
C	36" x 36" x 12" W/ #4 BARS AT 12" O.C. EACH WAY
D	42" x 42" x 12" W/ #4 BARS AT 12" O.C. EACH WAY
E	48" x 48" x 12" W/ #4 BARS AT 12" O.C. EACH WAY
F	24" x 24" x 18" W/ #4 BARS AT 12" O.C. EACH WAY
G	30" x 30" x 18" W/ #4 BARS AT 12" O.C. EACH WAY
H	36" x 36" x 18" W/ #4 BARS AT 12" O.C. EACH WAY
I	42" x 42" x 18" W/ #4 BARS AT 12" O.C. EACH WAY
J	48" x 48" x 18" W/ #4 BARS AT 12" O.C. EACH WAY

- FOUNDATION NOTES**
- REFER TO STRUCTURAL NOTES PAGE FOR MATERIAL SPECIFICATIONS AND ADDITIONAL REQUIREMENTS NOT LISTED BELOW.
  - ALL CONSTRUCTION AND FOUNDATION WORK SHALL COMPLY WITH THE LATEST ADOPTED EDITION OF ALL APPLICABLE BUILDING CODES.
  - VERIFY ALL FOUNDATION DIMENSIONS WITH ARCHITECTURAL DRAWINGS.
  - ALL WOOD PLATES THAT ANCHOR TO THE FOUNDATION SHALL BE PRESSURE TREATED OR FOUNDATION REDWOOD.
  - COORDINATE FOUNDATION PLAN WITH SHEARWALL PLAN FOR LOCATION OF HOLDINGS AND SHEARWALL ANCHOR BOLT SPACING.
  - CONTRACTOR TO PLACE CONTROL JOINTS AS INDICATED ON THE FOUNDATION PLAN WHERE APPLICABLE.
  - CONTRACTOR SHALL REFER TO ARCHITECTURAL DRAWINGS FOR ANY EXTERIOR SLAB, SIDEWALKS WORKS NOT SHOWN ON THESE DRAWINGS.
  - TYPICAL ANCHOR BOLT  $\frac{3}{4}$ " LONG AT 45° O.C. UNLESS NOTED OTHERWISE ON PLAN. ALL WOOD SILL PLATES SHALL HAVE MIN. 10" ANCHOR BOLTS PER PLATE. ANCHOR BOLTS SHALL BE LOCATED NOT LESS THAN 6" NOR MORE THAN 12" FROM END OF PLATE OR AT PLATE SPLICE. ANCHORS USED FOR HOLDINGS SHALL NOT BE CONSIDERED IN PLACING ANCHOR BOLTS. REFER SHEAR WALL LAYOUT PLAN FOR THE SPACING OF ANCHOR BOLTS AT THE LOCATION OF SHEAR PANELS. (SIMPSON MASA ANCHORS OR STRONG BOLTZ  $\frac{3}{4}$ " LDT OR EXPANSION ANCHORS (MIN.  $\frac{3}{4}$ " EMBED). MAYBE USED 1.10.  $\frac{3}{4}$ " EMBEDDED A.B. PROVIDED THEY ARE INSTALLED AT THE SAME SPACING INDICATED IN THE NOTES, DETAILS OR SCHEDULES OF THIS PLAN.)
  - ANY DEVIATION FROM PLAN SHALL REQUIRE ENGINEER'S APPROVAL.

HOLDOWN SCHEDULE			
MARK	TYPE	FASTENERS	DESCRIPTION
C	HIT-S	(2) 104 x 2-1/2" SD TO MIN. (2) 2#4 POST	C.L.P. SYSTEM MIN. 12'-0" O.C. DATED W/ 1/2" SQ. FTS. OR EPOXY 5/8" DIA. ALL THREAD W/ 1/4" DIA. (DET-30)
F	HIT-TK	(2) 104 x 2-1/2" SD TO MIN. (2) 2#4 POST	C.L.P. SYSTEM MIN. 10" O.C. DATED W/ 1/2" SQ. FTS. OR EPOXY 5/8" DIA. ALL THREAD W/ 1/4" DIA. (DET-30)
G	CSB	(2) 104 x 2-1/2" LONG NAILS	1" LAP LENGTH
H	CS4	(3) 104 x 2-1/2" LONG NAILS	1" LAP LENGTH
I	MSTCS	(4) 164 x 3-1/4" LONG NAILS	1" LAP LENGTH
J	HDD01-SDD2S	(2) 1/4" x 2-1/2" SD TO MIN. 4#8 POST	C.L.P. SYSTEM MIN. 24" DIA. W/ 8" STEM & 18" SQ. FTS.

- NOTES**
- ALL HOLDINGS REQUIRE DOUBLE FULL HEIGHT STUDS UNLESS OTHERWISE NOTED.
  - SPECIAL INSPECTION REQUIRED FOR ALL EPOXY OPTIONS.
  - IT IS RECOMMENDED TO CAST IN PLACE (C.I.P.) ALL HOLDINGS TO AVOID DRAGGAGE AND COSTLY DESIGN REVISIONS DURING CONSTRUCTION.
  - APPROVED EPOXY: SIMPSON SET-UP (ESR-4057), SIMPSON SET-36 (ESR-4044), SIMPSON AT-30 (ESR-3028).
  - SEE DETAIL 12/201 FOR TYPICAL REPAIR HOLDOWN APPLICATION.
  - STANDARD STRIP STRIPS REQUIRED AT EACH END OF SECOND STORY SHEAR PANELS UNLESS SEE DETAILS 7/203 AND 8/203 FOR STRIPS.

PROFESSIONAL SEAL



REVISIONS

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PROJECT NUMBER:  
DATE: 11.26.2024

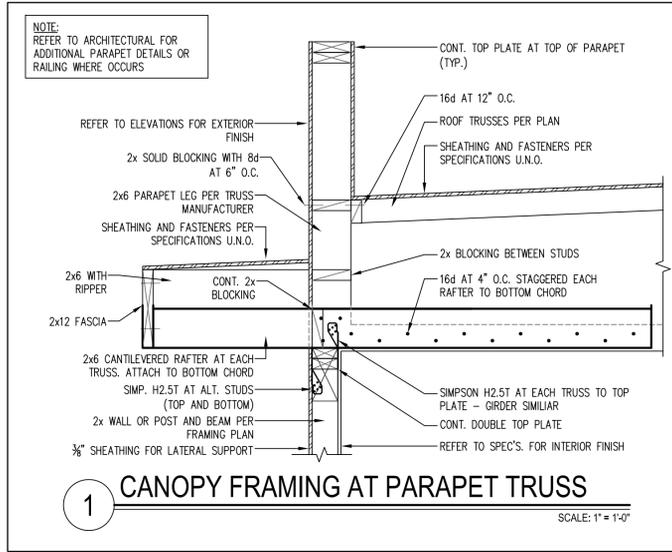
SHEET TITLE:  
**FOUNDATION LAYOUT**  
SHEET NUMBER:

# S1.0

**FOUNDATION PLAN**

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

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LEGEND:

[Pattern]	BEARING WALL
[Pattern]	CMU WALL
[Symbol]	2-2x POST (U.N.O.)

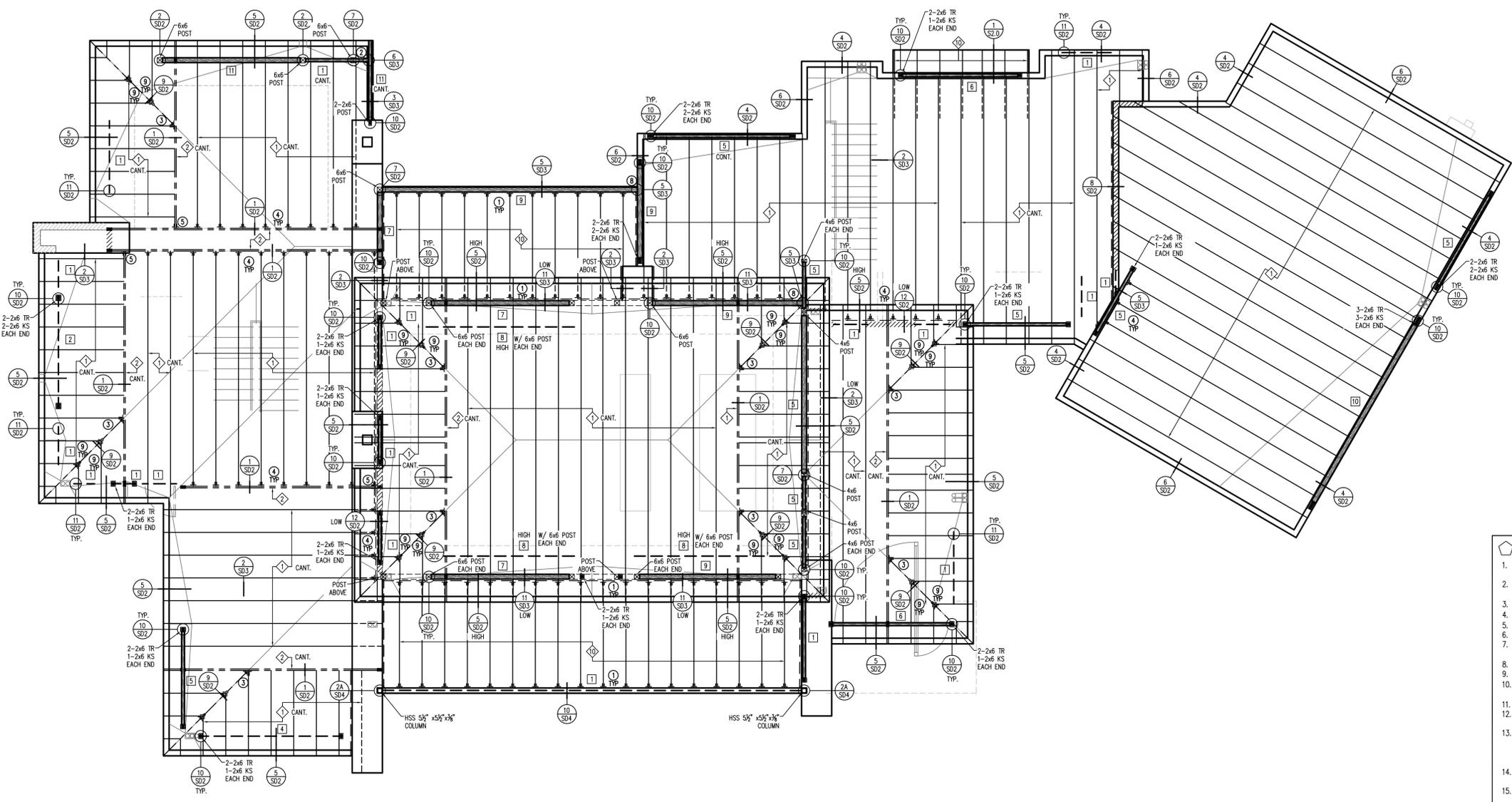
HANGER SCHEDULE

1	LUS26
2	HUC3.25/12
3	LTHJ
4	HUS26
5	HGUS26-2
6	THA422
7	LSU26
8	HUC5.25/12
9	SUR/L210
10	BA(MAX)

BEAM SCHEDULE	
1	(2) 2x6 DFL #2 OR 4x6
2	(2) 2x8 DFL #2 OR 4x8
3	(2) 2x10 DFL #2 OR 4x10
4	(2) 2x12 DFL #2 OR 4x12
5	(1) 3 1/2" x 9" GLB
6	(1) 3 1/2" x 10 1/2" GLB
7	(1) 5 1/2" x 9" GLB
8	(1) 5 1/2" x 10 1/2" GLB
9	(1) 5 1/2" x 12" GLB
10	(1) 5 1/2" x 13 1/2" GLB
11	(1) 5 1/2" x 15" GLB
12	(1) 5 1/2" x 16" GLB
13	(1) 5 1/2" x 18" GLB
14	W12 x 300 (50 ksi)
15	W16 x 31 (50 ksi)
16	W18 x 36 (50 ksi)
17	16" DEEP CMU LINTEL WITH 2-#4 BOTTOM REINF
18	NOT USED

TRUSS SCHEDULE

1	TAPERED TOP CHORD FLAT ROOF TRUSSES AT 24" O.C.
2	TAPERED TOP CHORD FLAT ROOF GIRDER TRUSS
3	BOX GIRDER TRUSS
4	20" DEEP RIM TRUSS
5	20" DEEP FLOOR TRUSSES AT 16" O.C.
6	20" DEEP FLOOR GIRDER TRUSS
7	CANTILEVERED 2x6 RAFTERS AT 24" O.C.
8	18" WALK DECK TRUSSES AT 16" O.C.
9	18" WALK DECK GIRDER TRUSS
10	2x12 RAFTERS WITH RIPPERS AT 24" O.C.
11	2x8 JOISTS AT 16" O.C.
12	3x12 JOISTS AT 12" O.C.



- FRAMING NOTES**
- REFER TO STRUCTURAL NOTES PAGE FOR MATERIAL SPECIFICATIONS AND ADDITIONAL REQUIREMENTS NOT LISTED BELOW.
  - ALL FRAMING AND ANCHORING SHALL COMPLY WITH THE LATEST ADOPTED VERSION OF THE BUILDING CODE.
  - EXTERIOR WALLS TO BE 2x STUDS AT 16" O.C., TYPICAL, U.N.O.
  - INTERIOR BEARING WALLS TO BE 2x STUDS AT 16" O.C., U.N.O.
  - INTERIOR PARTITION WALLS TO BE 2x STUDS AT 24" O.C., TYPICAL U.N.O.
  - ALL POSTS TO BE 2-2x THE WALL THICKNESS, U.N.O.
  - SINGLE TRIMMER IS TO BE PROVIDED UNDER THE ENDS OF ALL BEAMS AND HEADERS, U.N.O.
  - ALL JOISTS SHALL BEAR A MINIMUM OF 2" ON ALL BEAMS OR WALL PLATES. PROVIDE H2.5T TIE AT EACH TRUSS ALONG INTERIOR BEARING WALLS.
  - METAL CONNECTORS, HANGERS AND TIES TO BE "SIMPSON STRONG-TIE" OR APPROVED EQUAL.
  - ALL ROOF TRUSSES SHALL BE AT 24" O.C. U.N.O.
  - ALL TRUSSES AND STRUCTURAL MEMBERS SHALL BE BRACED, BLOCKED AND SUPPORTED AT ALL TIMES DURING CONSTRUCTION.
  - TRUSS MANUFACTURER TO COORDINATE WITH MECHANICAL AND ARCHITECTURAL DRAWINGS FOR EXACT WEIGHT AND LOCATION OF MECHANICAL EQUIPMENT. ALL ROOF TRUSSES SHALL BE DESIGNED FOR AN ADDITIONAL LOAD AS SPECIFIED ON MECHANICAL/ARCHITECTURAL PLANS.
  - SEE MECHANICAL AND ARCHITECTURAL PLANS FOR LOCATIONS OF SOFFITS AND LOWERED SOFFITS.
  - PROVIDE BLOCK-OUTS IN ROOF FOR FIREPLACE FLUES, PLUMBING, ETC. VERIFY LOCATIONS OF FIREPLACE FLUES PRIOR TO CONSTRUCTION.
  - PROVIDE CROSS BLOCKING AND 1/2" PLYWOOD BACKING AT ALL CEILING FAN LOCATIONS.
  - REFER TO ARCHITECTURAL FLOOR AND/OR ROOF PLANS FOR ATTIC ACCESS LOCATIONS AND CODE REQUIREMENTS.
  - PROVIDE 2x BLOCKING AT ALL HIPS AND RIDGES FOR PANEL EDGE NAILING REFER TO ENGINEERING SPECIFICATIONS.
  - PROVIDE SIMP. STCT CLIP AT ALL TRUSSES TO EXTERIOR NON-BEARING WALLS.
  - SIMPSON H2.5T OR RSP4 NOT REQUIRED AT TOP OR BOTTOM PLATE CONNECTIONS IF OSB IS INSTALLED AT THAT LOCATION.
  - 16-GAUGE 1 1/2" LONG (1/2" CROWN) STAPLES MAY BE USED IN LIEU OF 8d NAILS FOR ROOF SHEATHING CONNECTIONS. SAME SPACING APPLIES TO BOTH 8d NAILS AND 16-GAUGE STAPLES.
  - GIRDER TRUSS POST REQUIREMENTS:
    - SINGLE PLY GIRDER TRUSS - USE 1-2x (WALL THICKNESS) U.N.O.
    - TWO PLY GIRDER TRUSS - USE 2-2x (WALL THICKNESS) U.N.O.
  - ALL EXISTING CONDITIONS SHOULD BE VERIFIED PRIOR TO CONSTRUCTION AND FABRICATION.
  - ROOF SLOPES SHALL MATCH ARCHITECTURAL PLANS.

**ROOF FRAMING PLAN**

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

**SIVARAJAN RESIDENCE**  
**LONE MOUNTAIN VISTAS - LOT 93**  
 7899 EAST MARY SHARON DRIVE  
 SCOTTSDALE, ARIZONA 85266

Gilbert Structural LLC  
 414 East Southern Avenue  
 Tempe, Arizona 85282  
 Office 480-398-8144



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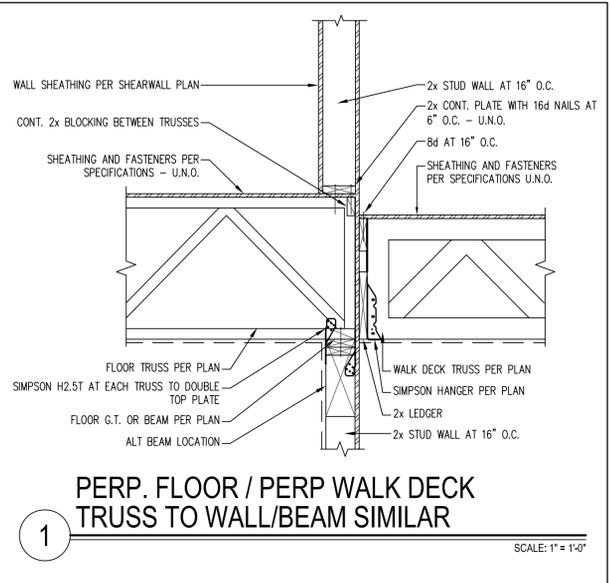
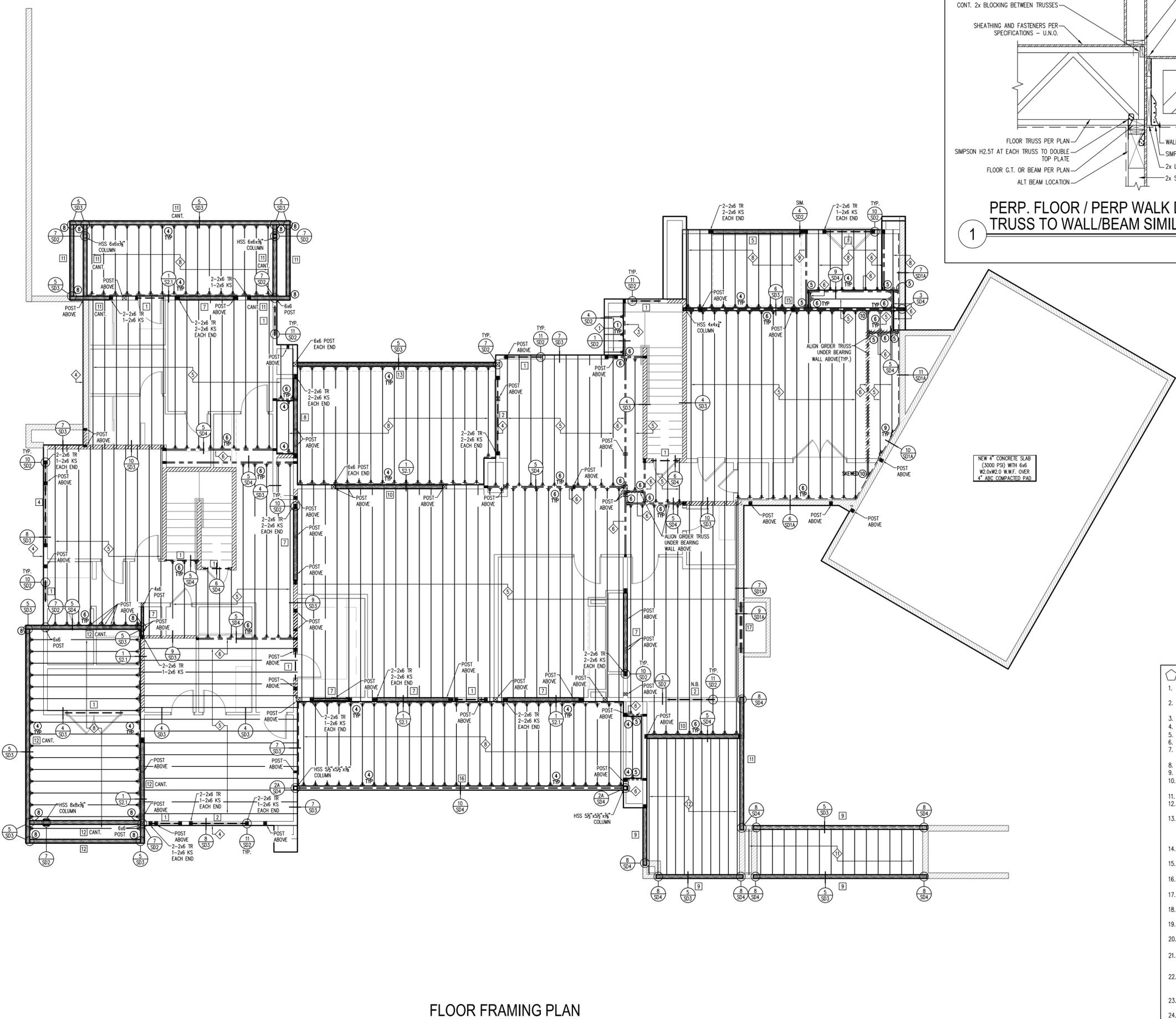
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PROJECT NUMBER:  
 DATE: 11.26.2024

SHEET TITLE:  
**FRAMING LAYOUT**

SHEET NUMBER:  
**S2.0**

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1 PERP. FLOOR / PERP WALK DECK TRUSS TO WALL/BEAM SIMILAR

LEGEND:

- BEARING WALL
- CMU WALL
- 2-2x POST (U.N.O.)

HANGER SCHEDULE

1	LUS26
2	HUC3.25/12
3	LTHJ
4	HUS26
5	HGUS26-2
6	TH422
7	LSU26
8	HUC5.25/12
9	SUR/L210
10	BA(MAX)

BEAM SCHEDULE	BEAM SCHEDULE
1 (2) 2x6 DFL #2 OR 4x6	11 (1) 5 1/2" x 15" GLB
2 (2) 2x8 DFL #2 OR 4x8	12 (1) 5 1/2" x 16" GLB
3 (2) 2x10 DFL #2 OR 4x10	13 (1) 5 1/2" x 18" GLB
4 (2) 2x12 DFL #2 OR 4x12	14 W12 x 300 (50 ksi)
5 (1) 3 1/2" x 9" GLB	15 W16 x 31 (50 ksi)
6 (1) 3 1/2" x 10 1/2" GLB	16 W18 x 36 (50 ksi)
7 (1) 5 1/2" x 9" GLB	17 16" DEEP CMU LINTEL WITH 2-#4 BOTTOM REINF
8 (1) 5 1/2" x 10 1/2" GLB	18 NOT USED
9 (1) 5 1/2" x 12" GLB	
10 (1) 5 1/2" x 13 1/2" GLB	

TRUSS SCHEDULE

1	TAPERED TOP CHORD FLAT ROOF TRUSSES AT 24" O.C.
2	TAPERED TOP CHORD FLAT ROOF GIRDER TRUSS
3	BOX GIRDER TRUSS
4	20" DEEP RIM TRUSS
5	20" DEEP FLOOR TRUSSES AT 16" O.C.
6	20" DEEP FLOOR GIRDER TRUSS
7	CANTILEVERED 2x6 RAFTERS AT 24" O.C.
8	18" WALK DECK TRUSSES AT 16" O.C.
9	18" WALK DECK GIRDER TRUSS
10	2x12 RAFTERS WITH RIPPERS AT 24" O.C.
11	2x8 JOISTS AT 16" O.C.
12	3x12 JOISTS AT 12" O.C.

- FRAMING NOTES
- REFER TO STRUCTURAL NOTES PAGE FOR MATERIAL SPECIFICATIONS AND ADDITIONAL REQUIREMENTS NOT LISTED BELOW.
  - ALL FRAMING AND ANCHORING SHALL COMPLY WITH THE LATEST ADOPTED VERSION OF THE BUILDING CODE.
  - EXTERIOR WALLS TO BE 2x STUDS AT 16" O.C., TYPICAL, U.N.O.
  - INTERIOR BEARING WALLS TO BE 2x STUDS AT 16" O.C., U.N.O.
  - INTERIOR PARTITION WALLS TO BE 2x STUDS AT 24" O.C., TYPICAL U.N.O.
  - ALL POSTS TO BE 2-2x THE WALL THICKNESS, U.N.O.
  - SINGLE TRIMMER IS TO BE PROVIDED UNDER THE ENDS OF ALL BEAMS AND HEADERS, U.N.O.
  - ALL JOISTS SHALL BEAR A MINIMUM OF 2" ON ALL BEAMS OR WALL PLATES. PROVIDE H2.5T TIE AT EACH TRUSS ALONG INTERIOR BEARING WALLS.
  - METAL CONNECTORS, HANGERS AND TIES TO BE "SIMPSON STRONG-TIE" OR APPROVED EQUAL.
  - ALL ROOF TRUSSES SHALL BE AT 24" O.C. U.N.O.
  - ALL TRUSSES AND STRUCTURAL MEMBERS SHALL BE BRACED, BLOCKED AND SUPPORTED AT ALL TIMES DURING CONSTRUCTION.
  - TRUSS MANUFACTURER TO COORDINATE WITH MECHANICAL AND ARCHITECTURAL DRAWINGS FOR EXACT WEIGHT AND LOCATION OF MECHANICAL EQUIPMENT. ALL ROOF TRUSSES SHALL BE DESIGNED FOR AN ADDITIONAL LOAD AS SPECIFIED ON MECHANICAL/ARCHITECTURAL PLANS.
  - SEE MECHANICAL AND ARCHITECTURAL PLANS FOR LOCATIONS OF SOFFITS AND LOWERED SOFFITS.
  - PROVIDE BLOCK-OUTS IN ROOF FOR FIREPLACE FLUES, PLUMBING, ETC. VERIFY LOCATIONS OF FIREPLACE FLUES PRIOR TO CONSTRUCTION.
  - PROVIDE CROSS BLOCKING AND 1/2" PLYWOOD BACKING AT ALL CEILING FAN LOCATIONS.
  - REFER TO ARCHITECTURAL FLOOR AND/OR ROOF PLANS FOR ATTIC ACCESS LOCATIONS AND CODE REQUIREMENTS.
  - PROVIDE 2x BLOCKING AT ALL HPS AND RIDGES FOR PANEL EDGE NAILING REFER TO ENGINEERING SPECIFICATIONS.
  - PROVIDE SIMP. STCT CLIP AT ALL TRUSSES TO EXTERIOR NON-BEARING WALLS.
  - SIMPSON H2.5T OR RSP4 NOT REQUIRED AT TOP OR BOTTOM PLATE CONNECTIONS IF OSB IS INSTALLED AT THAT LOCATION.
  - 16-GAUGE 1 1/2" LONG (1/2" CROWN) STAPLES MAY BE USED IN LIEU OF 8d NAILS FOR ROOF SHEATHING CONNECTIONS. SAME SPACING APPLIES TO BOTH 8d NAILS AND 16-GAUGE STAPLES.
  - GIRDER TRUSS POST REQUIREMENTS:
    - SINGLE PLY GIRDER TRUSS - USE 1-2x (WALL THICKNESS) U.N.O.
    - TWO PLY GIRDER TRUSS - USE 2-2x (WALL THICKNESS) U.N.O.
  - ALL EXISTING CONDITIONS SHOULD BE VERIFIED PRIOR TO CONSTRUCTION AND FABRICATION.
  - ROOF SLOPES SHALL MATCH ARCHITECTURAL PLANS.

FLOOR FRAMING PLAN

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

**SIVARAJAN RESIDENCE**  
**LONE MOUNTAIN VISTAS - LOT 93**  
 7899 EAST MARY SHARON DRIVE  
 SCOTTSDALE, ARIZONA 85266

Gilbert Structural LLC  
 414 East Southern Avenue  
 Tempe, Arizona 85282  
 Office 480-398-8144



REVISIONS

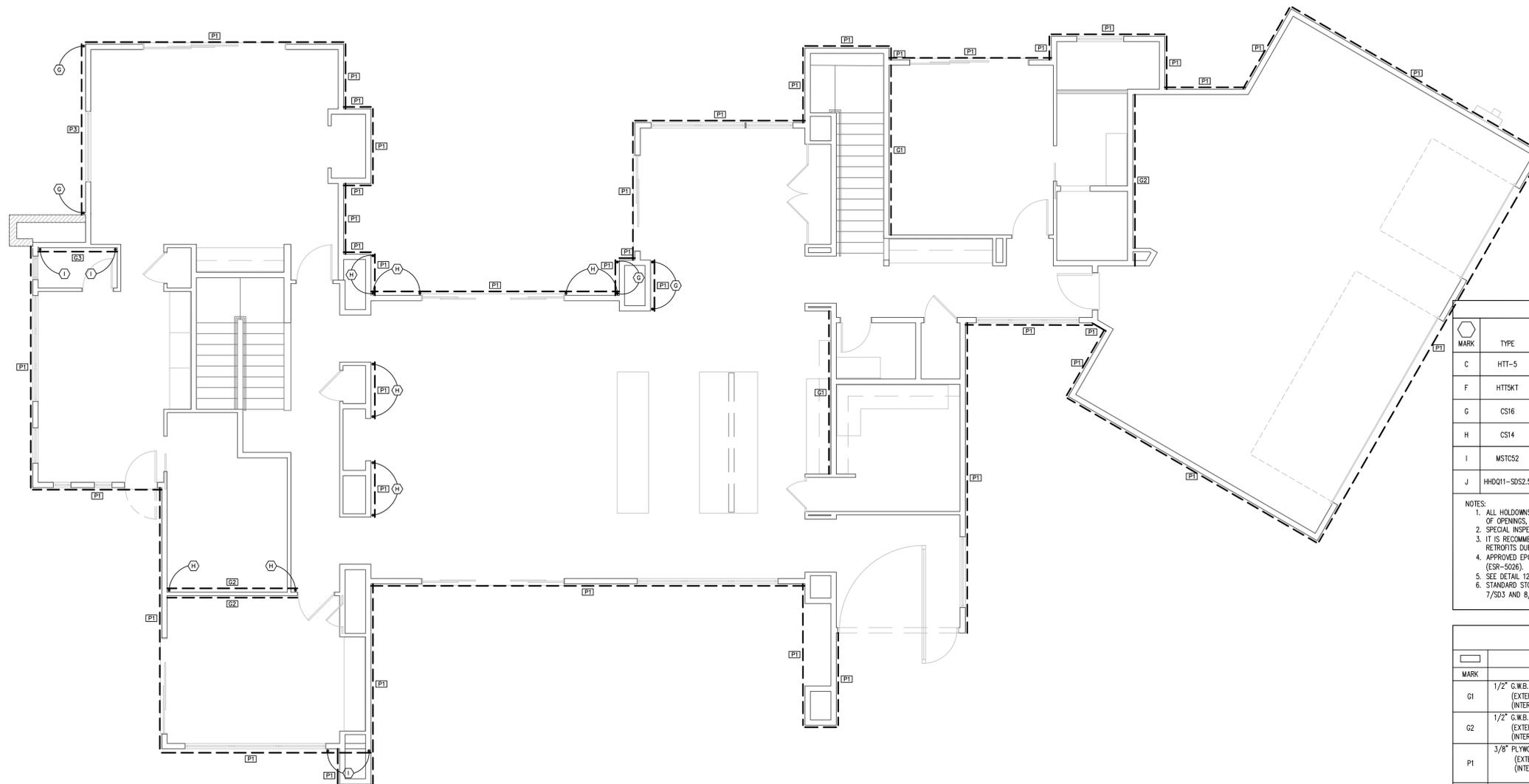
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PROJECT NUMBER:  
 DATE: 11.26.2024

SHEET TITLE:  
**FRAMING LAYOUT**

SHEET NUMBER:  
**S2.1**

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WALL TYPES	
	WOOD STUD WALL PER ARCHITECTURE
	CMU WALL WITH #5 VERTICAL BARS AT 32" O.C.

HOLDOWN SCHEDULE			
MARK	TYPE	FASTENERS	DESCRIPTION
C	HTT-5	(26) 10d x 2-1/2" LONG NAILS	C.I.P. SSTB24 MIN. 12-5/8" EMBED W/ 12" SQ. FTG. OR EPOXY 5/8" DIA. ALL THREAD W/ 6-1/4" EMBED AT INT. (SET-3G)
F	HTTKRT	(26) 10d x 2-1/2" SD TO MIN. (2) 2x4 POST	C.I.P. SB5/8x24 MIN. 18" EMBED W/ 18" SQ. FTG. OR EPOXY 5/8" DIA. ALL THREAD W/ 8" EMBED AT INT. (SET-3G)
G	CS16	(22) 10d x 2-1/2" LONG NAILS	13" LAP LENGTH
H	CS14	(30) 10d x 2-1/2" LONG NAILS	16" LAP LENGTH
I	MSTC52	(48) 16d x 3-1/4" LONG NAILS	18" LAP LENGTH
J	HDDQ11-SDS2.5	(24) 1/4 x 2-1/2" SDS TO MIN 4x6 POST	C.I.P. SB1x30 MIN 24" EMB. w/ 8" STEM & 18" SQ. FTG.

NOTES:  
 1. ALL HOLDOWNS REQUIRE DOUBLE FULL HEIGHT STUDS U.N.O., THEREFORE LOCATE HOLDOWNS ON KIN STUDS OF OPENINGS, TRIMMERS NOT INCLUDED.  
 2. SPECIAL INSPECTION REQUIRED FOR ALL EPOXY OPTIONS.  
 3. IT IS RECOMMENDED TO CAST IN PLACE (C.I.P.) ALL HOLDOWNS TO AVOID DRASTIC AND COSTLY DESIGN RETROFITS DURING CONSTRUCTION.  
 4. APPROVED EPOXY: SIMPSON SET-XP (ESR-4057), SIMPSON SET-3G (ESR-4844), SIMPSON AT-3G (ESR-5026).  
 5. SEE DETAIL 12/SD1 FOR TYPICAL RETROFIT HOLDOWN APPLICATION.  
 6. STANDARD STORY STRAPS REQUIRED AT EACH END OF SECOND STORY SHEAR PANELS U.N.O. SEE DETAILS 7/SD3 AND 8/SD3 FOR STRAPS.

SHEATHING SCHEDULE			SILL PLATE NAIL SPACING - SHEARWALL AT UPPER FLOORS (16d NAILS)
MARK	DESCRIPTION		
G1	1/2" C.W.B. w/ 5d COOLER NAILS AT 7" O.C. EDGES AND FIELD (UNBLOCKED) (EXTERIOR): 1/2" x 10" ANCHOR BOLTS AT 48" O.C. (INTERIOR): HILTI PINS AT 12" O.C.	12"	
G2	1/2" C.W.B. w/ 5d COOLER NAILS AT 7" O.C. EDGES AND FIELD (BLOCKED) (EXTERIOR): 1/2" x 10" ANCHOR BOLTS AT 48" O.C. (INTERIOR): HILTI PINS AT 12" O.C.	10"	
P1	3/8" PLYWOOD/OSB w/8d AT 6" O.C. EDGES /12" O.C. FIELD (BLOCKED) (EXTERIOR): 1/2" x 10" ANCHOR BOLTS AT 32" O.C. (INTERIOR): HILTI OR SIMPSON PINS @ 8" O.C., ANCHOR BOLTS OR EQUIV REQUIRED	6"	
P2	3/8" PLYWOOD/OSB w/8d AT 4" O.C. EDGES /12" O.C. FIELD (BLOCKED) (EXTERIOR): 1/2" x 10" ANCHOR BOLTS AT 24" O.C. (INTERIOR): HILTI OR SIMPSON PINS AT 6" O.C., ANCHOR BOLTS OR EQUIV REQUIRED	(2) ROWS AT 8"	
P3	3/8" PLYWOOD/OSB w/8d AT 3" O.C. EDGES /12" O.C. FIELD (BLOCKED) (EXTERIOR): 1/2" x 10" ANCHOR BOLTS AT 16" O.C. (INTERIOR): HILTI OR SIMPSON PINS AT 16" O.C., ANCHOR BOLTS OR EQUIV REQUIRED	(2) ROWS AT 6"	
P5	15/32" PLYWOOD/OSB WITH 10d AT 2" O.C. EDGES /12" O.C. FIELD (BLOCKED) (EXTERIOR): 1/2" x 10" ANCHOR BOLTS AT 12" O.C. (INTERIOR): ANCHOR BOLTS OR EQUIV REQUIRED	(2) ROWS AT 3"	

NOTES:  
 1. ALL SHEARWALLS TO HAVE DOUBLE TOP PLATES AND 2x STUDS AT 16" O.C. - U.N.O.  
 2. FRAMING AT ADJOINING PANEL EDGES SHALL BE 3" NOMINAL OR WIDER, AND NAILS SHALL BE STAGGERED WHERE NAILS ARE SPACED LESS THAN 3" O.C.  
 3. 1" MIN HILTI-PIN EMBEDMENT ACCEPTABLE HILTI-PINS: X-U 72 AND X-CF 72 (ESR-2269) (ESR-2379). SIMPSON PINS: POPA (ESR-2136)  
 4. USE: HILTI 1/2" DIA x 6" LONG HUS SCREW ANCHOR (ESR-2307) OR SIMPSON 1/2" DIA x 6" LONG TITEN HD (ESR-2713) AS A ONE FOR ONE REPLACEMENT TO 1/2" DIA ANCHOR BOLT  
 5. AS AN ALTERNATE TO 5d COOLER NAILS, #6 1 1/2" TYPE "W" DRYWALL SCREWS MAY BE USED. AS AN ALTERNATE TO 6d COOLER NAILS, #6 1 3/8" TYPE "W" DRYWALL SCREWS MAY BE USED. SAME SPACING APPLIES PER SCHEDULE.

UPPER FLOOR SHEARWALL PLAN

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

**SIVARAJAN RESIDENCE**  
**LONE MOUNTAIN VISTAS - LOT 93**  
 7899 EAST MARY SHARON DRIVE  
 SCOTTSDALE, ARIZONA 85266

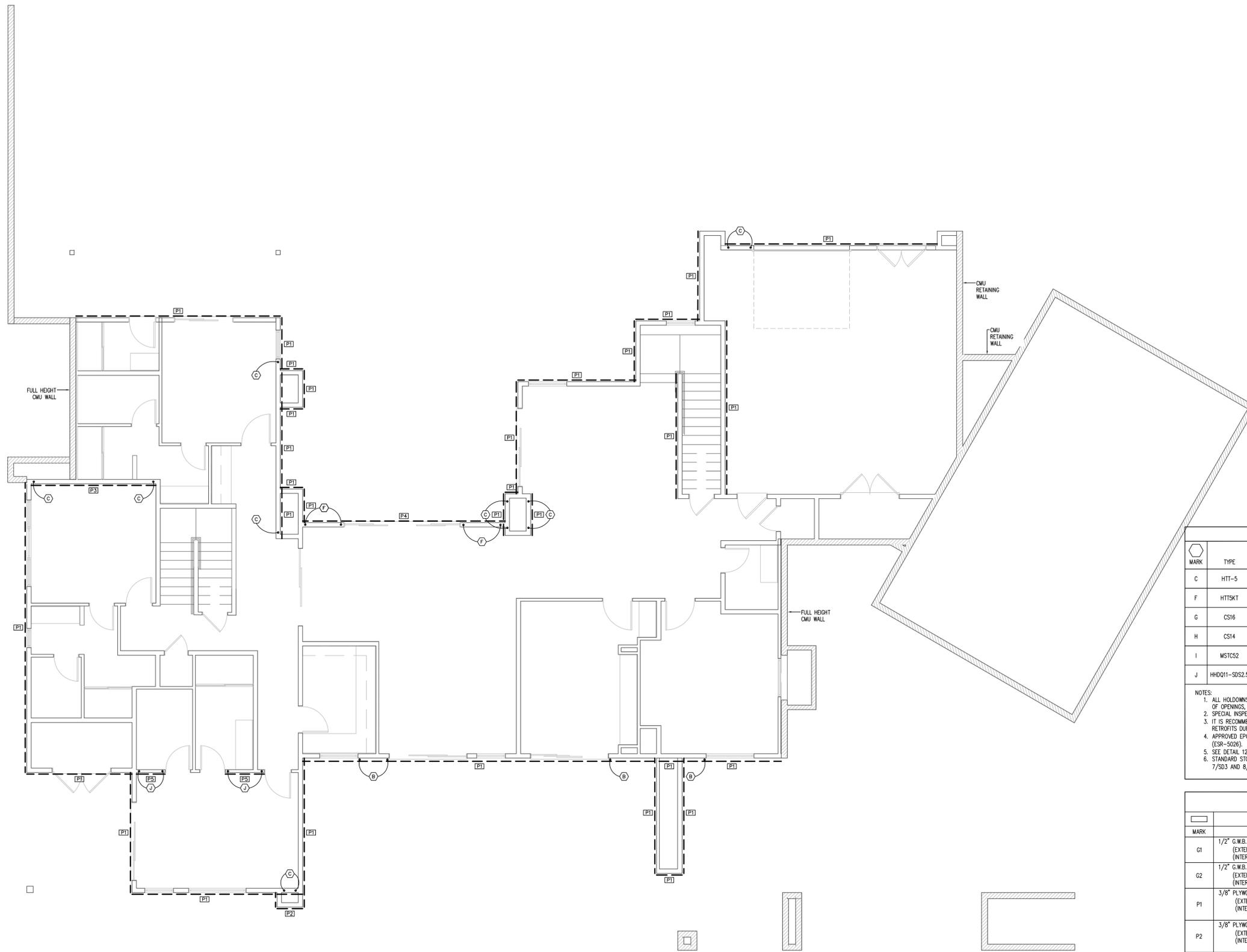


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PROJECT NUMBER:  
 DATE: 11.26.2024

SHEET TITLE:  
**SHEARWALL LAYOUT**  
 SHEET NUMBER:  
**S3.0**

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WALL TYPES	
[Hatching]	WOOD STUD WALL PER ARCHITECTURE
[Hatching]	CMU WALL WITH #5 VERTICAL BARS AT 32" O.C.

HOLDOWN SCHEDULE			
MARK	TYPE	FASTENERS	DESCRIPTION
C	HTT-5	(26) 10d x 2-1/2" LONG NAILS	C.I.P. SSTB24 MIN. 12-5/8" EMBED W/ 12" SQ. FTG. OR EPOXY 5/8" DIA. ALL THREAD W/ 6-1/4" EMBED AT INT. (SET-3G)
F	HTTKAT	(26) 10d x 2-1/2" SD TO MIN. (2) 2x4 POST	C.I.P. SB5/8x24 MIN. 18" EMBED W/ 18" SQ. FTG. OR EPOXY 5/8" DIA. ALL THREAD W/ 8" EMBED AT INT. (SET-3G)
G	CS16	(22) 10d x 2-1/2" LONG NAILS	13" LAP LENGTH
H	CS14	(30) 10d x 2-1/2" LONG NAILS	16" LAP LENGTH
I	MSTCS2	(48) 16d x 3-1/4" LONG NAILS	18" LAP LENGTH
J	HDDQ11-SDS2.5	(24) 1/4 x 2-1/2" SDS TO MIN 4x6 POST	C.I.P. SB1x30 MIN 24" EMB. w/ 8" STEM & 18" SQ. FTG.

NOTES:  
 1. ALL HOLDOWNS REQUIRE DOUBLE FULL HEIGHT STUDS U.N.O., THEREFORE LOCATE HOLDOWNS ON KIN STUDS OF OPENINGS, FRAMERS NOT INCLUDED.  
 2. SPECIAL INSPECTION REQUIRED FOR ALL EPOXY OPTIONS.  
 3. IT IS RECOMMENDED TO CAST IN PLACE (C.I.P.) ALL HOLDOWNS TO AVOID DRASTIC AND COSTLY DESIGN RETROFITS DURING CONSTRUCTION.  
 4. APPROVED EPOXY: SIMPSON SET-XP (ESR-4057), SIMPSON SET-3G (ESR-4844), SIMPSON AT-3G (ESR-5026).  
 5. SEE DETAIL 12/SD1 FOR TYPICAL RETROFIT HOLDOWN APPLICATION.  
 6. STANDARD STORY STRAPS REQUIRED AT EACH END OF SECOND STORY SHEAR PANELS U.N.O. SEE DETAILS 7/SD3 AND 8/SD3 FOR STRAPS.

SHEATHING SCHEDULE			SILL PLATE NAIL SPACING - SHEARWALL AT UPPER FLOORS (16d NAILS)
MARK	DESCRIPTION		
G1	1/2" C.W.B. w/ 5d COOLER NAILS AT 7" O.C. EDGES AND FIELD (UNBLOCKED) (EXTERIOR): 1/2" x 10" ANCHOR BOLTS AT 48" O.C. (INTERIOR): HILTI PINS AT 12" O.C.		12"
G2	1/2" C.W.B. w/ 5d COOLER NAILS AT 7" O.C. EDGES AND FIELD (BLOCKED) (EXTERIOR): 1/2" x 10" ANCHOR BOLTS AT 48" O.C. (INTERIOR): HILTI PINS AT 12" O.C.		10"
P1	3/8" PLYWOOD/OSB w/8d AT 6" O.C. EDGES /12" O.C. FIELD (BLOCKED) (EXTERIOR): 1/2" x 10" ANCHOR BOLTS AT 32" O.C. (INTERIOR): HILTI OR SIMPSON PINS @ 8" O.C., ANCHOR BOLTS OR EQUIV REQUIRED		6"
P2	3/8" PLYWOOD/OSB w/8d AT 4" O.C. EDGES /12" O.C. FIELD (BLOCKED) (EXTERIOR): 1/2" x 10" ANCHOR BOLTS AT 24" O.C. (INTERIOR): HILTI OR SIMPSON PINS AT 6" O.C., ANCHOR BOLTS OR EQUIV REQUIRED		(2) ROWS AT 8"
P3	3/8" PLYWOOD/OSB w/8d AT 3" O.C. EDGES /12" O.C. FIELD (BLOCKED) (EXTERIOR): 1/2" x 10" ANCHOR BOLTS AT 16" O.C. (INTERIOR): HILTI OR SIMPSON PINS AT 16" O.C., ANCHOR BOLTS OR EQUIV REQUIRED		(2) ROWS AT 6"
P5	15/32" PLYWOOD/OSB WITH 10d AT 2" O.C. EDGES /12" O.C. FIELD (BLOCKED) (EXTERIOR): 1/2" x 10" ANCHOR BOLTS AT 12" O.C. (INTERIOR): ANCHOR BOLTS OR EQUIV REQUIRED		(2) ROWS AT 3"

- NOTES:  
 1. ALL SHEARWALLS TO HAVE DOUBLE TOP PLATES AND 2x STUDS AT 16" O.C. - U.N.O.  
 2. FRAMING AT ADJOINING PANEL EDGES SHALL BE 3" NOMINAL OR WIDER, AND NAILS SHALL BE STAGGERED WHERE NAILS ARE SPACED LESS THAN 3" O.C.  
 3. 1" MIN HILTI-PIN EMBEDMENT ACCEPTABLE HILTI-PINS: X-U 72 AND X-CF 72 (ESR-2269) (ESR-2379). SIMPSON PINS: POPA (ESR-2138)  
 4. USE: HILTI 1/2" DIA x 6" LONG HUS SCREW ANCHOR (ESR-2307) OR SIMPSON 1/2" DIA x 6" LONG TITEN HD (ESR-2713) AS A ONE FOR ONE REPLACEMENT TO 1/2" DIA ANCHOR BOLT  
 5. AS AN ALTERNATE TO 5d COOLER NAILS, #6 1 1/2" TYPE "W" DRYWALL SCREWS MAY BE USED. AS AN ALTERNATE TO 6d COOLER NAILS, #6 1 3/8" TYPE "W" DRYWALL SCREWS MAY BE USED. SAME SPACING APPLIES PER SCHEDULE.

**SIVARAJAN RESIDENCE**  
**LONE MOUNTAIN VISTAS - LOT 93**  
 7899 EAST MARY SHARON DRIVE  
 SCOTTSDALE, ARIZONA 85266

Gilbert Structural LLC  
 414 East Southern Avenue  
 Tempe, Arizona 85282  
 Office 480-398-8144



REVISIONS:  
 1.  
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 3.  
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 5.  
 PROJECT NUMBER:  
 DATE: 11.26.2024

SHEET TITLE:  
**SHEARWALL LAYOUT**

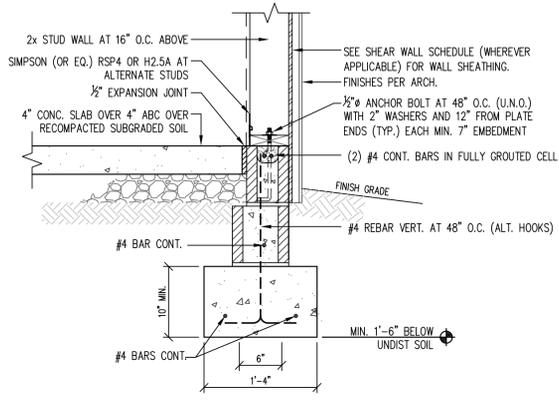
SHEET NUMBER:  
**S3.1**

LOWER FLOOR SHEARWALL PLAN

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

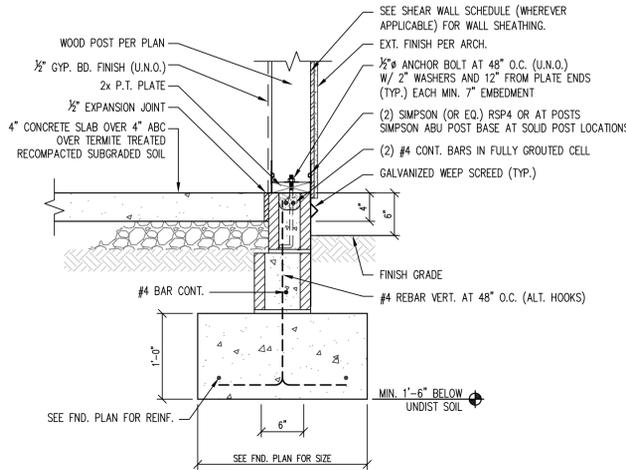
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NOTE:  
1. SIMPSON MASA MAY BE USED IN LIEU OF 1/2" ANCHOR BOLTS  
2. SEE 10/SD3 FOR RETAINING IN ALL STEM HEIGHTS GREATER THAN 1'-6" ABOVE FINISHED GRADE



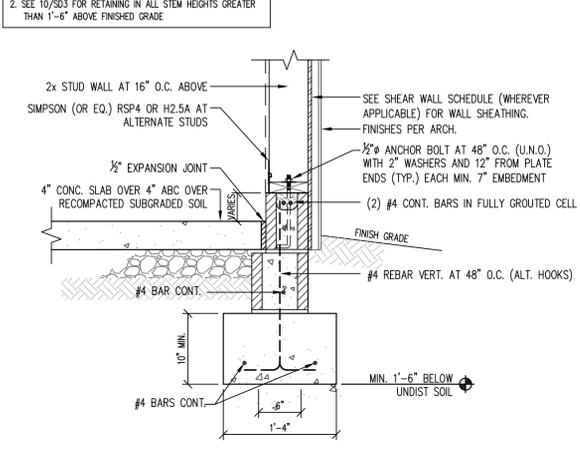
1 EXTERIOR WALL AND FOOTING  
SCALE: 1" = 1'-0"

NOTE:  
SIMPSON MASA MAY BE USED IN LIEU OF 1/2" ANCHOR BOLTS

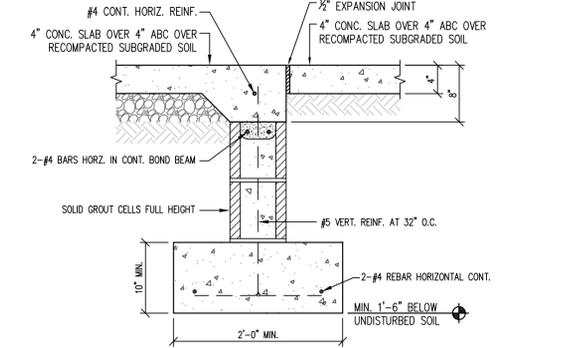


2 EXTERIOR WALL AT POST  
SCALE: 1" = 1'-0"

NOTE:  
1. SIMPSON MASA MAY BE USED IN LIEU OF 1/2" ANCHOR BOLTS  
2. SEE 10/SD3 FOR RETAINING IN ALL STEM HEIGHTS GREATER THAN 1'-6" ABOVE FINISHED GRADE

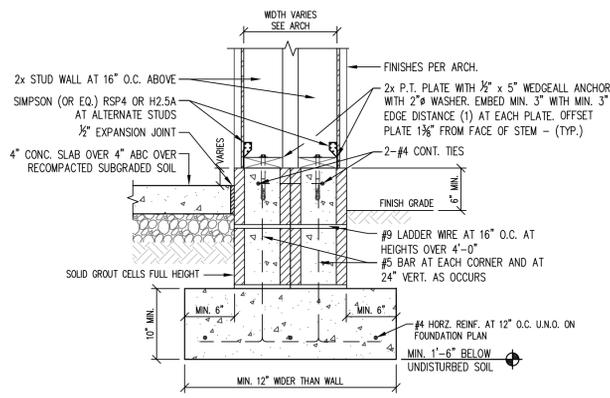


3 EXT. STEM AND FOOTING AT GARAGE  
SCALE: 1" = 1'-0"

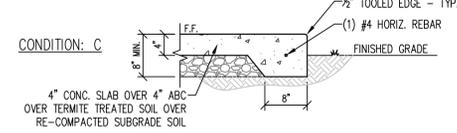
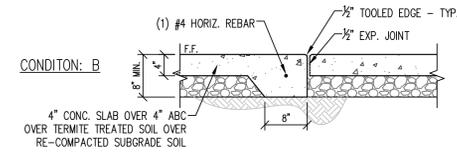
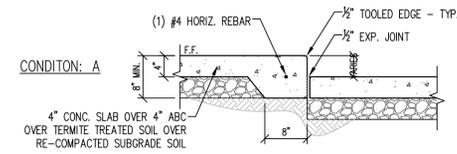


4 SLAB AT GARAGE ONLY  
SCALE: 1" = 1'-0"

NOTE:  
1. RAISE STEM WALL HEIGHT AS REQUIRED AT PLANTER AREAS.  
WATER PROOF ALL CMU WALLS INSIDE PLANTERS  
2. SEE 10/SD3 FOR RETAINING IN ALL STEM HEIGHTS GREATER THAN 1'-6" ABOVE FINISHED GRADE

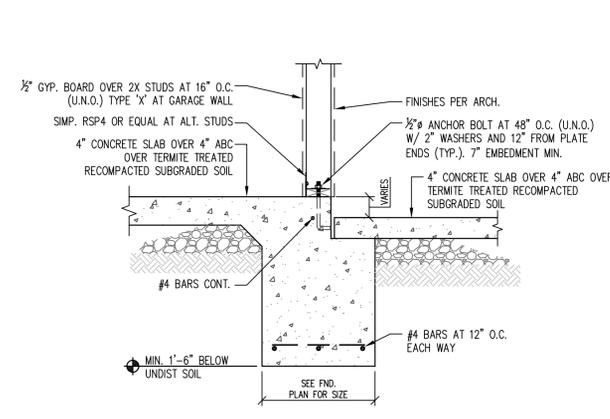


5 FRAMED COLUMN AT CMU STEM WALL  
SCALE: 1" = 1'-0"

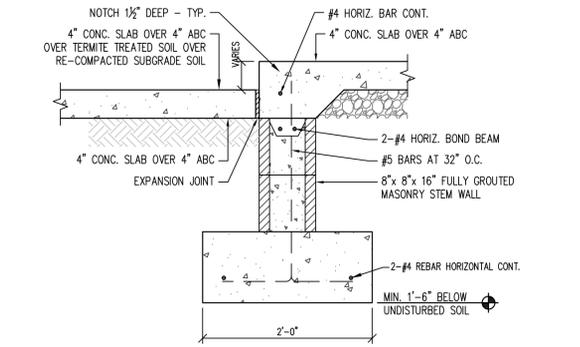


6 TURNDOWN SLAB CONDITIONS  
SCALE: 3/4" = 1'-0"

NOTE:  
REBAR SHALL BE A MIN. 3" ABOVE BOTTOM OF FOOTING WHERE APPLICABLE

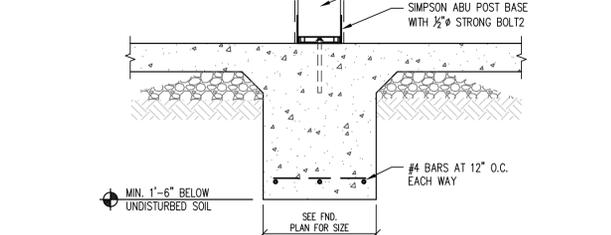


7 INTERIOR POINT LOAD FOOTING AT TURNDOWN SLAB  
SCALE: 1" = 1'-0"



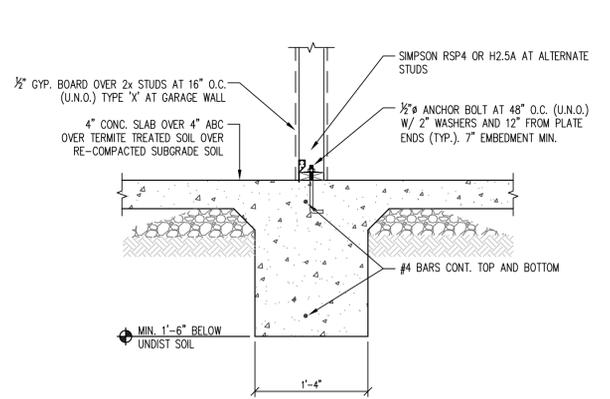
8 TURNDOWN AT EXTERIOR DOOR  
SCALE: 1" = 1'-0"

NOTE:  
REBAR SHALL BE A MIN. 3" ABOVE BOTTOM OF FOOTING WHERE APPLICABLE



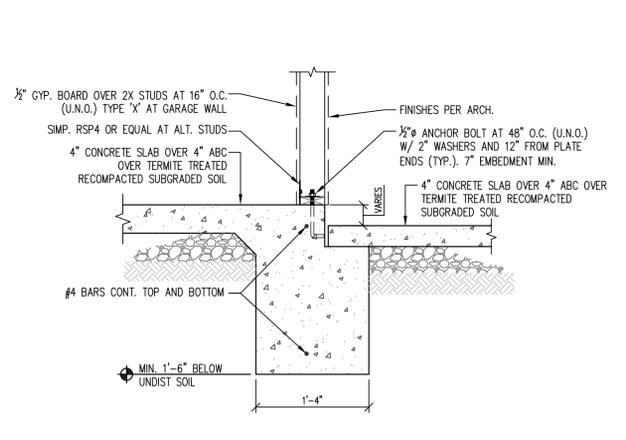
13 INTERIOR POINT LOAD FOOTING  
SCALE: 1" = 1'-0"

NOTE:  
REBAR SHALL BE A MIN. 3" ABOVE BOTTOM OF FOOTING WHERE APPLICABLE



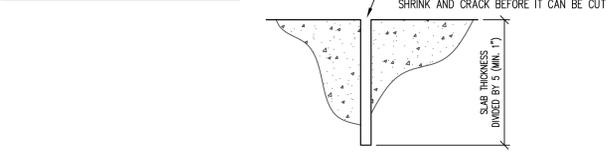
9 INTERIOR BEARING WALL FOOTING  
SCALE: 1" = 1'-0"

NOTE:  
REBAR SHALL BE A MIN. 3" ABOVE BOTTOM OF FOOTING WHERE APPLICABLE



10 INTERIOR BEARING WALL FOOTING AT TURNDOWN SLAB  
SCALE: 1" = 1'-0"

NOTE:  
IN REINFORCED SLABS, HALF THE REINFORCING IS ELIMINATED ACROSS THE CONTROL JOINT



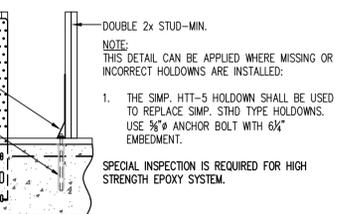
11 CONTROL JOINT DETAIL  
NOT TO SCALE

EXISTING HOLDOWN (WHERE OCCURS)

NEW SIMPSON HTT-5 HOLDOWN - SEE NOTE FOR CORRECT APPLICATION

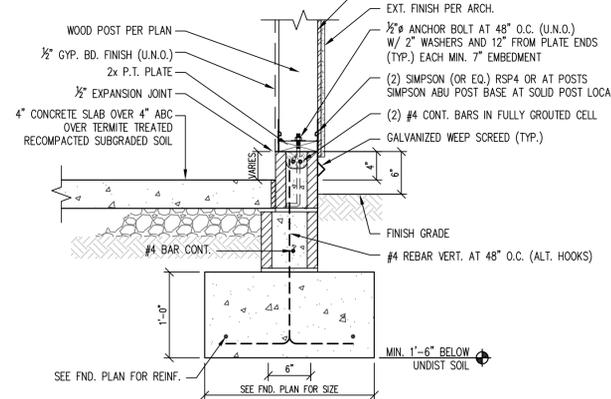
NEW A.B. INSTALLED WITH SIMPSON SET-3G HIGH STRENGTH EPOXY OR APPROVED EQUAL - ESR-4057/4844

1-#4 REBAR IN STEM WALL FOR SHEAR CONE REINFORCEMENT. 12" MIN. REBAR



12 HOLDOWN RETROFIT DETAIL  
NOT TO SCALE

NOTE:  
SIMPSON MASA MAY BE USED IN LIEU OF 1/2" ANCHOR BOLTS



14 EXTERIOR GARAGE WALL AT POST  
SCALE: 1" = 1'-0"

**SIVARAJAN RESIDENCE**  
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SCOTTSDALE, ARIZONA 85266

Gilbert Structural LLC  
414 East Southern Avenue  
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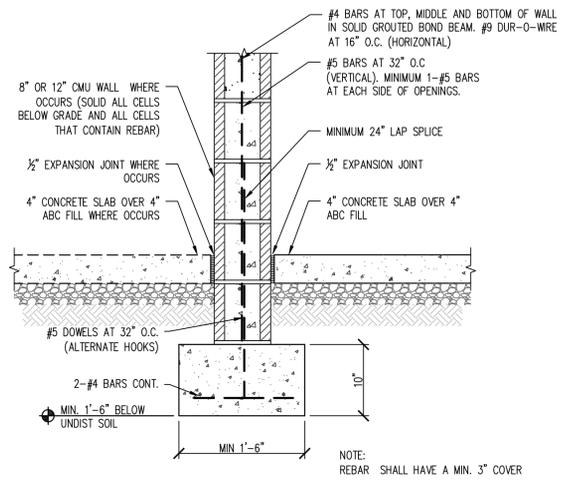
PROFESSIONAL SEAL  
41931  
WILLIAM L. GILBERT  
Arizona, U.S.A.

REVISIONS  
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PROJECT NUMBER:  
DATE: 11.26.2024

SHEET TITLE:  
**STRUCTURAL DETAILS**  
SHEET NUMBER:

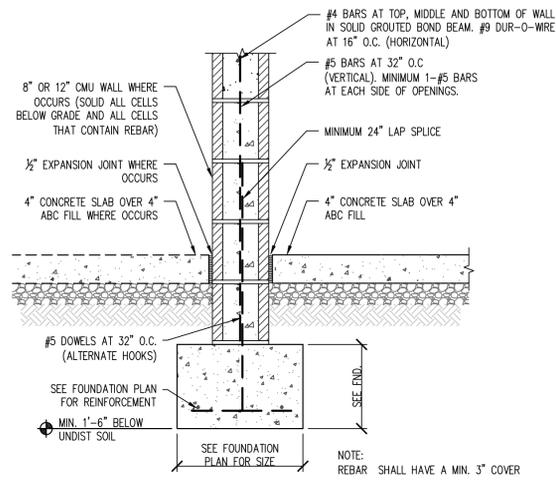
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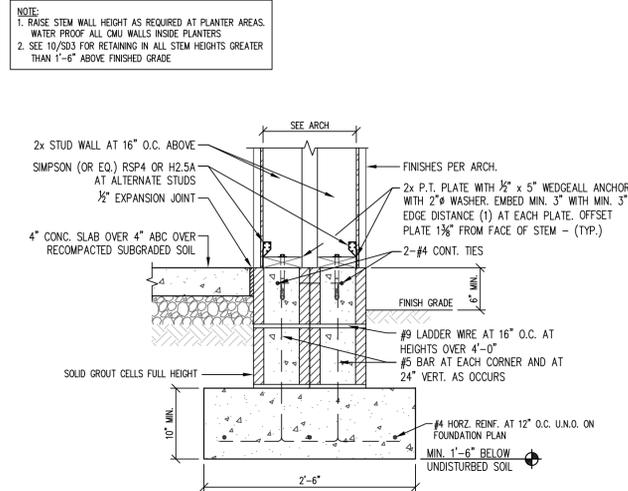
1 FOUNDATION AT MASONRY WALL

SCALE: 1"=1'-0"



2 POINT LOAD AT MASONRY WALL

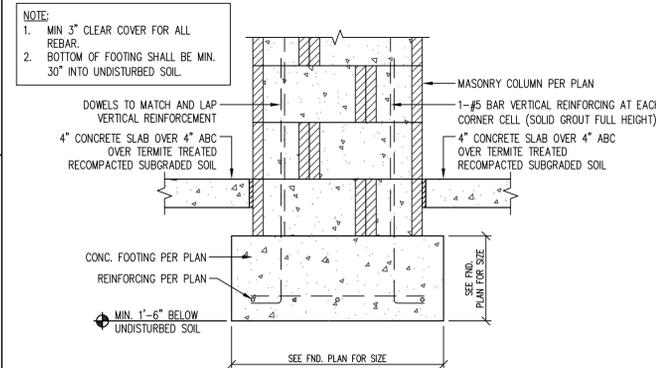
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3 EXT. THICKENED WALL AND FOOTING

SCALE: 1"=1'-0"

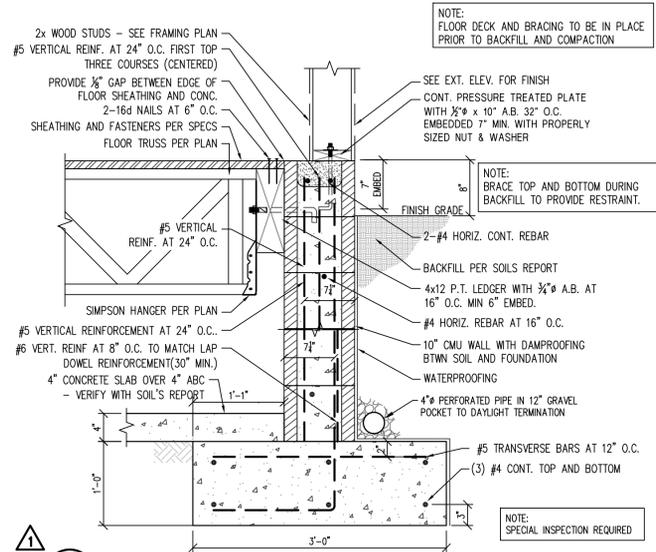
4 NOT USED



8 MASONRY COLUMN AND FOOTING

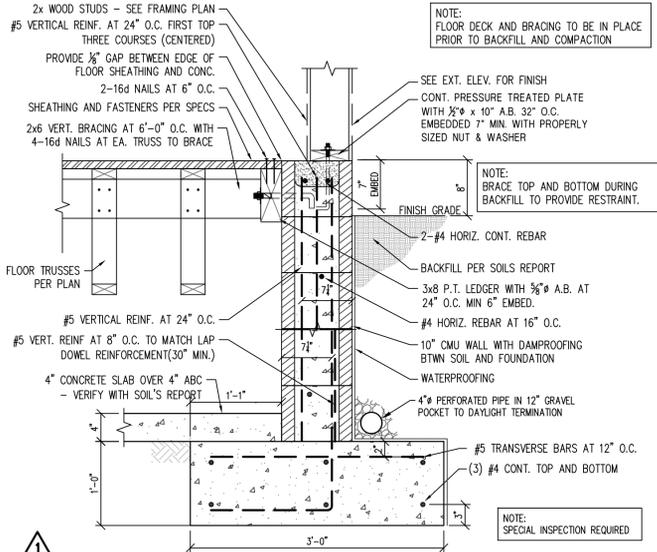
SCALE: 1"=1'-0"

5 NOT USED



6 CMU BASEMENT WALL (TRUSSES PERP.)

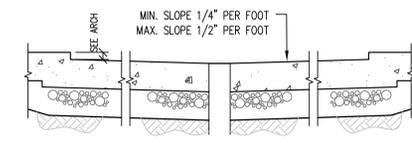
NOT TO SCALE



7 CMU BASEMENT WALL (TRUSSES PAR.)

NOT TO SCALE

- SHOWER RECEPTORS BUILT DIRECTLY ON GROUND SHALL:
- A) BE WATERTIGHT.
  - B) BE CONSTRUCTED OF APPROVED TYPE DENSE, NON-ABSORBENT AND NON-CORROSIVE MATERIALS.
  - C) BE ADEQUATELY REINFORCED.
  - D) BE PROVIDED WITH AN APPROVED FLANGED FLOOR DRAIN MADE OF CAST IRON, BRASS OR OTHER APPROVED MATERIAL DESIGNED TO MAKE WATERTIGHT JOINT IN FLOOR.
  - E) HAVE SMOOTH, IMPERVIOUS AND DURABLE SURFACES.
  - F) HAVE CURBS EXTENDING AT LEAST (3) INCHES ABOVE THE FINISHED THRESHOLD BEFORE ANY WOOD SUPERSTRUCTURE MAY BE ADDED.

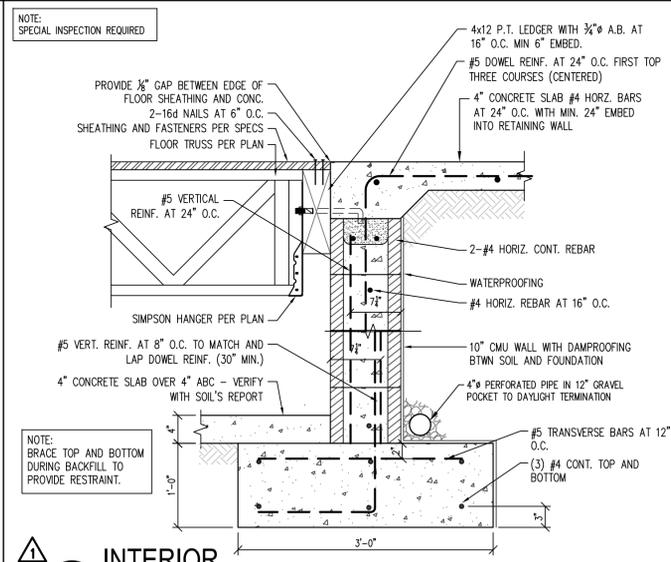
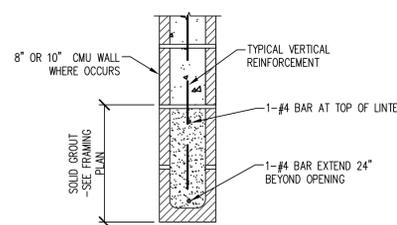


12 RECESSED SHOWER DETAIL

NOT TO SCALE

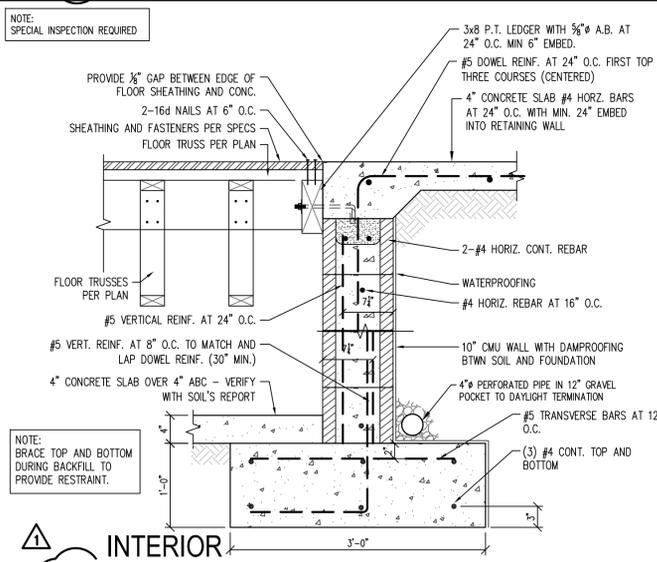
9 MASONRY LINTEL

SCALE: 1"=1'-0"



10 INTERIOR CMU BASEMENT WALL (TRUSSES PERP.)

NOT TO SCALE



11 INTERIOR CMU BASEMENT WALL (TRUSSES PAR.)

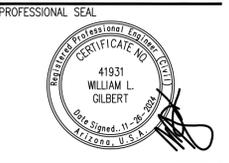
NOT TO SCALE

13 NOT USED

SIVARAJAN RESIDENCE  
LONE MOUNTAIN VISTAS - LOT 93

7899 EAST MARY SHARON DRIVE  
SCOTTSDALE, ARIZONA 85266

Gilbert Structural LLC  
414 East Southern Avenue  
Tempe, Arizona 85282  
Office 480-398-8144



REVISIONS

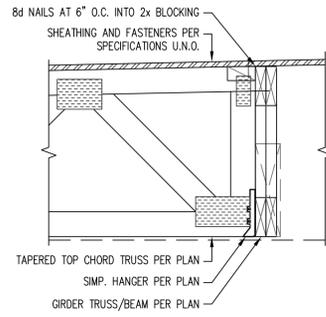
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PROJECT NUMBER: \_\_\_\_\_  
DATE: 11.26.2024

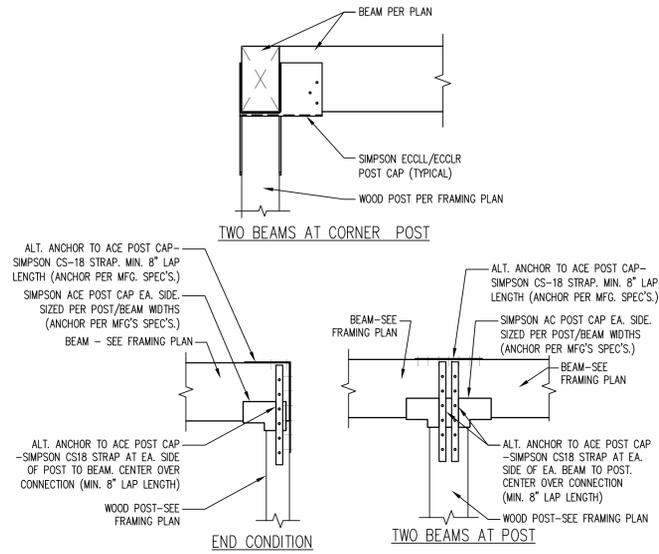
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STRUCTURAL DETAILS  
SHEET NUMBER:

SD1A

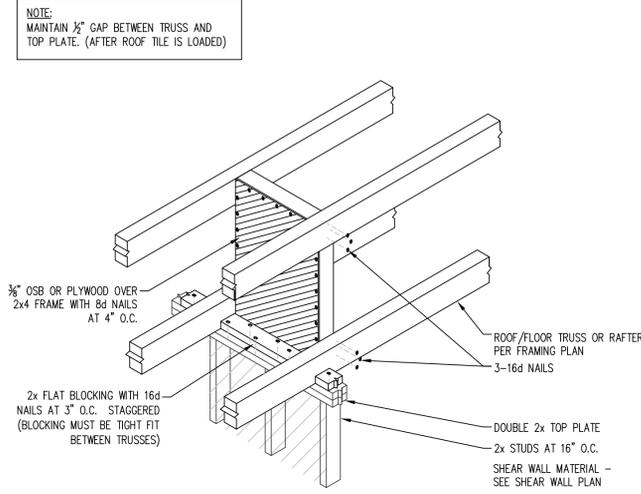
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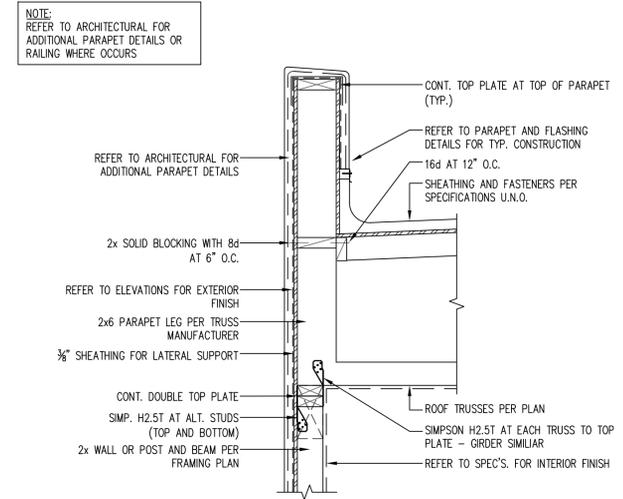
1 ROOF TRUSS TO GIRDER/BEAM CONN.  
SCALE: 1" = 1'-0"



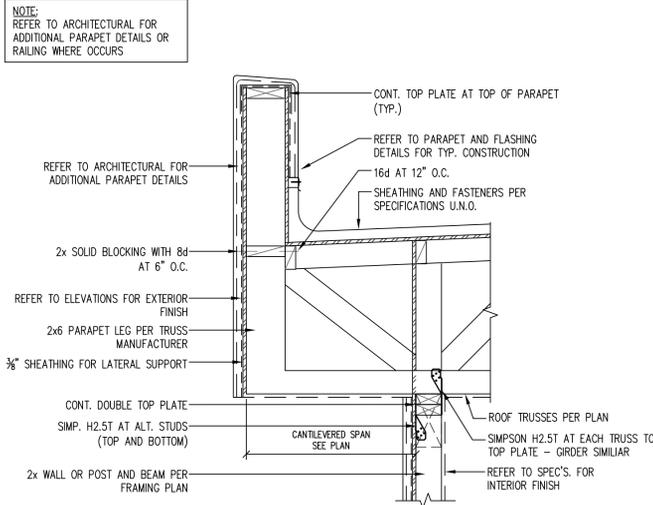
2 TYPICAL BEAM / POST CONNECTION  
NOT TO SCALE



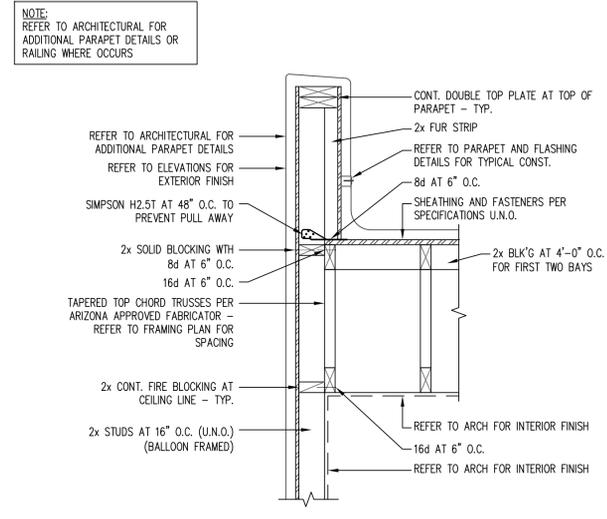
3 SHEAR TRANSFER AT NONBEARING WALL  
NOT TO SCALE



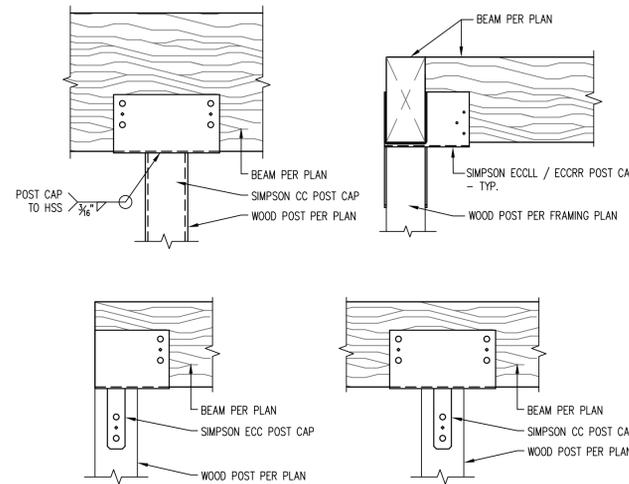
4 PERP. TRUSSES AT PARAPET WALL  
SCALE: 1" = 1'-0"



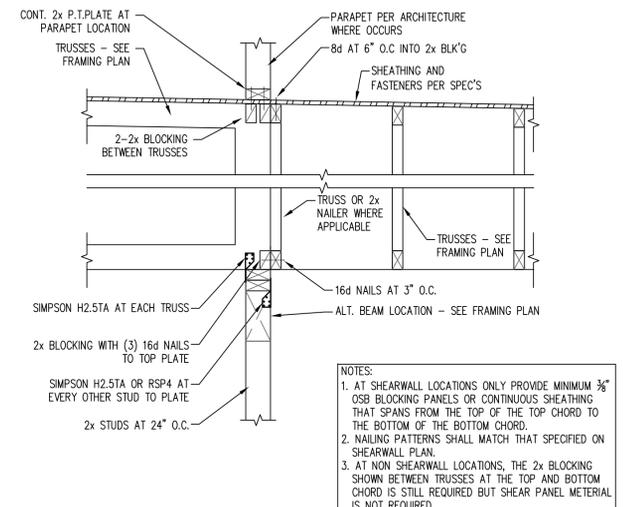
5 CANT. PERP. TRUSSES AT PARAPET WALL  
SCALE: 1" = 1'-0"



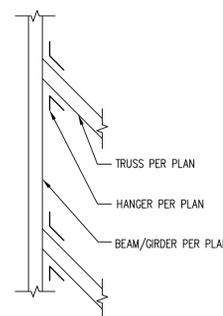
6 PARALLEL TRUSSES AT PARAPET WALL / RAILING  
SCALE: 1" = 1'-0"



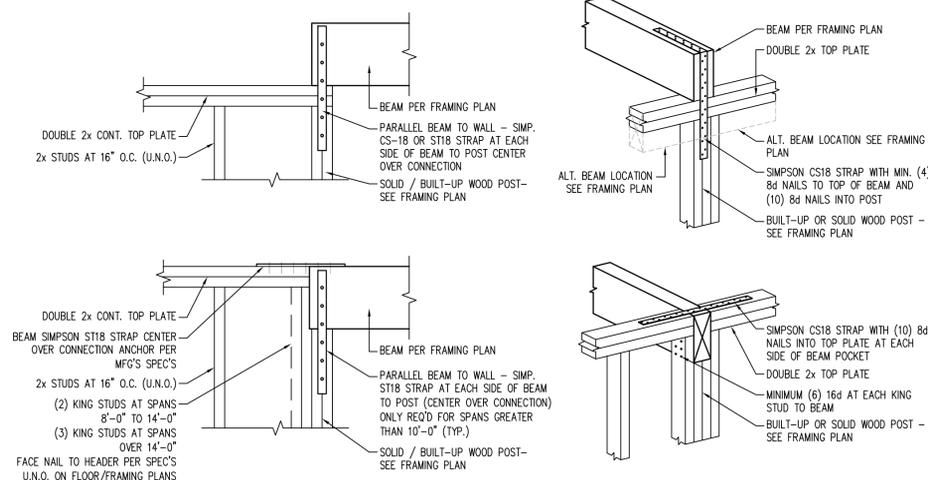
7 TYPICAL BEAM / POST CONNECTION  
NOT TO SCALE



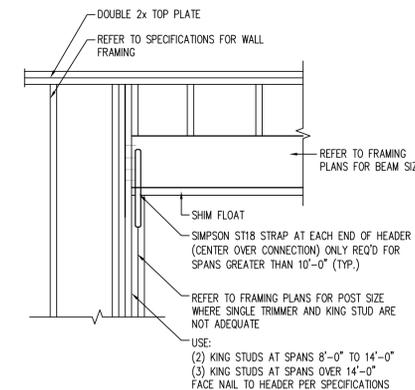
8 PERP. / PAR. ROOF TRUSSES AT WALL  
SCALE: 3/4" = 1'-0"



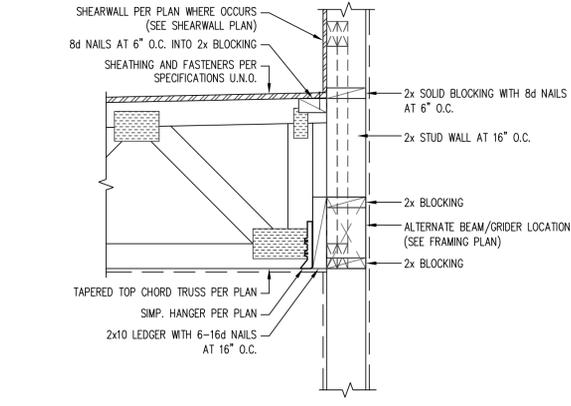
9 SKEWED TRUSS TO BEAM/GIRDER  
SCALE: 1" = 1'-0"



10 BEAM AT WALL CONNECTIONS  
NOT TO SCALE



11 HEADER CONNECTION AT WALLS  
SCALE: 1" = 1'-0"



12 ROOF TRUSS TO LEDGER/GIRDER AT WALL  
SCALE: 1" = 1'-0"

**SIVARAJAN RESIDENCE**  
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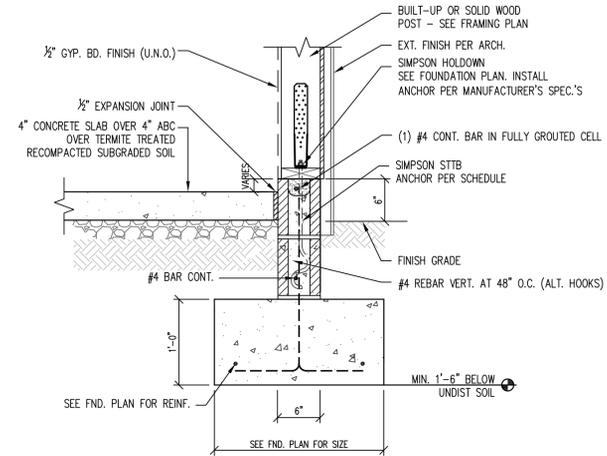
NO.	REVISIONS
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PROJECT NUMBER:  
DATE: 11.26.2024

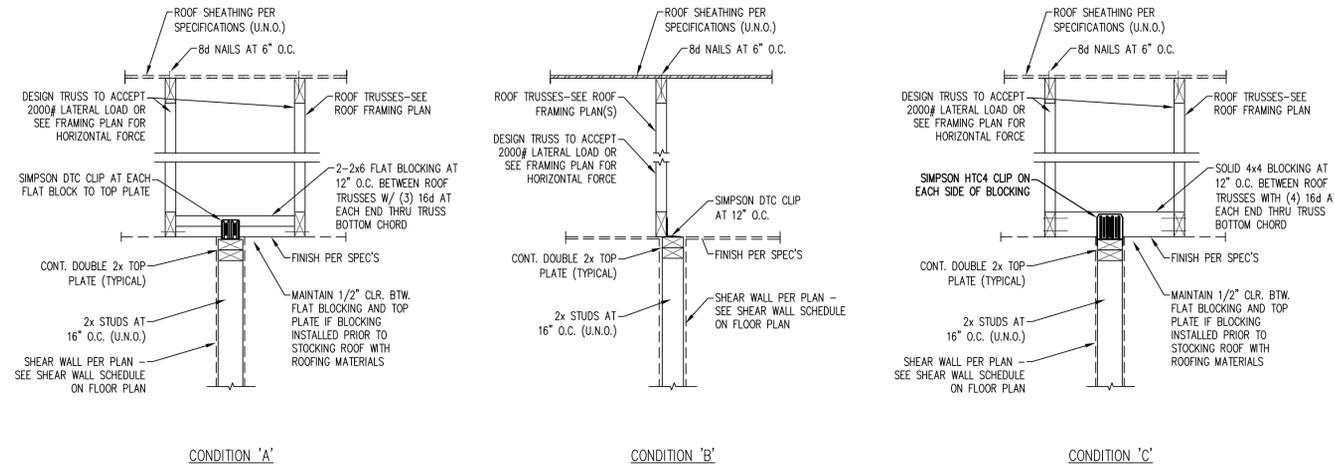
SHEET TITLE:  
**STRUCTURAL DETAILS**  
SHEET NUMBER:

**SD2**

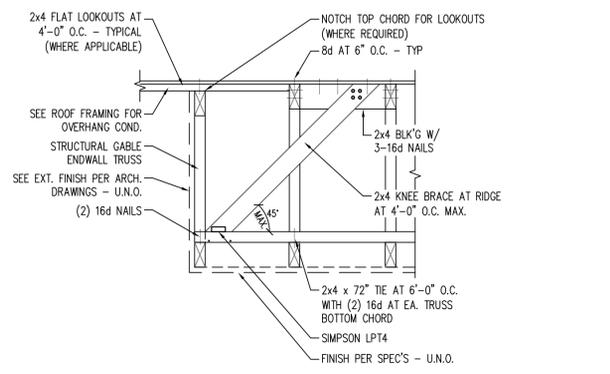
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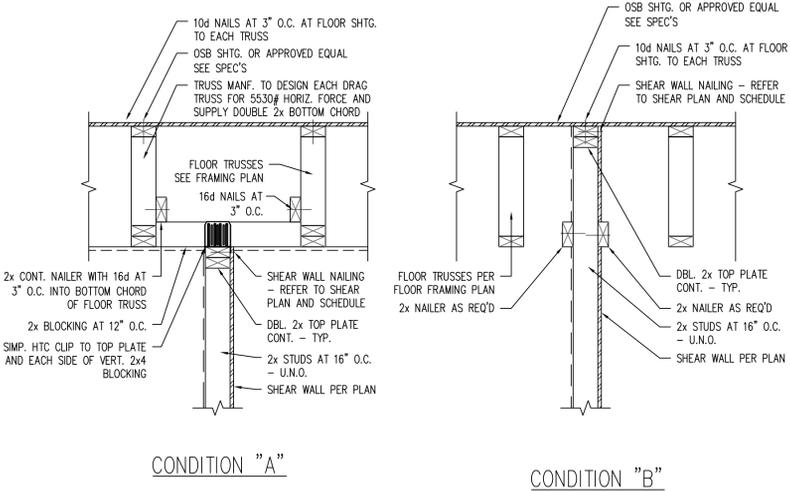
**1** HTT5 HOLDOWN AT EXTERIOR STEM WALL  
NOT TO SCALE



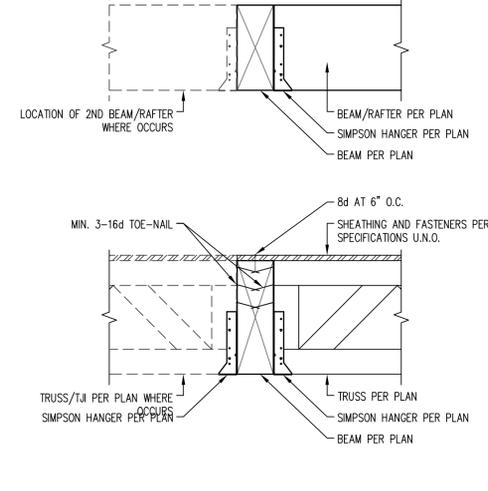
**2** TRUSSES / WALL  
TYP. SHEAR TRANSFER CONDITIONS  
NOT TO SCALE



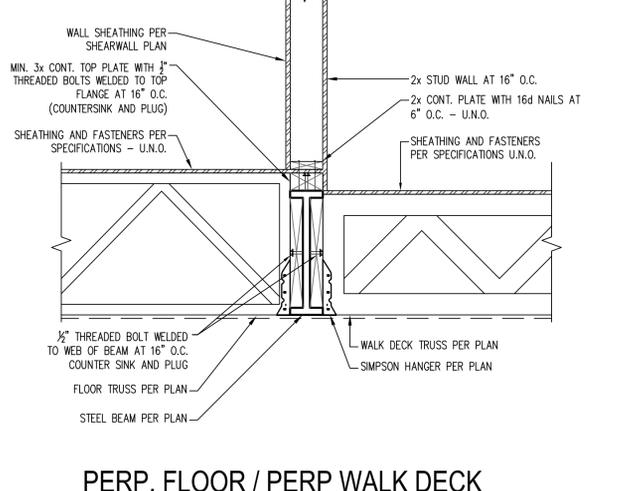
**3** TYPICAL GABLE END TRUSS  
SCALE: 1" = 1'-0"



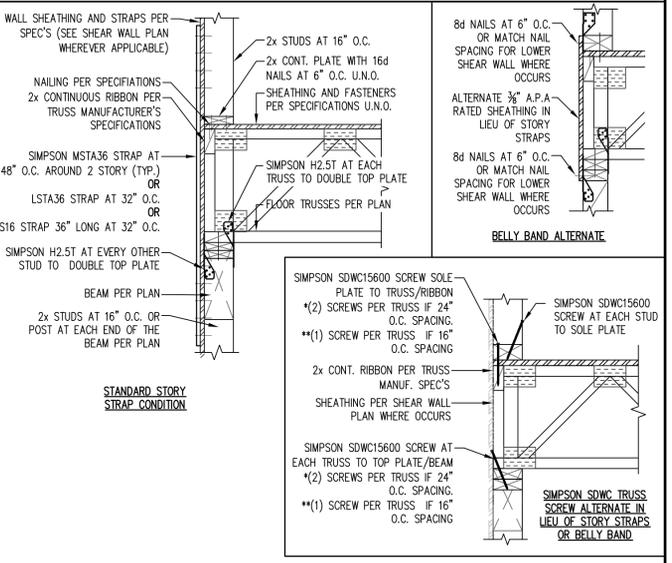
**4** FLOOR TRUSSES AT INT. SHEAR WALL  
SCALE: 3/4" = 1'-0"



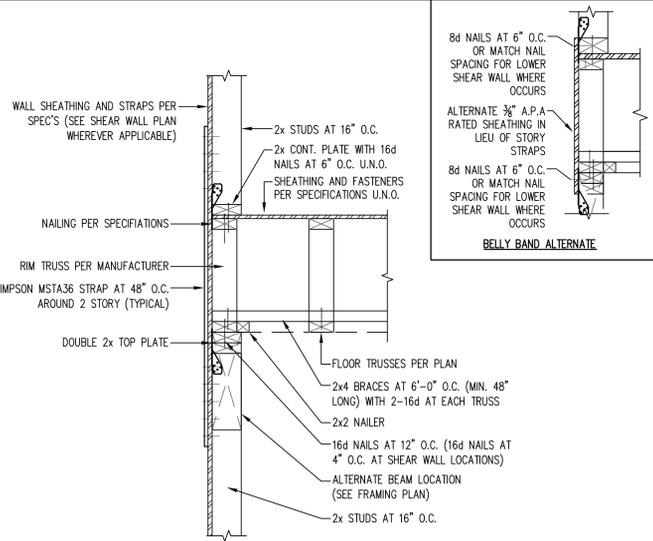
**5** BEAM / TRUSS / RAFTER TO BEAM  
SCALE: 1" = 1'-0"



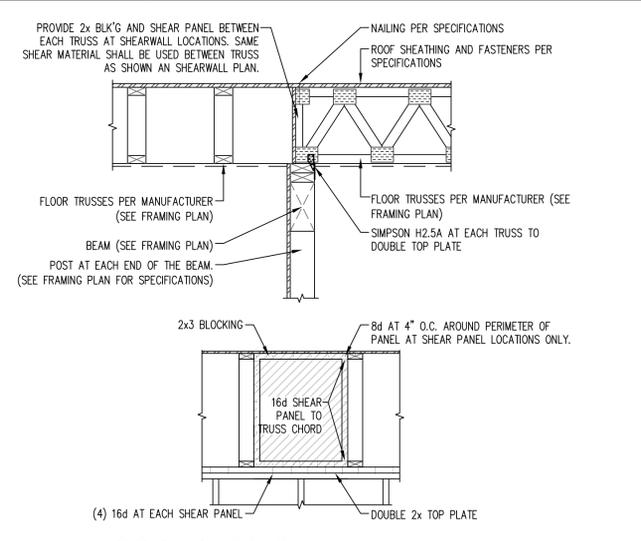
**6** PERP. FLOOR / PERP WALK DECK  
TRUSS TO STEEL BEAM CONNECTION  
SCALE: 1" = 1'-0"



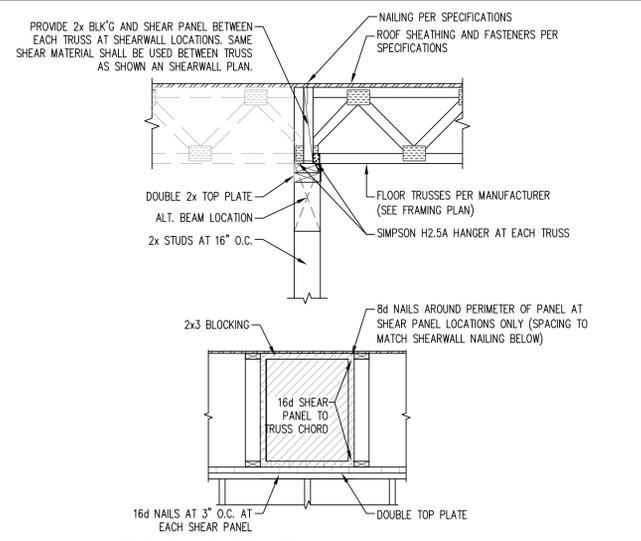
**7** FLOOR TRUSS AT WALL / BEAM (PERP.)  
SCALE: 1" = 1'-0"



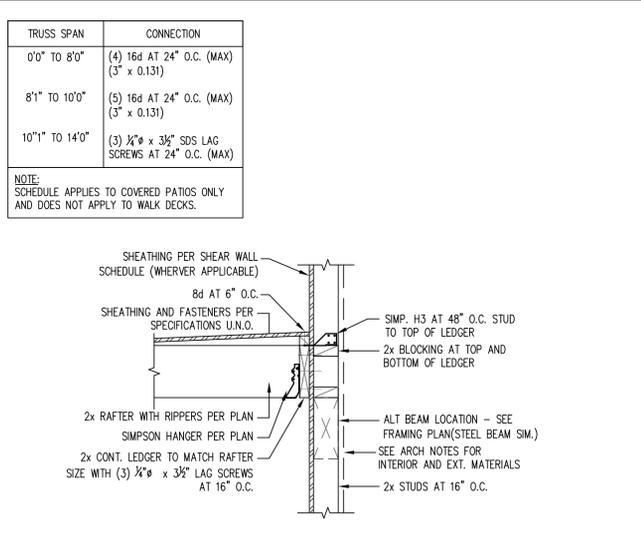
**8** FLOOR TRUSS AT BEAM / WALL (PARALLEL)  
SCALE: 1" = 1'-0"



**9** FLOOR TRUSSES  
AT BEAM / WALL (PAR. / PERP.)  
NOT TO SCALE



**10** FLOOR TRUSSES  
AT INTERIOR BEARING WALL / BEAM  
NOT TO SCALE



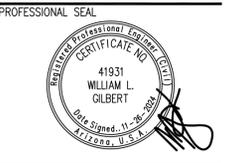
**11** RAFTERS TO LEDGER AT WALL / BEAM  
SCALE: 1" = 1'-0"

TRUSS SPAN	CONNECTION
0'0" to 8'0"	(4) 16d AT 24" O.C. (MAX) (3" x 0.131)
8'1" to 10'0"	(5) 16d AT 24" O.C. (MAX) (3" x 0.131)
10'1" to 14'0"	(3) 1/2" x 3/8" SDS LAG SCREWS AT 24" O.C. (MAX)

NOTE: SCHEDULE APPLIES TO COVERED PATIOS ONLY AND DOES NOT APPLY TO WALK DECKS.

**SIVARAJAN RESIDENCE**  
**LONE MOUNTAIN VISTAS - LOT 93**  
7899 EAST MARY SHARON DRIVE  
SCOTTSDALE, ARIZONA 85266

Gilbert Structural LLC  
414 East Southern Avenue  
Tempe, Arizona 85282  
Office 480-398-8144

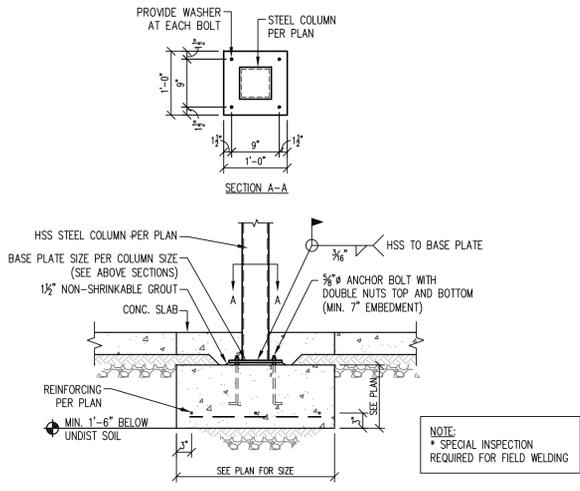


REVISIONS  
1  
2  
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PROJECT NUMBER:  
DATE: 11.26.2024

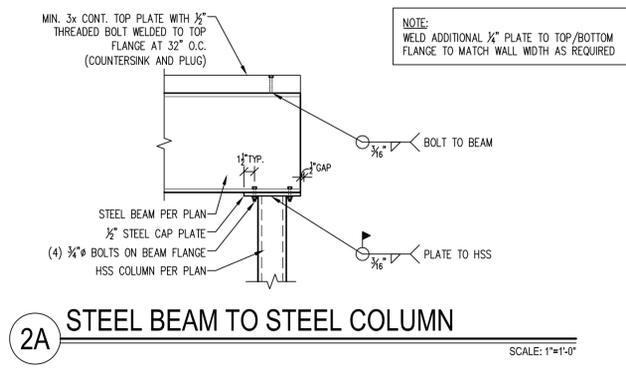
SHEET TITLE:  
**STRUCTURAL DETAILS**  
SHEET NUMBER:

**SD3**

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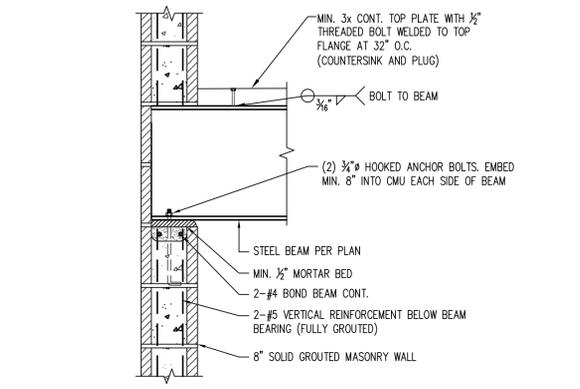


**1 HSS COLUMN BASE PLATE AND FOOTING**  
SCALE: 3/4" = 1'-0"

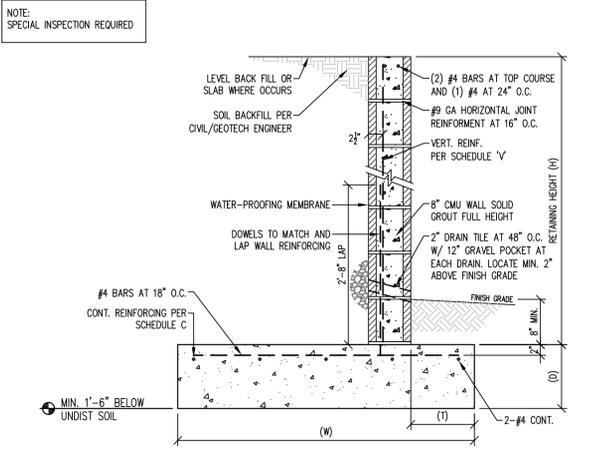


**2A STEEL BEAM TO STEEL COLUMN**  
SCALE: 1" = 1'-0"

**2 NOT USED**  
SCALE: 1" = 1'-0"

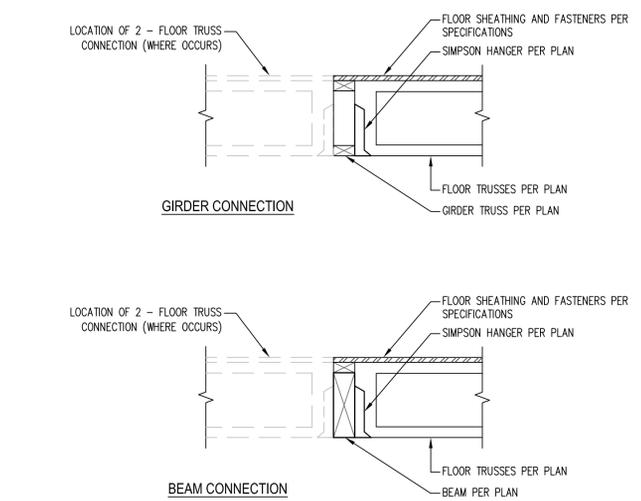


**3 STEEL BEAM AT CMU WALL**  
SCALE: 1" = 1'-0"

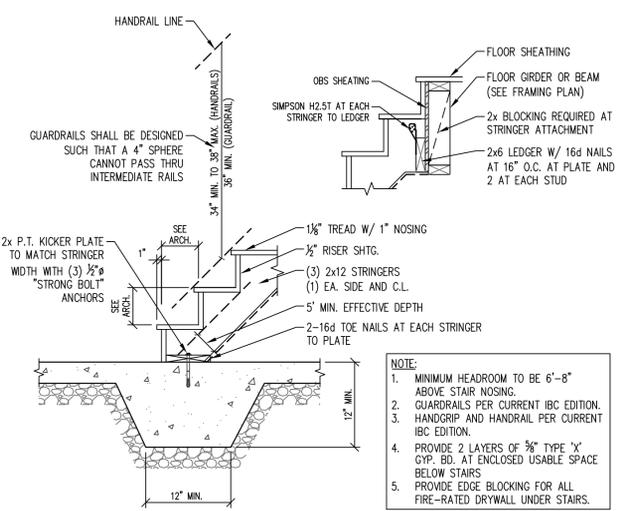


**4 CMU RETAINING WALL**  
SCALE: 3/4" = 1'-0"

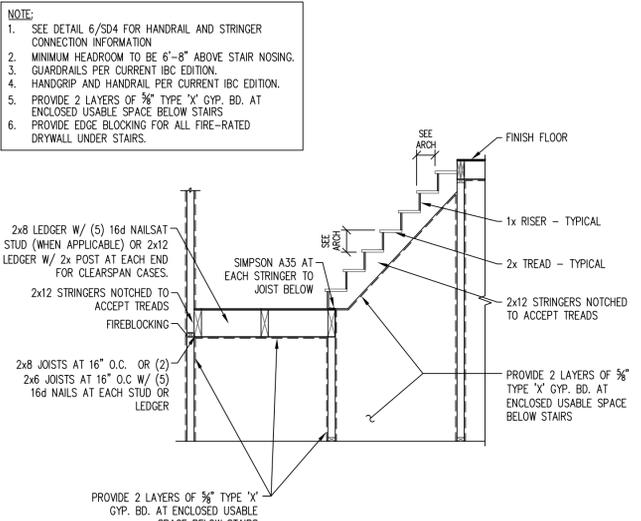
RETAINING HT.	FOOTING SIZE	VERT. REIN.	CONC. REIN.
2'-0" OR LESS	0'-8" - 2'-0"	#4 AT 32" O.C.	3 - #4
4'-0" OR LESS	0'-8" - 3'-10"	#4 AT 32" O.C.	3 - #4
6'-0" OR LESS	10" - 5'-8"	#5 AT 16" O.C.	5 - #4



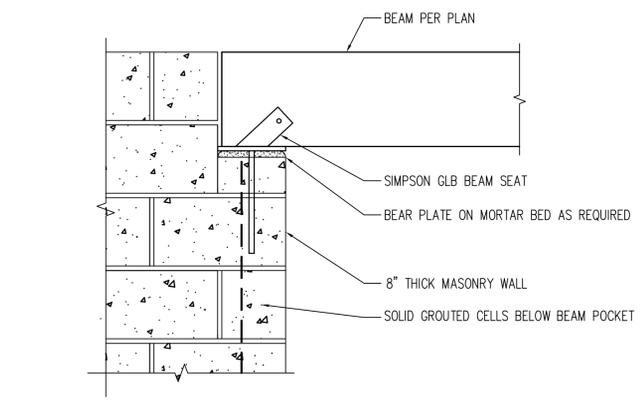
**5 FLOOR TRUSSES AT BEAM OR GIRDER**  
NOT TO SCALE



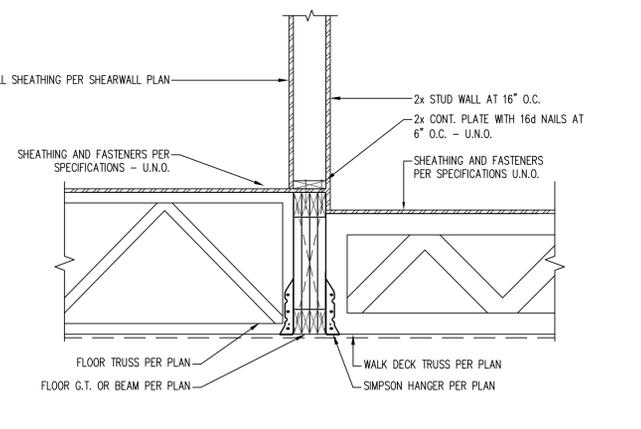
**6 TOP AND BOTTOM STAIR CONNECTION**  
NOT TO SCALE



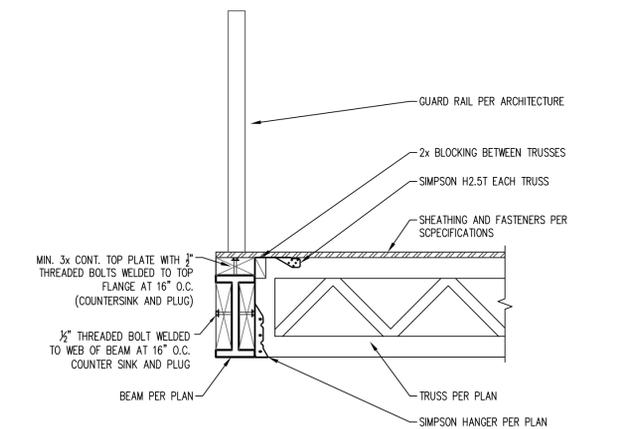
**7 TYPICAL STAIR SECTION**  
NOT TO SCALE



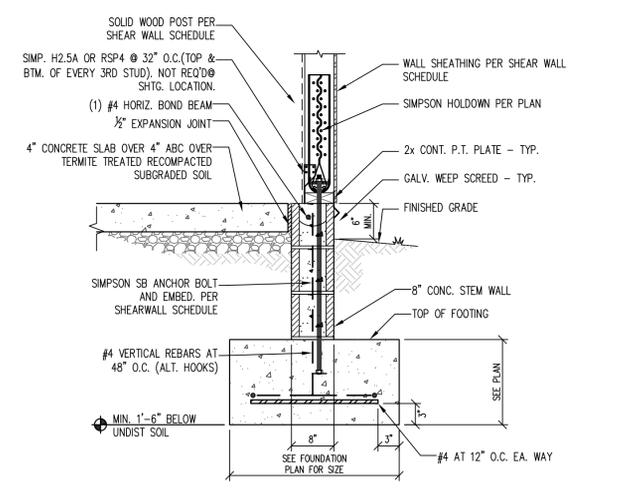
**8 BEAM AT MASONRY WALL**  
NOT TO SCALE



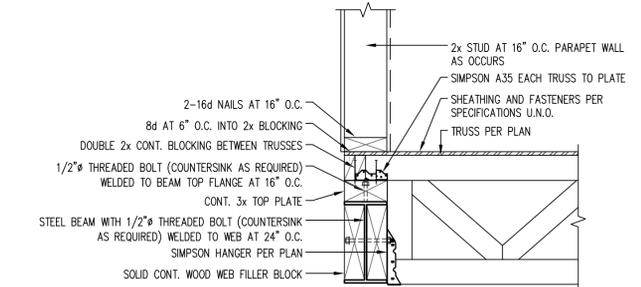
**9 PERP. FLOOR / PERP WALK DECK TRUSS TO GIRDER / BEAM CONNECTION**  
SCALE: 1" = 1'-0"



**10 TRUSSES AT STEEL BEAM**  
SCALE: 1" = 1'-0"



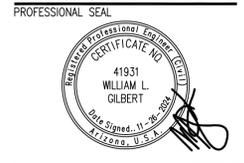
**11 SIMPSON HTT5KT HOLDOWN TYPE ANCHORAGE AT CMU STEM WALL & FTNG.**  
SCALE: 3/4" = 1'-0"



**12 ROOF TRUSSES TO STEEL BEAM**  
NOT TO SCALE

**SIVARAJAN RESIDENCE**  
**LONE MOUNTAIN VISTAS - LOT 93**  
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REVISIONS

1	CITY COMMENTS	2.3.2025
2		
3		
4		
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PROJECT NUMBER:  
DATE: 11.26.2024

STRUCTURAL DETAILS  
SHEET NUMBER:  
**SD4**

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