17-802 MIAKHAIL

PLANNING APPROVAL SET

A. 001 Specifications
A. 002 Compositions

A. 100 Site plan

A. 104 Main floor plan
A. 105 First floor plan
A. 106 Roof plan
A. 200 West elevation
A. 201 North elevation
A. 202 East elevation
A. 203 South elevation
A. 300 Cross section 1
A. 301 Cross section 2
A. 302 Longitudinal section
A. 350 Perspectives

NOTE: THE ENTIRE DWELLING WILL BE FITTED WITH A FIRE SPRINKLER SYSTEM AND THE PLAN WILL BE A DEFERRED SUBMITTAL.

ATTACHMENT V

* THESE PLANS ARE NOT FOR CONSTRUCTION.

BONE STRUCTURE®

THE FOLLOWING PLANS, PROVIDED BY **BONE STRUCTURE**, ARE FOR INFORMATION REGARDING THE CONSTRUCTION OF THE PROJECT BY A LICENSED DEALER. **BONE STRUCTURE** IS THE SUPPLIER OF A STRUCTURAL SYSTEM THAT INCLUDES THE ANCHORS NECESSARY FOR THE EXTERIOR AND INTERIOR FINISHING. ALL OTHER SYSTEMS ARE SHOWN ONLY FOR UNDERSTANDING AND ARE UNDER THE RESPONSIBILITY OF THE BUILDER.

DATE : 2017/09/19

GENERAL NOTES / BUILDING CODE REQUIREMENTS

2013 CALIFORNIA ENERGY EFFICIENCY STANDARD CODE

1. ENERGY

1.1. ALL SYSTEMS, EQUIPMENT AND/OR BUILDING COMPONENTS SHALL COMPLY WITH THE APPLICABLE MANUFACTURER PROVISIONS AND INSTALLATION PROVISIONS OF TITLE 24, PART 6, CHAPTER 2, SECTIONS 110.1 THROUGH 110.10.
1.2. ANY APPLIANCE REGULATED BY THE APPLIANCE EFFICIENCY REGULATIONS, TITLE 20 CALIFORNIA CODE OF REGULATIONS, SECTION 1601 ET SEQ., MAY BE INSTALLED ONLY IF THE APPLIANCE FULLY COMPLIES WITH SECTION 1608 (a) OF THOSE REGULATIONS . (TITLE 24, PART 6, CHAPTER 2, SECTION 110.1)
1.3. SERVICE WATER-HEATING SYSTEMS THAT HAVE A TOTAL CAPACITY GREATER THAN 167,000 BTH/HR, SHALL HAVE SEPARATE REMOTE HEATERS, HEAT EXCHANGERS, OR BOOSTERS TO SUPPLY HIGHER TEMPERATURE AT OUTLETS THAT REQUIRE HIGHER THAN SERVICE WATER TEMPERATURES AS LISTED IN THE 1995 ASHRAE HANDBOOK. (TITLE 24, PART 6, CHAPTER 2, SECTION 110.3).
1.4. CONTROLS FOR SERVICE WATER-HEATING SYSTEMS SHALL LIMIT THE OUTLET TEMPERATURE AT PUBLIC LAVATORIES TO 110-DEGREES FAHRENHEIT. (TITLE 24, PART 6, CHAPTER 2, SECTION 110.3)
1.5. SPACE CONDITIONING EQUIPMENT SHALL MEET THE EFFICIENCY STANDARDS SPECIFIED IN TITLE 24, PART 6, CHAPTER 2, SECTION 110.2.
1.6. PILOT LIGHTS SHALL BE PROHIBITED (TITLE 24, PART 6, CHAPTER 2, SECTION 110.5) FOR: (A) FAN-TYPE CENTRAL FURNACES (B) HOUSEHOLD COOKING APPLIANCES, EXCEPT APPLIANCES WITHOUT AN ELECTRICAL SUPPLY VOLTAGE CONNECTION AND IN WHICH EACH PILOT CONSUMES LESS THAN 150- BTH/HR. (C) POOL HEATERS (D) SPA HEATERS
1.7. MANUFACTURED FENESTRATION PRODUCTS AND EXTERIOR DOORS SHALL HAVE AIR INFILTRATION RATES NOT EXCEEDING 0.3CFM/SQFT OF WINDOW AREA, 0.3CFM/SQFT OF RESIDENTIAL DOOR AREA, 0.3CFM/SQFT OF NON-RESIDENTIAL SINGLE DOOR AREA, AND 1.0CFM/SQFT OF NON-RESIDENTIAL DOUBLE DOOR AREA. (TITLE 24, PART 6, CHAPTER 2, SECTION 110.6).
1.8. FENESTRATION PRODUCTS, OTHER THAN PRODUCTS WHICH ARE REMOVED AND REINSTALLED SHALL BE CERTIFIED FOR OVERALL U-VALUES AND OVERALL SHGC, AND SHALL HAVE A TEMPORARY LABEL WHICH LISTS THE CERTIFIED U-VALUE AND SHGC, AND CERTIFIED HEAT APPLICABLE AIR INFILTRATION REQUIREMENTS ARE MET (TITLE 24, PART 6, CHAPTER 2, SECTION 110.6).
1.9. FIELD MANUFACTURED FENESTRATION PRODUCTS AND EXTERIOR DOORS, OTHER THAN UNFRAMED GLASS DOORS AND FIRE DOORS, SHALL BE CAULKED BETWEEN THE FENESTRATION PRODUCTS OR EXTERIOR DOOR AND THE BUILDING, AND SHALL BE WEATHERSTRIPPED. (TITLE 24, PART 6, CHAPTER 2, SECTION 110.6)
1.10. SERVICE WATER-HEATING SYSTEMS SHALL BE EQUIPPED WITH AUTOMATIC TEMPERATURE CONTROLS CAPABLE OF ADJUSTMENT FROM THE LOWEST TO HIGHEST ACCEPTABLE TEMPERATURE SETTINGS FOR THE INTENDED USE AS LISTED IN TABLE 2, CHAPTER 49 OF THE ASHRAE HANDBOOK AND HVAC APPLICATION HANDBOOK (TITLE 24, PART 6, CHAPTER 2, SECTION 110.3)
1.14. CIRCULATING SERVICE WATER-HEATING SYSTEMS SHALL HAVE A CONTROL CAPABLE OF AUTOMATICALLY TURNING OFF THE CIRCULATING PUMP WHEN HOT WATER IS NO REQUIRED. (TITLE 24, PART 6, CHAPTER 2, SECTION 110.3)
1.15. GAS FIRED HOUSEHOLD HEATING AND COOLING APPLIANCES, SHOWER HEADS, AND FAUCETS SHALL COMPLY WITH THE APPLIANCE EFFICIENCY STANDARDS.
1.16. ALL HEATING AND/OR COOLING SYSTEMS OTHER THAN WOOD STOVES SHALL HAVE AN AUTOMATIC THERMOSTAT WITH A CLOCK MECHANISM OR OTHER SETBACK MECHANISM APPROVED BY THE EXECUTIVE DIRECTOR OF THE CALIFORNIA ENERGY COMMISSION THAT SHUTS THE SYSTEM OFF DURING PEAK PERIODS OF NON-USE AND THAT ALLOWS THE BUILD OCCUPANT TO AUTOMATICALLY SET BACK THE THERMOSTAT SET POINTS FOR AT LEAST TWO PERIODS.
1.17. THERMOSTATICALLY CONTROLLED HEATING OR COOLING SYSTEMS (EXCEPT HEAT PUMPS) SHALL HAVE AN AUTOMATIC THERMOSTAT WITH A CLOCK MECHANISM WHICH CAN BE MANUALLY PROGRAMMED TO AUTOMATICALLY SET BACK THE THERMOSTAT SET POINTS FOR AT LEAST TWO PERIODS WITHIN 24 HOURS.
1.18. REFER TO MECHANICAL NOTES FOR ADDITIONAL INFORMATION.

2. INSULATION

2.1. INSULATION SHALL BE PROVIDED FOR WATER HEATERS AS FOLLOWS: (A) STORAGE GAS WATER HEATERS WITH AN ENERGY FACTOR LESS THAN 0.58 SHALL BE EXTERNALLY WRAPPED WITH INSULATION HAVING AN INSULATED THERMAL RESISTANCE OF R-12 OR GREATER (B) UNFIRED HOT WATER TANK, SUCH AS STORAGE TANKS AND BACKUP STORAGE TANKS FOR SOLAR HEATING SYSTEMS, SHALL BE EXTERNALLY WRAPPED WITH INSULATION HAVING AN INSTALLED THERMAL RESISTANCE OF R-12 OR GREATER OR HAVE INTERNAL INSULATION OF AT LEAST R-16 AND A LABEL ON THE EXTERIOR OF THE TANK SHOWING THE INSULATION R-VALUE. (C) PIPING, WHETHER BURIED OR UNBURIED, FOR RECIRCULATING SECTIONS OF DOMESTIC HOT WATER SYSTEMS, PIPING FROM THE HEATING SOURCE TO THE STORAGE TANK FOR AN INDIRECT-FIRED DOMESTIC WATER-HEATING SYSTEM AND THE FIRST 5- FEET OF HOT AND COLD WATER PIPES FROM THE STORAGE TANK FOR NON RECIRCULATING SYSTEMS AND COOLING SYSTEMS SHALL BE THERMALLY INSULATED IN SUBSECTIONS AND A AND B. (D) SOLAR WATER-HEATING SYSTEMS AND/OR COLLECTORS SHALL BE CERTIFIED BY THE SOLAR RATING AND CERTIFICATION CORPORATION. (TITLE 24, PART 6, CHAPTER 2, SECTION 150.0)
2.2. INSULATION SHALL BE CERTIFIED BY THE MANUFACTURER AS COMPLIANT WITH THE CALIFORNIA QUALITY STANDARDS FOR INSULATING MATERIAL, TITLE 24, PART 12 CHAPTERS 12&13, ARTICLE 3 “STANDARD INSULATING MATERIAL” (TITLE 24, PART 6, CHAPTER 2, SECTION 110.8).
2.3. ALL INSULATING MATERIAL SHALL BE INSTALLED IN COMPLIANCE WITH THE FLAME SPREAD RATING AND SMOKE DENSITY REQUIREMENTS OF THE CBC. (TITLE 24, PART 6, CHAPTER 2, SECTION 110.8).
2.4. WALLS SHALL BE INSULATED BETWEEN FRAMING MEMBERS WITH INSULATION HAVING AN INSTALLED THERMAL RESISTANCE OF NOT LESS THAN R-19 IN FRAMING OR THE U-FACTOR SHALL NOT EXCEED THE U-0.074 THAT RESULTS FROM INSTALLING R-19 IN A 2X6 OR GREATER WOOD FRAMED ASSEMBLY. (TITLE 24, PART 6, CHAPTER 2, SECTION 150.0).
2.5. THE MINIMUM INSTALLED WEIGHT PER SQUARE FOOT OF ANY LOOSE-FILL INSULATION SHALL CONFORM WITH THE INSULATION MANUFACTURER’S LABELED R-VALUE. (TITLE 24, PART 6, CHAPTER 7, SECTION 150.0)
2.6. ALL NEW CEILINGS AND ATTICS SHALL BE INSULATED WITH A MINIMUM THERMAL RESISTANCE OF NOT LESS THAN R-30. THE ATTIC ACCESS SHALL BE GASKETED TO PREVENT AIR LEAKAGE. (TITLE 24, PART 6, CHAPTER 7, SECTION 150.0)
2.7. MATERIAL USED FOR SLAB EDGE INSULATION SHALL MEET THE FOLLOWING MINIMUM SPECIFICATIONS: (A) WATER ABSORPTION RATE NO GREATER THAN 0.3 PERCENT (B) WATER VAPOR PERMEANCE NO GREATER THAN 2.0 PERM/INCH(C.) CONCRETE SLAB PERIMETER INSULATION MUST BE PROTECTED FROM PHYSICAL DAMAGE AND ULTRAVIOLET LIGHT DETERIORATION (TITLE 24, PART 6, CHAPTER 7, SECTION 150.0)
2.8. DUCT INSULATION R-VALUE RATINGS: ALL DUCT INSULATION PRODUCT R-VALUES SHALL BE BASED ON INSULATION ONLY (EXCLUDING AIR FILMS, VAPOR RETARDER, OR OTHER DUCT COMPONENTS) AND TESTED c-VALUES AT 75 F DEGREES MEAN TEMPERATURE AT THE INSTALLED THICKNESS, IN ACCORDANCE WITH ASTM C518 OR ASTM C177, INCORPORATED HEREIN BY REFERENCE, AND CERTIFIED PURSUANT TO SECTION 110.8. (TITLE 24, PART 6, CHAPTER 7, SECTION 150.0)
2.9. RAISED FLOORS SEPARATING CONDITIONED SPACES FROM UNCONDITIONED SPACES SHALL BE INSULATED BETWEEN FRAMING MEMBERS WITH INSULATION HAVING AND INSTALLED THERMAL RESISTANCE OF R-19. (TITLE 24, PART 6, CHAPTER 7, SECTION 150.0)
2.10. ALL CONTINUOUSLY CIRCULATING DOMESTIC HEATING OR HOT WATER PIPING SHALL BE INSULATED AS REQUIRED BY THE PLUMBING DIVISION.

3. LIGHTING (TITLE 24, PART 6, CHAPTER 7, SECTION 110.9)

3.1. GENERAL LIGHTING IN KITCHEN AND BATHROOMS SHALL HAVE AN EFFICIENCY OF NOT LESS THAN 25 LUMENS/WATT.
3.2. HIGH EFFICACY LUMINAIRES FOR RESIDENTIAL LIGHTING SHALL CONTAIN ONLY HIGH EFFICACY LAMPS AND SHALL NOT CONTAIN MEDIUM SCREW BASE SOCKET (E24/E26). A HIGH EFFICACY LAMP HAS A LAMP EFFICACY THAT IS NOT LOWER THAN THE EFFICACIES CONTAINED IN TABLE 150-C. BALLASTS FOR LAMPS RATED 13 WATTS OR GREATER SHALL BE ELECTRONIC AND SHALL HAVE AN OUTPUT FREQUENCY NOT LESS THAN 20 KHZ. EXCEPTION TO 150(K) 1: HIGH INTENSITY DISCHARGE LUMINAIRES CONTAINING HARD WIRED ELECTROMAGNETIC BALLASTS IN MEDIUM SCREW SOCKETS SHALL BE CONSIDERED HIGH EFFICACY FOR THE PURPOSES OF MEETING SECTION 150(K)6, PROVIDED THEY MEET EFFICACIES CONTAINED IN TABLE 150-C. NOTE: TO DETERMINE THE MINIMUM LAMP EFFICACY CATEGORY ONLY THE WATTS OF THE LAMP (NOT BALLAST) ARE TO BE CONSIDERED.
3.3. PERMANENTLY INSTALLED LUMINAIRES IN KITCHENS SHALL BE HIGH EFFICACY LUMINAIRES. EXCEPTION TO SECTION 150(K)2: UP TO 50-PERCENT OF THE THE TOTAL RATED WATTAGE OF PERMANENTLY INSTALLED LUMINAIRES IN KITCHEN MAY BE IN LUMINAIRES THAT ARE NOT HIGH-EFFICACY LUMINAIRES, PROVIDED THAT THESE LUMINAIRES ARE CONTROLLED BY SWITCHES SEPARATE FROM THOSE CONTROLLING THE HIGH EFFICACY LUMINAIRES. THE WATTAGE OF HIGH EFFICACY LUMINAIRES SHALL BE THE TOTAL NOMINAL RATED WATTAGE OF THE INSTALLED HIGH EFFICACY LAMP(S). THE WATTAGE OF LUMINAIRES SHALL BE DETERMINED AS SPECIFIED BY SECTION 130(C).
3.4. PERMANENTLY INSTALLED LUMINAIRES IN BATHROOMS, GARAGES, LAUNDRY ROOMS, AND UTILITY ROOMS SHALL BE HIGH EFFICACY LUMINAIRES. EXCEPTION: PERMANENTLY INSTALLED LUMINAIRES THAT ARE NOT HIGH EFFICACY SHALL BE ALLOWED PROVIDED THAT THEY ARE CONTROLLED BY AN OCCUPANT SENSOR(S) CERTIFIED TO COMPLY WITH SECTION 119(D). SUCH MOTION SENSORS SHALL NOT HAVE A CONTROL THAT ALLOWS LUMINARIES TO BE TURNED ON AUTOMATICALLY OR THAT HAS AN OVERRIDE ALLOWING LUMINARIES TO BE ALWAYS ON.
3.5. PERMANENTLY INSTALLED LUMINAIRES LOCATED OTHER THAN IN KITCHENS, BATHROOMS, GARAGES, LAUNDRY ROOMS, AND UTILITY ROOMS SHALL BE HIGH EFFICACY LUMINAIRES. EXCEPTION 1 TO SECTION 150(K)5: PERMANENTLY INSTALLED LUMINAIRES THAT ARE NOT HIGH EFFICACY LUMINAIRES SHALL BE ALLOWED PROVIDED THEY ARE CONTROLLED BY A DIMMER SWITCH. EXCEPTION 2 TO SECTION 150(K)5: PERMANENTLY INSTALLED LUMINAIRES THAT ARE NOT HIGH EFFICACY LUMINAIRES SHALL BE ALLOWED PROVIDED THEY ARE CONTROLLED BY AN OCCUPANT SENSOR(S) CERTIFIED TO COMPLY WITH SECTION 119(D). SUCH MOTION SENSORS SHALL NOT HAVE A CONTROL THAT ALLOWS LUMINARIES TO BE TURNED ON AUTOMATICALLY OR THAT HAS AN OVERRIDE ALLOWING LUMINARIES TO BE ALWAYS ON. EXCEPTION 3 TO SECTION 150(K)5: PERMANENTLY INSTALLED LUMINAIRES THAT ARE NOT HIGH EFFICACY LUMINAIRES SHALL BE ALLOWED IN CLOSETS LESS THAN 70 SQUARE FEET. NOTE: LIGHTING IN AREAS ADJACENT TO THE KITCHEN, INCLUDING BUT NOT LIMITED TO DINING AND NOOK AREAS, ARE CONSIDERED KITCHEN LIGHTING IF THEY ARE NOT SEPARATELY SWITCHED FROM KITCHEN LIGHTING.
3.6. LUMINAIRES RECESSED INTO INSULATED CEILINGS SHALL BE APPROVED FOR ZERO CLEARANCE INSULATION COVER (IC BY UNDERWRITERS LABORATORIES OR BY OTHER TESTING/RATING LABORATORIES RECOGNIZED BY THE INTERNATIONAL CONFERENCE OF BUILDING OFFICIALS, AND SHALL INCLUDE A LABEL CERTIFYING AIR TIGHT (AT) OR SIMILAR DESIGNATION TO SHOW AIR LEAKAGE LESS THAN 2.0 CFM AT 75 PASCALS (OR 1.57 LBS/ SQUARE FEET) WHEN TESTED IN ACCORDANCE WITH ASTM E283, AND SHALL BE SEALED WITH A GASKET OR CAULK BETWEEN THE HOUSING AND CEILING.
3.7. LUMINAIRES PROVIDING OUTDOOR LIGHTING AND PERMANENTLY MOUNTED TO A RESIDENTIAL BUILDING OR TO OTHER BUILDINGS ON THE SAME LOT SHALL BE HIGH EFFICACY LUMINAIRES. EXCEPTION 1: PERMANENTLY INSTALLED OUTDOOR LUMINARIES THAT ARE NOT HIGH EFFICACY SHALL BE ALLOWED PROVIDED THAT THEY ARE CONTROLLED BY A MOTION SENSOR(S) WITH INTEGRAL PHOTO-CONTROL CERTIFIED TO COMPLY WITH SECTION 110.9(D). EXCEPTION 2: PERMANENTLY INSTALLED LUMINAIRES IN OR AROUND SWIMMING POOLS, WATER FEATURES, OR OTHER LOCATIONS SUBJECT TO ARTICLE 680 OF THE CEC NEED TO BE HIGH EFFICACY LUMINAIRES.
3.8. PERMANENTLY INSTALLED LIGHTING IN THE ENCLOSED, NON-DWELLING SPACES OF LOW- RISE RESIDENTIAL BUILDINGS WITH FOR OR MORE DWELLING UNITS SHALL BE HIGH EFFICACY LUMINAIRES. EXCEPTION TO SECTION 150(K)8: PERMANENTLY INSTALLED LUMINAIRES THAT ARE NOT HIGH EFFICACY SHALL BE ALLOWED PROVIDED THEY ARE CONTROLLED BY AN OCCUPANT SENSOR(S) CERTIFIED TO COMPLY WITH SECTION 110.9(D).

2013 CALIFORNIA BUILDING CODE

CHAPTER 7, FIRE AND SMOKE PROTECTION FEATURES

1. FIRE-RESISTANCE RATINGS AND FIRE TESTS, SECTION 703

1.1. FIRE-RESISTANCE RATINGS. THE FIRE-RESISTANCE RATING OF BUILDING ELEMENTS, COMPONENTS OR ASSEMBLIES SHALL BE DETERMINED IN ACCORDANCE WITH THE TEST PROCEDURES SET FORTH IN ASTM E 119 OR UL 262 OR IN ACCORDANCE WITH SECTION 703.3.
1.2. FIRE-RESISTANCE-RATED GLAZING. FIRE-RESISTANCE-RATED GLAZING, WHEN TESTED IN ACCORDANCE WITH ASTM E 119 OR UL 263 AND COMPLYING WITH THE REQUIREMENTS OF SECTION 707, SHALL BE PERMITTED. FIRE-RESISTANCE-RATED GLAZING SHALL BEAR A LABEL MARKED IN ACCORDANCE WITH TABLE 716.3 ISSUED BY AN AGENCY AND SHALL BE PERMANENTLY IDENTIFIED ON THE GLAZING.
1.3. MARKING AND IDENTIFICATION. FIRE WALLS, FIRE BARRIERS, FIRE PARTITIONS, SMOKE BARRIERS AND SMOKE PARTITIONS OR ANY OTHER WALL REQUIRED TO HAVE PROTECTED OPENINGS OR PENETRATIONS SHALL BE EFFECTIVELY AND PERMANENTLY IDENTIFIED WITH SIGNS OR STENCILING.

2. EXTERIOR WALLS, SECTION 705

2.1. PROJECTIONS. CORNICES, EAVE OVERHANGS, EXTERIOR BALCONIES AND SIMILAR PROJECTIONS EXTENDING BEYOND THE EXTERIOR WALL SHALL CONFORM TO THE REQUIREMENTS OF THIS SECTION AND SECTION 1406. EXTERIOR EGRESS BALCONIES AND EXTERIOR EXIT STAIRWAYS AND RAMPS SHALL ALSO COMPLY WITH SECTION 1019 AND 1026, RESPECTIVELY. PROJECTIONS SHALL NOT EXTEND ANY CLOSER TO THE LINE USED TO DETERMINE THE FIRE SEPARATION DISTANCE THAN SHOWN IN TABLE 705.2. (SECTION 705.2.3)
2.2. PROTECTED OPENINGS. WHERE OPENINGS ARE REQUIRED TO BE PROTECTED, FIRE DOORS AND FIRE SHUTTERS SHALL COMPLY WITH SECTION 716.5 AND FIRE WINDOW ASSEMBLIES SHALL COMPLY WITH SECTION 716.6. (SECTION 705.8.2)
2.3. DUCTS AND AIR TRANSFER OPENINGS. PENETRATIONS BY AIR DUCTS AND AIR TRANSFER OPENINGS IN FIRE-RESISTANCE-RATED EXTERIOR WALLS REQUIRED TO HAVE PROTECTED OPENINGS SHALL COMPLY WITH SECTION 717.

3. OPENING PROTECTIVES, SECTION 716

3.1. FIRE-RESISTANCE-RATED GLAZING. FIRE-RESISTANCE-RATED GLAZING TESTED AS PART OF FIRE-RESISTANCE-RATED WALL ASSEMBLY IN ACCORDANCE WITH ASTM E 119 OR UL 263 AND LABELED IN ACCORDANCE WITH SECTION 703.5 SHALL BE PERMITTED IN FIRE DOORS AND FIRE WINDOWS ASSEMBLIES WERE TESTED AND INSTALLED IN ACCORDANCE WITH THEIR LISTINGS AND SHALL NOT OTHERWISE BE REQUIRED TO COMPLY WITH THIS SECTION.
3.2. SAFETY GLAZING. FIRE-PROTECTION-RATED GLAZING INSTALLED IN FIRE WINDOW ASSEMBLIES IN AREAS SUBJECT TO HUMAN IMPACT IN HAZARDOUS LOCATIONS SHALL COMPLY WITH CHAPTER 24. (SECTION 716.6.3)
3.3. GLASS AND GLAZING.GLAZING IN FIRE WINDOW ASSEMBLIES SHALL BE FIRE-PROTECTION-RATED GLAZING INSTALLED IN ACCORDANCE WITH AND COMPLYING WITH THE SIZE LIMITATIONS SET FORTH IN NFPA 80. (SECTION 716.6.4)
3.4. AREA LIMITATIONS. THE TOTAL AREA OF THE GLAZING IN FIRE-PROTECTION-RATED WINDOWS ASSEMBLIES SHALL NOT EXCEED 25% OF THE AREA OF A COMMON WALL WITH ANY ROOM. (SECTION 716.6.7.2)
CALCULATED FIRE RESISTANCE, SECTION 722

CHAPTER 15, ROOF ASSEMBLIES AND ROOFTOP STRUCTURES

4. WEATHER PROTECTION, SECTION 1503

4.1. FLASHING. FLASHING SHALL BE INSTALLED IN SUCH A MANNER SO AS TO PREVENT MOISTURE ENTERING THE WALL AND ROOF THROUGH JOINTS IN COPINGS, THROUGH MOISTURE-PERMEABLE MATERIALS AND AT INTERSECTIONS WITH PARAPET WALLS AND OTHER PENETRATIONS THROUGH THE ROOF PLANE. (SECTION 1503.2)
4.2. COPING. PARAPET WALLS SHALL BE PROPERLY COPED WITH NONCOMBUSTIBLE, WEATHERPROOF MATERIALS OF A WIDTH NO LESS THAN THE THICKNESS OF THE PARAPET WALL.
4.3. ROOF DRAINAGE. DESIGN AND INSTALLATION OF ROOF DRAINAGE SYSTEM SHALL COMPLY WITH SECTION 1503 OF THIS CODE AND CHAPTER 11 OF THE CALIFORNIA PLUMBING CODE. (SECTION 1503.4)

REQUIREMENTS FOR ROOF COVERINGS, SECTION 1507

5. SOLAR PHOTOVOLTAIC PANELS/MODULES, SECTION 1511

5.1. SOLAR PHOTOVOLTAIC PANELS/MODULES INSTALLED UPON A ROOF OR AS AN INTEGRAL PART OF A ROOF ASSEMBLY SHALL COMPLY WITH THE REQUIREMENTS OF THIS CODE (SEE SECTION 3411) AND THE CALIFORNIA FIRE CODE.

CHAPTER 18, SOIL AND FOUNDATIONS

6. GEOTECHNICAL INVESTIGATION, SECTION 1803

6.1. COMPACTED FILL MATERIAL. WHEN SHALLOW FOUNDATIONS WILL BEAR ON COMPACTED FILL MATERIAL, THE COMPACTED FILL SHALL COMPLY WITH THE PROVISIONS OF AN APPROVED GEOTECHNICAL REPORT, AS SET FORTH IN SECTION 1803.
6.2. CONTRACTOR SHALL NOTIFY ARCHITECT AND OWNER OF ANY UNSTABLE OR QUESTIONABLE SOIL OR GEOLOGICAL CONDITIONS ENCOUNTERED DURING EXCAVATION.
6.3. WHERE A SOILS AND/OR GEOLOGY REPORT AND/OR GRADING PRE-INSPECTION REPORT HAS BEEN MADE, THESE DOCUMENTS SHALL BE CONSIDERED PART OF THE CONSTRUCTION DOCUMENTS, AND CONTRACTOR SHALL FOLLOW ANY RECOMMENDATIONS CONTAINED THEREIN.

7. EXCAVATION, GRADING AND FILL, SECTION 1804

7.1. THE GROUND IMMEDIATELY ADJACENT TO THE FOUNDATION SHALL BE SLOPED AWAY FROM THE BUILDING AT A SLOPE OF NOT LESS THAN ONE UNIT VERTICAL IN 20 UNITS HORIZONTAL (5% SLOPE) FOR A MINIMUM DISTANCE OF 10 FEET MEASURED PERPENDICULAR TO THE FACE OF THE WALL. (CHAPTER 18, SECTION 1804)
7.2. CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE OF ALL FINISHED GRADE SURFACES, SIDEWALKS, AND PATIOS AWAY FROM STRUCTURES AND VERIFY THAT ALL AREAS AFFECTED BY CONSTRUCTION ARE PROPERLY DRAINED WITH NO PONDING.
7.3. THERE SHALL BE NO TRENCHES OR EXCAVATIONS 5-FEET OR MORE IN DEPTH INTO WHICH A PERSON IS REQUIRED TO DESCEND. OTHERWISE, CONTRACTOR SHALL OBTAIN NECESSARY PERMIT FROM THE STATE OF CALIFORNIA DIVISION OF INDUSTRIAL SAFETY PRIOR TO ISSUANCE OF A BUILDING OR GRADING PERMIT. (HSC 17922.5, EFF. 3/6176).

8. DAMPPROOFING AND WATERPROOFING, SECTION 1805

8.1. WALLS. DAMPPROOFING MATERIALS FOR WALLS SHALL BE INSTALLED ON THE EXTERIOR SURFACE OF THE WALL, AND SHALL EXTEND FROM THE TOP OF THE FOOTING TO ABOVE GROUND LEVEL. (ARTICLE 1805.2.2)
8.2. CONTRACTOR SHALL INSTALL FOUNDATION PERIMETER DRAIN AND SUBDRAIN SYSTEM USING 4" MIN. DIAMETER PVC SCHEDULE 40 PERFORATED PIPE SLOPED TO DRAIN AND CONNECTED UNDERGROUND TO APPROVED STORM DRAINAGE SYSTEM OR STREET. PIPE SHALL BE SURROUNDED WITH A 2 FOOT DIAMETER OF 3/4-INCH WASHED GRAVEL AND WRAPPED WITH A FILTRATION FABRIC. DIRECTION OF HOLES IN PIPE SHOULD FACE DOWNWARD. (FOUNDATION DRAIN, SECTION 1805.4.2)
8.3. FLOORS. DAMPPROOFING MATERIALS FOR FLOORS SHALL BE INSTALLED BETWEEN THE FLOOR AND THE BASE COURSE REQUIRED BY SECTION 1805.4.1, EXCEPT A SEPARATE FLOOR IS PROVIDED ABOVE A CONCRETE SLAB. WHEN INSTALLED BENEATH THE SLAB, DAMPPROOFING SHALL CONSISTS OF NOT LESS THAN 6-MIL POLYETHYLENE WITH JOINTS LAPPED NOT LESS THAN 6IN, OR OTHER APPROVED METHODS OR MATERIALS. (ARTICLE 1805.2.1)

9. FOUNDATION WALLS, RETAINING WALLS AND EMBEDDED POSTS AND POLES, SECTION 1807

9.1. ANY LANDSCAPE OR PLANTER RETAINING WALLS AGAINST EARTH WHICH ARE SPECIFIED WITHOUT PERIMETER DRAINS SHALL BE PROVIDED WITH ADEQUATE WEEP HOLES SURROUNDED ON THE BACKSIDE BY A MINIMUM 6" OF GRAVEL BACKFILL AT BASE OF WALL. ALL ENCLOSED PLANTERS SHALL BE WATERPROOFED ON THE INSIDE AND SUPPLIED WITH BOTTOM DRAINS CONNECTED TO STORM DRAIN SYSTEM. (RETAINING WALLS, ARTICLE 1807.2)

10. SHALLOW FOUNDATIONS, SECTION 1809

10.1. FROST PROTECTION. EXCEPT WHERE OTHERWISE PROTECTED FROM FROST, FOUNDATION AND OTHER PERMANENT SUPPORTS OF BUILDINGS AND STRUCTURES SHALL BE PROTECTED FROM FROST.

2013 CALIFORNIA RESIDENTIAL CODE

CHAPTER 3, BUILDING PLANNING (SECTION R300)

1. FIRE-RESISTANCE CONSTRUCTION, SECTION R302

1.1. EXTERIOR WALLS. CONSTRUCTION, PROJECTIONS, OPENINGS AND PENETRATIONS OF EXTERIOR WALLS OF DWELLINGS AND ACCESSORY BUILDINGS SHALL COMPLY WITH TABLE R302.1 (1) OR DWELLINGS AND ACCESSORY BUILDINGS EQUIPPED THROUGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM INSTALLED IN ACCORDANCE WITH SECTION R313 SHALL COMPLY WITH TABLE R302.1 (2)
1.2. PARAPET CONSTRUCTION. PARAPETS SHALL HAVE THE SAME FIRE-RESISTANCE RATING AS THAT REQUIRED FOR THE SUPPORTING WALL OR WALLS. ON ANY SIDE ADJACENT TO A ROOF SURFACE, THE PARAPET SHALL HAVE NONCOMBUSTIBLE FACES FOR THE UPPERMOST 18”, TO INCLUDE COUNTERFLASHING AND COPING MATERIAL.
1.3. OPENINGS AND PENETRATIONS THROUGH THE WALLS OR CEILINGS SEPARATING THE DWELLING FROM THE GARAGE SHALL BE IN ACCORDANCE WITH SECTION R302.5.1 THROUGH R302.5.3 (SECTION R302.5) - DOOR SHALL BE EQUIPPED WITH SOLID WOOD DOORS NOT LESS THAN 1 ⅜” IN THICKNESS, SOLID OR HONEYCOMB-CORE STEEL DOORS NOT LESS THAN 1 ⅜” THICK, OR 20 MIN FIRE-RATED DOORS, EQUIPPED WITH SELF-CLOSING DEVICE AND SELF-LATCHING DEVICES. (R302.5.1)
1.4. THE GARAGE SHALL BE SEPARATED AS REQUIRED BY TABLE 302.6. OPENINGS IN GARAGE WALLS SHALL COMPLY WITH SECTION R302.5. THIS PROVISION DOES NOT APPLY TO GARAGE WALLS THAT ARE PERPENDICULAR TO THE ADJACENT DWELLING UNIT. (R302.6)
1.5. INSULATION. INSULATION MATERIAL, INCLUDING FACINGS, SUCH AS VAPOR RETARDERS AND VAPOR-PERMEABLE MEMBRANES INSTALLED WITHIN FLOOR/CEILING ASSEMBLIES, ROOF/CEILING ASSEMBLIES, WALL ASSEMBLIES, CRAWL SPACES AND ATTICS SHALL HAVE A FLAME SPREAD INDEX NOT TO EXCEED 25 WITH AN ACCOMPANYING SMOKE DEVELOPED INDEX NOT TO EXCEED 450 WHEN TESTED IN ACCORDANCE WITH ASTM E 84 OR UL 723. - FOAM PLASTIC INSULATION SHALL COMPLY WITH SECTION R316 (R302.10.1)

2. LIGHT, VENTILATION AND HEATING, SECTION R303

2.1. BATHROOM EXHAUST FANS. EACH BATHROOM CONTAINING A BATHTUB, SHOWER OR TUB/SHOWER COMBINATION SHALL BE MECHANICALLY VENTILATED FOR PURPOSES OF HUMIDITY CONTROL IN ACCORDANCE WITH THE CALIFORNIA MECHANICAL CODE, CHP 4, AND THE CALIFORNIA GREEN BUILDING STANDARDS CODE, CHP 4, DIVISION 4.5. (R303.3.1)
2.2. VENTILATION. VENTILATION RATES SHALL BE IN COMPLIANCE WITH THE CALIFORNIA MECHANICAL CODE. (R303.4)
2.3. OPENING LOCATION. OUTDOOR INTAKE AND EXHAUST OPENINGS SHALL BE LOCATED IN ACCORDANCE WITH SECTION R303.5.1 AND R303.5.2 - INTAKE SHALL BE LOCATED MIN 10 FEET FROM ANY HAZARDOUS OR NOXIOUS CONTAMINANT, 3 FEET BELOW THE CONTAMINANT SOURCE. (R303.5)
2.4. STAIRWAY ILLUMINATION. ALL INTERIOR AND EXTERIOR STAIRWAYS SHALL BE PROVIDED WITH A MEANS TO ILLUMINATE THE STAIRS, INCLUDING THE LANDING AND THE TREADS.INTERIOR - MIN 11 LUX ARTIFICIAL SOURCE. (R303.7)
2.5. LIGHT ACTIVATION. THE ILLUMINATION OF EXTERIOR STAIRWAYS SHALL BE CONTROLLED FROM INSIDE THE DWELLING UNIT. WHERE LIGHTING OUTLETS ARE INSTALLED IN INTERIOR STAIRWAYS, THERE SHALL BE A WALL SWITCH AT EACH FLOOR LEVEL TO CONTROL LIGHTING OUTLET WHERE THE STAIRWAY HAS SIX OR MORE RISERS. (R303.7.1)

3. GLAZING, SECTION R308

3.1. HUMAN IMPACT LOADS. INDIVIDUAL GLAZED AREAS, INCLUDING GLASS MIRRORS IN HAZARDOUS LOCATIONS SUCH AS THOSE INDICATED AS DEFINED IN SECTION R308.4, SHALL PASS THE TEST REQUIREMENTS OF SECTION R308.3.1 - TEST CPSC 16 CFR 1201 (R308.3)
3.2. GLAZING IN DOORS. GLAZING IN ALL FIXED AND OPERABLE PANELS OF SWINGING, SLIDING AND BIFOLD DOORS SHALL BE CONSIDERED A HAZARDOUS LOCATION. (R308.4.1)
3.3. GLAZING ADJACENT DOORS. WHERE THE NEAREST VERTICAL EDGE OF THE GLAZING IS WITHIN A 24” 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” ABOVE THE FLOOR OR WALKING SURFACE SHALL BE CONSIDERED A HAZARDOUS LOCATION. (R308.4.2)
3.4. GLAZING IN WINDOWS. GLAZING IN AN INDIVIDUAL FIXED OR OPERABLE PANEL THAT MEETS ALL OF THE FOLLOWING CONDITIONS SHALL BE CONSIDERED A HAZARDOUS LOCATION: (1) THE EXPOSED AREA OF AN INDIVIDUAL PANE IS LARGER THAN 9 SQ.FT. (2) THE BOTTOM EDGE OF THE GLAZING IS LESS THAN 18” ABOVE THE FLOOR. (3) THE TOP EDGE OF THE GLAZING IS MORE THAN 36” ABOVE THE FLOOR AND (4) ONE OR MORE WALKINGS SURFACES ARE WITHIN 36”, MEASURED HORIZONTALLY AND IN A STRAIGHT LINE, OF THE GLAZING. (R308.4.3)
3.5. GLAZING IN GUARDS AND RAILINGS SHOULD BE CONSIDERED A HAZARDOUS LOCATION (R308.4.4)
3.6. GLAZING ADJACENT STAIRS AND RAMPS. GLAZING WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 36” ABOVE THE PLANE OF THE ADJACENT WALKING SURFACE OF STAIRWAYS, LANDINGS BETWEEN FLIGHTS OF STAIRS AND RAMPS SHALL BE CONSIDERED A HAZARDOUS LOCATION. EXCEPTION: WHEN A RAIL IS INSTALLED ON THE ACCESSIBLE SIDE(S) OF THE GLAZING 34 TO 38” ABOVE THE WALKING DISTANCE. THE RAIL SHALL BE CAPABLE OF WITHSTANDING A HORIZONTAL LOAD OF 50 POUNDS PER LINEAR FOOT WITHOUT CONTACTING THE GLASS AND BE A MINIMUM OF 1 ½’ IN CROSS SECTIONAL HEIGHT. (R308.4.6)
3.7. GLAZING ADJACENT TO THE BOTTOM STAIR LANDING. GLAZING ADJACENT TO THE LANDING AT THE BOTTOM OF A STAIRWAY WHERE THE GLAZING IS LESS THAN 36 ABOVE THE LANDING AND WITHIN 60” HORIZONTALLY OF THE BOTTOM TREAD SHALL BE CONSIDERED A HAZARDOUS LOCATIONS. (R308.4.7)
3.8. PERMITTED MATERIALS. - FULLY TEMPERED GLASS (R308.6.2)

4. GARAGES AND CARPORTS, SECTION R309

4.1. FLOOR SURFACE. GARAGE FLOOR SURFACES SHALL BE OF APPROVED NONCOMBUSTIBLE MATERIAL. THE AREA OF FLOOR USED FOR PARKING OF AUTOMOBILES OR OTHER VEHICLES SHALL BE SLOPED TO FACILITATE THE MOVEMENT OF LIQUIDS TO A DRAIN OR TOWARD THE MAIN VEHICLE ENTRY DOORWAY. (R309.1)
4.2. FIRE SPRINKLERS ATTACHED GARAGES, AND CARPORTS WITH HABITABLE SPACE ABOVE. ATTACHED GARAGES, AND CARPORTS WITH HABITABLE SPACE ABOVE SHALL BE PROTECTED BY FIRE SPRINKLERS IN ACCORDANCE WITH THIS SECTION AND SECTION R313. PROTECTION SHALL BE PROVIDED IN ACCORDANCE WITH ONE OF THE FOLLOWING: (1) RESIDENTIAL SPRINKLERS INSTALLED IN ACCORDANCE WITH THEIR LISTINGS. (2) EXTENDED COVERAGE SPRINKLERS DISCHARGING WATER NOT LESS THAN THEIR FLOW RATE FOR LIGHT HAZARD IN ACCORDANCE WITH NFPA 13. (3) QUICK-RESPONSE SPRAY SPRINKLERS AT LIGHT HAZARD SPACING IN ACCORDANCE WITH NFPA 13 DESIGNED

5. EMERGENCY ESCAPE AND RESCUE OPENINGS, SECTION R310

5.1. EMERGENCY ESCAPE AND RESCUE REQUIRED. BASEMENTS, HABITABLE ATTICS EMERGENCY ESCAPE AND RESCUE OPENING. WHERE BASEMENT CONTAIN ONE OR MORE SLEEPING ROOMS, EMERGENCY EGRESS AND RESCUE OPENINGS SHALL BE REQUIRED IN EACH SLEEPING ROOMS. WHERE EMERGENCY ESCAPE AND RESCUE OPENINGS ARE PROVIDED THEY SHALL HAVE THE BOTTOM OF THE CLEAR OPENING NOT GREATER THAN 44 IN. MEASURED FROM THE FLOOR. WINDOW WELL IN ACCORDANCE WITH R310.2. EXCEPTION: BASEMENTS USED ONLY TO HOUSE MECHANICAL EQUIPMENT AND NOT EXCEEDING TOTAL AREA OF 200 SQ.FT. (MIN AREA OPENING AND ALL OTHER CONSTRAINT, SEE R310.1)
5.2. WINDOW WELLS. MIN HORIZONTAL AREA OF THE WINDOW WELL SHALL BE 9 SQ.FT WITH A MIN. HORIZONTAL PROJECTION OF 36” (R310.2)

6. MEANS OF EGRESS, SECTION R311

6.1. MEANS OF EGRESS. ALL DWELLINGS SHALL BE PROVIDED WITH A MEANS OF EGRESS AS PROVIDED IN THIS SECTION. THE MEANS OF EGRESS SHALL PROVIDE A CONTINUOUS AND UNOBSTRUCTED PATH OF VERTICAL AND HORIZONTAL EGRESS TRAVEL FROM ALL PORTIONS OF THE DWELLING TO THE EXTERIOR OF THE DWELLING AT THE REQUIRED EGRESS DOOR WITHOUT REQUIRING TRAVEL THROUGH A GARAGE. (R311.1) MIN. 36” - DIRECTION OF TRAVEL - LANDING (R311.3)

7. GUARDS AND WINDOW FALL PROTECTION, SECTION R312

7.1. GUARDS SHALL BE LOCATED ALONG OPEN-SIDED WALKING SURFACES, INCLUDING STAIRS, RAMPS AND LANDINGS, THAT ARE LOCATED MORE THAN 30” MEASURED VERTICALLY TO THE FLOOR OR GRADE BELOW AT ANY POINT WITHIN 36” HORIZONTALLY TO THE EDGE OF THE OPEN SIDE. (R312.2)
7.2. HEIGHT. REQUIRED GUARDS AT OPEN-SIDED WALKING SURFACES, INCLUDING STAIRS, PORCHES, BALCONIES OR LANDINGS, SHALL BE NOT LESS THAN 42 INCHES HIGH MEASURED VERTICALLY ABOVE THE ADJACENT WALKING SURFACE, ADJACENT FIXED SEATING OR THE LINE CONNECTING THE LEADING EDGES OF THE TREADS. (R312.1.2) EXCEPTION: AT STAIRS - GUARDS HEIGHT (HANDRAIL) MIN. 34” TO MAX. 38”.
7.3. WINDOW FALL PROTECTION. IN DWELLING UNITS, WHERE THE OPENING OF AN OPERABLE WINDOW IS LOCATED MORE THAN 72” ABOVE THE FINISHED GRADE OR SURFACE BELOW, THE LOWEST PART OF THE CLEAR OPENING OF THE WINDOW SHALL BE A MINIMUM OF 24 IN. ABOVE THE FINISHED FLOOR OF THE ROOM IN WHICH THE WINDOW IS LOCATED. OPERABLE SECTIONS OF WINDOWS SHALL NOT PERMIT OPENINGS THAT ALLOW PASSAGE OF A 4” DIAMETER SPHERE WHERE SUCH OPENINGS ARE LOCATED WITHIN 24” OF FINISHED FLOOR.
7.4. WINDOW OPENING CONTROL DEVICES SHALL COMPLY WITH ASTM F 2090. (R312.2.2)

8. AUTOMATIC FIRE SPRINKLER SYSTEMS, SECTION R313

8.1. AN AUTOMATIC RESIDENTIAL FIRE SPRINKLER SYSTEM SHALL BE INSTALLED IN ONE- AND TWO-FAMILY DWELLINGS. (R13.2) AUTOMATIC RESIDENTIAL FIRE SPRINKLER SYSTEMS SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH SECTION R313 OR NFPA 13D. (R313.2.2)
8.2. REQUIRED SPRINKLER LOCATIONS. SPRINKLERS SHALL BE INSTALLED TO PROTECT ALL AREAS OF A DWELLING UNIT. EXCEPTIONS: (1) ATTICS, CRAWL SPACES AND NORMALLY UNOCCUPIED CONCEALED SPACES THAT DO NOT CONTAIN FUEL-FIRED APPLIANCES DO NOT REQUIRE SPRINKLERS. IN ATTICS, CRAWL SPACES AND NORMALLY UNOCCUPIED CONCEALED SPACES THAT CONTAIN FUEL-FIRED EQUIPMENT, A SPRINKLER SHALL BE INSTALLED ABOVE THE EQUIPMENT; HOWEVER, SPRINKLERS SHALL NOT BE REQUIRED IN THE REMAINDER OF THE SPACE. (2) CLOTHES CLOSETS, LINEN CLOSETS AND PANTRIES NOT EXCEEDING 24 SQ.FT. IN AREA, WITH THE SMALLEST DIMENSION NOT GREATER THAN 3 FEET AND HAVING WALL AND CEILING SURFACES OF GYPSUM BOARD. (3) BATHROOMS NOT MORE THAN 55 SQ.FT. IN AREA. (4) DETACHED GARAGES; CARPORTS WITH NO HABITABLE SPACE ABOVE; OPEN ATTACHED PORCHES; UNHEATED ENTRY AREAS, SUCH AS MUR ROOMS, THAT ARE ADJACENT TO AN EXTERIOR DOOR; SIMILAR AREAS. (R313.3)
8.3. SPRINKLERS SHALL BE NEW LISTED RESIDENTIAL SPRINKLERS AND SHALL BE INSTALLED IN ACCORDANCE WITH THE SPRINKLER MANUFACTURER’S INSTALLATION INSTRUCTIONS. (R313.3.2)

9. SMOKE ALARMS, SECTION R314

9.1. SMOKE DETECTION AND NOTIFICATION. ALL SMOKE ALARMS SHALL BE LISTED AND LABELED IN ACCORDANCE WITH UL 217 AND INSTALLED IN ACCORDANCE WITH THE PROVISIONS OF THIS CODE AND THE HOUSEHOLD FIRE WARNING EQUIPMENT PROVISIONS OF NFPA 72. SYSTEMS AND COMPONENTS SHALL BE CALIFORNIA STATE FIRE MARSHAL LISTED AND APPROVED IN ACCORDANCE WITH CALIFORNIA CODE OF REGULATIONS, TITLE 19, DIVISION 1 FOR THE PURPOSE FOR WHICH THEY ARE INSTALLED. (R314.1)
9.2. LOCATION. SMOKE ALARMS SHALL BE INSTALLED IN THE FOLLOWING LOCATIONS: (1) EACH BEDROOM (2) OUTSIDE EACH SEPARATE SLEEPING AREA IN THE INTERMEDIATE VICINITY OF THE BEDROOMS. (3) ON EACH ADDITIONAL STORY OF THE DWELLING, INCLUDING BASEMENTS AND HABITABLE ATTICS BUT NOT INCLUDING CRAWL SPACES AND UNINHABITABLE ATTICS. IN DWELLINGS OR DWELLINGS UNITS WITH SPLIT LEVELS AND WITHOUT AN INTERVENING DOOR BETWEEN THE ADJACENT LEVELS, A SMOKE ALARM INSTALLED ON THE UPPER LEVEL SHALL SUFFICE FOR THE ADJACENT LOWER LEVEL PROVIDED THAT THE LOWER LEVEL IS LESS THAN ONE FULL STORY BELOW THE UPPER LEVEL. (R314.3)
9.3. SMOKE ALARMS SHALL BE TESTED AND MAINTAINED IN ACCORDANCE WITH THE MANUFACTURER’S INSTRUCTIONS. SMOKE ALARMS THAT NO LONGER FUNCTION SHALL BE REPLACED. SMOKE ALARMS INSTALLED IN ONE- AND TWO-FAMILY DWELLINGS SHALL BE REPLACED AFTER 10 YEARS FROM THE DATE OF MANUFACTURE MARKED ON THE UNIT, OR IF THE DATE OF MANUFACTURE CANNOT BE DETERMINED. (R314.3.2)

10. CARBON MONOXIDE ALARMS, SECTION R315

10.1. CARBON MONOXIDE ALARMS IN NEW CONSTRUCTION. FOR NEW CONSTRUCTION, AN APPROVED CARBON MONOXIDE ALARM SHALL BE INSTALLED IN DWELLING UNITS AND IN SLEEPING UNITS WITHIN WHICH FUEL-BURNING APPLIANCES ARE INSTALLED AND IN DWELLING UNITS THAT HAVE ATTACHED GARAGES. CARBON MONOXIDE ALARMS SHALL BE LISTED AS COMPLYING WITH UL 2034 AND BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH NFPA 720 AND THE MANUFACTURER’S INSTRUCTIONS. (R315.1)
10.2. CARBON MONOXIDE ALARMS REQUIRED IN SECTION R315.1 SHALL BE INSTALLED AND MAINTAINED IN THE FOLLOWING LOCATIONS: (1) OUTSIDE EACH SEPARATE DWELLING UNIT SLEEPING AREA IN THE INSTALLED VICINITY OF THE BEDROOM(S). (2) ON EVERY LEVEL OF A DWELLING UNIT INCLUDING BASEMENTS. (R315.1.4)

11. FOAM PLASTIC, SECTION R316

11.1. LABELING AND IDENTIFICATION. PACKAGES AND CONTAINERS OF FOAM PLASTIC INSULATION AND FOAM PLASTIC INSULATION COMPONENTS DELIVERED TO THE JOB SITE SHALL BEAR THE LABEL OF AN APPROVED AGENCY SHOWING THE MANUFACTURER'S NAME, THE PRODUCT LISTING, PRODUCT IDENTIFICATION AND INFORMATION SUFFICIENT TO DETERMINE THAT THE END USE WILL COMPLY THE REQUIREMENTS. (R316.2)
11.2. SPECIFIC APPROVAL. FOAM PLASTIC NOT MEETING THE REQUIREMENTS OF SECTIONS R316.3 THROUGH R316.3 SHALL BE SPECIFICALLY APPROVED ON THE BASIS OF ONE OF THE FOLLOWING APPROVED TESTS: NFPA 286 WITH THE ACCEPTANCE CRITERIA OF SECTION R302.9.4, FM 4880, UL 1040, OR UL 1715, OR FIRE TESTS RELATED TO ACTUAL END-USE CONFIGURATIONS. APPROVAL SHALL BE BASED ON THE ACTUAL END USE CONFIGURATIONS AND SHALL BE PERFORMED ON THE FINISHED FOAM PLASTIC ASSEMBLY IN THE MAXIMUM THICKNESS INTENDED FOR USE. ASSEMBLIES TESTED SHALL INCLUDE SEAMS, JOINTS AND OTHER TYPICAL DETAILS USED IN THE INSTALLATION OF THE ASSEMBLY AND SHALL BE TESTED IN THE MANNER INTENDED FOR USE.

13. CONSTRUCTION WASTE REDUCTION, DISPOSAL AND RECYCLING, SECTION R324.1

12.1. RECYCLE AND/OR SALVAGE FOR REUSE A MINIMUM OF 50 PERCENT OF THE NONHAZARDOUS CONSTRUCTION AND DEMOLITION WASTE IN ACCORDANCE WITH THE CALIFORNIA GREEN BUILDING STANDARDS CODE, CHP 4, DIVISION 4.4.

CHAPTER 7 WALL COVERING, SECTION 409

1. UNLESS NOTED OTHERWISE, ALL PLASTER AND DRYWALL MATERIALS AND INSTALLATION SHALL BE ACCORDING TO CURRENT U.S. GYPSUM HANDBOOK SPECIFICATIONS AND APPLICABLE CODE REQUIREMENTS.
2. STANDARD DRYWALL INSTALLATIONS: BLOCK ALL PANEL EDGES AND USE ZINC-PLATED DRYWALL SCREWS FOR ALL PANEL INTERIOR (FIELD) FASTENING. ALL CORNER BEADS AND EDGE TRIM SHALL BE SET LEVEL OR PLUMB, STRAIGHT AND TRUE AND CHECKED PRIOR TO TAPING. GO OVER TAPING AS MANY TIMES AS NECESSARY TO OBTAIN AN EVEN FINISH PRIOR TO APPLYING SKIM COAT. APPLY SKIM COAT AND FINISH SMOOTH. NO TAPE JOINTS OR SCREW LOCATIONS SHALL BE VISIBLE. WHEN COMPLETELY DRY, ROLL ON PAINT PRIMER COAT (DO NOT BRUSH OR SPRAY), THEN SAND LIGHTLY TO SMOOTH FINISH. TOUCH UP GYPSUM WALL BOARD AS REQUIRED AND SPOT PRIME TOUCH-UPS PRIOR TO APPLYING FINAL PAINT COATS.
3. GYPSUM WALLBOARD SHALL BE 5/8-INCH THICKNESS UNLESS OTHERWISE NOTED AND TYPE-X FIRE RESISTANT GYPSUM BOARD WHERE REQUIRED BY THE APPLICABLE FIRE BUILDING CODES.
4. INTERIOR ONE-COAT GYPSUM VENEER INSTALLATIONS SHALL BE ACCORDING TO U.S GYPSUM "DIAMOND VENEER SYSTEM": 1/2-INCH CEMENTITIOUS WALL BOARD PLUS ONE- COAT "DIAMOND" VENEER PLASTER WITH SMOOTH FINISH.
5. USE WATERPROOF WALLBOARD APPROVED FOR WET AREA INSTALLATION IN ALL BATHROOMS, KITCHENS, JANITOR'S CLOSETS AND WET AREAS. CERAMIC TILE AND STONE
6. MARBLE OR GRANITE WORK SHALL BE IN ACCORDANCE WITH THE MASONRY INSTITUTE OF AMERICA AND BUILDING STONE INSTITUTE GUIDELINES. VERIFY ALL CORNER, EDGE, SPLASH, AND OTHER DETAILS WITH ARCHITECT PRIOR TO COMMENCING CONSTRUCTION.

7. ALL TILE WORK SHALL BE ACCORDING TO CURRENT STANDARDS AND SPECIFICATIONS OF THE TILE COUNCIL OF AMERICA AND CERAMIC TILE INSTITUTE.
8. UNLESS OTHERWISE SPECIFIED, TILE SHALL BE INSTALLED ON A WIRE-REINFORCED MORTAR BED OVER A CLEAVAGE MEMBRANE. ALL DUST SHALL BE COMPLETELY WASHED OFF TILE PRIOR TO APPLICATION OF THE BOND COAT. BONDING MORTAR SHALL COVER 100% OF BOTH THE TILE AND THE SURFACE TO BE COVERED APPROXIMATELY 1/8-INCH THICK.
9. THE USE OF GYPSUM BOARD FOR TILED WALLS OR CEILINGS IN SHOWERS AND OTHER WET AREAS IS PROHIBITED, EVEN FOR BACKING.
10. THE USE OF CEMENT BACKER UNITS WILL BE ACCEPTABLE FOR TILE SETTING BED BACKING ONLY IF A WATERPROOF MEMBRANE IS INSTALLED BEHIND BOARD OVER STUDS. USE FULL SHEETS WHEREVER POSSIBLE TO ELIMINATE JOINTS. WHERE JOINTS ARE UNAVOIDABLE, HOLD BOARDS APART 1/8-INCH AND USE 2-INCH FIBERGLASS TAPE TO REINFORCE JOINTS. APPLY MIN. 1/2-INCH THICK MORTAR BED PLUS 1/8-INCH BONDING OVER BACKING SURFACES.
11. FINISH CAULKING FOR TUBS, COUNTERS, AND OTHER ITEMS SHALL BE COLOR-MATCHED SILICONIZED LATEX CAULK. REFER TO SEALANTS SECTION FOR ADDITIONAL INFORMATION.
12. PROVIDE NON-ABSORBENT WALL ADJACENT TO SHOWER, 70-INCHES HIGH MINIMUM ABOVE DRAIN PAINT TO MATCH THE ADJACENT SURFACE OR AS DIRECTED BY THE ARCHITECT. REFER TO SPECIFICATIONS FOR ALL OTHER ITEMS NOT INCLUDED ON FINISH SCHEDULE.

CHAPTER 9, ROOF ASSEMBLIES (SECTION R901)

ROOF CLASSIFICATION, SECTION R902

R902.1.1 ROOF COVERING WITHIN VERY-HIGH FIRE HAZARD SEVERITY ZONES.

1. CLASS A ROOF ASSEMBLIES INCLUDE THOSE WITH COVERINGS OF BRICK, MASONRY AND EXPOSED CONCRETE ROOF DECK.
2. CLASS A ROOF ASSEMBLIES ALSO INCLUDE FERROUS OR COPPER SHINGLES OR SHEETS, METAL SHEETS AND SHINGLES, CLAY OR CONCRETE ROOF TILE, OR SLATE INSTALLED ON NON-COMBUSTIBLE DECKS.
3. CLASS A ROOF ASSEMBLIES INCLUDE MIN. 16 OZ/SF COPPER SHEETS INSTALLED OVER COMBUSTIBLE DECKS.
4. THE ENTIRE ROOF COVERING OF EVERY EXISTING STRUCTURE WHERE MORE THAN 50 PERCENT OF THE TOTAL ROOF AREA IS PLACED WITHIN ANY ONE-YEAR PERIOD, THE ENTIRE ROOF COVERING OF EVERY NEW STRUCTURE - SHALL BE FIRE-RETARDANT ROOF COVERINGS THAT IS AT LEAST CLASS A.

2013 CALGREEN RESIDENTIAL MANDATORY MEASURES

1. EACH APPLIANCE PROVIDED AND INSTALLED SHALL MEET ENERGY STAR IF AN ENERGY STAR DESIGNATION IS APPLICABLE FOR THAT APPLIANCE (4.210)
2. THE FLOW RATES FOR ALL PLUMBING FIXTURES SHALL COMPLY WITH THE MAXIMUM FLOW RATES IN TABLE 4.303.1 AND 4.303.2 (4.303.1)
3. WHEN SINGLE SHOWER FIXTURES ARE SERVED BY MORE THAN ONE SHOWERHEAD, THE COMBINED FLOW RATE OF ALL THE SHOWERHEADS SHALL NOT EXCEED THE MAXIMUM FLOW RATES SPECIFIED IN THE MAXIMUM ALLOWABLE FLOW RATE COLUMN CONTAINED IN TABLE 4.303.1.3.2. (4.303.2)
4. ANNULAR SPACES AROUND PIPES, ELECTRIC CABLES, CONDUITS, OR OTHER OPENINGS IN THE BUILDING’S ENVELOPE AT EXTERIOR WALLS WILL BE PROTECTED AGAINST THE PASSAGE OF RODENTS. (I.E. CLOSING SUCH OPENINGS WITH CEMENT MORTAR, CONCRETE MASONRY, OR METAL PLATES.) (4.406.1)
5. CONSTRUCTION WASTE SHALL BE REDUCED BY 50% OF THE NONHAZARDOUS CONSTRUCTION AND DEMOLITION WASTE IN ACCORDANCE WITH EITHER SECTION 4.408.2, 4.408.4; OR MEET A MORE STRINGENT LOCAL CONSTRUCTION AND DEMOLITION WASTE MANAGEMENT ORDINANCE. DOCUMENTATION IS REQUIRED PER SECTION 4.408.5 (4.408.1)
6. AN OPERATION AND MAINTENANCE MANUAL INCLUDING, AT MINIMUM, THE ITEMS LISTED IN SECTION 4.410.1, SHALL BE COMPLETED AND PLACED IN THE BUILDING AT THE TIME OF FINAL INSPECTION. (4.410.1)
7. ALL DUCT AND OTHER RELATED AIR DISTRIBUTION COMPONENT OPENINGS SHALL BE COVERED WITH TAPE, PLASTIC, OR SHEETMETAL UNTIL THE FINAL STARTUP OF THE HEATING AND COOLING EQUIPMENT. (4.504.1)
8. ARCHITECTURAL PAINTS AND COATINGS, ADHESIVES, CAULKS AND SEALANTS SHALL COMPLY WITH THE VOLATILE ORGANIC COMPOUND (VOC) LIMITS LISTED IN TABLES 4.504.1 AND 4.504.2 (4.504.2.1)
9. THE VOC CONTENT VERIFICATION CHECKLIST, FORM GRN 2, SHALL BE COMPLETED AND VERIFIED PRIOR TO FINAL INSPECTION APPROVAL. THE MANUFACTURER'S SPECIFICATIONS SHOWING VOC CONTENT FOR ALL APPLICABLE PRODUCTS SHALL BE READILY AVAILABLE AT THE JOB SITE AND BE PROVIDED TO THE FIELD INSPECTOR FOR VERIFICATION. (4.504.2.4)
10. ALL NEW CARPET INSTALLED IN THE BUILDING INTERIOR SHALL MEET THE TESTING AND PRODUCT REQUIREMENTS OF ONE OF THE FOLLOWING: (A) VOC EMISSION LIMITS DEFINED IN THE CHPS HIGH PERFORMANCE PRODUCTS DATABASE (B) PRODUCTS COMPLIANT WITH THE CHPS CRITERIA CERTIFIED UNDER THE GREENGUARD CHILDREN & SCHOOLS PROGRAM (C) CERTIFICATION UNDER THE RESILIENT FLOOR COVERING INSTITUTE (RFCI) FLOORSCORE PROGRAM (D) MEET THE CALIFORNIA DEPARTMENT OF PUBLIC HEALTH’S SPECIFICATION 01350 (4.504.4)
11. NEW HARDWOOD PLYWOOD, PARTICLE BOARD, AND MEDIUM DENSITY FIBERBOARD COMPOSITE WOOD PRODUCTS USED IN THE INTERIOR OR EXTERIOR OF THE BUILDING SHALL MEET THE FORMALDEHYDE LIMITS LISTED IN TABLE 4.504.5 AND COMPLY WITH 17 CCR 93120 ET. SEQ.). (4.504.5)
12. A 4-INCH THICK BASE OF 1⁄2 INCH OR LARGER CLEAN AGGREGATE SHALL BE PROVIDED FOR THE PROPOSED SLAB ON GRADE CONSTRUCTION. SHOW ON DETAILS. (4.505.2.1)
13. A VAPOR BARRIER SHALL BE PROVIDED IN DIRECT CONTACT WITH CONCRETE FOR THE PROPOSED SLAB ON GRADE CONSTRUCTION. SHOW ON DETAILS, SEE AMERICAN CONCRETE INSTITUTE ACI 302.2R-06 (4.505.2.1)
14. BUILDING MATERIALS WITH VISIBLE SIGNS OF WATER DAMAGE SHALL NOT BE INSTALLED. WALL AND FLOOR FRAMING SHALL NOT BE ENCLOSED UNTIL IT IS INSPECTED AND FOUND TO BE SATISFACTORY BY THE BUILDING INSPECTOR. (4.505.3)
15. SHOW LOCATION OF EXHAUST FANS ON PLANS FOR BATHROOMS CONTAINING BATHTUBS, SHOWERS, OR TUB/SHOWER COMBINATIONS. PLANS SHALL STATE THAT THE BATHROOM EXHAUST FANS COMPLY WITH THE FOLLOWING: (A) FANS SHALL BE ENERGY STAR COMPLIANT AND BE DUCTED TO TERMINATE TO THE OUTSIDE OF THE BUILDING. (B) FANS, NOT FUNCTIONING AS A COMPONENT OF A WHOLE HOUSE VENTILATION SYSTEM, MUST BE CONTROLLED BY A HUMIDITY CONTROL. (4.506.1)
16. THE SIZE AND LAYOUT OF THE HEATING AND AIR-CONDITIONING SYSTEMS SHALL BE IN ACCORDANCE WITH ANSI/ACCA MANUAL J, ANSI/ACCA 1-D AND ANSI/ACCA 3-S, ASHRAE HANDBOOKS. (4.507.2)
17. THE HEATING AND AIR-CONDITIONING SYSTEMS SHALL BE SIZED AND DESIGNED USING ANSI/ACCA 2 MANUAL J- 2004, ANSI/ACCA 1-D-2009 OR ASHRAE HANDBOOKS AND HAVE THEIR EQUIPMENT SELECTED IN ACCORDANCE WITH ANSI/ACCA 3-S MANUAL S-2004. (CALGREEN 4.507.2)

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18 GENERAL

18.1 - ALL WORK MUST BE EXECUTED ACCORDING TO THE MOST RECENT STANDARDS OF THE CALIFORNIA BUILDING CODE, IN COMPLIANCE WITH STATE AND LOCAL REGULATIONS, STANDARDS OF THE OCCUPATIONAL HEALTH AND SAFETY CODE (OHS) AND MEET IN ALL RESPECTS THE STATE OF THE ART OF ALL TRADES INVOLVED IN THE IMPLEMENTATION OF THE PROJECT.
18.2 - VERIFY ON SITE ALL DIMENSIONS AND POSITIONS OF THE EXISTING STRUCTURES.
18.3 - DO NOT MEASURE TO SCALE ON THE PLANS. USE ONLY THE DRAWINGS ISSUED FOR CONSTRUCTION.
18.4 - THE GENERAL CONTRACTOR MUST SUBMIT FOR APPROVAL ALL OPENINGS NOT SHOWN ON CONSTRUCTION PLANS.
18.5 - THE GENERAL CONTRACTOR MUST VERIFY ALL DIMENSIONS, CONGESTIONS OR CONDITIONS ON SITE, THAT MAY AFFECT THE WORK AND NOTIFY THE SITE MANAGER OF ANY ANOMALIES.
18.6 - ALL DIMENSIONS RELATED TO AN EXISTING STRUCTURE ARE APPROXIMATE. THEY MUST BE VERIFIED ON SITE BEFORE THE EXECUTION OF THE WORK.
18.7 - THE SERVICE LOADS UTILIZED FOR DESIGN ARE THOSE INDICATED ON THE PLANS ISSUED FOR CONSTRUCTION. DURING CONSTRUCTION, THE LOADS SHOULD NOT EXCEED THAT PROVIDED FOR IN THE PLANS, IF IN DOUBT, ASK THE PERMISSION OF THE STRUCTURAL ENGINEER.
18.9 - IT IS FORBIDDEN TO CONCENTRATE IN ONE LOCATION, ON DIFFERENT FLOORS LEVELS, ROOFS AND TERRACES LARGE QUANTITIES OF HEAVY MATERIALS SUCH AS: SKIDS OF MASONRY, BUNDLES OF PLASTERBOARD, MOUNDS OF EARTH, MOUNDS OF GRAVEL, ETC. ALL THESE MATERIALS MUST BE DISTRIBUTED ON FLOORS AS THEY ARE DELIVERED.
18.10 - THE CONTRACTOR SHALL REFER TO ARCHITECTURAL DRAWINGS FOR ALL THE DETAILS CONCERNING WATERPROOF SEALS, CAULKING, SLOPE, WATER DRIPPING, ETC. AND IN PARTICULAR TO ROOF PARAPETS, POOL, BALCONIES, DECKS, DOORS, WINDOWS AND OTHER.

18.11 - DESIGN

- CODES USED FOR THE DESIGN ARE:
- 2013 California Building Code.
- 2013 California Plumbing Code.
- 2013 California Mechanical Code.
- 2013 California Electrical Code.
- 2013 California Fire Code.
- 2013 California Residential Code.
- 2013 California Green Building Standard Code.
- 2013 California Energy Efficiency Standards Code.

ALL OTHER APPLICABLE CITY AND COUNTY LAWS AND ORDINANCES.

18.12 - THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING AND COORDINATING ALL DIMENSIONS INCLUDED IN THESE DRAWINGS .
18.13 - ALL DIMENSIONS ARE SUBJECT TO VERIFICATION ON SITE.
18.14 - IN WINTER CONDITIONS , THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING THE BED OF EXCAVATION AGAINST FROST AND FOR PROTECTING CASTED CONCRETE WORK AGAINST UPLIFT CAUSED BY FROST .
18.15 - THE POSITION OF FOUNDATION WALLS FOOTING DROPS IS INDICATED FOR INFORMATION ONLY. THE CONTRACTOR IS RESPONSIBILE TO ENSURE THAT ALL THE FOUNDATIONS ARE PROTECTED FROM FROST.
18.16 - UNLESS OTHERWISE SPECIFIED, THE EXTERIOR FINISHES ON PLANS ARE DISPLAYED FOR INFORMATION ONLY. THE CONTRACTOR AND THE CUSTOMER ARE RESPONSIBLE FOR INSTALLING THE EXTERIOR FINISHES IN ACCORDANCE WITH THE INDICATIONS OF THE MANUFACTURERS AND SUPPLIERS .
18.17 - ALL CONSTRUCTION MUST BE IN ACCORDANCE WITH THE LATEST EDITION OF CBC.
18.18 - FOUNDATION DIMENSIONING AND REBAR SPECIFICATIONS MUST BE PROVIDED BY A CERTIFIED ENGINEER.

THESE PLANS ARE NOT FOR CONSTRUCTION.

STRUCTURE®

Simple Concept

2812 JOSEPH-A. BOMBARDIER, LAVAL, QC, CA H7P 6E2
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DATE	REVISION	BY	NO.

PROJECT

MIAKHAIL

17-802

2398 RAINBOW COURT
HAYWARD, CA 94542, APN 425-0410-031

DRAWING TITLE	DRAWN BY
Specifications	Author
	CHECK BY: Checker
SCEAU	DATE: 2017/09/19
	SCALE: 3/32" = 1'-0"
	REVISION
	PAGE: A. 001

F1 FOUNDATION WALL (8")
- Bituminous membrane
- 8" Poured concrete
- **ANCHOR INSTALLED WHEN CASTING**
- 2" Rigid insulation (4'-0" below the ground)

F2 FOUNDATION WALL (10") (R20)
- Drainage membrane
- Bituminous membrane
- 10" Poured concrete
- **ANCHOR INSTALLED WHEN CASTING**
- 2 1/2" Sprayed urethane-based foam
- Metal stud
- 1/2" Gypsum

W1 LIGHT GRAY STUCCO FINISH (R29)
- Stucco (according to system)
- 3/4" wood furring @ 16" c/c (vertical)
- 1 3/4" Air space
- **3 3/8" "Z" BARS @ 18" c/c HORIZONTALLY**
- 2 1/2" Sprayed urethane-based foam
- **3" RIGID INSULATION PANEL, EXP. POLYSTYRENE**
- **1" STEEL SUPPORT WITH THERMAL BREAK**
- **4"x4" GALVANIZED STEEL COLUMN @ 5'-0" c/c**
- **1/4" FURRING ANCHOR**
- **7/8" METALLIC FURRING @ 16" c/c HORIZONTALLY**
- 1/2" Gypsum board

W2 DARK GRAY ALUMINUM PANEL (R29)
- Alumnum panel
- 1 3/4" Air space
- 3/4" wood furring @ 16" c/c (Vertical)
- **3 3/8" "Z" BARS @ 18" c/c HORIZONTALLY**
- 2 1/2" Sprayed urethane-based foam
- **3" RIGID INSULATION PANEL, EXP. POLYSTYRENE**
- **1" STEEL SUPPORT WITH THERMAL BREAK**
- **4"x4" GALVANIZED STEEL COLUMN @ 5'-0" c/c**
- **1/4" FURRING ANCHOR**
- **7/8" METALLIC FURRING @ 16" c/c HORIZONTALLY**
- 1/2" Gypsum

W3 THIN STONE VENEER (R29)
- Thin stone veneer on 1/2" cement panel
- 1 3/4" Air space
- 3/4" wood furring @ 16" c/c (Vertical)
- **3 3/8" "Z" BARS @ 18" c/c HORIZONTALLY**
- 2 1/2" Sprayed urethane-based foam
- **3" RIGID INSULATION PANEL, EXP. POLYSTYRENE**
- **1" STEEL SUPPORT WITH THERMAL BREAK**
- **4"x4" GALVANIZED STEEL COLUMN @ 5'-0" c/c**
- **1/4" FURRING ANCHOR**
- **7/8" METALLIC FURRING @ 16" c/c HORIZONTALLY**
- 1/2" Gypsum

P1 TYPICAL FLOOR - WOOD FINISH
- Floor finish
- **3/4" PLYWOOD**
- **17" GALVANIZED STEEL JOIST**
- **"C" BARS @ 1'-8" c/c**
- **1/4" FURRING ANCHOR**
- **7/8" METALLIC FURRING**
- 1/2" Gypsum

P2 TYPICAL FLOOR - INSULATED WOOD FINISH
- 2" concrete (heated)
- Insonomat membrane (Recommended)
- **3/4" PLYWOOD**
- **17" GALVANIZED STEEL JOIST**
- **"C" BARS @ 1'-8" c/c**
- **1/4" FURRING ANCHOR**
- **7/8" METALLIC FURRING**
- 1/2" Gypsum

P3 4" CONCRETE SLAB(R10)
- Floor finish
- 4" concrete slab
- Vapor barrier
- 2" rigid insulation panel
- According to conditions

P4 6" GARAGE SLAB
- 6" concrete slab
- Vapor barrier
- 2" rigid insulation panel
- According to conditions

R1 TYPICAL ROOF (2% SLOPE) (R50)
- Double layer elastomeric membrane, mechanically fastened base sheet (Sopralix Base 630) and Heat-Welded cap sheet (Sopralix Traffic Cap 660), recommended
- **10 1/4" INSULATED PANEL**
- 2" Sprayed urethane-based foam
- **"Z" BARS WITH INTEGRATED SLOPE**
- **17" GALVANIZED STEEL JOIST**
- **"C" BARS @ 5'-0" c/c**
- **1/4" FURRING ANCHOR**
- **7/8" METALLIC FURRING**
- 1/2" Gypsum

R2 TERRACE ROOF (R50)
- Terrace finish
- Wood structure with inverse integrated slope
- 1/2" rubber pad
- Double layer elastomeric membrane, mechanically fastened base sheet (Sopralix Base 630) and Heat-Welded cap sheet (Sopralix Traffic Cap 660), recommended
- **4 1/2" INSULATED PANEL**
- 6" Sprayed urethane-based foam
- **"Z" BARS WITH INTEGRATED SLOPE**
- **17" GALVANIZED STEEL JOIST**
- **"C" BARS @ 5'-0" c/c**
- **1/4" FURRING ANCHOR**
- **7/8" METALLIC FURRING**
- 1/2" Gypsum

L1 ENCASTRATED LED SPOT LIGHT

L2 EXTERIOR WALL LIGHT

* THESE PLANS ARE NOT FOR CONSTRUCTION.

BONE STRUCTURE®

* NOTE
- THE R VALUES PROVIDED ARE ZONE 4 EFFECTIVE INSULATION VALUES

- UPPERCASE LETTER : INCLUDED
- Lowercase letter : NOT INCLUDED

Simple Concept

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T.:450.978.0602 FAX.:450.978.4917

DATE	REVISION	BY	NO.

PROJECT

MIAKHAIL

17-802

2398 RAINBOW COURT
HAYWARD, CA 94542, APN 425-0410-031

DRAWING TITLE
Compositions

DRAWN BY
Author

CHECK BY
Checker

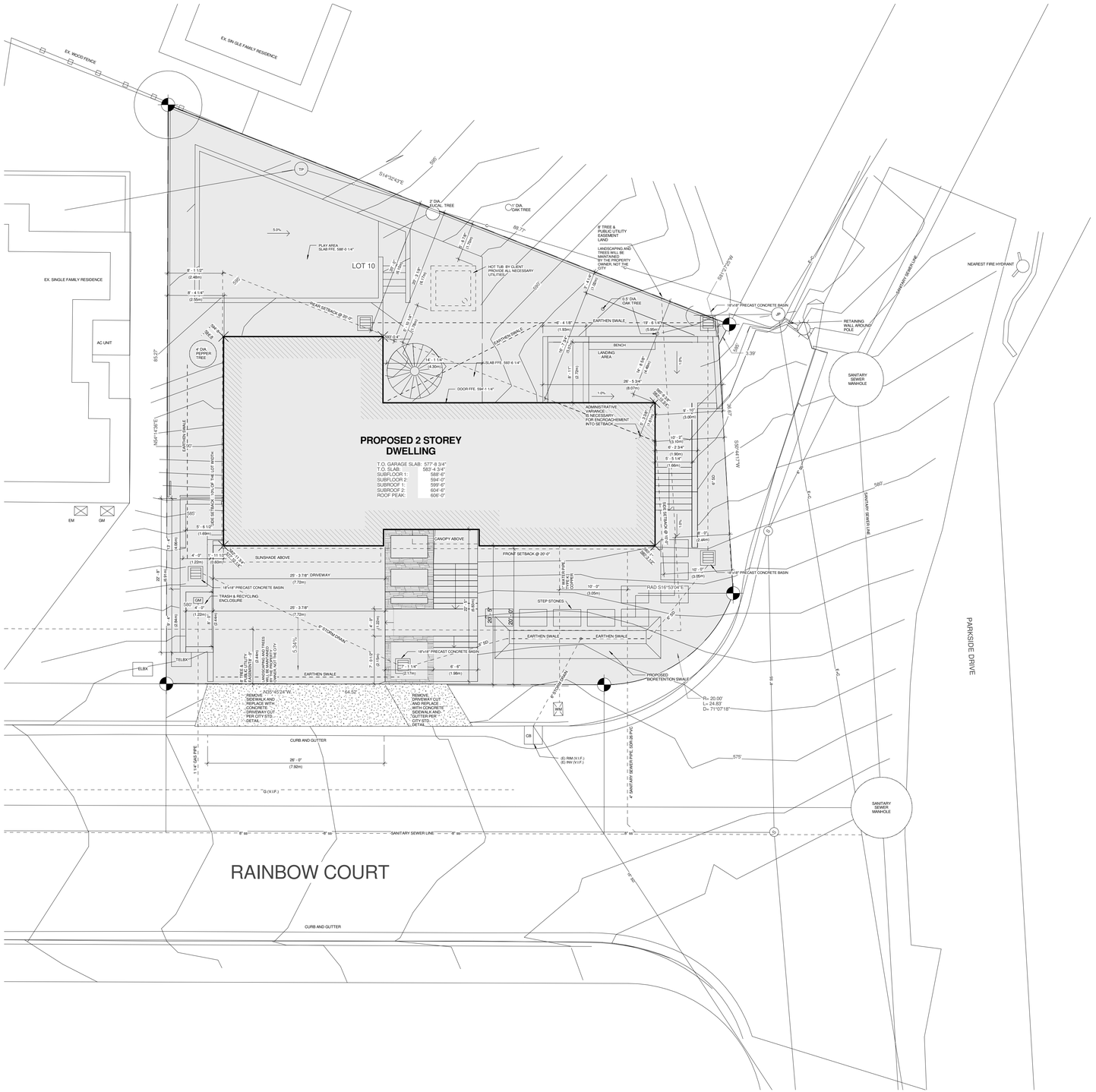
SCEAU

DATE
2017/09/19

SCALE
1" = 1'-0"

REVISION

PAGE
A. 002



Zoning and Site Restrictions Notes

Municipality and Project Information	
• Project type and description	New single Family Dwelling
• Municipality	HAYWARD, CA
• Zoning designation	RS

Lot area	
• Total lot area	5 657.36sq.ft / 525.03m²

	Permitted (ft/m)	Proposed (ft/m)
• Lot coverage	(40%) 2 260.54sq.ft/ 210.01m²	(28.52%) 1612.26sq.ft / 149.78m²

Setbacks		
• Front yard setback	20'-0" / 6.10m	20'-5" / 6.22m
• Side yard setback	8'-1 1/3" / 2.48m (10% of lot width)	8'-4 1/4" / 2.55m
• Side yard setback	10'-0" / 3.05m	9-10" / 3.00m
• Rear yard setback	20'-0" / 6.10m	14'-8 5/8" / 4.48m

• Building depth	N/A	31'-0 7/8" / 9.47m
• Building height	30'-0" / 9.14m	28'-3 1/4" / 8.62m
• Floor space index	N/A	0.47
• Gross floor area	N/A	2 672.3sq.ft / 248.26m²

Landscaping and trees will be maintained by the property owner (not the City)

1 Site Plan
1/8" = 1'-0"

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PROJECT

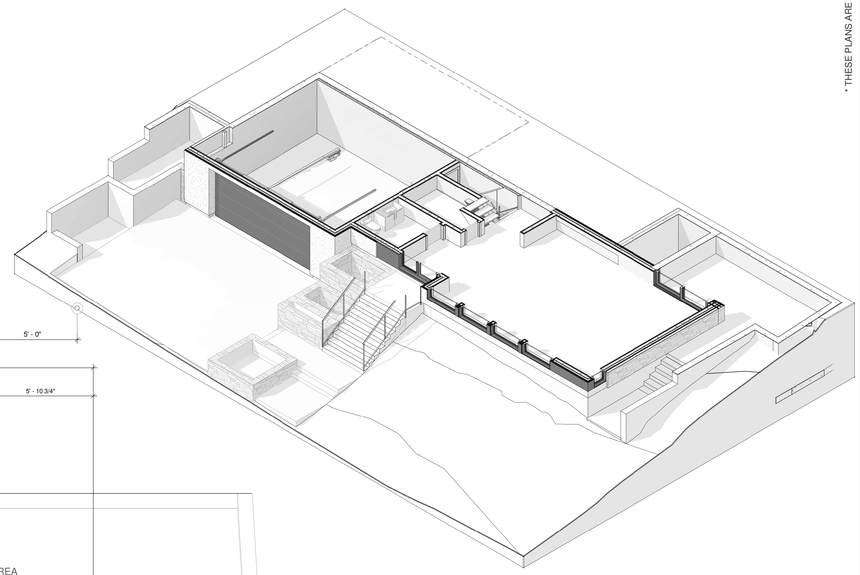
MIAKHAIL

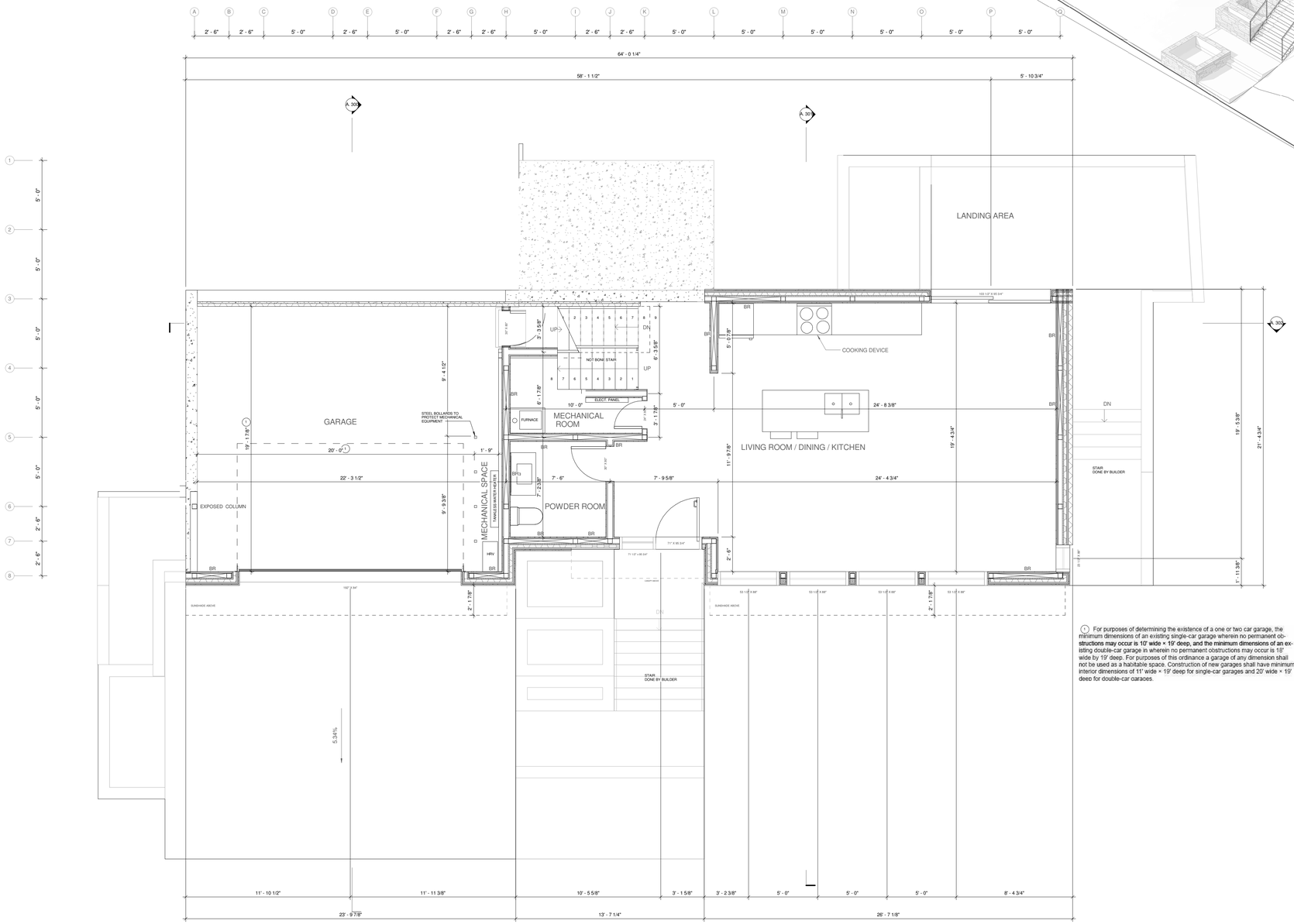
17-802

2398 RAINBOW COURT
HAYWARD, CA 94542, APN 425-0410-031

DRAWING TITLE: Site plan	DRAWN BY: Author
	CHECK BY: Checker
SCEAU	DATE: 2017/09/19
	SCALE: As indicated
	REVISION
	PAGE: A. 100

* THESE PLANS ARE NOT FOR CONSTRUCTION.





1 For purposes of determining the existence of a one or two car garage, the minimum dimensions of an existing single-car garage wherein no permanent obstructions may occur is 10' wide × 19' deep, and the minimum dimensions of an existing double-car garage in wherein no permanent obstructions may occur is 18' wide by 19' deep. For purposes of this ordinance a garage of any dimension shall not be used as a habitable space. Construction of new garages shall have minimum interior dimensions of 11' wide × 19' deep for single-car garages and 20' wide × 19' deep for double-car garages.

1 Main Floor Plan
1/4" = 1'-0"
1148.48 SF (including garage)

BONE STRUCTURE®

SYMBOLS LEGEND & NOTES

- ⊗ FLOOR DRAIN
- HARD-WIRED IONIC SMOKE ALARM AND CARBON MONOXIDE DETECTOR, INTERCONNECTED (per 9.10.19.5) WITH BATTERY BACKUP (per 9.10.19.4)
- (T) TEMPERED OR LAMINATED SAFETY GLASS, CONFORM TO CAN/CBSB-12.1-M per 9.6.1.4
- (E) UNOBSTRACTED OPENING OF NOT LESS THAN 0.35 m² IN AREA WITH NO DIMENSION LESS THAN 380mm.
- (F) FAN
- ♀ EXTERIOR LIGHTING OUTLET WITH INTERIOR SWITCH PER 9.34.2.1
- ☼ LIGHTING OUTLET WITH 3-WAYS WALL SWITCH PER 9.34.2.3
- (G) MIN. 1070 MM HIGH GUARDRAIL DESIGNED TO WITHSTAND THE SPECIFIED LATERAL LOADS PER 4.1.5.1.4
- BR BRACING TAG

- (FW) FOUNDATION WALL (8")
- (FW) FOUNDATION WALL (10") (R20)
- (WW) LIGHT GRAY STUCCO FINISH (R29)
- (WW) DARK GRAY ALUMINUM PANEL (R29)
- (WW) THIN STONE VENEER (R29)
- (FL) TYPICAL FLOOR - WOOD FINISH
- (FL) TYPICAL FLOOR - INSULATED WOOD FINISH
- (FL) 4" CONCRETE SLAB(R10)
- (FL) 6" GARAGE SLAB
- (RW) TYPICAL ROOF (2% SLOPE) (R50)
- (RW) TERRACE ROOF (R50)
- (LT) ENCASTRATED LED SPOT LIGHT
- (LT) EXTERIOR WALL LIGHT

BUILDING HEIGHT
- Building maximum height 60ft'-0 - PROPOSED: 60ft'-0"

RETAINING WALLS
- Maximum height 6'-0" - PROPOSED: All equal or less than 6'-0"

STAIRS (NOT BY BONE STRUCTURE)
- **R311.7.1 Width.** Minimum 36 inches (914 mm).
  Handrails maximum 412 inches (114 mm) on either side of the stairway
  Exception. The minimum width of spiral stairways 26 inches
- **R311.7.2 Headroom.** Minimum headroom 80 inches (2032 mm)
- **R311.7.3 Vertical rise.** Maximum flight of stairs shall not have a vertical rise larger than 147 inches (3734 mm) between floor levels or landings.

Simple Concept
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DATE	REVISION	BY	NO.

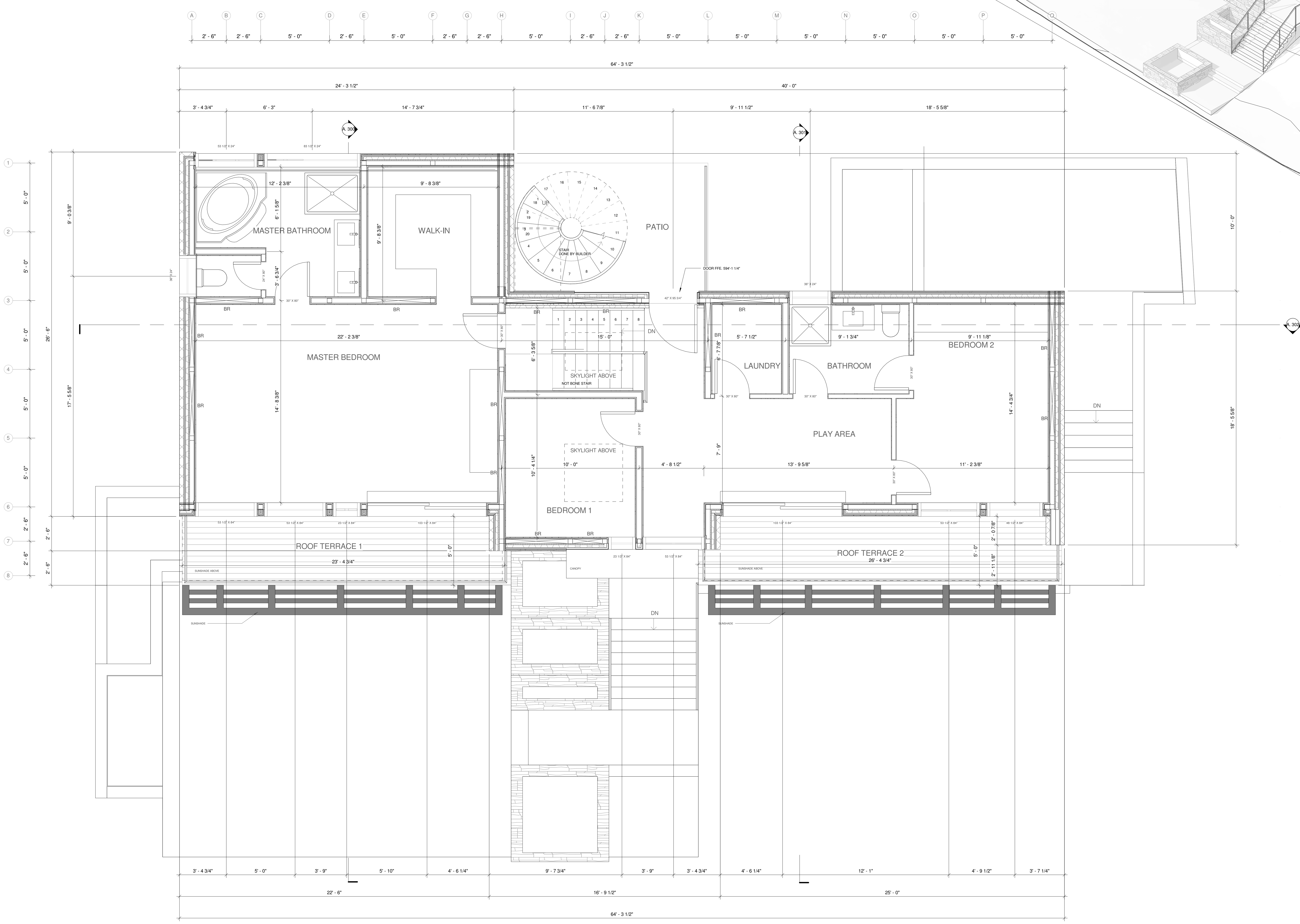
PROJECT

MIAKHAIL

17-802

2398 RAINBOW COURT
HAYWARD, CA 94542, APN 425-0410-031

DRAWING TITLE: Main floor plan	DRAWN BY: Author
	CHECK BY: Checker
SCEAU	DATE: 2017/09/19
	SCALE: As indicated
	REVISION:
	PAGE: A. 104



1 Main Floor Plan
1/4" = 1'-0"
1138.18 SF

* THESE PLANS ARE NOT FOR CONSTRUCTION.

BONE STRUCTURE®

SYMBOLS LEGEND & NOTES

- FLOOR DRAIN
- HARD-WIRED IONIC SMOKE ALARM AND CARBON MONOXIDE DETECTOR, INTERCONNECTED (per 9.10.19.5) WITH BATTERY BACKUP (per 9.10.19.4)
- (T) TEMPERED OR LAMINATED SAFETY GLASS, CONFORM TO CAN/CBSB-12.1-M per 9.6.1.4
- (E) UNOBSTRACTED OPENING OF NOT LESS THAN 0.35 m² IN AREA WITH NO DIMENSION LESS THAN 380mm.
- (F) FAN
- EXTERIOR LIGHTING OUTLET WITH INTERIOR SWITCH PER 9.34.2.1
- LIGHTING OUTLET WITH 3-WAYS WALL SWITCH PER 9.34.2.3
- (G) MIN. 1070 MM HIGH GUARDRAIL DESIGNED TO WITHSTAND THE SPECIFIED LATERAL LOADS PER 4.1.5.1.4
- BR BRACING TAG

- F1 FOUNDATION WALL (8")
- F2 FOUNDATION WALL (10") (R20)
- W1 LIGHT GRAY STUCCO FINISH (R29)
- W2 DARK GRAY ALUMINUM PANEL (R29)
- W3 THIN STONE VENEER (R29)
- P1 TYPICAL FLOOR - WOOD FINISH
- P2 TYPICAL FLOOR - INSULATED WOOD FINISH
- P3 4" CONCRETE SLAB(R10)
- P4 6" GARAGE SLAB
- R1 TYPICAL ROOF (2% SLOPE) (R50)
- R2 TERRACE ROOF (R50)
- L1 ENCASTRATED LED SPOT LIGHT
- L2 EXTERIOR WALL LIGHT

BUILDING HEIGHT
- Building maxumum height 606'-0 - PROPOSED: 606'-0"

RETAINING WALLS
- Maximum height 6'-0" - PROPOSED: All equal or less than 6'-0"

STAIRS (NOT BY BONE STRUCTURE)
- **R311.7.1 Width.** Minimum 36 inches (914 mm)
  Handrails maximum 41/2 inches (114 mm) on either side of the stairway
  Exception: The minimum width of spiral stairways 26 inches
- **R311.7.2 Headroom.** The minimum headroom 6 feet 8 inches (2032 mm)
- **R311.7.3 Vertical rise.** Maximum flight of stairs shall not have a vertical rise larger than 147 inches (3734 mm) between floor levels or landings.

Simple Concept
2812 JOSEPH-A. BOMBARDIER, LAVAL, QC, CA H7P 6E2
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DATE	REVISION	BY	NO.

PROJECT

MIAKHAIL
17-802
2398 RAINBOW COURT
HAYWARD, CA 94542, APN 425-0410-031

DRAWING TITLE: First floor plan	DRAWN BY: Author
	CHECK BY: Checker
SCEAU	DATE: 2017/09/19
	SCALE: As indicated
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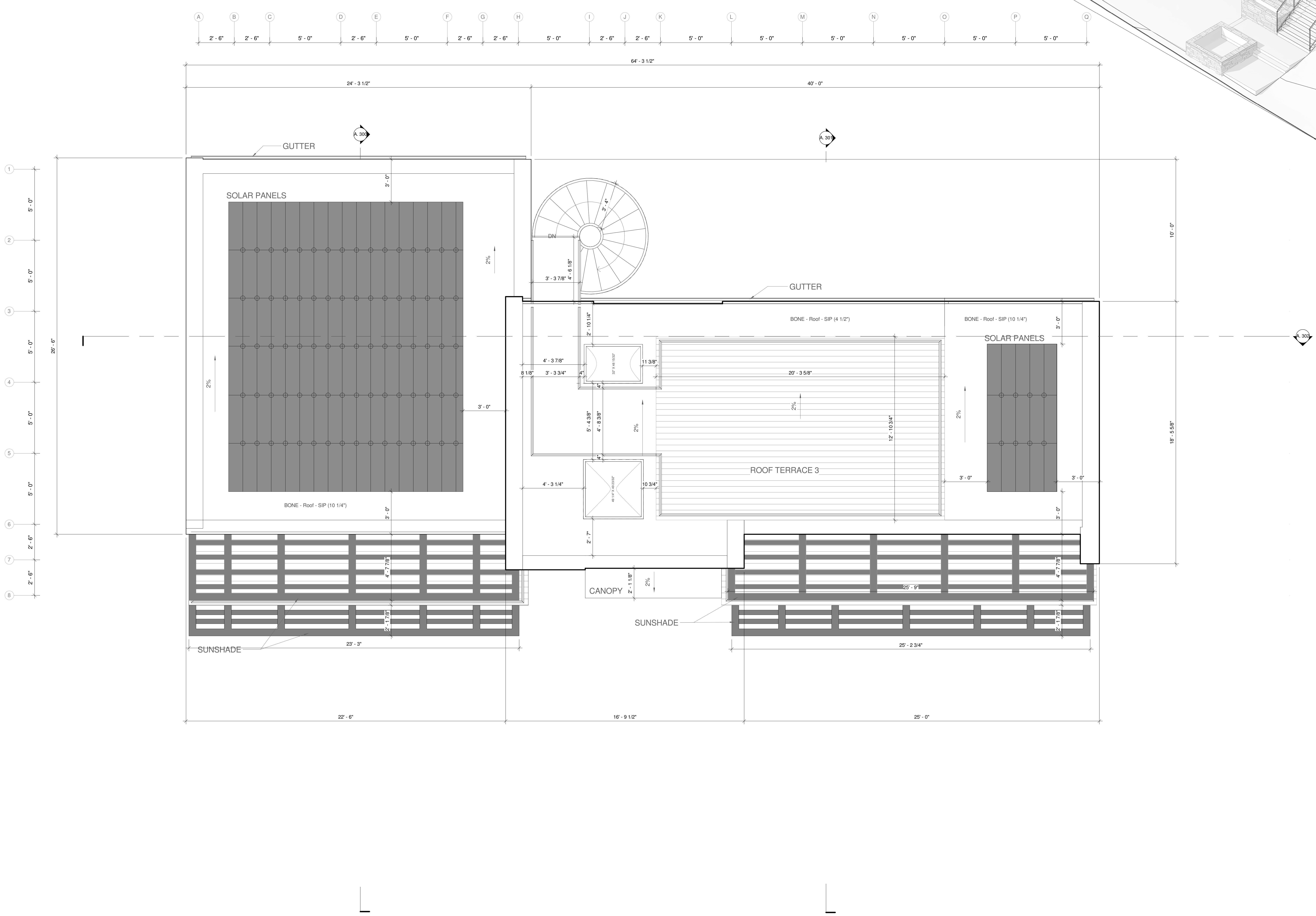
	PAGE: A. 105



1 First Floor Plan
1/4" = 1'-0"
1148.48 SF (Including garage)

* THESE PLANS ARE NOT FOR CONSTRUCTION.

BONE STRUCTURE®

SYMBOLS LEGEND & NOTES

- FLOOR DRAIN
- HARD-WIRED IONIC SMOKE ALARM AND CARBON MONOXIDE DETECTOR, INTERCONNECTED (per 9.10.19.5) WITH BATTERY BACKUP (per 9.10.19.4)
- (T) TEMPERED OR LAMINATED SAFETY GLASS, CONFORM TO CAN/CBSB-12.1-M per 9.6.1.4
- (E) UNOBSTRACTED OPENING OF NOT LESS THAN 0.35 m² IN AREA WITH NO DIMENSION LESS THAN 380mm.
- (F) FAN
- EXTERIOR LIGHTING OUTLET WITH INTERIOR SWITCH PER 9.34.2.1
- LIGHTING OUTLET WITH 3-WAYS WALL SWITCH PER 9.34.2.3
- (G) MIN. 1070 MM HIGH GUARDRAIL DESIGNED TO WITHSTAND THE SPECIFIED LATERAL LOADS PER 4.1.5.1.4
- BR BRACING TAG

PARAPETS NOT SUPPLIED BY BONE STRUCTURE

- F1 FOUNDATION WALL (8")
- F2 FOUNDATION WALL (10") (R20)
- W1 LIGHT GRAY STUCCO FINISH (R29)
- W2 DARK GRAY ALUMINUM PANEL (R29)
- W3 THIN STONE VENEER (R29)
- P1 TYPICAL FLOOR - WOOD FINISH
- P2 TYPICAL FLOOR - INSULATED WOOD FINISH
- P3 4" CONCRETE SLAB(R10)
- P4 6" GARAGE SLAB
- R1 TYPICAL ROOF (2% SLOPE) (R50)
- R2 TERRACE ROOF (R50)
- L1 ENCASTRATED LED SPOT LIGHT
- L2 EXTERIOR WALL LIGHT

BUILDING HEIGHT
- Building maxumum height 606'-0 - PROPOSED: 606'-0"

RETAINING WALLS
- Maximum height 6'-0" - PROPOSED: All equal or less than 6'-0"

STAIRS (NOT BY BONE STRUCTURE)
- **R311.7.1 Width.** Minimum 36 inches (914 mm)
  Handrails maximum 41/2 inches (114 mm) on either side of the stairway
  Exception: The minimum width of spiral stairways 26 inches
- **R311.7.2 Headroom.** The minimum headroom 6 feet 8 inches (2032 mm)
- **R311.7.3 Vertical rise.** Maximum flight of stairs shall not have a vertical rise larger than 147 inches (3734 mm) between floor levels or landings.

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DATE	REVISION	BY	NO.

PROJECT

MIAKHAIL
17-802

2398 RAINBOW COURT
HAYWARD, CA 94542, APN 425-0410-031

DRAWING TITLE	DRAWN BY
Roof plan	Author
	CHECK BY: Checker
SCEAU	DATE: 2017/09/19
	SCALE: As indicated
	REVISION
	PAGE: A. 106

1 West Elevation (Front)
1/4" = 1'-0"

* THESE PLANS ARE NOT FOR CONSTRUCTION.

BONE STRUCTURE®

SYMBOLS LEGEND

Ⓣ TEMPERED OR LAMINATED SAFETY GLASS, CONFORM TO CAN/CBSB-12.1-M per 9.6.1.4

Ⓔ UNOBSTRACTED OPENING OF NOT LESS THAN 0.35 m² IN AREA WITH NO DIMENSION LESS THAN 380mm.

Ⓖ TEMPERED SAFETY GLASS GUARDRAIL. DESIGNED TO WITHSTAND THE SPECIFIED LATERAL LOADS PER.4.1.5.14.

XXXX'-X" EXISTING GRADE

XXXX'-X" PROPOSED GRADE

ROOF	Material 1
FASCIA	Material 2
SOFFIT	Material 3

- F1 FOUNDATION WALL (8")
- F2 FOUNDATION WALL (10") (R20)
- W1 LIGHT GRAY STUCCO FINISH (R29)
- W2 DARK GRAY ALUMINUM PANEL (R29)
- W3 THIN STONE VENEER (R29)
- P1 TYPICAL FLOOR - WOOD FINISH
- P2 TYPICAL FLOOR - INSULATED WOOD FINISH
- P3 4" CONCRETE SLAB(R10)
- P4 6" GARAGE SLAB
- R1 TYPICAL ROOF (2% SLOPE) (R50)
- R2 TERRACE ROOF (R50)
- L1 ENCASTRATED LED SPOT LIGHT
- L2 EXTERIOR WALL LIGHT

BUILDING HEIGHT
- Building maxumum height 606'-0 - PROPOSED: 606'-0"

RETAINING WALLS
- Maximum height 6'-0" - PROPOSED: All equal or less than 6'-0"

STAIRS (NOT BY BONE STRUCTURE)
- **R311.7.1 Width.** Minimum 36 inches (914 mm) Handrails maximum 41/2 inches (114 mm) on either side of the stairway **Exception:** The minimum width of spiral stairways 26 inches
- **R311.7.2 Headroom.** The minimum headroom 6 feet 8 inches (2032 mm)
- **R311.7.3 Vertical rise.** Maximum flight of stairs shall not have a vertical rise larger than 147 inches (3734 mm) between floor levels or landings.

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DATE	REVISION	BY	NO.

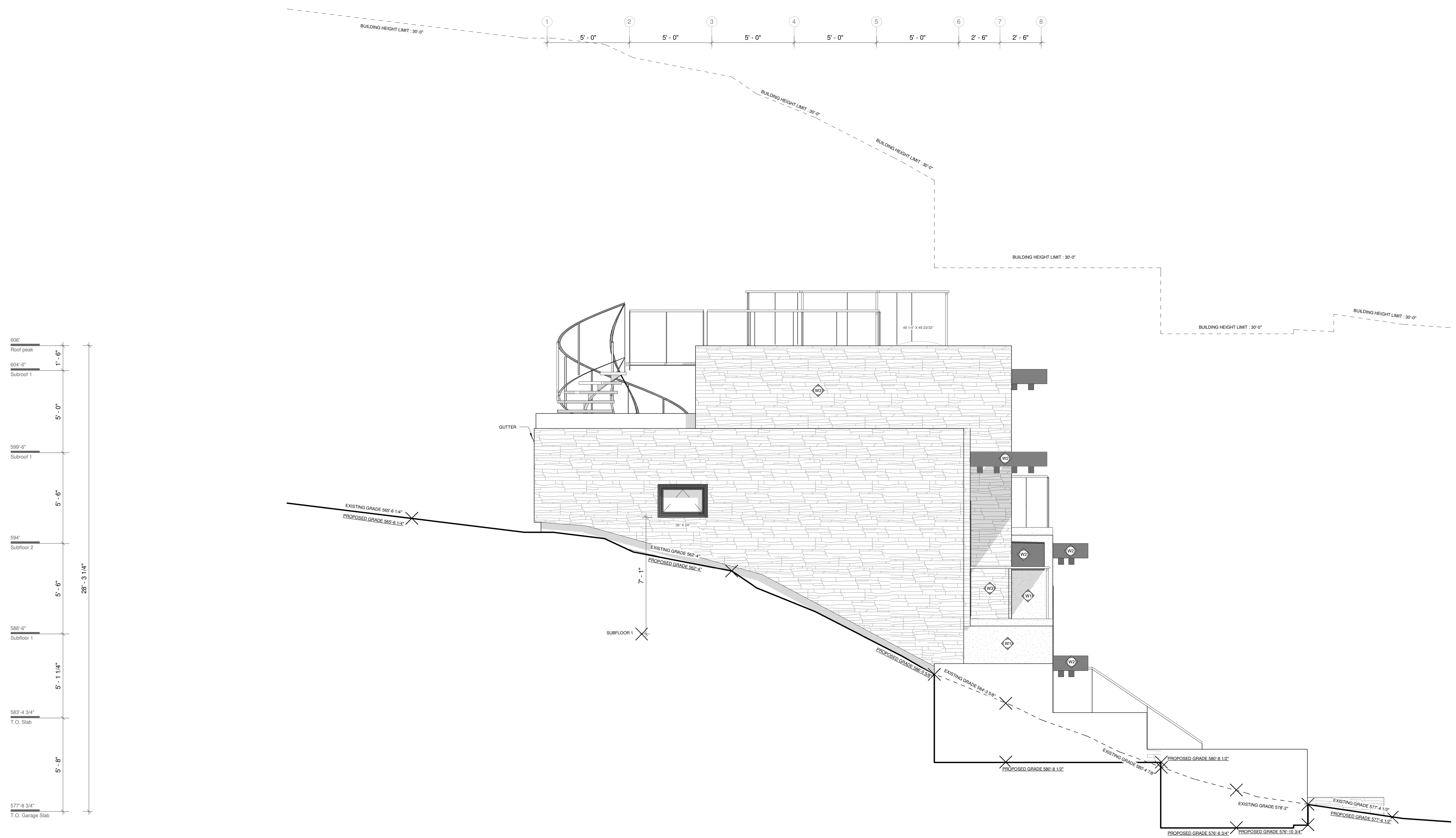
PROJECT

MIAKHAIL

17-802

2398 RAINBOW COURT
HAYWARD, CA 94542, APN 425-0410-031

DRAWING TITLE: West elevation	DRAWN BY: Author
	CHECK BY: Checker
SCEAU	DATE: 2017/09/19
	SCALE: As indicated
	REVISION
	PAGE: A. 200



1 North Elevation (Left)
1/4" = 1'-0"

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BONE STRUCTURE®

SYMBOLS LEGEND

Ⓣ TEMPERED OR LAMINATED SAFETY GLASS, CONFORM TO CAN/CBSB-12.1-M per 9.6.1.4

Ⓔ UNOBSTRACTED OPENING OF NOT LESS THAN 0.35 m² IN AREA WITH NO DIMENSION LESS THAN 380mm.

Ⓖ TEMPERED SAFETY GLASS GUARDRAIL. DESIGNED TO WITHSTAND THE SPECIFIED LATERAL LOADS PER.4.1.5.14.

XXXX'-X" EXISTING GRADE

XXXX'-X" PROPOSED GRADE

ROOF	Material 1
FASCIA	Material 2
SOFFIT	Material 3

- F1 FOUNDATION WALL (8")
- F2 FOUNDATION WALL (10") (R20)
- W1 LIGHT GRAY STUCCO FINISH (R29)
- W2 DARK GRAY ALUMINUM PANEL (R29)
- W3 THIN STONE VENEER (R29)
- P1 TYPICAL FLOOR - WOOD FINISH
- P2 TYPICAL FLOOR - INSULATED WOOD FINISH
- P3 4" CONCRETE SLAB(R10)
- P4 6" GARAGE SLAB
- R1 TYPICAL ROOF (2% SLOPE) (R50)
- R2 TERRACE ROOF (R50)
- L1 ENCASTRATED LED SPOT LIGHT
- L2 EXTERIOR WALL LIGHT

BUILDING HEIGHT
- Building maxumum height 606'-0 - PROPOSED: 606'-0"

RETAINING WALLS
- Maximum height 6'-0" - PROPOSED: All equal or less than 6'-0"

STAIRS (NOT BY BONE STRUCTURE)
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Simple Concept

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DATE	REVISION	BY	NO.

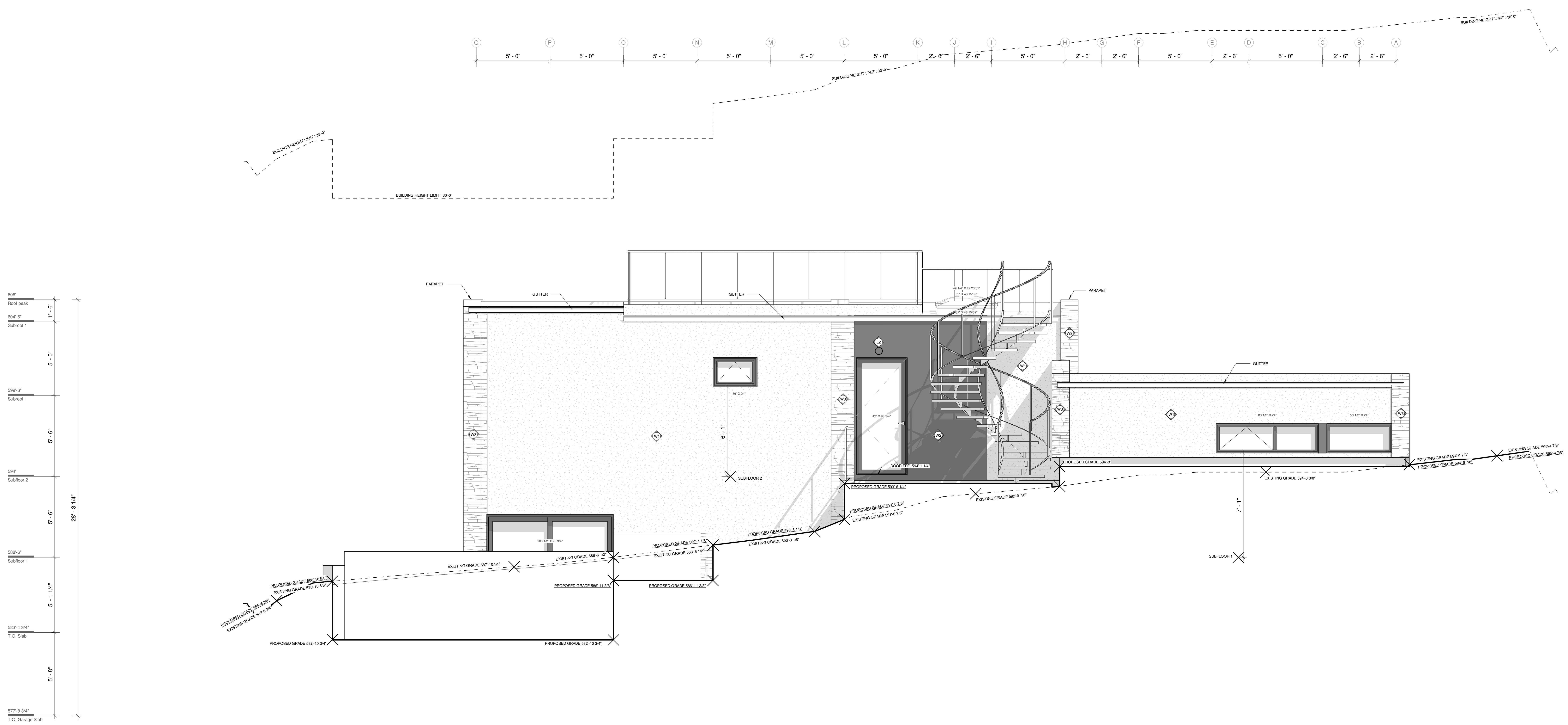
PROJECT

MIAKHAIL

17-802

2398 RAINBOW COURT
HAYWARD, CA 94542, APN 425-0410-031

DRAWING TITLE: North elevation	DRAWN BY: Author
	CHECK BY: Checker
SCEAU	DATE: 2017/09/19
	SCALE: As indicated
	REVISION:
	PAGE: A. 201



1 East Elevation (Back)
1/4" = 1'-0"

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BONE STRUCTURE®

SYMBOLS LEGEND

Ⓣ TEMPERED OR LAMINATED SAFETY GLASS, CONFORM TO CAN/CBSB-12.1-M per 9.6.1.4

Ⓔ UNOBSTRACTED OPENING OF NOT LESS THAN 0.35 m² IN AREA WITH NO DIMENSION LESS THAN 380mm.

Ⓖ TEMPERED SAFETY GLASS GUARDRAIL. DESIGNED TO WITHSTAND THE SPECIFIED LATERAL LOADS PER.4.1.5.14.

XXXX'-X" EXISTING GRADE

XXXX'-X" PROPOSED GRADE

ROOF	Material 1
FASCIA	Material 2
SOFFIT	Material 3

- F1 FOUNDATION WALL (8")
- F2 FOUNDATION WALL (10") (R20)
- W1 LIGHT GRAY STUCCO FINISH (R29)
- W2 DARK GRAY ALUMINUM PANEL (R29)
- W3 THIN STONE VENEER (R29)
- P1 TYPICAL FLOOR - WOOD FINISH
- P2 TYPICAL FLOOR - INSULATED WOOD FINISH
- P3 4" CONCRETE SLAB(R10)
- P4 6" GARAGE SLAB
- R1 TYPICAL ROOF (2% SLOPE) (R50)
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- L1 ENCASTRATED LED SPOT LIGHT
- L2 EXTERIOR WALL LIGHT

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HAYWARD, CA 94542, APN 425-0410-031

DRAWING TITLE: East elevation	DRAWN BY: Author
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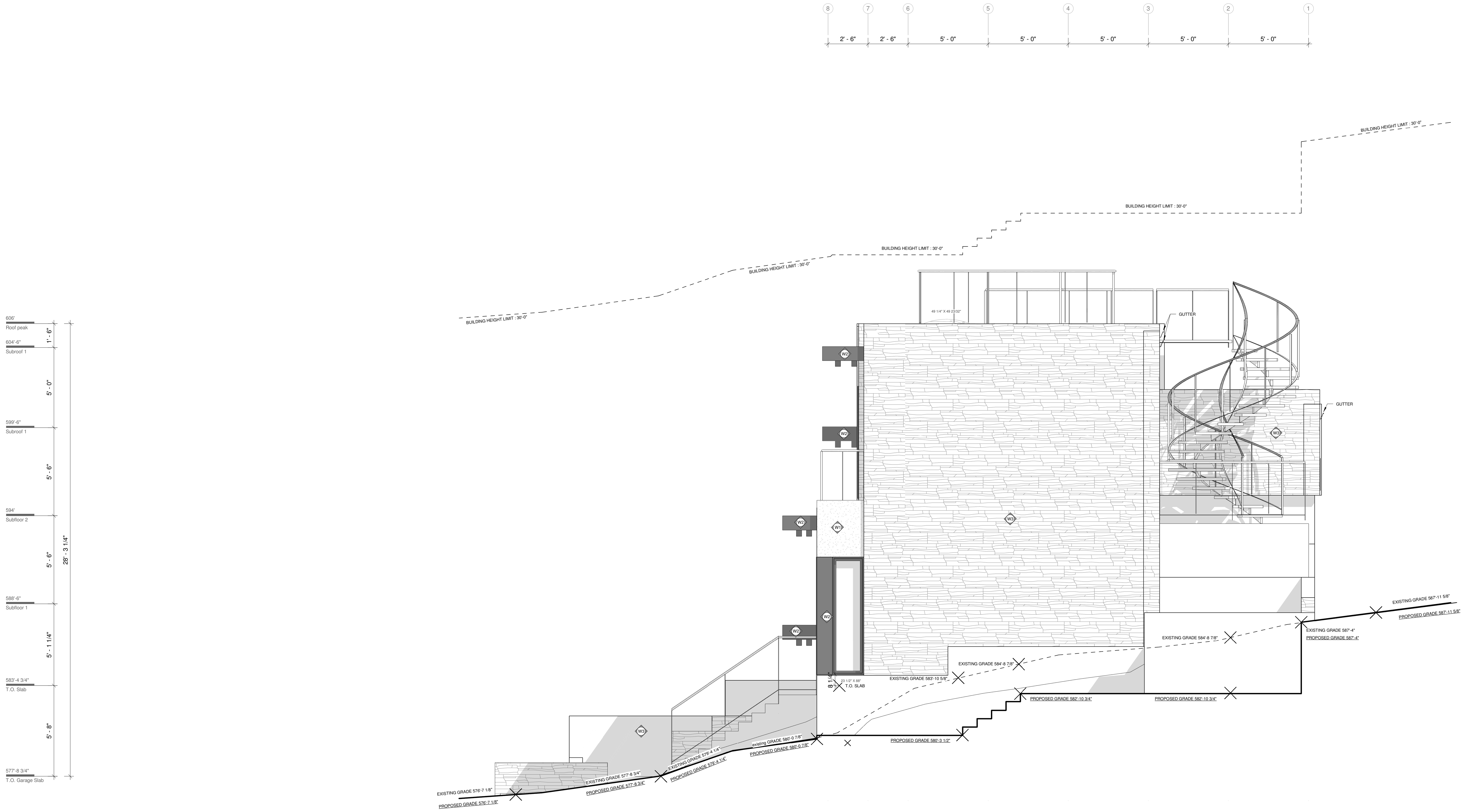
SCEAU	DATE: 2017/09/19
	SCALE: As indicated
	REVISION:
	PAGE: A. 202



1 South Elevation (Right)
1/4" = 1'-0"

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BONE STRUCTURE®

SYMBOLS LEGEND

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DATE	REVISION	BY	NO.

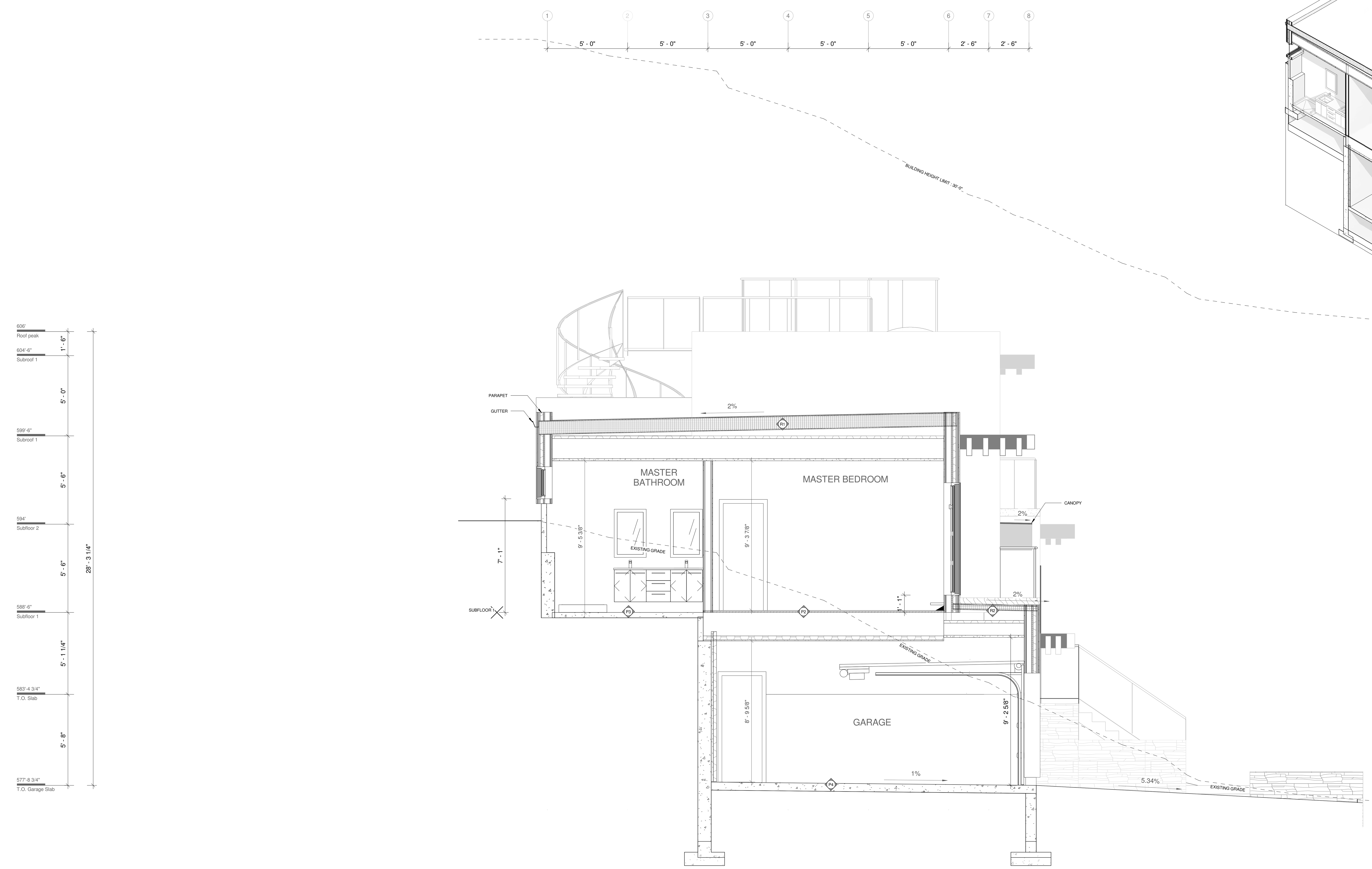
PROJECT

MIAKHAIL

17-802

2398 RAINBOW COURT
HAYWARD, CA 94542, APN 425-0410-031

DRAWING TITLE: South elevation	DRAWN BY: Author
	CHECK BY: Checker
SCEAU	DATE: 2017/09/19
	SCALE: As indicated
	REVISION:
	PAGE: A. 203



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BONE STRUCTURE®

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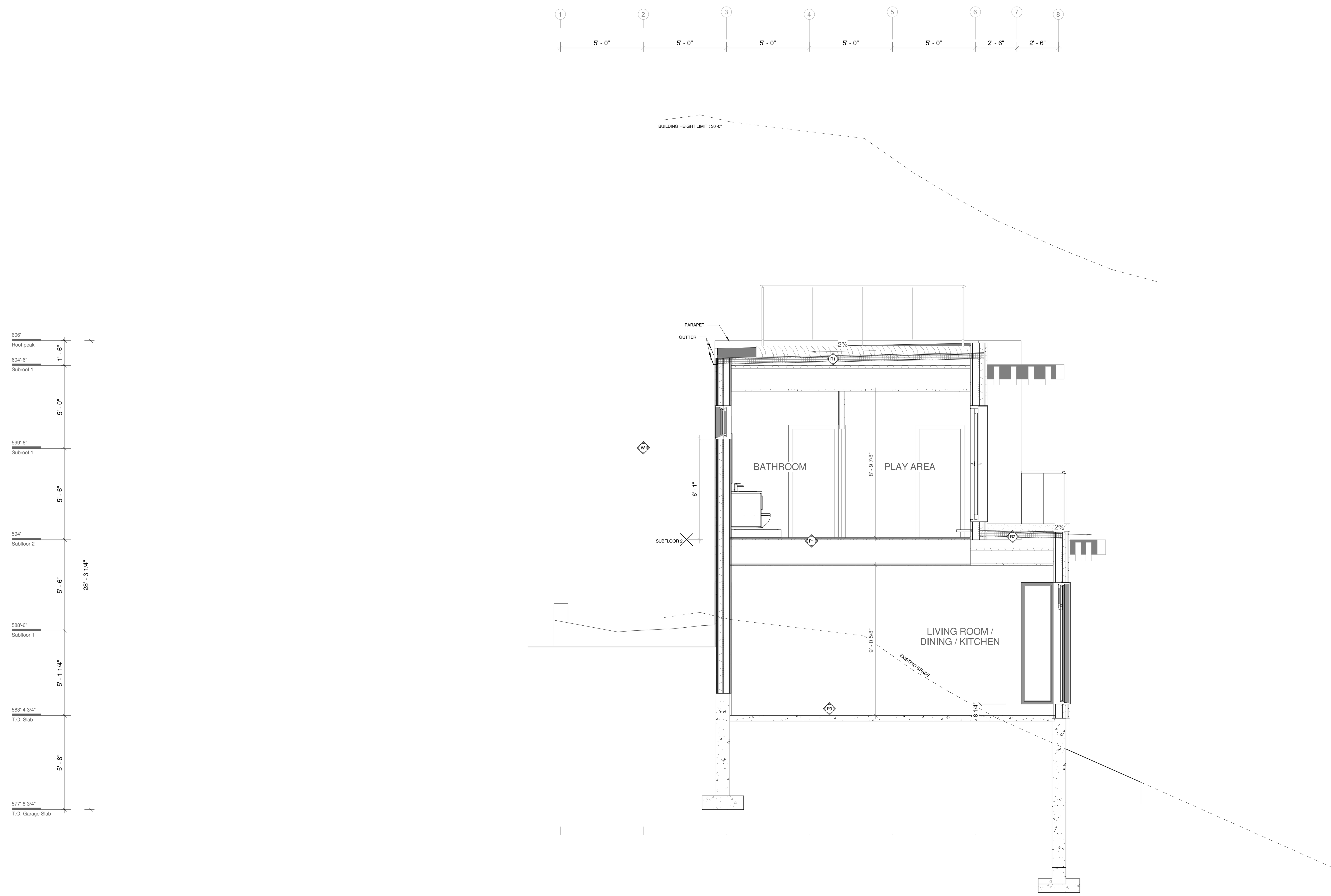
PROJECT

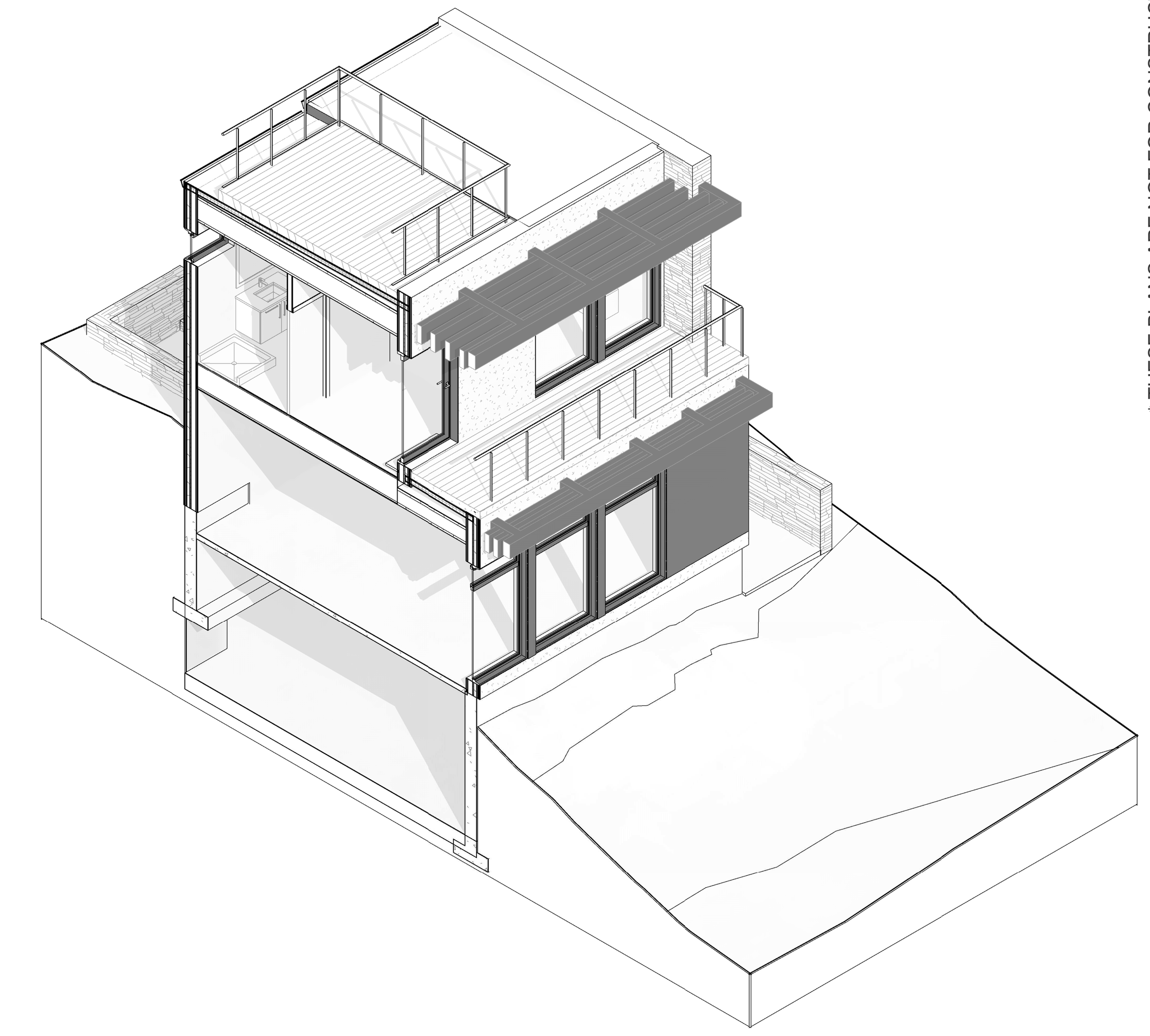
MIAKHAIL
17-802

2398 RAINBOW COURT
HAYWARD, CA 94542, APN 425-0410-031

DRAWING TITLE: Cross section 1	DRAWN BY: Author
	CHECK BY: Checker
SCEAU	DATE: 2017/09/19
	SCALE: As indicated
	REVISION
	PAGE: A. 300

1 Cross section 1
1/4" = 1'-0"





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STRUCTURE®

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PROJECT

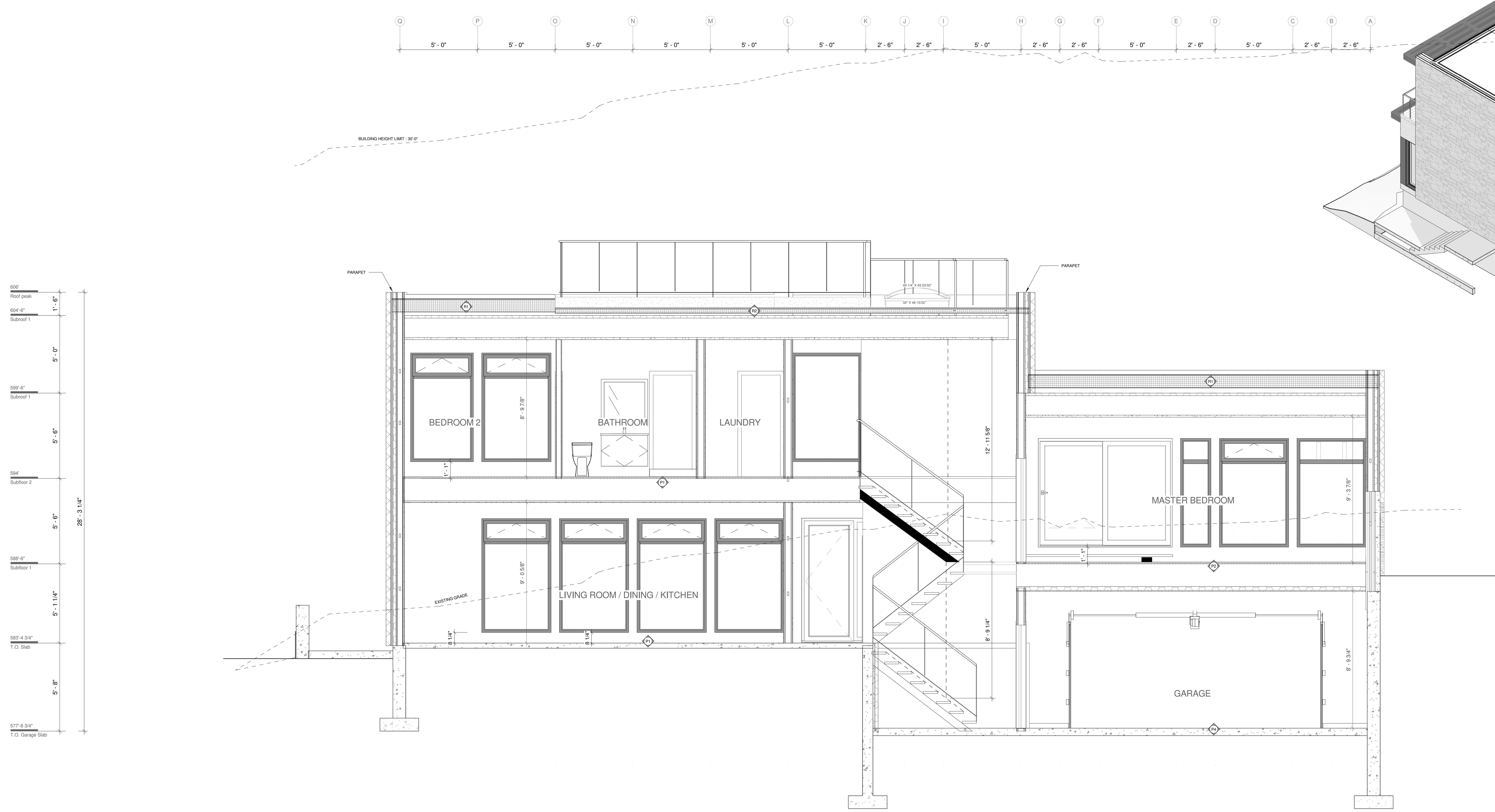
MIAKHAIL

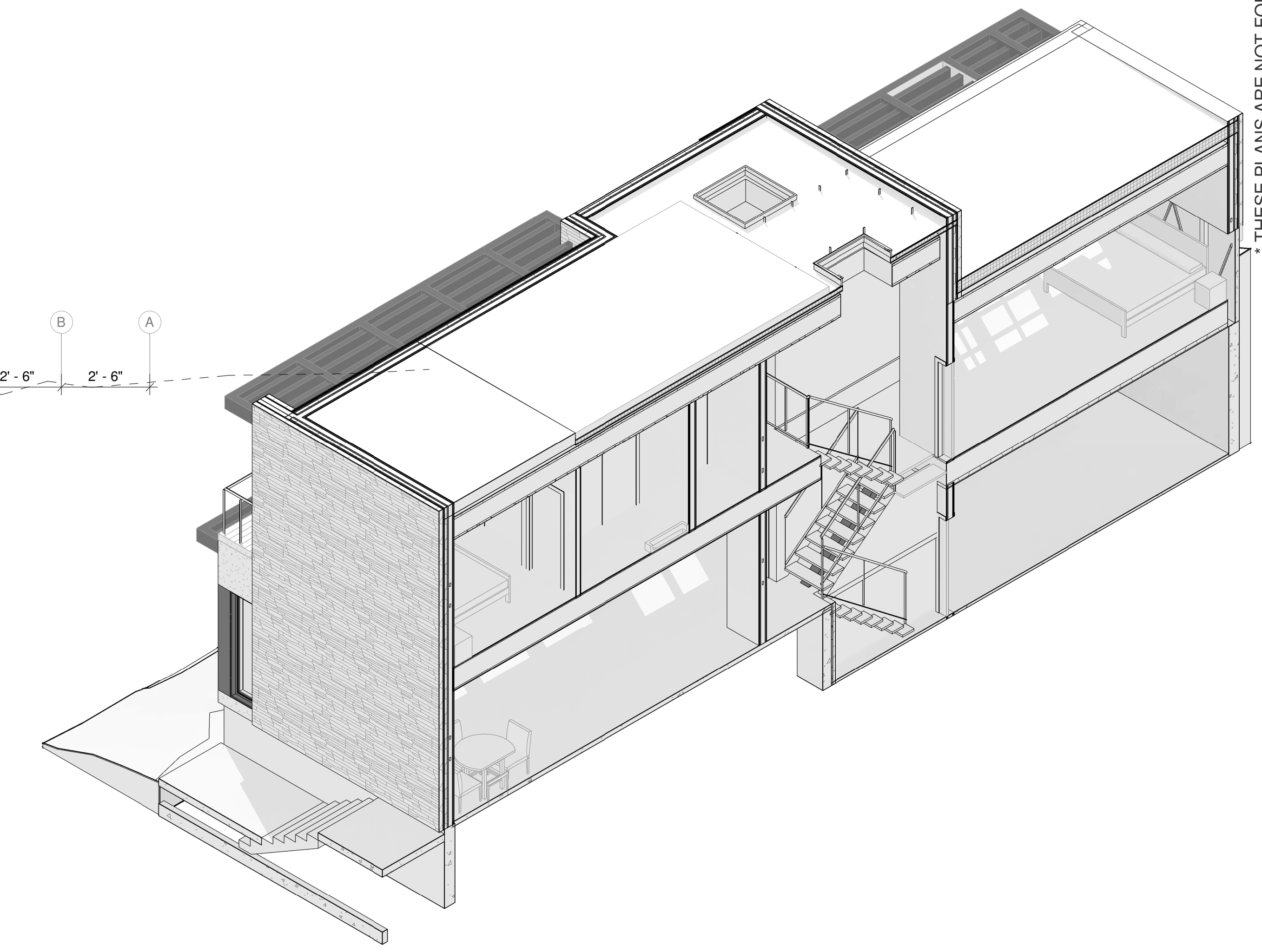
17-802

2398 RAINBOW COURT
HAYWARD, CA 94542, APN 425-0410-031

DRAWING TITLE	
Cross section 2	DRAWN BY: Author
	CHECK BY: Checker
SCEAU	DATE: 2017/09/19
	SCALE: As indicated
	REVISION:
	PAGE: A. 301

2 Cross section 2
1/4" = 1'-0"





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PROJECT

MIAKHAIL
17-802

2398 RAINBOW COURT
HAYWARD, CA 94542, APN 425-0410-031

DRAWING TITLE: Longitudinal section	DRAWN BY: Author
	CHECK BY: Checker
SCEAU	DATE: 2017/09/19
	SCALE: As indicated
	REVISION:
	PAGE: A. 302

1 Longitudinal section
1/4" = 1'-0"

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BONE STRUCTURE®

LIGHT GRAY STUCCO FINISH (RDI)

DARK GRAY ALUMINUM PANEL (RDI)

THIN STONE VENEER (RDI)

Simple Concept

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DATE	REVISION	BY	NO.

PROJECT

MIAKHAIL

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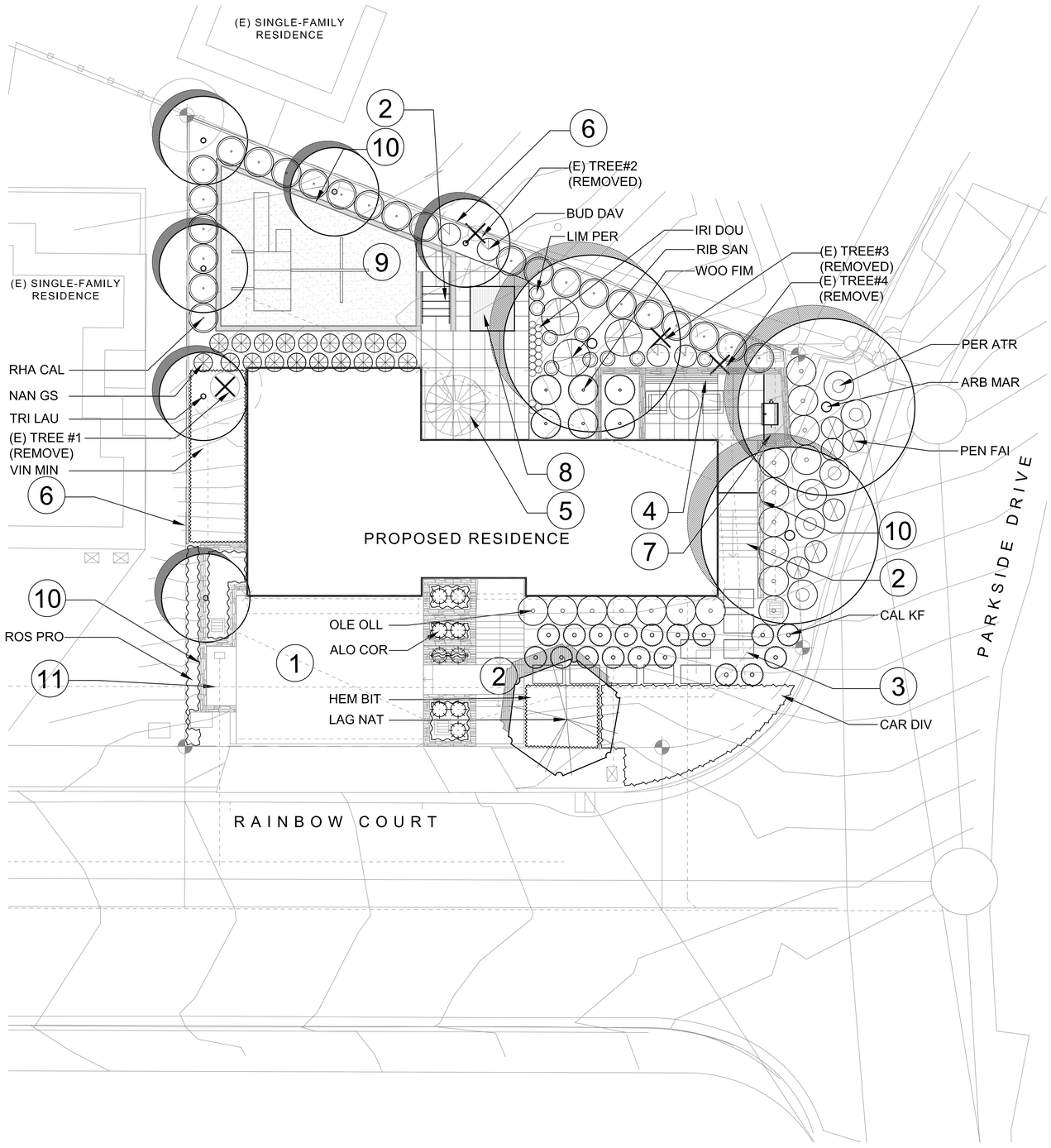
2398 RAINBOW COURT
HAYWARD, CA 94542, APN 425-0410-031

DRAWING TITLE: Perspectives	DRAWN BY: Author
	CHECK BY: Checker
SCEAU	DATE: 2017/09/19
	SCALE: 1/2" = 1'-0"
	REVISION
	PAGE: A. 350



PLAN

N

0 4' 8' 16'

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

KEY NOTES

1. DRIVEWAY
2. STEPS/STAIRS
3. CONCRETE STEP PADS
4. SEATING BUILT INTO RETAINING WALL
5. STAIRS FROM ROOF DECK
6. WOOD FENCE AT PROPERTY LINE--6 FT HIGH
7. OUTDOOR KITCHEN
8. SPA
9. PLAY AREA--BARK SURFACE
10. RETAINING WALL
11. TRASH/RECYCLING BIN STORAGE

LEGEND

PROPOSED TREES

EXISTING TREES TO BE REMOVED OR HAVE BEEN REMOVED

SHRUB AND GROUNDCOVER AREA

LANDSCAPE STATEMENT

THE PROJECT LANDSCAPE IS PROPOSED ON A SITE THAT SLOPES PREDOMINANTLY TO THE WEST. THE PROPOSED RESIDENCE IS MULTI-LEVELED AND ALSO STEPS WITH THE SLOPE TO ADDRESS THE EXISTING SITE CONDITIONS.
THE PROPOSED LANDSCAPE IS INTENDED TO BE BOTH WATER CONSERVING AND LOW-MAINTENANCE. PLANT MATERIALS ARE ZONED TO ADDRESS BOTH EXPOSURES AND SITE CONCERNS. THE PERIMETERS ARE PLANTED WITH TREES AND SHRUBS TO PROVIDE BOTH THE OCCUPANTS AND NEIGHBORS WITH PRIVACY. BROADLEAF EVERGREEN TREES ARE PROPOSED IN LOCATIONS WHERE PRIVACY IS OF GREATEST CONCERN. THE TREES LOCATED TO MAINTAIN VIEWS FROM THE TERRACES ON THE WEST ELEVATION OF THE PROPOSED RESIDENCE. RETAINING WALLS ARE SCREENED WITH PLANT MATERIALS. THE PLANT MATERIAL SELECTION AND ORGANIZATION ARE INTENDED TO ENHANCE THE SIMPLE CONTEMPORARY ARCHITECTURE OF THE RESIDENCE. THE PLANT SPECIES SELECTION VARIED TO PROVIDE DIFFERENT TEXTURES AND FORM WITH OPPORTUNITIES FOR SEASONAL FLOWERING AND COLOR.
AS SITE GRADING IS INTENDED, TOPSOIL WILL BE STOCKPILED FOR USE IN THE PROJECT LANDSCAPE TO THE EXTENT POSSIBLE. ON SLOPES STEEPER THAN 3:1 JUTE MESH WILL BE USED FOR EROSION CONTROL PURPOSES.
FOR INSTALLATION AND LONG-TERM MAINTENANCE OF THE LANDSCAPE, SUSTAINABLE AND "BAY-FRIENDLY" PRACTICES ARE GOALS OF THE OWNER. THE INTENT IS TO RECYCLE A MINIMUM OF 50% OF THE LANDSCAPE CONSTRUCTION AND GREEN WASTE.

PLANT LIST

ABBREV.	BOTANICAL NAME	COMMON NAME	SIZE	MISC. NOTES & REQUIREMENTS	MATURE PLANT HTxSP	SPACING	WUCOLS RATING
TREES							
ARB MAR	*Arbutus 'Marina'*	Strawberry Tree	24" Box		40' x 25' <slow growing	varies >17'	L
LAG MUS	*Lagerstroemia x 'Muskogee'*	Crape Myrtle (Lavender)	24" Box	Hi. Br./SL/Match	20' X 15'	NA	L
TRI LAU	*Tristania laurina 'Elegant'*	Tristania	15 G.C.	S.L./No. Whorl. Br./N. Drp. Br./Match	20' x 15'	varies >16'	M
SHRUBS							
ALO COR	*Alce striata 'Coral'*	Aloe	5 G.C.		3' x 2'	2.5'	VL
BUD DAV	*Buddleia davidi 'Black Knight'*	Butterfly Bush	5 G.C.	F & B	6' x 3'	varies >3.5'	M
NAN GS	*Nandina domestica 'Gulf Stream'*	Dwarf Heavenly Bamboo	1 G.C.	F & B	3' X 3'	3'	L
OLE OLL	*Olea europaea 'Little Ollie'*	Dwarf Olive (fruitless)	5 G.C.	F & B--no shearing	4' x 4'	4'	VL
RHA CAL	*Rhamnus californica 'Eve Case'*	Coffeeberry	5 G.C.	F & B--no shearing	6' x 6' <slow growing	varies >4'	L
RIB SAN	*Ribes sanguinium*	Pink Winter Currant	5 G.C.	F & B	8' x 6'	varies >4'	L
PER ATR	*Perovskia atriplicifolia*	Russian Sage	1 G.C.	F & B	3.5' x3.5'	varies >4'	L
WOO FIM	*Woodwardia fimbriata*	Giant Chain Fern	5 G.C.		4 x 4'	varies >4.5'	M
PERENNIALS/BULBS/ANNUALS							
CAL KF	*Calamagrostis a.'Karl Foerster'*	Reed Grass	1 G.C.		2' X 2' (flowers to 6')	3'	M
HEM BIT	*Hemerocallis 'Bitsy'**	Evergreen, repeat bloom: Daylily	B.R.	Double fan min., plant at 18" o.c. max.	1.5' X 1.5'	1.5'	M
IRI PAC	*Iris 'Pacific Coast Hybrids'*	Pacific Coast Iris	1 G.C.		1.5' X 1.5'	1'	L
LIM PER	*Limonium perezii*	Sea Lavender	1 G.C.		1.5' X 1.5'	varies >2.33'	L
PEN FAI	*Pennisetum 'Fairy Tales'*	Fountain Grass	1 G.C.		2' x 3'	varies >3'	M
GROUNDCOVERS							
CAR DIV	*Carex divulsa*	Berkeley Sedge	1 G.C.	Plant at 15" o.c.	1.3' x 1.3'	15"	L
ROS PRO	*Rosmarinus officinalis 'Prostratus'*	Dwarf Rosemary	1 G.C.	Plant at 2'-6" o.c.	2' x 6'	2.5'	L
VIN MIN	*Vinca minor*	Dwarf Periwinkle	Flats	Plant at 1'-6" o.c.	0.5' x 3'+	1.5'	M

* *Hemerocallis* available only from Greenwood Daylilies, 8000 Balcom Canyon Road, Somis, CA 93066, (562) 494-8944, <www.greenwoodgarden.com>

PLANT LIST ABBREVIATIONS:

Note:	This list together with the plant list prepared by Taniguchi Landscape Architecture must accompany the contractor's nursery order(s)
SL	Single main, straight, dominant, leader
Hi. Br.	High branched—lowest limbs held above rootball 5' min. for 15 gallon can 6' min. for 24" box trees
No Top	No topping or pruning of upper branches
Br. Gr.	Branched to ground
F & B	Full dense, bushy, vigorous plants, with young growth closely spaced on branches, no old/woody plants.
N.V.S.-30 deg.	Narrow upright vase shape 30 degrees or less spread in branch/trunk structure
N.V.S.-45 deg.	Narrow upright vase shape 45 degrees or less spread in branch/trunk structure
No. Whorl. Br.	No closely spaced whirled branches. Select even symmetrical branch distribution
Match	Matched size, form, caliper, branching and cultivar. Select from one lot, one grower, for guaranteed consistency through life of plants. In general plants within a group or area are to be matched, unless noted otherwise.
T.F.	Tree Form
S.F.	Shrub Form
N.F.	Narrow upright Form
B.R.	Bare Root
B & B	Balled and Burlap
Mult. St.	Multi stemmed
Flat	Rooted cuttings from flats at on center distance specified in list. See groundcover/shrub o.c. planting detail for layout.
Cal.	Caliper
EV.	Evergreen
G.C.	Gallon Can
N.C.N.	No Common Name
Trail F	Select trailing Forms for prostrate growth
Veg. Gr.	Vegetative Grown
Hed. F.	Hedge Form (clipped)
Stem up.	Stem up to expose trunk and lower branch pattern
o.c.	On center
N. Drp. Br.	No long heavy drooping branches
HT	Height
SP	Spread

Existing Tree Summary

Number	Tree species/Common Name	Trunk Diameter (DBH)	Height (feet)	Spread (feet)	Disposition
1	Schinus molle/California Pepper	48"--stump	NA	NA	Remove stump
2	Eucalyptus sp./Gum Tree	24"	NA	NA	**Removed**
3	Quercus agrifolia?/Coast Live Oak	6"	NA	NA	**Removed**
4	Quercus agrifolia/Coast Live Oak	6"	20'	16'	Remove--canopy not balanced/grading&const impacts

MIAKHAIL RESIDENCE

2398 Rainbow Court
Hayward, CA
94542

Taniguchi Landscape Architecture
1013 South Claremont St., Ste 1
San Mateo, CA 94402
v 650.638.9985 | f 650.638.9986
CLA #2942

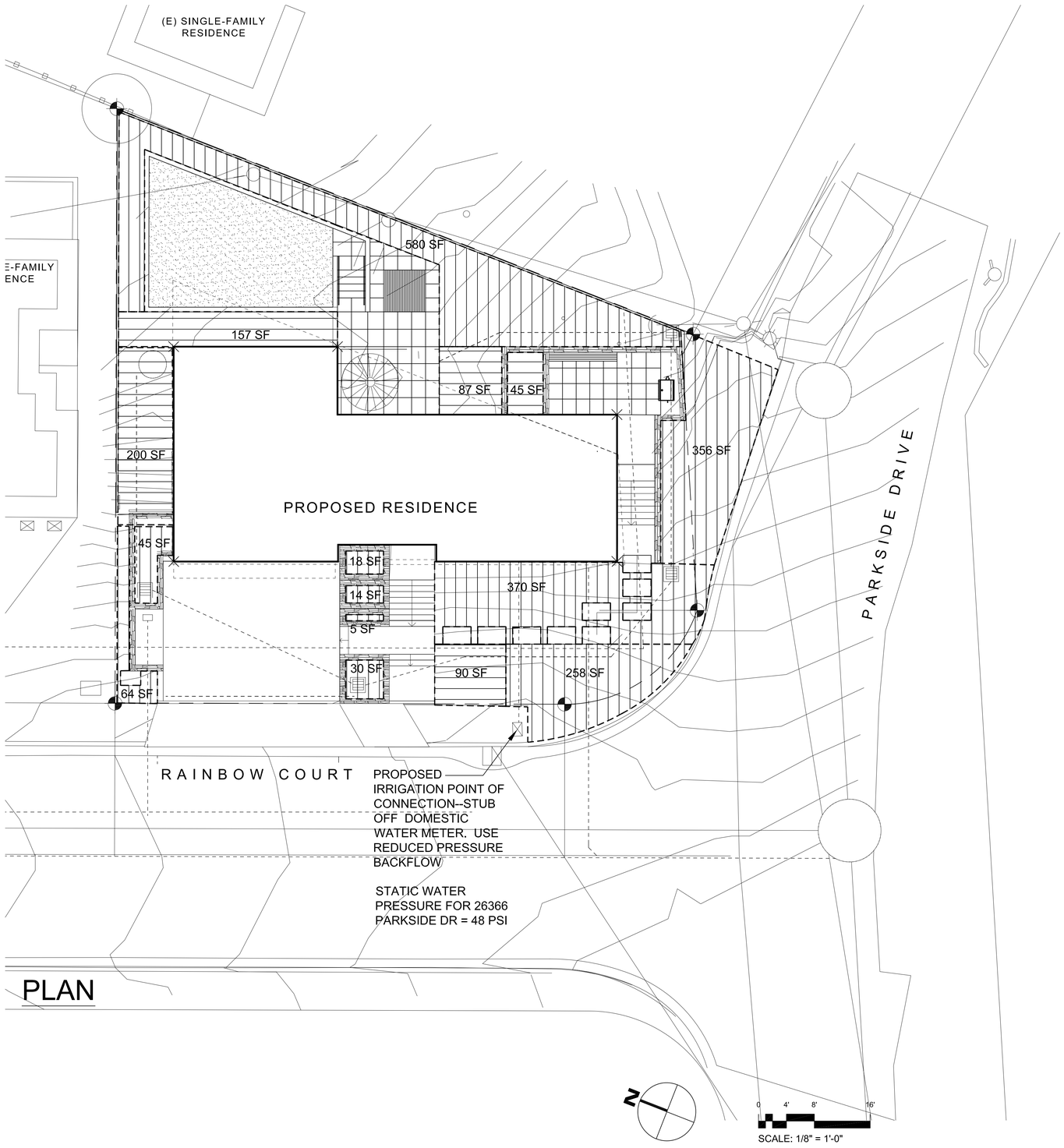
ISSUE:	DESCRIPTION:	DATE:
1	SUBMITTAL	09/19/17

SCALE: As Noted

PROJECT NUMBER: TLA#: 17018.000

SHEET TITLE
SCHEMATIC LANDSCAPE PLAN

SHEET NO.
L-1



PLAN

CONCEPTUAL IRRIGATION STATEMENT

1 IRRIGATION DESIGN SHALL BE ZONED FOR 1) TURF AND ANNUALS AND OTHER MODERATE TO HIGHER WATER USE PLANT MATERIALS; 2) GROUNDCOVERS, AND 3) NATIVE AND WATER CONSERVING PLANT MATERIALS.

2 IRRIGATION DESIGN SHALL ALSO BE ZONED FOR MICRO CLIMATES INCLUDING COOL, SHADED AND PROTECTED AREAS, AS WELL AS HOT, SUNNY AND WINDY AREAS.

3 PART SHADE AREAS INCLUDE MODERATE WATER USE AREAS HAVING MORNING AND/OR AFTERNOON SHADE.

4 COOL AND FULL SHADY AREAS INCLUDE LOW WATER USE AREAS FOR PLANTS REQUIRING LITTLE OR NO IRRIGATION WATER AND/OR LOCATIONS THAT WILL PROVIDE MOIST CONDITIONS.

5 LAYOUT SHALL BE DESIGNED FOR MINIMUM RUNOFF AND OVERSPRAY ONTO NON-LANDSCAPED AREAS

6 LOW VOLUME SPRINKLERS SHALL BE USED WHEREVER POSSIBLE WITH HEAD TO HEAD COVERAGE.

7 DRIP EMITTER OR BUBBLER IRRIGATION SHALL BE UTILIZED AT TREES TO PROMOTE DEEP WATERING WHEREVER POSSIBLE.

8 DRIP IRRIGATION SHALL BE UTILIZED AT NON-TRAFFIC OR ISOLATED PLANTING AREAS TO DECREASE THE POSSIBILITY OF VANDALISM TO THE MICRO-TUBING.

9 THE IRRIGATION CONTROLLER SHALL HAVE AMPLE CAPACITY IN TERMS OF PROGRAMS AND CYCLES THAT WILL MATCH THE COMPLEXITY OF THE LANDSCAPE PLAN FOR MORE EFFICIENT WATERING. FOR EXAMPLE, THE CONTROLLER SHALL HAVE THE ABILITY TO HAVE MULTIPLE CYCLES TO PERMIT A NUMBER OF SHORT DURATION WATERINGS THAT WILL ALLOW WATER TO SOAK INTO THE SOIL RATHER THAN RUN OFF.

10 INDIVIDUAL BUBBLERS OR DRIP EMITTERS SHALL BE UTILIZED TO ISOLATE WATER FOR PLANT MATERIALS AND ELIMINATE WATERING OF "BARE GROUND."

NOTES:

1. A MINIMUM 3-INCH LAYER OF 1/2" to 1' DIAMETER FIR OR PINE BARK MULCH SHALL BE APPLIED ON ALL EXPOSED SOIL SURFACES OF PLANTING AREAS EXCEPT TURF AREAS.

2. I HAVE COMPLIED WITH THE CRITERIA OF THE WATER CONSERVATION IN LANDSCAPING ORDINANCE AND APPLIED THEM FOR THE EFFICIENT USE OF WATER IN THE LANDSCAPE AND IRRIGATION DESIGN PLAN.

3. IRRIGATED PLANTED AREA= 2319 SF
TURF IS 0% OF THAT PLANTED AREA

4. PLANT MATERIAL SPECIES ARE DROUGHT TOLERANT NATIVE OR NON-INVASIVE PLANT SPECIES(AS DEFINED BY THE CALIFORNIA INVASIVE PLANT COUNCIL). DROUGHT TOLERANCE IS AS DEFINED IN "PLANTS AND LANDSCAPES FOR SUMMER-DRY CLIMATES OF THE SAN FRANCISCO BAY REGION" BY THE EAST BAY MUNICIPAL UTILITY DISTRICT.

5.. UNLESS CONTRAINDICATED BY A SOILS TEST, COMPOST AT THE RATE OF A MINIMUM OF FOUR CUBIC YARDS PER 1,000 SQUARE FEET OF PERMEABLE AREA SHALL BE INCORPORATED TO A DEPTH OF SIX INCHES INTO THE SOIL.

6. AUTOMATIC WEATHER-BASED OR SOIL-MOISTURE BASED IRRIGATION CONTROLLERS SHALL BE INSTALLED ON THE IRRIGATION SYSTEM.

7. IRRIGATION CONTROLLER PROGRAMMING DATA WILL NOT BE LOST DUE TO AN INTERRUPTION IN THE PRIMARY POWER SOURCE

8. PRESSURE REGULATORS SHALL BE INSTALLED ON THE IRRIGATION SYSTEM TO ENSURE DYNAMIC PRESSURE OF THE SYSTEM IS WITHIN THE MANUFACTURER'S RECOMMENDED PRESSURE RANGE.

9. MANUAL SHUT-OFF VALVES SHALL BE INSTALLED AS CLOSE AS POSSIBLE TO THE POINT OF CONNECTION OF THE WATER SUPPLY.

10. AREAS LESS THAN 10-FEET IN WIDTH IN ANY DIRECTION SHALL BE IRRIGATED WITH SUBSURFACE IRRIGATION OR OTHER MEANS THAT PRODUCES NO RUNOFF OR OVERSPRAY.

IRRIGATION WATER USE CALCULATIONS:

MIAKHAIL RESIDENCE WATER USE ESTIMATION

WATER TYPE	POTABLE
SITE ETo	44.2

REGULAR LANDSCAPE AREAS

HYDROZONE #	HYDROZONE NAME	PLANT WATER USE TYPE	PLANT FACTOR (PF)	IRRIGATION METHOD	IRRIGATION EFFICIENCY	ETAF (PXHE)	AREA (SQ. FT.) (HA)	ETAF X AREA (HA)	ETWU (GAL/YR)	ACRE FEET/ YEAR	HCF/ YEAR	PERCENTAGE OF LANDSCAPE
1	MIXED SHRUBS & GROUNDCOVER	LOW	0.3	DRIP	0.81	0.37	1,740	644	17,680	0.05	23.61	78%
2	MIXED SHRUBS & GROUNDCOVER	MOD	0.6	DRIP	0.81	0.82	579	337	9,794	0.03	13.08	25%
					TOTALS		2,319	1,002	27,455	0.08	36.70	100%

SPECIAL LANDSCAPE AREAS

HYDROZONE #	HYDROZONE NAME											
3												0%
					TOTALS		0					0%

MAWA	GALLONS/YR	94,962
	ACRE FEET/YR	0.11
	HCF/YR	46.73
ETWU	GALLONS/YR	27,455
	ACRE FEET/YR	0.05
	HCF/YR	36.70

SITE IRRIGATION EFFICIENCY	SITE PLANT FACTOR	MAWA COMPLIANT
81.0%	0.38	YES

ETAF Calculations	
REGULAR LANDSCAPE AREAS	
TOTAL ETAF x AREA	1,002
TOTAL AREA	2,319
AVG. ETAF	43.20%

MAWA FORMULA

MAXIMUM APPLIED WATER ALLOWANCE (MAWA) GALLONS PER YEAR

MAWA = (ETo)(0.62)[(LA x 0.55) + (0.45 x SLA)]

ETo = REFERENCE EVAPOTRANSPIRATION
0.55= ET ADJUSTMENT FACTOR
LA=LANDSCAPED AREA (SQUARE FEET)
0.62 = CONVERSION FACTOR (GALLONS/SQ.FT/YR)

ETWU FORMULA

ESTIMATED TOTAL WATER USE (ETWU) GALLONS PER YEAR

ETWU= ((ETO)(.62)(ETAF x LA))

ETo = REFERENCE EVAPOTRANSPIRATION
PF = PLANT FACTOR FOR HYDROZONES
HA = HYDROZONE AREA (SQ.FT)
0.62 = CONVERSION FACTOR (GALLONS/SQ.FT/YR)

IE = IRRIGATION EFFICIENCY (0.81=BUBBLER/DRIP
IE = IRRIGATION EFFICIENCY (0.76)=ROTORS/SPRAY

HYDROZONE LEGEND

LOW WATER USE: 1,740 SF
(SUBSURFACE DRIP AND/OR DRIP EMITTERS)

MEDIUM WATER USE: 579 SF
(SUBSURFACE DRIP AND/OR DRIP EMITTERS)

HIGH WATER USE:
(NONE PROPOSED)

MIAKHAIL RESIDENCE

2398 Rainbow Court
Hayward, CA
94542

Taniguchi Landscape Architecture
1013 South Claremont St., Ste 1
San Mateo, CA 94402
v 650.638.9985 | f 650.638.9986
CLA #2942

LICENSED LANDSCAPE ARCHITECT
DENNIS M. TANIGUCHI CLA 2942
Signature
10/31/18
Renewal Date
09/19/17
Date
STATE OF CALIFORNIA

ISSUE:	DESCRIPTION:	DATE:
1	SUBMITTAL	09/19/17

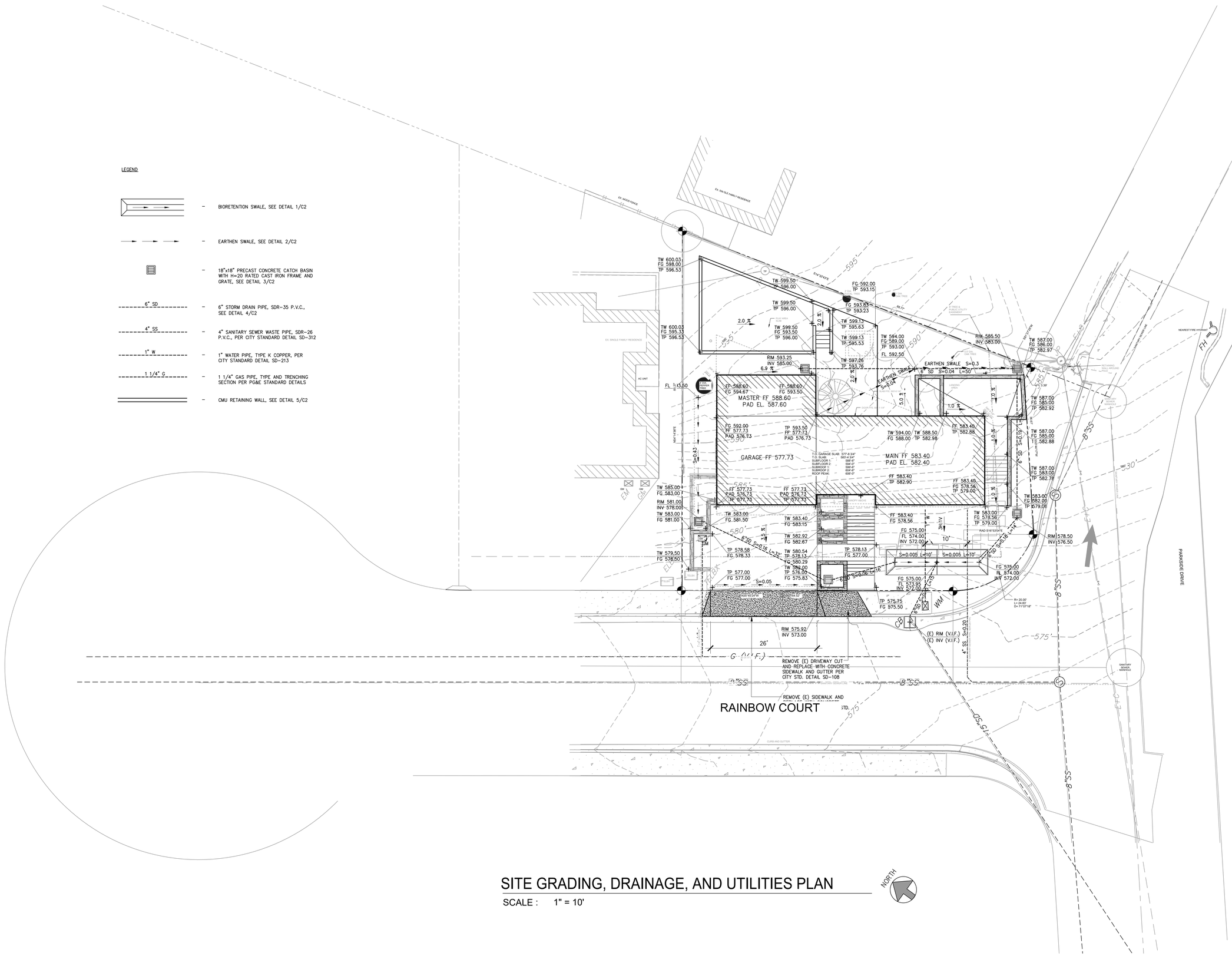
SCALE: As Noted
PROJECT NUMBER: TLA#: 17018.000

SHEET TITLE
IRRIGATION HYDROZONE PLAN

SHEET NO.
L-2

LEGEND

- BIORETENTION SWALE, SEE DETAIL 1/C2
- EARTHEN SWALE, SEE DETAIL 2/C2
- 18"x18" PRECAST CONCRETE CATCH BASIN WITH H=20 RATED CAST IRON FRAME AND GRATE, SEE DETAIL 3/C2
- 6" SD — 6" STORM DRAIN PIPE, SDR-35 P.V.C., SEE DETAIL 4/C2
- 4" SS — 4" SANITARY SEWER WASTE PIPE, SDR-26 P.V.C., PER CITY STANDARD DETAIL SD-312
- 1" W — 1" WATER PIPE, TYPE K COPPER, PER CITY STANDARD DETAIL SD-213
- 1 1/4" G — 1 1/4" GAS PIPE, TYPE AND TRENCHING SECTION PER PG&E STANDARD DETAILS
- CMU RETAINING WALL, SEE DETAIL 5/C2



SITE GRADING, DRAINAGE, AND UTILITIES PLAN

SCALE : 1" = 10'

NORTH

REVISIONS	BY

REGISTERED PROFESSIONAL ENGINEER
JAIME P. ARAFILES
C 40483
Exp. 03/31/19
CIVIL
STATE OF CALIFORNIA

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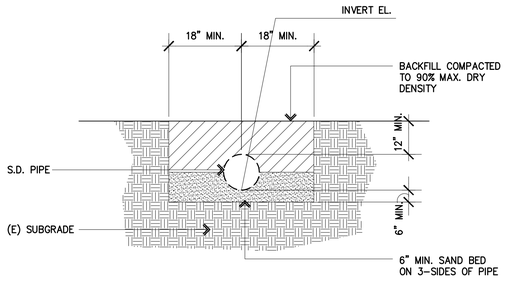
SITE GRADING, DRAINAGE, AND UTILITIES PLAN

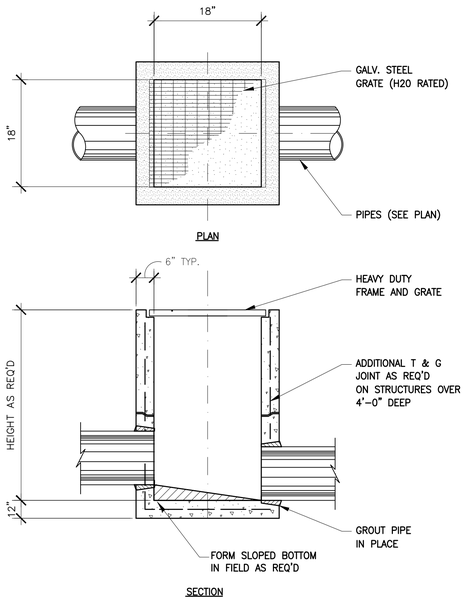
NEW RESIDENCE
2398 RAINBOW COURT
HAYWARD, CA 94542

DRAWN BY:	JA
CHECKED BY:	JPA
DATE:	AUGUST 18, 2017
SCALE:	AS NOTED
JOB NUMBER:	2173050
SHEET:	C1



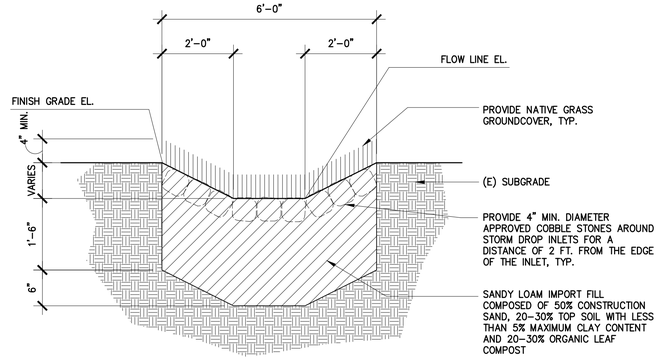
4 TYPICAL STORM DRAIN SECTION

NOT TO SCALE



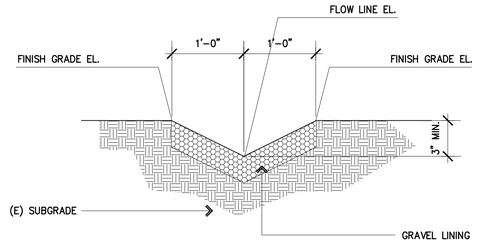
3 TYPICAL CATCH BASIN DETAIL

NOT TO SCALE



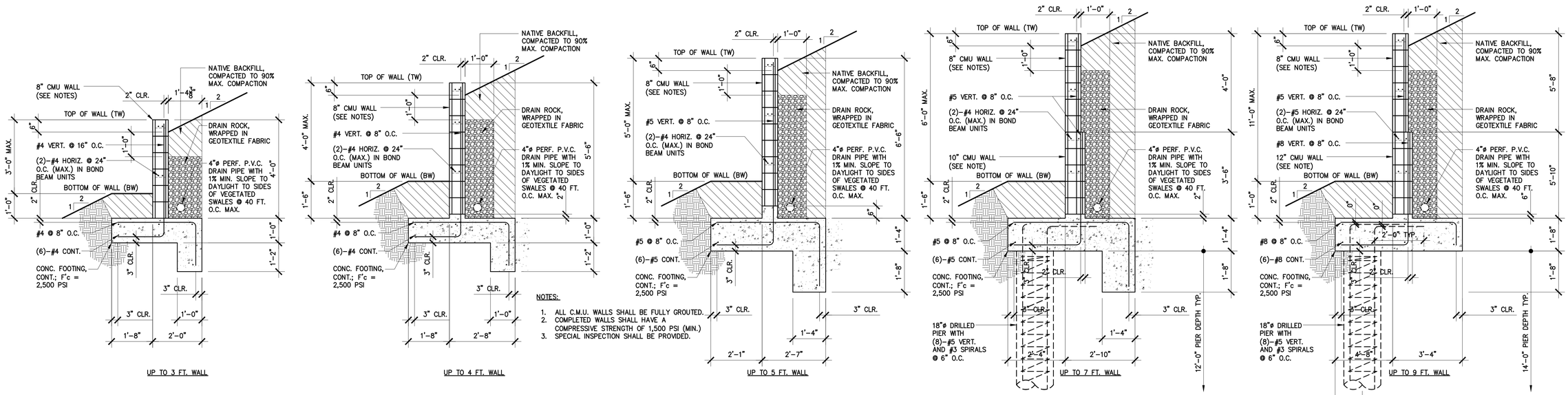
1 TYPICAL BIOSWALE DETAIL

NOT TO SCALE



2 TYPICAL EARTHEN SWALE

NOT TO SCALE



5 TYP. C.M.U. RETAINING WALL DETAIL

NOT TO SCALE

REVISIONS	BY

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SITE DETAILS

NEW RESIDENCE
2398 RAINBOW COURT
HAYWARD, CA 94542

DRAWN BY:	JA
CHECKED BY:	JPA
DATE	AUGUST 18, 2017
SCALE:	AS NOTED
JOB NUMBER:	2173050
SHEET:	C2