

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.



* THESE PLANS ARE NOT FOR CONSTRUCTION.

GENERAL NOTES / BUILDING CODE REQUIREMENTS

2013 CALIFORNIA ENERGY EFFICIENCY STANDARD CODE

1. ENERGY

1.1. SYSTEMS, EQUIPMENT AND/OR BUILDING COMPONENTS SHALL COMPLY WITH THE APPLICABLE MANUFACTURED 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 1605 (a) OF THOSE REGULATIONS. (TITLE 24, PART 6, CHAPTER 2, SECTION 110.1)

1.3. SERVICE WATER-HEATING SYSTEMS THAT ARE NOT THERMAL CAPABLE, GREATER THAN 167,000 BTU/HR, SHALL HAVE SEPARATE REMOTE HEATER, 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 FAUCETS AND SPGES 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) FAIR-TYPE CENTRAL UNITS, (B) HOUSEHOLD COOKING APPLIANCES, EXCEPT APPLIANCES WITHOUT AN ELECTRICAL SUPPLY VOLTAGE CONNECTION AND IN WHICH EACH PILOT CONSUMES LESS THAN 150 BTU/HR. (C) POOL HEATING SYSTEMS.

1.7. MANUFACTURED FENESTRATION PRODUCTS AND EXTERIOR DOORS SHALL HAVE AIR INFILTRATION RATES NOT EXCEDING 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 OVERALL 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, FIRE-RESISTANCE-RATED, CAN BE TESTED AND INSTALLED IN ACCORDANCE WITH THEIR LISTINGS AND SHALL NOT BE REQUIRED TO COMPLY WITH THIS SECTION.

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 LISTED IN CHAPTER 49 OF THE ASHRAE HANDBOOK AND HVAC APPLICATION HANDBOOK (TITLE 24, PART 6, CHAPTER 2, SECTION 110.3)

1.11. CIRCULATING SERVICE WATER-HEATING SYSTEMS SHALL HAVE A CONTROL CAPABLE OF AUTOMATICALLY TURNING OFF THE CIRCULATING PUMP WHEN HOT WATER IS NOT REQUIRED. (TITLE 24, PART 6, CHAPTER 2, SECTION 110.3)

1.12. GAS FIRE HOUSEHOLD HEATING AND COOLING APPLIANCES, SHOWER HEADS, AND FAUCETS SHALL COMPLY WITH THE APPLIANCE EFFICIENCY STANDARDS.

1.13. 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-RESIDENTIAL USE THAT ALLOWS THE BUILDING OCCUPANT TO AUTOMATICALLY SET BACK THE THERMOSTAT SET POINTS FOR AT LEAST 24 HOURS.

1.14. THERMOSTATICALLY CONTROLLED HEATING OR COOLING SYSTEMS (EXCEPT HOT 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.

1.15. GAS FIRE 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-RESIDENTIAL USE THAT ALLOWS THE BUILDING OCCUPANT TO AUTOMATICALLY SET BACK THE THERMOSTAT SET POINTS FOR AT LEAST 24 HOURS.

1.17. THERMOSTATICALLY CONTROLLED HEATING OR COOLING SYSTEMS (EXCEPT HOT 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 INSULATION FACTOR LESS THAN 0.56 SHALL BE EXTERNALLY WRAPPED WITH INSULATION HAVING AN INSULATED THICKNESS OF AT LEAST R-12 (OR EQUIVALENT) (B) UNINSULATED HOT WATER TANK, SUCH AS STORAGE TANKS, BACKUP STORAGES TANKS, AND POOL TANKS, SHALL BE EXTERNALLY WRAPPED WITH INSULATION HAVING 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 RECYCLING SECTIONS OF DOMESTIC HOT WATER SYSTEMS, PIPING FROM THE HEATING SOURCE TO THE STORAGE TANK FOR AN INDIRECT-FIRE DOMESTIC HOT WATER-HEATING SYSTEM, AND PIPING FROM THE TANK TO THE FAUCET, FOR NON-RECYCLING SECTIONS OF DOMESTIC HOT WATER-HEATING SYSTEMS AND COOLING SYSTEMS SHALL BE THERMALLY INSULATED IN SUBSECTIONS AND A AND B. (D) SOLAR 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 INSULATION. (TITLE 24, PART 6, CHAPTER 2, CHAPTERS 12&13, ARTICLE 3 STANDARD INSULATION MATERIAL) (TITLE 24, PART 6, CHAPTER 2, SECTION 110.8)

2.3. ALL INSULATING MATERIAL SHALL BE INSTALLED IN COMPLIANCE WITH THE FLM SPREAD RATING AND SMOKE DENSITY REQUIREMENTS OF THE CEC. (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. DRAINED 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 0.2 PDM (C) INCLINE COEFFICIENT NO GREATER THAN 0.05 FROM PHYSICAL DAMAGE AND ULTRAVIOLET-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 C517 AS INCORPORATED IN THE CEC. (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 BULBS. HIGH EFFICACY LAMPS HAS A LAMP EFFICACY THAT IS NOT LOWER THAN THE EFFICIENCIES CONTAINED IN TABLE 150-1C. BALLASTS FOR LAMPS RATED 13 WATTS OR GREATER SHALL BE ELECTRONIC AND SHALL HAVE AN OUTPUT FREQUENCY NOT LESS THAN 20 KHZ. EXCEPT TO 150(K) 1 HIGH INTENSITY DISCHARGE LUMINAIRES CONTAINING HARD WIRED ELECTROMAGNETIC BALLASTS IN MEDICAL AND SURGICAL EQUIPMENT, WHICH ARE CONTROLLED BY THE PLUMBING DIVISION. (TITLE 24, PART 6, CHAPTER 7, SECTION 150(K), PROVIDED THAT MEET THE EFFICIENCIES CONTAINED IN TABLE 150-1C. 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, EXCEPT TO SECTION 150(K): 10 TO 50 PERCENT OF THE TOTAL RATED WATTAGE. PERMANENTLY INSTALLED LUMINAIRES IN KITCHENS SHALL BE HIGH EFFICACY LUMINAIRES, PROVIDED THAT THESE LUMINAIRES ARE CONTROLLED BY SWITCHES SEPARATE FROM THOSE CONTROLLING THE HIGH EFFICACY LUMINAIRES. THE WATTAGE OF LUMINAIRES SHALL BE THE TOTAL NOMINAL RATED WATTAGE OF THE INSTALLED HIGH EFFICACY LAMPS. (THE WATTAGE OF LUMINAIRES SHALL BE DETERMINED AS SPECIFIED BY SECTION 1300.)

3.4. HIGH EFFICACY INSTALLED LUMINAIRES IN BATHROOMS, GARAGES, LAUNDRY ROOMS, AND UTILITY ROOMS SHALL BE HIGH EFFICACY LUMINAIRES, EXCEPT: 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 110(9D).

3.5. HIGH EFFICACY INSTALLED LUMINAIRES IN BATHROOMS, GARAGES, LAUNDRY ROOMS, AND UTILITY ROOMS THAT ARE NOT HIGH EFFICACY LUMINAIRES SHALL BE ALLOWED PROVIDED THAT THEY ARE CONTROLLED BY A DIMMER SWITCH. EXCEPTION 2 TO SECTION 150(K): PERMANENTLY INSTALLED LUMINAIRES SHALL NOT HAVE A CONTROL THAT ALLOWS LUMINAIRES TO BE TURNED ON AUTOMATICALLY OR THAT HAS AN OVERRIDE ALLOWING LUMINAIRES TO BE TURNED ON AUTOMATICALLY OR THAT HAS AN OVERRIDE ALLOWING LUMINAIRES TO BE TURNED ON EXCEPT ON SECTION 3 TO SECTION 150(K): 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): 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 110(9D).

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3.8. HIGH EFFICACY INSTALLED LUMINAIRES IN THE ENCLOSED, NON-DWELLING SPACES OF LOW-RISE RESIDENTIAL BUILDINGS FOR OR MORE DWELLING UNITS SHALL BE HIGH EFFICACY LUMINAIRES. EXCEPTION TO SECTION 150(K): 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(9D).

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3.10. PERMANENTLY INSTALLED LIGHTING IN THE ENCLOSED, NON-DWELLING SPACES OF LOW-RISE RESIDENTIAL BUILDINGS FOR OR MORE DWELLING UNITS SHALL BE HIGH EFFICACY LUMINAIRES. EXCEPTION TO SECTION 150(K): 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(9D).

3.11. HIGH EFFICACY INSTALLED LUMINAIRES IN THE ENCLOSED, NON-DWELLING SPACES OF LOW-RISE RESIDENTIAL BUILDINGS FOR OR MORE DWELLING UNITS SHALL BE HIGH EFFICACY LUMINAIRES. EXCEPTION TO SECTION 150(K): PERMANENTLY INSTALLED LUMINAIRES THAT ARE NOT HIGH EFFICACY SHALL BE ALLOWED PROVIDED THEY ARE CONTROLLED BY A MOTION SENSOR(S) WITH INTEGRAL PHOTO-CONTROL CERTIFIED TO COMPLY WITH SECTION 110(9D).

3.12. HIGH EFFICACY INSTALLED LUMINAIRES IN THE ENCLOSED, NON-DWELLING SPACES OF LOW-RISE RESIDENTIAL BUILDINGS FOR OR MORE DWELLING UNITS SHALL BE HIGH EFFICACY LUMINAIRES. EXCEPTION TO SECTION 150(K): PERMANENTLY INSTALLED LUMINAIRES THAT ARE NOT HIGH EFFICACY SHALL BE ALLOWED PROVIDED THEY ARE CONTROLLED BY A MOTION SENSOR(S) WITH INTEGRAL PHOTO-CONTROL CERTIFIED TO COMPLY WITH SECTION 110(9D).

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3.18. HIGH EFFICACY INSTALLED LUMINAIRES IN THE ENCLOSED, NON-DWELLING SPACES OF LOW-RISE RESIDENTIAL BUILDINGS FOR OR MORE DWELLING UNITS SHALL BE HIGH EFFICACY LUMINAIRES. EXCEPTION TO SECTION 150(K): PERMANENTLY INSTALLED LUMINAIRES THAT ARE NOT HIGH EFFICACY SHALL BE ALLOWED PROVIDED THEY ARE CONTROLLED BY A MOTION SENSOR(S) WITH INTEGRAL PHOTO-CONTROL CERTIFIED TO COMPLY WITH SECTION 110(9D).

3.19. HIGH EFFICACY INSTALLED LUMINAIRES IN THE ENCLOSED, NON-DWELLING SPACES OF LOW-RISE RESIDENTIAL BUILDINGS FOR OR MORE DWELLING UNITS SHALL BE HIGH EFFICACY LUMINAIRES. EXCEPTION TO SECTION 150(K): PERMANENTLY INSTALLED LUMINAIRES THAT ARE NOT HIGH EFFICACY SHALL BE ALLOWED PROVIDED THEY ARE CONTROLLED BY A MOTION SENSOR(S) WITH INTEGRAL PHOTO-CONTROL CERTIFIED TO COMPLY WITH SECTION 110(9D).

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3.21. HIGH EFFICACY INSTALLED LUMINAIRES IN THE ENCLOSED, NON-DWELLING SPACES OF LOW-RISE RESIDENTIAL BUILDINGS FOR OR MORE DWELLING UNITS SHALL BE HIGH EFFICACY LUMINAIRES. EXCEPTION TO SECTION 150(K): PERMANENTLY INSTALLED LUMINAIRES THAT ARE NOT HIGH EFFICACY SHALL BE ALLOWED PROVIDED THEY ARE CONTROLLED BY A MOTION SENSOR(S) WITH INTEGRAL PHOTO-CONTROL CERTIFIED TO COMPLY WITH SECTION 110(9D).

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3.23. HIGH EFFICACY INSTALLED LUMINAIRES IN THE ENCLOSED, NON-DWELLING SPACES OF LOW-RISE RESIDENTIAL BUILDINGS FOR OR MORE DWELLING UNITS SHALL BE HIGH EFFICACY LUMINAIRES. EXCEPTION TO SECTION 150(K): PERMANENTLY INSTALLED LUMINAIRES THAT ARE NOT HIGH EFFICACY SHALL BE ALLOWED PROVIDED THEY ARE CONTROLLED BY A MOTION SENSOR(S) WITH INTEGRAL PHOTO-CONTROL CERTIFIED TO COMPLY WITH SECTION 110(9D).

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3.25. HIGH EFFICACY INSTALLED LUMINAIRES

F1	FOUNDATION WALL (8")	F2	FOUNDATION WALL (10") (R20)	W1	LIGHT GRAY STUCCO FINISH (R29)	P1	TYPICAL FLOOR - WOOD FINISH	R1	TYPICAL ROOF (2% SLOPE) (R50)	L1	ENCASTRATED LED SPOT LIGHT	
	<ul style="list-style-type: none"> - Bituminous membrane - 8" Poured concrete - ANCHORS INSTALLED WHEN CASTING - 2" Rigid insulation (4"-0" below the ground) 		<ul style="list-style-type: none"> - Bituminous membrane - 10" Poured concrete - ANCHORS INSTALLED WHEN CASTING - 2 1/2" Sprayed urethane-based foam - Metal stud - 1/2" Gypsum 		<ul style="list-style-type: none"> - Stucco (according to system) - 3/4" wood furring @ 16" c/c (vertical) - 1/2" gypsum - 3 3/8" "Z" BARS @ 18" c/c HORIZONTALLY - 3" RIGID INSULATION PANEL EXP. POLYSTYRENE - 1" THERMAL BREAK - 4"x4" GALVANIZED STEEL COLUMN @ 5'-0" c/c - 1/4" FURRING ANCHOR - 1/8" METALLIC FURRING @ 16" c/c HORIZONTALLY - 1/2" Gypsum board 		<ul style="list-style-type: none"> - Floor finish - 3/4" Plywood - 1/2" METALLIC FURRING - "C" BARS @ 1"-0" c/c - 1/4" FURRING ANCHOR - 7/8" METALLIC FURRING - 1/2" Gypsum 		<ul style="list-style-type: none"> - Double layer elastomeric membrane, mechanically fastened base sheet (Sopralite Base 650) and Heat-Welded cap sheet (Sopralite Cap 650), recommended - 10 1/4" INSULATED PANEL - 1" THERMAL BREAK - "Z" BARS WITH INTEGRATED SLOPE - 1" GALVANIZED STEEL JOIST - "C" BARS @ 5'-0" c/c - 1/4" FURRING ANCHOR - 7/8" METALLIC FURRING - 1/2" Gypsum 			
				W2	DARK GRAY ALUMINUM PANEL (R29)		P2	TYPICAL FLOOR - INSULATED WOOD FINISH	R2	TERRACE ROOF (R50)	L2	EXTERIOR WALL LIGHT
					<ul style="list-style-type: none"> - Aluminum panel - 1/2" gypsum - 3/4" wood furring @ 16" c/c (Vertical) - 1/2" METALLIC FURRING - 3 3/8" "Z" BARS @ 18" c/c HORIZONTALLY - 3" RIGID INSULATION PANEL EXP. POLYSTYRENE - 1" THERMAL BREAK - 4"x4" GALVANIZED STEEL COLUMN @ 5'-0" c/c - 1/4" FURRING ANCHOR - 1/8" METALLIC FURRING @ 16" c/c HORIZONTALLY - 1/2" Gypsum 		<ul style="list-style-type: none"> - 2" concrete (isolated) - Impermeable membrane (Recommended) - 3/4" Plywood - 1/2" METALLIC FURRING - "C" BARS @ 1"-0" c/c - 1/4" FURRING ANCHOR - 7/8" METALLIC FURRING - 1/2" Gypsum 		<ul style="list-style-type: none"> - Terrace finish - Wood structure with inverse integrated slope - 1/2" insulation - Double layer elastomeric membrane, mechanically fastened base sheet (Sopralite Base 650) and Heat-Welded cap sheet (Sopralite Cap 650), recommended - 1/2" Sprayed urethane-based foam - "Z" BARS WITH INTEGRATED SLOPE - 1" GALVANIZED STEEL JOIST - "C" BARS @ 5'-0" c/c - 1/4" FURRING ANCHOR - 7/8" METALLIC FURRING - 1/2" Gypsum 			
				W3	THIN STONE VENEER (R29)		P3	4" CONCRETE SLAB(R10)	R3	4" CONCRETE SLAB(R10)	L3	EXTERIOR WALL LIGHT
					<ul style="list-style-type: none"> - Thin stone veneer on 1/2" cement panel - 1/2" Air gap - 3/4" wood furring @ 16" c/c (Vertical) - 1/2" METALLIC FURRING - 2 1/2" Sprayed urethane-based foam - 3" RIGID INSULATION PANEL EXP. POLYSTYRENE - 1" THERMAL BREAK - 4"x4" GALVANIZED STEEL COLUMN @ 5'-0" c/c - 1/4" FURRING ANCHOR - 1/8" METALLIC FURRING @ 16" c/c HORIZONTALLY - 1/2" Gypsum 		<ul style="list-style-type: none"> - Floor finish - 4" concrete slab - Vapor barrier - 2" rigid insulation panel - According to conditions 		<ul style="list-style-type: none"> - 4" concrete slab - Vapor barrier - 2" rigid insulation panel - According to conditions 			
							P4	6" GARAGE SLAB				

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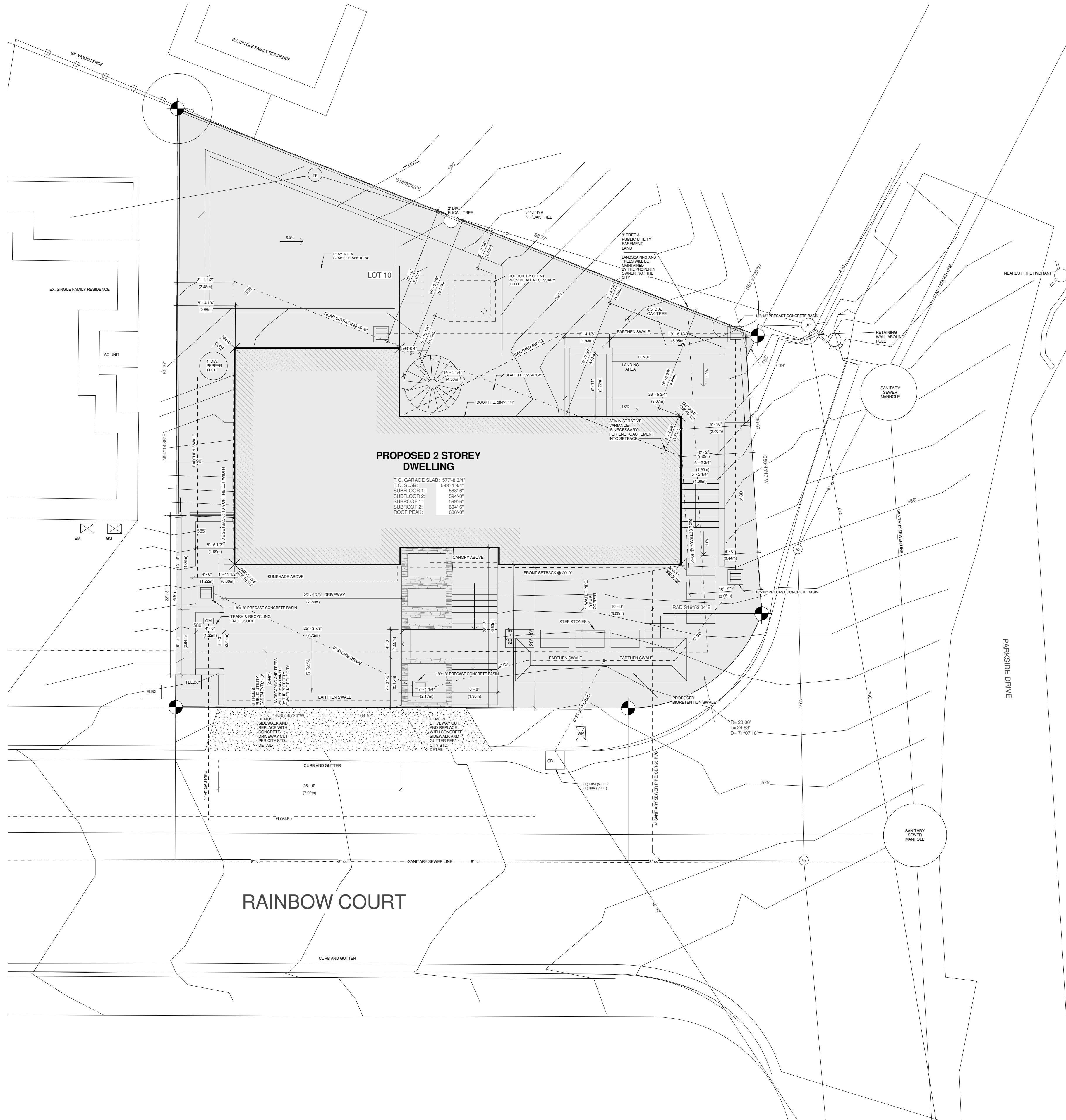
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DATE	REVISION	BY	NO.
PROJECT			

MIKHAIL		17-802
2398 RAINBOW COURT		
HAYWARD, CA 94542, APN 425-0410-031		
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Compositions	CHECK BY	Checker
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PROJECT

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17-802

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

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* THESE PLANS ARE NOT FOR CONSTRUCTION.

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)
- Tempered or laminated safety glass, conform to CAN/CSB-12.1-M per 9.6.1.4
- Unobstructed opening of not less than 0.35 m² in area with no dimension less than 380mm.
- FAN
- Exterior lighting outlet with interior switch per 9.34.2.1
- Lighting outlet with 3-ways wall switch per 9.34.2.3
- Min. 1070 mm high guardrail designed to withstand the specified lateral loads per 4.1.5.1.4

BR BRACING TAG

- Foundation wall (B1)
- Foundation wall (B2)
- Light gray stucco finish (B2B)
- Dark gray aluminum panel (B2B)
- Thin stone veneer (B2B)
- Typical floor - wood finish
- Typical floor - insulated wood finish
- 4" concrete slab (B10)
- 6" garage slab
- Typical roof (2% slope) (B50)
- Terrace roof (P50)
- Encastre LED spot light
- Exterior wall light

BUILDING HEIGHT

Building maximum height 6'0" - PROPOSED: 6'0" - 2"

DETACHMENT:

Minimum height 6'0" - PROPOSED: At least or than 6'0"

STAIRS:

Headroom: Minimum 6'0" inches (114 mm) or otherwise the stairway is required to be a headroom. The minimum headroom is 6'0" inches (203 mm)

RISER: 7.25" inches (184 mm). The maximum headroom is 7'0" inches (213 mm) or less. The maximum riser height is 7.25" inches (184 mm) between floor levels or landings.

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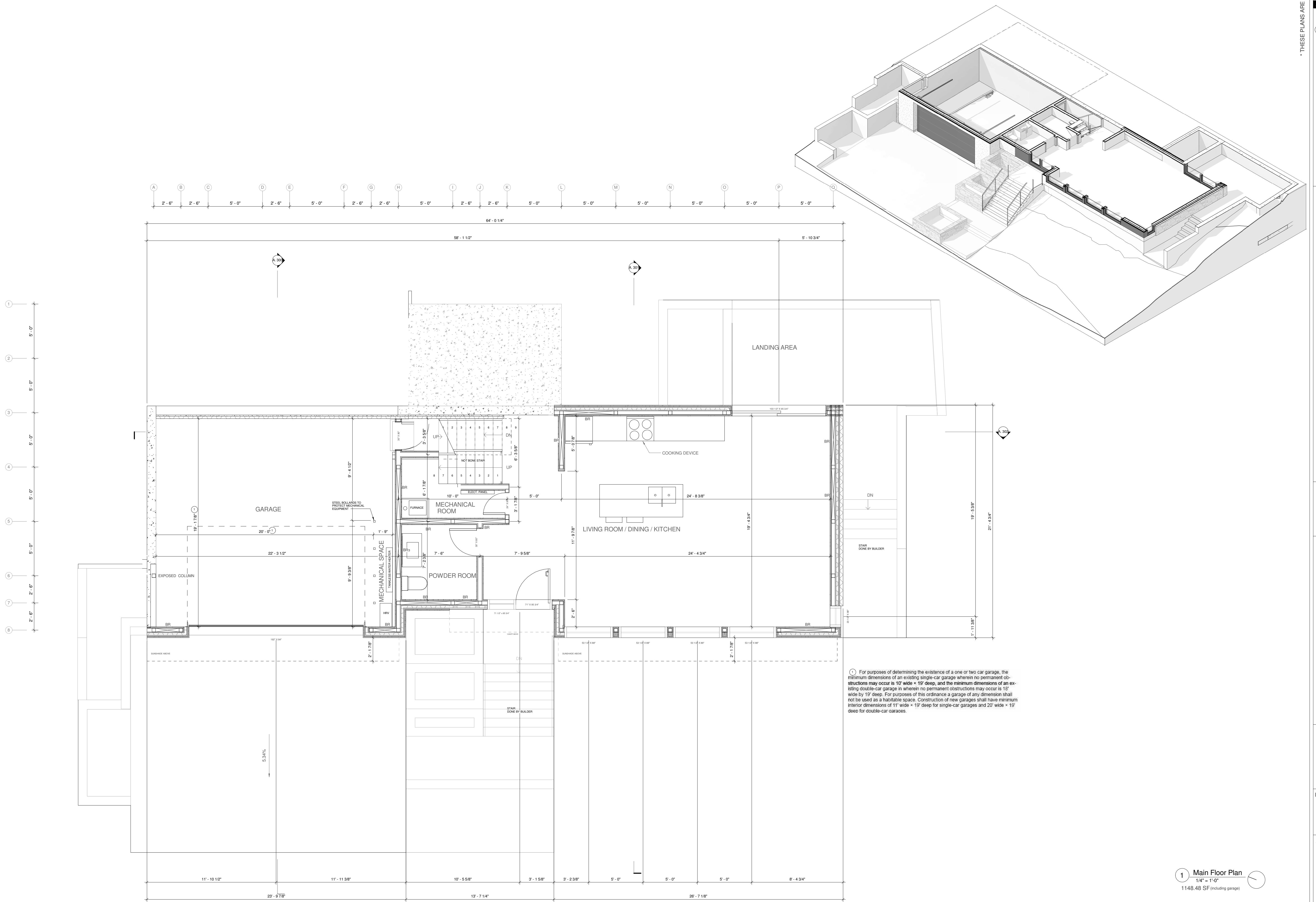
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DATE	REVISION	BY NO.

PROJECT	MIKHAIL	
DRAWING TITLE	17-802	
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Author	HAYWARD, CA 94542, APN 425-0410-031	
Main floor plan	DATE	2017/09/19
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1 Main Floor Plan
1/4" = 1'-0"
1148.48 SF (including garage)



BOLS 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)

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

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

FAN

EXTERIOR LIGHTING OUTLET WITH INTERIOR SWITCH PER 9.34.2.1

LIGHTING OUTLET WITH 3-WAYS WALL SWITCH PER 9.34.2.3

MIN. 1070 MM HIGH GUARDRAIL DESIGNED TO WITHSTAND THE SPECIFIED LATERAL LOADS PER 4.1.5.1.4

R BRACING TAG

FOUNDATION WALL (8")

FOUNDATION WALL (10") (R20)

LIGHT GRAY STUCCO FINISH (R29)

DARK GRAY ALUMINUM PANEL (R29)

THIN STONE VENEER (R29)

TYPICAL FLOOR - WOOD FINISH

TYPICAL FLOOR - INSULATED WOOD FINISH

4" CONCRETE SLAB(R10)

8" GARAGE SLAB

TYPICAL ROOF (2% SLOPE) (R50)

TERRACE ROOF (R50)

ENCASTRATED LED SPOT LIGHT

EXTERIOR WALL LIGHT

LDING HEIGHT
Building maximum height 606'-0" - **PROPOSED: 606'-0"**

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

IRS (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

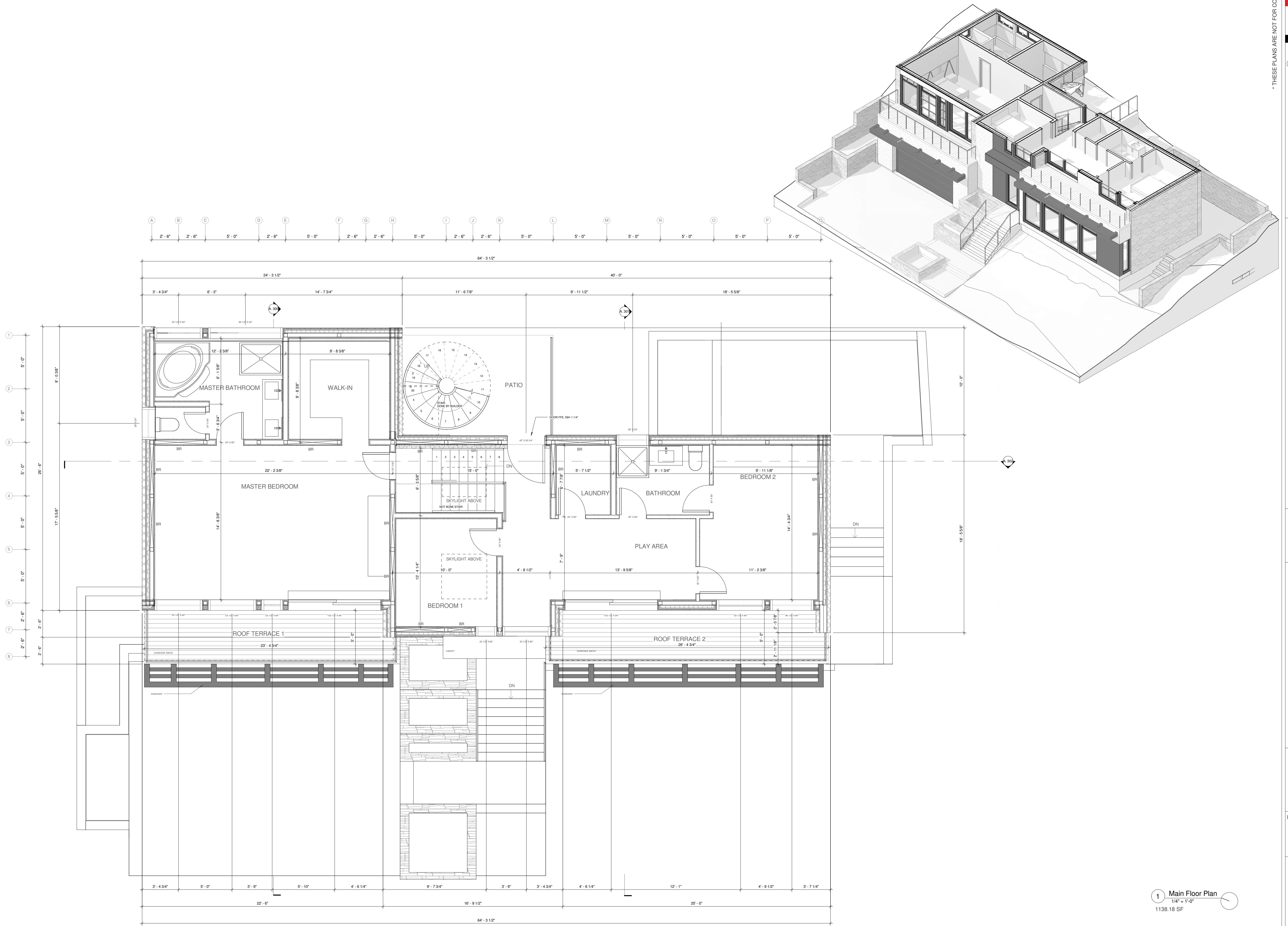
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SELECT

MIAKHAIL
17-802
2398 RAINBOW COURT

HAYWARD, CA 94542, APN 425-0410-031	
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First floor plan	Auth
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	2017/09
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*THESE PLANS ARE NOT FOR CONSTRUCTION.

SYMBOLS LEGEND

(T) TEMPERED OR LAMINATED SAFETY GLASS, CONFORM TO CAN/CBSE-12.1-M per 9.6.1.4.

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

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

XXXX-X^o EXISTING GRADE

XXXX-X^o PROPOSED GRADE

ROOF Material 1

FASCIA Material 2

SOFFIT Material 3

(D) FOUNDATION WALL (P)

(D) FOUNDATION WALL (10) (P20)

(W) LIGHT GRAY STUCCO FINISH (P20)

(W) DARK GRAY ALUMINUM PANEL (P20)

(W) THIN STONE VENEER (P20)

(P) TYPICAL FLOOR - WOOD FINISH

(P) TYPICAL FLOOR - INSULATED WOOD FINISH

(P) 4" CONCRETE SLAB (10)

(G) GARAGE SLAB

(W) TYPICAL ROOF (2% SLOPE) (P50)

(W) TERRACE ROOF (P50)

(W) ENCLOSURE LED SPOT LIGHT

(W) EXTERIOR WALL LIGHT

BUILDING HEIGHT

Building maximum height 600'-0" PROPOSED: 600'-0"

RETAINING WALLS

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

STAIRS ONLY BY BONE STRUCTURE

Handrails maximum 41/2 inches (114 mm) in either side of the stairway

• R511.2 Handrails: The minimum headroom is 6 feet 6 inches (2032 mm) from the floor to the underside of the rail. The maximum headroom is 7 feet 6 inches (2286 mm) between floor levels or mezzanine.

• R511.2 Headroom: The minimum headroom is 6 feet 6 inches (2032 mm) from the floor to the underside of the rail. The maximum headroom is 7 feet 6 inches (2286 mm) between

floor levels or mezzanine.

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

*THESE PLANS ARE NOT FOR CONSTRUCTION.

SYMBOLS LEGEND

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

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

(G) 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

(F) FOUNDATION WALL (8")

(F) FOUNDATION WALL (10") (R20)

(W) LIGHT GRAY STUCCO FINISH (R20)

(D) DARK GRAY ALUMINUM PANEL (R20)

(T) THIN STONE VENEER (R20)

(F) TYPICAL FLOOR - WOOD FINISH

(F) TYPICAL FLOOR - INSULATED WOOD FINISH

(C) 4" CONCRETE SLAB (R10)

(C) GARAGE SLAB

(F) TYPICAL ROOF (2% SLOPE) (R50)

(T) TERRACE ROOF (R50)

(L) ENCASTRATED LED SPOT LIGHT

(E) EXTERIOR WALL LIGHT

(BL) DRAUGHT

Reaching maximum height 600'-0" - PROPOSED: 600'-0"

WARNING: Vertical height of 6' - PROPOSED: All equal or less than 6'-0"

STANDS NOT BY BONE STRUCTURE:

• R510.7.1 Width: Minimum 36 inches (914 mm) from the center of the stairs to any wall or fixture on either side of the stairway.

• R512.1 Headroom: The minimum headroom is 7' 6 inches (2322 mm).

• R512.2 Handrail: The minimum headroom is 7' 6 inches (2322 mm) below a vertical rise larger than 147 inches (3724 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

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SCEAU	Checker
DATE	2017/09/19
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1 North Elevation (Left)
1/4" = 1'-0"

SYMBOLS LEGEND

⑤ TEMPERED OR LAMINATED SAFETY GLASS,
CONFORM TO CAN/CBSB-12.1-M per 9.6.1.4

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

⑥ TEMPERED SAFETY GLASS GUARDRAIL. DESIGNED TO WITHSTAND THE SPECIFIED LATERAL LOADS PER.4.1.5.14.

XXXX'-X" EXISTING GRADE

XXXX'-X" PROPOSED GRADE

<u>OO</u> <u>OF</u>	Material 1
<u>SCIA</u>	Material 2
<u>OFFIT</u>	Material 3

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

BUILDING HEIGHT
Building maximum 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)

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OBJECT

MIAKHAIL

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YWARD, CA 94542, APN 425-0410-031

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East elevation	Author

<u>Last Observation</u>	CHECK BY	Checker
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A. 202

East Elevation (Back)

SYMBOLS LEGEND

⑤ TEMPERED OR LAMINATED SAFETY GLASS,
CONFORM TO CAN/CBSB-12.1-M per 9.6.1.4

⑤ UNOBSTRUCTED OPENING OF NOT LESS THAN 0.35 m² IN AREA WITH NO DIMENSION LESS THAN 380mm.

⑥ TEMPERED SAFETY GLASS GUARDRAIL. DESIGNED TO WITHSTAND THE SPECIFIED LATERAL LOADS PER.4.1.5.14.

XXXX'-X"  EXISTING GRADE

XXXX'-X"  PROPOSED GRADE

<u>ROOF</u>	Material 1
<u>FASCIA</u>	Material 2
<u>SOFFIT</u>	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 maximum 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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PROJECT

MIAKHAI

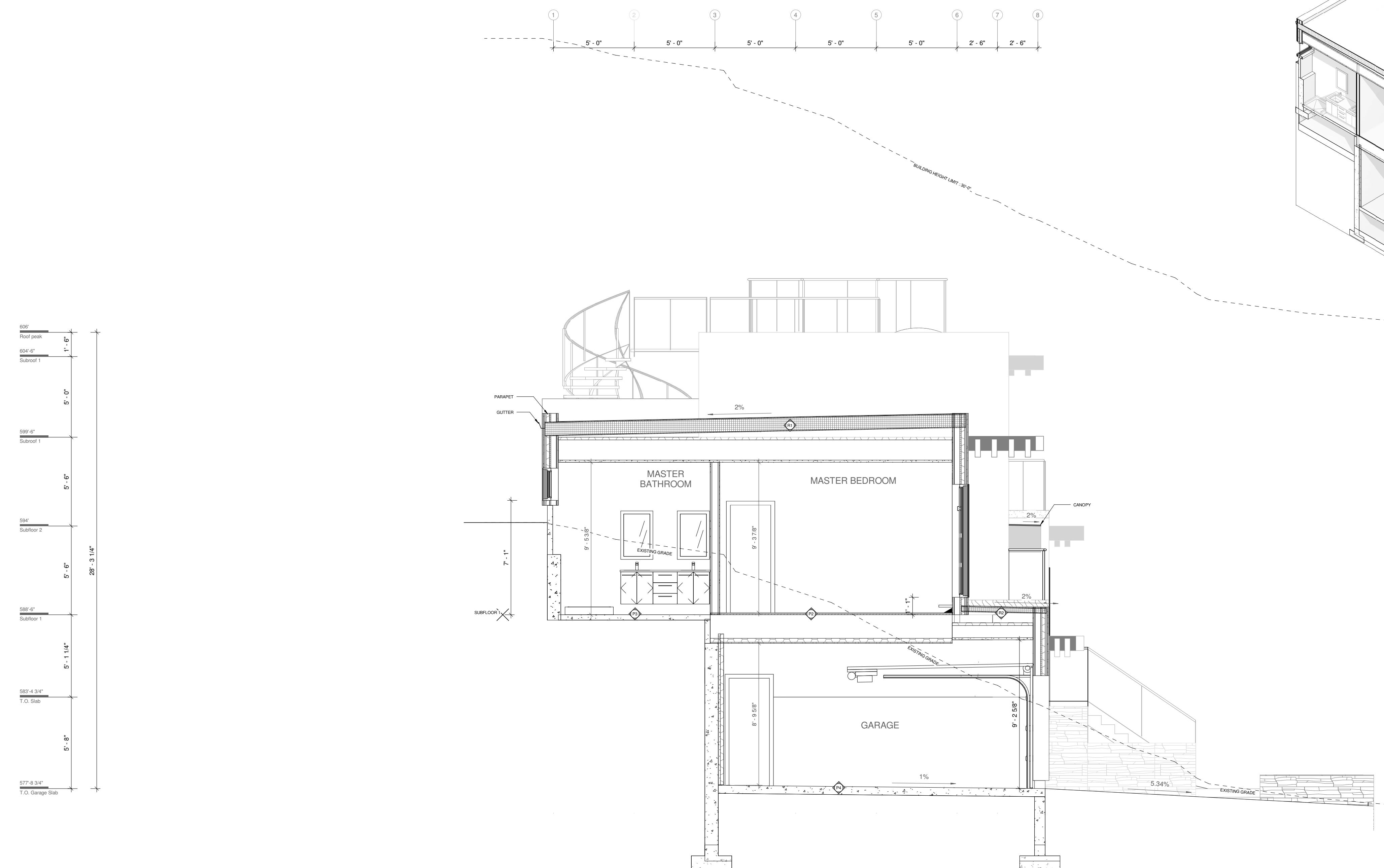
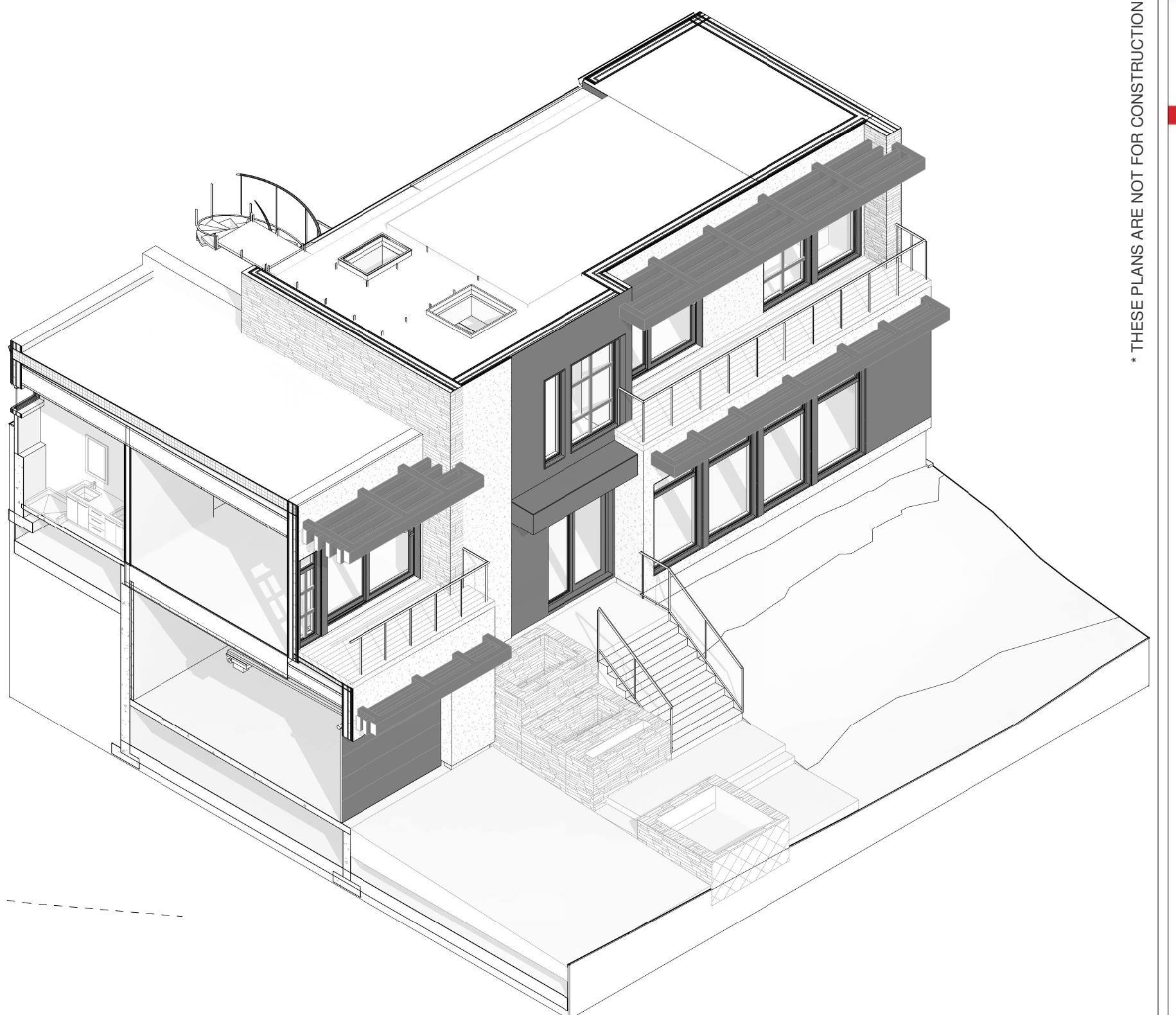
17-802

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South elevation	Author
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South Elevation (Right)

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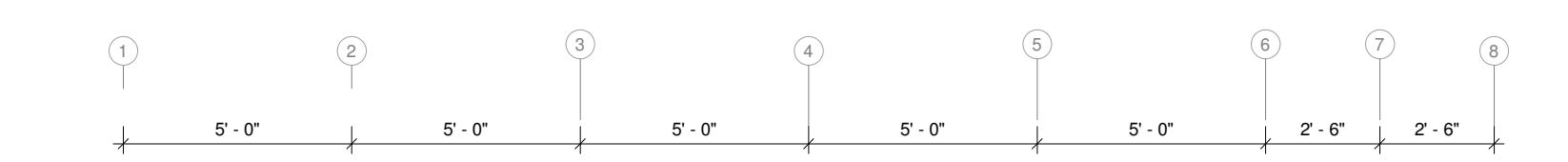
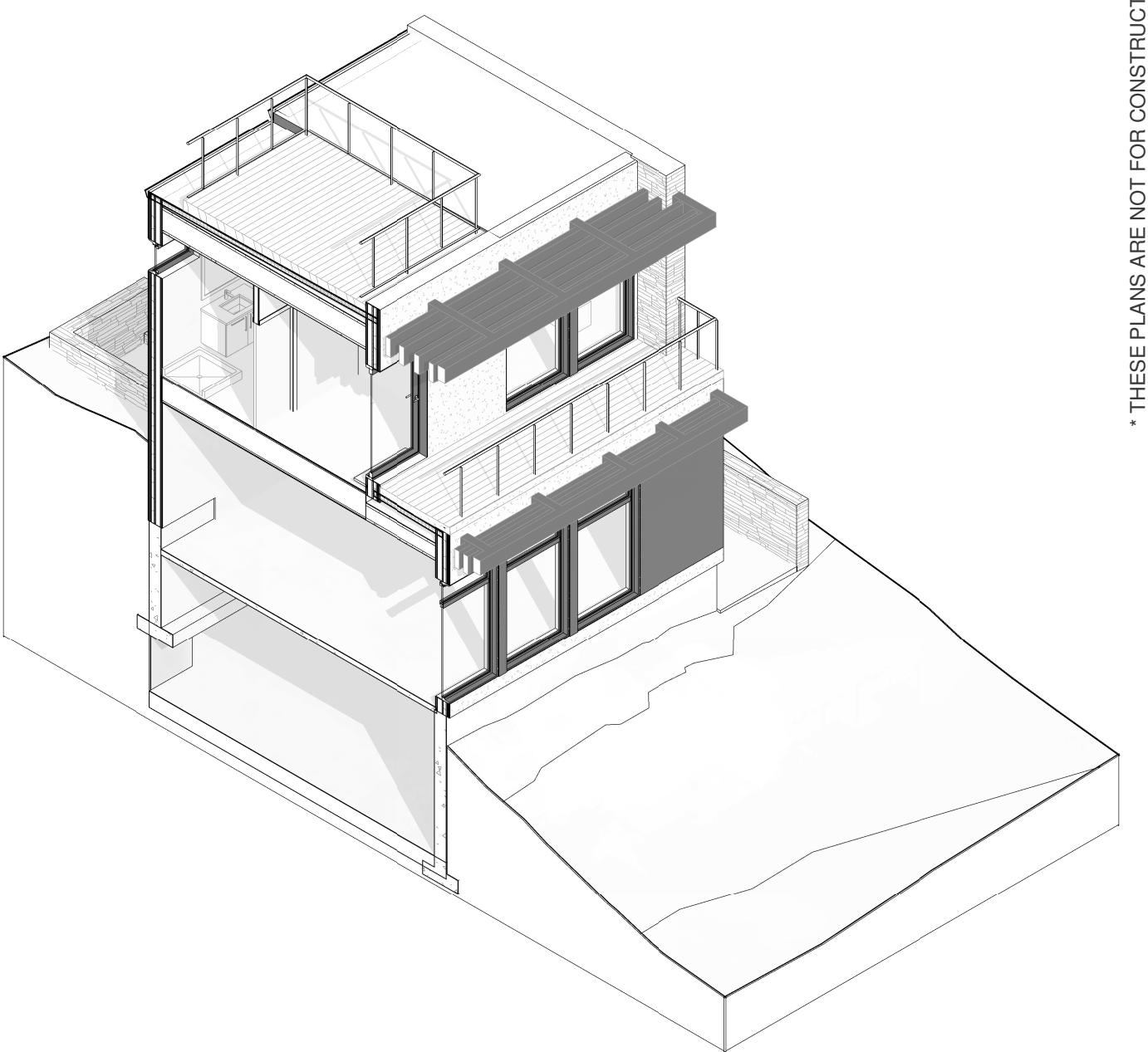
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DATE	REVISION	BY	NO.

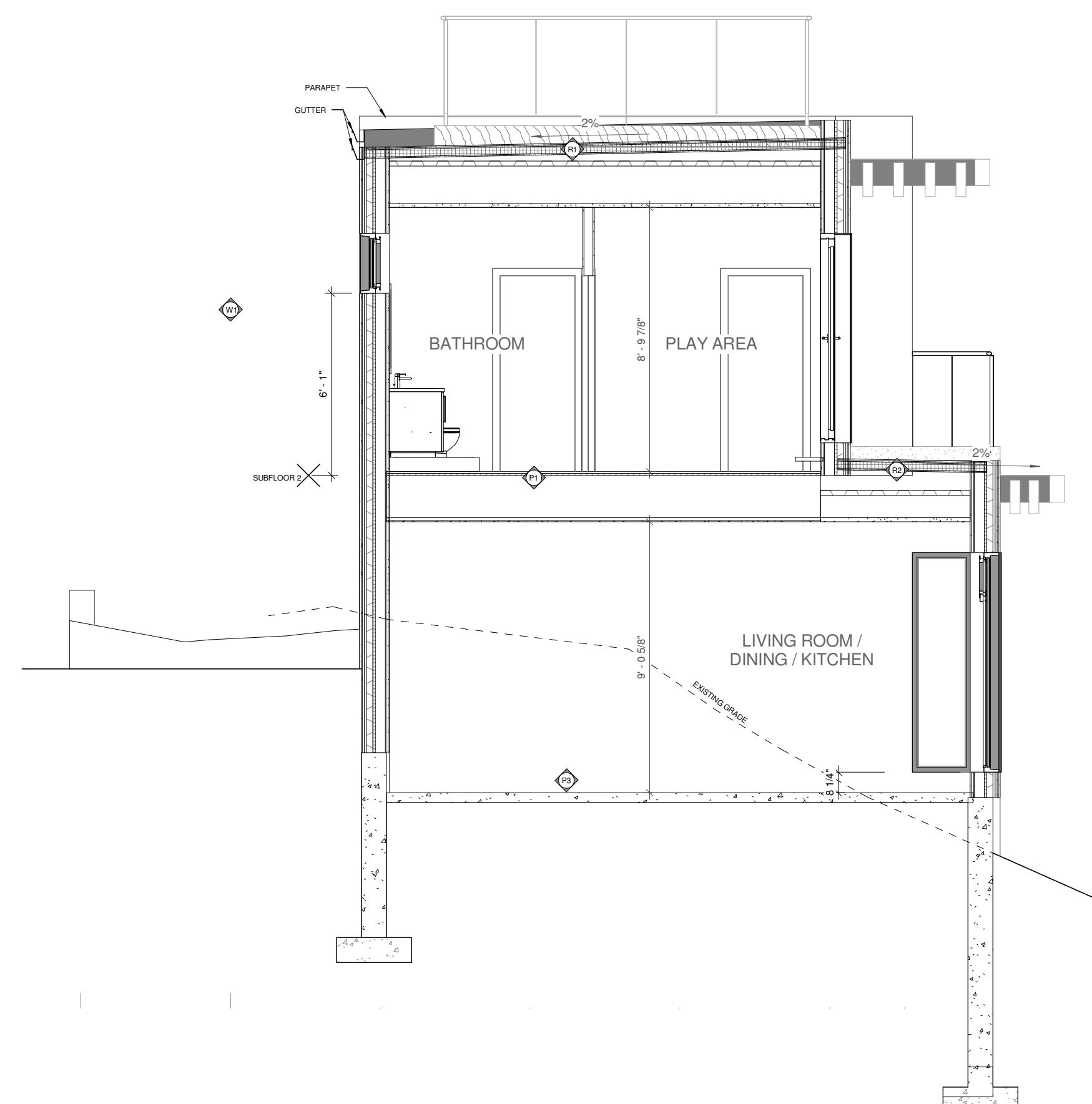
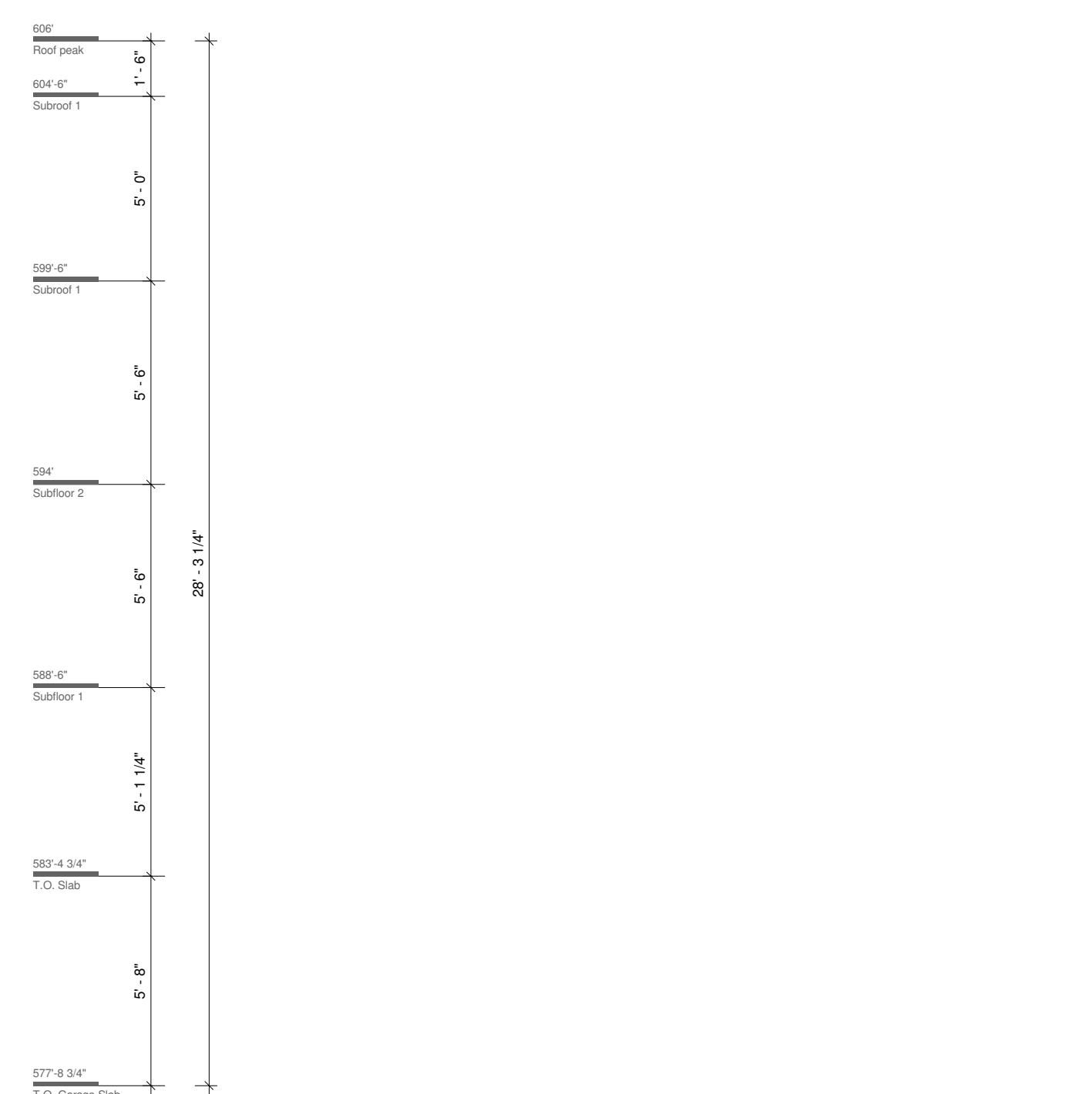
PROJECT		MIKHAIL	
17-802		2398 RAINBOW COURT	
		HAYWARD, CA 94542, APN 425-0410-031	
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Cross section 1		CHECK BY	Checker
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1 Cross section 1
1/4" = 1'-0"

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BUILDING HEIGHT LIMIT: 30'-0"



- ◆ FOUNDATION WALL (R1)
- ◆ FOUNDATION WALL (R10) (R20)
- ◆ LIGHT GRAY STUCCO FINISH (R28)
- ◆ DARK GRAY ALUMINUM PANEL (R29)
- ◆ THIN STONE VENEER (R29)
- ◆ TYPICAL FLOOR - WOOD FINISH
- ◆ TYPICAL FLOOR - INSULATED WOOD FINISH
- ◆ 4" CONCRETE SLAB (R10)
- ◆ 4" GARAGE SLAB
- ◆ TYPICAL ROOF (2% SLOPE) (R50)
- ◆ TERRACE ROOF (R50)
- ◆ ENCAUSTICATED LED SPOT LIGHT
- ◆ EXTERIOR WALL LIGHT

BUILDING HEIGHT: Building maximum height 60'-0" PROPOSED: 60'-0"
RETAINING WALL: Maximum height 8'-0" PROPOSED: At equal or less than 8'-0"

STAIRS: INCLINE BY BONE STRUCTURE
Treads: Maximum height 8 1/2 inches (216 mm)
Handrails: minimum 4 1/2 inches (114 mm) on either side of the staircase
R11.2.2 Headroom: The minimum headroom is 6 feet 8 inches (2032 mm)
R11.2.2.2 Headroom: The minimum headroom is 6 feet 8 inches (2032 mm)
vertical rise of large than 141 inches (3754 mm) between
four levels or less.

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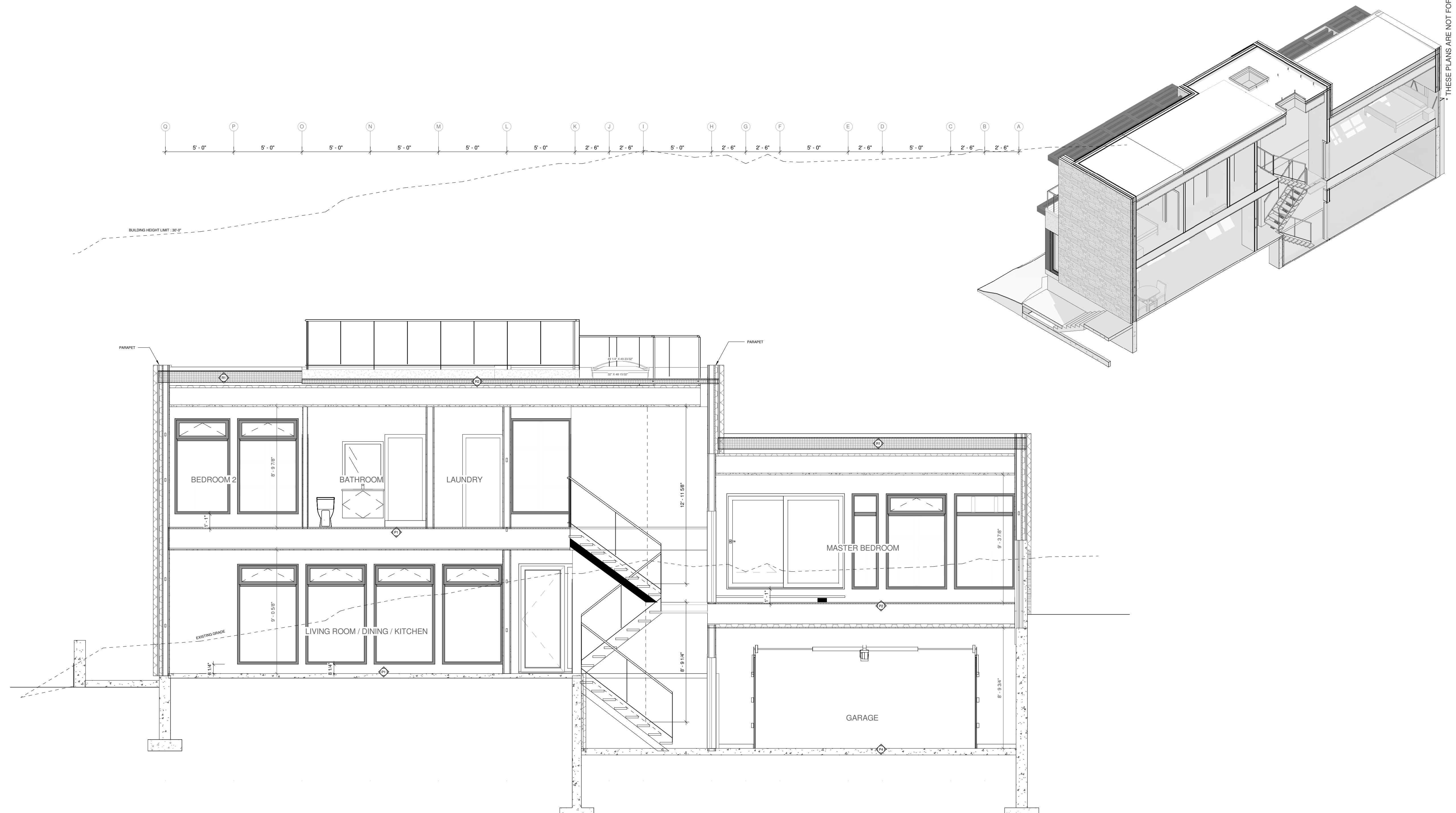
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DATE	REVISION	BY	NO.

PROJECT		MIKHAIL	
17-802		17-802	
2398 RAINBOW COURT		2398 RAINBOW COURT	
DRAWING TITLE	DRAWN BY	Author	
Cross section 2			
CHECK BY	Checker		
SCEAU			
DATE	2017/09/19 <th></th> <th></th>		
SCALE			
REVISION	As indicated		
PAGE			
A. 301			

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

THESE PLANS ARE NOT FOR CONSTRUCTION.



PROJECT	MIAKHAIL		
	17-802		
	2398 RAINBOW COURT		
	HAYWARD, CA 94542, APN 425-0410-031		
DRAWING TITLE	DRAWN BY	Author	REVISION
Longitudinal section			
SCEAU			
	DATE	2017/09/19	
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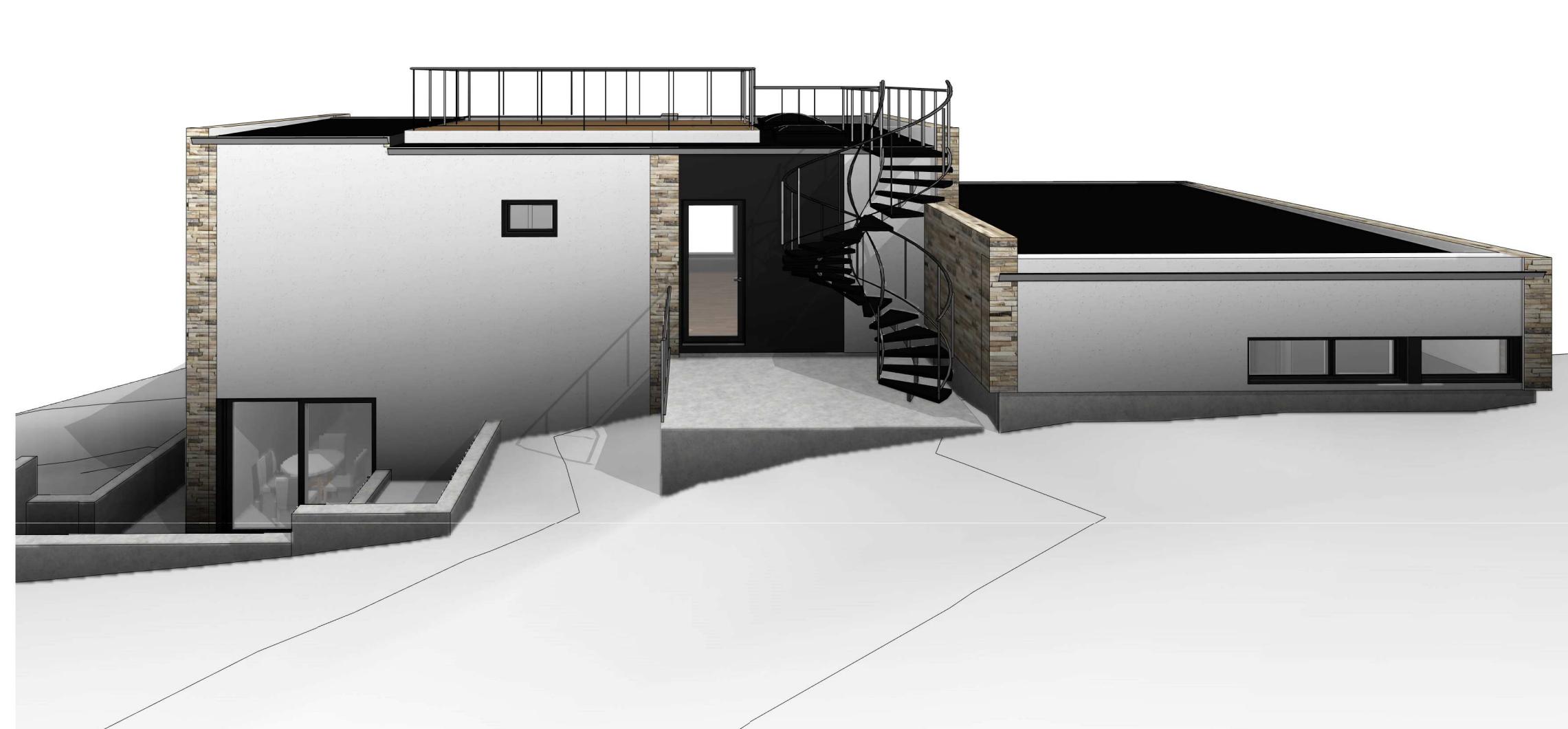
1 Longitudinal section
1/4" = 1'-0"



Simple Concept

2 JOSEPH-A. BOMBARDIER, LAVAL, QC, CA H7P 6E2
T.:450.978.0602 FAX.:450.978.4917

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PROJECT MIAKHAIL

2398 RAINBOW COURT
YUWARD, GA 31549 APN 105-2412-021

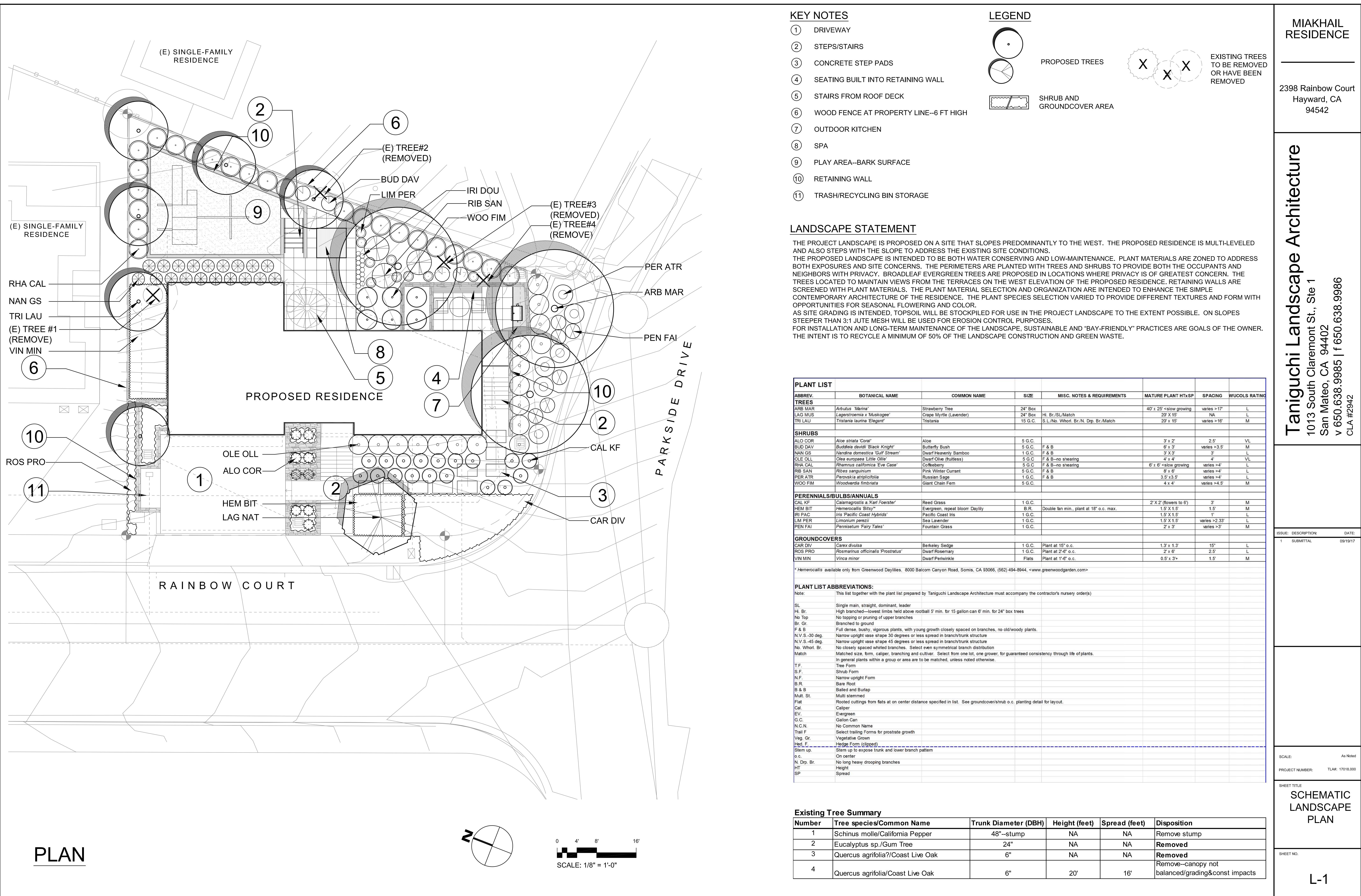
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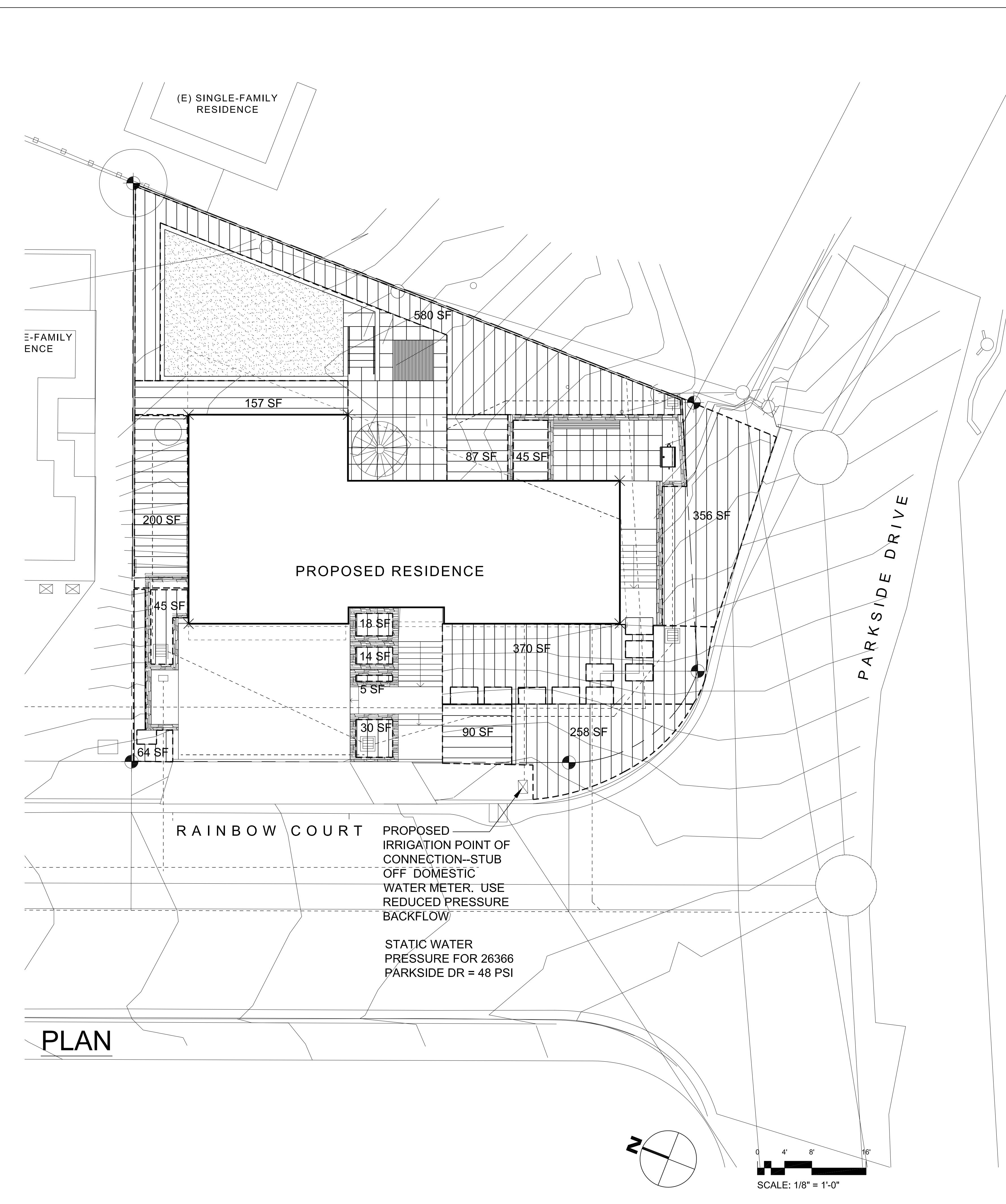
Perspectives

DATE

REVISION

PAGE 34





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 (P/F/IE)	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 (0.000174)	644	17,660	0.05	23.81	78%
2	MIXED SHRUBS & GROUNDCOVER	MOD	0.5	DRIP	0.81	0.82	579 (0.000579)	357	9,794	0.03	13.09	25%
TOTALS							2,319 (0.002319)	1,002	27,455	0.08	36.70	100%

SPECIAL LANDSCAPE AREAS

HYDROZONE #	HYDROZONE NAME											
3												
TOTALS							0					

MAWA	GALLONS/YR	34,952
	ACRE FEET/YR	0.11
	HCF/YR	46.73

ETWU	GALLONS/YR	27,455
	ACRE FEET/YR	0.08
	HCF/YR	36.70

SITE IRRIGATION EFFICIENCY	SITE PLANT FACTOR	MAWA COMPLIANT
81.0%	0.36	YES

ETAF Calculations	
REGULAR LANDSCAPE AREAS	
TOTAL ETAF X AREA	
TOTAL AREA	
AVG. ETAF	

MAWA FORMULA
MAXIMUM APPLIED WATER ALLOWANCE (MAWA) GALLONS PER YEAR
MAWA = (ETO)(0.82)[(LA x 0.85) + (0.45 x SLA)]

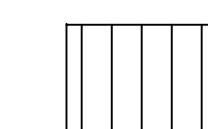
ETO = REFERENCE EVAPOTRANSPIRATION
 0.85= ET ADJUSTMENT FACTOR
 LA=LANDSCAPED AREA (SQUARE FEET)
 0.82 = CONVERSION FACTOR (GALLONS/SQ.FT/YR)

ETWU FORMULA
ESTIMATED TOTAL WATER USE (ETWU) GALLONS PER YEAR
ETWU= ((ETO)(.82)(ETAF x LA))

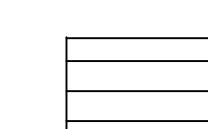
ETO = REFERENCE EVAPOTRANSPIRATION
 PF = PLANT FACTOR FOR HYDROZONES
 HA = HYDROZONE AREA (SQ.FT)
 0.82 = CONVERSION FACTOR (GALLONS/SQ.FT/YR)

IE = IRRIGATION EFFICIENCY (0.81)-BUBBLER/DRIP
 IE = IRRIGATION EFFICIENCY (0.78)-ROTORS/SPRAY

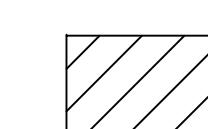
HYDROZONE LEGEND



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



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



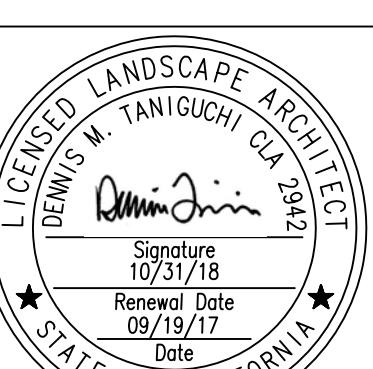
HIGH WATER USE: (NONE PROPOSED)

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



SUE: DESCRIPTION: DATE:

CALE: As Noted

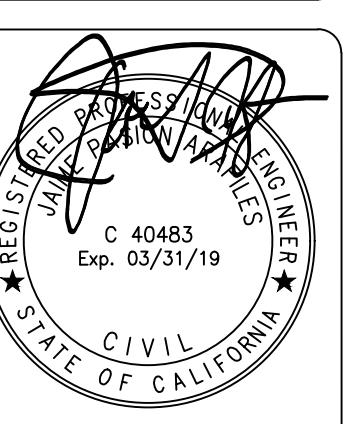
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HEET TITLE

IRRIGATION HYDROZONE PLAN

111

REVISIONS	BY



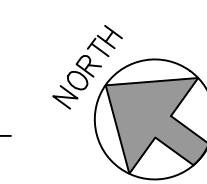
JAIME P. ARAFILES, PE
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(619) 385-5399 jarafiles@aol.com

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

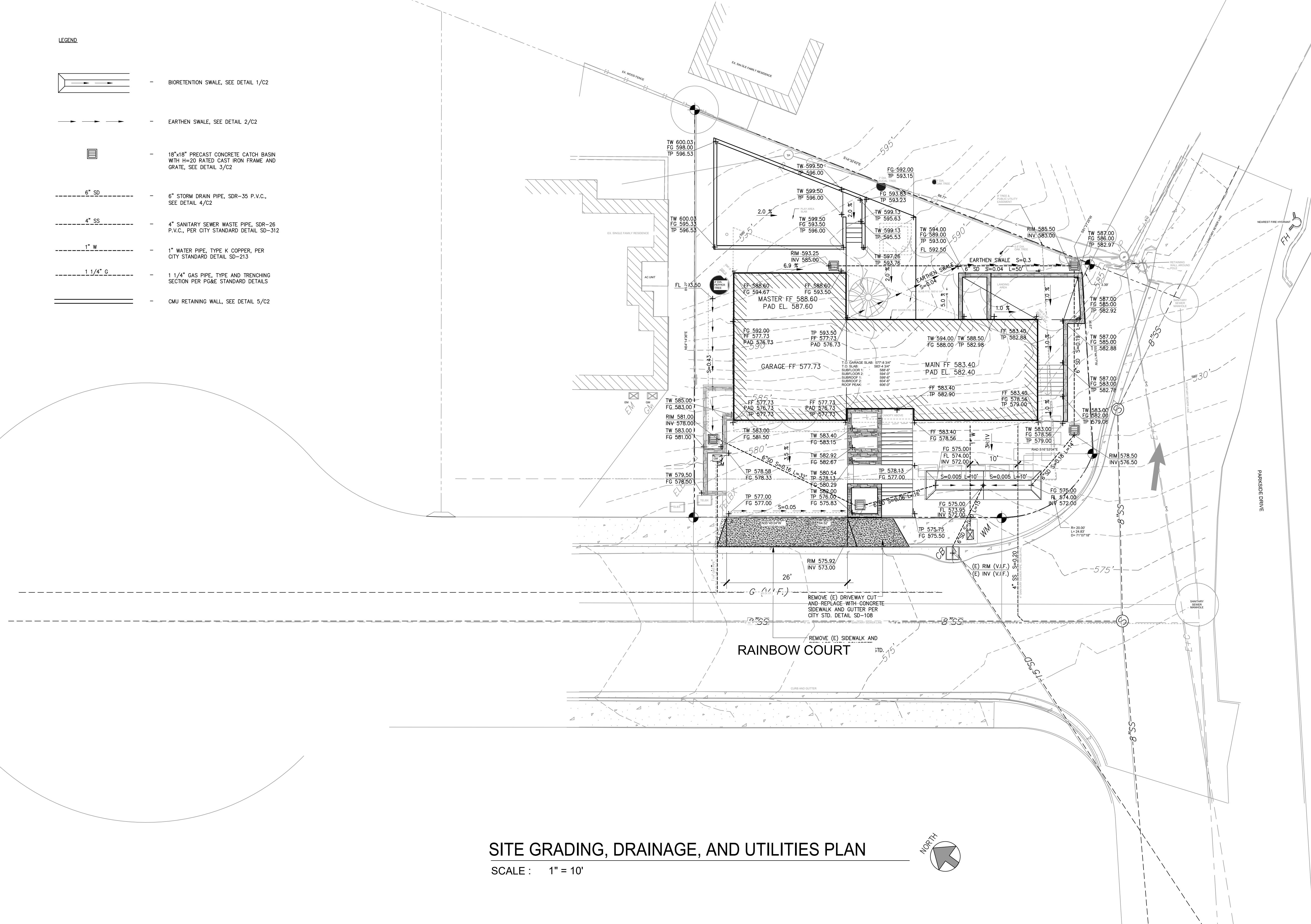
SITE GRADING, DRAINAGE, AND UTILITIES PLAN

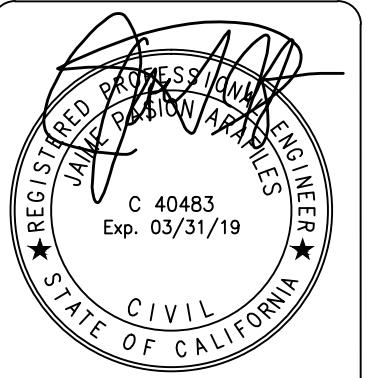
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LEGEND

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





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32108 ALVARADO BLVD. #293 UNION CITY, CA 94587

JAYME P. ARAFILE
32108 ALVARADO BLVD., #293, UNION CITY, CA 94587

SITE DETAILS

**NEW RESIDENCE
2398 RAINBOW COURT
HAYWARD, CA 94542**

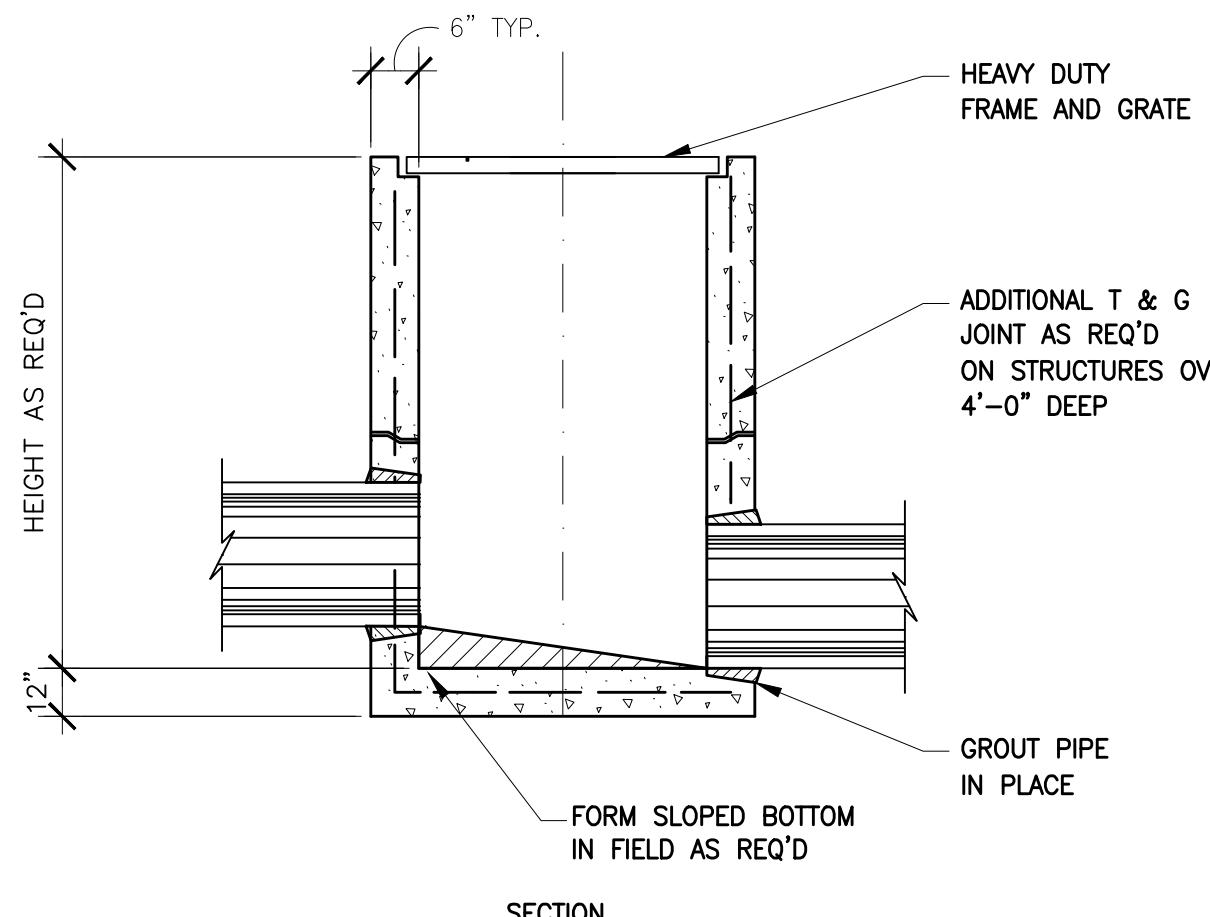
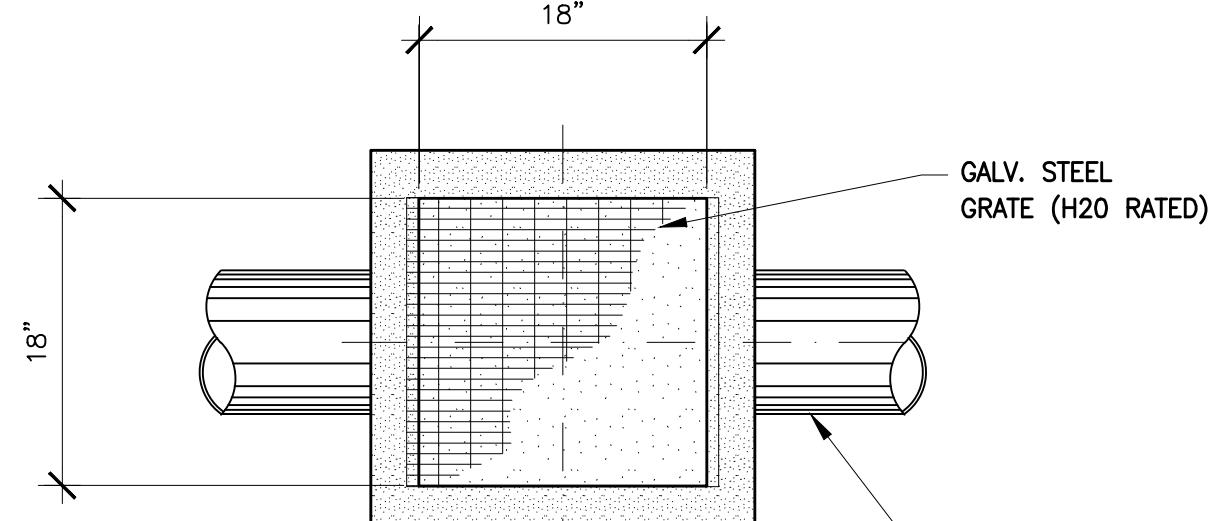
BY: **JA**
D BY: **JPA**
GUST 18, 2017
AS NOTED
BER: **2173050**

C2

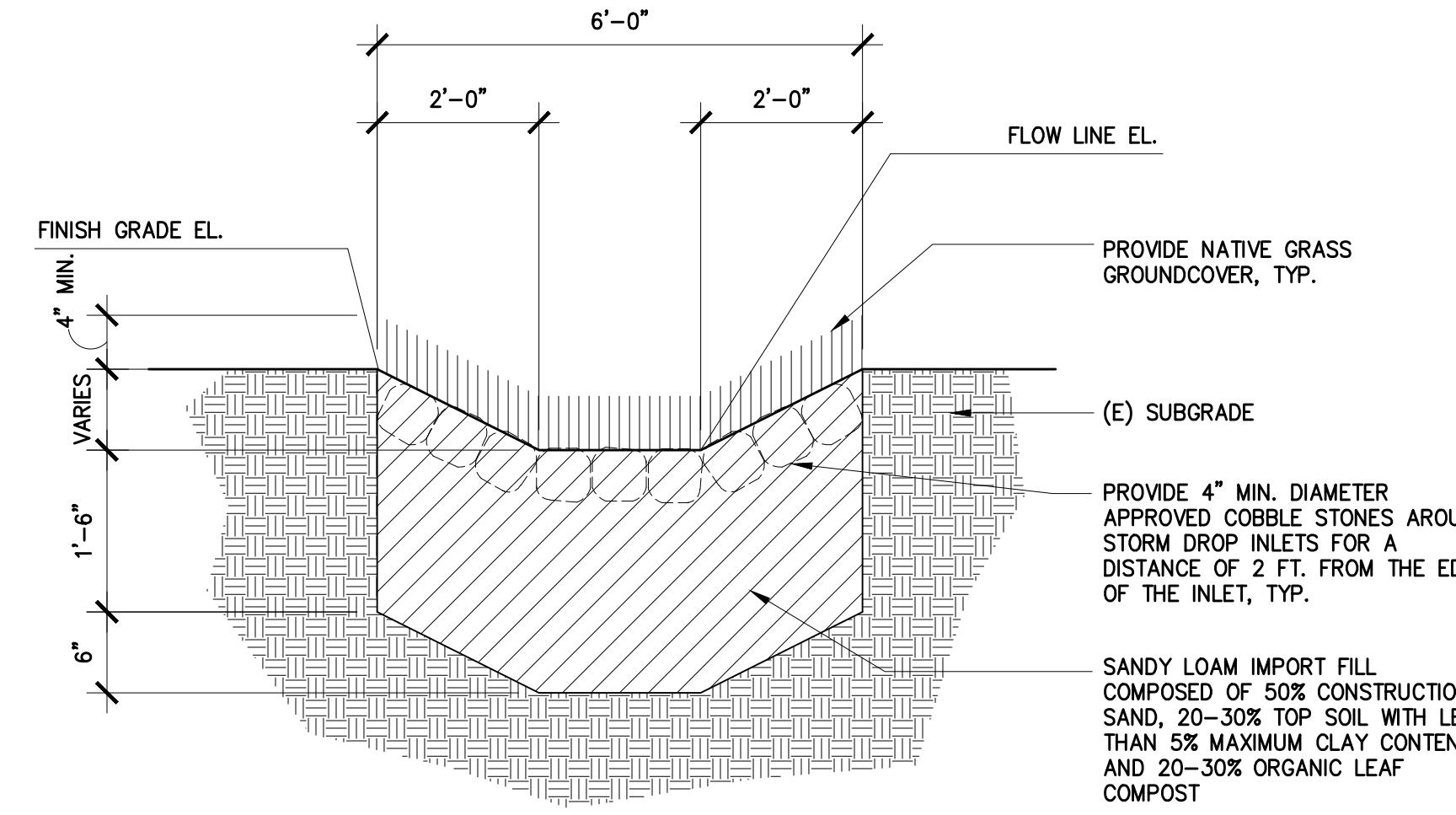
The diagram illustrates a cross-section of a drainage pipe installation. At the top, a horizontal line represents the 'INVERT EL.' (Invert Elevation). Below this, two vertical lines indicate a '18" MIN.' distance from the invert to the top of the pipe. The pipe itself is shown with a hatched pattern. A vertical line to the right of the pipe indicates a '18" MIN.' distance to the center of the next pipe. The pipe is surrounded by a '6" MIN. SAND BED' on three sides, indicated by arrows. The base of the pipe is supported by '(E) SUBGRADE', also indicated by arrows. Above the pipe, a '12" MIN.' distance is shown from the invert to the top of the backfill. The backfill is labeled 'BACKFILL COMPACTED TO 90% MAX. DRY DENSITY'. The entire assembly is shown within a rectangular frame.

4 TYPICAL STORM DRAIN SECTION

NOT TO SCALE

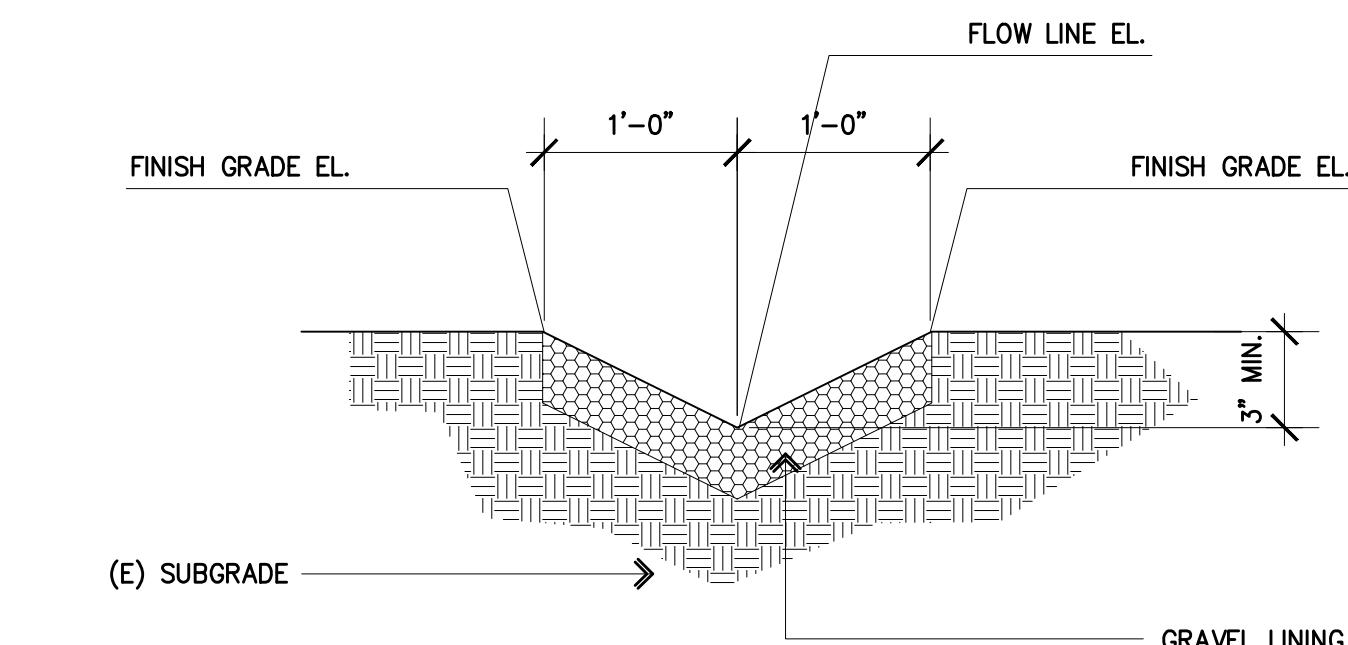


CATCH BASIN DETAIL



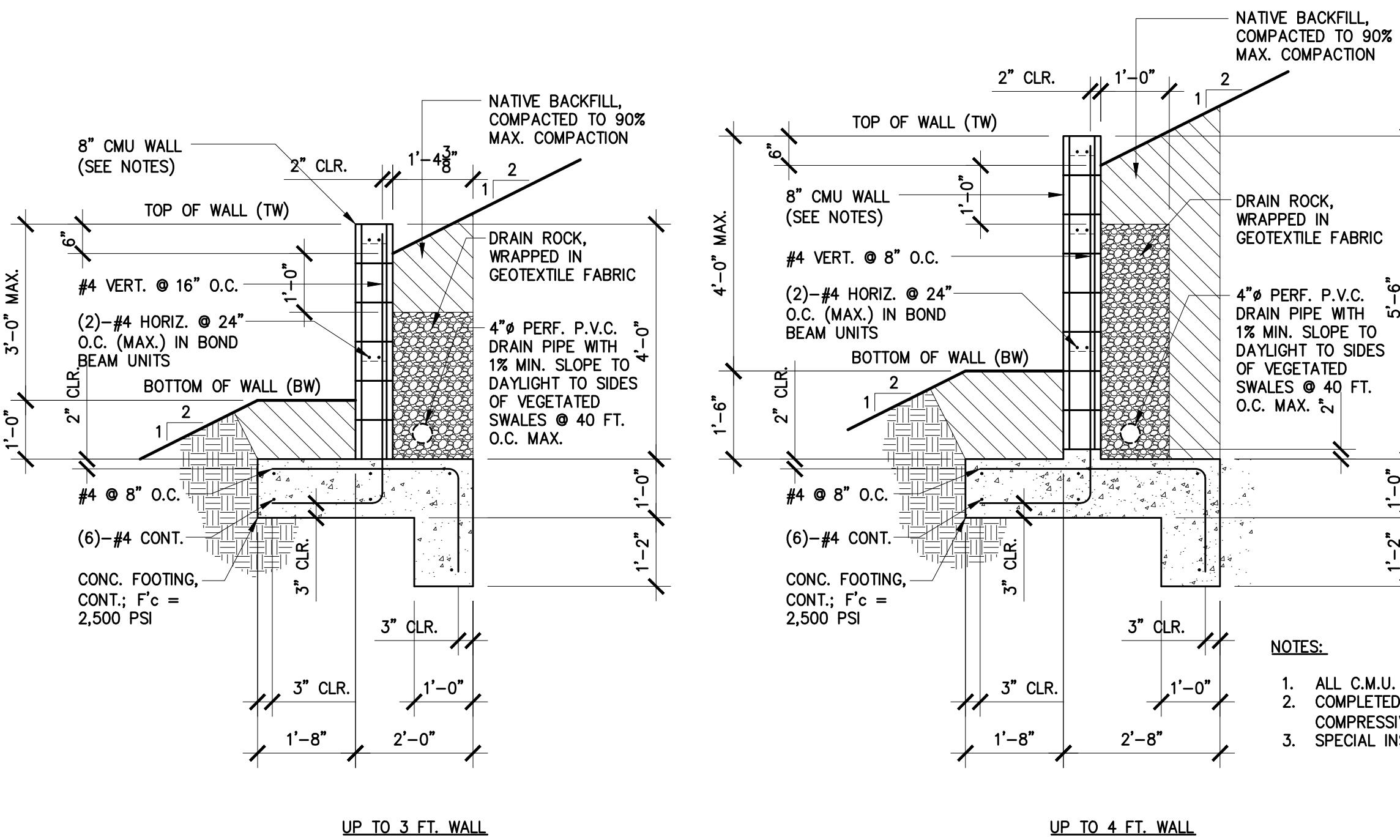
1 TYPICAL BIOSWALE DETAIL

NOT TO SCALE



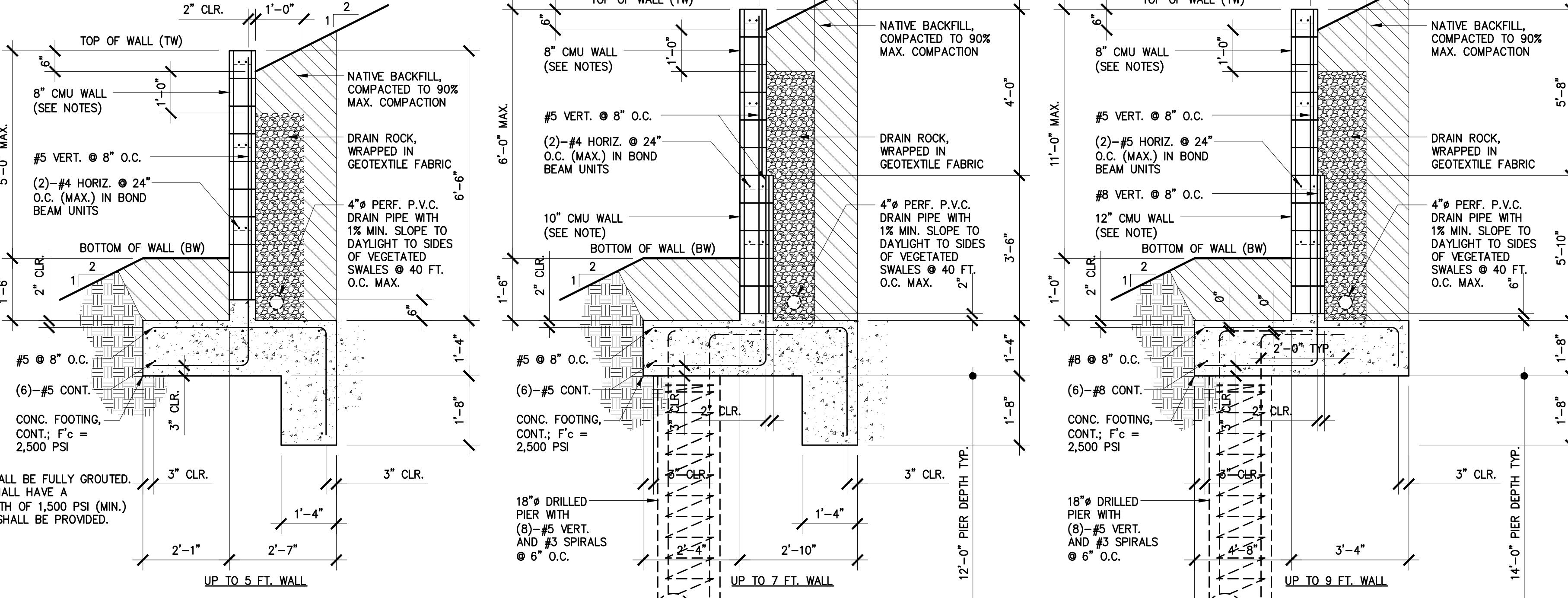
2 TYPICAL EARTHEN SWALE

NOT TO SCALE



P. C.M.U. RETAINING WALL DETAIL

NOT TO SCALE



P. C.M.U. RETAINING WALL DETAIL