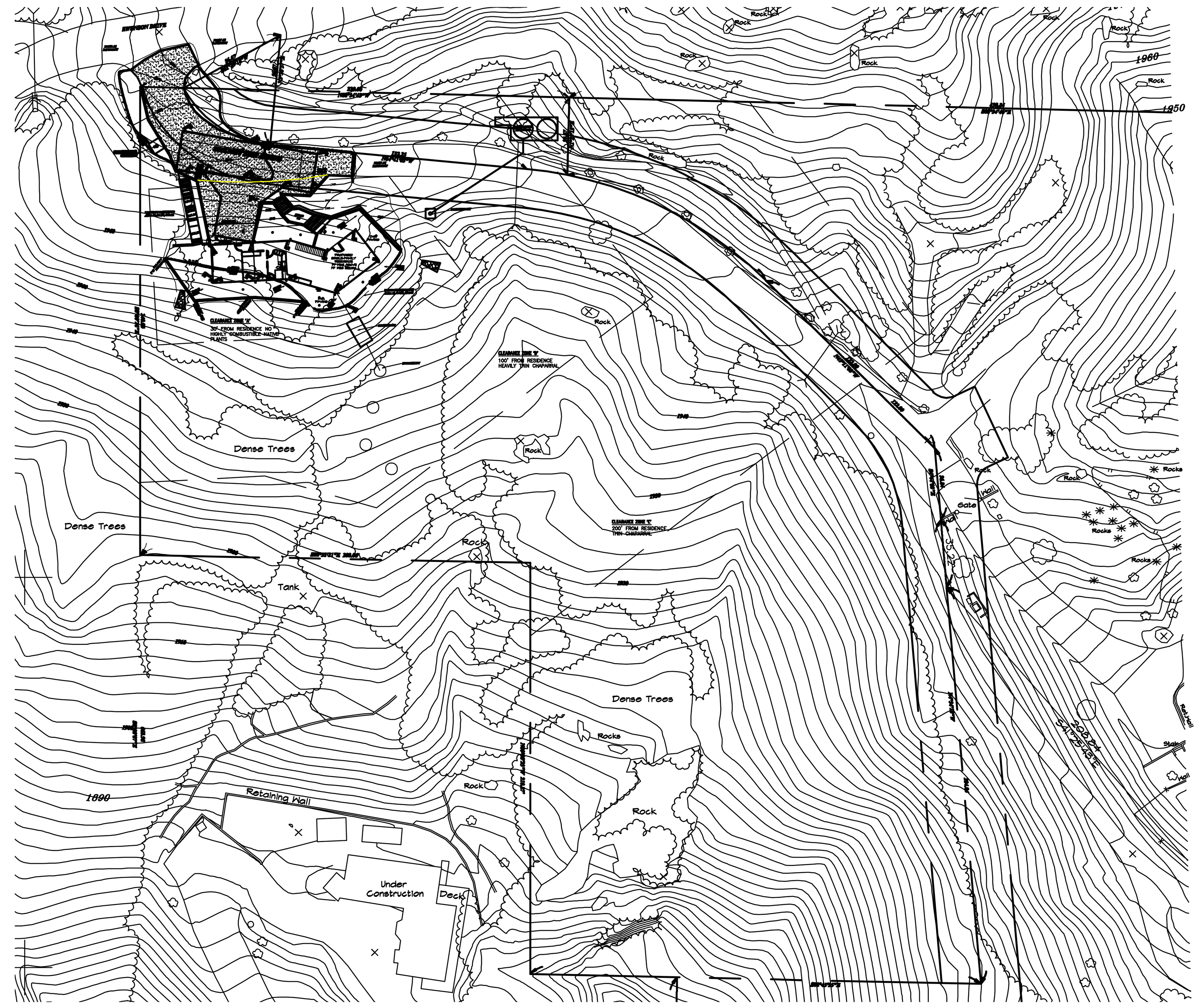
MOUZAYA RESIDENCE



SITE PLAN
SCALE: 1'-0"=50'-0"

GENERAL CONDITIONS
The word "Contractor" means the General Contractor and where applicable by trade, Subcontractors.

Contractor shall be responsible for reviewing all notes prior to finalizing the construction contract.

Before submitting any proposal, it shall be the responsibility of the Contractor to familiarize him/her self with all conditions at the site relative to the existing work, materials to be matched, working space available, access and all other aspects effecting the scope of work to the making of an intelligent bid. Increase in cost or extension in performance time will be considered failure to know the site conditions.

The Contractor shall maintain a full set of drawings, specifications and all required permits on the job site at all times. They shall be made available to the Landscape Architect and Owner at request.

Prior to finalizing contract prices, Contractor shall be responsible for reviewing all notes and drawings to include and subcontract requirements or information which may not be indicated on Subcontractor sheets or notes, but which are indicated elsewhere in the construction documents.

Contractor shall review all items noted by Landscape Architect or Owner which might affect costs prior to finalizing construction contract and subcontracts, and shall confirm final decisions regarding selection, materials, color, finish or other specifications not yet decided regarding these items. Contractor shall include the cost of these items within the original contract price.

Unless items are specifically itemized as "not included in contract" (NIC), they will be assumed to be included in the estimate or contract price.

Any allowance items shall be specifically identified as allowances and included in the estimate or contract price.

Contractor shall immediately notify the Owner of any extra costs arising from the execution of their contract or subcontracts and shall receive Owner's written approval of the same prior to doing the work.

Construction schedules shall be made available to Owner and Landscape Architect. Landscape Architect shall be contacted regarding the layout of all construction items and for the observation of steel and forms in place prior to the further construction of said items.

Spot elevations and topography lines shown for reference only. If discrepancies occur between actual conditions and landscape plans, Contractor shall contact Landscape Architect immediately for resolution prior to construction.

Notes and details on drawings shall take precedence over general notes and typical details. Details marked "typical" shall apply in all cases, unless specifically noted otherwise. Otherwise, where no detail is shown, construction shall be shown for other similar work.

Written dimensions shall prevail over scaled dimensions on drawings. In no event are dimensions to be scaled off of the drawings without prior approval from the Landscape Architect.

All dimensions are from outside edge of wall, paving, etc., unless otherwise noted on plans.

Contractor shall verify all works, dimensions, and details, and report any discrepancies to the Landscape Architect prior to work commencing. During construction, the Landscape Architect is to be advised regarding any discrepancies in measurements, dimension, location, or details prior to the Contractor proceeding with that portion of the work. Contractor shall confirm any discrepancies between drawings and specifications and any job site conditions with the Landscape Architect prior to starting portions of the work affected.

Details are intended to show final effect of parts of construction. Minor modifications may be required to suit particular job site conditions or dimensions and shall be included with the scope of the work and construction contract. Any modifications required in details are to be first reviewed and confirmed with the Landscape Architect prior to construction.

Any discrepancies not brought to the attention of the Landscape Architect and related work commenced therein conflict with codes or documents shall be corrected by the Contractor at Contractor's own expense and no expense to the Owner or Landscape Architect.

The Landscape Architect preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans. All changes to the plans must be in writing and must be approved by the preparer of the plans.

If revisions to the plans are requested by the City, the Contractor will notify the Landscape Architect for revisions and/or change orders required for resubmittal, permit site inspections and approvals. A copy of final permit approval shall be provided to Owner upon completion.

Contractor shall be responsible for supervising that all general and subcontract work is being accomplished according to the most current construction documents, including revisions.

Contractor shall not use any potentially hazardous materials or products in the construction, and shall advise Owner of any potentially hazardous materials or products recommended, selected or specified prior to purchasing or installing.

Contractor shall provide temporary toilet facilities on job site if necessary or required by local code.

Contractor shall keep premises secure, clean and hazard free. Contractor shall be responsible for maintaining their equipment, materials, and work, in neat, clean, orderly and safe conditions at all times.

DEMOLITION
Contractor shall perform all removal and related work shown on the drawings, described in these notes and reasonably inferred as necessary to complete the final design.

Contractor shall provide and maintain pedestrian protection as required by the presiding city/county. Prior to demolition, Contractor shall obtain and pay for all required permits for sidewalk and street use.

Contractor shall be responsible for obtaining permits and shall pay all fees necessary for encroachment, grading, demolition, and disposal of said materials as required by private, local, and state jurisdictions. Contractor shall be responsible for a site inspection to fully acknowledge the extent of the demolition work.

The existing conditions and dimensions shown on the plan represent as accurately as possible existing conditions. However, it is the Contractor's responsibility to verify in the field all dimensions and conditions prior to any work by the effected trades. Any discrepancies shall be reported to the Landscape Architect and Owner.

If any conditions arise where it is necessary to remove additional existing structure or finishes for the completion of the work as outlined in the contract, the Contractor shall inform the Landscape Architect and Owner prior to commencing with any additional demolition or modification.

Demolition of vegetation shall include the removal of roots and organic materials.

Contractor shall verify and locate all existing above and underground utilities. Any locations shown on the plans are approximate and are shown for general information only.

Underground utilities are not to be disturbed unless otherwise noted.

Damage to any existing utilities and services to remain shall be the responsibility of the Contractor. Contractor shall repair and/or replace in kind.

Damage to any existing utilities and services to remain shall be the responsibility of the Contractor. Contractor shall repair and/or replace in kind.

All depressions and trenches from demolition shall be backfilled.

Demolition and removal of existing structures, concrete slabs, paving and equipment shall include removal of all foundations and subsurface construction as required.

Required demolition and removal shall be done in strict accordance with the presiding city/county ordinances and conducted during approved hours only. Contractor shall take all necessary precautions to minimize noise, dust, and other nuisances to neighbors and public right of way.

Erosion control measures shall be implemented to prevent debris and unsuitable materials from entering storm, sanitary sewers and streets.

Erosion control plans, if required by the City, shall be at the Contractor's expense and the responsibility of the Contractor to prepare said documents.

All damaged existing areas to remain and existing areas affected by demolition or new construction work shown on drawings shall be repaired as required to match immediate adjacent areas in materials, including fire rating, finish and color unless otherwise noted.

Contractor shall legally dispose of removed materials and debris daily at approved disposal sites, as required by the presiding city/county. Contractor shall obtain necessary permits for the transportation of material to and from the site.

Upon completion of work each day, premises shall be broom swept.

Except for those materials indicated to be removed, existing trees, shrubs, groundcover and sod are to remain throughout the duration of construction. Contractor shall ensure that particular care is taken to protect, preserve and maintain these items.

SITE WORK, GRADING, FOUNDATIONS, ETC.
Contractor shall inspect and be responsible for protecting and maintaining all new and existing work, facilities and improvements within the areas indicated under the contract. Any disturbances or damage to the work, the existing building and improvements, or any impairment of facilities resulting directly or indirectly from the Contractor's operation shall be promptly restored, repaired or replaced to the satisfaction of the Landscape Architect and at no additional cost to the Owner.

Work shown herein shall be done in accordance with the "Standard Specifications for Public Works Construction," latest edition and supplements, Chapter 70 of the Uniform Building Code (Excavation and Grading), and City of Los Angeles local ordinances as applicable.

All recommendations of the Geotechnical and Soils Engineers shall be made a part of these plans.

Existing topographical information shown herein is based on the existing survey.

Construction staking for improvements shown on these plans shall be performed by a licensed land surveyor.

Contractor shall contact underground service alert at 800-422-4133 prior to excavation.

Contractor shall take precautionary measures to protect any utility lines and any other lines so as not to disturb them.

Prior to commencing construction, Contractor shall verify all join conditions for grading, drainage and underground facilities including location and elevation of existing underground at crossings with proposed underground facilities. If conditions differ from those shown on plans, contractor shall notify the Engineer and Landscape Architect, and shall not begin construction until the changed conditions have been evaluated.

Contractor shall assume sole and complete responsibility for the job site conditions, including safety of all persons and property, during the course of construction on this project. This requirement shall apply continuously, and shall not be limited to normal working hours.

Contractor shall obtain an OSHA permit from the California Division of Industrial Safety prior to the construction of trenches or excavations which are 4 feet or deeper.

Contractor shall notify Landscape Architect and Owner of any unstable or questionable soil or geological conditions encountered during excavation. If at any time during grading operations, any unfavorable geological conditions are encountered, grading in that area will stop until approved corrective measures are obtained.

The proposed grade is the finish grade and not the rough grade. Contractor shall subtract the thickness of the paved section and/or landscape topsoil section to arrive at the rough grade elevation.

Straight grade shall be maintained between contour lines and spot elevations unless otherwise noted.

Areas within the scope of work shall be weed killed with an application of "Round Up" or an approved equal product ten days prior to the start of work. Contractor shall verify with Landscape Architect prior to application.

Areas to be graded or paved shall be grubbed and stripped of all vegetation, debris and other deleterious material. All loose soil disturbed by removal of trees, existing fill and loose or disturbed topsoil shall be removed.

After over excavation is completed, the exposed surface shall be compacted to at least 90%. All new fill shall be brought to near optimum moisture, placed in layers not exceeding 6" thick, and compacted to at least 90% in areas to be paved only. See Soils Report for additional information.

Fill shall be compacted to at least 85% in planted areas.

The existing subgrade soils in unfilled areas shall be compacted prior to construction of paving to secure uniform support and to minimize differential settlements. The degree of compaction within the upper 12" shall be at least 90%.

The compaction characteristics of all fill soils shall be determined by A.S.T.M. D-155778. The field density and degree of compaction shall be determined at A.S.T.M. D-1556.

Where Soils and/or Geology Report have been made, it shall be considered a part of the construction documents and Contractor shall follow any recommendations contained therein.

All concrete floor slabs set below exterior grades shall be poured over a continuous 6 mil. Waterproof membrane set on 2" sand bed over 4" crushed rock on natural soil. Crushed rock shall be drained to storm drain system or relieved at perimeter to prevent sub floor saturation. See Structural Drawings for additional information.

Contractor to provide 4" Class II base under all paving; compact to 90% compaction. Hold paving level 1.5" below stucco screen except where noted otherwise.

Contractor shall provide mastic expansion joints next to architecture, walls and steps. Color shall match paving.

All forms and alignment of paving shall be reviewed and approved by the Landscape Architect prior to pouring (minimum 48 hours notice).

Contractor shall provide positive drainage on all finished grade surfaces, sidewalks and patios away from structures and verify that areas affected by construction are properly drained, with no ponding.

Contractor shall remove all excess oil, debris and materials not required by construction. Confirm any items to remain with Landscape Architecture or Owner prior to start of construction.

Contractor shall erect and maintain temporary barricades and dust proof partitions as needed for protection against accident, and shall continuously maintain adequate protection of work and the Owner's property from damage or loss arising in connection with construction.

Water shall be provided onsite and used to control dust during construction operations.

FRAMING
In addition to any structural grade requirements, all exposed wood beams and posts shall be selected for best appearance within specified grade, with minimum knots, checks or cracks.

Contractor shall coordinate framing with proposed location of electrical, mechanical, and plumbing work so as to avoid changes in framing which might conflict with proposed equipment or fixture locations.

UTILITIES, PLUMBING, DRAINAGE, ETC.
Contractor shall consult representatives of local utilities, including: gas, water, power, sewer, telephone and television where applicable, concerning locations and availability of utilities prior to commencing work or connecting utilities. Contractor shall be responsible for any damage to existing utility lines. Locations and elevations existing and new mains shall be confirmed on the record drawings.

Contractor shall provide and install new underground water and gas supply lines, and verify meter, main, (tank when applicable) and line sizes are adequate to provide acceptable pressure and volume required.

Hose bibs and irrigation systems shall not be connected to building water system, but shall be fed from main water line before building system pressure regulator and main valve. See irrigation drawings for further system information and specifications.

Contractor shall flush out new and old water supply lines prior to connecting new fixtures.

Contractor shall maintain adequate and constant water supply to all existing plumbing fixtures, hose bibs and sprinklers desired and deemed necessary during construction. See MEP drawings for additional information.

All storm drain and sanitary sewer pipe, fittings and joints shall be polyvinyl chloride (PVC) SDR 35 in accordance with Section 207-17 unless otherwise stated.

Contractor to provide hardscape and landscape drainage below and above surface. Provide 4" SDR 35 drain line with 4" brass drain grate in hardscape. Contractor to connect all new drains to existing drains.

All waterlines shall be installed with 36" minimum cover from top of pipe to finished grade unless otherwise noted.

All waterlines shall be polyvinyl chloride (PVC) class 150 and shall meet the requirements of AWWA C900 PVC pressure pipe unless otherwise stated.

Thrust blocks shall be installed at waterline horizontal and vertical bends, tees, capped ends and reducers.

ELECTRICAL
Unless noted otherwise, all conduits shall be concealed in structure or underground. Any exceptions are to be reviewed and confirmed in writing by the Landscape Architect.

Contractor shall verify that any existing service, meter, main, panel, conduits, and wiring to remain are adequate. Contractor shall advise Owner prior to finalizing contract if changes are required.

If required, contractor shall provide additional panel, capacity, breakers, circuits, etc., as required for new electrical loads, and shall verify location and scope of new and expanded service with the Owner and Landscape Architect. Contractor shall confirm all electrical loads and requirements for new appliances, heating and air conditioning systems, pool/spa, and other electrical equipment/fixtures prior to finalizing contract.

All wiring shall be copper, in flexible or rigid conduit as specified by code. Bo "Romex" or other non-conduited wiring is permitted.

Contractor shall confirm material and color of all switches, outlets and cover plates with Landscape Architect prior to ordering.

Contractor shall provide Title 24, Form 5 if required.

Ground fault interrupters are required for all exterior outlets and other wet areas required by code.

All electrical junction boxes for line voltage lighting shall be below grade in planting areas, as approved by Landscape Architect. See lighting plans for additional information and specifications.

See MEP drawings for additional information.

FINISHES
Contractor shall submit 2' x 2' samples, or as otherwise noted in the specifications, of all paving and wall finishes and colors with joints in place. All samples shall be approved by the Landscape Architect prior to construction.

All stucco walls shall match architecture in color and texture.

Contractor to provide non-slip surface on all step treads with 2% slope for drainage.

Contractor shall submit actual material samples for Landscape Architect's review of all finish materials including but not limited to: stone, tile, plaster, paint, and stains prior to ordering materials.

When plastering on masonry or concrete, a two coat minimum with ½" thickness is acceptable.

All curved walls and walks shall have smooth continuous curves as indicated on plans.

Plaster surfaces shall be straight and plumb on straight walls, with no wobble, wave or irregularities over the course of any wall plane, straight or curved.

Contractor shall confirm plaster finish with Landscape Architect prior to finalizing estimate.

All masonry work shall be in accordance with the Masonry Institute of America and Building Stone Institute guidelines.

All masonry work shall be according to current standards and specifications of the Tile Council of America and Ceramic Tile Institute.

Contractor shall verify all tile layouts, trim shapes, grout selections and widths, and other specifications with Landscape Architect approval prior to ordering tile. Unless otherwise specified, tile shall be installed on a wired reinforced mortar bed over a cleavage membrane.

All dust shall be completely washed off of tile prior to the application of the bond coat. Bonding mortar shall cover 100% of both the tile and surface to be covered, approximately 1/8" thick.

On dark colored stone or ceramic tile gray bonding will be used. On light colored tile white bonding mortar will be used. Landscape Architect shall approve tile and stone joint layout as well as color of potential grout prior to installation.

Contractor shall be responsible for ordering all tile and other finish materials with enough lead time so that ordered material can be confirmed as acceptable, and any unacceptable material replaced, without delaying construction.

PAINTING/STAINING
Contractor shall include within the scope of work preparation, priming, and finish painting of the exterior walls affected by additions and remodeling. Confirm paint, stain, finish selections and specifications with Landscape Architect, submit color samples and apply sample colors on actual surfaces to be painted for Landscape Architect's review prior to ordering materials.

Before beginning, inspect all work to be painted and report to Landscape Architect any conditions which will prevent a quality finish from being accomplished. Commencing of work by the Contractor is indicated by acceptance of the surfaces.

All spaces shall be broom clean and all hard surfaces to be painted shall be dry and clean.

Remove all electrical plates, surface hardware, etc., before painting. Protect and replace when completed.

All paint and stain material shall arrive at the job in unbroken containers with manufacturer's label clearly visible. Unless otherwise noted, all paints shall be applied in strict accordance with the manufacturer's master specifications and recommendations.

Paint coats as specified are intended to cover surfaces completely, if they do not, further coats shall be applied.

Exterior stains shall match existing conditions or as otherwise noted on drawings. Follow manufacturer's recommendation for application rates.

All wood to be painted with one coat primer and two coats paint to match fascia on architecture. All wood to be S4S, No. 1 grade Douglas fir. Fill all cracks.

LANDSCAPE/IRRIGATION
Fence around pool to be standard iron fence, per City requirements for pool safety. 5'-0" iron gates to be self-closing and self-latching. Latch to be installed 54" above adjacent grade.

Provide waterproof material on all raised planters (Xypex or approved equal) with 4" perforated styrine drain line and 1 cu. foot of ¾" gravel. Wrap drain pipe with filter fabric and connect to drainage system.

Provide linear deep root barriers on all trees within 5' of any sidewalk, wall, planter, bldg. or other hardscape. Root barrier to extend 4' on ea. side from tree centerline. Root barrier to be 39" wide by Reemay or approved equal.

Provide 4"x3' deep ventilation hole filled with ¾" gravel in all tree pits (2 per tree).

Provide espalier supports.

Provide 15-5 gal. and 30-1-gal. extra plants (to be spotted by Landscape Architect).

Provide 50 flats of 4" annual color (to be spotted by Landscape Architect).

Provide soil amendments (per soils report).

Provide 100% irrigation to all planting areas from curb line. Separate shrub, lawn, and sun exposure irrigation systems.

Bury irrigation lines as follows: 18" minimum for mainline (PVC) and 12" minimum for lateral (sch 40).

Provide irrigation controller to be located per Owner. Power to be supplied by Owner.

Landscape Architect shall review completed installation and file landscape certification with city, confirming compliance with approved plans.

SHEET INDEX

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LI-7	IRRIGATION DETAILS
LI-8	IRRIGATION CALCULATIONS
LS-9	SPECIFICATIONS

Environmental Patterns | inc.
31238 Via Colinas
Suite E
Westlake Village
California, 91362
License No. 2801
(818) 706-3344

REGISTERED LANDSCAPE ARCHITECT
BRYAN R. BADGETT
No. 2801
Signature
Date
STATE OF CALIFORNIA

MOUZAYA RESIDENCE
22390 SWENSON DR
TOPANGA, CA 90290

APN:
MAP:
TRACT:
BLOCK:
LOT:

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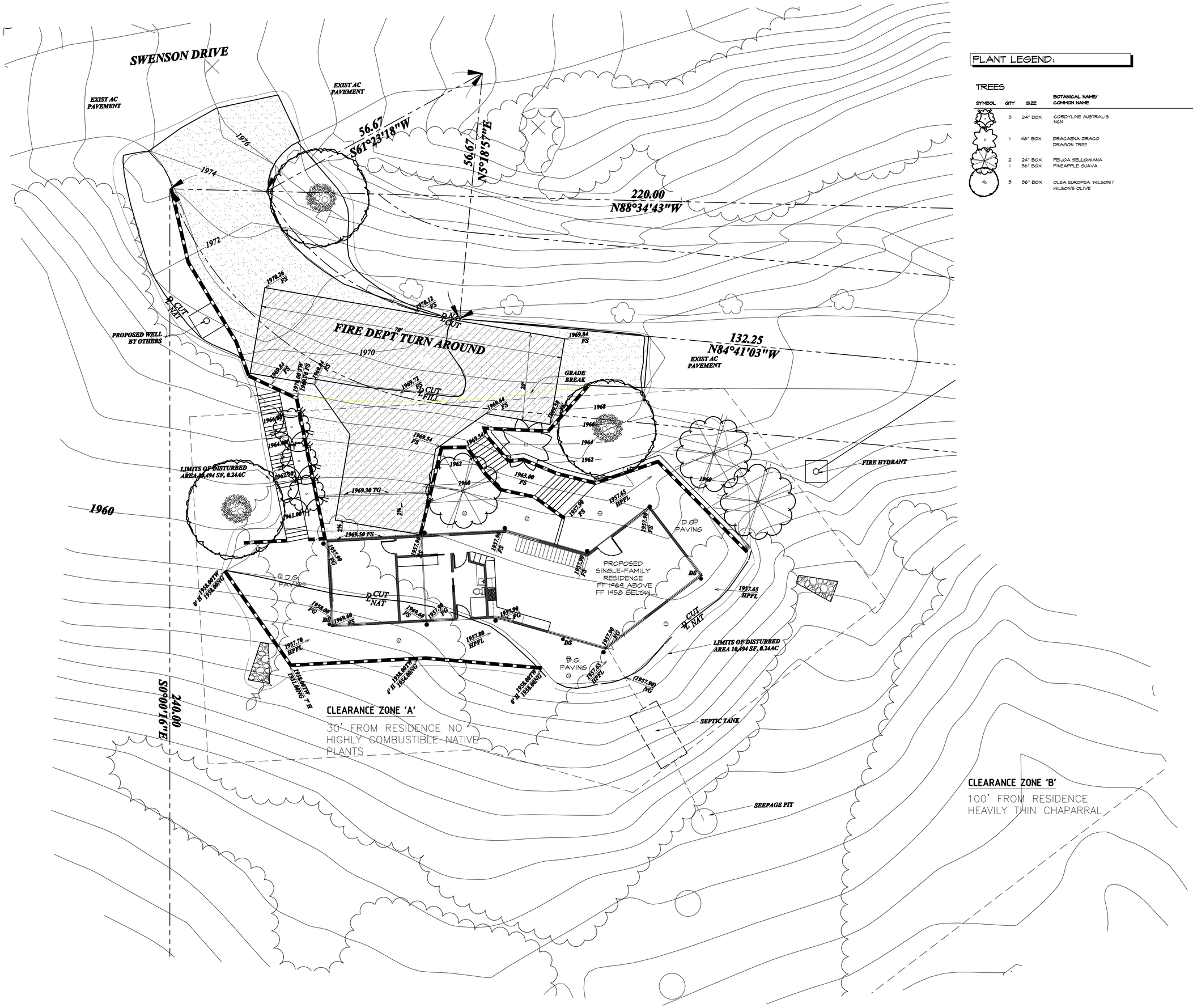
GENERAL NOTES

Date: 02/27/15
Drawn: B.B./E.S./K.R.
Job: #214240
Scale: NO SCALE

LG-1



PLANT LEGEND:

TREES

SYMBOL	QTY	SIZE	BOTANICAL NAME/ COMMON NAME	COMMENTS H/C/D/S
	3	24" BOX	CORDYLINE AUSTRALIS NCN	EVERGREEN - MULTI LOW - .35
	1	48" BOX	DRACAENA DRACO DRAGON TREE	EVERGREEN - DOUBLE HEAD VERY LOW - .25
	2 1	24" BOX 36" BOX	FEIJOA SELLOWIANA PINEAPPLE GUAVA	EVERGREEN - MULTI LOW - .3
	3	36" BOX	OLEA EUROPEA 'WILSONII' WILSON'S OLIVE	EVERGREEN - MULTI LOW - .3

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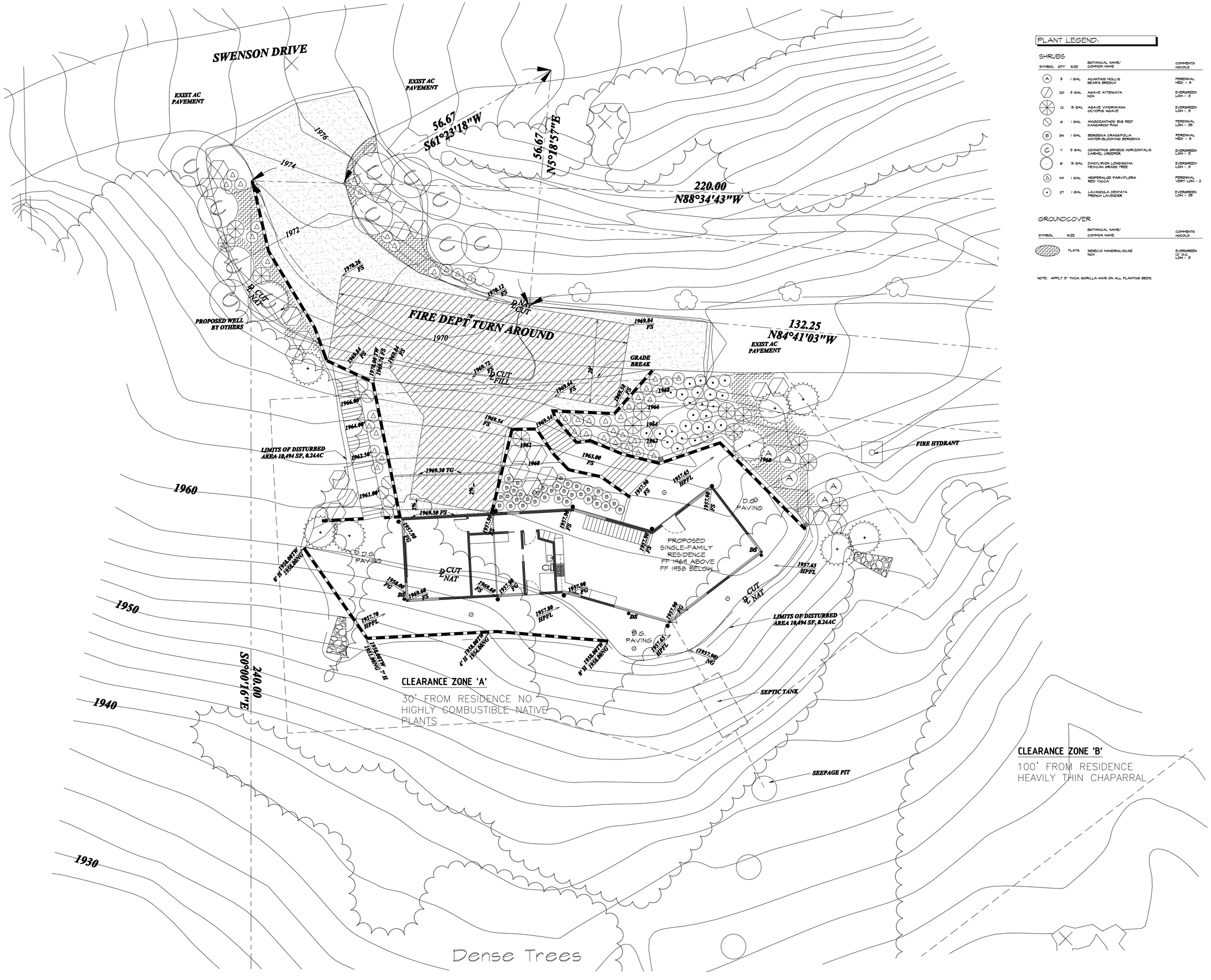
TREE PLAN

Date 02/27/15
Drawn B.B./E.S./K.R.
Job #214240
Scale 1/8"=1'-0"

NORTH

LT▸2

OF: 9
PLOTTED: 02/27/15



PLANT LEGEND:

SHRUBS

SYMBOL	QTY	SIZE	BOTANICAL NAME/ COMMON NAME	COMMENTS HUCOLS
A	5	1 GAL	ACANTHUS MOLLIS BEAR'S BREECH	PERENNIAL MED. - 3
	20	5 GAL	AGAVE ATTENUATA NCN	EVERGREEN LOW - 3
	12	15 GAL	AGAVE VIMORINIANA OCTOPUS AGAVE	EVERGREEN LOW - 3
	6	1 GAL	ANIGOZANTHOS 'BIG RED' KANGAROO PAW	PERENNIAL LOW - 39
B	54	1 GAL	BERGENIA CRASSIFOLIA WINTER-BLOOMING BERGENIA	PERENNIAL MED. - 3
C	11	5 GAL	CEANOTHUS GRISEUS HORIZONTALIS CARMEL CREEPER	EVERGREEN LOW - 3
	8	15 GAL	DASYLIRION LONGISSIMA MEXICAN GRASS TREE	EVERGREEN LOW - 3
D	44	1 GAL	HESPERALOE PARVIFLORA RED YUCCA	PERENNIAL VERY LOW - 2
	27	1 GAL	LAVANDULA DENTATA FRENCH LAVENDER	EVERGREEN LOW - 39

GROUNDCOVER

SYMBOL	SIZE	BOTANICAL NAME/ COMMON NAME	COMMENTS HUCOLS
	FLATS	SENECIO MANDRALISCAE NCN	EVERGREEN 12" O.C. LOW - 3

NOTE: APPLY 3" THICK GORILLA HAIR ON ALL PLANTING BEDS.

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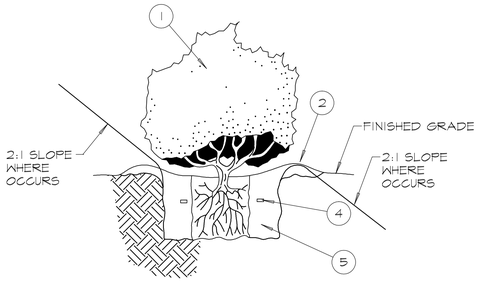
SHRUB PLAN

Date	02/27/15
Drawn	B.B./E.S./K.R.
Job	#214240
Scale	1/8"=1'-0"

NORTH

[LP▸3]

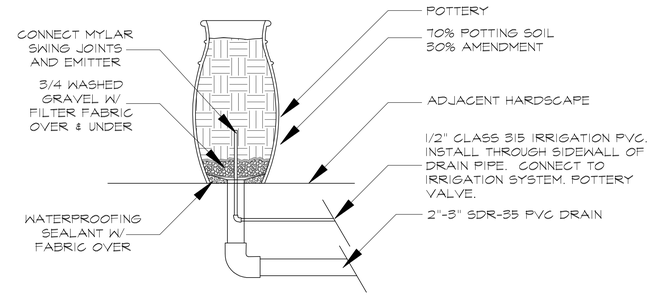
OF: 9
PLOTTED: 02/27/15



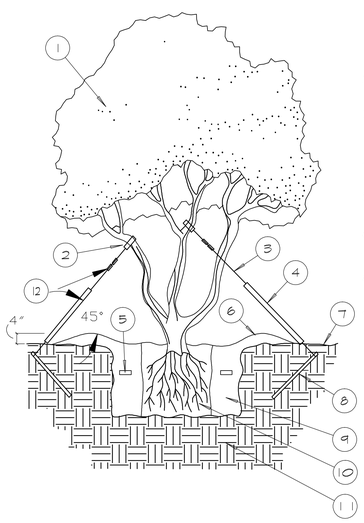
1. PLANT AS SPECIFIED.
2. 3" EARTH BERM.
3. ADJACENT FINISHED GRADE.
4. PLANT TABLET-21 GRAM 1-1 GAL., 2-5 GAL., 3- 15 GAL.
5. PREMIXED SOIL BACKFILL (SEE SPECIFICATIONS).

NOTE:
PLANT PIT TO BE TWICE THE SIZE OF ROOTBALL.

▸ B SHRUB PLANTING



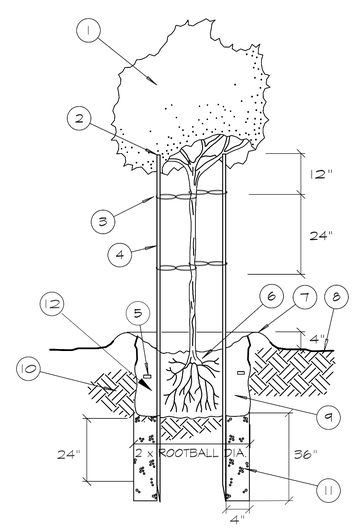
▸ A POTTERY PLUMBING



1. TREE PER PLAN
2. 1/2" DIA. BLACK RUBBER HOSE WHERE WIRE CONNECTS TO TREE
3. 12 GA. GALVANIZED WIRE (NO SPLICES) 3 GUY SETS MINIMUM PER TREE A120°
4. 1/2" DIA. x 36" LONG WHITE PVC SLEEVE 1 PER GUY WIRE
5. PLANTING TABLETS (SEE PLANTING NOTES FOR QUANTITIES)
6. MOUNDED EARTH WATERING BASIN
7. FINISH GRADE
8. ANCHOR STAKES (2x2x3' REDWOOD) BURIED 3" BELOW FINISHED GRADE
9. BACKFILL MIX (SEE PLANTING NOTES)
10. ROOTBALL (SET CROWN 2" ABOVE FINISH GRADE)
11. UNDISTURBED NATIVE SOIL
12. TURNBUCKLE

NOTE:
PLANTING PIT TO BE 2 TIMES ROOTBALL WIDTH, 1-1/2 TIMES ROOTBALL DEPTH SCARIFY SIDES OF HOLE AND ROOTBALL.

▸ D TREE GUYING



1. TREE PER PLAN
2. TRIM TOP OF STAKES BELOW LOWEST BRANCHES TO PREVENT DAMAGE
3. USE "CINCH TIE" OR EQUAL BETWEEN STAKE AND TREE PER PLANTING SPECIFICATIONS
4. 2" DIA. x 10' LONG LODGE POLE STAKES (INSTALL WIDER THAN ROOTBALL)
5. 21 GRAM PLANT TABLETS 5 GAL = 3, 15 GAL = 5, 24" BOX = 8
6. ROOTBALL (SET CROWN +/- 3" ABOVE FINISH GRADE)
7. EARTH WATERING BASIN (RAKE SMOOTH PRIOR TO SEEDING IN HYDROSEED AREAS; AT END OF PLANT ESTABLISHMENT PERIOD FOR ALL REMAINING BASINS)
8. FINISH GRADE
9. COMPACTED BACKFILL MIX (PER PLANTING SPECS/NOTES)
10. UNDISTURBED NATIVE SOIL
11. 4" X 3' DEEP VENTILATION HOLE FILLED WITH 3/4" GRAVEL BELOW PLANTING PIT. (OPPOSITE CORNERS)
12. 4" X 3' DEEP VENTILATION HOLE FILLED WITH 3/4" GRAVEL WITHIN PLANTING PIT. (OPPOSITE CORNERS)

▸ C TREE STAKING

Environmental Patterns | inc.
31238 Via Colinas
Suite E
Westlake Village
California, 91362
License No. 2801
(818) 706-3344

REGISTERED LANDSCAPE ARCHITECT
BRYAN R. BADGETT
No. 2801
Signature
Date
STATE OF CALIFORNIA

▸MOUZAYA RESIDENCE
22390 SWENSON DR
TOPANGA, CA 90290

APN:
MAP:
TRACT:
BLOCK:
LOT:

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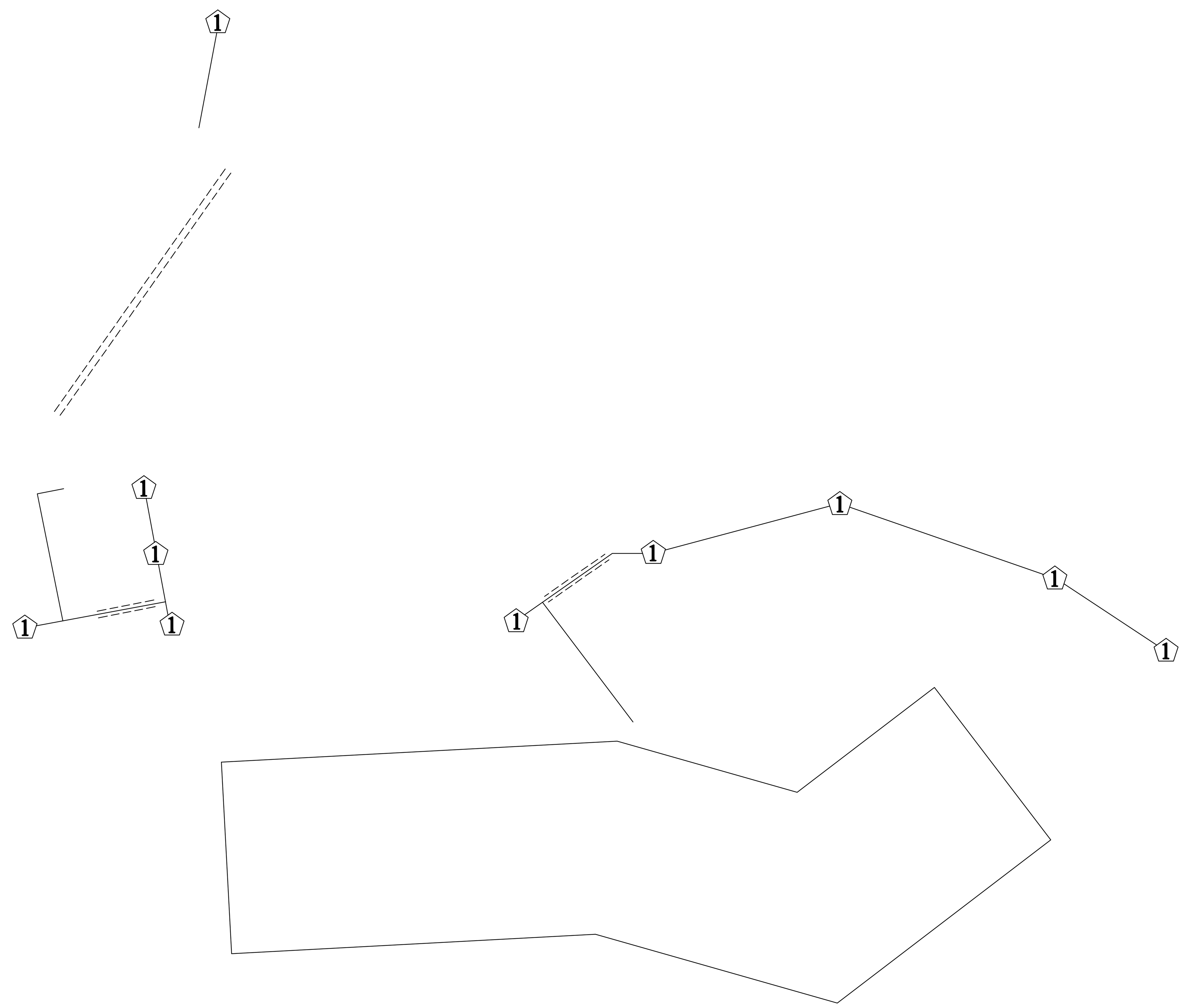
PLANTING DETAILS

Date 02/27/15
Drawn B.B./E.S./K.R.
Job #214240
Scale NO SCALE

[LP▸4]

OF: 9
PLOTTED: 02/27/15



IRRIGATION LEGEND:

OVERHEAD SPRAY HEADS

SYMBOL	MFG/MODEL NO./NOZZLE	RAD./DIM.	FLOW GPM	PSI	DET.
BUBBLERS:					
#	RAINBIRD PRESSURE COMPENSATING BUBBLER 1401	N/A	.25/BUBBLER	30	C

TREE BUBBLER SCHEDULE

TREE CONTAINER SIZE	BUBBLER QTY	DETAIL
15 GAL	1	C
24" BOX	1	C
36" BOX	1	C

THOROUGHLY FLUSH ALL DRIP TUBING PRIOR TO AND AFTER INSTALLING EMITTERS. THE CONTRACTOR IS RESPONSIBLE FOR ALL PLANT MATERIAL LOST DUE TO EMITTER CLOGGING DURING THE CONSTRUCTION AND MAINTENANCE PERIOD AT NO COST TO THE OWNER.

LATERAL PIPE SIZING CHART

CLASS 315 PVC	
1/2"	0 - 5.5 GPM

LATERAL PIPE SIZING CHART

SCH. 40 PVC	
3/4"	0 - 8 GPM
1"	OVER 8 - 12 GPM
1-1/4"	OVER 12 - 22 GPM
1-1/2"	OVER 22 - 30 GPM
2"	OVER 30 - 50 GPM
2-1/2"	OVER 50 - 70 GPM
3"	OVER 70 - 110 GPM
4"	OVER 110 - 190 GPM

EQUIPMENT

SYMBOL	DESCRIPTION	DET.
	REMOTE CONTROL VALVE, TO BE HUNTER DRIP CONTROL ZONE KIT MODEL ICZ-101 W/ FILTER AND 40 PSI PRESSURE REGULATOR.	F
	HUNTER WIRELESS SOLAR SYNC - #WSS-SEN. TO BE MOUNTED IN FULL SUN. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.	-
⊕	QUICK COUPLER, RAIN BIRD MODEL 33-RC. CONTRACTOR TO PROVIDE (2) VALVE KEYS W/ HOSE SWIVEL AND BIBB VALVE.	H
	2" BRASS GATE VALVE, NIBCO T-113 OR APPROVED EQUAL, SUPPLY LINE SIZE.	G
	LATERAL LINE, CLASS 315 FOR 1/2", SCH 40 PVC FOR 3/4" AND OVER (PACIFIC PLASTICS, INC. OR EQUAL). PROVIDE 12" OF COVER FROM FINISHED GRADE TO TOP OF PIPE.	B,D,I,J
	PRESSURE MAIN LINE, 2" CLASS 315 (PACIFIC PLASTICS, INC. OR EQUAL). PROVIDE 18" OF COVER FROM FINISHED GRADE TO TOP OF PIPE.	B,D,I,J
=====	SLEEVES, SCH. 40 PVC, 4" DIAMETER MINIMUM FOR PRESSURE MAIN LINE AND LATERALS, 2" DIAMETER MINIMUM FOR CONTROL AND COMMON WIRES. PROVIDE 30" OF COVER FROM FINISHED GRADE TO TOP OF PIPE.	J
C	(1) HUNTER I-CORE IRRIGATION CONTROLLER* W/ STAINLESS STEEL WALL MOUNT CABINET. TIMER TO BE 12-STATION WITH (2) EXPANSION MODULES. CONTROLLER TO BE LOCATED ON-SITE. CONTROLLER TO BE WIRED WITH 120 VAC. COORDINATE LOCATION WITH ELECTRICAL ENGINEER AND BUILDER. CONTRACTOR TO PROVIDE SOLAR-SYNC (#WSS-SEN) AND ROAMXL-KIT FOR CONTROLLER.	K
BF	1 1/2" FEBCO REDUCED PRESSURE BACKFLOW PREVENTER #825Y-QT-RP W/ 1 1/2" BRASS WATTS WYE STRAINER (#LF777). VERIFY SIZE AND LOCATION IN FIELD.	L
F	BOOSTER PUMP. TO BE BY BARRETT ENGINEERED PUMPS. HMS-QP 1HP. CONTRACTOR TO PROVIDE 120VAC ELECTRICAL, CONNECTIONS, AND CONCRETE PAD.	E

FLOW IN GPM
CONTROLLER AND STATION DESIGNATION
VALVE SIZE

NOTE:

1. ALL MAIN LINE, LATERAL PIPING AND CONTROL WIRES, UNDER PAVING, SHALL BE IN SEPARATE SLEEVES. MAIN LINE AND LATERAL SLEEVES SHALL BE A MINIMUM OF 4". FOR PIPING LARGER THAN 2", THE SLEEVES SHALL BE TWICE THE PIPE DIAMETER. WIRE SLEEVING SHALL BE 2" OR LARGER TO ACCOMMODATE CONTROL AND COMMON WIRES.
2. PROVIDE 18" OF COVER FROM TOP OF PIPE TO FINISHED GRADE FOR MAIN LINE AND 12" OF COVER FOR ALL LATERALS. THESE DEPTHS ARE MINIMUMS.
3. PIPE SIZES SHALL CONFORM TO THOSE SHOWN ON THE DRAWINGS. NO SUBSTITUTIONS OF SMALLER SIZED PIPE SHALL BE ALLOWED. LARGER SIZES MAY BE SUBSTITUTED UPON REQUEST AND SUBSEQUENT APPROVAL BY THE LANDSCAPE ARCHITECT.
4. AFTER MAIN LINE HAS BEEN INSTALLED AND PRIOR TO COVERING THE MAIN LINE TRENCH, A PRESSURE TEST SHALL BE CONDUCTED. ALL PRESSURE LINES SHALL BE TESTED UNDER A HYDROSTATIC PRESSURE OF THE DESIGN PRESSURE PLUS 50% FOR A PERIOD NO LESS THAN 12 HOURS. IF LEAKS DEVELOPER, THE JOINTS SHALL BE REPLACED AND THE TEST REPEATED UNTIL THE ENTIRE MAIN LINE IS PROVEN TO BE WATERTIGHT. CERTIFICATION, IN WRITING, SHALL BE SUBMITTED TO THE OWNER VERIFYING THAT THE TEST HAS BEEN CONDUCTED SUCCESSFULLY.
6. ANY CHANGES TO THE FINAL LOCATION OF THE BACK FLOW DEVICE OR CONTROLLER SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT.
6. 120 VAC POWER SHALL BE PROVIDED TO THE CONTROLLER LOCATION BY THE OWNER/DEVELOPER. THE IRRIGATION CONTRACTOR SHALL BE RESPONSIBLE FOR THE FINAL CONNECTION FROM THE POWER SOURCE TO THE CONTROLLER.
7. UNLESS OTHERWISE SPECIFIED, ALL BUBBLERS SHALL BE INSTALLED PERPENDICULAR TO THE FINISHED GRADE.
8. PRIOR TO INSTALLATION OF BUBBLERS, THE IRRIGATION CONTRACTOR SHALL FLUSH ALL LINES AND VALVES.
9. THIS DESIGN IS DIAGRAMMATIC. ALL IRRIGATION EQUIPMENT, BACK FLOW DEVICES, VALVES, ETC. SHALL BE PLACED WITHIN THE NEAREST GROUND COVER AND SHRUB AREAS. MAIN LINE, WIRES AND LATERAL LINES SHALL ALSO BE PLACED WITHIN PLANTED AREAS. EXCEPTION TO THIS IS TAKEN WHERE THE PLAN SHOWS PIPING CROSSING PAVED AREAS AND SLEEVE SYMBOLS ARE PRESENT.
10. IT IS THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR TO FAMILIARIZE HIMSELF WITH ALL OF THE SITE FEATURES. THIS INCLUDES, BUT IS NOT LIMITED TO GRADES, WALL AND BUILDING LOCATIONS, PAVING AND UTILITIES, ETC. IF, DURING HIS SITE FAMILIARIZATION, THE CONTRACTOR DETERMINES THAT CONDITIONS EXIST WHICH WOULD HINDER HIM FROM INSTALLING THE IRRIGATION SYSTEMS AS DESIGNED, HE SHALL NOTIFY THE OWNER, OWNER'S REPRESENTATIVE AND THE LANDSCAPE ARCHITECT WITHIN 24 HOURS OF DETERMINING THAT A PROBLEM EXISTS. DO NOT BEGIN WORK UNTIL ANY AND ALL DISCREPANCIES ARE ELIMINATED. ANY WORK BEGUN PRIOR TO NOTIFICATION IS AT THE CONTRACTORS RISK. ALL CORRECTIONS DUE TO NON-NOTIFICATION BY THE CONTRACTOR SHALL BE PERFORMED AT THE CONTRACTOR'S EXPENSE.
11. THE SPRINKLER SYSTEM DESIGN IS BASED ON A DESIGN PRESSURE OF 95 PSI AND A MAXIMUM FLOW OF 20.0 GPM. THE IRRIGATION CONTRACTOR SHALL VERIFY THE PRESSURE AND FLOW PRIOR TO CONSTRUCTION. ANY VARIANCE FROM THE DESIGN PRESSURE SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT WITHIN 24 HOURS AND PRIOR TO COMMENCEMENT OF ANY WORK. IF IT IS FOUND THAT THE PRESSURE AND/OR FLOW DEVIATE FROM THE DESIGN AND THE CONTRACTOR COMMENCES WORK WITHOUT NOTIFYING THE LANDSCAPE ARCHITECT, ALL CORRECTIVE ACTION NECESSARY TO ESTABLISH A FUNCTIONAL IRRIGATION SYSTEM SHALL BE AT THE CONTRACTOR'S EXPENSE.
12. ANY FIELD MODIFICATIONS PERFORMED BY THE IRRIGATION CONTRACTOR SHALL MAINTAIN THE DESIGN GUIDELINES OF PROVIDING SEPARATE VALVES FOR TURF AND SHRUBBERY AREAS, SUN AND SHADE AREAS AND FLAT AND SLOPED AREAS.
13. ALL IRRIGATION EQUIPMENT NOT DETAILED SHALL BE INSTALLED ACCORDING TO THE MANUFACTURERS SPECIFICATIONS AND RECOMMENDATIONS.
14. NO SUBSTITUTIONS OF ANY EQUIPMENT MAY BE MADE WITHOUT THE CONTRACTOR SUBMITTING A WRITTEN REQUEST TO THE LANDSCAPE ARCHITECT AND THE OWNER OR HIS REPRESENTATIVE. THE CONTRACTOR SHALL STATE THE REASONS FOR SUCH A REQUEST. DO NOT SUBSTITUTE ANY EQUIPMENT WITHOUT FIRST OBTAINING, IN WRITING, FROM THE LANDSCAPE ARCHITECT, HIS PERMISSION.
15. THE IRRIGATION CONTRACTOR SHALL GUARANTEE ALL MATERIAL AND WORKMANSHIP FOR A PERIOD OF ONE (1) YEAR FROM DATE OF FINAL ACCEPTANCE.
16. UPON COMPLETION OF THE IRRIGATION SYSTEM INSTALLATION, A COVERAGE TESTS SHALL BE CONDUCTED WITH THE LANDSCAPE ARCHITECT PRESENT.
17. IRRIGATION PLANS ARE FOR SCHEMATIC PURPOSES ONLY. EXACT LOCATION OF IRRIGATION HEADS, VALVES, AND LINES TO BE DETERMINED IN FIELD (FIELD CONDITIONS MAY VARY).
18. RECYCLED WATER IS NOT USED FOR THIS LANDSCAPE IRRIGATION.

*L.I.D. COMPLIANT SMART IRRIGATION CONTROLLER.

IRRIGATION CONSTRUCTION NOTES:

(1) POINT OF CONNECTION. THE CONTRACTOR SHALL VERIFY THE FOLLOWING:
1. VERIFY EXISTING WATER METER. SIZE TO BE MINIMUM 1" WITH A STATIC WATER PRESSURE OF 115 PSI.
2. INSTALL REDUCED PRESSURE BACKFLOW PREVENTER.

(2) 2" CLASS 315 PRESSURE MAIN LINE. UNLESS OTHERWISE SPECIFIED ALL MAIN LINE TO BE BURIED A MINIMUM OF 18" BELOW FINISHED GRADE AND 18" BEHIND CURB, DRIVEWAY, OR WALK.

(3) VALVES SHALL BE IN VALVE BOXES PARALLEL TO THE HARDSCAPE AND MAIN LINE. THESE VALVE BOXES SHALL BE BURIED AS SHOWN IN REMOTE CONTROL VALVE BOX DETAIL.

(4) ALL MAIN LINE AND LATERALS BENEATH DRIVEWAYS, WALKS, AND ROADWAYS SHALL BE CONTAINED WITHIN SLEEVES. UNDERGROUND SLEEVES SHALL BE TWICE THE PIPE DIAMETER AND SHALL BE BURIED WITH 36" OF COVER FROM THE TOP OF SLEEVE TO FINISHED SURFACE. CONTROL WIRES SHALL BE PLACED IN A SEPARATE CONDUIT OF APPROPRIATE SIZE TO ALLOW FOR PULLING OF WIRES WITHOUT BINDING. SEE DETAILS FOR SLEEVING.

(5) PRELIMINARY LOCATION OF WALL MOUNTED CONTROLLER (L.I.D. COMPLIANT SMART CONTROLLER). THE OWNER'S ELECTRICAL CONTRACTOR SHALL PROVIDE 120 VAC POWER TO CONTROLLER LOCATION. FINAL CONNECTION OF POWER TO THE CONTROLLER IS BY THE LANDSCAPE CONTRACTOR'S LICENSED ELECTRICIAN. FINAL LOCATION OF THE CONTROLLER SHALL BE COORDINATED WITH THE OWNER'S AUTHORIZED REPRESENTATIVE AND THE GENERAL CONTRACTOR.

PRESSURE LOSS CALCULATION

ORIGINAL P.S.I. (STATIC PRESSURE)	95 P.S.I.
FRICTION LOSS (P.S.I.)	
WATER METER (1")	(BEFORE TANKS)
BACKFLOW PREVENTER W/ WYE	16
ELEVATION LOSS (24' x .433 P.S.I./FT.)	10.39
MAINLINE (2" AT 295 L.F.)	1.2
FITTINGS	4.8
VALVE (1")	3
1" LATERAL LINE (.73/100')	.3
FITTINGS	1.2
TOTAL P.S.I. LOSS	36.89
ORIGINAL P.S.I. (STATIC)	95
MINIMUM P.S.I AT FARTHEST HEAD	58.11
HEAD OPERATING PRESSURE	30

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REGISTERED LANDSCAPE ARCHITECT
BRYAN R. BADGETT
No. 2801
Signature
Date
STATE OF CALIFORNIA

MOUZAYA RESIDENCE
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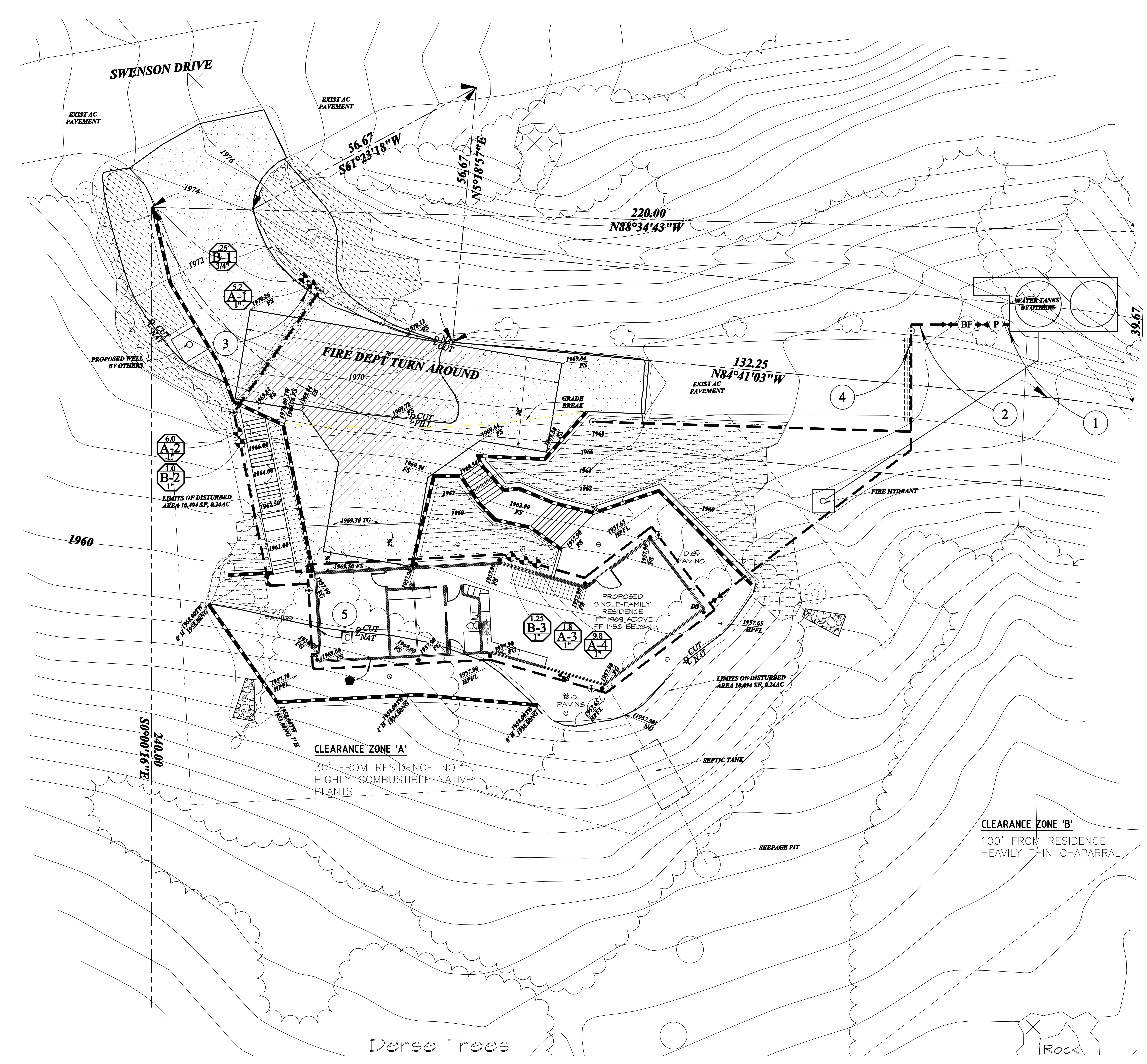
TREE IRRIGATION PLAN

Date: 02/27/15
Drawn: B.B./E.S./K.R.
Job: #214240
Scale: 1/8"=1'-0"

NORTH

[LI ▸ 5]



IRRIGATION LEGEND:

LATERAL PIPE SIZING CHART

CLASS 315 PVC	
1/2"	0 - 5.5 GPM

LATERAL PIPE SIZING CHART

SCH. 40 PVC	
3/4"	0 - 8 GPM
1"	OVER 8 - 12 GPM
1-1/4"	OVER 12 - 22 GPM
1-1/2"	OVER 22 - 30 GPM
2"	OVER 30 - 50 GPM
2-1/2"	OVER 50 - 70 GPM
3"	OVER 70 - 110 GPM
4"	OVER 110 - 190 GPM

EQUIPMENT

SYMBOL	DESCRIPTION	DET.
	HUNTER PLD SERIES DRIPLINE, MODEL PLD-10-12. USE PLD FITTINGS AND AIR/VACUUM RELIEF VALVES.	A,B,D
	REMOTE CONTROL VALVE, TO BE HUNTER DRIP CONTROL ZONE KIT MODEL ICZ-101 W/ FILTER AND 40 PSI PRESSURE REGULATOR.	F
	HUNTER WIRELESS SOLAR SYNC - #WSS-SEN. TO BE MOUNTED IN FULL SUN. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.	-
	QUICK COUPLER, RAIN BIRD MODEL 33-RC. CONTRACTOR TO PROVIDE (2) VALVE KEYS W/ HOSE SWIVEL AND BIBB VALVE.	H
	2" BRASS GATE VALVE, NIBCO T-113 OR APPROVED EQUAL, SUPPLY LINE SIZE.	G
	LATERAL LINE, CLASS 315 FOR 1/2", SCH 40 PVC FOR 3/4" AND OVER (PACIFIC PLASTICS, INC. OR EQUAL). PROVIDE 12" OF COVER FROM FINISHED GRADE TO TOP OF PIPE.	B,D,I,J
	PRESSURE MAIN LINE, 2" CLASS 315 (PACIFIC PLASTICS, INC. OR EQUAL). PROVIDE 18" OF COVER FROM FINISHED GRADE TO TOP OF PIPE.	B,D,I,J
	SLEEVES, SCH. 40 PVC, 4" DIAMETER MINIMUM FOR PRESSURE MAIN LINE AND LATERALS, 2" DIAMETER MINIMUM FOR CONTROL AND COMMON WIRES. PROVIDE 30" OF COVER FROM FINISHED GRADE TO TOP OF PIPE.	J
C	(1) HUNTER I-CORE IRRIGATION CONTROLLER* W/ STAINLESS STEEL WALL MOUNT CABINET. TIMER TO BE 12-STATION WITH (2) EXPANSION MODULES. CONTROLLER TO BE LOCATED ON-SITE. CONTROLLER TO BE WIRED WITH 120 VAC. COORDINATE LOCATION WITH ELECTRICAL ENGINEER AND BUILDER. CONTRACTOR TO PROVIDE SOLAR-SYNC (#WSS-SEN) AND ROAMXL-KIT FOR CONTROLLER.	K
BF	1 1/2" FEBCO REDUCED PRESSURE BACKFLOW PREVENTER #825Y-QT-RP W/ 1 1/2" BRASS WATTS WYE STRAINER (#LF777). VERIFY SIZE AND LOCATION IN FIELD.	L
P	BOOSTER PUMP. TO BE BY BARRETT ENGINEERED PUMPS. HMS-QP 1HP. CONTRACTOR TO PROVIDE 120VAC ELECTRICAL, CONNECTIONS, AND CONCRETE PAD.	E

FLOW IN GPM — CONTROLLER AND STATION DESIGNATION — VALVE SIZE

NOTE:

1. ALL MAIN LINE, LATERAL PIPING AND CONTROL WIRES, UNDER PAVING, SHALL BE IN SEPARATE SLEEVES. MAIN LINE AND LATERAL SLEEVES SHALL BE A MINIMUM OF 4". FOR PIPING LARGER THAN 2", THE SLEEVES SHALL BE TWICE THE PIPE DIAMETER. WIRE SLEEVING SHALL BE 2" OR LARGER TO ACCOMMODATE CONTROL AND COMMON WIRES.
2. PROVIDE 18" OF COVER FROM TOP OF PIPE TO FINISHED GRADE FOR MAIN LINE AND 12" OF COVER FOR ALL LATERALS. THESE DEPTHS ARE MINIMUMS.
3. PIPE SIZES SHALL CONFORM TO THOSE SHOWN ON THE DRAWINGS. NO SUBSTITUTIONS OF SMALLER SIZED PIPE SHALL BE ALLOWED. LARGER SIZES MAY BE SUBSTITUTED UPON REQUEST AND SUBSEQUENT APPROVAL BY THE LANDSCAPE ARCHITECT.
4. AFTER MAIN LINE HAS BEEN INSTALLED AND PRIOR TO COVERING THE MAIN LINE TRENCH, A PRESSURE TEST SHALL BE CONDUCTED. ALL PRESSURE LINES SHALL BE TESTED UNDER A HYDROSTATIC PRESSURE OF THE DESIGN PRESSURE PLUS 50% FOR A PERIOD NO LESS THAN 12 HOURS. IF LEAKS DEVELOPER, THE JOINTS SHALL BE REPLACED AND THE TEST REPEATED UNTIL THE ENTIRE MAIN LINE IS PROVEN TO BE WATERTIGHT. CERTIFICATION, IN WRITING, SHALL BE SUBMITTED TO THE OWNER VERIFYING THAT THE TEST HAS BEEN CONDUCTED SUCCESSFULLY.
6. ANY CHANGES TO THE FINAL LOCATION OF THE BACK FLOW DEVICE OR CONTROLLER SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT.
6. 120 VAC POWER SHALL BE PROVIDED TO THE CONTROLLER LOCATION BY THE OWNER/DEVELOPER. THE IRRIGATION CONTRACTOR SHALL BE RESPONSIBLE FOR THE FINAL CONNECTION FROM THE POWER SOURCE TO THE CONTROLLER.
7. UNLESS OTHERWISE SPECIFIED, ALL BUBBLERS SHALL BE INSTALLED PERPENDICULAR TO THE FINISHED GRADE.
8. PRIOR TO INSTALLATION OF BUBBLERS, THE IRRIGATION CONTRACTOR SHALL FLUSH ALL LINES AND VALVES.
9. THIS DESIGN IS DIAGRAMMATIC. ALL IRRIGATION EQUIPMENT, BACK FLOW DEVICES, VALVES, ETC. SHALL BE PLACED WITHIN THE NEAREST GROUND COVER AND SHRUB AREAS. MAIN LINE, WIRES AND LATERAL LINES SHALL ALSO BE PLACED WITHIN PLANTED AREAS. EXCEPTION TO THIS IS TAKEN WHERE THE PLAN SHOWS PIPING CROSSING PAVED AREAS AND SLEEVE SYMBOLS ARE PRESENT.
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11. THE SPRINKLER SYSTEM DESIGN IS BASED ON A DESIGN PRESSURE OF 45 PSI AND A MAXIMUM FLOW OF 20.0 GPM. THE IRRIGATION CONTRACTOR SHALL VERIFY THE PRESSURE AND FLOW PRIOR TO CONSTRUCTION. ANY VARIANCE FROM THE DESIGN PRESSURE SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT WITHIN 24 HOURS AND PRIOR TO COMMENCEMENT OF ANY WORK. IF IT IS FOUND THAT THE PRESSURE AND/OR FLOW DEVIATE FROM THE DESIGN AND THE CONTRACTOR COMMENCES WORK WITHOUT NOTIFYING THE LANDSCAPE ARCHITECT, ALL CORRECTIVE ACTION NECESSARY TO ESTABLISH A FUNCTIONAL IRRIGATION SYSTEM SHALL BE AT THE CONTRACTOR'S EXPENSE.
12. ANY FIELD MODIFICATIONS PERFORMED BY THE IRRIGATION CONTRACTOR SHALL MAINTAIN THE DESIGN GUIDELINES OF PROVIDING SEPARATE VALVES FOR TURF AND SHRUBBERY AREAS, SUN AND SHADE AREAS AND FLAT AND SLOPED AREAS.
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16. UPON COMPLETION OF THE IRRIGATION SYSTEM INSTALLATION, A COVERAGE TESTS SHALL BE CONDUCTED WITH THE LANDSCAPE ARCHITECT PRESENT.
17. IRRIGATION PLANS ARE FOR SCHEMATIC PURPOSES ONLY. EXACT LOCATION OF IRRIGATION HEADS, VALVES, AND LINES TO BE DETERMINED IN FIELD (FIELD CONDITIONS MAY VARY).
18. RECYCLED WATER IS NOT USED FOR THIS LANDSCAPE IRRIGATION.

*L.I.D. COMPLIANT SMART IRRIGATION CONTROLLER.

IRRIGATION CONSTRUCTION NOTES:

(1) POINT OF CONNECTION. THE CONTRACTOR SHALL VERIFY THE FOLLOWING:
1. VERIFY EXISTING WATER METER FOR SITE. SIZE TO BE MINIMUM 1" WITH A STATIC WATER PRESSURE OF 115 PSI.
2. CONTRACTOR TO DETERMINE BEST CONNECTION AND RUN LOCATION FROM WATER TANKS.
3. INSTALL WATER BOOSTER PUMP.
4. INSTALL REDUCED PRESSURE BACKFLOW PREVENTER.

(2) 2" CLASS 315 PRESSURE MAIN LINE. UNLESS OTHERWISE SPECIFIED ALL MAIN LINE TO BE BURIED A MINIMUM OF 18" BELOW FINISHED GRADE AND 18" BEHIND CURB, DRIVEWAY, OR WALK.

(3) VALVES SHALL BE IN VALVE BOXES PARALLEL TO THE HARDSCAPE AND MAIN LINE. THESE VALVE BOXES SHALL BE BURIED AS SHOWN IN REMOTE CONTROL VALVE BOX DETAIL.

(4) ALL MAIN LINE AND LATERALS BENEATH DRIVEWAYS, WALKS, AND ROADWAYS SHALL BE CONTAINED WITHIN SLEEVES. UNDERGROUND SLEEVES SHALL BE TWICE THE PIPE DIAMETER AND SHALL BE BURIED WITH 36" OF COVER FROM THE TOP OF SLEEVE TO FINISHED SURFACE. CONTROL WIRES SHALL BE PLACED IN A SEPARATE CONDUIT OF APPROPRIATE SIZE TO ALLOW FOR PULLING OF WIRES WITHOUT BINDING. SEE DETAILS FOR SLEEVING.

(5) PRELIMINARY LOCATION OF WALL MOUNTED CONTROLLER (L.I.D. COMPLIANT SMART CONTROLLER). THE OWNER'S ELECTRICAL CONTRACTOR SHALL PROVIDE 120 VAC POWER TO CONTROLLER LOCATION. FINAL CONNECTION OF POWER TO THE CONTROLLER IS BY THE LANDSCAPE CONTRACTOR'S LICENSED ELECTRICIAN. FINAL LOCATION OF THE CONTROLLER SHALL BE COORDINATED WITH THE OWNER'S AUTHORIZED REPRESENTATIVE AND THE GENERAL CONTRACTOR.

PRESSURE LOSS CALCULATION

ORIGINAL P.S.I. (STATIC PRESSURE)	95 P.S.I.
FRICTION LOSS (P.S.I.)	
WATER METER (1")	(BEFORE TANKS)
BACKFLOW PREVENTER W/ WYE	16
ELEVATION LOSS (24' x .433 P.S.I./FT.)	10.39
MAINLINE (2" AT 295 L.F.)	1.2
FITTINGS	4.8
VALVE (1")	3
1" LATERAL LINE (.73/100')	.3
FITTINGS	1.2
TOTAL P.S.I. LOSS	36.89
ORIGINAL P.S.I. (STATIC)	95
MINIMUM P.S.I AT FARTHEST HEAD	58.11
HEAD OPERATING PRESSURE	30

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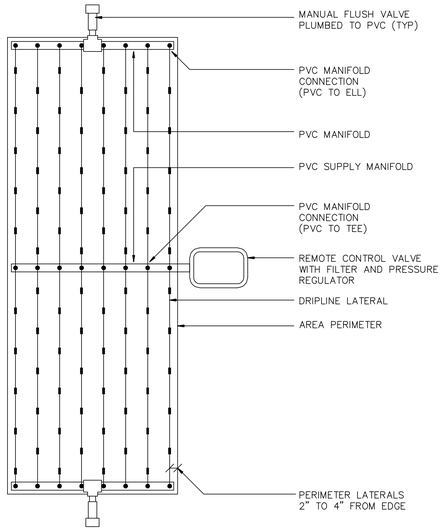
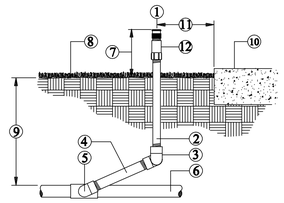
SHRUB IRRIGATION PLAN

Date 02/27/15
Drawn B.B./E.S./K.R.
Job #214240
Scale 1/8"=1'-0"
NORTH

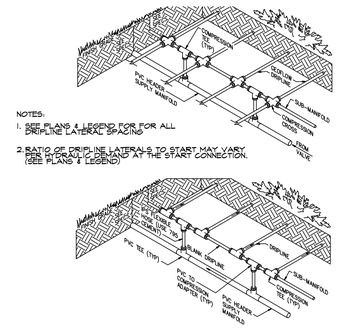


D DRIPLINE CENTER FEED LAYOUT

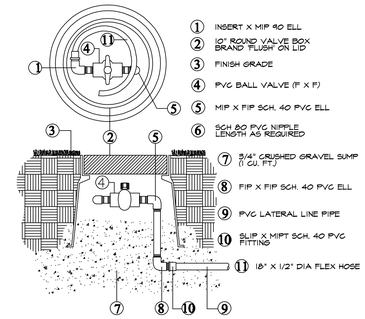


1. BUBBLER HEAD
2. SCH. 80 RIZER
3. 2-PVC SCH. 40 ELLS (1" X 1) & 2" PVC SCH. 80 THREADED NIPPLE
4. PVC SCH. 80 NIPPLE
5. PVC SCH. 40 STREET ELL
6. PVC LATERAL LINE
7. 2" MAXIMUM
8. FINISH GRADE
9. 12" MINIMUM (REFER TO SPECIFICATIONS)
10. EDGE OF HARDSCAPE
11. 6" MINIMUM
12. CHECK VALVE (REFER TO SPECIFICATIONS)

C BUBBLER ON RISER



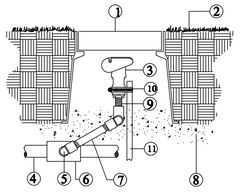
B DRIPLINE INSTALLATION



1. INSERT X MIP 90 ELL
2. 10" ROUND VALVE BOX BRAND "FLUSH" ON LID
3. FINISH GRADE
4. PVC BALL VALVE (F X F)
5. MIP X FIP SCH. 40 PVC ELL
6. SCH 80 PVC NIPPLE LENGTH AS REQUIRED
7. 3/4" CRUSHED GRAVEL SUMP (1 CU. FT.)
8. FIP X FIP SCH. 40 PVC ELL
9. PVC LATERAL LINE PIPE
10. SLIP X MIPT SCH. 40 PVC FITTING
11. 18" X 1/2" DIA FLEX HOSE

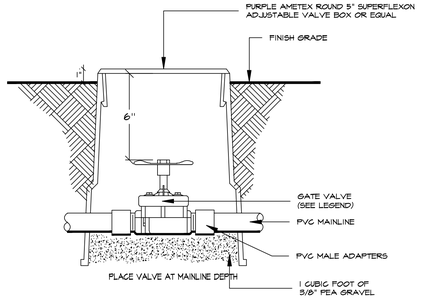
A FLUSH VALVE ASSSEMBLY

1. CLOSE-COUPLED CENTRIFUGAL PUMP, CAST IRON BRONZE FITTED.
2. NEMA 4X SIMPLEX CONTROL PANEL FOR AUTOMATIC OPERATION.
3. STAINLESS 1/4 TURN BALL VALVE
4. STAINLESS FLOW SWITCH – THERMAL DISPERSION, 150 PSI RATED
5. 2 INCH TYPE 304 STAINLESS STEEL.
6. STAINLESS UNION ADAPTER.
7. PRESSURE GAUGE, LIQUID DAMPENED.
8. MARINE GRADE ALUMINUM ENCLOSURE, HINGED TOP.
9. STRUCTURAL ALUMINUM BASEPLATE.
10. BRASS PIPE, DOUBLE WRAPPED WITH PVC PIPE WRAP
11. BRASS 90 DEG. ELBOW.
12. PVC SCHEDULE 80 MALE ADAPTER.
13. CONCRETE THRUST BLOCKS _____ CUBIC FEET MINIMUM. CONTRACTOR TO PROVIDE.
14. ____ INCH THICK CONCRETE PAD, ASTM C-94, ACI STD 318-83 MIX, 2500 PSI RATED, PAD DIMENSIONS SHALL BE 42" X 54".
15. MAIN POWER CONDUIT.
16. IRRIGATION CONTROLLER SIGNAL CONDUIT.
17. CONTRACTOR'S RESPONSIBILITY TO PROVIDE.

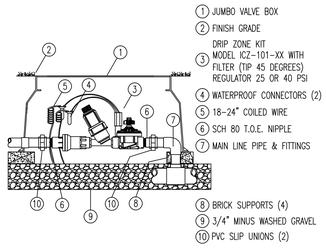


1. 10" ROUND VALVE BOX
2. FINISH GRADE
3. QUICK COUPLING VALVE
4. PRESSURE SUPPLY LINE
5. PVC STREET ELL (2 REQUIRED)
6. PVC ELL
7. PVC SCH. 80 NIPPLE
8. 3/4" CRUSHED ROCK SUMP
9. THREADED NIPPLE
10. HOSE CLAMP
11. 1/2" REBAR - LENGTH AS REQUIRED

H QUICK COUPLING VALVE

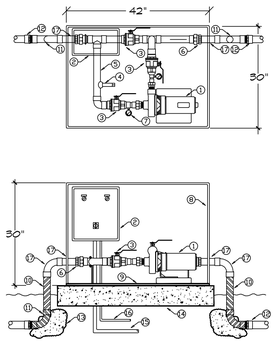


G GATE VALVE

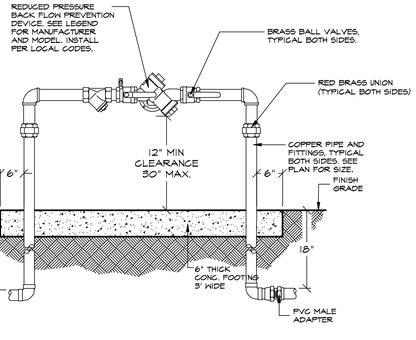


1. JUMBO VALVE BOX
2. FINISH GRADE
3. DRIP ZONE KIT MODEL ICZ-101-XX WITH FILTER (TIP 45 DEGREES) REGULATOR 25 OR 40 PSI
4. WATERPROOF CONNECTORS (2)
5. 18-24" COILED WIRE
6. SCH 80 T.O.E. NIPPLE
7. MAIN LINE PIPE & FITTINGS
8. BRICK SUPPORTS (4)
9. 3/4" MINUS WASHED GRAVEL
10. PVC SLIP UNIONS (2)

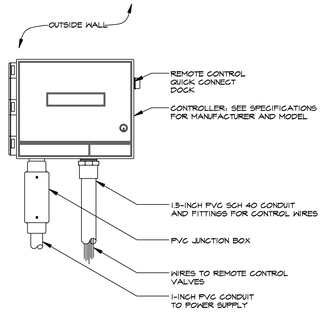
F DRIP REMOTE CONTROL VALVE



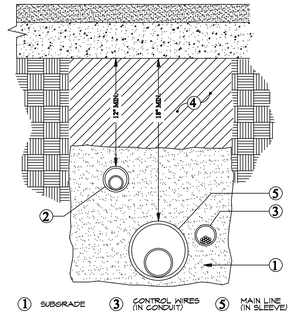
E BOOSTER PUMP DETAILS



L BACKFLOW DEVICE

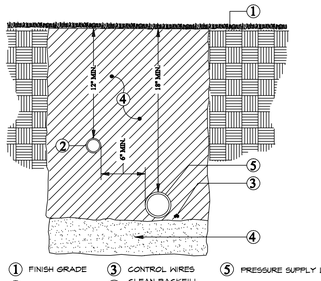


K CONTROLLER



1. SUBGRADE
2. LATERAL LINE (IN SLEEVE)
3. CONTROL WIRES (IN CONDUIT)
4. CLEAN BACKFILL (SEE SPECIFICATIONS)
5. MAIN LINE (IN SLEEVE)

J TRENCHING UNDER HARDSCAPE



1. FINISH GRADE
2. LATERAL LINE
3. CONTROL WIRES
4. CLEAN BACKFILL (REFER TO SPECIFICATIONS)
5. PRESSURE SUPPLY LINE

INSTALL ALL CONTROL WIRE ON THE UNDERSIDE OF THE PRESSURE SUPPLY LINE.

I TRENCHING IN LANDSCAPE AREAS

Environmental Patterns inc.
31238 Via Colinas
Suite E
Westlake Village
California, 91362
License No. 2801
(818) 706-3344

REGISTERED LANDSCAPE ARCHITECT
BRYAN R. BADGETT
No. 2801
Signature
Date
STATE OF CALIFORNIA

MOUZAYA RESIDENCE
22390 SWENSON DR
TOPANGA, CA 90290

APN:
MAP:
TRACT:
BLOCK:
LOT:

Drawings and specifications as instruments of service are and shall remain the property of the Landscape Architect whether the project for which they are made is executed or not. The Landscape Architect shall be deemed the author of these documents and shall retain all common law, statutory and other reserved rights, including copyright. The Owner shall be permitted to retain copies, including reproducible copies, of drawings and specifications, or information and reference in connection with the Owner's use and occupancy of the Project at the site referenced herein. The drawings and specifications shall not be used by the Owner on other projects, additions to this project, or for the completion of this project, by others, provided the Landscape Architect is not in default under this agreement, except by agreement in writing and appropriate compensation to the Landscape Architect of any discrepancies prior to commencement of any work. Written dimensions shall preside over scaled dimensions.

IRRIGATION DETAILS

Date: 02/27/15
Drawn: B.B./E.S./K.R.
Job: #214240
Scale: NO SCALE

[LI ▸ 7]

OF: 9
PLOTTED: 02/27/15

SECTION A. HYDROZONE INFORMATION TABLE

Hydrozone*	Zone or Valve	Irrigation Method**	Area (Sq. Ft.)	% of Landscape Area
Low	A1	Drip	645	22.13%
Low	A2	Drip	793	27.21%
Low	A3	Drip	334	11.46%
Low	A4	Drip	1142	39.19%
		Totals:	2914	100.00%

Hydrozone*	Zone or Valve	Irrigation Method**	Area (Sq. Ft.)	% of Landscape Area
Low	B1	Bubbler	20	9.09%
Low	B2	Bubbler	80	36.36%
Low	B3	Bubbler	120	54.55%
		Totals:	220	100%

*Hydrozone	**Irrigation Method
High=High Water Use Plants	Rotor
Moderate= Moderate Water Use Plants	Bubbler
Low= Low Water Use Plants	Drip
	Rotator

SECTION B1. WATER BUDGET CALCULATIONS - Maximum Applied Water Allowance (MAWA)

Estimated Total Water Use
Equation:
ETWU = (ET_o) x (0.62) x [(PF x HA/IE) + SLA]

Enter values in Pale Blue Cells
Tan Cells Show Results
Messages and Warnings

Enter Irrigation Efficiency (equal to or greater than 0.71)	0.85	
Irrigation Efficiency Default Value	0.71	

Plant Water Use Type	Plant Factor
Low	0 - 0.3
Medium	0.4 - 0.6
High	0.7 - 1.0
SLA	1.00

Hydrozone	Plant Water Use Type (s) (low, medium, high)	Plant Factor (PF)	Hydrozone Area (HA) (ft^2)	PF x HA (ft^2)
A1	Low	0.30	645	194
A2	Low	0.35	793	278
A3	Low	0.30	334	100
A4	Low	0.35	1,142	400
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				971
	SLA	0	0	0
		Sum	2,914	

Results

MAWA =	63,356	ETWU=	35,480	Gallons	ETWU complies with MAWA
			4,743	Cubic Feet	
			47	HCF	
			0.11	Acre-feet	
			0.04	Millions of Gallons	

Estimated Total Water Use
Equation:
ETWU = (ET_o) x (0.62) x [(PF x HA/IE) + SLA]

Enter values in Pale Blue Cells
Tan Cells Show Results
Messages and Warnings

Enter Irrigation Efficiency (equal to or greater than 0.71)	0.80	
Irrigation Efficiency Default Value	0.71	

Plant Water Use Type	Plant Factor
Low	0 - 0.3
Medium	0.4 - 0.6
High	0.7 - 1.0
SLA	1.00

Hydrozone	Plant Water Use Type (s) (low, medium, high)	Plant Factor (PF)	Hydrozone Area (HA) (ft^2)	PF x HA (ft^2)
B1	Low	0.35	20	7
B2	Low	0.35	80	28
B3	Low	0.35	120	42
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				77
	SLA	0	0	0
		Sum	220	

Results

MAWA =	4,783	ETWU=	2,990	Gallons	ETWU complies with MAWA
			400	Cubic Feet	
			4	HCF	
			0.01	Acre-feet	
			0.00	Millions of Gallons	

SECTION B2. ESTIMATED TOTAL WATER USAGE (ETWU)

Maximum Applied Water Allowance Calculations for New and Rehabilitated Landscapes

Enter value in Pale Blue Cells
Tan Cells Show Results
Messages and Warnings

Click on the blue cell on right to Pick City Name	Los Angeles	Name of City
ET_o of City from Appendix A	50.10	ET_o (inches/year)
Enter total landscape including SLA	3,134.00	LA (ft^2)
Enter Special Landscape Area		SLA (ft^2)
Results:		
MAWA = (ET_o) x (0.62) x [(0.7 x LA)+(0.3 x SLA)]	68,139.43	Gallons
	9,108.95	Cubic Feet
	91.09	HCF
	0.21	Acre-feet
	0.07	Millions of Gallons
MAWA calculation incorporating Effective Precipitation (Optional)		
ET_o of City from Appendix A	50.10	ET_o (inches/year)
Landscape Area	3,134.00	LA (ft^2)
Special Landscape Area	0.00	SLA (ft^2)

PART 1. PROJECT INFORMATION SHEET

CERTIFICATE OF COMPLETION
This certificate is filled out by the project applicant upon completion of the landscape project.

Date		
Project Name		
Name of Project Applicant	Telephone No.	
	Fax No.	
Title	Email Address	
Company	Street Address	
City	State	Zip Code

Project Address and Location:

Street Address	Parcel, tract or lot number, if available.	
City	Latitude/Longitude (optional)	
State	Zip Code	

Property Owner or his/her designee:

Name	Telephone No.	
	Fax No.	
Title	Email Address	
Company	Street Address	
City	State	Zip Code

Property Owner
"I/we certify that I/we have received copies of all the documents within the Landscape Documentation Package and the Certificate of Completion and that it is our responsibility to see that the project is maintained in accordance with the Landscape and Irrigation Maintenance Schedule."

Property Owner Signature
Date

Please answer the questions below:
1. Date the Landscape Documentation Package was submitted to the local agency_____
2. Date the Landscape Documentation Package was approved by the local agency_____
3. Date that a copy of the Water Efficient Landscape Worksheet (including the Water Budget Calculation) was submitted to the local water purveyor_____

MAINTENANCE SCHEDULES:
A REGULAR MAINTENANCE SCHEDULE SATISFYING THE FOLLOWING CONDITIONS SHALL BE SUBMITTED AS PART OF THE LANDSCAPE DOCUMENTATION PACKAGE.

LANDSCAPES SHALL BE MAINTAINED TO ENSURE WATER EFFICIENCY. A REGULAR MAINTENANCE SCHDULE SHALL INCLUDE, BUT NOT BE LIMITED TO: CHECKING, ADJUSTING, AND REPAIRING IRRIGATION EQUIPMENT; RESETTING THE AUTOMATIC CONTROLLER; AERATING AND DETHATCHING TURF AREAS; REPLENISHING MULCH; FERTILIZING; PRUNING; AND WEEDING IN ALL LANDSCAPED AREAS.

WHENEVER POSSIBLE, REPAIR OF IRRIGATION EQUIPMENT SHALL BE DONE WITH THE ORIGINALLY SPECIFIED MATERALS OR THEIR EQUIVALENTS.

A LANDSCAPE IRRIGATION AUDIT SCHEDLE AS REQUIRED IN CHAPTER 20.09 OF TITLE 20 MAY BE RECOMMENDED. THE MAXIMUM PERIOD BETWEEN AUDITS SHALL BE FIVE YEARS.

PART 2. CERTIFICATION OF INSTALLATION ACCORDING TO THE LANDSCAPE DOCUMENTATION PACKAGE

"I/we certify that based upon periodic site observations, the work has been substantially completed in accordance with the ordinance and that the landscape planting and irrigation installation conform with the criteria and specifications of the approved Landscape Documentation Package."

Signature*	Date	
Name (print)	Telephone No.	
	Fax No.	
Title	Email Address	
License No. or Certification No.		
Company	Street Address	
City	State	Zip Code

*Signer of the landscape design plan, signer of the irrigation plan, or a licensed landscape contractor.

PART 3. IRRIGATION SCHEDULE

Project: Mouzaya
Location: Topanga
Date: 2/27/2015
Controller: A

Month				Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Weekly Eto (in inches)				0.50	0.62	0.85	1.08	1.27	1.34	1.43	1.36	1.15	0.90	0.60	0.44
Yearly Eto		50.10													
		Precip.													
Sta:	PF	Rate	I.E.												
1	0.30	5.20	0.85	2	2.5	3.5	4.4	5.2	5.5	5.8	5.5	4.7	3.7	2.4	1.8
2	0.35	6.00	0.85	2.1	2.6	3.5	4.45	5.2	5.5	5.9	5.6	4.7	3.7	2.5	1.8
3	0.30	1.80	0.85	5.9	7.3	10	12.7	15	16	17	16	14	11	7.1	5.2
4	0.35	9.80	0.85	1.3	1.6	2.1	2.72	3.2	3.4	3.6	3.4	2.9	2.3	1.5	1.1
5	0.35	0.25	0.80	53	65	89	113	133	141	150	143	121	95	63	46
6	0.35	1.00	0.80	13	16	22	28.4	33	35	38	36	30	24	16	12
7	0.35	1.25	0.80	11	13	18	22.7	27	28	30	29	24	19	13	9.2

WATER AUDIT NOTE:
THE CONTRACTOR WILL CONDUCT AN IRRIGATION AUDIT USING A CERTIFIED IRRIGATION AUDITOR, AFTER THE FINAL FIELD OBSERVATION HAS BEEN COMPLETED AND ALL IRRIGATION COMPONENTS ARE INSTALLED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS AND THE IRRIGATION SYSTEM IS ACCEPTED BY THE PROJECT ARCHITECT FOR MAINTENANCE.

THE IRRIGATION AUDIT WILL BE CONDUCTED IN ACCORDANCE WITH THE FOLLOWING SCHEDULE:
1. **PLACE FLAGS AT EACH HEAD IN THE ZONE.**
2. **MEASURE SPACING AND MARK MID-POINTS BETWEEN HEADS.**
3. **PLACE WATER MEASURING RECEPTACLES.**
4. **TAKE READINGS OF WATER LEVEL IN RECEPTACLES AND RECORD RESULTS.**
5. **AFTER COMPLETING ZONE ADVANCE TO NEXT ZONE AND REPEAT PROCEDURE.**
6. **AFTER COMPLETING ZONE ADVANCE TO THE NEXT ZONE AND REPEAT PROCEDURE.**
7. **SUBMIT THE RESULTS OF THE AUDIT TO THE PROJECT ARCHITECT.**

THE IRRIGATION MAINTENANCE SCHEDULE TASKS LISTED BELOW ARE INTENDED AS MINIMUM STANDARDS AND MORE FREQUENT ATTENTION MAY BE REQUIRED DEPENDING ON THE PARTICULAR SITE CONDITIONS.

MAINTENANCE TASK
CONTROLLER CABINET (FREQUENTLY) - OPEN CABINET AND CLEAN OUT DEBRIS AND REPLACE BATTERY AS NECESSARY. CHECK WIRING AND REPAIR AS NEEDED AND CHECK CLOCK AND RESET IF NECESSARY.

IRRIGATION SCHEDULE (MONTHLY) - ADJUST SCHEDULE FOR SEASONAL VARIATIONS AND OTHER CONDITIONS WHICH MAY AFFECT THE AMOUNT OF WATER NEEEDED TO MAINTAIN PLANT HEALTH ADJUST AS NECESSARY.

POC (QUARTERLY) - VISUALLY INSPECT COMPONENTS FOR LEAKS, PRESSURE SETTINGS, SETTLEMENT OR OTHER DAMAGE AFFECTING THE OPERATION OF A COMPONENT REPAIR AS NEEDED.

REMOTE CONTROL VALVES, ISOLATION VALVES AND QUICK COUPLER VALVES (QUARTERLY) - VISUALLY INSPECT FOR LEAKS, SETTLEMENT, WIRE CONNECTIONS AND PRESSURE SETTINGS. REPAIR OR ADJUST AS NEEDED.

MAINLINE & LATERALS (QUARTERLY) - VISUALLY INSPECT FOR LEAKS OR SETTLEMENT OF TRENCH.

SPRINKLERS (WEEKLY) - VISUALLY CHECK FOR ANY BROKEN MISALIGNED OR CLOGGED HEADS. HEADS WITH INCORRECT ARC, INADEQUATE COVERAGE OR OVERSPRAY AND LOW HEAD DRAINAGE. REPAIR AS NEEDED.

FILTERS AND STRAINERS (MONTHLY) - VISUALLY CHECK FOR LEAKS, BROKEN FITTING CLEAN AND FLUSH SCREENS.

AUDIT SHALL BE IN ACCORDANCE WITH THE LATEST STATE OF CALIFORNIA LANDSCAPE WATER MANAGMENT PROGRAM AS DESCRIBED IN THE LATEST LANDSCAPE IRRIGATION AUDITOR HANDBOOK. THE LANDSCAPE IRRIGATION AUDITS TO BE CONDUCTED BY A QUALIFIED INDIVIDUAL AND THE AUDIT SCHEDULE SHALL BE CONDUCTED AT LEAST ONCE EVERY FIVE YEARS IN ACCORDANCE WITH THE REQUIREMENTS OF TITLE 20, DIVISION 1 OF THE LOS ANGELES COUNTY CODE.

Note:
Calculations and scheduling are for guidelines only. Actual site conditions may vary for individual zones. Irrigation should be monitored to maintain 100% water coverage while avoiding over-saturation and/or surface runoff. Climate, Heat index, evapotranspiration, wind, solar, precipitation, humidy, plant type, soil type, rates of application, and irrigation method must be considered when adjusting irrigation times accordingly.

Environmental Patterns | inc.
31238 Via Colinas
Suite E
Westlake Village
California, 91362
License No. 2801
(818) 706-3344

REGISTERED LANDSCAPE ARCHITECT
BRYAN R. BACHETT
No. 2801
Signature
Date
STATE OF CALIFORNIA

▸MOUZAYA RESIDENCE
22390 SWENSON DR
TOPANGA, CA 90290

IRRIGATION CALCULATIONS

APN:
MAP:
TRACT:
BLOCK:
LOT:

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Date 02/27/15
Drawn B.B./E.S./K.R.
Job #214240
Scale NO SCALE

[LI▸8]
OF: 9
PLOTTED: 02/27/15

IRRIGATION

1. SCOPE

Furnish all materials, equipment, services supervision, transportation and labor necessary to perform all irrigation work complete, including: drawings and specifications; service manuals; record drawings; loose equipment; guarantee; materials; and installation.

2. DRAWINGS AND SPECIFICATIONS

A. The intent of the Drawings and Specifications is to indicate and specify a complete and efficient sprinkler irrigation system.

B. Plot dimensions are approximate. Contractor shall carefully check and verify all dimensions and shall report any variations to the Architect.

C. Due to the scale of the Drawings, it is not possible to indicate all offsets, fittings, etc., which may be required. Contractor shall carefully investigate the structural and finished conditions affecting all his work, and plan his work accordingly. Drawings are generally diagrammatic and indicative of the work to be installed. The work shall be installed in the most direct and workmanlike manner, so that conflicts between sprinkler systems, planting and architectural features will be avoided.

3. SERVICE MANUALS

Contractor shall furnish two (2) service manuals to Owner. Manuals may be loose leaf and shall contain complete exploded drawings of all equipment installed showing components and catalog numbers together with the manufacturer's name and address. Additional sheets shall cover operation instruction simple enough to be understood without specialized knowledge.

4. RECORD DRAWINGS

Contractor shall procure from Landscape Architect a sepia transparency of the sprinkler layout and mark the exact "as built" arrangement including locations of all equipment installed. Locations shall be shown from easily identified permanent features such as sprinkler heads, building and walks. The "as built" drawing shall be drafted employing a competent draftsman. After final payment, the transparency shall be delivered to Owner (via Landscape Architect).

5. LOOSE EQUIPMENT

Loose sprinkler equipment, operating keys and spare parts will be furnished by the Contractor in quantities as shown on plans or in specifications.

6. GUARANTEE

A. The entire sprinkler system shall be unconditionally guaranteed by contractor as material and workmanship, including settling of backfilled areas below grade for a period of one (1) year following the date of final acceptance of the work.

B. If within one year from the date of completion, settlement occurs, and adjustments in pipes, valves and sprinkler heads or paving to the proper level of the permanent grades, Contractor, as part of the work under his contract, shall make all adjustments without extra cost to Owner including the restoration of all damaged planting, paving or other improvements of any kind.

C. Should any difficulties develop within the specified guarantee period which L.A. feels may be due to inferior material and/or workmanship, these difficulties shall immediately corrected by Contractor to the satisfaction of Owner at no additional cost to owner, including any and all other damage caused by such defects.

7. MATERIALS

A. Pipe and Fittings

1. Brass – Brass pipe shall be IPS Standard weight 85% Red Brass. Fittings shall be with standard 125 pound cast bronze threaded fittings.

2. PVC Conduit – Pipe that is used for control wires shall be PVC conduit Schedule 40–Type 1220. All wires under paving shall be installed in PVC conduit.

3. PVC Normal Impact Pipe – Type 1220 (PVC Schedule 40 & 80)

a. Type II Grade I High impact pipe.

b. Outside diameter of pipe shall be the same size as iron pipe.

c. Pipe shall be marked at internals not to exceed 5' with the following information: Manufacturer's name, nominal pipe size, PVC type and grade (i.e. 1220) schedule, NSF approval and commercial standard designation CS 207–60.

d. PVC Schedule 40 pipe shall not be threaded.

e. Fittings shall be PVC Schedule 40, Type–II, NSF approved.

4. PVC Pressure Rated Pipe – Type 1220 (PVC Class 160, 200 and 315) and Type 1120 (PVC Schedule 40)

a. Type I Grade II Pressure Rated Pipe.

b. Materials shall meet the requirements set forth in ASTM D1784–60T

c. Outside diameter of pipe shall be the same size as iron pipe.

d. Pipe shall be marked at intervals with the following information (not to exceed 5'): Manufacturer's name, nominal size, PVC type and grade (i.e., PVC 1220) SCR rating class, NSF approval and commercial standard designation CS 256–63.

e. PVC Type I shall not be threaded.

f. PVC fittings shall be PVC Type II, Schedule 40 NSF approval.

g. Solvent shall be #175 Gray NSF approved as manufactured by Industrial Polychemical Service, Gardena, California.

h. Caution shall be utilized in handling Type I pipe due to the possibility of cracking or of splitting when dropped or handled carelessly.

i. When connection is plastic to metal, male adapters shall be hand tightened, plus one turn with the strap wrench. Joint compound shall be permatix Type–II.

B. Sprinkler Heads –
Sprinkler heads shall be as shown on plan.

C. Valves

1. Remote Control Valves – Electric remote control valves shall be as shown on plan.

2. Quick Coupling Valves – Quick coupling valves shall be as indicated on Plans and shall be a locking cover. Each quick coupling valve shall have a molded vinyl cover, yellow in color. All quick coupling valve keys and hose swivels shall be of the same manufacturer as the quick couplers.

D. Automatic Controllers –
Automatic controllers shall be as shown on Plans and Details.

E. Control Wire for RCV's –
All wiring to be used for connecting the automatic controller to the electrical solenoid actuated by remote control valve shall be Type UF–600V, 7–strand or solid copper, PVC insulation, single conductor, UL approved underground feeder cable. Each pilot or "hot" wire shall be black or color–coded with the common wire being white.

F. Valve Boxes –
All remote control valves, gate valves, and pressure relief valves shall be installed in suitable valve boxes as shown in details, complete with locking covers. All shall be Ametek, or approved equal, and shall be marked "G.V." or "RCV" with station numbers for control valves heat–embossed in 1–1/2" letters on valve cover by Contractor.

G. Backflow Prevention Units –
The backflow prevention units shall be shown on Plans on Details.

8. INSTALLATION

A. Trenching

1. Excavation shall be open vertical construction sufficiently wide to provide free working space around the work installed and to provide ample space for backfilling and compacting.

2. Trenches for pipe shall be cut to required grade lines, and trench bottom shall be compacted to provide an accurate grade and uniform bearing for the full length of the line.

3. When two (2) pipes are to be placed in the same trench, a 6" space shall be maintained between pipes.

B. Backfilling

1. Backfill materials shall be approved soil. Unsuitable material including clods and rocks over 1" in size shall be removed from the premises and disposed of legally at no cost to Owner.

2. All backfilling shall be done carefully and shall be properly compacted.

3. Depth of trenches shall be sufficient to provide a minimum cover above the top of the pipe as follows:
12" over PVC non–pressure lateral lines
18" over PVC non–pressure lateral lines for rotor system
18" over PVC main under pressure

C. PVC Pipe

1. PVC pipe shall be installed in a manner which will provide for expansion and contraction as recommended by the pipe manufacturer.

2. All plastic to metal joints shall be made with plastic male adapters, unless otherwise shown in details.

3. The joints shall be allowed to set at least twenty–four (24) hours before pressure is applied to the system on PVC pipe.

4. After all new sprinkler piping and risers are in place and connected, all necessary work has been completely and prior to the installation of sprinkler heads, control valves shall be opened and a full head of water used to flush out the system. After the system is thoroughly flushed, riser shall be capped off and the system pressure tested.

5. Sprinkler lines shall be tested in place before backfilling for a period of not less that twenty–four (24) hours, and shall show no leakage or loss of pressure. During the test period, minimum test pressure at the highest point of the section being tested, shall be 100 pounds per square inch.

6. At the conclusion of the pressure test, the head shall be installed and tested for operation in accordance with design requirements under normal operating pressure. Contractor shall verify head pressures with pitot tube and adjust valve to correspond with design pressure.

D. Sprinklers

1. All nozzles on stationary pop–up sprinklers shall be tightened after installation. All sprinklers having an adjustment stem shall be adjusted on a lateral line for the proper coverage (radius, diameter and/or precipitation rate).

2. Sprinkler heads and risers shall be installed according to details.

E. Valves

1. Remote control valves shall be adjusted so that the most remote sprinkler heads operate at the pressure recommended by the head manufacturer. Remote control valves shall be adjusted so a uniform distribution of water is applied by the sprinkler heads to the planting areas for each individual valve system.

2. Quick coupling valves shall be set in valve boxes approximately 12" from walks, curbs, headerboards or paved areas where applicable. Vertical positioning of quick coupling valves shall be such that sleeve top will be flush with the settled finish grade as determined after the turf is established and 3" above grade in ground cover areas.

F. Valve Boxes

1. Valve boxes shall be set one–half (1/2") above the designated finish grade in lawn areas and two inches (2") above finish grade in ground cover areas.

2. Valve boxes installed near walks, curbs, headerboards and paving shall abut those items. Top surfaces shall be flush with items listed above.

G. Automatic Controller Location and Installation

1. The automatic controller shall be installed at the approximate location shown on the Plan.

2. All local and other applicable codes shall take precedence in connecting the 120 VAC electrical service to the controller. Owner shall provide power to controller. Contractor shall complete hook–up to controller.

3. There shall be adequate coverage of earth (18" minimum) over the 24–volt control wire. Install wire in trench and tape to main lines on side of pipe at 10' intervals.

H. Control Wire

1. All electrical equipment and wiring shall comply with local and state codes and be installed by those skilled licensed in the trade.

2. Connecting and splicing of wire at the valves or in the field shall be made using a Rainbird Pen–Tite Connector.

I. Backflow Prevention Units –
The backflow prevention unit shall be installed as shown on Plans and Details.

PLANTING

1. SCOPE

The work of the section includes all labor, materials and equipment required to complete work indicated the drawings. The work shall be performed in accordance with the best standards of practice relating to the various trades and under the continuous supervision of a competent foreman, capable of interpreting the drawings and these specifications. The work included in this section is as follows:

Finish grading for Planting; Soil Preparation: Fertilization: Planting, including lawn; Maintenance; Inspection and Certifications; Guarantees; Clean–up; Staking, Guying and Espaliering; Miscellaneous Allowances.

2. APPROVALS

A. All sprinkler work shall be inspected and approved prior to the start of any work.

B. Prior to excavation for planting or placing of stakes, locate all utilities, electric cables, conduits, sprinkler lines, heads, valves and valve control wires, and all utility lines so that proper precautions may be taken not to damage such improvements. In the event of a conflict between such lines and plant locations, promptly notify Architect who shall arrange for relocation for one or the other. Failure to follow this procedure places upon Contractor for the responsibility for, at his own expense, making any and all repairs for damages resulting from work hereunder.

3. QUANTITIES AND TYPES

Plant materials shall be as indicated on the drawings. The Landscape Contractor is to verify all sizes and quantities.

4. VERIFICATION OF DIMENSIONS AND QUANTITIES

Dimensions are approximate. Before proceeding with any work, Contractor shall verify all dimensions and quantities and shall immediately inform Architect of any discrepancies between the drawings and/or specifications and actual conditions. No work shall be done in any area where there is such a discrepancy until approval for same has been given by Architect.

5. INSPECTION

A. All inspections shall be made by the Landscape Architect. Contractor shall request (Landscape Architect) inspection at least two (2) days in advance of the time inspections is required. (Fridays only)

B. Inspection will be required for the following parts of the work:

1. During finish grading and soil preparation.

2. Plants, after delivery to site and prior to planting.

3. When vines, shrubs and trees are spotted for planting, but planting holes are not excavated.

4. Specimen trees at source, before deliver (to be selected by Landscape Architect).

5. Lawn areas prior to planting.

6. Planting areas prior to planting.

7. All landscape construction items, prior to the start of the calendar day maintenance period ("Final Inspection").

8. At completion of calendar day maintenance period ("Final Inspection").

9. Inspection reports shall be made for each inspection by the Landscape Architect and one copy shall be submitted to Architect and Contractor.

6. CERTIFICATION

Prior to job acceptance written certifications shall be submitted to the Architect for the following:

A. Quantity and Quality of Commercial Fertilizer and Organic Fertilizer.

B. Quantity and Quality of all Soil Amendments called for by Plans and Specifications.

7. MATERIALS

Plant materials indicated on the drawings and herein specified shall conform to the following:

A. Nomenclature –
Plant names indicated on the drawings conform to "Standard Plant Names": established by the American Joint Committee on Horticulture. Except for names covered therein, the established custom of the nursery is followed.

B. Condition –
Plants shall be symmetrical, typical for variety and species, sound, healthy, vigorous, free from plant disease, insect pests, or their eggs, and shall have healthy, normal root systems, well filling their containers, but not to the point of being root bound. Plants shall not be pruned prior to delivery, except as authorized by L.A. or his representative. In no case shall trees be topped before delivery.

C. Dimensions –
The height and spread of all plant material shall be measured with branches in their normal position, and shall be as indicated on the drawing. The caliper of all trees shall be measured 4'–0" above the surface of the ground. Where caliper or other dimensions of any plant materials omitted from the "Plant Legend", it shall be understood that these plant materials shall be normal stock for type listed.

D. Inspection –
All plant materials must have been previously inspected at the nursery by the County Horticultural Department, and shall be subject to the inspection and approval of the L.A. before planting.

E. Plant List –
As indicated on Landscape Drawings.

F. Sizes of Plants –
Shall be stated on the Plan. Container stock (1 gallon, 5 gallon and 15 gallon), shall have been grown in containers for at least one (1) year, but not over two (2) years.

G. Substitution –
No substitutions for the indicated plant materials will be permitted unless the substitute materials are approved in advance by the L.A. and the substitutions are made at no additional cost to Owner. Except for authorized variations, all substitute plant materials shall conform to the requirements of these specifications. If the accepted substitute materials are of a less value than those indicated or specified, the Contract price will be adjusted in accordance with the provisions of the Contract.

H. Plants Not Approved –
Plants not approved are to be removed from site immediately and replaced with suitable plants. The L.A. and/or Architect reserves the right to reject entire lots of plants represented by defective samples.

8. FERTILIZERS AND SOIL CONDITIONERS

Samples of all soil amendments, sod and plants shall be submitted for inspection and stored on the site until furnishing of materials is completed. Delivery may begin upon approval of samples or as directed by L.A. and the Owner.

A. Organic fertilizer shall be processed sewage sludge with a minimum content of 1% Nitrogen and 2% Phosphoric Acid similar to "Nitrohumus". Method of processing shall not destroy normal bacterial content.

B. Nitrogen stabilized sawdust shall be bulk, with the following nitrogen content based on dry weight:

0.5% for Redwood Sawdust
0.7% for Fir Sawdust
1.0% for Bark or Pine Bark or Mixture

Salinity – the saturation extract conductivity shall not exceed 3.5 millimhos/cm at 25 C.

C. Commercial fertilizer shall be delivered in sacks with manufacturer's label showing weight and analysis attached to each sack.

9. STAKING MATERIALS

A. Tree Staking shall be as per plan.

B. Ties for holding trees shall be as per plan.

10. GRADING AND SOIL PREPARATION

A. Contractor is to finish grade to within 1/10th of a foot or 1" below paving where paving exists.

B. Moisture Content –
The soils shall not be worked when the moisture content is so great that excessive compaction will occur, and not when it is so dry that dust will form in the air or that clods will not break readily. Water shall be applied if necessary to provide ideal moisture content for tilling and planting.

C. Preliminary Grading –
Preliminary Grading shall be done in such a manner as to anticipate the finish grading. Excess soils shall be removed or redistributed before application of fertilizer and mulch. Where soil is to be replaced by plants and mulch, allowance shall be made so that when finish grading has begun, there shall be no deficiency in the specified depth of mulched planting beds.

D. Weeding –
Before and during preliminary and finish grading, all weeks and grasses shall be dug out by the roots and disposed of off site (except those weeks and grasses not of the perennial type, less that 2–1/2" high and not bearing seeds, which may be turned under). Oats more that 2–1/2" high and not bearing seeds may be turned under. Perennial weeds and grasses to be removed include, but are not limited to, the following;

Nut grass, Puncture Vine, Dallas Grass, Alfalfa, Johnson Grass, Wire Weed, Morning Glory, Mustard Plant, St. Augustine Grass

E. All Planting areas shall be scarified to a depth of 6–inches below grade with the spacing of the ripper teeth no greater than 6–inches on center prior to placing conditioners and fertilizers. All rock and debris more than 2" in diameter shall be removed from the site.

F. Trenches –
If sprinkler system is installed after grading and fertilizing is completed, the upper portion of the backfill shall be retiled and fertilized to the depth specified for the area required, to conform to the specifications.

11. SOIL CONDITIONERS

A. In all planting areas the following application shall be made per 1,00 square feet of area and shall be thoroughly cultivated in two directions into the top 6" of soil, and the area watered down: (see Plan)

B. Prepare soil mix for backfill in pits for trees, shrubs and vines, as follows:

See soils Report for all general conditions. See Note #32 (This Sheet) for acidic soil requirements.

Planting pits shall be excavated twice the diameter and twice the depth of the rootball. Backfill shall then be added as outlined above.

12. FINISH GRADING

When preliminary grading, including weeding and fertilizing, had been completed and the soil has dried sufficiently to be readily worked, all lawn and planting areas shall be graded to the elevations indicated on the drawing. Grades not otherwise indicated shall be uniform levels or slopes between points where elevations are given. Minor adjustments of finish grades shall be made at the direction of the L.A., if required.

13. METHOD OF PLANTING AND WORK PROCEDURE

A. No planting shall be done until all operations in conjunction with the installation of the sprinkler system have been completed, final grades have been established, the planting areas have been properly graded and prepared as specified, and the work approved by Architect.

B. The relative position of all trees and plants is subject to approval by L.A. and Architect and they shall, if necessary, be relocated as directed as part of the Contract.

C. All plants shall be removed from their container and set so that, when settled, they bear the same relation to the required grade that they bore to the natural grade before being transplanted. Each plant shall be planted in the center of the pit and backfilled unless otherwise specified, with the prepared soil. No soil is muddy condition shall be used for backfilling. No filling will be permitted around trunks or stems. All broken or frayed roots shall be properly cut off.

D. L.A. and/or Architect shall supervise the placing and planting of all plants.

E. In the event that underground construction work or obstructions are encountered in the planting operation, alternated locations for plant material will be selected by L.A. and Architect operation will be done at no extra cost to Owner.

14. PLANTING OF TREES

A. Position plants in plant location indicated on drawings and secure approval before excavating pits, making necessary adjustments as indicated.

B. All pits for trees shall be dug square with bottoms level, the length of sides a depth equal to two times the diameter of the tree ball. Compacted soils at sides and bottoms shall be loosened by scarifying or other approved method. Pits shall be backfilled with "prepared soil" to the required grade, and the balance of the pit filled with "prepared soil", thoroughly settled by water application.

C. Set plants in center of pit, in a vertical position, so that crown of ball with be level with finish grade after allowing for watering and settling and shall bear the same relationship to the finish grade that it did to the soil surface in the container.

D. Prepare depressed water basin as wide as plant balls at each plant. Water thoroughly backfilling any voids with additional prepared planting mix.

15. PLANTING VINES, SHRUBS AND GROUND COVER

A. Vines and shrubs shall be planted in pits as least 18" greater in diameter than their ball of earth and at least 12" below the bottom of the ball. Compacted soil at the bottom of pit shall be loosened and the pit filled with "prepared soil" to the bottom of the ball. When the plant has been properly set, the pit shall be filled to the required grade with "prepared soil" and thoroughly settled by tamping and watering. All vines shall be removed from stakes, untied, and securely fastened in an approved manner to the wall, fence or other surface next to which they are planted.

B. Prepare a depressed water basin as wide as plant balls at each plant. Water thoroughly, backfilling any voids with additional prepared planting mix.

C. Ground Covers

1. Pits for flat sized plants to be at least 6"x6"x6". Ground cover areas shall be moistened prior to planting. No flat plants shall be planted in dry soil.

2. Set plants in center of pits so that crown of plant will be level with finished grade after settling of soil, then backfill and water.

3. Flatted plants shall be well–rooted with runners at least 4" but not more than 6" in length.

16. TREES AND VINES OCCURRING IN LAWN

Trees and vines occurring in lawn shall be planted before final preparation of those areas.

17. CARE OF PLANTS BEFORE AND DURING PLANTING

Plants shall not be allowed to dry out before or while being planted. Keep exposed roots moist by means of wet sawdust, peat moss or burlap at all times during planting operations. Do not expose roots to the air except while being placed in the ground. Wilted plants, whether in place or not, will not be accepted and shall be replaced at the Contractor's expense.

18. WATERING BASINS

A. Construct a firmly compacted mound of soil around each tree and shrub to form a watering basin at the edge of the rootball and following the shape of the planting pit area. Mounds for trees and vines from 5 gallon or larger containers, shall be at least 4" high. Mounds for all other trees, vines or plants not otherwise specified shall be at least 2" high. Excavated earth, if capable of retaining water, may be used. Any settlement within the basins retaining water shall be refilled to the required grade with prepared soil, and additional nitrogen stabilized sawdust worked into the surface as required to restore the mulched condition.

B. At the end of the 90 day maintenance period, all watering basins in lawn area shall be leveled to finish grade and be seeded with the specified seed.

19. SEEDED LAWN

A. Cultivate all lawn areas to a depth of 6". Rocks and debris larger than 1" in diameter which are brought to the surface by cultivation shall be removed from the site. If cultivation does not break lumps, a spike tooth harrow shall be pulled behind a mechanical seeder or tractor.

B. Areas to be planted in lawn shall be finished smooth to present a neat, and uniform grade prior to application of seed. The lawn bed shall be inspected by the L.A. to determine suitability for planting prior to seeding. Contractor shall obtain such approval before seeding.

C. All areas shall be thoroughly watered. Lawns are to be kept continuously moist by watering as often as required.

D. Any lawn areas that do not show a prompt catch of grass shall be re–seeded at ten day intervals until and acceptable stand of grass is assured.

E. (See plan for seed mix).

20. SODDED LAWN

A. Cultivate all lawn areas to a depth of 8". Rocks and debris larger than one–inch in diameter which are brought to the surface by cultivation shall be removed from the site. If cultivation does not break lumps, a spike tooth harrow shall be pulled behind a mechanical seeder or tractor.

B. Areas to be planted in lawn shall be finished smooth to present a neat and uniform grade prior to installation of sod. The lawn bed shall be inspected by the Landscape Architect to determine suitability for planting prior to sodding. The contractor shall obtain such approval before sodding.

C. All sodded areas shall be thoroughly watered. Lawns are to be kept continuously moist by watering as often as required.

D. Re–sodding: Any lawn areas that to not show a prompt catch of grass shall be re–sodded at ten day intervals until an acceptable stand of grass is assured.

21. WATERING

A. Immediately after planting, water shall be applied to each tree by means of a hose. The water shall be applied in a moderate stream in the planting holes until the material about the roots is completely saturated from the bottom of the hole to the top of the ground.

B. Plants which cannot be watered efficiently with the existing water system shall be watered by means of a hose.

C. Apply water in sufficient quantities, and as often as seasonal conditions require, to keep the ground wet at all times, well below the root system of grass and planting. Care is to be taken in watering slopes so as not to cause erosion damage.

22. TREE STAKING/GUYING

A. Stake all non–guyed trees at time of planting by placing stake in the prepared hole and driving it 18" into solid ground. Plant the tree as close to the stake as possible without growing the roots. Fasten the tree to the upper end of stake in at least three places using "rubber cinch ties". (See Planting Details)

B. Trees 24" box size or larger, shall be immediately guyed after planting with not less than three guys per tree, or as directed by the L.A.

1. Rubber ties to be twisted and nailed to peeled lodgepole stake.

2. Guying shall be done according to details. Guy wires to be covered with protective material (PVC) from ground to tree.

23. ESPALIER OF VINES

All trellises and stakes are to be removed from plants and the plants shall be fastened and trained against fences or walls as directed by the L.A.

24. CERTIFICATES

A. In addition to any other certificates specified, Contractor shall furnish a certificate with each delivery of bulk material, stating the source, quantity and type of material and that the material conforms to the specification requirements. For bulk delivered organic fertilizer, the certificate shall also state the volume, net weight, percent of Nitrogen and percent of Phosphoric acid. For each fertilizer and soil conditioner, in containers, a similar certificate or invoice shall be furnished stating total quantities by weight and volume for each material. These certificates shall be submitted to the Architect prior to the start of the maintenance period.

25. PROTECTION

Contractor shall carefully and continuously protect all areas included in the contract, including plant materials, fences, supports, etc., until final acceptance of the work by the Architect, L.A. and Owner.

26. MAINTENANCE

A. Contractor shall maintain a sufficient number of men and adequate equipment to perform the work herein specified. Plant maintenance work shall consist of applying water, weeding, caring for plants, including ground covers, shrubs and trees, edging, aerating and moving of lawns, fertilizing and control of pests and diseases.

B. Damage to any planted area shall be repaired immediately. Depressions caused by vehicles or foot traffic shall be filled with topsoil, leveled and replanted. Exterminate gophers and moles, and repair damage.

C. The entire project shall be maintained for a period of ninety (90) days commencing from time all items of work have been completed to the satisfaction of Architect, L.A. and Owner.

D. The project shall be cared for in a neat, clean condition at all times to the satisfaction of Architect, L.A. and Owner.

27. LAWN MAINTENANCE

A. Watering –
Water every day once per day for two weeks and thereafter gradually reduce frequency of watering to three times per week. Contractor shall continue to maintain the lawn until final acceptance by the Architect, L.A. and Owner.

B. Fertilizing –
Apply 16–6–8 at the rate of 5 pounds per 1,000 square feet three weeks after installation and water immediately thereafter.

C. Diseases and Pest Control –
Two weeks after installation of lawn, apply a granular mercurial fungicide of 1.8% mercurous chloride as per manufacturer's recommendation.

D. Mowing –
The lawn shall be mowed at a height of 1–1/2" with a rotary mower, equipped with rollers, before it reaches 2" in height. Collect grass clippings during mowing operations and remove from the site.

28. GROUND COVER AND SHRUB AREA MAINTENANCE

A. Watering –
New plantings shall be watered once per day for two (2) weeks after installation. Reduce watering to every other day for the next two (2) weeks. Water thereafter three (3) times per week until final acceptance.

B. Fertilization –
Fertilize three (3) weeks after planting with 5 pounds 16–6–8 per 1,000 square feet; fertilize thereafter every thirty (30) days.

C. Disease and Pest Control –
For control of slugs and snails, apply pelletized tricalcium arsenate 5% by weight and metaldehyde 5% by weight as per manufacturer's recommendations two (2) week after installation.

D. Pruning –
All Shrubs and trees shall be pinch pruned as necessary to encourage new growth and to eliminate rank sucker growth. Old flowers, and dead foliage and limbs shall be removed. No major pruning shall be done without the approval of the L.A.

E. Weeding –
All planting areas including lawn, ground cover and shrub areas shall be kept week free at all times. Weeds shall be dug out by the roots and disposed of offsite.

F. Weeding –
Upon completion of the 90–day maintenance period, the Contractor shall fertilize per Note #26 (Lawn Maintenance) and Note #27 (Ground Covers and Shrub Area Maintenance) of these Specifications.

29. GUARANTEE AND REPLACEMENTS

A. All shrubs and ground cover shall be guaranteed by Contractor as to growth and health for a period of ninety (90) days after completion of the specified maintenance period, and final acceptance by the L.A. All trees up to 20" boxes or larger, and all field grown specimens shall be guaranteed by Contractor to live and grow in an acceptable upright position for a period of one (1) year after completion of the specified maintenance period, and final acceptance by the L.A.

B. All plants that show signs of failing growth at any time during the life of the Contract, including the maintenance period, or those plants injured or damaged as to render them unsuitable for the purpose intended, shall be immediately replaced in kind and size at the expense of Contractor.

C. Contractor shall, within 5 days notice by the L.A., remove and replace all guaranteed plant materials which for any reason fail to meet the requirements of the guarantee. Replacement shall be made with plant materials as indicated or specified for the original planting, and all such replacement materials shall be guaranteed as specified for the original guaranteed materials.

30. CLEAN-UP

Upon completion of the work in this section, Contractor shall remove all rubbish, trash and debris resulting from the operations; remove disused equipment and implements of service; leave entire area involved in a neat and acceptable condition such as to meet the approval of the Architect and L.A.

31. FINAL INSPECTION AND CERTIFICATION

Final Inspection and Certification is required by Landscape Architect after receipt by City. The City's Landscape Architect will perform final inspection.

32. SOIL REQUIREMENTS

Backfill Mix (Amount Per Cubic Yard):
2 parts on site soil
1 part by volume nitrogen stabilized Redwood, fir or cedar shavings
15 lb/cu. Yd. 5–3 1 Grow–Powder
Fertilizer
8 oz./cu. Yd. Iron Sulfate
4 oz./cu. Yd. Zinc Sulfate
4 oz./cu. Yd. Manganese Sulfate

Acidic Backfill Mix
For plants requiring acid soil: such as ferns, azaleas, camellias, gardenias, etc.
(Amount per Cubic Yard):
1 part Sharp Sand
2 parts Peat Moss
3 parts Turf Supreme 16–6–8
1 ob. Suquestrine FE 330 Iron Chelate

*Verify all soil requirements w/soil report provided by contractor.

Environmental Patterns | inc.
31238 Via Colinas
Suite E
Westlake Village
California, 91362
License No. 2801
(818) 706-3344

REGISTERED LANDSCAPE ARCHITECT
BRYAN R. BADCETT
No. 2801
Signature
Date
STATE OF CALIFORNIA

▸MOUZAYA RESIDENCE
22390 SWENSON DR
TOPANGA, CA 90290

APN:
MAP:
TRACT:
BLOCK:
LOT:

Drawings and specifications as instruments of service are and shall remain the property of the Landscape Architect whether the project for which they are made is executed or not. The Landscape Architect shall be deemed the author of these documents and shall retain all common law, including copyright. The Owner shall be permitted to retain copies, including reproducible copies, of drawings and specifications, for information and reference in connection with the Owner's use and occupancy of the Project at the site referenced herein. The drawings and specifications shall not be used by the Owner on other projects, additions to this project, or for the completion of this project, by others, provided the Landscape Architect is not in default under this agreement, except by agreement in writing and appropriate compensation to the Landscape Architect of any discrepancies prior to commencement of any work. Written dimensions shall prevate over scaled dimensions.

SPECIFICATIONS

Date	02/27/15
Drawn	B.B./E.S./K.R.
Job	#214240
Scale	NO SCALE

[LS▸9]

OF: 9
PLOTTED: 02/27/15