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1. Measure entire front yard area. Subtract hardscapes areas to get the total square feet of planted and irrigated area. Enter this number in the plant water use table.

2. The garden is designed to capture and infiltrate some storm water on site. When the flow is directed to a swale or rain garden, it

3. Provide for rain gardens overflow low at sidewalk. Choose from details 7-10 for locations (see sidewalk situations).

4. Indicate any substitutions to the plantings by crossing out the listed plants and writing the substitution below in red ink. Make sure the plants used have matching water use and are roughly the same size (see Sonoma-Marin Saving Water Partnership http://www.savingwaterpartnership.org for substitutions).

5. Fill in planting details on sheet L3.2.

6. Indicate any substitutions to the plantings by crossing out the listed plants and writing the substitution below in red ink. Make sure the plants used have matching water use and are roughly the same size (see Sonoma-Marin Saving Water Partnership http://www.savingwaterpartnership.org for substitutions).

7. In the legend, circle the hardscapes materials you will be using and on detail sheets L3.0, L3.1 & L3.2.

8. Indicate any substitutions to the plantings by crossing out the listed plants and writing the substitution below in red ink. Make sure the plants used have matching water use and are roughly the same size (see Sonoma-Marin Saving Water Partnership http://www.savingwaterpartnership.org for substitutions).

9. Move to the irrigation plan and fill in the areas indicated on that sheet.

APPLICANT INSTRUCTIONS:

- Needs an overflow outlet that won't erode, options are provided on the detail sheets. Splash blocks and outlets in planting beds are

10. Indicate any substitutions to the plantings by crossing out the listed plants and writing the substitution below in red ink. Make sure the plants used have matching water use and are roughly the same size (see Sonoma-Marin Saving Water Partnership http://www.savingwaterpartnership.org for substitutions).

11. Move to the irrigation plan and fill in the areas indicated on that sheet.

APPLICANT INSTRUCTIONS:

- Needs an overflow outlet that won't erode, options are provided on the detail sheets. Splash blocks and outlets in planting beds are
1. Adjust layout of planting beds if changed on layout sheet 1.0.
2. Review irrigation value table to adjust sf areas of value zones.
3. If areas exceed max subzone flow (3 gpm) divide into additional subzones and enter new value number.
4. If areas exceed max zone flow (7 gpm) add a valve and enter sf area next to new valve number on plan.
5. Draw out new subzone area and/or valve zone area on plan in new color.
6. Add valve as needed to valve manifold.
7. Review irrigation legend and check off that all components are shown on selected plan.
8. Note any equipment substitutions.

IRRIGATION LEGEND

- **APPLICANT**: CHECK-OFF COMPONENTS
- **SYMBOL**: COMPONENT
- **MANUFACTURER**: MODEL
- **NOTE**: SIZE / COLOR

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>SYMBOL</th>
<th>MANUFACTURER</th>
<th>MODEL</th>
<th>NOTE / SIZE / COLOR</th>
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<tr>
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1. THIS PAVING IS IMPERVIOUS AND SHOULD HAVE POSITIVE DRAINAGE ON FOUNDATION, AND PROVIDE SUBDRAINAGE. REVIEW WITH GEOTECH & CIVIL ENGINEER.

2. DRIVEWAY ENGINEERING BY OTHERS. INSURE PROPER INSTALLATION INSTRUCTIONS. GEOTECHNICAL ENGINEER FOR AGGREGATE DEPTH, EXPANSION JOINT FILL PER MANUFACTURER, ASTM #8 GRAVEL OR BRICK PAVERS (L" x W" x THK" VARIES).

3. CONCRETE PAVING - DESIGN BY OTHERS. SEE NOTE 1. EXPANSION JOINT REQUIRES 1" OF DECOMPOSED GRANITE W/ STABILIZER PRODUCT. INSTALL PER MANUFACTURER SPECIFICATION. FILTER FABRIC (OPTIONAL) SEE DETAIL #11 THIS PAGE.

4. TRENCH DRAIN: K50 BY ACO POLYMER PRODUCTS, INC, NOTE THE POUR-OVER EDGE. INSTALL PER MANUFACTURER'S INSTRUCTIONS. FILTER FABRIC OR OTHER WATER RETENTION MATERIAL. IDENTIFICATION INSTRUCTIONS FOR TRENCH DRAIN, SIZE TBD BY OTHERS, SEE NOTE 1. CONCRETE DRIVEWAY - DESIGN BY OTHERS. OR APPROVED EQUIVALENT. AGGREGATE FILL SELECTED BY OWNER.

NOTE: CONSULT WITH GEOTECHNICAL & CIVIL ENGINEER FOR AGGREGATE DEPTH, SUBGRADE UNDISTURBED OR COMPACTED TO 90%, 8" TRENCH DRAIN, SIZE TBD BY OTHERS, SEE NOTE 1. FOR DRAINAGE THRU PATH SEE CURB O LET DETAIL #11 THIS PAGE AND SECTION VIEW IN DETAIL #1.

NOTE: MAINTAIN CHIP/BARK MULCH AMENDMENT PLUS PERMEABLE INFILTRATION - PEDESTRIAN, SUBDRAINAGE. REVIEW WITH GEOTECH & CIVIL ENGINEER, PERFORMANCE IN CLAY SOILS AND NEED FOR EXPANSION JOINTS.

GENERAL NOTES:

1. DESIGN STANDARDS: THESE DETAILS ARE PROVIDED TO CREATE OPTIONS FOR PERMEABLE PAVING. UNDOUBTEDLY, THESE STRATEGIES WILL INCREASE IN POPULARITY. USE CAREFULLY CONSIDERED. THESE STRATEGIES WILL CLEAN UP WATER, RETAIN RUNOFF OF HOT GROUNDWATER, AND PROVIDE MORE SOIL MOISTURE AVAILABILITY FOR LANDSCAPE PLANTINGS.

2. THESE DETAILS SHOULD BE EVALUATED BY THE SITE ENGINEER AND ADJUSTED TO SITE CONDITIONS.

3. PAVER SLEEPER: DEPTH OF BASE GRAVEL, SUB-BASE PREPARATION AND CONCRETE REINFORCEMENT SHOULD ALL BE EVALUATED AND ADJUSTED AS NEEDED BY A GEOTECHNICAL ENGINEER.

4. SOIL TYPE AFFECTS THE PERFORMANCE OF THESE DETAILS. CLAY SOILS DO NOT INFILTRATE WELL, SO THERE IS A NEED TO EVALUATE WHETHER THE PERMEABLE/PERVIOUS PAVING DETAILS AND APPROPRIATE FOR SPECIFIC SITES AND ADJUST THEM AS APPROPRIATE TO PROTECT BUILDINGS AND OTHER IMPROVEMENTS.

5. ACCESSIBLE PAVING IS SMOOTH, FIRM, AND HAS A CROSS SLOPE NOT TO EXCEED 2% RUNNING SLOPE, SHOULD BE 1 1/2 TO 2" LESS THAN UNPAVED RAMPS WITH HANDRAILS. SEE TITLE 24 OF CALIFORNIA CODE FOR ACCESSIBILITY REQUIREMENTS AND STANDARDS.
NOTES:

1. RAINWATER GARDEN DESIGNED FOR CLAY SOILS. MAX DEPTH 7". SEE DETAIL 9 FOR ROCK AND CHECK Dams.

2. NO WOOD CHIP OR BARK MULCH IN RAINGARDEN. 5" PEA GRAVEL MULCH INSURES NO SHEET FLOW AS NEEDED BY DESIGN.

3. INSTALL LEVEL SPREADER TO RETURN TO TOP SECTION AT PATH.

4. MAINTAIN CLEAN EDGE.

5. CEMENT IN PAVEMENT EDGING AND STAKE (OPTIONAL)

6. FILTER FABRIC BEHIND CHECK Dams

7. TEMPORARY SPLIT ROCKS 6" ABOVE TOP OF CHECK DAMS

8. INSTALL PLANTING IN RAINGARDEN.

9. ESURE NO MULCH OR SOIL WASHES BEHIND CHECK DAMS

10. PERVIOUS AGGREGATE PAVING 2" THICK OF 3/4" OR SMALLER AGGREGATES (NOT FINE)

11. 4" CLASS II PERMEABLE AGGREGATE BASE ROCK, COMPACT TO 95%.

12. FILTER EMBOSS

13. RECREATED AGGREGATE BASE ROCK WITH 3" OF 1.5-6" RIVER COBBLE.

14. CHECK DAMS FORMED WITH STACKED STONE 6"-12" ANGULAR PACKED WITH 3" OF RIVER COBBLE 1.5"-6" IN SIZE.

15. RAINGARDEN OVERFLOWING OVER PAVEMENT SECTION

SLOPE LENGTH VARIES 3' MIN (TYP)...

RAINGARDEN OVERFLOWING OVER PAVEMENT SECTION...

RAINGARDEN OVERFLOWING OVER PAVEMENT SECTION...

RAINGARDEN OVERFLOWING OVER PAVEMENT SECTION...

RAINGARDEN OVERFLOWING OVER PAVEMENT SECTION...

RAINGARDEN OVERFLOWING OVER PAVEMENT SECTION...

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RAINGARDEN OVERFLOWING OVER PAVEMENT SECTION...

RAINGARDEN OVERFLOWING OVER PAVEMENT SECTION...
TREE PLANTING

1. Tree, Central Leader
   - Synthetic strapping, loop around central leader below first branch, one strap per stake, attach to stake with sheet metal screws

2. Wood stakes, 2 per tree, set flush, outside of rootball, one per parallax, to protect from wind, windless conditions, avoid disturbing site to protect stakes, plant stakes do not touch stakes, stakes shall be spaced at least 35 degrees from central leader.

3. Watering berm, 2"H

4. Tops, use designs form to remove construction, do not till

5. Crown of rootball, set 2" above final grade

6. Planting pit backfill, per specs

7. Planting pit, scrapify edges, insure root ball rests on firm soil, and will not sink over time

8. Watering basin

9. Mulch, per specs, 2" layer, keep 4" away from trunk

10. Sheet mulch: 2 layers cardboard, or 3 layers compost under paper

11. Direction of prevailing wind

12. Rootball, scrape outer 1/2" of compost under paper

NOTES:

1. Make staves as short as possible, but high enough to hold the tree upright under calm conditions, the tree should return to vertical after the wind has bent the top.

2. Support the trunk at just one level, near the top of the staves.

3. Provide flexible movement at the point where strapping straps locate around the central leader of the tree.

4. Take care not to cause rubbing or girdling injuries.

5. Stakes are for protection of the tree for a period after planting, remove stakes as soon as tree establishes its root system, within 18 months max.

PLANTING - SHRUBS, PERENNIALS, GRASSES

1. Planting pit & watering berm table

<table>
<thead>
<tr>
<th>Container Size</th>
<th>Planting Pit Diameter</th>
<th>Watering Berm Height</th>
<th>Watering Berm Diameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 gal can</td>
<td>18&quot; min</td>
<td>3&quot; min</td>
<td>18&quot; min</td>
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<tr>
<td>5 gal can</td>
<td>30&quot; min</td>
<td>4&quot; min</td>
<td>30&quot; min</td>
</tr>
<tr>
<td>15 gal can</td>
<td>3&quot; min</td>
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<tr>
<td>24&quot; box</td>
<td>5&quot; min</td>
<td>6&quot; min</td>
<td>5&quot; min</td>
</tr>
</tbody>
</table>

2. Plug planting

3. Plumbing hole use cable to create a hole square to 1/16" wider than plug. Plant plug within 1/16" above finished grade of surrounding soil, leave more or less plug, insure bottom of plug is below finished grade

4. Sheet metal strap, loop around central leader

5. Face soil, dutch plant in soil, scrape edges of soil to promote root development

6. Sheet mulch

7. 1" of compost under paper

8. 1/2" layer of amendments under sheet mulch

9. 6" Berm, side of Berm 1" above finished grade

10. 3" Berm, 1" above finished grade

11. 2" Berm even at Berm, side of Berm 1" above finished grade

12. 1" Berm, 1" above finished grade

13. 6" Berm, side of Berm 1" above finished grade

14. 2" Berm even at Berm, side of Berm 1" above finished grade

15. 1" Berm, 1" above finished grade

16. Measure width, depth of container

17. Plant plug directly into planting hole

18. Plant plug straight up with garden soil, not mulch

19. Leave no air or mulch between plug and soil

20. Make sure plug is solid, not loose

21. Planting berm table

22. Sheet mulch: 2 layers cardboard, or 3 layers compost under paper

23. Watering basin

24. Support the trunk at just one level, near the top of the staves.

25. Provide flexible movement at the point where strapping straps locate around the central leader of the tree.

26. Take care not to cause rubbing or girdling injuries.

27. Stakes are for protection of the tree for a period after planting, remove stakes as soon as tree establishes its root system, within 18 months max.
**LANDSCAPE TO LAUNDRY SYSTEM OVERVIEW:**

A laundry-to-landscape graywater system is captured lightly used water from the discharge hose of your washing machine and pumps it out to the landscape through 1-inch tubing. The system does not alter the existing plumbing and therefore does not require permit. A three-way diverter valve is a necessary component allowing you to send discharge water back to the sewer system when needed or during the rainy season.

**INSTALLATION & DESIGN CONSIDERATIONS:**

1. **DESIGNED TO IRRIGATE UPHILL FROM THE WASHING MACHINE, THE DISTANCE SHOULD BE REDUCED TO 30-50 FEET.**
2. **SUFFICIENT PRESSURE THROUGH A 1-INCH IRRIGATION LINE FOR 100-FEET ON FLAT GROUND.**
3. **IF THE SYSTEM IS NOT ABLE TO REDIRECT TO SEWER, DIRECT AND CONTAIN GRAYWATER WITHIN MULCH BASINS (IRRIGATION OR DISPOSAL FIELD) BELOW THE GROUND.**
4. **OUTLETS COVERED BY AT LEAST 2-INCHES OF MULCH, ROCK, OR A SHIELD (E.G. VALVE BOX LID).**
5. **NO PONDING OR RUNOFF.**
6. **DIVERT WATER TO THE SEWER IF IT CONTAINS DIAPERS, OIL, OTHER CHEMICALS.**

**POST OPERATION AND MAINTENANCE MANUAL:**

1. **THE DISTANCE MAY INCREASE TO 150-FEET DEPENDING ON SLOPE.**
2. **A LAUNDRY-TO-LANDSCAPE GRAYWATER SYSTEM CAPTURES LIGHTLY USED WATER FROM THE DISCHARGE HOSE OF THE WASHING MACHINE.**
3. **THE FOLLOWING LIST OF COMMERCIAL DETERGENTS ARE RECOMMENDED FOR USE WITH LAUNDRY TO LANDSCAPE GRAYWATER SYSTEMS:**
   - ECOVER LAUNDRY WASH (SOME SALT)
   - BIO PAC LAUNDRY LIQUID
   - LIFE TREE LAUNDRY LIQUID
   - MOUNTAIN GREEN LAUNDRY DETERGENT
   - VASKA HERBATERGENT

**APPLICATION INFORMATION:**

1. **ESTIMATE YOUR GRAYWATER SUPPLY USING THE CALCULATION PROCESS IN CALCULATIONS SECTION BELOW.**
2. **COMPLETE, CALCULATIONS TO DETERMINE THE MINIMUM REQUIRED MULCH BASINS SIZE PER YOUR SOIL TYPE.**
3. **MEASURE ACTUAL IRRIGATION FIELD AREAS ON SITE AND DEVELOP NUMBER AND SIZE OF MULCH BASINS TO USE THIS VOLUME THAT FIT IN THE LANDSCAPE AREAS.**
4. **REVIEW REQUIRED SETTACKS SHOWN IN CPC TABLE 152.2 THIS SHEET.**
5. **DESIGN A LAUNDRY TO LANDSCAPE DETAILED PLAN FOR LOCATION OF LAUNDRY NEAR GRAYWATER SUPPLIED LANDSCAPE AREA, CIVIL ENGINEER (FOR ANY POTENTIAL CONFLICTS WITH STORMWATER DISCHARGE) AND GENERAL & LANDSCAPE CONTRACTORS TO REVIEW THREE-WAY VALVE LOCATION AND SUPPLY PIPE LOCATION.**

---

**Laundry to Landscape: Graywater System Example**

**CALCULATIONS SECTION:**

1. **Estimate Daily Laundry Production**
   - California Laundry Water Use - 160 gallons per wash load (average)
   - 15 gallons per load (maximum)
   - 70 gallons per load (minimum)

2. **Calculate Maximum Mulch Basin Size**
   - **Multipurpose Graywater Use:**
     - **Washing machine**
     - **24-Hour Period:**
     - **Discharge Per Day:**
     - **From 1 above Maximum Absorption Capacity (from column 3 in table below)**

3. **Determine Minimum Mulch Basin Size**
   - **Minimum Mulch Basin Size:**
     - **Washing machine**
     - **24-Hour Period:**
     - **Discharge Per Day:**
     - **From 1 above Maximum Absorption Capacity (from column 3 in table below)**

4. **Determine Required Graywater System Size**
   - **Graywater System Size:**
     - **Washing machine**
     - **24-Hour Period:**
     - **Discharge Per Day:**
     - **From 1 above Maximum Absorption Capacity (from column 3 in table below)**

5. **Determine Required Graywater System Size**
   - **Graywater System Size:**
     - **Washing machine**
     - **24-Hour Period:**
     - **Discharge Per Day:**
     - **From 1 above Maximum Absorption Capacity (from column 3 in table below)**

6. **Determine Required Graywater System Size**
   - **Graywater System Size:**
     - **Washing machine**
     - **24-Hour Period:**
     - **Discharge Per Day:**
     - **From 1 above Maximum Absorption Capacity (from column 3 in table below)**

---

**Diagram Notes:**

- **Do Not Drink:**
- **Fruits and vegetable plants are safe to irrigate with graywater so long as the edible portion doesn't touch the ground and/or mulch.**

---

**PANORAMIC DESIGN GROUP**

625 2ND ST. STE 110
PETALUMA, CA

**AWARDS**

- **California Green Building Enterprise Award.**
- **Platinum Home by 2004 Affiliates of California Builders Exchange,** California Plumbing Code 2016 (Chapter 12)

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LANDSCAPE VIA MULCH BASIN OUTLETS. PLUMBING FOR GRAYWATER SOURCES MUST BE
INSTALLATION & DESIGN CONSIDERATIONS:

BRANCHED DRAIN SYSTEM OVERVIEW:

BRANCHED DRAIN GRAYWATER REQUIREMENTS TO COMPLY WITH CALIFORNIA PLUMBING CODE (CPC) STANDARDS:

INSTALLED BY A HOMEOWNER TO SEVERAL THOUSAND IF INSTALLED BY A PROFESSIONAL. WHILE MORE COSTLY TO CONSTRUCT THAN A LAUNDRY TO LANDSCAPE SYSTEM, A BRANCHED DRAIN SYSTEM REQUIRES LITTLE MAINTENANCE AND LASTS A LONG TIME, SINCE IT HAS NO MOVING PARTS TO BREAK.

RECOMMENDED SOAPS:
MORE SOAPS ARE COMING OUT ALL THE TIME, BUT IT IS ALWAYS IMPORTANT TO READ THE INGREDIENTS LIST BELOW AND THAT ARE KNOWN TO BE GRAYWATER COMPLIANT:
- OASIS - ALL-PURPOSE CLEANER FOR HAND-WASHING, BODY & SHAMPOO
- DR. BRONNER’S MAGIC SOAPS (LIQUID)
- AUBREY ORGANICS SHAMPOOS

APPLICANT INSTRUCTIONS:
1. ESTIMATE YOUR GRAYWATER SUPPLY USING THE CALCULATION SECTION THIS SHEET.
2. ESTIMATE MULCH BASIN SIZES, AREA AND VOLUME USING TABLE 3.
3. DEVELOP A GRAYWATER SITE PLAN SHOWING THE SYSTEM LAYOUT FOR THE PERMIT APPLICATION. SHOW ALL THE PLAN ELEMENTS LISTED IN #4 GRAYWATER PLAN BELOW. REVIEW THE SAMPLE PLAN SHOWN IN DETAIL #1 THIS SHEET. SHOW TREE AND PLANT LOCATIONS TO BENEFIT FROM GREYWATER.
4. SUBMIT FOR BUILDING PERMIT EITHER WITH FULL SITE DRAWINGS OR AS A SEPARATE SUBMITTL.
5. REVIEW PIPE AND VALVE LOCATIONS WITH ARCHITECT, ENGINEER AND CONTRACTOR TO INSURE THERE ARE NO CONFLICTS WITH OTHER SITE ELEMENTS. CONFORM COMPONENTS TO BE INSTALLED AT TIME OF FOUNDATION SYSTEM CONSTRUCTION, INCLUDING PIPE STUB OUT FOR EXTERIOR GRAYWATER SYSTEM DEVELOPMENT.

INSTALLATION & DESIGN CONSIDERATIONS:
WITH A HIGHER POTENTIAL VOLUME OF WATER COMING FROM A SHOWER AND SINK, A BRANCHED DRAIN SYSTEM IS BEST SUITED FOR IRRIGATING TREES, BUSHES, SHRUBS, AND OTHER LARGER PERENNIAL PLANTS. THIS IS A SIMPLE SYSTEM AND DOES NOT REQUIRE ELECTRICITY OR A PUMP. HOWEVER, THE LANDSCAPE AREA MUST BE LOWER IN ELEVATION THAN THE GRAYWATER SOURCE, AND THE ENTIRE SYSTEM MUST HAVE A DOWNWARD SLOPE OF 2 % (1/4 INCH PER FOOT) TO ENSURE EVEN DISTRIBUTION.

INSTALLATION DIFFICULTY DEPENDS ON THE EXISTING HOUSEHOLD PLUMBING, ACCESS TO PIPES AND THE SLOPE OF THE LANDSCAPE. WHILE OUTDOOR COMPONENTS CAN BE INSTALLED BY A HOMEOWNER, A PROFESSIONAL PLUMBER IS NEEDED FOR INSTALLATION OF 3-MAY DIVERTER VALVE ON THE SEWER LINE. THE HOMEOWNER HAS THE OPTION TO INSTALL AN ACTUATOR, WHICH ALLOWS EASY DIVERSION OF GREYWATER BETWEEN LANDSCAPE AND THE SEWER LINE.

SYSTEM COSTS & REBATES: THE COSTS CAN RANGE FROM A THOUSAND DOLLARS WHEN PRIMARILY INSTALLED BY A HOMEOWNER TO SEVERAL THOUSAND IF INSTALLED BY A PROFESSIONAL. WHILE MORE COSTLY TO CONSTRUCT THAN A LAUNDRY TO LANDSCAPE SYSTEM, A BRANCHED DRAIN SYSTEM REQUIRES LITTLE MAINTENANCE AND LASTS A LONG TIME, SINCE IT HAS NO MOVING PARTS TO BREAK.

APPLICANT INFORMATION:

1. Determine Daily Computer Production

2. Determine Minimum Mulch Basin Size

3. Determine Mulch Basin Required Volume

4. Branch Drain System Diagram and Install Photo

5. Branch Drain Sample Site Plan

FLA 1.1 SHEET
ALL OTHER RAINWATER CATCHMENT SYSTEMS MUST BE SUBMITTED FOR BUILDING PERMIT.

4. TANKS CAN BE DAISY CHAINED AT POINT "D" USING FLEXIBLE PIPE ONLY TO REDUCE CHANCE OF LEAKAGE IN EARTHQUAKES.
- DOES NOT REQUIRE ELECTRICAL POWER OR MAKEUP WATER SUPPLY CONNECTION (SEE NOTE 2 AND 3)
- RATIO OF HEIGHT TO DIAMETER OR WIDTH DOES NOT EXCEED 2 TO 1
- TANK IS SUPPORTED DIRECTLY UPON GRADE

5. THERE ARE NO REQUIRED SETBACKS FROM BUILDINGS OR SIDE/BACK PROPERTY LINES, THOUGH A CONVERSATION WITH YOUR NEIGHBOR COULD BE HELPFUL.
BETWEEN RAINWATER HARVESTING SYSTEM AND DOMESTIC WATER SYSTEM.
- MAXIMUM STORAGE CAPACITY OF 5,000 GALLONS

NOTES
1. A RAINWATER CATCHMENT SYSTEM MAY NOT REQUIRE A BUILDING PERMIT PROVIDED ALL OF THE FOLLOWING ARE MET (CALIFORNIA PLUMBING CODE 1601.3 (I):
- WATER WILL BE USED FOR OUTDOOR NON-SPRAY IRRIGATION
- MAXIMUM STORAGE CAPACITY OF 5,000 GALLONES
- TANK IS SUPPORTED DIRECTLY UPON GRADE
- DOES NOT REQUIRE ELECTRICAL POWER OR MAKEUP WATER SUPPLY CONNECTION (SEE NOTE 2 AND 3)
- ALL OTHER RAINWATER CATCHMENT SYSTEMS MUST BE SUBMITTED FOR BUILDING PERMIT.
- PUMP AND PRESSURE TANKS CAN REQUIRE INEXPENSIVE, OVER-THE-COUNTER, ELECTRICAL PERMIT.
- TANK CAN BE DAISY CHAINED AT POINT "D" USING FLEXIBLE PIPE ONLY TO REDUCE CHANCE OF LEAKAGE IN EARTHQUAKES.
- TANK IS SUPPORTED DIRECTLY UPON GRADE

RAINWATER HARVESTING DETAIL

A. PREFERRRED DRY CONVEYANCE IF TANKS ARE NEXT TO DOWNSPOUT
B. OVERFLOW: 3 IN. DRAINAGE PIPE: SLOPED 2 PERCENT FOR HORIZONTAL SECTIONS
C. 100 GALLON BUSHMAN SLIMLINE RAIN HARVESTING TANK OR EQUIVALENT
D. 4 INCHES COMPACTED BASEROCK WITH 2 INCHES OF PEA GRAVEL ON TOP
E. 3 IN. TO 3 IN. PVC DRAINAGE REDUCER
F. BUSHMAN FLOAT BALL
G. BUSHMAN FIRST FLUSH FILTERS (TO KEEP EMITTER FROM CLOGGING)
H. FIRE SAFER LEAF GUARD
I. UNDISTURBED NATIVE SOIL
J. FIRE SAFER LEAF GUARD
K. NORMAL DOWNSPOUT
L. NORMAL DOWNSPOUT
M. OPTIONAL BUSHMAN LEAF DIVERTER (WITH 20X20 SCREEN IF USING DRY CONVEYANCE) (REDUNDANT WITH LEAF GUARD ON GUTTER)
N. PVC DRAINAGE TEE
O. 4 IN. DRAINAGE PIPE FOR THE FIRST Flush (THIS REMOVES THE FIRST, DIRTY WATER FROM A RAINSTORM)
P. BUSHMAN LEAF DIVERTER (WITH 20X20 SCREEN IF USING WET CONVEYANCE) (REDUNDANT WITH LEAF GUARD ON GUTTERS)
Q. BUSHMAN FIRST FLUSH FILTERS (TO KEEP EMITTER FROM CLOGGING)
R. BUSHMAN FLOAT BALL
S. BUSHMAN LEAF DIVERTER (WITH 20X20 SCREEN IF USING DRY CONVEYANCE) (REDUNDANT WITH LEAF GUARD ON GUTTERS)
T. CLEAN GRAVEL TO IMPROVE DRAINAGE FROM DRILLED HOLES
U. THREE SEPARATE 3/32 INCH HOLES TO DRAIN WATER FOR MOSQUITO CONTROL
V. CLEAN GRAVEL TO IMPROVE DRAINAGE FROM DRILLED HOLES