

**IRRIGATION CONSTRUCTION NOTES**

- (A) CONNECT NEW MAIN LINE & WIRES TO EXISTING MAIN LINE & WIRES AT EXISTING QUICK COUPLER.
- (B) CONNECT NEW MAIN LINE & WIRES TO EXISTING MAIN LINE & WIRES AT EXISTING BALL VALVE.
- (C) CONNECT NEW MAIN LINE & WIRES TO EXISTING MAIN LINE & WIRES AT EXISTING CONTROL VALVE.
- (D) CONNECT NEW LATERAL LINE TO EXISTING LATERAL LINE AT EXISTING ELBOW.
- (E) CAP EXISTING LATERAL LINES IN THESE TWO APPROXIMATE LOCATIONS.
- (F) CONNECT NEW LATERAL LINE TO EXISTING LATERAL LINE AT EXISTING LOW FLOW BUBBLER.
- (G) CONNECT NEW MAIN LINE & WIRES TO EXISTING MAIN LINE & WIRES AT EXISTING BALL VALVE.
- (H) CONNECT NEW MAIN LINE & WIRES TO EXISTING MAIN LINE & WIRES IN THIS LOCATION.

| FRICTION LOSS CALCULATION |         | FRICTION LOSS CALCULATION |         | FRICTION LOSS CALCULATION |         |
|---------------------------|---------|---------------------------|---------|---------------------------|---------|
| WATER METER REF. NO.      | #1      | WATER METER REF. NO.      | #1      | WATER METER REF. NO.      | #1      |
| VALVE STATION NO.         | A-7     | VALVE STATION NO.         | A-17    | VALVE STATION NO.         | A-20    |
| HEAD / BUBBLER / EMITTER  | 30.00   | HEAD / BUBBLER / EMITTER  | 30.00   | HEAD / BUBBLER / EMITTER  | 30.00   |
| ADV                       | 7.00    | ADV                       | 7.00    | ADV                       | 7.00    |
| LATERAL LINE & FITTINGS   | 2.61    | LATERAL LINE & FITTINGS   | 2.26    | LATERAL LINE & FITTINGS   | 0.82    |
| PRESSURE REGULATOR        |         | PRESSURE REGULATOR        |         | PRESSURE REGULATOR        |         |
| FILTER                    |         | FILTER                    |         | FILTER                    |         |
| MIN. RCV PRV DIFFERENTIAL | 2.90    | MIN. RCV PRV DIFFERENTIAL | 2.90    | MIN. RCV PRV DIFFERENTIAL | 2.90    |
| CONTROL VALVE             |         | CONTROL VALVE             |         | CONTROL VALVE             |         |
| PRESSURE MAIN LINE        | 1.66    | PRESSURE MAIN LINE        | 3.19    | PRESSURE MAIN LINE        | 3.22    |
| FLOW SENSOR               |         | FLOW SENSOR               |         | FLOW SENSOR               |         |
| PRESSURE REDUCER          | 1.00    | PRESSURE REDUCER          | 1.00    | PRESSURE REDUCER          | 1.00    |
| BACKFLOW PREVENTER        | 11.40   | BACKFLOW PREVENTER        | 11.40   | BACKFLOW PREVENTER        | 11.50   |
| STRAINER / FILTER         | 0.18    | STRAINER / FILTER         | 0.15    | STRAINER / FILTER         | 0.11    |
| WATER METER               | 0.20    | WATER METER               | 0.20    | WATER METER               | 0.20    |
| SERVICE LINE              | 0.02    | SERVICE LINE              | 0.01    | SERVICE LINE              | 0.01    |
| ELEVATION DIFFERENCE      | 0.43    | ELEVATION DIFFERENCE      | 2.60    | ELEVATION DIFFERENCE      | 2.60    |
| CONTINGENCY               | 2.57    | CONTINGENCY               | 3.04    | CONTINGENCY               | 2.97    |
| MINIMUM PSI. REQ'D.       | 60.27   | MINIMUM PSI. REQ'D.       | 63.75   | MINIMUM PSI. REQ'D.       | 62.33   |
| (EXISTING PSI.)           | -101.00 | (EXISTING PSI.)           | -101.00 | (EXISTING PSI.)           | -101.00 |
| RESIDUAL PSI.             | 40.73   | RESIDUAL PSI.             | 37.25   | RESIDUAL PSI.             | 38.67   |

**IRRIGATION NOTES**

- ALL IMPROVEMENTS SHALL COMPLY WITH THE STANDARD UNIFORM BUILDING CODE.
- INSTALL ALL EQUIPMENT AS SHOWN IN THE DETAILS AND/OR AS STATED IN THE WRITTEN SPECIFICATIONS PREPARED BY THE LANDSCAPE ARCHITECT AND MANUFACTURER.
- THIS DESIGN IS DIAGRAMMATIC. ANY EQUIPMENT SHOWN IN PAVED AREAS IS FOR DESIGN CLARIFICATION ONLY, AND IS TO BE INSTALLED WITHIN PLANTED AREAS WHEREVER POSSIBLE.
- THE IRRIGATION CONTRACTOR SHALL NOT WILLFULLY INSTALL THE IRRIGATION SYSTEM AS INDICATED ON THE DRAWINGS WHEN IT IS OBVIOUS IN THE FIELD THAT UNKNOWN OBSTRUCTIONS OR GRADE DIFFERENCES EXIST THAT WERE NOT KNOWN DURING DESIGN. SUCH CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S AUTHORIZED REPRESENTATIVE, OR THE LANDSCAPE ARCHITECT. OTHERWISE THE IRRIGATION CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY NECESSARY REVISIONS.
- THE SYSTEM DESIGN IS BASED ON THE MINIMUM OPERATING PRESSURE SHOWN AT EACH POINT OF CONNECTION. THE IRRIGATION CONTRACTOR SHALL VERIFY ALL PRESSURES ON SITE PRIOR TO COMMENCING WITH THE INSTALLATION OF THE IRRIGATION SYSTEM.
- FINAL LOCATION OF AUTOMATIC CONTROLLER TO BE DETERMINED BY THE OWNER'S AUTHORIZED REPRESENTATIVE AND/OR THE LANDSCAPE ARCHITECT.
- 117 VOLT 60HZ SINGLE PHASE ELECTRICAL POWER OUTLET FOR THE IRRIGATION CONTROLLER IS TO BE PROVIDED BY THE OWNER/DEVELOPER. THE IRRIGATION CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING THE HOOK-UP FROM THE POWER OUTLET TO THE CONTROLLER.
- ALL WIRE FROM THE CONTROLLER TO THE ELECTRIC CONTROL VALVES SHALL BE #14 AWG-UF DIRECT BURIAL COPPER WIRE. PILOT WIRES SHALL BE COLOR CODED BY CONTROLLER AND COMMON GROUND WIRES SHALL BE WHITE WITH IDENTIFYING COLOR STRIPE CODED FOR EACH CONTROLLER. CONTRACTOR SHALL INSTALL (1) EXTRA COLOR CODED COMMON AND (1) EXTRA PILOT WIRE FROM THE CONTROLLER TO THE FARTHEST VALVE(S) FOR FUTURE USE. INSTALL IN COMMON TRENCH WITH MAIN LINE PIPING WHERE POSSIBLE. FASTEN WIRES TO UNDERSIDE OF MAIN LINE WITH NYLON WIRE TIES AT 10 FT. INTERVALS. PROVIDE A MINIMUM OF 18" OF COVER WHEN NOT ADJACENT TO MAIN LINE.
- ALL WIRE CONNECTIONS SHALL BE MADE IN VALVE BOXES WITH APPROVED WATERPROOF WIRE CONNECTORS. WIRE SPLICES WILL NOT BE PERMITTED UNLESS APPROVED BY THE OWNER'S AUTHORIZED REPRESENTATIVE, OR THE LANDSCAPE ARCHITECT. WIRE SPLICES SHALL BE LOCATED ON RECORD DRAWINGS AS PER SPECIFICATIONS.
- PROVIDE A MINIMUM OF 24" OF COVER OVER ALL PRESSURE MAIN LINE PIPING 2" AND LARGER, 18" OF COVER OVER ALL OTHER PRESSURE MAIN LINE PIPING, AND 12" OVER ALL NON-PRESSURE LATERAL LINE PIPING. PROVIDE A MINIMUM OF 36" COVER OVER ALL SLEEVES UNDER STREETS AND VEHICULAR TRAFFIC AREAS. ALL MAIN LINE PIPING UNDER PAVED AREAS SHALL BE INSTALLED IN SCH. 40 PVC SLEEVES. ALL SLEEVES SHALL BE INSTALLED UNDER PAVED AREAS PRIOR TO PAVING.
- THE IRRIGATION CONTRACTOR SHALL FLUSH ALL LINES AND ADJUST ALL HEADS FOR MAXIMUM PERFORMANCE AND TO PREVENT OVERSPRAY ON ALL WALKS, WALLS, FENCES, DRIVES, AND BUILDINGS AS MUCH AS POSSIBLE. THIS WORK SHALL INCLUDE SELECTING THE BEST DEGREE OF ARC TO FIT ANY EXISTING SITE CONDITIONS.
- THE IRRIGATION CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ANTI-DRAIN VALVES AS REQUIRED BY FIELD CONDITIONS TO PREVENT DAMAGE AND EROSION DUE TO EXCESSIVE LOW HEAD RUNOFF.
- UPON COMPLETION OF THE JOB, THE CONTRACTOR IS TO PROVIDE THE OWNER WITH A SEPIA MYLAR OF THE RECORD IRRIGATION PLANS.
- THE SYSTEM SHALL BE FULLY GUARANTEED FOR A PERIOD OF ONE YEAR. ANY DEFECTIVE MATERIAL OR POOR WORKMANSHIP SHALL BE REPLACED OR CORRECTED BY THE IRRIGATION CONTRACTOR AT NO COST TO THE OWNER(S).

**DRIPLINE INSTALLATION NOTES**

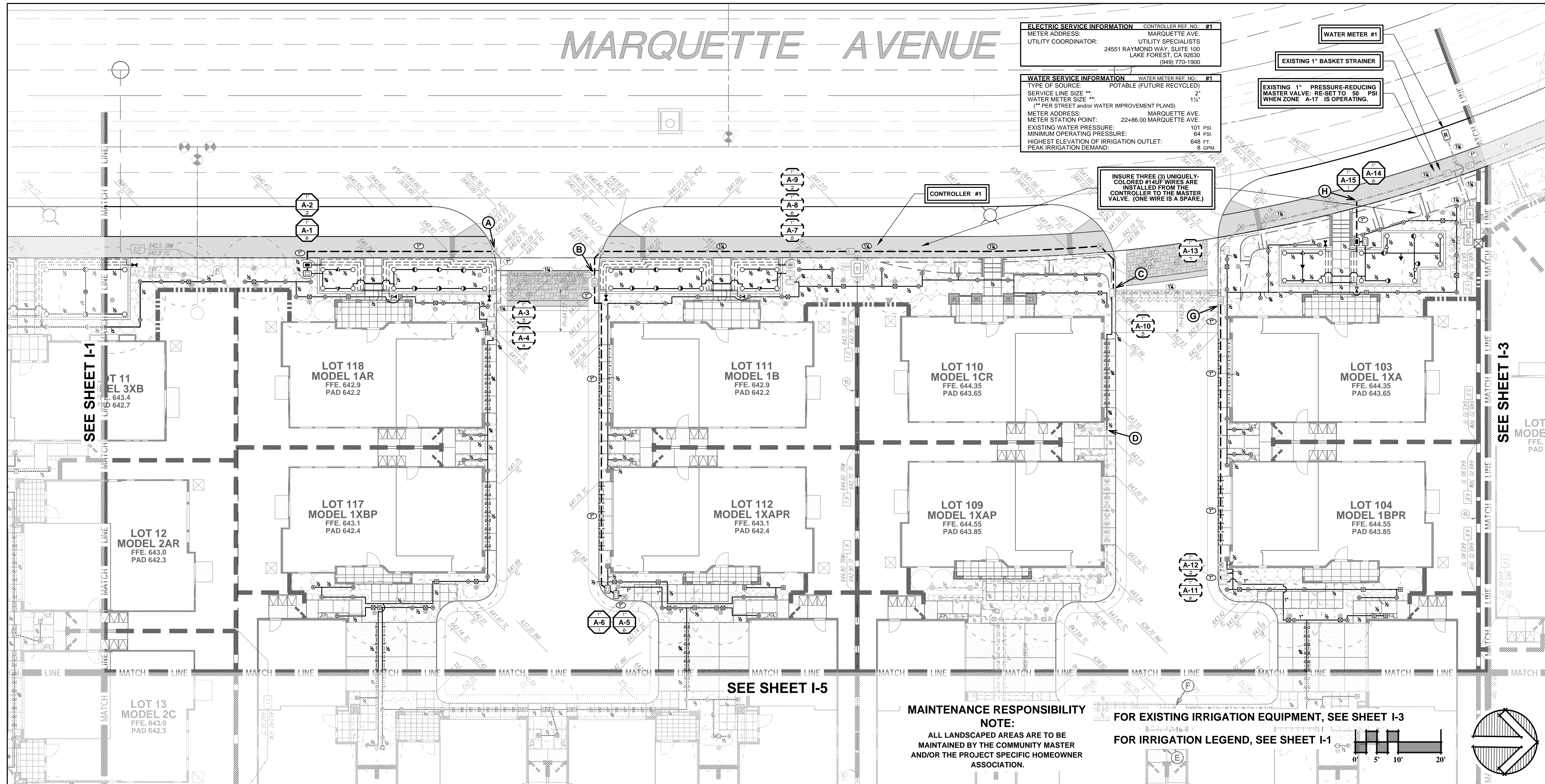
- ALL DRIPLINE, FITTINGS, FILTERS, PRESSURE REGULATORS, AIR VACUUM RELIEF VALVES, AND FLUSH VALVES SHALL BE FURNISHED BY THE MANUFACTURER LISTED IN THE LEGEND, AND SHALL BE INSTALLED AS PER THE LEGEND, THE DETAILS, AND THE MANUFACTURER'S RECOMMENDATIONS. NO SUBSTITUTIONS WILL BE ACCEPTED.
- DRIPLINE SHALL GENERALLY BE LAID OUT AS FOLLOWS:
  - DRIPLINE IS INSTALLED AROUND THE ENTIRE EDGE OF THE AREA TO BE IRRIGATED.
    - DISTANCES FROM THE EDGE OF THE IRRIGATED AREA ARE:
      - 2'-4" NEXT TO ASPHALT, CONCRETE PAVING, OR "HARDSCAPE".
      - 2'-4" OUTSIDE OF UNCONTAINED LANDSCAPES.
    - CORNERS, THE DRIFLINE MAY BE CURVED, DOWN TO A MINIMUM RADIUS OF 15 INCHES. FOR CORNERS SHARPER THAN THIS, ELBOWS (OR TEES, AS APPLICABLE) SHALL BE USED.
  - DRIPLINE IS INSTALLED THROUGHOUT THE ENTIRE AREA TO BE IRRIGATED, AND IS CONNECTED WITH TEES TO THE DRIFLINE LAID AROUND THE EDGE.
    - ON FLAT GROUND (LESS THAN 3%):
      - DRIFLINE SHALL GENERALLY RUN PARALLEL TO THE LONGEST SIDE OF THE AREA TO BE IRRIGATED.
      - DRIFLINES SHALL BE EVENLY SPACED AT A DISTANCE NOT TO EXCEED THE ON-CENTER (O.C.) SPACING INDICATED IN THE LEGEND.
    - ON SLOPES (3% OR STEEPER):
      - DRIFLINE SHALL GENERALLY RUN PARALLEL TO CONTOUR LINES, NOT UP AND DOWN THE SLOPE.
      - DRIFLINES SHALL BE SPACED AT 125% OF ON-CENTER SPACING ON THE LOWER ONE-THIRD OF THE SLOPE.
- ON LOOPED DRIFLINE SYSTEMS WITH A SINGLE POINT OF SUPPLY, THE SUPPLY CONNECTION SHALL BE MADE ON THE PERIMETER OF THE LOOP, AND THE CONNECTION SHALL BE LOCATED ON THE OPPOSITE SIDE OF THE LOOP FROM THE FLUSH VALVE.
- THE IRRIGATION CONTRACTOR SHALL THOROUGHLY FLUSH ALL LATERALS AND DRIFLINES PRIOR TO INSTALLATION OF FLUSH VALVES AND AIR VACUUM RELIEF VALVES.
- LOCATION OF FLUSH VALVES ON THE PLANS IS DIAGRAMMATIC ONLY. FLUSH VALVES SHALL BE LOCATED AT THE LOWEST POINT IN ELEVATION OPPOSITE THE POINT OF SUPPLY ON LOOPED DRIFLINE SYSTEMS, AND AT THE END OF THE LINE ON SINGULAR RUNS OF DRIFLINE.
- LOCATION OF AIR VACUUM RELIEF VALVES ON THE PLANS IS DIAGRAMMATIC ONLY. AIR VACUUM RELIEF VALVES SHALL BE LOCATED AT THE HIGHEST POINT IN ELEVATION ON LOOPED OR SINGULAR DRIFLINES.

**LOW FLOW BUBBLER SCHEDULE**

| SHRUBS:   | NUMBER OF TUBES (OUTLETS) TO EACH PLANT: |
|---|--|
| AAP AGAPANTHUS AFRICANUS 'PETER PAN'            | PETER PAN LILY-OF-THE-NILE 1             |
| AAQ AGAPANTHUS AFRICANUS 'QUEEN ANNE'           | QUEEN ANNE LILY-OF-THE-NILE 1            |
| AGA AGAPANTHUS AFRICANUS                        | LILY-OF-THE-NILE 1                       |
| AHJ ACHILLEA HYSSORIFOLIA                       | FALSE HEATHER 1                          |
| CVL CALLISTEMON VIMINALIS 'LITTLE JOHN'         | LITTLE JOHN BOTTLEBRUSH 1                |
| DIB DIETES BICOLOR                              | FORTNIGHT LILY 1                         |
| DIV DIETES IRIDIODES                            | FORTNIGHT LILY 1                         |
| EJS EUONYMUS JAPONICUS 'SILVER KING'            | SILVER KING EUONYMUS 1                   |
| EUM EUONYMUS JAPONICUS 'MICROPHYLLUS VAREGATUS' | VAREGATED BOX-LEAF EUONYMUS 1            |
| EMV ESCALLONIA FRAZEEI                          | ESCALLONIA 1                             |
| HEE HEMEROCALLIS 'YELLOW DWARF' (EVARGREEN)     | YELLOW DWARF LILY 1                      |
| HER HEMEROCALLIS 'RUBY DWARF' (EVERGREEN)       | EVERGREEN DWARF LILY 1                   |
| LJT LIGUSTRUM JAPONICUM 'TEANUM'                | TEXAS PRIVET 1                           |
| MUL MULEBERRIS RECENS                           | DEER GRASS 1                             |
| NDC NANDINA DOMESTICA 'COMPACTA'                | COMPACT HEAVENLY BAMBOO 1                |
| NEM NANDINA DOMESTICA 'HARBOUR DWARF'           | HARBOUR DWARF HEAVY BAMBOO 1             |
| NNN NANDINA DOMESTICA 'NANA'                    | NANA HEAVENLY BAMBOO 1                   |
| PBB PHORUM TENAX 'BRONZE BABY'                  | BRONZE BABY NEW ZEALAND FLAX 1           |
| PEP PELARSONIUM LUTEUM                          | IVY GERANIUM 1                           |
| PTC PITTOSPORUM TOBIRA 'CREME DE MINT'          | CREME DE MINT TOBIRA 1                   |
| PHI PHORUM TENAX 'JACK SPURTT'                  | JACK SPURTT NEW ZEALAND FLAX 1           |
| PTV PITTOSPORUM TOBIRA 'VAREGATA'               | VAREGATED TOBIRA 1                       |
| PTW PITTOSPORUM TOBIRA 'WHEELER'S DWARF'        | WHEELER'S DWARF TOBIRA 1                 |
| RFC ROSA FLORIBUNDA 'ICEBERG'                   | ICEBERG ROSE 1                           |
| RIB RHAPHIOLEPIS INDICA 'BALLERINA'             | BALLERINA INDA HAWTHORN 1                |
| RIC RHAPHIOLEPIS INDICA 'CLARA'                 | CLARA INDA HAWTHORN 1                    |
| RIP RHAPHIOLEPIS INDICA 'PINK CLOUD'            | PINK CLOUD INDA HAWTHORN 1               |
| RIS RHAPHIOLEPIS INDICA 'SPRINGTIME'            | SPRINGTIME INDA HAWTHORN 1               |
| RYL ROSA FLOWER CARPET 'YELLOW'                 | YELLOW FLOWER CARPET ROSE 1              |
| RFY ROSA FLOWER CARPET 'PINK'                   | PINK FLOWER CARPET ROSE 1                |
| RFR ROSA FLOWER CARPET 'RED'                    | RED FLOWER CARPET ROSE 1                 |
| RWF ROSA FLOWER CARPET 'WHITE'                  | WHITE FLOWER CARPET ROSE 1               |
| TSJ TRACHELOSPERMUM LASINKOIDES                 | STAR JASMINE 1                           |
| TUV TILBAGHIA VIOLACEA                          | SOCIETY GARLIC 1                         |
| VTX VITIS 'LASCARIS' 'SPRING BOUQUET'           | LAURUSTRIUS 1                            |
| XCC XYLOSMA CONGES TUM 'COMPACTA'               | COMPACT XYLOSMA 2                        |

| VINES:                    | NUMBER OF TUBES (OUTLETS) TO EACH PLANT: |
|---------------------------|--|
| DBU DISTICTIS BUCINATORIA | BLOOD RED TRUMPET VINE 1                 |



| REVISIONS | BY |
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**HILSDALE at COLLEGE PARK**  
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PLANNING  
 DESIGN  
 LANDSCAPE ARCHITECTURE

**ROBERT MITCHELL & ASSOCIATES**  
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BLUEPRINTER'S DATE STAMP:

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