INSTALLATION GENERAL NOTES

1. THE SYSTEM DESIGN ASSUMES A MINIMUM DYNAMIC PRESSURE FOR THE IRRIGATION SYSTEM OF 75 PSI (PER CITY ENGINEER), AT A DESIGN FLOW OF 60 GPM AT THE 2-INCH IRRIGATION POINT-OF-CONNECTION (POC). TAP, METER, BACKFLOW PREVENTER, MASTER VALVE AND FLOW METER SHALL BE SIZED AS INDICATED IN THE DRAWING LEGEND. VERIFY PRESSURE AND FLOW ON SITE PRIOR TO CONSTRUCTION.

2. READ THOROUGHLY AND BECOME FAMILIAR WITH THE SPECIFICATIONS AND INSTALLATION DETAILS FOR THIS AND RELATED WORK PRIOR TO CONSTRUCTION.

3. COORDINATE UTILITY LOCATES ("CALL BEFORE YOU DIG") OF UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION.

4. DO NOT PROCEED WITH THE INSTALLATION OF THE IRRIGATION SYSTEM WHEN IT IS OBVIOUS IN THE FIELD THAT OBSTRUCTIONS OR GRADE DIFFERENCES EXIST THAT MIGHT NOT HAVE BEEN CONSIDERED IN THE ENGINEERING. IF DISCREPANCIES IN CONSTRUCTION DETAILS, LEGEND, NOTES, OR SPECIFICATIONS ARE DISCOVERED, BRING ALL SUCH OBSTRUCTIONS OR DISCREPANCIES TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE.

5. THE DRAWINGS ARE DIAGRAMMATIC. THEREFORE, THE FOLLOWING SHOULD BE NOTED:

   A. ALTHOUGH IRRIGATION COMPONENTS MAY BE SHOWN OUTSIDE PLANTING AREAS FOR CLARITY, INSTALL IRRIGATION PIPE AND WIRING IN LANDSCAPED AREAS WHENEVER POSSIBLE.

   B. TREE AND SHRUB LOCATIONS AS SHOWN ON LANDSCAPE PLANS TAKE PRECEDENCE OVER IRRIGATION EQUIPMENT LOCATIONS. AVOID CONFLICTS BETWEEN THE IRRIGATION SYSTEM, PLANTING MATERIALS, AND ARCHITECTURAL FEATURES.

   C. USE ONLY STANDARD TEES AND ELBOW FITTINGS. USE OF TEES IN THE BULLNOSE CONFIGURATION, OR USE OF CROSS TYPE FITTINGS IS NOT ALLOWED.

6. PROVIDE THE FOLLOWING COMPONENTS TO THE OWNER PRIOR TO THE COMPLETION OF THE PROJECT:

   A. TWO (2) OPERATING KEYS FOR EACH TYPE OF MANUALLY OPERATED VALVES.

   B. TWO (2) OF EACH SERVICING WRENCH OR TOOL NEEDED FOR COMPLETE ACCESS, ADJUSTMENT, AND REPAIR OF ALL ROTARY SPRINKLERS.

7. SELECT NOZZLES FOR SPRAY AND ROTARY SPRINKLERS WITH ARCS WHICH PROVIDE COMPLETE AND ADEQUATE COVERAGE WITH MINIMUM OVERSPRAY FOR THE SITE CONDITIONS. CAREFULLY ADJUST THE RADIUS OF THROW AND ARC OF COVERAGE OF EACH ROTARY SPRINKLER TO PROVIDE THE BEST PERFORMANCE.

8. THE IRRIGATION CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION OF IRRIGATION SLEEVING. SLEEVES ARE REQUIRED FOR BOTH PIPING AND ELECTRICAL WIRING AT EACH HARDSCAPE CROSSING. COORDINATE INSTALLATION OF SLEEVING WITH OTHER TRADES. ANY PIPE OR WIRE WHICH PASSES BENEATH EXISTING HARDSCAPE WHERE SLEEVING WAS NOT INSTALLED WILL REQUIRE HORIZONTAL BORING BY THE IRRIGATION CONTRACTOR. PIPE SLEEVES SHALL BE SIZED TWICE THE NOMINAL SIZE OF THE PIPE PASSING THROUGH.

9. INSTALL ALL ELECTRICAL POWER TO THE IRRIGATION CONTROL SYSTEM IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE AND ALL APPLICABLE LOCAL ELECTRIC UTILITY CODES.

10. THE FOLLOWING SHOULD BE NOTED REGARDING PIPE SIZING: IF A SECTION OF UNSIZED PIPE IS LOCATED BETWEEN TWO IDENTICALLY SIZED SECTIONS, THE UNSIZED PIPE IS THE SAME NOMINAL SIZE AS THE TWO SIZED SECTIONS. THE UNSIZED PIPE SHOULD NOT BE CONFUSED WITH THE DEFAULT PIPE SIZE NOTED IN THE LEGEND.

11. INSTALL TWO (2) #14 AWG CONTROL WIRES ON STANDARD WIRE SYSTEMS OR ONE (1) #14 AWG TWO-WIRE PAIR ON TWO-WIRE SYSTEMS, FOR USE AS SPARES. INSTALL SPARE WIRES FROM CONTROLLER LOCATION TO EACH DEAD-END OF MAINLINE. COIL 3 FEET OF WIRE IN VALVE BOX.

12. IRRIGATION CONTRACTOR TO INSTALL PAIGE DECODER CABLE FUSE DEVICES (DCFD), AT ALL DECODER CABLE DIRECTIONAL SPLITS AND/OR CHANGES. INSTALL ALL SPLICES WITHIN A 10" VALVE BOX.

CONSTRUCTION NOTES

(1) THE IRRIGATION SYSTEM POINT-OF-CONNECTION (POC) SHALL BE DOWNSTREAM OF THE IRRIGATION WATER TAP AND METER INSTALLED BY OTHERS AT THE APPROXIMATE LOCATION SHOWN. INSTALL BACKFLOW PREVENTION UNIT AND MASTER VALVE ASSEMBLY AS INDICATED. VERIFY EXACT LOCATION OF POC WITH OWNER'S REPRESENTATIVE.

(2) WALL MOUNT THE IRRIGATION CONTROLLER AT THE APPROXIMATE LOCATION SHOWN. COORDINATE ELECTRICAL POWER TO THE CONTROLLER WITH THE OWNER'S REPRESENTATIVE. CARE SHOULD BE TAKEN TO INSTALL THE IRRIGATION CONTROLLER IN A LOCATION THAT IS ACCESSIBLE FOR MAINTENANCE, AND SCREENED FROM VIEW EITHER BEHIND ENTRY WALLS, NEXT TO BUILDINGS, OR BEHIND PLANT MATERIAL. FINAL LOCATION TO BE APPROVED BY OWNER'S REPRESENTATIVE.

(3) IRRIGATION SHOWN OUT OF LANDSCAPED AREA FOR CLARITY ONLY. INSTALL IRRIGATION COMPONENTS WITHIN LANDSCAPED AREA.

ESTIMATED ANNUAL WATER USE

THE IRRIGATION SYSTEM AS SHOWN ON THIS PLAN HAS AN ESTIMATED ANNUAL WATER USE OF 1,832,649GALLONS. TO VERIFY EFFICIENT IRRIGATION SYSTEM OPERATION, THE OWNER SHALL COMPARE THIS ESTIMATED IRRIGATION WATER USE WITH ACTUAL WATER USE, AS RECORDED ON SITE, AFTER ALL PLANT MATERIAL HAS BEEN ESTABLISHED.

THE ESTIMATED ANNUAL IRRIGATION WATER USE OF THIS SYSTEM IS BASED ON 30-YEARS AVERAGE EVAPOTRANSPIRATION RATES (ET) FOR THE LOCAL AREA AND TYPICAL NEW IRRIGATION SYSTEM EQUIPMENT EFFICIENCIES. MAJOR DEVIATIONS FROM THIS ESTIMATE USE SHOULD BE BROUGHT TO THE ATTENTION OF THE OWNER AND CURRENT IRRIGATION MAINTENANCE COMPANY AT THE TIME OF THE DEVIATION.

TO VERIFY EFFICIENT IRRIGATION SYSTEM OPERATION AND WATER USE, AN IRRIGATION SYSTEM EVALUATION AND AUDIT SHOULD BE PERFORMED.

IRRIGATION SYSTEM DESIGN PARAMETERS

THE FACTORS IN THE TABLE BELOW WERE UTILIZED IN THE IRRIGATION SYSTEM DESIGN TO DETERMINE TAP CAPACITY REQUIREMENTS AND MAINLINE SIZE AND ARE MADE AVAILABLE TO GUIDE DECISIONS ON THE SYSTEM OPERATION BY THE CONTRACTOR. MULTIPLE ZONES WILL BE REQUIRED TO OPERATE AT THE SAME TIME UP TO A COMBINED TOTAL EQUAL TO THE MINIMUM FLOW REQUIRED AT THE POC WHEN ZONE SIZES ARE LOWER THAN THE MINIMUM FLOW REQUIRED AT THE POC.

MINIMUM PRESSURE REQUIREMENT AT POC	75 PSI
MINIMUM FLOW REQUIRED AT POC	60 GPM
MAXIMUM FLOW AT FURTHEST POINTS OF THE SYSTEM	55 GPM
TOTAL IRRIGATION DAYS PER WEEK	4 DAYS
WATER WINDOW PER DAY	8 HRS

IRRIGATION LEGEND

SLEEVES: **CLASS 200 PVC**

POINT-OF-CONNECTION ASSEMBLY

MAINLINE PIPE: **CLASS 200 PVC**
2-INCH SIZE UNLESS OTHERWISE INDICATED

LATERAL PIPE TO SPRINKLERS: **CLASS 200 PVC**
1-INCH SIZE UNLESS OTHERWISE INDICATED

LATERAL PIPE TO TREE EMITTERS: **CLASS 315 PVC**
3/4-INCH SIZE UNLESS OTHERWISE INDICATED

UNCONNECTED PIPE CROSSING

REMOTE CONTROL VALVE ASSEMBLY FOR SPRINKLER LATERALS:
RAIN BIRD PEB PEB-IVM (SIZED PER PLAN)

QUICK COUPLING VALVE ASSEMBLY: **RAIN BIRD 5RC**

ISOLATION GATE VALVE ASSEMBLY: **MATCO 514**

F FLOW SENSOR ASSEMBLY: **RAIN BIRD FS200P**

BACKFLOW PREVENTION ASSEMBLY: **FEBCO 825YA (2")**

M WATER METER AND CURB STOP ASSEMBLY: **BY OTHERS**

MASTER VALVE ASSEMBLY: **RAIN BIRD PEB-IVM (2")**

HB HOSE BIB ASSEMBLY: **SUPERIOR B400**

A1 — INDICATES CONTROLLER AND STATION NUMBER
14 — INDICATES LATERAL DISCHARGE (GPM)
1" — INDICATES VALVE SIZE (INCHES)
Turf — INDICATES LANDSCAPE APPLICATION

A IRRIGATION CONTROLLER UNIT
WITH **RAINBIRD WR2 RAIN SENSOR**
IQ4 CELL CATRIDGE
RAINBIRD ESP-LXIVM 2 WIRE CONTROLLER

WEATHER SENSOR: **CONTACT HINES INC FOR WEATHER SENSOR SPECIFICATION**

— C — IRRIGATION CONTROL WIRES IN CONDUIT OR WITH WARNING TAPE

TREE BUBBLER ASSEMBLY: **TWO (Y) RAIN BIRD 1401 BUBBLERS**
PRESSURE: **30 PSI**
FLOW (GPM): **0.25 PER BUBBLER; 0.50 PER ASSEMBLY**

POP-UP SPRAY SPRINKLER: **RAIN BIRD RD1806-S-P30 W/U-SERIES 8 NOZZLE**
PRESSURE: **30 PSI** RADIUS: **8 FEET**
FLOW (GPM): **Q-0.26 H-0.52 F-1.05**

POP-UP SPRAY SPRINKLER: **RAIN BIRD RD1806-S-P30 W/U-SERIES 10 NOZZLE**
PRESSURE: **30 PSI** RADIUS: **10 FEET**
FLOW (GPM): **Q-0.41 H-0.82 F-1.64**

POP-UP SPRAY SPRINKLER: **RAIN BIRD RD1806-S-P30 W/U-SERIES 12 NOZZLE**
PRESSURE: **30 PSI** RADIUS: **12 FEET**
FLOW (GPM): **Q-0.65 H-1.30 F-2.60**

POP-UP SPRAY SPRINKLER: **RAIN BIRD RD1806-S-P30 W/U-SERIES 15 NOZZLE**
PRESSURE: **30 PSI** RADIUS: **15 FEET**
FLOW (GPM): **Q-0.92 H-1.85 F-3.70**

POP-UP SPRAY SPRINKLER: **RAIN BIRD RD1806-S-P30 W/U SERIES NOZZLE**
PRESSURE: **30 PSI** RADIUS: **4 FEET X 15 FEET**
FLOW (GPM): **EST-0.61 SST-1.21**

(12 Q, T, H, TT, TQ, F) POP-UP SPRAY SPRINKLER: **RAIN BIRD 1812-SAM-PRS W/ FIXED U-SERIES NOZZLE**
PRESSURE: **30 PSI** RADIUS: **AS SHOWN**

(8, 10, 12, 15) POP-UP SPRAY SPRINKLER: **RAIN BIRD 1812-SAM-PRS W/ HE-VAN NOZZLES**
PRESSURE: **30 PSI** RADIUS: **AS SHOWN**

(LCS, RCS, ES, CS, SS) POP-UP SPRAY SPRINKLER: **RAIN BIRD 1812-SAM-PRS W/ STRIP SERIES NOZZLES**
PRESSURE: **30 PSI** RADIUS: **AS SHOWN**

POP-UP GEAR DRIVEN ROTORS: **RAIN BIRD 5006-SAM-R**
PRESSURE: **45 PSI**

NOZZLE	RADIUS	FLOW
1.5	35'	1.54 GPM
2.0	37'	2.07 GPM
2.5	37'	2.51 GPM
3.0	39'	3.09 GPM
4.0	42'	4.01 GPM
5.0	43'	5.09 GPM
6.0	44'	6.01 GPM
8.0	44'	8.01 GPM

Hines Inc
SITE WATER ENGINEERING SERVICES
323 W. DRAKE RD, SUITE 204
FORT COLLINS, COLORADO 80526
Telephone: 970.282.1800
Web: www.hinesinc.com

PROJECT LEAD & CIVIL ENGINEERING:
KEITH
301 EAST ATLANTIC BLVD.
POMPANO BEACH, FL 33060
PH: (954) 788-3400
Florida Engineering Business License: CA7928
Florida Surveyor and Mapper Business License: LB6860
Florida Landscape Architecture Business License: LC26000457

LANDSCAPE ARCHITECT:
MKSK
801 INTERNATIONAL PARKWAY
LAKE MARY, FL 32746
407.871.9607
MKSKSTUDIOS.COM

ARCHITECT:
WANNEMACHER JENSEN ARCHITECTS
815 NORTHWEST 57 AVE. SUITE 219
MIAMI, FLORIDA 33126
727-822-5566
WJARC.COM AA0002277

MECHANICAL, PLUMBING, & ELECTRICAL ENGINEERING:
SGM ENGINEERING
5301 WATERFORD DISTRICT DR.
SUITE 750
954-421-1944
SGMENGINEERING.COM CA-00006208

REVISIONS

NO.	DESCRIPTION	DATE
	ISSUED FOR BUILDING PERMIT	11/21/2024

ISSUE DATE: 11/21/2024
DESIGNED BY: HINES
DRAWN BY: HINES
CHECKED BY: HINES

THOMAS F. DONAHUE, P.E.
FLORIDA REG. NO. 60529
(FOR THE FIRM)

CLIENT
VILLAGE OF PINECREST
PINECREST PARKS & RECREATION

PROJECT

SHEET TITLE
IRRIGATION LEGENDS & NOTES

SHEET NUMBER IR-000

KEITH PROJECT NUMBER 13861.00

Plotted by: carla_r0czr79 On 11/21/2024 8:54 AM
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