**'EXHIBIT A'**

**PROBLEMS - SOLUTIONS – ANALYSIS - PHOTOS**

***"The EPA WaterSense program estimates that as much as 50 percent of irrigation water is wasted due to overwatering caused by inefficiencies in irrigation methods and systems."***

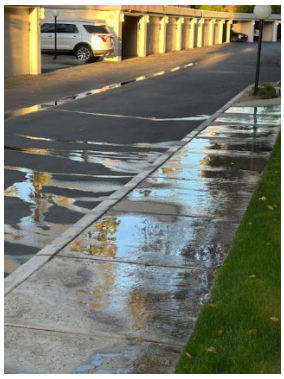
## PROBLEMS & SOLUTIONS

### 'PART A' - High Efficiency MP Rotor Spray Heads Replacement

**PROBLEM:** The photos below show the significant amount of wasted water that has been delivered during a 15-minute cycle onto a typical 5' wide ***Narrow Strip*** grass area Section. These photos are from the north side of Building 8 and show an individual example of a typical problem for many similar areas project wide that are adjacent to a hard impervious surface sidewalk or drive lane.

Note the amount of over spray coverage that has been placed onto the adjacent 4' wide sidewalk, and the significant resulting runoff onto the adjacent drive lane and into the valley gutter. It is estimated that 60 – 70% of the sidewalk is over sprayed resulting in this water being wasted.

The existing traditional standard spray heads lack adequate direction and flow adjustment flexibility to properly control this problem in ***Narrow Strip*** Sections as seen in the photos below.



**Bldg 8**

**Bldg 9**

**Bldg 7**

**Lakeshore Dr**

**SOLUTION:** Exchange all traditional standard spray heads to a Toro MP Rotor Nozzle type spray head. **This product is EPA WaterSense© Approved** and meets USGBC LEED v4.1 Certification requiring a 20% water reduction prerequisite for a Water Efficiency (WE) Credit.

Each ***Narrow Strip*** and ***Broad Area*** Sections of turf will be analyzed to select the proper nozzle configuration type to minimize overspray and to maximize distribution uniformity. This increased efficiency will delete wasteful runoff and will result in an industry estimated 30% average savings of water used compared to the currently existing traditional standard spray nozzles.

*See page 3 for the estimated water usage and cost savings based on comparisons between existing and proposed efficient replacement systems for both* ***Narrow Strip*** *and* ***Broad Area*** Sections.

***Narrow Strip*** Sections - Standard Toro MPR Nozzles of various types will be used.
**Industry Standards state that these nozzles typically save 30% of water usage.**

***Broad Area*** Sections – Toro MPR Popup Large Radius Nozzles will be used.
**Industry Standards state that these nozzles typically save 15% of water usage.**

## ‘PART B’ - WaterSense High Efficiency Irrigation Controllers Replacement

**PROBLEM:** There are 5 on-site manually programmed irrigation timers for controlling both drip and spray zones. These existing controllers lack the programming and control technology to irrigate efficiently. The landscape maintenance contractor must physically show up on site several times a month to seasonally adjust each one. This required task results in significant water waste and unnecessary on-site labor costs for Harbour Village.

**SOLUTION:** Replace 5 irrigation controllers with ***Weathermatic SL1600 16-zone*** Commercial controllers and related weather-based components. **This product is EPA WaterSense© Approved.**


Each independent zone related to an individual vegetation type will be programmed to create a sophisticated watering schedule that can adjust automatically to required seasonal flow rates and start times.

These controllers communicate via cellular module with local internet-based weather-data stations to adjust automatically to real-time site-specific weather data. Off-site computer monitoring and program adjustments can and will be done by the selected contractor as part of their monthly contract terms. An annual required subscription fee beginning year 2 is $120/yr per controller or $600/yr.

**Industry Standard water savings with this controller is stated at 25% - 30%, in addition to the 22% savings shown on the ESTIMATED ANNUAL SAVINGS section below.** See **ANALYSIS** page 3.

**The new controllers will facilitate the implementation of Harbour Village’s Multi-Year Landscaping Plan through more precise control of water being delivered to each zone as well as by enabling data-driven irrigation management with digital history reporting.**

## ‘PART C’ – Installation of Automatic Main Control Valves & Leak Detection Sensors

Included in the Contractor’s scope of work is to install wireless controlled Main Valves, Leak Flow Detectors, and Solenoid Valves on the two independent main landscape risers. These valves and sensors will communicate any minute leak in the system downstream to the smart irrigation controller to immediately shut off the system flow. The controllers will identify the leaking zone to the monitoring station. **These components will save additional $H_2O$ above estimates stated on Pg 3.**

### Selected Landscaping Contractor

Harbour Village will select the Contractor from the attached List of Bidders (see ‘EXHIBIT B’) to install the Waterwise components project wide. The Contractor will be chosen based on their professional integrity, multiple certifications, response performance regarding our Request for Proposals, experience, and qualified references. Harbour Village will execute a long-term Maintenance Contract with the same Contractor to ensure that the installed systems will be maintained and monitored correctly for seamless integration and project success.

## ANALYSIS

### Comparison of Existing vs MPR Nozzles - Estimated $H_2O$ Savings

**EXAMPLE: Building 8**

Based on the 5' x 66' (330sf) ***Narrow Strip*** **Building 8** example area shown in the photos on page 1 above, the **weekly** calculated Water Savings from nozzle replacement is estimated as follows:

**Site Conditions:**

- Soil Type – Clay/Loam  Infiltration Rate = 1"/hr
- July & August - Maintained Precipitation Root Depth Required = 4"
- Based on current run times for existing nozzles, and adjusted run times for MPR nozzles.

**Note:** Seasonal adjustment run times not included in examples below. MPR nozzles require a smaller number of days to reach the required 4" saturation depth due to a slower and more precise placement.

**Nozzles Replacement Comparison:**

| Existing - Standard Rainbird Nozzles | | | | Zone Run Times Required - 4" depth | | | # Days | Gallons |
|---|---|---|---|---|---|---|---|---|
| Type | Qty | GPM | Total GPM | Runs/Day | Minutes | Min/Day | per Week | per Week |
| 90° | 2 | 0.29 | 0.58 | 2 | 10 | 20 | 5 | 58 |
| 180° | 9 | 0.59 | 5.31 | 2 | 10 | 20 | 5 | 531 |
| | | | | | Total Gallons Used per Week | | | 589 |

| Replaced - MPR High-Efficiency Nozzles | | | | Zone Run Times Required - 4" depth | | | # Days | Gallons |
|---|---|---|---|---|---|---|---|---|
| Type | Qty | GPM | Total GPM | Runs/Day | Minutes | Min/Day | per Week | per Week |
| PSM+ 90 left | 1 | 0.17 | 0.17 | 2 | 20 | 40 | 4 | 27.2 |
| PSM+ 90 right | 1 | 0.17 | 0.17 | 2 | 20 | 40 | 4 | 27.2 |
| PSM+ standard | 7 | 0.33 | 2.31 | 2 | 20 | 40 | 4 | 369.6 |
| | | | | | Total Gallons Used per Week | | | 424 |

**Toro PSM+ MP Rotors**

| Estimated $H_2O$ Savings (424÷589) | 28% |
|---|---|

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### ESTIMATED ANNUAL $H_2O$ SAVINGS – Conservative based

**Based on 2025 Water Used and Cost & Grant Component Replacements**

| Grass Turf - Area Breakdown | | | H2O Used | $0.5789 | GRANT - Estimated Annual Savings | | |
|---|---|---|---|---|---|---|---|
| Section Type | sf | % | 2025 | per 100gal | $H_2O$ %/avg | Gallons | Cost |
| Narrow Strip | 22,840 | 49% | 1,741,407 | $10,081 | 28% | 487,594 | $2,823 |
| Broad Area | 23,914 | 51% | 1,823,293 | $10,555 | 15% | 273,494 | $1,583 |
| **Totals** | **46,754** | **100%** | **3,564,700** | **$20,637** | **22%** | **761,088** | **$4,406** |

**Note: Overspray waste on adjacent hard surfaces not included in above.**
**Add 2% additional savings to the Narrow Strip line above.**

## PHOTOS

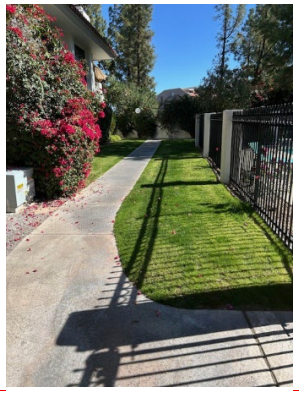
### Harbour Village Grass Areas

#### *Narrow Strip* Section examples

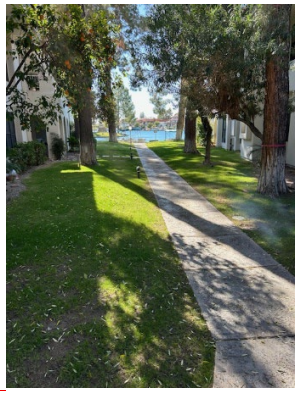
Total Area is 22,840sf - Toto PSM+ MPR standard rotor nozzles would be used in these areas

**Bldg 8**

**Bldg 9**



**Pool**



**Bldgs 2 & 3**

#### *Broad Area* Section examples

Toal Area is 23,914sf - Toto T5 popup large radius nozzles would be used in these areas

**Bldgs 7 & 8**

**Bldg 1**

**Bldgs 1 & 2**

**Dog Hill**