

# CITY OF MARYSVILLE AGENDA BILL

## EXECUTIVE SUMMARY FOR ACTION

**CITY COUNCIL MEETING DATE: July 10, 2017**

<b>AGENDA ITEM:</b>	
Purchase of Toro Controller OSMAC G3 Network Irrigation System at Cedarcrest Golf Course	
<b>PREPARED BY:</b>	<b>DIRECTOR APPROVAL:</b>
Jim Ballew	
<b>DEPARTMENT:</b>	
Parks, Culture and Recreation	
<b>ATTACHMENTS:</b>	
Purchase Quotation	
<b>BUDGET CODE:</b>	<b>AMOUNT:</b>
	\$96,587.03
<b>SUMMARY:</b>	

The irrigation system at Cedarcrest Golf Course has recently failed. The equipment is an outdated automated system managed by software that is no longer supported and controllers that are no longer available or repairable. Staff has admirably managed to obtain parts for several years but those options have expired.

The irrigation controller system is vital towards daily management of the golf course irrigation system and if the system is not replaced, the results could be catastrophic to golf course operations. This system will integrate with all in ground features of the irrigation.

Staff is requesting the City consider the purchase of the Toro Irrigation Controller OSMAC G3 Network System, which will be a new radio controlled irrigation controller network system that will integrate with existing infrastructure. This is a sole source quote due to the need to stay with a network controller that can function with current infrastructure. Total cost of the system is \$96,587.03.

**RECOMMENDED ACTION:** Staff recommends the City Council consider authorize the purchase of new Toro Irrigation OSMAC G3 Network Irrigation System controller network for Cedarcrest Golf Course. The Purchase price is \$96,587.03.



Date: June 27, 2017

**Quotation for Cedarcrest Golf Course Maint**  
Quote No:8024849-00

<b>Prepared For:</b> Jim Ballew	<b>Quote No:</b> 8024849-00
Cedarcrest Golf Course Maint 6915 Armar Road Marysville, Wa 98270	<b>iQuote No:</b> TS0607060727 <b>Sales Person:</b> Carl Taylor doug.dahl@turfstar.com (760) 597-6045

Model	Product Description	Qty	Unit Price	Subtotal	Sales Tax	Total
G3-40P6R3	Osmac G3 40 Station Green LVL3	18	\$3,591.00	\$64,638.00	\$5,882.06	\$70,520.06
RIU-02	Radio Interface Unit Dual Radio	1	\$7,722.12	\$7,722.12	\$702.72	\$8,424.84
LX-SW	Software Lynx Client/Server	1	\$3,276.00	\$3,276.00	\$298.12	\$3,574.12
SITE-SURVEY	Site Survey	1	\$600.00	\$ 600.00	\$0.00	\$600.00
NSN-ULTIMATE-L	NSN-R-Pkg:Ultimate 5N1 Lump	1	\$13,360.00	\$13,360.00	\$0.00	\$13,360.00
LYNXAPPS	Lynx Apps Application	1	\$99.00	\$ 99.00	\$9.01	\$108.01
<b>Totals:</b>				<b>\$89,695.12</b>	<b>\$6,891.91</b>	<b>\$96,587.03</b>



Date: June 27, 2017

**Quotation for Cedarcrest Golf Course Maint**  
Quote No:8024849-00

**Standard Terms and Conditions**

Prices, including all finance options, are valid for 30 days from date of quotation. Open Account Terms are N30, subject to credit approval. Irrigation Products are sold in case quantity. Freight charges may apply.

**Products not covered by Turf Star Support or Warranty**

Motorola Radios and Otterbine Products are serviced your local authorized service dealer.

**Office Locations**

**Northern California:**

5646 W Barstow Ave Ste 104  
Fresno, CA 93722  
Fax: (559) 277-7123

2438 Radley Court  
Hayward, CA 94545  
Fax: (510) 785-3576

11373 Sunrise Gold Circle  
Rancho Cordova, CA 95742  
Fax: (800) 241-1997

**Southern California:**

79-253 Country Club Drive  
Bermuda Dunes, CA 92203  
Fax: (760) 345-4297

955 Beacon Street  
Brea, CA 92821  
Fax: (800) 775-8873

2110 La Mirada Ste 100  
Vista, CA 92083  
Fax: (760) 734-4285

**Pacific Northwest:**

11175 SW Elligsen Way  
Sherwood, OR 97140  
Ph: (503) 691-0250

20224 80<sup>th</sup> Ave South  
Kent, WA 98032  
Fax: (253) 872-6942

2824 East Garland  
Spokane, WA 99207  
Fax: (509) 483-7563



The OSMAC G3 satellite is easy to install, troubleshoot and maintain. Economical because you buy only what you need and can expand as your site conditions change. They utilize paging technology to create one of the most convenient, dependable, and flexible satellites on the market. Employing wireless communication, these satellites are great for retrofit projects. Available as complete satellites or upgrade kit for existing E-OSMAC satellites. Upgrade kit includes OSMAC G3 faceplate, interface cable and hardware.

## FEATURES & BENEFITS

### ✓ Low Cost Wireless Communication

Ideal choice for upgrading existing systems. No communication wires are needed. Mounts to many existing pedestal bolt patterns.

### ✓ Easily Expandable

OSMAC G3 offers up to 64 stations in eight-station increments.

### ✓ Lower Operating Costs

The enhanced surge protection on OSMAC G3 provides lower operating costs. Ideal for high lightning areas.

### ✓ Enhanced Diagnostics

Page log and radio signal strength readings provide local troubleshooting capabilities.





**Additional Features:**

- ✓ Stand-alone capabilities include scheduled irrigation programs, manual program start and station multi-manual
- ✓ Received Signal Strength Indication (RSSI) at the satellite faceplate aids in system installation and troubleshooting
- ✓ Page Log records the last 100 commands received by each satellite
- ✓ Improved radio performance helps overcome difficult environmental conditions
- ✓ Available as complete satellites and an upgrade kit for existing E-OSMAC units

**SATELLITE SPECIFICATIONS**

**Operational**

*OSMAC G3:*

- Colored LED indicators to confirm 24-, 9-, and 5-volt power to various boards within the cabinet
- LED's for each station output
- Internal antenna allows for smaller profile cabinet
- Patented Hot Post for each eight-station module

**Electrical**

- Input power: 120/240 V ac, 50/60 Hz

*OSMAC G3:*

- 0.20 amps, 110-120 V ac, 60 Hz (no load)
- 0.96 amps, 110-120 V ac, 60 Hz (max load)
- 0.10 amps, 220-240 V ac, 50/60 Hz (no load)
- 0.47 amps, 220-240 V ac, 50/60 Hz (max load)

**Dimensions**

- Plastic Cabinet: 17" W x 40" H x 16" D

**Options**

- Surge protection

*Specifying Information – OSMAC G3 Upgrade Kit*

<b>118-2987</b>
<i>Kit Contains</i>
OSMAC G3 Faceplate, Interface Cable and Hardware

*Specifying Information—OSMAC G3 Satellites*

G-X XX 6ANMX					
Description	Configuration	Cabinet	Output	Communication	Options
E	XX	X	6A	X	MX
G – OSMAC G3	16 – 16 Stations 24 – 24 Stations 32 – 32 Stations 40 – 40 Stations 48 – 48 Stations 56 – 56 Stations 64 – 64 Stations	P – Plastic Green B – Plastic Tree Bark T – Plastic Desert Sand	6A – 24VAC	N – Narrowband Radio	3 – Large Terminal Blocks, Switches 4 – Large Terminal Block, Switches, Premium Surge
Example: When specifying a 40-station, satellite in a green plastic cabinet with large terminal block, switches and premium surge you would specify:G-40P6ANM4					





Count on it.

# LYNX® CENTRAL CONTROL SYSTEM



The Toro® Lync® Control System was developed specifically to help you address the unique challenges and changing priorities you face everyday. With the Lync System, you can now have all of your essential irrigation information readily available in one place, conveniently combined into a single, intuitive interface.

## Features & Benefits

### Lync 3.0 Adds More Flexibility And More Control

Station Percent Adjust for duration allows you to set temporary adjustments that automatically returns to normal after a set number of days. The new Sequential Instant Program allows you to pick the order stations water automatically. GDC system diagnostics can now be selected by Hole or Area to make pin pointing a problem even easier, and you can now chose to have Lync automatically upload station changes into the Watering Plan.

### Simplified Decision Making With Dynamic Drilldown

Guides you to where you need to go. Follow the water drop in the Watering Plan to find stations, holes or entire areas that are disabled, on hold or otherwise not programmed to irrigate. Quickly find any stations in Course Report that did not operate as intended.

### Flexible and Editable Map

Easily add, drag, drop and assign sprinklers, satellites, sensors and switches to their exact locations. You can effortlessly make edits as your field hardware changes. Fully supports CAD-generated maps.

### Power Guard Helps Prevent Wasted Energy

Integration with a Flowtronex® pump station with PACE™ enables the exclusive Lync Power Guard feature to track and control electricity usage of the system.



**Integrated Turf Guard® Soil Sensor**  
*Helps you determine when to irrigate and how much which helps you save water.*



**Lync Mobile**  
*Enables remote access and control from any mobile device connected to the Internet. Screens are specifically designed and optimized for smaller devices.*



# LYNX® CENTRAL CONTROL SYSTEM

## SPECIFICATIONS – Lynx® Levels Comparison

SYSTEM CAPACITY	Lynx CE	Lynx PE	Lynx SE
Satellites	500	500	500
Satellites Stations	32,000	1344	512
GDC Stations	6400	1000	500
Weather Stations	10	10	10
Pump Stations	10	3	2
Courses	3	2	1
Holes	84	56	28
Hydraulic Branches	1024	300	100

### HARDWARE SUPPORTED

OSMAC®	Yes	Yes	Yes
Network GDC	Yes	Yes	Yes
Network VP®	Yes	No	No

### PROGRAMMING

VP Current Sensing	Yes	No	No
VP Station Adjust Upload	Yes	No	No
Site Code Categories	7	3	No
Precip. Mgmt. Groups (PMG)	Yes	Yes	No
Max. Stations/Hole Control	Yes	Yes	No
Instant Program Creation	Yes	Yes	Yes
Program Priority	Yes	Yes	No
Pump Profiling	Yes	No	No
Station Group Multi-Manual	Yes	No	No
Master Group Multi-Manual	Yes	No	No
Pump Integration	Yes	Yes	Optional
Weather Station Alarms	Yes	Yes	Optional
ET Auto Calc. RT Method	Yes	Yes	Optional



**NSN® Connect**  
Remote access so  
that you can control  
irrigation anytime,  
anywhere.

## ADDITIONAL FEATURES

### Runtimes:

- Runtimes are executed to the second rather than rounding to the whole minute, resulting in more precise irrigation and water savings (Network VP® & OSMAC® only)
- Control your irrigation by setting runtime minutes or application inches and let the system calculate the other. See exactly how much water you will apply and how long you will irrigate each area.
- Runtime synchronization with Network VP satellites prevents irrigation outages if the central goes offline.
- Integrated runtime display shows past and planned irrigation activity so you can easily determine what action to take.

### Quick Start:

- With Quick Start, you create station, hardware and area associations, and control the definition of greens, tees, fairways and sprinklers based on their locations.
- A basic hydraulic tree is auto-generated for you during Quick Start.

### Views and Reports:

- Course Report provides both real time and daily summaries of both scheduled and manual watering events.
- Area and Hole orientation allows you to control your irrigation system the same way you think about the course.
- Instant Program has simple check-box selection and Dynamic Drilldown to you can instantly create and personalize new irrigation programs
- Projected Flow View shows you areas that will be watered and how much will be applied.

### Communication:

- Current-sensing capabilities notify you of wire cuts and sprinklers unintentionally turned off (Network VP Only).
- Constant communication with Network VP satellites lets you take action if a power outage threatens irrigation.
- Toro GDC communication and solenoid diagnostics help identify shorts, low voltage and other issues.
- Weather station integration and Hand-held Remote Interface support are included as standard features

### Operating System:

- Windows 7

## Specifying Information—Lynx Central

LX-0X-X-XX			
Computer Hardware	Service	Levels	Field Hardware
0X	X	X	X
1—Standard Computer 4—Premium Computer	1—1-year NSN 5—5-years NSN	0—CE 1—SE 2—PE	1—For OSMAC 7—For Network VP 8—For Network GDC
Example: When ordering a LYNX Central standard computer with one year of NSN and CE Level with Network VP field hardware, you would order: LX-01-1-07			

## Specifying Information—Lynx CE Central Upgrade for SitePro®

Model	Description
LYNX-NSN-STAN	Lynx Upgrade - NSN - Standard Toro Computer
LYNX-NSN-PREM	Lynx Upgrade - NSN - Premium Toro Computer
LYNX-NONNSN-STAN	Lynx Upgrade-NSN-Standard Computer and 1-year NSN Support
LYNX-NONNSN-PREM	Lynx Upgrade-NSN-Premium Computer and 1-year NSN Support
LX-SW	Software, Lynx, Client/Server

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## Network LTC Plus to Network VP

Available as an upgrade kit for existing LTC Plus satellites. Upgrade kit includes Network VP Faceplate, Network LTC Plus To Network VP Power Distribution Board, Cable and Hardware.

### FEATURES & BENEFITS

- ✓ Station based flow management shortens watering window
- ✓ Intuitive user interface simplifies manual irrigation
- ✓ Station runtimes executed to the second helps save water
- ✓ Upgrade to Lynx for enhanced central capabilities



#### Specifying Information—Network LTC Plus Upgrade Kit

<b>118-0038</b>
<i>Kit Contains</i>
Network VP Faceplate, Network LTC Plus To Network VP Power Distribution Board, Cable and Hardware

## Network LTC Plus to LTC Pro

Available as complete satellites or upgrade kit for existing LTC Plus satellites. Upgrade kit includes LTC Pro Faceplate, Power Distribution Board, Cable and Hardware.

### FEATURES & BENEFITS

- ✓ Intuitive user interface simplifies faceplate functions
- ✓ Enhanced manual operations
  - Runtimes to the second
  - Stackable multi-manuals
  - Start/Pause/Stop
- ✓ Backwards compatible with SitePro®



#### Specifying Information—LTC Pro Satellites

<b>LTCRXXX6XX</b>					
Description	Configuration	Cabinet	Output	Comm.	Options
<b>LTCR</b>	<b>XX</b>	<b>X</b>	<b>6</b>	<b>X</b>	<b>X</b>
LTCR - LTC Pro	16 – 16 Stations 40 – 40 Stations	P – Plastic Green	6 – 24VAC	M – Wire – Radio	4 – Large Terminal Block, Switches, Premium Surge
Example: When specifying a 40-station, wire communication satellite, you would specify: <b>LTCR40P6M4</b>					

#### Specifying Information—LTC Pro Upgrade Kit

<b>118-4838</b>
<i>Kit Contains</i>
LTC Pro Faceplate, Power Distribution Board, Cable and Hardware

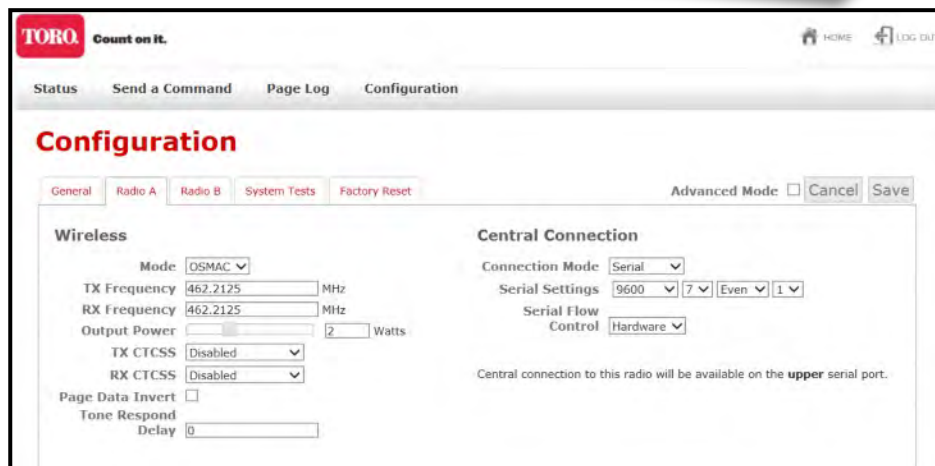


## Radio Interface Unit (RIU)

The Toro® Radio Interface Unit combines the functions of the OSMAC® Base Station and Hand-held Remote Interface (HHRI) in a single unit. Available in a dual radio configuration that performs both Base Station and HHRI functions, a single radio configuration that's programmable for either function, and a radio-less configuration that's programmable for either function and utilizes a user-supplied

## FEATURES & BENEFITS

- ✓ Provides control of your system while you're on-the-go
- ✓ Provides both hand-held control and central-to-satellite communication
- ✓ Designed to operate continuously, 24/7
- ✓ Interfaces with your Lynx® or SitePro® central without the burden of recurring network costs
- ✓ Tailored to fit your application with programmable selections for: OSMAC Base Station and hand-held remote interface modes, independent transmit/receive UHF frequencies, independent transmit/receive private line settings (CTCSS) and transmit power.



*Radio Interface Unit (RIU) Graphical User Interface.*

### *Specifying Information—Radio Interface Unit (RIU)*

<i>Model</i>	<i>Description</i>
RIU-00	Radio Interface Unit – External Radio
RIU-01	Radio Interface Unit – Single Radio
RIU-02	Radio Interface Unit – Dual Radio

*Note: FCC license required.*