

**Charlotte County Board Of County Commissioners
Agenda Item Summary**

Item Number: F- 3

1 DEPARTMENT MAKING REQUEST

Purchasing

2 MEETING DATE

6/10/2014 9:00:00 AM

3 REQUESTED MOTION/ACTION

Approve File #14-290, School Flasher Upgrade, sole source approval to Temple, Inc. of Decatur, AL, in the amount of \$130,000. This is to upgrade 80 school flashers with current technology and to provide a 10 year program to provide all upgrades and services to keep the system operational.

4 AGENDA

5 IS THIS ITEM BUDGETED (IF APPLICABLE) - Yes

Budget Action

No budget action necessary. Budgeted in the adopted FY2014 CIP "School Flashing Beacon Technology Upgrade".

Financial Impact Summary Statement

Funding is supplied from ad valorem revenues in the Greater Charlotte Street Lighting District.

Detailed Analysis Attached - No

Budget Officer-

6 BACKGROUND (Why is this Action Necessary, and What Action will be accomplished)

Initially all school flasher clocks were manually set by traffic technicians by responding to the field each time the clocks were not synchronized or changes in school schedules required modifications. With 57 school flashers in the County and 16 school flashers in the City of Punta Gorda this process is very labor intensive.

* In 2005 a decision was made to utilize the most current state of the art technology to send out changes in timings to each time clock in the field from one central location via a one way communication command or pager. This technology has served us well and eliminated the need to send a technician out into the field to address the problem. A concern has been raised throughout the transportation industry that pager service in the near future may no longer be available. In order to maintain the services we wish to obtain an alternative method. RTC Manufacturing, the makers of the time clocks and the paging system communication software, realized this would become an issue in the near future and developed a communication system utilizing cell phone communication administered from one central location. In our case that central location would be the Traffic Management Center where our operator would have the capability to update and synchronize all school flasher clocks for both the County and the City of Punta Gorda.

* Replacing the paging units currently in use will provide enhanced features, such as two way communication. The units in the field will verify that they received a command to reset the clocks, giving the operator the ability to verify all scheduling for accuracy and make any modifications necessary. The new system will provide us with alarms should a school flashing beacon not be active and will also advise us that all school flashing beacons are operating.

* Many of our school flashers are now solar powered for energy efficiency. However this efficiency creates another problem with the clocks. Electrically powered clocks use the 60 Hz sine wave to keep the clocks from drifting. Solar power does not use the sine wave because it operates off of sun and battery therefore those clocks either lose time, gain time or do not stay synchronized. The current school flasher time clocks do not have a means to manually program them in the field. Should we lose our paging service we will have no means to change the times or schedules. Without the paging program, all school flasher clocks would have to be replaced and returned to manual clocks with a front entry panel that we will have to purchase.

The upgrade being requested contains a number of benefits to both the County and the City of Punta Gorda:

* The new program is either 5 or 10 years as proposed by the manufacturer. We are proposing to purchase the 10 year program as the cost difference between the 5 and 10 year plans are nominal.

* As part of the proposal the manufacturer will supply all necessary components to provide us with a completely operational system except for the computer and the internet service which we already have. Further enhancements include an expanded scheduler clock that will allow us to install all timings for the upcoming school year, including exception days. All of our current time clocks will be updated with software and hardware enhancements and the manufacturer will give us a three year warranty on the updated clocks. Currently there is no warranty on our clocks as they have all expired.

* The 10 year program includes all upgrades and services needed to keep the system operational as designed, including cell carrier services. The manufacturer has negotiated with 27 companies to give the end user the best possible coverage.

* The service is currently a 2 g network which, from all indications, will continue for the next 5 years. At any time the manufacturer chooses to change to 3 or 4 g network there will be no charge to the County or to the City as this is already covered in the agreement.

ATTACHMENTS:

Name:	Description:	Type:
<input type="checkbox"/> 20140423154635.pdf	Quote Specifications and Sole Source Letter	Backup Material
<input type="checkbox"/> Q-3_School_Flashing_Beacon_Upgrade.pdf	School Flashing Beacon 2014 Adopted CIP	Backup Material

TEMPLE, INC.

P.O. Box 2066 / 50 Davis Street
Decatur, AL 35602
Phone: 800/633-3221, Local 386-615-8246
Fax: 256/353-4578, Local 386-615-4866

1954 - 2014
Serving the South's
Traffic Needs
for Over 50 Years

TO: Richard A. Doll Sr.
District Lighting Superintendent
Charlotte County Public Works - Lighting District

DATE:

14-Apr-14

TERMS: Net 30 Days, FOB
Shipping Point, Prepaid
and Allowed

DELIVERY:

4 to 6 Weeks ARO

SALESPERSON:

Sheldon Pafford

QUOTE #: Charlotte RTC Cp-22 and M2M 4-14-14

Page 1 Of 1

CONDITIONS: The prices and terms on this quotation are subject to verbal changes or other agreements unless approved in writing by Temple, Inc.. All quotations and agreements are contingent upon strikes, accidents, fires, availability of materials and all other causes beyond our control. Prices are based on cost and conditions existing on the date of the quotation and are subject to changes by Temple, Inc. before final acceptance.

Quantity	Description	Price	Extended
80	M2M Ten Year Communication Plan - M2M10YR Includes: 506435 - Cell Modem 506472 - M2M SIM Card 506473 - M2M Antenna 506475 - Adapter Cable Modem RS232	\$ 1,500.00	\$120,000.00
80	CP-22 Processor and Extended Warranty - (Three Years) (506445CPW)	\$ 125.00	\$ 10,000.00
Total Quote			<u>\$130,000.00</u>

Sheldon Pafford
Account Representative



RTC Manufacturing, Inc.
Serving the traffic signal industry since 1987

April 10, 2014

Charlotte County FL

To Whom It May Concern:

This is to inform Charlotte County, Florida that Temple, Inc. is the exclusive dealer for Charlotte County in the State of Florida for RTC product distribution, repairs and customer support. Products which Temple distributes for RTC Manufacturing, Inc. include Solar and AC School Zone Flasher Systems, the M2M Communication system, CPR 2102 Pager and Radio Systems, AP22 Time switch and accessories and the TR-4 GPS Time Reference. Any order for RTC products must be purchased through Temple, Inc.

Thank you for your interest in RTC products and the opportunity to be of service. Should you require additional information, please call me at (800) 782-8721.

Sincerely,

Margie Dorman
Sales Associate

Model TSC-2G, M2M to Time Switch Converter

Communicate with school zone flashers using 2G SMS texting

The RTC Model TSC-2G is a compact device that allows the user to connect an RTC Time Switch to a central computer using SMS texting on 2G networks available from multiple providers. The TSC-2G is used to provide full two-way communications from a central computer to any Model AP22 or CPR2102 Time Switch via SMS texting eliminating the need for additional infrastructure.

FEATURES



M2M to Time Switch Converter
Model TSC-2G p/n 506435

- Two-way communication with AP22 & CPR2102 Time Switches using SMS texting, 2G technology (no additional infrastructure)
- Omni antenna typically mounts inside the flasher cabinet. External Omni antenna available if required.
- LED indicator for power and SMS network connection.
- Compact size: 3.4" x 2.4" x 1.0" with mounting tabs.
- Simple "plug-and-play" operation.
- Make program changes anytime day or night.
- Operating temperature range: -30 to +75C.

SPECIFICATIONS

Dimensions	3.4" x 2.4" x 1.0"
Power	12VDC, powered from the Time Switch DB9 connector
Operating Temperature	-30 to 75 C
SMS Texting	2G Technology from AT&T or a variety of other providers
Antenna Options	Omni antenna mounted inside the flasher cabinet (standard) Omni antenna mounted outside the flasher cabinet (if required)
Programming	Make programming changes to your school zone flashers anytime from a PC or laptop connected to the internet
Manual Control	Send manual control commands anytime day or night
Validate Programming	Validate the program in any time switch anytime day or night

ORDERING INFORMATION

Part Number: 506435

Description: Model TSC-2, M2M to Time Switch Converter



RTC Manufacturing, Inc.

1016 Enterprise Place * Arlington, TX 76001
(800) 782-8721 (817) 860-1217

"Serving the traffic signal industry since 1987."

www rtc-traffic.com

Specification

School Zone Flasher System Upgrade

Radio/M2M/Wi-Fi/LAN-Ethernet Programmable Time Switch System with Master Groups

This specification sets the minimum acceptable requirements, materials, and workmanship for a Radio/M2M/Wi-Fi or LAN-Ethernet Programmable Time Switch System that is programmed and managed using two-way Radio, M2M, Wi-Fi, or LAN - Ethernet communications technology or a hybrid combination of any of these technologies. The system shall be capable of uploading and downloading time switch programming from a central computer and verifying the condition of the output circuit over any combination of 900MHz Spread Spectrum Radio, Wi-Fi, SMS M2M (machine to machine) and LAN-Ethernet (fiber optic or copper wire).

School Zone Flasher Time Switch

The existing CPR 2102 time switches must be upgraded to include the latest technology to bring them into a condition where the manufacturer will issue a new non pro-rated 3 year warranty. Real time clock chips, relays, power supplies, manual switches, and other at risk for failure parts will be replaced. The programming memory of the Time Switch will be upgrade from 1 week to 15 months of internal operational schedule. The time switch will be upgraded with a wireless M2M data converter. The M2M device has a 10 year service agreement with no recurring fees or charges. The M2M device has an obsolescence warranty that guarantees, if the technology used to link the M2M device to the network changes during the 10 year service agreement, RTC will replace the unit with a unit that is compatible with the current technology.

Software and Computer Configuration

The time Switch System software shall be capable of operation on a central office computer running Windows™ 2000 ,XP, Windows 7 (or most recent version i.e.Windows 8). The software shall be user friendly and intuitive in format and shall employ a "Windows" style interface and shall include suitable prompts and verifications as well as help screens. Database storage on a SQL cloud service must be available for use if the agency approves it. The software must have a mapping function for providing a visual view for the field assets. The programing, and management of the time switches

The computer used for the Radio/Wi-Fi/LAN-Ethernet Programmable Time Switch System shall be configured as follows:

- PC running Windows™ 2000 or XP, Windows 7, or Windows 8
- 1024MB RAM (recommended).
- 10MB hard drive space.
- Monitor (1024 x 768) or better.
- Mouse and Printer (optional).
- COM port for possible use by the radio transceiver.
- LAN (Ethernet) Port
- Persistent Internet connection.

The Radio, M2M, Wi-Fi, or LAN - Ethernet programmable time switch system shall operate from any combination of 900MHz spread spectrum radios, wireless Wi-Fi and/or LAN-ethernet to form a wireless RS-232 network. The wireless RS-232 network shall have the capability of 2-way communication with any individual time switch. The wireless RS-232 network shall also have the capability of downloading information to all of the time switches for a particular school, and to all time switches throughout the network.

Master Group Programming

The software shall be capable of programming up to 10 Master Groups. Each Master Group shall be comprised of 99 Sub Groups. Each Sub Group shall be programmable to accommodate the daily, weekly and annual schedule of the flashing beacons around one school or school zone. The system shall be capable of programming a total of 990 individual schools or school zones.

The Master Group number shall appear at the top of each program screen that is Master Group specific.

Sub Group Programming

The software shall be capable of programming up to 10 Master Groups each with up to 99 Sub Groups. A sub group will be comprised of time switch locations that share common daily, weekly and annual programs, typically for controlling flashing beacons around one school or school zone. Each Sub Group shall be capable of accommodating up to 99 different time switch location addresses. The programming of each Sub Group shall include an alphanumeric name and group number that is selected by the user from a list of available Sub Group numbers.

One button shall be provided for adding a Sub Group to a master group and a separate button shall be provided for editing a Sub Group. The add feature shall allow the operator to enter a new Sub Group name and select a Sub Group number from a list of available Sub Group numbers. The edit feature shall allow the operator to change an existing Sub Group name, change a Sub Group number, and delete a Sub Group. If a Sub Group is deleted, or if the number of a Sub Group has been changed, the deleted and changed numbers shall be added back to the list of available Sub Group numbers. This feature will eliminate the possibility of inadvertently making a program change.

The software shall allow the operator to list the Sub Groups by name, and list the Sub Groups by number. Print capability shall be provided when listing the Sub Groups by name or number.

Location Programming

Each Sub Group (see above) shall be capable of accommodating up to 99 different time switch location addresses. The programming of each location shall include the location name, location type, sub group number and a unique location ID number. The software shall allow the operator to assign a unique location ID number. Each new location type shall be automatically added to a pull down list, eliminating the need to reenter the same location type more than once.

One button shall be provided for adding a location and a separate button shall be provided for editing a location. The add feature shall allow the operator to enter a new location name, location type and select a location number from a list of available location numbers. The edit feature shall allow the operator to change an existing location name, location type, change a location number, and delete a location. If a location is deleted, or if the number of a location has been changed, the deleted and changed numbers shall be added back to the list of available location numbers. This feature will eliminate the possibility of inadvertently making a program change.

The software shall allow the operator to list the locations by name, by type and by sub group. Print capability shall be provided when listing the locations by name, type or sub group.

Day Plan Programming

Each sub group described above shall have up to twenty (20) day plans with 24 program steps per plan. Each day plan program step shall include the following:

Time of day: Hours, Minutes, AM or

PM ON / OFF Commands: ON
 OFF

A list of the program steps shall be displayed on the screen as the day plan program is being entered. The operator shall be able to access any of the program steps that are displayed for editing.

One of the day plans shall be reserved for programming a normal school day. The operator shall have the option of entering a name for each of the other day plans such as Early Out, Football, Summer School, etc. This feature immediately identifies each day plan's function. The operator shall have the ability to edit or delete any day plan name. Each new day plan name shall be automatically added to a list, eliminating the need to enter the same name more than once.

Provisions shall be made to edit or delete any day plan step. It shall also be possible to copy the program from any day plan to any other day plan, and copy from any sub group to any other sub group. Print capability shall be provided for any sub group and day plan combination including the day plan name.

Over the Radio/Wi-Fi/LAN-Ethernet network, SMS, it shall be possible to manually send default week plans to any or all sub groups of time switches. It shall also be possible, over the Radio/Wi-Fi/LAN-Ethernet network, to manually re-send any alternate week plans that are currently running.

The day plan program screen shall include an "Error Check" button. When clicked, this button shall search all of the day plans for errors in the program. An error is defined as one of the following conditions:

ON command followed by an ON command, OFF
command followed by an OFF command,
A sub group having more than one day plan with the same name.

The error check display will tell the operator the sub group name, the day plan number, a description of the error found and the step numbers where the error occurs.

Default Week Plan Programming

Each Sub Group shall have a Default Week Plan. The Default Week Plan is the normal Monday through Friday school program for a Sub Group.

The system shall automatically program Saturday and Sunday to no Day Plan, and Monday through Friday to the Normal Day Plan. The operator shall have the ability to change any day from the Normal Day Plan to any other Day Plan programmed for that Sub Group.

Annual Plan Programming

The software shall be capable of executing an unlimited number of holiday plans, day plans and vacation plans. A holiday plan shall be used for single days where the time switch/s are not to operate (i.e.: school holiday). A day plan shall be used for days where the time switch/s are to operate according to a day plan other than the Normal Day Plan (i.e.: early out). A vacation plan shall be used for multiple days where the time switch/s are not to operate (i.e.: summer vacation,

winter vacation, spring break, etc.).

The software shall display a 15-month calendar on the screen without having to scroll. The calendar shall start with the current month set in Windows™. Each holiday plan and day plan shall be programmed by selecting a day from the calendar. Each vacation plan shall be programmed by selecting individual start and end days from the calendar.

In addition to the calendar display, the annual programming screen shall provide a list of all of the master groups and the sub groups for each master group programmed into the system. When the operator selects a sub group, the screen shall display the following information specific to that sub group:

Holiday Plan, Vacation
Plan,
All day plans with their assigned names.

It shall not be possible to select a day prior to the date set on the computer or program more than one holiday plan and/or day plan for the same day.

When a day on the calendar is programmed for a holiday plan, that day shall be highlighted with the letter H displayed. When a day on the calendar is programmed for a day plan, that day shall be highlighted with the day plan number displayed.

The operator shall select the start and end days of a vacation plan from the calendar displayed on the screen. When the start and end days of a vacation plan are programmed on the calendar, the individual days shall be highlighted with the letter V displayed.

A provision shall be provided that will allow the operator to view only the highlighted days on the calendar that are programmed for a holiday plan, vacation plan or a day plan. A button shall be provided that will allow the operator to view all highlighted days simultaneously.

It shall be possible for day plans to be programmed during the days programmed for a vacation plan. This feature will allow the flashing beacons to operate during summer school or other school functions that may occur during the school vacation.

Over the Radio/Wi-Fi/LAN-Ethernet network, the holiday plan, day plan and vacation plan programs shall cause the software to automatically download the appropriate programming to all affected time switches.

The software shall automatically delete all holiday plans, day plans and vacation plans whose date has passed.

It shall be possible for the operator to copy all programming to include locations, day plans, holiday plans and vacation plans from one sub group to any of the other sub groups in the system.

It shall be possible for the operator to copy only the holiday and vacation plan programming from one sub group to any of the other sub groups in the system.

The software shall allow the operator to add and delete any holiday plan, day plan or vacation plan and to show all of the holiday plans, day plans and vacation plans on the computer screen. Print capability shall be provided for the holiday plans, day plans and vacation plans.

Override Program

The main menu shall include a program override button that when clicked will allow the operator to create a special program and download that program to selected sub group/s or location/s of Radio/Wi-Fi/LAN- Ethernet programmable time switch/s in the field via the paging network. The

Radio/Wi-Fi/LAN-Ethernet programmable time switch/s will run the override program until midnight of the same day and then revert to the program previously running. This feature will allow the agency to download a special program to account for daily operational changes due to inclement weather, special holidays, or other unforeseen events.

Over the Radio/Wi-Fi/LAN-Ethernet network, the system shall be capable of downloading an override program to

- 1) a single location within a sub group of time switches,
- 2) each individual sub group of time switches,
- 3) any number of selected sub groups of time switches, or
- 4) all sub groups of time switches.

Once the operator has sent an override command, the system shall provide a means for selecting any sub group running an override program, review that override program, and re-send or cancel the override command. When a Radio/Wi-Fi/LAN-Ethernet programmable time switch receives a cancel override command, it will revert to the program that was running prior to receiving the override command.

Manual Control

Over the Radio/Wi-Fi/LAN-Ethernet network, it shall be possible to manually control any set of location time switch/s, or an entire sub group of time switches, or all sub groups of time switches from the computer. The operator shall have the ability to build a manual control list of up to six sub group/location/ON or OFF commands. Once this manual control list is complete, the operator shall click a button to download all manual commands over the Radio/Wi-Fi/LAN-Ethernet network. In order for the operator to confirm that the manual command has been successfully transmitted, the manual control screen shall display all commands received by the time switch/es.

The time switches affected by this operation shall remain in the manual state until the next program step of the default, week plan or override plan, whichever is running.

Validation of Time Switch Programming

To insure that each time switch is running the correct program, the software shall automatically poll each time switch for errors (see Error Detection). An error shall be either 1) the Radio/Wi-Fi/LAN-Ethernet connection with the time switch failed or 2) the Radio/Wi-Fi/LAN-Ethernet connection passed but the program in the time switch did not match the program in the computer.

When errors are detected, the software will automatically retry to download the correct program and re-validate each time switch listed as having an error. The retry process will repeat every 30 minutes throughout Sunday in an effort to automatically clear all errors in all time switches.

Error Detection

The system software shall have the ability to detect errors with any Radio/Wi-Fi/LAN-Ethernet time switch in the field. The error shall be either 1) the Radio/Wi-Fi/LAN-Ethernet connection with the time switch failed or 2) the Radio/Wi-Fi/LAN-Ethernet connection passed but the program in the time switch did not match the program in the computer. An error button shall appear on the main menu of the software when one or more errors are detected. Clicking this button shall display a screen with all errors listed. Each

error listed on this screen shall include the following information:

Type of Error Detected
Location Name and Number, Group Name and Number
Time, day and date the error was detected

Computer program for the location to include:
Default week plan, alternate week plan and override plan

From the error screen the operator shall have the ability to re-validate any error, reprogram any time switch listed, erase any individual error and erase all errors.

Validate Time Switch Programming

To insure that each time switch is running the correct program, the operator shall be able to manually activate a routine from a validate screen that will poll each time switch to validate the program. The validate screen shall list all time switches in the system by location name and number, and group name and number. When the validate process starts, the software will poll each time switch for errors (see Error Detection). An error shall be either 1) the Radio/Wi-Fi/LAN-Ethernet connection with the time switch failed or 2) the Radio/Wi-Fi/LAN-Ethernet connection passed but the program in the time switch did not match the program in the computer.

The validate screen shall allow the operator to disable any time switch from the validate process and to start and stop the validate process.

Communications Set-up

The communications set-up of the software shall allow the operator to select the comm port for the radio transceiver from a pull down menu.

View Time Switch Program

The operator shall have the option of selecting any time switch from a list.

The operator shall have the ability to read the data from any time switch in the field. The software shall have a screen listing all of the Groups and Locations. The operator shall highlight any time switch location and click to read the data programmed in that time switch. The data shall be as follows:

- Actual day-of-week and time-of-day snapshot
- Default week plan
- Alternate week plan (if running)
- Override plan (if running)
- Actual status of relay (ON or OFF)

This data shall be purged from the computer each day at midnight.

This screen shall also display the program stored in the software for all Groups and Locations. The operator shall be able to show the computer program and the actual time switch program on the screen at the same time for comparison. The software shall indicate automatically if the program in the time switch does not match the program in the computer.

Set-up Time Switch

The system shall have the capability of programming any time switch (week or annual) over the Radio/Wi-Fi/LAN-Ethernet network. The setup time switch program will compile the commands necessary to program any week or annual time switch with the following:

- Current day-of-week and time-of-day
- Default week plan for the sub group selected
- Alternate week plan currently running for sub group (if selected)
- Special Week Plan to run the remainder of the week.

If a Special Week Plan is to be downloaded, the operator shall build this plan from the

day plans programmed into the sub group selected.

The operator shall have the option of sending the setup program to the time switch over the Radio/Wi- Fi/LAN-Ethernet network or downloading the setup program directly to a time switch through a COM port on the computer. If downloading directly to a time switch, the operator shall select the computer COM port to be used for the download from a list of available COM ports.

Weekly or Annual Time Switch Programming

The system shall have the capability of uploading and downloading programming to week and annual time switches. The system may be comprised of all week time switches, all annual time switches or a combination of week and annual time switches. The software shall send the correct command regardless of whether the time switch is of week or annual design.

CRC Error Checking

To eliminate the possibility of a week time switch in the field receiving a corrupted transmission, the software shall include an algorithm that generates a four character, "Cyclic Redundancy Check" (CRC) error-checking character set. If a transmission contains programming for multiple week time switches, a unique CRC shall be generated for each week time switch program sent. The bidder will be required to demonstrate the CRC error checking capability to the agency as specified in the Test and Acceptance section of this specification. The Check Sum method of error checking shall not be accepted.

Print Setup

The system shall have the capability of printing all programmed data. The operator shall be able to switch between a word format and a spreadsheet format for the printout.

Help Screens

The software shall include help screens that will assist the operator in the set-up and operation of the system software. A separate help button shall be displayed on each appropriate screen.

Service information shall be available to the purchaser consisting of at least schematics, parts locators and parts lists.

Test and Acceptance

The apparent low bidder shall be required to supply a complete working system to the agency for testing and evaluation. This working system shall include a computer preloaded with the software, six field time switch units and any other equipment or supplies necessary for the agency to adequately test and evaluate the system..

The bidder shall set up the computer, the computer transceiver and the six field time switch units at a location identified by the agency. The bidder will successfully demonstrate the CRC error-checking feature to the agency personnel by simulating a weekly programmable time switch receiving normal commands and corrupted commands. The bidder will train agency personnel on how to program and operate the Radio/Wi-Fi/LAN-Ethernet programmable time switch system. The test and evaluation will take up to 60 days, at which time the equipment may be picked up by the bidder or shipped to the bidder freight collect.

Upon telephone or written notification, the bidder must deliver this equipment to the agency within 14 calendar days. Failure to comply with the above requirement will render the bid non-responsive.

FY2014 Capital Improvements Budget / FY 2014 - FY 2019 Project Detail **Project No. c411411**

GENERAL PROJECT DATA:		CONCURRENCY REQUIREMENTS (Y/N)	PROJECT NEED CRITERIA	PROJECT SCHEDULE	FY14	FY15	FY16	FY17	FY18	FY19
Project Title:	School Flashing Beacon Technology Upgrade	Does project add new capacity?	No	Safety	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
Functional Area:	Traffic Circulation	Is project required to maintain level of service:		Mandate						
Department:	Community Dev./Engineering/Lighting	- Within 5 years? List project in CIE	No	Replace						
Location:	County wide	- From 6 to 10 years? Monitor Annually	No	Growth						

PROJECT DESCRIPTION:
 Currently the communication for school flashing beacons is through pagers. As this technology is on the verge of elimination Charlotte County needs to change to newer technology. This project will change to cell phone communication to ensure that we are able to maintain school flashers in a timely manner. It will also include maintenance and free upgrade for a ten year period.

PROJECT RATIONALE (Include Additional LOS Detail, if necessary):
 There are a total of 73 school beacons in Charlotte County, including 15 in the City of Punta Gorda.

OPERATING BUDGET IMPACT:

Total Length in Miles
 Lane Miles Added
 Lane Miles Rebuilt
 New Intersections Signalized
 New Intersection (Non-Signl)

			(1)	(2)	(3)									
			Calc. for FY14											
	Prior Actual	Est FY13	Orig. FY14	Est c/o to FY14	New \$ FY14	FY14	FY15	FY16	FY17	FY18	FY19	FUTURE	Total	

EXPENDITURE PLAN (000'S)														
Design/Arch/Eng														
Land (or ROW)														
Mitigation Land														
Construction														
Internal Costs					10	10								10
Landscaping														
Interest														
Other Fees & Costs														
Equipment					130	130								130
Total Project Cost					140	140								140

FUNDING PLAN (000'S)														
Gas Tax														
Road Impact Fees														
Sales Tax														
Grants														
Developer Contribution														
Other					140	140								140
TOTAL FUNDING					140	140								140

LOAN REPAYMENT SCHEDULE (000'S)														
Gas Tax														
Impact Fees														
TOTAL LOAN REPAYMENT														

OPERATING BUDGET IMPACT (000'S)														
Personal Svc.														
Non-personal														
Capital														
Total Operating														



M2M to Time Switch Converter
 Model TSC-2G p/n 506435