

SAFE ROUTES TO SCHOOL (SRTS) PROGRAM APPLICATION

North Dakota Department of Transportation, Local Government
SFN 58504 (02-2007)

You may use additional sheets to further describe your project.

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| Project Name CPR (remote radio/computer controlled)Time Switch Emergency School Safety Flasher System |
| Project Location Remote emergency system for pedestrian flashing lights at 22 locations near the Grand Forks Elem. & Middle Schools |

Project Contact Information

| | | | |
|--|---|------------------------------------|-------------------|
| Project Contact City of Grand Forks | | | |
| Project Contact Name Al Grasser, City Engineer | Email Address agrasser@grandforksgov.com | Telephone Number (701) 787-3777 | |
| Address 255 N. 4th Street PO Box 5200 Grand Forks | | State ND | Zip Code 58201 |

Project Sponsor Information

| | | | |
|--|---|------------------------------------|-------------------|
| Project Sponsor City of Grand Forks | | | |
| Project Sponsor Name Mayor Michael Brown | Email Address mbrown@grandforksgov.com | Telephone Number (701) 746-2607 | |
| Address 255 N. 4th Street PO Box 5200 Grand Forks | | State ND | Zip Code 58201 |

Funding Information

| | |
|---|---|
| Project Type <input checked="" type="checkbox"/> Infrastructure <input type="checkbox"/> Noninfrastructure <input type="checkbox"/> Both | Project Amount Requested \$66,041.76 |
| | Total Project Cost/Source(s) \$66,041.76 |
| | Project Cost Estimate (attach detailed copy) \$66,041.76 |

Project Description

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| *see attached narrative and pictures.* |
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School(s) Involved or Affected

| School Name | Grade Level | Total K-8 Students | K-8 Students Live Within 2 miles | Estimated K-8 Students Bike or Walk | Estimated Non Student Bike or Walk to Benefit |
|--|-------------|--------------------|----------------------------------|-------------------------------------|---|
| Grand Forks School District (all K-8 students) | K-8 | 4283 | 80+% of total | 23-25% | thousands |
| | | | | | |
| | | | | | |
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| Who will own this property when project is completed? City of Grand Forks |
| Maintenance of this project will be provided by: City of Grand Forks |
| Right of Way for this project will be provided by: City of Grand Forks |

Environmental Impacts (beneficial/adverse)

There should be no adverse environmental impacts on the area. Pedestrian flashing lights that flash at appropriate times helps all who want a safe crossing into the main doors of the Grand Forks K-8 schools.

Support (Attach documentation from all those affirming this support)

| |
|---|
| Names of Governmental Agencies Grand Forks School District, GF - EGF Metropolitan Planning Organization, City of Grand Forks |
| Names of Groups/Organizations Safe Kids Grand Forks |
| Names of Individuals |

| | |
|---------------------------------------|---------------|
| _____ Signature of Contact Person | _____ Date |
| _____ Signature of Project Sponsor | _____ Date |
| _____ Signature of MPO Official | _____ Date |

These radio controlled devices are needed to meet our Safe Routes to School Program and to create a safe walking and biking environment at all times, not just at specific times of the day. If they do not flash at the correct times, they do not provide a safety service.

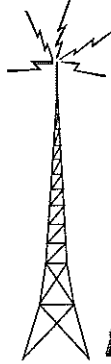
Drivers become complacent when there are no students present at the flashing lights and will begin to ignore them at all times. Drivers need to be reminded to observe traffic control devices and speed limits in school zones. Drivers may drive through the school zone regularly during non-school hours and, as a result, forget to slow down and watch for pedestrians when school is in session. As well, drivers may speed because they are not aware that school is dismissing at a different time or that an after school activity will create added pedestrians outside of school hours. These changes in speed limit will only occur when accompanied by visible school zone warnings.

If these pedestrian flashing lights truly accompany school arrival/dismissal times, education, evaluation and enforcement become easier to view and implement. PTOs, public education through the media and school programs can drive the message home to the residents of Grand Forks. Those using the flashing lights for safe crossings can evaluate if the accurate flashings is noticed by vehicular traffic and law enforcement will know that students, faculty and visitors will be present near the school when the lights are flashing. They can then enforce the school zone speed limit with ease as the lights will flash at those arrival/dismissal times.

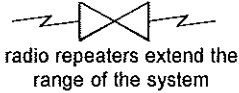
CPR III Time Switch System

2-Way Radio, WiFi or Fiberoptic Ethernet

Two-way communication with all school zones



1 watt radio transceivers with 20 mile line-of-sight capability build a wireless RS232 connection between the central computer and all school zone flashers



radio repeaters extend the range of the system

2-Way Radio and/or WiFi Network

Instantly upload and download data to more than 9,000 CPR2102 Time Switches from your office computer



How the CPR Radio/WiFi System works

A computer with *Windows(tm) 98, NT, ME, 2000 or XP* and the CPR III software, is programmed with time switch programming to control your school flashers for the entire school calendar.

This programming is downloaded to the CPR2102 Time Switches over 900MHz radio, city-wide WiFi or Fiberoptic Ethernet network from a computer COM port, from a Palm Pilot, from any BLUETOOTH capable PDA or from a DT2100 Handheld Display.

The computer sends alphanumeric radio/WiFi messages once a week to reset the time and day in all CPR2102 Time Switches and to download alternate week plan programming (if scheduled).

Using a radio/WiFi network, the operator can upload and download programming to any CPR2102 Time Switch for immediate two-way communications with any school flasher location.

Each CPR2102 Time Switch runs its own program to turn on or off the school flasher.

Program up to 10 Master Groups for a total of 990 Groups (*optional*)

Program up to 99 different groups (each group has 1 Normal Day Plan, 19 Alternate Day Plans and an unlimited number of Annual Plans)

Program up to 99 different locations per group

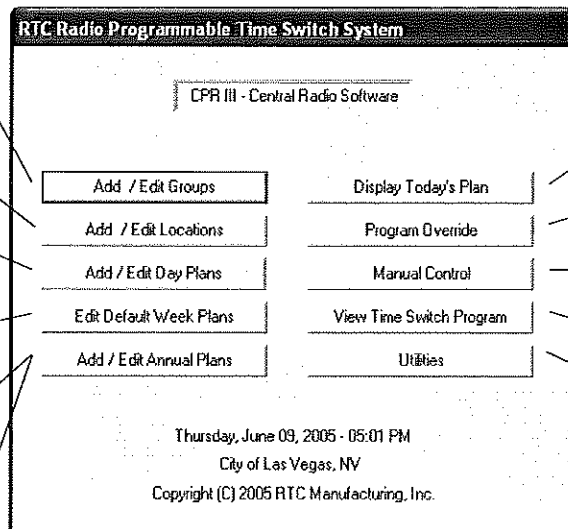
Program up to 20 Day Plans per Group including Normal school day, Early Out days, Summer School days, etc.

Default Week Plan - Normal Monday thru Friday school flasher schedule (runs automatically every week)

Annual Plans - The system uses exception day programming for Holidays, Early Out days, Vacation days, etc. for programming your entire school calendar

Vacation Plans - Program Vacation Plans for summer, winter and year round school breaks

CPR III Main Menu Screen



Display and print the program for any day of any year

Override any daily program due to inclement weather, special holidays, etc.

Manually control any school flasher from the computer keyboard

Read the program from any time switch

Utilities lets you configure your system

Download a complete program to any Group of time switches or to any individual time switch

RTC

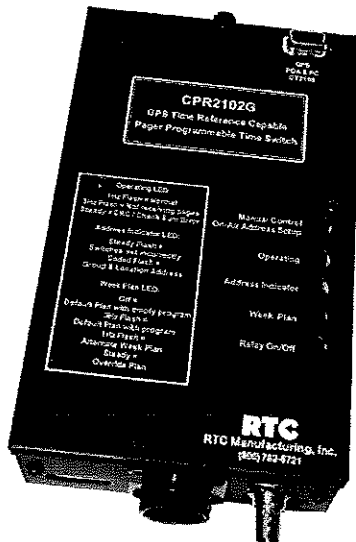
"Serving the Traffic Signal Industry since 1987"

RTC Manufacturing, Inc.
P. O. Box 150189 * Arlington, TX 76015
www.rtc-traffic.com
(800) 782-8721 * Fax (800) 448-8850

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CPR2102 Programmable Time Switch

**2-Way Radio,
WiFi or
Fiberoptic Ethernet**



ORDERING INFORMATION

| Part Number | Description |
|-------------|--|
| 503645 | Model CPR2102R Time Switch, w/radio, antenna and CPC Harness |
| 500900 | Upgrade CPR2102 Pager Time Switch to CPR Radio |
| 503648 | CPR Radio Remote w/Adapter to convert CPR2102 Pager to Radio |
| 503646 | CPR Radio Master, (one per system) includes antenna and power supply |
| 503647 | CPR Radio Repeater, includes antenna and power supply |
| 501662 | PDA Time Switch Programmer |
| 503620 | Model DT2100 Display Terminal (upload and download programs) |
| 503626 | Model DA2100 Audible/Visual Alarm (confirms when data is being received) |
| 501638-R | CPR III Central Radio/WiFi Software |

Program from a BLUETOOTH Enabled PDA

- Time switch programming is transmitted over two-way 900MHz spread spectrum radio, a city wide WiFi or fiberoptic ethernet network.
- One wireless RS232 network can program up to 9,801 time switches.
- Group and Location address programmed either by DIP switches or over the radio network.
- Download Default Week Plan programming over the radio network. (normal Monday through Friday school schedule)
- Download Alternate Week Plan programming over the radio network. (for Holidays, Early Out days, Summer School days, etc.)
- Download Override Plan programming over the radio network. (overrides regular program for one day to adjust for delayed or cancelled school due to bad weather, etc.)
- Power back-up maintains timekeeping and program for more than 6 months.
- Search-back feature automatically controls relay output when downloading a program.
- Indicators display the following information:
 - Power applied and operating
 - Communication being received
 - Unit failed to receive a communication since Saturday
 - Group and Location address
 - Running one of the following programs:
 - empty default week plan
 - programmed default week plan
 - alternate week plan
 - override plan
 - Relay on or off
- Stainless steel enclosure measures 3.7" w x 7.5" h x 1.55" d (without CPC connector).
- Optional 16-pin CPC connector and harness.
- External 3db gain antenna supplied with each time switch.
- Manual push-button controls relay output.
- Direct download programming from a computer.
- Upload and Download programming from a BLUETOOTH enabled PDA, a Palm Pilot or a DT2100 Handheld Display via the DB9 connector located on the front of the time switch or the two-way radio network.
- Dual power supply, 120VAC and 12VDC.

For more information on the
CPR III Radio/WiFi
Programmable Time Switch System,
call Toll Free (800) 782-8721

RTC

RTC Manufacturing, Inc.

P. O. Box 150189 * Arlington, TX 76015

www.rtc-traffic.com

(800) 782-8721 * Fax (800) 448-8850

INFRASTRUCTURE PROJECTS

6. **CPR Time Switch Emergency School Safety Flasher System
Emergency System for 22 Locations**

| | | | | |
|----|---|----|----|-----------|
| A. | CPR2102R Time switch w/ wireless transceiver | 25 | \$ | 30,975.00 |
| B. | CPRIII Central Software | | \$ | 3,150.00 |
| C. | CPR Radio Master Unit | | \$ | 840.00 |
| D. | CPR Repeater Unit | | \$ | 840.00 |
| E. | Server/Computer | | \$ | 3,675.00 |
| F. | Installation and setup | 25 | \$ | 2,625.00 |
| G. | Contingencies | | \$ | 4,210.50 |
| H. | Field Design and Field Inspection | | \$ | 4,631.55 |
| I. | Consultant Services/Engineering/Evaluation/Management | | \$ | 15,094.71 |

Project Total \$ 66,041.76 \$ 66,041.76

Includes study