

REQUIREMENTS
FOR THE INSTALLATION OF SCHOOL FLASHERS
WITHIN BROWARD COUNTY

1. The Contractor shall be governed by the latest editions of the following manuals:
 - a. The applicable portions of The FDOT Design Standards
 - b. The FDOT Standard Specifications for Roadway and Bridge Construction
 - c. The Broward County Minimum Standards Applicable to Public Rights of Way
 - d. The Broward County Traffic Engineering's Standards and Specifications
2. Broward County Traffic Engineering web site at <http://www.broward.org/Traffic/Pages/Default.aspx>
 - a. Signs Detail Sheet - http://www.broward.org/Traffic/Documents/stop_sign_detail_sheet.pdf
 - b. Pavement Marking & Sign Detail Sheet – http://www.broward.org/Traffic/Documents/pavementmarkings_signs_detail_sheet.pdf
 - c. Ground Mounted Solar Flasher Detail Sheet – http://www.broward.org/Traffic/Documents/solar_fl_model.pdf
3. The Contractor shall notify Sunshine State One-Call of Florida, Inc, at 1-800-432-4770, at least 48 hours prior to digging for underground facility locations, as set forth in the Underground Facility Damage Prevention and Safety Act@ of the State of Florida.
4. All appropriate utility companies shall be notified by the Contractor 48 hours in advance of any excavation in proximity to those utilities so that a company representative can be present.
5. The "Maintenance of Traffic School/Pedestrian" shall appear on the plan as indicated. The contractor shall comply with the "MOT for Schools/Pedestrian" comment which can be found at www.broward.org/traffic under publications.
6. The contractor shall comply with all MOT requirements necessary for the safe and effective removal of all project removal items. MOT may include but is not limited to provisions for: lane closures, pedestrian and bicycle traffic, utility work and law enforcement assistance.
7. School flasher plans are **VALID** for eighteen (18) months from date of approval. After that date, plans **shall** be resubmitted for approval. The purpose of this is to keep all information on the plans current.
8. Prior to any equipment order, the Contractor shall submit to the Broward County Traffic Engineering Division (BCTED) Special Projects Coordinator for approval, equipment specifications for all materials proposed for the project. See Section 603 of the Standard Specifications for submittal data requirements. Included in this submittal shall be shop drawings for this project which will include ground mount and / or mast arm detail, as applicable.
9. The Contractor shall make written request to BCTED, Systems Section - Design Engineer, to provide billing authorization to FPL. This is required before electrical service can be obtained. The request shall include a statement certifying that this electrical installation meets or exceeds all applicable requirements of all applicable codes and is now ready for connection to FPL facilities. Also include the date service is required by in the request.
10. The Contractor shall make written request to the Special Projects Coordinator at BCTED either by fax; 954-735-8564 or e-mail; llaskin@broward.org to schedule an inspection of the complete installation, including the interim signing and pavement marking plan. Activation of the flashers shall only be permitted after said inspection.
11. The Contractor shall provide two sets of as-built plans to BCTED signal technician at the time of inspection. Two copies of cabinet prints, two sets of cabinet keys and pager/time switch operation manuals for each location shall also be turned over at this time.

12. The Contractor is to use caution when working in or around areas of existing loop wires and lead-in cable, overhead electric lines, and underground utilities. 10' minimum clearance must be maintained between any equipment and the overhead electric facilities. Cease work immediately and contact Mr. Nelson Gonzales of FPL at (954) 321-2056 if this clearance cannot be maintained.
13. The Contractor shall include a Naztec Pager System under pay item number 670-4-1. Contact Mr. Darren Beyer at Naztec (281) 240-7233 for equipment and installation instructions. The minimum cabinet dimensions shall be 14" wide by 16" high by 11" deep. Equipment shall include proper antenna installation as directed by BCTED. The time clock/pager system assemble shall **NOT** be hardwired to the cabinet.
14. All sign assemblies shown or noted on the plan sheets for removal shall be delivered to the BCTED Operations Building, 2300 West Commercial Blvd., Fort Lauderdale. Signs are to be removed at the time of flasher activation by Broward County Traffic Engineering. This step will take place only during the school flasher inspection.
15. All cabinets and its contents are to be returned to BCTED during the replacement / modification of an existing school flasher. The contractor will use all new equipment and cabinets, unless authorized in writing on the original approved plans by the Special Projects Coordinator.
16. All School Flasher panels shall be completely covered and bagged with **burlap** material or equivalent up until the time of inspection.
17. All signs installed by the Contractor adjacent to the walking paths, including FTP-37 flashing assemblies, shall provide a minimum of 7' vertical clearance from the bottom of the sign. Minimum clear recovery for signs and/or ground mounted flashers without curbing shall be 8' feet. Minimum clear recover for signs and/or ground mounted flashers with curbing shall be 4' feet.
18. Sign locations may be varied in the field as necessary in order to avoid conflicts with unforeseen obstacles, driveways, etc. However, this shall be noted on the as builts and ever effort shall be made to install signs and/or flasher on a property line.
19. **Flashers:**
 - a. Mast arms shall have a factory applied, two part epoxy finish of solar black, federal color no. 27038 or powder coat.
 - b. Lineside / Loadside shall be separate pull boxes.
 - c. Lineside / Loadside Service disconnect and field wires shall have separate pull boxes.
 - d. The Contractor shall provide 12" LED and tunnel visors for the flashing beacon assemblies.
 - e. All aluminum used for S5-1 ground mounted school flashing assemblies shall be mounted on a transformer type base.
 - f. Install concrete apron, two (2) feet by two (2) feet with the pull box attached to the apron using suitable attaching hardware. The apron shall be a minimum of six (6) inches in depth. This applies to all areas that are not secured by asphalt and/or concrete. Pull boxes shall have quazite heavy duty covers rated for static design load of at least 15,000 lbs. Over a 10" square area. (Strongwell PG1324BA12 & PG1324HA00 or equivalent) (per pay item no. 635-1-11)
 - g. Install a non-conductive pull box and pull box cover, quazite type for electric service as designated on the plan. Provide sufficient conductor lengths for FPL to make an unfused connection here. Install conduit and conductors from here up the FPL pole 8' to a service disconnect. This service disconnect shall have a surge protector installed on the load side (line side of equipment.) The service disconnect shall be properly bonded to the FPL pole ground wire. Load side of disconnect shall be run back down pole and on to the flasher cabinet. If there is no existing FPL pole, install

service disconnect on nearest upright pole as permitted or install a 6' stub pole.

20. **Solar Flashers:**

- a. All solar flasher assemblies shall consist of a Carmanah R828N, or equivalent, 20 watt solar engine compatible with a Naztec time switch and pager system. It shall also have a mounting bracket for a four and a half-foot pole or mast arm.
- b. All solar flashers shall have a completed cabinet harness assembly with appropriate wiring lengths fabricated by the manufacturer and installed by the contractor.
- c. All solar flasher foundations for ground mounted aluminum poles shall be 2' x 2' x 3' deep with hook anchor bolts imbedded 12" deep.
- d. All solar flasher ground mounted aluminum poles shall be grounded a minimum of 20'.
- e. All solar flasher Naztec time switch and pager systems shall be installed in a separate aluminum cabinet 48" above ground.
- f. For solar flasher assembly refer to the detail sheet.
- g. All solar flasher plans shall include photographs of the area showing a full 360 degrees around the proposed installation to confirm that there are no vegetation conflicts.

21. **Signs:**

- a. All "times" shall be in the following format: X:XX – X:XX, example: 7:00 – 8:00.
- b. All S1-1 with supplemental W16-9P "AHEAD" and / or W16-7P "ARROW" plates; S4-3 "SCHOOL" panels; and the "SCHOOL" portion of the FTP-31-04 signs are to have Fluorescent Yellow backgrounds with black legends.
- c. All S1-1 shall be 36" x 36".
- d. All W16-9P shall be 24" x 12".
- e. All W16-7P shall be 21" x 15".

22. Any existing "Speed Limit" signs within the newly established or existing school zone shall be relocated outside the school zone limits.

23. (State Statute 316.1895)

- i. NEW - Speeding Fines Doubled (FTP-38-06) shall be installed between the S1-1/W16-9p "School Ahead" sign and the school zone times signs or solar powered school flashers. The FTP-38-06 panel shall be 3' x 2' - 6", white background, black legend and border with an S4-3 "SCHOOL" plate 24" x 8" above it in Fluorescent Yellow Green.

24. Ground mounted signs are to be installed on 12' square tube pole with 3' anchor.

25. **NO** signage is to be installed in concrete that will be maintained by Broward County Traffic Engineering. **NO concrete!!!**

26. **No requirements shall be deleted or combined. They shall appear on the plan as written.**

