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# SIGNALIZATION

## TECHNICAL SPECIAL PROVISIONS

DATED: JULY, 2025


TO THE

FLORIDA DEPARTMENT OF TRANSPORTATION  
STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION

FLORIDA DEPARTMENT OF TRANSPORTATION  
DESIGN STANDARDS

UNITED STATES DEPARTMENT OF TRANSPORTATION  
MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES

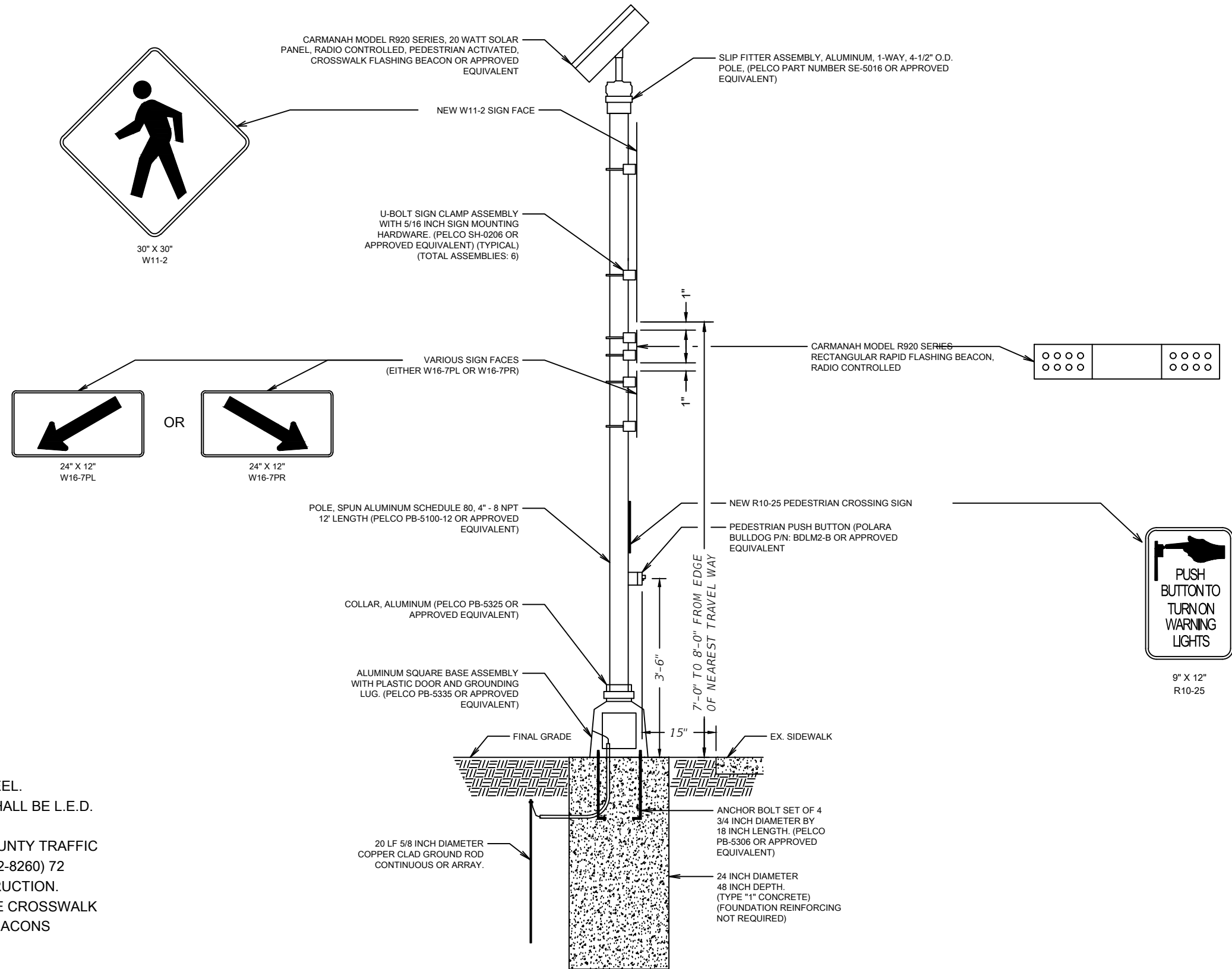
NATIONAL ELECTRICAL CODE

REVISIONS						 <div>Collier County Traffic Operations 2885 South Horseshoe Drive Naples, Florida 34104  Phone: (239) 252-8260 Fax: (239) 252-5868</div>	COLLIER COUNTY TRANSPORTATION MANAGEMENT SERVICES 2885 S. HORSESHOE DR. NAPLES, FLORIDA 34104	INDEX OF TECHNICAL SPECIAL PROVISIONS	SHEET NO.  TSP-1
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION				

COLLIER COUNTY TRAFFIC OPEARTIONS SIGNALIZATION  
"TECHNICAL SPECIAL PROVISIONS" DATED JULY, 2025

<p><b>PURPOSE:</b> All work associated with the installation of a traffic signal shall conform to current Florida Department of Transportation (FDOT), National Electrical Codes (NEC) and this supplement. It is the intent of this supplement to detail installation requirements dictated by the County, which exceed standard FDOT and NEC requirements. It is the Contractor's responsibility to note these extended specifications, and to adhere to the methods and requirements mandated in this document.</p> <p><b>GENERAL INSTALLATION AND MAINTENANCE REQUIREMENTS WORKMANSHIP:</b> All work is to be performed in a workmanlike manner. It is the Contractor's responsibility to provide the labor, skilled in the appropriate areas, necessary to provide an acceptable and professional finished product. The Contractor and his personnel shall have, at all times, all the necessary paperwork needed to complete the job. It is expected that plumb surfaces shall be plumb. Spacing of multiple components, such as conduit stubs or straps, shall be in equal increments. All materials shall be new or in like-new condition All pole assemblies, pedestrian poles, and supplemental signal poles shall be leveled to the satisfaction of the Collier County Signal Inspector. The Collier County Signal Inspector assigned to the project shall have the authority to make final determinations on whether workmanship, materials, and/or final product(s) meet the specifications contained herein.</p> <p><b>QUALIFICATIONS OF SIGNAL CONTRACTOR PERSONNEL:</b> The Contractor who is engaged in installing or maintaining traffic signals within Collier County shall have all work performed under the supervision of a traffic signal technician certified by the International Municipal Signal Organization (I.M.S.A.) as a Level II, Traffic Signal Technician. All cabinet-related work shall be performed by an International Municipal Signal Association (IMSA) Level II Technician, certified in traffic signals. This certification shall be presented at the pre-construction conference or upon request. A local permanent telephone number where trouble-calls can be received on a 24-hour basis shall be provided by the Contractor. Licensed Electricians shall supervise all electrical type work. During all working hours, the Contractor shall have a responsible, English-speaking superintendent on the project with the capabilities and authority required by FDOT Specifications, Section 5-8.</p> <p><b>RESPONSIBILITIES OF SIGNAL CONTRACTOR PERSONNEL:</b> Collier County Traffic Operations Department Inspection Staff shall be notified in writing either via form letter (To: Collier County Traffic Operations, At: 2885 Horseshoe Drive South, Naples FL 34104) or e-mail (TrafficOps@collierCOUNTYFL.gov) a minimum of 72 Hours prior to the commencement of jobs that include overhead or underground work that will be conducted as part of construction or maintenance projects within Collier County or State road rights-of-way within Collier County. Collier County Traffic Operations Department Inspection Staff shall also be notified either via form letter or e-mail a minimum of 12 Hours prior to any and all daily work to be performed throughout the entire length of construction or maintenance projects. Any changes that necessitate the rescheduling of work that has been previously scheduled shall be provided in writing via e-mail no later than the morning that it was to be performed. Collier County Traffic Operation Department Inspection Staff has the full authority to shut down any and all overhead or underground work that has failed to comply with the aforementioned requisites. Collier County reserves the right to redirect the termination point(s) of any or all conduit(s) from what is shown on the plans. If the quantity of materials is increased, the Contractor shall be compensated according to the per unit price of this change. The Contractor shall submit cut sheets on all materials proposed for the installation of a traffic signal. The material submittal will be reviewed by Collier County for conformance and returned to the Contractor within five business days. Whenever a new traffic control device is to be installed at a location where no device exists, the installing Contractor (from the time of activation of the device) will assume the full responsibility of maintenance of said device until</p>			<p>such time as a final inspection is completed by the County and the installation accepted. Whenever a new traffic control device is to be installed at a location where there is an existing device, the Contractor shall assume the full responsibility of maintenance of the existing device on the commence work date of the contract. The Contractor shall be responsible for continuous maintenance of the existing device until such time as the new device is activated, inspected by the County, and accepted. For new traffic signals, conditional acceptance and inspection will be scheduled with Collier County Traffic Operations, (239) 252-8260, before the signal is placed in the normal operational mode. Notification is also required before placing the signal in the flashing mode.</p> <p>When a pedestrian activated flashing beacon system malfunction occurs, the Contractor shall respond within two hours of notification and repair the pedestrian crossing device so that it is operating in a safe manner. The Contractor shall be responsible for the permanent repair, and shall notify the County of the completion of the repairs within 24 hours. If the Contractor fails to respond within two hours, the County reserves the right to either repair the malfunction or employ alternate personnel and charge all costs incurred by Collier County to the Contractor.</p> <p>The Contractor shall be responsible for coordinating with all utilities having overhead or underground facilities in close proximity or possible conflict with the Contractor's excavations and underground cable installation. The Contractor shall notify all utility companies and maintaining agencies forty-eight (48) hours in advance of commencing work. Hand-digging will be required in all areas where the utilities stake or locate a possible conflict, or where hand-digging is specified on the plans. The exact location of utilities shall be determined by the Contractor when necessary, during construction.</p> <p>Traffic shall be maintained in accordance with the "Manual on Uniform Traffic Control Devices" and "Roadway and Traffic Design Standards" and as designated in the plans.</p> <p><b>CONCEALED WORK:</b> All work which will not be readily visible upon completion shall not be concealed until a County Signal Inspector gives approval. In the event the below items are concealed, it will be the Contractor's responsibility to expose the questioned item(s) for the Inspectors' approval, at no additional cost to the County. This includes, but is not limited to:</p> <ol style="list-style-type: none"><li>Buried or imbedded conduit</li><li>Ground wire, rods, and array</li><li>Loops and home runs</li><li>Leveling nuts before grouting</li><li>Loop splices before encapsulating</li></ol> <p><b>ADDENDUM TO FLORIDA DEPARTMENT OF TRANSPORTATION SPECIFICATIONS</b> SPECIFICATION: All equipment shall be listed on the Florida Department of Transportation, Approved Products List.</p> <p><b>SPECIFICATION FOR THE CARMANAH MODEL R920 SERIES, OR APPROVED EQUIVALENT, RADIO CONTROLLED SOLAR POWERED PEDESTRIAN ACTIVATED CROSSWALK FLASHING BEACON:</b></p> <p><b>OPERATION</b> Flash pattern and activation MUTCD* compliant Alternate, unison, and quick-flash Control Push button.</p> <p><b>LED SIGNAL MODULE</b> Standard ITE VTCSH LED circular signal supplement. Size and LED colour 3" x 7" amber.</p> <p><b>ENVIRONMENTAL</b> Operating temperature range 5 to 122 degrees F (-15 to 50 degrees C). Energy Management System Battery lifespan 3-5 years (field replaceable) Capacity without solar charging Up to 40 days typical (location dependant).</p>			<p>Daily operation profile Up to 12 hours (system configuration dependant). Automatic light control (ALC): Systems continue to provide useful light during extreme conditions that prevent charging over an extended period of time.</p> <p><b>WIRELESS ACTIVATION</b> Activation: Push button activation sends wireless signal to all units, Duration: 10-60+ second flash duration (adjustable by 5 second increments). Frequency: 902-928 Mhz ISM Band FHSS (frequency hopping spread spectrum) Effective range 165 ft (50 m) line of sight. Effective range: 165 ft (50 m) line of sight.</p> <p><b>COMPONENTS</b> Solar Panel: High-effeciacy 20 W (C-Compact) or 20 W panel. Battery: Replaceable, recyclable best-in-class battery pack, Sealed, maintenance-free Light Source: Ultra-bright LEDs featuring innovative optic and lens design for optimum light divergence. Construction: Fully self-contained weather, corrosion and vandal resistant unit with premium grade UV-resistant head.</p> <p><b>QUALITY STANDARDS</b> Quality certification: ISO 9001:2008 Certified Manufacturer. Certification: NCHRP 350, FDOT, system compliant with Buy America Act.</p> <p><b>Warranty</b> Term: 3-year limited warranty (including batteries).</p>		
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R E V I S I O N S						 Collier County Traffic Operations 2885 South Horseshoe Drive Naples, Florida 34104  Phone: (239) 252-8260 Fax: (239) 252-5868	COLLIER COUNTY TRANSPORTATION MANAGEMENT SERVICES 2885 S. HORSESHOE DR. NAPLES, FLORIDA 34104	TECHNICAL SPECIAL PROVISIONS	SHEET NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION				TSP-2



CONSTRUCTION NOTES:

1. ALL FASTENERS SHALL BE STAINLESS STEEL.
2. RAPID FLASHING BEACON INDICATIONS SHALL BE L.E.D.
3. GROUND WIRE SHALL BE #6 STRANDED.
4. CONTRACTOR SHALL NOTIFY COLLIER COUNTY TRAFFIC OPERATIONS SIGNAL INSPECTOR (239-252-8260) 72 HOURS PRIOR TO THE START OF CONSTRUCTION.
5. THE PUSH BUTTON AT EITHER END OF THE CROSSWALK SHALL ACTIVATE ALL RAPID FLASHING BEACONS ALONG THE CROSSWALK.

RADIO CONTROLLED SOLAR POWERED  
PEDESTRIAN ACTIVATED RAPID FLASHING BEACON

NOT TO SCALE

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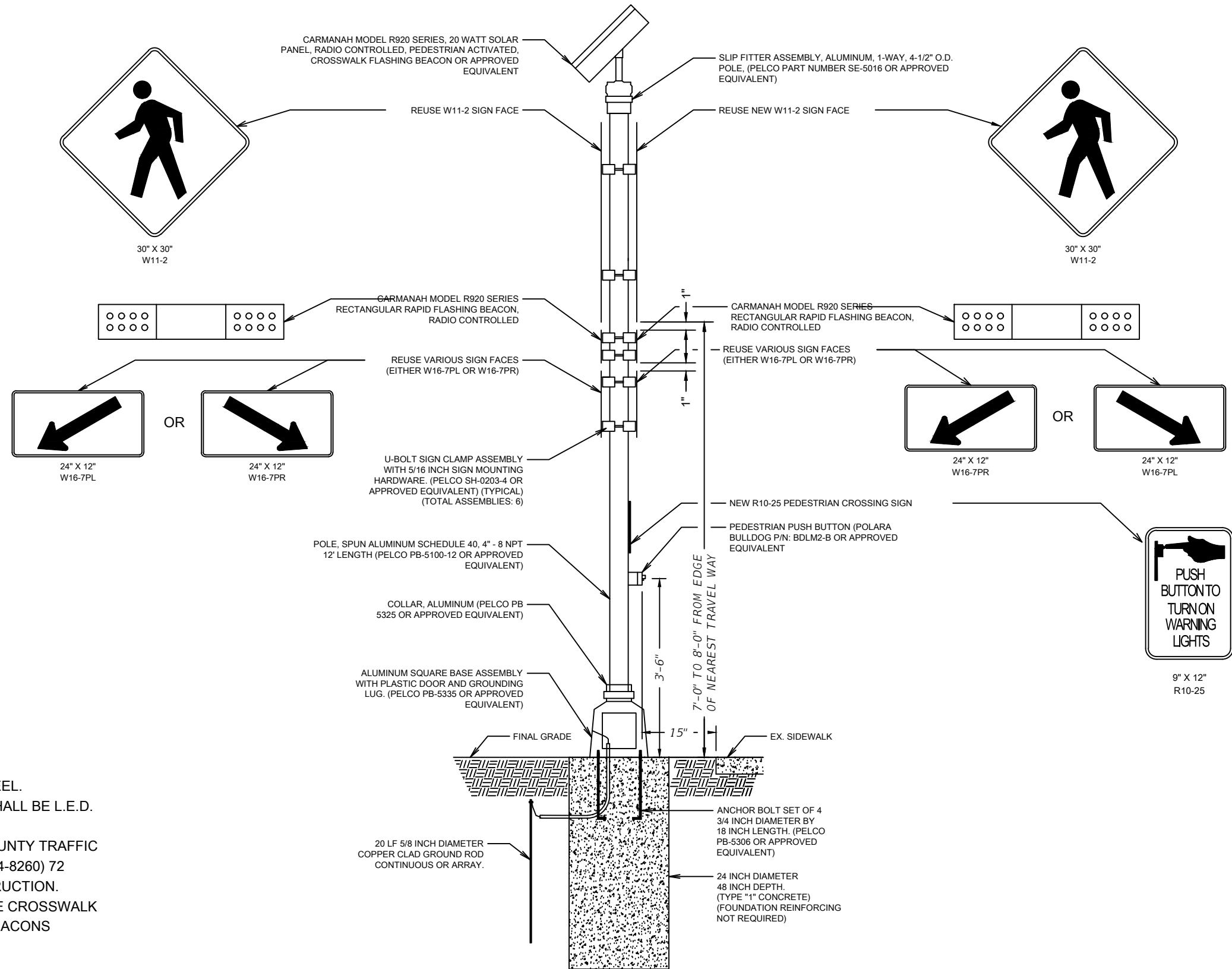
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COLLIER COUNTY TRANSPORTATION  
MANAGEMENT SERVICES  
2885 S. HORSESHOE DR.  
NAPLES, FLORIDA 34104

ONE-WAY PEDESTRIAN  
ACTIVATED FLASHING BEACON  
DETAIL

SHEET  
NO.

TSP-3



**CONSTRUCTION NOTES:**

1. ALL FASTENERS SHALL BE STAINLESS STEEL.
2. RAPID FLASHING BEACON INDICATIONS SHALL BE L.E.D.
3. GROUND WIRE SHALL BE #6 STRANDED.
4. CONTRACTOR SHALL NOTIFY COLLIER COUNTY TRAFFIC OPERATIONS SIGNAL INSPECTOR (239-774-8260) 72 HOURS PRIOR TO THE START OF CONSTRUCTION.
5. THE PUSH BUTTON AT EITHER END OF THE CROSSWALK SHALL ACTIVATE ALL RAPID FLASHING BEACONS ALONG THE CROSSWALK.

**RADIO CONTROLLED SOLAR POWERED  
PEDESTRIAN ACTIVATED RAPID FLASHING BEACON**

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**TWO-WAY PEDESTRIAN  
ACTIVATED FLASHING BEACON  
DETAIL**

SHEET  
NO.

TSP-4