



TRAFFIC PLANNING AND DESIGN, INC.

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**May 18, 2020**

Casey LaLonde, Township Manager  
West Goshen Township  
1025 Paoli Pike  
West Chester, PA 19380

**RE: Application for Traffic Signal Approval**

MPMS 111696 West Chester Green Light GO  
West Chester Borough and West Goshen Township, Chester County, PA  
TPD No. WCBO.00008

Dear Mr. LaLonde:

PennDOT requests that the attached Application for Traffic Signal Approval (PennDOT Form TE-160) and associated Resolution be executed by West Goshen Township for the intersection of Market Street and Westtown Road. TPD has completed Sections A, B, C, and D of the form. Part E of the form will need to be signed and the attached resolution will need to be executed and returned to our office.

If you have any questions, please don't hesitate to contact us.

Sincerely,  
TRAFFIC PLANNING AND DESIGN, INC.

Wayne Droesser, P.E.  
Senior Project Manager  
wdroesser@TrafficPD.com

Enclosures      1) TE-160 Form and Resolution for West Goshen Township

cc:      TPD File



# Application for Traffic Signal Approval

Please Type or Print all information in Blue or Black Ink



County : \_\_\_\_\_  
Engineering District : \_\_\_\_\_  
Department Tracking # : \_\_\_\_\_  
Initial Submission Date : \_\_\_\_\_

### A - Applicant's (Municipal) Contact Information

Municipal Contact's Name : Casey LaLonde Title : Township Manager  
Municipal Name : West Goshen Township  
Municipal Address : 1025 Paoli Pike, West Chester, PA 19380  
Municipal Phone Number : 610-692-5266 Alternative Phone Number : \_\_\_\_\_  
E-mail Address : twp@westgoshen.org  
Municipal Hours of Operation : Monday-Friday: 7:00 AM - 5:00 PM

### B - Application Description

Location (*intersection*) : East Market Street (SR 0003) and Westtown Road  
Traffic Control Device is :  NEW Traffic Signal  EXISTING Traffic Signal (Permit Number) : 62-0476  
Type of Device (*select one*)  Traffic Control Signal (MUTCD Section 4D, 4E, 4G)  Flashing Beacon (MUTCD Section 4L)  School Warning System (MUTCD Section 7B)  
 Other : \_\_\_\_\_  
Is Traffic Signal part of a system? :  YES  NO System Number (*if applicable*) : I-0056/I-0057/I-0058  
If YES, provide locations of all signalized intersections in system.  
Market Street- from New Street to Westtown Road; High Street- from Rosedale Street to Marshall Street; Gay Street- from High Street to Bolmar Street; Chestnut Street- from Matlack Street to Hannum Avenue; Downingtown Pike- from Wayne Street to Bradford Shopping Center; Strasburg Road- from Downingtown Pike to Bradford Avenue.  
Explain the proposed improvements :  
Connect to TMC and add video detection system.  
Associated with Highway Occupancy Permit (HOP)? :  YES  NO If YES, HOP Application # : \_\_\_\_\_

### C - Maintenance and Operation Information

Maintenance and Operations are typically performed by? :  
 Municipal Personnel  Municipal Contractor  Municipal Personnel & Contractor  
 Other : \_\_\_\_\_  
Maintenance and Operations Contact Name : Stephanie Higgins McGough Company/Organization : Charles A. Higgins & Sons  
Phone # : 610-566-3700 Alternative Phone # : \_\_\_\_\_ E-mail : higginselec25@verizon.net

### D - Attachments Listing

- Municipal Resolution (*required*)
- Letter of Financial Commitment
- Traffic Signal Permit
- Warrant Analysis
- Crash Analysis
- Traffic Signal Study
- Location Map
- Photographs
- Straight Line Diagram
- Capacity Analysis
- Traffic Impact Study (TIS)
- Condition Diagram
- Traffic Volumes / Pedestrian Volumes
- Turn Lane Analysis
- Turn Restriction Studies
- Other : \_\_\_\_\_

# Application for Traffic Signal Approval

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County : \_\_\_\_\_  
 Engineering District : \_\_\_\_\_  
 Department Tracking # : \_\_\_\_\_  
 Initial Submission Date : \_\_\_\_\_

## E - Applicant (Municipal) Certification

The applicant desires to own, operate, and maintain the traffic control device in the location indicated above; and the Vehicle Code requires the approval of the Department of Transportation ("Department") before any traffic signals may be legally erected or modified. A signed Application for Traffic Signal Approval (TE-160) must be submitted in conformance with the instructions provided by the Department, and a Traffic Signal Permit must be issued, before any work can begin.

If the Department approves a traffic signal after a traffic engineering study and engineering judgment indicates the need, the traffic signal shall be installed, owned, operated, and maintained within the parameters indicated in the Vehicle Code and the Department's regulations relating to traffic signs, signals, and markings. The Department may direct appropriate alterations to the design or operation (including, but not limited to, hours of operation) of the traffic signal, or require removal of the traffic signal, if traffic conditions or other considerations necessitate alteration or removal.

All items associated with the traffic control device (geometric features, signs, signals, pavement markings, pedestrian accommodations, and other traffic control device associated items) are the applicant's responsibility. The Traffic Signal Permit will then document all of the items associated with operation of each traffic control device. The applicant, at its sole expense, shall provide the necessary inspection, maintenance, and operation activities in conformance with the Department's Publication 191 or as otherwise agreed to by the Department. The applicant shall perform the preventative and responsive maintenance requirements and recordkeeping in accordance with the exhibits specified below. If the applicant fails to provide the required inspection, maintenance, or operation services within thirty (30) days of receipt of written notice from the Department, the Department shall have the right to perform the required inspection, maintenance, or operation services in the applicant's stead and the applicant shall reimburse the Department for all costs incurred. Federal- and/or state-aid participation may be withheld on all future projects if the applicant fails to demonstrate to the Department the ability to provide all required maintenance and operation services. The applicant certifies that it has funds available and committed for the operation and maintenance of the traffic control device and that it will make available sufficient funds for all required future inspection, maintenance, and operation activities.

The applicant shall indemnify, save harmless and, defend (if requested) the Commonwealth of Pennsylvania, its agents, representatives, and employees from and against any damages recoverable under the Sovereign Immunity Act, 42 Pa. C.S. §§ 8521-8528, up to the limitations on damages under said law, arising out of any personal injury or damage to property which is finally determined by a court to be caused by or result from acts or omissions of the applicant and for which a court has held applicant, its officials, or employees to be liable. This provision shall not be construed to limit the applicant in asserting any rights or defenses. Additionally, the applicant shall include in any contracts into which it enters for maintenance, operation, or inspection of the traffic control device this same obligation to indemnify the Commonwealth and its officers, agents, and employees; and it shall require its contractor(s) to provide public liability insurance coverage, naming the Commonwealth and the applicant as additional insureds for bodily injury, including death and property damage, in the minimum amounts of \$500,000 per person, \$1,000,000 per occurrence, it being the intention of parties to have the contractor fully insure and indemnify the Commonwealth and the applicant.

The applicant shall comply with the study and ordinance requirements of 75 Pa. C.S. § 6109. The applicant submits this application with the intention of being legally bound.

Neither this application nor any Traffic Signal Permit creates any rights or obligations with respect to parties other than the applicant and the Department. Third parties may not rely upon any representations made by either the applicant or the Department in connection with the submission or approval of this application or any work permitted or approved that is related to this application, as regards either payment of funds or performance of any particular item of maintenance precisely as specified.

The applicant agrees to comply with the attached Exhibits:

- Exhibit "A": Preventative and Response Maintenance Requirements (Sheet 3 of 5)
- Exhibit "B": Recordkeeping (Sheet 4 of 5)
- Exhibit "C": Signal Maintenance Organization (Sheet 5 of 5)

Printed Municipal Contact Name : \_\_\_\_\_ Date : \_\_\_\_\_  
 Signed By : \_\_\_\_\_ Witness or Attest : \_\_\_\_\_  
 Title of Signatory : \_\_\_\_\_ Title of Witness or Attester: \_\_\_\_\_

**Exhibit "A":**  
**Preventative and Response Maintenance**  
**Requirements**



County : \_\_\_\_\_  
 Engineering District : \_\_\_\_\_  
 Department Tracking # : \_\_\_\_\_  
 Initial Submission Date : \_\_\_\_\_

**Preventive Maintenance**

The APPLICANT or its contractor will provide preventive maintenance for each individual component of the traffic signal installation covered by this application at intervals not less than those indicated in the Preventive Maintenance Summary, PA DOT Publication 191, current version. This is the recommended level of maintenance to keep the intersection control equipment and signals in mechanically, structurally and aesthetically good condition.

**Response Maintenance**

The APPLICANT or its contractor will provide response maintenance in accordance with the provisions of the Response Maintenance Schedule. It encompasses the work necessary to restore a traffic signal system to proper and safe operation. Includes Emergency Repair and Final Repair.

**FINAL REPAIR:**

Repair or replace failed equipment to restore system to proper and safe operation in accordance with permit within a 24-hour period.

**EMERGENCY REPAIR:**

Use alternative means or mode to temporarily restore system to safe operation within a 24-hour period. Final repair must then be completed within 30 days unless prohibited by weather conditions or availability of equipment.

**Response Maintenance Schedule**

<u>KNOCKDOWNS</u>	<u>TYPE OF REPAIR PERMITTED</u>
Support - Mast arm	Emergency or Final
Support - Strain pole	Emergency or Final
Span wire/tether wire	Final Only
Pedestal	Emergency or Final
Cabinet	Emergency or Final
Signal heads	Final Only
 <b><u>EQUIPMENT FAILURE</u></b>	
Lamp burnout (veh. & ped.)	Final Only
Local controller	Emergency or Final
Master controller	Emergency or Final
Detector sensor	
- Loop	Emergency or Final
- Magnetometer	Emergency or Final
- Sonic	Emergency or Final
- Magnetic	Emergency or Final
- Pushbutton	Emergency or Final
Detector amplifier	Emergency or Final
Conflict monitor	Final Only
Flasher	Final Only
Time clock	Emergency or Final
Load switch/relay	Final Only
Coordination unit	Emergency or Final
Communication interface, mode	Emergency or Final
Signal cable	Final Only
Traffic Signal Communications	Final Only
Traffic Signal Systems	Final Only

**Exhibit "B":**  
**Recordkeeping**



County : \_\_\_\_\_

Engineering District : \_\_\_\_\_

Department Tracking # : \_\_\_\_\_

Initial Submission Date : \_\_\_\_\_

**Recordkeeping**

Accurate and up-to-date recordkeeping is an essential component of a good traffic signal maintenance program. In recognition of this fact, the APPLICANT must prepare, retain, and make available to the COMMONWEALTH, on request, a record of all preventive and response maintenance activities performed on the traffic signal equipment covered by this application.

The APPLICANT shall establish a separate file for each installation and keep its records in the municipal building, signal maintenance shop, or other weather-protected enclosure.

At a minimum, the following records will be kept by the APPLICANT or its contractor for each traffic signal. These forms can be found in Section 10.0, Maintenance Record Forms, PA DOT Publication 191, current version.

**FORM 1 - Master Intersection Record**

This form, which lists all maintenance functions performed at the intersection, should be updated within one day of the activity but no more than one week later.

**FORM 2 - Response Maintenance Record**

Each time response maintenance is required at the intersection, this form is to be completed. Once the pertinent information is transferred to the master intersection record, this form is to be placed in the intersection file.

**FORM 3 - Preventive Maintenance Record**

This form will be used to provide a record of the preventive maintenance activities performed at each intersection. The date, the activities performed, and the signature of the person in charge of the work must be recorded in the form.

This form may be kept at the intersection, if it is adequately protected from the weather. Form 1 must be updated at the central file, however, to reflect the date and activity.

**Exhibit "C":  
Signal Maintenance Organization**
 County : \_\_\_\_\_  
 Engineering District : \_\_\_\_\_  
 Department Tracking # : \_\_\_\_\_  
 Initial Submission Date : \_\_\_\_\_
**Personnel Classifications**

In order to properly maintain the traffic signal equipment covered by this applicant, the APPLICANT agrees to provide, as minimum, the following staff throughout the useful life of equipment. The APPLICANT agrees to abide by all guidance provided in PA DOT Publication 191.

**Traffic Engineer** - The administrative position which has prime responsibility for the proper operation of traffic signal equipment. The principal function of this position is the supervision and control of subordinate personnel and the planning of their activities to ensure adequate preventive and response maintenance programs.

**Minimum Position Requirements**

1. A thorough understanding of traffic signal design, installation and maintenance.
2. A working knowledge of the interaction between the following traffic characteristics: Intersection geometry, traffic flow theory, control type (fixed time, actuated, etc.), signal phasing and timing, and interconnection.
3. An ability to supervise subordinate personnel effectively in the assignment of their work.
4. Possession of a college degree in engineering, which includes course work in traffic engineering.
5. Either four years experience in the field of traffic engineering or its equivalent in graduate college work.

**Signal Specialist** - The individual responsible for the diagnostics and repair of all traffic signal equipment including solid state equipment.

**Minimum Position Requirements**

1. Extensive training and troubleshooting skills in electronics and software.
2. Ability to repair modules in the shop and to design test equipment needed to diagnose and repair a problem.
3. Ability to make design and modifications to implement or omit special functions.
4. Ability to implement a recordkeeping system to include maintenance activities, inventory control and identification of recurring problems.
5. Ability to perform all tasks required of a signal technician.

**Signal Technician** - Individual responsible for the operation and maintenance of traffic signals and electromechanical equipment.

**Minimum Position Requirements**

1. Ability to perform response maintenance on solid state equipment up to the device exchange level.
2. Capability to diagnose a vehicle loop failure and initiate corrective action.
3. Ability to tune detector amplifiers.
4. Ability to follow wiring schematics, check and set timings from plan sheet and check all field connections.
5. Ability to perform preventive maintenance on all equipment and to maintain accurate records of all work perform.

**Training**

The APPLICANT agrees to secure training in order to upgrade the ability of its present staff to properly perform the required maintenance functions. The APPLICANT agrees to abide by all guidance provided in PA DOT Publication 191.

**Budget Requirements**

The APPLICANT agrees to provide, in its annual operating budget, dedicated funds which are sufficient to cover the cost of the personnel, training, contractors (if utilized) and specialized maintenance equipment which are required, by virtue of this application. The APPLICANT agrees to abide by all guidance provided in PA DOT Publication 191..