Part II: Streetscape Plan Implementation
Pedestrian Crossings:
Selected Intersection Improvements
Notes:
- PROVIDE APPOPRIATELY INCLUDE THE FOLLOWING:
  - REMOVE AND REPLACE EXISTING CONCRETE CURB RAMP WITH NEW CONCRETE RAMP.
  - CONCRETE IS REJECTED OR AREA IS NOT TO BE REPAIRED.
  - INSTALL SALVAGED CONCRETE CURB RAMP TO MATCH EXISTING CURB RAMP PATTERNS.
  - REMOVE EXISTING CONCRETE CURB RAMP.
  - INSTALL NEW CURB RAMP WHERE NEEDED AT EACH CURB RAMP.
  - REMOVE ALL CURB RAMP TO BE REPAIRED AND REPLACE CONCRETE RAMP.
  - INSTALL NEW CROSSWALK WARNING AS REQUIRED.
  - INSTALL ALL CEMENT MIXES AT CURB RAMP AREAS.

DESIGN CONCEPTS ARE SUBMITTED ON DESIGNER'S STANDARDS AND ARE DESIGNED TO MEET EXISTING STANDARDS AND ARE DESIGNED TO MEET EXISTING STANDARDS.

OWNER ENGINEER:

PROJECT ADDRESS:
Germantown Avenue
Philadelphia, PA 19118
Germantown Ave & Evergreen Ave.
Crosswalk Upgrade

Boles, Smyth Associates Inc.
2400 Chestnut Street - Philadelphia PA, 19103
215-561-2644 - 215-561-0501

Germantown Ave & Evergreen Ave
Crosswalk Upgrade

Philadelphia, PA 19118
OWNER: ENGINEER:

PROJECT ADDRESS:

Germantown Avenue
Philadelphia, PA 19118

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Germantown Ave & Springfield Ave.
Pavement Removal

Boles, Smyth Associates Inc.
Consulting Civil Engineers
2400 Chestnut Street - Philadelphia PA 19103
215-561-2644 (P) - 215-561-0501 (F)
Germantown Avenue
Philadelphia, PA 19118

City Bus - Proposed Condition

Notes:

1. Plans show service improvements that are potentially subject to approval by proposed public authority.
2. The city bus is subject to the City of Philadelphia's Right of Way in a proposed right-of-way expansion.

Germantown Ave & Springfield Ave.
Streetlighting Plan 2015
General Streetlighting recommendations
- In general the recommended lighting levels should be between 0.6 & 0.7 minimum maintained average depending upon pavement classification and an estimation of conflict potential. (See Chart)
- The current lighting levels with existing poles along Germantown Avenue average ±.3fc

Pole Replacement
- Existing light poles are reaching the end of their useful life. Additional money spent to repair beyond minimal maintenance would be better spent on new modern fixtures. New lenses, lamps and ballasts would increase lighting levels but the resulting light would still be deficient and structural pole issues would remain.
- Any new allocation of funds would be better spent with a comprehensive replacement of lighting poles with new Philadelphia City standard fixtures as shown in this document.
- The combination of direct pole replacement and the addition of recommended cobra head poles at intersection will bring the average up to recommended levels.
Several poles are in danger of falling over and causing damage or injury.

Light fixture heads are in very poor shape with opaque yellow lenses and damage. Lens conditions impact efficiency and cause more glare problems.

Undersized Base footing may not be adequate for new poles.
City Standard Cobra Head Fixture
- GE Lighting “ERS: Series LED
- Forward throw optics, 4000k color, with dimming recepticle on top

City Standard Pedestrian Scale Fixture
- Sun Valley Lighting “CS-6638” LED head with cast decorative base
- Type III optics - rotateable, 4000k color, with concealed LED lamping in cap
- Note: Concrete bases may need replacement based upon appearance of existing fixtures.
CALCULATION STUDY LEGEND:

- **Vertical View Readings**
  - Measures the amount of light hitting a spot 5’ in the air typically in a crosswalk

- **Horizontal Readings taken at ground level**
  - Measures the amount of light hitting the ground at a point

IESNA recommends .5fc maintained average vertical illuminance at crosswalks and intersections for high pedestrian conflict areas. This is measured at 5’ above the roadways surface facing in the direction of traffic.

IESNA recommends 1.8fc maintained average horizontal illuminance at intersections based on local roadway classification and areas of high pedestrian activity. For roadways between intersections 0.5FC maintained average is recommended.

Note: In our experience the city of Philadelphia uses IES and other industry recognized guidelines for determining lighting levels for lighting projects in addition to practical considerations unique to each location. We are not aware of published city guidelines that detail a different set of criteria.
EVERGREEN INTERSECTION

Existing Lighting Levels Survey facts
- Lighting levels are +50% lower than recommended levels
- Vertical lighting levels at crosswalks are adequate facing Germantown ave but deficient facing evergreen
- Pedestrians may be difficult to see from vehicles entering from Evergreen
- glare from existing fixtures is very high further limiting visibility and compromising comfort
Simulation using new Philadelphia city standard fixtures in existing locations

Original Layout with new fixtures
- Calculation uses new Philadelphia city standard pole from Sun Valley and GE Cobra head fixture with 400w HPS lamping
Improved Layout - Upgrade Lights

- All fixtures are being tested with the city standard pole from Sun Valley and GE Cobra head fixture
- Replace all current fixture with new city standard to increase performance, color, reliability and optical control.
- 2 Cobra head poles have been added to get closer to the IES guideline for 1.8fc at intersections and to increase pedestrian visibility
Existing Lighting Levels Survey facts
- Lighting levels are +50-75% lower than recommended levels
- Vertical lighting levels at crosswalks are adequate facing south on Germantown ave. Other directions are 50% lower than recommended levels
- Pedestrians may be difficult to see from vehicles entering from Highland Street
- Glare from existing fixtures is very high further limiting visibility and compromising comfort
Original Layout with new fixtures

- Calculation uses new Philadelphia city standard pole from Sun Valley and GE Cobra head fixture with 400w HPS lamping
Improved Layout - Upgrade Lights

- All fixtures are being tested with the city standard pole from Sun Valley and GE Cobra head fixture
- Replace all current fixture with new city standard to increase performance, color, reliability and optical control.
- 2 Cobra head poles have been added to get closer to the IES guideline for 1.8fc at intersections and to increase pedestrian visibility
Existing Lighting Levels Survey facts

- Most lighting levels are +50-75% lower than recommended levels
- Vertical lighting levels at crosswalks are adequate facing south on Germantown ave. Other directions are 50% lower than recommended levels
- Pedestrians may be difficult to see from vehicles entering from Springfield
- Glare from existing fixtures is very high further limiting visibility and compromising comfort
Original Layout with new fixtures

- Calculation uses new Philadelphia city standard pole from Sun Valley and GE Cobra head fixture with 400w HPS lamping

Simulation using new city standard fixtures in existing locations
Improved Layout - Upgrade Lights

- All fixtures are being tested with the city standard pole from Sun Valley and GE Cobra head fixture
- Replace all current fixture with new city standard to increase performance, color, reliability and optical control.
- 2 Cobra head poles have been added to get closer to the IES guideline for 1.8fc at intersections and to increase pedestrian visibility
Existing Lighting Levels Survey facts
- Most lighting levels are +75% lower than recommended levels
- Trees block much of the light from the old fixtures
- Glare from existing fixtures is very high further limiting visibility and compromising comfort
Improved Layout - Upgrade Lights

- All fixtures are being tested with the city standard pole from Sun Valley and GE Cobra head fixture
- Replace all current fixture with new city standard to increase performance, color, reliability and optical control.
- 1 Cobra head pole has been added to get closer to the IES guideline for 1.8fc at intersections and to increase pedestrian visibility
Wall Lighting Upgrade

- Ingrade linear wallwash fixtures
- 39.5” fixtures Spaced ±2.5’ away from wall with 3.5’ between fixtures.
- Sample fixture used- Bega Lighting 7918LED
- 35 Fixtures total to light wall along block
- Increases brightness in general and helps to “activate” block.

Chestnut Hill Streetscape Plan 2015

Philadelphia, PA
Residences on block
- Create better lighted homes with a few simple lighting upgrades to help make block feel more active and safe
- Request that owners leave lights on until after shopping closes. A simple timer switch could be provided.
- Assist owners to add a small historic porch light at door area
- Add small post mounted walkway light
Verizon Building on block
- Worn and dark building creates hiding places and makes entire block feel unsafe
- Repair/replace broken wall sconces
- Add light at alley adjacent to building
- Add 2 full-cutoff wall lights at loading area
- New streetpole at existing location should also help small seating area
Business owners lighting guidelines

- Ensure store display windows are lighted with inward facing light.
- Whenever possible circuit storefront lighting on independent switch so that display can be left on after hours. A simple timer switch is recommended.
- Exterior wall mounted lighting that matches the historic character of the district is encouraged.
- Storefront window and wall mount sconces are recommended to stay lighted until midnight to be visible to late night restaurant and other patrons.
Gateway importance

- help visitors to know where business district is and how to get there
- establish and reinforce identity and brand
- help establish borders and a sense of place for both visitors and residents
- Gateways are commonly established with large scale signage over or adjacent to roadway. However, identity can also be established with consistent signage and matching light poles throughout the business district.
Bethlehem Pike / Stenton Ave intersection
- with high traffic potential this intersection offers the best value for an investment
- the stenton avenue turn is a non-signaled intersection that provides for easy redirection of traffic
- Any sign must be lighted to take full advantage of visibility to traffic at night
Potential Funding Opportunities

A number of public funding sources are available for design, documentation, and implementation of streetscape improvement projects. Political support will be integral to the success of obtaining funds. The following list is not exhaustive.

Pennsylvania Department of Community and Economic Development:

- Funding Finder (Summary of state grant opportunities)
  [www.newpa.com/find-and-apply-for-funding/funding-and-program-finder](http://www.newpa.com/find-and-apply-for-funding/funding-and-program-finder)

- Keystone Communities (KC) Program Grants

Keystone Community designation must be obtained before applying for an implementation grant. Signage is one of the projects eligible for KC grants.

Pennsylvania Department of Transportation (PennDOT) Grants

- Transportation Alternatives Program (TAP)
  [www.dot.state.pa.us/Internet/Bureaus/CPDM.nsf/TAPHomepage?OpenFrameset](http://www.dot.state.pa.us/Internet/Bureaus/CPDM.nsf/TAPHomepage?OpenFrameset)

  TAP provides funding for programs and projects defined as transportation alternatives, including pedestrian and bicycle facilities, infrastructure projects for improving non-driver access to public transportation and enhanced mobility, community improvement activities, environmental mitigation, safe routes to school projects, etc.

- Multimodal Transportation Fund (MTF) Grants:
  [http://community.newpa.com/programs/multimodal-transportation-fund](http://community.newpa.com/programs/multimodal-transportation-fund)

  MTF provides matching funds for projects ranging from $100,000 to $3,000,000. Applications are received between March 31 and July 31 of each year. Funding is intended to benefit transportation systems by mitigating public safety issues and supporting connectivity, integration, or revitalization of at least two different means of transportation.