**Site 1 - Barnes Lane:** This paved LVR is a frequent maintenance headache for the township, and contributes runoff and sediment to Spring Creek at the bottom of the hill.

- While stream impacts may be less obvious than some sites, much of the road drains to the “curb and gutter” section at the bottom of the hill which drains to Spring Creek. The Karst topography also drains much of the runoff to Spring Creek.

- The road is a constant source of maintenance as ditches are frequently eroded and ditch material is deposited on the lower intersection. Ditch erosion is so frequent and severe that the township has resorted to paving sections of the ditch.

- The township is interested in submitting a LVR application to Centre County.
A traffic county discussion on Barnes Lane will highlight the SCC approved traffic count policy and procedures. At their 9/9/2014 meeting, the State Conservation Commission approved a traffic count policy for use in the Low Volume Road (LVR) part of the Program. As you know, LVR funds are limited to paved roads with 500 vehicles per day or less.

**Some highlights of the policy:**

- **Traffic Counts can only be conducted from March 1 through the week before Thanksgiving.** Please note this seasonal restriction is why we rushed to make this policy available so counts could be done this fall if needed.
- Counts are the responsibility of the applicant, and must be done to District satisfaction.
- Existing traffic data can be used or extrapolated from when available.
- A “Level 1” two-hour hand count can be used to verify traffic is <500.
- A “Level 2” 24-hour automated count is needed if the level 1 count is over 500.

---

**Secured traffic counter on Shiloh Road.**

**Pneumatic Tube from the traffic counter on Shiloh Road.**
### Site 1: Barnes Lane (LVR Diagnostic)

#### Field Trip 1

<table>
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<th>Tue 23-Sep-14</th>
<th>Wed 24-Sep-14</th>
<th>Thu 25-Sep-14</th>
<th>Fri 26-Sep-14</th>
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<th>Sat 27-Sep-14</th>
<th>Sun 28-Sep-14</th>
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**Day Total:** 6 137 113 46 0 124 0 0 124

**% Avg. WKDay:** 4.8% 110.5% 91.1% 37.1% 0.0%

**% Avg. Week:** 4.8% 110.5% 91.1% 37.1% 0.0% 100.0% 0.0% 0.0%

**AM Peak:** - 06:00 07:00 08:00 - - 08:00 - - 08:00 - -

**PM Peak:** 23:00 18:00 16:00 12:00 - - 18:00 - - 18:00 - -

**Grand Total:** 6 137 113 46 0 124 0 0 124

**ADT** ADT 125 AADT 125
Site 1: Barnes Lane (LVR Diagnostic)

An aerial photograph and topographic map of Barnes Lane in Benner Township, Centre County. These maps are what you would expect to receive from a municipality with a grant application.
Site 1: Barnes Lane (LVR Diagnostic)  
Field Trip 1  

DIRT, GRAVEL AND LOW VOLUME ROAD MAINTENANCE  
GRANT APPLICATION  

<table>
<thead>
<tr>
<th>Centre</th>
<th>Benner Twp</th>
</tr>
</thead>
<tbody>
<tr>
<td>County</td>
<td>Municipality</td>
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<tr>
<td>Multiple</td>
<td>Roadmaster</td>
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</table>
| ESM Certified Person | Position | Certification Date  

Benner Township  

Official Name of Applying Agency  

100 Municipal Drive, Bellefonte, PA 16823  

Mailing Address  

Any one | 814-777-7777 | 814-777-778  
| Contact Person | Phone | Fax | E-Mail  

Spring Creek | Barnes Lane  

Affected Stream or Tributary | Road Name / ID Number | ADT  

7/1/15 | 9/1/15 | Proposed Project Start Date | Proposed Project Completion Date  

Existing Road Surface Type: ☐ Unpaved ☐ Paved  

Is project considered an emergency? ☐ Yes ☐ No  

1. The applicant is required to identify and obtain all necessary permits before starting the project.  
2. Do the materials proposed to be used on the project meet State Conservation Commission conditions for non-polluting? ☐ Yes ☐ No  
3. Identify the proposed work elements: ☐ Ditches Improved ☐ Ditch Outlets Added ☐ Off Right-of-Way Improvements ☐ Road Banks Improved ☐ Road Base Improved ☐ Road Surface Stabilized ☐ Stream Crossings Improved ☐ Storm Water Improvements ☐ Vegetative Management ☐ Other  
4. The applicant is required to obtain the DSA Specification and Certification form prior to DSA placement.  
5. Complete Attachment B by drawing a sketch of the proposed project. Attach a copy of a locational map with the project highlighted.  
6. Project cost estimate: (attach additional documentation as needed)  

<table>
<thead>
<tr>
<th>Grant Requested Funds</th>
<th>In-Kind Contributions</th>
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</thead>
<tbody>
<tr>
<td>Materials</td>
<td>Equipment</td>
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</table>

See Attachment A1  

See Attachment A2  

Grant Requested ........ $ ___________________  

In-Kind Contributions..... $ ___________________  

Total Project Value........ $ ___________________  

Applicant Signature | Date  

ATTACHMENT A
## Site 1: Barnes Lane (LVR Diagnostic)

### Field Trip 1

**DIRT, GRAVEL AND LOW VOLUME ROAD MAINTENANCE PROJECT WORK PLAN**

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<tr>
<th>Applicant</th>
<th>County</th>
<th>Municipality</th>
<th>Road Name / ID Number</th>
<th>Date</th>
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<tbody>
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### Instructions:
- Draw a sketch of the proposed project that includes:
  - Compass and North Arrow
  - Project Road Length in Feet or Miles
  - Known Utilities
  - Nearest Intersection and/or Reference Landmarks
  - All Proposed Work (i.e., Cross Pipes, Stream Crossings, Other ESM Practices)
- Attach a copy of a locational map with the project highlighted
- Attach additional project details as necessary
- Write PA One Call Serial Number once obtained

---

811

Dial 8-1-1 or 1-800-242-1776 not less than 3 business days nor more than 10 business days prior to the start of excavation.

Pennsylvania One Call System Serial Number

Project Length = ________ feet / miles (circle one)

---

North Arrow

ATTACHMENT B
Barnes Road represents a traditional dirt and gravel road project, which just happens to have a paved surface. The best strategy in dealing with too much water is usually to start at the top of the hill to disperse drainage instead of trying to remediate the situation at the bottom of the hill. While there are ample opportunities to outlet water on the upper part of Barns road, drainage is concentrated into a few outlets causing perpetual ditch and outlet erosion. The drainage on the upper part of the road can be handled with a combination of traditional ESM practices such as new crosspipes, new turnouts, and new “through-the-bank” pipes. The lower “straightaway” section of Barns road drains nearly 900 feet of roadway down to the “curb and gutter” section of the road at the intersection. The best opportunity for a crosspipe in this lower section is to outlet it at the hedgerow/treeline between the farm fields. An additional pipe could be installed below this if the outlet is extended through the narrow farm field. Much of the downslope ditch below the hedgerow/treeline could be eliminated with removal of the roadside berm.

A topographic map showing Barnes Lane in Benner Township, Centre County. The proposed worksite is highlighted in blue. The four labeled sites correspond to sites marked on the Project Sketch and the pictures on the following page.
Site 1: Barnes Lane (LVR Diagnostic Plan)  

Field Trip 1

• First location where an outlet is required.
• Ideal location for a through-the-bank pipe.
• Ditch erosion on both sides of road already present within 175’ from the top of the hill.
• This location intercepts a small watershed and traps the water in the road drainage system.

• First crosspipe located at telephone pole.
• Second crosspipe at the driveway.
• A new driveway pipe may be required.
• A crosspipe with a through-the-bank pipe may be required to avoid changing the road elevation.

• This is the last functioning outlet on Barnes Lane.
• This turn out has too much drainage water. This volume will be reduced with pipes further up the hill.
• There are no outlets in the remaining 1,300’ of road.

• To achieve effective drainage, outlets must cross these farm fields.
• Utilize existing hedge rows and drainage ways as best you can.
• For new outlets at locations such as this, long pipes with infiltrating designs could work well in conjunction with the land use.
### Site 1: Barnes Lane (LVR Diagnostic Plan)

#### Field Trip 1

**SECTION 9106 OF THE PENNSYLVANIA VEHICLE CODE**

**DIRT, GRAVEL AND LOW VOLUME ROAD MAINTENANCE GRANT APPLICATION**

<table>
<thead>
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<th>Centre Township</th>
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<tbody>
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<td>County</td>
<td>Municipality</td>
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<td>Multiple</td>
<td>Roadmaster</td>
</tr>
<tr>
<td>ESM Certified Person</td>
<td>Certification Date</td>
</tr>
<tr>
<td>5/14/14</td>
<td></td>
</tr>
</tbody>
</table>

**Official Name of Applying Agency**

100 Municipal Drive, Bellefonte, PA 16823

**Mailing Address**

**Any one**

**Contact Person**

814-777-7777 814-777-7778 814-777-7778

**Phone**

**Fax**

**E-Mail**

**Spring Creek**

**Barnes Lane**

<table>
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<tr>
<th>Affected Stream or Tributary</th>
<th>Road Name / ID Number</th>
<th>ADT</th>
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</thead>
<tbody>
<tr>
<td>7/1/15</td>
<td>9/1/15</td>
<td></td>
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</tbody>
</table>

**Proposed Project Start Date**

**Proposed Project Completion Date**

**Existing Road Surface Type:** □ Unpaved □ Paved

**Is project considered an emergency?** □ Yes □ No

1. The applicant is required to identify and obtain all necessary permits before starting the project.

2. Do the materials proposed to be used on the project meet State Conservation Commission conditions for non-polluting? □ Yes □ No

3. Identify the proposed work elements:
   - □ Ditches Improved
   - □ Ditch Outlets Added
   - □ Off Right-of-Way Improvements
   - □ Road Banks Improved
   - □ Road Base Improved
   - □ Road Surface Stabilized
   - □ Stream Crossings Improved
   - □ Storm Water Improvements
   - □ Vegetative Management
   - □ Other

4. The applicant is required to obtain the DSA Specification and Certification form prior to DSA placement.

5. Complete Attachment B by drawing a sketch of the proposed project. Attach a copy of a locational map with the project highlighted.

6. Project cost estimate: (attach additional documentation as needed)

<table>
<thead>
<tr>
<th>Grant Requested Funds</th>
<th>In-Kind Contributions</th>
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<td>Equipment</td>
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<td>Labor</td>
<td>Materials</td>
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<td>See Attached</td>
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| Grant Requested........... | $40 - 80 K |
| In-Kind Contributions.... | $50 K |
| Total Project Value...... | $90 - 130 K |

**Applicant Signature**

[Signature]

[Date] 

ATTACHMENT A
Site 1: Barnes Lane (LVR Diagnostic Plan)  
Field Trip 1

SECTION 9106 OF THE PENNSYLVANIA VEHICLE CODE
DIRT, GRAVEL AND LOW VOLUME ROAD MAINTENANCE
PROJECT WORK PLAN

Applicant
County
Municipality
Road Name / ID Number
Date

Notes: Road Length 3500 ft

Instructions:
- Draw a sketch of the proposed project that includes:
  ◦ Compass and North Arrow
  ◦ Project Road Length in Feet or Miles
  ◦ Known Utilities
  ◦ Nearest Intersection and/or Reference Landmarks
  ◦ All Proposed Work (i.e., Cross Pipes, Stream Crossings, Other ESM Practices)
- Attach a copy of a locational map with the project highlighted
- Attach additional project details as necessary
- Write PA One Call Serial Number once obtained

Project Length = 35.00 feet / miles (circle one)

Dial 811 or 1-800-242-1776 not less than 3 business days nor more than 10 business days prior to the start of excavation.

Pennsylvania One Call System Serial Number

North Arrow