

The Center will act as a “DSA Clearinghouse” for DSA projects. The purpose of this DSA Clearinghouse is to ensure quality DSA purchase and placements for districts statewide by:

- Visiting and talking with quarries to ensure they understand the DSA requirements.
- Collecting samples and performing testing to ensure DSA meets all material requirements before delivery and placement.
- Keeping records of aggregate testing to avoid duplicating efforts.
- Establishing a central point of contact for quarries on DSA issues.
- Assistance with contractor coordination.
- On-site assistance during DSA placement.

**If districts plan to use the DSA Clearinghouse, it is recommended that they contact the Center when a potential DSA supplier is chosen, at least 30 days before placement.**

Notification can be made utilizing the DSA Purchase Notification Form, provided in the Aggregate Handbook, or on the Center’s website. **If districts choose to sample their own DSA, they should share testing results with the Center** in order to provide a more comprehensive statewide database and avoid duplicate testing.

## 7.3 Full-Depth Reclamation (FDR)

### 7.3.1 Program Eligibility

**FDR is an eligible expense in the Program, at the discretion of individual districts, for use on paved Low-Volume Road (LVR) projects. FDR is not an eligible expense on unpaved roads.** FDR shall not be funded on paved LVR roads with DGLVR Program funds unless all applicable drainage improvements and Environmentally Sensitive Maintenance practices have been employed, as road owners are hesitant to install drainage practices at a later point when it would disturb the new road base. Shallow surface grinds for the purpose of road resurfacing are not considered FDR projects. FDR is a major rehabilitation technique in which the full depth (minimum 6”) of the surface and predetermined portion of the underlying base is uniformly pulverized and blended to provide a stronger, homogeneous road base.

### 7.3.2 Alternatives to FDR

FDR is an expensive process that may not be necessary everywhere it is proposed. When considering funding FDR projects, consider alternative base improvement techniques such as:

- **Imported fill:** Importing fill to raise the elevation of a road can be less expensive than FDR in some cases. Entrenched roads in particular will benefit from road fill to eliminate drainage issues while providing a sound road base.
- **French Mattress:** In some cases, road base instabilities are a direct result of spring and seeps coming up near or under the road. French mattresses provide excellent road base while insuring that wet areas around and under the road will not affect the road above.
- **Geo-synthetics:** The use of geo-synthetics such as geogrid can increase the structural strength and stability of the road base. Geogrid is an excellent solution to fix base problems and is cost effective on small projects.

### 7.3.3 Program FDR Requirements:

If a district chooses to fund an FDR project, the following requirements apply:

- The Center must be made aware of the proposed FDR project before a contract is signed. A site visit from Commission or Center staff may be requested.
- FDR must follow specifications in PennDOT Publication 447 (Approved Products for Lower Volume Local Roads)
- The mix design for FDR projects must be determined by an independent third-party.
- FDR is a base stabilization technique and does not provide a final running surface. Consideration for asphalt, “tar and chip”, or some other final running surface must be part of the planning for FDR projects.

- Any additives or binding agents used in chemical stabilization must be on the Program's "Approved Products" list, detailed on the Center's website.

## 7.4 Low-Volume Road Specific Guidance

This section applies only to Low-Volume funds, not Dirt and Gravel funds. For the purposes of the LVR Program, a "paved" road is defined to include any road surfaced with asphalt, "tar and chip", "chip seal", bitumen, concrete, or other asphalt-like coating.

### 7.4.1 LVR Guiding Principals

#### 7.4.1.1 Project Focus

The focus of road projects in the LVR portion of the Program should be on similar ESM principles that have been used in the Program since its inception. Projects in the LVR Program must contain benefits to both the road systems (improved drainage, reduced surface, ditch and bank erosion, smoother surface, more durable surface, reduced maintenance costs, etc.) and the environmental systems (water quality, stream quality, reduced storm water flows, improved air quality, increased infiltration). The balance between road improvements and environment benefits should be considered in the local QAB/district project ranking criteria and funding decisions.

#### 7.4.1.2 Long Term Benefits

Similar to Dirt and Gravel Projects, the focus of LVR projects should be on long-term road and environmental improvement projects.

- Routine maintenance of LVR or storm water systems such as cleaning inlets, street sweeping, crack sealing, etc. is not eligible for funding under this Program.
- Program funds should not be used to pay for deferred or neglected maintenance on drainage/storm water systems without road improvements.
- Program funds should not be used to fund any LVR issues that do not provide a long term benefit to the road and to the environment.

#### 7.4.1.3 Mistakes/design Errors

Program funds should not be used to correct recent mistakes and or design errors on LVRs that are the responsibility of the original project engineer or construction firm. If recent (within its reasonable design lifespan) LVR construction projects contain design or construction flaws, correction of these problems should be the duty of the project's engineer or contractor of record, and LVR funds should not be allocated for these purposes.

#### 7.4.1.4 Project Eligibility

In order to be eligible for LVR funding, a road must have an existing paved (including chip sealed) surface, and it must have a verified average daily traffic count of less than 500 vehicles per day (according to Commission guidance). For more information on traffic count guidance, see [section 7.5](#).

All projects must apply ESM principles and practices approved by the Program in order to address an environmental concern directly related to the road, make improvements to the road system, or to meet all other Program requirements (ie. permits or approvals). The project eligibility requirements in [section 3.7](#) of this manual apply to Low-Volume Roads.

### 7.4.2 LVR Project Guidelines

#### 7.4.2.1 Paying for Asphalt or Other Surfacing