



Sundance Mt. South Association

2024 Reports

Roads Committee Report



2024 SMSA ROADS COMMITTEE REPORT



The Roads Committee reported several road issues that occurred during Shentel's installation of fiber optics cable on Sundance Mt. Road, Blue Smoke Lane and Walden Lane.

Since Shentel's cable was run along the side of the roads, some ditches and culverts were damaged and had to be repaired. On Sundance Mt. Road, Shentel hit a long stretch of main water line at the edge of the road that not only resulted in the replacement of the several hundred feet of pipes, but the need to repair a long stretch of the road in that area. In addition, Shentel caused some problems with private ditches and driveways that owners had to get resolved, including having a few trees cut without the owner's notification. All SMSA road damages caused by Shentel were eventually repaired to satisfaction, however, after learning that Shentel may install their cable on Shotgun Spring Road in the future, the Board advised them that more advanced notice and coordination is required in an effort to prevent future road and waterline damage.

After the normal 2024 roadwork was completed by Macanie Trucking, the Valley had torrential rainfall from a hurricane which caused the new road gravel to wash out and fill several ditches and private driveway culverts. Macanie cleaned out those areas and hopefully no further damage will be experienced. Owners were alerted to report those problems as soon as possible to prevent washout of the main road.

Two projects are scheduled for the end of this year. First, the replacement of a collapsed culvert under Sundance Mt. Road, before the intersection of Sundance and Blue Smoke Lane. This culvert has needed replacement for several years and the repair should not only help drainage in that area, but possibly result in fewer spring potholes in that location. Second, there will be placement of "Keep Left" arrow signs in one area on Sundance that has a steep drop-off. The signs will help to prevent cars moving too far to the right when meeting oncoming traffic in this narrow area. When these projects are started, traffic will need to be directed to one side of the road. Traffic alerts will be sent to all owners to drive with caution.

Macanie Trucking worked with several owners on their private driveways this year correcting drainage issues. Some of the work has involved installing Conveyor Belt Diversion Systems, which is a successful cost-effective method used to divert water to reduce erosion. We have attached a two-page flyer to the Road Report on the installation of this device, since we feel it would help many owners with long steep driveways that may have drainage problems.

Speeding on SMSA roads has increased this year and will be discussed at the annual meeting. Additional road signs are being added and larger speed limit signs and having them in more locations is under consideration.

Members should quickly report downed trees and powerlines as well as road drainage problems as soon as they are seen, to prevent injuries or increased erosion problems. The SMSA Roads Committee can be reached by voice, text or voicemail through the hotline at 540-339-7510 or by emailing smsaroads@gmail.com or sundancemtsouth@gmail.com.

Technical Bulletin

Conveyor Belt Diversion



PennState

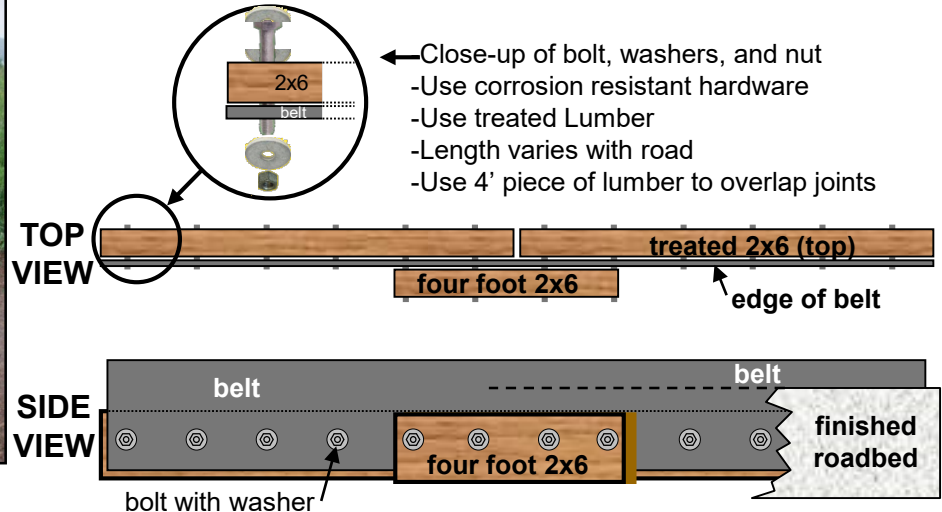
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CONVEYOR BELT DIVERSION – A structure, consisting of a wide belt attached to treated lumber and buried in the road, that is used on unpaved access roads to divert water and prevent run-on to the main road.



Completed Conveyor Belt Diversion



PURPOSE

To reduce erosion on an unpaved road by diverting concentrated flow off of the road surface, and to reduce negative impacts to public roads caused by uncontrolled run-on flow from unpaved access roads. Generally, Belt Diversions benefit both the private access and the public road.

BENEFITS OF A CONVEYOR BELT DIVERSION

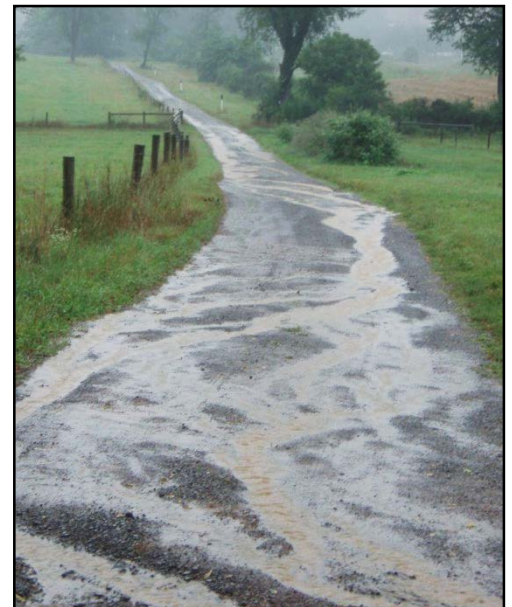
- Forces water off the road, similar to water bars or grade-breaks, to reduce erosion on the road surface.
- Functions when road crown is lost (provided Belt Diversions are properly installed and properly spaced).
- Belt Diversions give and spring back when run over, and will not deform under heavy hauling..
- Can have a long life expectancy with relatively low maintenance.
- Belt Diversions are inexpensive and easy to install.

WHERE TO USE A CONVEYOR BELT DIVERSION

- **On low volume access roads**, to prevent run-on to public roads (consider for driveways, farm lanes, and camp lanes). Belt Diversions are NOT suitable for roads that receive high traffic volume, fast traffic, routine grading, or snow plowing. They are a tool for “off right of way” water issues
- Where there is evidence of flowing water damage to the surface of an upslope access road near the intersection with a public road.
- On unpaved roads that do not receive sufficient surface maintenance to maintain proper crown or cross-slope.

CONSIDERATIONS

- Belt diversions require a stable outlet. A rock dissipater may be needed at the end of the diversion to slow water and disperse flow.
- Multiple Conveyor Belt Diversions can be used to prevent the buildup of erosive water volume. Spacing between each diversion is determined by the grade of the road, the stability of the surface material, available outlets, and the amount of water entering the road drainage system (including run-on sources).



Low volume access lanes such as this are ideal candidates for diversions.

TYPICAL REQUIREMENTS:

MATERIALS and TOOLS (to Build)

- (1) Conveyor Belt ½" x ~15" x necessary length
- Treated 2"x6" lumber. Total length depends on road width. Overlap joints with 4' length board (see diagram on front).
- (12) 3/8" diameter bolts and nuts. Bolt length varies with belt.
- (24) wide diameter washers
- Tools: utility knife; drill; hammer; adjustable wrenches

EQUIPMENT (to Install)

- Backhoe, excavator, or trenching machine
- Upright tamper (Jumping Jack)
- Shovel and rake

CONSTRUCTION: Building diversion (see diagram on front)

Note: These instructions assume 20' length. This will vary.

1. Cut conveyor belt into ~15" x 20' piece.
2. Lay belt on two 2"x6"x10' boards laid end to end. Leave ~10" of belt above board (5" to be buried & 5" left above road).
3. Starting at one end, drill holes through belt and lumber (~2' spacing) and secure with bolts and washers. **(Pic 1)**
4. On diversions longer than 16', a lumber joint is necessary. Longer bolts should be used to attach a 4' piece of lumber on the opposite side of the belt at the joint (visible in **Pic 2**).

INSTALLATION (Installing diversion)

1. Excavate a trench diagonally across the road
 - a. Angle: Dig trench at min 30% angle to road **(Pic 3)**.
 - b. Fall: Minimum of 1% of continuous fall toward the outlet.
 - c. Width: Wide enough trench to allow for compaction equipment beside the belt diversion (typically ~18").
 - d. Depth: The trench should be deep enough to provide 4"-5" of cover over the top of the supporting 2" x 6" board.
2. Place the diversion against bottom edge of the trench, leaving ~5" of the belt exposed above the final road surface. **(Pic 2)**
3. Backfill the trench and compact with a tamper. **(Pic 3 & 4)**
4. Place stones at the end of the diversion to control erosion, but be careful not to prevent flow from freely leaving the belt.
5. Mark Conveyor Belt Diversion with reflective posts along the road edge to avoid damage during future maintenance.

ADDITIONAL NOTES

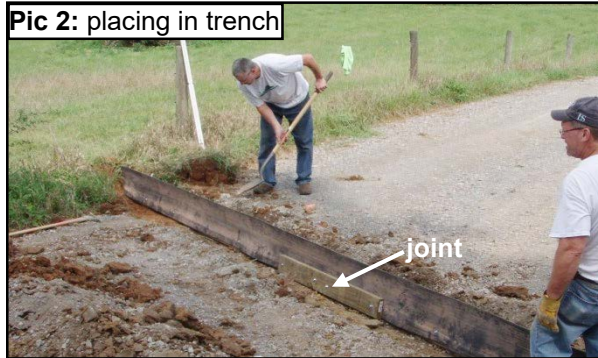
- Be sure diversion is long enough to angle across the roadway and prevent water from returning to the road around the belt.
- Used belts may be available at a local quarry or mine at low or no cost. Belts typically come in 26"-30" widths. Unless they contain steel, most belts can be cut with a utility knife.
- Diversions must be periodically cleaned to ensure function.
- Once the belt is cut in half lengthwise, it will begin to bow. You will need to adjust the belt as you secure it to the boards.
- For longer diversions. It may be easier to construct the belt, then remove the 4' joint board. The diversion can then be folded in half for transport and reassembled on site.

This document is based on a brochure produced by PA's Indiana County Conservation District.

Pic 1: building



Pic 2: placing in trench



Pic 3: filling



Pic 4: compacting



Pic 5: completed

