

# So You Now Have the Old Home Place

*Part 3: Roads, Trails, Fire Lanes and Bridges*

*by James L. Cummins*

Roads are major access routes  
through one's property.



This is the third in a series titled “So You Now have The Old Home Place?” In our previous article, we discussed forest management. In this one, we will discuss roads, trails, fire lanes and bridges.

A good access system is an essential component of land management and necessary for your property. It provides a means to get to your cabin and, if the tract is large enough, to other parts of your property. However, high costs, erosion, degradation of water quality and destruction of fish and wildlife habitat can result from poor location, construction and maintenance. Today, there are regulations specific to building small, private roads in forested and agricultural areas.

## ROADS

Historically, road systems have been one of the major sources of sediment from forestry and agricultural related activities. Proper planning can reduce skidding distances for logging and eliminate unnecessary road construction. To protect water quality, a road system should be designed to minimize the amount of sediment entering stream channels. Use of broad-based dips, water bars, filter strips and other sediment control techniques can significantly lower the amount of erosion which might otherwise occur.

When planning for the road system on your property, it is important for the design to meet long-range objectives

rather than simply access individual sites. Numerous, separate road projects will negatively impact the environment more than one, well-designed road system. Carefully consider all of your access needs before progressing to the construction of roadways. If you need help with planning, your local Natural Resources Conservation Service (NRCS) agent or Mississippi Forestry Commission county forester can walk your property with you to help you site roads and suggest good, road system maintenance practices.

Roads are the major access routes into and around your property. They may lead to your cabin, barn and/or pond or lake. They are typically gravel and are wide enough to accommodate a jeep or truck. Trails, which can also double as fire lanes, are somewhat smaller in size and are used to maintain boundary lines, access food plots and generally move around the property. The surface consists of dirt as they are unimproved.

Road development provides several important benefits for the landowner. For most people, they make it much easier to enjoy the property by improving access through it – whether on foot, horseback, bicycle or all-terrain vehicle. A well-marked road system will also improve the marketability of your land should you ever decide to sell.

The design of your roads and trails depends on the type of use or uses you intend it for, the characteristics of the property and the features or points of

interest that you want to incorporate. Well-designed roads and trails take advantage of natural drainage features, follow benches on hillsides, pitch around rocks and trees and show very little evidence of the work that went into them. The best roads and trails “fit” into the natural landscape.

The layout should be done by flagging the general course and then double-checking the location to make sure it’s correct. Plastic flags or flagging tape used by surveyors work well and are inexpensive, highly visible and easily placed and removed. If possible, the desired location of the roads and trails should be checked periodically throughout the year to make sure all environmental factors have been considered – especially drainage.

The best time for the layout of the road and trail system is during spring or fall: drainage problems will be more recognizable and terrain features more visible. Unless a swampy area is something you specifically want to incorporate as a point of interest, the trails should avoid wet areas. This will help to avoid the extra work needed to build a passable, dry surface as well as future maintenance problems to prevent erosion.

Do not attempt to run roads directly up a slope. Steep slopes require careful location to avoid as much erosion as possible. Traversing the slope at a diagonal will help avoid erosion and make the road much easier to travel.

## TRAILS AND FIRE LANES

Once your main road system has been designed, next, you should think about trails and fire lanes. I designed our trails and fire lanes around the boundary of our property for food plots and for skidder trails for timber removal. Fire lanes are basically a strip of fire-resistant vegetation, nonflammable material, bare ground or a combination that slows or stops the spread of fire from controlled burns or wildfire.

Trail width and height are important factor in layout and construction. The width should be determined by the terrain and the purpose of the road or trail. Foot paths usually have a minimum tread width of about 4 feet. Trails for horses and recreational vehicles should be a minimum of 8 to 10 feet wide. Additional width should be provided for curves and erosion control devices when necessary. It is also important to remember that height clearance is important when constructing trails for horses and recreational vehicles.

While width and height are important to take into account, proper drainage is an essential component in road and trail design. A road or trail can be quickly destroyed by erosion if water is not diverted from the surface. Proper grading of the road surface is vital for

water runoff. Where additional measures are necessary, broad-based dips, water bars or culverts may be incorporated.

When designing and constructing trails and fire lanes, keep in mind that maintenance will be essential. They tend to “grow in” over time since brush and tree limbs will tend to sunlit openings along the trail. To minimize the need for future maintenance, avoid creating openings during construction. Try to locate trails and fire lanes where there already is a well-developed forest canopy overhead.

When clearing for trails, brush and saplings along the edges of the trail should be cut at ground level to eliminate hazardous stumps and stubble. All stumps in the trail should be removed, as well as dead and dangerous trees along the trail corridor. Overhead limbs should be cut high enough to avoid interference.


To effectively create trails and fire lanes, it is best to use a bulldozer. Fire lanes should be located to minimize the potential for wildfire spread to the primary residence and other structures you wish to protect. If winds are predictable, fire lanes should be located perpendicular to the wind and on the windward side of the area to be protected. Fire lanes should be tied into existing barriers such as roads,

cultivated fields, pastures and utility right-of-ways, when possible. However, fire lanes should not be directly tied into lakes, streams, ponds or swamps as this is a threat to water quality.

Trails and fire lanes should be at least 10 feet wide. Prior to conducting a controlled burn, they can be disked to expose fresh soil. They need to be bush-hogged to maintain grasses less than 3 inches in height year-round. You should also periodically inspect all trails and fire lanes for woody materials such as dead limbs or blown-down trees and remove them.

On flat terrain, ditches are needed on both sides of the trail and fire lane and should be diverted at every opportunity. The maximum grade of trails and fire lanes should not exceed 10 percent and water bars should be installed to minimize erosion. Percent of slope will determine spacing and dimensions of water bars. Typically, water bars are 12 to 18 inches high and installed at a 30 degree angle down slope so water is diverted into forested areas.

Permanent fire lanes should be maintained by disking or with grass cover to further stabilize soil movement. Fertilizing and seeding with species with dense, deep root systems can further stabilize fire lanes. Consider using legumes, small grains, rye grass

A photograph of a wooden boardwalk bridge crossing a stream in a forest. The bridge is made of wooden planks and has a simple railing on one side. The surrounding area is lush with green vegetation and trees. The lighting is soft, suggesting a misty or overcast day.

Bridges should be constructed over streams for ease of access to all areas of your property.

or other native grasses. Lime and fertilizer should be applied periodically, and reseeding should be done as necessary. You should also remove all burnable materials on your permanent fire lane at the start of fire seasons.

Vertical separation should be maintained between fuel layers on both sides of the trail and fire lane to remove "ladder" fuels, making sure that lower layers of flammable vegetation do not connect to upper layers so that a fire could not "step up and over" the fire lane. Also, thin the overstory stand sufficiently to reduce the tree canopy and the potential of a crown fire over the fire lane. You should also ensure the control of invasive species such as cogongrass, privet and kudzu.

A well-designed trail and fire lane system also provides the landowner with more options for future management practices such as allowing easy access to timber stands for hunting and other recreational activities, providing access for timber harvest operations and creating transition zones between habitat types.

One advantage of trails and fire lanes often overlooked by landowners is their use as wildlife openings. Trails and fire lanes offer the landowner an easy way to increase wildlife food sources with minimal effort and low cost. Plantings should be evenly distributed across an entire tract of land to ensure access by wildlife. Landowners should strive to put 5 percent of total forest land into openings to benefit wildlife. This is not always possible; however, by utilizing trails and fire lanes as wildlife openings, landowners can increase the percentage of openings on their land.

## BRIDGES

Mississippi has a significant number of streams that, in many instances, can restrict access into or across one's property. Therefore, crossings of waterways should have culverts, low water crossings or bridges designed to support the traffic that will be crossing them. Bridges that span the waterway or low water crossings will provide the least hydraulic and environmental impact to the waterway.

Bridge design must consider stream bank materials and profiles, flooding as well as construction materials. For example, a foot bridge will require different materials than one used for a small tractor to prepare food plots or one used in the main road that may need to support a dump truck hauling a load of gravel.

For foot bridges and bridges used by ATVs and small tractors crossing a narrow stream, utility poles may be used. Bridges spanning a greater distance, and needed for heavier loads, will need to be designed to support such. If in doubt of what you need to support a certain weight, contact a civil engineer.

Bridge railing is normally necessary on access crossings for the safety of the users. The style and height of the railing should be considered based on flooding. For example, with a bridge that will be submerged during a periodic flood, railings should be kept to a minimum to reduce the potential of catching flood debris.

Whether you are constructing a road, trail or a stream crossing, always be sure to comply with applicable federal, state and local laws, regulations and ordinances during the installation, operation and maintenance of them.

In the next issue of *Wildlife Mississippi* magazine, we will discuss food plots and open areas.

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# LAND

Since 1966, it has  
been our only business.

**Clarke Co. - Enterprise Gas Plant:** 429± acres, \$691,946.

Located 17 mi. south of Meridian, MS. The property consists of 173± ac. of 2005 pine plantation, 58± ac. of 2001 pine plantation, 28± ac. of upland hardwood and pine regeneration, and 158± ac. of hardwood bottomland.

**Kemper Co. - \$100 Tract:** 240± acres, \$471,600.

Located north of Collinsville, MS, this tract consists of 98 ac. of 2000 pine plantation, 40 ac. of 1991 pine plantation and remainder in hardwood timber. The terrain is diverse with a creek running through part of the property. Utilities available. Lots of internal 4-wheeler roads. Established food plots. Good hunting/investment property with several possibilities!

**Newton Co. - Oakahatta Creek Tract:** 317.98± acres, \$508,768.

The property is located 4 mi. north of Hickory, MS with a diverse terrain that consists of 175± ac. of 2003 pine plantation, 100± acres of hardwood bottomland, and 43± ac. of beaver sloughs. There are six established food plots and a creek that runs through the property. Utilities available.

**Noxubee Co. - Flora Tract:** 34± acres, \$39,282.

The property is located 7 mi. west of Shuqualak, MS and has approximately 2,328 feet of frontage on Hwy 21. The property consists of 10± ac. of 2003 pine plantation and 21± ac. of upland hardwood regeneration mixed with scattered merchantable hardwood and pine timber. The property is surrounded by large landowners.

**Scott Co. - Jimmie Drive Tract:** 33± acres, \$71,439.

The property is located 11 mi. north of Forrest, MS. The property has a diverse terrain that consists of 19± ac. of 1996 un-thinned pine plantation, and 14± ac. of hardwood bottomland. Excellent investment property!

**Scott Co. - North King Road Tract:** 112± acres, \$221,680.

Located 10 mi. north of Forest, MS, this property consists of 33± ac. of 1996 un-thinned pine plantation, 20± ac. of 2001 pine plantation, and the remainder is hardwood bottomland. There is road frontage, but no internal roads. Completely timbered on mostly flat terrain with utilities available. An excellent investment/recreational property!

**Smith Co. - Rose Hill Tract:** 120± acres, \$158,400.

The 120 ac. is located just north of the small town of Mize. The majority of the property was machine planted in pine seedlings during the winter of 2011, but there are also 55 ac. of natural hardwood timber along a small creek. Interior roads and two small food plots for hunting. This is an excellent hunting property.

**Smith Co. - Vanderford Cemetery Tract:** 72± acres, \$157,608.

The property is 35 mi. southeast of Jackson, MS. Timber consists of 40± ac. of 1996 pine plantation and 28± ac. of natural pine and hardwood timber along a seasonal creek. Road frontage. Utilities available. A great place for a cabin or weekend getaway!

**For more information on these properties, please contact:**

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Disclaimer: All information is assumed to be accurate and substantially correct but no assumptions of liability are intended. Neither the seller nor the agent or representatives warrant the completeness or accuracy of the information. Seller does not guarantee timber volumes, values, acreages (total, woodland/cropland, stand or otherwise), tree ages or the condition and/or function of any improvements, including but not limited to all buildings, machinery, appliances, wells, equipment, livestock and ponds. No representatives or warranties are expressed or implied as to the property, its condition, boundaries or logging feasibility. Prospective buyers should satisfy themselves as to the accuracy of this information.

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