

RESIDENTIAL DRIVEWAY APPROACH

GRAVEL (AGGREGATE) DETAIL SHEET

LAPEER COUNTY ROAD COMMISSION
 820 Davis Lake Road, Lapeer, MI 48446
 Phone: 810-664-6272 www.lcrconline.com

Permit Notes:

- It is the Applicant's responsibility to ensure that the entire driveway approach is constructed on the Property Owner's frontage.
 - Do not encroach upon the neighboring property without written permission.
- The driveway approach location shall be approved by the LCRC prior to obtaining any building permits.
- Call Miss Dig (811) prior to digging.
- All disturbed areas within the Right of Way (R/W) must be restored with seed and mulch blanket prior to final approval of the permit.
- All mailboxes must meet the federal standards. Refer to the LCRC Mailbox Policy available on our website at www.lcrconline.com. Brick / Stone or other hazardous mailboxes are prohibited.
- No other hazardous items such as large rocks, landscaping, or fences are permitted in the Road Right of Way. Existing rocks or other hazardous items shall be removed prior to final approval.
- This Permit is valid for 90 days unless otherwise noted. All Work shall be completed within 90 days.**

Driveway Approach Dimensions

- At a minimum, the gravel portion of the driveway approach shall meet the dimensions in **Figure 1**.
- Regardless of construction method used, the driveway approach shall be surfaced to the extent of these minimum dimensions.

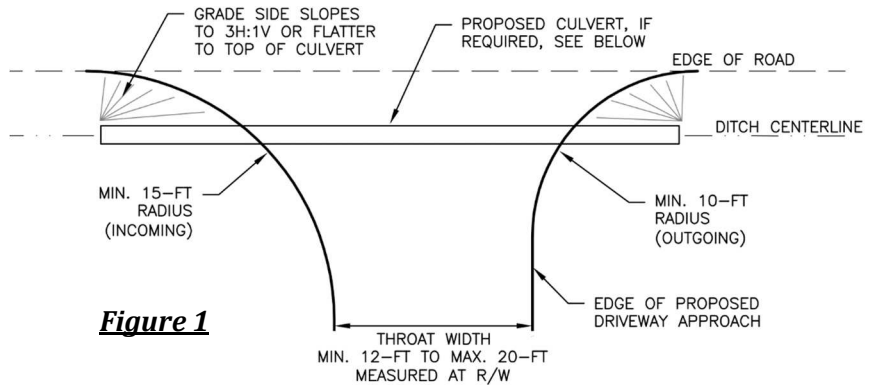


Figure 1

Driveway Approach Material & Depth

- Gravel (Aggregate) shall meet the Michigan Department of Transportation (MDOT) gradation requirements of 21AA, 22A or 23A.
- Gravel (Aggregate) shall be a minimum of 8-inches in depth
- Material may be natural aggregate, limestone, crushed concrete or HMA millings. However, absolutely no material may be larger than 1.5-inches in diameter, and shall be free of foreign material, brick, wire, glass, wood, rubber, etc. If material is found to not meet the gradation or material requirements, approach will be rejected.

Driveway Approach Grade

- Driveway Approaches shall be a 2% minimum slope down / away from the road so that water runs away from the road and toward the ditch line, as shown in **Figure 2**.
- In no case shall water from the driveway drain out onto the shoulder or roadway.

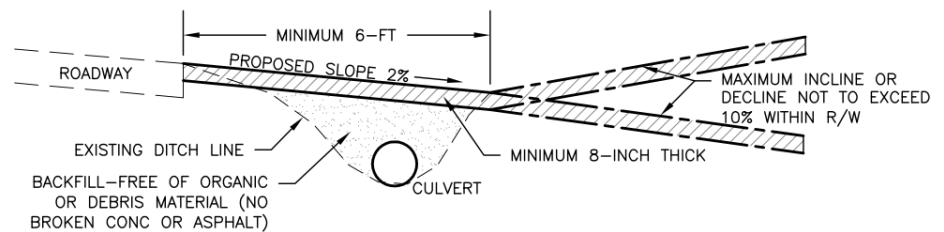


Figure 2

Sight Distance

- It is necessary to provide a clear line of sight to safely enter or exit the roadway. All trees, brush, bushes, banks and objects (rocks, fences, landscaping) in the shaded portion of **Figure 3** shall be cleared / removed so that the ground is fairly level and allows for proper sight distance.
- Minimum sight distance for a Residential Driveway Approach shall be in accordance with **Table 1** below.

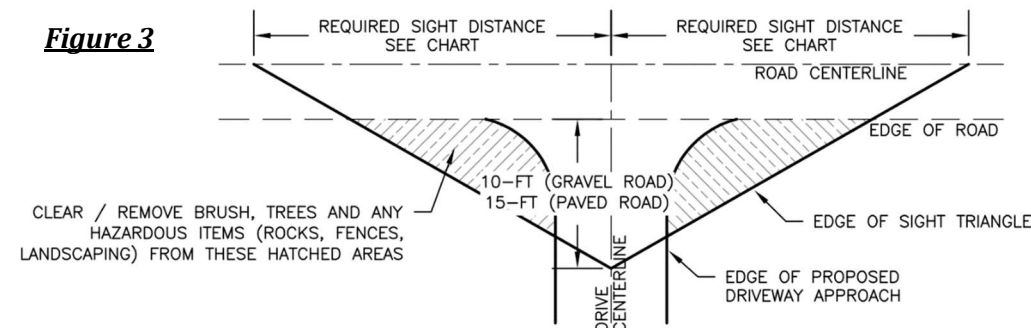


Figure 3

Table 1

Speed Limit (MPH)	Minimum Sight Distance (Feet)
25	280
30	335
35	390
40	445
45	500
50	555
55 / Unposted	610

Culvert Length and Side Slopes

1. Driveway Approach culverts shall be installed in line with the road ditch.
2. The Contractor shall ensure that the culvert grade allows positive flow through the ditch.
 - a. Ditch elevation may need to be adjusted (daylighted) to allow for positive flow.
3. Vegetative growth and topsoil shall be removed prior to culvert placement.
4. A separate permit is required for enclosure of the ditch beyond the adjacent limits of the driveway approach culvert.
5. Driveway Approach and culvert shall not be located or placed in such a manner that they interfere with cross-culvert drainage.

a. If a cross culvert is located near the proposed approach, maintain a minimum of 10-ft between inverts, or as directed by the LCRC Engineer.

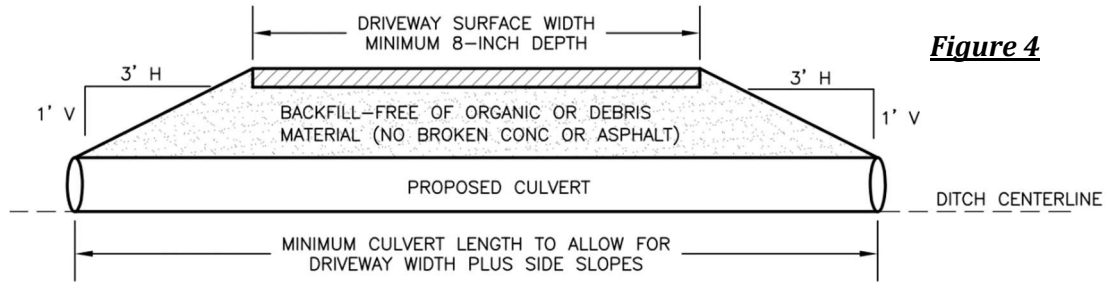


Figure 4

6. The required culvert length is dependent on the ditch depth, location and size of driveway approach width selected.
 - a. The minimum culvert length is 30-ft and works well in most cases.
 - b. A 3-ft horizontal to 1-ft vertical slope is required from the driveway aggregate edge down to the top of the culvert. Therefore, a longer culvert may be required in some cases, as shown in **Figure 4**.
 - c. Under no circumstances shall a vertical headwall be placed. No rocks, stone or headwall shall be placed around the culvert. Engineered or manufactured sloped end sections are allowable.

7. Culvert material shall meet the requirements of **Table 2**.

Table 2

- a. Use of Corrugated Plastic Pipe within the R/W requires prior approval by the LCRC Engineer, refer to the *Placement of Plastic Pipe Under Driveways* Policy for additional requirements.
- b. All joints shall be soil tight.

Material	Diameter Size (Inches)	Minimum Gauge / Thickness
Corrugated Steel or Metal Pipe (CSP / CMP)	12-inch to 24-inch	16 gauge
	30-inch to 42-inch	14 gauge
	48-inch and greater	12 gauge
Reinforced Concrete Pipe (RCP)	12-inch to 48-inch	Minimum Class II (AASHTO M170)
Smooth Lined Corrugated Plastic Pipe Dual Wall (SLCPP)	12-inch to 24-inch	AASHTO M294, Type S, Prior Approval is Required
	30-inch and greater	Prior Approval is Required

Permit Information

Application #: _____ Permit #: _____

Location: _____ Feet _____ From _____ Road

Side of Road: East West North South

Required Culvert Size: _____ Inch Diameter x _____ Feet Long Minimum

Additional Notes for Site:

Inspected By: _____ # _____ Date: _____