

Hidden Lake Association – Regulation for road standards and construction.

The purpose of the following design standards is to safeguard life, limb, property and the public welfare by regulating construction of private local access roads serving Hidden Lake Association members, (referred to as HLA for the remainder of this document) and emergency vehicles. This also provides design recommendations for private roads accessing single residences. These regulations will also allow the Board of Governors, (referred to as BOG for the remainder of this document) the necessary information for qualifying road construction within the confine of the HLA by establishing reasonable minimum standards for emergency access and roadway safety and to encourage that private local access roads and driveways meet these standards while minimizing the amount of site disruption caused by such construction.

These minimum design standards for safe, maintainable roadways should balance the desire to preserve the natural terrain and landscapes while maintaining fairness and respect for individual rights. These standards are not intended to inhibit creative design, provided that safety is maintained and site disturbance is minimized, nor are they intended to prevent development of private property in Hidden Lake. The intent is to encourage roadways which “fit” with the natural terrain. while providing safe, functional roads.

Road Construction design specification:

Private Road Construction Permit designs will be reviewed by the designated Road Committee or designated representative of the Hidden Lake Association Board of Governors. A site inspection may be required if sufficient information is not included with the application. In such cases a Pre-Application Inspection Report will be generated by the HLA Road Committee.

Application for a private road construction must be accompanied by a plan of sufficient clarity to indicate the nature and extent of the work. The plan must show sufficient topography to estimate the general longitudinal profile of the proposed road, extent of cuts and fills, and location of drainages, wetlands, and water features. No approval shall be granted for a private multiple access road unless it is shown to be constructed to meet the minimum requirements of this regulation. The plan must give the location of the work, the name of the owner, the name of the person who prepared the plan, and the contractor proposed to accomplish the work, if applicable. The plan must include the following specific information:

1. Horizontal alignment of the proposed road shown on a topographic map of sufficient scale to allow cut and fill volumes and longitudinal profile to be estimated.
2. Locations, dimensions, and designed flow capacity of proposed drainage structures such as culverts.
3. Typical cross-sections of the road design showing width, drainage feature dimensions, depth of road surfacing materials, and proposed sub-grade treatment. A cross section must be shown for each major change in design parameters.
4. Location of any buildings, structures, natural drainages, wetlands, and water features within 100 feet of the grading work or that may be affected by the proposed grading work.
5. An erosion control plan specific to the site conditions.

A drivable all-weather road surface width of 15 feet is required for an adequate two-way roadway to assure safe ingress and egress of emergency response vehicles. A narrower width for short distances, to minimize cut volumes or address other environmental concerns and for existing used roads may be acceptable if adequate turnouts are incorporated into the design and the road design is demonstrated to be otherwise safe and maintainable. The minimum acceptable width in these cases is 12 feet.

Access roads through forested areas must maintain proper clearance heights above the traveled way sufficient to allow passage of emergency vehicles. Tree branches must be trimmed to obtain a minimum overhead clearance of 13 feet 6 inches.

Road design must incorporate a maximum longitudinal slope of 8%. Road designs exceeding these longitudinal slopes must ensure that other safety and site disturbance guidelines are not compromised. Where topography requires, steeper grades may be necessary. The HLA BOG may grant deviations in writing for unusual cases in hilly terrain. However, the average grade for 200 feet should not exceed 12%.

Radii of curvature on centerlines may be a minimum of 100 feet (60 feet in steep terrain), so long as adequate sight distance exists to allow a safe stopping distance. Hilly terrain may require a deviation from this standard if topography is steep. The HLA BOG must approve such variance. For safety reasons, design of crest vertical curves (top of hill crests) must be based on the design speed of the road. The design speed must take into account sight distance limitations which result from extreme crest vertical curves. Correspondingly, sag vertical curves (bottom of hill) must also be designed based on the design speed, such that headlight visibility will not be compromised in nighttime or dim light conditions. Recommended design speed for most local access roads is 15 mph.

Drainage:

Plans for adequate site and roadway drainage are required for all road construction. Road design must contain provisions for stormwater drainage sufficient to achieve a standard of no ponding at all locations. Adequate design must insure the natural drainage system will be maintained and erosion is minimized. All perimeter erosion control measures shall be installed and functional, prior to any other earth-disturbing activity. All other structural erosion control measures shall be implemented as soon as the facilities, around which they are based, become operational. Any erosion control facility damaged or destroyed prematurely, by any means, shall be immediately repaired by the Developer. The pavement section design should be included in the construction plan set. Prior to paving, the asphalt mix design must be approved and certified by the HLA BOG to meet existing road surfaces.

Where proposed paving adjoins existing asphalt, the existing asphalt shall be saw cut from the existing edge to create a clean construction joint. The developer shall be required to remove existing pavement to a distance where a clean construction joint can be made. Wheel cuts shall not be allowed.

The top 12 inches of street subgrades shall be scarified and re-compacted prior to subbase installation. When an existing asphalt street must be cut, the street must be restored to a condition equal to or better than its original condition. The existing street condition shall be documented by the HLA BOG before any cuts are made. Patching shall be done in accordance with the HLA BOG.

Clearing and Grubbing

The natural ground surface shall be cleared of all vegetation such as trees, logs, upturned stumps, roots of downed trees, brush, grass, weeds and all other objectionable materials within the limits of the construction. All surface objects and all trees, stumps, roots and other protruding obstructions, not designated to remain, shall be cleared and/or grubbed, including mowing, as required. Trees which are to be removed shall be removed in such a manner as not to injure standing trees, plants, and improvements which are to remain.

Conformity to Roadway Smoothness Criteria:

Roadway smoothness shall be tested as described below. Roadway smoothness testing will not be measured and paid for separately, but shall be included in the work. All longitudinal and transverse pavement surfaces will be measured using a 10 foot straightedge. The Contractor shall furnish an approved 10 foot straightedge and depth gauge and provide an operator to aid the engineer in testing the finished pavement surface. Areas to be measured shall be as directed by the Engineer. Areas showing high spots of more than 1 inch in 10 feet shall be marked and ground until the high spot does not exceed ½ inch in 10 feet.

All excavated material shall be stockpiled in a manner that does not endanger the work or workers and that does not obstruct sidewalks, roads and driveways. No stockpiled materials shall be allowed on the asphalt surface or adjacent walkways. The work shall be done in a manner that will minimize interference with traffic and/or drainage of the road. The Contractor at the end of each day shall barricade all excavations and ditch lines, remove excess material from travel ways, and thoroughly clean all road, alleys and walkways affected by the excavation. If it becomes necessary, all roads, (if asphalt or concrete) and walkways shall be swept or washed as required by the HLA BOG.

Materials encountered during excavation such as rubbish, organic, or frozen material, and any other material that is not satisfactory for use as backfill in the opinion of the Engineer, shall be removed from the site and disposed of daily by the Contractor at his expense. Stones, concrete or asphalt chunks larger than six (6) inches or frozen material shall be considered unsatisfactory backfill.

All excavation, shoring and trenching shall comply with OSHA's "Construction Industry Standards" as well as all applicable Federal and State regulations. Excavation shall be performed in a careful and orderly manner with due consideration given to protection of adjoining property, and the public. Any damage to roads, parking lots, utilities, irrigation systems, plants, trees, buildings or structures, private property, construction stakes or bench marks, due to the negligence of the Contractor, shall be repaired and restored to its original conditions by the Contractor at his expense.

All materials determined acceptable by the Engineer acquired from roadway excavations may be used for embankment fill and backfill as needed. The entire area in the vicinity of the construction where excavation and filling has been performed shall be raked clean of all trash, wood forms, and debris, after completion of the work with no additional cost to the Owner. Material removed in excavation and not acceptable or not required for embankment fill or backfill shall be disposed of by the Contractor. It shall not be wasted on private property without written permission of the property owner. Waste banks shall be left with reasonable smooth and regular surfaces.

NOTICE OF COMPLETION

The applicant must notify the HLA BOG or the designated official when the road is ready for final inspection. Final approval will not be given until all work, including installation of all drainage facilities and their protective devices, and all erosion control measures, has been completed in accordance with the final approved plan, and any required certifications are submitted.