

Cobmoosa Shores Association

Roads

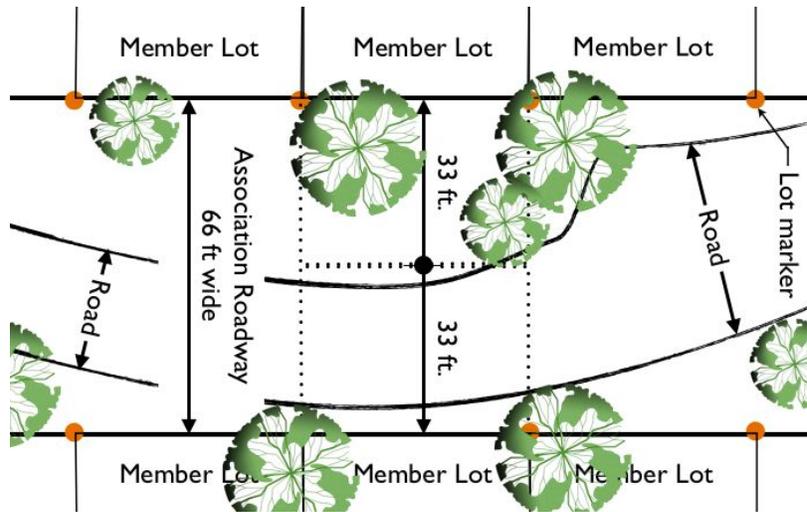
10 Year Plan

October 2015

2015-16 through 2025-26

Cobmoosa Shores Roads - 10 Year Plan

The Cobmoosa Shores Association Board provides maintenance and upkeep on all roads in the association. The roadway consists of 66 feet of road, shoulder, trees, shrubs, plants and grasses. Members are asked to keep area between the road surface and property line maintained. Cutting of trees or shrubs should be approved by the board. If members are unsure, contact a board member. There are approximately 5 miles of roads in Cobmoosa. 4 ¼ miles are gravel and ¾ of a mile is paved for control of erosion after heavy rains, snowmelt and emergency access during and after inclement weather. A Roads Committee provides oversight for maintenance, repair, grading, snow plowing, brining, signage, salt barrel upkeep and placement, trees in the road right of way.



History

Many of the roads in Cobmoosa are gravel surface and according to conversations with many settlers here, they have been gravel since Cobmoosa was established. Some have been two track trails prior to improvements. The steep inclined roads have been paved to reduce maintenance and repair after rains and snowmelt. Many of these paved areas have been in place for almost 22 years. There are some roads that are no longer in use and some that were platted and never put into use as shown on the map.

Maintenance has been performed mainly contracted services and is managed by elected Board Members, serving as a Roads Trustees appointed by the board to a Roads Committee.

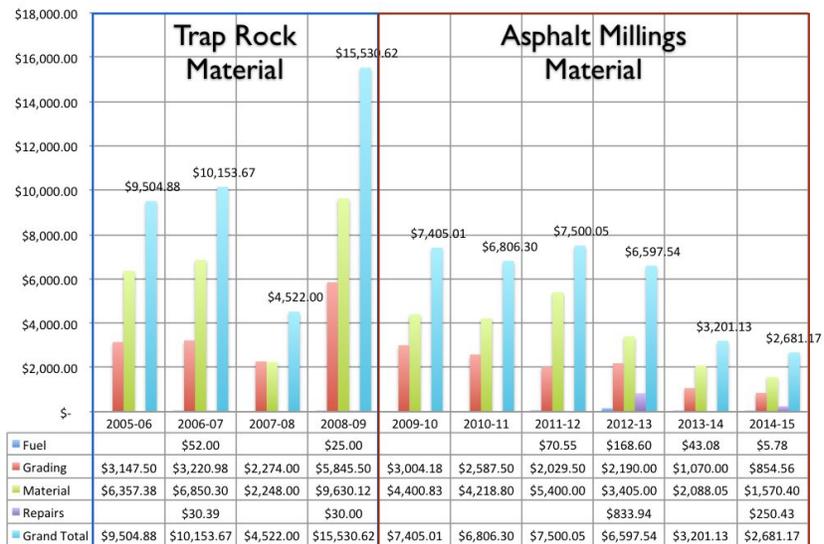
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Budget

Over the past 10 years, roads is the largest annual budgeted item. While the budget has never been broken down by category internal to the road budget we can show how the most of budget has been spent.

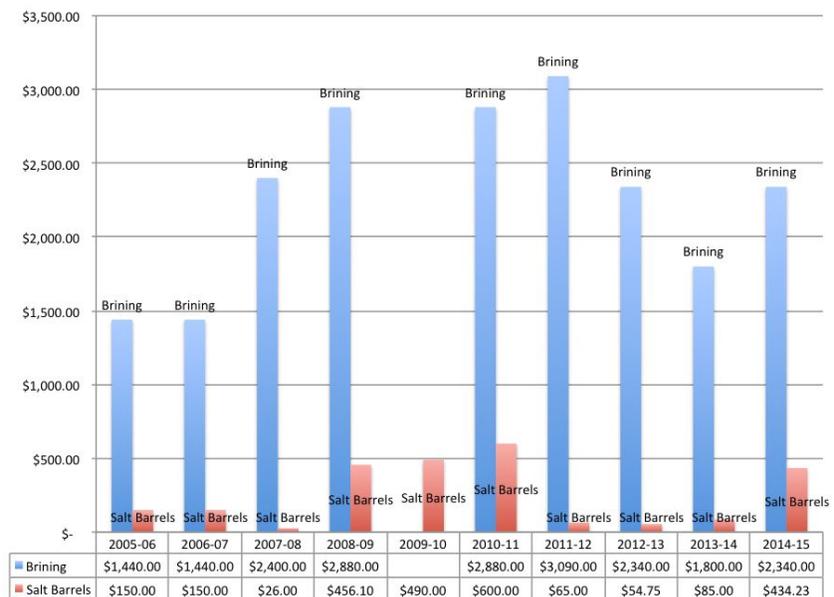
Materials, Grading, Fuel and Repair Costs

Due to more surgical grading with landscape rake and trading trap rock for asphalt millings, the trajectory of expenditures for contracted materials and grading has gone down. A subset of expenditures has been replaced with additional fuel and repairs type expenditures.



Brining Costs

Brining is used on the gravel roads in the summer to provide dust control. There are limited services in the area to do this and we have contracted with all of them at least once that are available in the area. The expenditure is mainly controlled by weather and therefore no practical cost measures can be used to bring those costs down.



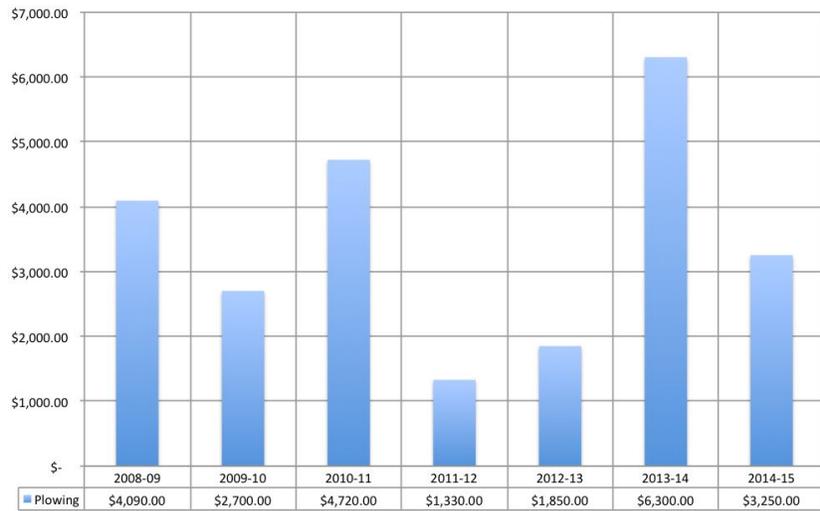
Salt Barrel Costs

Salt Barrels are placed throughout Cobmoosa in steeper inclines for safety. This cost fluctuates as we sometimes have Cobmoosa members volunteer/contracted to fill the barrels or we have Hallack Contracting fill them as a service. This cost is again controlled by the availability of members willing or able to fill the barrels or hiring a service.

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Snow Plowing Costs

Snow plowing is necessary in Cobmoosa to allow emergency vehicles to access all cottages at least from the road as well as allow for year round residences to have access. Plowing costs fluctuate based on the amount of snowfall each year. The only controlled measures are the cost of the service.



Tree Costs

Trees have not been maintained but rather dealt with on an as needed basis through negotiation of members, Great Lakes Energy and AmeriGas. We have elected to wait until one of the companies or the members has time or resources to cut the trees and this can take months.



Many times the resources to cut the trees are contractors with no cares for the underling trees and shrubs when taking down a larger tree and can ruin the live healthy trees and plant life below. The diseases affecting the Beech, Ash and Oak are taking a toll on the tree population and trees in the right of way need to be dealt with as soon as they are showing signs of illness. It is our responsibility to maintain the road right of way and the safety of the membership is paramount.

We can budget to take care of these trees.

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Maintenance and Recommendations

Gravel Road Surface

Over the next 10 years, gravel surfaces will continue to require regular maintenance due to traffic, weather, snow plowing, etc. Over the past 5 years, results have shown, using asphalt millings and performing quick small repair to potholes and washouts allowing the the road to hold structure and requiring less major repair. This method has also made a significant impact on reducing the expenditures and rolling road budget into surplus.



Recommendation: It is recommended that clean, fine asphalt millings continue to be used as they provide great base and low dust when mixed with calcium chloride brining applications. In addition, asphalt millings are significantly less cost than traprock or crushed road gravel.

Paved Surfaces

Paved surfaces require less traffic and weather maintenance but annual inspection is warranted. Sweeping of debris after heavy storms is warranted and has fallen out of practice in the past few years. Asphalt tends to spider crack over time and cause water to enter, freeze, expand and weaken the base of the road causing dips and eventually leading to potholes allowing water to enter and erode. Hot applications for crack filling and bituminous coating is a common practice and has never been applied professionally with a hot application. Cold patch crack filling and seal coating has been performed on some of the paved surfaces by members of the community but never total coverage.

Recommendation: Sweeping of paved surfaces to be performed after heavy rains, annual inspection of paved surfaces and crack sealer in heated form to be applied as necessary to preserve longevity of paved surface.

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Paved Surface Repairs

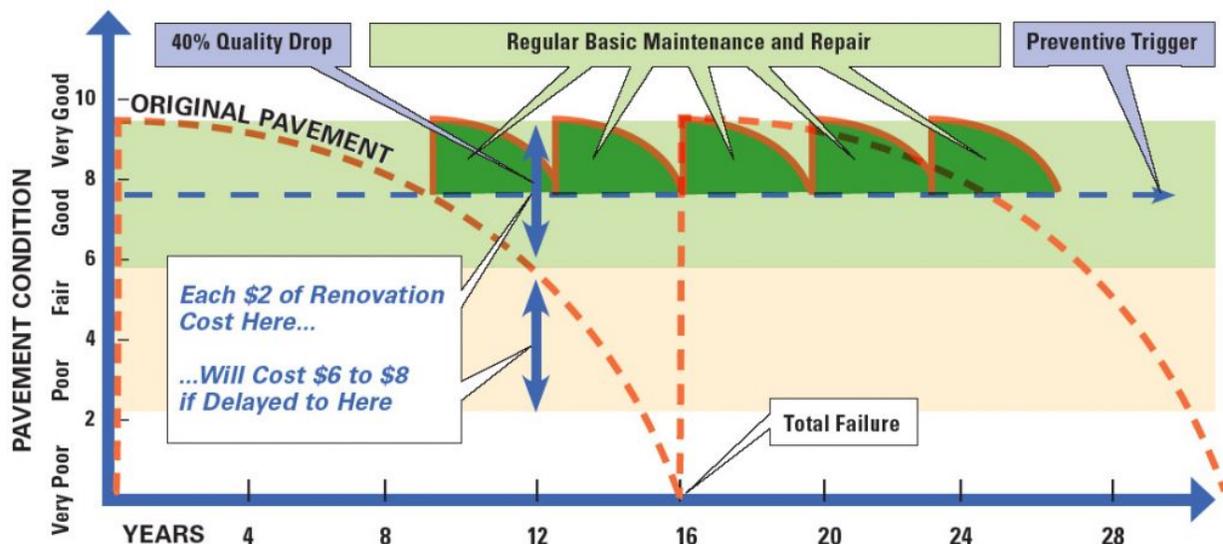
General maintenance can help preserve roads, however, after heavy rains and winter thaws minor and major repairs are necessary. One cannot predict when repairs will be necessary however, through regular maintenance the need for repairs should be reduced due to the structure of the roads being more sound and able to handle normal traffic and inclement weather.



Recommendation: Continue current practice for road maintenance and perform repair on as needed basis. Contingency funds should be set aside for major repairs due to complete road washouts, sinkholes, etc.

Since general maintenance has not been common practice for some of the paved areas, there is a need to re-surface and begin a regular maintenance regiment on much of the paved areas to preserve the road base and structure. Some of the paved areas are beginning to deteriorate and will require patching before a new surface can be applied. Some areas require a wider, angled apron for keeping rain water from washing out the shoulder requiring 2-3 yards of fill after each heavy rain.

The Cost of "Timely" Maintenance



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Recommendation: *Bring repaving proposal to the membership to establish budget of \$36,000 for repairing and resurfacing Erie Trail over the entire paved area (27,072 sq ft) including spillways for water runoff.*

Alternative Recommendation: *Do nothing, repair as needed. Revisit in 5 years to determine condition and re-evaluate.*

Recommendation: *Continue to fund Apache and Tahoe Trail member efforts up to \$500 per year for repair using cold patch and crack filler until members no longer desire to maintain roadway. When members are no longer desire or are unable to maintain roadway, bring repaving proposal to the membership to establish budget using the highest of three bids for repairing and repaving the area (12,536 sq ft).*

Recommendation: *Resurface Chippewa Entrance and add angled apron to the top part of Chippewa that connects to Paubawme to keep the washouts at bay during heavy rains. Establish budget using the highest of three bids for adding apron and resurfacing Chippewa Entrance over the entire paved area (10,693 sq ft) including (2) new spillways for water runoff.*

Alternative Recommendation: *Do nothing, repair as needed, find closer location than four corners for storing extra asphalt millings (end of Paubawme). Revisit in 5 years to determine conditions and re-evaluate.*

Snow Plowing

Snow plowing has been performed for years contracted through a plowing service and performed with a pickup truck and occasional loader if necessary.

Recommendation: *Continue current practice of contracting plowing service. May consider getting three quotes for plowing service to satisfy best accounting practices, ensure that contractors are insured for liability and damage and have high quality references.*

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Dust Control (Brining)

Dust control or brining has been performed for years contracted through a brining service. It is almost always applied before a holiday weekend when traffic volumes are the highest in the association. Brining needs intermittent rains to reactivate and in the right conditions can last for long periods of time saving the association money. Higher speeds in the association dry out the gravel and wear down the brine coated areas and can be ineffective within two weeks without rain to reactivate it.



Recommendation: Continue current practice of contracting brining service. Will continue getting competitive pricing for brining service to satisfy best accounting practices, ensure that contractors are insured for liability and damage and have high quality references.

Salt Barrels

Recommendation: Continue to find cost effective ways of maintaining salt barrels. Check barrels each year for trash and placement. Replace and add as needed.

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Trees

Trees that are endangering roads, people and property that are in the road right of way have been removed in recent years by Great Lakes Energy or contractor, a contracted Tree Services hired by the Cobmoosa Board and members have taken some trees with prior Cobmoosa Board approval.

We are faced with a few diseases in Cobmoosa that are affecting our stand and require regular maintenance, removal and cleanup.

Beech Bark Disease (From Wikipedia, the free encyclopedia)

Beech bark disease is a disease that causes mortality and defects in beech trees in the eastern United States and Europe. In North America, the disease results when the beech scale insect, attacks the bark, creating a wound. Later, two different fungi invade the tree through the wound, causing a canker to form. In subsequent years, new cankers will continue to form, ultimately leading to the death of the tree.



Signs: The first sign that is visible is a woolly, white, waxy covering that the beech scale insect secretes. This sign can be observed covering small areas or most of the tree. The amount of waxy material observed depends on the population of the beech scale insect on that tree. The fungi also show signs of its presence. An early sign is what looks like a bleeding spot on the tree. A reddish-brown fluid will ooze from the wound site, giving it this appearance. Later, perithecia will form around the dead spot, which is another sign of the disease.

Symptoms: Beech bark disease can be observed in the foliage and on the bole of the tree. Symptoms affecting the foliage are yellowing, becoming small and sparse, and remaining on the tree during the summer time. Trees that display a thin, weak crown may persist for several years but may also die without displaying any symptoms. Symptoms that are noticeable on the bole are the cracking of the bark, the formation of cankers, and beech snap. Beech snap is a result of the fungi and insect weakening the wood, which makes it susceptible to being blown over by wind.

In a forest setting, controlling the beech bark disease is too costly. Timely salvage cutting is the best way to reduce the losses of beech in a forest.

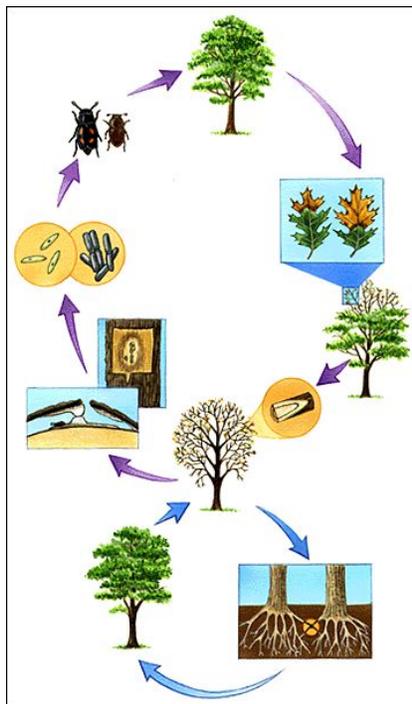
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Oak Wilt (From Wikipedia, the free encyclopedia)

Oak wilt is a fungal disease that can quickly kill an oak tree.

Symptoms vary by tree species but generally consist of leaf discoloration, wilt, defoliation, and death. The fungus is spread from diseased to healthy trees by insect vectors or via connections between tree roots. Management of the disease consists mainly of preventing infection by avoiding tree wounds, removing diseased trees and digging trenches that disrupt root connections. Fungicide treatments are available and are mostly preventive as well.

Oak wilt affects all oak species, but affects the two main groups differently. Oaks in North and Central America are sorted into two groups based mostly upon cell structure and corresponding leaf shape. The white oak group are diffuse-porous hardwoods and have rounded leaf edges. The red oak group are ring-porous hardwoods and have pointed leaf edges. Ring porous (red oak group) oaks die faster - from oak wilt disease - than diffuse porous oaks. In the upper



midwest, red oak group trees like black, northern red and northern pin are most threatened-by oak wilt for two reasons: they die faster and they produce spore mats. White oak group trees rarely produce spore mats, so overland spread of oak wilt from white oaks is not a problem. Oaks in the red oak group (pointed leaf edges) are particularly susceptible and, when infected, generally die over the course of a single summer. These oaks typically die from the top of the tree down as leaves become a bronze color and fall off the tree.

Oaks in the white oak group (white, swamp white, bur and others with rounded leaf edges) are somewhat less susceptible when infected (white oak in particular) and can live for several years after infection, losing a few branches each season, from the top down. Some oaks in the white oak group, such as bur oak, are more susceptible than others, although not as susceptible as red oaks. Symptoms in white oak are similar to those in red oak.

Oaks with oak wilt stand out with their dead crowns compared to a green canopy in the summer, so much so that oak wilt infections can be spotted from the air.

Prevention: Oak wilt is similar to Dutch elm disease but more controllable. Beetles that carry the oak wilt fungus do not have chewing mouthparts -and need some other creature or physical damage to create open wounds - whereas beetles that carry Dutch elm disease do have chewing mouthparts. Prevention is essential, as there is no permanent cure. To prevent beetle transmission, oaks should never be pruned in the spring months in the east and Midwest.

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Emerald Ash Borer (From Wikipedia, the free encyclopedia)

It is invasive in North America where it has a core population in Michigan and surrounding states and provinces. Populations are more scattered outside the core area, and the edges of its known distribution range north to the upper peninsula of Michigan, south to northern Louisiana, west to Colorado, and east to Massachusetts

The emerald ash borer life cycle can occur over one or two years depending on the time of year of oviposition, the health of the tree, and temperature. Eggs are deposited between bark crevices, flakes, or cracks and hatch about two weeks later. After hatching, larvae chew through the bark into the sapwood or outer bark where they fold into a J-shape. These J-shaped larvae shorten into prepupae and develop into pupae and adults the following spring. To exit the tree, adults chew holes from their chamber through the bark, which leaves a characteristic D-shaped exit hole. Immature larvae can overwinter in their larval gallery, but can require an additional summer of feeding before overwintering again and emerging as adults the following spring.



The emerald ash borer primarily spreads longer distances by transport of firewood and other wood products that contain ash bark, which allows it to reach new areas and create satellite populations outside of the main infestation. In urban areas, trees are often removed once an infestation is found to reduce emerald ash borer population densities and the likelihood of further spread.

Recommendation: Continue annual inspections of road right of ways for diseased, dying or dead trees and contract for removal and chipping service. May consider getting three quotes for service to satisfy best accounting practices, ensure that contractors are insured for liability and damage and have high quality references.

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Signage

Cobmoosa shores is a large association and does not have uniform signage for house numbering. This is a barrier to safety as Fire and Emergency services have no good way of identifying cottages. A uniform approach would provide a sense of community and safety.



Other nearby communities have signage that respects the feel of the neighborhood and provides good direction for emergency services.

Current Cobmoosa signage has provided a good long life and direction for Cobmoosa members but has required maintenance and refurbishing that is not practical any longer. Signage has been on a replacement as needed basis and maintenance of current wood and donated street signs from a larger municipality. New street signs have been approved and budgeted by the board to allow for better visibility, more directional instruction and night viewing while improving the aesthetic quality and continuity of the association.

New Street, Landmark and Directional Signs

A proposal has been passed by the board to provide street signs that are uniform, reflective and two sided with a sunset image at the top. New cedar posts and aluminum sign holders that are secure and allow the signs to be seen from both sides and from each direction.

Directional signs will be added to provide delivery, emergency services and guests better information and direction to locate addresses.

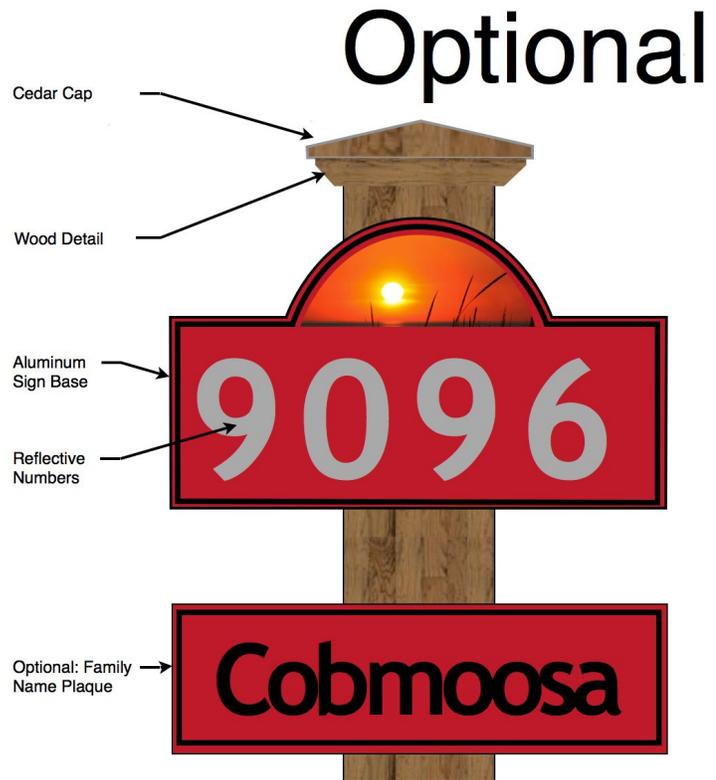


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Optional Uniform House Numbers and Family Name Plaques

The options for uniform, reflective house numbers and family name signs can be added in the future pending board approval. House number and family name signs could be purchased through Cobmoosa Shores like apparel by the members individually.

Once the current sign project is underway we can consider the designs and assembly of house numbers and other



Closing Remarks

The 10 Year Cobmoosa Shores Association road plan is a recommended strategy for maintaining and keeping up the good roads that we have built over the years in Cobmoosa. Travel around any other association and see just how good we have it and what regular maintenance and investment affords us. We are not perfect and will not do everything right the first time, however, as volunteers we learn as we go and try to provide the best possible solutions to meet the needs of all Cobmoosa membership at that time. Thanks for your support.

Cobmoosa Roads Committee 2015