

DMS Property Protection Mechanism Guidance and Deliverables

This document details the required tasks, deliverables, and associated templates for the Division of Mitigation Services (DMS) property protection mechanism process, Property Task (Task 2) of the contract. A full listing of the full-delivery tasks referenced in this guidance are shown in Appendix A. Significant changes in content from previous guidance document (4/5/22) appear in *italics*.

The full delivery provider (Provider) shall furnish one point of contact as a central point of communication for real property acquisition.

Conservation Easement

We strongly encourage using the most recent version of the Conservation Easement Template posted on the DMS Templates, Guidelines, and Tools for Projects web page. If this is not practical, then the provider shall use the version of the CE posted at the time of the RFP issuance date.

The Vendor must provide a copy of the conservation draft and final easement to the landowner and notify the landowner of potential tax implications such as NC General Statute 105-277.4 which addresses County agricultural deferred taxes that may be incurred at closing.

Landowner Contact

At the completion of Task 2, the complete and accurate landowners' contact information using the Landowner Contact Template must be submitted at the final Task 2 deliverable and again at the NCDEQ Stewardship Program site review and action memo prior to project closeout.

<https://deq.nc.gov/mitigation-services/document-management-library/guidance-and-template-documents/landowner-contact-template/open>

Boundary Design and Fencing Guidelines

Simple and contiguous project boundaries minimize encroachments, protect mitigation assets, and reduce the recurring cost of surveying, fencing, and boundary marking. Simplified boundaries allow adjacent landowners to understand the conservation easement boundary more clearly. Conservation easement boundary design should prioritize minimizing the number of corners thereby establishing longer boundary lines.

*Conservation easement crossings shall be minimized to the greatest extent practicable. Internal crossings located within the conservation easement are preferred over external crossings or "cut out" crossings. Internal crossings abide by the conservation easement terms and discourage incompatible livestock use, water withdrawal, or other deleterious activities that could harm the intended purpose of the conservation easement. When practical, use internal crossings or crossings that are included within the conservation easement area. Cutout crossings should only be used when future use is expected to be incompatible with a conservation management area and shall be clearly described in the Technical Proposal and fully addressed in the Mitigation Plan. **The State is not responsible for the maintenance of crossings; this should be discussed with the project landowner/s in detail prior to property acquisition.***

Wetland delineations and measurements from stream top of bank serve as tools to help define the conservation easement boundary but should not be the single determinant of the conservation easement boundary location. The Provider should field-verify the conservation easement boundary, *including the projected wetland extent and potential for hydrologic trespass*, with the landowner(s) prior to submitting a preliminary plat for review. *Rough staking the corners is encouraged so that a visual assessment can be performed with the landowner(s) and potential concerns identified before finalizing the conservation easement design. This is especially important for properties with livestock and planned livestock exclusion fencing. All conservation easement corners must be set and witnessed with a U-channel post and signs prior to recording the plat.*

The conservation easement boundary must mimic the boundary provided within the technical proposal (within reason). The Provider shall contact the DMS Project Manager to get approval for any variations in the conservation easement boundary that strays from the technical proposal prior to proceeding with the property acquisition.

Livestock must be excluded from the conservation easement and fences are required on all sites where livestock have access to areas adjacent to the conservation easement. Fencing styles and alignments should be based on landowner and livestock needs. *Include human passage designs along the fenced area so that human movement from one fenced area can be achieved safely. These passages can include gates, simple step ladders or other creative and effective strategies.* Give careful consideration for the time, energy, and financial resource capacity of the landowner to maintain fence installations in good working condition. *Discuss with the landowner the pluses and minuses of fence offsets, agriculture equipment turning radius, and other issues that impact the landowner's interaction with the fence and their ability to maintain it over time.* Use resources like the Natural Resources Conservation Service (NRCS) to help develop well designed and built fences that can meet the landowners' needs. A well designed and built fence will provide less opportunity for encroachment, reduce maintenance needs, and will facilitate long-term protection of the conservation easement. *Detailed discussion with the landowner to clearly understand their intended maintenance desires is required to install a long lasting and working fence that meets their expectations.* The Provider must ensure sufficient room for the landowner to maintain the fence without impacting the integrity of the conservation easement, including herbicide drift/ overspray. **The State is not responsible for maintenance of project fencing; this should be discussed with the project landowner/s in detail prior to property acquisition.**

Surveying Requirements

All surveys and conservation easement boundary marking up to and including Task 6, shall be completed by a licensed NC surveyor in accordance with the Standards of Practice for Land Surveying in North Carolina NCAC Title 21, Chapter 56, Section.1600 and G.S. 47-30 Mapping Requirements of the North Carolina Administrative Code. Boundary marking shall be maintained in accordance with the specifications through project closeout by the Provider.

- The Provider shall depict all the existing roads or trails, property corners, nearby easements, dwellings, structures, roadways, streams, internal crossing allowances, rights-of- way, and infrastructure located within the conservation easement as well as within 100 feet of the conservation easement. *DMS highly recommends keeping existing infrastructure a minimum of 15 feet from the conservation easement to help avoid management conflicts. The survey plat will serve as a baseline document for existing infrastructure and provides a spatial reference for the long-term stewardship of the conservation easement. All infrastructure to be removed and labeled on the plat unless otherwise approved by DMS and State Property. Features of enduring quality that are intended to remain as a use within the conservation easement area must be approved by DMS, located and labeled "to remain" on the plat.*
- Legal and physical access to the conservation easement area must be depicted and/or described on the recorded plat. Conservation easement right of way access shall be a minimum of 20' in width *and shown as "proposed CE access" with courses and distances as surveyed and mapped unless any part of the conservation easement adjoins an existing right of way.*
- *Designed, permitted, or existing infrastructure, including new and existing fencing and the full extent of the conservation easement boundary, per approved Task 2 and 3 deliverables must be captured on the As-built survey per the DMS As-Built Survey Requirements as part of Task 6. Constructed and existing fences within 10 feet on either side of the conservation easement boundary must be located by a NC licensed surveyor as part of the as-built survey. All encroachments not allowed by the conservation easement shall be noted on the as-built survey. Examples include roads, utility ROW's, septic systems, etc.*

- All surveys shall be tied to the North Carolina State Plane Coordinate System NAD83(2011) *or the most current datum reference system per NCAC Title 21, Chapter 56, Section.1602(g) (Standards of Practice for Land Surveying in North Carolina)* **regardless of whether the property is or is not within 2,000 feet of a geodetic monument** and with application of 21-56.1607 GLOBAL POSITIONING SYSTEM SURVEYS or 21-56.1603 CLASSIFICATION OF BOUNDARY SURVEYS.
- The survey title block shall read, "Conservation Easement Survey for the State of North Carolina, Division of Mitigation Services." The title block shall also contain the project name, State Property Office (SPO) number, DMS Project ID number, *survey sheet number*, name of the *landowner(s)*, location, date surveyed, scale of the drawing, *surveyor's name*, address, registration number and seal of the surveyor.
- A table of coordinates (northing and easting) for all property corners must be included on the plat. All corners shall be numbered consecutively starting with number 1. If multiple parcels comprise a single project, assign a unique number to each property corner within the project. The text metes and bounds description for each tract of the surveyed areas shall be provided on standard letter sized paper and titled "Exhibit A".
- The landowner(s) or his/her legal representative must sign the recorded plat and be given a copy of the recorded document.
- The Provider shall send an Adobe Acrobat (.pdf) copy, DWG file and an Arc GIS file of the preliminary plat to the DMS Project Manager, DMS Property Specialist, and the State Property Agent by electronic mail.
- After review by the NCDEQ *Stewardship Program*, DMS and SPO, any requested edits or changes to the plat will be transmitted in the SPO Authorization to Close Memo. Upon making any edits or changes as requested by SPO and DMS, the Provider shall record the final plat and obtain all necessary approvals from the County review officer.
- The Provider shall send electronic copies of the recorded plat to *the DOA SPO Mitigation Services/Review Appraiser, Blane Rice*(blane.rice@doa.nc.gov), *DOA SPO GIS Analyst, Jeff Mulligan* (jeff.mulligan@doa.nc.gov), and *DMS Property Specialist, Jeff Horton* (jeffrey.horton@deq.nc.gov), and the assigned DMS Project Manager. Include the digital files in CAD (.dwg) and ArcGIS shapefile (.shp) with the recorded plat in PDF format.
- All files must be geo-referenced and projected in NC State Plane Coordinates, NAD83(2011) *or the most current datum reference system*, in US Survey Feet (*this may change with the new datum to international feet*). The CAD and ArcGIS files must contain a closed polygon of the conservation easement shape and a polygon layer in addition to the line work.
 - For tips on creating GIS compatible CAD drawings, please see ESRI's [Creating Compatible CAD Data for ArcGIS](#).

Boundary Marking Requirements

- *At the conservation easement corners, the surveyor shall set 5/8" rebar 30" in length with 3-1/4" domed aluminum corner cap/marker disc set flush with the soil surface. Caps shall meet DMS specifications (Berntsen RBD5325 imprinted with NC State Logo # B9087 or equivalent). After installation, caps shall be stamped with the corresponding number from the table of coordinates. The stamped number will be located above the State of NC logo. Stamping inside the State logo risks stamping in an area important for the survey record.*



Cap/marker disc example.

- *Providers are required to make all in-ground monument caps visible and easy to locate upon completion of Task 6 (MY0) as-built for DMS inspection.*
- *Each easement corner will have a witness post installed. This witness post will receive a diamond conservation area sign and a rectangular survey boundary marker secured 6-inches below the top of the post with hammer rivets and installed by the surveyor (see diagram for witness post below). The surveyor shall place a 72 inch long, 1.12 pounds per foot (or greater), green, steel U-channel post with the top six inches painted yellow. U-channel posts will be installed to a minimum 24-inch depth. The U-channel witness post must be placed within the conservation area and within one foot of the corner monument. Local conditions may dictate minor adjustments. If agricultural or other mowing activities are anticipated, the U-channel posts should be located as close as practical to the in-ground easement corner monument to help avoid encroachment when the witness posts are used to line up equipment for farming and mowing. Signs shall face away from the easement area so that a person entering the easement area will be able to read the sign and know that they are about to enter the easement.*



Diagram for witness post.



Installed witness post example.

- *Use of Witness trees (Bearing trees) within the conservation easement area to complement the mechanical U-channel witness post is encouraged. When this technique is used, the bearing trees should be blazed, painted, with survey boundary signs installed facing the corner and documented on a report of survey and provided as part of the final Task 2 deliverable.*

March 11, 2024

- Yellow tree blazes shall be approximately 5-feet above ground. Blazes shall be yellow forestry paint with a 3-inch to 4-inch wide band, painted approximately $\frac{3}{4}$ around the circumference of the tree. The Provider shall take care not to girdle the tree or damage the cambium when scraping the tree bark. A conservation easement marker sign shall be installed 6 inches above the blaze (see diagram for tree marking below). Signs shall be fastened to trees with 16d aluminum nails such as the 3 $\frac{1}{2}$ inch by 0.177 inch by 11/32-inch head aluminum nails from Kaiser Aluminum 800-633-3156. Please watch the DMS instructional video before installing tree signage <https://youtu.be/7dE7edd3V5M>. It is a five-minute video originally created during the NC Ecosystem Enhancement Program era and helps visualize the preferred method for attaching signs to trees.

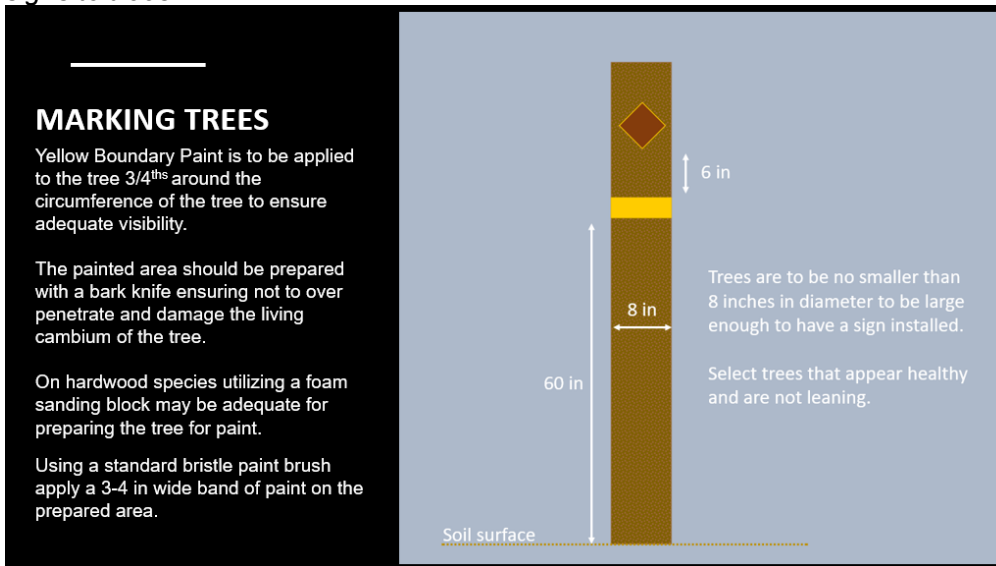


Diagram for Tree Marking.



Example of Tree Marking.

- *The surveyor shall install in-line marking along the conservation easement boundary line at no more than 200-foot intervals using the U-channel posts, or trees and diamond conservation easement marker signs. Steel U-channel posts shall be 72 inch long, 1.12 pounds per foot (or greater), green, with the top six inches painted yellow. U-channel posts will be installed to a minimum 24-inch depth. Conservation easement marker signs shall be installed 6-inches below the top of post using hammer rivets. Yellow tree blazes utilized for in-line boundary marking, shall be approximately 5-feet above ground. Blazes shall be yellow forestry paint with a 3-inch to 4-inch wide band, painted approximately $\frac{3}{4}$ around the circumference of the tree. The Provider shall take care not to girdle the tree or damage the cambium when scraping the tree bark. A conservation easement marker sign shall be installed 6-inches above the blaze (see diagram for tree marking above). Signs shall be fastened to trees with 16d aluminum nails such as the 3 $\frac{1}{2}$ inch by 0.177 inch by 11/32-inch head aluminum nails from Kaiser Aluminum 800-633-3156.*
- *DMS has several conservation easement sign versions that are acceptable to use. Brown and yellow colors are used depending on the landscape context and the landowner preference. Yellow Conservation area "No Mowing No Cutting and No Vehicles" is the most common for agricultural areas. Brown "Plant Protection Zone" signs can be used around homes or areas where people frequent.*
- *Gates and any natural entry ways into the conservation easement area should be marked on both sides of the entry. These areas provide an opportunity to communicate the nature of the conservation easement. Consider using QR codes and educational links to augment the understanding for the people who pass through these conservation easement entrances.*
- *When using round fence posts to hang additional conservation easement signs, bend the sign around the post and use the provided holes to ensure the sign wraps around the post. This is easiest to complete before the fencing goes on, so consider that in your workflow. Use appropriate and compatible fasteners for treated lumber; DMS has consistently observed that roofing nails do not perform well as fasteners for attaching signs to wooden posts. Providers shall utilize screw type fasteners such as 2 $\frac{1}{2}$ inch hex head sheet metal roofing screws or equivalent rated for exterior treated lumber applications or stainless-steel screws rated for ACQ treated lumber.*
- *Where farming practices threaten to enter into the easement area, a 10-foot tall pole with a reflective top and/or flagging can be added to help communicate the location of the conservation easement to the farm equipment operator.*
- *The default corner monument and conservation easement boundary line marking described above is a pre-approved and acceptable practice for marking conservation easement boundaries. However, it is understood and encouraged for landowners to participate in these marking decisions as site specific needs may dictate variation. During the early conversations with landowners, these marking requirements should be discussed. If the landowner decides that these are not acceptable or requires that alternate marking techniques are needed, then DMS retains the ability during the Task 2 process to review a boundary marking plan that is similar in effectiveness and acceptable to all parties. Any proposed plan needs to show effectiveness and remain consistent with cost and durability. The plan shall provide detailed information in the following format.*
 - **Alternative Methods and Reasons for Variation**
 - **Landowner Consultation Summary**
 - **In-Ground Corner Monumentation Detail**

March 11, 2024

- *Witness Posts and Corner Marking Detail*
- *Sign Fasteners Detail*
- *In-Line Boundary Marking Detail*
- *Boundary Line Marking Standards*
- *Additional Notes*
- *Photos, Maps and Visual Aids*

Task 2 Deliverables Summary

1. Recorded Conservation Easement in Adobe PDF format.
2. Recorded Survey Plat in Adobe PDF format.
3. Final digital easement file in AutoCAD (.dwg) and ArcMap (.shp) format.
4. Final attorneys report on title based on 30-year search with deeds and documentation.
 - a. Each conservation easement conveyed must have good, marketable title free of liens and encumbrances.
 - b. Title attorney's "Schedule A" including any documents describing possible exceptions to title and exhibits.
5. Original title insurance policy shall be forwarded to SPO's Blane Rice as soon as it is available.
6. Completed landowner contact template

Appendix A (Typical Distribution of Project Tasks and Milestones)

Task	Project Milestone
1	Regulatory Site Visit & Environmental Screening
2	Submit Recorded Conservation Easement on the Site
3	Mitigation Plan (Final Draft) and Financial Assurance
4	Mitigation Site Earthwork completed
5	Mitigation Site Planting and Installation of Monitoring Devices
6	Baseline Monitoring Report (including As-Built Drawings)
7	Submit Monitoring Report #1 to DMS (meets success criteria*)
8	Submit Monitoring Report #2 to DMS (meets success criteria*)
9	Submit Monitoring Report #3 to DMS (meets success criteria*)
10	Submit Monitoring Report #4 to DMS (meets success criteria*)
11	Submit Monitoring Report #5 to DMS (meets success criteria*)
12	Submit Monitoring Report #6 to DMS (meets success criteria*)
13	Submit Monitoring Report #7 to DMS and complete project Close-Out process (meets success criteria*)