

Florida Trail Association Trail Manual



Florida Trail Association, Inc.
June 06, 2022

This Trail Manual is dedicated to the Volunteers of the
Florida Trail Association
who have given their time and energy
to build and maintain over 1,500 miles
of the Florida Trail
for over 50 years

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GLOSSARY OF TERMS

Challenge Cost Share Agreement Program of Work (CCSA Program of Work): Annual agreement between the USDA Forest Service (USDA-FS) and FTA that sets program priorities and budgets for funding allocations.

Clearing Limits. The area over and beside the trail tread that is cleared of trees, limbs, and other obstructions (refers to tread, height and width). Clearing limits vary with trail class and design parameters. See Chapter 201 for a complete list of classes and parameters.

Design Parameters: Technical guidelines for the survey, design, construction, maintenance, and assessment of a trail, based on its Designed Use and Trail Class.

Designed Use: The Managed Use of a trail that requires the most demanding design, construction, and maintenance parameters and that, in conjunction with the applicable Trail Class, determines which Design Parameters will apply to a trail.

Florida National Scenic Trail (FNST): One of eleven national scenic trails. While the FNST follows the route of the Florida Trail, it only officially includes those segments of the Florida Trail that have been certified by the USDA-FS as meeting the requirements for national scenic trail status. For use in this document the Florida Trail and the Florida National Scenic Trail are interchangeable.

Florida National Scenic Trail Comprehensive Plan (1986): Developed by the USDA-FS in cooperation with the FNST Advisory Council, the FTA, and affected state and federal agencies. This plan provides general guidance on routing, development, protection, and management of the FNST to cooperating public agencies and private landowners.

Florida Trail: The continuous route of the thru trail from Gulf Islands National Seashore to Big Cypress National Preserve. It refers to both certified and non-certified trail segments. For use in this document the Florida Trail and the Florida National Scenic Trail are interchangeable.

Florida Trail Association (FTA): The FTA is a volunteer, membership-based 501(c)(3) Florida not for-profit Corporation. The FTA's primary purpose is to develop, maintain, promote, and protect the Florida Trail.

Florida Trail System (FTS): Trails officially adopted by the FTA that are not part of the Florida Trail. These trails may include loop trails, connecting trails, side trails, and cross trails which are maintained by individual FTA Chapters throughout the State of Florida.

FNST Certification Agreements: Written agreements between the USDA-FS and either landowners or land management units for the purpose of certifying segments of the Florida Trail as meeting the requirements of the National Trails System Act and the Florida National Scenic Trail Comprehensive Plan.

FNST Planning Corridor: Refers to the 20 mile wide FNST planning corridor represented as the 'Trail Corridor Selection Area' on page 22 of the Florida National Scenic Trail Comprehensive Plan (1986).

FNST Trail Standards: Blazing, signage, development, construction, and maintenance standards that are applied equally to the Florida Trail and the Florida National Scenic Trail.

Grubbing: Pulling out shrubs, small trees, or seedlings along with their roots.

Managed Use/Managed Use Type: For USDA-FS trails, the managed use types are Hiker/Pedestrian, Cross-Country Ski, Pack and Saddle, Snowshoe, Bicycle, Snowmobile, Motorcycle, Motorized Watercraft, All Terrain Vehicle, Non-Motorized Watercraft, and Four-Wheel Drive Vehicle.

National Forests in Florida: USDA Forest Service in Florida is delegated the administrative responsibility for the management of the Florida National Scenic Trail pursuant to the National Trails System Act of 1968 (P.L. 90-543) and Amendment Act of March 28, 1983 (97 Stat. 42, 16 U.S.C. 1244a).

Optimal Location Review: The process of determining the best or optimal location for the Florida Trail that best serves to achieve the goals set forth in the Florida National Scenic Trail Comprehensive Plan.

Trail Centerline: An imaginary line marking the mid-line of the trail tread. During construction, the center line is usually marked by placing a row of flags or stakes.

Trail Class: The prescribed scale of development for a trail, representing its intended design and management standards.

Trail Construction: Physical building of a trail along the continuum of the trail corridor. Generally follows the Trail Development phase.

Trail Corridor: The trail corridor includes the trail's tread and the area above and to the sides of the tread. Trail standards typically define the edges of the trail corridor as the *clearing limits*. Vegetation is trimmed back and obstacles, such as boulders and fallen trees, are removed from the trail corridor to make it possible to ride or walk on the tread.

Trail Development: Coordination, planning, trail design and layout and other preparation involving FTA staff, volunteers, land managing units, governmental agencies and private land owners that takes place during and prior to trail construction.

Trail Relocation: Any movement or change in the location of the trail corridor.

Trail Shoulder: The ground on both sides of the tread or treadway (concept is the same as a highway or road shoulder).

Tread or treadway: The surface portion of a trail upon which users travel.

Work Party: All organized FTA functions on the FNST or FTS that involve trail maintenance, trail construction and/or trail development activities.

Volunteer Profile: Individual profile necessary to record and assign volunteer hours to a volunteer.

Volunteer Hours Reporting System: FTA's on-line system of recording and reporting FNST and FTA volunteer hours.

101: FLORIDA TRAIL

Florida Trail Manual

This manual serves as a guide to Florida Trail Association (FTA) volunteers and staff while engaged in trail development, trail construction, and trail maintenance related activities for the Florida Trail (FT) and the Florida Trail System (FTS).

Florida Trail Advocacy

It is often said that the Florida Trail is the best kept secret in Florida. While this isn't true, it is true that it is in our mission to change that perception. The FT isn't a secret pathway nor is the FTA a secret society. FTA members are the prime promoters and advocates for both the Trail and FTA. Simply put: Individuals make a difference and if not us, who? If not now, when?

The Florida Trail's Most Valuable Resource: Volunteers!

From the Big Cypress to Fort Pickens the Trail can vary tremendously. In places it is a very primitive single-track footpath while elsewhere it is on a dike or wide pavement. In multiple locations the path remains on road shoulders. Yes, much has been accomplished in forty plus years, but much is left to do! The Trail is a work in process of closing gaps and finding optimal locations. While closing current gaps is, and will continue to be, a priority, searching for the optimal location for all trail segments should never cease.

Advocating for the Trail, identifying new routing opportunities and influencing doors to open are vital functions for FTA volunteers and staff. Local volunteers working on the Trail are wonderful, but those who work with an eye to the future of the Trail are GOLDEN! Volunteering for the Florida Trail includes being at the local, state and federal tables when long-term and local management plans are being developed. If FTA volunteers are not there to advocate for a woodlands trail, then those with very different visions will prevail.

FTA volunteers and staff are building and maintaining a legacy that is the **Florida Trail**, but individually we can only secure a small piece of that legacy. We share it with those very committed FTA volunteers and staff who came before us and we build on their accomplishments.

Trail work is important but recruiting like-minded individuals to carry that legacy into the future is essential.

102: VOLUNTEER ROLES/TRAIL COMMITTEES**Vice President/Trails**

1. Performs the duties of the President in the absence of the VP/Administration and VP/Membership.
2. Oversees planning, development, maintenance, and protection of the Florida Trail (FT) and Florida Trail System (FTS).
 - a. Oversees all Florida Trail Association (FTA) trail-related staff.
 - b. Makes final FTA decisions for changes in the Trail Manual.
 - c. Assigns trail construction and maintenance responsibilities to FTA Chapters for the Florida National Scenic Trail (FNST) and FTS.
 - d. Coordinates and collaborates with FNST Program Manager on matters relating to the FNST.
 - e. Oversees the planning of, and conducts, the Trails Committee meetings. Best practice is for no less than one meeting per calendar year.
3. Oversees all Chapter Trail Coordinators and Section Leaders.
 - a. Approves or disapproves nominations and forwards them to the President for approval.
 - b. Helps with resolution of all trail-related issues as appropriate.
4. Is responsible for the following committees/publications:
 - a. Trails Committee
 - b. Trail Protection Committee
 - c. Trail Manual
 - d. Maps and *Data Book*

Chapter Trail Coordinator (See Chapter 301 for nomination form)

1. Coordinates and collaborates with:
 - a. FTA Regional Representatives, Section Leaders, and land managers on matters relating to the FNST.
 - b. VP/Trails, Section Leaders, and land managers on matters relating to the FTS.
2. Demonstrates a working knowledge of FTA Trail Crew Leader basic skill sets (see Chapter 103).
3. Implements, and oversees adherence to, FNST Trail Standards, volunteer safety, and other practices as specified in the FTA Trail Manual.
4. Responsible to the VP/Trails for coordinating the planning, development, and maintenance of FNST segments assigned to his/her chapter by the VP/Trails.
5. Facilitates requests for information and communications between FTA staff, VP/Trails and Section Leaders.
6. Coordinates preparation/submission of:
 - a. Work plans, when requested by land managers and required by trail agreements.
 - b. Equipment/material requests.
7. Oversees adherence to the Volunteer Hours Reporting System.
8. Serves as a voting member of the Trails Committee.
9. Provides recommendations on chapter trail proposals.
10. Ensures that the VP/Trails and the FTA office are provided with map and *Data Book* changes to the trail corridor.
11. Reports to his/her chapter concerning Trail issues and the status of trails within their area.

12. Recruits, trains, and recommends Section Leaders to the VP/Trails.
13. Assumes responsibility in the event of a Section Leader vacancy until a new Section Leader is approved.
14. Maintains an FTA Volunteer Profile.

Section Leader (See Chapter 302 for nomination form)

1. Coordinates and collaborates with:
 - a. FTA Regional Representatives and land managers on matters relating to the FNST.
 - b. Chapter Trail Coordinator and land managers on matters relating to the FTS.
2. Demonstrates working knowledge of FTA Trail Crew Leader basic skill sets (see Chapter 103).
3. Implements and oversees FNST Trail Standards, volunteer safety, and other practices as specified in the FTA Trail Manual.
4. Is responsible to the VP/Trails, through the Chapter Trail Coordinator, for the development and maintenance of a section of the FT.
5. Coordinates and collaborates with FTA trail staff and land managers on trail maintenance planning and all FNST infrastructure and/or trail relocation request or proposals.
6. Appoints Trailmasters and assigns each to specific trail segment responsibilities.
7. Ensures training of Trailmasters and provides each with information and FNST Trail Standards for their assigned trail segment.
8. Exercises leadership of Trailmasters by direct communication regarding status of trail assignment and the need for maintenance.
9. Ensures that current trail corridor GIS and *Data Book* information is provided to the FTA office and United States Department of Agriculture Forest Service (USDA-FS)/FNST office in a timely manner.
10. Maintains supplies and equipment as required for Section maintenance.
11. Establishes and maintains personal contact with Section landowners and land managers.
12. Ensures that the trail segments under his/her supervision are fully inspected semi-annually for condition.
13. Prepares and submits Notices to Hikers and map changes to the FTA office as necessary.
14. Provides volunteer hours reports for posting to the Volunteer Hours Reporting System.
15. Maintains an FTA Volunteer Profile.

Trailmaster

1. Responsible to the Section Leader for the maintenance of a segment of the FT or FTS.
2. Ensures that trail under his/her supervision is fully inspected semi-annually for condition.
3. Provides trail volunteer hours to the Section Leader for posting to the Volunteer Hours Reporting System.

Trail Crew Leader (See Chapter 103)

Trails Committee

The Trails Committee serves as an advisory committee to the VP/Trails and FTA Staff to:

1. Provide a statewide view of the Florida Trail.
3. Recommend policy concerning development and maintenance of trails.
4. Review and implement standards regulating trail building and maintenance.

5. Review recommendations and changes to the *FTA Trail Manual*.
6. Establish ad-hoc committees, as needed, to review other trail-related issues.

Trails Committee membership shall consist of:

1. Voting:
 - a. Chapter Trail Coordinators
 - b. Chair of Trails Committee (unless Chair is also the VP/Trails)
2. Non-voting:
 - a. President
 - b. VP/Trails
 - c. Immediate past VP/Trails
 - d. FTA Staff
 - e. USDA-FS/FNST Program Manager

Trail Protection Committee

The Trail Protection Committee provides guidance to the Officers, Board of Directors, and FTA staff concerning the planning and implementation of trail protection strategies, work parties, and issues for the routing of the Florida Trail.

103: FLORIDA TRAIL ASSOCIATION TRAIL CREW LEADER

Trail Crew Leader

An FTA Crew Leader is any FTA volunteer or staff member who organizes and leads an FTA-sponsored trail work activity. The skill sets listed below are those desirable for FTA Activity Leaders who lead trail work activities. It is recognized that crew leading is an ongoing learning and development process. As crew leaders gain experience, they will expand their knowledge base and refine both their organizational and leadership capacities.

Basic Trail Crew Leader skill sets. The basic skill sets for Trail Crew Leaders are technical, management, and leadership.

Technical trail skills:

1. Has a working knowledge of trail hand tools, power equipment and personal protective equipment (PPE). Performs tailgate safety briefings prior to work activities.
2. Has a working knowledge of blazing, clearing, signage, treadway development standards, application of treadway grubbing (plant removal), and proper brushing techniques.
3. Acquires the ability to examine the trail from the perspective of a trail builder and trail maintainer as to what needs doing. Recognizes minor issues before they become major issues or replicate themselves as bad practices.
4. Is aware of the Trail Class and Design Parameters for each trail segment where work is to be performed (see Chapter 201: Trail Standards for Design, Clearing and Maintenance. For Trail Classes on the FNST see: [USDA-FS/FNST ArcGIS](#) . If the trail classes are not showing on the map, click on "Content" and check "Trail Class."
5. Has a basic knowledge of trail design methodology and terminology (see Chapter 203: Trail Design and Layout).
6. Is knowledgeable about sustainable trail fundamentals and implements practices that will reduce future trail reconstruction and maintenance.

Management skills:

1. Coordinates with land managers, FTA Trail Staff, FTA Trail Coordinator, and Section Leader for work plan and objectives both before and after a work party.
2. Identifies task and estimates time and crew size to complete trail work.
3. Determines tools, supplies, and material required and availability of same.
4. Coordinates transportation of volunteers, material, tools, and supplies to and from work site.
5. Has a backup/alternative work plan and work site if the primary site is unavailable.
6. Monitors weather and other factors impacting access and crew safety.
7. Communicates with volunteers, land manager, and emergency services.
8. Ensures that the emergency action plan, communications plan, and all other documents in the FTA crew leader packet are completed before work is started (see [Crew Leader Packet](#) [<https://floridatrail.org/volunteer-resources/#crew-leader-corner>] and Chapter 208: Tailgate Safety Session/ Volunteer Profile).
9. Ensures all volunteers are formally signed in.

10. Makes crew assignments based on everyone's volunteer experience and skill level.
11. Records and reports work party details and accomplishments.

Leadership skills:

1. Welcomes volunteers and communicates work party objectives, crew assignments, meal plan, and time frame.
2. Motivates volunteers to accomplish the shared goal with quality performance.
3. Demonstrates an emphasis on volunteer safety and a safe work environment.
4. Interacts with and trains volunteers in safe tool usage and trail standards.
5. Engages in conflict resolution as needed.
6. Recognizes individual and crew achievement.
7. Makes on-site (in the field) decisions concerning safety, logistics and volunteers as required.
8. Speaks up when something isn't right!
9. Strives to ensure that every participant is included in the team and feels a sense of camaraderie and accomplishment.
10. Communicates end of work party accomplishments and extends thanks to volunteers.

Advanced Trail Crew Leader Skills. Advanced Trail Crew Leader skills relate to trail corridor selection and trail design. Advanced crew leaders will know and apply skills in the following areas:

1. Trail corridor planning with land manager, partners, and other stakeholders.
2. Optimal Location Review purpose, process, and application (see Chapter 210: Trail Relocations/ FNST Optimal Location Review).
3. Mapping and on-line tools available for trail corridor selection.
4. Positive and negative control points.
5. Basic fauna, flora, and plant growth characteristics.
6. Trail corridor flagging and trail corridor pin flagging.
7. Long-term maintenance, infrastructure, and overall costs.
8. Topography/hillside hydrology and their impact on water erosion (fall lines, trail grade, and out-slope).
9. Grade reversals, curvilinear design principles, water bars, check dams.
10. Wetlands trail corridor selection, minor infrastructure types and designs.
11. Hillside trail corridor selection, erosion management types and designs.
12. Management for major trail relocations and major infrastructure construction work parties.

104: FLORIDA TRAIL ASSOCIATION CHAPTER MAINTENANCE RESPONSIBILITIES FOR THE FLORIDA NATIONAL SCENIC TRAIL

Big Cypress Chapter maintains the FNST from the South Terminus at the Oasis Visitor Center in Big Cypress National Preserve (BCNP) (Map/Data Point 42-1) north to Oak Hill Campsite (Map/Data Point 41-1).

Alligator Amblers Chapter maintains the FNST from Oak Hill Campsite (Map/Data Point 41-1) north to I-75 (Map/Data Point 41-3).

Happy Hoofers Chapter maintains the FNST from I-75 (Map/Data Point 41-3) north to John Stretch Park at Lake Okeechobee (Map/Data Point 40-5).

Loxahatchee Chapter maintains the FNST from John Stretch Park at Lake Okeechobee (Map/Data Point 40-5) around both sides of Lake Okeechobee to the junction with the Kissimmee River confluence (Map/Data Point 40-5 thru 37-7).

Tropical Trekkers Chapter maintains the FNST from the Kissimmee River confluence with Lake Okeechobee (Map/Data Point 37-7) north to the north boundary of Kissimmee Prairie Preserve State Park at Water Management District (WMD) gate to WMD S65A lock on the Kissimmee River (Map/Data Point 34-7).

Heartland Chapter maintains the FNST's Eastern Corridor from the WMD gate to WMD S65A lock on the Kissimmee River (Map/Data Point 34-7) north to the Three Lakes Wildlife Management Area (WMA) access road (Map/Data Point 34-12), and the Western Corridor from the Polk/Osceola County line north to SR 471 in Green Swamp (Map/Data Point 29-2).

Indian River Chapter maintains the FNST's Eastern Corridor from the Three Lakes WMA access road (Map/ Data Point 34-12) north to State Road (SR) 50 north of Tosohatchee State Preserve (south of Map/Data Point 23-7).

Central Florida Chapter maintains the FNST's Eastern Corridor from SR 50 north of Tosohatchee State Preserve (south of Map/Data Point 23-7) north to Blackwater Creek in Seminole State Forest (south of Map/Data Point 21-4), and the Western Corridor in Orange County from the junction of the Eastern and Western Corridors in Three Lakes WMA (Map/Data Point 33-5) north to the Osceola/Polk County line.

Highlanders Chapter maintains the FNST's Eastern Corridor from Blackwater Creek in Seminole State Forest (south of Map/Data Point 21-4) north to SR 40 in the Ocala National Forest (east of Map/Data Point 20-6).

Black Bear Chapter maintains the FNST's Eastern Corridor from SR 40 in the Ocala National Forest (east of Map/Data Point 20-6) north to Etoniah Creek State Forest at Coral Farms Road (Map/Data Point 18-8), and the Western Corridor in the Ocala National Forest from County Road (CR) 314 (Map/Data Point 25-2) to CR 316 (Map/Data Point 19-3).

Suncoast Chapter maintains the FNST's Western Corridor from SR 471 entering Green Swamp West (Map/Data Point 29-2) north to the Citrus/Marion County line south of Dunnellon (between Map/Data Points 26-1 and 26-2).

Florida Crackers Chapter maintains the FNST from Lake Butler (between Map /Data Points 16-4 and 16-5) north to US 90 through Lake Butler Forest/Plum Creek (Map/Data Point 16-9), from the north side of the US 41 Suwannee River bridge in White Springs (Map/Data Point 15-8) north to CR 751 and up the road to the south side of the Alapaha River (Map/Data Point 14-8), and the Western Corridor from the Citrus/Marion County line south of Dunnellon (between Map/Data Points 26-1 and 26-2) north through the Florida Greenway and CR 314 to the where the FNST enters Ocala National Forest (Map/Data Point 25-2).

North Florida Trailblazers Chapter maintains the FNST from the Tinsley Road Trailhead (Map/Data Point 18-8) in Etoniah State Forest to the SR 100/231 intersection in Lake Butler (between Map/Data Points 16-4 and 16-5), and from the Olustee Trailhead (Map/Data Point 16-9) at US 90 in the Osceola National Forest west to the U.S. 41 Suwannee River bridge in White Springs (Map/Data Point 15-8).

Suwannee Chapter maintains the FNST from CR 751 in Hamilton County (Map/Data Point 14-8) to the intersection of C-14 (CR 14) in Taylor County (Map/Data Point 12-8).

Apalachee Chapter maintains the FNST from the intersection of C-14 (CR 14) in Taylor County (Map/Data Point 12-8) west to the Apalachicola River (Map/Data Point 8-2)

Panhandle Chapter maintains the FNST from the Apalachicola River (Map /Data Point 8-2) west to the Choctawhatchee River (between Map/Data Points 5-1 and 6-6).

Choctawhatchee Chapter maintains the FNST from the Choctawhatchee River (between Map/Data Points 5-1 and 6-6) to the Okaloosa/Santa Rosa County line (between Map/Data Points 3-5 and 2-1).

Western Gate Chapter maintains the FNST from the Okaloosa/Santa Rosa County line (between Map/ Data Points 3-5 and 2-1) west to the North Terminus of the FNST at Fort Pickens in Gulf Islands National Seashore (Map/Data Point 1-1), and the FNST side trail from US 90 (Map/Data Point 2-1) north to Alabama/ Florida State line (Map/Data Point PH1N-3).

Note: Map/Data Points from 2014 FT map revision.

105: SCHEDULING, MARKETING AND ADVERTISING FOR TRAIL WORK PARTIES

This chapter addresses the scheduling, marketing, and advertising of trail workdays for both FTA volunteers and staff. It covers how the average volunteer (long-timer and/or first-timer) learns that a workday is scheduled, where it will be, and the work to be performed, and suggests some post-workday follow-ups that thank volunteers and encourage them to return. The logistical planning for a trail work activity is multifaceted and is covered elsewhere: crew leader skill sets in Chapter 103, trail standards in Chapter 201, trail design in Chapter 203, trail construction and maintenance in Chapter 204, etc.

Maintenance Cycle

Trail work on the Florida Trail goes on all year but the majority of maintenance and construction is accomplished from September through April.

Trail Work is Priority One

FTA volunteers and staff should strive to plan ahead of the FTA and chapter activity scheduling cycle so that trail work dates are selected, and trail work activities are scheduled, long before leisure activities are considered. Securing priority scheduling over leisure activities is best accomplished with long-term planning. FTA members from other chapters and members of the public are all potential participants, so broadly publicize work hikes and communicate all opportunities with other chapters and groups.

Transparency is Key

Transparency is the key to marketing one-day and multi-day work activities. Transparency increases volunteer participation and encourages new volunteer recruitment. Schedule and advertise all trail work activities as early and widely as possible. Multi-day work activities should be advertised well in advance (six months or more).

Coordination and Collaboration

The level of coordination and collaboration needed is dependent upon the task; but it is most important, if not essential, for multi-day trail work parties for the following reasons:

- Identifying dates that accommodate the desired level of volunteer, FTA staff, public, and land manager participation
- Determining the availability of work and camping locations
- Identifying secondary work and camping locations
- Ascertaining land manager plans that may impact the work party location or camping
- Deciding on the number of volunteers required and their critical trail-related skill levels
- Identifying and soliciting trail crew leaders
- Ensuring the availability of equipment and materials
- Ensuring the availability of FTA staff
- Seeking/obtaining funding
- Soliciting FTA member involvement
- Advertising in public media

- Avoiding scheduling conflicts with other major FTA activities

Fundamentals of Long-term Trail Work Scheduling and Marketing

In late spring to early summer, finalize the trail maintenance and construction work plan for the upcoming trail work season. The work plan should target the highest priorities early in the maintenance cycle.

Transparency avoids confusion and misunderstandings. Coordinate and collaborate with FTA trail staff, other Chapter trail leaders, land managers, and surrounding FTA chapters when developing work plans and scheduling.

Scheduling specific days of the week or month has proven to work well for maintenance activities. (*Example: First and third Saturdays and/or Sundays of each month during the maintenance cycle*). It's also helpful to hold multi-day and multi-chapter work activities at the same time each year. (*Example: The first week in October, the last weekend in November.*)

As soon as the dates are reserved, prepare and submit a [Project Proposal Form](https://floridatrail.org/volunteer-resources/#crew-leader-corner) [https://floridatrail.org/volunteer-resources/#crew-leader-corner] for posting on the FTA website Volunteer Opportunities page and in other media as appropriate (chapter website, chapter Meetup, chapter activities calendar, etc.). Early descriptions should, at a minimum, identify the work to be performed (maintenance or construction), a trail section, and time duration. It is common for the full details of the work (camping, meals, degree of difficulty) and volunteer requirements to not be fully known in the early scheduling period, so update the Volunteer Opportunities page and other media with details as they become known.

Identify and contact non-FTA stakeholders who could provide volunteer, funding, or marketing support.

Advertising Tips

To avoid the need for multiple locations for updates, comments, and RSVPs, one site should be chosen for the full descriptions and updates, with postings in other locations linking back to this site. Post an announcement on the FTA website with a link to the chapter website/Meetup site. Use the chapter website/Meetup site for RSVPs, questions, and updates for volunteers.

Delay open sign-up to no more than 60-90 days prior to the start date; publish an announcement when the work hike is opened for sign-up. Periodically query those that signed up to update their availability status. As volunteers sign up, identify their skill sets and work preferences.

Where to Advertise

- Print and radio media: Community calendars
- Social media: Facebook, Twitter
- Footprint
- E-Blaze (published monthly)
- Chapter websites
- Chapter Meetups
- Community bulletin boards

- Trailhead and campsite kiosks
- Like-minded organizations

After the Trail Work Activity

Trail volunteers appreciate recognition and want to feel a sense of accomplishment. At a minimum they should receive a thank you together with a brief summary of what they and others accomplished (miles of trail maintained or constructed, bridge built, etc.). They should be told that they are welcome to come back for subsequent activities. They should be invited to participate in future FTA activities. If they are not FTA members they should be encouraged to become a member.

Be transparent to ensure that the *'what,' 'where,'* and *'when'* of the trail work done is communicated, so subsequent trail crews will pick up where the last crew stopped. Record work performed and volunteer participation in the Volunteer Hours Reporting System.

More Marketing

An 'elevator statement' is a marketing pitch for when you have only 30 seconds to talk to someone. Here is one example of how to do that:

WHY MEMBERSHIP MATTERS

by Ed Talone / January 31, 2015

YOU DON'T HAVE TO BE A HIKER TO ENJOY OPEN SPACES

Your financial support in the form of membership helps make statewide Greenways possible.

Some thoughts on membership: The main reason people don't join groups like FTA is that they do not think they are good enough hikers. When I did events I was told things like: I'm too old, bad knees, never hiked etc. When I told them that their financial support was key even if they only sat on a bench along a trail and read a book...out came their wallets. With people I met you could see a physical reaction: "They actually want me!" was written on their face. At public events everyone should be asked about membership. For the reasons noted above, most people will not join, even if they quietly take a brochure. If they are *not* hikers, relate the above idea: financial support matters. If they *are* hikers:

- Ask where they live in Florida.
- Ask if they've heard of the Florida Trail.
- If not, ask them where they hike, and describe (see below) a part of the Trail that might be nearby.
- If they are not from Florida, note that the Florida Trail is directly linked to a series of marked trails that stretches all the way to Canada and beyond—to Labrador.

Ed Talone describes the Trail

Here is how Ed describes (in general) the sections of the Trail from south to north:

Big Cypress. Florida's true wilderness. Expect wading. Incredible wildlife and solitude. Cypress domes and Sawgrass.

Seminole Reservation. Mostly on roads but an interesting look at a different culture.

South of Lake Okeechobee. A fascinating up-close look at the citrus and sugar cane industry. If you are lucky enough to see a cane field burnt off, you'll never forget it.

Lake Okeechobee (West). More isolated with some lake view. Don't miss Clewiston.

Lake Okeechobee (East). More lake views and a chance to experience small towns.

Kissimmee River. Farm pastures, cattle, live oaks and prairie.

Three Lakes/Prairie Lakes. Vast palmetto prairie with islands of dark enchanting forest.

Bull Creek. Tramways through dark forests. Love the palm trees here.

Deseret Ranch. A long interesting road walk offers a look at the workings of an enormous farm.

Tosahatchee. Feels like wilderness in Central Florida. Beautiful, well engineered trail.

Orlando area. Amazing route through Bronson SF followed by a well-thought-out rail trail route all the way to I-4.

Ocala NF. Easy, usually dry, walking through pine forests on wide trail. The hills begin.

Rice Creek. Just after Barge Canal remnant. More tramways. Amazing 9-mile swamp.

Palatka–Lake Butler Trail. Mowed rail trail. Great isolated route.

Osceola NF. Mixed forest and dark swamps.

Suwanee River. Wonderful views of dark waters and white sands along the Suwanee.

Paper Company Lands. Very isolated, actually great areas to see wildlife along sand roads.

Aucilla Sinks. Magical walk along a disappearing river.

St. Marks. Long levee walks mixed with dark forests of palm trees and views of the Gulf of Mexico.

Apalachicola NF. Mixed sand roads and brief visits to titi swamps, along with the wade through Bradwell Bay.

Econfina Creek. A trail of interesting bridges and creek-side solitude.

Eglin AFB. Gently rolling hills, clear streams and the best built trail you'll ever walk.

The Beaches. A chance to walk sand dunes and beaches before ending at a 19th-century fort right on the Gulf.

106: FLORIDA TRAIL ASSOCIATION TRAIL STAFF ROLES

Our Florida Trail Association (FTA) Trail Staff are tasked with enhancing volunteer stewardship and support for the Florida National Scenic Trail (FNST). One of their prime functions is to promote and support both *volunteer participation* and *volunteer leaders*. Volunteer-led work activities remain the primary source of FNST trail maintenance. While Regional Representatives (RR) often lead work activities, the primary job of the RR is supporting and enhancing volunteer work events and volunteer stewardship.

FTA trail leaders and staff share, and often have parallel, responsibilities. Much of this revolves around annual trail maintenance. Any time two or more individuals have shared responsibility, coordination and frequent straightforward communication are the keys to success. The best example for the Florida National Scenic Trail (FNST) is the annual trail maintenance cycle. When only volunteers were performing trail maintenance, knowing what had and hadn't been completed was often an issue. Then RRs added another layer. RRs and chapter leaders are free to develop and use web-based organizing tools, but the Volunteer Hours Reporting System already records many of the '*what*' and '*when*' aspects of FNST trail maintenance. *Transparency is essential!* Planning, scheduling, coordinating, and advertising of trail work activities are addressed in Chapter 105.

Trail Program Director (TPD).

Position Summary. The TPD is responsible for developing a Trail Operations Program focused on volunteer engagement, construction, protection, and maintenance of the Florida National Scenic Trail (FNST). The TPD works with the Board and Staff of the Florida Trail Association (FTA), as well as the administrator of the trail, the United States Department of Agriculture - Forest Service (USDA-FS), to set program goals. The TPD is primarily responsible for setting overall program direction as well as day-to-day management of Trail Operations Program and staff, working in cooperation with, and in support of, the USDA-FS FNST Administrator. Frequently works with other local land manager agencies and private landowners to achieve FNST program goals.

Trail Construction, Maintenance, and Protection:

1. Is responsible for the development, coordination, and management of trail operations on the FNST including trail building, maintenance, training, and volunteer programs.
2. Is responsible for oversight of regional staff and associated field programs.
3. Ensures all necessary agreements are in place.
4. Manages Trail Operations budget and assets.
5. Serves as Liaison to the USDA-FS and builds relationships with federal, state, and local agencies and non-governmental organizations, as well as private landowners.
6. Works with USDA-FS to ensure standards are met regarding FNST.
7. Is responsible for researching, writing, and managing grants for trail program.
8. Prepares updates on accomplishments for FTA Board and compiles a yearly *Trail Operations Report*.
9. Works with the Board's VP/Trails and Trails Committee to develop a Regional Trail Operations Program and set strategic goals.
10. Serves as support for the Trail Operations Staff.

11. Works in the field as needed on optimal trail location reviews, trail protection issues, and volunteer work parties.

Volunteer Program Development and Management:

1. Is responsible for general oversight of the Volunteer Program Coordinator (VPC).
2. Works with the VPC to develop program of work and associated goals.
3. Oversees trail crew work and contracts with other organization crews as applicable.

Financial Management:

1. Is responsible for financial management regarding FNST program of work and timely expenditures accounting.
2. Works with FTA Bookkeeper/Admin Director to ensure timely and accurate reporting.
3. Is responsible for Trail Operations grant management.

Volunteer Program Coordinator (VPC).

Position Summary. The VPC is responsible for building and improving volunteer programs on the Florida National Scenic Trail (FNST). The VPC position is under general supervision of the Trail Program Director. This position works with the Trail Program Director to set volunteer program goals. The VPC works to ensure volunteer stewardship events on the FNST are well coordinated, engaging, and rewarding. This position will work closely with land managers and volunteers to build partnerships and facilitate communication. The VPC position includes a non-traditional schedule and will include weekend work. Overnight travel throughout Florida as well as the ability to lift up to forty-five pounds and hike up to ten miles a day on the Florida National Scenic Trail may be necessary at times.

Primary Duties:

1. Oversees volunteer program and finds innovative ways of building and improving stewardship events and trainings on the Florida National Scenic Trail.
2. Is responsible for volunteer recognition and tracking of certifications, skills, and hours.
3. Assists RR with implementation of volunteer programs as needed.
4. Engages volunteers in applicable program areas and associated committees.
5. Travels to volunteer stewardship projects throughout Florida to work alongside volunteers.
6. Assists with reporting of volunteer contributions and accomplishments.
7. Coordinates and updates regional stewardship projects yearly on FTA website.
8. Facilitates communication and works to empower and engage volunteers.
9. Works to improve retention rates and volunteer experiences on the FNST.
10. Compiles annual volunteer report for inclusion into the *Trail Operations Report* and conducts annual volunteer surveys.
11. Serves as point of contact for volunteers requesting information on regional work parties.

Regional Representative (RR).

Position Summary. The Regional Representative focuses on coordinating successful trail management, protection, and volunteer work on the Florida National Scenic Trail within their respective region. This individual will work with diverse groups of volunteers in order to build sustainable trail stewardship

programs. He or she will be responsible for building collaborative partnerships with volunteers and agency personnel within the region. The Regional Representative will need to work closely and communicate proactively with land management agencies and volunteers on a regular basis. It is important for this person to be able to effectively prioritize and follow through on the implementation of regional projects, which may span over multiple years. He or she will identify, engage, and respond to external planning efforts that could have an effect on the trail corridor. The Regional Representative will gather information on the physical trail, local features, and work to ensure optimal routing of the Florida Trail in perpetuity. He or she will carry out tangible work intended to permanently protect the Florida Trail in accordance with the values outlined in the National Trails System Act and the Comprehensive Management Plan.

Primary Duties:

1. Develops a regional trail program focused on protection, preservation, and promotion of the Florida Trail and the volunteer programs that support it.
2. Builds and expands volunteer stewardship opportunities on the Florida Trail by developing partnerships between the Florida Trail Association (FTA), volunteers, and agency partners.
3. Monitors, evaluates, and responds to activities that could affect the trail corridor.
4. Serves as a technical resource to agencies in the areas of trail protection, volunteer coordination, and project management.
5. Increases the amount of manpower and the number of well-trained volunteers regularly working on the trail.
6. Ensures volunteers have access to appropriate training, certification, safety gear, tools, and equipment.
7. Is responsible for the oversight and work plan development of FTA's seasonal staff and field crews working in the region.
8. Effectively prioritizes work to meet or exceed FTA's broader trail program goals and yearly program of work.
9. Oversees the planning, replacement, and construction of trail infrastructure.
10. Facilitates proactive communication and meets with volunteers and agency partners as needed to coordinate trail protection and maintenance efforts.
11. Is knowledgeable about the trail within the region and responds to public requests for information.
12. Verifies trail conditions as much as possible and notifies the public about access issues, safety concerns, threats, and changes to the trail.

201: TRAIL STANDARDS FOR DESIGN, CLEARING AND MAINTENANCE

Routine maintenance consumes the majority of a trail maintainer’s time and energy. This time and energy is the core asset or value that FTA and our trail volunteers provide. The Florida Trail was built and maintained by FTA volunteers. Few of these very committed individuals arrived at their first trail workday knowing what is expected or what a well maintained trail looks like. In any business new employees are trained, supervised and often mentored. Trail crews and individual volunteers are no different. Knowing why they are there, what is expected and how to do it is basic to a positive outcome. Trail standards and the application thereof are the tools by which we instruct and measure trail condition and maintenance. Trail standards are multifaceted but at the core are clearing limits.

The Florida Trail corridor ranges from a narrow, primitive and remote trail to a wide, paved and urban one. This mixture makes it impractical to have a single standard for clearing limits. Site and area specific land manager requirements only add more standardization challenges. From terminus to terminus, the Florida Trail is an assortment of trail types and experiences.

To accommodate as many of the differences as possible the National Forests in Florida and the Florida Trail Association have adopted a modified version of the National Trail Class Matrix and Design Parameters (see below). The modified version has five trail classes (very primitive to very developed) and parameters or specifications for each trail class. From a land manager’s and a trail builder’s/maintainer’s perspective these provide quantifiable standards that can be conveyed to trail workers. For any trail work activity the trail crew leaders should be aware of the class and parameters. These should be communicated to crew members, along with clearing limits information, before the workday begins. First time trail workers are especially vulnerable to no instructions and/or misinformation about what trail work entails and what is expected.

To do a good job the average trail worker/volunteer does not have to know the trail class but they do need to know what is expected (clearing limits and blazing standards).

Florida National Scenic Trail (FNST)/Trail Standards/Trail Specification.

Example of Design Parameters:

<u>Design Parameters for a Pedestrian</u>	<u>Class 3</u>
Tread Width (non-wilderness – single lane) = minimum to maximum tread width.	18” – 36”
Surface:	
Type	natural
Protrusions	≤ 3”
Obstacles	≤ 10”
Grade is elevation change.	3% – 10%
Cross Slope is the maximum cross slope.	5% – 10%
Clearing:	
Width	36” – 60”
Height	8’
Trail shoulder clearance	12” – 18”
Turns are the turning radius.	4’ – 8’

Note: See complete Trail Class Matrix and FNST Design Parameters on pages 3-4. FNST Trail Classes can be found at: [USDA-FS FNST ArcGIS](#) (Trail Class layer).

Skills Training: What You Don't Know.

Knowledge of standards for trail clearing and blazing are essential but they are only the first step. Equally important are best practices, techniques, and the skills required to apply them. For most volunteers these are not acquired in a classroom. There are plenty of judgment calls and there is no substitute for in-the-field training and working with experienced staff and volunteers.

Land Manager Resources for FNST Coalition.

[A Land Managers Guide to: Minimum Trail Standards and Guidelines for the Florida National Scenic Trail.](#)
[http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprd3805919.pdf]

[Addendum: Minimum Standards and Guidelines for the Florida National Scenic Trail.](#)
[http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprd3803485.doc]

Note: Additional details on trail standards and techniques are found in Chapter 211: Basic Trail Maintenance.

Table 1: National Trail Class Matrix / USDA-FS
U.S. Forest Service

Trail Attributes	Trail Class 1 Minimally Developed	Trail Class 2 Moderately Developed	Trail Class 3 Developed	Trail Class 4 Highly Developed	Trail Class 5 Fully Developed
Constructed Features & Trail Elements	<ul style="list-style-type: none"> Structures minimal to non-existent Drainage typically accomplished without structures Natural fords Typically no bridges 	<ul style="list-style-type: none"> Structures of limited size, scale, and quantity; typically constructed of native materials Structures adequate to protect trail infrastructure and resources Natural fords Bridges as needed for resource protection and appropriate access 	<ul style="list-style-type: none"> Structures may be common and substantial; constructed of imported or native materials Natural or constructed fords Bridges as needed for resource protection and appropriate access 	<ul style="list-style-type: none"> Structures frequent and substantial; typically constructed of imported materials Constructed or natural fords Bridges as needed for resource protection and user convenience Trailside amenities may be present 	<ul style="list-style-type: none"> Structures frequent or continuous; typically constructed of imported materials May include bridges, boardwalks, curbs, handrails, trailside amenities, and similar features
Signs²	<ul style="list-style-type: none"> Route identification signing limited to junctions Route markers present when trail location is not evident Regulatory and resource protection signing infrequent Destination signing, unless required, generally not present Information and interpretive signing generally not present 	<ul style="list-style-type: none"> Route identification signing limited to junctions Route markers present when trail location is not evident Regulatory and resource protection signing infrequent Destination signing typically infrequent outside of wilderness; generally not present in wilderness Information and interpretive signing not common 	<ul style="list-style-type: none"> Route identification signing at junctions and as needed for user reassurance Route markers as needed for user reassurance Regulatory and resource protection signing may be common Destination signing likely outside of wilderness; generally not present in wilderness Information and interpretive signs may be present outside of wilderness 	<ul style="list-style-type: none"> Route identification signing at junctions and as needed for user reassurance Route markers as needed for user reassurance Regulatory and resource protection signing common Destination signing common outside of wilderness; generally not present in wilderness Information and interpretive signs may be common outside of wilderness Accessibility information likely displayed at trailhead 	<ul style="list-style-type: none"> Route identification signing at junctions and for user reassurance Route markers as needed for user reassurance Regulatory and resource protection signing common Destination signing common Information and interpretive signs common Accessibility information likely displayed at trailhead
Typical Recreation Environments & Experience³	<ul style="list-style-type: none"> Natural, unmodified ROS: Typically Primitive to Rooded Natural WROS: Typically Primitive to Semi-Primitive 	<ul style="list-style-type: none"> Natural, essentially unmodified ROS: Typically Primitive to Rooded Natural WROS: Typically Primitive to Semi-Primitive 	<ul style="list-style-type: none"> Natural, primarily unmodified ROS: Typically Primitive to Rooded Natural WROS: Typically Semi-Primitive to Transition 	<ul style="list-style-type: none"> May be modified ROS: Typically Semi-Primitive to Rooded Natural to Rural setting WROS: Typically Portal or Transition 	<ul style="list-style-type: none"> May be highly modified Commonly associated with visitor centers or high-use recreation sites ROS: Typically Rooded Natural to Urban Generally not present in Wilderness

¹ For National Quality Standards for Trails, Potential Appropriateness of Trail Classes for Managed Uses, Design Parameters, and other related guidance, refer to FSM 2353, FSH 2309.18, and other applicable agency references.

² For standards and guidelines for the use of signs and posters along trails, refer to the Sign and Poster Guidelines for the Forest Service (EM-7100-15).

³ The Trail Class Matrix shows the combinations of Trail Class and Recreation Opportunity Spectrum (ROS) or Wilderness Recreation Opportunity Spectrum (WROS) settings that commonly occur, although trails in all Trail Classes may and do occur in all settings. For guidance on the application of the ROS and WROS, refer to FSM 2310 and 2353 and FSH 2309.18.

Table 2. Pedestrian Design Parameters by Trail Class
 USDA, Forest Service modified for the FNST

Design Parameters are technical guidelines for the survey, design, construction, maintenance, and assessment of the FNST. Local deviations from any Design Parameter may be established based on trail-specific conditions, topography, or other factors, provided that the deviations are consistent with the general intent of the applicable Trail Class and National Scenic Trail experience.

Designed Use FNST		Trail Class 1	Trail Class 2	Trail Class 3	Trail Class 4	Trail Class 5
Design Tread Width	Wilderness (Single Lane)	0" – 12"	6" – 18"	12" – 24" Exception: may be 36" – 48" at steep side slopes	18" – 24" Exception: may be 36" – 48" at steep side slopes	Not applicable
	Non-Wilderness (Single Lane)	6" – 12"	12" – 24"	18" – 36"	24" – 60"	36" – 72"
	Non-Wilderness (Double Lane)	36" – 48"	36" – 48"	36" – 60"	48" – 72"	72" – 120"
	Structures (Minimum Width)	18"	18"	36"	48"	60"
Design Surface	Type	Native, ungraded May be continuously rough	Native, limited grading May be continuously rough	Native with some onsite borrow or imported material where needed for stabilization, occasional grading Intermittently rough	Native with improved sections of borrow or imported material, routine grading Stable, with minor roughness	Likely imported material, routine grading Uniform, firm, and stable
	Protrusions	≤ 24" Likely common and continuous	≤ 6" May be common and continuous	≤ 3" May be common, not continuous	≤ 3" Uncommon, not continuous	No protrusions
	Obstacles (Maximum Height)	24"	12"	10"	8"	No obstacles
Design Grade	Target Grade	5% – 20%	5% – 12%	3% – 10%	2% – 8%	2% – 5%
	Short Pitch Max	30%	25%	15%	10%	5% - 8%
	Maximum Pitch Density	20% – 30% of trail	10% – 30% of trail	10% – 20% of trail	5% – 10% of trail	0% – 5% of trail
Design Cross Slope	Target Cross Slope	Natural side slope	5% – 20%	5% – 10%	3% – 7%	2% – 3%
	Maximum Cross Slope	Natural side slope	20%	10%	8%	5%
Design Clearing	Height	6'	6' – 8'	8'	8' – 10'	8' – 10'
	Width	≥ 24" Some vegetation may encroach into clearing area	24" – 48" Some light vegetation may encroach into clearing area	36" – 60"	48" – 72"	72" – 96"
	Shoulder Clearance	3" – 6"	6" – 12"	12" – 18"	12" – 18"	12" – 24"
Design Turn	Radius	2' – 3'	3' – 6'	4' – 8'	8' – 10'	8' – 12'

202: TRAIL SIGNAGE AND BLAZING

Signage

Trail signs for the Florida Trail are typically used to inform the motoring public and/or trail users that they are approaching, or are on, the Florida Trail. When blazes are not sufficient to inform the user of location specific information then directional, interpretive or regulatory signage may be necessary. Examples include directions to water sources, campsites, trailheads, land use restrictions, location signage, trail junctions, etc. Signage frequency and purpose should be consistent with trail class matrix for the trail segment (Chapter 201). Trailside signage should be placed at the level of blazes, visible to trail users, and far enough off the trail centerline to not interfere with the passage of users. Be conservative with the quantity of both signage and blazes. Over blazing and signing has a negative impact on the trail experience.

The number, types, and frequency of signs or blazes depends primarily on the trail user's skill level and the trail's designed use and Trail Class. Low-challenge trails (Class 4 and 5) typically will be signed with destinations and distances. Usually, the trail will be so obvious that blazing is minimal or necessary only at points where users might be confused. As the desired opportunity for challenge rises (Class 1-3), the amount of information given by signs usually drops to trail identification and direction.

The FNST Program Manager is responsible for working directly with FNST land management partners in evaluating FNST shield sign requirements and approving their location and placement. FTA regional representatives have primary responsibility for signage coordination, selection, and placement with land managers. In areas without FTA regional representatives those functions are shared between the Section Leaders and FTA Trail Program Director. FTA volunteers are encouraged to assist in FNST shield signage planning and placement.

Chapter 310: [FTA Sign Library](#) contains a comprehensive display of signage and guidelines for location and usage.



FNST Shield Sign. The *purpose* of the 24-inch and 12-inch FNST Shield Signs is *to identify the location of the FNST to the motoring public*. These markers should be placed so they can be readily seen from a moving vehicle approaching from either direction. The placement of the markers on right-of-way requires approval of appropriate State or

County authorities. Section Leaders and managing agencies should give high priority to timely repair and/or replacement of missing or damaged signs. FNST Shield Signs are available to land managers from the USDA-FS/FNST Office, 325 John Knox Rd., F-100, Tallahassee, FL 32303-4160.

24-inch Shield. These signs are for location on federal or state highways (speed over 40 mph) and need to comply with the Federal Highway Administration's Manual on Uniform Traffic Control Devices (MUTCD) or FDOT sign standards.

12-inch Shield. These signs are for locations where the FNST crosses secondary roads (paved or aggregate surface), with one sign facing each direction of traffic and approximately 100 feet before the actual trail crossing point.

3-inch Shield. The purpose of the 3-inch shield is to identify the FNST to the person approaching from a side trail. It is to be used only on the FNST at common access junctions, at intersections with other trails, or where needed as a reassurance sign if other land use activities or game trails make the trail location uncertain to the traveler. The 3- inch shield is not intended to be used as a trail blaze.



Hiking Trail Symbol Sign. This sign can be used to identify the FNST or FTS trail locations to the public.

Blazing

In the recreational trails community painted blazes are one form of *reassurance markers*. On the Florida Trail these are painted orange blazes that are typically placed on trees or wood posts. The purpose of reassurance markers is to help users identify the trail corridor. They are most useful when the trail corridor is indistinct, confused by multiple trails or otherwise obscured.

Uniformity and Standardization. The importance of *uniform and standardized* blazing cannot be overstated. The task of blazing should be assigned to experienced volunteers who have demonstrated an understanding of the importance and methodology of blazing. Blaze placement and frequency are decisions best left to seasoned trail volunteers. New or inexperienced volunteers seldom have the trail skills to understand blazing's significance or impact on the trail user.

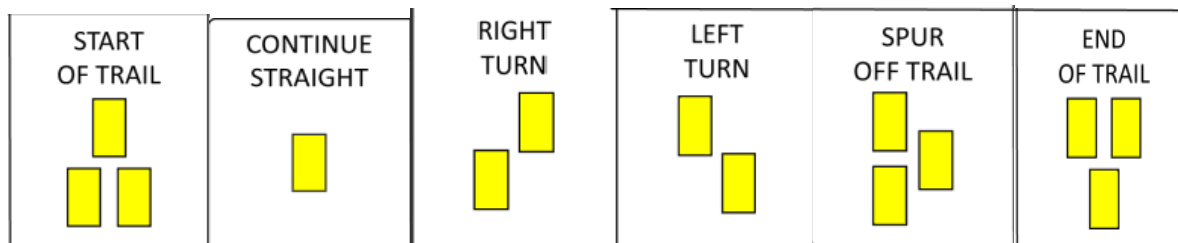
Frequency of Blazes. The *frequency* of blazes depends primarily on visibility. Visibility is heavily dependent upon trail design, layout, the anticipated user's skill level, and the trail class. Trails designed with minimal abrupt turns allow for increased visibility and therefore fewer blazes. Over-blazing diminishes the user experience and adds unnecessary work for trail maintainers. Under-blazing can result in lost hikers.

A properly blazed trail will permit users to enjoy the woods while not being continuously concerned about losing the trail. Blazes should be frequent enough to assure the hiker that he or she is on the trail. Normally, this is accomplished by placing the blazes so that when the hiker is passing one blaze the next quickly comes into view. Terrain and other factors often dictate the frequency of blazes. Road walk connectors are to be blazed. The blazing on road walks should be close enough so the hiker is regularly reassured. Blazing every other telephone pole is sufficient along paved roads.

Painting the Blazes. To ensure that blazes are appropriately located, it is recommended that the trail be walked in both directions, blazing in one direction at a time. What you notice in one direction may not be obvious from the other. If equally visible from either direction, blazes may be painted on opposite sides of trees or posts. Select live trees or other objects (such as fence posts and poles) that catch the eye. Obtain permission to use fence posts and poles, especially power poles. Brush back (remove) vegetation that may obscure the blaze visibility. Working in teams of two or three people helps determine blaze visibility from a distance.

Blazes should be painted five-and-one-half feet above the ground with the top six feet above ground level. The blaze should be two inches wide and six inches long (approximately the size of a dollar bill), preferably on trees wide enough to provide a contrast for the paint. An offset double blaze is used when

the trail makes an abrupt change in direction (more than a gentle curve), with the top blaze offset in the direction of the turn. *Note: Double blazes (one directly over the other) can be used when the blazing surface doesn't allow for offset blazes or when alerting the user to a trail change other than a turn.* In very limited circumstances the blazes for START, SPUR, and END (shown below) may be appropriate. These three should be used sparingly.



Blaze Colors. Orange is the official blaze color for the Florida Trail. Only the Florida Trail (FNST) is to be blazed orange. The blaze colors of other trails maintained by FTA volunteers (including side and/or connector trails) should **not** include orange. Otherwise, the blaze color and rules for these trails are at the discretion of the land manager.

The Florida Trail (FNST) blazing color system:

- *Orange* is for the Florida Trail (FNST) through trail.
- *Blue* blazes mark side, spur and connector trails to camping, access points, or places of interest.
- *White* blazes may be used for loop or alternate routes when they are connected to the Florida Trail (FNST).
- *Yellow* blazes may be used for trails that intersect other trails already blazed in orange, blue or white.

Paint Formulas. The official Florida Trail blaze paint is a Coronado acrylic water-base, high-gloss enamel. This water-based paint is durable on tree bark and affords easy cleanup with water.

FTA approved Coronado paint formulas:

- The formula for one gallon of Florida Trail **orange** blaze paint is:
80-139 (OSHA Orange) plus R-Y; T-Y; M-40; F-8; B-1
- The formula for one gallon of Florida Trail **blue** blaze paint is:
80-34 plus D-Y; E-3Y
- The formula for one gallon of Florida Trail **white** blaze paint is:
80-1 (White)
- The formula for one gallon of Florida Trail **yellow** blaze paint is:
80-151 (OSHA Yellow)

Note: Additional information on blazing standards and techniques is in Chapter 211: Basic Trail Maintenance.

203: TRAIL DESIGN AND LAYOUT

There is an art to trail design and layout. Through study and experience, a person locating the trail corridor and laying out the trail centerline will develop an eye for it, and the results will be sustainable trails that are easy to maintain and a delight to hike.

Trail design and layout requires consideration of many factors: geology, hydrology, botany, and aesthetics—just to name a few. Observe how use, weather conditions, water flow, and regrowth of vegetation affect a trail over time. Utilize professionals (FTA staff) and volunteers *with design and layout experience* as mentors. They've spent years acquiring relevant knowledge and experience. These skills can only be fully developed with experience. These skills are not complex but they are also not intuitive without exposure to training—both classroom and on-the-job. *Training is the first step and it starts with the individual accepting that there are things they can learn about trail design and layout.*

There are several very good books and manuals written on the subject of recreational trail design and layout. It would be a futile effort to summarize them in a few pages (see the end of this Chapter for reference material suggestions). Professionals and long-time volunteers spend years acquiring the relevant knowledge and experience. Below are some of the most relevant components.

Central to any design and layout discussion are Trail Fundamentals. These five concepts are the cornerstones of USDA-FS trail management:

- Trail Type (terra firma, water, etc...)
- Trail Class (1-5; see Chapter 201)
- Managed Use (hiker, bicycle or other)
- Designed Use (level of development for managed usages)
- Design Parameters (see Chapter 201)

Trail design and layout are much more than the application of FNST Design Parameters for a Trail Class. The trail class and parameters are specifications, while design and layout are techniques and skills. Design and layout merge sustainability, esthetics, flow, and how the trail fits into the setting. Trail design is an important factor in ensuring that the trail offers optimum scenic, geologic, historic, cultural and biological sites to provide a variety of diverse habitats for the trail user to experience. Trail design is the critical connection to make the trail sustainable, to reduce impacts to the natural environment, and to minimize future trail maintenance.

Sustainability.

In the trail development and construction community you hear the term “sustainable.” In trail jargon this is a trail that *accommodates its intended objectives while requiring minimal long-term maintenance.* A sustainable trail is often not the easiest to plan or construct. It frequently requires much more work to clear the trail corridor and establish a stable tread.

Trail design and layout is about fitting a sustainable trail to the land. Before starting the design and layout process there is an assumption that the selected trail corridor is in the best or optimal location

(see Chapter 210). Most of the Florida Trail is designed and managed for the pedestrian/hiker. The managed use for any Florida Trail segment is the decision of the landowner or manager.

Trail Corridor Reconnaissance.

Whether it is a new trail, a minor relocation or a major relocation, trail corridor reconnaissance is paramount. The reconnaissance process includes the identification and evaluation of alternative corridors, which will lead to the selection of the best possible location. Application of sound principles of trail location, corridor selection, and trail grade will minimize construction cost and future maintenance. Trail corridor reconnaissance and selection is a shared volunteer and FTA staff responsibility. The cost of construction as well as the long-term maintenance requirements are not decisive but are influencing factors in trail corridor selection.

The process starts with the examination of contour maps and aerial imagery to identify terrain features, drainage patterns, vegetation, and man-made structures. Inquire about current and future land use and management plans that might influence both the trail location and the user experience. Discussions with managers and volunteers familiar with the area are essential to identifying control points. Control points can be positive (things to route toward) or negative (areas to avoid).

There is no substitute for on-the-ground examination of potential trail corridors. Walk each feasible corridor and record the proposed centerline. Identify the alternative trail corridors on the ground with different temporary markers (flagging) that can be easily recognized and moved. Record all pertinent data on physical conditions and key features that are to be regarded as principal items for consideration in corridor selection. Examine control points closely.

Positive Control Points. Favor areas with the following features:

1. Natural stream crossings
2. Natural ridges
3. Natural openings
4. Open timber
5. Light stands of brush
6. Scenic vistas
7. Observation opportunities with special features
8. Access to water and areas protected from the weather
9. Natural drainages offered by sloped locations
10. Well-drained soils
11. Differing seasonal experiences and conditions
12. Natural contours in topography
13. Safe and quick crossing of roads and railroads
14. Reasonable access to other transportation modes
15. Good trailhead access
16. Available campsites
17. Location of potential blazing trees

Negative Control Points: Carefully consider the conditions of various trail corridors and avoid the following as much as possible:

1. Wet and flat areas with difficult drainage
2. Stream bottoms subject to periodic floods
3. Unstable, fragile soils
4. Steep slopes and abrupt elevation changes
5. Frequent stream crossings where fording is difficult or bridging impractical
6. Locations requiring bridges or culverts
7. Heavy vegetation requiring clearing and more-than-annual maintenance
8. Fragile vegetation areas
9. Cultural sites, except where featured as a trail objective
10. Lightning-prone areas
11. Road or railroad crossings with limited sight distances
12. Known habitats of threatened or endangered species of plants or animals—see [Notes on Florida's Endangered and Threatened Plants](http://fresh_fromflorida.s3.amazonaws.com/fl-endangered-plants.pdf) [http://fresh_fromflorida.s3.amazonaws.com/fl-endangered-plants.pdf]
13. Private land requiring a right-of-way
14. Timbered areas prone to blowdown
15. Adverse effects on other resources such as wildlife
16. Fences, cables, and guy wires

Trail Layout.

Ideally, trail layout should follow the contours of the land and consist of a series of gently sweeping long curves. Long straight stretches and sharp angular turns should be avoided as much as possible. Layout should take advantage of natural drainage to minimize the need for drainage modifications.

Flat land.

Land is seldom truly flat--the elevation differences over long stretches south of Orlando can often be measured in inches. Trail builders generally prefer the highest ground possible for trails on flat terrain. The higher ground may be only inches above the surrounding terrain but is often recognizable by the type of vegetation. While it is always possible to elevate and harden the tread it is seldom cost effective for long trail segments. Sandy soils generally drain quicker than those primarily of organic matter. Discussions on elevating the tread are contained in a [Virginia Greenway](#) document and the [USDA FS Wetland Trail Design and Construction](#).

Trail Grade.

Florida has an overabundance of sandy soils that are highly erodible. The ideal grade is 3% or less in sandy soils. Grade is usually a controlling factor for a hillside trail location. Avoid closely spaced undulate grades and downhill grade/fall-lines where water will funnel. A slight downhill grade is necessary for crossing drainages and to provide grade undulations (grade reversals) for drainage purposes.

Hillside and Fall-lines.

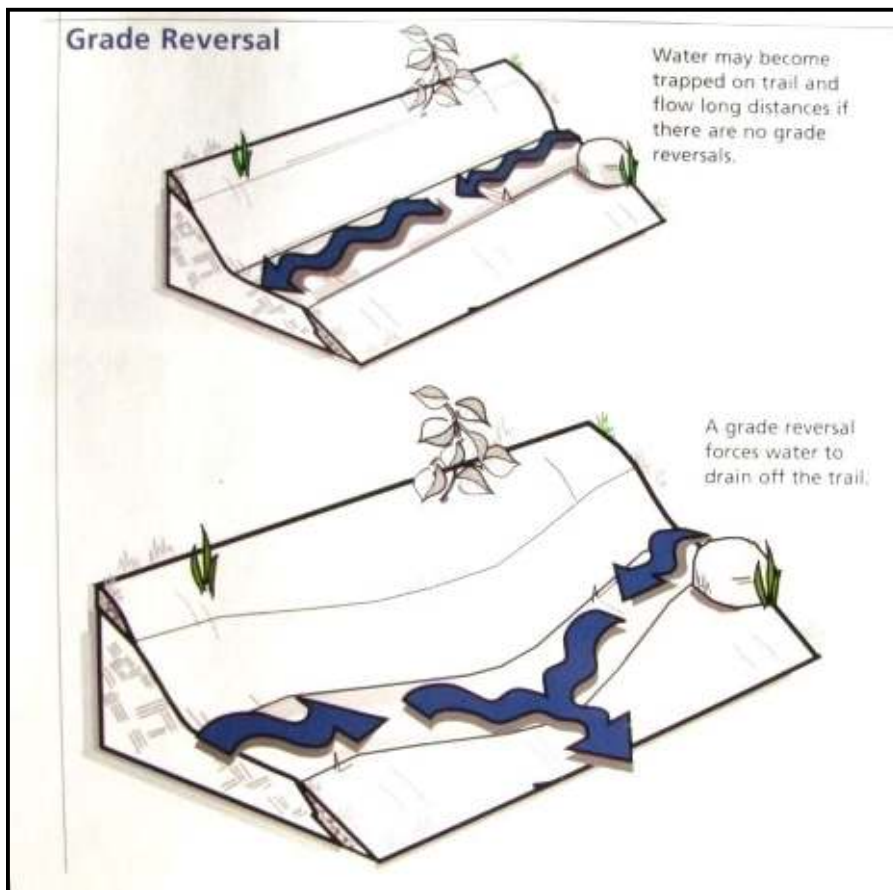
Locating the trail directly up/down a slope results in little opportunity to drain water off the tread. Florida is *not* all flat, and elevation changes of 50 feet or more are not uncommon. North Florida and the Panhandle have plenty of hills and erosion-prone grades. This is about *moving water* in and crossing the trail tread. Even small elevation changes can create fall-line/erosion-prone trail segments in sandy soils.

With user impact a sand-based tread becomes compacted and a small trench forms. On a grade, water will run downhill until it encounters a way out. Ideally you want to vent the water off the trail every 20-30 feet. Water running in the tread for any distances will erode and destroy the tread.

Assume that *any* grade change is *erosion prone*. When grade changes are encountered the first solution is to find a more sustainable trail corridor to avoid or reduce the grade. If that isn't feasible, hillside trail construction techniques need to be applied. These can include use of natural terrain dips, grade reversals, tread out-sloping, and switchbacks. If design and layout do not fully address erosion, trail repair measures such as water bars and check dams may be necessary.

The Half Rule.

The half rule says that the trail grade should be no more than half the side slope grade. This rule really helps when putting trails on gentle side slopes. For example, if you're working on a hill with a 6 percent side slope, your trail grade should be no more than 3 percent. If the trail is any steeper, it will be a fall-line trail.



GRADE REVERSAL:
Reverse the grade
for drainage,
about every 20-30
ft.

Looks like a
natural dip in
trail.

Marking the Trail Corridor.

The trail corridor should be marked with flagging tape hung on bushes and tree branches. Once the final corridor is selected the corridor should be pin flagged. Pin flags mark the corridor for trail construction.

Flags can be placed on the uphill side, the right side, the left side, or on the least desirable option—the tread’s centerline. Centerline pinning is least desirable because the pins often will be in the way and interfere with clearing the corridor. *What is most important is that the trail crew clearing the trail corridor be fully aware of the pin flags orientation (left, right, or center) before work begins.* Pin flags are set at frequent intervals to clearly define the trail corridor and clearing limits. Flagging should be placed above the pin flags where they are obscured in grasses or other vegetation. The pin flags should remain in place until the trail is blazed.

The person marking the trail corridor is not always present during every aspect of trail development or construction. The pin flags serve to clearly show the exact trail corridor, tread and clearing limits for those evaluating the trail corridor and for the construction crews during the building process.

Structures such as bridges and puncheons should be clearly marked and identified on the ground and recorded in detail. Dangerous trees should be marked for removal. Roads and utility easements should be crossed at right angles.

Trail Design and Layout Resource Material.

AMC's Complete Guide to Trail Building and Maintenance. 4th ed. Boston: Appalachian Mountain Club Books, 2008. ISBN: 1934028169. AMC, 5 Joy St., Boston, MA 02108. (603) 466-2721. www.outdoors.org/

Appalachian Trail Design, Construction, and Maintenance. 2nd ed. Harpers Ferry, WV: Appalachian Trail Conference, 2000. ISBN: 091795372X. Pub. #503. ATC, Box 807, Harpers Ferry, WV 25425. (304) 535-6331. www.atconf.org

Lightly on the Land: The SCA Trail Building and Maintenance Manual. 2nd ed. Seattle: Mountaineers, 2005. ISBN: 0898868483. The Mountaineers Books, 1001 SW Klickitat Way, Suite 201, Seattle, WA, 98134. (206) 223-6303. www.mountaineers.org

Trail Solutions: IMBA's Guide to Building Sweet Singletrack. Boulder, CO: International Mountain Biking Association, 2004. ISBN: 0975502301. IMBA, P. O. Box 20280, Boulder, CO 80308. 1-888-442-4622. www.imba.com

[USDA FS Trail Construction and Maintenance Notebook](http://www.fs.fed.us/t-d/pubs/htmpubs/htm07232806/toc.htm)
[<http://www.fs.fed.us/t-d/pubs/htmpubs/htm07232806/toc.htm>]

[USDA FS Wetland Trail Design and Construction](http://www.fs.fed.us/t-d/pubs/htmlpubs/htm07232804/toc.htm)
[<http://www.fs.fed.us/t-d/pubs/htmlpubs/htm07232804/toc.htm>]

204: TRAIL CONSTRUCTION AND MAINTENANCE

Dirt, water, gravity, vegetation, and critters are what cause the need for trail work. Construction and maintenance are our methods for dealing with these impacts to the trail.

FTA Regional Representatives, Section Leaders, and Activity Leaders with trail crew leader training or experience are the primary leaders of trail construction and maintenance activities. Chapter leaders should make every effort to involve the land managers, the public, youth groups, interested stakeholders and other FTA Chapters in trail maintenance. Prior to the beginning of the hiking season, Section Leaders should contact land managers and prepare a trail maintenance work plan and tentative schedule of activities. Just prior to trail work activities, the land manager should be contacted again to ensure the work location is open and safe for trail workers.

Trail Standards

Trail standards are the same for both construction and maintenance, although construction is normally a more intense activity. Trail and blazing standards for the Florida Trail (FNST) are found in Chapters 201, 202 and 211. The trail standards outlined in Chapters 201 and 202 also apply to the Florida Trail System. Trail relocations and new infrastructure construction are to follow the coordination and approval sequence set forth in Chapter 210.

Safety

All workdays start with a Tailgate Safety Session. The safe use of tools and no injuries are *priority one!* See Chapter 208 for information on the Tailgate Safety Session.

Clothing

In addition to required Personal Protective Equipment (PPE), recommended clothing for trail workers includes sturdy shoes or boots, long sleeve shirts, and long pants. For PPE requirements see the *Trail Maintenance and Construction Safety Quick Reference Card* in Chapter 207.

Routine Trail Maintenance and Trail Construction

Clearing and Brushing (aka lopping and mowing). Plants grow fast in Florida, often closing off a trail corridor in less than a year. Brushing generally needs to be very aggressive. Mow and lop back vegetation to the clearing limits. Cut brush at ground level, even if the plant is outside the clearing limits. Never just cut off the tips of branches; it is a waste of time. Prune back brush to encourage growth away from the trail. Ideally, cut where a single stem at the base (trunk or primary stem) removes several branches.

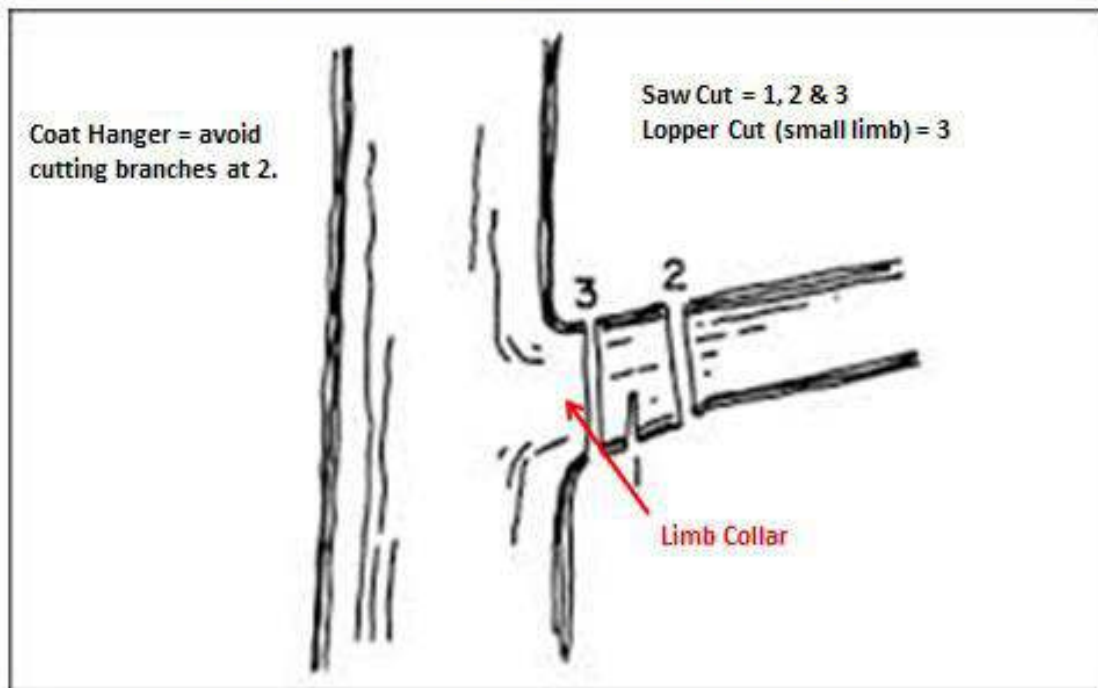
Vegetation grows back vigorously; it may be necessary to brush more often than once per year using chainsaws and/or brushcutters. Both are moderately dangerous tools and not suitable for volunteers without training. An alternative is to grub out shrubs using Pulaskis, cutter mattocks, or other grubbing tools.

All sapling stumps must be cut as flush as practical with the ground to prevent tripping hazards and avoid interference with mowers. Within the trail tread, completely pulling up seedlings and small saplings to remove their roots is acceptable and a more permanent solution.

Trail mowers and brushcutters can be used to aggressively clear the trail shoulder. Attempting to maintain the clearing limits with loppers or other hand tools is time and labor intensive.

Prune tree and brush limbs close to the trunk or main stem. For a clean cut, make a shallow undercut first, then follow with the top cut. This prevents the limb from peeling bark off the tree as it falls. Do not use an ax for pruning. If more than half of the tree needs pruning, it is usually better to cut it down. Cut trees off at ground level and do not leave pointed stobs or tripping hazards.

Limb and Branch Pruning



Logging Out. Logging out means cutting away trees that have fallen across the trail corridor. This work can be hazardous. The size of the trees, restrictions on motorized equipment, and your skill and training determine whether chainsaws, crosscut saws, bow saws, or axes are used. **Safety first!**

Volunteers are required to receive USDA-FS certification prior to operating a chainsaw or crosscut saw. Training, experience, and level of certification can allow volunteers to buck and limb trees that are already on the ground. Felling any standing tree is hazardous. Only individuals with felling certification are to undertake felling trees. Chainsaw operator skill levels and use restrictions are outlined in Chapter 207. FTA has adopted the USDA-FS requirements and procedures for chainsaw safety, training, uses and operations as outlined in Section 22.48, Chainsaw Operations of the USDA-

FS, FSH 6709.11, Health and Safety Code Handbook [<http://www.fs.fed.us/dirindexhome/fsh/6709.11/FSH6709.pdf>].

Cut (buck) and remove fallen trees 4-5 feet back from the trail's center line (remove a total of 8-10 feet). Bucking and limbing is considered a routine part of trail maintenance. Tree removal and/or felling should be pre-approved by the land manager.

Leaners are trees that have not fallen but are leaning across the trail. If a leaner is within the trail clearing limits, it should be removed. Beyond that, it is a matter of discretion whether a leaner needs to be cut.

Small hand saws are capable of cutting blowdowns up to six inches in diameter and can make a great start on clearing a trail. If a chainsaw logcut crew will follow, there may not be a need to try to cut larger logs. Logs are often easily dragged off the trail if they are neither too heavy nor attached at the base.

Routine Trail Maintenance and Construction resource material.

[*Trail Construction and Maintenance Notebook*](#). Missoula, MT: USDA Forest Service, Technology and Development Program, 2007. [<http://www.fs.fed.us/t-d/pubs/htmlpubs/htm07232806/toc.htm>]

[*Wetland Trail Design and Construction*](#). Missoula, MT: USDA Forest Service, Technology and Development Program, 2007. <http://www.fs.fed.us/t-d/pubs/htmlpubs/htm07232804/toc.htm>

Marking and Signing

For information on blazing and trail signs standards, see Chapters 202 (Trail Signage and Blazing) and 211 (Basic Trail Maintenance).

Trail signs are typically used to inform users they are on the Florida Trail and provide informational, directional, interpretive, and regulatory information. Additional guidance on FNST signage and blazing is contained in the Land Manager Resources for FNST Coalition Members: 303: [A Land Managers Guide to: Minimum Trail Standards and Guidelines for the Florida National Scenic Trail](#), and 304: [Addendum: Minimum Standards and Guidelines for the Florida National Scenic Trail](#).

Trail Facilities

Campsites and Camping Zones. FTA Regional Representatives and Section Leaders are to coordinate with land managers to obtain approval and assistance with campsite selection and development. Campsites should be provided on all sections of the Florida Trail. Such sites may be off the trail but at a reasonably close distance. Designated sites should be frequent enough to allow reasonable accommodation for hikers of varying abilities. Campsites are recommended to be located four to six miles apart based on the expected use of the trail and site, but in all cases are to be no more than one hiking day (eight to ten miles) apart. Some landowners may prohibit camping on their land. In selecting and locating a campsite, the following criteria should be considered:

- Select a reasonably level and clear wooded site that is near, but not on, the Trail.
- Avoid placing a campsite near dead or dying trees or areas subject to flooding.
- When possible, locate a campsite near a suitable water supply.

- Campsites should accommodate a minimum of six to eight small tents.
- There should be a reasonably close area that will accommodate the disposal of human waste.
- A campsite should be in a remote location at least one mile away from highways, public recreation areas, and residences.
- Vehicles should not be permitted, and their access to campsites should be restricted.

Bridges and Boardwalks. Installation or removal of any type of trail infrastructure requires land manager approval. FTA Regional Representatives and Section Leaders are to coordinate with land managers to obtain approvals and assistance with bridge and/or boardwalk construction. State and Federal regulations often require assessments and/or permits to construct bridges and boardwalks in wetland areas and over streams. If required, permits must be obtained prior to construction by the managing authority. Before constructing a bridge or boardwalk, attempt to find a suitable alternative corridor that eliminates or minimizes the construction, maintenance, and replacement of these costly structures.

Trailheads. *Major* trailheads are generally located near primary highways while *minor* trailheads are on secondary roads. Major trailheads will normally offer a higher level of infrastructure than minor trailheads. Trailhead infrastructures should at a minimum include a vehicle parking area and an informational kiosk or bulletin board. Kiosk information should include at a minimum:

- Local area trail map
- Land manager identification, requirements, and restrictions
- Clear identification of the FT (or other trail as applicable).

The Trail Crew and Leave No Trace

It is evident that trail work has an impact on the land, but trail work is meant to reduce *overall* impact. It is a tool to help manage use. It is successful if it quickly becomes invisible to the average trail user.

There are ways to bring Leave No Trace ethics into all the work completed on the trail, including how we conduct work parties, where we choose to camp and take breaks, and how a crew behaves in relation to visitors and wildlife. It is important that we foster a Leave No Trace ethic, since our members are models for trail users. How we perform and the end result of our work influences others' behavior.

- Be respectful of other visitors: minimize visual impacts, hide brush whenever possible, store tools and take breaks off the trail, and never leave stobs (a.k.a. staubs, pungy sticks) when brushing.
- Travel and take breaks on durable surfaces: keep off-trail disturbance to a minimum.
- Dispose of waste properly: pack out garbage you find or create, and dispose of human waste properly.

Closing a Trail

Trail relocations are common. When obliterating blazes due to relocation remove ***all*** the old blazes, not just the one where the old trail deviates from the new trail. The old blazes should be lightly scraped and obliterated with a gray or brown paint. The closed trail should be blocked with debris and/or signage to direct users onto the new pathway. Trail corridor changes or *Data Book* description changes should be

submitted using the Map Changes Procedure (see Chapter 206). Trail corridor changes may also require the submission of a *Notice to Hikers* (see Chapter 205).

Temporary Corridor Markers

Orange surveyor tape (flagging) should be used as temporary/emergency markers. The tape should be removed when the trail corridor is blazed.

205: NOTICE TO HIKERS

Notice to Hikers Procedure

This procedure is for the purpose of publishing and tracking *Notice to Hikers* (NTH) submissions. *Notice to Hikers* submissions should originate from the FTA Chapter Trail Coordinators, Section Leaders, Regional Representatives or land managers and be submitted to the FTA office ASAP for posting on the FTA website. A blank *Notice to Hikers* form can be found in Chapter 311: [Notice To Hikers \(NTH\) Form](#).

NTHs are important for providing current trail information to hikers. Special urgency should be given to those NTHs that impact hiker safety. Whenever appropriate/practical a map illustration should be part of the NTH submission.

1. All NTH submissions and cancellations are to be coordinated with, and approved by, the land manager prior to transmission to the FTA office (fta@floridatrail.org).
2. Every NTH should use the designated format on page 2, or a reasonable facsimile.
3. Upon posting, the NTH will be assigned a sequential number by year and sequence (e.g. 2014-001, 2014-002, etc.).
4. Every NTH should have an “Effective Date” and an “Ending Date.”
5. Permanent trail corridor changes should be followed by the submission of GIS data for updating maps.
6. Chapter Trail Coordinators and Section Leaders are the primary FTA officials responsible for preparation and submission of NTHs.
7. Whenever appropriate, a copy the NTH should be posted on the trail in a location that is visible to trail users.

Submit all changes to:

Florida Trail Association
Attn: *Notice to Hikers*
1022 NW 2nd Street
Gainesville, FL 32601
fta@floridatrail.org
(877) HIKE-FLA
(352) 378-4550 (FAX)

Outdated Notices. Outdated NTHs remaining on the FTA web site often result in trail user confusion. NTHs are to be removed from the FTA web site posting when they are no longer relevant. FTA Chapter Trail Coordinators, Section Leaders, Regional Representatives and land managers should review posted NTHs no less than semi-annually and remove any NTHs that are outdated or no longer relevant.

206: TRAIL MAPS AND DATA BOOK

Florida Trail Map Series and *Data Book*

The location and description of the Florida Trail (a.k.a. Florida National Scenic Trail (FNST)) is documented in the Florida Trail map 1:100,000 series and *The Florida Trail Data Book*. The map series is maintained and periodically updated by FTA and the USDA Forest Service. Trail corridor and *Data Book* information are compiled by FTA trail staff and volunteers—usually the Regional Representatives and Section Leaders.

FTA publishes and sells both the maps and *The Florida Trail Data Book*—which provides general information for the entire Florida Trail. The *Data Book* lists trail data and mileages from south-to-north and north-to-south. **The official Florida Trail maps and Data Book are copyrighted and are not to be copied for distribution.** FTA sells these maps to offset expenses related to updating the map series and the *Data Book*.

The primary purpose of the FTA trail maps and *Data Book* is to provide trail users with accurate and up-to-date information. This is not possible without an accurate record of the trail's centerline and features. Without current and accurate trail centerline data both the FTA maps and the *Data Book* are flawed. The procedure outlined below provides a format and guideline as to what and how changes to the trail's centerline and features should be recorded and submitted to FTA. Revisions of both the maps and the *Data Book* must be coordinated to ensure they reflect the same information.

Florida Trail Maps and *Data Book* Change Procedure

The procedure shown below is established in order to accurately publish map and *Data Book* updates. Map change requests should originate from Chapter Trail Coordinators, Regional Representatives, or Section Leaders and be submitted to the FTA Office within 30 days of a trail centerline or data change. Trail centerline changes or *Data Book* description changes should be submitted using the Map Changes Procedure. Trail centerline changes may also require the submission of a Notice to Hikers (Chapter 205).

Map Changes Procedure.

1. Requests for changes to maps or *Data Book* text must be submitted in writing to the FTA office and originate from the Chapter Trail Coordinator, the Section Leader, a Regional Representative, or VP-Trails.
2. Changes coming into the FTA Office from persons other than the Chapter Trail Coordinator, the Section Leader, a Regional Representative, or VP-Trails will be sent to the Chapter Trail Coordinator for confirmation.
3. To maintain an accurate database of the trail's centerline, lateral movements of 50 feet or more are to be recorded and forwarded the FTA Office at the e-mail address shown below.

4. GPS track data of the trail's centerline and data points should be submitted to FTA in GPX file format. GPX is the preferred file format intended to transfer point and line information to and from GPS receivers. Most mapping software products are able to read and write files using this format.

5. In addition to the trail's centerline data, submissions should record and identify trailheads, trail kiosks, parking areas, campsites, side trails, water sources, bridges, roads, highways, fence gates, fence crossings, property boundary, trail signage, trail junctions, resupply facilities, and other features or information of interest to users.

6. Regardless of who does the field work necessitating map and *Data Book* changes, it is the responsibility of the Chapter Trail Coordinator and the Section Leader to verify the correctness of changes and provide the data to the FTA Office in a timely manner.

Submit all changes to:
Florida Trail Association
Attn: Map Changes
5415 SW 13th Street
Gainesville, FL 32608-5037
mapping@floridatrail.org
(877) HIKE-FLA
(352) 378-4550 (FAX)

The FTA has a limited number of portable GPS units available for loan to chapters to record map and *Data Book* changes. Contact the FTA office at the above address for details.

Chapter Trail Maps and Brochures

Chapters may publish, at their own expense, trail information and maps specifically targeted to trails in their immediate area. Any such maps or brochures should state who produced the document and the last revision date. It is expected that any maps published will not diminish the need for trail users to purchase official Florida Trail maps and *Data Book*. Any independently developed maps which show part of the Florida Trail or the Florida Trail System and/or makes mention of the FTA should be accompanied by the official FTA disclaimer:

"The Florida Trail Association, Inc., its officers, directors, staff and members proclaim the information included has not been independently verified by the FTA. The FTA assumes no liability arising from the use of the information herein. Persons using the information do so at their own risk."

207: TOOLS, POWER EQUIPMENT AND MATERIALS

Hand Tools

There are a large variety of hand tools available for use in trail construction and maintenance, ranging from small screwdrivers and bark scrapers to larger tools such as Pulaskis and shovels. Regardless of the size or type of tool, proper use and care of it will ensure a safer and longer life for both the tool and the operator.

Prior to using any tool, inspect its condition. Check that handles are attached securely, and are not prone to slipping. If the tool has an edge, make sure it is properly sharpened. Repair or replace any tool that is not in top working condition.

When using any tool, be sure the surrounding area is free of other workers and potential hazards. This is often referred to as a person's "dime"—a ten-foot radius of awareness when using any tool. Individuals performing trail maintenance are required to read and sign the [FNST General Trail Maintenance JHA – PDF](https://floridatrail.org/volunteer-resources/#crew-leader-corner) [https://floridatrail.org/volunteer-resources/#crew-leader-corner] prior to performing any trail maintenance task.

For a listing of commonly used hand tools, refer to [Handtools for Trail Work](http://www.fs.fed.us/t-d/pubs/pdfpubs/pdf0523810/pdf05232810dpi72.pdf). Missoula, MT: USDA Forest Service, Technology and Development Program, 2005. [http://www.fs.fed.us/t-d/pubs/pdfpubs/pdf0523810/pdf05232810dpi72.pdf]

Power Tools

Power tools are an efficient way to build and maintain the trail. However, power tools can present hazards to users and bystanders. To help ensure safe operation of power tools:

1. Operators of power tools must have appropriate Personal Protective Equipment, training and supervision. Experienced crew leaders in the field must provide a safety briefing before tools are distributed. If possible, team experienced users with new users.
2. Read, understand, and follow the manufacturer's safety and maintenance rules. If necessary make several copies of each owner's manual and bring a copy of the manual to the field.
3. Work in groups. Do not have anyone operating a power tool out of sight of the group.
4. People working with or near power tools should wear eye, hearing, and other appropriate personal protection. It may be possible to have two groups, one with power tools and one without.
5. Be alert for fatigue. Require rest breaks for both hand and power tool operators. If possible, periodically change operators. Be sure each person has adequate water.
6. Immediately stop and correct unsafe behavior.
7. Keep all tools properly maintained, oiled, and sharpened.
8. Maintain a safe distance from others when power tools are in use. Follow the safe distance guidelines in the operator's manual.

Chainsaw. Chainsaws are effective tools for heavy-duty trail clearing and especially for removing downed trees. During operation adhere to the safe distance requirements and directions provided in the

manufacturer's operator manual. The following notes supplement the operator's manual. Safe use of a chainsaw should be of the utmost concern.

Operator Training and certification. Prior to operating a chainsaw, FTA volunteers are required to successfully complete formal classroom and hands-on training. The volunteer must receive certification based on skill level, and be able to perform specific chainsaw operations. The skill levels include: "A" apprentice sawyer, "B" intermediate sawyer, and "C" advanced sawyer. Operation restrictions include, but are not limited to, felling, bucking, brushing, and limbing. The restrictions are listed on the Certification Card issued to those who successfully complete the training. The certification period is limited to three years and operators must have concurrent First Aid and CPR certification. The chainsaw work performed by FTA staff and volunteers consists almost exclusively of clearing downed trees—i.e., bucking and limbing. The majority of FTA volunteers are only certified for bucking and limbing and are restricted to those operations. Felling is cutting down live or dead trees and few FTA sawyers have received this training. **Only sawyers with felling certification are to undertake cutting down live or dead trees.** FTA has adopted the requirements and procedures for chainsaw safety, training, uses, and operations as outlined in *Section 22.48-Chainsaw Operations* of the [Health and Safety Code Handbook](#) (Washington, U.S. Dept. of Agriculture, Forest Service, 1999. [<http://www.fs.fed.us/dirindexhome/fsh/6709.11/FSH6709.pdf>]) Sawyers and those working in the work area are required to read and sign the [Chainsaw, Job Hazard Analysis](#) [<https://floridatrail.org/volunteer-resources/#crew-leader-corner>] prior to performing any chainsaw related task.

Chainsaw Personal Protective Equipment. The required Personal Protective Equipment for chainsaw use consists of the following:

- USFS approved hardhat
- Chainsaw chaps
- Eye protection
- Appropriate gloves
- Long-sleeve shirt
- 8"-high leather boots
- Hearing protection (85dB)
- Chainsaw General Equipment Kit

Chainsaw General Equipment Kit. The following equipment (Chainsaw General Equipment Kit) is also required to be readily available when operating a chainsaw:

- Fire extinguisher Type IV
- First Aid kit
- Chainsaw wrench
- Chain file w/ handle & guard
- Approved container for fuel
- Approved container for oil
- Wedges
- Single-bit axe or maul

Chainsaw Spare Parts Kit. The following spare parts should be carried in the field: spark plug, chain, chain sprocket, and air filter. Other tools are a spark plug wrench, Allen wrenches, screwdrivers, and pliers.

Brushcutter (a.k.a. Brush Saw). Like chainsaws, brushcutters are effective tools for heavy duty trail clearing when constructing new trail and maintaining existing trail—especially for removing the toughest kinds of brush, small trees, sparkleberry, palmettos, oak thickets, and cypress knees. Operators of brushcutters should first and foremost read and follow the directions provided in the brushcutter operator’s manual prior to operation of the equipment. For safety, anyone not directly assisting the brushcutter operator should be at least 50 feet from the work area. Operators and those working in the general area are required to read and sign the [Mower and Brushcutter, Job Hazard Analysis](https://floridatrail.org/volunteer-resources/#crew-leader-corner) [https://floridatrail.org/volunteer-resources/#crew-leader-corner] prior to performing any brushcutter related task.

The following tools and spare parts of appropriate size and model should be furnished with the brushcutter and carried in the field: a spark plug wrench, Allen wrenches, screwdrivers, pliers, spare blade, friction washer, one gallon of gasoline-oil mixture of the specified ratio, and rags.

Trail Mowers. The trail mower is a valuable labor-saving tool for both trail construction and trail maintenance. These mowers rank high on the list of hazardous equipment. Operators of trail mowers should first and foremost follow the directions provided in the operator’s manual prior to operation. Operators and those working in the general area are required to read and sign the [Mower and Brushcutter, Job Hazard Analysis](https://floridatrail.org/volunteer-resources/#crew-leader-corner) [https://floridatrail.org/volunteer-resources/#crew-leader-corner] prior to performing trail mowing or related task.

There are three main hazards: the blade, the rotating belt and pulleys, and objects flying from under the mower deck. All personnel should wear USDA-FS approved PPE (hardhats, work gloves, safety glasses, hearing protection, long pants and long sleeve shirts). Whenever a mower requires lifting over roots, logs, fences, water, etc. the motor must be turned off. If it becomes necessary to clear the blade by hand, first remove the wire from the spark plug.

Prior to any use the assigned operator must check the oil level.

After each 12 hours of operation, it is recommended that the following maintenance be performed:

1. Clean debris and dust accumulations with a hose or blower. Be sure the area around the oil filler is clean.
2. Remove and clean or replace the filter.
3. Drain oil and replace with the recommended oil specified in the operator’s manual.
4. Sharpen blade and balance. Replace bent or cracked blades.
5. Grease all lubrication points.
6. Clean debris wound around axles and top/bottom of blade shaft.
7. Clean cooling fins by blowing out debris; use a narrow wire as a pick if needed.
8. Inspect entire mower for cracked welds, bent or broken parts, loose wheel bearings, worn belt, etc.
9. Check tire pressure.
10. Spray carburetor linkage and flexible throttle cable with lubricant (WD-40).

Maintenance, Storage and Inventory of Trail Tools and Equipment

Each Chapter is responsible, at Chapter expense, for the maintenance, inventory, and secure storage of all tools and equipment assigned to their Section Leaders and/or Chapter.

Section Leaders are responsible for maintaining an inventory of the trail tools and equipment assigned to them, including where they are stored. The Chapter Trail Coordinator is responsible for annually inventorying all tools and equipment assigned to the Chapter and its Section Leaders. Equipment purchased with Challenge Cost Share Agreement funds are for use on the FNST only. Equipment inventories are to be completed and submitted annually, by May 31, to the FTA Office. Updated equipment inventories are also to be included with all equipment and tool requests submitted by Chapter Trail Coordinators or Section Leaders. The inventory form is in Section 300 (*Chapter 307: [Inventory of Trail Tools and Equipment; Florida Trail Association](#)*).

Acquisition and Disposition of Tools, Power Equipment and Materials

For information on acquisition and disposition of trail tools, see *Chapter 209: [Acquisition of Trail Tools, Equipment, Material and Services/Disposition of Tools](#)*.

208: TAILGATE SAFETY SESSION/VOLUNTEER PROFILE

Tailgate Safety Sessions

Safety is the number one priority for those working on the Florida Trail. FTA has a culture of safety that encompasses all trail maintenance and construction activities. On all trail work related activities at least one volunteer should have First Aid and CPR certification. The Florida Trail Association has adopted safety requirements based on the USFS Health and Safety Code Handbook ([Health and Safety Code Handbook](#) (Washington, U.S. Dept. of Agriculture, Forest Service, 1999. [<http://www.fs.fed.us/dirindex/home/fsh/6709.11/FSH6709.pdf>])). These requirements are listed on the Florida Trail Association Safety Quick Reference Card (see below).

Workers should always be conscious of the dangers of sharp tools, rough vegetation and terrain, excess heat, cold, fatigue, insects, and poisonous snakes. All tools—including chainsaws, power brushcutters, and mowers—can be hazardous if not used properly. Be sure there is sufficient room between workers using these tools. The safety equipment required for all trail maintenance and construction activities and tools are: USFS approved hard hat, work gloves, safety glasses, non-skid boots, and ear protection (when working with power tools). In some cases, long trousers, long sleeve shirts, and 8"-high leather boots may be required. Workers should avoid over-exertion and be sure to drink plenty of water.

A Tailgate Safety Session is conducted prior to the start of any trail construction or maintenance activity. The session should include details of the activity, any potential hazards, and all required safety equipment. Operators of power and hand tools must have appropriate Personal Protective Equipment, training and supervision. Trail crew leaders in the field must provide a safety briefing before tools are distributed for use. When possible, team up experienced users with new users. The session can also be used to ensure that all volunteers have enough water, are equipped with the proper clothing and footwear, and have signed all necessary documents. Those with specialized training (first aid, CPR, chainsaw certification, etc.) should be identified.

Trail crew leaders are responsible for the safety of volunteers. As an aid to the crew leader, the Project Paperwork Summary (see below) details the safety related tasks required at the Tailgate Safety Session. All of these forms can be found on the FTA website: [Crew Leader Packet Forms](#) [<https://floridatrail.org/volunteer-resources/#crew-leader-corner>].

Volunteers are required to wear appropriate Personal Protective Equipment (PPE) while working on the FT or FTS. While it may be safe to do some trail work tasks without a given item of PPE, circumstances can change in a moment and then require a particular PPE item that might not be at hand. Thus, the safest practice, by far, is to wear all standard PPE at all times.

FTA Safety Quick Reference Card / PPE Requirements:



FTA Safety Quick Reference Card (2nd version, current as of 09/12/05)

Volunteer Profile

The Volunteer Profile is used in recording trail work. Maintenance along the 1300 miles of the Florida Trail (FT) is a massive task performed by 18 FTA Chapters spread from Naples to Pensacola. To coordinate and record work performed, a centralized online system is in place to track task, location, and individual volunteer hours and mileage. This information is initially recorded and input at the Chapter level. To assign hours worked to an individual, an FTA [Volunteer Profile](https://floridatrail.org/volunteer-management/) [https://floridatrail.org/volunteer-management/] is required. A profile can be created on the [FTA website](https://floridatrail.org/) at www.floridatrail.org—click on ‘Volunteer’ and choose ‘Create a Volunteer Profile.’ Membership in FTA is encouraged, but there is no requirement that a volunteer working on the FT be an FTA member.



Project Paperwork Summary

Below is a list of forms required to be completed for FTA trail work projects. Crew Leaders are responsible for making sure the paperwork has been completed and the work is recorded in the volunteer hour entry system or is sent to the appropriate chapter official once the project ends.

If you have any questions, please contact the Volunteer Program Coordinator.

Form Name	Purpose	Procedure
Volunteer Profile	Tracks individual volunteer hours and certifications	Crew Leader: Make sure all volunteers fill out a profile online before your project OR have them fill one out on site. If filled out onsite, you will need to fill out a profile for them online or send the hard copy to FTA.
Trailhead Communications Plan (TCP)	Provides important logistical information in the event of an emergency.	Crew Leader: Make two copies of this sheet, one for the Communications Lead and one for the Situation Manager. Update and re-use for future projects at same location.
Volunteer Sign-In Sheet/ Assumption of Risk	Releases FTA of liability.	Crew Leader: Make sure each volunteer signs in at the trailhead. Mail to FTA.
Emergency Action Plan (EAP)	Delegates leadership roles in the event of an emergency	Crew Leader: Assign First Aid Lead, Communications Lead, and Situation Manger. Recycle once project is completed.
Tailgate Safety Session (TSS)	Provides a checklist of important topics to cover with your crew	Crew Leader: Use checklist to cover all pertinent project information for your crew. Recycle once project is completed.
Job Hazard Analysis (JHA)	Ensures volunteers receive the information on task to be performed, possible hazards related to tasks, and abatement actions. Will include one or more of the following: <ul style="list-style-type: none"> - Trail Maintenance - Mower and Brushcutter - Chain Saw Use - Crosscut Saw Use - Rigging - Canycom 	Crew Leader: Make sure each participant has signed appropriate JHA. Mail to FTA once project is completed.
Project Report Form	Provides FTA with volunteer hours and project accomplishments.	Crew Leader: Fill out the hard copy and enter into Volunteer Hours Reporting System database OR send to designated chapter admin. to report OR mail form to FTA Volunteer Program Coordinator in Tallahassee ASAP (can be submitted as an electronic Excel or PDF file via email).

209: ACQUISITION OF TRAILTOOLS, MATERIAL AND SERVICES / DISPOSITION OF TOOLS

Acquisition of Hand Tools, Power Equipment, Material and Services

Florida Trail Association (FTA) Chapters are responsible for determining the type of tools and equipment necessary to maintain their assigned trail sections and for maintaining and replacing those tools. Volunteer-donated and FTA chapter-purchased tools, power equipment, material, and other items are welcome and encouraged. Such items are to be inventoried and recorded as in-kind donations in the Volunteer Hours Reporting system.

The following table outlines which level of the FTA has the primary responsibility for funding tools, equipment, and services for FNST-related expenditures **only**.

Trail tools, equipment, servicing, and or purchase	Association Responsibility	Chapter Responsibility	Trail Volunteer Responsibility
Safety equipment: hardhat, gloves, safety glasses, ear protection, orange vests	YES	NO	NO
Power tools and equipment: brushcutter, chainsaw, mower, generator, drill, etc.	YES	NO	NO
Hand tools: lopper, rake, axe, saw, paint brush, scrapers, etc.	YES	NO	NO
Supplies and materials: gasoline and lubricants for power equipment, blaze paint, food and related items for FTA-sponsored FNST work parties	YES	NO	NO
Personal expenses: Volunteer-incurred tolls, meals, mileage, parking fees, etc.	NO	YES*	YES*

* Chapters are encouraged to reimburse volunteer expenses.

Acquisition and Reimbursement Requirements for FNST Related Expenditures

Funding for items listed in the table above is subject to budget limitations and designated for **FNST work only**. FTA does not guarantee, nor is FTA obligated to reimburse, expenditures where written pre-approval was not obtained. FTA pre-approval is required if: (1) the cost of any one item or grouping of items exceeds \$200 for a 30-day period and/or (2) the anticipated expenditure is for power tools, hand tools, and/or volunteer training.

Reimbursement Submission Requirements and Procedure

1. For qualifying expenditures, chapter designees (i.e., Trail Coordinators, Section Leaders, Trail Crew Leaders) pay the vendor or service provider from personal or Chapter funds and then submit a request for reimbursement to FTA.
2. Chapters with an FTA Regional Representative (RR) are to submit completed reimbursement forms to their RR once per month. Panhandle Region and Western Corridor chapters with no RR are to submit forms directly to the FTA Trail Program Director (TPD).
3. Reimbursement requests must be accompanied by original receipts.
4. Each expenditure must be directly associated with FNST trail work that has been reported in the online Volunteer Hours Reporting System database.
5. Reimbursement requests must be submitted to FTA within 60 calendar days of vendor payment.
6. The reimbursement requests are to be submitted using 309: [Chapter Reimbursement Form](#) (see Section 300), with expenditures listed in chronological order.
7. Mail original receipts and one copy of the reimbursement request form to the RR or TPD as appropriate.
8. Reimbursement payments/checks will be issued in Chapter names *only* and forwarded to FTA Chapter Treasurers. Chapters are responsible for reimbursing designees for expenditures made with personal funds.

Reimbursement for Volunteer Training

All volunteer training where reimbursement is anticipated requires written pre-approval from the FTA Volunteer Program Coordinator (VPC). Group training for First Aid and CPR courses qualifies for reimbursement only when funds are available. For the course to be accepted by FTA it must be OSHA accredited. Chapters are responsible for securing instructors and arranging group training sessions. To qualify for reimbursement the participant(s) must be in the Volunteer Hours Reporting System database with volunteer hours logged **on the FNST**.

Annual Request for FTA Assistance in Purchasing and Servicing Power Equipment

FTA funding is limited by the annual Challenge Cost Share Agreement Program of Work (CCSA Program of Work) budget allocations. Due to this, it is not always possible to accommodate requests. To prioritize equipment purchasing and/or servicing expenditures, the following factors will be considered:

- [CCSA Program of Work](#) funding
- Availability of FTA Chapter funding
- Availability of FNST partner funding
- Current equipment availability and chapter trail maintenance responsibilities

Requests for FTA assistance in purchasing and/or servicing power equipment will be forwarded to a chapter's RR from *March 1 to June 15* of each year. Chapters without an assigned RR should forward the request to the TPD. Requests received outside of this period may be held until the following June 15 before being considered. Requests must identify the Land Management Unit(s) where the equipment will be used. Updated equipment inventories are to be included with all equipment and tool requests submitted by Chapters. Requests are made by using 308: [Florida National Scenic Trail; Request for Equipment, Tools, Supplies, and Personal Protective Gear form](#) (see Section 300).

Funding Sources for Florida Trail System Expenditures

- Land Management Unit
- FTA Chapter treasury
- Donations from FTA members
- Chapter fundraising
- Grants and other donations
- FTA – Budgeted for FTS

Disposal of Excess and Unserviceable Tools and Equipment

The disposal of excess and unserviceable tools and equipment depends upon in which of those two categories they fall and/or whether they have a serial number.

Serviceable tools and equipment that are no longer needed. The Section Leader or Chapter Trail Coordinator should notify the RR or TPD so that the tools and equipment can be redistributed.

Hand tools that are no longer serviceable or economically serviceable. These may be disposed of via landfill or other methods at the discretion of the Chapter. *Under no circumstances are these tools to be sold.*

Equipment, with serial numbers, that is no longer serviceable or economically serviceable. These require official notification to the USDA-FS. Section Leaders are to complete 306: [Request for Cannibalization, Modification and Deregistration of Forest Service Owned Property](#); USDA Forest Service; FS-3100-09 (see Section 300) and forward this form to the RR or TPD. Equipment that is no longer serviceable is to be disposed of in a landfill. *Under no circumstances is this equipment to be sold.* Cannibalized equipment can be retained until retention is no longer viable.

After final disposal of hand tools and/or equipment they are to be removed from the Chapter's equipment inventory.

210: TRAIL RELOCATIONS/FNST OPTIMAL LOCATION REVIEW

USDA Forest Service (USDA-FS) has primary administrative and management responsibility for the Florida National Scenic Trail (FNST). USDA-FS responsibilities include FNST certification agreements with land management units, oversight of FNST relocations and maintaining an accurate record of the FNST's location.

An *FNST relocation or reroute* is broadly defined as any movement or change in the location of the trail corridor. Relocations are further categorized as major and minor.

Major FNST Relocation: A trail corridor relocation of a trail segment that is one-quarter mile or more in length and/or one-quarter mile or more in lateral movement from its existing location.

Minor FNST Relocation: A trail corridor relocation of a trail segment that is less than one-quarter mile in length and less than one-quarter mile in lateral movement from its existing location.

Relocations of the Florida National Scenic Trail

The Florida Trail Association (FTA) Trail Program Director (TPD) and FTA Regional Representatives (RR's) have primary responsibility for coordinating, developing, and submitting *major* and minor relocation proposals and notifications to the FNST Program Manager.

Components of a FNST Relocation

The procedure for relocation of the FNST depends on whether the change in location is major or minor.

Major FNST Relocation

- FTA trail staff submits written proposal to the FNST Program Manager and follow-up coordination as required.
- FTA trail staff transmits approval or disapproval to Land Management Units and FTA volunteers.
- Coordination and collaboration between FTA trail staff, Land Management Units, and FTA volunteers on:
 - Developing relocation proposals
 - Trail infrastructure and construction issues
 - *Notice to Hikers* (see Chapter 205)
 - Obtaining new GPS tracks and *Data Book* information (see Chapter 206)

Minor FNST Relocation

- FTA trail staff informs FNST Program Manager of proposed relocation.
- Coordination and collaboration between FTA trail staff, Land Management Units, and FTA volunteers on:
 - Developing relocation proposals
 - Trail infrastructure and construction issues

- *Notice to Hikers* (see Chapter 205)
- Obtaining new GPS tracks and *Data Book* information (see Chapter 206)

With the concurrence of the FNST Program Manager, both major and minor FNST relocations intended for future FNST certification may be constructed prior to formal FNST certification.

Optimal Location Review (OLR)

The primary objective of an OLR is to identify the best location for the FNST. Relocations may require an OLR. Implementation of an OLR is at the discretion and responsibility of the FNST Program Manager and the impacted land management unit(s). FTA participation in the conduct of an OLR will be coordinated by TPD and RRs. For more information see 305: *Florida National Scenic Trail Optimal Location Review Process Guidelines* [http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprd3826770.pdf].

FNST Planning Corridor, Certification Requirements, and Routing Standards

The Planning Corridor, Certification Requirements, and Routing Standards for the FNST are broadly defined in the [Florida National Scenic Trail Comprehensive Plan \(1986\)](http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5356779.pdf) [www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5356779.pdf]. The USDA-FS has the flexibility to move the FNST to any location within the twenty-mile planning corridor.

Certifying Florida National Scenic Trail Segments

FNST certification agreements are formal contracts between the USDA-FS, public land management units and/or private land owners. FTA TPD, RR's and volunteers are not normally involved in negotiating FNST certification agreements.

Adding Florida Trail System Segments

FTA volunteers help maintain non-FT recreational trails in Florida. Periodically, requests for the construction of new trails are received from outside organizations and government entities. Trails generally require many hours to maintain, and poorly maintained trail segments reflect badly on FTA. It is imperative that each chapter carefully evaluate its overall construction and maintenance capabilities before embarking on new trail obligations.

When a chapter submits a trail for inclusion in the Florida Trail System (FTS) they acknowledge and accept future obligation for that trail. In addition to volunteer trail maintenance, these obligations often include financial and volunteer support for trail maps, map revisions, and signage.

With the foregoing in mind, each chapter shall adhere to the following procedure when undertaking the development of new recreational trails:

1. Chapter receives written request for development of a trail. Each proposal shall include:
 - a. Type of trail (hiking, shared-use, nature, etc.)
 - b. Location
 - c. Approximate length
 - d. Land owner/manager written approval or request and notice of consent to build
 - e. Name, address, telephone number of contact person

- f. Any assistance to be provided (equipment, materials, etc.) by land manager
 - g. Description of terrain and reasonable evidence that the terrain will allow for a viable trail
 - h. Identification of the approximate trail corridor
2. Chapter Trail Coordinator reviews request in terms of:
 - a. The chapter's interest in developing and maintaining the trail
 - b. The chapter's ability to undertake the project in light of its current trail building resources and its ongoing/primary maintenance responsibilities for the Florida Trail
 - c. Any other factors deemed relevant or material
 3. For trails to be part of the FTS, the Chapter may consider the proposal and recommend approval or denial. *Chapters may help build trails that are not part of the FTS as a community service.*
 4. For trails to be part of the FTS, the Chapter's recommendation and proposal are submitted by the Trail Coordinator to the VP-Trails for review and approval. VP-Trails may, at his or her discretion, request additional information and/or clarification of the proposal.
 5. At the VP-Trails' discretion he/she may accept or reject the request based on an evaluation of the submitting Chapter's ability to undertake the project and/or long term commitment.
 6. If the request is approved, the VP-Trails will present the request for final approval by the Board of Directors at a regularly scheduled board meeting.

211: BASIC TRAIL MAINTENANCE

For The Florida Trail

A “How To” Guide

For New Trail Maintainers



Second Edition
July 2015

Introduction

Volunteers of The Florida Trail Association (FTA) are responsible for building and maintaining the 1300-mile Florida Trail (FT) a.k.a. Florida National Scenic Trail (FNST). For the purpose of trail maintenance, the FT is divided into Sections which average about 25 miles in length. Each Section is overseen by a volunteer Section Leader.

Most trail construction and maintenance work days are scheduled at the chapter level and can be found on individual chapter websites and Meetup sites. Major trail work parties and multi-day activities are listed on the [FTA website](http://www.floridatrail.org) at www.floridatrail.org—click on ‘Volunteer’ and choose ‘Volunteer Opportunities.’

FTA and local Chapters generally provide the hand tools and motorized equipment required for trail maintenance. Volunteers are issued safety equipment and are required to use it during trail maintenance and construction activities. Heavy-duty mowers, loppers, pruning saws, paint brushes, and Pulaskis are our basic trail maintenance tools.

This document is part of the FTA Trail Manual but can also be used alone as a “how to” guide for beginning maintainers. Except where noted, the trail maintenance standards and specifications contained in this document equally apply to all trails maintained by FTA Chapters.

Volunteer Profile/Recording Trail Work

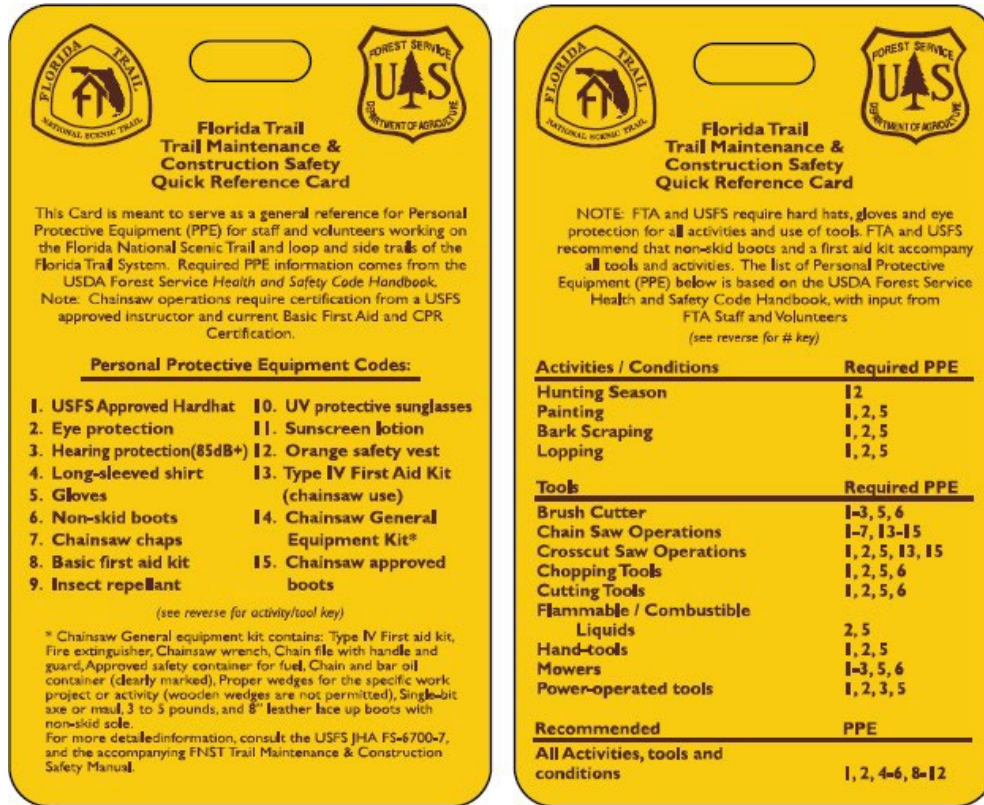
Maintenance along the 1300 miles of the FT is a massive task performed by 18 FTA Chapters spread from Naples to Pensacola. To coordinate and record work performed a centralized online system is in place to track task, location, individual volunteer hours and mileage. Input of this information is initially

recorded and input at the Chapter level. To assign hours worked, and miles driven, to an individual volunteer an FTA [Volunteer Profile](https://floridatrail.org/volunteer-management/) [https://floridatrail.org/volunteer-management/] is required. A profile can be created on the FTA website at www.floridatrail.org—click on ‘Volunteer’ and choose ‘Create a Volunteer Profile.’ A hardcopy may also be available from the FTA trail crew leader. Membership in FTA is encouraged, but there is no requirement that a volunteer working on the FT be an FTA member.

Safety

There are inherent hazards in most activities and trail work is no different. Overhead limbs and debris on the treadway are present. Most workers get into difficulty from things they know but failed to plan for. Not having enough water and not anticipating the weather conditions are the most common mistakes. Snakes and animals need to be considered but they rarely present any real danger. The best advice is to be aware of your surroundings. Let the FTA trail crew leader or First Aid Lead know of any allergies and health issues. What to wear/bring: backpack, long sleeved shirts, long pants, sturdy boots, raingear, insect repellent, personal first aid kit, sunscreen and plenty of water. During hunting seasons, wear an orange safety vest.

All trail maintenance work is preceded by a Tailgate Safety Session. These sessions address overall and location-specific safety issues. All volunteers will sign an FTA *Assumption of Risk* form and appropriate Job Hazard Analysis Forms. For all trail work activities, volunteers are required to wear some form of Personal Protective Equipment (PPE). This is generally a hard hat, eye protection, and gloves. Make sure the hard hat and gloves fit. For power tools, some form of hearing protection is required. For chainsaw and crosscut saw use, there is specific safety equipment. The Quick Reference Card shows what PPE is required for different jobs.



FTA Safety Quick Reference Card (2nd version, current as of 09/12/05)

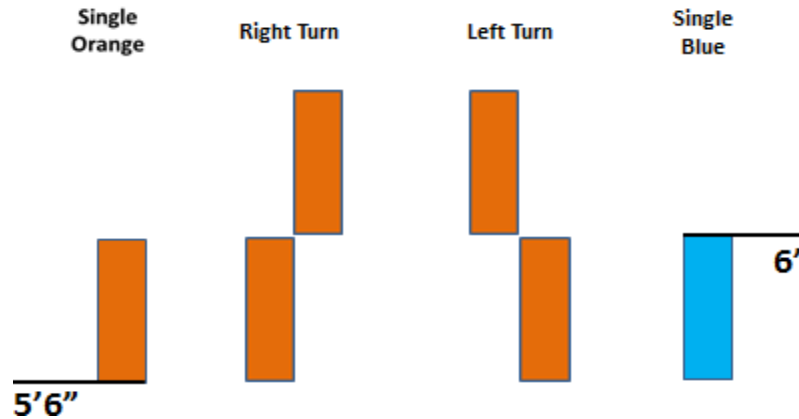
Blazing

Painted blazes are reassurance markers and the objective is to provide a blaze often enough to guide the trail user and keep the trail distinguishable. Maintainers should avoid over-blazing, but consideration should be given to the typical trail user for each specific piece of trail.

Blazing methods and specifications can be taught but techniques and skills are learned by working with experienced trail maintainers/blazers. New volunteers can assist in blazing but should never be assigned as blazers until properly trained. FTA trail maintainers are responsible for ensuring that the FT is adequately marked, is easy to follow, and all signage is accurate and in good condition. No trail maintenance task is more important than blazing and the lack of proper blazing consistently causes more complaints and "lost" hikers than any other consideration. It doesn't matter how beautiful your trail is or how well you have cleared it, if hikers can't follow it.

Maintainers are tasked with keeping blazes in good condition and painting new blazes as required. Blazes consist of neatly painted rectangles and should meet the general standards as outlined below to maintain consistency. The blaze paint used on the FT is approved by (and provided by) FTA.

Florida Trail Blazing (Size 2"x6")



General Standards for blazing

- Blazes are 2" X 6" painted vertical rectangles.
- Place blazes at adult eye-level on live trees—5.5 feet to 6 feet above ground level.
- Where blazes of different colors are used on the same treadway (two trails running jointly), the two blazes should be placed one above the other.
- A double blaze means “Heads Up!” and generally indicates an upcoming abrupt turn. Double offset blazes are used to indicate an upcoming turn. The top blaze is offset in the direction of the turn. Gradual turns do not need double blazes, just place the blazes a little closer together.
- Double blazes should be placed BEFORE a turn, not AT or AFTER a turn.
- A single blaze should be visible immediately after a turn.
- A blaze should be visible across an intersection with another trail, a stream, an easement, or a road.
- No other form of paint marking (painted arrows, etc.) is approved. If users require more information than can be conveyed by a single or double blaze, then a sign should be used.
- When no trees are available, install wooden posts. Pressure treated 4x4s are the preferred blaze posts.
- Once an area re-vegetates (after a fire, timber harvest, etc.), blaze posts should be removed and reused elsewhere.
- The FT is blazed with FTA orange paint.
- Spur or side trails (to campsites, trailheads, water sources, etc.) are blazed with FTA blue paint.
- When intersecting trails occur, and other colors are needed, consult the Section Leader.

Techniques for Blazing

- From one blaze (or within the next few paces) you should be able to see the next blaze.
- Find where 5.5 feet is on your body (chin, nose, hairline, etc.) and use that point as the bottom of the blaze.

- A hand or other object can be used to gauge and ensure consistent blaze size (2" x 6").
- When standing at one blaze, sight down the trail and pick the most prominent tree up ahead at the end of your sight-line. Walk to it and blaze it. If no suitable tree exists, install a post.
- Blazing should be done when leaves are on the trees.
- Select blaze trees which are 6" or more in diameter and prominent when foliage is out.
- Blaze trees on the outside of turns.
- Avoid blazing stumps or dead trees. They may not be there next year!
- Never blaze trail structures (shelters, picnic tables, land manager kiosks, etc.).
- Paint neatly; avoid using too much paint (it will run down the tree).
- Remove vegetation or protruding branches to clear the blaze area. Remove branches on small trees that are obstructing blaze visibility.
- Avoid scraping tree bark too deep (down to the cambium layer).
- Scrape a 3" X 7" rectangle on thick-barked trees.
- Rub moss and lichen off a 3" X 7" rectangle on thin-barked trees.
- Re-blaze every two to three years to keep blazes visible and to replace missing or enlarged blazes. Carefully remove excess blazing and trim down blazes which have "grown."
- Blaze in only one direction at a time. A prominent tree in one direction may look very different from the opposite direction.
- Try to space blazes at fairly constant intervals.
- All road walks should be blazed. Space blazes closer together as you join or leave a road. After that, a reassurance blaze every few hundred feet should be enough (every other electrical pole).
- When blazing roads, try to blaze the side of the road which is safest for pedestrians, i.e., the side with the widest shoulder, least traffic, or fewest obstructions.
- Try to avoid painting blazes on both sides of the same tree.

Tools

- Draw knife for thick-barked trees (carbide is sharper and stays sharp longer)
- Paint scraper/rough kitchen scrub pad for thin-barked trees
- 1.5-inch paintbrush
- Rag or paper towels
- Aluminum foil, plastic wrap, or plastic zip bag to hold wet brushes until cleaned
- Container for holding small amounts of paint
- Brush cleaner and hand cleaner for afterwards
- A small bucket, caddy, or gallon milk jug to carry tools

Note: Additional information on blazing and signage can be found in Chapter 202: Trail Signage and Blazing.

Vegetation Control

Clearing vegetation is the most time-consuming task for a trail maintainer. Maintainers will usually spend most of their time using mowers to cut high grass and weeds, and loppers to trim branches, palmettos, and woody vegetation that have grown into the trail corridor.

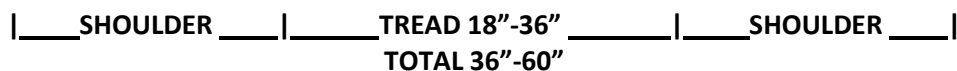
Clearing Limits Standards for the trail corridor are shown below. Maintainers are to be aggressive in applying the clearing limits. At times small trees and brush will have to be removed or cut to ground level to achieve and maintain the clearing limits. Wherever possible the trail shoulder clearance should be maintained with mowers and brushcutters. On a 2-3 year cycle, maintainers are encouraged to cut beyond the clearing limits in dense growth.

Overgrowth of problem vegetation (briars, poison ivy, stinging nettles, and high weeds) is directly related to tread degradation and erosion problems, since hikers will avoid these areas and create an easier path. This results in “braided” tread. Control of vegetation is essential in order to avoid the labor-intensive work of repairing an eroded trail and restoring multiple social trails.

Heavy-duty mowers and brushcutters are the primary tools for cutting high grass, vines and weeds on all non-wilderness sections of the Florida Trail. Maintainers will want to clear aggressively, especially if limited to a single trail clearing visit per season. Plants will be harder to control if left to thrive over one or more growth cycles.

Clearing Limits Standards (Class 3 non-wilderness)

- **Tread width** should be maintained at 18” to 36”. Remove tripping hazards in tread by grubbing.
- **Total horizontal clearance** width should be 36” to 60”. Shrubs and trees should be removed or cut flush with the ground to provide sufficient ground clearance for mowers.
- **Vertical clearance** should be maintained at 8 feet.

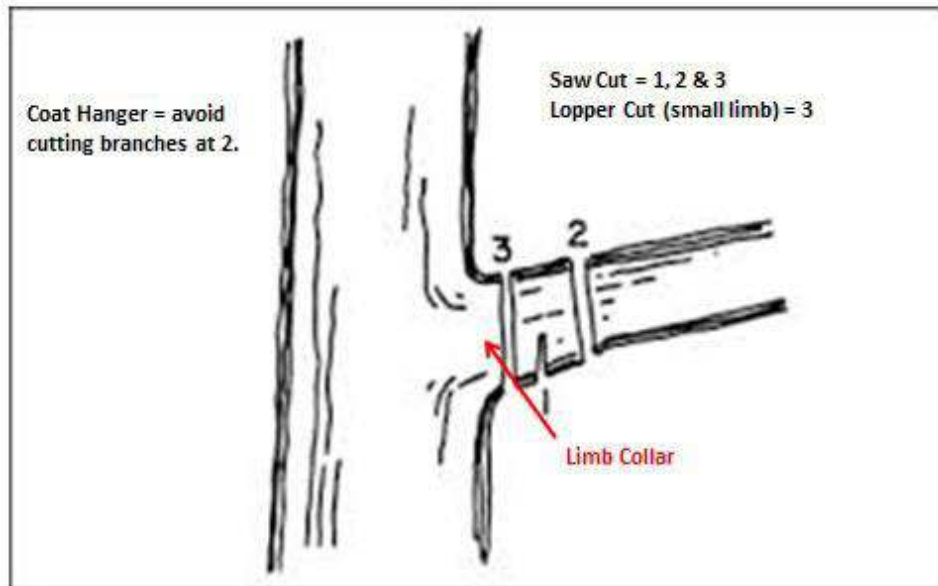


Note: Additional details on Clearing Limits are in Chapter 201: Trail Standards of Design, Clearing and Maintenance.

Clearing Methods and Techniques (0% to 3% grade or slope)

- Areas in front of blazes should be kept open to allow maximum visibility of blazes.
- Areas at road crossings with little or no shoulder should be cleared to provide hikers and motorists with unobstructed views.
- Low shrubs and young trees (on the trail shoulder) should be cut flush with the ground to prevent tripping and to reduce sprouting from the stump and roots. Limit grubbing or removal of trailside plants (on the trail shoulder); these plants and root systems help stabilize the soil.
- Cut branches and limbs at the collar to prevent “coat hanger” effect and tree injury.

Limb and Branch Pruning



- Branches growing towards the trail should be cut back to the next limb growing away from the trail (to encourage growth away from the trail).
- It is better to remove all lateral branches than to remove the tree top since removal of the terminal bud will encourage lateral growth across the trail.
- Grubbing with a mattock or Pulaski may be necessary to clear the trail tread; remove roots and vegetation necessary to eliminate tripping hazards.
- Disburse plant cuttings 10-20 feet away from the trail with the cut ends not visible.

Note: Hillsides and areas with a grade or slope exceeding 3% may require erosion control techniques.

Note: High usage areas may require a higher level of clearing. These should be scouted often and findings reported to the Section Leader.

Equipment

- Loppers
- Brush mowers
- Hand weeders (swing blades)
- Bow, pruning, and folding saws
- Pulaskis and mattocks (for grubbing out vegetation in the trail tread)
- Power weeders and brushcutters

Removal of Fallen Trees and Obstacles

Trail maintainers are expected to remove any obstacle that can be tackled safely. Obstacles (fallen trees, etc.) causing hikers to leave the tread are a high priority for removal, while easy step-overs (or walk-

unders) may be left in place. Maintainers should carry a folding pruning saw on routine maintenance trips to handle small blowdowns. The trail should be scouted after major weather events. These events often drop trees and limbs in the trail corridor.

Maintainers are not to attempt removing trees that are still standing, blowdowns under tension (trees that are wedged in other trees), very large obstacles, widow-makers, and other obstacles that might pose a safety risk. These should be reported as soon as possible to the Section Leader. Chainsaws may only be used by certified sawyers. FTA offers chainsaw classes each year. Training opportunities are available to active trail maintainers.

Guidelines

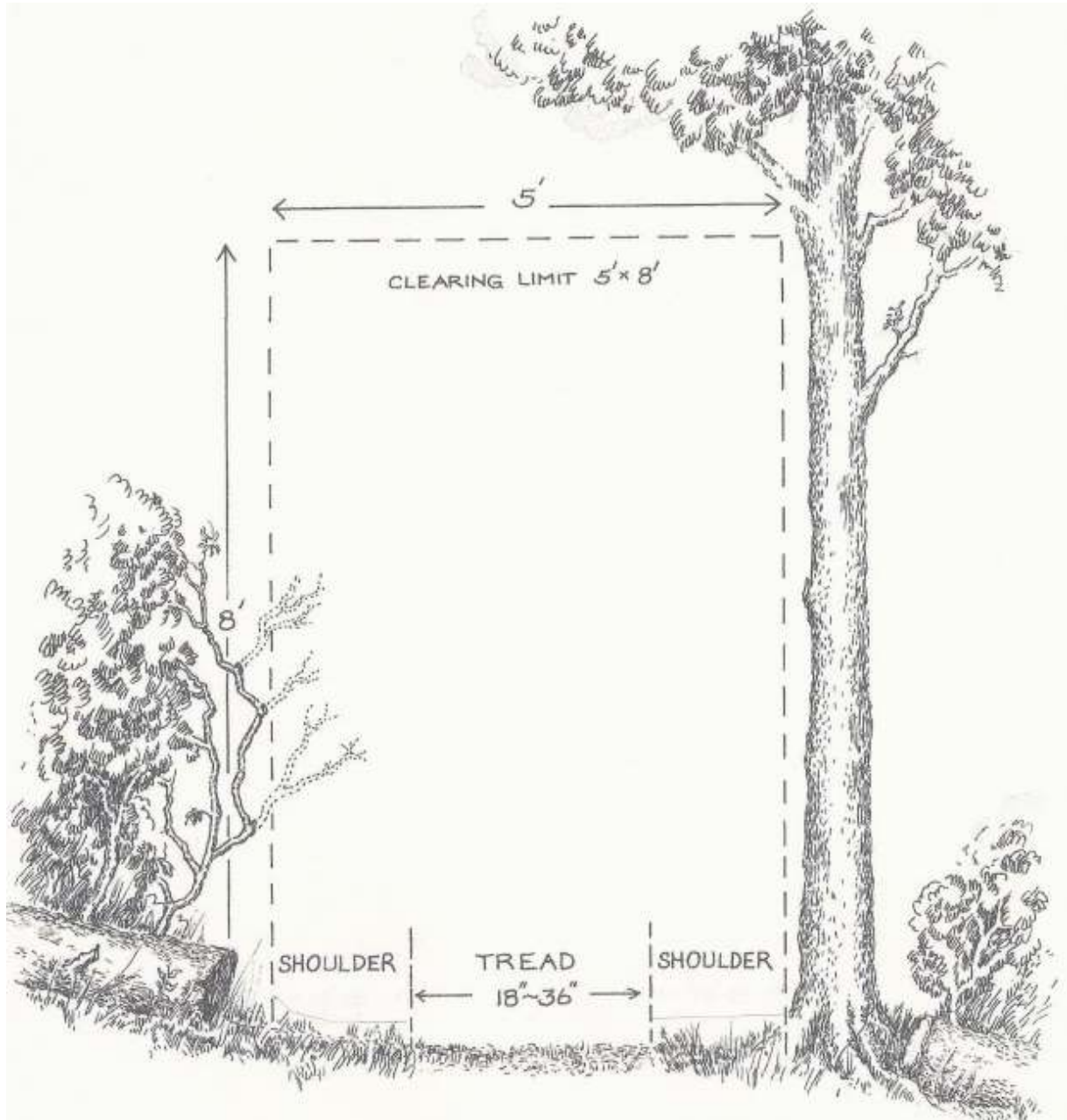
- Safety is the primary consideration. Do not attempt to remove large or "hung-up" trees alone. Do not exceed the capability of your equipment, your skills or your current physical abilities.
- Clear logs to 4-5 feet on both sides of the trail center line (8-10 feet).
- Trees not removed should lie flat on the ground and not impede the passage of a mower.
- All obstructions should be removed as soon as possible to prevent danger to users and discourage users from creating their own trails.
- If removal of an obstacle exceeds the capability of the trail crew, notify the trail crew leader and the Section Leader.

Acknowledgements:

The original document was edited by Deb Blick in 2008.

2015 contributors/revisers: Tom Daniel, Robin Luger and Linda Patton.

**Florida Trail Clearing Limits
Class 3 (non-wilderness) Parameters**





301: CHAPTER TRAIL COORDINATOR NOMINATION FORM

Procedure for nominating a Chapter Trail Coordinator:

- 1. Chapter Chair submits signed Nomination Form to the VP of Trails.
- 2. VP of Trails submits signed Nomination Form to the President.
- 3. President submits signed Nomination Form to the Volunteer Program Coordinator (VPC).
- 4. VPC notifies FTA Trail Staff, FNST Administrator, Chapter Chair and Trail Coordinator.

CHAPTER NAME: _____

INCUMBENT INFORMATION

INCUMBENT NAME: _____

NOMINEE INFORMATION

NOMINEE NAME: _____

STREET: _____

CITY: _____ STATE: _____ ZIP CODE: _____

EMAIL: _____ PHONE: _____

JUSTIFICATION FOR NOMINATION:

APPROVAL SECTION

RECOMMENDED BY: _____

Chapter Chair Name	Chapter Chair Signature	Date
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APPROVED BY: _____

VP Trails Name	VP Trails Signature	Date
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President Name	President Signature	Date
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302: SECTION LEADER NOMINATION FORM

Procedure for nominating a Section Leader:

1. Chapter Chair and Trail Coordinator submits signed Nomination Form to the VP of Trails.
2. VP of Trails submits signed Nomination Form to the President.
3. President submits signed Nomination Form to the Volunteer Program Coordinator (VPC).
4. VPC notifies FTA Trail Staff, FNST Administrator, Chapter Chair and Section Leader.

CHAPTER NAME:

SECTION NAME:

MAP NUMBER:

INCUMBENT INFORMATION

INCUMBENT NAME:

NOMINEE INFORMATION

NOMINEE NAME:

STREET:

CITY:

STATE: ZIP:

EMAIL:

PHONE:

JUSTIFICATION FOR NOMINATION:

APPROVAL SECTION

RECOMMENDED BY:

Chapter Chair Name

Chapter Chair Signature

Date

Trail Coordinator Name

Trail Coordinator Signature

Date

APPROVED BY:

VP Trails Name

VP Trails Signature

Date

President Name

President Signature

Date



A Land Managers Guide to:
Minimum Trail Standards and Guidelines for the Florida National Scenic Trail

The following standards and guidelines were recommended by the Florida National Scenic Trail Advisory Council on November 18, 1989 and put forth by the National Trails System Act and the Florida National Scenic Trail Comprehensive Plan. These guidelines serve as rules, policies, and principles for trail certification, use, and management of the FNST. For a more in-depth overview of minimum trail standards and guidelines, please refer to the *Addendum*.

TRAIL BLAZING & SIGNING STANDARDS

The Uniform FNST Marker

- The 12-inch uniform markers are used to identify location of the FNST to motoring public and should be placed so that a moving vehicle can see from either direction.
- "FNST Parking" or "FNST Crossing" should be written below the marker
- The 3.5-inch marker identifies FNST intersecting with another trail



THE UNIFORM FNST

Directional, Informational, Interpretive, and Regulatory Signs

- Signs should be placed along and on side trails to point out user resources and land management boundaries
- Strive for standardization of sign design along the FNST where possible

Maintenance of Signing and Marking

- The USDA Forest Service will provide markers to managing agencies
- High priority should be given to repair or replacement of missing and damaged signs



FNST DOUBLE BLAZE



THE FNST BLAZE

Trail Blazes

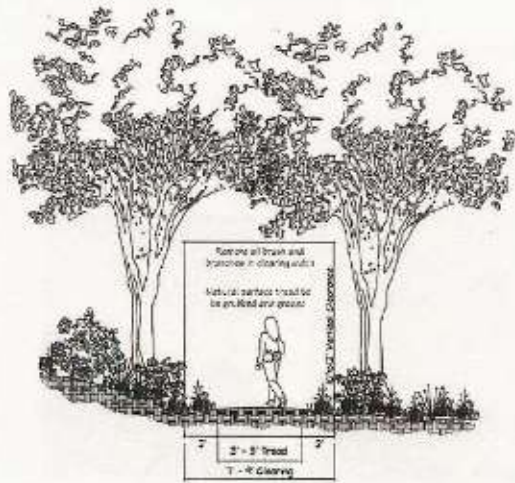
- Blazes should be frequent enough to ensure user is on route
- Blazes should be painted ~ 5.5 - 6 feet off the ground
- Double blazes indicate a change in direction or departure from obvious path, where the top blaze indicates the turn
- The FNST (and only the FNST) is marked with a two-inch wide and six-inch long orange blaze
 - The formula for one gallon of Florida Trail orange blaze paint is:
80-139 (OSHA Orange) plus R-Y; T-Y; M-40; F-8; B-1
- Side trails to water, campsites and observation points are painted with a light blue blaze
 - The formula for one gallon of Florida Trail blue blaze paint is: 80-34 plus D-Y, E-3Y

TRAIL MANAGEMENT & MAINTENANCE STANDARDS

- Each land manager & private landowner is responsible for proper maintenance of the trail, and is encouraged to enter formal certification agreements with the US Forest Service and stewardship agreements with volunteer groups such as the Florida Trail Association
- Condition of trail corridor, treadway, bridges, and other support facilities should be inspected regularly by land managers, with repairs performed in a timely manner. The US Forest Service can provide assistance where necessary

303: A LAND MANAGERS GUIDE TO MINIMUM TRAIL STANDARDS AND GUIDELINES FOR THE FLORIDA NATIONAL SCENIC TRAIL

- Clearing and maintenance of the trail should be conducted in accordance with the Trail Class Matrix (see *Addendum, pg. 6*).



TRAIL CAMPING STANDARDS

- Select a reasonably level and clear site, avoiding dead or dying trees and seasonal flooding
- If possible, locate near a suitable water supply
- Campsites should be large enough to accommodate six to eight small tents
- Campsites must be available no more than one day (8 to 10 miles) hiking apart
- Leave No Trace principles should be published at trailheads and camp areas where appropriate to promote sustainable use, especially sanitation and food storage



CAMPSITE AT
SEMINOLE RANCH



TRAILHEAD AT
AUCILLA WMA

TRAILHEAD STANDARDS

- Off-road parking should be planned and accommodated at all popular points of departure, with space for:
 - Five-vehicle minimum at *major* trailheads
 - Three-vehicle minimum at *minor* trailheads
- Trailheads should include a kiosk which illustrates the following in addition to local unit interpretive information:
 - A detailed local area map which includes the FNST
 - A general statewide map illustrating the route of the FNST
 - FNST Logo and website information
 - The following statement, in part or entirety where possible,

"The Florida National Scenic Trail (FNST) was congressionally designated in 1983 as part of the National Trail System and is intended to be a non-motorized recreation trail that when complete will extend 1,300 miles from Big Cypress Nation Preserve, in the south, to Gulf Islands National Seashore, in the panhandle. The US Forest Service administers the Trail, which passes through a mix of federal, state, local, and privately owned lands and a variety of landscapes from remote wilderness to popular urban areas. The FNST is a unique public resource dedicated to the exploration of the natural, scenic, historic, and cultural resources of Florida and providing meaningful stewardship opportunities to preserve them for future generations."

ADDENDUM: MINIMUM STANDARDS AND GUIDELINES FOR THE FLORIDA NATIONAL SCENIC TRAIL

This addendum provides a more in-depth list of the minimum standards and guidelines of the Florida National Scenic Trail Advisory Council.

Standards and guidelines are rules, policies, and principles that serve as criteria for trail certification, use, and management of the Florida National Scenic Trail. The following are minimum trail standards that all eligible segments must meet before the trail can be considered for designation as part of the Florida National Scenic Trail.

Responsibilities of Land Managing Authorities:

- **Funding:** Each managing authority is responsible for obtaining funding for its activities related to the Trail. Funding may be obtained through government appropriations, government or foundation grants, donations, organization dues, fund raising campaigns and events, or other sources. Land managers may seek general cost-share agreements with the US Forest Service for maintenance of the FNST on their lands up to \$400 per mile, and special projects.
- **Marking the Trail:** The National Trails System Act requires the Secretary of Agriculture to establish a uniform marker with a distinctive symbol for the Florida National Scenic Trail (16 U.S.C. 1246 (c)). The USDA Forest Service will provide the markers to managing authorities and shall require such managing authorities to erect and maintain them.
- **User Protection and Law Enforcement:** The managing authority responsible for a given trail segment should provide or arrange for regular patrol of the Trail as part of their unit law enforcement plan. As a minimum, the appropriate local law enforcement agencies should be informed about the trail, its access points and national designation.
- **Cultural Resources Identification:** A cultural resource investigation will be required within all areas affected by the proposed Trail at the management / design narrative plan stage. An inventory will suggest where the trail may be located to minimize cultural resource impacts. All cultural resource activity on the National Scenic Trail will be conducted in accordance with the procedures of the Advisory Council on Historic Preservation (36 CFR 800), the Florida State Historic Preservation Office and the USDA Forest Service.
- **Land Acquisition Protection Encouraged:** State and local management authorities are encouraged to purchase lands or accept land donations for the Florida National Scenic Trail.
- **Interpretation:** Since a primary purpose of a National Scenic Trail is to provide for the enjoyment of the scenic, historic, natural, and cultural qualities of the areas through which the Trail passes, managing authorities should plan and provide for the interpretation of such features.
- **Trail Information and Publicity:** The USDA Forest Service will prepare, print, and distribute a general brochure about the trail, and make trail location information available to the public on-line and in a variety of digital formats. The Florida Trail Association will prepare various detailed trail maps, and guidebooks for sale to the public. Individual managing authorities are encouraged to provide detailed maps, brochures, and guides to their trails and should cooperate with the USDA Forest Service in preparing such informative materials. All trail publications should include educational information emphasizing respect for public and private property, safe and careful use of the trail and interpretation of natural and cultural features as well as the following websites:
 - For Trail Information visit: www.fs.usda.gov/FNST
 - For Volunteer Opportunities visit: www.FloridaTrail.org

- **Trail Regulations:** Section 7(i) of the National Trails Act gives legal authority to the Secretaries of Agriculture and Interior to issue regulations to protect and manage segments of the trail. State authorities may issue Trail regulations or request regulations from the Secretary of Agriculture.

I. General Trail Standards from the National Trails System Act:

- A. The use of motorized vehicles by the general public along any national scenic trail shall be prohibited.
- B. Reasonable effort shall be made to provide sufficient access opportunities to the trail, and to the extent practicable, efforts shall be made to avoid activities incompatible with the purposes for which the trail was established.
- C. National scenic trails may contain campsites, shelters, and related public-use facilities. Other uses along the trail, including but not limited to forestry, farming, grazing of livestock, which will not substantially interfere with the nature and purposes of the trail, may be permitted.

II. General Trail Standards from the Comprehensive Plan:

- A. The Trail should be commensurate with its national significance in location, design, construction, and maintenance while reflecting the type and volume of traffic planned, and limited by the standards established for areas created through legislative action (National Parks, National Forests, State Parks, National Wildlife Refuges) through which it passes.
- B. The management of the trail must be consistent with applicable laws, regulations, and higher order plans including sanitation, safety, handicapped accessibility, cultural resources, the Endangered Species Act, water quality and planning.
- C. The Trail should focus on the physical and cultural environments which make it unique from a national perspective: Subtropical climate, fauna and flora, cultural resources, and water-based environments (estuarine habitat, ocean beaches, natural lakes, rivers, natural limestone sinks and springs, wetlands).
- D. The Trail should be permanent in nature, but this does not mean the trail cannot be rerouted or relocated.
- E. Through interpretation, the Trail should emphasize the diversity of land uses and historical values and resource management objectives, ranging from preservation to industrial use.
- F. All trail segments must be located within the general FNST corridor as defined in the comprehensive plan.
- G. The trail must be open and available for public use.

III. Specific Trail Standards from the Comprehensive Plan

A. **Trail Routing**

1. The trail may be located within a road right-of-way if sufficient width is available for safety. Generally, the Trail should not be located on roads or on the shoulder of roads open to motorized use by the general public.
2. When appropriate, the Trail may provide views and sounds of man's activities such as harvesting timber and crops, livestock ranching, and fishing without conflicting with these activities.
3. The Trail should provide for all weather and all season passage where possible.

4. Man-made features such as roads and power transmission lines should be crossed at angles that will minimize prolonged visual contact.
5. River, highway and railroad crossings should be safe. Bridges and underpasses should be safe for trail users and crossings should have adequate visibility.
6. The Trail should be located near geological, archaeological or historical sites.
7. Sensitive sites and critical wildlife habitat should be avoided.
8. The Trail should be routed to pass within one-fourth mile of potable water and campsites when practical and possible.
9. The trail route should take advantage of opportunities to provide drinking water, showers, clothes washing facilities, and other services needed by users.
10. Abrupt changes in trail direction which may confuse the user should be avoided.
11. The Trail should be located near archaeological sites where recommended by the landowner and State Historic Preservation Officer. Sensitive archaeological sites should be avoided.

B. Resource Protection

1. Public and private land management agencies are encouraged to buy land (acquisition) for the Trail.
2. The managing authority should monitor trail lands to insure that they are not abused or threatened. If negative impacts occur, steps should be initiated to protect resources.
3. Other tools that are encouraged for resource protection include easements, cooperative agreements, assistance, and registration.

C. Trail Use

1. Motorized use by the general public along the national scenic trail is prohibited by Section 7(c) of the National Trails System Act (16 U.S.C. 1246(c)).
2. The following motorized uses are permitted on the Trail unless prohibited by specific local regulations or other components of the management plan: emergency situations, official resource management functions, adjacent landowners to enable reasonable access, private landowners to cross their lands, and users of established roads or off-road vehicle trails which cross the Trail.
3. The managing authority responsible for the segment of Trail should consider uses permitted on adjacent segments.
4. On the Florida National Scenic Trail hiking shall be allowed throughout, with other uses optional at the land owner's discretion. Uses other than hiking should be permitted if the activity will not cause degradation of the tread way and surrounding environment, and the activity can be safely accommodated.
5. The passage of the Florida National Scenic Trail through any land open to hunting should not in any way close hunting nor should the Trail be closed to use during hunting seasons, unless otherwise specified by the land management authority. Managing authorities for public lands and the Trail segments should post notices at trail entrances notifying users of any applicable regulations or special warnings.

D. Trail Management

1. The Trail requires three kinds of maintenance: regular, long-term maintenance; major erosion and overuse repairs; and emergency, short-term maintenance.

Each land management agency and private landowner is responsible for the proper maintenance of the trail. In order to carry out this responsibility, these agencies and owners are encouraged to enter into formal cost-share agreements with the U.S. Forest Service, and to engage volunteers through organizations such as the Florida Trail Association.

2. The condition of the trail corridor and treadway, bridges, and related support facilities should be monitored and inspected on a regular basis. Needed maintenance and minor repairs should be performed in a timely manner before serious deterioration or injury occurs. The U.S. Forest Service can provide assistance in inspection and maintenance upon request.

3. Routine maintenance, such as emptying trash bins, toilet cleaning, and litter pickup, should be performed by the responsible managing authority.

4. *Trail Relocation Standards:*

a. Major relocation is defined as changing the location of a section of trail that is longer than one-quarter mile or as changing the location of a section of trail to a location more than one-quarter mile away from its existing location. Major relocation will be made upon the approval of the USDA Forest Service.

b. Minor relocations are those that involve a shorter than a one-quarter mile long section or those that move the trail less than one-quarter mile from its existing location. Minor relocations or rerouting may be done by the local manager or landowner without the permission of the Forest Service. The local manager or landowner should notify the Forest Service that a change is to be made and request assistance, if necessary, in relocating the trail. After relocation, the segment will be GPSed and forwarded to the Forest Service at FNST@fs.fed.us

5. *Tread Standards:*

a. Clearing and maintenance of the trail should be conducted in accordance with the Trail Class Matrix and Design Parameters (*refer to page 6 & 7*).

b. The Trail should be cleared approximately four feet wide and cleared high enough to permit passage of a user and his pack. The actual tread should be at least 18 inches wide. Vary the clearance width to avoid a “tunnel effect”.

c. Avoid leaving stubs in the tread that trip users and remove cut brush and logs to minimize view-shed impacts.

6. *Trail Blaze and Sign Standards:*

a. Trail Blazes

i. Blazes should be painted approximately five and one-half feet to six feet off the ground.

ii. The FNST shall be marked with a two-inch wide and six-inch long painted orange blaze. Blazes should be frequent enough to assure the user is on the route, but not so frequent that more than two blazes may be seen in a given direction from any one location. The formula for one gallon of Florida Trail **orange** blaze paint is: **80-139 (OSHA Orange) plus R-Y; T-Y; M-40; F-8; B-1**

iii. Side Trails to water, campsites, and observation points shall be blazed with light blue paint. The formula for

one gallon of Florida Trail **blue** blaze paint is:
80-34 plus D-Y, E-3Y

- iv. Double blazes indicate a change in direction or that the Trail is departing the obvious path, where the top blaze indicates the direction of the turn.
- b. The Uniform FNST Marker
 - i. The uniform 12 inch marker shall be used to identify the location of the FNST to the motoring public. The markers should be placed so that they can be readily seen from a moving vehicle approaching from either direction.
 - ii. Below the marker should be the words FNST Parking or FNST Crossing.
 - iii. The official marker will be incorporated into trailhead and information signs.
 - iv. The three and one-half inch marker shall be used to identify the FNST to common access junctions: intersections with other trails, and where needed as a reassurance sign if other land use activities or game trails make the trail location uncertain to the traveler.
- c. Directional, Informational, Interpretive, and Regulatory Signs
 - i. These signs should be placed along the trail, on side trails, at trailheads, etc., to meet the needs of the user, management, or to add to the enjoyment of the user by pointing out or interpreting resources and land uses.
 - ii. The designation as a National Scenic Trail mandates the maintenance of a high standard of signing. Managing agencies should give high priority to timely repair and/or replacement of missing or damaged markers and signs

7. User Facilities

- a. Campsites
 - i. Select a reasonably level and clear wooded site. Avoid placing a site near dead or dying trees or where subject to seasonal flooding. A campsite should be located near a suitable water supply, if possible.
 - ii. Campsites should be large enough to accommodate six to eight small tents.
 - iii. Camping must be available no more than one hiking day (8 to 10 miles) apart.
 - iv. Campsites should be remote (one mile) from highways, public recreated areas, and residences.
- b. Trailheads
 - i. Off-road parking should be planned and accommodated whenever possible at all popular points of departure.
 - ii. Major trailheads (normally located near primary highways) should include: kiosks with local unit information and a parking facility (five-vehicle minimum). Additional facilities to consider include potable water, toilets, and trash can.

- iii. Minor trailheads should include kiosk or bulletin board, information signs, and vehicle parking for a minimum of three to five vehicles.

Table 1: National Trail Class Matrix
USDA, U.S. Forest Service

Trail Attributes	Trail Class 1 Minimally Developed	Trail Class 2 Moderately Developed	Trail Class 3 Developed	Trail Class 4 Highly Developed	Trail Class 5 Fully Developed
Constructed Features & Trail Elements	<ul style="list-style-type: none"> Structures minimal to non-existent Drainage typically accomplished without structures Natural fords Typically no bridges 	<ul style="list-style-type: none"> Structures of limited size, scale, and quantity; typically constructed of native materials Structures adequate to protect trail infrastructure and resources Natural fords Bridges as needed for resource protection and appropriate access 	<ul style="list-style-type: none"> Structures may be common and substantial; constructed of imported or native materials Natural or constructed fords Bridges as needed for resource protection and appropriate access 	<ul style="list-style-type: none"> Structures frequent and substantial; typically constructed of imported materials Constructed or natural fords Bridges as needed for resource protection and user convenience Trailside amenities may be present 	<ul style="list-style-type: none"> Structures frequent or continuous; typically constructed of imported materials May include bridges, boardwalks, curbs, handrails, trailside amenities, and similar features
Signs²	<ul style="list-style-type: none"> Route identification signing limited to junctions Route markers present when trail location is not evident Regulatory and resource protection signing infrequent Destination signing, unless required, generally not present Information and interpretive signing generally not present 	<ul style="list-style-type: none"> Route identification signing limited to junctions Route markers present when trail location is not evident Regulatory and resource protection signing infrequent Destination signing typically infrequent outside of wilderness; generally not present in wilderness Information and interpretive signing not common 	<ul style="list-style-type: none"> Route identification signing at junctions and as needed for user reassurance Route markers as needed for user reassurance Regulatory and resource protection signing may be common Destination signing likely outside of wilderness; generally not present in wilderness Information and interpretive signs may be present outside of wilderness 	<ul style="list-style-type: none"> Route identification signing at junctions and as needed for user reassurance Route markers as needed for user reassurance Regulatory and resource protection signing common Destination signing common outside of wilderness; generally not present in wilderness Information and interpretive signs may be common outside of wilderness Accessibility information likely displayed at trailhead 	<ul style="list-style-type: none"> Route identification signing at junctions and for user reassurance Route markers as needed for user reassurance Regulatory and resource protection signing common Destination signing common Information and interpretive signs common Accessibility information likely displayed at trailhead
Typical Recreation Environments & Experience³	<ul style="list-style-type: none"> Natural, unmodified ROS: Typically Primitive to Rooded Natural WROS: Typically Primitive to Semi-Primitive 	<ul style="list-style-type: none"> Natural, essentially unmodified ROS: Typically Primitive to Rooded Natural Typically Primitive to Semi-Primitive 	<ul style="list-style-type: none"> Natural, primarily unmodified ROS: Typically Primitive to Rooded Natural WROS: Typically Semi-Primitive to Transition 	<ul style="list-style-type: none"> May be modified ROS: Typically Semi-Primitive to Rooded Natural to Rural setting WROS: Typically Portal or Transition 	<ul style="list-style-type: none"> May be highly modified Commonly associated with visitor centers or high-use recreation sites ROS: Typically Rooded Natural to Urban Generally not present in Wilderness

¹ For National Quality Standards for Trails, Potential Appropriateness of Trail Classes for Managed Uses, Design Parameters, and other related guidance, refer to FSM 2353, FSH 2309.18, and other applicable agency references.

² For standards and guidelines for the use of signs and posters along trails, refer to the Sign and Poster Guidelines for the Forest Service (EM-7100-15).

³ The Trail Class Matrix shows the combinations of Trail Class and Recreation Opportunity Spectrum (ROS) or Wilderness Recreation Opportunity Spectrum (WROS) settings that commonly occur, although trails in all Trail Classes may and do occur in all settings. For guidance on the application of the ROS and WROS, refer to FSM 2310 and 2353 and FSH 2309.18.

Table 2. Pedestrian Design Parameters by Trail Class
 USDA, Forest Service modified for the FNST

Design Parameters are technical guidelines for the survey, design, construction, maintenance, and assessment of the FNST. Local deviations from any Design Parameter may be established based on trail-specific conditions, topography, or other factors, provided that the deviations are consistent with the general intent of the applicable Trail Class and National Scenic Trail experience.

Designed Use FNST		Trail Class 1	Trail Class 2	Trail Class 3	Trail Class 4	Trail Class 5
Design Tread Width	Wilderness (Single Lane)	0" – 12"	6" – 18"	12" – 24" Exception: may be 36" – 48" at steep side slopes	18" – 24" Exception: may be 36" – 48" at steep side slopes	Not applicable
	Non-Wilderness (Single Lane)	6" – 12"	12" – 24"	18" – 36"	24" – 60"	36" – 72"
	Non-Wilderness (Double Lane)	36" – 48"	36" – 48"	36" – 60"	48" – 72"	72" – 120"
	Structures (Minimum Width)	18"	18"	36"	48"	60"
Design Surface	Type	Native, ungraded May be continuously rough	Native, limited grading May be continuously rough	Native with some onsite borrow or imported material where needed for stabilization, occasional grading Intermittently rough	Native with improved sections of borrow or imported material, routine grading Stable, with minor roughness	Likely imported material, routine grading Uniform, firm, and stable
	Protrusions	≤ 24" Likely common and continuous	≤ 6" May be common and continuous	≤ 3" May be common, not continuous	≤ 3" Uncommon, not continuous	No protrusions
	Obstacles (Maximum Height)	24"	12"	10"	8"	No obstacles
Design Grade	Target Grade	5% – 20%	5% – 12%	3% – 10%	2% – 8%	2% – 5%
	Short Pitch Max	30%	25%	15%	10%	5% - 8%
	Maximum Pitch Density	20% – 30% of trail	10% – 30% of trail	10% – 20% of trail	5% – 10% of trail	0% – 5% of trail
Design Cross Slope	Target Cross Slope	Natural side slope	5% – 20%	5% – 10%	3% – 7%	2% – 3%
	Maximum Cross Slope	Natural side slope	20%	10%	8%	5%
Design Clearing	Height	6'	6' – 8'	8'	8' – 10'	8' – 10'
	Width	≥ 24" Some vegetation may encroach into clearing area	24" – 48" Some light vegetation may encroach into clearing area	36" – 60"	48" – 72"	72" – 96"
	Shoulder Clearance	3" – 6"	6" – 12"	12" – 18"	12" – 18"	12" – 24"
Design Turn	Radius	2' – 3'	3' – 6'	4' – 8'	8' – 10'	8' – 12'



**Florida National Scenic Trail
Optimal Location Review Process Guidelines**

Executive Summary

This document outlines the format, process, and location criteria for an Optimal Location Review (OLR) on the Florida National Scenic Trail (FNST).

This analytical process is critical for ensuring that the trail is located in the setting that best meets the congressional intent for a National Scenic Trail, provides outstanding recreation opportunities, and promotes and protects access to the natural, scenic, historic and cultural resources of the trail corridor. The format is intended to engage land managers, community and stewardship partners at every level of project development and implementation.

Pioneered by the US Forest Service on the Appalachian National Scenic Trail, this analysis process reviews land ownership, scenic resource values, natural and cultural resource concerns, and trail location and determines the optimal location for the FNST. Actual relocation of the FNST will require an environmental analysis, and significant relocation proposals will require USFS Chief or Congressional approval.

I. INTRODUCTION

This white paper is written with the intent of standardizing the process for relocating significant portions of the Florida National Scenic Trail and to better ensure protection of the Trail and Trail Corridor for an outstanding recreation and scenic trail experience. The trail relocation review developed for the FNST, referred to as the Optimal Location Review (OLR), establishes a systematic and objective framework for determining the best location for the FNST and for acquiring lands to meet the criteria outlined in the FNST Comprehensive Plan. The optimal location of the Trail should be located within a corridor which can sustain the most desirable recreation setting, including natural appearing scenery, safe public access, suitable water sources, and reasonable separation from urban developments that could impair the desired scenic recreation experience of the Trail. This document describes the need for relocating segments of the trail and the desired outcome of an OLR (Sections I, II, and III). It explains the entire OLR process (Section IV) and the final steps involved in completing the analysis (Sections V, VI, and VII). Lastly, it explains the role of OLR in the NEPA process (Section VIII).

II. BACKGROUND

The National Trails System Act of 1968 (the Act) assigned the US Forest Service (USFS) as the lead managing agency for the Florida National Scenic Trail's administration. To coordinate the management and operation of the FNST, individual Memorandum's of Understanding (MOU) or Certification Agreements are signed with land managers of the FNST including Federal, State, Local and Private interests. The Act also recognized the valuable contributions of volunteers to the development and maintenance of the National Trail System, a Memorandum of Understanding and a Challenge Cost Share Agreement (CCSA) between the USFS and the Florida Trail Association ensures volunteer citizen involvement in the planning, maintenance and management of the FNST.

For segments that lie outside of the jurisdiction of the USFS , the National Trail Manager is the agency, land owner, or interest with the authority and the responsibility for decision making for lands under its jurisdiction. The USFS may recommend relocation of FNST right-of-way segments upon concurrence with the head of the Agency having jurisdiction over the lands involved.

The FNST's selected route and Comprehensive Management Plan were published in the Federal Register of May 28, 1987 (Vol. 52, #102). The Trail, when complete, will extend a total distance of 1,300 miles across the State of Florida. According to the National Trail System Act, "the routes of national scenic trails... should avoid, insofar as practicable, established highways, motor roads, mining areas, power transmission lines, existing commercial and industrial developments, range fences and improvements, private operations, and any other activities that would be incompatible with the protection of the trail in its natural condition and its use for outdoor recreation".

Of the total trail miles, approximately 600 miles cross non-federally owned lands (i.e. State, County or Privately owned). Several issues including limited public lands, and a lack of adequate

funding and/or unwilling sellers during initial construction, resulted in locating several segments of the Trail on “interim” routes along public roads, and on narrow, non-restrictive private easements (with the majority providing only 10 to 20 feet of right-of-way) that provide little if any protection to the Trail or its users. These interim routes have created conflicts with motorists and landowners, leading to concerns that portions of the current route fail to meet the intent of the Act and the safety of its users. To further exacerbate the problem, many trail segments are located in less-than-optimal locations, and constantly evolving land uses have resulted in urban encroachment within and upon the FNST trail corridor.

In response to these problems, the FNST partners will work to identify segments located on or adjacent to public roads, utility corridors, and areas of development as trail segments with an immediate need for relocation to improve user safety and the quality of the recreation experience, and to protect the FNST by improving the Trail Corridor where the trail crosses private lands.

III. THE GOAL OF AN OLR

The decision for the optimal trail location is based upon the desired FNST experience and achieving consistency within the criteria outlined in the FNST Comprehensive Plan. The federal administrator and managing agency must determine if: (1) relocation is necessary to preserve the scenic and recreation purposes for which the trail was established, or (2) the relocation is necessary to promote a sound land management program in accordance with established multiple-use principles. To accomplish a full OLR, the entire length of the FNST should be reviewed to determine if there are any unknown problems areas or possible opportunities. An OLR can recommend a combination of land acquisitions, conservation easements and/or trail relocations to preserve the purposes for which the FNST was established and to protect the FNST from urban encroachment by establishing a Trail Corridor. The OLR identifies the best possible location for the FNST regardless of land ownership or construction needs. Acquisition of the easement or land surrounding the Trail and completion of relocations may at times require a long or uncertain wait. This should not deter land managers from pursuing the location deemed most desirable. Land ownership conditions change over time and provide opportunities to acquire the optimal location. Land management agencies should pursue alternate locations to those identified as “optimal” if unique circumstances warrant using an alternate route.

Optimal Location Review Objectives

The purpose of conducting an OLR is to:

1. Determine an optimal trail location prior to land or easement acquisition and trail construction, that:
 - a. Meets the intent of Congress to locate the FNST so that it “emphasize(s) nationally significant scenic, historic, natural and cultural features.
 - b. Achieves consistency with design criteria for location outlined in the FNST

Comprehensive Plan.

c. Ensures a trail location that meets stability and maintenance requirements which blends with the environment in a cost-effective manner.

d. Selects the best solution that will resolve concerns and provide for an optimal trail location and continuous public access.

2. Evaluate the physical, biological and social environments to locate the trail within a corridor which can sustain the most desirable recreation setting, including natural appearing scenery, safe public access, suitable water sources, and reasonable separation from residential, commercial and industrial developments that could impair the desired FNST experience.

3. Provide an accurate and complete inventory of Florida National Scenic Trail locations and alternatives using GPS technology that meets national mapping accuracy standards (+/- 40 feet). USFS will use GIS technology to maintain GPS inventoried data. Maps created using GIS technology will identify areas of greatest concern and potential trail management opportunities.

4. Provide site photography to communicate desired recreation settings and scenery, and to identify adverse conditions to be avoided or minimized by the OLR.

5. Provide a method to facilitate an OLR process and a format to document agreements between partner agencies and organizations.

6. Establish the purpose and need to begin NEPA environmental planning and obtain funding.

IV. OLR PROCESS

The steps for the OLR process are outlined below

1. Determine the Scope of the OLR:

The Forest Service FNST Manager may initiate an OLR process to resolve impaired FNST experiences and conditions resulting from:

- land uses and developments that excessively alter the desired recreation setting and scenery
- severe ecosystem disturbance events such as floods or fires
- safety concerns
- conflicts with motorized vehicles and mechanized recreation activities
- unique circumstances such as newly identified habitat for an endangered species

Frequently, an OLR will evaluate lands across administrative boundaries providing sufficient size to consider alternatives regardless of land ownership. For proposed relocations greater than 15 miles, partners may divide the project into sections based on fixed anchors, such as road crossings, to facilitate detailed field review.

2. Form the OLR Team:

The Forest Service FNST Manager will designate an OLR Project Team Leader to coordinate and provide oversight for the OLR process. The Team Leader will provide opportunities for partners to become familiar with sections in need of protection. These partners may include the US Forest Service, FTA staff, volunteers, and local chapters, Federal, State, County, and Private land owners and other Stewardship groups. The FTA and the land management agency partners for the segment under review will appoint OLR Team members (staff, volunteers, and interested parties/groups). Early in the process, the Team Leader will develop a schedule for meetings and fieldwork to assure adequate participation and representation of the partners on the team.

3. Preliminary Office Review:

- For the segment under review, Team Leader will determine if the current route is located within the original route selection as published in the Federal Register of May 28, 1987 (Vol. 52, #102). or a published amendment to the original route. Information regarding unpublished current route locations should be forwarded to the US Forest Service Florida National Scenic Trail Manager for appropriate action.
- Team Leader will provide team members with those sections of the FNST Comprehensive Plan, the National Trails System Act, subsequent legislation and other guiding documents pertaining to the FNST.
- Team Leader will provide team members with land ownership patterns for review.
- Team Leader will provide team members with any associated Forest Plan desired conditions for Recreation and Scenery (i.e. Recreation Opportunity Spectrum (ROS) class and Scenic Integrity Objectives/Visual Quality Objectives (SIO/VQO) pertinent to the project area, as well as its mapped “Scenic Attractiveness”/“Variety Class”).

4. Preliminary Field Meeting:

The Team Leader will set up preliminary field meetings to identify obvious issue areas, e.g. proximity to private land, roads, leasing applications, power lines, wind energy operations, residential developments, etc. The Team Leader will consult with all team members to:

- Discuss the unique recreational niche of the area/place, and its desired recreation

setting conditions (access, sights, sounds, bodily contacts and challenges, site facilities and management, social encounters, visitor impacts)

- Discuss the desired scenic character conditions that are sustainable and can best provide an enduring, attractive FNST setting
- Discuss other resource objectives and their potential as additional attractions or vulnerabilities along the FNST
- Review known issues, concerns, and opportunity / problem areas
- Identify potential alternate trail locations to maximize the enjoyment and safety of FNST users.

“Opportunity Area” Examples

- Vistas
- Meadows
- Unusual topographic and hydrological features
- Streams, rivers, lakes, and other nearby scenic or cultural attractions

“Problem Area” Examples

- User safety, e.g. road walks, particularly if extensive in length;
- A pronounced lack of desired recreation setting or scenery conditions;
- Incompatible use such as OHV or other mechanized or motorized equipment;
- Excessive disturbance within the FNST corridor or view shed due to existing or potential residential, commercial or industrial forest development;
- Resource damage, e.g. erosion and creation of multi-tracks;
- Chronic, recurring maintenance demands or problems;
- Hazards to the public;
- Arbitrary or circuitous routing;

5. Contact Land Owners:

Agency Representatives and FTA staff and/or volunteers should have permission to access private lands if these areas are under consideration. If staff is unable to secure permission for access and field review, use the best information available to complete the analysis.

6. Full Field Review:

All segments under review require an on-site intensive visit to determine if the current location meets all objectives of an “optimal location”. The field review should involve key members of the OLR team. The OLR team will develop alternate routes and analyze in comparison with the current route for identification of an optimal location.

- Use GPS technology to collect the spatial location of trail features.
- Note opportunities, problems and alternatives for the current route.
- Examine whether the trail segment was designed for sustainability.

7. Post-Field Review:

The final steps for completing an Optimal Location Review include:

- Conduct a “Landscape Visibility Analysis” for the optimal trail location. This will be described in further detail in Section V.
- Design a “Trail Corridor”.
- Collect GIS parcel data for the private lands which fall within the “Trail Corridor” (see Section VI).
- Document findings by generating a report and GIS map (see Section VII).

V. LANDSCAPE VISIBILITY ANALYSIS

The intent of landscape visibility is to identify the relative importance of what is seen and perceived in the landscape. A high priority must be given to maximizing the scenic nature of the FNST, given its status as a National Scenic Trail. The OLR will conduct a landscape visibility analysis to assist in determining the best boundaries for (or extents of) a “Trail Corridor”. The Distance Zones described in the USDA Agriculture Handbook Number 701: “Landscape Aesthetics, A Handbook for Scenery Management” will be used to guide the process in delineating a “Trail Corridor” (Refer to Figure 1).

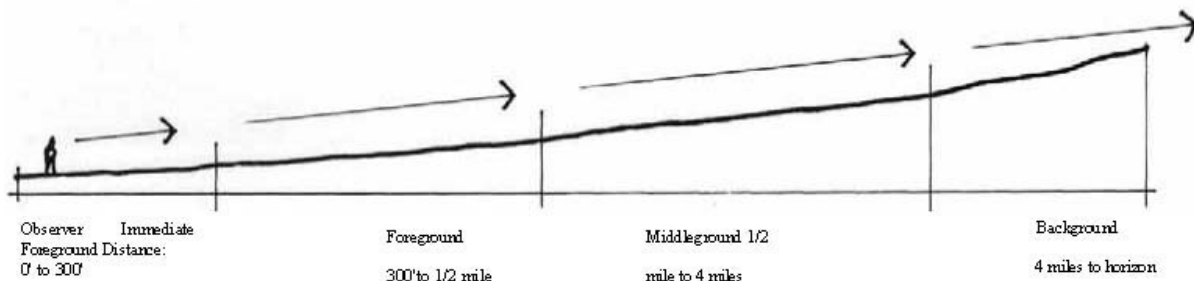


Figure 1: Distance Zones described in the USDA Agriculture Handbook Number 701: “Landscape Aesthetics, A Handbook for Scenery Management” (page 83 of chapter 4; Landscape Visibility and Scenic Classes”)

Landscape visibility analyses utilize GIS technology to run a view shed analysis to determine the area that can be “seen” from the optimal trail location. The “seen area” is overlaid with Immediate Foreground and Foreground distance zones to determine which portions of the landscape should be defined and then managed as the formal FNST Trail Corridor.

Distance Zones:

- Where the viewshed is greater than ½ mile and the trail is located adjacent to or within a developed community or near highways; the FNST Trail Corridor will be developed within the “Immediate Foreground” for a maximum distance of 300 feet on either side of the trail centerline.
- In all other locations where the viewshed is greater than ½ mile, the “trail corridor” can be developed within the “Immediate Foreground” and “Foreground” for at least ½ mile on either side of the trail centerline.

Scenic Integrity/Disturbance:

- Note: Consider the FNST’s scenic integrity/disturbance visible within all distance zones during evaluation of proposed projects. Scenic Integrity levels of “Very High”, “High”, or “Moderate” are typically compatible with FNST user preferences for a dominantly natural appearance (refer to Scenery Handbook 701 Chapter 2 for Scenic Integrity criteria).

Thresholds for visible disturbance (called Scenic Integrity Objectives/SIOs) should be established whenever possible, for both the FNST Corridor and its entire view shed (all applicable distance zones).

VI. LANDS ACQUISITION INVENTORY

After identifying the Trail Corridor boundaries, the OLR shall identify all of the private lands located within this boundary. The OLR team will categorize the land parcels as either acquisition “Priority 1” or “Priority 2”. “Priority 1” parcels are those non-federal parcels located directly on the optimally determined location for the trail itself. “Priority 2” parcels do not cross the trail but are located within the Trail Corridor determined by the visibility analysis. The OLR team leader will list parcels in a table that includes: a parcel ID that will cross-reference with the assessor’s parcel number (APN) on a map provided of the OLR area; a legal description; whether there is an easement; assessor parcel number; acres; landowner; and acquisition priority. An example table is shown below:

Priority Level	Parcel ID	Legal Description	Assessor's Parcel # (APN)	Parcel Acres	Land Owner	Easement Present
1	A	S 20, T19N, R15E	XXX-XXX-002	54	Mr. Smith	Yes
2	D	S20, T19N, R13E	XXX-XXX-003	125	Mrs. Smith	No
3	E	S21, T18S, R12W	XXX-XXX-017	219	Mr. Allen	No

The FNST Manager will maintain a “Lands Acquisition Inventory” database of the Florida National Scenic Trail protection priorities. Priorities identify areas most in need of protection and assists with securing funding and resources to pursue land acquisitions.

VII. DOCUMENTATION

The OLR report shall be formatted and numbered as follows. It is not necessary to include a background of the FNST’s history or the purpose of the OLR process:

- 1. Description of the Current Route:** Describe the location of the current route (from south to north) and whether the trail is located along the route identified and published in the Federal Register, or if it is an “interim” route.
- 2. Background and Statement of the Problem:** Describe why there is a need to do an Optimal Location Review by identifying the known problems, issues and concerns with the existing trail location. Issues and concerns include such things as: unsafe road crossings, road walks, reservoir crossings, protection of unique areas, and encroachment by development. Describe the outcome of any public meeting(s) that may have been held.
- 3. Trail Objectives:** Describe the objectives for the Trail in the area under review. This section should list the improvements or added benefits of moving the trail. For example, this could include improving safety by moving the trail from a highway shoulder, or providing a unique recreation experience by allowing the hikers to see an interesting geological formation. These objectives should follow the guidelines outlined in the FNST Comprehensive Plan and the National Trails System Act.
- 4. Alternative Routes Considered:** Compare different route possibilities that will meet trail objectives, including the current route. List “pros” and “cons” of each. Each route considered will be referenced by an “Alternative Number” that is cross-referenced to the report’s map. The discussion will include an evaluation of physical, site-specific trail considerations that locates the trail within a corridor which provides safety, a natural setting, suitable water sources, and avoids urban development.

5. Optimal Trail Location: Provide a description of which alternative provides for an optimal trail location, and describe how it resolves concerns and meets trail objectives. It may be determined that the existing route is already the optimal trail location.

6. Trail Acquisition Corridor: For the selected optimal trail location, identify its Trail Corridor and any parcels proposed for acquisition within this Trail Corridor. Identify any “Priority 1” and/or “Priority 2” acquisition parcels. Format this section as a table, discussed previously in Section VI.

7. Maps: Include a topographic map(s) produced using GPS and GIS technologies which meets national mapping accuracy standards (+/- 40 feet). GIS maps will provide a visual depiction of the Florida National Scenic Trail corridor, locations, alternatives, and areas of greatest concern and potential opportunities as described within the OLR Report. The appropriate map(s) will accompany each OLR report/document. Identify parcels proposed for acquisition with a parcel ID cross-referenced to the report’s acquisition table.

8. Photographs: Include digital photography of the existing recreation setting and its scenic character, as well as problem areas demonstrating opportunities to improve FNST conditions and settings through the OLR process.

9. Review: Once the OLR partners reach consensus and the OLR document is complete, the Forest Service FNST Manager will obtain final review, and acceptance from the representatives of the underlying land management agency line officer, the local land management agency unit, the assigned maintaining organization (if one exists), and the Florida Trail Association President. A signature page should be developed where possible.

VIII. CONCLUSION

It is a Federal Action to relocate a portion of a National Scenic Trail. All Federal Actions, whether located on federal or non-federal land, are subject to compliance with the National Environmental Policy Act (NEPA). The OLR process functions as the analysis which establishes the purpose and need to begin a NEPA analysis for relocating a segment of the FNST. The OLR report does not substitute for NEPA compliance or legal requirements for publishing major shifts in the location of the FNST in the Federal Register. After an agency completes NEPA compliance, the final OLR and NEPA documents set the stage for publishing a notice for trail relocation in the Federal Register, and the ultimate implementation of activities to improve FNST settings and conditions.

Appendices:

Purpose of the Florida National Scenic Trail, *1986 Florida National Scenic Trail Comprehensive Plan*

Location Criteria, *1986 Florida National Scenic Trail Comprehensive Plan*

For Forest Service Internal Use Only		
REQUEST FOR CANNIBALIZATION, MODIFICATION AND DEREGISTRATION OF FOREST SERVICE OWNED PROPERTY		
Property Report No.:	Date:	
SECTION I – ACCOUNTABLE PROPERTY OFFICERS REPORT		
1. STATUS OF PROPERTY (check only one) <input type="checkbox"/> Unserviceable <input type="checkbox"/> Obsolete <input type="checkbox"/> Destroyed <input type="checkbox"/> Damaged	2. ACTION REQUESTED (check only one) <input type="checkbox"/> Cannibalize for Parts <input type="checkbox"/> Modify Item <input type="checkbox"/> Deregister Aircraft (initiate aircraft deregistration)	3. REPORTING ACTIVITY (Agency, address, phone, fax, and e-mail address)
4. QTY	5. ITEM DESCRIPTION AND OTHER DETAILS (include NFC ID No., Serial No.'s, model, manufacturer, year, acquisition date, current condition, and other pertinent details).	6. ORIGINAL ACQUISITION COST
7. EXPLANATION AND INTENDED USE OF THE ITEM (Describe what major components will be removed from the property item; list all items with an original estimated acquisition cost of \$5,000.00 or greater):		
8a. Printed name of custodian or appointee:	8b. Signature of custodian or appointee:	8c. Date:
SECTION II – FOREST SERVICE APPROVAL (complete 1 – 4 when applicable)		
1. Estimated date of completion (not to exceed four (4) years): 2. One-year extension requested date: 2a. Justification for extension: 3. Actual date of completion (not to exceed 5 years from approval date): 4. Carcass disposal report number:		
5a. Printed name of PMO:	5b. Signature of PMO:	5c. Date:
SECTION III – CERTIFICATION FOR COMPLETION OF CANNIBALIZATION, MODIFICATION, OR DEREGISTRATION		
I certify that cannibalization, modification, or deregistration action for item authorized in Section II was completed on this date:		
1a. Printed name of custodian or appointee:	1b. Signature of custodian or appointee:	1c. Date:
2a. Printed name of Witness:	2b. Signature of Witness:	2c. Date:
SECTION IV – CERTIFICATION OF PROPERTY AND FISCAL OFFICERS		
1a. <input type="checkbox"/> Yes, the necessary entries have been made to adjust property records. Signature of Property Management Officer:	1b. Date:	
2a. <input type="checkbox"/> Yes, the necessary action has been taken to adjust the accounting records. Signature of Fiscal Officer:	2b. Date:	

INVENTORY OF TRAIL TOOLS AND EQUIPMENT

Florida Trail Association

SECTION: _____ SECTION LEADER: _____ CHAPTER: _____
 DATE: _____

Mail to: FTA Trail Program Director, FTA Office, 5415 SW 13 St., Gainesville, FL 32608, (352) 378-8823.

1. All trail tools and equipment in the possession of a chapter is considered FTA property for insurance and tracking purposes.
2. List and describe all FTA property in possession of the Chapter.
3. Update and send revisions by March 1 to the Trail Construction Coordinator, who maintains an inventory of all trail tools and equipment.

ITEM	QUAN- TITY	BRAND	MODEL	SERIAL #	DATE ACQUIRED	PURCHASE PRICE (or estimate)	CONDITION	CUSTODIAN name & location

If additional space is needed, please copy this form.

ITEM	QUAN- TITY	BRAND	MODEL	SERIAL #	DATE ACQUIRED	PURCHASE PRICE (or estimate)	CONDITION	CUSTODIAN name & location

If additional space is needed, please copy this form.

INSTRUCTIONS FOR CHAPTER REIMBURSEMENTS

INSTRUCTIONS PERTAIN TO EXPENDITURES RELATED TO THE FLORIDA NATIONAL SCENIC TRAIL *ONLY*

FTA'S ABILITY TO REIMBURSE VOLUNTEER EXPENDITURES IS SUBJECT TO AVAILABLE FUNDING AND AT THE ASSOCIATION'S DISCRETION. CONTACT YOUR REGIONAL REPRESENTATIVE (RR) OR TRAIL PROGRAM DIRECTOR (TPD) TO ENSURE FUNDS ARE AVAILABLE BEFORE INCURRING SUBSTANTIAL EXPENSES. FTA DOES NOT GUARANTEE NOR IS FTA OBLIGATED TO REIMBURSE EXPENDITURES

- 1. THE COST OF ANY ONE ITEM OR GROUPING OF ITEMS EXCEEDS \$200 FOR A 30 DAY PERIOD.**
- 2. THE ANTICIPATED EXPENDITURE IS FOR POWER TOOLS, HAND TOOLS AND/OR VOLUNTEER TRAINING.**

REIMBURSEMENT SUBMISSION REQUIREMENTS AND PROCEDURES:

1. Chapters may submit receipts for reimbursements *once* per month.
2. Requests must be submitted to the appropriate RR. Reimbursement requests for the Panhandle Region and for work on the Western Corridor should be submitted to the TPD. **Do not send reimbursement requests**
3. Chapters should task one person with submitting receipts and the reimbursement forms. These forms should be completed on a computer. Do not submit hand written requests.
4. The chapter member tasked with submitting reports should complete the reimbursement form. List the expenses in chronological order. Glue the original receipts to sheets of paper for ease in copying, processing and
5. Make 2 copies of the reimbursement form and receipts.
6. Send the original reimbursement request, the original receipts and one of the two copies to the appropriate RR for approval. Retain the second copy for your records.
7. The RR will forward the approved request to the Gainesville office for payment.
8. Reimbursement checks will be issued in chapter names only and sent to the chapter Treasurer.
9. Reimbursement requests must be timely. We will not reimburse for expenses that are more than 2 months old
10. Expenses must be directly related to an FNST trail project or training that has been entered in the Volunteer Database
11. All participants (maintainers, trainees, etc.) must have a volunteer profile in the Volunteer Reporting database and have volunteer hours logged on the FNST within the current or last calendar year.

EXAMPLES OF MATERIALS AND SUPPLY EXPENSES ELIGIBLE FOR REIMBURSEMENT

1. Hand tools, power equipment and construction materials
2. PPE (personal protection equipment) for volunteers
3. Kitchen supplies for multi-day trail work activities including propane
4. Tool maintenance: saw blades, chains for chainsaws, replacement handles, mower and brushcutter maintenance
5. Fuel, lubricants and supplies for power equipment (mowers, chainsaws, etc.)

TRAININGS- 1st Aid and CPR

1. Chapters are responsible for securing instructors and arranging group training opportunities
2. To ensure funds are available, all trainings must be approved in advance by the Volunteer Program Coordinator.
3. Complete the part of the reimbursement form that lists the members who were trained.

INSTRUCTIONS FOR CHAPTER REIMBURSEMENTS

These instructions **ONLY** pertain to expenditures related to the Florida National Scenic Trail.

FTA's ability to reimburse volunteer expenditures is subject to available funding and at the Association's discretion. Contact your Regional Representative (RR) or Trail Program Director (TPD) to ensure funds are available, before incurring substantial expenses. FTA does not guarantee nor is FTA obligated to reimburse expenditures, where written pre-approval was not obtained.

PRE-APPROVAL IS REQUIRED IF:

1. The cost of any one item or grouping of items exceeds \$200 for a 30-day period.
2. The anticipated expenditure is for power tools, hand tools and/or volunteer training.

REIMBURSEMENT SUBMISSION REQUIREMENTS AND PROCEDURES:

1. Chapters may submit receipts for reimbursements once per month.
2. Requests must be submitted to the appropriate RR. Reimbursement requests for the Panhandle Region and for work on the Western Corridor must be submitted to the TPD. **Do not send reimbursement requests directly to the Gainesville office.**
3. Chapters must task one person with submitting receipts and the reimbursement forms. These forms must be completed on a computer. **Do not submit hand written requests.**
4. The chapter member tasked with submitting reports must complete the reimbursement form. List the expenses in chronological order. **Original receipts must be glued to sheets of paper** for ease in copying, processing and filing. Please list original receipts in chronological order.
5. Make 2 copies of the reimbursement form and receipts.
6. Send the original reimbursement request, the original receipts and one of the two copies to the appropriate RR/TPD for approval. Retain the second copy for your records.
7. If approved, the RR/TPD will forward the approved request to the Gainesville office for payment.
8. Reimbursement checks will only be issued in chapter names and sent to the chapter Treasurer.
9. Reimbursement requests must be timely. FTA will not reimburse for expenses that are more than two months old. Please submit receipts on a monthly basis.
- 10. Expenses must be directly related to an FNST Volunteer Work Party or training that has been entered in the Volunteer Hours Entry database.**
11. All participants (maintainers, trainees, etc.) must have a Volunteer Profile and have volunteer hours logged on the FNST within the current or last calendar year.

EXAMPLES OF MATERIALS AND SUPPLY EXPENSES ELIGIBLE FOR REIMBURSEMENT

1. Hand tools, power equipment and construction materials.
2. PPE (Personal Protection Equipment) for volunteers.
3. Kitchen supplies for multi-day trail work activities, including propane.
4. Tool maintenance: saw blades, chains for chainsaws, replacement handles, mower and brush cutter maintenance, etc.
5. Fuel, lubricants and supplies for power equipment (mowers, chainsaws, etc.)

TRAININGS - FIRST AID AND CPR

1. Chapters are responsible for securing instructors and arranging group training opportunities.
2. Complete the training section of the reimbursement form that lists the participants of a training.
3. To ensure funds are available, all trainings must be approved in advance by the Volunteer Program Coordinator (VPC). **Send this reimbursement form to the VPC, prior to any trainings.**



This procedure is for the purpose of publishing and tracking “Notice to Hikers” (NTH) submissions. “Notice to Hikers” submissions should originate from the FTA Chapter Trail Coordinators, Section leaders or land managers and be submitted to the FTA office and Regional Representative ASAP for posting on the FTA website. A blank “Notice to Hikers Form” can be found BELOW (page 2).

All NTH are important for providing current trail information to hikers. Special urgency should be given those NTHs that impact hiker safety.

1. All NTH submissions and cancelations are to be coordinated with and approved by the land manager prior to submission to the FTA office (fta@floridatrail.org) and your region’s Regional Representative.
2. All NTH should use the designated format (below) or a reasonable facsimile.
4. All NTH should have an “Effective Date” and an “Ending Date”.
5. Permanent trail alignment changes should be followed by the submission of GIS data to update maps.
6. Chapter Trail Coordinators and Section Leaders are the primary FTA official responsible for preparation and submission of NTH’s.
7. Whenever appropriate, a copy the NTH should be posted on the trail in a location that is visible to trail users.
8. Submit this form to FTA@FloridaTrail.org

TITLE OF NOTICE: Enter text.

SUBMITTERS NAME: Enter text.

SUBMITTERS TITLE: Enter text.

PHONE NUMBER: Enter text.

EMAIL: Enter text.

REGION: Enter text.

MAP #: Enter text.

PERM. CHANGE?: Yes or No.

EFFECTIVE DATE: Enter text.

ENDING DATE: Enter text.

DESCRIPTION:

Enter text.

SUPPORTING IMAGERY/MAPS

Insert Photos/Maps. Attach Separate Pages if Necessary.