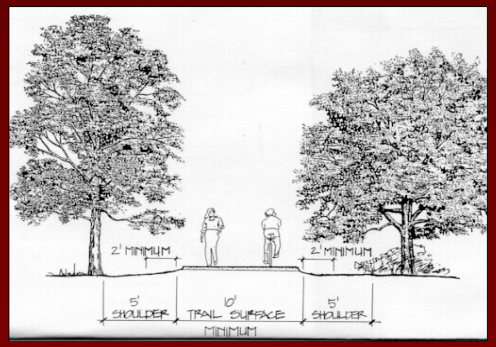
ADA Access on Paved Bikeways



California State Trails & Greenway Conference

Accessible Trail Planning, Design & Construction

Friday, May 11, 2007

Michael Jones, Alta Planning + Design

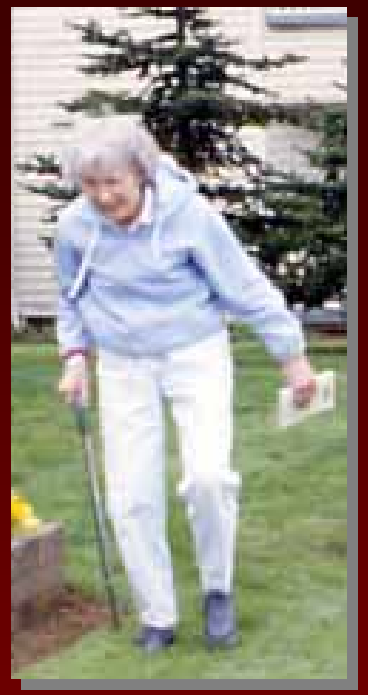
alta PLANNING + DESIGN

Outline

- Definition of Facilities
- ADA Requirements
- Pathways
- Parallel Paths
- Intersections
- On-Street Bikeways
- Over/Under Crossings
- Other Facilities

Definitions

- Caltrans: Class I Bikeway (Bike Path)
- Multi-use Path
- Multi-purpose Path
- Shared Use Path



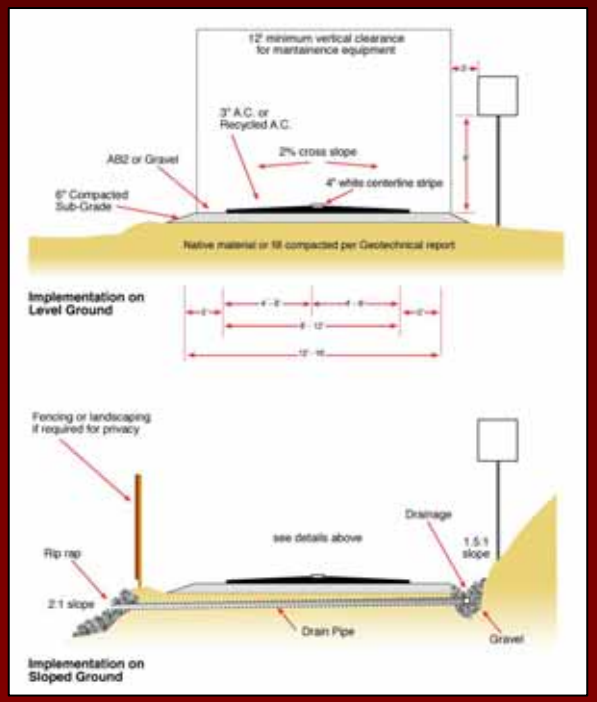
- Funding source dictates how a facility is defined
- Transportation v. recreation
- Caltrans HDM

ADA Requirements

- Transportation (Class I bike path)
- Recreation (Multi-use Trail)
- Defined by law and court cases
- Title II, Federal Code 28 CFR
- 'Designing Sidewalks & Trails for Access: Review of Existing Guidelines & Practices, Part I,II' (FHWA)

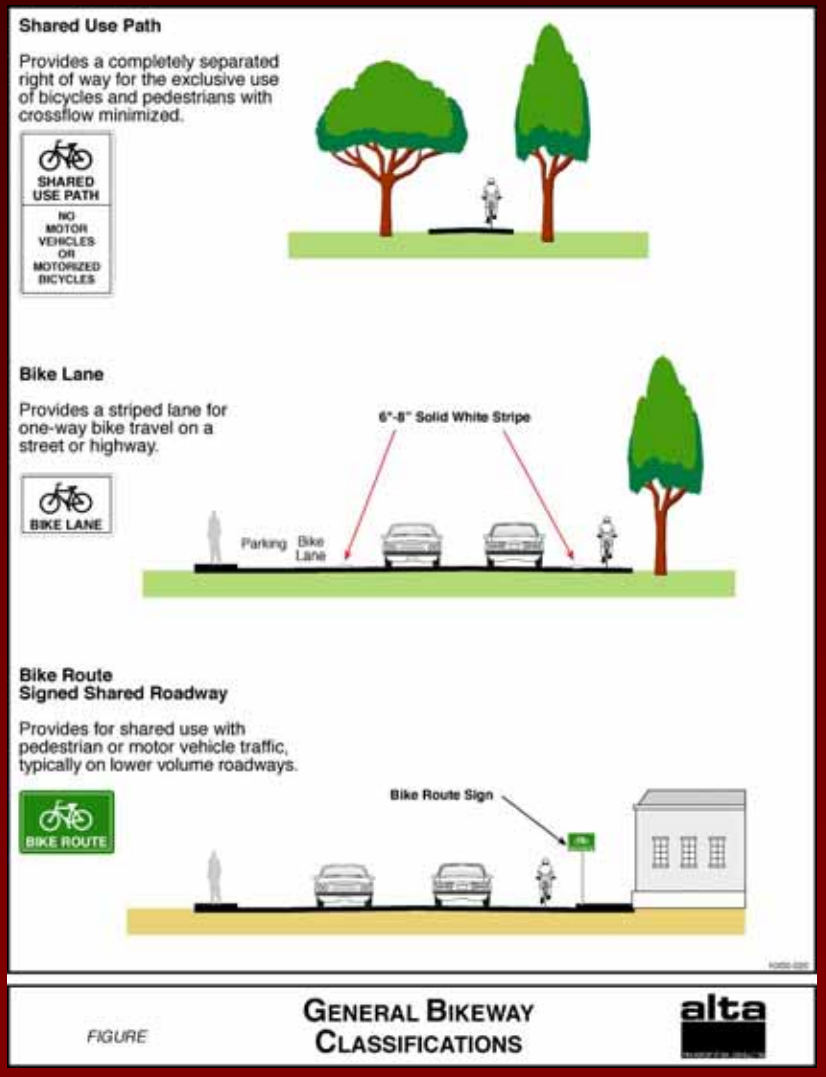
ADA Requirements

- Paved bicycle paths will almost always meet or exceed ADA if built to accepted transportation standards
- Paved recreational trails should also conform to transportation standards: if not, comply with recreational use ADA requirements



Paved Bikeway Elements

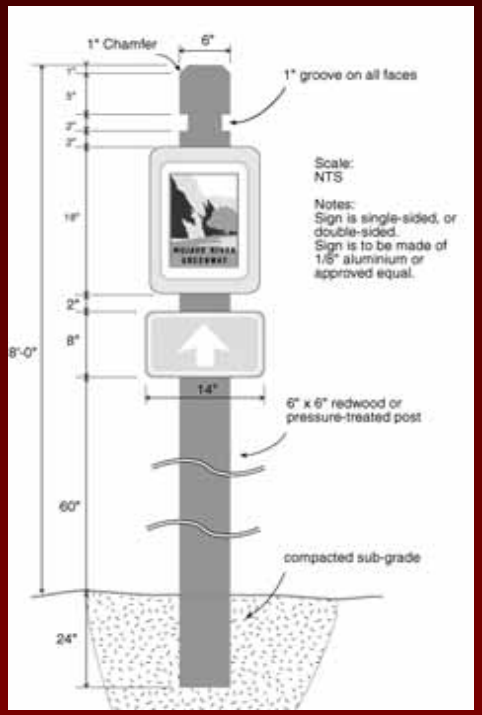
- Bike Paths
- Parallel Paths
- Intersections
- On-Street Bikeways
- Over - Under Crossings
- Other Facilities



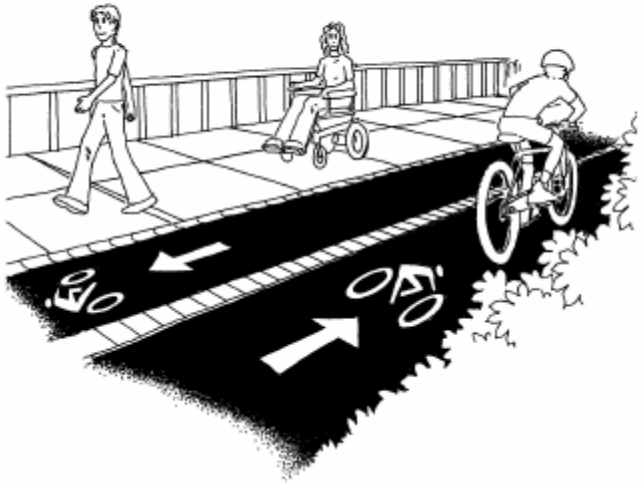
Bike Paths

- Width (8’ min – 10’ preferred)
- Gradient (5% sustained, up to 12.5% for 10 feet with landings)
- Landings not recommended by AASHTO
- Railings typically not used
- Cross slope 2%
- Surface: smooth, gaps ½” max.
- Separation of users
- Clearance: Vert: 10’ Horiz: 2’

Bike Paths



Separate pathways and clear signage can help reduce conflicts between users who travel at different speeds.



Parallel Bike Paths

- Known as Side Paths, Sidewalks
- Controversy on safety
- 8’ minimum width
- 5’ setback from roadway
- Same requirements as bike paths, except gradient
- Driveways
- Exceeds sidewalk requirements

Parallel Bike Paths

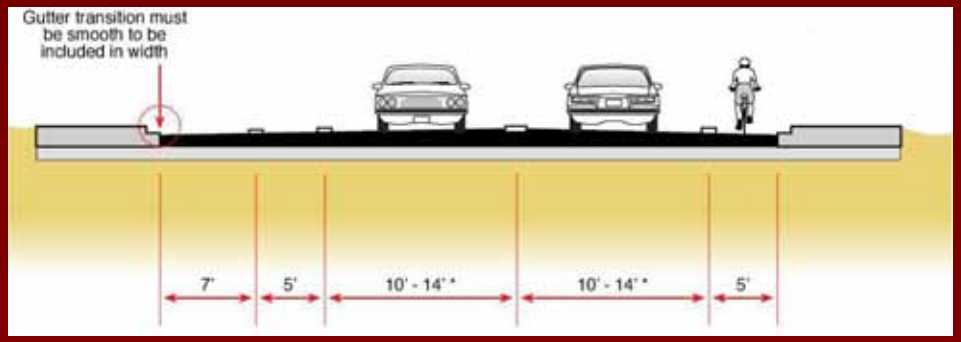
Intersections

- Bollards
- Curb ramps (1/4” max vertical)
- Detectible warning strips
- Placement of ramps
- Crosswalks - medians
- Audible/Vibro-tactile Signals
- Accessible Ped Buttons
- Signal Timing
- Curb Extensions

Intersections

On-Street Bikeways

- Bike Lanes
- Bike Routes
- Roadways
- Gradient Issue

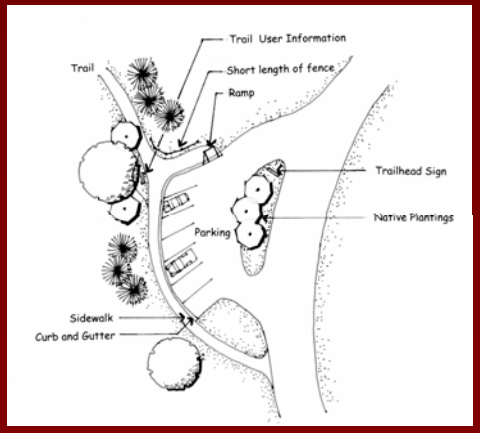


Bridges - Undercrossings

- Bike/ped structures must be 100% accessible
- Handrails
- Lighting
- Access
- Use of landings
- Avoid 180 degree curves
- Safety - security

Other Facilities

- Trailheads
- Gangways/Piers
- Beach Paths



Summary

- Routine accommodation
- Barrier free access
- Equivalent access
- Comparable experience
- Exceptions:
- Significant impacts
- Alter setting/purpose of facility
- Prohibited by law
- Impractical due to steep terrain/construction practices

DESIGNING FRONTCOUNTRY ACCESSIBLE TRAILS

Course Objectives

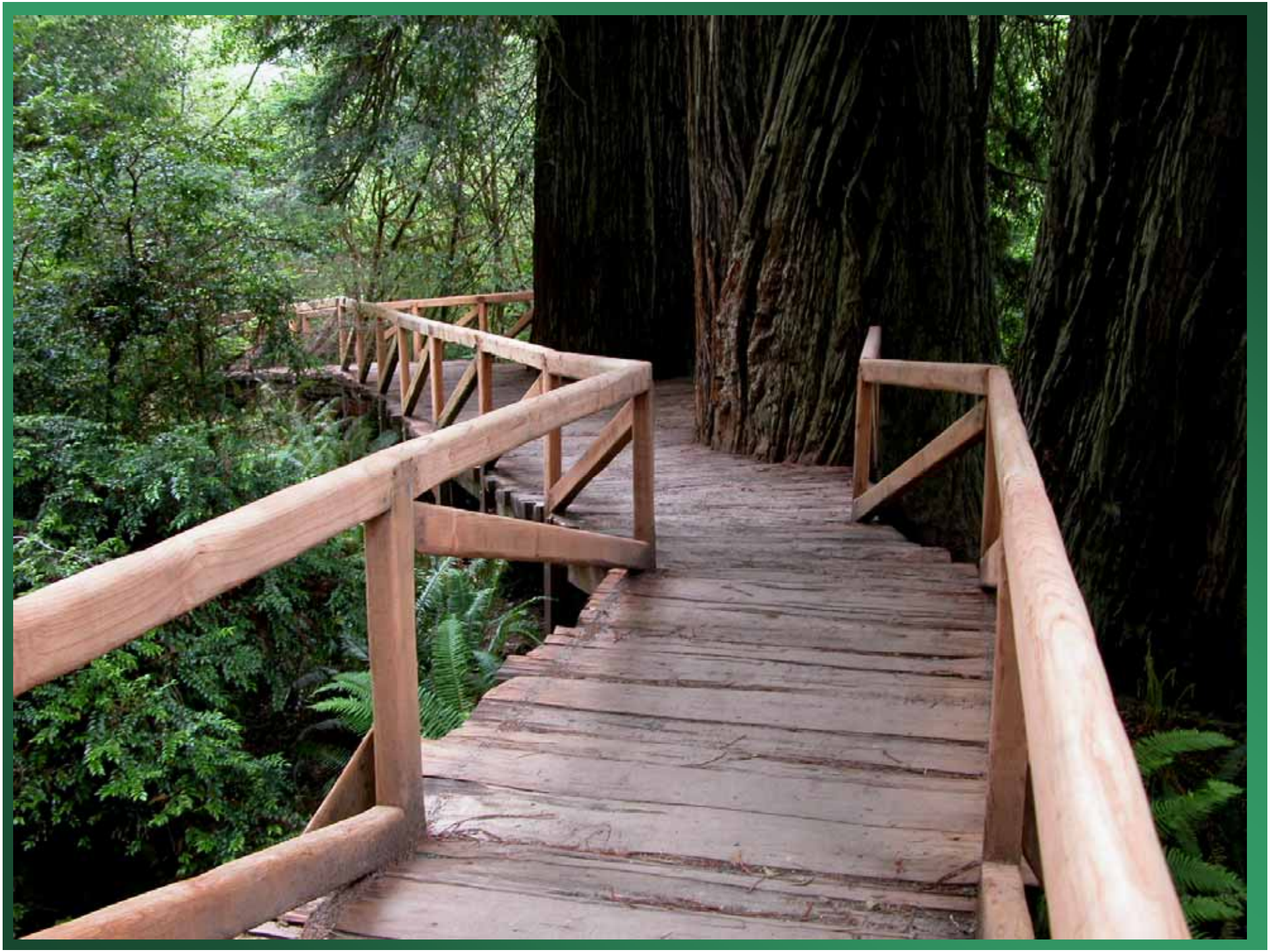
- Design and construct trails that are compatible with resource management objectives
- Design and construct trails that are sustainable and require minimal maintenance
- Design and construct trails that provide a high quality experience for all users

Blending Your Trail with the Outdoor Environment

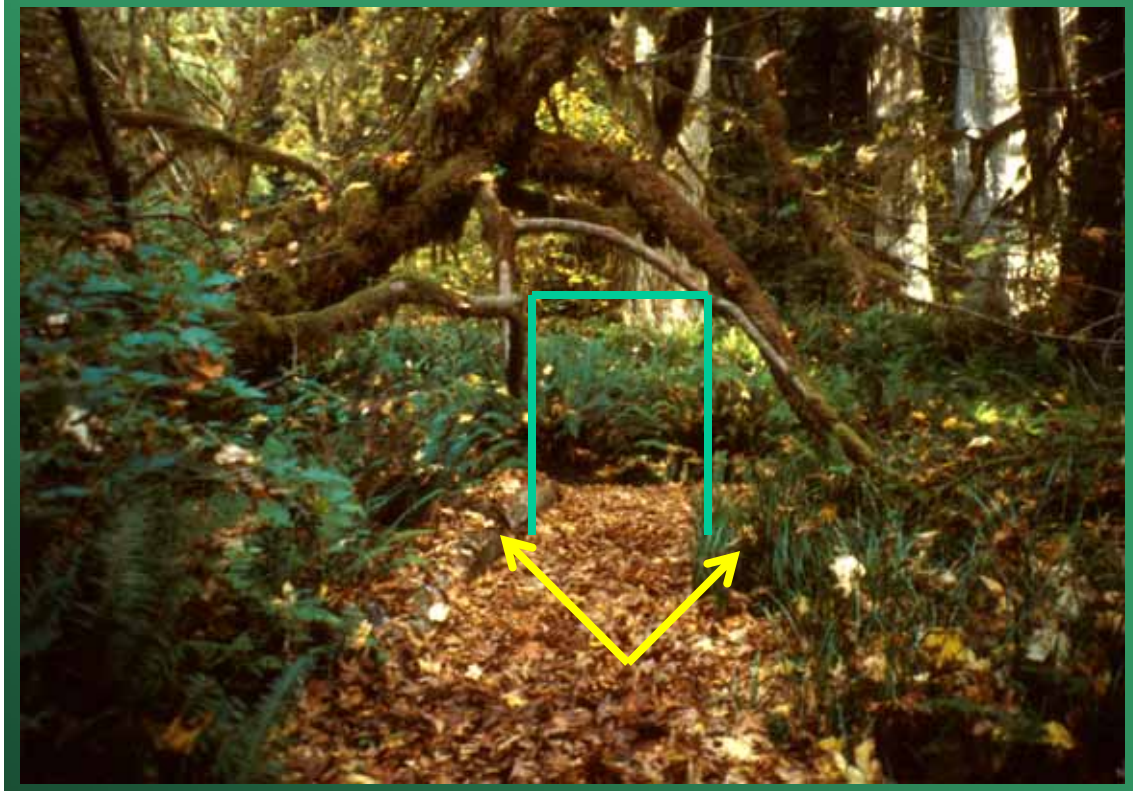
The Natural Environment is not Angular

Accessible Trails Should Follow the Contours of the Land and have Soft Edges

Incorporate Natural or Unique Features Into Your Trail Alignment



Limbs that do not represent an overhead obstruction should be retained



Retaining Walls may be Required to Protect Trees or Bridge Over Obstacles

Retaining Walls Should Utilize Native Materials When Possible

Retaining Walls Constructed of Native Materials Should be Discrete and not Overpower the Setting

Providing a Firm and Stable Surface

The Standards for Firmness and Stability and Instruments to Measure Tread Surfaces have been Developed

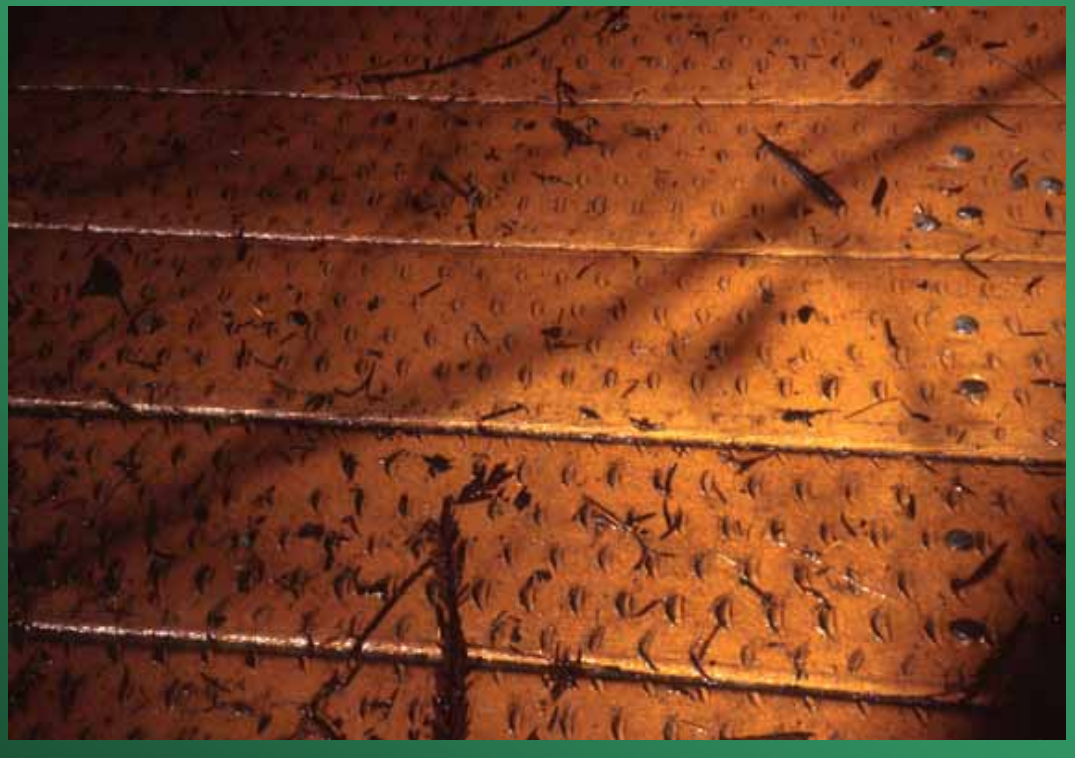
Native Tread Surfaces Need to be well Shaped, Uniform and Compacted

Traditional Methods of Stabilizing Trail Tread

Native Soils may Need to be Strengthened by Adding Crushed Rock (Shale)

Trails are In Dynamic Environments and Surfaces Cannot be Kept Dry or Clean

Trail Surfaces Need to Have Enough Roughness and Texture to Provide Traction



Providing Edge Protection

Choice of Edge Protection Should be Consistent With Setting

Native Materials Logs and Rocks

Plants can Replace Railing and Curbs

Do not Take the Built Environment Into the Natural Setting

Accessible Trail Construction Requires:

- Following sound trail layout and design principles
- Following best practices in trail construction
- Using native materials to maintain the natural setting
- Collaboration with accessibility experts
- Creative and innovative approaches