

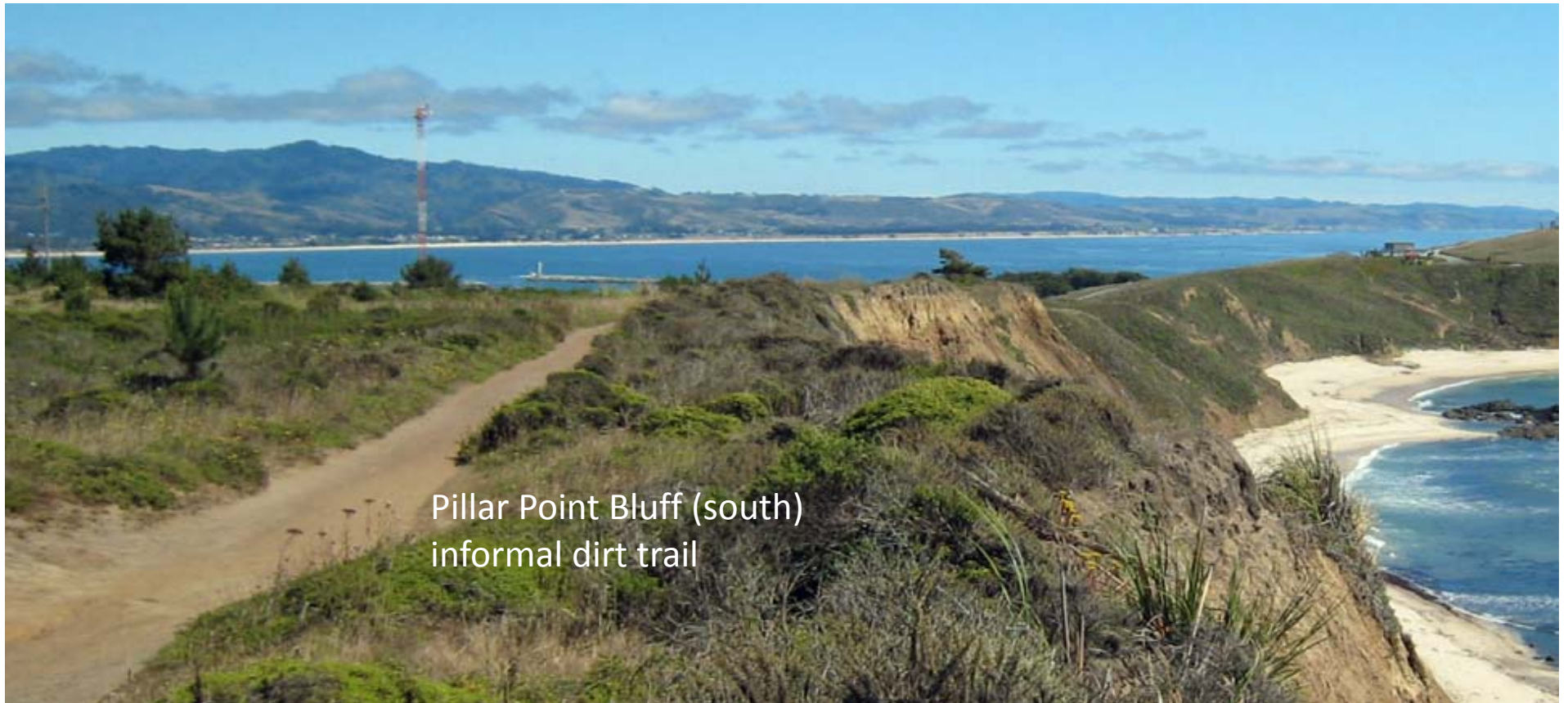
Trail Surfaces

Midcoast Community Council
September 14, 2016 presentation
by L. Ketcham

Photo: Russian Ridge, MPROSD

“Of all the paths you take in life, make sure a few of them are dirt.”

--John Muir



Pillar Point Bluff (south)
informal dirt trail

Half Moon Bay Marathon:

“One of the most amazing parts of our ‘26.2 Miles of Running Heaven’ involves using some packed dirt portions.”

Jean Lauer Trail, Pillar Point Bluff (north) -- CA Coastal Trail
compacted native soil, ADA accessible,
constructed by Go-Native for POST ~2007



Wide segment of packed dirt trail
provides emergency vehicle access.



“Compacted native soil works well
if soil conditions are good.
Most coastal soils have a heavy clay
content, and they worked well at
Pillar Point. Good design and
construction are key.” --Chuck Kozak

Pillar Point Bluff –

Color & texture are key for a natural look and feel underfoot.



Coarse grey aggregate to fill temporary puddles mars the packed dirt trail -- (later removed upon request).

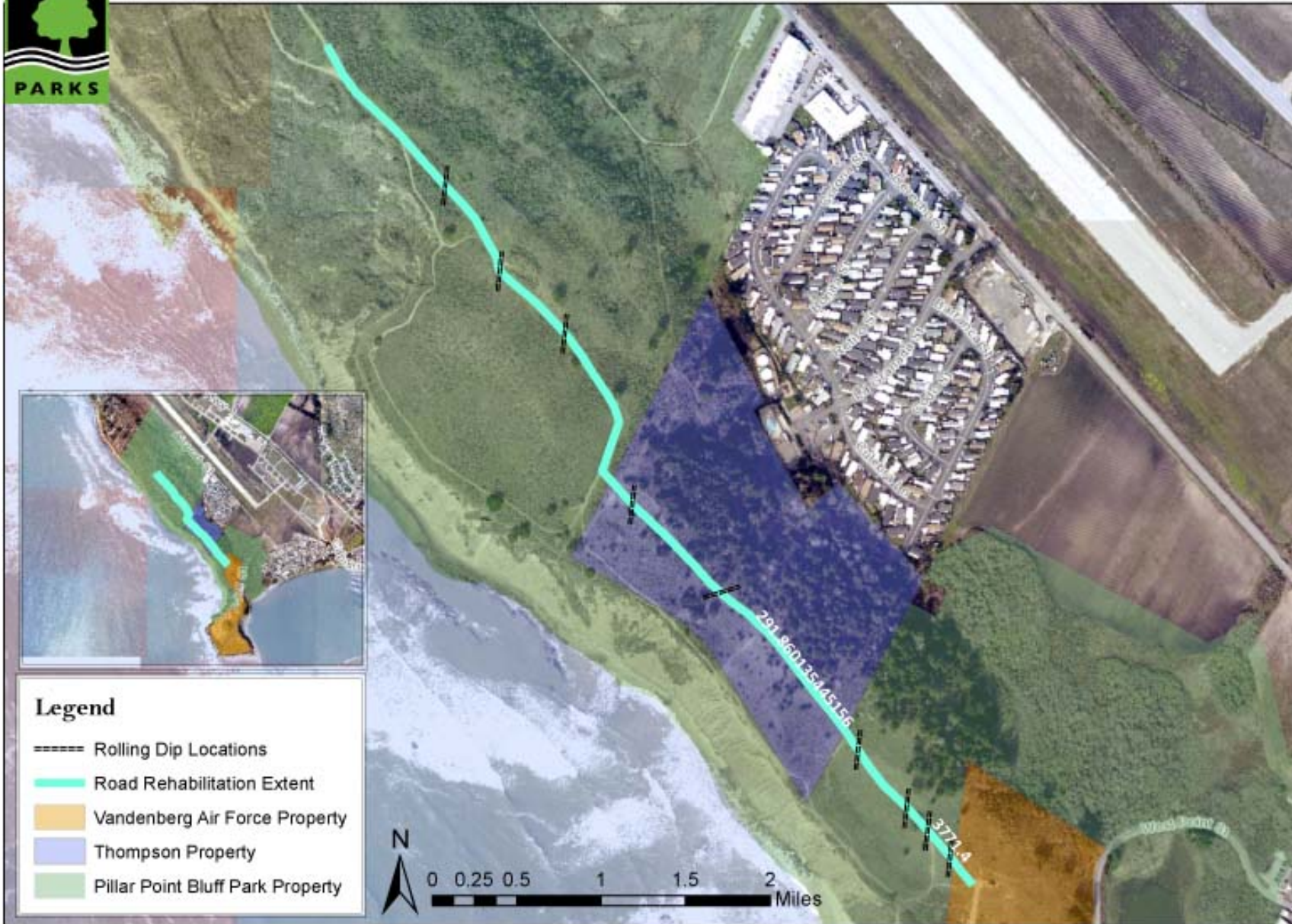
Brown-colored aggregate would look more natural than grey.

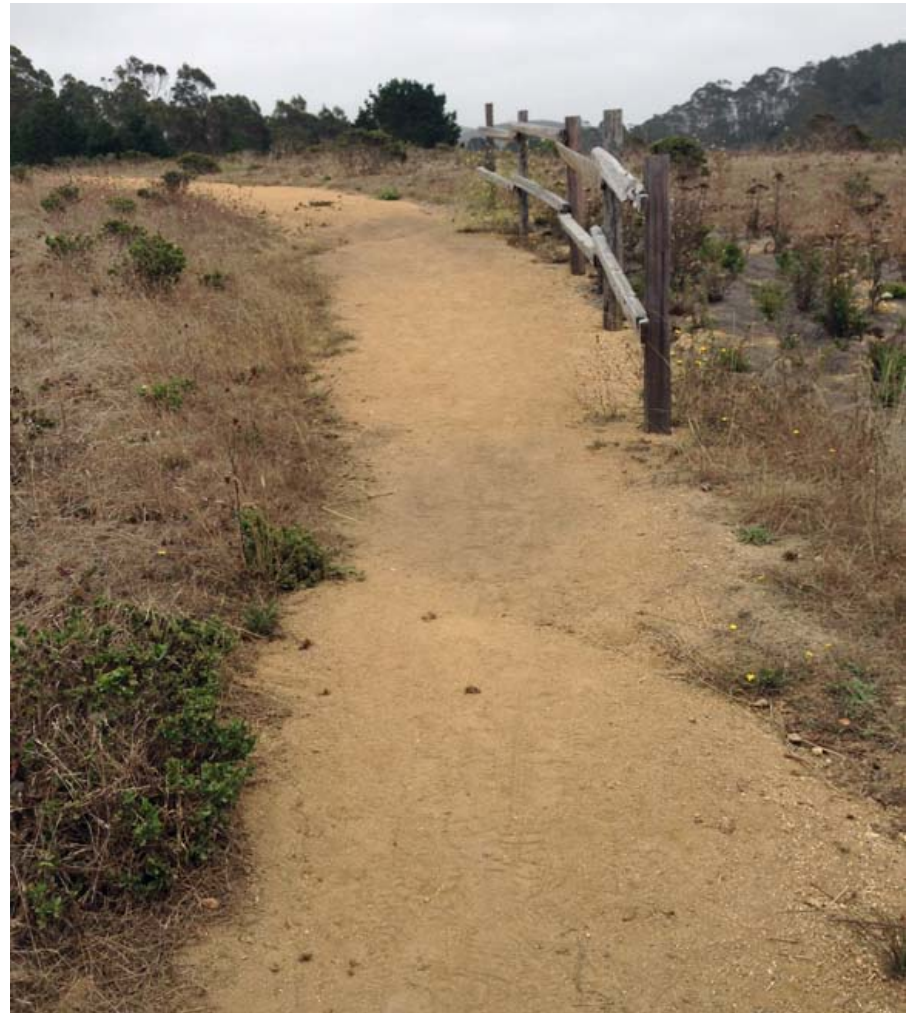
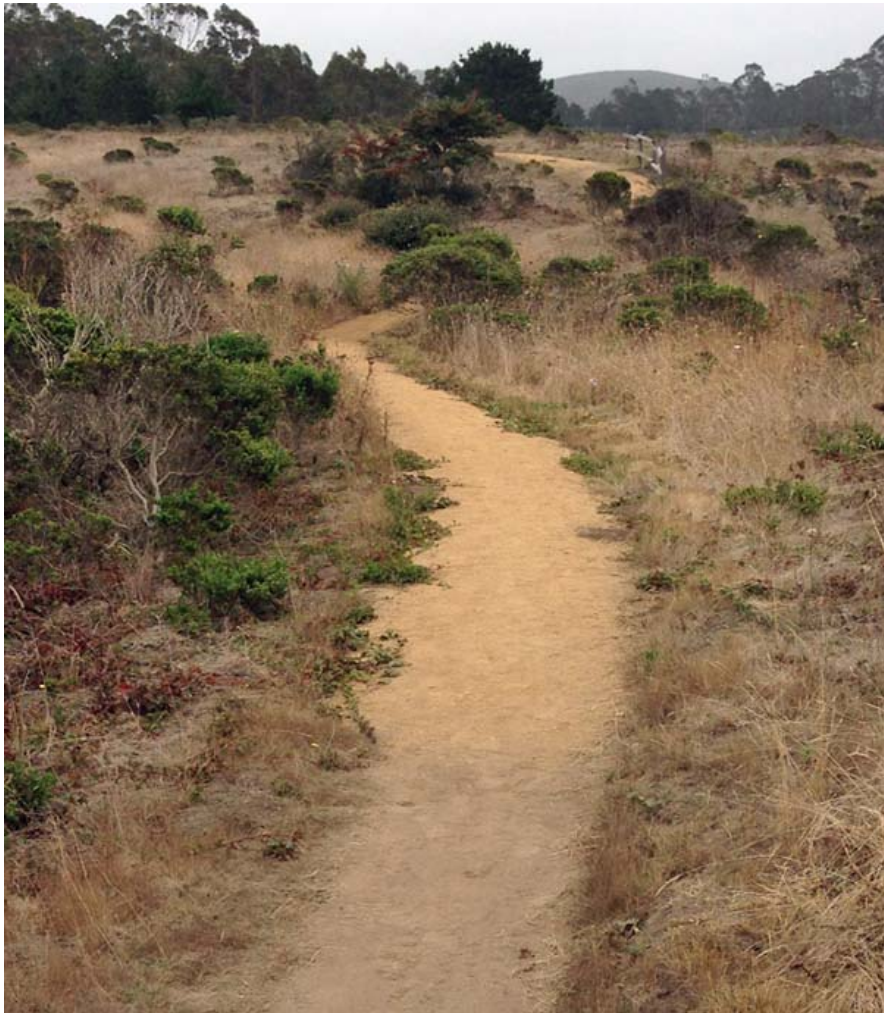


2016 - Planning underway for trail improvements



Pillar Point Bluff County Park: Road Rehabilitation Project





GGNRA Rancho Corral de Tierra – San Vicente Trail

Packed dirt trail improvement used native soil diggings stockpiled from MWSD Alta Vista water tank construction. Important drainage features are out-sloping and angled swales cut in at regular intervals on steeper trails to divert downhill runoff off the side of the trail.

Fitzgerald Marine Reserve beach access trail





Pillar Point Harbor West Shoreline Trail:

Harbor District plans to protect the trail from erosion and “improve” the trail’s natural surface.



Notes from 2009 talk on ADA Trails
by Jason Spann, CA State Parks Accessible Trails Coordinator

ADA trail surface provides firm and stable surface for wheel chairs, walkers, canes, strollers, and old/stiff/gimpy people. All-weather surface not required. Make it as natural as possible – disabled community wants a natural experience as much as anybody.

Compacted native soil: durable, low maintenance, low cost, natural appearance -- success depends on soil conditions, clay content.

Compacted rock aggregate (gravel): necessary when native soils not firm/stable, needs occasional maintenance, easy to repair. Success depends on quality of aggregate that compacts well; soil can be added for compaction/aesthetics. Moderate cost to install, easy to shape trail surface, relatively natural appearance, often requires edging. Best year-round (all weather) surface is good mix of aggregate and clay -- natural looking, hard surface.

Asphalt: low short-term maintenance, very firm, multi-use, expensive installation, expensive to replace, developed appearance, cracking, semi-permeable.

Concrete: low short-term maintenance, very firm, multi-use, very expensive installation, very expensive to replace, developed appearance, non-permeable.

Boardwalk: low short-term maintenance, very firm, multi-use, very expensive installation, very expensive to replace, developed appearance, rotting, permeable, bridge over poor soils (boggy, wet, sandy).

Mirada Surf County Park – CA Coastal Trail



County preference for asphalt trails may stem from funding strategies, where trails are built with one-time grant funds and County budget does not include trail maintenance.

Multi-use trails (bike/ped)

The push for multi-use trails the last 15 years brings increasing trail width and controversy due to different speeds and competing needs of users.

San Mateo County 2001 Trails Plan excerpts:

2.1.2 Multi-Use. Multiple-use, natural tread, double track trails should be designed as two-way paths. Where paved, the paved portions of a multiple-use trail should have an optimum width of 12 feet with a center stripe and minimal 2-foot, flush gravel shoulders, or clear space on each side of the trail.

2.1.3 Hike Only. Single-purpose hiking trail treads should be an optimum of 4 feet wide.

3.2 Minimum Disturbance

Trail development should be limited to the minimum construction necessary to provide for public safety and to protect natural and cultural resources.

3.6 Trail Surfaces

3.6.1 Material. Where feasible, trail treads should be of materials that provide a firm, smooth surface meeting the requirements of the most current ADA Accessibility Guidelines for Outdoor Developed Areas.

3.6.2 Surface. Trail surfaces appropriate to intended use shall be selected so as to minimize runoff and erosion problems.



Lands End, San Francisco
CA Coastal Trail

Natural Pave Resin Pavement™ –

High strength pavement alternative to asphalt & concrete -- made of rock aggregate -- cold-applied, with no toxic components or fumes, that gives the illusion of natural dirt.

Needs dry conditions for curing – coastal fog drip under trees is a problem. Harder to do small repairs. Can be used to resurface asphalt.



Mori Point CA Coastal Trail



Park Tread™
GGNRA trails surfaced with brown chert shale from a Sonoma quarry, installed by Campbell Grading have natural appearance, are low maintenance, erosion resistant, and pollutant free. Small batches available for repairs.



Presidio CA Coastal Trail



Sharp Park CA Coastal Trail

Pacifica

Lands End coastal access





Montara State Beach trail to Martini Creek stairs:
State Parks plans to pave the north parking lot on the bluff with hot-mix asphalt
and improve trail accessibility with unspecified “aggregate base paving”.



CA Coastal Trail in Half Moon Bay south of Poplar:
Worn/cracked asphalt grows weeds and has faded to grey – contrast to natural brown informal trail.
Asphalt can be resurfaced with Natural Pave.





CA Coastal Trail segment south of Seymour Bridge was constructed of grey compacted base rock (DG) in 2014. Lots of loose rocks float on the surface and migrate towards the trail edge.

Aggregate Paving Specs


Section 02776 – who/when?

2.01 Materials: natural rock only. Brown color.

3.02 Installation: Native soil shall be blended into the last 3-inch lift of crushed rock to soften the color and texture of the finished trail tread.

Cowell Purisima CA Coastal Trail



A person wearing a white hat and a bright green shirt is hiking away from the camera on a dirt trail. The trail is surrounded by dry, yellowish-brown grass and some green shrubs. In the background, there is a large hill covered in dense green forest under a clear blue sky.

What's your favorite trail surface?

Edgewood County Park



Jean Lauer Trail & bench



Benches: looking ahead to plans for Broadway street-end viewpoint in Princeton.



Mori Point



Cement bench

Fitzgerald Marine Reserve --
Split-rail fence may be rustic, but should it intrude into the shoreline vista along the entire bluff? Would post and rope or cable be a better solution?
FMR Master Plan calls for fence no higher than 3 feet.

