



Ramapo Valley County Reservation Work Plans Vista Loop- Waterfall Section

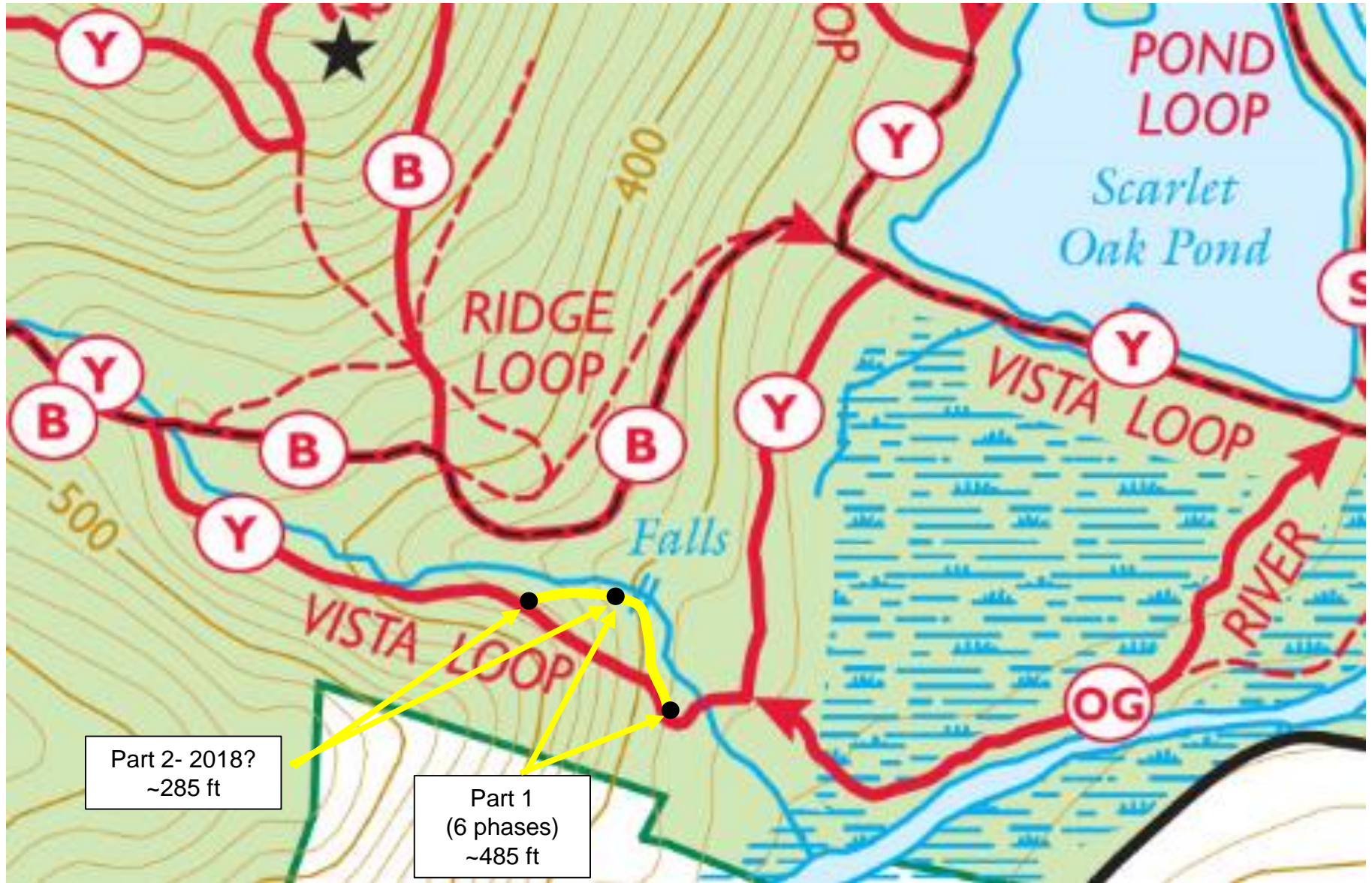
January 15, 2017

Prepared For

Bergen County, Ramapo Valley County Reservation

Prepared By

New York-New Jersey Trail Conference





Work Log Item Summary

The following table contains an approximate list of the major trail construction items which will be required for this section of trail. There are other minor items which are not listed here but described in the trail construction work log below.

Item	Unit	Totals
Plan segment length	In. ft.	770
Sidehill	In. ft.	125
Stone Steps	each	
Stone Cribbing	sq. ft.	tbd
Stepping Stones	each	8-16
Stone Paving	sq. ft.	85-102
Turnpike/Causeway	In. ft.	
Drainage Structures	each	
Bridges	each	
Crush Fill	cu. ft.	
Surfacing	cu. ft.	

* Work Log Item Summary is for construction estimate purposes only. Actual project accomplishments may vary.

General Trail Construction Notes

1.NYNJTC Trail Development Level: 3

- Development level details below, and this link: <https://www.nynjtc.org/sites/default/files/TrailDesignStandards.pdf>
- Trail Use Type: **Foot Travel Only**
- Trail Tread Width Range: **18" - 36" (48" stair width) , tread should be natural surfacing where possible. Where necessary, tread definition, filling, and removal of loose rock will be preformed to keep hikers on trail and remove safety hazards.**
- Running Grade Range: **0-12%, Grades above 20% will have steps installed.**
- Corridor: **4'x8', all cuts should be flush to tree or ground. Stumps within treadway should be removed.**
- **Deviations from Trail Development Level Standards:**

- 2.The trail layout/existing trail improvement follows the general principles of sustainable trail design with the added objective of creating an interesting, scenic, and low maintenance route.
- 3.All local stone harvesting/splitting/shaping must be done away from the trail as to not significantly alter the appearance of the surrounding area from the trail.
- 4.Safeguards should be made to protect trailside vegetation including the use of "tree bumpers."
- 5.All trailside impacted areas must be renovated with leaves, logs, and other on-site organic debris.
- 6.Visible drill holes on stone should be minimized to the extent possible with cut/split faces mixed in with natural faces.
- 7.Organic materials/duff must be removed from the ground surface before trail construction commences. These materials must be stockpiled for finishing work and trail closure purposes.
- 8.Backfill materials may be stone up to 3". To ensure proper drainage, mineral soil should not be used.
9. **Site Specific Notes: This trail borders a stream. All efforts should be made to not disturb the stream.**

Safety Notes

- 1.Each day will begin with a safety tailgate meeting outlining environmental, flora, fauna, work, communication, site, and tool related hazards and mitigation practices.
- 2.Proper personal protective equipment must be worn by all trail workers while on the worksite including long pants, closed-toe shoes, work gloves, eye protection, and hard hats. Ear protection must be worn around power equipment. Dust masks/respirators must be worn when drilling rock.



These photo references indicate the location of major work items as well as the trail centerline indicated by a solid yellow line shown in each photo.

To effectively use this trail construction work log, place yourself approximately where the photographer stood, note the trees, boulders, or other features in the photo and that will help you reference where the trail is to be built/improved. Remember you are looking at photos which are in two dimensions and the field situation is in three dimensions. In addition, expect the view to change over time given more vegetation, downed trees, etc.

Arrows point to the approximate location of the work needed, or the location of a singular structure, such as a drainage structure. Two arrows or lines show the approximate start and finish of on-going structures or types of work, such as stone cribbing, stairs, and sidehill.

Each section to be built will be field staked or pin-flagged where needed by the trail designer prior to construction.

Note: Trail routing assumes a 50 foot corridor on either side of the centerline in which to move or realign the trail. For example, a trail might need to be realigned around a seep, large boulder, or bedrock. If the trail needs to be moved outside of the 50ft corridor due to unforeseen construction constraints, it will be brought to the land manager's attention for approval. A new work log photo with proper proof of approvals will be inserted into this document (at the end as an addendum to the slide/s in question).

1st phase

5th phase

First base step/ last stepping stone

293"

Dig flat
For ~ 3 more
stepping stones

0/0
18 ft

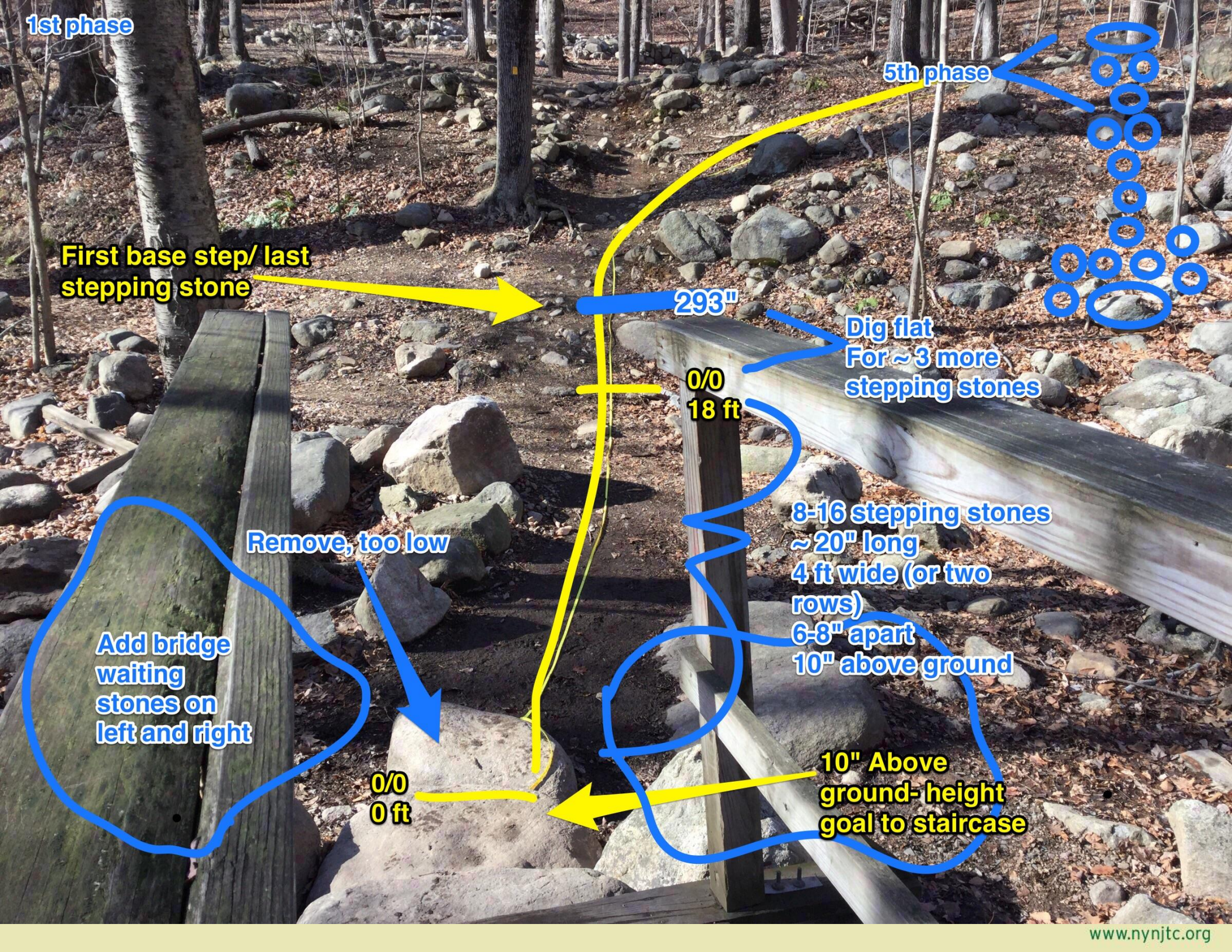
8-16 stepping stones
~ 20" long
4 ft wide (or two
rows)
6-8" apart
10" above ground

Remove, too low

Add bridge
waiting
stones on
left and right

0/0
0 ft

10" Above
ground- height
goal to staircase



31

19/50, 65/200

15/50

16/50

15/50

0/0
18 ft

Stairs begin.
7 steps.
8" rise, 14" run
8.5' landing

Dig back 77".
Add ~3 new
stepping
stones.
~20" long
6-8" apart
10" above
ground

10 in above flat, same
height as bridge landing

Last phase, or skip?

4/50, 63/200

8/50

20/50

17/50

14/50

0/0, 15/50

8 steps
8 in rise
~16 in landings

Cut back 6 ft
landing



49

12/50, 112/350

17/50

18/50

19/50, 65/200

7 steps
8" rise
14" run

31

Dig flat
8.5' landing

**Tree rotting
Shelf fungus
infestation
Heart rot?**

49

9/50, 134/450

5/50

57

13/50

12/50, 112/350

66

**14th
step?**

90

66

Rake and define tread
begin

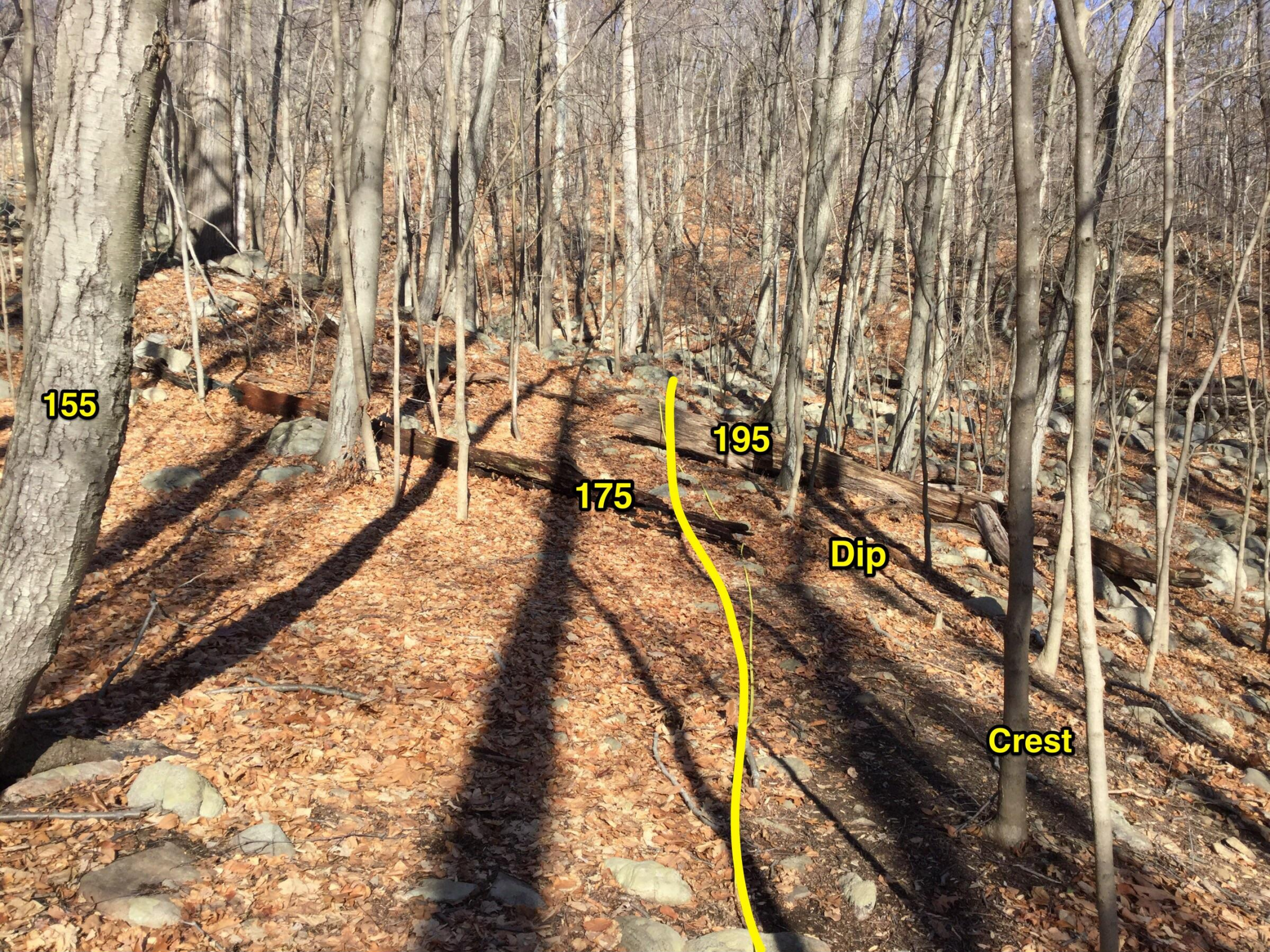




90

115

155



155

175

195

Dip

Crest



**225
Crest**

215

195



280

250

Dip

**225
Crest**

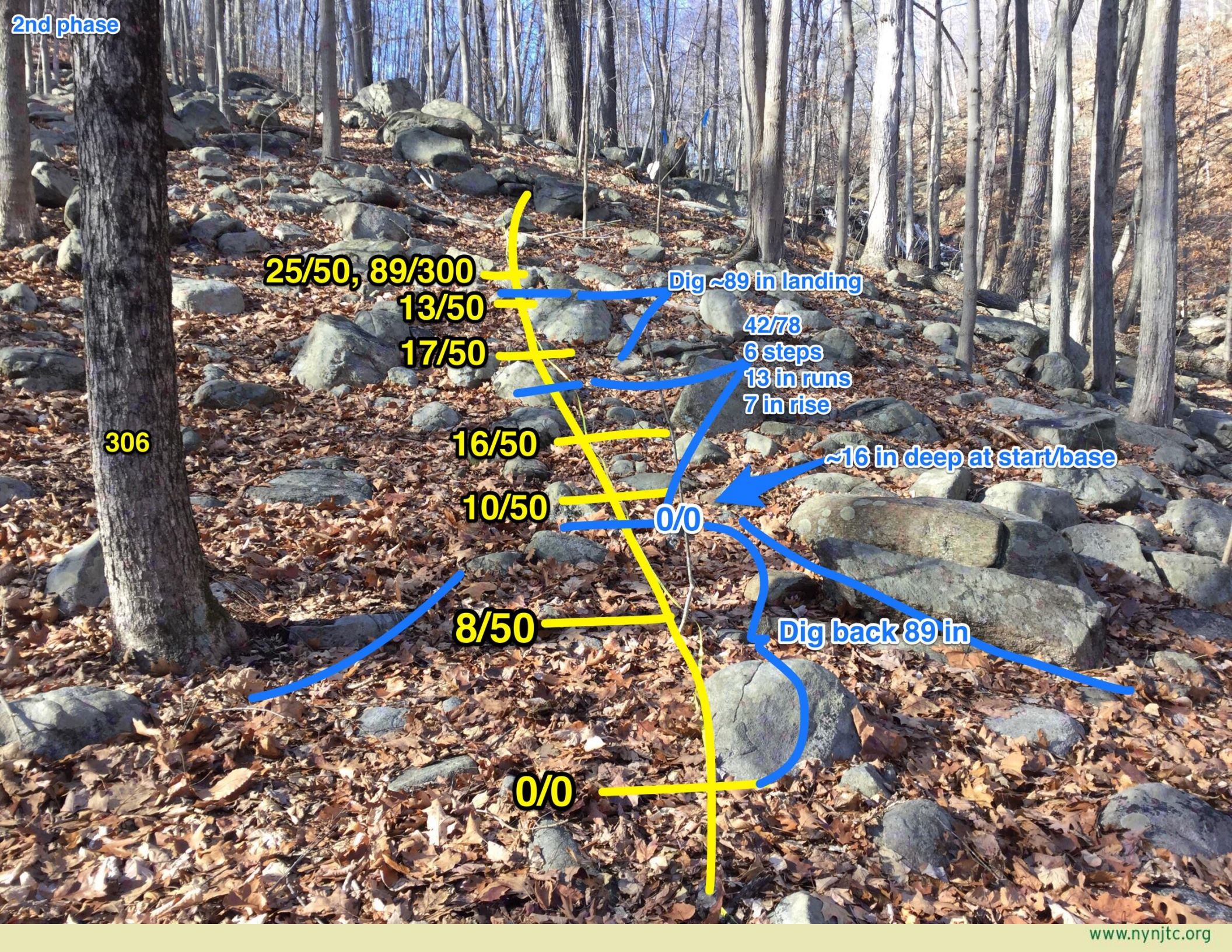


306

290

300

280



25/50, 89/300

13/50

17/50

16/50

10/50

8/50

0/0

Dig ~89 in landing

42/78

6 steps

13 in runs

7 in rise

~16 in deep at start/base

0/0

Dig back 89 in

306

2nd phase



14/50, 144/500

18/50

15/50

8/50

25/50, 92/300

42/78
6 steps
13 in runs
7 in rise

Dig ~ 89 in landing

42/78
6 steps
13 in runs
7 in rise

2nd phase

6/73, 167/723

Rock top 363

20/50

2/50

-5/50

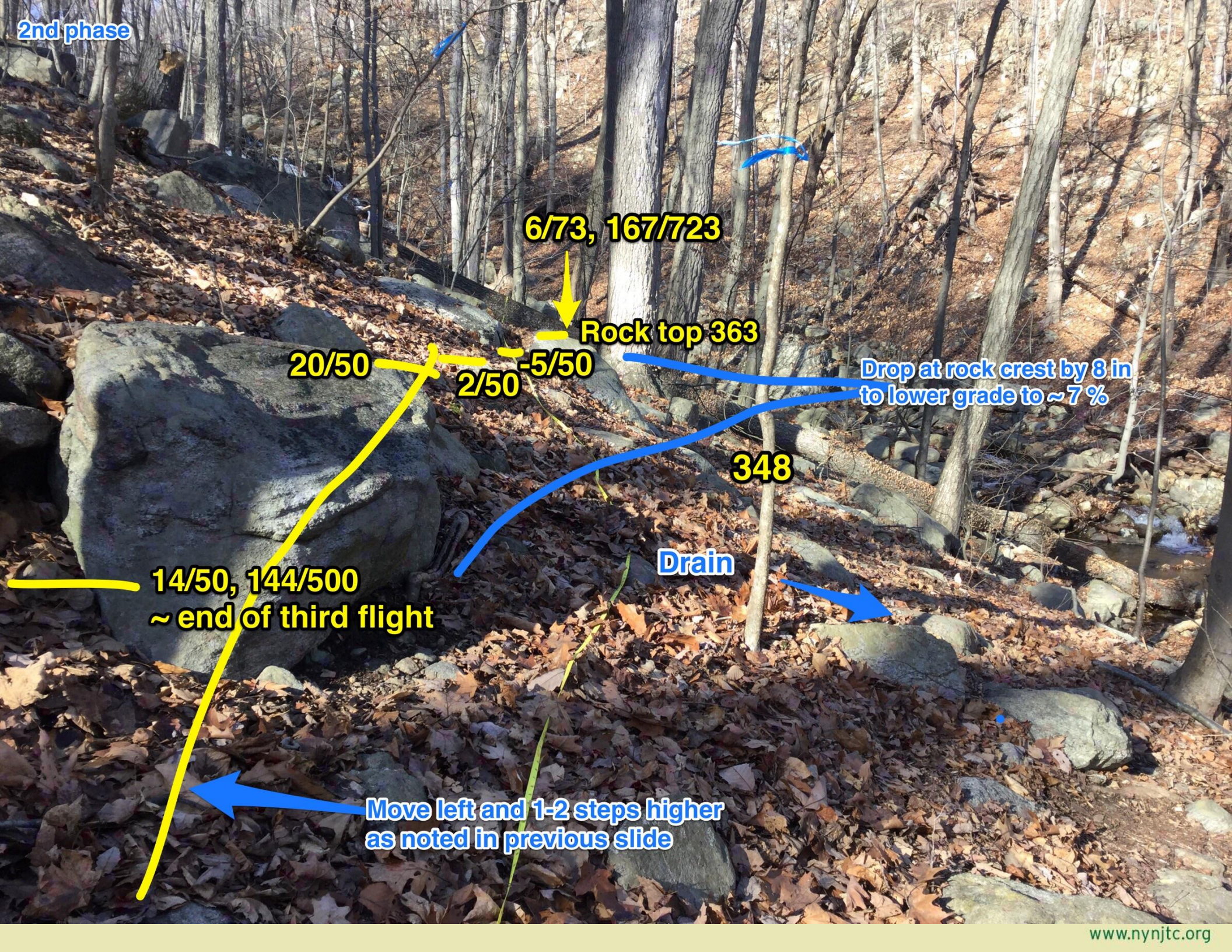
Drop at rock crest by 8 in to lower grade to ~7%

348

Drain

14/50, 144/500
~ end of third flight

Move left and 1-2 steps higher as noted in previous slide



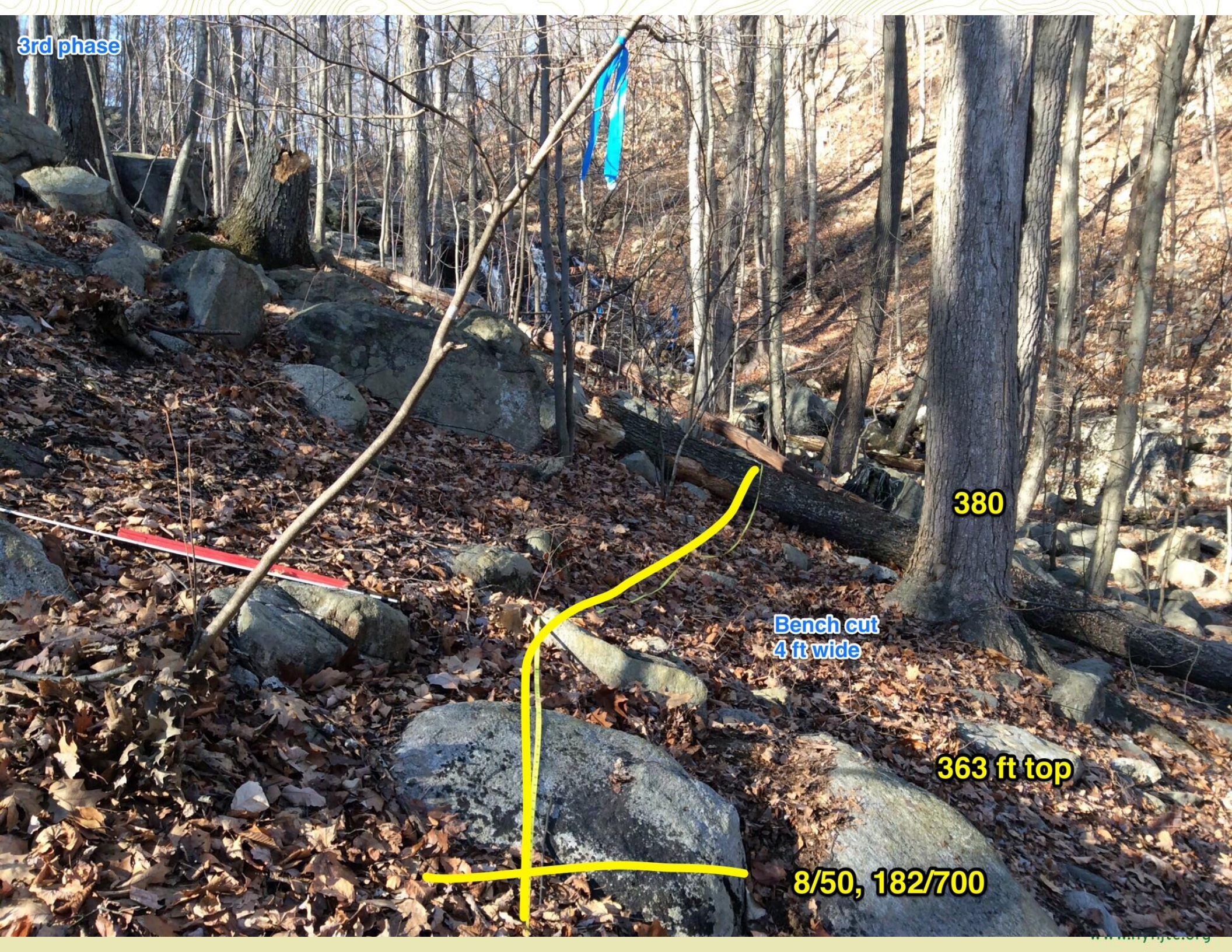
3rd phase

380

Bench cut
4 ft wide

363 ft top

8/50, 182/700





410

380



0/0
420 ft

420

410

4th phase

End bench cut

15/50, 50/200
437

13/50

12/50

10/50

0/0

6 steps
~8/16 each

420

Dig back ~100"
~22" deep

4th phase

450

457

21/50, 104/350

17/50

16/50

15/50, 50/200

Dig back ~ 38"

7-8 steps
~ 8/16 each

437



457

465
Or
482

450

4/50, 122/500

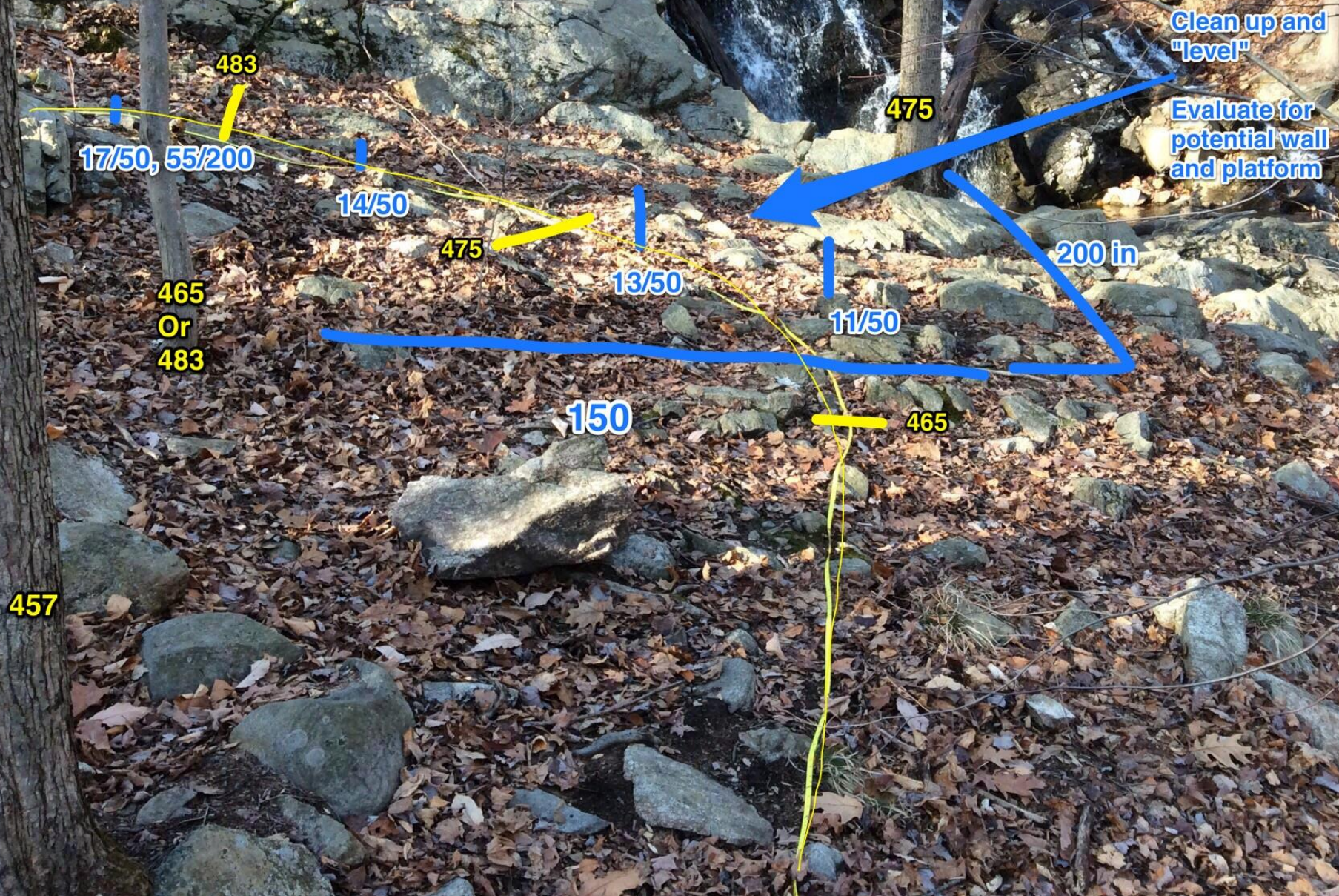
5/50

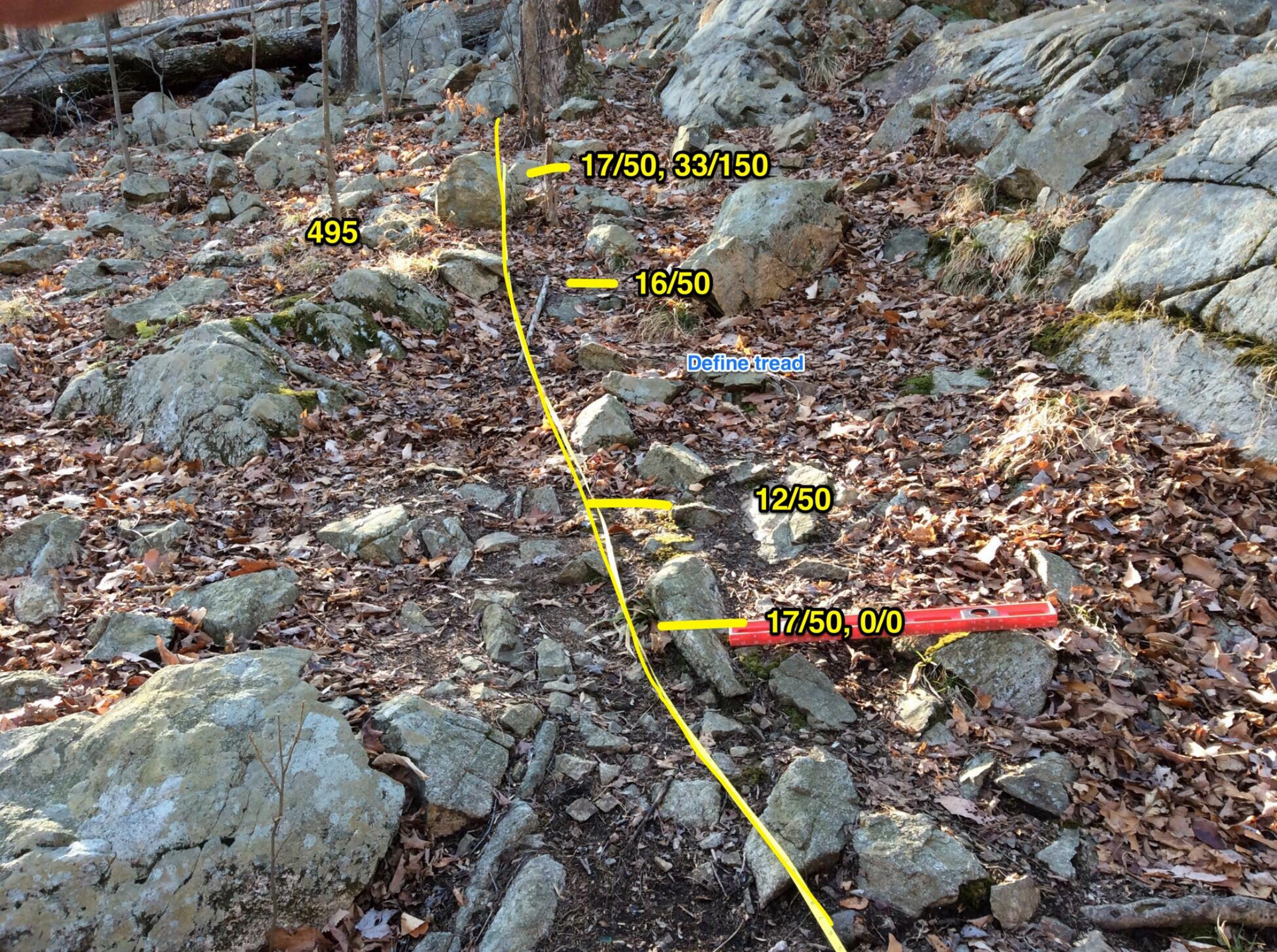
9/50

7th/8th step

21/50, 104/350

6th/open phase of project





495

17/50, 33/150

16/50

Define tread

12/50

17/50, 0/0



0/50, 50/350

513

503

8/50

8/50

Define tread

1/50

495

17/50,
33/150

535

12/50, 89/250

20/50

24/50

18/50

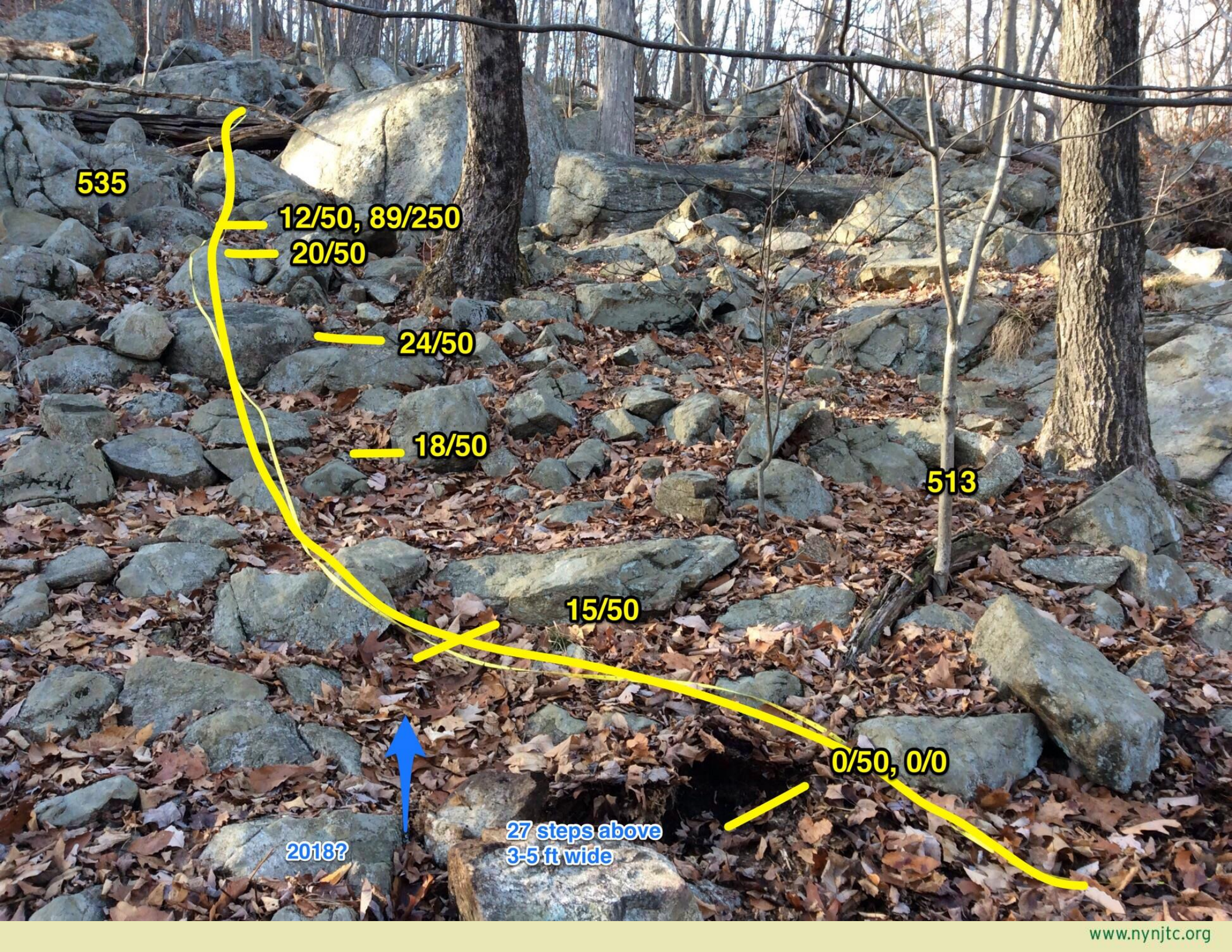
513

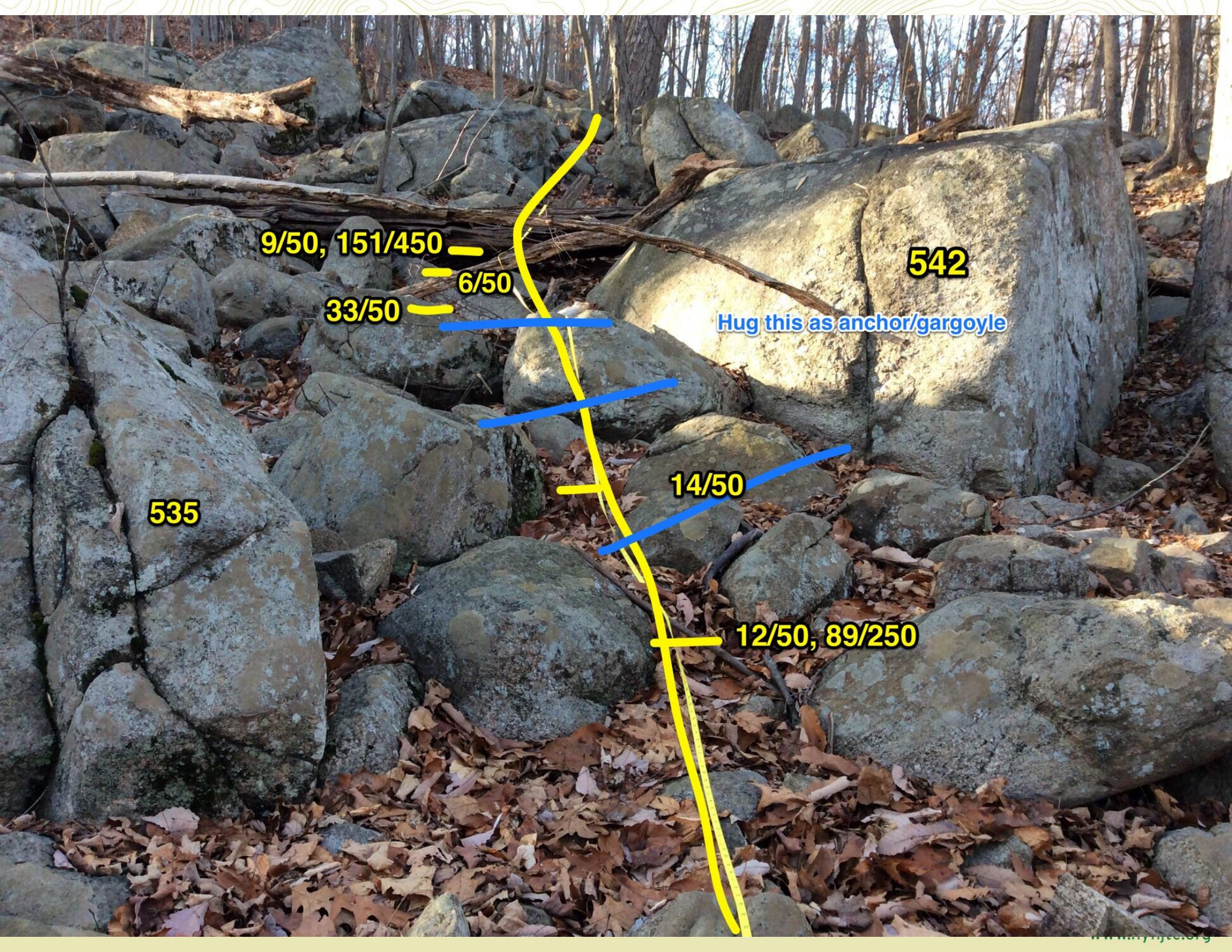
15/50

0/50, 0/0

2018?

27 steps above
3-5 ft wide





9/50, 151/450

6/50

33/50

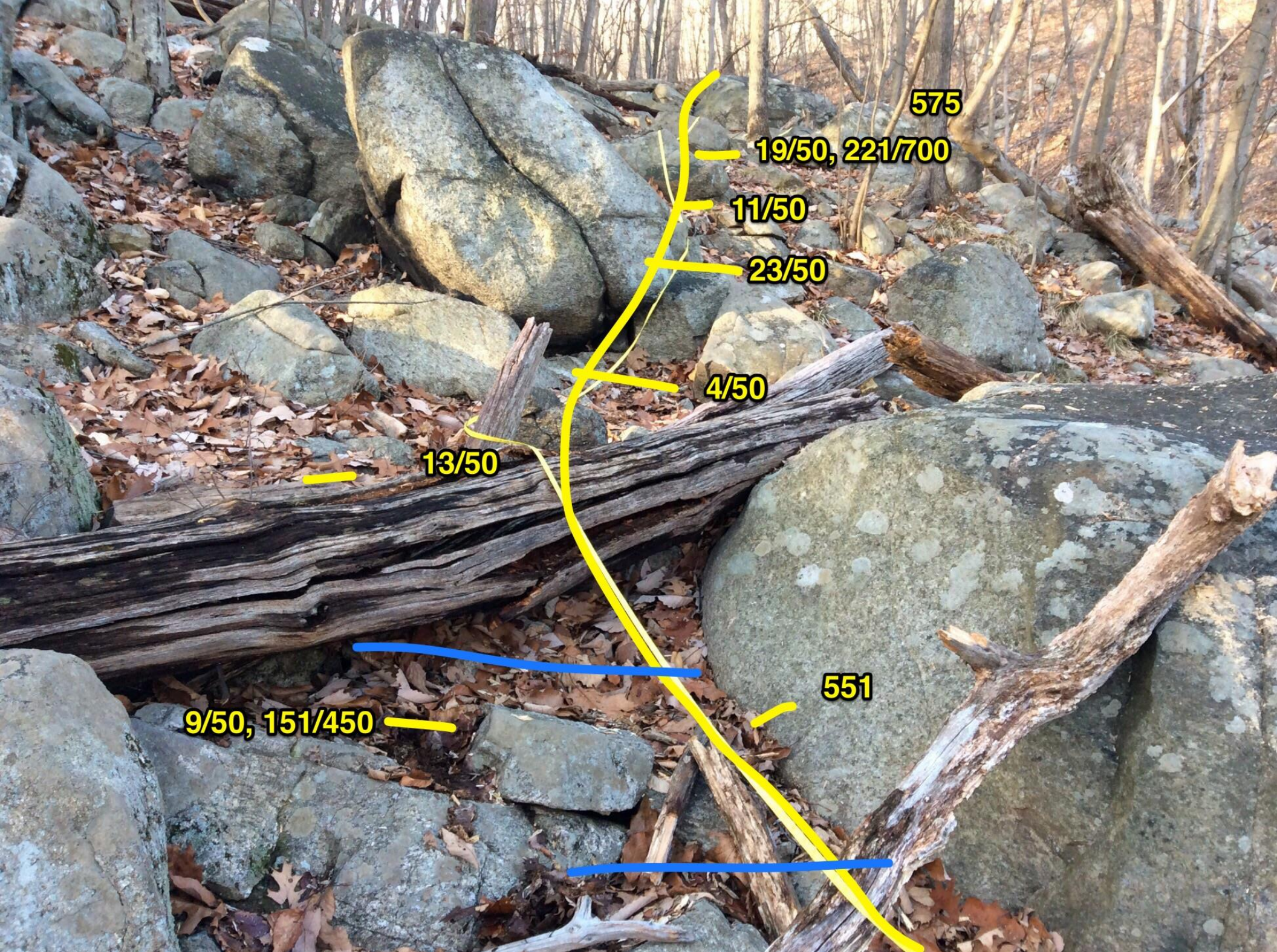
542

Hug this as anchor/gargoyle

535

14/50

12/50, 89/250



575

19/50, 221/700

11/50

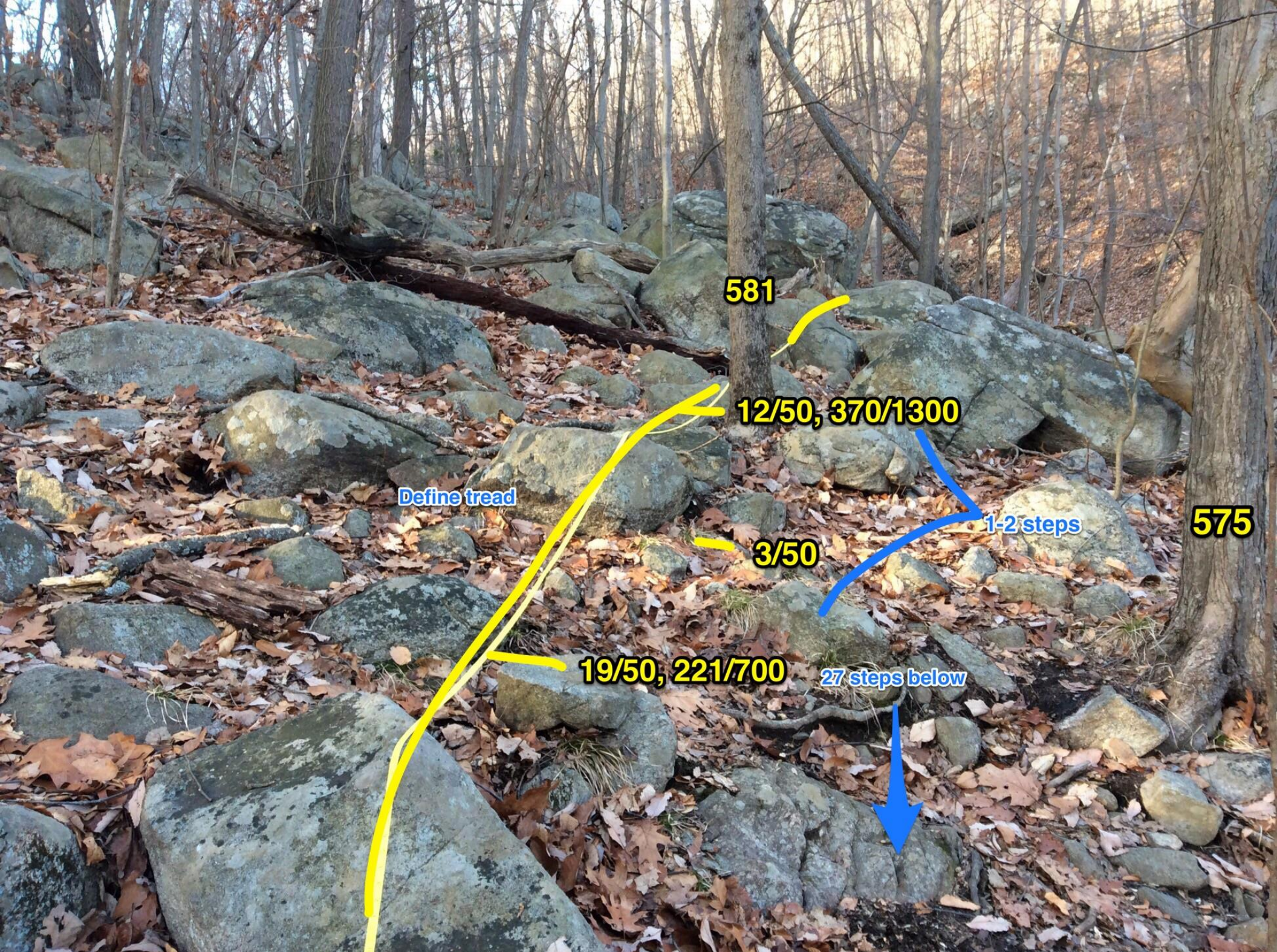
23/50

4/50

13/50

551

9/50, 151/450



581

12/50, 370/1300

Define tread

3/50

1-2 steps

575

19/50, 221/700

27 steps below



590

596

600

581

Define tread

12/50, 370/1300



617

Move to block

610

Landing

600



13/50

9/50

16/50

3-5 steps

**610
Take out**



628

13/50

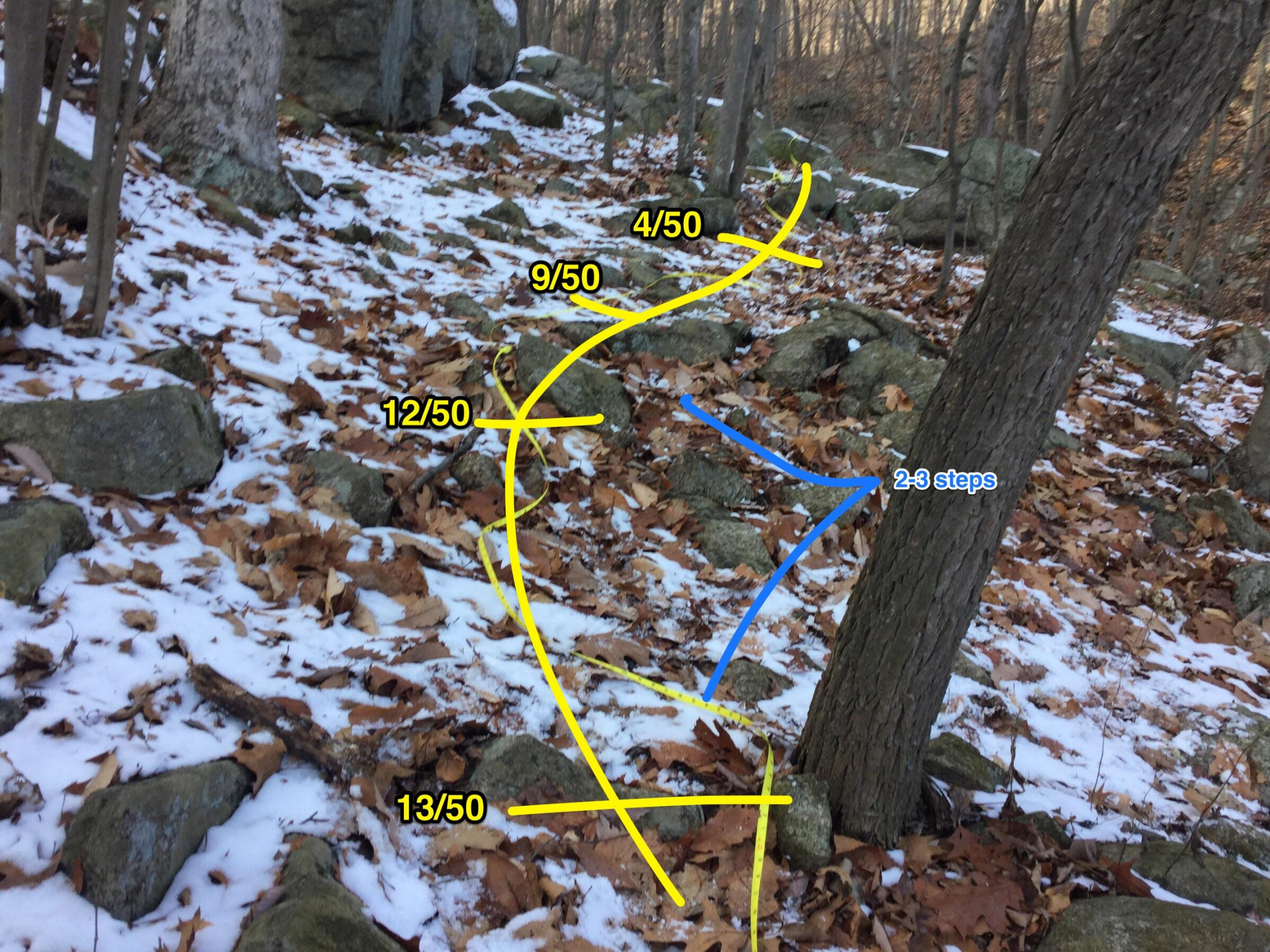
10/50

8/50

13/50

Keep pinch

2-4 sreps



4/50

9/50

12/50

13/50

2-3 steps



657

2/50 @ tree

11/50
Define tread

8/50

4/50



685

Crest

4/50

Define tread

6/50

657

2/50



Block off
w/ stone



Define tread



14/50

685
Turn this to
open treadway?



9/50

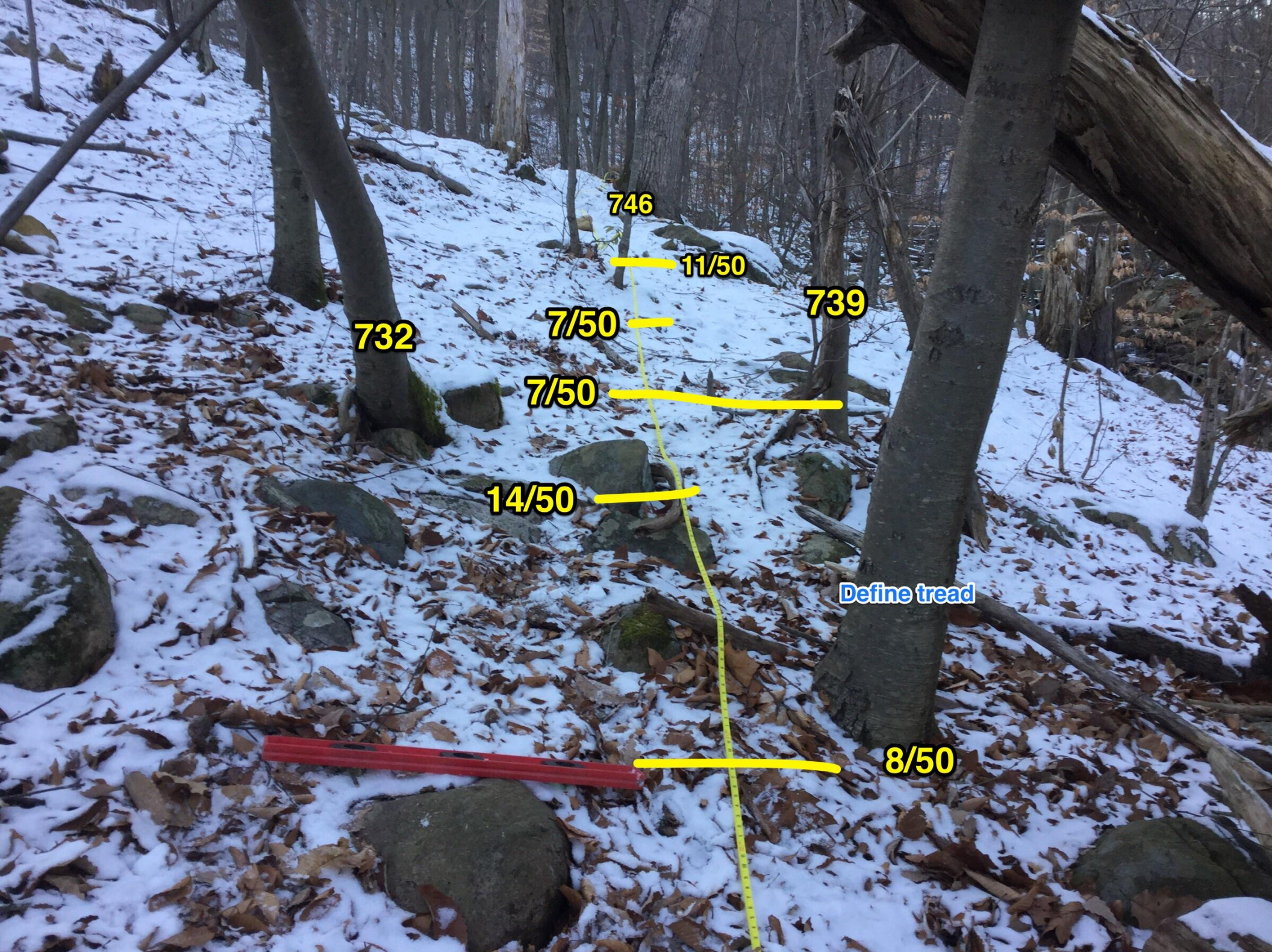
10/50

11/50

14/50

Define tread





746

11/50

739

732

7/50

7/50

14/50

Define tread

8/50

Hit existing trail,
Lower? to lower
step number

766

9/50 @ 770

17/50

3/50

11/50

14/50

746

11/50

3-4 steps

2-3 steps