

Considering hazards both inside and outside the property lines

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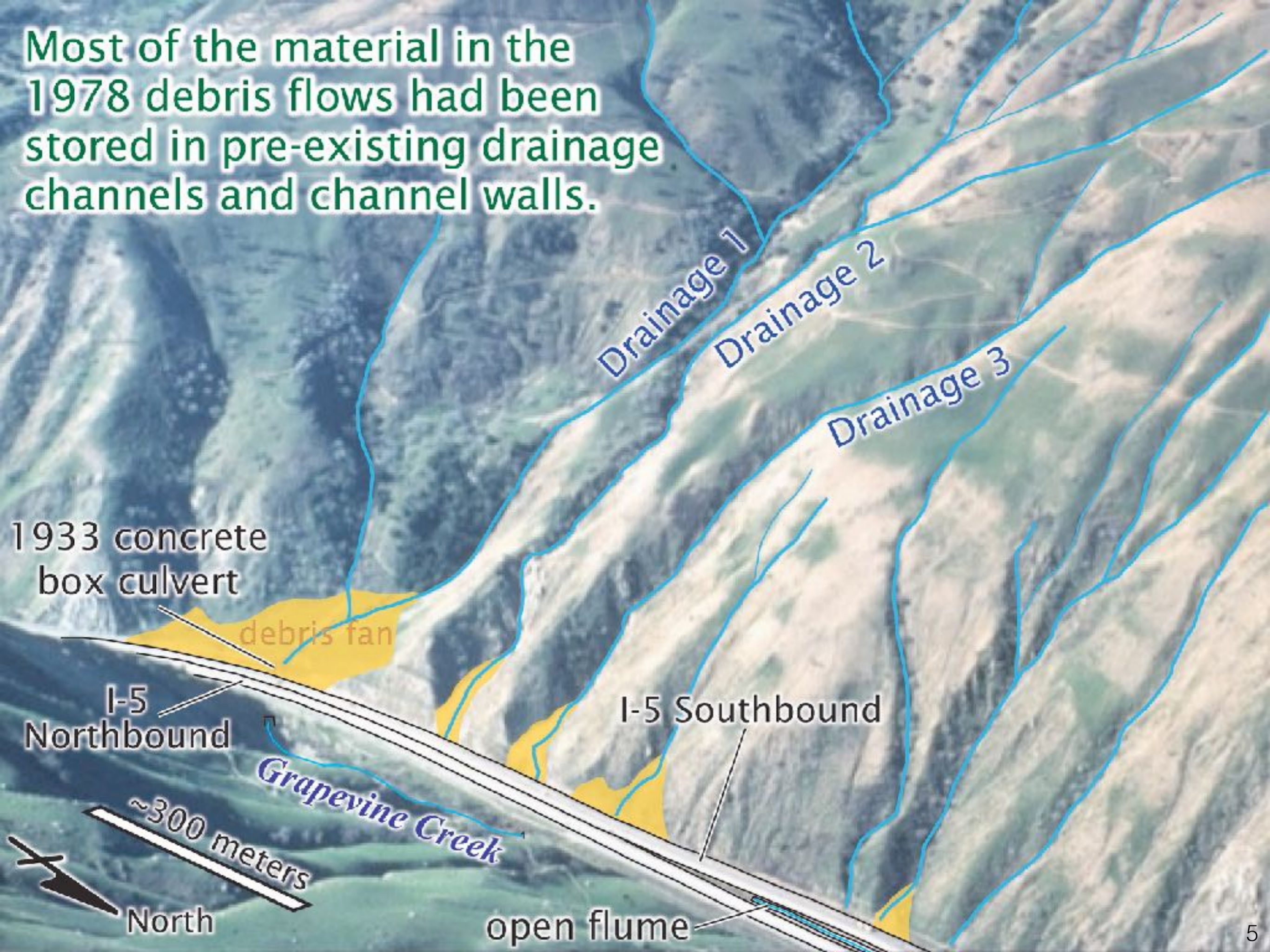
Case 1

I-5 Debris Flow



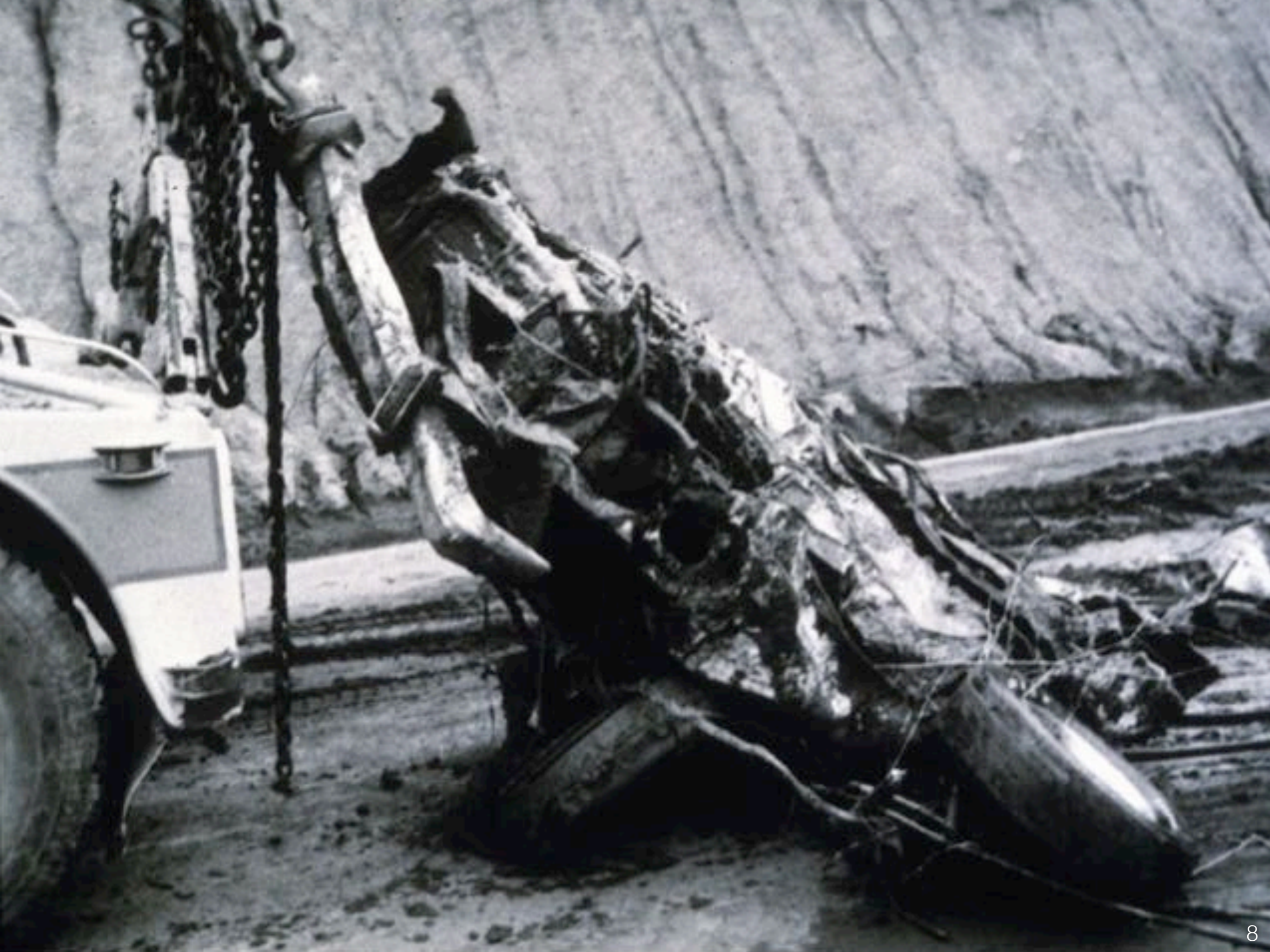


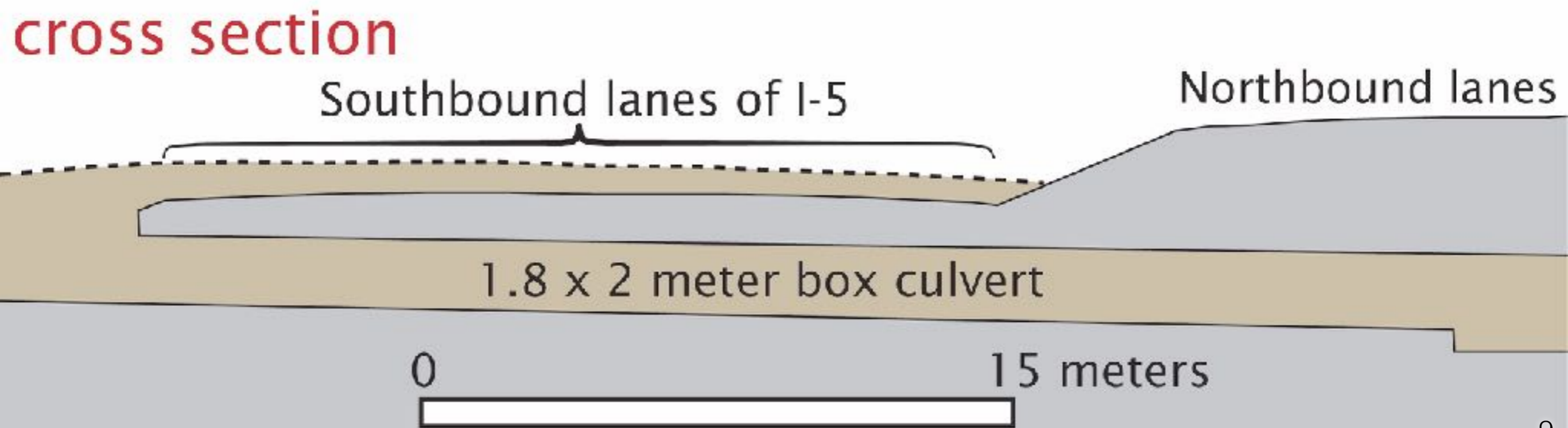
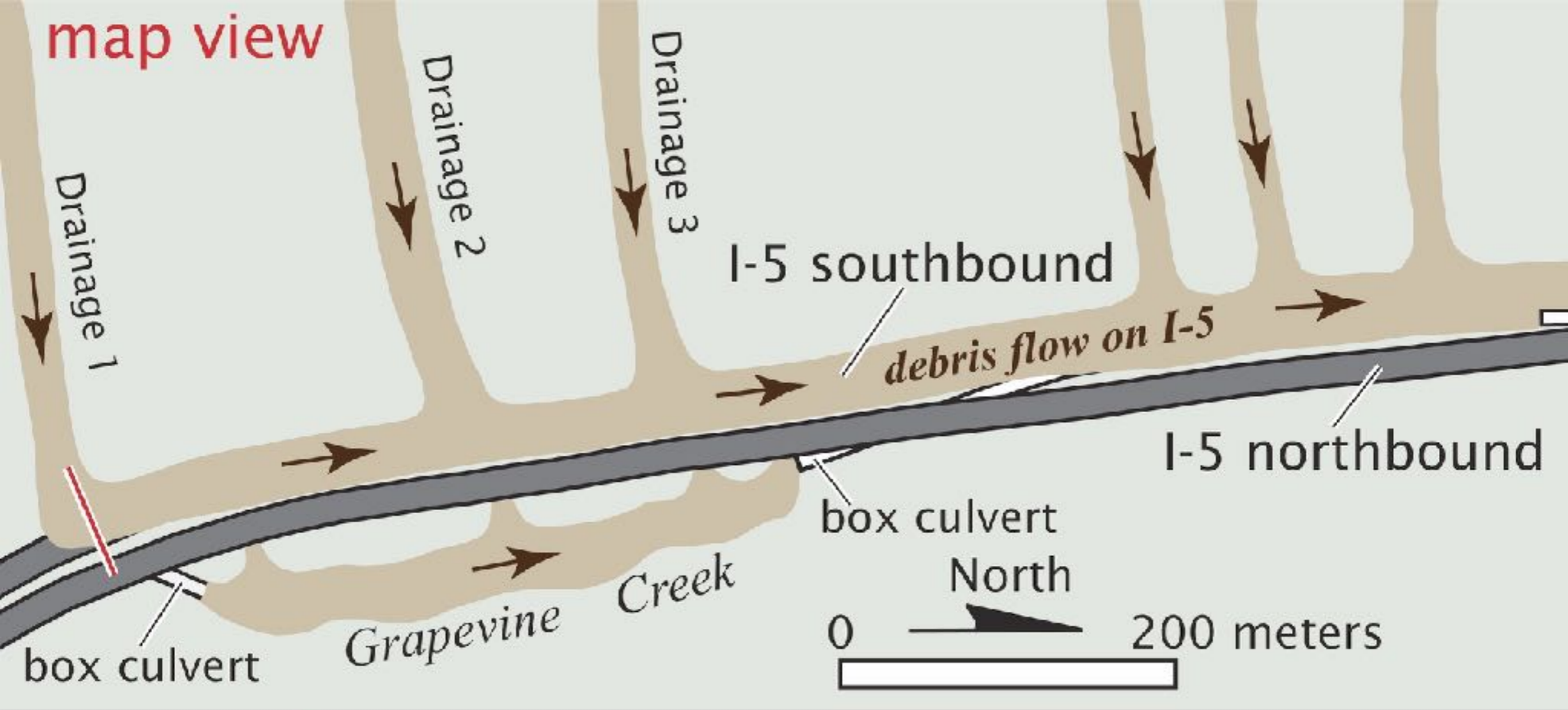
Most of the material in the 1978 debris flows had been stored in pre-existing drainage channels and channel walls.













Case 2

Pacifica Debris Flow

Velez Family, Christmas 1981

- Bill Velez, father
- Barbara Velez, mother
- Michelle, age 14
- Billy, age 7
- Melissa, age 4

“We have completed an investigation of the soil/***geologic conditions*** of the subject site...

The investigation consisted of a soil and foundation study ***and a geologic reconnaissance of the local area...***

Our findings indicate that the site is suitable for the proposed residential use...”

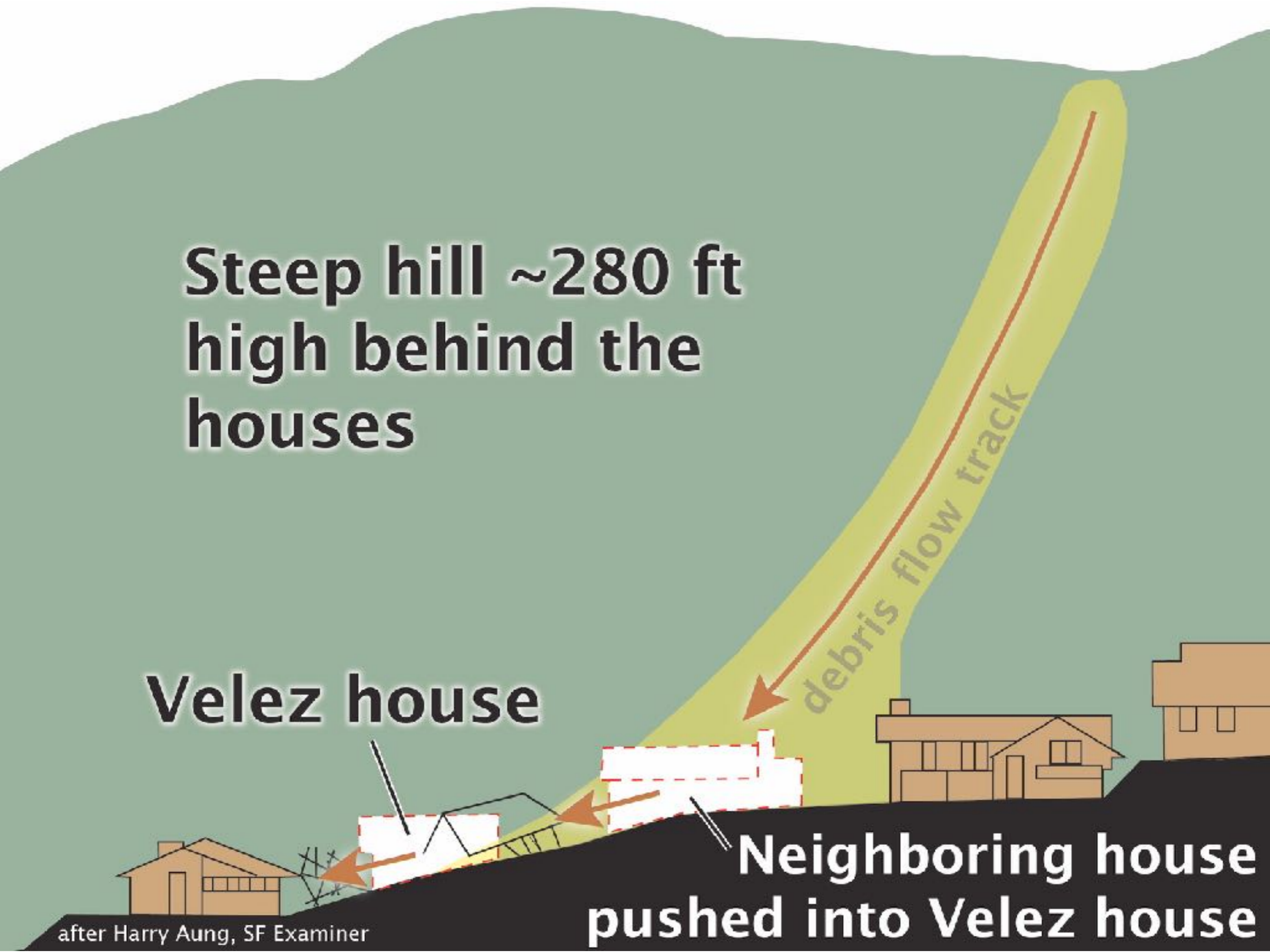


**Steep hill ~280 ft
high behind the
houses**

Velez house

debris flow track

**Neighboring house
pushed into Velez house**





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- Colluvium-filled swales were not commonly recognized as potential hazards — it was beyond standard practice.
- This project was driven by the developer and engineers. Site geology was a minor consideration.





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Case 3: New Construction Within the San Andreas Fault Zone

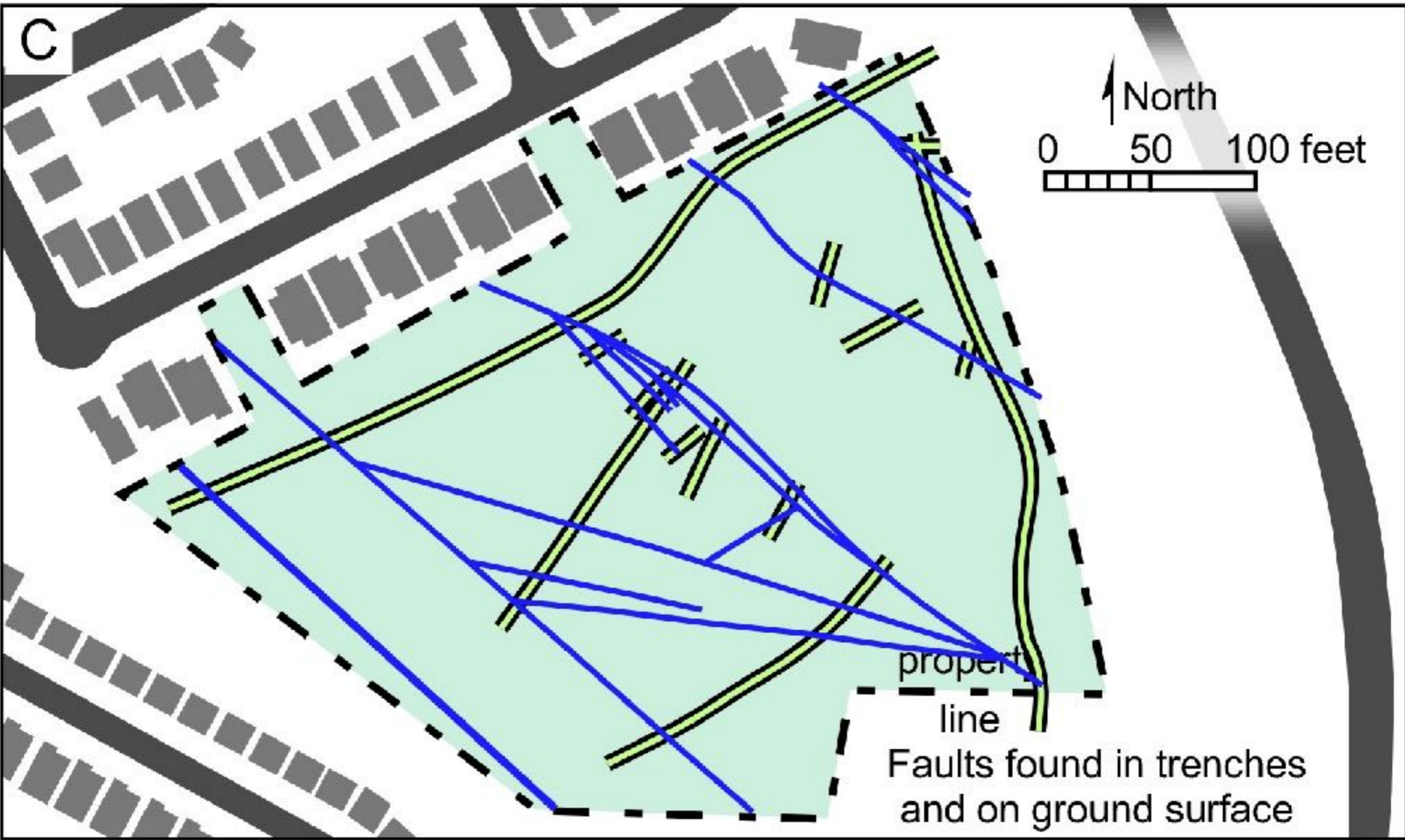


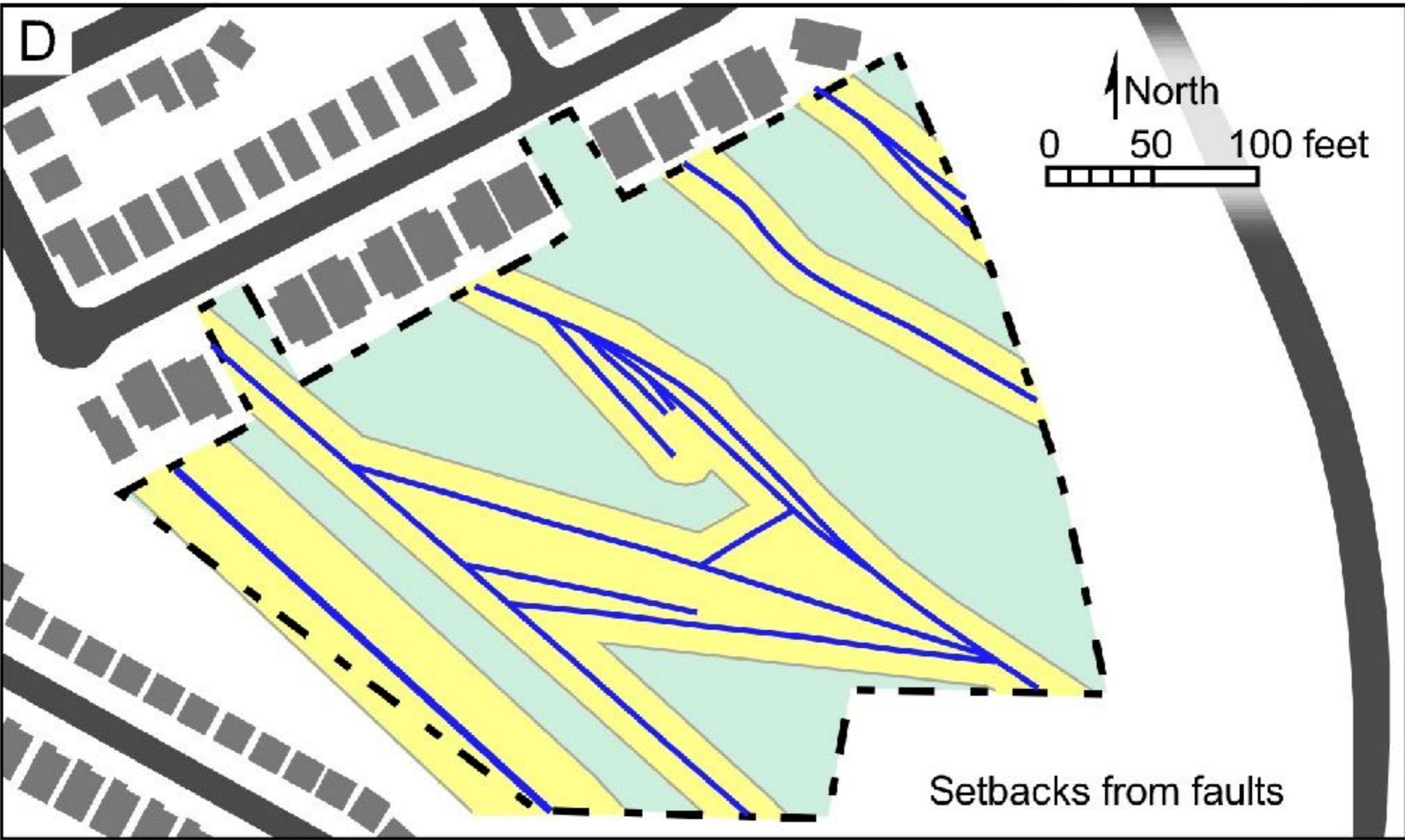
Google Earth image



Google Earth image

July, 1993

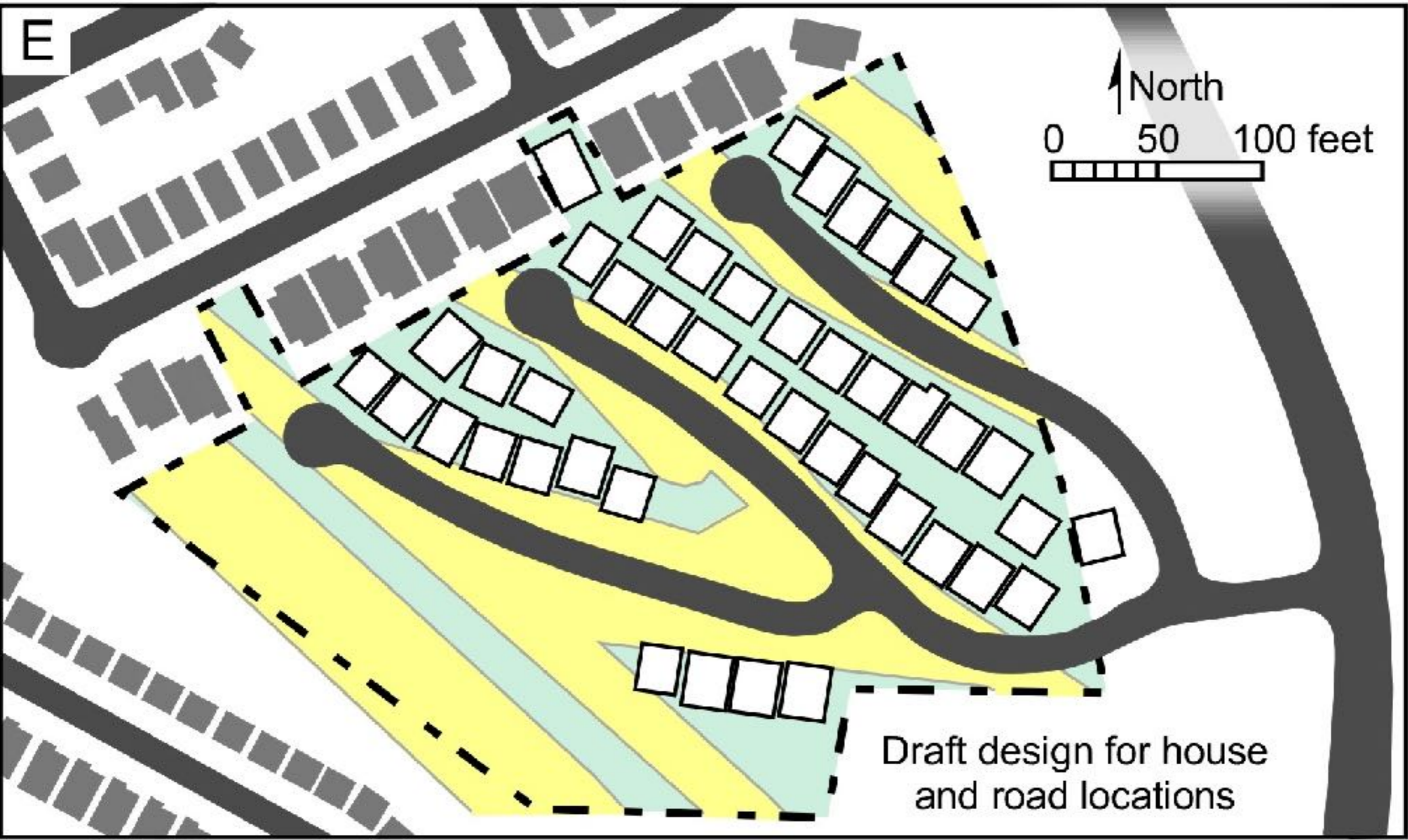




E

North

0 50 100 feet



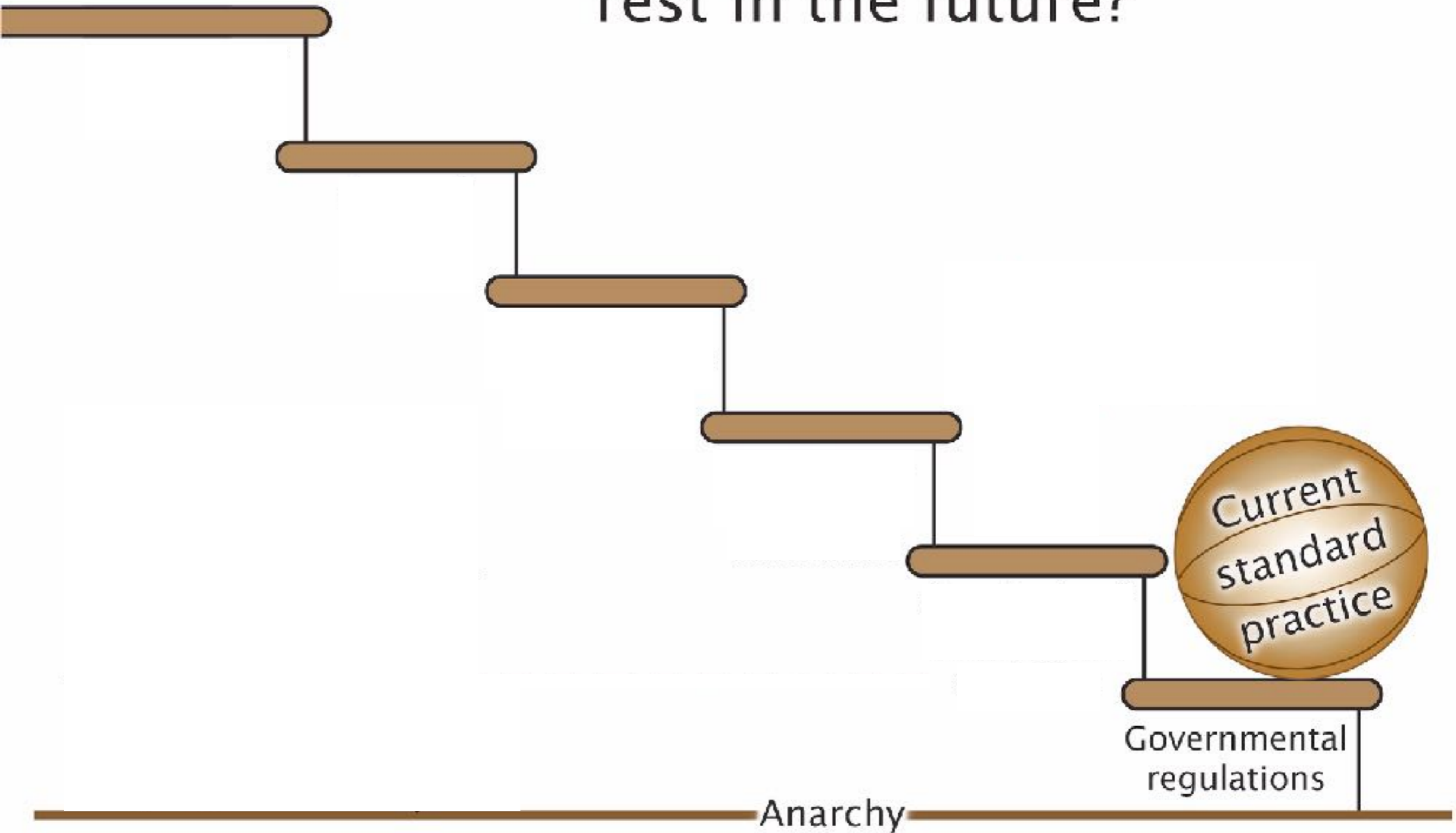
Draft design for house and road locations



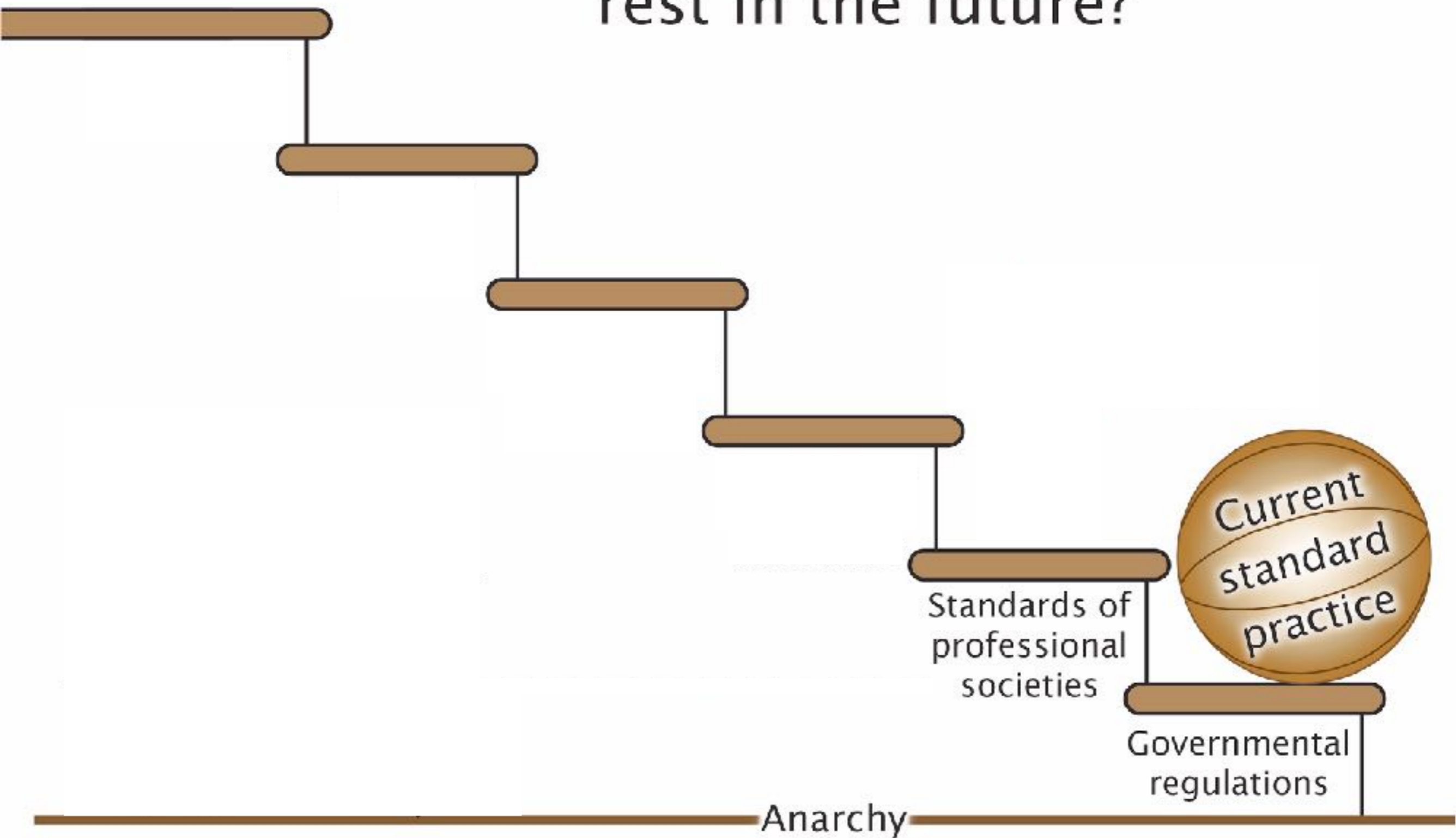
March, 2015



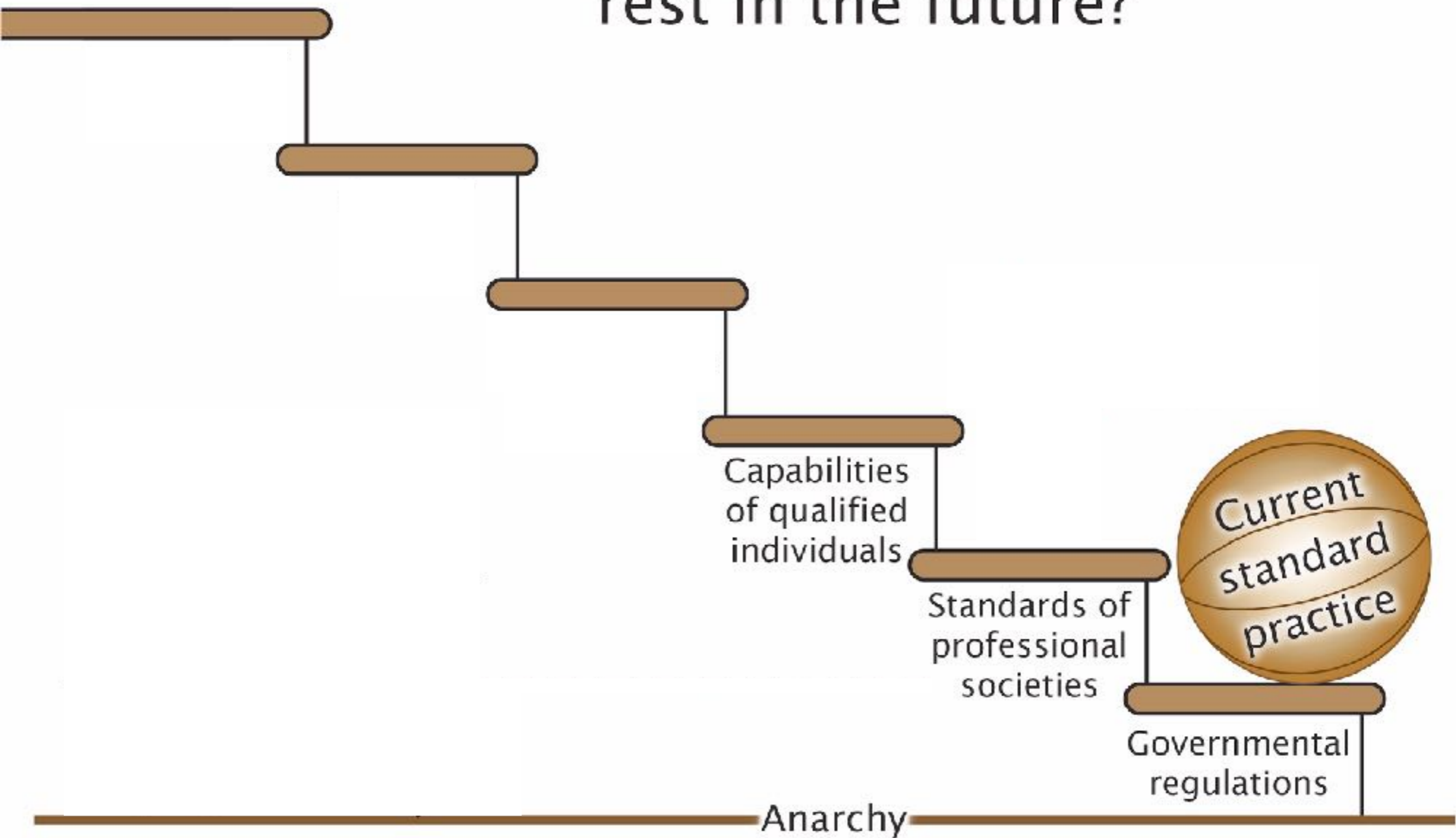
On which level will standard practice rest in the future?



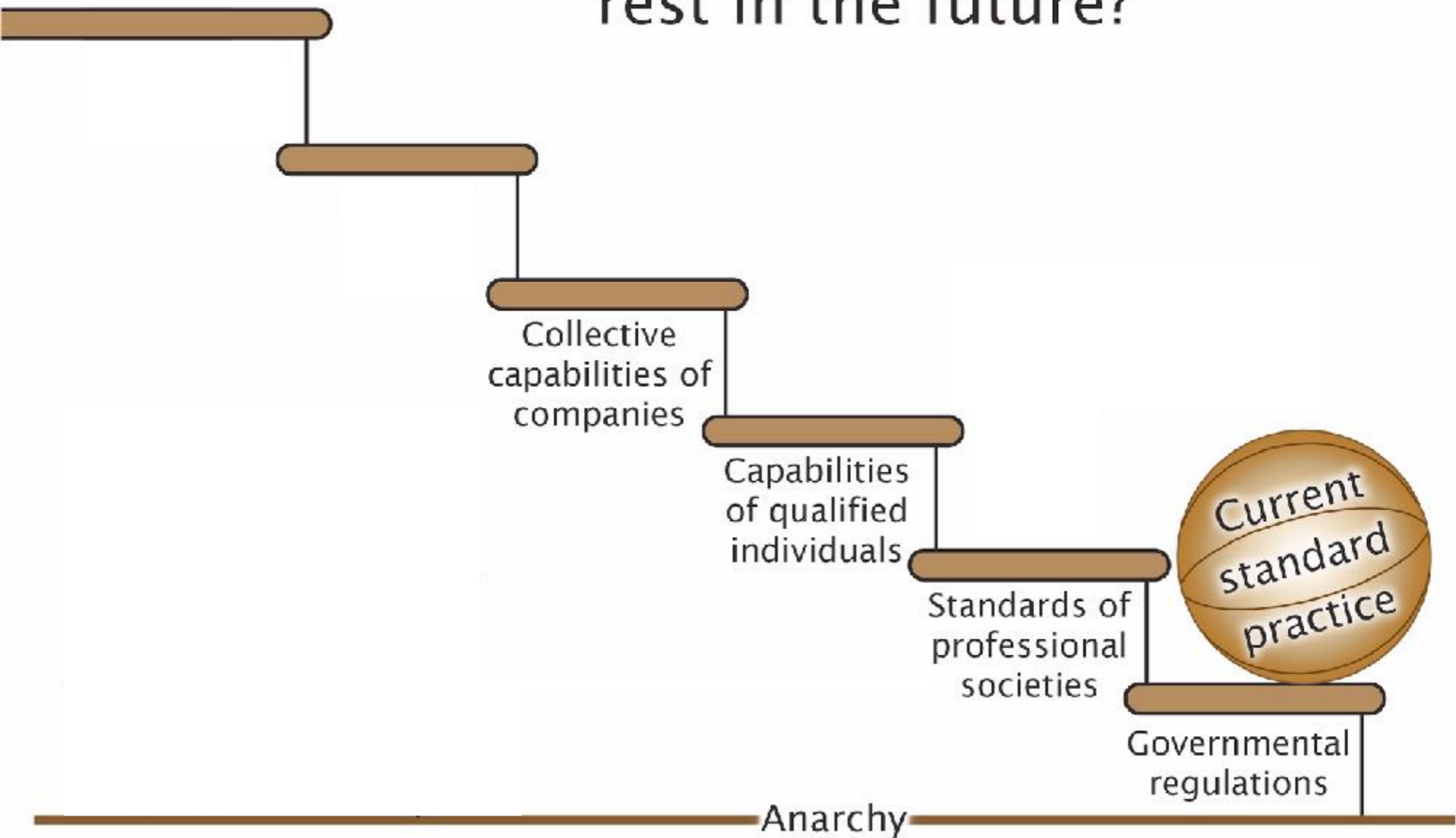
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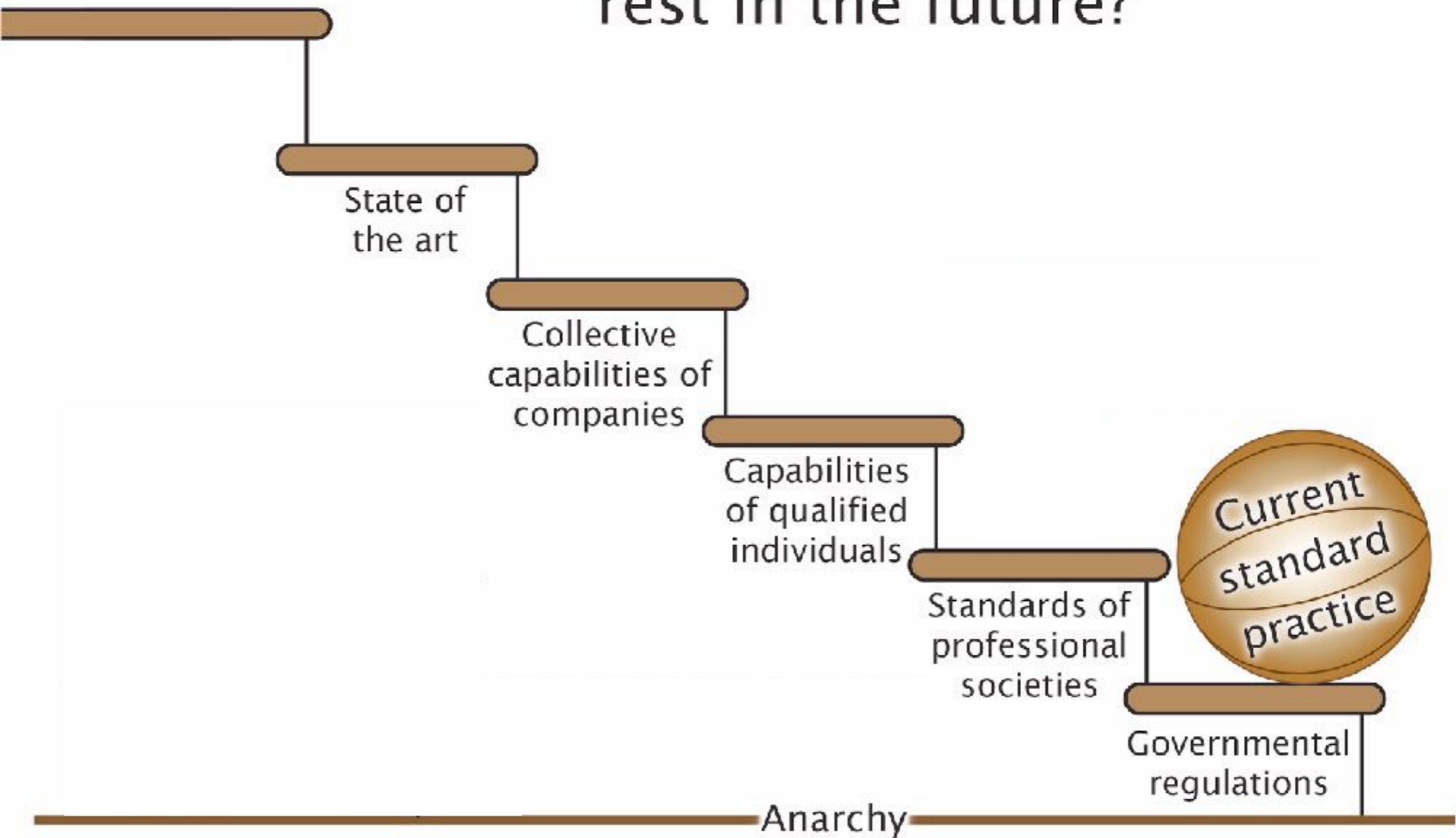
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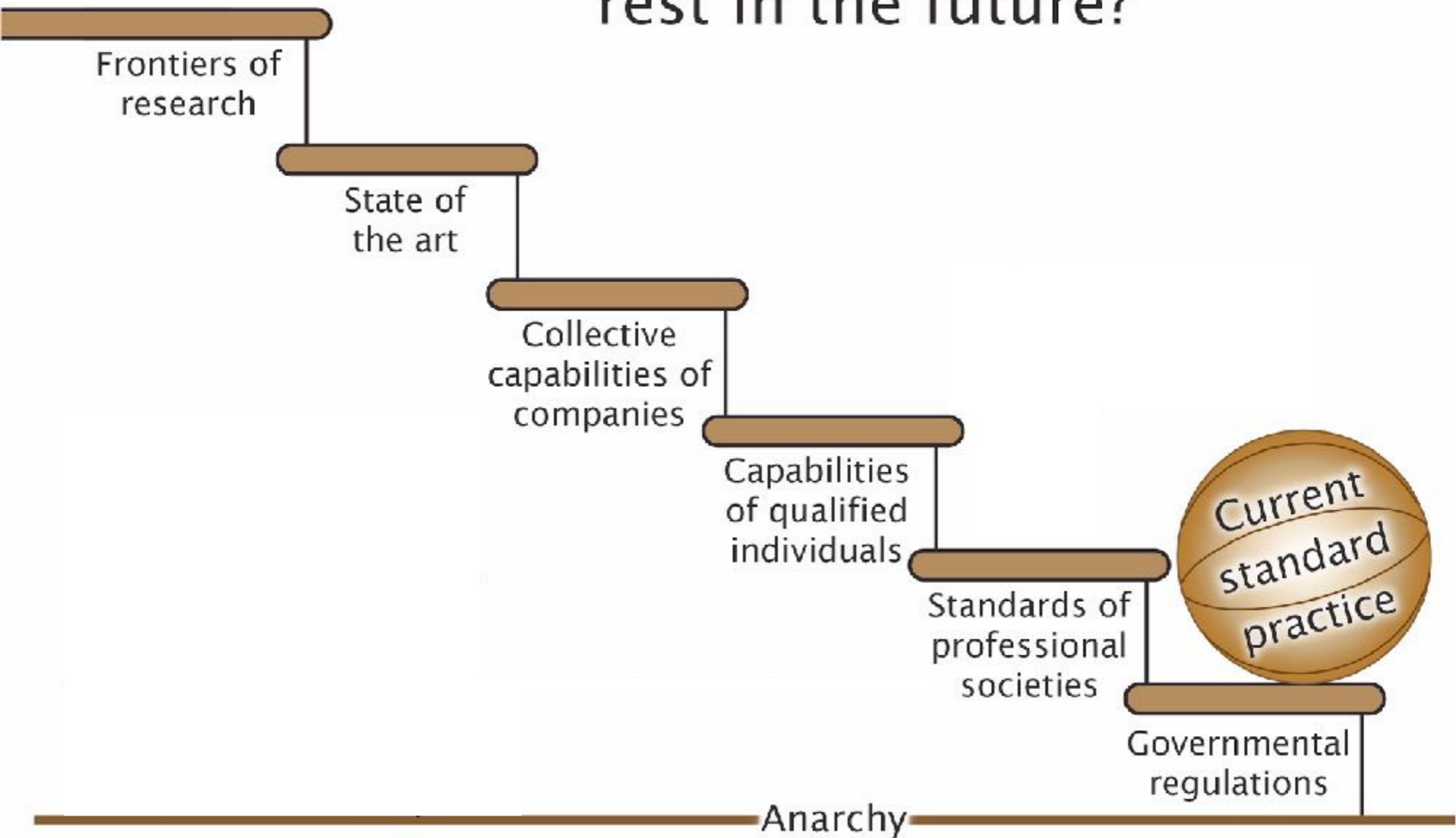
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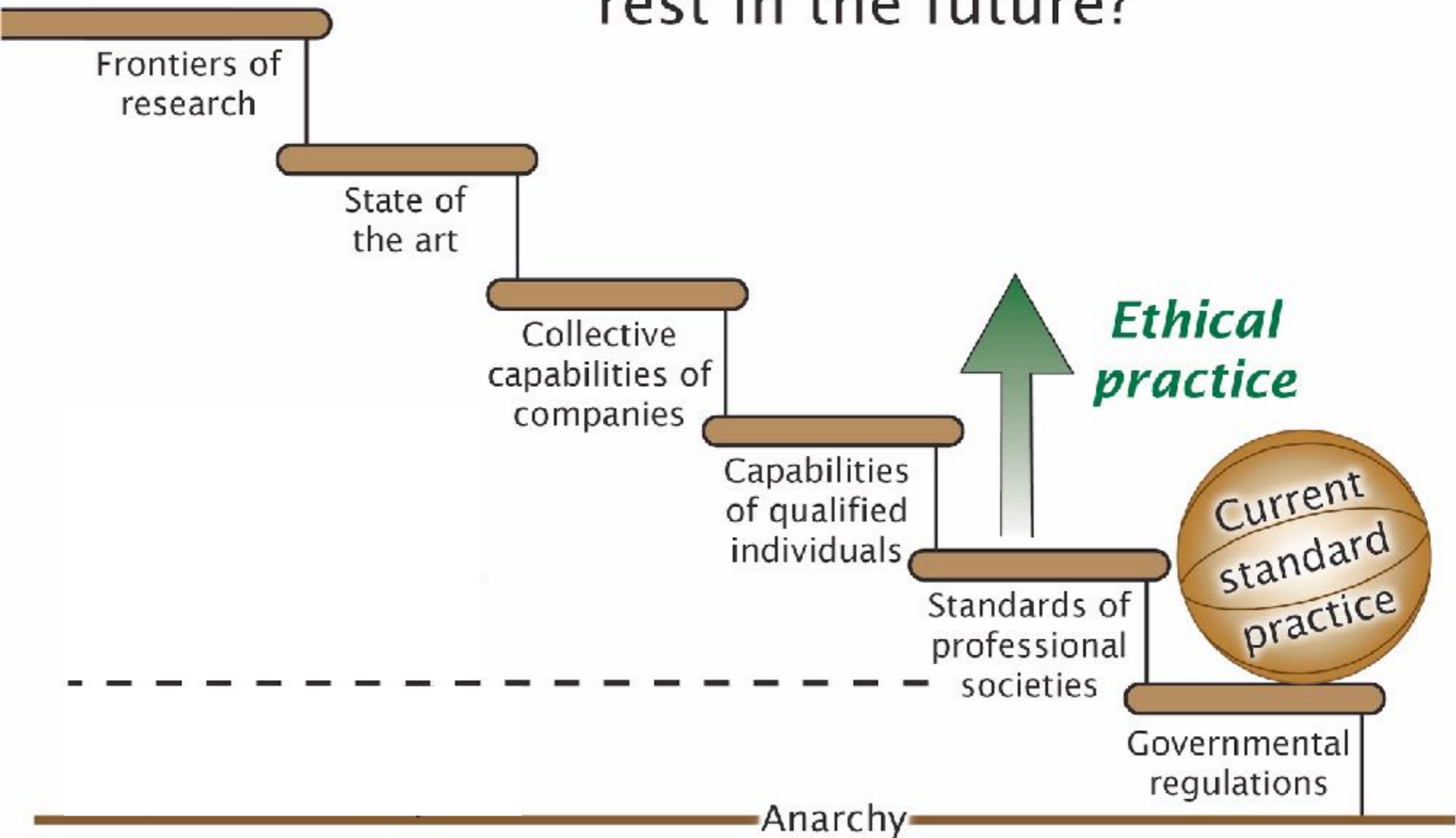
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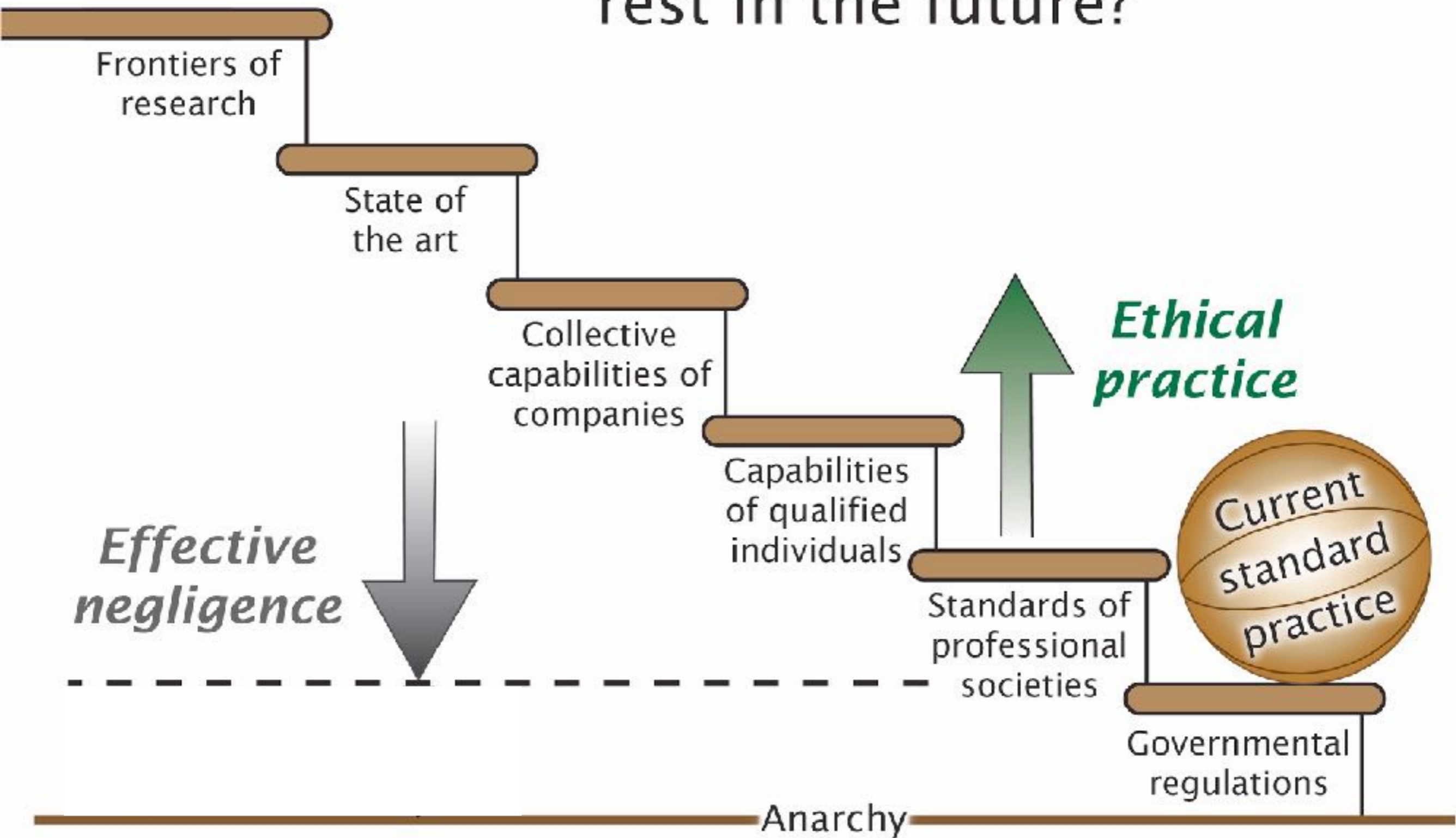
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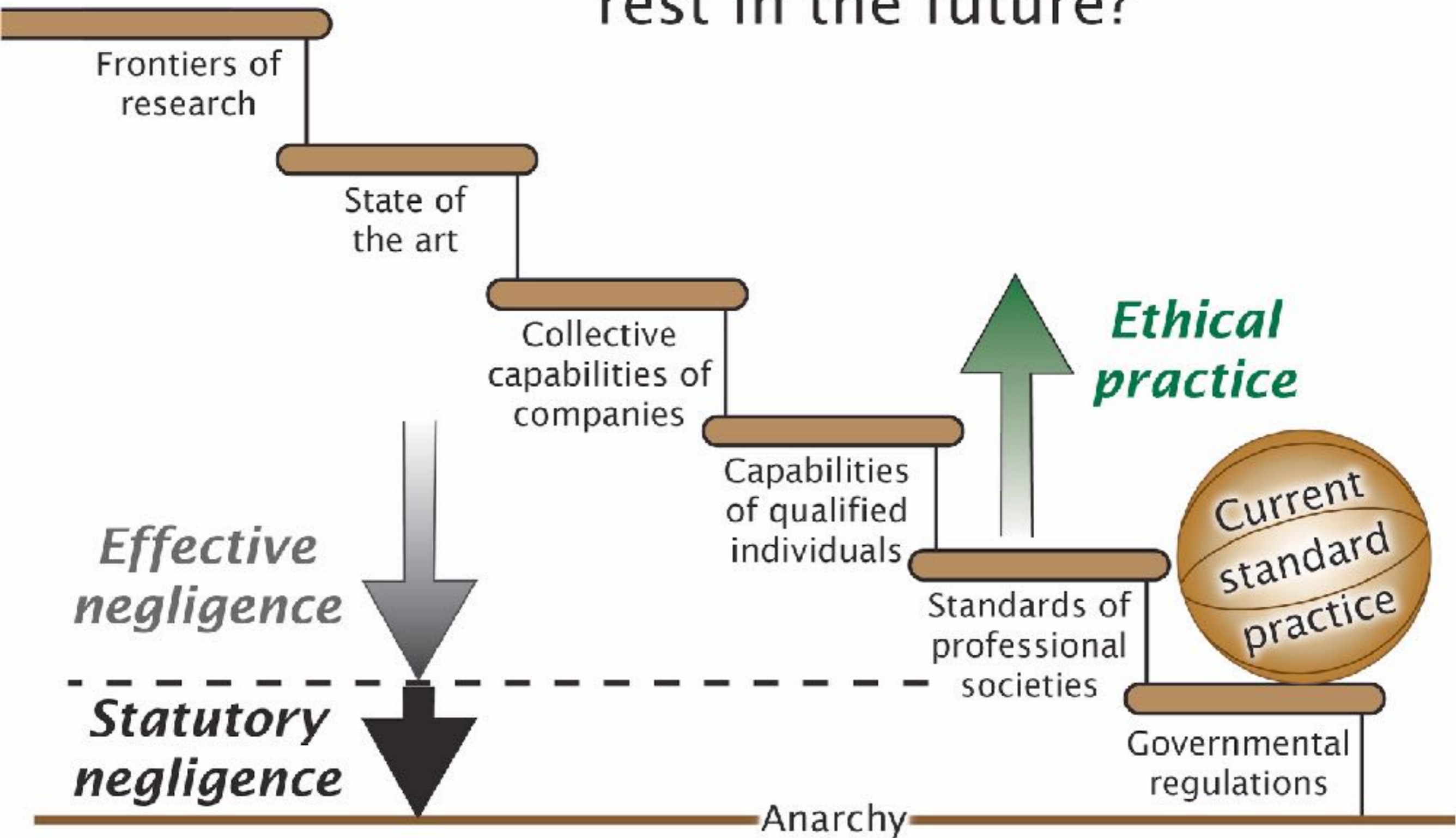
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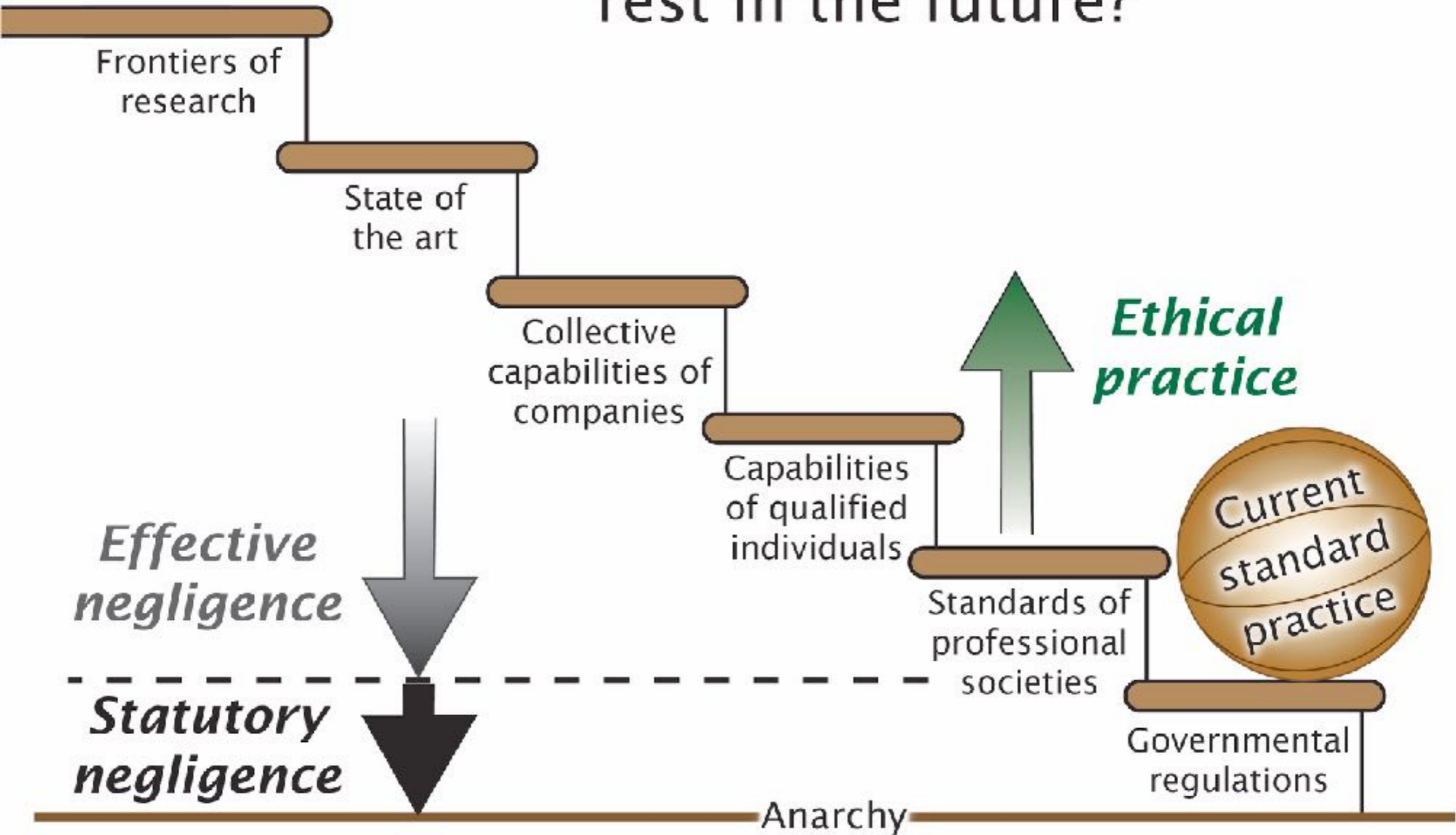
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Slosson's Law: Practice will drop to the lowest level permitted by the administration and enforcement of applicable law.

*Primacy Clause
in Codes of Professional Ethics*

**In our professional work,
the health, safety, and well-being of
the public are paramount.**

Robert Tepel

**Business decisions do not outweigh
our duty to protect the public.**

Our goal as professional geoscientists is to participate in the responsible development of assets that are of sustainable benefit to society, while avoiding or effectively mitigating any hazardous consequences of that development.