Richard H. Jahns Lecture Series 2022-23

Vince Cronin

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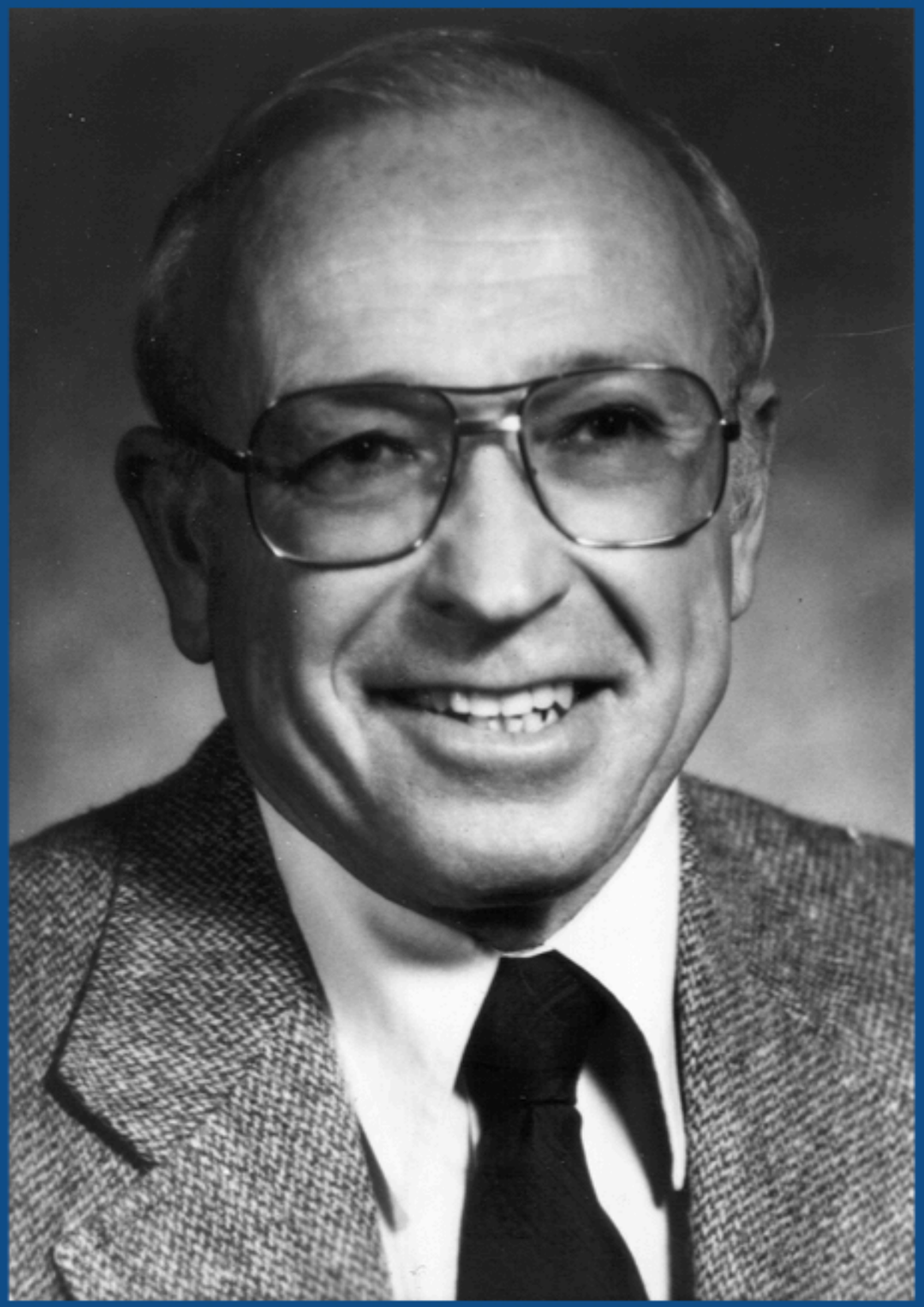
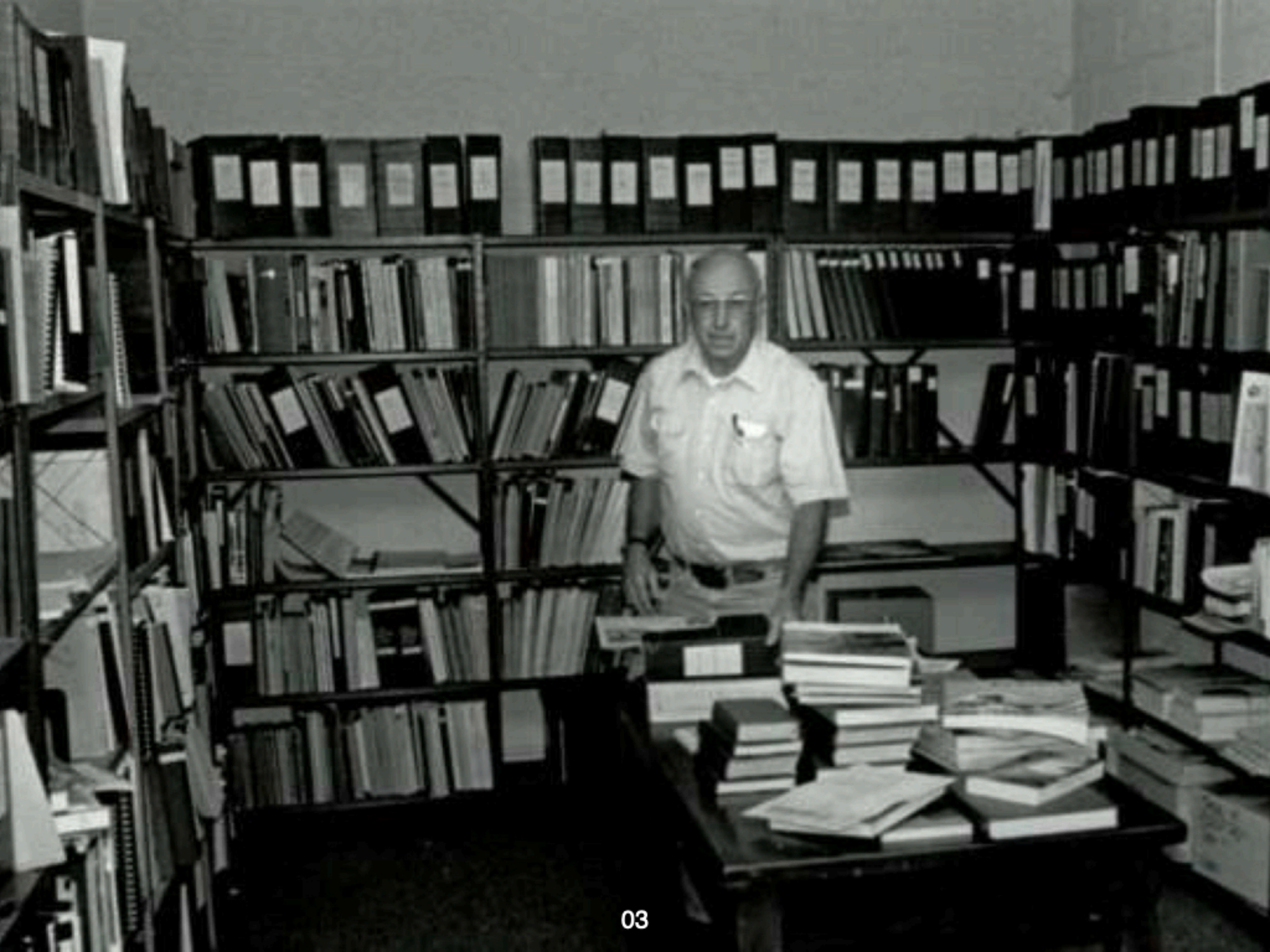
https://CroninProjects.org/Jahns/



Dr. Jim Slosson

California State Geologist
1973-75

Jahns Lecturer
1989



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How can an engineering geologist find an active fault?

photo by Ryan Gold, USGS

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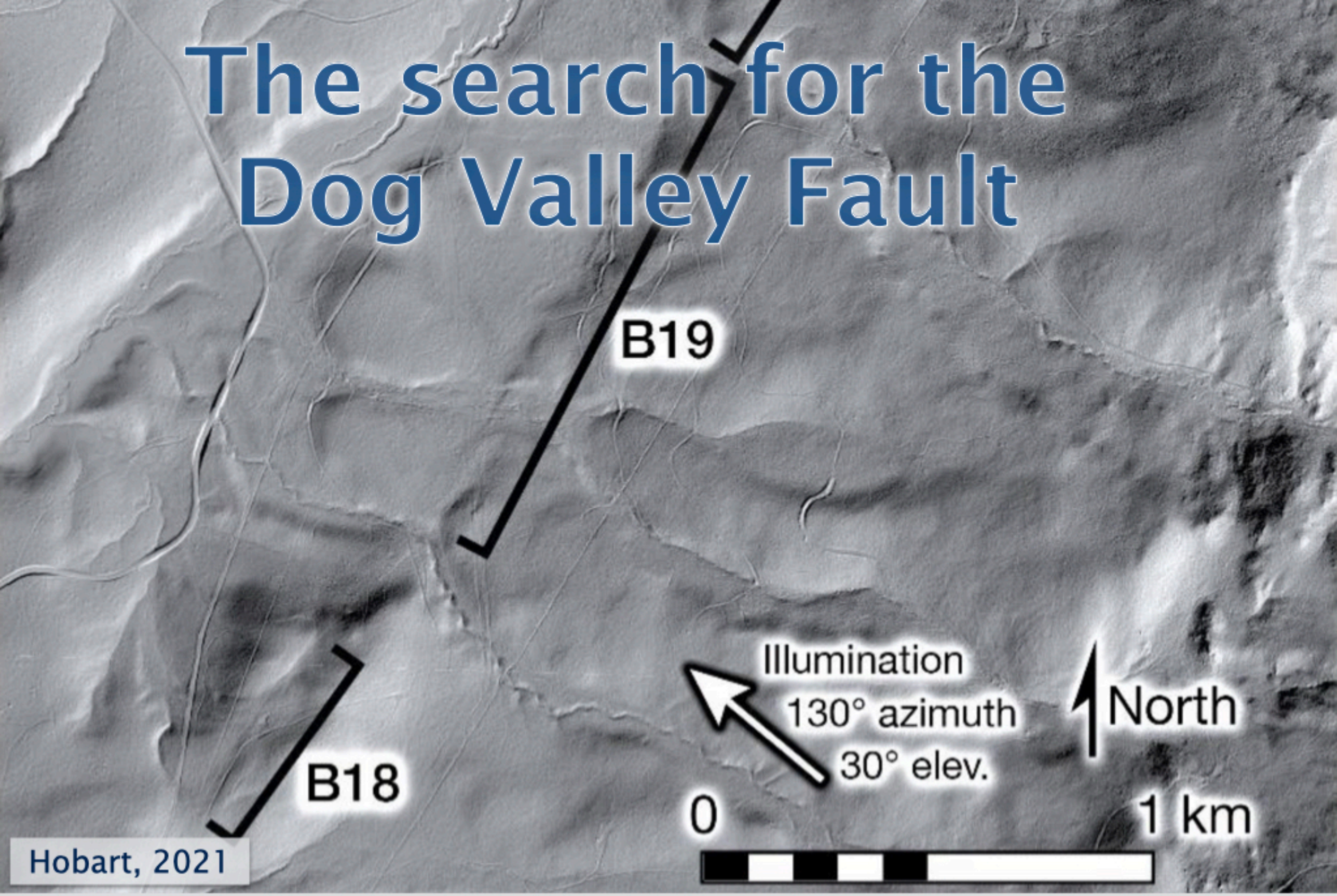
The search for the Dog Valley Fault



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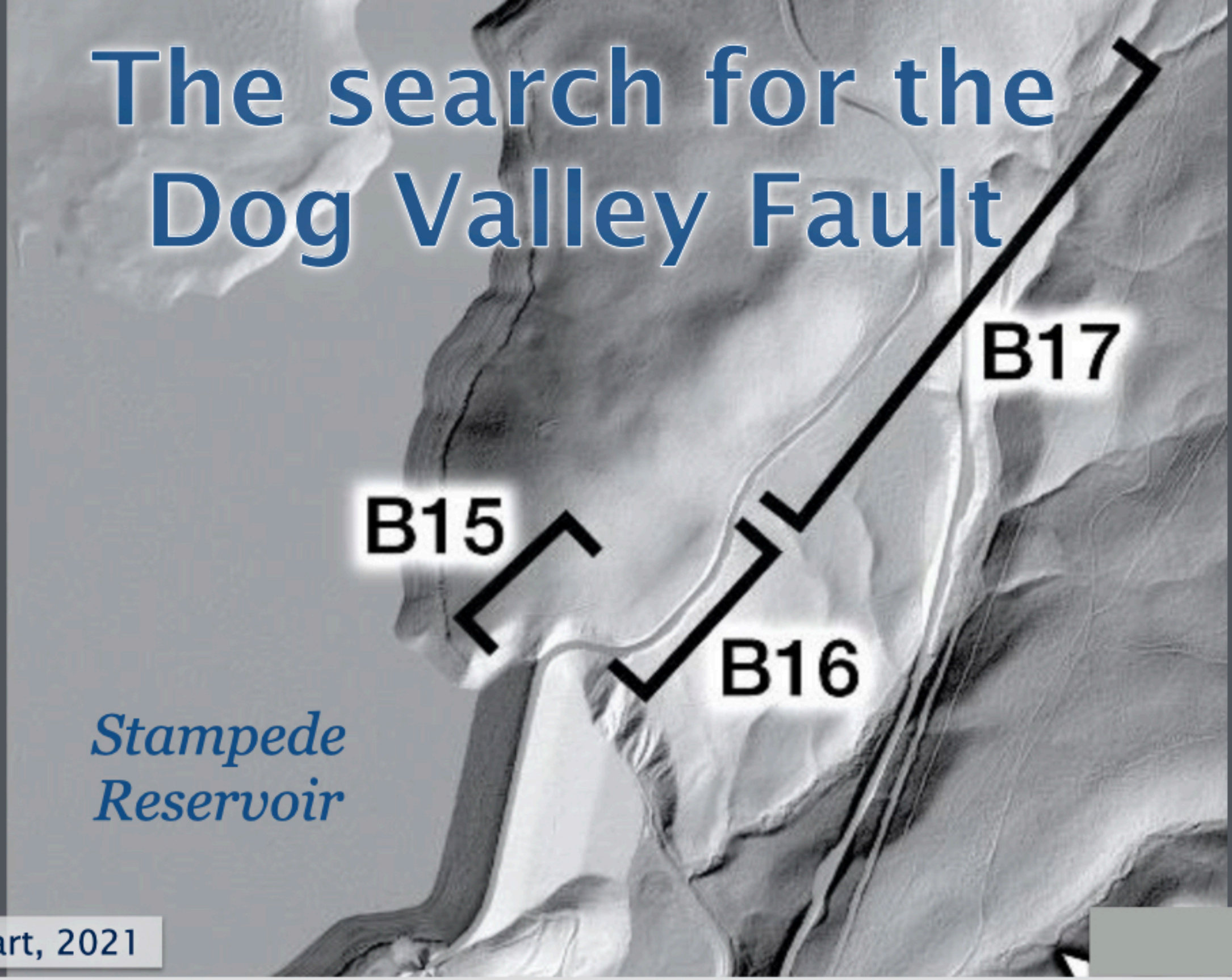
The search for the Dog Valley Fault



Hobart, 2021

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A path from "Rocks for Jocks" to a career in engineering geology

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A path from "Rocks for Jocks" to a career in engineering geology

Jim McCalpin teaching how to identify a fault in a trench

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Geoethics is at the heart of engineering geoscience

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How can engineering geology help society meet the challenge of a changing climate?

photo by Kimberly Vardeman

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Why do I think geoethics is fundamental to engineering geoscience?

Debris flows of February 5, 1978, along Interstate 5 near Grapevine, California

photo by Jim Slosson

photo by Jim Slosson

photo by Jim Slosson

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

Drainage 1

Drainage 2

Drainage 3

1933 concrete box culvert

debris fan

I-5 Northbound

I-5 Southbound

Grapevine Creek

~300 meters

North

open flume

photo from CHP

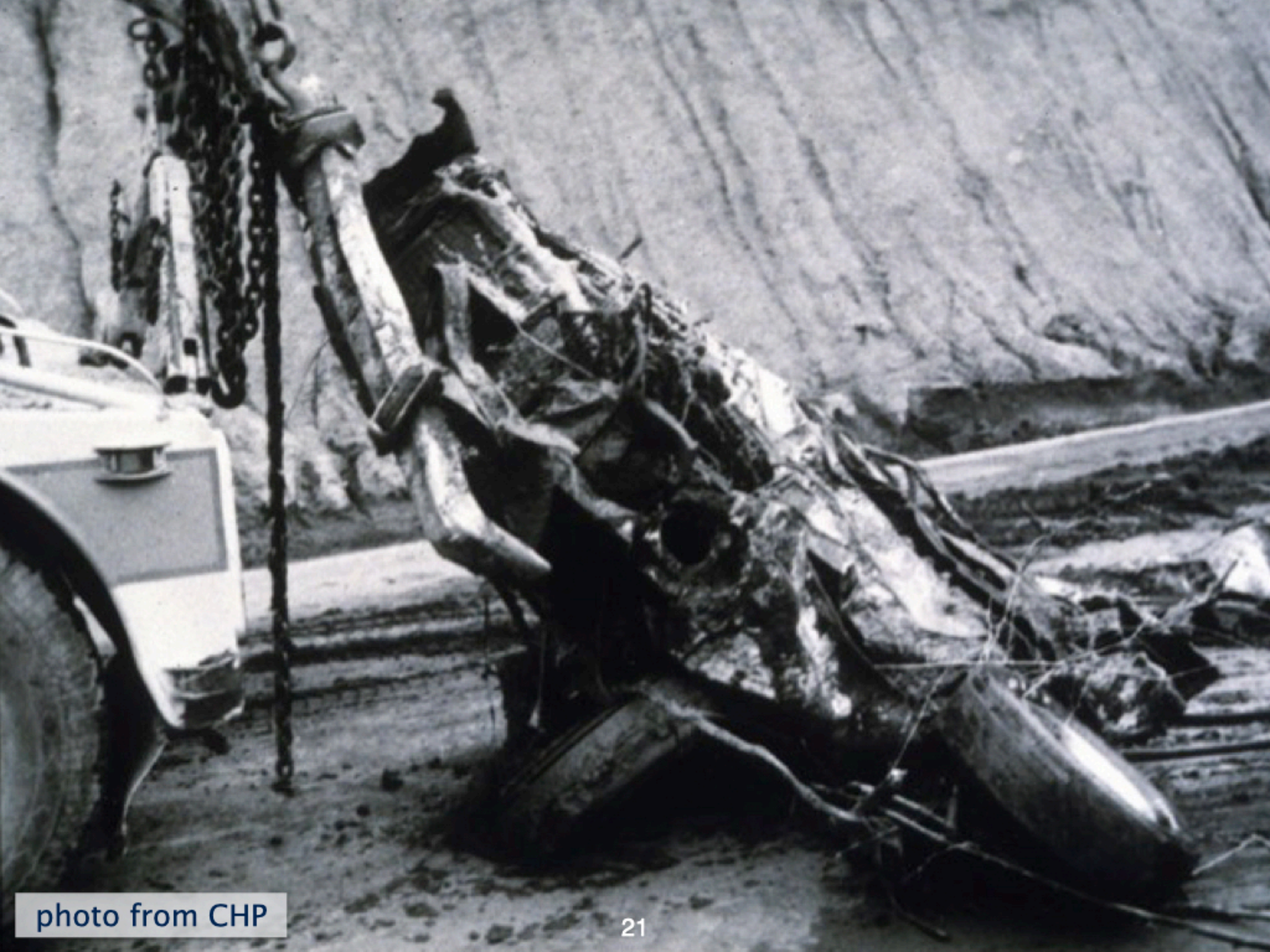

photo from CHP

map view

Drainage 1

Drainage 2

Drainage 3

I-5 southbound

debris flow on I-5

I-5 northbound

box culvert

box culvert

Grapevine Creek

North

0 200 meters

cross section

Southbound lanes of I-5

Northbound lanes

1.8 x 2 meter box culvert

0 15 meters

photo by Jim Slosson

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Debris flow of January 4, 1982, along Oddstad Blvd in Pacifica, California

photo from Jim Slosson

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…"

photo from Jim Slosson

Steep hill ~280 ft high behind the houses

debris flow track

Velez house

Neighboring house pushed into Velez house

after Harry Aung, SF Examiner

photo from Jim Slosson

Reasons given to explain why the hazard potential was not recognized

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- The source of the debris was on the other side of the property line.

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- The source of the debris was on the other side of the property line.
- 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.

photo from Jim Slosson

photo from Jim Slosson

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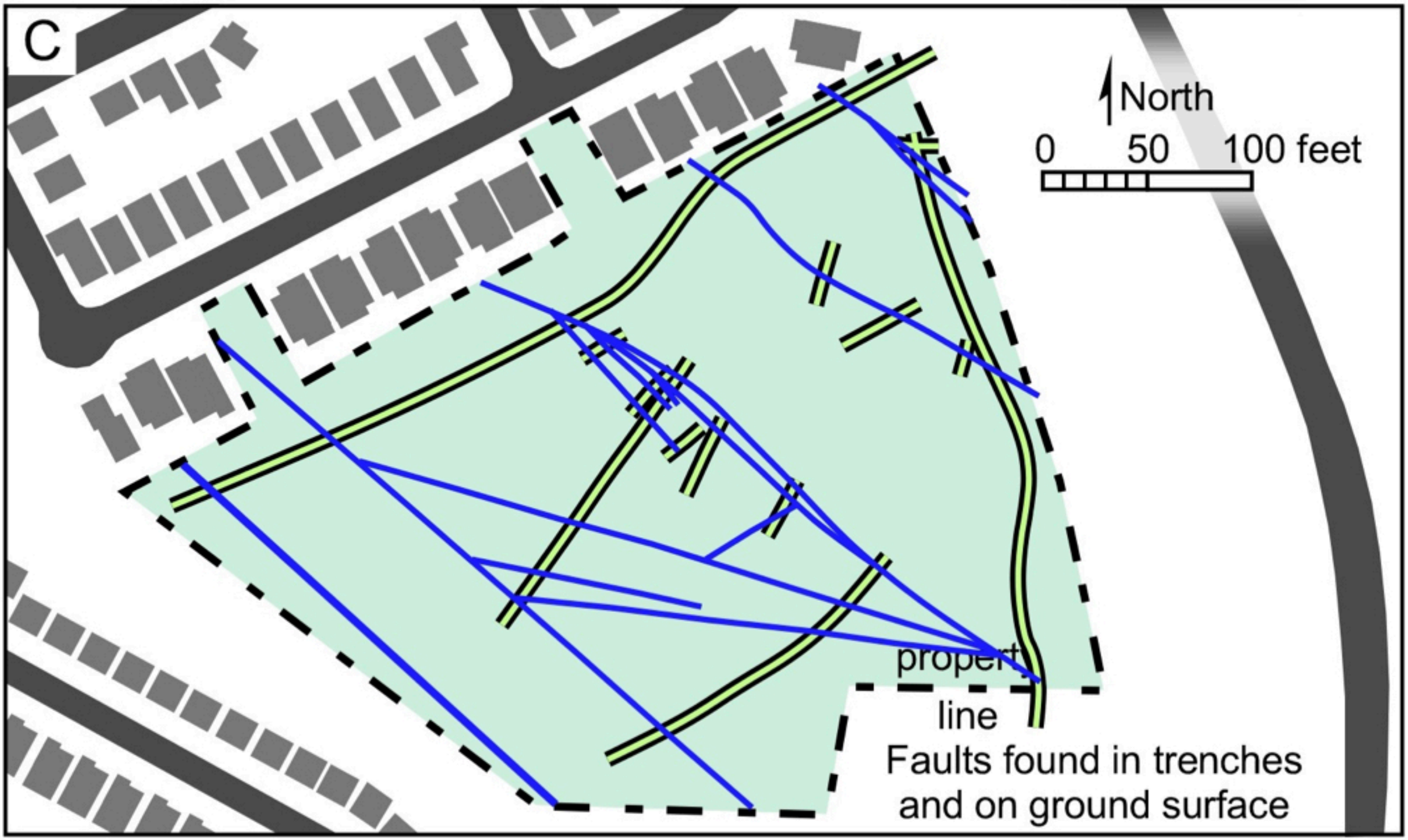
Robert Larson at Hume Rd., Malibu

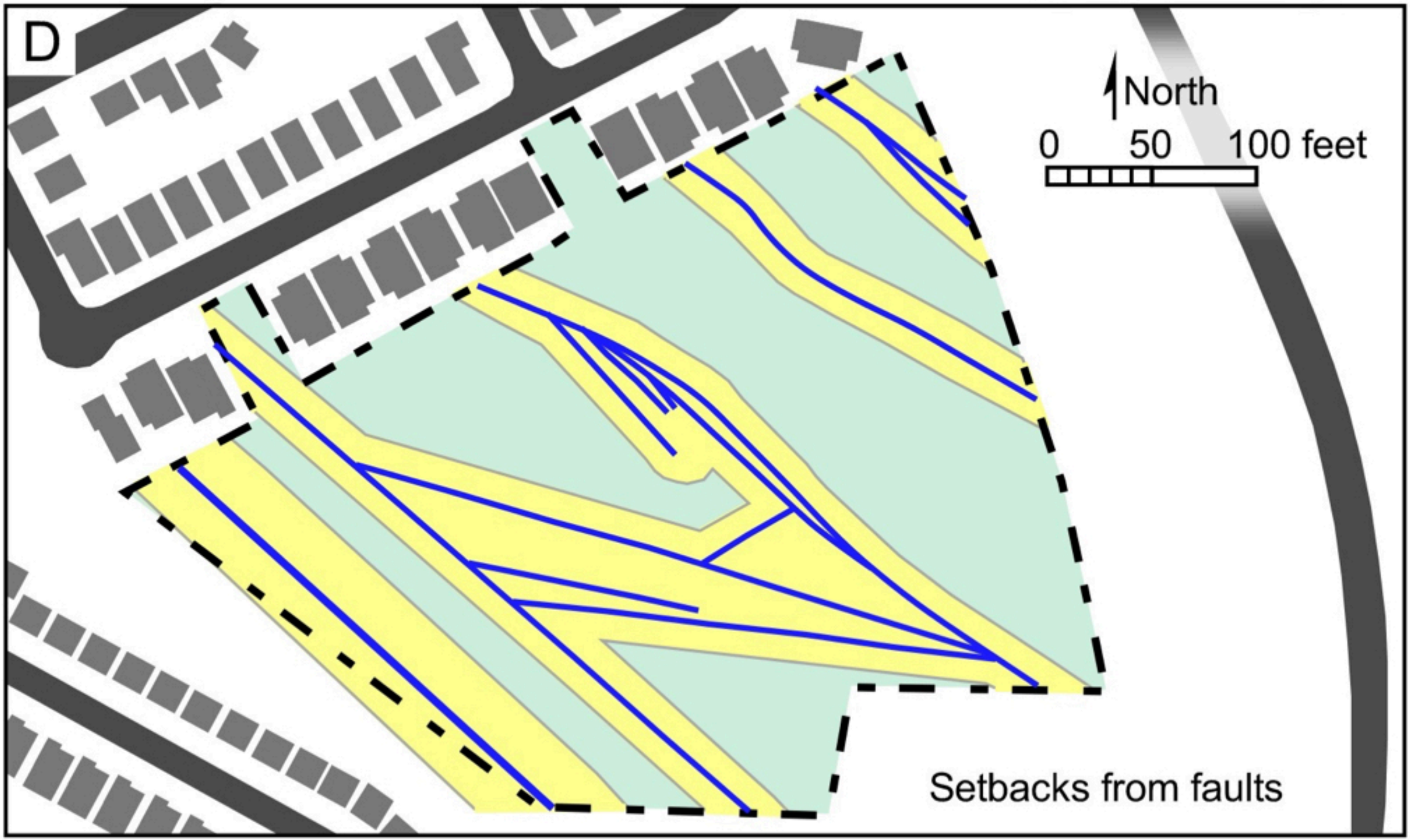
New Construction Within the San Andreas Fault Zone, Pacifica, California

Google Earth image


Google Earth image
July, 1993



after W.A. Bryant



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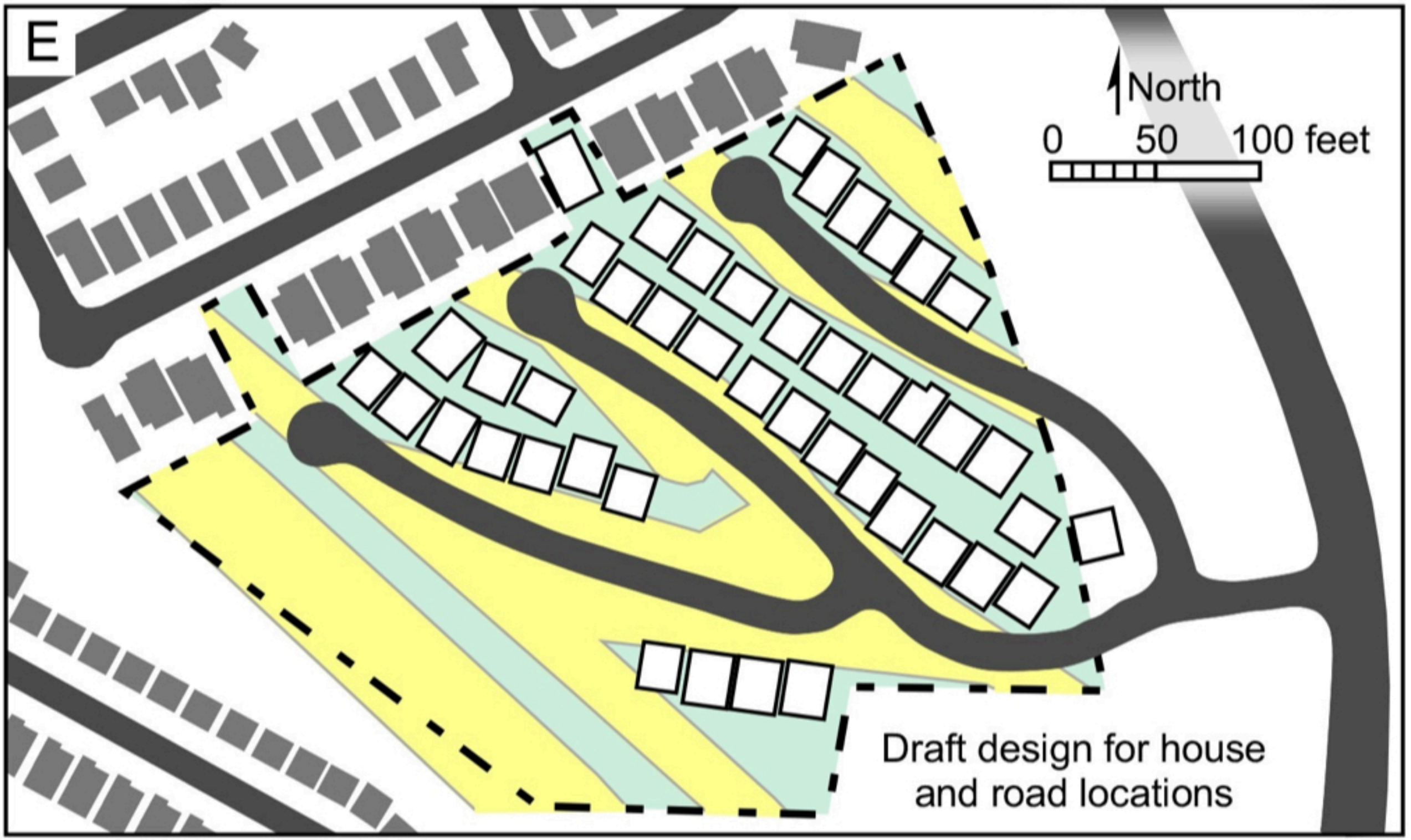

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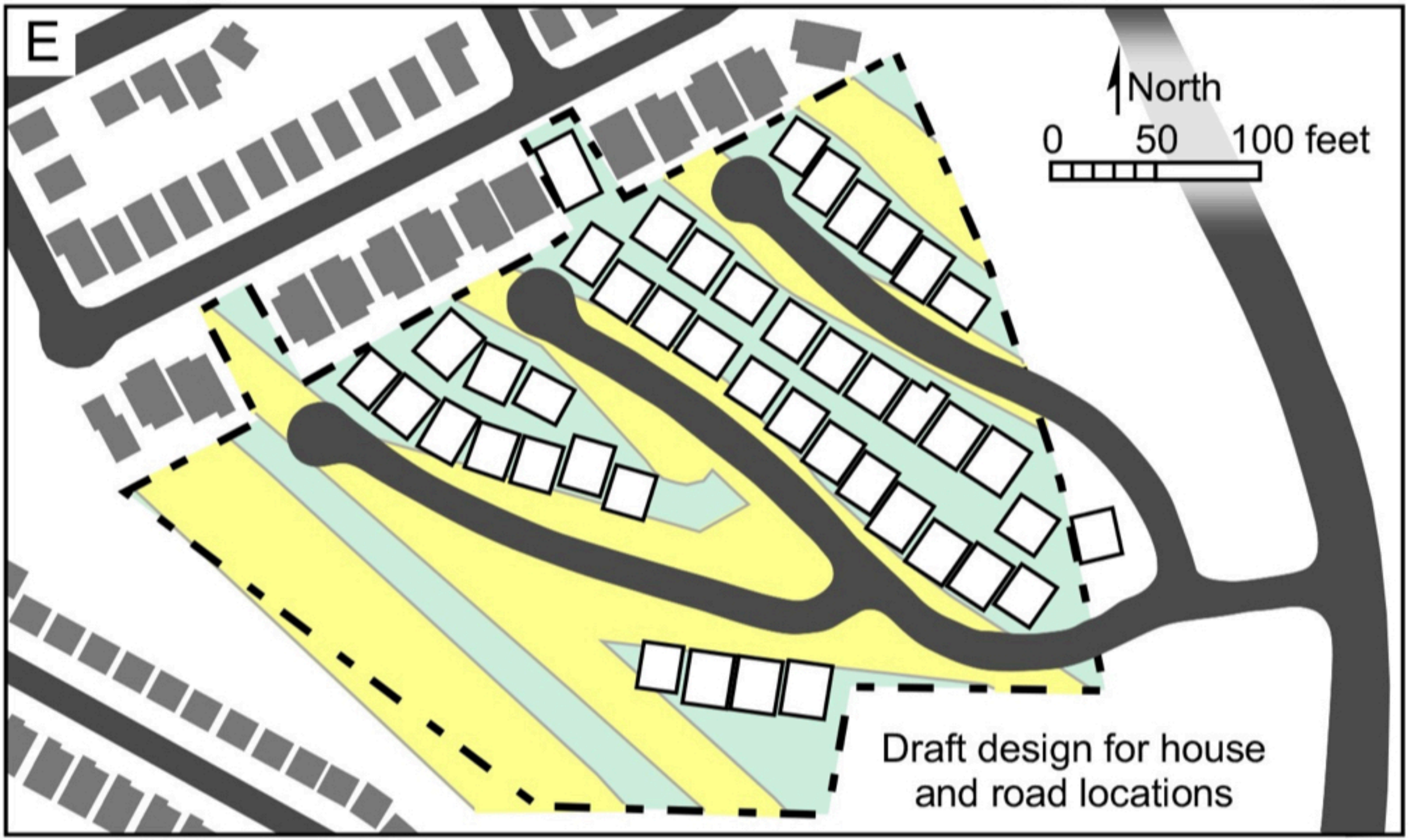

after W.A. Bryant

Google Earth image

March, 2015

New houses inside the
San Andreas Fault Zone, Pacifica

Slosson's Law

Practice will drop to the lowest level permitted by the administration and enforcement of applicable law.

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Practice will drop to the lowest level permitted by the administration and enforcement of applicable law.

(We can do better.)

We must support the positive evolution of codes, and the enforcement of codes, so they can better protect public safety.

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 professional obligation to protect the public.

We must be stewards of Earth's environment.

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Our development activities should be of sustainable benefit to society.

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We must avoid or effectively mitigate potential hazardous consequences of projects in which we participate.

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