



# Ground Deformation Form

Event/Date: \_\_\_\_\_ Investigator: \_\_\_\_\_

Short description of observation: \_\_\_\_\_ Date of observation: \_\_\_\_\_

## I. Location (please be as detailed as possible)

Descriptive: \_\_\_\_\_

Number	Address Street (indicate street, road, avenue, lane, etc.)	Additional Address (room, suite, floor, etc.)	City	State	Zip	Country

### Map Reference

Quad	Latitude	Longitude	Thomas Bros. Page No.	Grid	Station ID

## II. General Ground Deformation:

General description: \_\_\_\_\_

Time of observation: \_\_\_\_\_

Fissures or cracks in soil or rock:

- None    Few    Many  
 Widespread    Unknown

Settlement/Vertical Displacement:

- Unknown    Yes    No

Compression Features:

- Unknown    Yes    No

Extension Features:

- Unknown    Yes    No

Horizontal Offset:

- Unknown    Yes    No

Movement at or toward a Steep Slope:

- Unknown    Yes    No

Buckled or cracked pavement/ground:

- Unknown    Yes    No

Broken Buried Utilities:

- Unknown    Yes    No

Broken, Distorted or Offset above-ground Utilities:

- Unknown    Yes    No

Foundation Damage:

- Unknown    Yes    No

Surface Area Affected (m<sup>2</sup>): \_\_\_\_\_

Length (cm): \_\_\_\_\_

Width (cm): \_\_\_\_\_

Average Vertical Displacement (cm): \_\_\_\_\_

Average Horizontal Displacement  
Compression (cm): \_\_\_\_\_

Average Horizontal Displacement  
Extension (cm): \_\_\_\_\_

Slope Angle of Ground:

- Flat (< 1/2 degree)  
 Gentle (10:1 to 4:1)  
 Gentle/Moderate (4:1 to 2:1)  
 Moderate (2:1 to 1:1)  
 Moderate/Steep (1:1 to 1/2:1)  
 Steep (> 60 degrees)

Downslope Direction:

- N    NE    E    SE  
 S    SW    W    NW

Severity:

- Unknown  
 None  
 Low (< 1 cm)  
 Moderate (1 cm - 10 cm)  
 High (> 10 cm)

Material Type:

- Unknown    Soil    Rock

Continued Movement:

- Unknown    Yes    No

### III. Surface Fault Rupture:

General description: \_\_\_\_\_

Time of observation: \_\_\_\_\_

Type of Fault Movement:

- Reverse  Normal  Right-Lateral  Left-Lateral

Pattern:

- Linear  Branching  Right-step en echelon  Left-step en echelon  Other \_\_\_\_\_

Kinematic Indicators:

- Branching  Left-step en echelon  Right-step en echelon  Other \_\_\_\_\_

Material Type:

- Unknown  Soil  Rock  Other \_\_\_\_\_

Fault Strike: \_\_\_\_\_ Fault Dip: \_\_\_\_\_

Width of fault trace [latest rupture (m)]: \_\_\_\_\_

Strike-slip (cm): \_\_\_\_\_ Vertical (cm): \_\_\_\_\_

Horizontal Net Slip (cm): \_\_\_\_\_ Azimuth: \_\_\_\_\_ °

Plunge (cm): \_\_\_\_\_ ° Net slip length (cm): \_\_\_\_\_

Slip Measurement Method: \_\_\_\_\_

Uncertainty in Measurement: \_\_\_\_\_

Lithological Unit(s): \_\_\_\_\_

Nature of Faulting:

- Original Displacement  Renewed Displacement on Old Fault Trace  Other \_\_\_\_\_

Any additional displacements on nearby or subsidiary faults (mainshock or aftershock):

- Unknown  Yes  No Amount and Sense of Displacement: \_\_\_\_\_

Evidence for Previous Rupture at Site:

- Unknown  Yes  No Comments: \_\_\_\_\_

Evidence of afterslip:

- Unknown  Yes  No

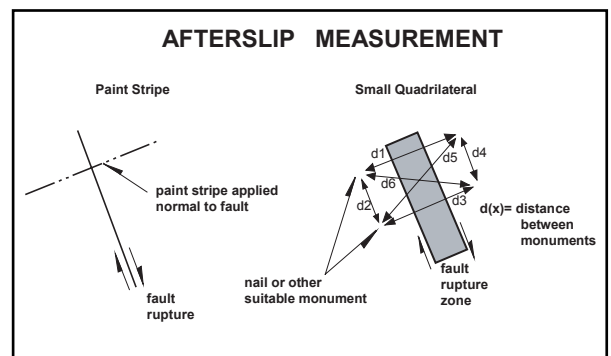
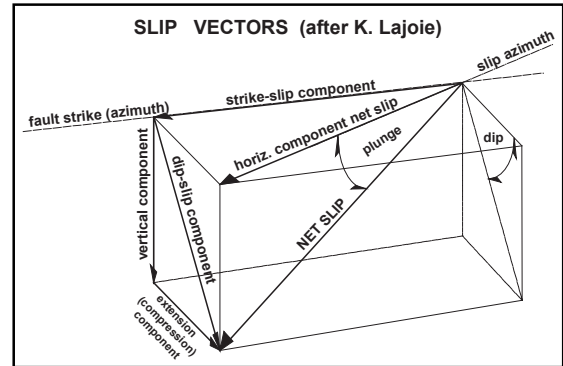
Amount (cm): \_\_\_\_\_

Location: \_\_\_\_\_

Sense of movement: \_\_\_\_\_

Relation to aftershocks: \_\_\_\_\_

Width of principal fault zone through which new faulting took place: \_\_\_\_\_



Sketches/Comments:

#### IV. Slope Deformation:

General description: \_\_\_\_\_

Time of observation: \_\_\_\_\_

Ridge-Top Features:

- Unknown
- Fissure
- Shatter
- Spread
- Multiple
- Other \_\_\_\_\_

Landslide Features:

- Unknown
- Flow
- Slide
- Fall
- Topple
- Spread
- Multiple
- Other \_\_\_\_\_

Surface Area Affected (m<sup>2</sup>): \_\_\_\_\_

Length (cm): \_\_\_\_\_

Width (cm): \_\_\_\_\_

Thickness (cm): \_\_\_\_\_

Volume (m<sup>3</sup>): \_\_\_\_\_

Vertical Displacement (cm): \_\_\_\_\_

Lateral Displacement (cm): \_\_\_\_\_

Slope Angle of Ground:

- Flat (< 1/2 degree)
- Gentle (10:1 to 4:1)
- Gentle/Moderate (4:1 to 2:1)
- Moderate (2:1 to 1:1)
- Moderate/Steep (1:1 to 1/2:1)
- Steep (> 60 degrees)

Downslope Direction:

- N     NE     E     SE
- S     SW     W     NW

Severity:

- Unknown
- None
- Low (< 1 cm)
- Moderate (1 cm - 10 cm)
- High (> 10 cm)

Material Type:

- Unknown     Soil     Rock

Continued Movement:

- Unknown     Yes     No

Sketches/Comments:

## V. Liquefaction Deformation:

General description: \_\_\_\_\_

Time of observation: \_\_\_\_\_

Lateral Spread:

Unknown  Yes  No

Sand Blows:

Unknown  Yes  No

Sand Fissures:

Unknown  Yes  No

Surface Water/Wet Ground:

Unknown  Yes  No

Surface Area Affected (m<sup>2</sup>): \_\_\_\_\_

Length (cm): \_\_\_\_\_

Width (cm): \_\_\_\_\_

Thickness (cm): \_\_\_\_\_

Volume (m<sup>3</sup>): \_\_\_\_\_

Vertical Displacement (cm): \_\_\_\_\_

Lateral Displacement (cm): \_\_\_\_\_

Slope Angle of Ground:

Flat (< 1/2 degree)

Gentle (10:1 to 4:1)

Gentle/Moderate (4:1 to 2:1)

Moderate (2:1 to 1:1)

Moderate/Steep (1:1 to 1/2:1)

Steep (> 60 degrees)

Downslope Direction:

N  NE  E  SE

S  SW  W  NW

Severity:

Unknown

None

Low (< 1 cm)

Moderate (1 cm - 10 cm)

High (> 10 cm)

Material Type Ejected:

Silt  Sand  Gravel  Other \_\_\_\_\_

Sketches/Comments: