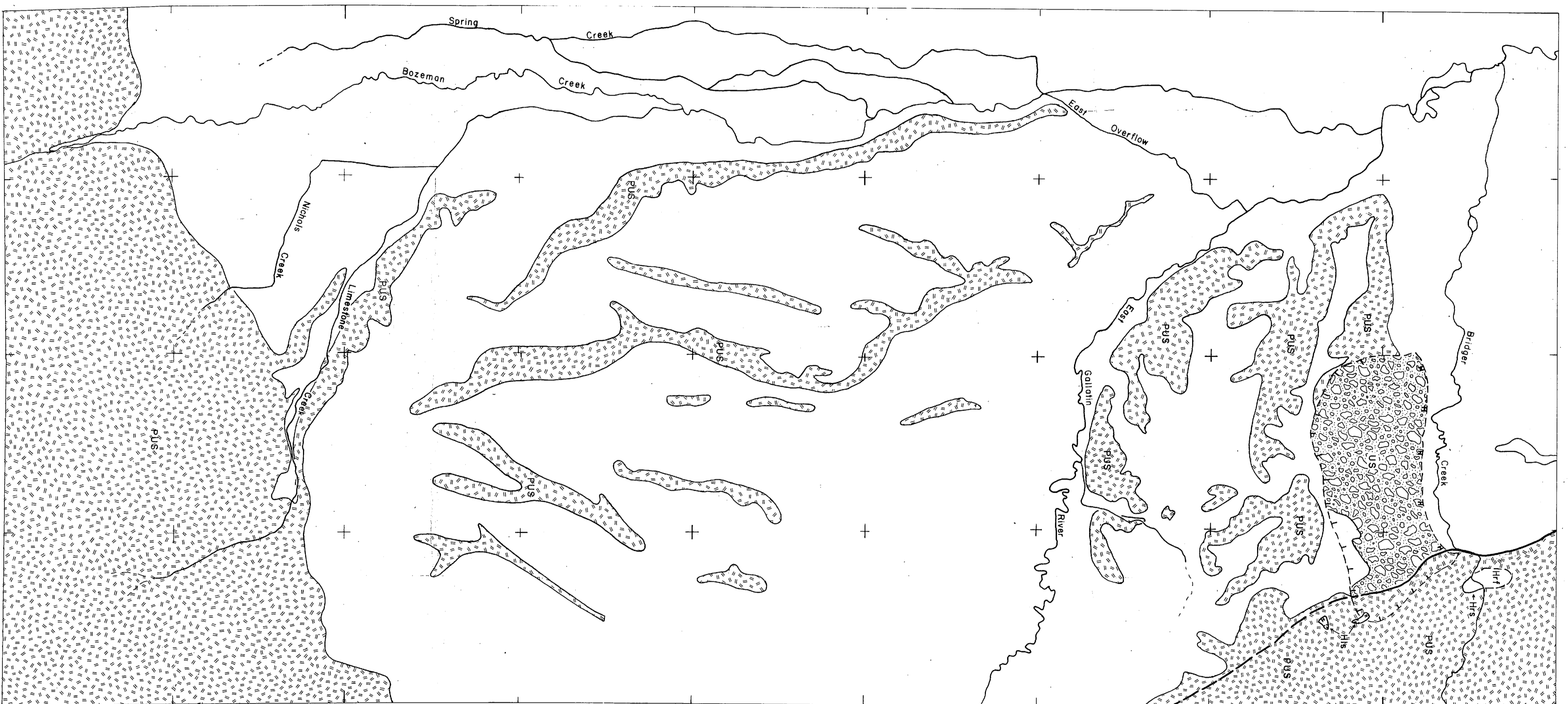
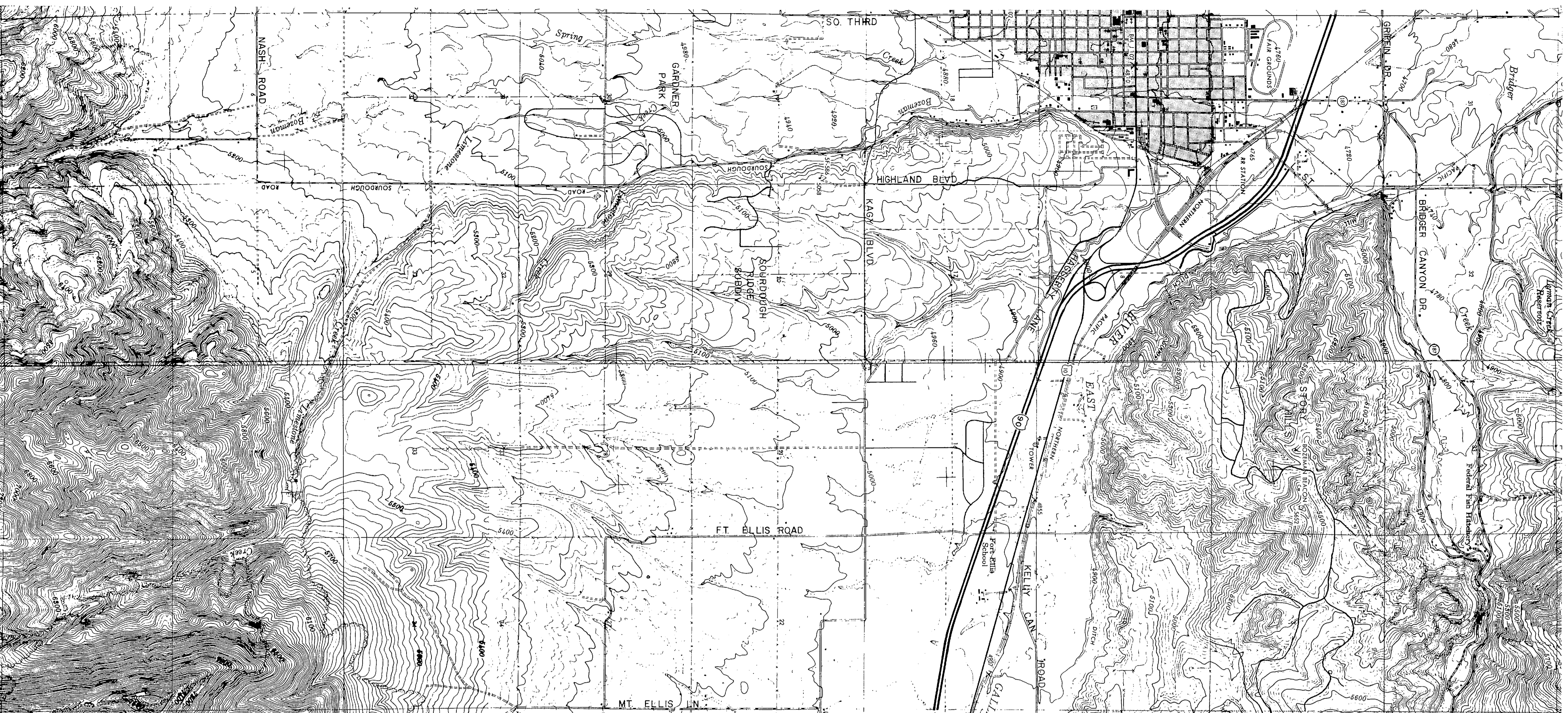


PLATE 5 SLOPE STABILITY

Southeast Margin of the Gallatin Valley



EXPLANATION
 (Boundaries are approximate; statements are general; specific investigations are necessary.)

Hf HOLOCENE ROCKFALLS: An area subject to very rapid, intermittent, nonperiodic sliding. Potential for free falling of rocks and debris or individual rock blocks (Sontz, 1976). Rockfall areas are usually associated with steep bedrock cliffs or barren and unvegetated slopes, such as those in Bridger Canyon.

Hs HOLOCENE ROCKSLIDE: An area of active downslope movement of large, generally unconsolidated, and may be rather rigid. Rockslide is the dominant hazard in the narrow portion of Bridger Canyon just east of the Fish Hatchery.

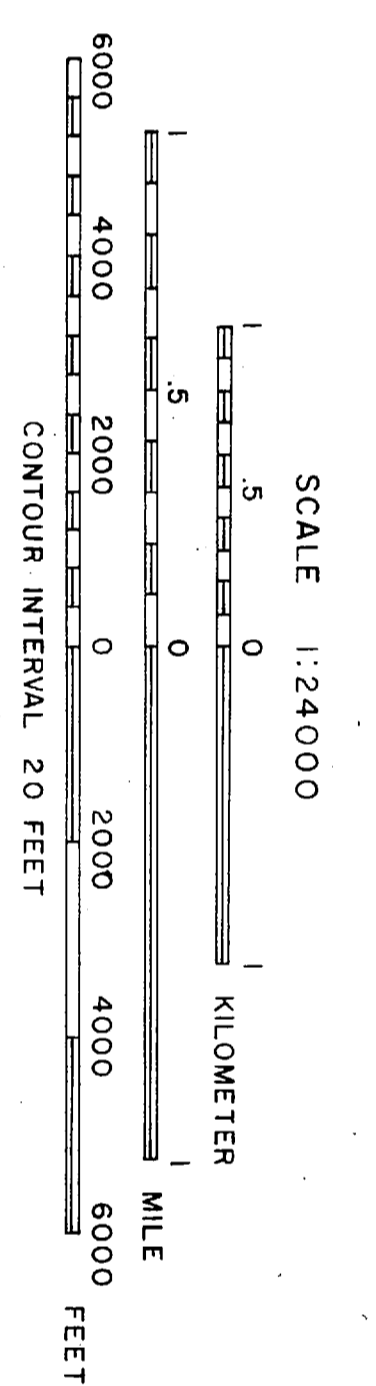
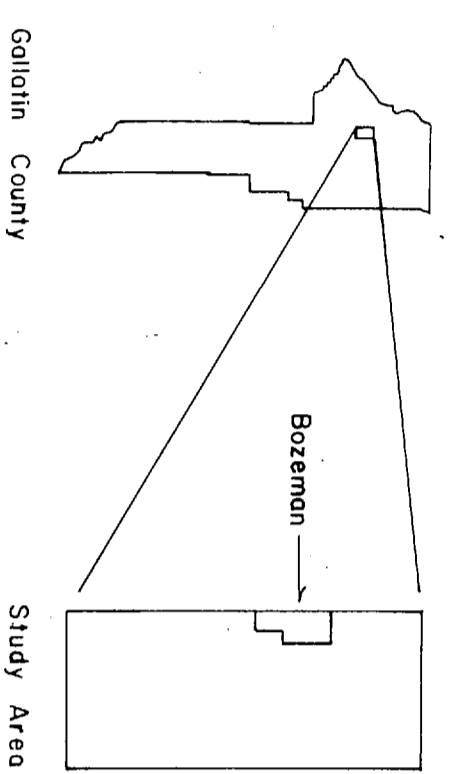
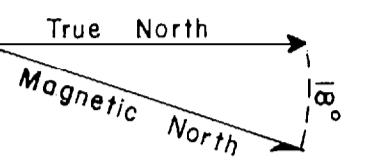
Hi HOLOCENE LANDSLIDE: An area with demonstrably active natural movement of large masses of soil materials. Active landslides are generally unconsolidated, and may be rather rigid. One of two dominant slides was reactivated following heavy rains during May and June, 1981.

PUS POTENTIALLY UNSTABLE SLOPES: Slopes with conditions conducive to instability, but whose past failure is not apparent. Reconditions include macroclimate, geologic stability, to areas that aspect (generally), high soil moisture conditions, active creep and soilification.

- Specific Areas are:
1. Slopes east of the Bridger Creek-Bear Canyon fault in Stearns bedrock.
 2. Steep mountainsides of Bridger Canyon.
 3. Steep mountainsides slopes >15%.
 4. Sourdough ridge (west slope >15%) where active development is taking place.
 5. North slopes of the Story Hills >10%.
 6. North slopes of the Story Hills >15%.

Construction and road building in these areas require special attention. The areas are subject to active creep, and vegetation indicators and soil moisture conditions. Possible changes in the microclimate and earthquake induced stresses reinforces this slope stability classification and construction codes standards.

US UNSTABLE SLOPES: Slopes with landslide physiography, but where slope movement is demonstrably active. Areas where slope movement has undergone slope movement in the recent geologic past (post-Pliocene). Some portions of the slide are presently stable due to snow cover or other factors. Other portions are unstable or show evidence of active movement. The hazard associated with these slopes is particularly high on the steeper north slopes. The hazard associated with these slopes is particularly high on the steeper north slopes. The hazard associated with these slopes is particularly high on the steeper north slopes. The hazard associated with these slopes is particularly high on the steeper north slopes.



Base Map from U. S. Coast and Geodetic Survey
 Upper Missouri River Basin Survey, 1947 & 1948
 Map Numbers 87, 88, 97, & 98
 Plates Drawn By Earl F. Griffin MSU-1982