Data review for the Silver Creek Slide at Station 450+00
Project I-80-4(4)144
Summit County, Utah
Date: July 27, 1965

July 12, 1965

Mr. Tom McCleary of District Two called and alerted this department that there was a big slide along I-80 between Silver Creek Jct. and Wanship at about Station 450+00. We saw the area that very afternoon. Jack Tompkins of District 2 accompanied us (Hopkins and McCleary). The slide has just recently moved. The evidence "in a degree" is shown by a displaced line of flaged lath as stakes. Estimated volume of slide is 10,000 cu. yds. The "back wall" crevices are 10-12 feet deep. Data for a preliminary sketch map was taken. Reference is made to: Sketch map drawn by T. McCleary, 7-13-65 and a cross section along Line A-A' by J. Hopkins, 7-14-65

July 14, 1965 -

I. Miscellaneous, Statements, Observations and Conclusions:

1. A report was made to Dick Hepworth with sketch map and cross section.
2. It was suggested by J.B.H. that we try to "stick the slide in place," rather than remove any large proportion of it.
3. It is too early to suggest "just how" it can be "stuck in place," for lack of basic information as of this date.
4. The "slide" is now the accumulation of at least the past 3 to 4 years. It is now in the catagory of being critical and represents a real and imminent danger to I-80 Interstate traffic.

II. The basic points of the trouble area are:

1. Water from yearly snow runoff which in this case lies in a natural catch basin (the sagebrush flat of the sketch map).
2. A fluxional groundwater table is seasonal and suspected to be highly variable.
3. Because of the slide movement the underground plumbing system has been altered and no doubt a subsurface slip plane zone has been created at some distance below the slide surface.
4. The local geology [illegible] the major proportion of the slide mass

to be altered volcanics (either intruded or extruded andesites, altered in place), or a form of laterite. The unstable material is in a steep area already unstable, generally speaking, and very much so when either deep or wet. It is composed of a very large proportion of plastic clay. It is estimated to be possibly from 40 to 70 feet deep.

5. There is evidence that there is also some sand-stones and shales in the slide. This is presently of an unknown quantity and character.

6. From observed slickensides it is suspected that a possible fault or shear zone system exists below the slide area and has a decided influence on the subsurface plumbing system and water control for the slide mass. Some surface features also weakly suggest the presence of a fault.

7. Any further heavy summer showers could spell imminent danger in this unstable area and could very likely result in the complete closure of this section of I-80 traffic and without much notice. This would be expensive and very inoportune at this stage of interstate planning.

8. The first recommendation is to use a measure of prevention now to immediately build an access road to the top of the slide area and run a surface ditch to prevent any sudden rain storm from furnishing water to the "back wall" crevices of this slide. This measure will buy time. Time to work out the basic information necessary and provide for the best answers to the problem.

It is recommended that the steep area above the slide mass be drilled for geologic information as to "kind and types of soil and bedrock present." Also to study and evaluate the subsurface plumbing system that is causing the failure at this point.

It is recommended that the geophysical department help and add their contribution to the subsurfaces impenderables and to have their data

coordinated with that of the drilling program.

It is recommended to make a search of the literature for means and suggestions as to how to "stick" this slide as against the possibility of moving any major portion of it. The area is already on too steep a slope and the materials we are dealing with are already in the classification of "unstable," especially so when wet. It is primarily a problem of drainage and a problem of prevention, Snow fences and hydraugering to adequately drain the subsoils.

July 19 & 20, 1965 -

An arrangement with District 2 through Roy Tea resulted in a bulldozer being supplied which ran an adequate drain ditch above the effected area and provided an access road to a point above the caved and crevessed area.

It was found that the slide had again moved during a recent local storm that occurred on the 17th of July, just past. It was estimated that the slide material at the "back wall" had dropped by an additional 3 feet and had moved outward by about 5 feet. The whole surface of the slide now shows signs of a marked and recent movement downhill. The situation is now critical and a real problem to solve. The situation had degenerated alarmingly from the first date of observation - July 13, 1965. Color pictures were taken July 17 & 19 to show the various stages of degeneration in the slide and the preventive work done with the bulldozer.

Conversations have been had with various people relative to this problem, which are: Roy tea, Richard Hepworth, Dave Price, & Dyke Lefevas, all since July 19, 1965. Reference is here made to instructions left by Mr. Wilbert through Roy Tea not to touch the slide without prior engineering and consultation with him.

July 26, 1965 -

The soils laboratory people have recently reviewed the current condition of the slide and the problem it presents.