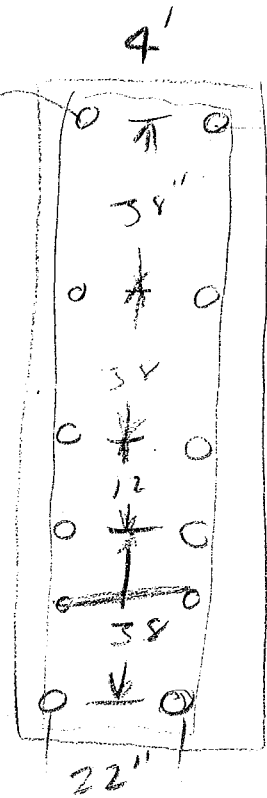


~~Interferometer~~

$$DL = \frac{2000}{1000} \#$$

3/4" DIA PIPE

12 1/2



PLAN VIEW

38  
114  
12  
12 1/2  
10 1/2  
27  
10  
38

$$3 \times 12 = 36 \text{ ft}$$

$$\frac{2000 \#}{36} = 55.6 \#/\text{ft}$$

Say 18" dia

$$\frac{1.5 \times 3 \times 12 \times 150}{3 \times 12} = 225 \#/\text{ft}$$

$$252.8 \#/\text{ft}$$

Excavate

$$3' \times 100 \#/\text{ft} = 300.0 \#/\text{ft}$$

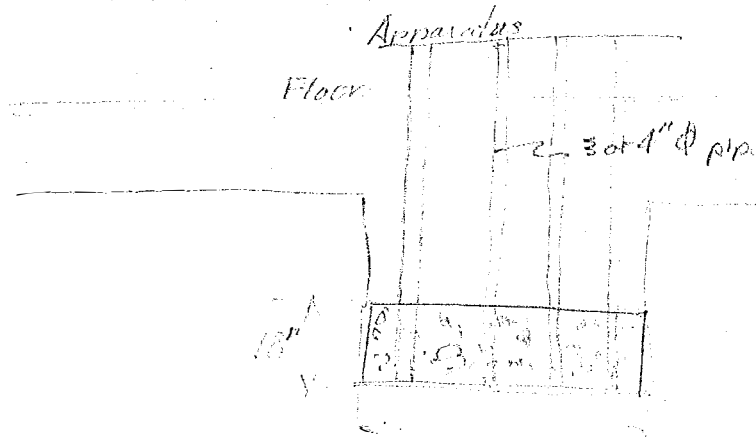
$$- 47 \#/\text{ft}$$

2' dia

$$- 300 \#/\text{ft}$$

$$+ 328 \#/\text{ft}$$

$$+ 38 \#/\text{ft}$$



113 Talbot Lab  
March 8, 50

Prof. W.S. Stillwell  
Head, Dept. of Aeronautical Engineering  
101 Transportation Bldg.

Subject: Foundation for Interferometer

Dear Prof. Stillwell:

At the request of Mr. Allen Pansha of your department we have investigated the soil conditions under the machine tool lab. at the location where it is proposed to install an interferometer. This investigation was accomplished by making two auger borings at the approximate ends of the proposed apparatus. Both of these borings encountered a yellow clayey silt containing pebbles between the depths of three and eight ft. This soil is typical of the soil in this area. It is quite satisfactory for the support of building loads provided the <sup>soil</sup> ~~soil~~ pressure is not excessive.

I understand that the ~~base~~ <sup>base</sup> for the proposed interferometer will require a foundation measuring at least 3 ft by 12 ft in plan. The weight of the apparatus has been estimated at 2000 pounds. This is to be supported on about ten 3 or 4 in diameter pipes embedded in the concrete foundation. Assuming that an 18 in thick

concrete foundation will be ample, it may be located  
at a depth of three ft. below the present ground surface.  
It is proposed that no backfill material be placed on  
the foundation. Such fill would only serve to increase  
the soil pressure under the foundation and no problem  
would be created by leaving this open as the foundation  
is to be located under the floor of the present structure.  
Inasmuch as the total change of stress in the soil  
under these circumstances is quite small, I do not  
expect any <sup>significant</sup> settlement to occur.

Sincerely,  
H. C. DeLoach

