

National Radio Astronomy Observatory

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January 21, 1982

To: G. M. Peery

From: Bill Horne *W.H.A.*

12 METER MILLIMETER WAVE TELESCOPE
MEMO No. 125

Subject: Panel Supports ~ 12M Antenna

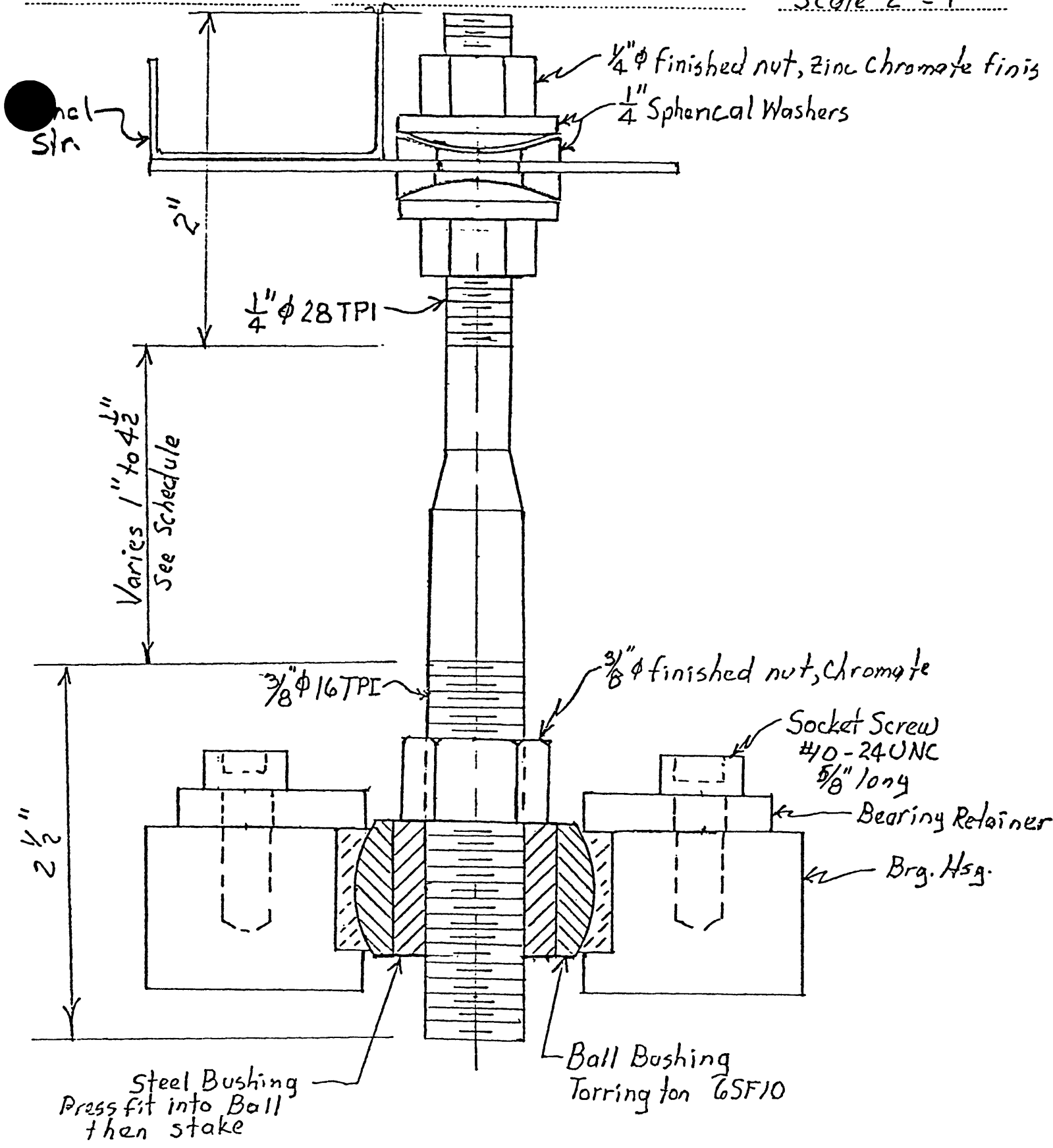
I am shipping under separate package 6 Torrington Ball Bushings which I bought from Kaman Bearings, in Albuquerque for the 12M Panel Support Assemblies. Purchase Order No. S-16511 for these ball bushings is attached; Kaman Bearings (Mr. Richard Auld, Ph. 505-247-0222) quoted \$6.98 for these bearings in quantity of 480 and said they were available from factory subject to prior sale. You will note from examining the bearings that a slight axial play exists between the inner and outer rings of this bearing. I have called for a pressfit between the bushing and bearing and between the bearing and bearing housing which should eliminate this. Some experimentation or adjustment of the housing bore may be required to make this optimum.

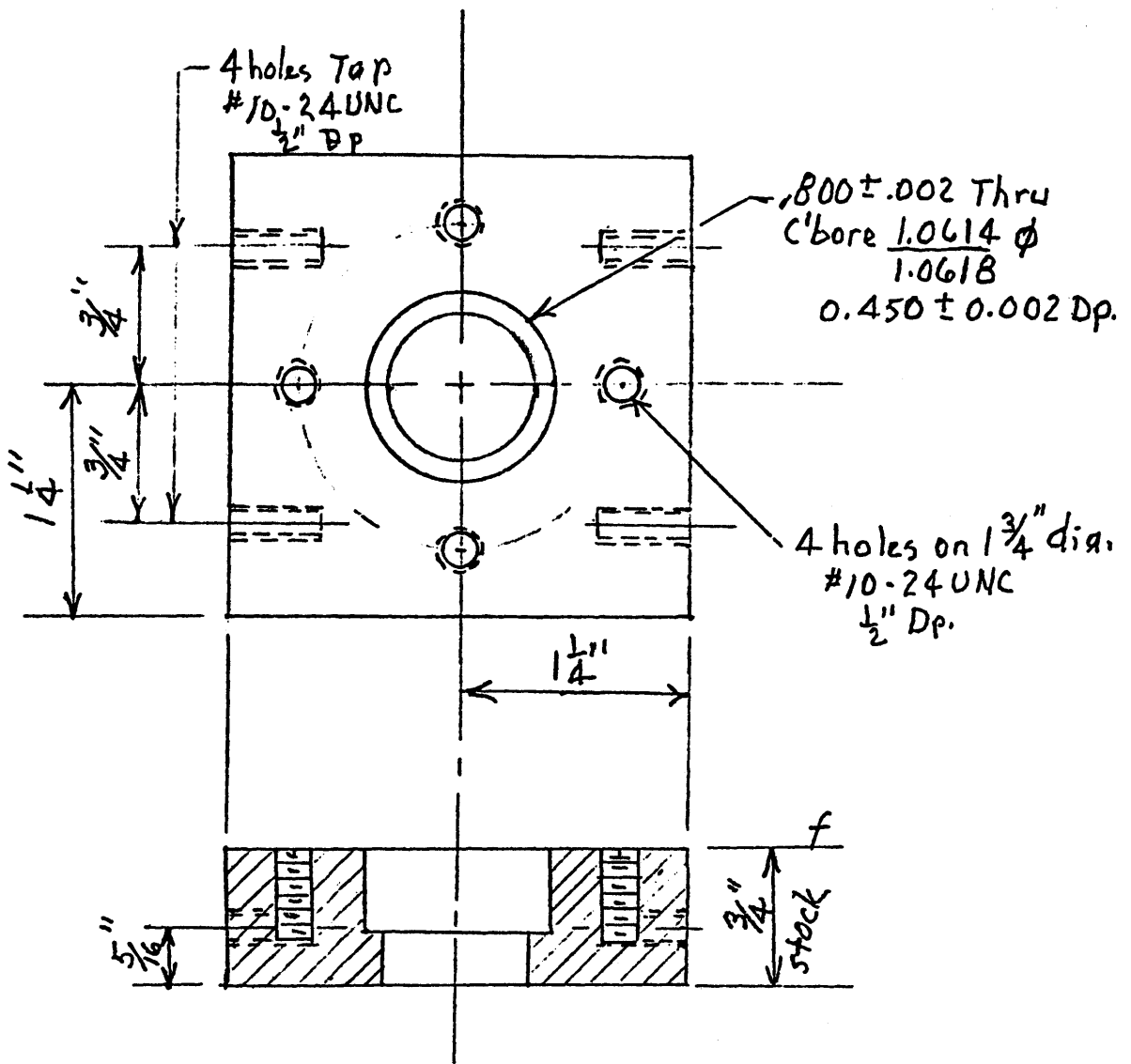
My present plan is to install the support hardware on a spare panel (used as a template) optical align this panel to the backup structure using a gaugebar between the center of the structure and the 1st panel tooling hole and tack weld the bearing housing to the BUS. Bearing housings for an individual panel would be clamped to the BUS during initial adjustment of the panel and tack welding would not be done until after initial adjustment. It may be concluded however that provision for adjustment in the radial direction is required during John Findlays fine setting of the panels which is why the 4 tapped holes are shown in the sides of the bearing housing. In this case 2 bars with slotted holes would be attached to the bearing housing and these bars would be tack welded to the BUS and final tack welding of the housing to the BUS would not be done until after JWF is satisfied panels are properly located which could be on the telescope.

I would suggest that you have Don Stone check the sketches I sent you (another copy attached) for drafting symbols, expression of information, radiusing of corners and general drafting standards.

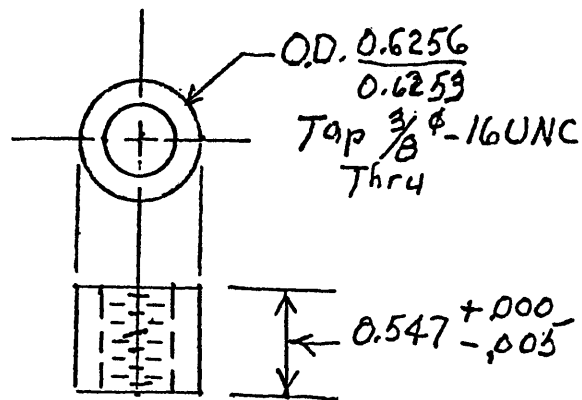
You will note that the length of the support bolt has not been set forth for all 480 supports, I haven't finished the schedule.

c.c J. Findley
H. Hvatum

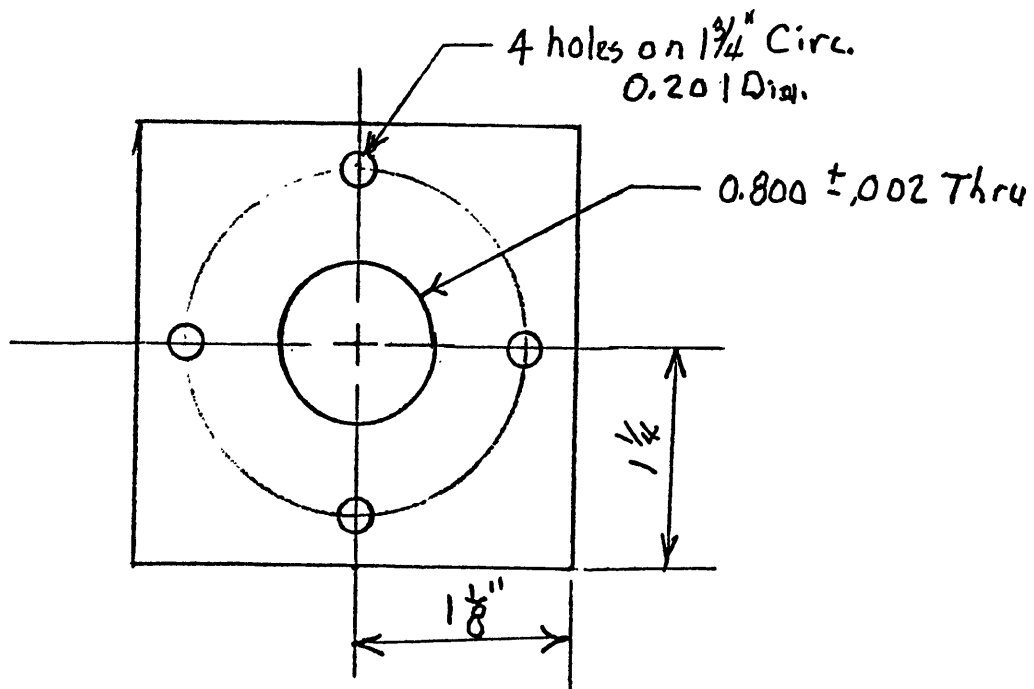




BEARING HOUSING
STL. $2\frac{1}{2}$ " x $\frac{3}{4}$ " x $2\frac{1}{2}$ "



BEARING BUSHING
STL.



BEARING RETAINER
STL. $2\frac{1}{4}$ " SQ X $\frac{3}{16}$ "

12M ANTENNA
PANEL SUPPORT HARDWARE

SK-12M 011482-1

WGH - 1/15/82