

VERTEX COMMUNICATIONS CORPORATION  
FCC Application for Experimental License

Exhibit 1

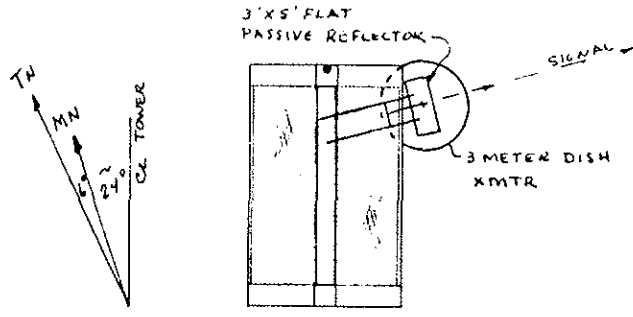
(FCC Form 442-9,10)

Experimentation Program

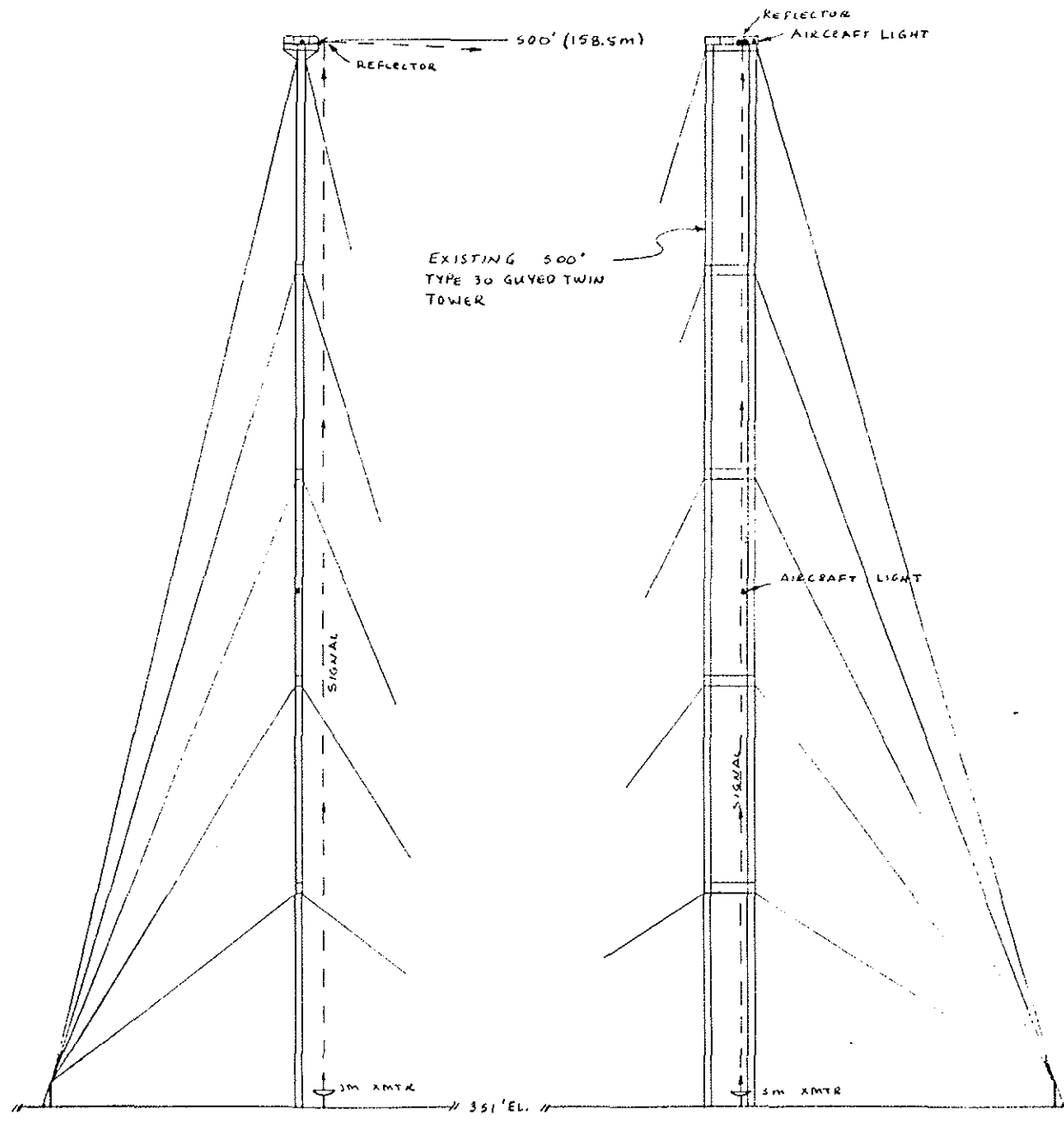
Vertex is applying here for an Experimental License for a test range on which satellite earth station antennas will be "mapped" for gain patterns at various frequencies. Vertex Communications is now engaged in antenna and feed production only for the 3.7-6.425 GHz, 7.25-8.4 GHz, and 10.7-14.5 GHz commercial frequency bands. In the near future (1-2 years) the 14-20 GHz band will become more and more prominent for commercial use, and Vertex will be developing feeds and antennas for that band also.

In addition, for the support of Harris Government Communications System Division and other customers, Vertex is constantly in need of a test range for the military bands up to 20 GHz and higher. This range will be used for both commercial and government/military product development for at least two years. All Vertex commercial transmitting antennas must pass FCC regulations governing sidelobes, spillover, gain, etc. This range will allow Vertex to qualification tests for these requirements. It will also allow Vertex to develop new feeds and specially shaped main and subreflectors with the specific objectives of achieving maximum efficiency, minimum RF loss, minimum cost and 100% compliance with FCC requirements.

Vertex Antenna Test Range will use a 12 foot diameter transmitting antenna located at the base of a 500 foot tower and aimed up the tower at a passive flat reflector. This reflector then points the signal down range approximately 2 miles to the antenna under test which is at azimuth bearing of 84° from true North and elevation of -3° or 3° below horizontal from the top of the tower. The test signal can be either horizontally or vertically polarized. The signal may also be right handed or left handed circular depending on the end user of the antenna under test. This is achieved by using appropriate feeds and polarizers.



PLAN VIEW  
TOP PLATFORM  
(SCALE 1"=12.5')

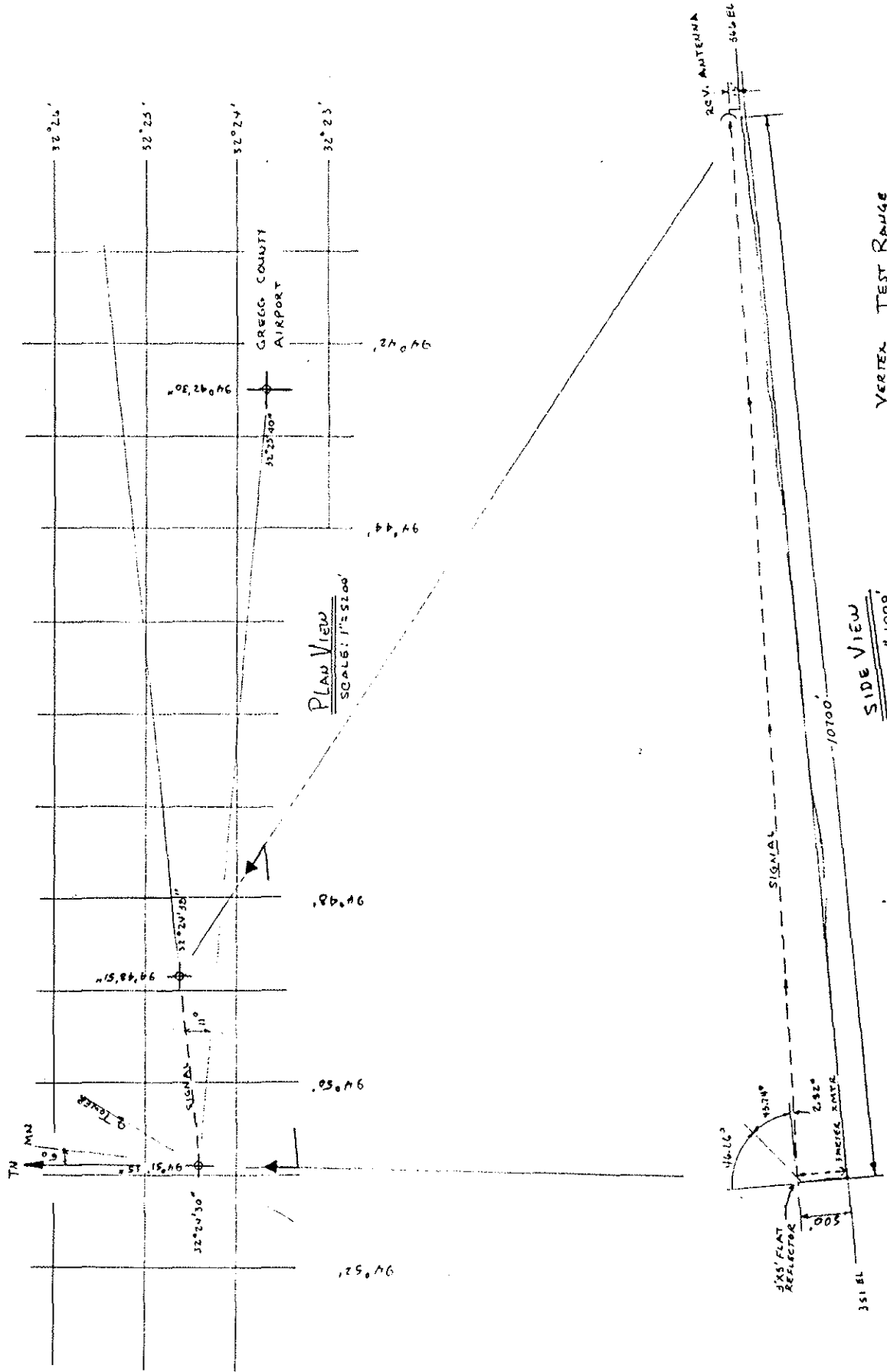


END VIEW

SIDE VIEW

V500SCALE

VERTEX TEST RANGE  
ENGR: F.S.113-5 JUN 65



PLAN VIEW  
SCALE: 1" = 52.00'

SIDE VIEW  
SCALE: 1" = 1000'

VERTEX TEST RANGE  
ENGR: F. SULLS, 5 JUN 85

