EXHIBIT 1
FCC FORM 442
ITEM 4e

TPS-70 Solid State Radar
Pulse Characteristics

Beacon Interrogator:

Tx Frequency	1030MHz
Pulse rise time	0.1 µSec
Pulse width	0.8 µSec
Pulse fall time	0.1 µSec
Pulse Repetition Frequency	Variable-200 to 1300 Hz

Radar Transmitter:

Tx Frequency	2800 to 3100 MHz, 1MHz NLFM
Pulse rise time	1.6-2 µSec
Pulse widths	15, 90, and 245 µSec
Pulse fall time	1.6-2 µSec
Pulse Repetition Frequency	250, 275, 300, 650, and 825 Hz

Radar Modes:

Mode	Pulses	PRF	Notes
Baseline	15 µS @ F1 and 245 µS @ F2	250 Hz avg,	Frequency Diversity F2-F1>/=60MHz
Enhanced MTI	15 µS @ F1 and 245 µS @ F2	275 Hz avg,	Frequency Diversity F2-F1>/=60MHz
Rain/Chaff Detect	9 pulses @ 90 µS each	650 Hz	MTD
	3 pulses @ 245 µS each	300 Hz	MTI
	9 pulses @ 90 µS each	825 Hz	MTD
	3 pulses @ 245 µS each	300 Hz	MTI

EXHIBIT 2
FCC FORM 442
ITEM 5b

This experimental program will require two transmitter sites. Site #1 is the Stoney Run Test Site tower located at 1160 Stoney Run RD, Hanover (Anne Arundel) MD. The NAD83 coordinates for this site are 39-11-08.59 N, 076-42-10.26 W.

Site #2 is the Blueberry Hill Test Site located at 7323 Aviation Blvd, Linthicum (Anne Arundel) MD, with NAD83 coordinates of 39-10-45 N, 076-41-22 W.

EXHIBIT 3
FCC FORM 442
ITEM 10

Northrop Grumman Corporation is developing a solid state transmitter to upgrade the AN/TPS-70 radar system. The purpose experiment is to test and evaluate the new transmitter and integrate it into the physical space occupied in the shelter unit by the current tube-based transmitter. The objective of this program is to develop a more reliable TPS-70 radar with enhanced capabilities. Future use of site #2 includes system demonstrations to potential customers.

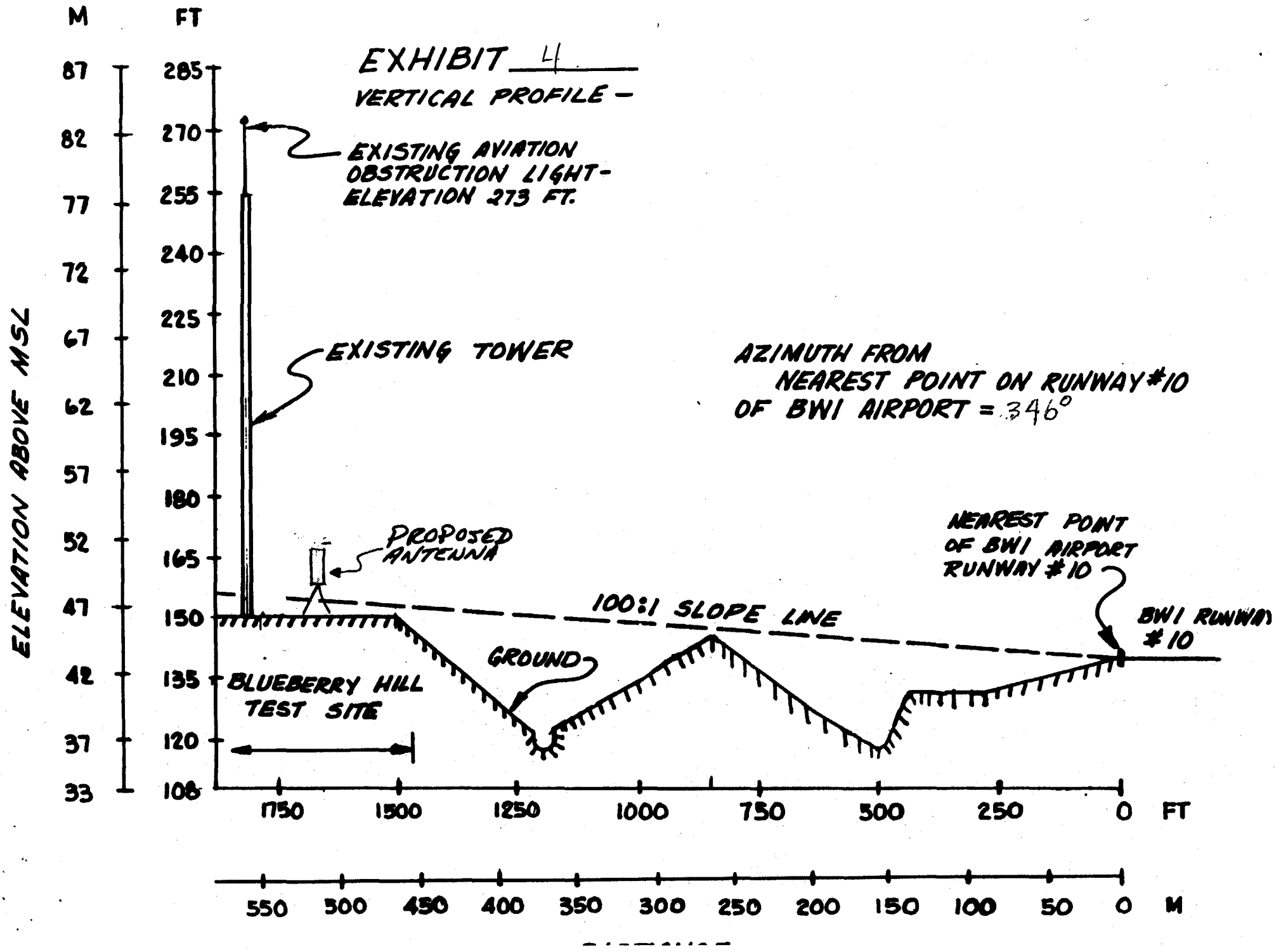
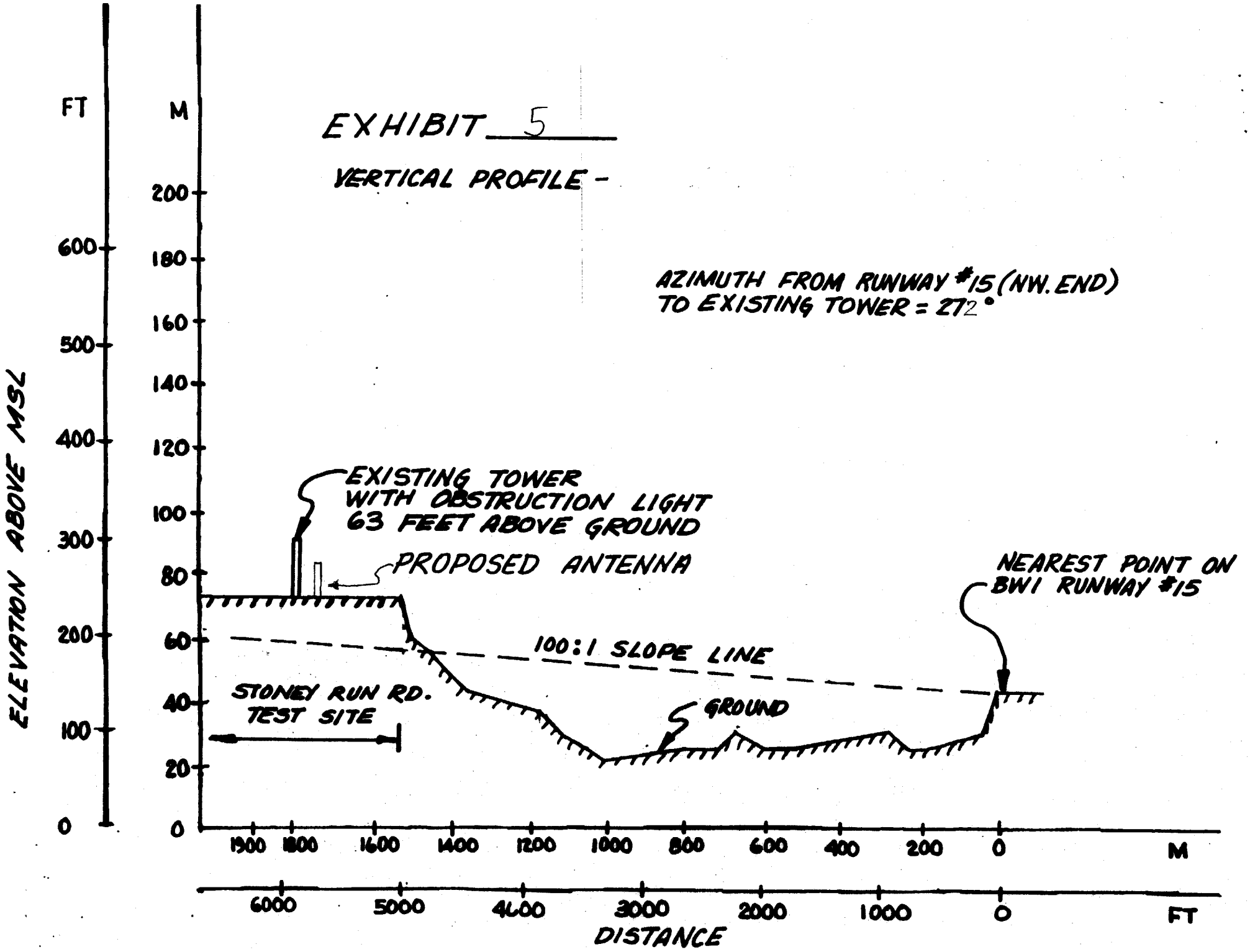


EXHIBIT 4
VERTICAL PROFILE -
EXISTING AVIATION OBSTRUCTION LIGHT - ELEVATION 273 FT.
EXISTING TOWER
AZIMUTH FROM NEAREST POINT ON RUNWAY #10 OF BWI AIRPORT = 346°
PROPOSED ANTENNA
NEAREST POINT OF BWI AIRPORT RUNWAY #10
100:1 SLOPE LINE
BWI RUNWAY #10
GROUND
BLUEBERRY HILL TEST SITE
ELEVATION ABOVE MSL
M
FT
87
82
77
72
67
62
57
52
47
42
37
33
285
270
255
240
225
210
195
180
165
150
135
120
108
1750
1500
1250
1000
750
500
250
0 FT
550
500
450
400
350
300
250
200
150
100
50
0 M

EXHIBIT 5

VERTICAL PROFILE -



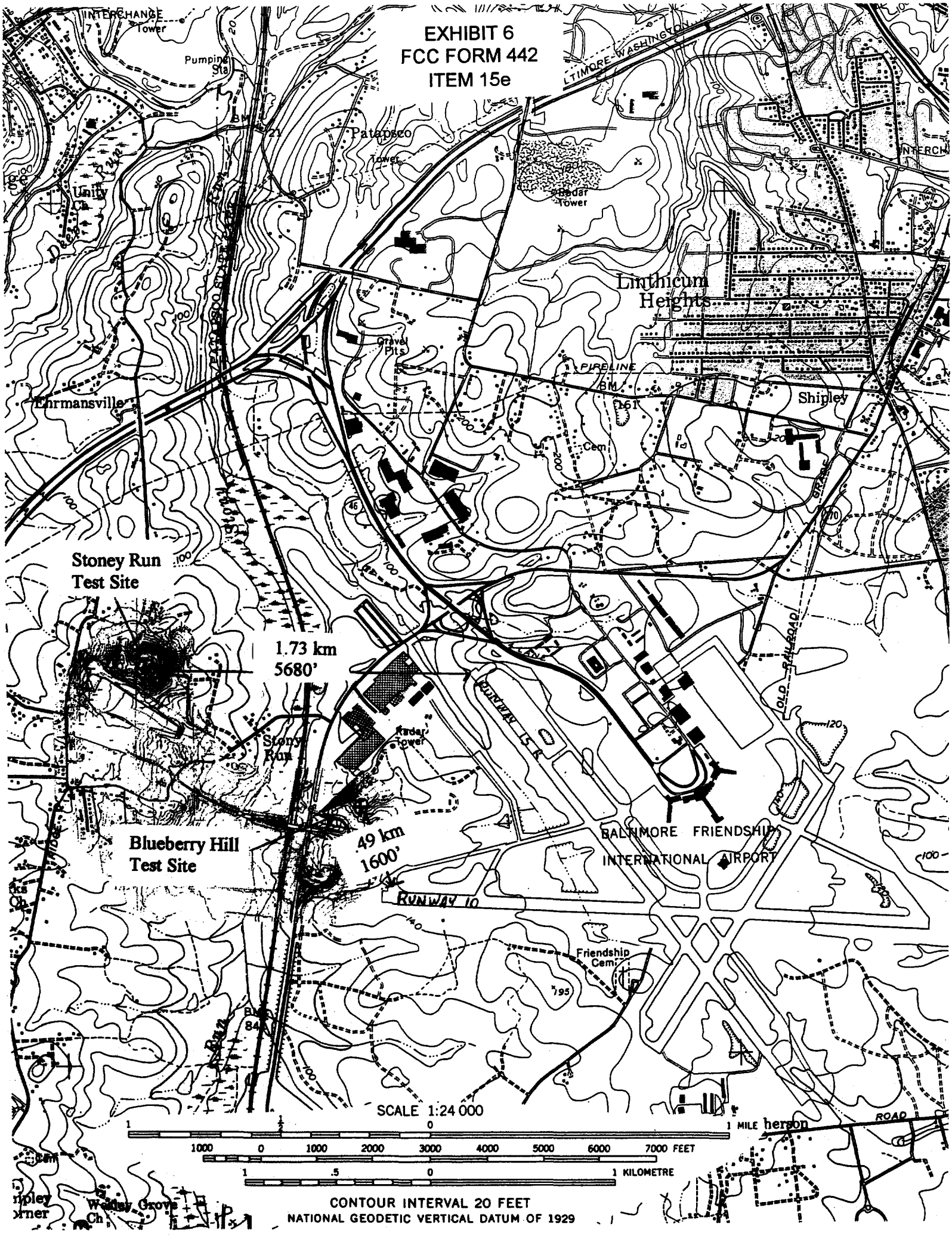


EXHIBIT 6
FCC FORM 442
ITEM 15e
Stoney Run
Test Site
1.73 km
5680'
Blueberry Hill
Test Site
.49 km
1600'
Linthicum
Heights
Shipley
Ehrmansville
Patapsco
Tower
Radar
Tower
Pumping
Sta
Unity
Ch
Travel
Pits
PIPELINE
Cem
Stony
Run
Radar
Tower
RUNWAY 15R
RUNWAY 10
BALTIMORE FRIENDSHIP
INTERNATIONAL AIRPORT
Friendship
Cem
OLD RAILROAD
ROAD
Wesley Grove
Ch
SCALE 1:24 000
1 0 1 MILE
1000 0 1000 2000 3000 4000 5000 6000 7000 FEET
1 .5 0 1 KILOMETRE
CONTOUR INTERVAL 20 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929