SECRET

SPM 6-081
31 July 1956

Chief, OC-CST
ATTN : Chief, OC-CST/AAB

Chief, OC-SP

Tower and Antenna Installation [redacted] for Radio Locating System (Inverse Loran) 50X1

1. In March 1955 the Agency awarded a contract to [redacted] 50X1
[redacted] for the purpose of planning, laying out and designing an initial radio locating system. The principle of this system is to determine a bearing of a radio station by the simultaneous reception of signals from the radio station at three controlled sites. The three sites have been chosen and are as follows: 50X1

a. [redacted] to be known as Outstation A (o/s A). 50X1

b. [redacted] to be known as Net Control Station (NCS). 50X1

c. [redacted] to be known as Outstation B (o/s B). 50X1

2. Discussions were held with members of your Division and your representative [redacted] in order to outline the requirements necessary to install Outstation B as a completed unit. Mutual agreement was reached that your representative at [redacted] will make arrangements to install the towers and antennas locally. 50X1 50X1

3. The following information and attachments are submitted for guidance in the installation of the towers and antennas:

a. TOWERS

Four Type 1245 Trylon Towers, 60 ft., and associated gear were shipped to [redacted] Written specifications and blueprints for the installation of these towers are at the site. 50X1

Placement of towers is not critical; however, a rough sketch is attached showing desired separation. (See Attachment A.)

Siting of antennas should be made on [redacted] 50X1

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50X1

b. ANTENNAS

Two antennas for the timing channel are used and they are 1/2 wavelength folded dipoles. (Details shown on Attachment B.)

These antennas are terminated with 300 ohm transmission line to the terminal box, thence with RG-13/U coaxial cable to the trailer. All antenna material is being shipped inside the trailer.

Receiving frequency is 2045 kcs; antenna length is 228'6".

Transmitting frequency is 3165 kcs; antenna length is 147'8".

One vertical antenna and its base, shipped with the trailer, has been fabricated complete with guy wires. This antenna is to be used for the signal channel which is to be connected to the Collins 51J Receiver.

[redacted]

50X1

Attachments:
A - Rough sketch of tower separations
B - Antenna details

Distribution:
Orig - addressee
1 - [redacted] ✓
1 - chrono

50X1

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