Project Texas Towers 1012655

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1955

RETURN TO

AFSHRC

DEPARTMENT OF THE AIR FORCE HEADQUARTERS UNITED STATES AIR FORCE WASHINGTON 25, D.C.

Mr. George V. Rickel 1368 Huntington Turnpike Trumbull 18, Conn.

Dear Mr. Rickel:

1 5 DEC 1956

This is to acknowledge receipt of your letter of 4 December 1955 referring to the construction of the Texas Towers.

Your suggestion for construction of the foundations for these structures has been reviewed and careful consideration and study given to it.

It should be noted that a substantial portion of the cost of these facilities is for electronic and communication equipment as well as for adequate housing of operating personnel.

Design and construction of these important parts of the continental air defense operated by the Air Force was entrusted to engineers most qualified in this work. All pf the work is being accomplished under the guidance of the Bureau of Yards and Docks, Department of the Navy.

The Air Force is always interested in new ideas for the construction of its facilities. However, evaluation of your proposal indicates that considerable time would be involved and numerous logistic problems could be encountered. Construction could not be accomplished with the time allotted.

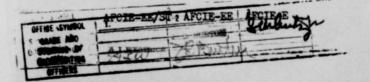
Your interest in behalf of the Air Force is appreciated.

Sincerely yours,

S. N. LUTZ, JR.
Colengl, U. S. Air Force
Chlor, Adjusting Division
Eirsetesses of Communication, ACS/I

DISTRIBUTION:

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Stayback-CIE-EE/ST



dop

10,04

1768 Buntington 'urnpike Trumbull 18, onn December 4, 1955

Bureau of Engineering ir Force mashington D.C.

"entlemen: -

I have read about the texas lower off Cape God. For future towers, why would not this plan be feasible.

Obtain from the outerries of vermont the largest slabs of granite that could be transported to sea, say 300 to 500 tons each; these would be lowered and enchored to each other by an anti-salt water eresion process. You would only then have to conquer the water space rather than going down 50 feet into sand as the present tower is. you certainly would have terrific tonnege in the height of 75 to 125 feet necessary and I cant conceive of the cost equalling the 20million dollars expended for the Texas Tower plus the loss of the fenders.
In my plan you would have a virtual square construction and solid whereas with fenders: no matter how well built they are, could always be a hazard to the towers. One cant build up resistance unless it is solid resistance; this was proven in the collarse of the bridge years ago in washington in the valley of the winds.
I never succeeded in mathematics or any other science; however, I know the Cape well and an ouite certain that nothing but good grade rock can withstand the seas.

lease do not consider my letter fantastic coming from an absolute amateur: I just dont want to see millions of dollars tossed into the sea if what nature provided to us will do the job that much better

Junge V Rickel

AFCIE-CS/Maj Vandegrift/mea/54443/31 Oct 55
rewrtn/AFCIE-3/LtCol House/pm/74779/2 Nov 55

Dear Mr. Chadbourn:

Reference is made to your letter of 7 October 1955 concerning the "Bayley Texas Tower" and the brochure furnished to the Department of the Air Force for evaluation.

The Bayley brochure will be evaluated by the Department of the Air Force and its construction agent, the Bureau of Yards and Docks, Department of the Navy. You will be informed of the results of this evaluation upon completion.

Sincerely,

(Signed)

JOHN M. FERRY

Special Assistant for Installations

Mr. Philip H. Chadbourn Green Valley Farm Hyattstown, Maryland

NOTE: No major change in context.

Previous coordinations remain valid.

WALTER G HOUSE LA Col. USAP DISTRIBUTION:

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Maj Vandegrift
AFCIE-CS/ENI MNIKE/mea/54443/31 Oct 55

er. Philip H. Chadbourne Green Valley Farm Myattetoon, Ed.

Deer Fr. Chedbourns

Reference is made to your letter of 7 October 1955 concerning the "Eagley less fower", brochure furnished to the Department of the Air Force for evaluation.

The Bayley brombure will be evaluated by the Department of the Air Force and the construction agent for this project the Bureau, Tards and Docks United States Novy. You will be informed of the results of this evaluation as soon as possible after completion.

Sincerely,

Memo for Record: The brochure referenced in Mr. Chadbourn's letter was forwarded to Cambridge Lab's by R&D as they considered the evaluation to be a development Process and not an construction methods evaluation. AFDRD is taking necessary action to have brochure returned from Cambridge Lab's to AFCIE at which time it will be forwarded to Bureau Docks for Engineering analysis, a final reply to Mr. Chadbourns letter will be prepared at that time.

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Coord:

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Comeback CIE-CS

Stayback

Thisers)

Green Valley Farm Hyattstown Maryland

7 October 1955

Hon. Donald A. Quarles, Secretary of the Air Force, Pentagon, Washington, D.C.

CAPIT

Dear Mr. Secretary:-

While the enclosed copy of my letter of even date to Colonel E.A.Friedlander of the Air Research and Development Command in Baltimore is almost self-explanatory there remain two angles to this "Texas Tower" situation which I feel you should know about. Therefore I take the liberty of describing them to you in briefest fashion.

In the first place, "r.J.A.D.Bayley is a modest man of science like yourself. He has devoted a life time to inventing, perfecting and applying hydradynamic principles all over the world. He invented a drydock which is in operation in many parts; his scientific vitae would fill many pages. For twelve years he developed what has come to be known as a "Texas Tower". He has spent many thousands of dollars on model testing plants and the invention is thoroughly patented. Being a retiring and modest character he doesn't know how to get to first base in Washington. He is convinced that the "Texas Tower" presently being set up off Cape Cod is off on the wrong foot since it hasn't enough weight at the bottom, to over simplify a very complex problem.

In 'the second place I come into the picture as a private citizen with no & financial interest in the outcome. My interest is purely that of national defence and the Air Force's interest therein. In fact I was commissioned in the Air Force in 1918 (in Billy Mitchell's time). I am even now 'one or your boys holding a responsible job with Air Force Security Service, (AFSBOP), Office of Praduction at Arlington Hall Station under a splendid boss, Colonel George R. Ronka. Should your office want any information beyond that which is conveyed in my letter to Colonel Friedlander, my phone at Arlington Hall is JAckson 5-5800, extension 314.

What brings me to the point of writing to you is recent reports in the press that several more 'Towers' of the Cape Cod type are envisaged for the near future. It is my feeling that the Air Force and Yards and Docks should at least have a good look at the "Bayley Tower" before committing itself further to a type which has demonstrable scientific deficiencies which were foreseen and overcome in the Bayley inventions some years ago. You, of course, have the qualified personnel who can get to the bottom of the delay in Baltimore and establish the true merits of the opposing theories.

My satisfaction in this matter will be two fold; the hope that the Air Force will wind up with the very best product for our defence and that, by acting effectively now it may avoid a gratuitous Congressional investigation later on.

In closing, may I express the tremendous gratification that hundred of my collea gues share with me in having an eminent man of science at the 'stick'of our grand old Air Force?

Respectively tourstiedown

Green Valley Farm

7 October 1955

Oslong 1 & A.Friedlander Air Research and Development Command P.O.Box 1395 Baltimore, Waryland

Subject: U.A.D.Bayley's "Texas Tower"

Dear Sire

Just a month ago today, 7 September , wrote to you to inform you that Colonel J.Robbins of the Air Force for Flane Division, (Western Hemisphere Branch), Pentagon had east the entire "Bayley Texas Tower" dossier to Joionel Gordon Jould and Lt.Jolonel George Watts of your organization on 25 August 1955.

I am still waiting to hear from one of the parties concerned whether this extremely valuable file of drawings and tables was duly reserved. While it may be too early to expect a report from your engineers on the merits of the 'dayley Tower' as compared to the one now being set up off Cape Cod, please let me out down the following observations for what they may be worth.

Work in the Persian Gulf in the near future. Sefore sailing he told we about some of the serious set-backs the other outfit is having with all three of the 'Cape Cod type Towers' being erected for oil companies in the Gulf of Vexice. It seems that one 'Tower' capsized and has cost the contractors of to Smillion extra and isn't working yet. I begged Mr. Bayley to give me an engineer's report on these events to ampairs each to you, to refused to do so stating that in business "every knock is a boost he believes that both the Air Force and the navy will find out in practice with the 'Cape Cod Tower' that there is not enough weight at the bottom. (this, as you will recognize, is my own crude way of expressing a complicated problem in hydro-dynamics).

In the light of the foregoing I to hope that the Air force will be able to evaluate the "Bayley lower" on a priority basis. To invest more millions on the groung horse with the winner locked up in the stable; (the A R & D files) would make the kind of fodder that keeps longressmen in fine fattle.

Looking forward to word from you in the premises,

sincerely yours,

Philip H.Chadbourn

+ 43

o.c. Hon. Donald A. Quarles, Decretary of the Air Force. c.o. General Edw. Barber, Operations Research Office. c.o. C.A. D. Bayley, Esq. U.S. Embassy, Rome.

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AFCIE-CS/MajVandegrift/mol/75967 Wrtn 100ct55

per 3-3

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MEMORAETUM FOR GHIFF, BURGAU YARDS & DOURS, TEPT OF NAVY WASHINGTON 25 D C

SURJECT: Transfer and Acceptance of Texas Towers

- Reference is made to telephone conversation between Captain Clark and the Director of Construction, this Headquarters, 10 October 1955.
- 2. It is requested that normal transfer and acceptance procedure outlined in AFR 88-9 be followed in transferring Texas Towers from Bureau, Yards and Docks to the using agency. Necessary copies of the transfer documents (DA Eng Form 290) will be made available to the construction agency by the USAF Installations Representative Office, New England Region, 857 Commonwealth Avenue, Boston, Mass.

FOR THE CHIEF OF STAFF:

GILBERT T. PERRY
Colonal, U. S. Air Force
Military Assistant
Construction Division
Directorate of Construction, ACS/I

COORD: AFCIE-CS

AFCIE-C

AFCIE-3

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AFIR NER

Mundruft
J D VANDERRET
Major, USAF

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AFCIE-CS/LtColCaldwell/mol/71975 Wrtn 7Sep55

7 SEP 1955

APULE-US

AINORANDON FOR CHIEF, BUREAU OF YARDS & TOCKS, TEPARTMENT OF THE RAVI, WASHINGTON 25 D. C.

MUBJ OT: Advance Advertisement for Additional Texas Towers

1. Reference:

- a. Letter, Bureau of Yards & Tocks 0-270A/GCE: wvh Al6-1. "Texas Towers", Funds for Construction of, undated, to USAF;
- b. Air Force memorandum AFCIE-CS, TEXAS TOWERS, TT-1 and TT-3, dated 30 June 1955:
- c. Letter Bureau Yards & Docks C 270A/GGB: vfp A16-1, TEXAS TOWERS TT-1 and TT-3
- d. Bureau Yards & Tooks letter 0-2710/VD:vvh Al6-1 "Texas Towers". Funds for Construction of, dated 18 August 1955.
- 2. It is requested that i mediate action be taken to advertise for the construction of three (3) additional Texas Towers (Nos. 4, 3 and 1). Bids should be solicited in such a manner that only Towers 4 and 3 can be awarded, in accordance with the operational requirements, if costs (as reflected by the bids) should exceed present authority and availability of funds.
- 2. Immediate action is being taken to secure apportionment of additional funds to permit award in accordance with the above.

FOR THE CHILF OF STAFF:

PAUL C. EROWN Colonel, U. S. Air Force Chief, Construction Division actorate of Construction, ACS/I

COORD: AFCIE-CS

Harold White

AFCIE-C COI Brown

Coord AFCIE-CS Comeback Stayback

(4)

10030

ENGEA(26 May 1955) 2nd Ind SUBJECT: Standard Beacon Platform for Water Towers

Office of the Chief of Engineers, Washington 25, D. C.

26 August 1955

TO: Chief of Staff, U. S. Air Force Attention: Assistant Chief of Staff, Installations Directorate of Construction

- 1. Inclosed reproducible print of Standard Beacon Platform for Water Tower, drawing No. 86-16-08, is furnished for information and record.
- 2. Safety features mentioned in preceding indorsement have been incorporated in the basic design.

FOR THE CHIEF OF ENGINEERS:

1 Incl:
 w/d 2 incl - 1 and 2
 Added 1 incl:
 3. Dwg. 86-16-08

J. O. Thorley, OR.
Acting Chief, Engineering Division
Military Construction

To the word of here is the season

ENGEA(26 May 1965) 2nd Ind SUBJECT: Standard Beacon Platform for Water Towers

Office of the Chief of Engineers, Washington 25, D. C.

26 August 1955

TO: Chief of Staff, U. S. Air Force
Attention: Assistant Chief of Staff, Installations
Directorate of Construction

- 1. Inclosed reproducible print of Standard Beacon Platform for Water Tower, drawing No. 86-16-08, is furnished for information and record.
- 2. Safety features mentioned in preceding indorsement have been incorporated in the basic design.

FOR THE CHIEF OF ENGINEERS:

1 Inel: w/d 2 inel - 1 and 2 Added 1 inel: 3. Dwg. 86-16-08 I. O. THORLEY, JR.
Acting Chief, Engineering Division
Military Construction

Basic Ltr fr OCE, subj: Standard Beacon Platform for Water Towers, dtd 26 May 1955

AFCIE-EE/V

1st Ind

Dept of the Air Force, Hqs USAF, Washington 25, D. C.

TO: Chief of Engineers, Department of the Army, Washington 25, D. C.

1. The beacon platform as such, shown on drawing 671-139, appears to be adequate for the purpose intended. Changes in the rotating beacon since 1931 are insufficient to warrant changes in platform requirements.

2. Current ground safety rules of the USAF require that the vertical ladder be provided with an enclosing basket similar to that shown on the attached plan sheets Nos. E 3000. The inclined ladder will require handrails.

2 Incls l. n/c Added l incl 2. Dwg E 3000

S. M. LUTZ, JR.

Colonel, U. S. Air Force Chief, Engineering Division Directorate of Construction

Assistant Chief of Staff, Installations

gen. distribution made on 19 ling 55.

2180



DEPARTMENT OF THE ARMY OFFICE OF THE CHIEF OF ENGINEERS WASHINGTON 25, D. C.

ENGEA

26 May 1955

SUBJECT: Standard Beacon Platform for Water Towers.

Chief of Staff, U. S. Air Force TO: Attention: Assistant Chief of Staff, Installations Directorate of Construction

- 1. Inclosed for your comments and/or approval is a print of subject facility, plan number 671-139, dated 2 October 1931.
- 2. This drawing will be revised and identified as No. 86-16-08. Any changes desired by your headquarters, due to new criteria having been developed since 1931, will be considered for incorporation on the new
- 3. An early reply would be appreciated due to demand for prints of this drawing from the field.

FOR THE CHIEF OF ENGINEERS:

1 Incl: 1 Print

INCL REC IN CIE- 14/M ZACKRISON, SR.

Chief, Engineering Division

Military Construction

AFCIE_EE/ST/Mr Westrich/ed/75038/26 JUL 55

100 5 -

B/Ltr Hq TAC to ACS/I Hq USAF subjt Tower anchors, AN/UNA-3, TACAH Installations, dtd 18 JUL 1955

AFCIR-SE/ST

1st Ind

1 AUG 1955

Department of the Air Force, Headquarters United States Air Force, Weshington 25, D. C.

TO: Commander, Tactical Air Command, Langley Air Force Dame, Va ATTN: AI/N

- 1. This headquarters interposes no objection to the use of screw or plate type patent anchors for subject installations provided anchorage equivalent to that shown on drawing AF 86-16-13 is furnished. Towers for TACAN installations must be rigidly braced as any exercing of the tower will transmit erromous azimuth readings to sircraft.
- 2. Concrete pier type anchors are indicated on drawing AF 86-16-13 because of their universal application. Screw or plate type patent anchors cannot readily be obtained outside the Zone of the Interior.
- 3. Drawing AF-36-16-13 will be revised at an early date to include the optional use of screw or plate type patent anchors of appropriate size.

BY ORDER OF THE CHIEF OF STAFF:

G. W. HARRIS
Deputy Chief, Engineering Division
Birectorate of the America
Assistant Chief of Staff, Installations

M/R- AFCIE-EA/S will have dwg AF-86-16-13 revised. Telephone coordination rec'd fr Mr. Hench (OCE) and Mr. Watson (AACS) 25 Jul 55.

AIW

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A I WESTRICH

M. C. HODGDON

A DELLECTOR

A DE

1010

Hy Jac

AI/N

18JUL 1955

SUBJECT: Tower Anchors, AN/URN-3, TACAN Installations .

TO: Assi

Assistant Chief of Staff, Installations Headquarters USAF Washington 25, D.C.

- 1. It is recommended that screw or plate type patent anchors, without the concrete pier, be used in lieu of the anchors shown on Drawing AF-86-16-13 for subject installations.
- 2. Similar screw type anchors are now being used by the Air Force to guy receiver, transmitter and other antennas. No trouble or failures have been experienced.
- 3. The helding strengths of the screw anchors vary from 4,500 to 12,500 pounds in average soil. This should be ample to guy the towers. It is believed the helding strength of the 12,500 pound screw anchor is greater than that of the concrete pier types installed in disturbed earth. Should there be any doubt as to the adequacy of the screw type anchor the plate type is recommended. The plate type anchor has an area from ninty to four hundred square inches. The concrete pier type anchor has an area of two hundred and forty-four square inches.
- 4. Both type patent anchors are stock items with electrical supply houses and are readily installed. Considerable saving will result from this change in type of anchors to be used.

FOR THE COMMANDER:

C. V. CRAIG Major, USAF Assistant Adjutant

AFCIE-CS/LtColCaldwell/mol/71975 ReWrtn 30 Jun 55

CIE- /AM

fro 3-3

AFCIF-CS

30 JUN 1955

MEMORANTUM FOR CHIEF, BUREAU OF YARDS AND FOCKS, ATTN: G-270A A16-1/ TEXAS TOWERS, DEPARTMENT OF NAVY, WASHINGTON 25, D. C.

SUBJECT: TEXAS TOWNES, TT-1 and TT-3

- 1. Reference your letter, subject "Texas Towers", Funds for Construction of, dated 24 June 1955.
- 2. This Headquarters does not concur in advertising IT-1 and IT-3 for bid on 5 July 1955 as proposed in paragraph 2 of above referenced letter. Funds to construct IT-1 and IT-3 are contained in the FY 1956 Military Construction Program. When the authorization and appropriation bills have progressed to the point where Congressional enactment into law seems assured, authorization to advertise in advance of receipt of funds will be favorably considered.
- 3. With reference to the question in paragraph 3, as soon as final determination is made your headquarters will be informed. In the meantime, design should continue.
- 4. In accordance with telephone conversation between representatives of your office and this Headquarters, action will be taken to provide necessary additional funis for TT-2 prior to 31 August 1955 as requested in paragraph 4 of referenced letter. It is requested that a current working estimate of funds needed for TT-2 be furnished this Headquarters as of 31 July 1955.

FOR THE CHIEF OF STAFF:

M/R: In addition to the reason stated in para 2 abv for not advertising for bid on 5 Jul 55, AFOOP-OP-D on 28Jun55 queried ADC to investigate the requirement for TT-1. Further, at a ADDRD Briefing for Mr. Talbott relative to advantages of TT vs picket ships, Mr. Talbott requested that construction of add towers be held

COORD: AFCIR-CS AFOO P- DP- D AFCIE

My Flaterty by phin

21 June 15 mm

AFUIE-C in abeyance pending coord his consideration AFUIE-US of the problem. Comeback expected to arrive at a decision o/a 12 Jul 55.

Der Chief of Staff, lossallations

W. E. LEONHARD

HAVEBRICE A CALDWELL
14 Colonel, CSAF
Heuselekhut

Security Strate

HERVALE



DEPARTMENT OF THE NAVY

BUREAU OF YARDS AND DOCKS WASHINGTON 25, D. C.

IN REPLY REFER TO

C-270A/GCE: vvh A16-1/TEXAS TOWERS

24 JUN 1088

From: Chief, Bureau of Yards and Docks
To: Headquarters, U. S. Air Force, Washington 25, D. C. Special Projects, Construction Division Directorate of Construction, AGS/F

Subj: "Texas Towers"; Funds for construction of

Ref: (a) BUDDCKS ltr C-271C/VD:vfp Al6-1/Texas Towers of 18 May 1955 to USAF ACS/F

1. The Department of the Air Force has informally advised this Bureau that availability of funds for construction of Texas Towers TT-1 (Caches Ledge) and TT-3 (Nantucket Shoals) is dependent on the passage of the FY1956 Appropriations Bill.

2. Under these circumstances Air Force concurrence is requested in this Bureau's proposal to advertise for construction of these two towers on 5 July 1955, with bids to be received on 1 September. Latest estimates indicate that funds required to finance award, administrative costs and contingencies will be as follows:

TT-1 (Caches Ledge) \$8,350,000 TT-3 (Nantucket Shoals) 9,700,000

3. Information is also requested regarding informal advice that the Air Force is reconsidering the necessity for construction of Texas Towers TT-4 (Off New York) and/or TT-5 (Browns Bank). Design of these platforms is being actively pursued with bid advertising scheduled for approximately 1 August 1955. Current working estimates for these towers are:

TT-4 (Off New York) \$9,500,000 TT-5 (Browns Bank) 9,500,000

4. The recent mishap in connection with the launching of TT-2, together with higher than expected change order costs, indicate the inadequacy of the nominal contingency amount requested in reference (a). At the present time no funds are available to finance anticipated change order requirements or payment for damage to contractor's facilities in the event of an unfavorable decision in connection with the launching difficulty. Additional contingency funds for construction of TT-2 in the amount of \$500,000 are accordingly requested. This will bring the total contingency amount to \$700,000 or approximately 7% of the total contract price.



C-270A/GCE:vvh A16-1/TEXAS TOWERS

5. In view of the proximity of the proposed advertising date for Texas Towers TT-1 and TT-3, a reply to paragraph 2 by return endorsement is requested.

Copy to: OICC Texas Towers Contracts Mr. H. Cluby

AFCIE-CS/Col White/mjr/54443/21 June 55

Uncluse), by mitherity of

1 4 JUL 1965 mge, includinghe Sign including

AFCIE-CS

MEMORANDUM FOR DIRECTOR OF OPERATIONS, DCS/O

SUBJECT: (Uncl) Texas Towers - Construction

- 1. The construction contract for TI-2, Georges Bank, was let during December 1954, and the hull was launched at Quincy, Massachusetts, during the week of 15 May 1955. The BOD for this facility is now scheduled for September 1955.
- 2. The design and construction agency, BuDocks, has reported that design for the remaining programmed towers will be completed in accordance with the following schedule:

TT-1	(Cashes Ledge)	5	July	55
TT-3	(Nantucket Shoal)	5	July	55
TT-4	(Unnamed Shoal)	22	July	55
TT-5	(Browns Bank)	22	July	55

- 3. The above design schedule will permit advertising for bids in August and contract awards in September 1955.
- 4. It has been indicated at informal conferences that revised plans for coverage in this area eliminate the requirement for one or more of the towers. Request this office be advised of the firm requirement for Texas Towers to permit timely funding and construction programming.

NYLLIAM B. LEONHARD Colonel, U. S. Air Force Deputy Director of Construction Aggistent Chief of Staff, Installations

AFCIESS AFGIE-C Coord DOGUMENTS ABOVE WERE DEST Comeback Reading Stayback EXCEPT 1-(Witnessing Official) (Destroying Official)

AFCIE-CS/LtColCrossey/mol/71975 Wrtn 9Jun55

SUBJECT: Design of Texas Towers - Modifications Thereto

TO:

USAF Installations Representative Office New Ingland Region 857 Commonwealth Ave. Boston 15. Hass

Tates Hemo No. .

The drawings attached to Memorandum #1 have been reviewed and the changes and sedifications are concurred in by this Headquarters.

2 Incls w/d

M/R: Dwgs reviewed in this Hdqtrs 25May55 Col Alexander, Mr.Cleary CIE-E, LtColGrossey-GIE-CS, BuY&D. Modf recommended by BuY&D concurred in by this Hdqtrs.

ol, U. S. Air Force

Construction Division

COORD:

AFCIE-CS

AFCIE-C und

Col USAF

actorate of Construction, ACS/I AFCIE-EE

Sleary G & CLEARY 10 June 55

ADC Coord AFCIE-CS Comeback Stayback

PRK/km

1 June 1955

SUBJECT: Design of Texas Towers - Modifications Thereto

MEMORANDUM: Asst. Chief of Staff, Installations, AFCIE-CSR

- 1. Transmitted herewith is copy of latter from Officerin Charge of Construction, Texas Towers, First Neval District, dated 18 May 1955, with inclosures of preliminary A/E Drawings.
- Your comments and/or recommendations are requested as soon as practicable.

Incl. 2 1.Prints (Prel. A/E dwgs) 2.Ltr. as above

ec: ADC w/cy incl.s

PAUL R. KNIGHT Capt. USAF OIC Instls. Reprs. Office New England Region

Rewrtn 6 Apr 55

SUBJECT: Supply Ship for Texas Towers

Director of Transportation, ATTN: AFMTP-PD

8 APR 1955

TATE: MENO NO.

AFCIA-GS/Lt Gol Crossey/mol/71975

- 1. It is believed that representatives from your office and the Directorate of Logistics Plans have visited the Navy Construction Office and obtained all necessary information since your memorandum was written.
- 2. Fuel storage has been increased by 100-120,000 gallons, and the vertical distance between low water and the main deck is approximately eight-five (85) feet.
- 3. The proposed use of helicopters to logistically support these towers appears to be the most favorable and economical.

1 Incl n/c

GILBERT T. PERRY Colonel, U. S. Air Force Executive Construction Division Directorate of Construction, ACS/K

COORD: AFCIR-CS

Hussell St.

AFCIE-C Col USAR

> Coord; Cy Comeback AFCIE-CS Stayback

AFMTP-PD

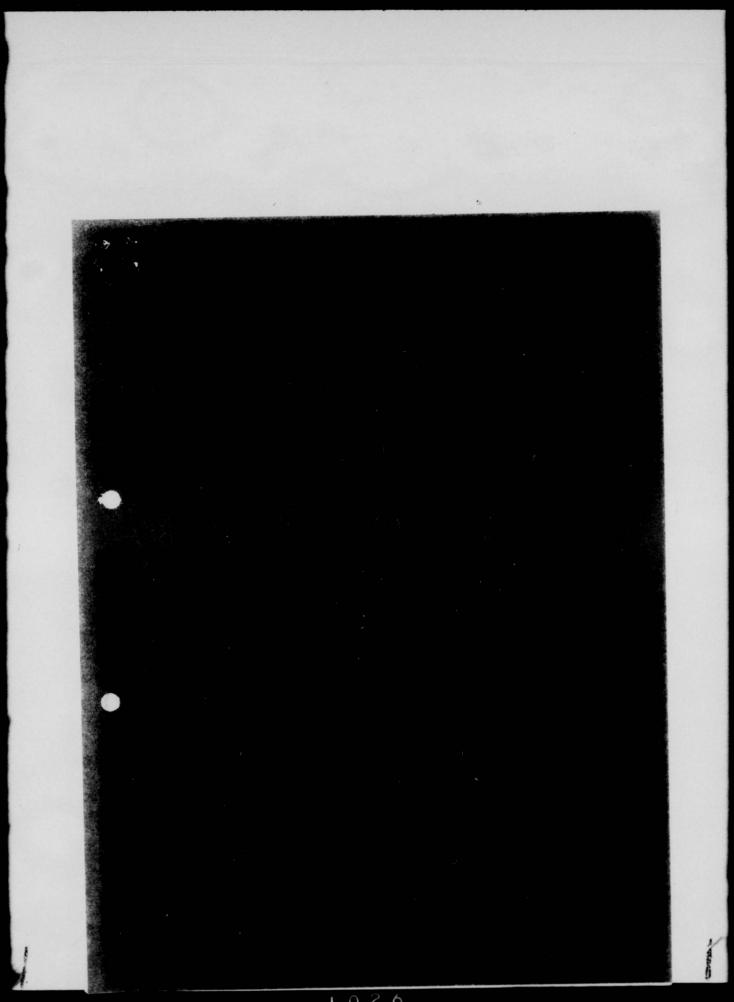
MEMORANDUM FOR DIRECTOR OF OPERATIONS, DCS/O
ATTN: AFOOP-OPD
ASSISTANT FOR LOGISTIC PLANS, DCS/M
ATTN: AFMLP-PL-OS
ASSISTANT CHIEF OF STAFF, INSTALLATIONS
ATTN: AFCIE-C/SR
IN TURN

SUBJECT: Supply Ship for Texas Towers

- 1. A review of the attached correspondence indicates that some thought is being given to the use of helicopters for transporting personnel between the Texas Towers and shore points. The ADC operations plan calls for the use of surface transportation for this job.
- 2. The provision of an ocean vessel capable of lifting the correct amounts and types of cargo and personnel between the shore and the Texas Towers will be a lengthy process. If we are to have a suitable vessel ready by the time the first Tower becomes operational we must develop a specific requirement in the immediate future.
- 3. We would like to know whether or not the supply ship should be equipped to handle passengers. If so, then we would like to know the numbers of passengers to be carried at any one time so that adequate accommodations may be provided.
- 4. We would also like to know the vertical distance between low water and the main deck of each tower so that adequate liquid cargo pumping facilities may be provided aboard the supply ship.

1 Incl
B/L fr AFMTP-PD, same subj,
dtd 10 Jan 55 to ADC w/lst
Ind dtd 8 Feb 55,w/l Incl

DAVID E. DANIEL
Colonel, USAF
Crief, Progress Div, D/Transportation
Office, Progress Div, Editof/Material



DEPARTMENT OF THE AIR FORCE HEADQUARTERS UNITED STATES AIR FORCE WASHINGTON

ADDRESS REPLY TO:

AF INSTALLATIONS REPRESENTATIVE NEW ENGLAND REGION

857 COMMONWEALTH AVENUE BOSTON 15, MASS.

REFER TO FILE NO. NER-AF PRK/jw

25 March 1955

MEMORANDUM FOR ASST. CHIEF OF STAFF, INSTALLATIONS, HQ. USAF ATTENTION: AFCIE-CSR

SUBJECT: Partial Assumption of Contractor Risks, Texas Tower

Forwarded for your information.

1 Incl. (in dupl) Cy ltr frm 1st Naval District dtd 15 Mar 55

(1 cy feld CIE-CS')

Upid Chedusan

ALFRED C. ANDERSON Chief Civilian Asst. Dep. OIC Instls. Reprs. Office New England Region

To: Central Files

00200 dden ALL M35/1

1 5 MAR 1955

Officer in Charge Proms

Chief, Bureau of Yards and Dacks District Tablic Works Officer, First Maral District Vis:

Subj: Texas Towars - Partial assumption of contractor risks

- l. In ascordance with verbal directive from the Chief of Dureau, it is desired to present recommendations for the government's acceptance of a portion of the contractor's risk in toxing and erecting subject toyears.
- 2. Advise has been received from a qualified insurance broker that coverage to the tower itself will cost about (150,000 per tower for \$3,000,000 coverage with \$25,000 deductible per socident. It is further understood that the Dalong Corporation normally does not insure the first \$25,000 in order to to reduce his insurance president. Therefore, it is recommended that the government self income for all damage to the tower in excess of \$25,000 per accident thereby saving \$750,000 in insurance premiums on the five toware.
- 3. Alimination or partial coverage of insurance for third party limbility is not recommended.
- 4. It is considered that the contractors will include in their bids siscable contingencies to cover costs of delays resulting from simornal poer weather conditions. Delays in jacking after arrival at the erection site could be very costly. Therefore, it is recommended that the government reisburse the contractor by change order for 50% of his direct out-of-posisst expenses at the erection site chargeable to nonproductive periods resulting from extended periods of poer weather. This would require legal definition, but tentatively, poor weather could be defined as waves in excess of 6 feet and/or wind with frequent parts in excess of 25 knotes. Infliently, an extended period could be defined as a normal work whift and out-of-pocket expenses defined to exclude overhead, prafit, rental or contractor owned equipment, etc. It is considered important that the contractor assume a part of this risk even though he will probably cover it with a contingency item. His as uption will alie nate possible unnecessary stormages at government expense to manit were productive weather.

D-100 JJ 6479bb U17/1

5. Although recommendations were requested for future toward, it is proceed that these same recommendations and also to the first toward that a provided allowences may be included in the contractor's and that conducted for delivery to the introduct Harch.

Conv to:
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time, avonate contracts attantic
broth to a security ship has, the

SUBJECT: Supply Ship for Texas Towers

TO:

Assistant Chief of Staff, Installations
ATTN: AFCIE-CS
Director of Transportation
ATTN: AFMTP-PD
IN TURN

MAR 24 1955

MEMO NO. 3 AFMLP-PL-US/Lt Col Bradley/dm/78648

- 1. This office recommends that Texas Tower personnel be transported by helicopter. Further, we recommend that airlift be used for resupply of cargo other than water and diesel fuel to the first Tower (one Tower 1 Sept 1955 1 Sept 1956). The two H21B's mentioned in Memo 2 can carry this cargo as well as the personnel.
- 2. It is understood that diesel fuel storage will be increased by 100-120,000 gallons, and that equipment for routine distillation of water is being installed. This will permit occasional resupply (of fuel, and perhaps some water) by a standard commercial tanker.
- 3. During the first 6-8 months of supporting the first Tower, the helicopter operation will be thoroughly tested. The operation can then be evaluated and compared with surface resupply of dry cargo in order to decide on providing a ship, or about four additional H21B's (10 instead of 6) to continue air resupply to all five Towers.

1 Incl n/c CHARLES B. HARVIN
Colonel, USAF
Chief, Plans Division
colistent for hogistics Plans
Colice, LCS/Hateriel

AFCIE-CS/LtColCrossey/mol/71975 Wrtn 2 Feb 55 fus 3 - 3 RM

3 FEB 1955

Rear Admiral R. F. A. Studde U S Coast and Geodetic Survey Department of Commerce Washington 25, D. C.

Door Admiral Stude:

Reference your letter of 10 January 1955, requesting information as to the possibility of using the "Texas Towers" to obtain data on behavior of tides.

The U S Havy Hydrographic Office has also requested the use of these towers to acquire data on various oceanographic parameters. The Air Force has given approval to the Mydrographic Office inlicating that sufficient space and power would be available to support their requirements. It was indicated by the Mydrographic Office that contact would be made, by that office, with various other government agencies who would be interested in this type of data. A cooperative program where the various participating agencies could combine their requirements would result in a more economical investigation.

It is suggested that your office contact Commander L. Robinson, U S Nevy Hydrographic Office, Washington 25, D. C., Code 153, Extension 273, in order that your requirements may be included in this program.

When all the requirements are known for this program they will be subsitted to the USAF Installations Representative, New England Region, 857 Gommonweelth Avenue, Boston 15, Massachusetta, by the U S Havy Eydrographic Office.

Sincerely,

LEE B. WASHBOURNE

Rajor Ce and, U. S. Air Force '

, lastallations

AFCIE-C lenn

AFCIE 3 Col count

Coord Gy AFCIE-CS Comeback

Stayback

U S Navy Hydrographic Off AFIR NER

COORD: AFCIE-CS

DEPARTMENT OF COMMERCIA

LE OF THE DIRECTOR

U. S. COART AND GEODIETIC ALP

WARRIED

10 January 1955

Major General Lee B. Washburn Assistant Chief of Staff for Installations U. S. Air Force Washington 25, D. G.

Subject: Tide Observations at Texas
Tower Installations

Dear General Washburn:

There have been a number of articles regarding the installation by the U.S. Air Force of radar platforms - "Texas Towers" - slong the continental saelf of the Atlantic coast of the United States. A recent and most interesting article, "Radar Platforms: Archallenge to Builders" by Comdr. John J. Albers, CEC USN appearing in the Mov. 25, 1954 issue of Engineering News Record, gives considerable information about the design and installation proposed.

The purpose of this letter is to explore the possibilities of obtaining certain systematic observations at such installations for the purpose of learning more about ocean waters off our coast, particularly concerning the behavior of tides. Observations in the offshore areas are very meagre but frequently in demand for various studies.

Systematic tide observations for example would furnish the relationship of the tide on the continental shelf with that inshore; and of perticular benefit to your operation would furnish over the years the variation between the elevation of the platforms and mean sea level. As you probably know sea level has been rising slowly but noticeably along the Atlantic. This has been brought out by our present network of tide stations located along our coasts, primarily in somewhat probected places.

Data on the benevior of tides, varietion in water temperature and density, and durient flow are desired, particularly now with increased interest in the development of the natural resources on the continental shelf. 10 January 1955 Major General Lee B. Washburn U. S. Air Force Page two

Our present files of processed data collected by the Coast and seedetic Survey on tides along our coasts, currents on Georges Pank and at scattered points along the shelf are used extensively by Defense Department contractors, such as Woods Hole Oceanographic Institute, in research studies.

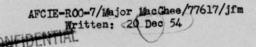
Using the standard automatic recording instruments of the Coast and Geodetic Survey little time and space are mediated to obtain the desired observatious; which are processed by the Coast and Geodetic Survey. However, if a program were to be undertaken some provision for installing the instruments would be required before the platforms are completed.

An expression of your opinion on this matter would be appreciated.

Sincerely yours,

Rear Admiral, USC&GS

Director



Real Estate Division D/Real Property, ACS/I COORDINATION AFCIE COORDINATION AFPTR COORDINATION AFDRD 1 4 JUL 1965 COORDINATION AFOOP APPROVAL AFCCS his signature ! but COORDINATION SAFGC SIGNATURE OSAF

Designation of Areas of the Outer State Shelf Needed for National Defense

- 1. The Outer Continental Shelf Lands Act (Public Law 212, 83rd Congress) asserts be exclusive jurisdiction and control of the Federal Government over the sea bed and absoil of the Outer Continental Shelf and provides for the development of mineral resources, Section 12.(d) of the Act authorizes the Secretary of Defense, with the approval of the President, to designate areas outside the three mile limit which are required for National Defense purposes. As long as this designation remains in effect, no exploration for or exploitation of natural resources can be conducted except with the concurrence of the Secretary of Defense. While the Act applies to the Outer Continental Shelf (Atlantic, Pacific, and Gulf of Mexico) the focal point of interest at the present time is the Gulf of Mexico; the off shore oil, gas and sulphur resources, better known as the tideland oil fields.
- 2. By Memorandum, dated 12 October 1954, the Assistant Secretary of Defense (Properties and Installations) requested that the three Military Departments recommend areas of the Outer Continental Shelf to be designated by the Office, Secretary of Defense as needed for National Defense purposes, and therefore, to be restricted from exploration and commercial exploitation.
- 3. The inclosure to the proposed memorandum for the Secretary of Defense summarmes present and foreseeable Air Force requirements for areas of the Outer Continental
 Shelf. These areas are used fors air-to-air gunnery and rocket ranges, bombing ranges,
 missile ranges and special purpose areas to meet operational and training requirements
 of the Air Defense Command, Strategic Air Command, Tactical Air Command, Air Training
 Command and Air Proving Grounds Command, and the Air Research and Development Command.

RECOMMENDATION

4. It is recommended that the attached proposed memorandum for the Office, Secretary of Defense (Properties and Installations) be approved and signed.

ATC SELVE DIN WIN	When Incl. no. Asea is (are) withdraw			5/ Gen Rodenhauer		
1 Incl Proposed issue for the Asst Secy of Defende		this conteston	cc: AFCIE	0439-54 OSAF FILE CO AFCIE-CI		
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JAN 5 1955

MEMORANDUM FOR THE ASSISTANT SECRETARY OF DEFENSE (PROPERTIES AND INSTALLATIONS)

SUBJECT: Designation of Areas of the Outer Continental Shelf Reeded for National Defense

- 1. Reference is made to Memorandum from the Office, Secretary of Defense, subject: "Designation of Areas of the Outer Continental Shelf Needed for National Defense," dated 12 October 1954.
- Inclosed is a list of areas of the Outer Continental Shelf required by the Department of the Air Force for national defense purposes.
- Section I of the inclosure lists those areas presently being used for: sir-to-air gummery ranges, air-to-air rocketry ranges, bombing ranges, missile ranges and special purpose ranges.
- 4. Section II of the inclosure lists those ranges which are either in the process of expansion or are programmed for expansion to meet anticipated future requirements.
- 5. Section III of the inclosure lists the approximate geographical coordinates of "Texas Tower" sites. The exact coordinates of these facilities can not be determined until caissons are sunk preparatory to final construction. The coordinates furnished herewith are based upon the best information available at this time. The area required for designation in this case is a circle with a five mile radius around each tower.
- 6. Pursuant to the provisions of Public Law 212, 83rd Congress, it is requested that the areas listed in Section I,II and III be designated as needed in the national defense. It is essential that these areas be restricted from exploration, commercial production and exploitation except when temporarily waived by the Secretary of the Air Force as being in the national interest and not prejudicial to the mission of the Air Force.

When Incl. no. / Sec 3 is (are) withdrawn or not attached, the classification of Confidential on this correspondence will be cancelled in accordance with par 25 e, AFR 205-1.

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AFCIE-ROO-7/Major McChee/77617/jfm/Hrtn: 20 Dec 54
CONFIDENTIAL
Rewrtn: 27 Dec 54

Memo for the Asst Sec of Defense (P&I), Subj: Designation of Areas of the Outer Continental Shelf Needed for National Defense (Cont'd)

7. The Air Force is presently making a utilization study of the overall range problem, the final results of which should be available some time. The increased speeds of aircraft, the increased ranges of weapons systems, the limited size and high value of land emphasize the desirability of overwater ranges whereever possible. These factors plus the ever increasing training requirements of the Air Force indicate that an overall Departmental review of overwater range distribution and control may be desirable in the not too distant future.

(Signed)

JOHN M. FERRY

Special Assistant for Installations

1 Incl a/s (dup)

No Change in Substance or Meaning

Cod UBAF

T. W. BOOM

AFCIE
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When Incl. no. 2-5003 is (are) withdrawn or not attached, the classification of Confidential on this correspondence will be cancelled in accordance with par 25 e, AFR 205-1.

CONFIDENTIAL

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AFCIE-ROO-7/major MacChee/77617/jfm/artn: 21 Dec 54

ee: AFCIE

AFPTR

Memo for the Asst Sec of Defense, Subj: Designation of Areas of the Outer Continental Shelf Needed for Mational Defense (Cont'd)

7. The Air Force is presently making a utilization study of the overall range problem, the final results of waich should be available some time next year. The incressed speeds of aircraft, the incressed ranges of weapons systems, the limited size and high value of land emphasize the desirability of overwater ranges whereever possible. These factors plus the future expension of the Air Force indicate that an overall Departmental review of overwater renge distribution and control may be desirable in the not to distant future.

When Incl. no. Like 3 is (are) with An not attached, the classification of will be cancelled in accordance with par 25 e, AFR 205-1.

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1 Incl 8/8

AFDRD MEMO FOR RECORD: By Memo dtd 12 Oct 54 OSD req that three Ser-AFOOP vices furnish OSD requirements for areas of Outer Continental AFCCS Shelf needed for national Defense purposes so that these areas SAFCC could be designated as national defense areas & restricted from OSAF OFC OF SIG exploration, commercial exploitation and production when such OSAF FILE COPY activity would be hazardous or interfer with defense activities. AFCIE-CI The focal point of interest was in the Gulf of Mex. & the tideland oil area with its oil, natural gas & sulphur resources. AFCIE req that AFPTR, AFDRD & AFOOP furnish AFCIE with present & future AF requirements for areas of the Outer Continental Shelf in order that a insolidated reply might be furnished OSD by 1 Dec 54. Replies were rec from AFOOP dtd Nov, AFDRD dtd 29 Nov, AFPTR'dtd 19 Nov. Inadequate info prevented preparation of final reply until after Texas Tower site doordinates could be resolved. Coordinates & size of area to be designated in connection w/Texas Tower sites was obtained informally from Col. Parson AFOOP-OP-D & Lt. Col. Crossey AFCIE-C/S on 20 Dec 54. AFOOP plans to hold an opns conference on range problems during Jan 55. At the conclusion of that confer. AFCIE will undertake to clarify the confusion presently existing in range real estate, providing AFOOP & representatives of maj commands are able to clear up the confusion relative to existing ranges & who exercises jurisdiction over them. It should be noted that the Nevy has almost complete control over both the eastern & west coast seaboards & is moving to grab all that area in the Gulf not req'ed for designation under PL 212 by the AF. The unsuitability of current continental ranges due to the greater sequirements of modern weapon systems and the high value of land in most continental shelf ranges, especially in the New England & west coast area. NOTE: Mr. Norton, OSD, informally advised Col. Price that for the purpose of this action use justification could be adequate, eg. gummery ranges, bombing ranges, Texas Tower site. bombing ranges, Texas Tower site. areas indicate that in the most too distant future, it may be

MAJOR DAVID F. MACCHEE

AFCIE/Gen Washbourne/dl/76381/8Dec54

Ans 3-3

8 December 1954

Mr. W. M. Horn Newport News Shibuilding and Dry Dock Company Newport News, Viginia

Dear Mr. Horn:

Receipt is tknowledged of your letter of December 3, 1954, expressing an imrest in a sub-contract for Texas Towers for the Air Force.

The Bureau (Yards and Docks, U. S. Navy is handling the design and constrtion of these units for the Air Force. It is suggested that yr interest in the fabrication of the steel work for these units I communicated to the Public Works Office, First Naval District, Ston, Massachusetts.

Sincerely,

LEE B. WASHBOURNE Major General, USAF Assistant Chief of Staff, Installations fair the copy

NEWPORT NEWS SHIPBUILDING AND DRY DOCK COMPANY

NEWPORT NEWS, VIRGINIA

OUR REFERENCE

December 3, 1954

Major General Lee B. Washburn Ass't. Chief of Staff for Installations for the United States Air Force Washington, D. C.

Gentlemen:

We read with interest the article on the proposed Radar Warning Platforms for the Continental Air Defense Command, and we note that it is the thought of the Air Force to ask tenders from specialized engineering contractors for these units.

Inasmuch as we do not intend to submit a prime bid on the fabrication, assembly and erection of these units, we would appreciate receiving a list of those contractors who will receive requests for prime bids. We may be able to assist as a sub-contractor in the fabrication of the steel work for these units.

Your advice in this matter will be appreciated.

Yours very truly,

NEWPORT NEWS SHIPBUILDING AND DRY DOCK COMPANY By-

W. M. Horn Sales Department

11 motor

WMH: bm-2

LAFCIE-CS CHIEF, CONSTRUCTION PROJECT CONTROL OFFICE, ACS/I MEMORANDUM FOR ATTN: LT COL NEL GLARK

SUBJECT: (Uncl) Projects SACE and TEXAS TOWERS - Critical List

- 1. Request your office initiate action to place the following projects on the critical list:
 - a. SAGE (Semi-Automatic Ground Tavironment) (term Unclassified) formerly known as Lincoln Transition System.

This Headquarters issued Design Guidance to AFIR NAR on 20 July 1954. Form 378 in amount of \$15,250,000 was issued to Commander, Air Materiel Command on 25 Oct 1954. This 378 authorized obligations for the following:

- (1) Construction of technical facilities at McGuire AFB, New York and Stewart AFB, New York;
- (2) Design and construction of technical facilities at Syracuse AFS, H. I.
- (3) Inspection service at acquire AFB, Syracuse AFS, N.Y. and Stewart AFB, N. Y.
- (4) Design of technical facilities at Ft Lee, Va., Brunswick NAS, Me. and Ft Custer, Mich.

AsC has been designated as executive agency for this project. A Joint Project Office under the jurisdiction of ALC has been established to coordinate all the facets of the project. A separate SAGE section has been established in the AFIR NAR office to monitor the construction of these facilities.

b. TEXAS TOWERS (term unclassified)

This Headquarters issued advance planning directive to Bureau of Yards & Docks on 8 sar 1954 authorizing preparation of contract plans and specifications for the towers. Form 378 in amount of \$11,023,000 will be issued to Bullocks prior to 3 Dec 1954 for the following:

(1) Construction of Sites TT-2 and TT-3

(2) Design of Sites TT-1, TT-5, TT-4 -

By Automy of Charles and Texas Towns - Critical List (Cont)

Bullocks has been designated as construction agency and AFIN NAR will monitor this project. Bullocks and Air Force has agreed to a construction schedule which provides for completion of one (1) Tower during CY 1955 and four (4) Towers during CY 1956.

- 2. It Colonel A. B. Parsons, AFOUP-OP/D, room BD951, telephone: 78456 and It Colonel J. L. Crossey, AFOUR-CS, room 5D431, telephone: 71975 will furnish additional information on above projects as required.
- 3. Request this office be included for coordination on all action papers pertaining to these projects and be furnished information copies of all action papers, reports, etc.

MARGLE C. MRITE Colonel, USAF Chief, Special Projects Branch Construction Division Directorate of Construction, ACS/I

COORD: AFCIE-CS

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Classification canceled or changed to:

by Anthony of Office

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AFCTE-CS/Col White/mir/54443

AFCIE-CS

MEMORANDUM FOR RECORD

Classification Canceled (Changed to _____30_November), 19 5 shortly of C. W. HARRIS 05-15 (Ottleer cruthoris

1 4 JUL 1965

SUBJECT: Status of Action - Projects Spag Map and the change, including his signature,) but

1. A discussion was held this date with AFTRD representative Colonel Rockwell and AFOIN-XI representative Lt Col Perlberg pertaining to status of action on project RAG MOP. Following points were noted or emphasized as requiring further action:

- a. It Col Perlberg stated that the project has been presented for JCS approval, and that he will take necessary action for project to be included in programming guidance documents to give it some official status.
- b. A memorandum was prepared by Mr. Hoover (DCS/Gomptroller) for General Bogart to present to Secretary of Defense, requesting \$10,000,000 in contingency funds to cover complete project. It is unknown at this time if these funds are applicable to PWP requirements. AFCIE-CS will follow-up on authorization and funding for this project.
- c. Budget estimate prepared by General Electric indicates a PWP fund requirement as follows:

(1) Initial Cost \$ 550,000

(2) Transportation 96,000

(3) Erection & Installation -495,000

\$ 1,141,000

114,000 10% Contingency

> \$ 1,255,000 TOTAL

- d. It Col Perlberg presented a schedule which showed the desired phasing of equipment delivery and installation with timing of construction operations. A copy is to be furnished this office as basis for establishing a construction schedule with the construction agency.
- e. General Electric's study on this project provides basic data for preparation of design guidance to field agency. It Col Perlberg will provide additional G.E. contacts on generators, etc. AFCIE-CS will take immediate steps to issue design guidance instructions. Target date is 2 December 1954.

Memo for Record, 30 Nov 54, Subj: Status of Action - Proj RAG MOP

- f. Site survey team is expected to return to Washington by 3 Dec 54. Confidential Message Q5681, 27 Nov 54, from the survey team, stated that all survey team members and representatives of JAMMAT concur that JCA is the logical construction agency, and further recommend immediate release of construction funds.
 - g. Design and Construction Channels:
 - USAFE has AFIR responsibilities for subject area.
 Issue design guidance to USAFE.
 - (2) JCA is design and construction agency through CINCEUR. 378's will be issued to CINCEUR.
 - (3) Adequate design funds are in hands of JCA to carry out design.
- h. Goordinate all project action papers with AFOIN, AFERD, and AFCIE-CO.
- i. A query was raised concerning a similar Z.I. site. It Col Perlberg indicated that operational requirement was so phased that project could be included in FY 56 program. It Col Perlberg was requested to contact Mr. Ulinski, AFCIE-W, to insure that the project is included in the FY 56 program.

HAROLD C. WHITE Colonel, USAF Chief, Special Projects Branch Construction Division Directorate of Construction, ACS/I

cc: Coord Cy L Comeback Stayback AFCIE-CS Col White AFCIE-W AFCIE-C

AFCIE-CS/Col White/mjr/71975/24 Nov 54 CONFIDENTIAL

MAY 2 6 1954

Stayback

LEGICRANDUM FOR ASSISTANT SECRETARY OF THE NAVY SPECIAL ASSISTANT FOR FACILITIES

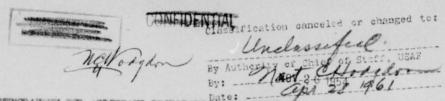
SUBJECT: Schedule of Construction for Texas Toward

- 1. Reference is made to a discussion held in my office on 23 November 1954 with Admiral J. R. Perry of Subocks concerning the schedule of construction for Texas Towers.
- 2. By letter of 22 October 1954 on this subject, the Air Force requested, as an immediate urgant requirement, the construction of two (2) towers during CT 1955. Pollowing a disoussion of the Air Force requirement for Texas Tower type facilities during GY 1955 and anticipated design and construction difficulties, enumerated by Bureau of Tards and Docks represent-atives, it was concluded to be in the best interest of the serwices and agreed by those present (subject to telephone confirmstion by Department of the Navy which was received on 24 Movember 1954) that:
- s. The Air Force accepts a design and construction schedule which will provide one (1) completed facility in CY 1955 with four (4) and tional towers to be completed in CY 1956.
- b. The Air Force recognizes the difficulties that may arise in maintaining this schedule in an unproven construction development field, however, the Air Force is prepared to accept the additional cost incurred in attempting to maintain this priority schedule.
- 3. A construction directive covering the construction of this facility will be issued prior to 3 December 1954. The Air Force will procure and install all technical and communications equipment, less generators. Generators will be procured by the Air Perce and installed by the construction agency. All other construction for the facility will be provided by the construction

againcy.			
Classification changed to: By Authority of: AFR. Date: 19	Uncl	(Signed) JOHN M. FERRY CASA Accistant for Insta	llations
Sgd: AoK pate: 22	CONFID	Coord Cy Coord Cy	1.534
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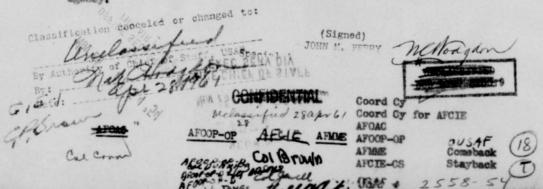
AFCIE-CS/Col White/mjr/71975/24 Nov 54



REMORANCIEM FOR ASSISTANT SECRETARY OF THE HAVY
SPECIAL SSSISTANT FOR PACILITIES

SIP-NOT: Schedule of Construction for Texas Towers

- 1. Reference is made to a discussion held in my office on 23 November 1954 with Admiral J. R. Perry of Subocks conserning the schedule of construction for Texas Towers.
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- 3. A construction directive covering the construction of this facility will be issued prior to 3 December 1954. The Air Force will precure and install all technical and communications equipment, less generators. Generators will be procured by the Air Force and installed by the construction agency. All other construction for the facility will be provided by the construction agency.



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Coordination & Fig. Approval

Special Projects Branch Construction Division Directorate of Construction, ACS/I

MR. A. L. CROCKETT

54443

2 8 OCT 1954

TOLAS TORERS

- 1. Letter from Department of the Navy (Dureau of Maris & Dooks) 20 October 1954, (Tab B), presents two (2) schedules of construction for the five (5) Texas Towers. Schedule "A" ""commenced by Dureau of Maris & Dooks calls for completion of all five (5) towers during a period May August 1956. Schedule "B", submitted at the request of the Air Force, calls for completion of two (2) of the towers during June August 1955, belance in 1956. The Mayy outlines various reasons why completion of any of the towers in 1955 is not recommended.
- 2. By attached letter, (Tab A), the Mavy is requested to adhere to Schedule "B" with periodic reexamination of all factors to determine if we should proceed as planned. Factors in this decision are as follows:
- a. There is an immediate fir force equipment for a segment extension of the Air Defense Badar Net to offerd coverage of strategic areas not presently severed.
- b. The USAF operating program phases personnel into these facilities starting in October 1955 with full occupancy on an operating basis during, July, August and September 1956.
- o. Il circuic equipment will be available January 1955 for installation as the teatrs are completed.
- d. By building at least two (2) of the towers in 1955, experience will be gained which will permit improvement on the 1956 installations.
- e. Two (2) sets of temporary legs, at a cost of \$1/2 million mach, required in 1955 can be roused during the 1956 installations.
- f. By erecting two (2) of the towers in 1955 and three (3) in 1956, the load on the Air Force in installing and testing of electronic equipment will be distributed.
- g. Contingency factors outlined by Eurean of Tards & Docks could just as easily affect Schedule "A" as Schedule "B". For example, if Schedule "A" is used and bed weather prevails during the summer of 1956, the possibility of getting none of the facilities prior to calendar year 1957 is apparent.

. 1 0 + 4-

TRIAS TORGES (Continued)

RECORDERENDATION:

3. It is recovared that Tab A be signed and dispatched.

2 inols 1. Frep lir to SuYaD Tab A 2.ltr from NOTAB 20 Oct 54 Tab B WILLIAM E. LEONHARD Colonel, U. S. Air Force Answers - and of Seast, Localistions

AFORC M/Com Blake Coords AFCIE

AFCCS

OSAF

Coord Og Comeback Cy AFCIT-CS Off of Sig OSAF AFCCS

AFCIE-CS/RLCrockett/mol/71975
Wrtn 21 Oct 54

2 2 OCI 1954

AFCIE-CS

SUBJECT: Schedule of Construction for Texas Towers

TO: Bureau of Yards and Docks ATTN: 0-270A Department of the Mavy Washington 25, D. C.

- 1. Reference is made to your letter dated 20 October 1954, subject: "Texas Towers Design and Construction of", and to Schedules SA" and SE" Inclosures #1 and #2 thereto.
- 2. The problem areas outlined in your letter in adhering to Schedule "B" for construction of Texas Towers are recognised as probable trouble spots. However, the Air Force has an immediate urgent requirement for construction of at least two (2) of the towers during calendar year 1955. Therefore, after careful consideration of all the factors involved, it is requested that your planning be predicated on Schedule "B" and that every effort be made to complete the towers at Hantucket and Georges Bank during calendar year 1955.
- 3. The progress of design, construction, outfitting and erection will be closely followed during the next few months. If at any time it appears that factors beyond your control will make 1955 completion of the two (2) towers not feasible, the construction schedule may be modified by mutual agreement accordingly.
- 4. Action is being taken to secure immediate release of funds required to permit advertising and award of contracts for construction of the two (2) towers referred to above, and for completion of design on the remaining three.

FOR THE CHIEF OF STAFF:

C. PRATT BROWN
E officer General, U. S. Air Force
Admissant Chief of Staff, Installations

COORD: AFCIE

AFCCS

OSAF

Coord Cy Comeback Cy AFCIE-CS Off of Sig - CSAF AFCIE AFCCS

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AF HQ-50 (Rev 21 June 48) Hel 10-5

DEPARTMENT OF THE AIR FORCE

AIR STAFF SUMMARY SHEET

ТО	ROUTE	DESIRED ACTION	INITIALS	Special Projects by	
AFCIE	1	Coordination & S	9. 012	Construction Divisi Directorate of Cons	ion struction
CSAF	3	Signature		GRADE - SURNAME MR. R.L.CROCKETT	TELACS/I 54443
				DATE 2 2 001 1954	

SUBJECT TEXAS TOWERS

SUMMARY

- 1. Letter from Department of the Navy (Bureau of Yards & Docks) 20 October 1954, (Tab B), presents two (2) schedules of construction for the five (5) Texas Towers. Schedule "A" recommended by Bureau of Yards & Docks calls for completion of all five (5) towers during period May August 1956. Schedule "B", submitted at the request of the Air Force, calls for completion of two (2) of the towers during June August 1955, balance in 1956. The Navy outlines various reasons why completion of any of the towers in 1955 is not recommended.
- 2. By attached letter, (Tab A), the Navy is requested to adhere to Schedule "B" with periodic reexamination of all factors to determine if we should proceed as planned. Factors in this decision are as follows:
- a. There is an immediate Air Force requirement for a seaward extension of the Air Defense Radar Net to afford coverage of strategic areas not presently covered.
- b. The USAF operating program phases personnel into these facilities starting in October 1955 with full occupancy on an operating basis during July, August and September 1956.
- c. Electronic equipment will be available January 1955 for installation as the
- d. By building at least two (2) of the towers in 1955, experience will be gained which will permit improvement on the 1956 installations.
- e. Two (2) sets of temporary legs, at a cost of \$1/2 million each, required in 1955 can be reused during the 1956 installations.
- f. By erecting two (2) of the towers in 1955 and three (3) in 1956, the load on the Air Force in installing and testing of electronic equipment will be distributed.
- g. Contingency factors outlined by Bureau of Yards & Docks could just as easily affect Schedule "A" as Schedule "B". For example, if Schedule "A" is used and bad weather prevails during the summer of 1956, the possibility of getting none of the facilities prior to calendar year 1957 is apparent.

AF HQ-50 (Rev 21 June 48) HOI 10-5

DEPARTMENT OF THE AIR FORCE

AIR STAFF SUMMARY SHEET

то	ROUTE	DESIRED ACTION	INITIALS	OFFICE OF PREPARATIO	N
				GRADE - SURNAME	TEL
				DATE	

SUBJECT TEXAS TOWLES (Continued)

SUMMARY

1

RECOLLENDATION:

3. It is recommended that Tab A be signed and dispatched.

2 Incls 1. Prop ltr to BuY&D Tab A 2. Ltr from BUYED 20 Oct 54 Tab B W.E. Lembard

WILLIAM E. LEONHARD Const. U. S. Air Force

1. Director of Continuous
Annual and Chief of Staff, Installations



DEPARTMENT OF THE NAVY BUREAU OF YARDS AND DOCKS WASHINGTON 25, D. C.

IN REPLY REFER TO

C-270A/GCE:vfp/fb

OCT 20 994 :

From: Chief, Bureau of Yards and Docks To: Department of the Air Force

Subj: TEXAS TOWERS Design and construction of

Ref: (a) USAF ltr AFOAl dtd 8 Mar 1954

(b) Conference of 19 Oct btwn representatives of BUDOCKS and /

Encl: (1) Schedule "A" (2) Schedule "B"

- 1. By reference (a) the Department of the Air Force requested this Bureau to proceed with the preparation of plans and specifications for construction of the subject project.
- 2. A feasibility report has recently been completed and tentatively approved by Department of the Air Force representatives. A thorough technical review of this feasibility report, by BuDocks in consultation with the Architect-Engineer representatives, has been made. Based upon this review a schedule which follows sound established design and construction procedures has been prepared providing for erection of all towers during the summer of 1956. This schedule is outlined in enclosure 1 forwarded herewith.
- 3. This schedule (enclosure 1) contemplates the completion of plans and specifications for all towers by 1 May 1955. Lump sum bids for construction of the towers would be received from selected bidders lists and awards would be made on four towers prior to 1 May and on the fifth tower prior to 15 June 1955 under contracts which would stipulate completion dates not later than 1 August 1956. This schedule allows several weeks for partial installation by the Air Force of electronic equipment during the dockside outfitting period, with completion to be accomplished at the sites ifter the towers have been completely erected and outfitted. The schedule is designed to take full advantage of lower costs resulting from concurrent construction of identical platforms and onshore or dockside outfitting and installation of electronic equipment. The schedule is considered realistic and provides optimum completion dates from the standpoint of economy, thoroughness of design and good construction practice.
- 4. By reference (b) Air Force representatives expressed desire for a plan that would envisage completion of two towers during the summer of 1955, with the remaining towers to be completed in the summer of 1956.

C-270A/GCE:vfp;fb

Accordingly, enclosure 2 has been prepared to indicate maximum time allocations which could be assigned to various phases of work in order to permit erection of two towers prior to 10 August 1955. To attempt to meet this schedule, highly accelerated and abnormal design, construction and bidding procedures would be required, with no assurance that they would result in construction completion by the date desired. As examples:

- (a) It would be necessary to immediately advertise for bids on fabrication and installation of the structures on the basis of the limited information contained in the Feasibility Report.
- (b) The fabrication portion of the bid would be based on an estimated tonnage with adjustment at a later date.
- (c) Outfitting might have to be added to the contract by change order upon completion of plans and specifications.
- (d) Contractors, both design and construction, would demand sizeable contingencies for overtime work.
- (e) Additional costs would be involved in the dovetailing of A&E design with the preparation of fabricators shop drawings.
- (f) Contractors would include cost contingencies to cover possible necessity for major outfitting at the sites after erection in lieu of complete outfitting at dockside prior to erection.
- (g) All electronic equipment installation by the Air Force would have to be accomplished at the sites, rather than on shore.
- (h) Thorough review and double checking of the unique design of the structure would not be possible
- (i) Any number of difficulties such as strikes, unusual weather, transportation problems, etc. could occur and cause delays. The probability of such delays is completely realistic and, even if of only two to four weeks, would make adherence to the outlined schedule impossible. This would result in the payment of premium prices for completion on desired dates with the benefit not being actually realized. That premium is estimated at 30%.
- 5. The Bureau accordingly considers that it would be extremely unwise to adopt a construction schedule similar to enclosure (2) and feels that it can only accept the responsibility for the full design and construction of this project on basis of a schedule along the lines of enclosure (1). The unusual design and construction requirements inherent in this operation which is completely different in scope and character from any previously undertaken similar marine work dictated engineering crudence and no variation from sound practice.

Copy to: DPWO One Se & Belleuty

Coordination

AFCIE-FA/S/Mr Roehr/wmw/73541 Wrtn 6 Oct 54

1 2 OCT 1954

Industrial Machine and Tool Company ATTN: Mr. Donald H. Roberts 615 North Sheridan Road Tulse 1, Oklahoma

Gentlemen:

Your letter of September 13, 1954, to the Commanding General, Readquarters U. S. Air Force, requesting an opportunity to participate in the proposed construction program for "Texas Towers," has been referred to this office for reply.

Design and construction of these contemplated facilities is performed for the Air Force by the Bureau of Yards and Docks, First Naval District, as contract construction agent.

It is, therefore, suggested that you refer inquiries to the above-mentioned First Nevel District, Nevy Building, 495 Summer Street, Boston 10, Massachusetts.

Your interest in this matter is greatly appreciated.

Sincerely,

C. W. HARRIS Deputy Chief, Engineering Division Directorate of Construction Assistant Chief of Staff, Installations

cc: USAF Instls Repr

M/R: Cy b/ltr dtd 13 Sep fr above company retained in EA File.

AFCIE-EA COORDINATION:

AFCIE-E



INDUSTRIAL MACHINE & TOOL CO.

615 N. SHERIDAN ROAD TULSA 1, OKLAHOMA TELEPHONE 8-3328

September 13, 1954

Commanding General Headquarters U. S. Air Force Pentagon Building Washington 25, D. C.

Gentlemen:

We recently have been advised through public releases of the anticipated radar tower fabrication and installation program that the Air Force will be initiating in the near future.

It is requested that we be provided with whatever information you have available at this time pertaining to the design, fabrication and installation of these radar towers known as "Texas Towers". We have done quite a design study on this type of structure and feel that we have a qualified staff to assist or to do preliminary design on this program if same is available. In addition thereto, we have complete facilities for the fabrication of these units, and we would certainly appreciate the opportunity of working with the Air Force and the United States Government on a project of this nature and magnitude.

If there is a formal application form required to receive bid sets or this data, it is requested that this information be forwarded to the undersigned so that they can be completed and our firm placed in a position to receive bid sets, engineering data, etc., pertaining to your program.

Thanking you in advance for your cooperation and assistance,

Yours very truly,

INDUSTRIAL MACHINE & TOOL CO.

Donald H. Roberts

Sales Director

DHR:1b

APCIE-CS/LtColCrossey/mol/71975 Wrtn 30 Sep 54

AFUIE-GS

30 September 1954

MIMORANTUM FOR AFGIR-E

SUBJICT: Texas Towers Preliminary Plans

- 1. Request that your Division make an immediate engineering review of the attached plans for the above referenced subject. This review should be accomplished prior to 4 October 1954 at which time representatives from your Division and Construction Division will depart for Boston to attend a conference with Department of the Navy and Architectural Engineering representatives.
- 2. A meeting is now scheduled at 0900 hours, 5 October 1954, AFIRO NEE, Boston. Request adequate representation from your office attend this meeting in order that decisions may be made at this meeting. It is expected that, at the conclusion of this meeting, Department of the Navy will be able to proceed with detailed plans and specifications for these towers. Contract award is estimated to be 1 January 1955, construction to be accomplished on shore during spring of 1955 and erection on site in summer of 1955.

1 Incl Set dwgs 1-10 Texas Towers L. A. SWANKE Lt Colonel, USAF Chief, Special Projects Branch Construction Division Directorate of Construction, ACS/I

JOORD: AFUIE-CS

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Coord Cy Comeback AFCIL-CS Stayback

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APCIB-CS/LtColCrossey/mol/71975 Wrtn 22 Sep 54

24 SEP 1954

AFGIR-CS

SUBJECT: General Security Classification - Project Texas Towers

TO:

Commander Air Defense Command Ent Air Force Base

Colorado Springs, Colorado

in order to clarify numerous inquiries and to establish a policy on the general security classification of Project Texas Towers, the attached copy of a letter to Bureau of Yards & Docks, Department of the Havy, dated 17 September 1954, (Incl 1) is forwarded for your information and guidance.

BY ORDER OF THE CHILF OF STAFF:

l Incl Cy Ltr as cited

DISTRIBUTION:
AMG
Middletown AMMA
Rome, N.Y.
EALF
AFIRO-NER
First Naval District

E. A. Swenke
ht. Colonel, U. S. Air Force
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COORD: AFCIE-CS

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Coord Cy Comeback AFCIE-CS

31

First Naval Dist, DB-300, Subject: MOy-32761: Project Texas Towers

ADMIS C-2 (6 Aug 54)

3d Ind

P 1958

HQ AIR DEFENSE COMMAID, Ent Air Force Base, Colorado Springs, Colorado

TO: Assistant Chief of Staff, Installations, Headquarters USAF, Washington 25, D. C.

This headquarters concurs with the recommendation for declassification of information pertaining to Texas Towers, to the extent defined by the District Public Works Officer, First Maval District, as outlined in basic letter. It is requested that you initiate directives to all echelons and agencies to accomplish the required declassification.

FOR THE COMMANDER:

Thomas of Songs

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PMO First Naval Dist
AFIR-NER
Comdr EADF

HQ ADC AAG DISPATCHED

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1954 SEP 20 12 04

ASST. CHIEF OF STAFF INSTALLATIONS

First Naval District DB-300 Subject: NOy-82761: Project Texas Towers

EAOPR-2 (6 Aug 54)

2d Ind

27 AUG'5A

HQ EASTERN AIR DEFENSE FORCE, Stewart Air Force Base, Newburgh, New York

TO: Commander, Air Defense Command, Ent Air Force Base, Colorado Springs, Colorado

- 1. This headquarters concurs in principle with the proposal outlined in the basic letter.
- 2. Although the provisions of ADCR 205-5 are believed appropriate in determining security classification pertaining to Texas Tower installations, a review of paragraph (a(1) as pertains to the purpose and location does not appear applicable in view of the widespread publicity already afforded this project.
- 3. Request this headquarters be advised of the current classification policies as pertains to various elements of the Texas Towers project.

FOR THE COMMANDER:

B/L Dist. Pub. Wks Office, First Naval District, Boston, Mass. Subj: N)y-82761: Project Texas Towers

MERAF LBR/km (6 Aug. 195h)

1st Ind.

USAF Instls. Reprs. Office, NED. Boston, Mass.

10 Aug. 1954

TO: Commander, Eastern Air Defense Force, Stewart AFB, Newburgh, N.Y.

- 1. Concur in desirability.
- 2. Request clearence through Command and Public Relation channels. BY OPDER OF THE CHIEF OF STAFF:

cc: PWO First Nev. Dist.

LEGNARD B. REPPERT
Lt. Colonel USAF
OIC Instis. Reprs. Office

New England Region



DISTRICT PUBLIC WORKS OFFICE FIRST NAVAL DISTRICT

NAVY BUILDING

AGE SUMMER STREET, BOSTON 10, MASS.

Address reply to District Public Works Officer First Naval District and refer to: DB-300

RSS: mg NOy-82761 AUG 1954

From: To:

District Public Works Officer, First Naval District Lt. Col. L. B. Reppert, USAF IRO NED, Representative's Office, Officer in Charge of Installations, U. S. Army Engineers, 857 Commonwealth Avenue, Boston

NOy-82761: Project Texas Towers Subj:

1. In view of the widespread publicity regarding subject structures contained in recent newspaper articles and magazines, this office considers that the "Secret" classification should be confined solely to the type and capabilities of equipment to be installed. The articles, in general, point out that a chain of offshore radar warning stations called "Texas Towers" will be built as an extension to the system now in existence from Alaska to Greenland. They further state that the towers will be linked to shore-based warning stations.

2. It is requested that necessary steps be taken to declassify all portions of the project except that noted above.

> J. J. ALBERS By direction

AFUIE-CS/LtColUrossey/mol/71975 Wrtn 14 Sep 54

1 7 SEP 1954

AFCIE-CS

SUBJUCT: General Security Classification - Project Texas Towers

TO:

Bureau of Yards & Docks ATTN: C-270 Department of the Navy Washington 25, D. C.

1. In reference to your inquiry on classification of construction concerning Project Texas Towers the following policy should govern:

- a. When the project is discussed without specifically mentioning either the type of electronic gear, electronic coverage, the number of towers, and/or the general area covered, correspondence can be unclassified.
- b. When the type of electronic equipment to be used on the tower is indicated, correspondence should be confidential unless specific equipment requires a higher classification.
- c. When the general electronic coverage is given, the correspondence should be classified secret.
- 2. It is quite difficult to specifically place a classification on all facets concerning Texas Towers as many individual elements in themselves are unclassified, however, the grouping of these elements can require classification. For example, the locations of two sites would not be classified in themselves, but to state that they are adjacent would show the possibility of a gap, thereby providing information upon which to analyse the capability of this system which would require classification of confidential or higher.
- 3. Classification of correspondence relating to Texas Towers must necessarily be decided by the originator exercising good judgment.

FOR THE CHIEF OF STAFF:

WILLIAM E. LEONHARD Colonel, U. S. Air Force Deputy Director of Construction Assistant Chief of Staff, Installations

AFCIE-C COLFRENCH COLBRUM

AFOAC-E/A

AFCIE-CS Stayback

AFCIE

1. Information concerning design and construction of facilities listed in paragraph 1 Comment 1 is outlined below:

a. Low Altitude Gap Filler Madar

- (1) Action taken: The services of an A/E firm to prepare plans, specifications and working drawings for these facilities has been obtained. These plans should be available by second quarter F7 1955, in time to meet the proposed schedule to start construction during this period. The Chief of Engineers has been requested to assist Air Lefense Command in siting these facilities.
- (2) Action Contemplated: Providing the siting surveys will be accomplished as scheduled, it is expected that OCE will provide construction of facilities as scheduled for all sites in the FT 55-56 PSP, 125 and 100 sites respectively.
- (3) Additional Information Required: Criteria as to weight, size and power required by the equipment to be used for these facilities. Since this information has not been furnished it is contemplated the A/E selected along with representatives from this Headquarters will secure this information in the near future.
- (4) Problem Areas incountered: In addition to criteria mentioned in paragraph 3 above, the realization of completed site surveys upon which to base design and construction will be a continuing problem.

b. Third Phase Augmentation Madar Program

- (1) Action Taken: Design Guidance issued for twenty-five (25) third phase mobile sites as contained in the FY 55 PWP. OGE has been requested to assist ATC in the siting of these facilities.
- (2) Action Contemplated: OCE will construct these facilities upon approval of the site survey reports by this Read-quarters. If the site survey reports are accomplished and approved as scheduled, it is expected that the construction of these 25 sites will meet the target date.

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(Continued) SUBJUCT: (Uncl) ACAM Program

- Third Phase Augmentation Radar Program (Continued)
 - (3) Information Required: Approval of Site Survey Reports.
 - (4) Problem Areas Encountered: Delay in receiving site survey reports.
- Implementation of Texas Towers
 - (1) Action Taken: Tesign Guidance issued to Department of Navy, Bureau Yards & Docks who, in turn, have awarded a contract to an A/M firm to investigate and design these five (5) sites. Preliminary drawings have been submitted to this Headquarters and will be discussed at a conference at MADF, Stewart AFB, 23 July 1954.
 - (2) Action Contemplated: It is anticipated that the design of the Texas Towers will be accomplished by 1 December 1954. Construction will start on the superstructures about February 1955. Installation at the locations should begin approximately June 1955 with the exception of the one (1) site off New York City which is in deep water. This site presented a design and construction problem which has not as yet been resolved.
 - (3) Additional Information Required: Manning, logistic plans and type of communication from site to shere.
 - (4) Problem Areas Encountered: The means of providing a site in 180 ft depth of water is presenting a major engineering problem.
- 2. A series of Field Conferences with MATF, CATF and WATF are to be conducted during first quarter, FY 1955. Siting, criteria, real estate and design problems will be discussed and resolved to the greatest possible extent. These conferences will reveal additional information and problem areas which will be furnished as appropriate.

COORD: AFCIB-CS

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8 Y talletteris

M/R: Comments 2 thru 4 & 6 are not applicable to this Directorate.

WILLIAM E. LEONHARD Colonel, U. S. Air Force Deputy Director of Construction

Assistant Chief of Staff, Installations
AFCIE-C AFCIE-

COI BrOWN

classification changed to: - Um

By Authority of: Date:

Lt Col Crossey/ Wrtn: 27 Apr 54 / mol/71975 Re-Wrtn: 29 Apr 54/Col Leonhard/cn/73311

APCIE AFCCS m Ferry OSAF -

Coordination Approval Signature

Special Projects Branch Construction Division, D/Construction, ACS/I

Lucol J.L. Crossey

71975

1/11

3 MAY 1954

Texas Towers Construction

1. Admiral Jelly, Director of Construction, Office, Secretary of Defense, has ested a sketch of the floor plan for the Texas Towers. The memorandum, as Tab MAN, transmits the requested aketch and explains the current status for design for these

RECOMMENDATION:

2. It is recommended that the attached personandum to the Director of Construction, OSD (Tab "A") be signed by the Special Assistant for Installations and dispatched.

1 Incl PTab An L. J. ERLER Colonel, U. S. Air Force Director of Construction Assistant Chief of Staff, Installations

Cou dn. Cy - AFCIE Cmbk Cy - AFCIE-CS Stayback cy AFCIE-CS leading cy AFCIE-3 leading cy Office of Signature Ofice of Sec of A/S OSAF Files Gen Washbourne

P.D. alder Sanke

OSAF # 2558-54

MAY 4 1954

MEMORANDUM FOR THE DIRECTOR OF CONSTRUCTION, OFFICE, SECRETARY OF DEFENSE SUBJECT: Texas Towers Construction

- As requested in your Memorandum of 16 April 1954, there is inclosed a copy of floor plan recently submitted to the Department of the Navy for guidance in the design of subject named facilities.
- 2. Design and construction responsibilities having been assigned to the Bureau of Yards and Docks, a meeting was held 12 and 13 April 1954, at the Headquarters, First Naval District regarding the design criteria to be used. In addition to this Headquarters, the Air Defense Command, the First Naval District, and the Architect-Engineer retained by the Navy for this project were represented. The actual size of the tower structure will be determined by the Navy based upon criteria furnished at this meeting and other data to be developed.
- 3. Some reduction in area may result from the adoption of a square, rather than rectangular, platform but the ultimate area will be primarily dependent on the required spacing of the three radomes. Our instructions to the Navy require the most economical type of structure capable of supporting the assigned mission which contemplates three large radomes and a heliport on the top deck. The area below the deck should accommodate thirty seven (37) Air Force personnel, power equipment, 30-day supply storage and radio equipment. In addition this Headquarters has for consideration a Navy requirement for space to accommodate twenty (20) of their personnel and certain additional equipment.

(Signed)
- JOHN M. FERRY
Special Assistant for Installations

Inclosure Plan (2 pages)

ather below.

(2)

AF RQ-50 (Rev 21 June 48) HO1 10-5

DEPARTMENT OF THE AIR FORCE

SUMMARY

TO	ROUTE	DESIRED ACTION	Special Projects Branch		
AFCHS-	1	Coordination Approval	Mune	Construction Division,	
CSAF- Mr. Ferry	3	Signature		GRADE - SURNAME	EL. 71975
				3 MAY 1954	

SUBJECT

Texas Towers Construction

SUMMARY

L. Admiral Jelly, Director of Construction, Office, Secretary of Defense, has uested a sketch of the floor plan for the Texas Towers. The memorandum, as Tab TAB, transmits the requested sketch and explains the current status for design for these towers.

RECOMMENDATION:

2. It is recommended that the attached memorandum to the Director of Construction, OSD (Tab "A") be signed by the Special Assistant for Installations and dispatched.

J.J. Eren:

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I. J. ERLER Colonel, U. S. Air Force Director of Construction

Assistant Chief of Staff, Installations

0.18 # 2558-54

AFCI - US/Lt Col Crossey/m61/71975 Wrtn 27 Apr 54

APGIX APGOS OSAF 1 Goordination 2 Approval 3 Signature Special Projects Branch Construction Sivision Sir/Construction, ACS/1

Lt Gol J. L. Pressey 71975

Temas Towers Construction

1. The attached memorandum and plan describing the present situation is submitted a er request of Admiral Jelley.

RECOMMENDATION:

2. It is recommended that memorandum to Assistant Secretary of Telense (Properties and Installations), Tab A, be signed and dispatched.

1 Inclosure
Memo for Signature
w/1 Inclosure, Tab A

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COORDINATION



OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE WASHINGTON 25, D. C.

PROPERTIES AND INSTALLATIONS

EMORACION FOR THE SECRETARY OF THE AT' FORCE

ATT: Special Assistant for Installations

SUBJECT: Texas Tower Construction

In view of the limited personnel strengths scheduled to occury the Texas Town installations included in your FY-55 lengthustion Program, it is undo stood that substantial reductions in the initially proposed size of these towars can be said. In order that the interior arrangement of the space to be provided on these towars may be examined, it is requested that a floor plan occurring the latest reduced size towar superstructure be furnished this office.

Hills J. N Jailey

OF LICE SECRETARY OF THE AIR FORCE 45' 4 11 BI RIA

SFFICE SECRETARY OF THE AIR FORCE 04 - 06 PH 108 Now 19 12 27 "54

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ALBERT M. DOHERTY Major, U. S. Air Force
Assistant Executive Assistant Chief of Staff, Installations

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WRTN 20 Apr 54

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JELINEY

(Uncl) Project Texas Towers

Director of Operations, DOS/O

Directorate of Construction, ACS/1

21 APR 1954

AFO12-03/Lt ColGrossey/mol/ 71975

- 1. Request your review and comments on the attached letter from Dept. of the Mavy.
- 2. As this project is presently being designed by the Mavy for the Air Force, it is imperative that a decision be made on whether space for material and personnel for the Mavy be provided in these structures.
- 3. The increased cost of design because of the inclusion of this additional space hould be negligible and could be covered with our presently available design funds, although the cost of the additional construction may be considerable and it is possible that the Mavy will be requested to cite a source of funds if their request for space is approved.
- 4. Many items must be considered in regard to this request such as prorating of cost of upkeep and operation, commend jurisdiction of the site, etc.
- 5. A meeting was held at office of First Havel District, Boston, Mass., 12 April 1954, with representatives of this Headquarters, Tept. of the Navy and ADC to resolve problems of design regarding these Texas Towers. It was decided at that time that the beavy should design for 31 AF permanent personnel and 6 AF transit personnel and that criteria to be used in the design such as water, messing, docking, laundry, etc., would be of Navy standards.

WILLIAM E. LEONHARD

Calenel, U. S. Air Force

. Director of Construction

astattant Chief of Staff, Installations

1 Incl Ltr frm Dept Havy 20Mar54

co: AFOAC

COORDINATION: AFCIE-CS

enclosure No. _____ is withdrawn not attacked) the classification of respondence will be cancelled no with par. 25c, AFR 205-1.

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(Uncl) Texas Towers

AFIRO NED

AFCIE-CS

5 APR 1954 1 AFCIR-CS/FWMcCarthy/mol/ 71975

Reference your message ARTAR 3-1714. Copies of correspondence requested in referenced message are enclosed.

3 Incls 1. Ltr to BUY&D dtd 12Jan54 2. Memo frm BUY&D dtd 19 Jan 54 3. Conf rpt-Texas Towers dtd 11Feb54

CHARLES C. LUTMAN Lt. Colonel, U. S. Air Force Executive, Construction District Directorate of Construction Assistant Chief of Staff, Installations

If enclosures no. 122 and withdrawn (or not attempt) the characterities of this correspond that is correlated in accordance that is correlated.

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J. L. Crossoy, 46 & 1 Path May

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TO JEPHO/COFS USAF WASHDO

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COFS USAF WASHDC/FOR AFCIE-C PD URIGHT PATTERSON AFB/FOR MCMTC PD GRIFFISS AFB/FOR MCOR PD USAFIRO NED 2 PD REQUEST THIS OFFICE BE FURNISHED CYS CORRESPONDENCE & DATA REFERRED TO IN PAR 1A CHM 1B AND 3B OF YOUR LTR SUBJECT CLN QUOTE FY 55 JADVANCE PLANNING DIRECTIVE TEXAS TOWERS UNQUOTE DTD 18 MARCH 54 PD PRELIMINARY RPT PREPARED BY LINCOLN LAB DID 1 AUG 5 IS AVAILABLE TO THIS OFFICE PD UPON RECEIPT OF REFERENCED DATA UD INTEND TO ESTABLISH JOINT CONFERENCE TO PERMIT INITIATION OF DESIGN PO YOUR COMMENTS AND/OR CONCURRENCE IS REQUESTED VNEDAR 3-1714

CFN USAFIRO NED 2 18 18 3B 55 18 54 1 352 NEDAR 3-1714

ACTION: CIE

AF IN : 20265 (30 Mar 54)

979TO: AFCAE CABLE DESK SUSPENSE DUE DATE: 4/6/34

AFHQ FORM 0-309d



DEPARTMENT OF THE AIR FORCE STAFF MESSAGE DIVISION

OUTGOING CLASSIFIED MESSAGE

CONFIDENTIAL PRIORITY

PARAPHRASE NOT REQUIRED. CRYPTOCENTER BEFORE DECLASSIFYING

HQ USAF AFOAI-PP Colonel L. G. Griffin 55623

: COMATRDEFCOM ENT AFB COLO

: 53945

23 March 1954

(DTG 230908Z)

PERSONAL TO CHIDLAW FROM WHITE

Ref URMSGs ADHCR 08720 dtd 17 Mar 54, ADHCR 0383 dtd 11 Mar 54, and Personal to Chidlaw from White dtd 15 Mar 54, and URMSG ADHCR 0433 dtd 18 Mar 54.

Just completed second reclama to OSD on FY-55 Public Works Program. This reclama, as did the first, included essential ADC facilities expressed in your personal messages. Mr. Douglas and myself personally appeared before OSD to urge their approval of the minimum operational facilities sponsored for the FY-55 Public Works Program. Even though every possible effort was made to secure their approval of these facilities, for reasons beyond control of Air Staff, OSD declined to approve all items requested. For instance, they did not allow the ADC maintenance facilities program for McClellan nor did they approve the family housing at ADC bases. We were able to secure approval on the following ADC items which have now been reinstated in the FY-55 Public Works Program:

Readiness Hangars

Lockbourne

26,800 sq. ft. hangar

Wurtsmith

14,000 sq. ft.

Bismark

21,640 sq. ft. 35,160 sq. ft. 35,160

fby hangar Tribraced of the shop his signature.) Date of the change, including his signature.)

K. I. Sawyer

CAF OUT: 53945

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DEPARTMENT OF THE AIR FORCE STAFF MESSAGE DIVISION

OUTGOING CLASSIFIED MESSAGE

CONFIDENTIAL

NR : 53945 (cont'd)

Readiness Hangars (cont'd)

McChord	21,640 5,160	sq.	ft.	hangar	
MinnSt. Paul	21,640 5,160	sq.	ft.	hangar shop	
Suffolk Co.	5,160	sq.	ft.	hangar shop access	apron

Maintenance Hangars

Duluth	21,640	sq.	ft.	hangar	
	5,160	sq.	ft.	shop	
	2,164	sq.	yd.	access	apron

Youngstown 21,640 sq. ft. hangar 5,160 sq. ft. shop 2,500 sq. yd. access apron

Texas Towers

Approval is granted for the inclusion in the FY-55 Authorization Bill of an item for Texas Towers in the amount of \$8 million. This item will be included in the overall line item for the Lincoln Transition

System.

It is planned to resubmit as firm operational requirements in the FY-56 Public Works Program, those items which failed to receive OSD approval for FY-55.

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Page 2 of 3 pages

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NR : 53945 (cont'd)

NOTE

: ADHCR 08720 is AF IN 11721 (17 March 1954). ADHCR 0383 is CAF IN 66675 (11 March 1954). ADHCR 0433 is CAF IN 68290 (18 March 1954).

ORIGINATOR : CIE

CVC DISTRIBUTION:

CAF OUT : 53945

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AFHQ FORM 0-309h



COPY NO.

COL W. E. LEONHARD/amh/73311 WRTN: 12 March 54 My

#3

AFOAI-C

15 March 1954

SUBJECT: Design Instructions

TO:

Chief, Bureau of Yards & Docks Department of the Navy Washington 25, D. C.

- 1. An unacceptable time lag exists between the date funds are appropriated for Public Works construction and the date these programs are placed under contract. This delay is largely attributable to (1) the need to re-program funds before the program can be implemented because of inadequate cost estimating in the initial program preparation, and (2) the late initiation of design in the program cycle.
- 2. Letter, this Headquarters, subject "Preparation of Project Planning Reports", this date, is designed to overcome the first problem listed above. The purpose of this letter is to delegate to Air Force Installations Representatives the authority for issuing design instructions to design agencies, and to outline a procedure for implementing this authority as a means of overcoming the second obstacle cited above.
- 3. Effective immediately, this Headquarters will discontinue the preparation and issuance of detailed line item design directives for all years programs worldwide. Instead, this Headquarters will:
- a. For the FY-1955 and FY-1956 programs, advise the AFIRs, major commands and design agencies of the USAF Construction Program, including real estate items, approved by the Office, Secretary of Defense for submittal to the Congress, and identify the design agency for each line item.
- b. For the FY-1954 and prior years programs, furnish the AFIRs, major commands and design agencies with a consolidated listing of all projects included in current Air Force programs.
- c. Furnish the AFIRs, major commands and design agencies, general design criteria and standards, list of definitives and standard working drawings, and specific design guidance as may be necessary to insure compliance with program objectives.
- d. Allocate advance planning funds to the design agencies (P-313), as necessary to accomplish authorized design.

(19)

 $\rm B/L$ to Chief, Bureau of Yards & Docks, Dept of Navy, Wash., D.C., subject Design Instructions.

- e. Advise the AFIRs, major commands and design agencies of changes in scope in all programs, including real estate items, as a result of actions by the Congress or the Department of Defense, changes in base utilization or other reasons.
- Monitor for adherence to approved scope and technical adequacy, all design instructions issued by the AFIRs.
- 4. Major commands will promptly furnish siting, and specific criteria for non-standard items to AFIRs as a basis for design instruction.

5. AFIRs will:

- a. Screen listing of projects contained in current program for FY-1954 and prior, and insure that a valid design directive is in force for each line item not under contract.
- b. Upon receipt of FY-1955 program, as approved by the Office, Secretary of Defense, screen design directives currently in effect for revisions and omissions.
- c. Upon receipt of FY-1956 programs, as approved by the Office, Secretary of Defense, screen project planning reports on file for required changes.
- d. Following screening in sub-paragraphs a, b and c above, issue appropriate instructions, including requests for real estate planning reports, to the design agency at Naval District level to design projects in accordance with designated scope and criteria. Design will be in accordance with Air Force outline specifications and will not exceed the scope specifically authorized by this Headquarters, except for nominal changes (not to exceed 10%) to (1) adjust to a standard definitive or (2) meet special on-site conditions.
- e. Forward two copies of all design instructions issued to this Headquarters, ATTN: AFCAI-C and AFCAI-AE. Information copy will also be furnished to major command concerned.
- f. Revise design instructions upon directions from this Headquarters to reflect changes in approved scope and correct errors, omissions and ambiguities.

6. Design agencies will:

 a. Advise this Headquarters of the need for advance planning funds (P-313) for accomplishment of design. B/L to Chief, Bureau of Yards & Docks, Dept of Navy, Wash., D.C., subject: Design Instructions.

- b. Prepare preliminary and/or working drawings as requested by AFIRs in design instructions.
- Current procedures with respect to review and approval of preliminary plans will continue to apply.
- 8. Where an Air Force major command is designated the design agency, relationship of the AFIR to that command and the procedure to be followed are identical with those in effect for design agencies outside the Air Force unless specifically exempted by this Headquarters.
- 9. Construction directives, program authorization vouchers (AF Forms 378) and budget allocations for construction will continue to be issued to construction agencies directly from this Headquarters.
- 10. Previous instructions in conflict with the foregoing are rescinded.

FOR THE CHIEF OF STAFF

William E. LEONHARD Colonel, USAF Chief, Constr. Division Directorate of Installations, DCS/0

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(21)

DEPARTITAT OF THE LIR FORCE Hesequarters United States Air Force Washington 25, D. C.

Ins - 6-2

ARDAT-C

15 March 1954

SUBJECT: Design Instructions

TO: Chief of Engineers
Department of the Army
Washington 25, D. C.

- 1. An unacceptable time lag exists between the date funds are appropriated for Public Works construction and the date these programs are placed under contract. This delay is largely attributable to (1) the need to reprogram funds before the program can be implemented because of inadequate cost estimating in the initial program preparation, and (2) the late initiation of design in the program cycle.
- 2. Letter, this Headquarters, subject "Preparation of Project Planning Reports," this date, is designed to overcome the first problem listed above. The purpose of this letter is to delegate to Air Force Installations Representives the authority for issuing design instructions to design agencies and to outline a procedure for implementing this authority as a means of overcoming the second obstacle cited above.
- 3. Effective immediately, this Headquarters will discontinue the preparation and issuance of detailed line item design directives for all year's programs world-wide. Instead, this Headquarters will:
- a. For the FY 55 and FY 56 programs, advise the AFTRs, Major Commands and design agencies of the USAF Construction Program, including real estate items, approved by the Office, Secretary of Defense for submit'al to the Congress, and identify the design agency for each line item.
- b. For the FT 54 and prior year's programs, furnish the AFTRs, Major Commands and design agencies with a consolidated listing of all projects included in current Air Porce programs.
- c. Furnish to the AFIRs, Major Commands and design agencies, general design criteria and standards, lists of definitives and standard working drawings, and specific design guidance as may be necessary to insure compliance with program objectives.
- d. Allocate advance planning funds to the design agencies (P-313), as necessary to accomplish authorized design.
- e. Advise the AFIRs, Major Commarks and design agencies of changes in scope in all programs, including real estate items, as a result of actions by the Congress or the Department of Defense, changes in base utilization or other reasons.

appender besign instructions

- f. Noniter for adherence to approved scope and technical adequacy, all design instructions issued by the AFIRs.
- 4. Major commands will promptly furnish siting, and specific criteria for non-standard items, to AFTRs as a basis for design instruction.

S. ARTRA Wills

- a. Screen listing of projects contained in current program for FY 54 and prior, and insure that a valid design directive is in force for each line item not under contract.
- b. Upon receipt of PT 55 program as approved by the Office, Secretary of Defense, screen design directives currently in effect for re-
- c. Upon receipt of FY 56 programs appeared by the Office, Secretary of Defense, screen project planning reports on file for required changes.
- d. Following screening in sub-paragraphs a, b, and a above, issue appropriate instructions, including requests for real estate planning reports, to the design agency at Division Engineer or Naval District level to design projects in accordance with designated scope and criteria. Design will be in accordance with Air Force outline specifications and will not exceed the scope specifically authorised by this Headquarters except for nominal changes (not to exceed 10%) to (1) adjust to a standard definitive or (2) meet special on-site conditions.
- a. Forward two copies of all design instructions issued to this Headquarters, ATTN: AFOAI-C and AFOAI-AE. Information copy will also be furnished the major command concerned.
- f. Revise design instructions upon directions from this Headquarters to reflect changes in approved scope and correct errors, omissions and obiguities.

6. Design agencies will:

- a. Advise this Headquarters of the need for advance planning funds (F-313) for accomplishment of design.
- b. Frepare preliminary and/or working drawings as requested by AFIRs in design instructions.
 - c. Prepare real estate planning reports as required.
- 7. Current procedures with respect to review and approval of preliminary class will continue to apply.

SUBJECT: Design Instructions

- 8. Where an Air Force Major Command is designated the design agency, relationship of the AFIR to that commend and the procedure to be followed are identical with those in effect for design agencies outside the Air Force unless specifically exempted by this Headquarters.
- 9. Construction directives, program authorization vouchers (AF Forms 378) and budget allocations for construction will continue to be issued to construction agencies directly from this Headquarters.
 - 10. Previous instructions in conflict with the foregoing are rescinded.

FOR THE CHIEF OF STAFF*

W. F. IEONHARD

Colonel, USAF Chief, Construction Division Directorate of Installations, DCS/O

AFOAI-CS/MajorLittle/mol/71975 ReWrtn 4 Mar 54

Classification changed to: By Authority of: AFR 205-1

.. Date: 18 agr. 60

AFOAI-US

Sgd: ____ Dok SUBJECT: (Uncl) FY 1955 Advance Planning Directive - Texas Towers

Chief, Bureau Yards & Docks 20: Department of the Havy Washington 25, D. C.

1. References:

a. USAF letter, subject: "(Uncl) Texas Towers", with brochure dated 12 January 1954;

b. (Secret) Bureau Yards & Docks letter G-203E/ims Bll. 29 January 1954, to Directorate of Installations, DOS/O, USAF.

2. As a part of the seaward extension of contiguous radar coverage of the U.S. Air Tefense System, there is a requirement for five (5) radar facilities identified as "Texas Towers". Subject to subsequent provisions of this directive, you are authorized to proceed with the preparation of contract plans and specifications for these radar facilities. The site surveys, ocean floor and geological investigation, design and preparation of contract drawings and specifications, cost estimates and all other phases of design necessary to provide complete bidding documents will be prepared.

3. General provisions:

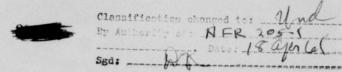
a. Current procedures and policies relative to standards of construction, siting of facilities, approval of plans, specifications and coordination with agencies concerned will govern the administration of this program.

b. Initiation of this advanced planning work will be based upon reference la above and conclusions established by conference in this Headquarters, 5 February 1954, a report which has been furnished.

4. Special provisions:

a. Preliminary plans and specifications will be subject to approval prior to proceeding with final drawings for the purpose of establishing the actual scope of work of these projects and determining the validity of the construction requirements.

A current working estimate for each tower will be developed on the basis of the preliminary plans and specifications.



SUBJECT: (Uncl) FY 1955 Advance Planning Directive - Texas Towers (Continued)

4. Special provisions: (Continued)

c. The AF Installations Representative, New Ingland Division, Corps of Engineers, Department of the Army, 857 Commonwealth Avenue, Boston 15 Mass., telephone: Algonquin 4-2050, Extension 35, is the Air Force agency designated to monitor this project in accordance with AFR 93-17.

d. Technical radar plane and engineer assistance will be furnished by the Rome Air Force Depot (RAFD: MOOK) through Air Materiel Command.

e. Goordinate location and project number for each site is as follows:

Project No.	Name	Location			
TT-1 TT-2 TT-3	Cashes Ledge Georges Shoal Kantucket Shoal	42°-45' N 68°-57' N 41°-44' N 67°-45' N 40°-45' N 69°-19' N			
TT_4 TT_5	(Asia Rip) Shoal (Unnamed) Brown's Bank	39°-48' N 72°-40' W 42°-47' N 65°-37' W			

f. Additional specific design criteria will be furnished in the near future as it becomes available and is approved for utilization on this project by the Air Force.

5. Action has been initiated by this Headquarters to make available to your office design funds in the amount of \$200,000.

FOR THE CHILF OF STAFF:

co: ATG

ANG: MOMTO RAFD: MOOR

Lincoln

Dept of Navy: CHO Tept of Navy: Bu Shipe

AFIR: NET

AFOAC AFOOP AFMME

AFOAI-A/E

AFOAI-CC

COORDINATION: AFOAI

AFOAI-CC

AFOOP-OP-D AFOAI-A/E

Copt. Taylor.

AFOAI

WILLIAM E. LEGGRAND Colonel, USAF

Chief, Constr. Division

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Directorate of Installations, DCS/0

A-10559

L/C White/AE/R/vhf/52641 12 Jan 54

19 JAN 1954

AFOAI-AE/R,

SUBJECT: Texas Powers (Uncl)

TO:

Chief Bureau of Yards and Docks Department of the Navy Washington 25, D.C.

- 1. Informal discussions have been conducted between representatives of this Headquarters and your Bureau concerning the design of certain off-shore facilities called "Texas Towers".
- 2. This Headquarters believes that the design and supervision of construction can best be performed under your guidance and requests that you indicate if you are desirous of prosecuting this work as outlined in the i closed brochure. The urgency of this program dictates that site surveys, soil investigations, design and preparation of construction drawings, cost estimates and all other phases must be co pleted in sufficient time to permit construction during mlendar year 1955.
- 3. If you desire to undertake the work outlined above, it is requested that you provide this Headquarters with an estimate of planning funds required and a time schedule of contemplated actions.

FOR THE CITEF OF STAFF:

SIGNED

E. V. N. SCHUYLER Colonel. USAF Chief, Architectural & Engineering Div Directorate of Installations, DCS/0

locluse of hundard

Classification changed to: By Authority of: AFR 205