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19 July 1944

SUBJECT: Report No. 63 Observations of Signal Corps Activities,  
Cherbourg Peninsula, France.

TO : The Commanding General, Army Service Forces, Pentagon Building,  
Washington 25, D. C.  
(Attn: Chief Signal Officer)

1. There is inclosed for information observations made of Signal  
Corps activities on Cherbourg Peninsula, France, for the period 6 June to  
6 July 1944.

2. Copies of this report have been furnished The Commanding General,  
Army Ground Forces, as AGF Report No. 125.

*W. A. Hooks*  
W. A. HOOKS, *sub*  
Lt. Col. Sig C,  
Signal Corps Member.

1 Incl: Observer Report (in trip.)

Classification changed to 11 JAN 1945

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by authority of AC of

*E. S. Johnston*  
E. S. JOHNSTON  
Colonel, Infantry  
CUSTODIAN

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INTELLIGENCE  
BRANCH  
O C Sig O

FILE NO.

P.O. Reg. #1063762



117.3-1297

WAR DEPARTMENT

ARMY SERVICE FORCES

OFFICE OF THE CHIEF SIGNAL OFFICER

WASHINGTON

2 September 1944

IN REPLY REFER TO:

SPSMT-3 .2 ETO

SPSMT-3

**2712**  
Subject: Report No. 63, Observations of Signal Corps Activities,  
Cotentin Peninsula, France.

To: The Commandant, Command and General Staff School,  
Fort Leavenworth, Kansas.

Attention: Signal Corps Representative.

The inclosed report, subject as above, is forwarded for your  
information.

For the Chief Signal Officer:

Jerry V. Matejka,  
Brigadier General, U. S. Army,  
Chief, Personnel and Training Service.

*J. R. Spangler*  
J. R. Spangler,  
Major, Signal Corps,  
Executive Officer, Military Training Branch.

1 Incl:  
Report No. 63.

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OBSERVER REPORT

SIGNAL CORPS

For Period  
6 June 1944 to 6 July 1944

INDEX

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of  
SIGNAL CORPS OBSERVER

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PART I

OBSERVATIONS  
of  
SIGNAL CORPS OBSERVER  
For Period  
6 June 1944 to 6 July 1944

1. PURPOSE

This report of observation of Signal Corps activities on Cherbourg Peninsula, France, covers the period 6 June 1944 to 6 July 1944. It is based on personal observation of operations of Signal Corps units observed and opinions of responsible Signal Corps Officers. The purpose of the observations was to determine the capability of Signal Corps units as currently organized, to perform their combat mission satisfactory, and to determine the ability of Signal Corps equipment to perform intended functions for general service use in the operation. It is pointed out that the opinions are based on operations of Signal Corps units in the field over a limited period of time and that existing conditions may be modified as time progresses.

2. SIGNAL UNITS OBSERVED

The following Signal Units were observed:

Infantry Division Signal Company

- 1st Signal Company
- 2nd Signal Company
- 4th Signal Company
- 9th Signal Company
- 29th Signal Company
- 90th Signal Company

Armored Division Signal Company

- 142nd Armored Signal Company

Airborne Division Signal Company

- 82nd Airborne Signal Company
- 101st Airborne Signal Company

Joint Assault Signal Companies

- Engineer Brigade Group Signal Company
- 286th Joint Assault Signal Company
- 293rd Joint Assault Signal Company
- 294th Joint Assault Signal Company

Signal Service Company

- 3251 Signal Service Company
- 3252 Signal Service Company

Corps Signal Battalion

- 1st Signal Battalion
- 2nd Signal Battalion
- 3rd Signal Battalion

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Signal Construction Battalion  
29th Signal Construction Battalion

Signal Sections  
First Army  
V Corps  
VII Corps  
VIII Corps  
XIX Corps

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3. ENEMY ACTIVITIES

a. Wire. It was observed that the Germans in the Beach areas did not rely on existing commercial facilities for wire communications. The Germans utilized for wire communications an underground military cable system, installed by them. This system connected up the beach fortifications and inland strong points. The system has been traced and circuits where practical have been rehabilitated and are being used for communications by the Signal Corps.

b. Poles. The Germans made no effort to destroy the poles of existing commercial lines in the territory thus far occupied. It was observed that open wire lines had been broken and in general rendered unserviceable. However, there were numerous stretches of from 3 to 4 miles of open wire lines unmolested and, where these circuits could be used to advantage, use is being made of them. Use is also being made of the existing poles for construction of our open wire lines.

c. Mines. Outside of the beach areas where it was stated that there was mining around the base of a few poles, there has been an absence of mining about the base of the existing poles. Comparatively few mines along the road shoulders have been used by the Germans to date.

d. Telephone Switching Facilities. Local telephone commercial switching facilities were damaged to varying degrees from total destruction to minor damage. In some villages no damage exists to local switchboards. The greater damage appears to have been done by artillery fire destroying the buildings. At Cherbourg the damage to the commercial exchange switchboard was considered slight and restoration of service over a few circuits began a few days after surrender and completed repair was expected to be rapid.

e. Sabotage. No sabotage of wire lines was observed. However, one case of suspected sabotage was reported, that at Valognes shortly after the town was occupied several wire circuits passing through the center of the town were broken and it appeared that the wires had been cut.

f. Planned Destruction. There appears to have been no organized plan of destruction of existing telephone commercial facilities by the Germans in the area thus far occupied.

4. BEACH LANDING

a. Omaha Beach. For four or five hours after the initial landing on "Omaha" beach considerable confusion existed. Because of intense hostile enemy



[REDACTED]

action the infantry was unable to move inland, and jamming of units upon the beach ensued. All personnel were pinned to the ground and Signal Corps personnel fought alongside of the infantry with such weapons as were picked up upon the beach. Considerable difficulty was experienced by Signal Corps detachments in locating the units with which they were to serve. Many Signal Corps detachments were not landed with the elements they were to serve, and as the elements themselves were not landed at the predesignated points, it was some time before Signal Corps detachments and elements were joined. Once joined progress on the establishment of communications systems were rapid.

b. Utah Beach. There was less jamming of personnel on the "Utah" beach and the establishment of communications systems progressed more rapidly. It is deduced from the study of all factors affecting the operations on the two beaches, that the more rapid progress in establishing communications on "Utah" beach was due to less severe hostile action, better landing of Signal Corps detachments with elements they were to serve, and the more experienced in amphibious operations, Signal Corps personnel operating on the "Utah" beach.

c. Lessons. The lesson learned is that in an amphibious operation it is essential that Signal Corps detachments be landed with the unit they are to serve. It was also learned that after the initial assault phase it is necessary that common battery telephone equipment be provided for shore communications in the beach area.

d. Losses. The amount of Signal Corps equipment and Signal Corps personnel lost in the landing and crossing the beaches was not excessive. Signal Corps personnel losses were light and the equipment losses were about as foreseen and provided for in the plan of operation.

e. Training. It was the opinion of responsible Signal officers operating on the beaches that all Signal Corps troops that are to operate in beach areas should be as well trained as are the Engineer troops in the detection and removal of enemy mines. This is considered essential as wire lines had to cross extensive mine fields in the beach area in this operation and which can reasonably be expected to be the case in any future landing involving the assault of a fortified shore. It was learned that Signal Corps troops of Assault Signal Companies taking part in the landing had received some training in the detection and removal of mines. However, opinion was that the training should be more intensive and thorough.

f. Equipment. Opinion was expressed for the necessity of lightening the load the individual must carry ashore. It was stated lighter Signal Corps equipment should be provided Signal Corps troops making the initial landing, present equipment being considered too bulky and heavy.

g. Waterproofing. Excellent results were reported with the waterproofing of Signal equipment. Waterproofing was done in accordance with Signal Supply Instructions 46-B Waterproofing Signal Equipment 18 April 1944, HQS ETOUSA, Office of The Chief Signal Officer. It was reported that for the operation there was a general shortage of canvas waterproof bags.

## 5. ORGANIZATION

a. Infantry Division Signal Company. Infantry Division Signal Companies

[REDACTED]

4

[REDACTED]

observed were organized under T/O & E 11-7, 11 December 1943, but were augmented by additional personnel and equipment for the operation. The current T/O & E was considered inadequate in that sufficient quantity of equipment and construction personnel are not provided in the table. It appears that a minimum of 7 wire construction teams and 2 wire pickup teams should be provided. It is doubtful if the Division Signal Company could have accomplished its mission had it been limited to equipment and personnel prescribed in the table. Attention is invited to Part II, Tabs, "A" to "F", for opinions of responsible Division Signal Officers as to changes in T/O & E.

b. Armored Signal Company. The 142nd Armored Signal Company observed was organized under T/O & E 11-57, 15 September 1943, but actually operates under organization of its own. For organization and method of operation attention is invited to Inclosure 1, Tab "H", Part II, of report. Attention is also invited to Tab "H" for opinions of Division Signal Officer as to changes in T/O & E.

c. Airborne Signal Company. The Airborne Signal Companies observed were organized under T/O & E 11-557, 10 August 1943, but were augmented by additional personnel and equipment for the operation. It was the opinion of responsible unit signal officers that the T/O & E did not provide an adequate number of officers and enlisted men, as well as equipment, to function as an Infantry Division Signal Company after the assault landing. The Airborne Signal Company has furnished satisfactory communications in the operation only because of the augmentation to T/O & E of personnel and equipment. Attention is invited to Tabs, "H" & "I", Part II, for opinions of responsible Airborne Division Signal Company Officers as to changes in T/O & E.

d. Joint Assault Signal Company. The Joint Assault Signal Companies observed were not organized in accordance with T/O & E, 11-147 S, 21 October 1943, but in accordance with First Army SOP Joint Assault Signal Company, 31 March 1944. It is understood that copies of SOP are on file in Washington. It appears that the shore fire control parties should be divorced from the Signal Company and constituted into a separate unit, as the personnel for these parties in the operation were drawn from the Divisions making the assault, and were not organic personnel of the Joint Assault Signal Company. Likewise the Air Liaison Section should be eliminated as the responsibility for air liaison was charged to the Air Forces which furnished the requisite personnel. Attention is invited to Part II, Tabs "J", "L", and "M", for opinions of responsible Signal Corps officers.

e. Corps Signal Battalion. The Corps Signal Battalions observed were organized under T/O and T/BA of April 1942, and not under T/O & E 11-27, 10 December 1943. Units preferred the old organization to the new on the basis that the old tables provide more men and equipment. It was stated that the battalion could not perform its required mission if organized under the new table because of lack of adequate personnel and equipment being provided. However, it was pointed out that the new table provided a greater number of enlisted ratings in the higher bracket and was looked on with favor from that angle. For opinions of responsible Corps Signal Battalion officers, as to changes in T/O & E, attention is invited to Part II, Tabs "O" and "P".

f. Signal Construction Battalion. The 29th Signal Construction Battalion (Colored) was the only Signal Construction Battalion observed during the period covered by this report. The battalion was organized under T/O 11-25, 1 April 1942,

[REDACTED]

[REDACTED]

and T/BA-11. The work observed of this unit was meritorious. A rapid and excellent job of open wire construction was being done. Responsible officers pointed out that the work of the unit required close supervision and for that reason it was felt a 25% overstrength in white officer personnel should be authorized for all colored Signal Corps construction units. For opinions of responsible unit officers, as to changes in equipment, attention is invited to Part II, Tabs "Q".

g. General. A study of all factors affecting the operations of Signal Corps Units thus far indicates, in the opinion of the observer, that current War Department T/O & E are inadequate as to the number of personnel and the amount of equipment provided. In retrospect, had Signal Corps units been organized in strict accordance with T/O & E, and had not been augmented with additional personnel and equipment, it is doubtful if the units could have satisfactorily performed their mission.

## 6. WIRE

a. General. Wire communications in general have been satisfactory. To date wire has been the primary means of communications.

b. Wire Maintenance Beach Area. Maintenance of wire circuits within the beach area have presented a considerable problem to Assault Signal Companies. The volume of traffic over the beaches is immense. Trucks and track vehicles chew up the wire when laid upon the surface of the beach; when the wire circuits are buried, bulldozers cutting new roads sever the wires; and when put up overhead on poles, cranes break the wires and trucks knock down the poles. However, it was reported that good results on the beach proper have been obtained with M.A.L. type construction. Good use for beach communications has been made of captured underground cable system along the beach which connected German beach fortifications.

c. Wire Laying and Recovery. It was observed that there has not been a conservative use of field wire and Spiral Four cable. While slack is essential in the laying of wire and cable, the amount of wire left for slack and tie purposes is considered excessive. Wire circuits have not been policed promptly after laying, with resultant damage to insulation and general waste of wire. In the opinion of the observer there has not been as prompt recovery of wire as there might have been. It is estimated that approximately 50% of wire recovered is unserviceable, which is considered an excessive amount. There are too many wire circuits laid along the main highways and full advantage is not taken of the existing secondary roads net existing within the area for laying wire on the less traveled highway.

d. Training. There is need for more thorough indoctrination of all troops, both combat and service, with the importance of, and the necessity for, protecting communication wire wherever found, whether upon the surface of the ground or up in the air.

e. Maintenance. All wire patrols and maintenance personnel should police all wire circuits found to be in need of policing, whether or not the circuits were layed by their unit. A very strong spirit of cooperation in this matter should exist among all wire communications personnel in the desire to see that



all wire service is excellent.

f. Spiral Four Cable. Spiral Four cable is extensively used by the Army and Corps. From conversations with Division Signal Officers it was learned that Spiral Four Cable could to advantage be utilized within the division. It would be used from the Division CP to Division rear echelon and to equivalent lateral units. An additional possible use would be from the Division CP forward to a wire head and thence field wire to regiments. One division is being issued Spiral Four Cable as an experiment. It was estimated that an allowance of 25 miles of spiral four cable would be required in the Division.

g. Existing Facilities. In the campaign it was observed that no use of existing signal commercial facilities is made by the Division. Report of status of existing signal commercial facilities within the division area is made to Corps and the Corps in turn to Army for disposition. The army does make use of the existing facilities and when advantageous allocates certain existing wire circuits to Corps.

h. Underground Installations. No underground or buried cable installations were observed during period covered by the report. However, good use has been made of located German buried military cable which was used along the coast to furnish communications to beach fortifications. This cable has been rehabilitated and is being used to advantage in the beach areas.

## 7. TELEPHONE

Better telephone discipline is required. Much unnecessary conversation was observed being carried on over the telephone, with resultant tying up of trunk circuits. The necessity of observing fundamental telephone operation, such as proper method of making calls, ringing off, etc., should be stressed upon staff personnel.

## 8. TELETYPEWRITER

Satisfactory teletypewriter service is provided down to the divisions. However, full advantage is not being made of the teletypewriter service as very few messages are being written. Staffs prefer to use the telephone to writing out messages. Teletypewriter maintenance has presented no difficulty in the campaign during period covered by this report.

## 9. TELEGRAPH

It was observed that telegraph is little used. Many of the Division Signal Companies do not even connect up the telegraph. One division that had telegraphic service reported that over a period of 9 days only 3 messages were sent over telegraph.

## 10. RADIO

a. General. Radio has been used comparatively little at the Divisions and Corps Headquarters but extensively by the front line infantry units and artillery units.

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b. Division and Corps. It was observed in the Divisions and Corps that all remote operated radio sets were operated remote control from our central location, thus establishing a Radio Control Central. Two methods were observed; one, the keying was done at the CP and sets were located some distance from the CP; the other method was to transmit by teletypewriter the message to a "Radio Park" where it was keyed from a central point to the various sets stationed in the general area.

c. Armored Division. In the Armored Division radio silence is maintained except in actual combat. However, messages from liaison officers with the Infantry Divisions and Corps Headquarters are sent by radio to the Armored Division Signal Company. No acknowledgment is made by the Armored Division Signal Company and no assurance is given that message has been received. The sets remain on the air. However, no signals are transmitted. The operators at the Division CP merely listen and copy any message they hear that is for the Armored Division.

## 11. RADIO INTELLIGENCE

### a. Radio Intercept.

(1) It was reported on 24 June by the 3252nd Signal Service Company, serving with the XIX Corps, that radio intercept was satisfactory. It was also reported that there was little hostile CW radio traffic, that the radio telephone was being used by the Germans, and that the radio traffic was that of hostile artillery spotters.

(2) At VIII Corps Headquarters, served by the 3251st Signal Service Company, it was learned on 29 June that units of divisions report plenty of enemy radio activity at front but RI does not indicate such activity.

b. Radio Direction Finding. On 24 June it was further stated by the 3252nd Signal Service Company that the direction finding equipment the unit had was inadequate in that it would cover a range of one to three megacycles only. It was felt that the unit should have equipment to cover the entire range of hostile sets on the corps fronts. It was reported that hostile artillery spotters on Corps front could not be located because of lack of equipment.

## 12. EQUIPMENT

a. General. Signal Corps equipment to perform intended functions for general service use in the present operation in general is considered satisfactory with a few exceptions. For comments of responsible Signal Corps unit officers on Signal Corps equipment. Attention is invited to Part II Tab "B" to "Q" inclusive. The following observations on equipment were noted.

### b. Radio Equipment.

(1) Radio Set SCR-300 was considered satisfactory by using personnel; it has proven to be an excellent set in the campaign, and it was stated that the regiments like them.

(2) Radio Set SCR-399 was reported to be a good set.

(3) Radio Set SCR-506. Was advised that no difficulties had been reported to date, covered by this report. However, it was reported that the 9th Reconnaissance Troop does not like Radio Set SCR-506, and that Radio Set SCR-193 is preferred. It is said that Radio Set SCR-193 is easier to handle, and as for range the SCR-193 is more reliable.

[REDACTED]

(4) Radio Set SCR-536 was reported as a good set but as drawing hostile fire. It appears that the antenna is easily broken and that using personnel cannot use the set in the hedgerows and underbrush prevalent in the terrain on which the campaign thus far has been conducted, and expose the set in the clear and thus becomes a target for enemy snipers.

(5) The 4th Signal Company reported that the most striking use of radio is the use of FM Radio Sets SCR-608 and SCR-610, and that very little CW has been used.

(6) The 2nd Signal Company reports that the remote control equipment furnished with radio set SCR-193 is considered unsatisfactory and that remote control equipment used in the Radio Set SCR-284 is desired. The difficulty with the SCR-193 remote control equipment, it was stated, is that the relays furnished are not fast enough and that the dynamotor will not stand up.

(7) It was reported that the tubes in radio set SCR-508 are easily blown. The difficulty appears to be that operational personnel do not allow the tubes to warm up before beginning operation.

c. Telephone Equipment

(1) It was pointed out that for common battery use, the Receiver Hook on telephone EE-8 (B) should be redesigned so that the hand piece won't be dropping off the hook, and that a positive depression of the hook is insured when the hand piece is placed in the telephone case compartment. It was also stated that it was desirable to provide the telephone EE-8 (B) with some means for bracket mounting, to mount on tent pole, table, etc. as using the carrying strap around the tent pole was not satisfactory and that the phone was easily knocked off when placed on a flat surface.

(2) Telephone switchboard TC-2 was considered too large to be satisfactorily handled by one operator.

(3) It was reported that artillery units should be provided with more switchboards BD-72.

d. Code Equipment.

(1) In the division it was stated that Slidex was the best thing for coding in the division and that converter M-209 was very little used. With regard to converter M-209 opinion was divided among the divisions observed as to its suitability for use in the divisions. It was stated by some that the converter M-209 was too delicate and required constant adjustment; others stated no trouble had been experienced with the converter.

(2) The general opinion in the divisions was that the safe to house the SIGABA was useless in the division in the field. The safe was considered too heavy for divisional equipment. It was observed that in some divisions the SIGABA was not kept in the safe. It was felt that proper precaution of safe guard was being taken as the SIGABA was under constant guard of using personnel. In some instances the safe was not at the same place as the SIGABA.

e. Motorcycles. Opinion was expressed in the Infantry Division Signal Company of the desirability of being furnished motorcycles. It was stated that in the particular terrain of hedgerows and narrow roads motorcycles for messenger service would be of advantage. The Airborne Signal Companies stated that the servicycles furnished were not durable and that it was slow and could not cover open terrain. Motorcycles in lieu of the servicycles were desired by Airborne Signal units.

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f. Panels. It was learned that of the Signal Corps units observed about one half of the Signal Corps units were not equipped with Panels AP-50. A few of the units stated that they had the panels at one time and had turned them in. It was stated that the panels were not used and that no necessity had arisen for their use.

### 13. SIGNAL SUPPLY AND MAINTENANCE

a. Supply. It was observed that for the period covered by this report the supply of Signal Corps equipment was equal to the demands. Signal Corps units reported that the receipt of needed signal supplies has been prompt. No critical shortages of signal equipment were observed and neither were there any reported by the units observed. The 2nd Signal Company on 20 June 1944 stated that for radio sets SCR-300, SCR-536 and SCR-610 the division had received a 100 percent replacement. The purpose of having been furnished this information was to show how prompt and satisfactory supply has been in the 2nd Division and the demands of combat for the smaller types of radio sets. Other Signal Corps units reported that supply had been satisfactory and prompt.

b. Maintenance. Signal units reported that the repair sections have been able to keep abreast of signal maintenance and that as a general rule the repairable equipment has been returned to service within 24 hours.

c. General. It is pointed out that while the supply and maintenance of Signal equipment has been satisfactory and units well pleased to date, a few facts must be borne in mind; that for the operation units were backed up with relatively well stocked reserves of Signal Corps equipment; that the Signal equipment is new and has had little field wear and tear; and that the period covered by this report is that of the first 30 days of the campaign. It is expected that satisfactory supply and maintenance of Signal Corps equipment will continue to be the case. However, it was observed that there was an atmosphere growing within Signal Corps units because of the satisfactory supply to date that supplies were plentiful. It is felt that all personnel using Signal Corps equipment should be advised to take every precaution to conserve and protect Signal Corps equipment to the utmost. The care to be given Signal Corps equipment should equal that given the weapon with which the individual is armed.

### 14. REPLACEMENTS

#### a. Training.

(1) It was observed that in general Signal Corps units, which had received replacements, had received them promptly, and that the replacements were considered well trained by the Unit. Each man's record is reviewed and each interviewed with the idea of getting him into the proper niche. After a period of time, which varies with the individual from two to four days, for personal and unit procedure adjustment, they were satisfactory.

(2) The 56th Signal Battalion, it was learned from conference with Major H. H. Boggus, Sig C, Bn EX, and Captain Robert E. Berg, Sig C, Bn S-3 had received 36 replacements which were not satisfactory. It was stated that the unit usually received just "bodies" and not Signal Corp trained personnel.

b. General. It was noted that it is the general practice of the Division Signal Company to furnish radio operators, when the necessity arises, to Infantry and Artillery units. It is pointed out that this practice, while commendable in the interest of keeping communications and of rendering service, will have a direct bearing on the number of Signal Corps Replacements required and the number that should be trained.

15. MORALE

The morale of the Signal Corps troops observed during the period covered by the report was excellent.



W. A. ROOKS  
Lt. Col., Signal Corps  
Signal Corps Member  
WD Observers Board

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# PART II

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## OBSERVATIONS AND OPINIONS OF RESPONSIBLE SIGNAL UNIT OFFICERS

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OBSERVATION AND OPINIONS  
OF  
RESPONSIBLE SIGNAL UNIT OFFICERS

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P R E F A C E

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1. INTRODUCTION

a. The observations and opinions of responsible Signal Unit officers are reported in compliance with instructions of Army Ground Forces. It was desired that the opinions and thoughts of using personnel be obtained.

b. Attention is invited to the fact that these opinions are based on combat experience on the Cherbourg Peninsula, France, and that in general over a very limited period of time of operations, from 6 June 1944 to date, opinions were given. Many statements made are subject to modification as time goes on and as the military situation changes.

2. OBSERVATIONS AND OPINIONS

a. For observations and opinions, attention is invited to Tabs A to Q inclusive.

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OBSERVATIONS AND OPINIONS  
1st SIGNAL COMPANY

WAR/bhm

17 June 1944

1. The following information and opinions were given by the Division Signal Officer 1st Col Pickett Sig C and the Assistant Divisional Signal Officer, Captain Sanford.

a. ORGANIZATION

That the 1st Signal Company is organized under T/O & E 11-7 of 11 December 1943, but was supplemented by additional personnel and equipment for the operation. Opinion was expressed that the company should be organized in accordance with T/O & E July 1943 with the additional equipment and personnel requested by First Army Signal Officer Colonel Williams which was considered ideal for a Div Signal Company. A minimum of 7 wire laying teams and two trouble shooting teams in jeeps was essential for successful operation and that the unit had such teams.

b. LOSSES AND REPLACEMENTS.

(1) Personnel

The unit lost 7 men out of 70 men crossing the beach and 1 man since which was not considered excessive losses in view of the operation. Unit has received 17 men replacements which training was considered satisfactory.

(2) Equipment

Equipment lost in crossing the beach was about as expected, and as a result of good planning and furnishing unit with additional equipment above T/E the unit was able to furnish satisfactory communications.

c. WIRE

The unit experiences the usual maintenance problem of maintaining wire circuits. The trouble being that the wire is chewed up by tanks and mechanized units or broken by vehicles before wire can be policed. No unusual difficulties has been encountered with telephone equipment.

d. RADIO

No trouble has been experienced with radio. Radio Set SCR-300 is considered an excellent set. In connection with Radio Set SCR 506 no difficulties has been reported as of date. Radio Set SCR-399 was reported as a good set.

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e. SUPPLY AND MAINTENANCE

Supply and maintenance of signal equipment was satisfactory as of date.

f. GENERAL

No unusual communication problem has presented itself to date. No use is made of existing signal commercial facilities by the Division Signal Company. Report of status of existing signal commercial facilities in division area is made to Corps for disposition.

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e. SUPPLY AND MAINTENANCE

Supply and maintenance of signal equipment was satisfactory as of date.

f. GENERAL

No unusual communication problem has been reported. No use is made of existing signal commercial facilities. Report of status of existing signal communication area is made to Corps for disposition.

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OBSERVATIONS AND OPINIONS  
2ND SIGNAL COMPANY  
20 June 1944

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The following information and opinions were given by the Division Signal Officer, Lt. Col. K. E. Deu Lieu, Sig C.

1. ORGANIZATION

The 2nd Signal Company is organized under T/O & E 11-7, 11 December 1943, but was supplemented by additional personnel and equipment for the operation, without which the company could not have furnished satisfactory communications.

2. WIRE

a. A minimum of 8 wire construction teams, each team to be furnished with 1 - 2 $\frac{1}{2}$ -ton truck, 1 - 3/4-ton truck, and 1 jeep with reel RL-31 mounted, was recommended for the Division Signal Company. In addition to the 8 wire construction teams, 2 wire pick-up teams, each equipped with jeep, with reel RL-31 mounted, was desired. Opinion was expressed that the Construction Officer and Wire Chief each should be furnished with a jeep, with reel RL-31 mounted.

b. It was recommended that illuminous tags for marking tags of wire circuits be furnished. The Signal Company is at present, in addition to marking present tags for marking wire circuits, is marking wire for identification by brush and red paint, being drawn across the wire on drum as wire is played out.

c. Spiral 4 Cable was recommended for use in the DIVISION SIGNAL COMPANY. It would be used forward from Division C.P. to a wire head, thence field wire to regiments, also to division rear echelon.

d. It was stated that the Germans were using cable similar to Spiral 4 and single strand wire, size similar to W-110, and that the Germans were using a 10 drop switchboard, which is much lighter and compact than our similar board. Infantry Regiments telephone switchboard was considered too bulky and opinion was expressed for the need of light weight switchboard similar to what the Germans used.

3. RADIO

a. Radio is operated remote control from one central location. The remote control equipment for radio set SCR 193 is considered unsatisfactory, and remote control equipment used for radio set SCR 284 is desired. The difficulty with the SCR 193 remote control equipment is that the relays furnished are not fast enough.

b. Radio set SCR 536 is considered a good set. It was stated that a 100% replacement of this set has been made, due to the fact that the antenna becomes broken. Opinion was expressed that the set needed a flexible antenna similar to the German flexible antenna.

c. It was also stated that a 100% replacement of radio set SCR 610 has been made. The replacement has been made necessary by enemy sniper action, which pick off the artillery observers.

TAB "B"

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4. SUPPLY AND MAINTENANCE

Supply and maintenance of Signal equipment was satisfactory as of date.

5. GENERAL

a. The Signal Company has had maintenance trouble with converter M 209 getting out of adjustment. Opinion was expressed that it was too delicate.

b. No unusual communication problem has presented itself to date. No use is made of existing Signal Commercial facilities by the Division Signal Company. Report of status of existing Signal commercial facilities in division area is made to Corps for disposition.

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OBSERVATIONS AND OPINIONS  
4TH SIGNAL COMPANY  
2 July 1944

CONFIDENTIAL

The following information and opinions were given by the Division Signal Officer, Lt. Col. S. W. Crisman, Sig C.

1. ORGANIZATION

a. The 4th Signal Company is organized under T/O & E 11-7, 11 December 1943, but was supplemented by additional personnel and equipment for the operation by the First Army, and the additional personnel and equipment authorized should be incorporated in T/O & E.

2. WIRE

a. Opinion was expressed that T/O & E should provide nine wire laying teams and two wire pickup teams, and that the strength of the Construction Platoon should be 76 men. Transportation for each wire laying team was recommended as one 2½-ton truck, one 3/4-ton truck, and one jeep. Four 1-ton trailers for use of the Platoon was also recommended.

b. The T&T Section is authorized by T/O 38 enlisted men. This section has 45 enlisted men at present and it was recommended that T/O provide for the 45 enlisted men by the addition of 7 switchboard operators. It was stated that two TC-4 switchboards, two TC-12 switchboards, and two BD-72 switchboards, were all that were required by the T&T Section. The following transportation was recommended for use of the T&T Section:

<u>Present</u> <u>Quantity</u>	<u>Recommended</u> <u>Quantity</u>
-----------------------------------	---------------------------------------

2	3
1	1
2	1
1	2

2½-ton truck
1½-ton truck for teletypewriter
3/4-ton truck for supply and emergency jump off
Jeeps with reel RL-31 for laying locals and for use of wire officer

c. Telegraph is provided but used very little over a period of 9 days; only 3 messages were sent over TG.

d. The Division Signal Company will use Spiral 4 cable to division rear echelon. It was recommended that the Signal Company be provided on T/E with 25 miles of Spiral 4 cable.

3. RADIO

a. It was stated that the most striking use of radio is the use of FM radio sets SCR-608 and SCR-610, and that very little CM had been used. Approximately 95% of communications was by wire. The radio set SCR-193 is used as an emergency means, and very few messages are sent.

b. Radio personnel provided in T/O was considered adequate.

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4. SUPPLY AND MAINTENANCE

a. Supply and maintenance of Signal equipment was satisfactory as of date.

b. T/O provides for Division Signal Supply one warrant officer, one corporal clerk, and one private. It was stated that many items of Signal equipment for the division and attached units have been provided, and that personnel provided on T/O is inadequate. The unit has one officer and ten enlisted men handling Division Signal Supply and it was recommended that T/O be amended to provide the following:

- 1 - officer, in grade of captain.
- 10 - enlisted men
  - 1 - Sgt. Stock and Record clerk
  - 2 - T/5 Clerks, Typing and Consolidating of Request
  - 7 - Pfc Truck drivers

c. It was stated that the greater part of repair thus far was by canalization.

5. GENERAL

a. Opinion was expressed that T/E should provide jeep with 1/4-ton trailer for use of the Assistant Division Signal Officer.

b. It was stated that Slidex was the best thing for coding in the division and that converter M-209 was very little used.

c. It was recommended that the Division Signal Company be provided with:

- 1 - Outfit cooking, single or two burner, per motor vehicle.  
It was considered a field necessity for preparation of K ration or 10 in 1 ration.

d. The replacements received by the Division Signal Company have been excellent.

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OBSERVATIONS AND OPINIONS  
9th SIGNAL COMPANY  
1 July 1944

The following information and opinions were given by the Division Signal Officer, Lt. Col. F. E. Heikkila, Sig C, and the Assistant Division Signal Officer, Capt. L. Eisenstaff, Sig C.

1. ORGANIZATION

a. The 9th Signal Company is organized under T/O & E 11-7, 11 December 1943, but was supplemented by additional personnel and equipment for the operation. Opinion was expressed that equipment and personnel authorized by the FIRST ARMY should be incorporated in T/O & E.

b. It was stated T/O should authorize an assistant construction officer, and one enlisted man as personnel clerk for the Signal Company.

2. WIRE

a. Opinion was expressed that the Division Signal Company should have a minimum of 8 wire laying teams, to be used as follows:

1 Team to each of the three regimental headquarters.

5 Teams to be used for laying wire for displacements, forward, and to separate and attached units.

Motor transportation for each wire laying team to consist of 1 2½-ton truck, with reel RL-26 mounted, 1 3/4-ton truck, and 1 jeep.

b. Three wire trouble teams of 3 men each, equipped with ½-ton jeep, with reel RL-31 mounted, was recommended in addition to wire laying teams.

c. Facsimile equipment is not considered essential and telegraph set TG-5 is not used in the division. Opinion was expressed that such equipment should be held in a pool and issued only as required on order of the Army Commander or Theater Commander.

3. RADIO

a. No unusual radio operational trouble has been experienced to date.

b. Radio Set SCR-300 has proven to be an excellent set in the campaign.

c. It was stated that the 9th Reconnaissance Troop does not like Radio Set SCR-506 and that Radio Set SCR-193 is preferred. It is said that Radio Set SCR-193 is easier to handle, and as for range the SCR-193 is more reliable.

4. SUPPLY AND MAINTENANCE

Supply and maintenance of signal equipment was satisfactory as of date.

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TAB "D"  
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5. GENERAL

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- a. It was stated the T/O & E should provide transportation and equipment for Assistant Division Signal Officer.
- b. The safe for the Sigaba should be done away with in Division Signal Company.
- c. It was recommended that boom equipment be deleted from T/E.
- d. The use of motorcycles for motor messengers was recommended. It was stated that 5 motorcycles should be provided on T/E to supplement jeeps and not to replace the jeeps for such use.
- e. The Division Signal Officer stated that:
  - (1) Infantry Companies could use more Sound Power.
  - (2) Not enough communication personnel is provided in T/O for Infantry and Artillery units, especially wire personnel. It was recommended that the Infantry Regiment be provided with a total of 40 wiremen, whereas 15 wiremen are authorized.

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OBSERVATIONS AND OPINIONS  
29th SIGNAL COMPANY  
21 June 1944

~~CONFIDENTIAL~~

The following information and opinions were given by the Division Signal Officer, Maj. Gordon B. Cauble, Sig. C, and the Assistant Division Signal Officer, Capt. Murray A. Little, Sig C.

1. ORGANIZATION

a. The 29th Signal Company is organized under T/O & E 11-7, 11 December 1943, but was supplemented by additional personnel and equipment for the operation. Without such additional personnel and equipment the Signal Company could not have furnished satisfactory communications.

b. A minimum of 7 wire construction teams was considered essential for successful wire communication.

c. It was recommended that 3 additional officers be provided to T/O & E 11-7, 11 December 1943, one officer each to the Construction, Radio and Supply sections.

d. It was stated that the amount of signal equipment has been increased without provision for increased transportation. It was recommended that the 1½-ton truck with trailer, which is provided, should be replaced by a 2½-ton truck.

2. WIRE

a. The unit experiences the usual maintenance problems of maintaining wire circuits. It was stated that field wire must be policed as layed, either buried or placed up overhead.

b. Telegraph was used to regiments and teleprinter to corps.

c. It was stated that the Signal Company required 2, TC-12 switchboards instead of 1, TC-4 switchboard, 1, TC-12 switchboard to be used at each echelon of the forward C.P.

d. Use of spiral 4 cable in the Division Signal Company was recommended, the cable to be used along axis of advance.

3. RADIO

Radio set SER-300 was considered satisfactory and it was stated that the regiments like them. The set has rendered satisfactory service up to 31 mile distance.

4. SUPPLY AND MAINTENANCE

Supply and maintenance of signal equipment was satisfactory as of date.

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TAB "E"

5. GENERAL

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a. Opinion was expressed that the Engineer Special Brigade comes in too early in the beach landing, that communication equipment should be lighter, and that the load of the individual must be lightened in amphibious operations.

b. Equipment for the Assistant Division Signal Officer should be provided on T/O & E. Vehicle in particular is needed.

c. Signal units going into combat should stress on staff the necessity of observing fundamental telephone operation; that is, method of making calls, ringing off, etc. This is essential because of nature of switchboards.

d. No unusual communication problem has presented itself to date. No use is made of existing signal commercial facilities by the Division Signal Company. Report of status of existing signal commercial facilities in division area is made to Corps for disposition.

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OBSERVATIONS AND OPINIONS  
90TH SIGNAL COMPANY  
27 June 1944

~~CONFIDENTIAL~~

The following information and opinions were given by the Division Signal Officer, Lt. Col. E. W. Horning, Sig C.

1. ORGANIZATION

a. The 90th Signal Company is organized under T/O & E 11-7, 11 December 1943, but was supplemented by additional personnel and equipment for the operation.

b. Opinion was expressed that two additional officers to T/O should be provided, one for the Radio Section and one for the Construction Section.

2. WIRE

a. The unit experiences the usual maintenance problems of maintaining wire circuits. Opinion was expressed that there was insufficient personnel in wire construction, as provided in T/O. A minimum of 7 wire laying teams of 10 men each was recommended. Each team, in addition to the 2½-ton truck which is provided at present, should have a jeep with reel RL-31 mounted. Three additional jeeps with reel RL-31, mounted, should be provided for use of each construction section for supervision, repair and patrol of wire.

b. The TC-4 switchboard was considered satisfactory.

c. Telegraph is used to regiments and teleprinter to corps.

d. It was recommended that the T/E provide the T&T Section with nine TG-5 telegraph sets instead of six sets, to be used as follows: four sets with each CP team and one set at rear echelon.

3. RADIO

a. No trouble has been experienced with radio operation.

b. Radio set SCR-300 is considered satisfactory.

c. It was stated that radio set SCR-536 ~~used by antiaircraft division officers~~ draws hostile fire. It appears that to protect the antenna the set when operated is exposed and is subjected to enemy sniping.

4. SUPPLY AND MAINTENANCE

Supply and maintenance of Signal equipment was considered satisfactory as of date.

5. GENERAL

a. It was stated that T/E should provide motor transportation for Division Signal Supply and recommended one 2½-ton truck and one 1½-ton truck. The unit at present is using three 1½-ton trucks for Division Signal Supply.

TAB "F"

- 1 -

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b. Opinion was expressed that the safe provided for Sigoba was useless in the field. It was further stated that a trailer with prime mover should be developed to carry the Sigoba and Generator for the Division Signal Company.

c. It was stated that 15 jeeps, or motorcycles, should be provided for the Message Center motor messengers. 10 jeeps at present are authorized.

d. Opinion was expressed that additional tentage should be provided for the T&T Section. It was recommended that a total of 5 CP tents with blackout be provided the T&T Section, to be used as follows:

- 1 tent for Teletypewriters & Telegraph )each, at the Division CP,
- 1 tent for Switchboards )and the Advance CP
- 1 tent for Tel. & Tel. Section at rear echelon.

e. No use is made of existing Signal commercial facilities by the Division Signal Company. Report of status of existing Signal commercial facilities in division area is made to corps for disposition.

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OBSERVATIONS AND OPINIONS  
2nd ARMORED DIVISION  
142nd ARMORED SIGNAL COMPANY  
20 June 1944

~~CONFIDENTIAL~~

The following information and opinions were furnished by the 2nd Armored Division Signal Officer, Lt. Col. C. L. Clay, Sig. C.

1. ORGANIZATION

The 142nd Armored Signal Company is not organized in accordance with T/O & E 11-57, 15 September 1943, but operates under organization of its own. Attention is invited to attached Incl. 1, Standard Operating Procedure, 142nd Armored Signal Company, for organization and operation.

2. WIRE

The Wire section consists of 76 men as presently organized. The unit has 7 construction wire teams of 7 men each; 1 wire officer, 1 wire chief at forward echelon and 1 wire chief at rear echelon. The construction units have the following motor vehicles:

- 4 - 1½-ton trucks
- 1 - 3/4-ton trucks
- 2 - 2½-ton trucks with winch
- 1 - 2½-ton cargo wire
- 10 - peeps

3. EQUIPMENT

a. Opinion was expressed that the company needed 4 additional EE39 ( ) Telephone Repeaters added to Table of Equipment.

b. That 3 additional Radio Sets SCR-399 should be provided, making a total of 9 - SCR-399 for the company. The recommended use of the sets is as follows:

- 2 sets, one at each combat command.
- 1 " Division Command Net.
- 1 " Division Reconnaissance Net.
- 1 " Division Administrative Net (Rear Echelon).
- 2 " Division Corps Net.
  - 1 set for Corps Troop Net.
  - 1 " for Corps Point to Point Net.
- 1 " Division Railhead.
- 1 " Division Rear Echelon for use of Adjutant General, Division Teams, etc.

c. Opinion was expressed of the desirability of having 2 Cub L-5 Liaison Planes available for use of the Armored Signal Company. These planes to be used by the Division Signal Officer and Division Signal Supply Officer on special missions and as special messengers during radio silence and when wire

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distance is too great and distance too great for normal messenger service, as an example when the Division CP is at one end of the front line and a combat team at the far end of the front line.

#### 4. RADIO

a. The unit has three radio repair sections instead of two radio repair sections as provided in T/O.

b. Except in actual combat radio is silent. However, messages from liaison officers are sent by radio to the Armored Division from Corps and Infantry Divisions. The messages are just copied at the Armored Division C.P. Radio is operated remote control from a central point establishing a "Radio Control Central".

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STANDARD OPERATING PROCEDURE  
142ND ARMORED SIGNAL COMPANY

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SECTION I  
MISSION

1. To furnish communications necessary for the functioning of the Division Commander and his staff.
2. To supply units of the Division with all types of authorized signal equipment.
3. To perform or handle all 3d echelon maintenance of signal equipment of the Division.

SECTION II  
ORGANIZATION

1. The Division Signal Officer commands the Signal Company for training and combat operations.
2. The Company Commander commands the company for administration, and acts as Executive Officer to the Division Signal Officer.
3. The Signal Company will normally be operated in two echelons, forward and rear. (See Appendix "A", Organization of Armored Signal Company.)
  - a. Each echelon detachment will be commanded by an officer of the company appointed by the Commanding Officer.
  - b. Functions of administration, supply and mess will be performed separately at each echelon. Rear echelon will be responsible for maintaining records, except in the event of separation the forward echelon will maintain its own records and submit reports independently.

SECTION III  
OPERATIONS

1. Operation of forward echelon communications will be directly supervised by the Division Signal Officer. Movement will be coordinated with the Headquarters Commandant.
2. Operation of the rear echelon communications will be the direct responsibility of the Signal Company Officer in command of the rear detachment. Movement of the detachment will be coordinated with the Division Trains Commander.
3. Radio: (See Radio Net Diagram, Appendix "B".)
  - a. The following radio stations will be operated and maintained by the forward echelon detachment:
    - (1) Division Command Net (NCS).
    - (2) Division Reconnaissance Net (NCS).

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- (3) Division Administrative Forward Net (NCS).  
(4) Division Administrative Rear Net (NCS).  
(5) Corps Command Net.  
(6) Corps Administrative Net (If required).  
(7) Army Command Net (If required).

b. The following radio stations will be operated and maintained by the rear echelon detachment:

- (1) A.G.O.  
(2) Railhead.  
(3) Ammunition Control Point.

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c. Spare radio sets will be available at both echelons to replace sets in need of repair, to act as relay when necessary, and to fulfill any emergency requirement.

d. Radio nets will be monitored as required to obtain information for the Commanding General.

4. Message Center operation will be continuous in both echelons. For detailed plan of operation see Message Center SOP, Appendix "C".

5. Wire. (See normal traffic diagram, Appendix "D").

a. Forward echelon wire crews will install and operate all circuits in the Division CP and circuits to both Combat Commands and the Division Reserve.

b. Rear echelon wire crews will install and operate all circuits from the Division Rear Echelon to the Division CP and units of the Division Trains.

6. Signal Supply and Radio Maintenance. This is chiefly a function of the rear echelon detachment and is the responsibility of the Signal Supply and Radio Maintenance Officers under the supervision of the Division Signal Officer. For detailed plan see Appendix "E".

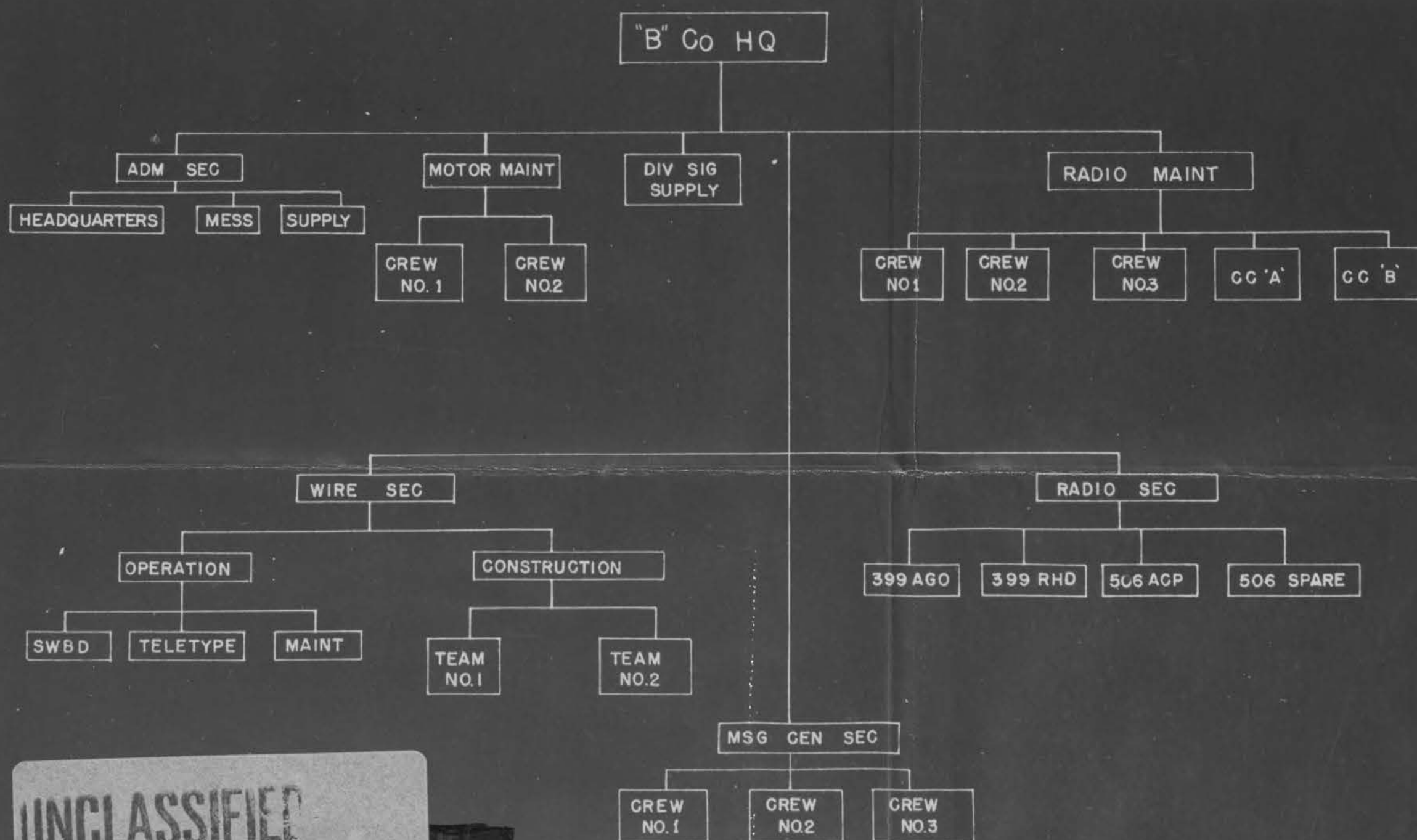
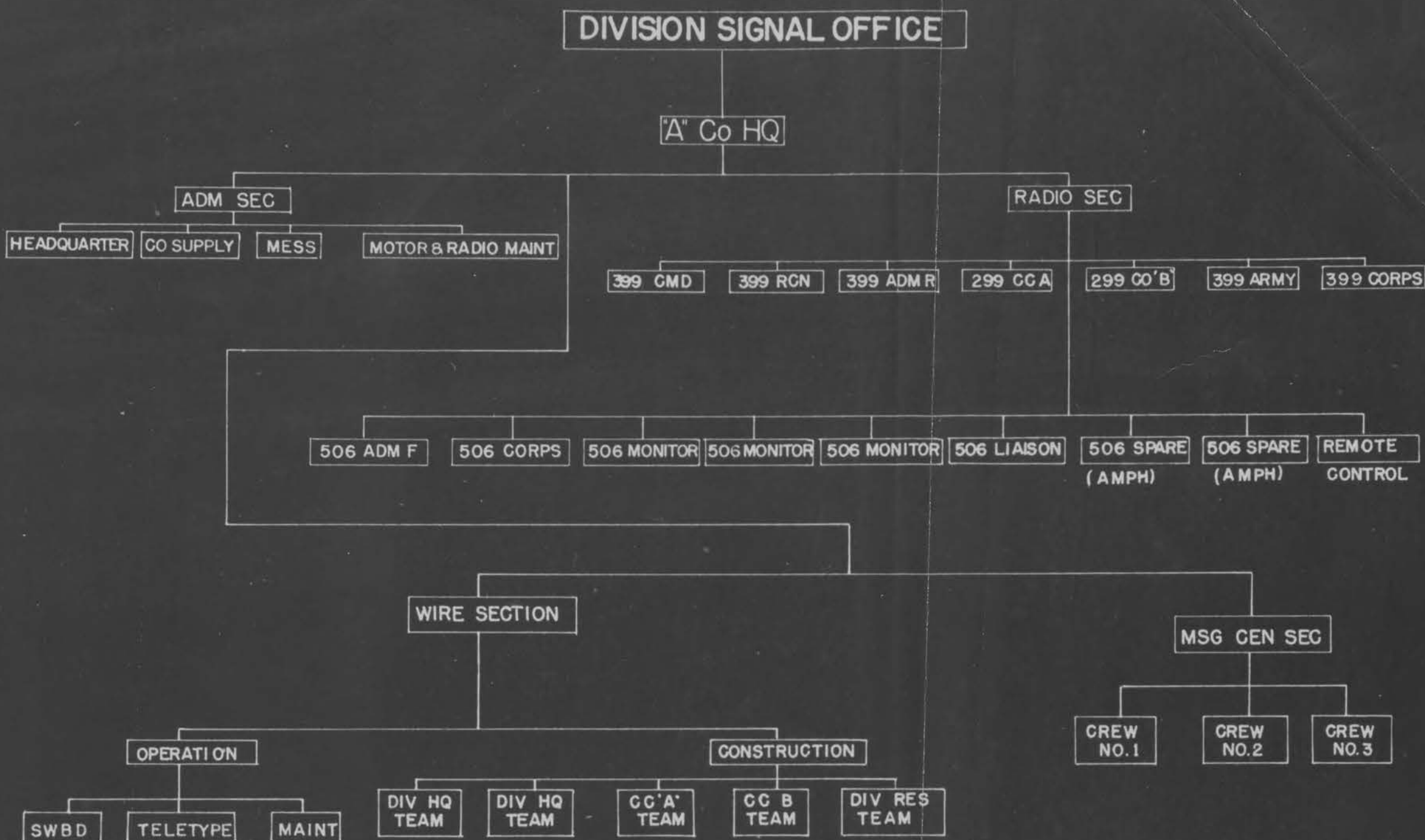
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# ORGANIZATION OF DIVISION SIGNAL COMPANY

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Appendix "A"



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APPENDIX "C"

MESSAGE CENTER  
142ND ARMORED SIGNAL

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1. Message Center Section will normally function in two echelons during operations, one to serve Division Forward Echelon and the other to serve the Adjutant General and Division Trains. Forward echelon is principally concerned with the flow of operational and administrative messages plus distribution of operational maps and orders. Rear echelon is more concerned with the distribution of administrative information and reports, and maps.

2. Forward echelon functions on a two twelve hour shift basis (until such time as personnel is available for three eight hour shifts). Each shift is composed of an officer, Message Center Chief, Assistant Message Center Chief, Message Center Corporal, six code clerks, four dismounted messengers, and four mounted messengers.

a. While in C.P. traffic will flow from staff to Message Center Officer who will determine routing and means of transmission, divide equally between Message Center Chief and Assistant Message Center Chief who will process messages. Divide again between code clerks, and continue on by dismounted messenger to radio vehicles, or in the reverse direction for incoming traffic. Traffic going by means other than radio usually by-pass the code clerks. The Message Center Corporals duties include posting of unit locations on map board, control of messengers, supervising code clerks, and liaison with staff sections. Message Center is in communication with staff, units, and division C.P. radio vehicles by telephone.

b. During movement Message Center will operate in an M-3 half-track. Personnel will consist of Message Center Officer in command, Message Center Chief, Message Center Corporal, and two code clerks. FM radio contact with staff on channel 8 and with radio vehicles on channel B is continuous by SCR-508 radio in Message Center Vehicle. Code clerks will ride in radio vehicles, where traffic is cryptographed by them. Mounted messengers will follow behind Message Center and all radio vehicles to relay traffic to Message Center and addressee.

c. After a general movement of division units and opening of a new forward echelon C.P., the majority of messengers will be dispatched immediately, one to each unit, to determine the physical route to and location of that unit, whereupon they will return to division C.P. Scheduled runs to units will be employed only during long static situations. Special messengers are dispatched as required.

d. S.O.P. includes pitching of tent, camouflaging installation, digging in, upon arrival at new location and constant manning of machine gun.

- (1) Personnel will display panels and dispatch pigeons as required.
- (2) Teletype to Corps will be operated in Message Center half-track when lines to Corps are available.
- (3) Cub airplane messengers are expected to operate daily from Corps to Division.
- (4) All Message Center procedure is eliminated when necessary to expediate a message faster than normal processing will permit.
- (5) Official time will be dissiminated by Message Center to radio vehicles for relay to division twice daily.

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Appendix "C"



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e. Two code clerks will be dispatched with Signal Center to CC"A" and CC"B" on D.G.  
f. Message Center will compile and distribute S.O.I. items to all units weekly.

3. Rear echelon will function on the same basis as forward echelon. Each shift is composed of a Message Center Chief, distribution clerk, dismounted messenger, and three mounted messengers.

a. Message Center will be established in proximity of Adjutant General's office.

b. Code clerks will be dispatched with Signal Center to ACP and RHD. During movement of rear echelon a code clerk will ride in AGO Signal Center.

c. Scheduled messenger service to units of division trains and division forward echelon will be dispatched thrice daily. Special messengers as required.

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2nd ARMORED DIVISION TRAFFIC DIAGRAM.  
EFFECTIVE 1944  
OFFICE OF THE DIVISION SIGNAL OFFICER

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APPENDIX "E"

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FOR SIGNAL SUPPLY AND MAINTENANCE  
142ND ARMORED SIGNAL COMPANY

1. Signal Supply and Signal Maintenance will be coordinated very closely with Ordnance Supply and Maintenance in battle. Each knocked-out vehicle must be replaced with another one that has the correct radio set already installed. It is the general plan of the Division G-4 to place a Maintenance Company or Maintenance Detachment of the Maintenance Battalion in support of each Combat Command, and the remainder of the Maintenance Battalion with the battalion headquarters at the Division Rear Echelon. The Division Signal Officer will place a complete Radio Maintenance Team at each of these three locations to act not only as a maintenance crew for radio repair, but also to provide a distributing point for all Signal Corps Items to the units in the Combat Command. Each Radio Maintenance Team will be equipped with a small arms repair truck, a 2 $\frac{1}{2}$ -ton cargo supply truck, and a  $\frac{1}{4}$ -ton truck. Spare radio sets will be carried for immediate replacement as unserviceable ones are turned in.

2. To make the system work, it is necessary for each unit S-4 to requisition Signal Supplies in the daily administrative report to G-4. Requisitions for tanks and radio equipped vehicles must state the type radio needed. The Division Signal Supply Officer receives the shortage report from G-4 and is responsible for the procurement and delivery of the items to the Radio Maintenance Team concerned. The Maintenance Team is responsible for issue to the unit that requested the items. In the case of tanks, delivery will be made with the correct type of radio set already turned to the proper channels. Unserviceable radio sets and equipment can be exchanged without requisition to G-4. Radio sets in vehicles that have been evacuated only as far as the Maintenance Company supporting the Combat Command may be repaired immediately. The radio set is removed from the vehicle and is serviced while the vehicle is being repaired. In this way, both the vehicle and radio can be returned to the unit at the same time. The system will require very close cooperation between the operations officer of the Maintenance Company and the Non-commissioned Officer in charge of the Radio Maintenance Team.

3. The Division Radio Maintenance Officer and the third Radio Maintenance Team remain at the Maintenance Battalion in the Rear Echelon. This team supports the other two teams at the Combat Commands insofar as placing proper radio sets in vehicles before they are sent forward or delivered to the Maintenance Company of the tank regiment concerned. Units under division control, including the reserve elements and attached units are serviced by this radio maintenance team.

4. Additional light radio maintenance crews will be placed at the Headquarters of each Combat Command and at Division Headquarters. The light crew is mounted in an M-2 halftrack and carries a spare set of each major type used at that headquarters. In battle, the crew will issue all Signal Corps Equipment Requisitioned by the headquarters.

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Appendix E

R-E-S-T-R-I-C-T-E-D

OBSERVATIONS AND OPINIONS  
82ND AIRBORNE SIGNAL COMPANY  
27 June 1944

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The following information and opinions were given by the Acting Division Signal Officer, Captain Robert E. Furman, Sig C.

1. ORGANIZATION

The 82nd Airborne Signal Company is organized under T/O & E 11-557, 10 August 1943, but was supplemented by additional personnel and equipment for the operation. Opinion was expressed that the T/O should provide for 7 officer personnel. The company at present has the following officer personnel:

- 1 - Division Signal Officer
- 1 - Company Commander
- 1 - Wire Officer
- 1 - Radio Officer
- 2 - Message Center Officers
- 1 - Officer at Base Area

2. WIRE PLATOON

a. The following data and recommendations relative to the Wire Platoon were furnished:

(1) The following changes in equipment allowances were recommended:

<u>Item</u>		<u>Authorized Allowances</u>	<u>Recommended Allowances</u>
Switchboard	BD-72	2	2
"	TC-4	None	1
Telephone	EE-8 (B)	20	40
Climbers	LC-5	5	12
Belts	LC-23	5	12
Tool equipment	TE-33	5	1 per wireman

(2) It was recommended that reel RL-31 be furnished in lieu of reel RL-35.

b. A 72 man wire platoon was recommended. Suggested use of the personnel is as follows:

- 12 men at Base.
- 12 men in T&T Section in assault area for operation, installation and maintenance.
- 6-8 man wire teams.

c. Motor transportation for the Wire Platoon was recommended as follows:

- |   |                 |
|---|-----------------|
| 6 - jeeps with $\frac{1}{4}$ -ton trailer | 1 per wire team |
| 1 - jeep " " "                            | for T&T Section |
| 1 - motorcycle                            | for wire chief  |

### 3. RADIO PLATOON

a. The following data and recommendations relative to Radio Platoon were furnished:

(1) The following changes in radio equipment allowances were recommended:

The deletion of 2 radio sets SCR-188 and the substitution of 5 radio sets SCR-193, the SCR-193 sets to be employed as follows:

- 1 - SCR-193 In Base Net.
- 1 - SCR-193 To higher echelon of command.
- 1 - SCR-193 In Division Command Net.
- 1 - SCR-193 In Division Commander's jeep.
- 1 - SCR-193 For forward displacement of CP.

(2) No changes in personnel were recommended for Radio Platoon.

(3) Five  $\frac{1}{4}$ -ton trucks, 12 Volt system, for the radio sets SCR-193, were recommended for the Radio Platoon.

### 4. MESSAGE CENTER PLATOON

a. The following increase and distribution of personnel for message center platoon was recommended:

Four teams of 10 men each, three teams to be employed in the assault area and one team in the base area, each team to be constituted thus:

- 3 Code clerks
- 2 Message Center clerks
- 3 Messengers, Motor
- 1 Messenger, Dismounted
- 1 Team chief

b. The motor transportation recommended for the Message Center Platoon was:  
8 motorcycles and 1 jeep with trailer, in lieu of 9 servicycles authorized.

### 5. HEADQUARTERS PLATOON

a. It was suggested that a motor pool with 5 personnel be provided, and 2 stock clerks be added to handle division Signal supply.

b. Transportation for Headquarters Platoon recommended was as follows:

- 2 jeeps with  $\frac{1}{4}$ -ton trailer
- 1  $2\frac{1}{2}$ -ton truck with 1-ton trailer for Signal supply.



6. SUPPLY AND MAINTENANCE

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Supply and maintenance of Signal equipment was satisfactory as of date.

7. GENERAL

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It was recommended that the Command Section be provided with one mimeograph for getting out orders, etc. No unusual communication problem has presented itself to date.

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OBSERVATION AND OPINIONS  
101ST AIRBORNE SIGNAL COMPANY  
27 June 1944

CONFIDENTIAL

Lt. Col. Sidney S. Davis, Sig C, is the Signal Officer of the 101st Airborne Division. The following information and opinions were given by the respective officers listed below:

Capt. Wm. H. Breen Jr.,	Sig C,	Company Commander
1st Lt. John A. McKee,	Sig C,	Wire Officer
1st Lt. Wm. H. Johnson,	Sig C,	Radio Officer
2nd Lt. John E. Moore,	Sig C,	Msg Ctr Officer
W/O Louis A. Stuber,	Sig C,	Div. Sig. Supply Officer

1. ORGANIZATION

a. The 101st Airborne Signal Company is organized under T/O & E 11-557, 10 August 1943, but was supplemented by additional personnel and equipment for the operation. T/O provides a strength of 4 officers, 1 Warrant Officer, and 95 enlisted men. Opinion was expressed that the T/O should provide the following personnel:

(1) Officer

1 Division Signal Officer	Grade	Lt. Col.
1 Asst. Division Signal Officer	"	Major
1 Radio Officer	"	1st Lieut.
2 Message Center Officers	"	1, 1st Lt. & 1, 2nd Lt.
3 Wire Officers	"	1, 1st Lt. & 2, 2nd Lt.
1 Div. Sig. Supply Officer	"	Warrant Officer

(2) Enlisted Personnel

The strength of the enlisted personnel should be approximately doubled.

(3) The reason advanced for the increased strength was that after the initial assault, the Airborne Signal Company has to operate as an Infantry Division Signal Company.

(4) Grades and Ratings

Opinion was expressed that T/O does not provide proper distribution of ratings for enlisted personnel in particular between radio and wire personnel.

2. WIRE PLATOON

a. The following data and recommendation relative to the wire platoon were furnished:

(1) Recommended Wire Equipment Changes to T/E:

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(a) It was recommended that reel RL-31 be provided in place of reel RL-35 throughout the division, in the Signal Company, and in the Infantry and Artillery Communication Sections.

(b) The following additional changes in equipment allowances were recommended:

<u>Item</u>		<u>Authorized Allowance</u>	<u>Recommended Allowance</u>
Climbers	LC-5	5	12
Belts	LC-23	5	12
Wire	W-130	30 miles	60 miles, either W-130 or W-150
Swbd	BD-72	1	3
Telephone	EE-8 (B)	20	40
Tool Equipment	TE-33	5	1 per wireman
Test Set	EE65 (B)	None	1
Terminal Strip	TM-184	None	6
Repeating Coil	C-161	None	6

b. A 72 man wire platoon was recommended. Suggested use of this personnel is as follows:

12 men at Base.

12 men in T&T Section in assault area for operation, installation and maintenance.

6-8 men wire teams.

c. The following motor transportation for the wire platoon was recommended:

1 - Jeep with  $\frac{1}{4}$ -ton trailer for use at Base

4 - Jeeps " " " for use in assault area

1 -  $\frac{3}{4}$ -ton truck with reel RL-26

### 3. RADIO PLATOON

a. The following data and recommendations relative to radio platoon were furnished:

#### (1) T/E Allowance

<u>Radio Set</u>	<u>No. Allowed</u>	<u>Distribution</u>
SCR188 or 499	3	3 Rad. Sec.
SCR 284	6	4 " " , 2 Maint. Sec.
SCR 511 or 300	14	4 " " , 10 " "
SCR 536	10	10 " " "
SCR 610	7	2 " " , 5 " "

#### (2) Recommended Radio Equipment Changes to T/E:

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(a) Radio Set SCR 188 or SCR 499. In the operation the unit actually had 7 sets. It was stated that 6 Radio Sets SCR 499 (which is preferred to SCR 188) were required in the Radio Section. It was further stated that it would be desirable to divide these 6 Radio Sets between the SCR 499 and SCR 399 and to use the sets as follows:

- 2 Radio sets SCR 499 to be flown into the assault area, to work to rear.
- 1 Radio set SCR 499 to be left at base area, to work in Army Command Net.
- 1 Radio set SCR 399 to be at base area and to work forward to assault area.
- 1 Radio set SCR 399 to be at base area, to work with troop carrier command.
- 1 Radio set SCR 399 to be used as relay station between base area and assault area.

For the operation the unit rebuilt the SCR 499 radio sets. The component parts of the set were mounted in a trailer and brought into the assault area in CG4A Glider.

(b) Radio Set SCR 284. Preference for Radio Set SCR 694 to Radio Set SCR 284 was expressed. It was recommended that 8 Radio Sets SCR 694 be provided, 6 for the Radio Section and 2 for the Maintenance Section. The basis of use for the sets is as follows:

- 2 Sets SCR 694 - In Division Command Net.
- 1 " " " - In G-2, S-2 Net.
- 2 " " " - In Corps Net.
- 3 " " " - Spares

In the operation it was stated the unit lost, in the initial assault, 7 Radio Sets (6-SCR 284 and 1 SCR 694) of 8 radio sets SCR 284 or SCR 694 it was furnished.

(c) Radio Set SCR 511 or 300. 8 Radio Sets SCR 300 are required in the Radio Section. Basis of use is as follows:

- 1 set SCR 300 - Division Command Net. Standby set.
- 1 " " " - For the Division Commander.
- 1 " " " - For the Div. Chief of Staff.
- 1 " " " - For the Div. Artillery Commander.
- 4 " " " - For wire sections.

No change in the number of SCR 300 sets in the maintenance was recommended. A total of 18 Radio Sets SCR 300 is required.

(d) Radio Set SCR 536. No changes were recommended.

(e) Radio Set SCR 610. It was recommended that the 2 sets assigned to Radio Section be transferred to the Maintenance Section as the sets are not required by the Radio Section.

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b. It was stated that the company does all the radio repair for the division and that 2 sets of Maintenance Equipment ME-40 for Radio Set SCR 300 were required; and that the T/E does not authorize this equipment and recommends this addition to T/E.

c. The following motor transportation for the radio platoon was recommended:

- 3 Jeeps for Radio Sets SCR 193, which replace the Radio Sets SCR 694 dropped in the initial assault.
- 1  $\frac{1}{4}$ -ton trailer.

Two jeeps would pull trailers carrying Radio Sets SCR 499, and one jeep would pull the  $\frac{1}{4}$ -ton trailer.

d. T/O authorizes 29 men for the radio platoon. A total of 48 men was recommended, this number of men being required to operate all the nets of a 24 hour basis.

#### 4. MESSAGE CENTER PLATOON

a. It was stated that T/O authorizes 31 men in the Message Center Platoon and that 49 men were recommended. This is the number of enlisted men actually employed in the section as of date.

b. The following motor transportation for the Message Center Platoon was recommended:

(1) 13 motorcycles in lieu of 9 servicycles authorized. It was stated that the servicycle is not durable, and that it was slow and could not cover open terrain.

4 motorcycles would be used in(rear)base area.

9 motorcycles would be used in(forward)assault area.

(2) 2 jeeps; 1 jeep to be used in base area and 1 jeep to be used in assault area.

c. It was stated that 8 convertors, M 209, were required whereas T/E authorizes only 4, M 209. Three echelons of command are operating continuously, and a fourth echelon on displacement, two each, convertors, M 209, being required at each echelon.

#### 5. COMMAND SECTION AND HEADQUARTERS PLATOON

a. The following enlisted personnel distribution was recommended:

4	enlisted men in Signal Office
8	" " " Division Signal Supply and Maintenance
2	" " " Company Supply
6	" " " Company Headquarters
9	" " " Company Kitchen
5	" " " Motor Pool

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b. The following motor transportation for Command Section and Headquarters Platoon was recommended.

2 Jeeps with  $\frac{1}{2}$ -ton trailer, to be used by the Division Signal Officer and Company Commander.

1  $\frac{3}{4}$ -ton truck for Company Administration.

6. SUPPLY AND MAINTENANCE

Supply and maintenance of Signal Equipment was satisfactory as of date.

7. GENERAL

No unusual communication problem has presented itself to date.

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OBSERVATIONS AND OPINIONS  
286TH JOINT ASSAULT SIGNAL COMPANY  
28 June 1944

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1. The following information and opinions were given by Major Robert E. Hayes, Sig C, Commanding Officer, 286th Joint Assault Signal Company, which serves the 1st Engineer Special Brigade, and Lt. Col. Rand S. Bailey, Sig C, Signal Officer, 1st Engineer Special Brigade, which operated on Utah beach.
2. Major Hayes was of the opinion that for amphibious operations lighter Signal equipment should be provided, and that T/E should be enlarged to provide a greater number of personnel.
3. It was estimated that the facilities of the Assault Signal Company operating on Utah beach extended inland for approximately 5 miles.
4. The radio sets were operated remote control from one central location.
5. It was stated that the unit was equipped with panel AP-50 but does not use the panels.
6. It was further stated that shore fire control parties should be divorced from the Joint Assault Signal Company and constituted into a separate unit.
7. Lt. Col. Bailey stated that the 286th Joint Assault Signal Company was not organized under T/O & E 11-147S, 21 October 1943, but in accordance with First Army SOP, 31 March 1944, and that the T/O 11-147S does not provide sufficient personnel. In the operation teams were furnished by the Joint Assault Signal Company to provide communications for the following:
  - 4 Engineer Battalions
  - 2 Engineer Regiments
  - 1 Brigade Headquarters
  - 1 Brigade Dump
8. Lt. Col. Bailey was of the opinion that because of the volume of work required of an assault Signal Company, and as a solution to organization, a Signal Battalion consisting of three companies was the probable answer.
  - 1 Engineer Regimental Signal Company of approximately 210 men.
  - 1 Engineer Brigade " " " " 160 men.
  - 1 Attached Company consisting of shore fire control personnel as a separate company.
9. It was stated that after the initial assault phase it was necessary that common battery telephone equipment be provided for shore communications in beach area. It was pointed out that telephone equipment suffers heavily from sand and salt water condensation, particularly as the equipment must be dug in.
10. Use was being made within the beach area of located underground German telephone cable.

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11. Air liaison parties as a part of the Joint Assault Signal Company were not utilized; the Air Force provided the air liaison parties. As to shore fire, Control Section was informed that seven additional FM had been added per party and this augmentation was necessary to provide relief operators and basics to hand carry initial equipment.

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OBSERVATIONS AND OPINIONS  
293 JOINT ASSAULT SIGNAL COMPANY  
1 July 1944

CONFIDENTIAL

1. The following information and opinions were given by Lt. Col. F. E. Heikkila, Sig C, Commanding Officer, during the assault operation of the 293rd Joint Assault Signal Company. The 293rd Joint Assault Signal Company furnished communications for the 6th Engineer Special Brigade which operated on "Omaha" beach.

2. Lt. Col. Heikkila was of the opinion that initially in the assault very few men should be sent ashore. In the early phase of the landing the situation appeared confused. Signal detachment was separated from units which they were to serve and considerable difficulty was encountered in locating the units as units were not landed at planned points but at points at considerable distance from designated location.

3. It was stated that he had found that MAL pole line construction is very good within the Special Brigade beach area, that it offered a better chance of maintaining the wire circuits, and that wire circuits laid on the ground or buried in the beach area proper were constantly being broken by trucks and bulldozers. Damage to overhead circuits by cranes was considered minor, and it was pointed out that there was less likelihood of the circuits being broken if they were up where operators of vehicles could see them.

4. The company was not organized under T/O & E 11-147 S, 21 October 1943, but in accordance with First Army SOP, 31 March 1944, for the operation.

5. Opinion was expressed for the need of motorcycles to be provided. It was stated that they were essential in the early phase of amphibious operation because of the congestion of the roads and the limited number of roads leading from the beach to the interior.

6. Lt. Col. Heikkila would eliminate from the T/O the Shore Fire Control Section and Air Liaison Section as the personnel for Shore Fire Control was not an organic part of the assault company but was furnished from the divisions making the assault, and that the Air Force provided the personnel and was responsible for air liaison.

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OBSERVATIONS AND OPINIONS  
294TH JOINT ASSAULT SIGNAL COMPANY  
27 June 1944

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The following information and opinions were furnished by Major Harold L. Densonier, Signal Corps, Commanding, 294th Joint Assault Signal Company. The information is in the form of questions and answers.

1. Is company used in manner outlined in FM 31-5 "Landing Operations on hostile shores"?

No.

2. How far inland do facilities of Joint Assault Signal Company extend?

Approximately five (5) miles.

3. What is the maximum extent of beach covered by a Joint Assault Signal Battalion shore and beach party communication section?

500 yards.

4. How are air liaison sections utilized?

Air liaison parties were not used as part of Joint Assault Sig Co, but were assigned directly to Air Corps.

5. Is any augmentation of the shore fire control section necessary?

Yes. 5 additional enlisted men per party are required. Also 1 additional Naval Officer per Inf Regt and 1 for Div Hq.

6. How far inland does the shore fire control party go?

Ten to twelve miles.

7. At what stage of the operation can a Joint Assault Signal Company be withdrawn?

At same time as associated Engineer Special Brigade.

8. Are present training doctrines suitable and adequate?

Not entirely. Too much stress placed on value of radio. Not enough on wire and message center. Various ship-shore nets outlined seldom operate due to radio silence prior to H hour and fact signal personnel are unloaded in small boats when radio silence is lifted. Brigade staffs land very early in operation not requiring extensive ship-shore communication. Radio circuits inland are used only in emergencies due to fact nets are bulky and scheduled transmission by JASCO personnel would interfere with infantry operational traffic.

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9. What shortages of T/O and E equipment exists? What items are considered critical?

No critical shortages existed at beginning of operations.

10. What increase or decrease of T/O & E equipment is recommended?

	Pres	Auth	Rec	
Decreases: Public address equip PA-5	10		4	1 per Eng Bn 1 per Brig Hq Flat
Switchboard, ED-71	20		0	Replaced by special swbd
Telegraph set, TG-5	20		0	Not used
Test set, TS-26/TSM	32		10	Not used by SFCP

Increases:

ORDNANCE DEPT:

Watches, wrist - should all be 15 jewel or better and waterproof

Vehicles - Replace truck, 3/4-ton, by truck, 1 1/2-ton, 6x6 Pers Car and increase auth to 9. 1 per Eng Bn Shore Sig Flat, 4 per Brigade plat and 2 Co hqs.

Increase auth of 2 1/2-ton, 6x6 cargo, to 3. Required to carry additional equip for brigade platoon and land essential equip in organic vehicles.

Authorize 1 truck, 2 1/2-ton SAR M7A1 for radio and telephone repair sections.

QUARTERMASTER:

Screen, latrine - 2 required.

SIGNAL CORPS.

	Present	Auth	Rec	Auth	
Axle, RL-27	20		25		
Gauge, TL-144	1		10		
Maintenance equip, ME-13	0		2		Required if SCR-694 is not available and 284 nets are supplemented by SCR-609.
Radio set SCR-399 in HO-17 mounted in 2 1/2-ton 6x6	0		1		to be used by Brig Flat.

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SIGNAL CORPS (Cont'd)	Present	Auth	Rec	Auth	
Radio set SCR 694	38		53		11 adtl Signal sections and 4 for SFCP.
Radio set SCR 609	0		46		to be used to supplement 284s if SCR-694 is not available. Were used by SFCP and Sig detachments with Eng Shore Cos and found to be entirely adequate
Reel, RL-39	0		34		
Switchboard, BD-72	0		6		2 per Eng Sh Bn Sig Plat
8 drop, special lightweight	0		12		
18 drop lightweight swbd	0		4		
Telephone, central office set, TC-12	0		4		
Telephone, Central Office set, TC-4	0		1		
Telephone, EE-8A	100		218		
Terminal strip, TM-184	20		28		
Teleprinter, set EE-97	0		2		
Tool Equipment, TE-33	209		1		per ind.
Tool Equipment, TE-49	1		3		
Tool Equipment, TE-50	0		1		
Reel Unit, EL-26	0		3		
Reel Unit, RL-31	10		16		
Wire Pike, MC-123	10		16		
Wire, W-130	0		60		miles
Cable assy, CC-345 5 pr 1000'	0		2		
Cable assy, CC-355 10 pr 1000'	0		2		
Converter, M-222	0		1		
Glove, LC-10	0		50		
Ladder, LC-15	0		2		
Radio Set, SCR 188	0		1		
Stamp, MC-181	0		4		
Swbd Unit, EE-2	10		20		
Test Equip., IE-9	0		1		
Test Set, 1-56	1		2		
Typewriter, MC-88	0		1		
Wire, instrument, black 2000'	0		1		
SCR-625	0		10		Required by line crews who go out before areas have been cleared by Engs.

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11. a. Is the degree of training prior to arrival in theater adequate? If not, why not?

Yes. But due to reorganization and operational plans unit had never operated on so large a scale.

b. Is basic "combat" training adequate?

Yes.

c. To what extent must signal units provide their own protection?

Local security. However, it is imperative that signal personnel landing in assault waves be prepared to fight with assault infantry and combat Engineers, at the same time protecting as much of their equipment as possible. It is felt that due to lengthy amphibious training of unit that men did not drop equipment they were carrying although under heavy enemy fire. In early phases of operation wire crews needed protection from snipers. All personnel should have intensive training in mines and booby traps. Mine detectors should be T/E equipment.

12. Are your radio sets operated remote controlled?

No, radios operated by remote control due to confined area in which must operate.

13. Are your troops equipped with panels AP-50? Are these panels satisfactory?

Yes. Air cover made their use unnecessary.

14. What means are taken to identify troops to friendly airplane crews during daylight? During darkness? Any effort made to identify motor vehicles from the air?

Presence of troops operating in beachhead should be known to friendly air forces making identification unnecessary. Vehicles were marked with painted designs.

15. Is it practical for Headquarters and Signal units to formulate an SOP and follow same in combat conditions?

Each operation requires a signal unit SOP, which should be flexible.

16. What is the ability of signal equipment to perform functions intended for general service to meet requirements of your particular theatre?

All equipment (Signal Corps) used by amphibious forces should be water-proofed to allow immersion in sea water for at least four hours without damage to equipment. Existing equipment will not stand this.

17. How does the functioning of your unit in theatre differ from that during maneuvers?

During maneuvers too much stress was placed on value of radio communication. During present operation it has been found that wire is still the primary

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means of communication. Additional stress should be placed on swbd opn, message center, field wire construction. During present operation Brigade switchboard has handled over 1500 calls in a 24 hour period/

18. To what extent and how are Signal lamps, SE-11 used?

All lamps, SE-11 landed dry were turned over to Naval Beach Bn for use in signaling to coasters.

19. Is training of specialist and unit training satisfactory upon arrival?

Yes. Important that Signal personnel undergo combined training with all shore party units including beach battalion.

20. General comments?

It has been found that basic 19 man battalion shore section is too large to function with Eng Shore companies and too small to functions with Hqs of Eng Sp Brigade. The reorganization of Signal Corps personnel with an increase to a total of 298 EM is recommended. Breakdown as follows:

Co Hqs Platoon	46 Enlisted Men
3 Signal Platoons	52 Enlisted Men as follows:
Engineer Shore Bn (ea)	3 Sig detachments of 10 EM
	1 per Eng Shore Co
	1 Signal Section 22 Em
	per Eng Sh Bn
1 Signal Platoon	
Engineer Special Brigade	96 Enlisted men.

Company headquarters platoon should include at least four telephone repairmen.

Shore fire control parties operated with twelve EM but it is felt that 10 would be adequate. Each party carried two SCR 609 as well as SCR-284. These parties made no use of lance poles and other wire equipment except for combat wire, sound phones, etc.

Size of organization makes personnel section mandatory, all administration handled by company headquarters, which has worked satisfactorily. Supply personnel adequate under T/O.

Recommended an additional officer be authorized in company headquarters as supply officer, leaving all administrative matters to executive officer. The warrant officer should be a technical man in charge of repair sections as well as having a knowledge of all phases of communications.

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OBSERVATIONS AND OPINIONS  
ENGINEER BRIGADE GROUP SIGNAL COMPANY  
22 June 1944

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1. The following information and opinions were given by the Engineer Brigade Group, Signal Officer, Lt. Col. Homer Riggs, Sig C. The Group consisted of the 5th Engineer Special Brigade with 294th Joint Assault Signal Company, the 6th Engineer Special Brigade with 293rd Joint Assault Signal Company, and the 11th Port Service Company. The group operated on Omaha Beach.
2. On D-Day detachments of the Joint Assault Signal Companies for three to four hours after reaching beach were pinned to the ground by extremely intense enemy fire, and during this period of time Signal Corps personnel assisted the Infantry with rifle fire. Losses of Signal equipment and personnel were considered light and did not exceed that contemplated.
3. Opinion was expressed that in any future amphibious operation, involving the need for an Engineer Brigade Group, the group should have permanently assigned Signal Corps personnel for the duration of the mission. Because of the volume of installation, operation and maintenance work required of the group headquarters, a Signal company of size and organization, similar to an Infantry Division Signal Company, was recommended.
4. Opinion was expressed that the Signal Corps 6 and 8 drop telephone switchboards were satisfactory but that all larger switchboards should be for common battery, similar to telephone switchboard TC-4. It was stated that telephone switchboard TC-2 was too large to be satisfactorily handled by one operator.
5. It was pointed out that for common battery use, the Receiver Hook on telephone EE-8 (B) should be redesigned so that the receiver won't be dropping off the hook, and that a positive depression of the hook is insured when the hand piece is placed in the telephone case compartment. It was also stated that it was desirable to provide the telephone EE-8 (B) with some means for bracket mounting, to mount on tent pole, table, etc., as using the strap around the tent pole was not satisfactory, and that the phone was easily knocked off when placed on flat surface.
6. It was stated that all Signal Corps troops that are to operate in beach area should be as well trained in the detection and removal of enemy mines as are the engineer troops.
7. The need for a far greater indoctrination of all troops, from combat echelon to service troops, on the necessity of safeguarding telephone lines at all hazards was pointed out. Considerable difficulty has been experienced in the maintenance of telephone lines in the beach area. Lines layed on the ground or buried are broken by truckage and bulldozers; when lines are placed up overhead cranes break the wires, or lance poles are broken by vehicles.
8. In the initial phase of landing Signal detachments were not landed with the troop units they were to serve, and some difficulty in locating the troop unit was experienced as the troops were not landed at designated points but some distance away. It is essential that Signal detachments land with the units which they are to serve.

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9. The Joint Assault Signal Company for the operation was not organized under T/O & E 11-147 S, 21 October 1943, but in accordance with S.O.P. of First Army of March 1944. Air Liaison Section was entirely out. It was detached and assigned to Air Force which became responsible for its operation. The Air Force attached teams to units as required. Shore Fire Control parties were drawn from the divisions making the assault and assigned to the Joint Assault Signal Company for the landing. Opinion was expressed that Shore Fire Control Section should be detached from JASCO and organized into a separate unit.

10. The Joint Assault Signal Company was not used in the manner outlined in FM 31-5 "Landing Operations" on hostile shore.

11. Facilities of the Joint Assault Signal Company extended approximately six miles inland.

12. Approximately one mile was the extent of beach covered by a Joint Assault Signal Battalion shore party communication section.

13. The Joint Assault Signal Company cannot be withdrawn as long as the Engineer Special Brigade remains and is handling cargo over beach.

14. Opinion was expressed that motorcycles and more messenger jeeps should be provided the JASCO.

15. In static situation all of the radio sets are operated remote control from one central location.

16. The unit was equipped with panels AP-50 but was not required to use them in the operation.

17. It was stated an SOP was prepared prior to combat and that it is practical to follow it in combat.

18. It was stated that waterproofing of Signal equipment was satisfactory for the operation; the waterproofing was done in accordance with Signal Supply Instruction 46-B, HQ ETOUSA. There was a marked shortage of waterproof bags, and unit never got waterproof bags.

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OBSERVATIONS AND OPINIONS  
3252 SIGNAL SERVICE COMPANY  
24 June 1944

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1. The following information and opinions were given by the Commanding Officer (Lt. Jones) of the 3252 Signal Service Company which serve the XIX Corps and was corroborated by Lt. Col. S. S. Cerwin, Sig C., XIX Corps Signal Officer.
2. The direction finding equipment the unit had was inadequate in that it would cover a range of one to three megacycles only. It was felt that the unit should have equipment to cover the entire range of hostile sets on the Corps front.
3. It was stated that hostile artillery spotters on Corps front could not be located because of lack of equipment.
4. Opinion was expressed that intercept was satisfactory and that there was little hostile CW radio traffic. It was advised that the Germans were using radio telephone and that the only radio traffic was that of hostile artillery spotters.

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OBSERVATIONS AND OPINIONS  
50TH SIGNAL BATTALION  
30 June 1944

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Lt. Col. W. C. Fisher, Sig C, commands the 50th Signal Battalion which furnishes communication for the VII Corps. The following information was furnished by Capt. H. W. Taylor, Sig C, Battalion S-3.

1. ORGANIZATION

The 50th Signal Battalion is organized under T/O and T/BA of April 1942, and not under T/O & E 11-27, 10 December 1943. The opinions advanced are based on operational experience to date,

2. GENERAL

a. The Repair Section of Headquarters Company will probably be adequate to perform third echelon maintenance of Signal equipment. As of date little repair has had to be made. The Repair Section is normally located in the battalion bivouac.

b. The battalion has no light construction companies. The average rate of construction of field wire per construction company in combat was two miles per hour per wire team, which included policing of wire. No pole line construction had been made to date and pole line construction in the corps Signal battalion was considered to be unusual, and no open wire construction was made to date.

c. Opinion was expressed that T/O and T/BA, April 1942, were better than T/O & E, 10 December 1943, for a corps Signal battalion in that it provides more men and equipment.

d. Spiral 4 cable is used to divisions and to lateral units. No underground or buried cable installations have been made to date. Existing commercial cable facilities underground or overhead have not been used by the battalion.

e. During landing operations one Wire Repair Section and one Radio Repair Section from Signal Repair Company were attached to the Corps Signal Battalion. The Wire Repair Section has been released and was with the battalion from D-day to D + 20. The Radio Repair Section is still with the Corps Signal Battalion because of loss of corps' equipment in landing.

f. The Signal Battalion must furnish its own local protection.

g. The Radio sets are operated remote control from one central location, thus establishing a "Radio Control Central".

h. The unit is equipped with panels AP 50 and although they are not used, the panels were considered satisfactory.

i. The ability of signal equipment to perform intended functions for general service in the present situation was considered satisfactory.

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j. Considerable difficulty had been experienced with radio set SCR-536 in that the antenna breaks off.

k. The tubes in radio set SCR-508 are easily blown. The difficulty appears to be that operational personnel do not allow the tubes to warm up before beginning operation.

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OBSERVATIONS AND OPINIONS  
56TH SIGNAL BATTALION  
24 June 1944

Major E. L. Smith, Sig C, commands the 56th Signal Battalion which furnishes communications for the V Corps. The following information and opinions were given by Major H. H. Boggus, Sig C, Battalion Executive, and Captain Robert E. Berg, Battalion, S-3.

1. ORGANIZATION

The 56th Signal Battalion is organized under T/O and TBA of April 1942 and not under T/O & E 11-27, 10 December 1943. The opinions advanced are based on operational experience to date.

2. OPERATIONS COMPANY, Signal Battalion

a. It was stated that the Operations Company needed more transportation and that the T/BA, April 1942, does not provide requisite transportation for mobile operation. The vans which the Battalion has should be eliminated.

b. Six Central Office Sets, TC-3, were recommended, four sets for forward echelon and two sets for rear echelon. It was further recommended that three shelters, HO-17, and three 2½-ton trucks, be provided to house the TC-3 sets.

c. For installation and maintenance platoon it was recommended that K-43 trucks be removed from T/E and 1½-ton, 6 x 6 personnel carrier, substituted.

d. It was stated that ten reels, RL-31, were required for the operations company.

e. An officer in the teletypewriter operation section was recommended.

f. It was stated that remote control equipment furnished with radio set SCR-193 was unsatisfactory in that the dynamotor will not stand up under constant operation.

g. The following recommendations were made for the Message Center Platoon:

- 3 - Shelters, HO-17, with 3 - 2½-ton trucks, for code work.
- 3 - Power units, PE-95.
- 13 - Code and cryptographic clerks, 6 at forward echelon, 5 at rear echelon, and 2 for reserve.
- 12 - Message Center clerks, 6 at forward echelon and 6 at rear echelon.
- 3 - officers, and 2 warrant officers.

3. CONSTRUCTION COMPANY, Signal Battalion

The following recommendations were made for the construction company:

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- a. That each company have 12 construction teams of 15 men each; each team to be provided with one 2 $\frac{1}{2}$ -ton truck, one 3/4-ton truck, and one jeep.
- b. That each Construction Company have a 4-ton wrecker.
- c. That each Construction Company be provided with 48 telephones, EE-8(A), to be issued on the basis of 4 telephones per construction team.
- d. That each Construction Company be provided 2 switchboards, TC-12, in place of 4 switchboards, BD-72.
- e. That heavy construction material, such as cross arms, be eliminated from T/E, and carried in depot stocks and drawn as required.

4. HEADQUARTERS & HEADQUARTERS COMPANY, Signal Battalion

The following recommendations were made for the HQ & HQ CO:

- a. It was stated that the Battalion needs, in addition to the Corps Signal Supply and Maintenance Officer, a Battalion Supply Officer, and it was suggested that he be in the grade of First Lieutenant. Opinion was also expressed that T/O & E, 10 December 1943, should provide an officer as Battalion S-3.
- b. The desirability of standardization of motor transportation for a Company Headquarters was advanced. One  $\frac{1}{2}$ -ton truck, with  $\frac{1}{2}$ -ton trailer, and one 3/4-ton weapons carrier, with  $\frac{1}{2}$ -ton trailer, were recommended as being considered adequate transportation for a Company Headquarters.

5. GENERAL

Based on combat operations to date the following information was furnished:

- a. The repair section of Headquarters Company is adequate to perform third echelon maintenance of signal equipment. The repair section operates in three similar constituted teams and two teams are normally located at the forward echelon, and one team at the rear echelon.
- b. The battalion has no light construction companies, and it was recommended that the construction companies be organized as light construction companies.
- c. To date no pole line construction had been made in combat operation. The average rate of construction of field wire per construction company in combat thus far was approximately 12 to 15 miles per hour.
- d. No rehabilitation work or underground, or buried cable installations, have been made to date.
- e. No use had been made of any existing commercial cables, either underground or overhead.
- f. Spiral 4 Cable is used to divisions.

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g. Teleprinter is not being used to full advantage as the Staff is writing very few messages and using the telephone in preference to writing messages.

h. It has not been necessary to attach Signal Repair Sections from Signal Repair Companies to any Signal Repair and Supply Platoon of the Corps Signal Battalion.

i. It has not been found necessary to detail any member of Corps Signal Battalion to augment the Corps Signal Section.

j. The Corps Signal Battalion must furnish its own local protection.

k. All of the radio sets are remote operated and are controlled from one central location.

l. The Battalion had panels, AP 50, but turned them in as they were not used. The working on vehicles is the only means taken to identify troops to friendly airplane crews during daylight. During darkness no means of identification was considered necessary.

m. An SOP was prepared prior to combat and has been followed very closely in the operation. Copy of SOP is attached. (Inc. 1)

n. The ability of Signal equipment to perform intended functions for general service use in present operation was considered satisfactory.

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HEADQUARTERS 56TH SIGNAL BATTALION  
APO # 305, U. S. Army

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29 April 1944.

BATTALION STANDARD OPERATIONS PROCEDURE (SOP)

I GENERAL:

This SOP will govern the operation of this battalion in the execution of its mission of installing, maintaining and operating all Corps signal communications in accordance with the current Corps Signal SOP and SOI.

II COMPOSITION OF THE BATTALION

This Battalion is composed of a Hq. & Hq.Co., and three (3) lettered companies as follows:

Companies "A" & "B" are construction companies and Company "C" is a Wire Operations Company. The Battalion will be divided into a Forward and a Rear Echelon located with the Forward and Rear Echelon of Corps Headquarters respectively.

The composition of these echelons will be as follows:

a. Forward Echelon

- (1) Battalion Headquarters
  - Commanding Officer
  - Executive Officer
  - Battalion S-3
  - Battalion Adjutant
  - Headquarters Clerks (Less Det.)
- (2) Headquarters Company
  - Detachment Radio Platoon
  - Detachment Msg. Cen. Platoon
  - Corps Signal Supply & Repair
  - Battalion-Motor Maintenance Section
- (3) Company "C"
  - Entire Company less operating detachment at Rear Echelon of Corps Headquarters.
- (4) Company "A"
  - Entire Company
- (5) Company "B"
  - Entire Company less sufficient construction personnel at Rear Echelon to install and maintain wire lines to Corps troops at Rear.
- (6) Medical Detachment.
  - Medical Detachment less aid men at rear echelon.

b. Rear Echelon

- (1) Battalion Headquarters
  - C.O. Rear Echelon (C.O., Hq. Co.)
  - Personnel Adjutant
  - Personnel Section Clerks
  - Det. Bn. Hq. Section

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INCL 1 TO TAB P

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- (2) Headquarters Company  
Entire Company less Detachments listed in a (2) above.
  - (3) Company "C"  
Operating detachments for Rear Echelon Corps Hq.
  - (4) Company "B"  
Construction teams necessary to install and maintain wire lines to corps units in vicinity of Corps Rear Echelon.
  - (5) Medical Detachment.  
Medical Air Men.

### III OPERATIONS

#### 1. Message Center:

Message Center Platoon will install, and operate a Message Center at the Forward and Rear Echelons of Corps. Messenger Service will be established from both echelons as directed by the Corps Signal Officer. The Message Center will be located within the C.P. area at a point picked out by the Corps Headquarters Commandant. Motor messengers will park transportation at a designated motor park without the CP area and proceed to the Message Center on foot. One Message Center Officer will be on duty at all times in the Forward Echelon C.P. Message Center. Message Center platoon will provide a "jump" team to go forward and establish an advanced message center at the new location of the Corps C.P. before the actual closing of the old C.P.

#### 2. Radio

The radio platoon will operate radio in various radio nets as directed by the Corps Signal Officer. All radio sets at the Corps C.P. will be dispersed at a distance not less than one mile from the Corps C.P. area. These sets will be remote controlled from a radio center located in the C.P. area near Message Center. Control circuits from the radio center to the dispersed sets will be installed by a construction team from Co. "A", over at least two separate routes to insure sufficient circuits at all times. On a move of the C.P. the wire team will be prepared to go forward and install the above circuits at the new location before the closing time of the old C.P.

#### 3. Teletype & Telegraph

The Telegraph Printer Operation Platoon will establish teletype and telegraph communication within the Corps as directed by the Corps Signal Officer. The teletype truck will be set up within the Corps C.P. area in the vicinity of Message Center. This platoon will also be responsible for the installation, operation, and maintenance of facsimile equipment as a means of communication on orders from the Corps Signal Officer. The teletype platoon will provide a "jump" team to go forward and install the teletype communication at the new location of the Corps C.P. before the actual closing of the old C.P.

#### 4. Telephone Operations:

The Telephone Operations Platoon will install, operate, and maintain a switchboard at the Forward and Rear echelons of Corps Headquarters. The switchboard will be located at some point between the construction center and the C.P. area since it is not vitally necessary

- 2 -

5



Telephone Operations, cont'd

that it be located near the Message Center. A complete "jump" switchboard installation will be available to go forward and be ready for operation at the new location of the C.P. prior to closing time of the old C.P.

5. C.P. Installation:

The Installation and Local Maintenance Platoon will install local wire distribution system in the C.P. area and telephones in accordance with the Corps SOI. Five and ten pair cable will be installed from the switchboard to distribution points (DP's) in the C.P. area. Field wire will be used from the D.P.'s to local telephones. Tp-6 telephone sets will be used where the situation will warrant their use, otherwise EE-8-A field telephones will be used. This platoon will maintain the local distribution system. At least one lineman and one installer will be located in the C.P. area at a D.P. with a telephone in order that the wire chief may be able to contact them at any time for trouble or to move a telephone. This platoon will provide a "jump" team to go forward and make the new C.P. installation prior to the closing of the old C.P.

6. Construction Center:

At each echelon, all wire lines out of the C.P. area shall terminate at a central point known as the Construction Center. Cable will be used to connect these circuits from the construction center to the main Corps switchboard. When lines are being constructed they will be connected to the construction center and all testing will be done to the switchboard therein. After a line is constructed and tested to its destination the construction chief will then call the wire chief and report that the line is ready for use. The line will then be switched to bypass the construction center. When trouble is reported on line outside the C.P., the wire chief will call the construction chief and make the report, whereupon the line will be switched to the construction board and tested. The construction chief will supervise the trouble shooting until the line is again ready for use when it will again be turned over to the wire chief. The construction center will be made up with at least two BD-72 switchboards and one EE-65. The construction center will have point to point telephone lines to the Corps switchboard and all construction and trouble team bivouacs. There will be a senior construction officer on duty at the construction center at all times who will be responsible for all lines from that center whether constructed by "A" or "B" company. Accurate records will be kept and line route maps turned over to the battalion operations officer daily at midnight unless there is no change, in which case a telephonic report will be made of that fact.

7. Wire Construction:

All wire lines outside of the immediate C.P. area will be constructed and maintained by Companies "A" & "B". A minimum of one officer and two wire teams will be allocated to the construction of lines to each Division within the Corps. The officer and one team will be located at the Division C.P. and one team at the Corps C.P. The allocation of teams and officers to other lines will be the responsibility of the construction officer at the construction center. Normally the construction team laying

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Wire Construction, cont'd:

the line will maintain that line. Construction officers will select the routes for their lines. Existing lines in occupied territory will not be rehabilitated and used without permission of the Corps Signal Officer, however, existing pole routes will be used wherever available for attaching field wire and cable unless otherwise directed by the Corps Signal Officer. Wherever information is available, and terrain will permit, lines to forward units will be constructed along the axis of Signal Communication. It shall be the mission of the construction officer at the division to keep wire communication to that division. He will keep close liaison with the division Signal Officer and whenever possible construct his lines forward of the Division C.P. toward the future location of that C.P. He will keep in constant communication with the officer at the Corps Construction Center:

8. Operation Control:

a. Forward Echelon

Within the Corps C.P. in the vicinity of the Signal Office there will be a battalion operations office from which all operations of the battalion will be controlled. Either the Bn. C.O., his Executive, or his S-3 can be found at this location at all times. At this office an accurate record of all communications as well as the disposition of the battalion operations personnel will be kept. Close contact will be kept with the Signal Officer from this point.

b. Rear Echelon

The company commander of Hq. & Hq. Co. having been designated as Signal Officer for the Corps Rear Echelon will control all operations of the battalion at the Rear Echelon.

IV. MOVEMENT OF THE BATTALION:

Each echelon of the battalion will move with the corresponding echelon of Corps Hq. All moves will be by infiltration, but since communication must be continuous, it is necessary that movement be by groups and in the proper sequence. The composition, mission and movement of each group is outlined below:

a. Forward Echelon

1. Reconnaissance Group

(a) Composition.

Bn. S-3 or Executive  
C.O., Company "C"  
Bn. Adjutant  
Radio Officer  
Construction Officer

(b) Mission.

The C.O. Company "C" will check location of switchboard and teletype trucks with Corps Hq. Comdt. and also familiarize himself with locations of all staff sections with regard to telephones.

The construction officer will locate spot for construction center and advise Signal Officer as to accessibility of Division and trunk lines.

The Radio Officer will check location of radio center truck and select dispersal site for remoted radios so that he can instruct wire team on laying radio remote cable.

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The Battalion Adjutant will select bivouac areas for operation group and Bn. Hq. and get approval from Corps Hq. Comdt.

The Bn. S-3 will coordinate the entire Signal layout with Signal Officer and Corps Hq. Comdt.

(c) Movement.

The group will be alerted by the S-3 or Executive or information from the Signal Officer that Hq. Comdt. is going forward to select C.P. Group will move with the Hq. Comdt.

2. C.P. Installation Group

(a) Composition.

- Bn. S-3 or Executive
- Message Center 'jump' team
- Radio remote construction team
- Switchboard 'jump' truck
- C.P. installation wire teams
- Construction Center 'jump' setup
- At least one wire construction team
- Teletype 'jump' truck

(b) Mission.

To install the complete Corps C.P. communication system and be able to open the C.P. at the same time the old C.P. closes.

(c) Movement.

The group will be alerted by S-3 or Executive Officer when the Rec. group leaves, with an indication as to how long before departure. They will move on orders from the S-3 or Executive on information from the Signal Officer that the site selected has been approved.

3. Construction Teams.

All construction teams occupied at the time of a move will be instructed to report to the new bivouac location of their company when finished.

4. Company "A"

Company "A" will move to a new location at any time at the discretion of the Company Commander with approval of the Bn. CO.

5. Company "C"

Company "C" will move its mess and Hq. after the Corps Command Post has closed at the old location.

6. Battalion Bivouac & Co. "B"

(a) Composition.

- Bn. Hq.
- Bn. Motor Maintenance
- Corps Signal Repair & Supply
- Co. "B" Hq., Mess, etc.
- Medical Detachment

(b) Movement.

This group will move on orders of the Bn Commander after Co. "C" has cleared.

7. Old C.P. Installations.

Radio sets will move with the Corps C.P. as soon as wiring, twax, telephone are installed at new location. Listening watch

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will be maintained on all nets during move as ordered by the Signal Officer. Other installations that can dismantle in time will move with Company "C". The switchboard and construction center will move only after all circuits have been cut over.

NOTE: ALL MOVEMENTS WILL BE COORDINATED WITH THE PROPER TRAFFIC CONTROL

IV MOVEMENT OF THE BATTALION (Cont'd).

b. Rear Echelon:

The rear echelon of the battalion does not have equipment nor personnel for 'jump' team installation. It will be necessary to close practically all communication at the old installation before moving to the new location. The exception will be messenger and radio service. If necessary due to a shortage of transportation, the movement will be accomplished by shuttling. The following will be the order of movement:

1. Reconnaissance.

The C.O. of Hq. & Hq. Co. and an officer from operations will go forward with the Corps representative. They will advise as to availability of wire lines and locations for various signal installations.

2. C.P. Installation group

(a) Composition.

Construction Officer  
Construction Center  
Construction Teams  
Temporary Switchboard (TC-12)  
C.P. installation wire team.

(b) Mission

To install wire communication, local telephones, temporary switchboard, and connect new location with Forward Echelon trunk lines.

(c) Movement

This group will move on orders of C.O. Hq. & Hq. Co. (C.O. Rear Echelon).

3. C.P. Group

(a) Composition

Message Center & Code group  
Messengers  
Teletype truck  
Radio

(b) Movement

This group will move on orders of the C.O. Hq. & Hq. Co. The group will move at the time of closing the old C.P. and with the main Corps Rear Echelon group. Immediately on reaching new location each part will set up and go into operation immediately.

4. Bivouac Group

(a) Composition.

Hq. & Hq. Co., Mess, supply, etc.  
Bn. Personnel section  
Bn. Supply section.  
Bn. Hq. Det.

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## (b) Movement

This group will move on orders of Bn S-1 after Corps rear echelon has cleared.

## 5. Dismantling group.

The switchboard and construction center will move when forward group has taken over service. Move individually. The main switchboard will replace the temporary one already in operation as soon as it reaches new location.

V. ADMINISTRATION.

Administration orders will be issued by the rear echelon. The C.O. of Hq. & Hq. Co. will represent the Bn. C.O. for routine matters. From time to time he will confer with Bn. C.O. on unusual matters. Personnel Records of all companies will be kept in the rear echelon. Each team or section separated from its company will report casualties and changes of status to its company Hq. immediately. Morning reports of Companies A, B, and C will be sent to Rear Echelon thru Bn. Hq. each day. Payrolls will be made out in the Personnel section in the rear echelon and each company will be responsible for the payment of men in that company, although actual payment will normally be made by the personnel Adjutant.

VI. MESS

The disposition of the Battalion is shown in Section II above. The following will in general govern the personnel eating at each mess. However, no person will be refused food if he is away from his own mess.

a. Hq. & Hq. Co. Mess

1. Location: Rear Echelon
2. Personnel

All personnel in Rear Echelon.

b. Company "A" Mess

1. Location: Forward of Corps C.P.
2. Personnel

Company "A" personnel less wire teams at Division.

c. Company "B" Mess

1. Location: Vicinity of Corps C.P.
2. Personnel

Co. "B" personnel less wire teams at rear and at divisions.

Bn. Hq. Forward Echelon.

Corps Signal Supply and Repair.

Battalion Motor Maintenance.

Army attached wire teams.

Medical Detachment.

d. Company "C" Mess

1. Location: As near Corps C.P. as possible
2. Personnel

Company "C" personnel less rear echelon

Message Center Personnel

Radio personnel

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VII SUPPLY

Battalion Supply will be located at the Rear Echelon and will be responsible for drawing and issuing all classes of supply to the various companies within the Battalion.

Battalion Supply will draw and distribute all supplies to the companies as far as possible. Locations of various dumps will be given each company and each company will furnish Battalion Supply personnel and vehicles if needed.

Corps Signal Supply and Repair will be located at the forward echelon.

VIII MISCELLANEOUS

a. Vehicles in Corps C.P.

The number of vehicles within the Corps C.P. will be kept at a minimum. The Code truck, Msg. Center Truck, Radio Center Truck, and Teleprinter Truck will remain in the C.P. There are three 1-ton trailers with these trucks. The switchboard installation will be in the vicinity of but not necessarily in the Corps C.P.

b. Medical

The Medical detachment will be located in the forward echelon and will furnish aid men to the various companies.

c. Security

Each company or separate group will be responsible for its own security and the protection of its installation.

By order of the Battalion Commander:

/s/ Bernard A. Talbot  
/t/ BERNARD A. TALBOT,  
1st Lt., 56th Sig. Bn.,  
Adjutant.

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OBSERVATIONS AND OPINIONS  
29TH SIGNAL CONSTRUCTION BATTALION  
26 June 1944

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The 29th Signal Construction Battalion is commanded by Major T. J. Quan, Sig C. The following information and opinions were given by Captain R. K. Brown, Sig C., Battalion Executive Officer.

1. ORGANIZATION

The 29th Signal Construction Battalion is organized under T/O 11-25, 1 April 1942 and T/BA-11. Opinion was expressed that colored units should be provided with 25 percent overstrength in white officer personnel in order to give close supervision to work.

2. EQUIPMENT

a. It was stated that each truck, K-43, with the battalion, should have 8 slack blocks and one ladder, and that slack blocks should have grips at each end instead of hook at one end.

b. Opinion was expressed that all vehicles furnished the battalion should be equipped with winches.

c. It was recommended that the battalion be furnished air hammers and air compressors, in lieu of Barco Gasoline Hammers. It was stated that the Barco Hammer was "no good" in that it can be successfully used only in clay type soil, and that it was difficult to keep running.

d. During combat it is difficult to keep the cable splicing cart from overturning. It was stated that this difficulty could be overcome by providing wider axles for the cable splicing cart.

e. It was recommended that tool set TE-47 be deleted from T/E in that no requirement in the battalion exists for its use.

f. Opinion was expressed that line construction material, other than that which can be conveniently carried on trucks, be eliminated from T/E and carried in dumps and drawn as required. Examples cited were 400 cross arms, 200 each anchors and anchor rods, and 20,000 feet of W-115 wire.

g. It was stated that the surveying compass furnished on T/E is not used and the substitution of engineer transit was recommended.

h. It was recommended that one engineer bulldozer of medium size be provided in T/E for Headquarters Company, for use by the construction companies. It was stated that the bulldozer was necessary for rapidly clearing away of debris in villages and towns, and right of way.

i. It was stated that it was desirable that each construction company be provided with 8 micress tools for copper sleeves.

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j. It was strongly urged that each construction company be provided with approximately 20 percent M-1 rifles in lieu of carbines for protection against enemy sniping.

k. An increase of 4 Tool Equipment TE-27, from 12 to 16 per construction company, was recommended.

### 3. MOTOR TRANSPORTATION

a. The addition of 4 jeeps to Headquarters Company of the Signal Construction Battalion, for use of the Battalion Commanding Officer, Headquarters Company Commander, Battalion S-3 and Battalion Supply Officer, was recommended.

b. A total of 4 jeeps per construction company for use of supervisory work, wire patrol, installation and maintenance, was recommended.

c. The substitution of 4-ton wreckers in lieu of 2-ton wreckers was recommended.

d. In each construction company it was recommended that two 4-ton cargo trucks, with winches, be provided in lieu of 2½-ton cargo trucks.

e. Increase in the quantity of hand digging equipment (Shovels, LC-17 and LC-18, and bars, LC-2 and LC-3), from 24 per company to 32 per company, on the basis of 4 each per truck, was recommended.

### 4. GENERAL

a. It was stated that the battalion as currently organized is capable of performing its combat mission.

b. The average rate of construction of field wire per construction company, of 8 field wire teams, per day has approximated 50 miles.

c. It was stated that the present organization of the construction companies lends itself readily to organization for rapid pole line construction.

d. The average rate of permanent pole line construction per construction company in combat was estimated as 4 miles with erection of poles.

e. As to use of Spiral 4 cable it was stated it was installed for specific jobs only.

f. It was stated that basic training prior to combat was adequate and that the battalion must furnish all its own protection.

g. The battalion was not equipped with panels AP-50 and no means other than marking on vehicles, it was stated, is taken to identify troops to friendly airplane crews during daylight or darkness.

h. It was stated that Reel RL-17 was a "poor excuse" in comparison with commercial reel for same purpose. The fault appears to be that the reel has a tendency to kink wire when being played out and picked up.

i. Opinion was expressed that trucks, K-43 and K-44, should be mounted on 2½-ton chassis.

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