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# AD NUMBER

### AD875443

## NEW LIMITATION CHANGE

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# AUTHORITY

OAG, D/A ltr, 29 Apr 1980

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DISTRIBUTION STATEMENT A

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		DEPARTMENT OF THE ARMY OFFICE OF THE ADJUTANT GENERAL WASHINGTON, D.C. 20310
		IN REPLY REFER TO
	3	AGDA (M) (2 Oct 70) FOR OT UT 702099 7 October 1970
•	4	SUBJECT: Operational Report - Lessons Learned, Headquarters, 554th Engineer Battalion, Period Ending 30 April 1970
	54	SEE DISTRIBUTION
•	AD87544	l. Subject report is forwarded for review and evaluation in accordance with paragraph 4b, AR 525-15. Information of actions initiated as a result of subject report should be forwarded to ACSFOR OT UT within 90 days of receipt of covering letter.
		2. Information contained in this report is provided to insure appropriate benefits in the future from lessons learned during current operations and may be adapted for use in developing training material.
		BY ORDER OF THE SECRETARY OF THE ARMY:
AD No.		1 Incl as Linch G. Mickham Major General, USA The Adjutant General DISTRIBUTION: Commanding Generals US Continental Army Command US Army Combat Developments Command Commandants US Army War College US Army War College US Army War College US Army Field Artillery School US Army Field Artillery School US Army Field Artillery School US Army Transportation US Army Transportation Starpenent as UNCLASSIFIED Wis Army Transportation School US Army Transportation School MS Army Tra

#### DEPARTIENT OF THE ARMY HEADQUARTIRS 554TH ENGINEER BATTALION (CONSTRUCTION) APO US FORCES 96289

EGED-3	14 M	a <b>y 19</b> 70
SUBJECT :	Operational Report-Lessons Learned, 554th Engineer Batta (Construction), Period Ending 30 April 1970, RCS CSFOR-6	lion 5 (R2)

THRU: Commanding Officer 79th Engineer Group ATTN: EGE-3 APO 96491

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Commanding Officer 20th Engineer Brigade ATTN: AVBI-COS APO 96491

Commanding General United States Army, Vietnam ATTN: AVHCG-DST APO 96375

Commanding General United States Army Pacific ATTN: CPOP-OT APO 96588

TO: Assistant Chief of Staff for Force Development Department of the Army (ACSFOR DA) Washington, D.C. 20310

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FOR OT UT 702099 Inclosure EGED-3 SUBJECT: Operational Report-Lessons Learned, 554th Engineer Battalion (Construction), Period Ending 30 April 1970, RCS CSFOR-65 (R2)

#### I. Section I: Operations: Significant Activities:

a. General:

(1) During the period 1 February 1970 to 30 April 1970, the 554th Ingineer Battalion was primarily engaged in LOC Construction, namely the restoration of QL-13 from Ap Ben Cau to An Loc. A small percentage of the overall effort was directed toward operational support, and combat support. Fighty eight days were devoted to operations and on one day, Easter, operations were held to a minimum.

(2) The Battalion Headquarters and Company CP's with the exception of B Company are located at Lai Khe. B Company is utilizing Fire Support Base Thunder III as its base of operations. A small rear detachment was left at Lai Khe. C Company also has personnel at FSB Thunder III. The Maintenance Platoon of A Company and Prefab Yard of C Company continue to operate from Cu Chi. The 595th Light Equipment Company is now attached to the 554th. They had completed movement to Lai Khe and were operational 3 April 1970. A detachment of 15 people, 290M tractors, and 290M tractor - scrapers from the 362nd Engineer Battalion was attached to the 554th Engineer Battalion during the period. Ten operators and ten 5 ten dumps from the 557th Engineer Co (LE) "vere attached to the 554th Engineer Battalion throughout the report period until the 28th of April.

b. Command and Staff:

The following changes in command and staff occurred during the past quarter: On 9 March 1970, LTC Clarence D. Gilkey became the Battalion Commander succeeding LTC James E. Lynch. Maj Lewis C. Sowell Jr. succeeded Maj Walter K. Vilson III on 27 February 1970 as S3 officer. Vithin the Battalion staff, Chaplain (MAJ) Michael C. Flannery became the Battalion Chaplain on 12 March 1970 replacing Chaplain (CPT) Ignatius W. Buller. Maj Clifford W. Steelman succeeded Maj James J. Sadusky as Battalion Executive Officer on 9 April 1970. On 11 April 1970, CW2 Joseph J. De France succeeded CW2 Norman S. Pennypacker as Property Book Officer and ILT Lloyd S. Howell became the newly: created Civilian Personnel Officer on 28 February 1970. Within the companies, Cpt Fred B. Dybdahl became commander of D Company on 20 February 1970 replacing Cpt Jack E. Sparn. Cpt William W. Obley succeeded Cpt Robert H. Fennel who was killed in action at Fire Support Base Thunder III on 31 March 1970 and Cpt David G. Weise assumed command of C Company on 16 April 1970 from Cpt Paul S. Iwai who became Assistant S3.

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#### c. Personnel, Adminstration and Morale:

(1) During the past quarter the Battalion operated on a 7 day work week, making ample use of the dry season for road construction. Increased chapel services were made available, to include Friday morning, when the Bat-talion is on a complete standdown for maintenance.

(2) Non-judicial punishment rates increased but Courts-Martials decreased during the quarter. There were 95 Article 15's administered, 4 Courts-Martial convened (2 Special Court, 2 General Court) and 11 AUOL's recorded. Eleven Congressional Inquires were received.

(3) From 1 February 1970 to 30 April 1970, 53 Purple Hearts, 1 Soldier's Medal, 29 Bronzo Stars (5 w/"V" device), 156 Army Commendation Medals (9 w/"V" device) and 2 Air Medals were awarded, again representing a significant increase over the past quarter. Awards submission reached an alltime high of 115 for the month of March.

(4) Troop morale was good during the reporting period. Forty-nine Out-of-Country and 6 In-Country R&R's were taken by members of the command. The Battalion continued to operate its own Officer's club thru a Sundry Fund Account, while the IM club, formely an annex of the 1st Infantry Division NCO-EM Open "css System, also established a Sundry Fund Account. Each company presently has a 16mm projector and novies are shown Battalion-wide, to include Fire Support Base Thunder III: Finance is now handled by the 22nd Finance Section (Disbursing) at Di An, and service remained excellent. On 27 March the Battalion opened its own Sundry Fund PX. The FX operates on a time schedule convenient to all and is utilized by other US units at Lai Khe.

(5) '300 Hone Town News Releases and eighteen feature stories were submitted. The latter represents another significant increase compared to the previous quarter.

(6) Religious service attendance increased to an average of 36% with a high of 44% in the month of April.

#### d. Logistics:

(1) Major effort during the quarter was supended on the hauling of cement. With receipt of 190,000 bags and issue of 125,000+ bags there was a significant daily workload in this area. Approximately 6030 drums of asphalt product were handled and issued for the project during the period.

(2) In class III this Battalion assumed the POL responsibilities for the American Sector of Lai Khe Base Comp on 15 March 1970. Approximately

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15,000 gallons of bulk nogas and diesel have been consumed daily since that date The primary effort in this area involved transportation for the oils and lubricants from Long Binh to Lai Khe.

(3) Major equipment fill was experienced during the quarter by receipts from units being redeployed.

#### e. Training:

A Battalion master training program, as directed by S3, is followed by all companies. Training schedules submitted to the Battalion are spot checked by representatives of the S3 section to insure that effective training is conducted. Emphasis remains on OJT programs to cross train and educate individuals in more than one skill. Due to the recent redeployment of the 1st Infantry Division new replacements were being entered into the 25th Infantry Division replacement training for 5 days duration. The weekly classes for offic rs remains in effect. Personnel that perform bunker line duty are instructed on the rules of engagement.

### f. Command Management:

(1) Sundry Fund:

The Officers! Club continued to operate as an other Sundry Fund

Club.

(2) Voluntary Informant Program

No nine information was received from Local Nationals this quarter and eight nines were detected and destroyed by the Battalion nine sweep teams while working on the LOC Program.

(3) Cormand Maintenance Management Inspections:

HHC received a 20th Engr Bdo CMMI on 10 April 1970. It received an overall rating of 73% adjusted to 77% for a satisfactory rating.

#### g. Operations:

(1) ComPat Support:

The land clearing operations of the 62nd Engr Bn were supported on numerous occasions through out the reporting period. Commitments for 38 ten ton tractors, 23 twenty five ton trailers and 4 five ton tractors for periods ranging from one to eight days duration were made. All tractors were

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provided with drivers and shotguns. The 31st Engr Bn was supported with 3 D7E, 8 ten ton tractors with lowbeds and a transit mix truck for 2 days. With the departure of the 11th ACR on 23 March 1970 the 554th Battalion was tasked with overall base defense of the US Sector of Lai Khe. This requires 5 full time personnel to man the Base Defense TOC in cooperation with the 5th ARVN Division.

(2) Operational Support:

The operations of the 31st Engine r Battalion were supported with plumbers for 53 man days and electricians for 38 man days, and also with a 290M tractor for 35 days, and a 40 ton crane for 2 days. A paving train with 10 five ton dumps trucks for 7 days was **provided** 31st Engr Bn in support of paving operation on the Phone Vinh Airfield.

The 586th Engr Bn was supported with a 12½ ton evant for 14 days) a D7E for 2 days 2 ten ton tractors with lowbeds for 2 days, and a plumber for 29 man-days who assisted on the Go Dau Ha, MACV Compound.

(3) MIR Construction:

MER construction for the Battelien's relocation to Lei Khe had been completed by the start of this reporting period.

(4) LOC Construction:

The sole mission of the 554th Engr Bn during this reporting period was the restoration of QL-13 from Ap Bon Cau to An Loc. This is a distance of 49.4 KN. The 554th is tasked with all phases of road construction for 40.6 KM and paving, shoulder rock and DBST for the remaining 8.8 KM.

QL-13 is an important artery to the Saigon area. It serves the lumber industry around Chon Thanh and the rubber industry at An Loc. It is an international route serving Viet Nan, Carbodia and Loos. It has major military significance in that it is the nost direct route to the northern III Corps area, and the main supply route for Quan Loi Base Camp,

The concept of operation is one of parallel construction, where possible, and utilization of existing alignment through villages and developed areas. On the offset portions, normal construction procedures are followed with construction of a  $6^{11}$  soil cement base course proceeding the paving operation. On the existing alignment a rock base course is used. About 10 KH which follow the existing road alignment will be built with a rock base.

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14 Hay 1970 SUBJECT: Operational Report-Lossons Learned, 554th Engineer Battalion (Construction), Period Ending 30 April 1970, ECS CSFOR.65 (E2)

Clearing, grubbing, stripping, subbase and rock base course work are being accomplished by B Company. Soil cement base course and construction of a 40' reinforced concrete and steel bridge are being accomplished by C Company. Paving operations are being accomplished by A Company. D Company is providing dump truck support. Shoulder work, ditching and land-scaping are being accomplished by the 595th Engr Co (LE).

During the quarter 22.95 KM of road were paved, using 57,058 tons of asphelt. This completes paving thru Chon Thanh, a village the north end of which is 25.6 Kl north of Lai Khe, with the exception of approaches for a box culvert being constructed by the 31st Engr Bn just south of Chon Thanh and a 60' bridge in Chon Thanh, also being constructed by the 31st.

20.19 KM of base course were prepared during the quarter consisting of 14.70 KH of soil conent and 5.49 KM of rock base.

The soil c ment operation is accomplished as follows: first an S" lift of suitable base course natorial is added and brought to grade, then local nationals place and empty cement bags at a selected density. L grader distributes the loose cement and a MCL-LOC water distributor adds water while the rotary tiller nixes the cement and base course natorial. Tests are nade periodically to assure that Optimum Moisture Content is aphieved. A MCA-LOC segmented embankment compactor and a ten ton roller are used to bring the mix to a specified compaction. In the rock base course sections the rock is spread with a jersey spreader and compacted with a MMA-LOC vibratory compactor.

18.65 KH of subbase were completed during the period requiring the loading, hauling and placing of 239,470 CY of suitable fill material. Compaction was accomplished using sheepsfoot rollers, 7-35 ton pneumatic rollers, 35-50 ton pneumatic rollers, and a KCA-LOC water distributor.

Clearing, grubbing and stripping operations were completed during the reporting period. 12.9 KH were stripped completing the 30.6 KH required, Several low, inundated areas were not stripped but were surcharged. 14 mines were hit by equipment during this operation and some injuries and damages were sustained.

At the Lai Khe Bridge Site, north of Lai Khe Base Camp, the 40' single span bridge was completed with the exception of applying a protective coating to the steel beans. This work is to be accomplished using national labor. The only change in design was that the riprap around the abutnent was grouted to prevent scouring.

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EGED-3 SUBJECT: Operational Report-Lessens Learned, 554th Engineer Battalion (Construction), Period Ending 30 April 1970, RCS CSFOR-65 (R2)

The shoulders are to receive a double bituminous surface treatment. This operation is being accomplished in conjunction with landscaping and final shoping of the ditches. At the end of the reporting period 8.5 KM of shoulders have been rocked.

#### h. Civic Action:

During March and April and on a continuing basis, the Battalion's Surgeon and disponsary personnel are providing medicial support for the Ben Cat Orphanage. Sick call is hold weekly for the 80 orphans, in addition medicial aid is given on an as meeded basis. The Battalion Surgeon also provided meeded treatment to 200 day students.

During the first part of April the Battalion cleared and stripped of vegetation an area 500 meters by 300 meters on both sides of 'L-13, approximately 10 kilometers south of An Loc. The Binh Long Province Chief and the An Loc District Chief thru the American Advisor requested that the area be cleared in order that the area could be resettled. This will make possible the first resettlement in Binh Long Province of areas which were depopulated to create a free fire zone.

## II. Section II: Lessons Learned; Commander's Observation, Evaluation and Recommendations:

#### L. Personnel:

Observation: During the latter part of the reporting period personnel were redeployed early as a result of increased efforts to reduce the overall personnel in Vietnam. The early rotation of personnel was not consistent or uniform and resulted in some personnel having their tours curtailed in excess of 30 days while others received no tour curtailment at all.

Evaluation: This had a definite adverse offect upon norale. The troop redeployment was obviously a tronendous project for the USARV Command and probably the fluctuations could not be avoided because of aircraft scheduling, funding and D/ guidance regarding troop withdrawls.

Recommendation: Every effort be made by the Cormand to keep redeployment actions consistent from one person to another so that all are required to be in a combat zone for equal periods of time. Curtailments should be publicized as far in advance as possible, with as much information being supplied the individual soldier as is possible, so that he "knows where he stands" since "going home" is his most important norale factor.

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14 May 1970

SUBJECT: Operational Report-Lessons Learned, 554th Engineer Battalion (Construction), Feriod Ending 30 April 1970, RC: CSFOR-65 (R2)

B. Intelligence: None

C. Operations:

Observation: Mixing coment with dense base course natorial hostens wear on rotary tiller times.

Evaluation: The base course mat rial to be mixed should be scarified and broken up before attempting to mix it with cement using the rotary tiller.

Recommendation: The scarifict attachment on the grader should be utilize to loosen the base course prior to nixing. However, previous experience has shown that the ordinary scarifier teeth will not dig deep enough without the resultant snow plow effect, i.e. material piling up ahead of the scarifier log. To eliminate this problem, an additional tooth has been welded to alternate teeth, thus increasing the effective depth of the scarifiers.

Observation: In effective means to insure lateral stability of concrete forms is required.

Evaluations: A means of assuring sufficient spacing between forms and reinforcing steel before the concrete pour is made, and prevention of laterel deformation during and after the pour is required on forming of large scale concrete structures.

Recommendation: U-shape' pickets are excellent replacements for spreaders and the wire used in concrete forms. After the required length of picket is determined and the picket is cut, a nut is welded at each end of the picket. The picket is then placed between the form walls and a bolt with a large washer is put thru each from outside the form, to secure the picket. Sketch included as inclosure 2.

Observation: Compaction of shoulders slopes can be very dangerous when the slope of the shoulder is great enough to nove the center of gravity of the compaction equipment near the balance point.

Evaluation: Compaction equipment should be utilized in such a manner as to minimize the danger to operator and equipment.

Recommendations: A practical and effective nears of compacting existing phoulders or newly constructed shoulders on an existing readway has been devised by B Company of this Battalion. By connecting a small vibratory compacter to the blade of a grader, the compactor can be towed on the shoulder slope as well as on the shoulder itself. By using this method, the grader can remain on the

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14 May 1970 Operational Report-Lessons Learned, 554th Engineer Battalion (Construction), Feriod Ending 30 April 1970, RCS CSFOR-65 (R2)

horizontial while the compactor works the slope. When using the compactor on a slope, a chain must be connected between the grader and the compactor to prevent the compactor from sliding down the slope. It is advisable to use this nothed of compacting only over a long distances as it requires a large area. to turn the grader around. Sketch included as inclosure 3.

LEVIS C. SOVILL R. ₩J, CE Acting Commander

7 Inclosures:

1. Organization Chart

2. Sketch, Expedient Concrete Form Brace

3. Sketch, Shoulder Compaction Expedient

Completion Reports on Projects Completed Before This Quarter:

4. CR; CD 712 03C2 001, Operation of Congrete Batch Plent 5. CR; C: 212 5773 0 20; TOC and Corne Revetments, Bao Trai

-CR, CD 12 226 C1 I 75, Site Properation for Cu Chi Power Plant and 6.-Distribution System.

Completion Report Termineted With No Work Accomplished:

7. OR, OD 540 0305 0 01, Road Paving Lai Kine, Incls 4 thru 7 w/d HQ DA

عند (14 May 70) 1st Ind SUBJECT: Operational Report-Lessons Learned, 554th Engineer Battalion (Construction), Period Ending 30 April 1970, RCS CSFOR-65 (R2)

DA, HEAD UARTERS, 79TH ENGINEER GROUP, APU 96491 19 May 70

TO: Commanding Officer, 20th Engineer brigade, ATTN: AVBI-OS, APO 96491

1. This report contains an excellent summary of the 554th Engineer Battalion's operational activities during the 1 February - 30 April 1970 period.

2. The following items deserve additional comment:

a. Reference Faragraph 1g(4), LOC Construction: The actual quantity of asphaltic concrete consumed in paving 22.96 KM was 33,566 tons.

b. Regarding the Lai Khe pridge, the plans did specify that the rip rap would be grouted; instead of toeheaders, however, rip rap was placed over the entire stream bed to prevent erosion.

c. Since most of the Laikhe Base Camp was turned over to ARVN following the redeployment of the 1st Division, the battalion has been forced to commit an ever-increasing number of personnel to base camp security and logistics missions. Currently 71 soldiers are lost to construction each day because of these base camp support missions.

FUR THE CONTANDER:

CHT, CE Adjutant

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AVBI-OS (14 May 70) 2nd Ind SUBJECT: Operational Report - Lessons Learned of 554th Engineer Battalion (Construction) for Period Ending 30 April 1970, RCS CSFOR-65 (R2)

DA, HEADQUARTERS, 20TH ENGINEER BRIGADE, APO 96491 <sup>11</sup>N 1970

- TO: Commanding General, United States Army Vietnam, ATTN: AVHGC-DST, APO 96375
- 1. Submitted in accordance with USARV Regulation 525-15, dated 13 April 1968.

2. Subject report has been reviewed by this headquarters and is considered adequate.

FOR THE COMMANDER:

DY M Brid D. L. MC BRIDE 1LT, CE Assistant Adjutant

Copies Furnished: CO, 79th Engr Gp CO, 554th Engr Bn AVHGC-DST (14 May 70) 3d Ind SUBJECT: Operational Report-Lessons Learned, 554th Engineer Battalion (Construction), Period Ending 30 April 1970, RCS CSFOR-65 (R2)

Headquarters, United States Army Vietnam, APO San Francisco 96375 13 JUL 1970

TO: Commander in Chief, United States Army Pacific, ATTN: GPOP-DT, APO 96558

1. This Headquarters has reviewed the Operational Report-Lessons Learned for the quarterly period ending 30 April 1970 from Headquarters, 554th Engineer Battalion (Construction) and comments of indorsing headquarters.

2. Reference item concerning "Tour Curtailment Variances," page 7, paragraph A: nonconcur. Foreign service tour curtailments were utilized as the final means to attain and maintain a command strength posture that was under the revised Army strength ceiling imposed as a result of the third increment of the force reduction. Prior to directing tour curtailments, maximum utilization of personnel requisition cancellations was made. Since tour curtailments deny the command maximum utilization of experienced personnel, curtailments were used to the minimum extent necessary to reach the new strength level. In order to ensure that curtailments in excess of those required were not effected, and to ensure that the new strength ceiling was reached at the proper time, foreign service tour curtailments were determined in weekly increments, using the latest data available at the time of each decision meeting. During the reduction period, FST curtailments were generally determined approximately three weeks prior to revised DEROS date. To make decisions at an earlier time or for a wider time span runs the risk of curtailing more personnel than necessary or not curtailing enough and failing to meet the new strength ceiling. Flexibility in the ability for this Headquarters to control personnel strength is necessary because of variables that can affect the strength; such as unprogrammed losses and revisions in projected replacement flow. In view of the short time frame (approximately 90 days) for planning and attaining the new strength ceiling, the variables that affect personnel strength and the requirement to make curtailment decisions in short increments, it is not feasible to determine a standard FST curtailment at the outset of a reduction increment and at the same time ensure maximum utilization of present personnel assets and the attainment of a specific strength posture. No action by USARPAC or DA is recommended.

FOR THE COMMANDER:

CPT. AGC

Assistant Adjutant General

Cy furn: 20th Engr Bde 554th Engr Bn

GPOP-DT (14 May.70) 4th Ind SUBJECT: Operational Report of HQ, 554th Engineer Battalion (Const), for Period Ending 30 April 1970, RCS CSFOR-65 (R2)

HQ, US Army, Pacific, APO San Francisco 96558 5 AUG 70

TO: Assistant Chief of Staff for Force Development, Department of the Army, Washington, D. C. 20310

This headquarters concurs in subject report as indorsed.

FOR THE COMMANDER IN CHIEF:

D.D. CLINE 2LT, AGC Asst AG

Inclosure I to 554th Engineer Battalion (Construction) Operational Report-Lessons Learned, Period Ending 30 April 1970.

### ORGANIZATION CHART

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Inclosure 2 to 554th Engineer Battalion (Construction) Operational Report-Lessons Learned, Period Ending 30 April 1970.

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Inclosure 3 554th Engineer Battalion (Construction) Operational Report Lessons Learnod, Period Ending 30 April 1970



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I. DESCRIPTIVE NOTES (Type of report and inclusive dates)				
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N AU THOR(3) (First mage, Blogie Willel, Jeer (Bare)				
CO, 554th Engineer Battalion				
o, JJ4th Engineer Baccarton				
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0. DISTRIBUTION STATEMENT				
1. SUPPLEMENTARY NOTES	12. SPONSORING	MILITARY ACT	VITY	
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