The outcome of the war depended on the infiltration of troops, weapons, and supplies through Laos into South Vietnam.

The Ho Chi Minh Trail

A long line of communist porters carry supplies along the Ho Chi Minh Trail.

By John T. Correll

uring the Vietnam War, US pilots could see weapons, military equipment, and war supplies moving on 40-car trains on the railroad near Hanoi and being unloaded from ships in the Haiphong harbor.

They could look, but not strike. Preventing these war supplies from reaching South Vietnam was a primary goal of US strategy, but Air Force and Navy aircraft were seldom allowed to go after them in the North Vietnamese heartland, where they were concentrated and wide open to attack.

The White House, fearing that bombing Hanoi and Haiphong might escalate the war, would not allow the shipments to be targeted until they were broken up into small loads and headed south on jungle pathways. Transported by trucks, bicycles, and porters with A-frames on their backs, they were difficult to find and even more difficult to stop.

The route south was the Ho Chi Minh Trail. The critical stretch was in Laos, which was supposedly neutral but which in actuality was one of the major battle areas of the war.

North Vietnam's name for the trail was the Truong Son Strategic Supply Route, after the long mountain chain that separates Vietnam from Laos.

The jumping-off point was Vinh, in southern North Vietnam. Trucks went west to one of three passes—Mu Gia, Ban Karai, or Ban Raving-that cut through the mountains north of the Demilitarized Zone. The trail began on the other side, in Laos. It was 80 miles from the Mu Gia Pass to Tchepone. From there, Khe Sanh, on the South Vietnamese side of the border, was only 25 miles away.

The route went south through Laos for hundreds of miles with mountain passes allowing access to South Vietnam at various places along the way.

The Ho Chi Minh Trail was not a single road but rather a honeycomb of routes, passing through country that was alternately limestone karst, triplecanopy jungle, and grassland.

Some of it was open to the sky, especially where the bombing had been severe, but much of it was concealed by thick vegetation. There were major sections of the trail that US forces never knew about. Late in the war, the North Vietnamese moved tanks, undetected, all the way south.

Military historian John Prados says there were five main roads, 29 branch roads, and many cutoffs and bypasses, adding up altogether to about 12,000 miles of trail.

Both sides tried to keep the war in Laos a secret. The North Vietnamese denied that they were using Laos to infiltrate South Vietnam. The US government did not want to acknowledge publicly that the war had expanded beyond Vietnam.

Origin of the Trail

The trail was in use long before the first US Air Force Farm Gate commandos arrived in Vietnam in October 1961.

In May 1959, the Lao Dong, the Communist Party of Vietnam, ordered the creation of a "special trail" to support the war it was fomenting in South Vietnam. Construction, maintenance, and operation was assigned to the 559th Transportation Group, so named for the month and year of the decision to establish the trail.

Great care was given to prevent discovery of the trail's existence. In the beginning, it led across the Demilitarized Zone and followed Route

9 past Khe Sanh. The first infiltration down the trail was June 10, 1959. Each porter carried four rifles or a 44-pound box of ammunition. These goods were delivered to local insurgents at the head of the A Shau Valley.

The trail was discovered in 1960, when the owner of a plantation found a bundle of rifles that was mistakenly left behind. In early 1961, the North Vietnamese began shifting the route to the other side of the mountains, where the Laotian panhandle had long been a communist stronghold. The Laotian government, fighting another war against the Pathet Lao in the northern part of the country, was unable to stop this use of its territory.

Porters crossed the mountains into Laos, followed the jungle trails, then recrossed the mountains into South Vietnam to deliver their shipments. Bicycles, outfitted with extra suspension, widened handlebars, and pallets could carry 400 pounds or more. French and Czech bicycles were the preferred models.

In 1964, the North Vietnamese

Vietnam. Mountain passes allowed ac-

cess to that belea-

guered country.

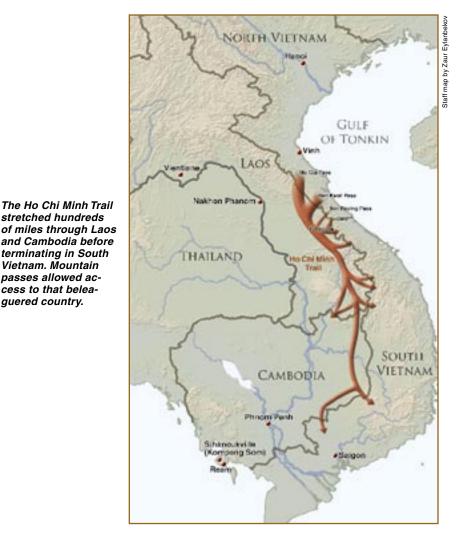
launched a huge project to upgrade the trail for use by trucks. They used Chinese and Soviet machinery to build roads and bridges and established elaborate way stations, complete with underground barracks, storage facilities, workshops, and fuel depots.

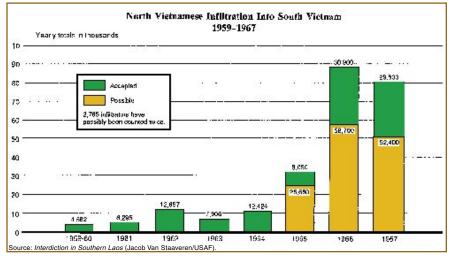
Soldiers going south also used the trail. Infiltration-which had been about 8,000 troops in 1963-leapt to 12,000 in 1964, then doubled in each of the next two years. Road watchers at the Mu Gia Pass between North Vietnam and Laos reported the passage of 2,294 trucks between December 1964 and May 1965.

By 1965, some 6,000 porters and 80,000 laborers were occupied in the operation of the trail. In good weather, they built new roadways at the rate of two miles a day.

The Secret War

In 1962, the United States and North Vietnam were among the nations signing the Geneva Accord agreeing to the neutrality of Laos. The United States duly removed all of its troops, but the





This chart shows troop infiltration in the first part of the war. "Accepted" numbers are those that could be reasonably confirmed. The actual total was considerably higher. "Possibles" are infiltrators that are believed to have moved South.

North Vietnamese withdrew only a token number, leaving 6,000 in place.

North Vietnam also continued using the Ho Chi Minh Trail to send troops and supplies into South Vietnam. They denied doing this. In 1966, Prime Minister Pham Van Dong told journalist Stanley Karnow that allegations of North Vietnamese troops in the South were "a myth fabricated by the US imperialists to justify their war of aggression." After the war, he told Karnow that combat forces had been sent down the trail by the tens of thousands.

The White House announced in August 1964 that US aircraft were flying reconnaissance missions over Laos at the request of the Laotian government and that the pilots had instructions to "fire when fired upon."

At US urging, Laotian aircraft flew interdiction strikes against the trail. The first mission was Oct. 14, 1964. Laotian T-28s escorted by US Air Force F-100s and RF-101s struck storage facilities near the Mu Gia Pass.

In December, following attacks on US bases in South Vietnam, US aircraft struck targets in the central Laotian panhandle, but these were more on the order of reprisal and warning rather than interdiction. In April 1965, the United States began flying regular air strikes against the Ho Chi Minh Trail. The American public was not informed of this.

Congressional committees, however, had full details on the "secret war." News reporters filed occasional articles about it, although they were not allowed to witness it for themselves.

When airmen were killed or captured

in Laos, their families were told they had been lost in "Southeast Asia." President Johnson, whose 1964 election campaign had included a pledge of "no wider war," did not want to acknowledge that hundreds of combat sorties were being sent against the trail every day.

Less widely known, "unconventional warfare" ground teams of South Vietnamese mercenaries, led by NCOs from the US Army Special Forces, went into Laos in February 1965. These teams, designated with deliberate vagueness as "Studies and Observation Groups," conducted hundreds of classified missions in Laos over the next six years.

SOG patrols scouted the Ho Chi Minh Trail, identified targets, called in air strikes, captured prisoners, planted mines, and performed such "direct action" missions as attacking North Vietnamese facilities on the trail. These "over the fence" operations eventually employed 2,500 US Army volunteers and 7,000 Vietnamese irregulars.

The secret war would not be officially disclosed to the American public until March 1970, when pressure from the news media and opposition politicians forced President Nixon to confirm that the United States had been, for several years, flying interdiction missions against the trail in Laos.

Steel Tiger Begins

Contrary to the propaganda from Hanoi, the war in the South was not a simple, homegrown insurgency. It was a conflict directed and sustained by North Vietnam and the lifeline for it was the Ho Chi Minh Trail. US leaders recognized this. Secretary of Defense Robert S. McNamara said the US objective in the war was not to overthrow or destroy North Vietnam but rather to stop its infiltration and activities in the South.

Gen. William C. Westmoreland, commander of Military Assistance Command Vietnam (MACV), saw the infiltration to be of such importance that he proposed a ground invasion of Laos to block the trail. His plan was rejected, partly because it would have required three Army divisions to carry it out and also, Westmoreland said, because President Johnson "would take no step that might possibly be interpreted as broadening the war, which he had publicly announced he would not do."

In its seven-year war on the Ho Chi Minh Trail, the United States would have to rely on airpower.

In March 1965, after North Vietnamese and Viet Cong attacks on US air bases, the Air Force and the Navy launched the Rolling Thunder air campaign against North Vietnam.

About the same time—but less openly—the US began use of sustained air strikes on the Ho Chi Minh Trail. Steel Tiger was the name applied to both the operation and to the geographic area, which was the Laotian panhandle south of Mu Gia Pass.

On April 3, 1965, two B-57 light bombers, supported by a C-130 dropping flares for illumination, flew the first Steel Tiger mission against the trail. Combat aircraft of all kinds would soon join in the attack.

In December 1965, the eastern part of Steel Tiger was designated Tiger Hound. It was regarded as an extension of the war in South Vietnam and operations were controlled by MACV. (Air operations in Steel Tiger were controlled by US Pacific Command. All air strikes in Laos had to be approved by the US ambassador in Vientiane.)

"Failure to stop the supply flow at the head of the system [in North Vietnam] made it most difficult to pinch off supplies for the enemy's army in South Vietnam," said Gen. William W. Momyer, commander of 7th Air Force from 1966 to 1968.

In his 1978 book, *Air Power in Three Wars*, Momyer wrote, "The intent of the interdiction campaigns from 1965-1972 was not to 'strangle' the flow of traffic. This misconception led some to believe that the interdiction campaign was not succeeding because the flow of traffic wasn't stopped.



"Traffic wasn't stopped in the European or Korean campaigns, either, but it was reduced to such an extent that the enemy couldn't get enough supplies for sustained operations. This, too, was the objective in Vietnam; by slowing the traffic with a series of calculated choke points in the rail and road system, we could destroy trucks and supplies piled up by the blockage."

Night on the Trail

Air operations in the Laotian panhandle occurred mostly at night and were concentrated into six months of the year.

Much of the trail was concealed by triple-canopy jungle. However, the jungle did not provide sufficient cover from the air strikes, and in 1966, the trucks essentially stopped moving in daylight. When they did move during the day, they were camouflaged with green paint and tree branches.

The truck drivers drove the same segments of the trail every night, so they could navigate with little or no light. They moved out soon after nightfall and around 3 a.m. began looking for a place to park, unload, and hide before sunrise.

Air operations also were paced by the semiannual monsoons. Activity on the trail surged during the northeast monsoon—the dry season—which lasted from the middle of September to the middle of May.

This map shows

air operations in

Laos. Barrel Roll in

northern Laos and

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East. also called

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employing aircraft based in Thailand

and South Vietnam.

operated extensively

Steel Tiger in the

Both infiltration and air strikes declined sharply during the wet season, the southwest monsoon, from May to September. The rains washed out roads and trails. To some extent, supplies could move on swollen waterways, but Viet Cong and North Vietnamese soldiers in the South depended mostly on stores built up during the dry season. When Steel Tiger began, the Air Force relied mainly on F-100 and F-105 fighter-bombers and B-57 light bombers for attack missions. Propeller-driven B-26 bombers, which had a long loiter time, were pulled out of storage and reconfigured as A-26s for hunter-killer missions on the trail. In December 1965, B-52 bombers made their first strike in the Laotian panhandle.

The strike crews were supported by a full range of aircraft. C-130s dropped flares to illuminate the targets. UC-123s sprayed the jungle growth with defoliant to make the trail more visible. Other aircraft flew in forward air control, electronic countermeasures, and reconnaissance roles.

The AC-47 gunship, effective in the early going, was withdrawn from operations in Laos in 1966 because of vulnerability to ground fire. It was succeeded by more advanced gunships, the AC-119 and the AC-130.

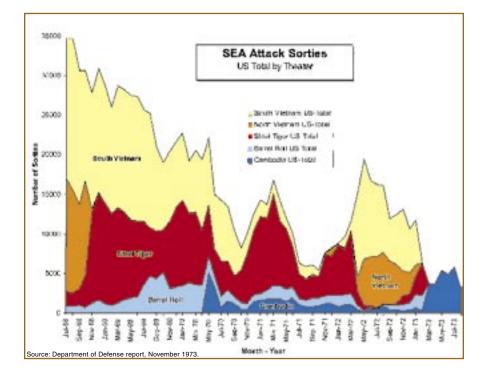
The Air Force replaced many of the propeller aircraft in Steel Tiger with jets, which were faster, more flexible, and better able to survive the enemy guns. After 1967, F-4 Phantoms made more than half of the air strikes on the trail.

Between 1964 and the end of 1967, US aircraft flew about 185,000 sorties against the Ho Chi Minh Trail. The Air Force flew about 80 percent of these. Of the 132 aircraft shot down in the Laotian panhandle in those years, 107 belonged to the Air Force.

In March 1968, President Johnson ordered a partial halt of the bombing of North Vietnam. It merged into a total



In this 1964 photo, a US military advisor and South Vietnamese troops patrol a point where the trail entered South Vietnam. On the right are crude benches offering a resting place for those carrying supplies.



bombing halt—and the end of Rolling Thunder—on Oct. 31.

The halt, however, did not apply to Laos. With more resources available for Laos, a new phase of the war against the Ho Chi Minh Trail was about to begin, and it would be considerably more intense than the early Steel Tiger and Tiger Hound operations.

McNamara's Line

By 1966, McNamara had lost faith in the air war against North Vietnam and was ready for change. An alternative was proposed by John T. McNaughton, the assistant secretary of defense for international security affairs, who had heard the idea from a colleague at Harvard.

End the Rolling Thunder campaign in the north, McNaughton suggested to McNamara, and build a "high-tech barrier" to block infiltration of troops and supplies.

As McNaughton described it, the barrier would "run from the sea across Vietnam and Laos to the Mekong, a straight line distance of about 160 miles." In Vietnam, it would consist of minefields, barbed wire, ditches, and military strong points. In Laos, it would be an "interdiction and verification zone," about 10 miles wide, seeded with road-denial mines and all sorts of sensors to target trucks moving on the trail.

Against the advice of military leaders, McNamara launched the project in September 1966. The barrier in Vietnam would be called Dye Marker. The portion in Laos was Muscle Shoals, and the technology for it—as well as the name by which the program is best remembered—was Igloo White. (See "Igloo White," November 2004, p. 56.)

Word of the program leaked to the newspapers and it became popularly known as "the McNamara Line."

The barrier in Vietnam was eventually canceled, but the Igloo White portion of the project was implemented. The trail was sown with 20,000 seismic and acoustic sensors, dropped by aircraft and placed by Special Forces teams. The sensors had to be replaced every few weeks as the batteries ran down.

An infiltration surveillance center called Task Force Alpha opened at Nakhon Phanom, Thailand, in July 1967. EC-121 Batcat aircraft began flying from Korat, Thailand, in November to monitor the signals from the sensors and relay them back to Task Force Alpha.

Sensors tracked the direction and speed of convoys on the trail. From this, it was possible to predict where the trucks were going and when they would get there. Air strikes were sent in, and as the aircraft approached the strike zone, the sensors updated the location of the trucks.

Some aircraft, notably the AC-130 gunship, were able to find trucks on their own. The AC-130 had its own sensors, including low-light-level TV, forward-looking infrared, and the shad-

owy "Black Crow," which could detect truck engines from 10 miles away.

When the air campaign against the trail escalated in 1968, Igloo White would be central to it and would remain so for the rest of the war.

Commando Hunt

Operation Commando Hunt began promptly on Nov. 1. In fact, every interdiction campaign after 1968 was called Commando Hunt. The numerical designations changed with the monsoon season. As before, most of the strikes were in the dry season. Commando Hunt I, III, V, and VII were the most intensive. A key characteristic of the seven Commando Hunt campaigns was the use of the Igloo White sensors.

In addition, the Air Force relied on "blocking belts" to impede infiltration on major routes. The drill was to cut the road at several places with laser guided bombs and seed the ground between the cuts with mines, which made it more difficult for the enemy to repair the road cuts. This forced the North Vietnamese to divert their trucks to out-of-the-way routes, and it created traffic jams—lucrative targets for air attack.

There were two problems. North Vietnamese forces had bypasses unknown to the Air Force, and they were very good at clearing the blocking points. They threw rocks tied to cords into the mined area and drew them backward to set off the mines. Once they had a path through the antipersonnel mines, the rest of the clearance was easy.

The B-52s continued to pound the mountain passes, but they were unable to close them.

"After years of heavy bombing, the landscape of the passes, stripped of vegetation and pockmarked by craters, was lunar," Air Force historian Eduard Mark said. "This probably made it easier for the North Vietnamese to keep the passes open."

Mark went on, "The pattern of the bombs dropped by a cell of B-52s was so adjusted that they were distributed evenly through a box. Relatively few bombs would, on average, strike the narrow roads. Where they did, temporary bypasses could be readily constructed in treeless areas where the soil, tilled by thousands of bombs, had become easier to work. Craters in the road could be filled with the spoil from adjacent craters."

The most effective weapons in Commando Hunt were the gunships. They flew a comparatively small percentage of the sorties, but accounted for an exceptionally large share of the results. At the peak of Commando Hunt VII, the average number of trucks reported as destroyed or damaged per sortie was as follows:

0.3

- AC-130 gunship 8.3
- AC-119 gunship 3.3
- B-57 bomber 2.0
- Fighters (all)

Between 1966 and 1970, North Vietnam used a second infiltration route that was considerably less hazardous than the Ho Chi Minh Trail. At the request of China, Prince Norodom Sihanouk of Cambodia gave the North Vietnamese access to the ports of Sihanoukville (Kompong Som) and Ream. From there, they sent military supplies north through Cambodia, then east to South Vietnam along the "Sihanouk Trail."

This alternative route became more important in 1968, when Commando Hunt air strikes intensified on the Ho Chi Minh Trail. In the covert "Menu" operations from March 1969 to May 1970, US bombers repeatedly hit supply dumps and staging bases along this route.

When Sihanouk was ousted in 1970, the ports and the Sihanouk Trail were lost to North Vietnam. In May and June 1970, a US "incursion" into Cambodia took out most of what was left of the sanctuaries. The Pentagon's estimate was that enough weapons to equip 74 infantry battalions had been destroyed and that the North Vietnamese cause had been set back by 15 months.

Disclosure

Soon after the Nixon Administration took office in 1969, the secret war in Laos—which had been under way for the past four years—became a political issue.

That summer, the Senate Foreign Relations Subcommittee on US Security Agreements and Commitments Abroad began hearings. By the end of the year, a growing list of Senators was complaining about Administration secrecy in Laos, and national newspapers had joined the fray.

"This was the culmination of a campaign extending over many months in the Senate and in the media to get at the 'truth' in Laos," said Henry Kissinger in 1979. "The issue was not to obtain the facts—they were widely known—but to induce the government to confirm them publicly, which was quite a different matter."

US involvement in Laos was publicly acknowledged for the first time in a statement by President Nixon on March 6, 1970.

He said the North Vietnamese started violating the Geneva agreement "before the ink was dry" and that, "since 1964, over a half-million North Vietnamese troops have crossed the Ho Chi Minh Trail in Laos to invade South Vietnam. This infiltration provides the great bulk of men and supplies for the war in South Vietnam."

(Nixon's estimate may have been low. By the end of the war, North Vietnam had sent as many as a million troops south on the trail.)

"We have used airpower for the purpose of interdicting the flow of North Vietnamese troops and supplies on that part of the Ho Chi Minh Trail which runs through Laos," Nixon said. "Our air strikes have destroyed weapons and supplies over the past four years which would have taken thousands of American lives."

Gen. Creighton W. Abrams, who had succeeded Westmoreland as commander of MACV, renewed Westmoreland's notion of a ground invasion of Laos to cut the Ho Chi Minh Trail. The Pentagon and the White House agreed that it was worth trying.

The Cooper-Church amendment to the defense appropriations act in 1970 prohibited the use of US ground troops in Laos, so the task fell to the South Vietnamese Army, supported by US airpower. The operation was called Lam Son 719. South Vietnamese forces crossed into Laos on Feb. 8, 1971. Ten miles beyond the border, they stopped and dug in. They did not begin moving again until March 3. They reached Tchepone, but retreated after two days when the enemy counterattacked. A large number of tanks and trucks were abandoned, and South Vietnamese forces withdrew from Laos on March 24 under massive US air cover.

The Air Force flew four more Commando Hunt campaigns after that, two in the dry season and two in the wet season.

Interdiction of the trail essentially ended in early 1972. On March 30 of that year, North Vietnam launched its massive Easter invasion of the South. US airpower was suddenly diverted to counter North Vietnam's attack. Shortly after that, the bombing of North Vietnam resumed with Operation Linebacker on April 6. The emphasis never shifted back to Laos.

The United States and North Vietnam signed a cease-fire in January 1973. It covered the fighting in Laos as well as in Vietnam. Major US participation in the war had come to an end.

Disputed Results

How effective was the seven-year air war against the Ho Chi Minh Trail? On that, opinions vary widely. Many of the strikes were at night against targets moving through jungle cover. Even when there were fires or explosions, it was difficult to be certain about the damage inflicted.



Gunships gave the Air Force the most bang for the buck against the trail. At the peak of Commando Hunt VII, AC-119s hit 3.3 enemy trucks per sortie, while the new AC-130 (shown) hit 8.3 North Vietnamese trucks per sortie—by far the best result.



In modern Vietnam, the Ho Chi Minh Trail is legendary. A highway from Hanoi to Ho Chi Minh City (Saigon) goes under the name "Ho Chi Minh Trail," but it is entirely in Vietnam. Shown are bicyclists traveling the highway earlier this year.

The Air Force reported 46,000 trucks destroyed or damaged during the four Commando Hunt dry season campaigns, with the count distributed as follows:

- 1968-69 6,000
- **1969-70** 10,000
- **1970-71 20,000**
- 1971-72 10,000

Critics in Washington found great sport in disparaging such bomb damage assessments. "These figures are not taken seriously by most officials, even Air Force officers, who generally apply something on the order of a 30 percent discount factor," said a staff report for the Senate Foreign Relations Subcommittee on US Security Agreements and Commitments Abroad in 1971. "One reason why there is some skepticism about the truck kills claimed by the Air Force is the total figure for the last year greatly exceeds the number of trucks believed by the embassy to be in all of North Vietnam."

There was, no doubt, inflation and error in the numbers the Air Force reported. However, if Air Force claims could be cast in doubt, so could the criticism. Political axe-grinding was an element in the Congressional report, and the "discount factor" apparently referred to the intelligence agencies, which arbitrarily cut as much as 75 percent from any pilot claims that came their way.

Furthermore, North Vietnam imported 4,500 to 8,000 trucks a year from the Russians and Chinese during the Commando Hunt campaigns. That, plus the number of damaged trucks the North Vietnamese were able to repair, does not necessarily validate the Air Force claims, but it does indicate they are more supportable than the ridicule of the critics would suggest.

After Commando Hunt VII, Brig. Gen. Richard G. Cross Jr., 7th Air Force assistant deputy chief of staff for operations, said, "This interdiction effort failed to prevent the enemy from positioning sufficient supplies to initiate an all-out offensive against South Vietnam" in March 1972.

That was probably the case, although some of the supplies for the Easter invasion may have been accumulated and stored over a period of years.

Looking back at Steel Tiger, Tiger Hound, and Commando Hunt, Momyer said, "The interdiction campaign was able to limit the number of forces the North Vietnamese could support in the South. Not until the interdiction campaign ended with the termination of US involvement could the North Vietnamese logistically support and deploy their full strength of 18 to 20 divisions. Before the 1975 offensive, they never deployed more than 11 or 12 divisions, apparently for fear of the destruction they would suffer by exposure to our airpower."

The "Trail" Today

In Vietnam today, the trail is a legend. Those who built it, ran the way stations, and transported the arms and supplies south are revered as heroes of the war.

In April 2000, Vietnam began building the Ho Chi Minh Highway from Hanoi to Ho Chi Minh City, formerly Saigon. It is a needed addition to the nation's road system, but it also is billed as running "along the historic Ho Chi Minh Trail" and commemorating the famous route. It will eventually be 1,050 miles long. So far, about 750 miles are open to traffic.

Western news media—notably the Associated Press, *Time* Magazine, and *National Geographic*—have reported that the highway will follow the course of the wartime Ho Chi Minh Trail and have made much of the symbolism.

In fact, the Ho Chi Minh Highway will be entirely in Vietnam. It will go through Vinh, cross what was the DMZ, pass close to Khe Sanh, and run down the eastern side of the mountains through the Central Highlands to the former capital of South Vietnam. The actual Ho Chi Minh Trail ran through Laos, of course.

The historical significance of the Ho Chi Minh Trail is certainly real, however. In recent years, Vietnamese leaders have confirmed that their strategy for winning the war depended on infiltrating troops and supplies into South Vietnam.

They have said they were pressed at times but that they were able to move what they truly had to move. Their strategy worked because US policy ruled out stopping the flow at its source by striking the ports and logistics centers in the North.

That left Air Force and Navy airmen to chase down the trucks, one by one, on the Ho Chi Minh Trail, and that was never a realistic or reasonable objective.

John T. Correll was editor in chief of Air Force Magazine for 18 years and is now a contributing editor. His most recent article, "The Ups and Downs of Counter Force," appeared in the October issue.