Tank fuel cells
Revetments
Landing mats
Parachute hardware
Helmets
Mess kits
Canteens
Stainless steel inner soles for combat boots
Lightweight armor for helicopter seats and tactical vehicles
Barracks
Base housing
Prefabricated buildings
CONEX containers
Fence posts
Concertina barbed wire

Second, and more important in terms of the volume of steel necessary to satisfy defense requirements, steel is an essential in the facilities and equipment used in the manufacture and transportation of all vital war materials, including those not made of steel. These indirect defense requirements—without which effective defense of the nation would not be possible—include:

Industrial Plant and Equipment:
- Metalworking Machinery
- Machine Tools
- Textile Machinery
- Electrical Generating Equipment

Domestic Transportation Systems:
- Trucks
- Railroad Equipment

Interstate National Defense Highway System
Merchant Marine Vessels
Communications Equipment
Construction Equipment
General Support Items:
- Filing Cabinets
- Desks

1. Direct defense steel requirements

Current Department of Defense forecasts of direct steel requirements are for about 4.6 million tons in 1968, so that the defense share of estimated total domestic steel consumption will approximate 4½ percent. However, these aggregate figures do not portray the full impact of the present defense requirements for some steel products. As Assistant Secretary of Commerce Ray stated in 1959:

"Aside from the broader impact on our national health and safety, the defense requirements, although limited in volume, are precise, particular, complicated, and ever-changing and cannot be met by a stockpile of new or preselected items of steel. In other words, the need is not merely for a given amount of steel in being, but for a continuous flow of specially tailored items capable of meeting developing defense requirements. Only continued production of steel in all its phases can supply the real needs of defense."

The aggregate requirement consists of many products, some of which are affected tremendously by military buildup, some hardly at all.

The thrust of rapidly escalating defense steel demand can be appreciated by examining its effect on certain key products (Tables C, D, E, F). Between 1965 and 1966, ammunition steel requirements increased seven-fold—from 150,000 tons to over one million tons—and then increased again by more than one-half million tons in 1967. About 2.4 million tons of steel will go into ammunition in 1968. As a consequence, direct defense demand in 1968 for such a category as semifinished products is expected to amount to 28 percent of total shipments of these products to *all* industries (Table G). Bar, semifinished, and tubular products represent most of the ammunition requirements; and more than two million tons of these products were imported in 1967. In 1968, as a result of sharply increased demand for shells, industry facilities for some types of these steel products are even more heavily taxed.

Between 1965 and 1966, military demands for regular and concertina barbed wire increased almost 100,000 tons, and reached 186,000 tons in 1967 as it suddenly became necessary to fortify the demilitarized zone (DMZ) between North and South Vietnam. But it is in the general category of wire products that foreign imports have taken over the greatest share of the domestic market. In 1967, imported wire rods represented 46.1 percent of total domestic consumption, barbed wire 40.6 percent, and wire nails 39.8 percent. It is difficult to maintain a viable wire products industry with such levels of imports.

The military helicopter and aircraft programs are vital to our effort in Vietnam, and critical importance of alloy and stainless specialty steel products has required extensive production scheduling and expediting by the Department of Defense.

Hence, while the absolute level of total defense steel consumption does not present supply difficulties at the current degree of involvement in Vietnam, requirements in some key product areas are already high (Table G) and would escalate rapidly in event of a broad-scale military action.