



Director of
Central
Intelligence

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Soviet Wartime Management: The Role of Civil Defense in Leadership Continuity

Interagency Intelligence Memorandum
Volume II—Analysis

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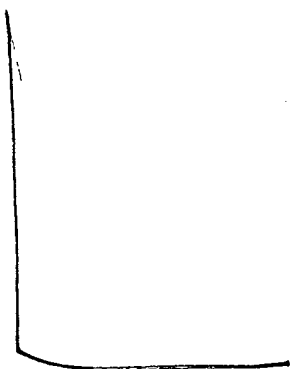
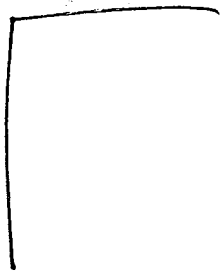
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SOVIET WARTIME MANAGEMENT:
THE ROLE OF CIVIL DEFENSE IN
LEADERSHIP CONTINUITY

VOLUME II—ANALYSIS

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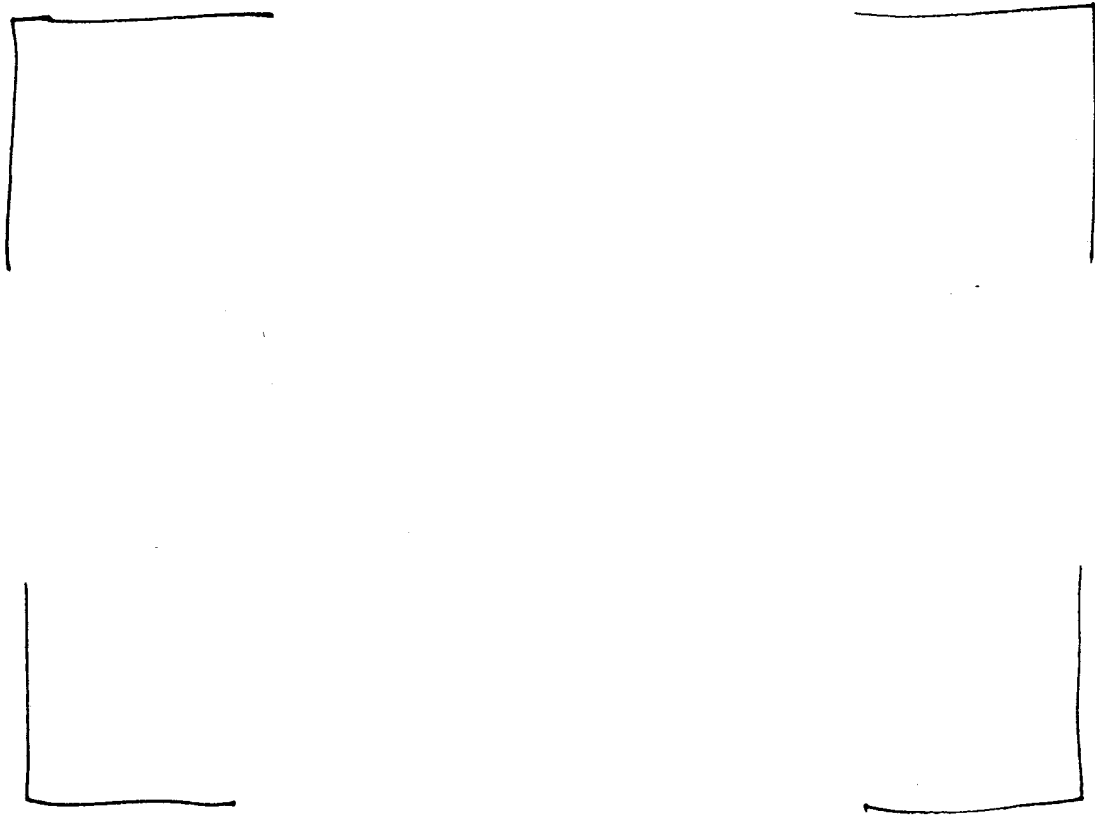
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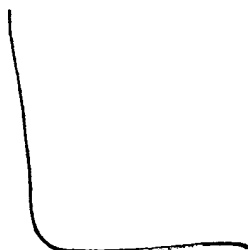
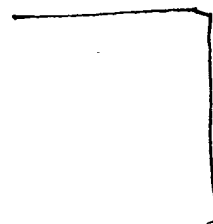
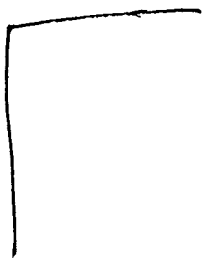
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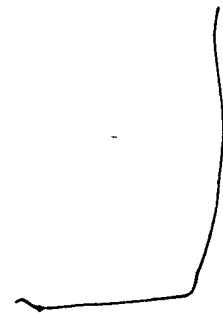
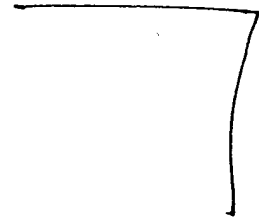
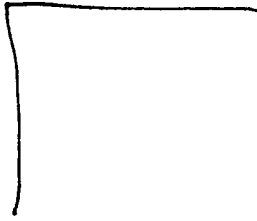
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PURPOSE AND SCOPE

National intelligence issuances on Soviet civil defense have addressed the objectives, scope, and pace of the program and its likely effectiveness in reducing damage from a nuclear attack.¹ While these estimates concluded that a large percentage of the leadership would survive a large-scale US nuclear attack on the USSR, they did not address in detail the specific role of civil defense in Soviet plans to ensure continuity of their leadership.

In this Memorandum we assess the Soviet civil defense infrastructure and measures for leadership protection and relocation as an integral part of a broader national command and control system. This national system would provide strategic direction of theater and intercontinental forces and for the defense of the USSR from nuclear attack. We have assessed the Soviets' progress in making the necessary preparations that would enable their management structure to function according to the USSR's strategy for nuclear war. In our analysis we have relied heavily on reporting from human sources who served in the system, as well as on evidence from other sources of actual relocation and command and control facilities and of operational exercises in which these facilities have been used.

This Memorandum was prepared under the auspices of the National Intelligence Officer for Strategic Programs. It was drafted by the Defense Intelligence Agency with the participation of representatives from the Central Intelligence Agency, the National Security Agency, the National Photographic Interpretation Center, the Office of the Assistant Chief of Staff, Intelligence, for the Department of the Air Force, and the Federal Emergency Management Agency. This Memorandum was coordinated by the Interagency Working Group on Soviet Civil Defense.

¹ See Interagency Intelligence Memorandum NI IIM 77-029, *Soviet Civil Defense: Objectives, Pace, and Effectiveness*, December 1977, and Interagency Intelligence Memorandum—Memorandum to Holders NI IIM 81-10001D, *Soviet Civil Defense: Objectives, Pace, and Effectiveness*, July 1981.

KEY JUDGMENTS

The Soviets' confidence in their capabilities for global conflict is probably critically dependent on their assessment of the survivability and continuing effectiveness of their leadership during and following a nuclear attack. To this end, the Soviets have been making the preparations required to facilitate the transition from peacetime to wartime and to give their leadership the potential for effective performance in a nuclear conflict. These preparations are intended to provide for:

- Continuity of party, government, military, and economic leadership at all levels.
- Mobilization of human and material resources.
- Support of military operations.
- Continuity of essential economic activity.
- Conduct of postattack recovery operations. (~~S-REF~~)

The Soviets have made considerable progress in:

- Delineating the wartime management system and the responsibilities of Soviet leaders at all levels.
- Preparing the civilian leadership to make a rapid transition to their wartime roles through the use of special organizations that plan, train, and exercise during peacetime.
- Providing their leadership with hardened urban command posts, exurban relocation facilities, and redundant, hardened communications. (Relocation facilities are those exurban command posts to which military and civilian leaders and their staffs will relocate in wartime for the purpose of exercising command and management functions.)

Concept and Organization

The Soviet wartime management organization (see figure 1 on page 3) would consist of:

- The National Command Authority and other national-level leaders who would direct the military, political, and economic activities of the nation.

- The leaders of the 16 military districts who would have the key role in wartime territorial administration, management of recovery operations, and in providing continuing support of military operations following a large-scale nuclear attack.
- The leaders of those regional organizations responsible for vital services such as transportation, communications, and electric power.
- The leaders of the 15 Soviet republics who would be responsible for supporting the war effort and maintaining the integrity of the multinational Soviet state. As shown in figure 1, the Soviet republics would not be in the chain of command from the National Command Authority to key territorial organizations.
- The leaders of oblasts, the basic territorial elements, who would be responsible under military district supervision for directing rescue and recovery operations and for military support tasks.
- The leaders in cities, rural areas, and at individual installations who would operate under oblast control.

We estimate that a total of 179,000 officials (see table 1 on page 5) constitute the leadership that would be responsible for the continuity and survival of the nation in a nuclear war. The key elements of Soviet leadership would be primarily those at the national, military district, republic, and oblast levels—about 100,000 individuals, including about 60,000 full-time civil defense staff personnel.

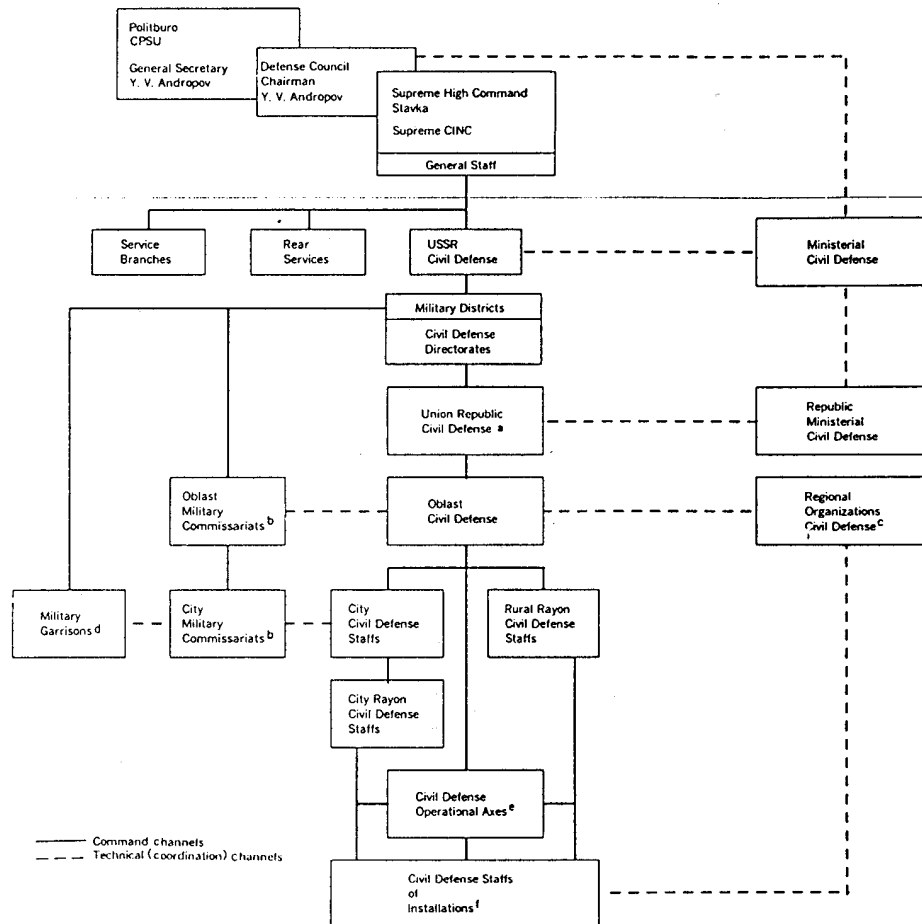
The USSR Civil Defense organization is intended to provide the wartime management system with a command structure staffed by military personnel with the professional expertise necessary for civilian leaders to carry out their assigned wartime roles. The legal basis for this largely military structure to perform its wartime mission would derive under Soviet statutes from declaration of a "special period," comparable to martial law in World War II.

The Communist Party would continue to function in wartime as it does in peacetime, with primary responsibility for the formulation and implementation of policy. Its parallel structure with the state administration facilitates party control of administrative functions. In wartime, party officials would also be present on the military councils of the military districts, the highest regional politicomilitary authority in wartime.

The Soviets do not expect the entire national leadership to be destroyed in wartime. Should national-level control be temporarily

Figure 1
Soviet Wartime Management Structure

National Command Authority (NCA)



a In wartime the chain of command extends directly from military districts to oblasts except in those smaller republics without oblasts (such as the Baltic republics).

b The operations of military commissariats are closely coordinated with civil defense staffs. These commissariats are responsible for callups of manpower and motor vehicles in a crisis.

c Regional organizations refer to those service-oriented entities (such as transportation and power) whose areas of responsibility do not always coincide with military district or oblast boundaries.

d Civil defense staffs coordinate their plans for dispersal and evacuation in the threatening period and for cooperation with the military garrison commanders during postattack recovery operations.

e Operational axes are local organizations created by oblast civil defense staffs for cities with several city rayons. They are designed to coordinate civil defense operations of city and rural rayons in sectors located along principal transportation routes.

f Installations refers to factories, institutes, schools, hospitals, and other such enterprises.

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Table 1
Size of the Soviet Wartime Leadership

National	17,000
Military districts ^a	1,000
Republics	13,500
Key regional organizations	6,500
Oblasts	10,000
Cities	
Population 25,000 or above	32,000
Population below 25,000	20,500
City rayons	18,500
Subtotal	119,000
Civil defense staff	60,000
Total ^b	179,000

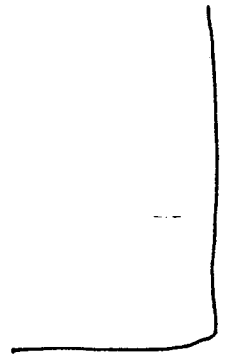
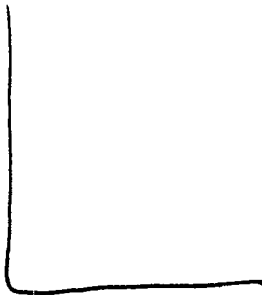
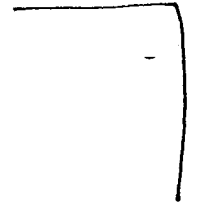
^a The figure of 1,000 for the military district includes 800 officers in their civil defense components plus senior command personnel.
^b The total figure includes the top national leaders but not military officers below the level of the Ministry of Defense, except for those at military districts and in civil defense staffs. Also, the total does not include civilian leaders at individual installations.

interrupted, however, the military district would have the means and, we believe, the authority for decentralized operations. Moreover, the highly structured, bureaucratic, and authoritarian nature of the Soviet system, which is widely perceived as hindering peacetime performance, would greatly facilitate the management of the nation under the catastrophic circumstances of nuclear war.

Transition to Wartime

The Soviets believe that a nuclear war would be preceded by a period of international tension and probably conventional conflict. Previously, we concluded that a large percentage of the leadership on which the Soviets would rely for wartime management would probably survive a large-scale US nuclear attack with as little as a few hours' warning. Under these circumstances the Soviets are probably confident that they could make the transition from a peacetime to a wartime management posture prior to a nuclear attack on the USSR. That transition would be governed by changes in Soviet armed forces readiness levels. The corresponding changes in the Soviets' civil defense posture are shown in table 2.

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Relocation Facilities

During the past few years, we have acquired a better understanding of Soviet wartime management concepts and have identified more relocation facilities for the higher levels of Soviet wartime management—national, military district, and key regional organizations. [

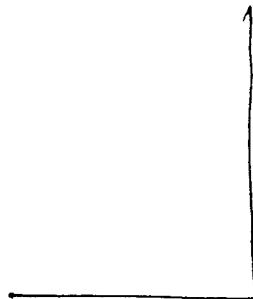
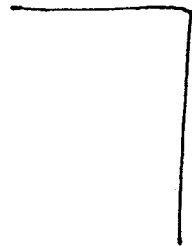
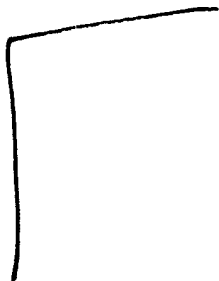


Table 3
Soviet Leadership Relocation Facilities ^a

	Estimated Requirements	
	Maximum	Minimum
National Command Authority	16	8
Ministry of Defense components	70	35
National ministerial organizations	200	100
Military districts	64	32
Key regional organizations	190	95
Subtotal	540	270
Republics	806	403
Oblasts	296	148
Subtotal	1,102	551
Nonassociated relocation complexes	—	—

Communications Support. Communications support for the war management system is provided by both the Ministry of Communications and the Ministry of Defense, supplemented by the KGB. These ministries have jointly developed redundant communications networks, supporting facilities, and operational procedures that are aimed at providing the national leadership with the means to maintain continuity of control over all activities in the Soviet homeland following a nuclear attack. Other measures that the Soviets have taken to enhance the survivability and dependability of wartime communications include providing mobile signal support systems, constructing hardened reserve telephone exchanges in major cities, installing underground intercity cables to circumvent vulnerable urban areas, building bunkered cable switching points and network control centers, and developing automated regional communications control centers. Despite these efforts, the Soviets expect their communications systems to suffer damage in a nuclear attack and have made preparations for poststrike restoration of communications services.

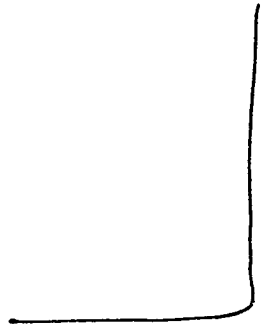
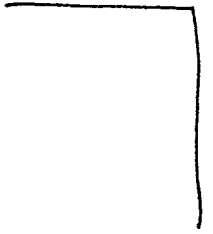
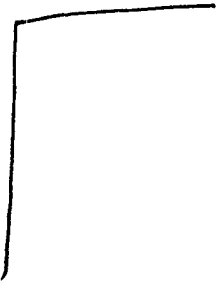
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Costs. We are unable to estimate the total costs of Soviet preparations for wartime management. One measure of the magnitude of the Soviet investment in their program is the cost of relocation facilities:

- We calculate the total cost of construction and equipment at the single- and dual-purpose facilities we have identified to date to be at least 1.5 billion (1970) rubles. If these facilities were built in the United States, the cost would be some US \$5 billion (1981).
- Using these calculations and the number of relocation facilities we believe have been constructed nationwide, we estimate that the total cost of construction and equipment for relocation facilities since the inception of the program in the 1950s ranges from at least 8 billion to 16 billion rubles, depending on whether there are one or two facilities for each leadership entity. These costs would be \$28-56 billion if the sites were duplicated in the United States. This estimate does not include the costs of civil defense personnel, supporting communications networks, or hardened urban facilities. We believe, therefore, that the overall cost of the program would be significantly greater than the at least \$28 billion we have estimated for relocation sites alone.

Vulnerability. Despite the extent of their preparations, the effectiveness of the Soviets' wartime management will depend heavily on the vulnerability of their leadership facilities to a US nuclear attack. Most of their urban and exurban facilities would be vulnerable to destruction if they could be located and were attacked by US weapons (see table 4). Hardened urban command posts for the leadership have not been emphasized in our analysis because they would largely be vacated during the period prior to nuclear attack. Thus, locating exurban command and control sites and supporting communications is key to the potential vulnerability of the Soviets' wartime management structure.

Achievement of a high probability of severe structural damage to almost all types of Soviet hardened underground exurban leadership facilities we have located would require multiple high-yield, accurate weapons. Deep underground facilities like those at Sharapovo and Chekhov near Moscow for the National Command Authority would present a difficult targeting problem. (The composition of the National Command Authority is shown in figure 1.) A recent reassessment of

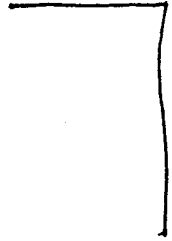
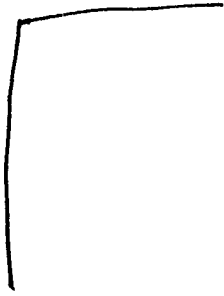
these sites indicates that they are harder, deeper, and much less vulnerable than previously estimated. For more than a decade the Soviets have been expanding and improving these sites, but have concealed the extent of their activities]

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Trends and Implications

We expect the Soviets will continue to improve the facilities required to give the leadership the potential for effective performance

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in wartime, increasing both the number and hardness of fixed sites and improving communications support at all levels. They will probably concentrate on further improvements in the capabilities of military districts to integrate active and passive measures for defense against nuclear attack, to assure manpower and logistic support required by the war effort, and to direct poststrike recovery operations. The military district will remain the key element of Soviet wartime territorial administration.

The Soviets may believe that deep underground structures such as those near Moscow will assure the survivability of the top leadership—a priority objective of their wartime management plans. We have not yet assessed the implications of such a perception by Soviet leaders. Nonetheless, their confidence in the effectiveness of their overall wartime management structure is almost certainly tempered by the belief that civilian as well as military leadership facilities would be high on the list of US targeting priorities in a nuclear conflict. [

] They would certainly assume that US capabilities would improve in the future. Therefore, future improvements in Soviet wartime management preparations may include greater use of mobile command posts and communications equipment, especially for some of the top national leaders. We doubt, however, that the Soviets could carry out their wartime management plans following a large-scale nuclear attack relying only on mobile facilities. We therefore believe that they will continue to base their program around an extensive network of fixed, hardened facilities and to engage in concealment practices that make many facilities difficult to detect.

Destruction of those leadership sites that we have located at the national, republic, and military district levels, together with their related communications nodes, could have a serious effect on the Soviet wartime management structure, particularly in the Moscow area. [

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In sum, the scope of the USSR's program for leadership continuity in nuclear war and the investment it has received over the past 25 years indicate that the Soviets are serious in their efforts to achieve a survivable and effective wartime management structure. This structure is intended to exercise control over whatever national assets survive a nuclear attack. Such a capability would be vital to their plans for favorably concluding the war effort and for postwar recovery.

CHAPTER I

SOVIET STRATEGY FOR WARTIME MANAGEMENT

1. Soviet strategy for nuclear war calls for plans that will ensure the continuity and survivability of the Soviet state and its form of government. This strategy underlies Soviet efforts since World War II to create a unified management structure for exercising control at national and territorial levels during a conflict.

A. Soviet Perceptions of Nuclear War

2. Soviet development of nuclear weapons and intercontinental delivery systems began under Stalin, but it was not until the mid-1950s that their implications for Soviet military strategy were openly discussed by military leaders. By the end of the decade, the main outlines of Soviet doctrine on nuclear war had emerged and were given extensive treatment in classified and unclassified literature. Since then, debates have continued within the Soviet military establishment on some aspects of this doctrine and its application to strategy, tactics, and operations, but, on the whole, Soviet views on the objectives, origins, conduct, and consequences of nuclear war have been generally consistent.

3. The Soviets believe that in the present US-Soviet strategic relationship each side possesses strategic nuclear capabilities that could devastate the other after absorbing an attack. Soviet leaders have stated that nuclear war with the United States would be a catastrophe that must be avoided if possible and that they do not regard such a conflict as inevitable. They have been willing to negotiate restraints on force improvements and deployments when it serves their interests. Nevertheless, they regard nuclear war as a continuing possibility and have rejected mutual vulnerability as a desirable or permanent basis for the US-Soviet strategic relationship. They seek superior capabilities to fight and win a nuclear war with the United States without bringing the vital activities of the state to a standstill or threatening the survival of the Soviet system. A tenet in their strategic thinking holds that the better prepared the USSR is to fight in various

contingencies, the more likely it is that potential enemies will be deterred from initiating attacks on the Soviet Union and its allies and will be hesitant to counter Soviet political and military actions.

4. We believe the Soviets envisage a number of conflict contingencies—conventional war, theater nuclear war, intercontinental nuclear war, and protracted war. Regardless of how nuclear war develops, the Soviets believe the conflict will possess several characteristics that will distinguish it from past wars and greatly influence the kinds of preparations necessary for its conduct. For the Soviets, World War II was largely a series of front operations in one theater in which the tempo of operations was dictated by the need of opposing forces to rest, regroup, and resupply after major actions. They believe the scope and pace of contemporary war will be sharply different. It will cover large areas of the world and involve several theaters of operations, both continental and oceanic. Theater combined-arms operations may begin with little warning and would have to proceed rapidly to accomplish their objectives. Manpower and materiel losses will be much higher because of modern weapons. Finally, nuclear weapons will be able to cause enormous damage to the Soviet population and the economy. Consequently, the entire Soviet state must be prepared to function in a nuclear environment.

B. Organizational Concepts

5. During the past 20 years, the Soviets have adopted organizational structures that are consistent with their view of nuclear war. Organizational changes for managing a nuclear conflict followed the shifts in Soviet strategy and tactics resulting from the increases in numbers and quality of nuclear weapons deployed by both the United States and USSR. Conceptually, the requirements for these changes as well as for the weapons and forces for nuclear warfare were recognized by the Soviets in the 1950s and early 1960s. But progress toward satisfying these requirements was

uneven because of resource limitations, resistance to change within the officer corps, and the continuing need to match or offset US technological advances.

6. The Soviet concept of maintaining the stability of the homeland in nuclear war evolved from what the Soviets described as the "revolution in military affairs" and is firmly anchored in the tradition and history of the USSR. In the early years of the Soviet regime, the chief purposes of a unified war management structure were to harness the economy to the war effort and to retain the loyalty of the population. The experiences of the USSR in World War II reinforced these themes and demonstrated the danger inherent in delaying the implementation of the necessary organizational changes in the nation's management structure until after the onset of hostilities. Consequently, in the postwar period plans were made for converting peacetime industrial production to meet wartime requirements. As the Soviets studied nuclear war more intensively, however, they recognized their need for more comprehensive peacetime preparations. These preparations would provide for:

- Survival and continuity of the leadership by protecting personnel and facilities against the effects of nuclear attack and by facilitating damage recovery operations.
- Development of rapid and efficient manpower and economic mobilization procedures, which could offset the high rates of attrition expected in modern warfare.
- Indoctrination of military and civilian personnel in the realities of nuclear warfare.

7. Soviet strategists and planners concluded that the wartime management organization should meet several criteria. They concluded that it must be:

- Established in peacetime.
- Integrated with the organizations responsible for defending against nuclear attack, and capable of supporting the conduct of military operations at any level or phase of hostilities.
- Capable of a quick transition to wartime conditions without requiring significant modifications of its peacetime organization.

— Responsive to centralized direction, yet have the capability for decentralized operations if nuclear destruction should make it necessary.

8. These organizational criteria remain valid and are reflected in current writings by the highest levels of the Soviet military establishment. In 1982 the Chief of the General Staff N. V. Ogarkov noted that preparations for the transition from peace to war of both the armed forces and the national economy "assume a significance of special state importance." Expediting this transition requires "carefully planned measures in peacetime, the coordinated actions of local party, state, and military organs." Ogarkov emphasized the need to coordinate mobilization of the armed forces, the economy, and civil defense as the major precondition for preserving the defensive capability of the USSR.¹

9. The Soviet war management system now provides for a unified command structure extending from the central leadership to the armed forces, to all territorial and administrative levels of the USSR, and to the national economy. The national-level control organs that the Soviets have established, such as the Defense Council, correspond to organizational patterns of the World War II period. The wartime management organizations below the national level consist of the military districts and the nationwide civil defense structure.

10. The military districts, organized on territorial lines, have traditionally served as the focus for vital military-civilian relationships. Military districts provide a framework that is essential for the transition from a peacetime to a wartime posture. The Soviet civil defense organization for its part provides the civilian political and economic leadership a command structure staffed by military personnel with the professional expertise for managing the country under the stress of nuclear conflict. According to Soviet writings, in peacetime the civil defense organization is an "integral part of a statewide system of defensive measures," and a recognized component of the Soviet armed forces. Civil defense officials provide doctrinal and technical uniformity in training programs and supervise all other peacetime civil defense preparations. By placing the civil defense structure under the

¹ Ogarkov, N. V. "Always Prepared for the Defense of the Fatherland," Moscow, *Voenizdat*, 1982.

operational control of the military districts during war, the Soviets believe they will achieve an effective, unified military-civilian organization for managing the country.

11. The present war management structure and procedures did not evolve smoothly. Soviet military leaders probably hoped that the civil defense organization, established by statute ² in 1961, would be directly subordinated to the Ministry of Defense (MOD) and the military districts. However, the 1961 statute placed the Chief, USSR Civil Defense, directly under the Council of Ministers rather than the MOD. Although it was not until 1971 that MOD was formally given direct responsibility for civil defense, the Ministry of Defense did provide personnel and materiel support to civil defense and frequently assumed control of civil defense operations in command post exercises.³ The subordination of civil defense to the MOD was followed by changes in the functions of the

² This Civil Defense Statute was confirmed by a classified resolution of the Central Committee of the CPSU and Council of Ministers of the USSR, dated 13 July 1961.

³ According to the *Soviet Military Encyclopedia*, because of the change made in 1971 the Soviets achieved "unified leadership of the armed forces and civil defense directed at the defense of the rear of the country, one of the most important conditions for guaranteeing reliable defense of the Soviet state."

military districts designed to integrate civil defense (and later air defense) into planning for mobilization and wartime management of all the military and civilian resources within these districts. The changes at the military district level began in the mid-1970s [

]

12. Progress toward ensuring the stability of the rear has not been as spectacular as that displayed by the Soviets in their development and deployment of weapon systems. Also, the use of the term "civil defense" by both Soviet and Western officials to refer to these extensive preparations has tended to obscure their purpose as key elements of a wartime management system. Soviet propaganda invariably refers to civil defense activities as "humanitarian."⁴ However, Soviet civil defense preparations encompass far more than humanitarian considerations. The chapters that follow address the additional dimensions of civil defense in Soviet concepts and plans for wartime management.

⁴ See the lead article intended for use by propagandists on pp. 8-9 in the Soviet publication *Voyennyye Znaniya*, June 1982.

CHAPTER II

WARTIME MANAGEMENT STRUCTURE

A. Influence of World War II

1. The present Soviet wartime management structure displays marked continuity with World War II organizations designed to mobilize both military and civilian resources. Although the Soviets continue to emphasize the lessons of World War II, they stress that changes in warfare have occurred. Organizational forms and managerial practices created during the war were highly improvisational. Soviet awareness of the inadequacies of these wartime experiments and of the "altered conditions of modern warfare" has been a primary impetus for change. The Soviets frequently cite, however, the State Defense Committee (GKO) as a model for wartime centralization of the political, military, and economic leadership. The wartime authority of the Defense Council would probably correspond to that exercised by the GKO during World War II. Similarly, the present Soviet civil defense organization is heavily influenced by its predecessor, the Local Air Defense (MPVO), created in 1932. Although the MPVO underwent numerous reorganizations prior to its redesignation as USSR Civil Defense in 1961, it was very much under the control of the military at the national and military district levels during its formative years. The wartime experiences of the military districts and the city defense committees in mobilizing and organizing the population have also influenced the scope of responsibilities envisioned for the present military district commanders during a war.

B. Peacetime Organizations and Functions

2. The party-state apparatus that manages the Soviet Union in peacetime consists of three interrelated hierarchies: the party, the government administration, and the ministerial system with subordinate entities throughout the country. As a whole, they provide an integrated management structure that imposes centralized direction over all elements of the military, economic, and social life of the nation. Some of the

characteristics of this apparatus and its management practices are widely perceived as hindering the peacetime performance of the Soviet Union, but these same characteristics and practices would greatly facilitate the management of the nation under the catastrophic circumstances of nuclear war.

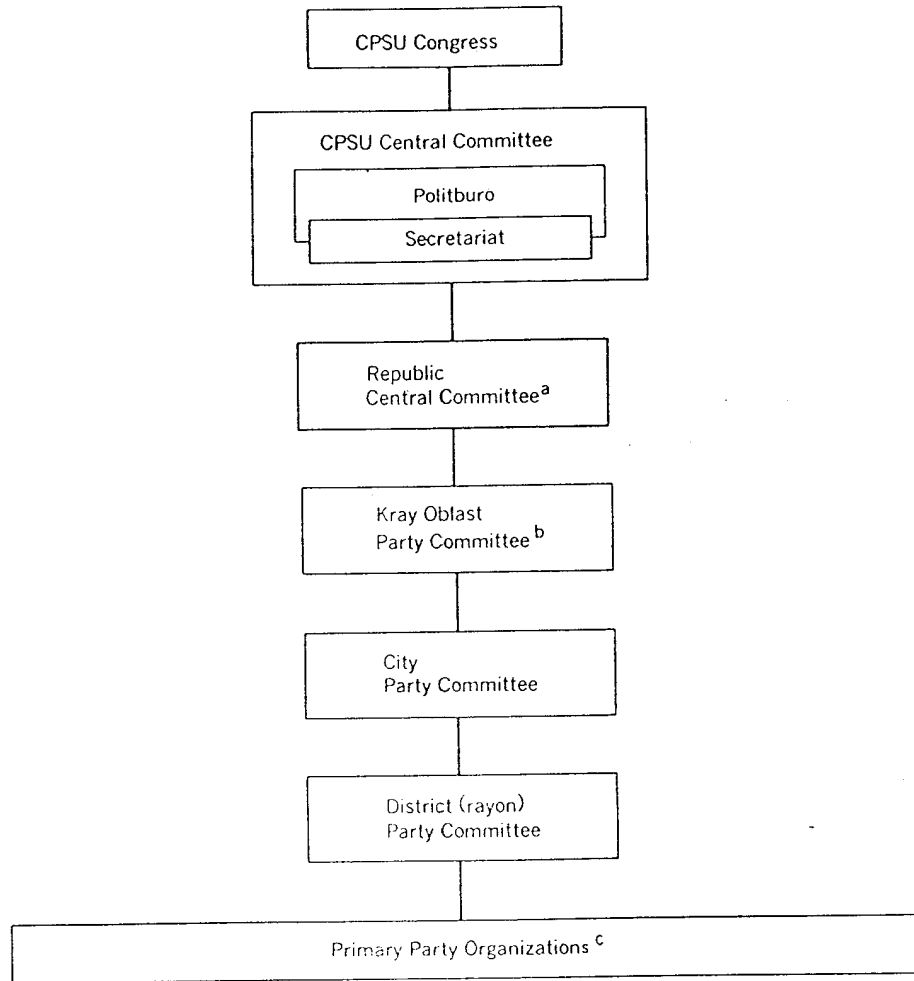
3. *Communist Party of the Soviet Union (CPSU).*

Central to the Soviet system is the CPSU, whose monopoly of political power was formally recognized in the 1977 Constitution. Organizationally, the CPSU parallels the state apparatus. Beginning with the Politburo and the Central Committee, there are party committees at each level of the territorial-administrative structure (figure II-1). The party also has organizations in every military unit, government office, factory, and school in the country. Party officials in this complementary structure are tasked to ensure that goals set by the national leadership in the military, economic, and social spheres are met. Their efforts are enhanced by the *nomenklatura* system by which the CPSU controls the assignment of party officials to key government, military, and economic posts.

4. The party structure provides for a high degree of redundancy in management personnel: Party committees at all levels contain departments composed of functional specialists who oversee corresponding departments of government, economic, and military organizations. These specialists are frequently rotated under the *nomenklatura* system to party-controlled management positions in the territorial or ministerial hierarchies. Such party career patterns potentially broaden the pool of management expertise available to replace losses that would occur in a nuclear conflict. (See chapter III, paragraphs 42-45 for a current estimate of the size of the wartime leadership.)

5. Well-defined peacetime party organizations which manage the USSR are expected to continue to function in wartime. During peacetime, senior party leaders at territorial levels are responsible for the

Figure II-1
Organizational Structure of the CPSU



^a Does not exist for the RSFSR.

^b Kray and oblast party committees in the RSFSR are directly subordinate to the CPSU Central Committee.

^c Found in ministries, factories, universities, army units, and so forth.

implementation of policy goals in their respective areas of jurisdiction. This practice has laid the groundwork for decentralized management during periods when central authorities may be unable to function. A typical first secretary of the party at the territorial level is likely to have had extensive experience in working with government military and economic organizations. He may also have held memberships in central party bodies, such as the Central Committee, and is usually well-informed on a wide range of policy issues that transcend provincial interest.

6. *Territorial-State Administration.* The USSR is divided into 15 union republics whose boundaries, languages, and population mix are the product of various historical influences (figure II-2). The structure of each republic government resembles that of the USSR itself. Below the union republic are territorial administrative subdivisions that include autonomous republics (having government structures patterned after those of the union republics to which they are subordinate) followed by krays, oblasts, autonomous oblasts, national districts, cities, urban rayons, and rural rayons (see figure II-3). At levels below that of the republics, it is the chairman of the executive committee (*ispolkom*) of the local Soviet (council) through whom administrative authority is exercised. The size and makeup of the support structure of executive committees vary according to territorial level, population, and economic importance of the area.

7. The organizational level at which basic managerial functions are performed also varies. The number, types, and responsibilities of subordinate echelons are not uniformly distributed from republic to republic. They differ considerably depending on factors such as the size of the republic and the presence within the republic of ethnic minorities possessing their own political subdivisions. In smaller republics (such as those in the Baltic and the Caucasus) authority is exercised directly from the republic to cities and rural rayons. For the remainder of the country, however, it is the oblast level entity¹ that represents the principal

¹Currently, there are 148 autonomous republics, krays, and oblasts in the USSR. For uniformity they will all be referred to as oblasts in this Memorandum. In 1982 the Soviets announced that a new oblast had been created in the Uzbek SSR; its oblast center is the city of Navoi. Because we have no additional details on this new oblast (for example, population, boundaries, and so forth) as of this writing, readers should be advised that the base figure for the total number of oblasts used herein is 147. This would not cause a significant statistical difference were we to attempt to include estimates for the Navoi Oblast.

building block of Soviet administration. While its responsibilities are narrowly defined, the oblast is the lowest managerial level where the interests and activities of all sectors—political, military, economic, and social—converge.

8. *Ministerial Structure.* Government administration and economic management are conducted primarily through ministries, state committees, and comparable entities at the national and republic levels. Their managers form the all-union and union republic councils of ministers, the chairmen of which head the government apparatus of the USSR and those of its constituent republics. These ministerial organizations are responsible for functions such as planning, supplying, and pricing, and specific sectors such as defense, state security, public order, individual industries, health care, and transportation. Their activities are coordinated by the respective national and republic councils of ministers acting under guidelines established by the CPSU Politburo and implemented by appropriate departments of the Central Committee. There are three types of ministerial structures:

- *All-union* ministries are those organizations with headquarters in Moscow which have no counterparts in the republics and manage their activities through subordinate offices at territorial levels and through enterprises under their direct control. The type and geographic distribution of organizations subordinate to the ministries may be widespread, including all the enterprises of an industry. The subordinate elements may be organized on a regional basis, as is the case with the military districts of the Ministry of Defense or the railroad administrations of the Ministry of Railways.
- *Union republic* ministries have headquarters in Moscow with counterparts at the republic level. The republic counterpart ministry is subordinate both to the union republic ministry in Moscow and to the Council of Ministers of the republic. Ministerial organizations below the republic level and individual enterprises, depending on their importance, may also be responsible to the ministry at both the national and republic levels.
- *Republic* ministries have no counterpart at the national level. They are responsible for functions such as road construction and maintenance,

Figure II-2
Soviet Union Administrative Divisions^a



motor transport, communal services, social welfare, and local industry. They operate through local offices and enterprises which in turn are subordinate to both regional (kray or oblast) executive committees and republic ministries.

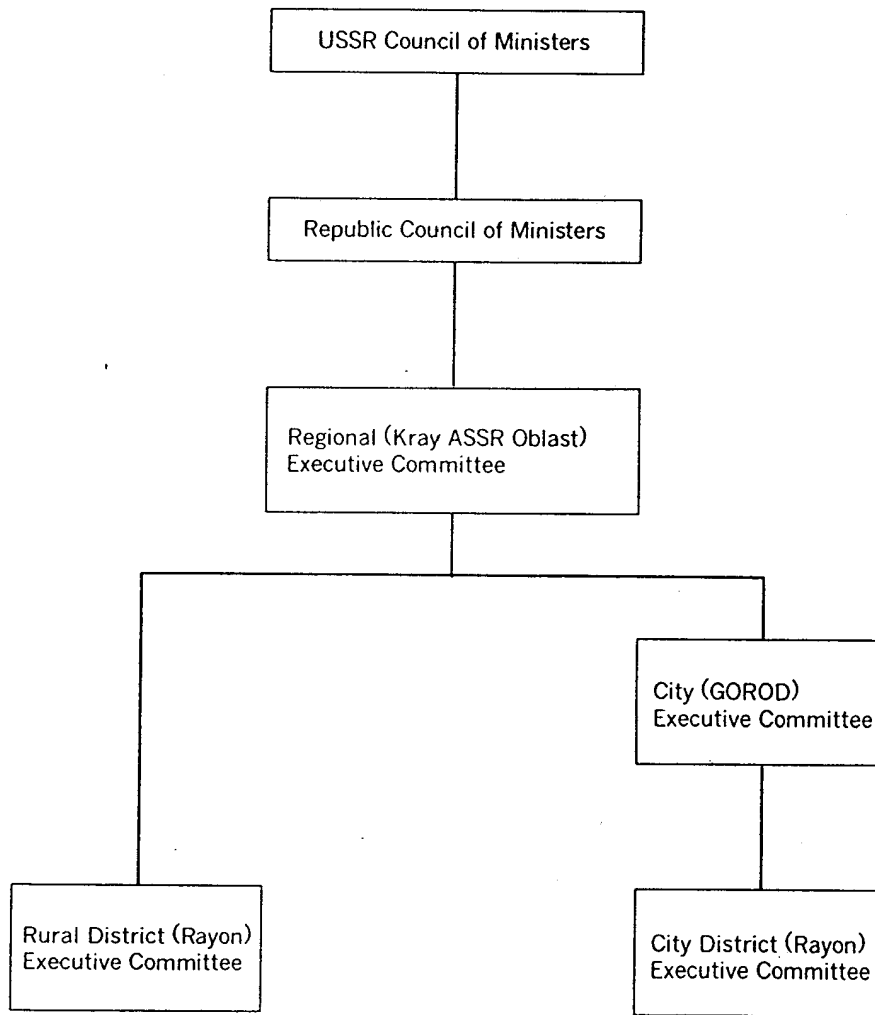
9. High-priority and centralized organizations such as the Ministry of Defense, the various defense and defense-related industries, railways, and civil aviation, which have no ministerial counterparts at lower levels, are likely to have an all-union status (see inset on pages II-6 and II-7).² On the other hand, many important functions, such as state security, internal affairs,

² In some cases, such as the Ministries of Ferrous and Nonferrous Metallurgy, the all-union organization was adopted because of the geographic dispersion of their activities over the territory of several republics.

communications, and other sectors, fall under union republic ministries in Moscow, and their central control apparatus is replicated at union republic and territorial levels.

10. All of the organizations subordinate to national-level ministries have a role in wartime management of the government and the economy, including postattack recovery. Even those ministries found only at the republic level and at the lowest end of the peacetime priority scale have responsibilities that will assume considerable importance in nuclear war. For example, extensive preparations for decontamination involve facilities and services that would be provided through republic ministries responsible for housing and municipal affairs. Although the ministerial system is highly centralized, the replication of ministerial organizations

Figure II-3
Soviet Territorial Administrative Structure



Ministerial Organizations

All-Union Ministries and State Committees

Economic

A. Industry

1. Machine Building/Defense

Ministry of Aviation Industry
Ministry of General Machine Building
Ministry of Medium Machine Building
Ministry of Defense Industry
Ministry of Shipbuilding Industry
Ministry of Electronics Industry
Ministry of Radio Industry
Ministry of Machine Building
Ministry of Communications Equipment Industry
Ministry of Automotive Industry

2. Other Machine Building

Ministry of Electrical Equipment Industry
Ministry of Instrument Making, Automation Equipment, and Control Systems
Ministry of Machine Building for Animal Husbandry and Fodder Production
Ministry of Machine Building for Light and Food Industry and Household Appliances
Ministry of Machine Tool and Tool Building Industry
Ministry of Tractor and Agricultural Machine Building
Ministry of Chemical and Petroleum Machine Building
Ministry of Construction, Road, and Municipal Machine Building
Ministry of Heavy and Transport Machine Building
Ministry of Power Machine Building
State Committee for the Supply of Production Equipment for Agriculture

3. Extractive Industry/Energy

Ministry of Gas Industry
Ministry of Petroleum Industry

4. Other Industry

Ministry of Medical Industry
Ministry of Chemical Industry

B. Transportation/Communications

Ministry of Civil Aviation
Ministry of Maritime Fleet
Ministry of Railways
Telegraph Agency of the Soviet Union (TASS)

C. Construction

Ministry of Construction in Far East and Transbaikal Regions
Ministry of Construction of Petroleum and Gas Industry Enterprises
Ministry of Transport Construction

Administrative

A. Foreign Policy/National Security

Ministry of Defense
Ministry of Foreign Trade

State Committee for Foreign Economic Relations
State Committee for Science and Technology
State Committee for Material Reserves

B. Miscellaneous

State Committee for Inventions and Discoveries
State Committee for Standards
State Committee for Hydrometeorology and Environmental Control

Union Republic Ministries and State Committees

Economic

A. Industry

1. Extractive Industry/Energy

Ministry of Coal Industry
Ministry of Ferrous Metallurgy
Ministry of Nonferrous Metallurgy
Ministry of Petroleum Refining and Petrochemical Industry
Ministry of Power and Electrification
State Committee for the Supply of Petroleum Products

2. Agronomy

Ministry of Agriculture
Ministry of Fruit and Vegetable Industry
Ministry of Land Reclamation and Water Resources
State Committee for Forestry

3. Other Industry

Ministry of Light Industry
Ministry of Fish Industry
Ministry of Food Industry
Ministry of Mineral Fertilizer Production
Ministry of Timber, Pulp and Paper, Wood Processing Industry

B. Construction

Ministry of Construction
Ministry of Construction of Heavy Industry Enterprises
Ministry of Construction Materials Industry
Ministry of Installation and Special Construction Work
Ministry of Rural Construction
State Committee for Construction Affairs (Gostroy)

Administrative Services

A. Security

Ministry of Internal Affairs (MVD)
Committee for State Security (KGB)

B. Central Planning

Ministry of Procurement
Ministry of Trade
State Committee for Material and Technical Supply (Gossnab)
State Committee for Planning (Gosplan)
State Committee for Prices

Ministerial Organizations (continued)

Administrative Services (continued)

C. Finance

Ministry of Finance
State Bank (Gosbank)

D. Science/Education

Ministry of Education
Ministry of Geology
Ministry of Higher and Secondary Specialized Education
State Committee for Vocational and Technical Education
Academy of Sciences ^a

E. Public Services

Ministry of Communications
Ministry of Culture
Ministry of Health
State Committee for Cinematography (Goskino)
State Committee for Labor and Social Problems
State Committee for Publishing Houses, Printing Plants, and
the Book Trade
State Committee for Television and Radio Broadcasting

F. Other

Ministry of Foreign Affairs
Ministry of Justice
Central Statistical Administration

Republic Ministerial Agencies ^b

Main Administration of the River Fleet
Ministry of Consumer Services
Ministry of Cotton Cleaning Industry
Ministry of Furniture and Wood Processing
Ministry of Highway Construction and Maintenance
Ministry of Housing and Municipal Services
Ministry of Local Industry
Ministry of Motor Transport
Ministry of Municipal Services
Ministry of Social Security
State Committee for the Protection of Nature

^a Agency without ministerial status.

^b Representative listing only. The numbers and types of republican ministries, committees, and administrations vary from republic to republic. The total number for all 15 republics is 138.

in republic and regional administrations could, however, facilitate a shift to more decentralized management if circumstances require it.

11. Ministerial collegiums also contribute to the potential of the ministerial structure to provide management redundancy and to decentralize their functions in wartime. In each ministry, the minister and his deputies belong to a formal collegium charged by the Council of Ministers with oversight of the ministry's activities and the resolution of policy questions. This system of collegial decisionmaking permits leaders to avoid personal responsibility for peacetime decisions. However, from what we know of the functioning of ministerial collegiums, particularly in the economic area, it is evident that the broad exposure of deputy ministers to managerial issues outside their area of specialty could enable them to assume a wider range of responsibilities in a crisis.

C. Organizations for the Transition to Wartime

12. The Soviets attach great importance to the need to effect a rapid transition from peace to war with

minimal disruption. Organizations exist within their peacetime structure that have special responsibilities for facilitating this transition. These include the Defense Council and the second directorates and departments in ministerial and territorial components that coordinate civil defense and economic mobilization measures. Also included are civil defense staffs, military commissariats, and military districts.

USSR Defense Council

13. Article 121 of the 1977 Soviet Constitution provides for the establishment of a USSR Defense Council by the Presidium of the Supreme Soviet, which also confirms the Council's membership. The Council is now chaired by the General Secretary of the CPSU, who is also the chairman of the Presidium of the Supreme Soviet. Although its existence was first made public in 1976-77, the Defense Council has formally existed since at least the early 1960s. It is believed that the Council's membership includes the Chairman of the Council of Ministers, the Minister of Defense, and other selected Politburo members whose special responsibilities would fall within the province

of national defense. In addition, top military leaders and key defense industrial managers are probably involved in Defense Council activities as members or participants.

14. The Defense Council serves as the Soviets' supreme decisionmaking organization for national security policy. It is described in Soviet administrative law as responsible in peacetime for "coordination of the activities of the organs of state administration concerned with defense of the country" and for "determination of the basic direction of military development in the USSR." Thus, it makes peacetime policy decisions affecting doctrine and strategy, defense expenditures, weapons procurement, force structure, and the entire range of preparations necessary for the mobilization of the nation's resources for armed conflict. For example, in the July 1961 statute establishing civil defense, it was stated that the most important questions concerning civil defense are "studied by the USSR Defense Council."

15. The Defense Council probably operates through special groups or commissions, as well as through the existing ministerial structure under the Council of Ministers. Such groups would include the Military Industrial Commission with its responsibility for research and development and production of defense materiel and possibly a second, unidentified commission that was formed in 1976 which probably deals with civil defense-related questions affecting other ministerial entities. These two commissions appear to be essential elements in the development and execution of an integrated military-economic mobilization plan for which the Defense Council is responsible.

Second Departments

16. Present at all management levels in the national economy are Second Departments responsible for integrating plans for conversion to wartime operations with the necessary civil defense measures. Each sector of the economy and each enterprise has differing requirements for protecting personnel and facilities, depending on the importance of their functions and the need to continue their operations in wartime.

17. Integration of economic mobilization and civil defense planning begins at the ministerial level. Each

Second Department develops plans for the implementation of the ministry's wartime operations and production requirements in a nuclear environment (based on research done by the Scientific-Technical Commission of USSR Civil Defense). These measures range from shutdown of some plants and the development of redundant production facilities to the creation of wartime command and control facilities. The physical preparations and emergency procedures that are to be undertaken are specified in an integrated plan for wartime mobilization of each organization. These plans are coordinated with territorial civil defense staffs through the chiefs of civil defense of the ministry's enterprises. This process serves as a technical channel for modifying plans. The territorial civil defense staffs have the "operational" responsibility for civil defense planning.

USSR Civil Defense

18. A principal feature of Soviet civil defense planning is the direct involvement in peacetime of professionally trained military officers at all levels of the organization. The civil defense organization is responsible in peacetime for:

- Research into those aspects of nuclear conflict (potential target areas, nuclear weapons employment, and effects) that relate to the stability of the government and economy.
- Development of technical standards for the full range of protective measures, devices, and structures (surface and underground) designed for wartime use.
- Development and testing of training and indoctrination programs for civil defense staffs, services, and formations down to individual installations.
- Establishment of command, control, and communications facilities and procedures (including alert and warning systems) that are compatible with those of the armed forces.
- Preparation, revision, and coordination of plans for civil defense operations.

19. *Civil Defense Organization and Functions.* Overall policy guidance on civil defense matters originates with the Defense Council. Coordination of civil

defense activities with those of other components of the armed forces is the responsibility of the General Staff. The USSR Civil Defense Staff, headed by General of the Army Aleksandr Altunin, is organized to provide technical guidance and direction to subordinate elements in the same manner as other MOD staff elements provide guidance and direction to the branches of the Soviet armed forces. This similarity is reflected in the organizational structure of the USSR Civil Defense Staff, which includes political, personnel, foreign assistance, and combat training components. In addition, the civil defense organization has specialized functions that are the responsibility of numbered directorates such as the 10th (probably responsible for supervision of civil defense laboratories) and the 11th (probably responsible for engineering-technical measures). An indication of the importance of USSR Civil Defense is the presence of at least 26 general officers at USSR Civil Defense Headquarters. See figure II-4 for a chart of the organizational structure.

20. At the republic level, the chiefs of civil defense are the civilian chairmen of the republic councils of ministers. Military chiefs of staff retain functional responsibility for civil defense and their staff organizations. The chiefs of staff are general officers, many of whom are of the same ethnic origin as the majority of the population in the republic in which they serve. The organizational structure of the republic civil defense staff (composed of both civilian and active-duty military personnel) is patterned on that of the USSR Civil Defense Staff.

21. At levels below that of the republic, the civilian chairmen of executive committees are chiefs of civil defense for their jurisdictions. At the oblast level and in many cities, the executive committees are assisted by civil defense staffs headed by active-duty military officers. At lower levels, staffs can also be headed by reserve or retired military officers. The civil defense staffs operate with the same authority as departments of regional and local governments. Oblast staffs are correspondingly smaller than those at the republic level but follow similar organizational patterns. In some cases, oblast civil defense staffs are merged with the civil defense staffs of cities, as in the case of Leningrad.

22. The CPSU's authority over civil defense is exercised through the first secretaries of its territorial committees and through other party organizations. Within the civil defense structure, the party organization follows the pattern established by the MOD's Main Political Directorate for other components of the armed forces. There are deputies for political affairs at each level of the civil defense structure. Also, all military personnel in the civil defense organization who are party members must be affiliated with key party organizations.

23. Communications for civil defense staffs at the national, republic, and oblast levels are maintained by military communications centers. Personnel of these centers have been included in the totals of military civil defense personnel shown in table II-1. (See chapter III for further details on the civil defense communication system.)

24. At individual installations there are few active-duty military personnel among the many full-time employees charged with civil defense responsibilities. We have had reports, however, of active-duty officers serving in civil defense positions at industrial installations described as having "national importance."

25. *Manpower.* The number of full-time civil defense personnel in peacetime is determined by the USSR Council of Ministers. As stipulated in the 1961 statute, the three categories are:

- Active-duty military personnel and civilian employees of the Ministry of Defense assigned to territorial civil defense staffs, command posts, civil defense troop units, communications centers, chemical laboratories, and educational institutions.
- Civilian employees of councils of ministers or executive committees of local soviets (oblast, city, and rayon) who may supplement MOD personnel in staffing the territorial or local civil defense organizations, or at lower levels, may constitute the entire civil defense staff.
- Civilian employees of ministerial and territorial organizations who serve as full-time civil defense personnel for individual installations.

Figure II-4
Organizational Structure of National Civil Defense Staff

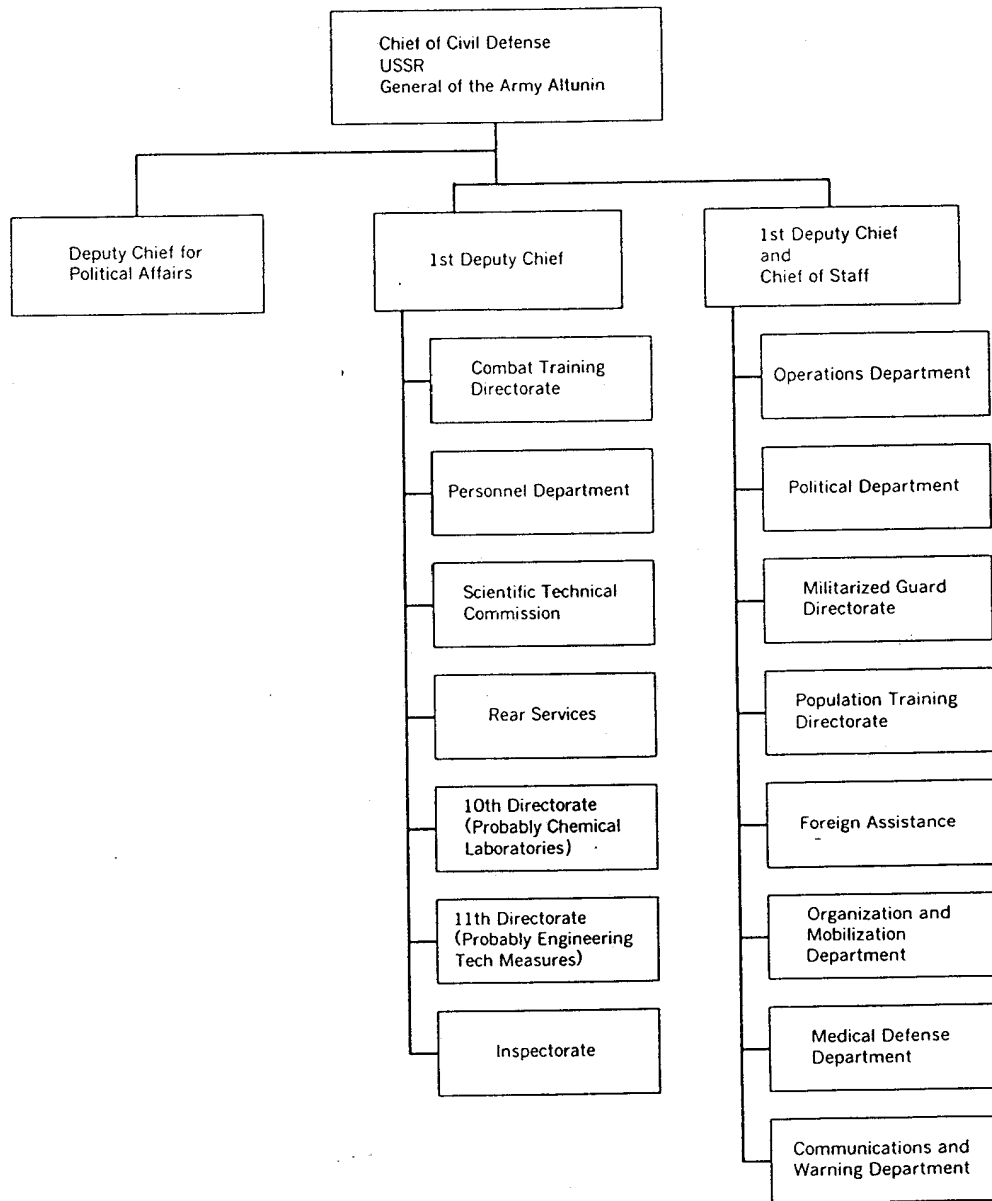


Table II-1
Estimated Full-Time Soviet
Civil Defense Personnel

	MOD Personnel ^a	Civilian	Total ^b	
			Current Estimate	Previous Estimate
Staff organizations	40,020	19,980	60,000	(41,170)
National	1,700		1,700	(300)
Republic	4,300		4,300	(2,700)
Oblast and below	34,020	19,980	54,000	(38,170)
Military components	40,980		40,980	(27,230)
Military district headquarters	1,200		1,200	(480)
Communications centers	5,230		5,230	(900)
Civil defense troop units	34,000		34,000	(25,000)
Military academy	550		550	(850)
Nonmilitary organizations	3,000	44,500	47,500	(47,500)
Factories		33,500	33,500	(33,500)
Scientific research institutes		2,700	2,700	(2,700)
Educational institutions	3,000	2,700	5,700	(5,700)
Cooperative and public organizations		2,100	2,100	(2,100)
Housing adminis- trations/public utilities		3,500	3,500	(3,500)
Total			148,480	(115,900)

^a In estimating numbers of MOD personnel assigned to civil defense, we have not attempted to distinguish between active-duty servicemen and civilian employees.

^b These manpower estimates represent an increase of 32,580 over those of the 1981 Memorandum to Holders, which are shown in parentheses. The increases result from reanalysis of existing data and acquisition of new information.

26. Current estimates for full-time personnel in the civil defense structure are given in table II-1. (See annex A for the methodology used in arriving at these figures.)

27. In the transition from peacetime to wartime, the professional qualifications of command and staff personnel responsible for civil defense are just as important as their numbers. Of the approximately 75 general officers in the civil defense structure, the

careers of those for whom we have biographic data reveal that the majority have had significant command and staff experience at military district or equivalent levels. Their educational backgrounds demonstrate that these civil defense generals are on a par with their peers in other elements of the armed forces in terms of advanced military education. Civil defense assignments do not appear to have diminished career advancement for general and field-grade officers.

28. Veterans of World War II no longer predominate among the active-duty officers and reserve officers in civil defense staff positions. An increasing number of active-duty personnel are graduates of the civil defense academy, other military schools, and the civil defense advanced officers courses. The quality of the field-grade officers is indicated by the number of active-duty colonels at national and republic levels promoted to general officer rank. Senior, full-time positions at lower levels of the territorial civil defense structure and at individual installations continue to be staffed by reserve officers and officer retirees. Modifications in administrative law covering dual compensation pay scales and pensions promulgated in 1979 by the USSR Civil Defense chief have encouraged reserve officers and retirees to accept these positions. Military commissariats are particularly effective in counseling qualified officers leaving active service to improve their financial prospects by joining civil defense components. Improvements in the quality of military personnel as well as other changes in personnel practices since 1971, particularly at the military district level, have contributed to a closer integration of civil defense and other elements of the Soviet war management system.

Military Districts

29. The 16 military districts in the Soviet Union are the territorial extension of the Ministry of Defense and are a key echelon in the wartime management structure. The main peacetime functions of the military district are supervising combat and political training of military units and making preparations for mobilization. The military district is also responsible for administering an extensive network of service and support organizations and facilities through its chief of rear services.

30. In each military district there is a deputy commander for civil defense who is responsible to the military district commander for all civil defense-related activities and control of military civil defense troops in the district. During the past decade we have identified deputy commanders for civil defense in 13 of the 16 military districts. The organization of the staff of the deputy commander for civil defense probably resembles that of the USSR Civil Defense. The civil defense directorates of the military districts develop and participate in training programs, monitor the readiness of territorial civil defense staffs, supervise services and civilian formations in their districts, and conduct exercises (often within the framework of more broadly based General Staff exercises). The manner in which the military district will function in wartime is treated in the next chapter.

Military Commissariats

31. A vital ingredient in Soviet plans for the transition to wartime management is the need to balance the manpower requirements of the armed forces with those of civil defense. The Soviets must make peacetime preparations to ensure adequate manning of key command posts. These preparations must also ensure the availability of motor vehicles and drivers on which civil defense would rely for implementation of many of its wartime plans. The military commissariats are the key to resolving the problems faced by Soviet civil defense in mobilizing manpower and other civilian resources.

32. Military commissariats are defined by the Soviets as organs of local military administration and are found at all levels of the territorial hierarchy. Although military commissariats are organized according to Soviet territorial-administrative subdivisions, they are responsible to the military district within which they are located. Their activities include supervising preinduction military training and indoctrination, issuing callups for military service and reserve training, and maintaining records on reservists and deferments. They also supervise registration of national economic resources suitable for meeting the needs of the military, conduct partial or general mobilization, and allocate civilian technical equipment and transport.

33. We believe that during the past decade the Soviets have done much to ensure that mobilization of manpower and other resources would take into consideration the needs of the civil defense structure. Intelligence sources have revealed growing cooperation between commissariats and civil defense staffs at key levels. Indeed, there is evidence that consideration of consolidation of the functions of these organizations began as early as 1978. [

] Reporting from other sources in the same time frame offers further indication of continuing Soviet interest in this problem. Administrative experiments were reportedly conducted in the Baltic MD in the late 1970s in which republic military commissariats and their subordinate organizations assumed responsibility for civil defense. The commissariats absorbed the civil defense staffs, and deputy commissars with special civil defense duties were appointed. Below this level, the staffs continued to function in the same manner at their regular offices. Marshal Ogarkov has also suggested closer coordination between civil defense and military commissariats, both in public writings and in articles in the military press.⁹

34. By fall 1982, it appeared that the question of consolidation of military commissariat and civil defense functions was still being deliberated as the General Staff sought the views of various military district commanders. Reportedly, after consulting with their deputy commanders for civil defense and others, they responded negatively. Senior officers of the USSR Civil Defense Staff were also opposed to the proposal. While the precise parameters of the consolidation proposal and the reasons for the opposition are not

⁹ For example, an article entitled "Our Goal Is the Same" in the November 1982 issue of *Voyennyye Znaniya* describes a conference held in Leningrad in the summer of 1982 attended by representatives of civil defense staffs, DOSAAF committees, and military commissariats of Leningrad city and oblast. The purpose of the conference was to prepare a plan for joint actions, including civil defense participation in preinduction military training courses.

known, the negative reception could have been caused by:

- Questions of organizational responsibilities, prestige, and personnel assignments, which inevitably occur in any major reorganization.
- Adverse reactions from heads of governments at republic and oblast levels on whose cooperation military districts must rely to ensure effective support of the civil defense program.

35. We believe, however, that some version of the consolidation plan will probably be adopted because of Marshal Ogarkov's consistent support for this concept. Outright rejection of the proposal would counter the long-term trends of integrating plans for mobilization

and civil defense and ensuring maximum cooperation between the two organizations. We cannot, however, predict the extent and form of this consolidation. We expect, however, based on the experiments in the Baltic republics, that this would have little noticeable impact on the territorial civil defense structure. As in the case of other war preparedness programs, the military commissariats would exercise behind-the-scenes control. In sum, merging these two organizations would enhance the ability of the military district to manage mobilization and meet its war management responsibilities.⁴

⁴ See DIA Defense Intelligence Report OOB-2680-127-82 SAO *Soviet Military Commissariats: Organization and Capabilities*, February 1982, for more information on the Soviet military commissariat system.

CHAPTER III

WARTIME MANAGEMENT OPERATIONS

1. Although there are some gaps in our information on the Soviet wartime management structure, particularly with regard to some components of the central politicomilitary apparatus, we are still able to assess the requirements of individual components for leadership protection and relocation facilities. We will concentrate on those organizations concerned with the defense of the homeland and on programs to ensure the continuity of rear services activities and the national economy. These functions are all vital to the support of military operations. We also will address requirements for leadership protection of the headquarters of each of the branches of the armed forces.

A. Functions and Requirements

National Level

2. *Politburo and Central Committee CPSU.* We believe the highest organ of decisionmaking and control in wartime would be a modified Defense Council whose members would be drawn from the highest levels of the party and government. The strategic direction of the armed forces would be the responsibility of the "Stavka" of the Supreme High Command (VGK). The Politburo would probably continue to function, but, because much of its membership would be on the Defense Council, we cannot determine what the separation of functions would be between the Politburo and the Defense Council. During World War II, the Politburo and the Central Committee continued to meet periodically even though virtually all of the members of these top party entities were involved in the war effort and had assumed one or more additional responsibilities, including membership in the State Defense Committee. As a result, key decisions were normally taken at joint sessions of the Politburo, the State Defense Committee, and the Stavka. We are also uncertain about the precise war-

time role of the Secretariat of the Central Committee and its functional departments. This group has a force of some 2,000 professional and staff personnel whose expertise would be vital to Politburo and Defense Council activities. Although the Central Committee possesses an exurban relocation facility near Moscow, we do not know which wartime functions will be carried out there.

3. *Defense Council or State Defense Committee (GKO).* Soviet writings continue to emphasize the role of the State Defense Committee in World War II. We believe that a new version of the GKO would be formed, probably around the existing Defense Council, with expanded membership and whatever additional staff committee support might be required. However, we do not believe that references to the GKO imply that an entirely new organization would be created. The present Defense Council already has available the legal basis and organizational resources needed for deciding on and implementing strategic policies and plans during periods of crises. The Defense Council would be able to provide centralized leadership and streamlined war management procedures prior to hostilities by planning in advance for utilization of the resources of the Main Operations Directorate of the General Staff and existing commissions on defense industries and civil defense, and by working through key ministerial organizations.

4. At some point in the transition to wartime operations, the Defense Council would begin issuing directives in its own name in place of the present practice of having joint resolutions issued by the Central Committee CPSU and Council of Ministers. Procedures for making this transition and for its timing probably have already been established and linked to the readiness levels of the Soviet armed forces. If the conflict did not go as expected, or if it became

protracted, Defense Council operations would almost certainly be modified as circumstances required. In some circumstances authority could be decentralized.

5. *Stavka of the Supreme High Command (VCK)*. As executive organ of the Supreme High Command, the Stavka provides strategic direction of the armed forces. The head of the Stavka would be both the Supreme Commander in Chief and also Chairman of the Defense Council. We are not certain which of the nation's senior political and military leaders would be included in the Stavka. It could number some or all of the members of the peacetime Ministry of Defense collegium—the Minister of Defense, the three first deputy ministers including the Chief of the General Staff, the chiefs of the five military services, the deputy ministers for rear services and civil defense, and the Chief of the Main Political Directorate. Decisions on the actual membership could be modified as the situation required. Included in the Supreme High Command structure and subordinate to the Stavka are the General Staff and key directorates of the Ministry of Defense.

6. The principal source of staff support for the Stavka would come from the Main Operations Directorate of the General Staff. The Stavka would probably be colocated with the Main Operations Directorate. Other General Staff components with key wartime roles would operate from separate command posts. On the basis of our analysis of the functions of the General Staff and the Ministry of Defense, we have judged which of their subordinate elements would require command post facilities for operations in wartime (see figure III-1).

7. *Force Headquarters*. The headquarters of the five branches of the armed forces would require at least one major exurban command post and relocation facility. Within the headquarters of the individual branches, there are specialized elements that would require additional exurban relocation facilities in wartime.

8. *Rear Services*. The chief of the armed forces rear services would almost certainly be a member of the Stavka and be required to coordinate closely with the Defense Council and party-state components. Rear

services support to theater forces and control of the extensive network of rear services units, depots, transportation systems, and other facilities would be accomplished from central rear services command post facilities in the Moscow area. Given the scope of the rear services responsibilities, it is likely that subordinate directorates—such as the Central Military Transportation Directorate, Central Food Directorate, and Central Military Medical Directorate—also would require command posts. These facilities probably would be located in the Moscow area as part of the overall General Staff command post network. We have no evidence to indicate whether these subordinate directorates would be colocated with the rear services chief or be separately housed in their own hardened command posts. Figure III-2 describes those rear services directorates whose wartime responsibilities will require them to be included in the command post system.

9. *USSR Civil Defense*. We believe that in wartime the national headquarters of USSR Civil Defense will function in the same manner as other service components of the armed forces. It will provide staff support to the Stavka and the General Staff and technical staff supervision to territorial civil defense organizations and the civil defense directorates of the military districts. Operational command of civil defense organizations in the field, like elements of the Soviet armed forces, would be exercised by the Stavka and the General Staff through the commanders of military districts. The Chief of USSR Civil Defense would probably be a member of the Defense Council and the Stavka. Specialists in postattack repair and recovery operations of the USSR Civil Defense organization would probably be included in teams of General Staff representatives assigned to individual military districts. The USSR Civil Defense organization will require at least two exurban command posts in the Moscow area and may also need protected facilities in exurban areas for the computers of its central automated information system. We believe USSR Civil Defense will utilize this information system to determine repair and restoration requirements.

10. *Ministerial Organizations*. In wartime, each all-union and union republic minister will act as chief of civil defense of the ministry, assisted by a chief of

Figure III- 1
Ministry of Defense/General Staff Components
Requiring Wartime Relocation Facilities

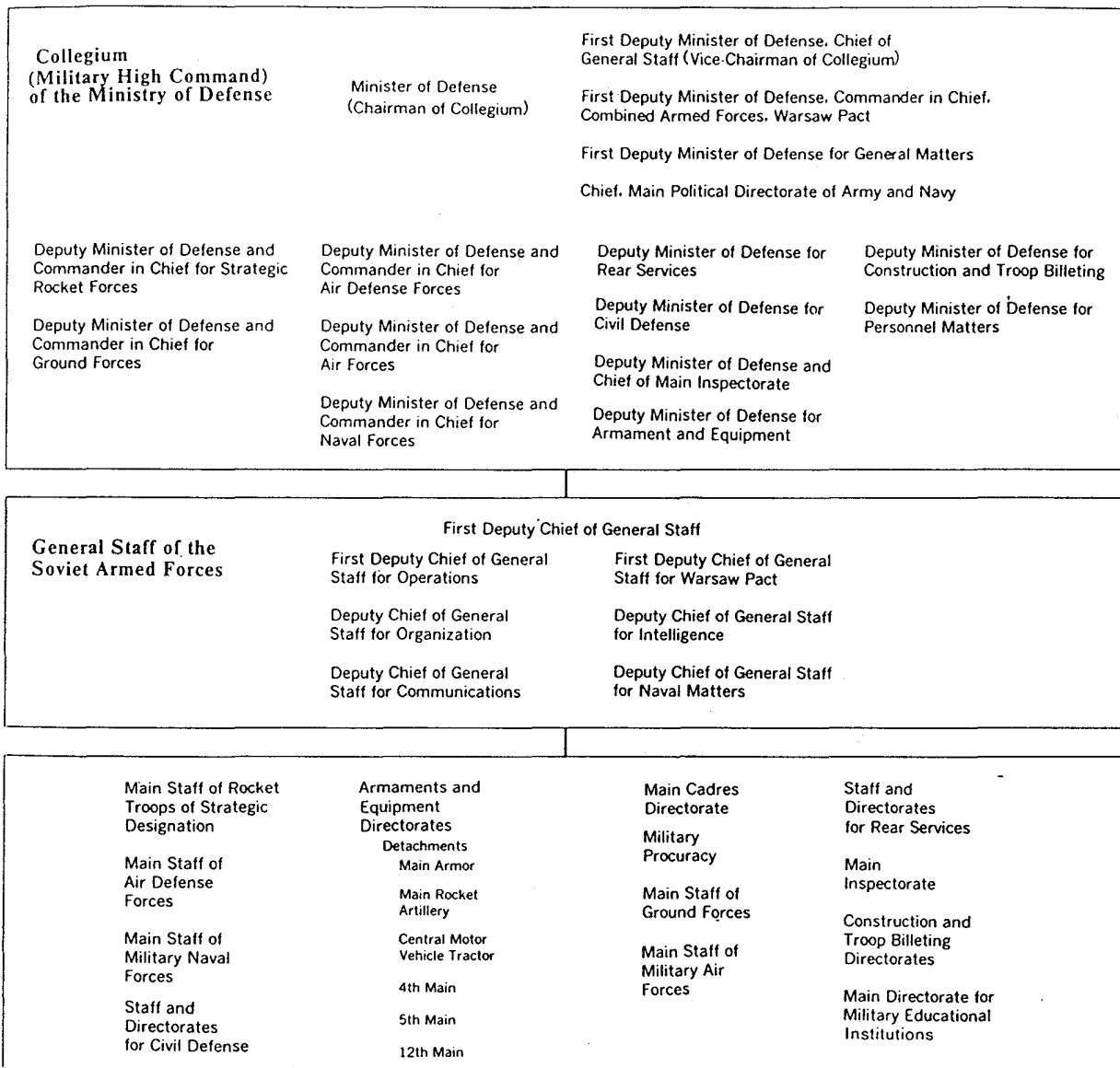
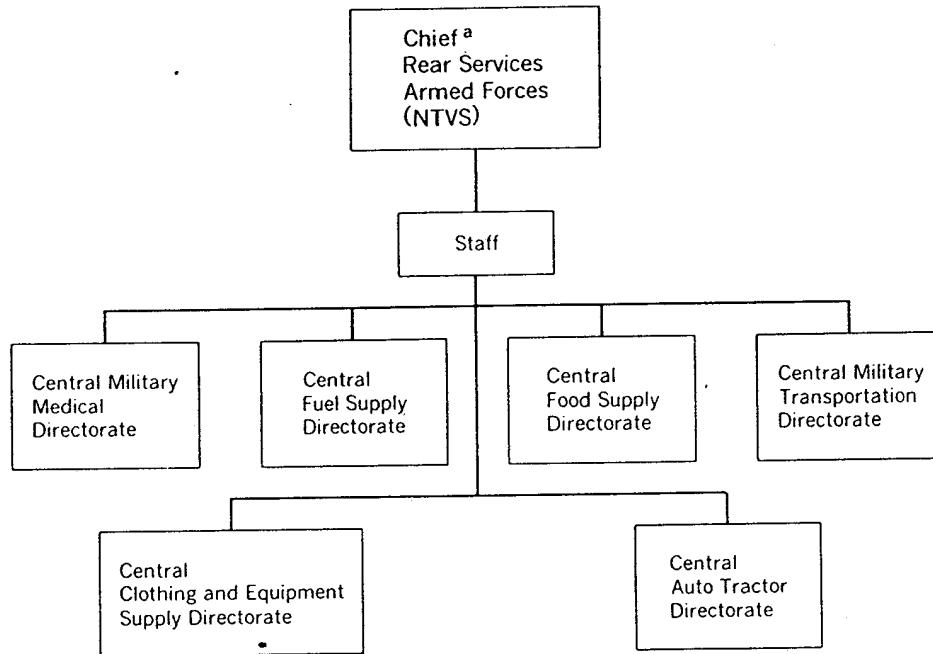


Figure III-2
Rear Services Components Included in General Staff Command,
Control, and Communication System



^a Other Main/Central MOD directorates/services with significant rear services responsibilities will maintain close liaison with the NTVS.

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staff. The wartime responsibilities of certain ministries (primarily support and service ministries) were initially specified in the 1961 Civil Defense Statute. Examples of these ministries are contained in table III-1. The civil defense directives used in preparing table III-1 have been modified since 1961, but there is evidence that the responsibilities of the ministries for wartime management accord generally with those assigned them under the original statute.

11. In addition, we have evidence of wartime plans for other service ministries and associated organiza-

tions that were not specifically cited in the 1961 statute. These include the State Committee for Material and Technical Supply, the Ministry of Power and Electrification, and TASS. The wartime operations of industrial ministries, including those responsible for defense industries, are determined by the production requirements of their respective economic mobilization plans. Details are available on the plans and facilities of some defense industries and the ministries responsible for the electronics, automotive, chemical, coal, and construction materials industries.

Table III-1
Civil Defense Roles for Selected Support
and Service Ministries

Ministry of Agriculture ^a	Direct measures for the protection of animals and plant life.
Ministry of Civil Aviation	Ensure constant readiness of air transport and provide transport and aerial reconnaissance of centers of destruction in accordance with civil defense plans.
Ministry of Communications	Ensure the dependable functioning of means of communications and organize their centralized use. See chapter IV.
Ministry of Gas Industry	Ensure gas supply system works reliably in wartime and provide for emergency reconstruction work on damaged gas mains.
Ministry of Health ^a	Put into effect civil defense measures for medical care under conditions of nuclear war. Create reserves of medical supplies and medicines.
Ministry of Internal Affairs	Put into effect measures for the preservation of order and security, for extinguishing conflagrations, and for keeping track of losses among the population.
Ministry of Maritime Fleet	Ensure the reliability of the maritime transport systems and their installations.
State Committee for Material Reserves	Organize measures for protection of foodstuffs, forage, and sources of water supply at subordinate bases and depots; disperse storage of State foodstuffs and forage reserves. Responsible for other areas as well. Through its Eighth Directorate, allocates wartime requirements such as a variety of raw materials and semifinished goods.
State Planning Committee (Gosplan)	Coordinate the assignment of urban areas to civil defense categories in accordance with their administrative-political, economic, and defensive significance; work out together with MOD and USSR Civil Defense basic data for carrying out measures to reduce losses from nuclear attack. Part of these responsibilities may rest with the military-economic department of Gosplan, which works directly with the General Staff on economic mobilization problems. Also, Gosplan is currently providing its regional information centers down to oblast level with hardened underground structures for personnel and computer operations (see figure III-3).
Ministry of Procurement	Organize dispersal of grain stocks, their protection against nuclear effects, and methods for their decontamination.
Ministry of Railways	Ensure the reliability of the rail transport systems and their installations.
State Committee for Television and Radio	Organize the broadcasting of special civil defense programs and signals.
Ministry of Trade	Provide food supplies, drinking water, and basic necessities to the population.

^a The Ministry of Agriculture and the Ministry of Health in their civil defense modes in wartime will also function as the Service of Animal and Plant Protection and Medical Service, respectively, of USSR Civil Defense. Each minister, in addition to his role as chief of civil defense of his own ministry, serves as the chief of the service provided by the Ministry and in this capacity becomes responsible to the Chief, USSR Civil Defense.

12. Individual ministries with wartime functions have been directed by joint resolutions of the Central Committee CPSU and the USSR Council of Ministers to establish exurban relocation facilities that would enable them to continue to function. Party and government bodies at lower levels also issue directives based on these resolutions. For example, a directive in December 1980 implementing a joint resolution called for the RSFSR Ministry of the Food Industry to establish a relocation facility at least 180 kilometers from Moscow. Formulation of such joint resolutions and directives involves Soviet civil defense staffs, which set standards for such facilities. The Military Industrial Commission, which provides tasking for individual ministries concerning defense and defense-related industries, is also involved in this process. Exurban relocation complexes will allow the ministries to:

- Supervise subordinate enterprises that continue to function in a dispersed or "special operating mode"¹ through the period of threat up to the moment of actual attack.
- Reallocate surviving personnel and equipment in a manner that will permit continuing operations at reduced levels following a nuclear attack.
- Provide technical guidance necessary for the repair and restoration of selected installations.

13. Several ministries possess more than one exurban command post. In some cases these facilities are located in the Moscow area at distances of 25 to 155 kilometers from the capital. Other ministries have reportedly chosen to locate alternate facilities several

¹ The term "special operating mode or conditions" (*osobyi rezhim raboty*) is used by the Soviets to characterize the transition of production and service organizations to working arrangements specified in their wartime civil defense plans. The term usually refers to circumstances in which economic enterprises operate on a two-shift basis. Under this system, an on-duty shift will remain at the urban installation while off-duty shifts, the facility's administration staff, and, in some cases, families will be grouped at an exurban dispersal site selected for the facility in advance. During the threatening period (when there is a high risk of a nuclear attack) shifts will commute from the dispersal point to the urban installation and return. Normally, there will be sufficient shelter space at the urban installation to accommodate the on-duty shift.

hundred kilometers from Moscow. It is also expected that some leaders and technical staff members of ministries in Moscow will be assigned in wartime to subordinate organizations of the same ministry elsewhere in the country, thus permitting decentralized functioning if this becomes necessary.

14. Regardless of the relocation complex from which a ministry operates in wartime, it retains technical responsibility for its special function and for the echelons subordinate to the ministry in peacetime. Distinct from technical responsibility, operational responsibility to carry out civil defense plans is vested in military district and territorial civil defense organizations. Technical guidance and direction from ministries are incorporated in the civil defense operations plan of territorial civil defense organizations. Movement of a ministry from administrative offices in Moscow to its relocation sites would be accomplished under the operational control of the civil defense staffs of Moscow city and oblast. Relocation to more distant points would involve the civil defense staff in the area concerned.

15. *Ministry of Internal Affairs (MVD)*. Regulating public order (as opposed to state security) is the responsibility of the union republic Ministry of Internal Affairs, which operates through the civil defense structure during wartime (see table III-1). At all territorial levels, the senior MVD official serves as the chief of the civil defense service of public order and in wartime would command the forces that make up the service. The service draws on the regular militia (local police forces) reinforced, as required, by local regiments of the MVD internal troops, the civil defense paramilitary formations of public order, and the people's volunteers. In peacetime, MVD internal troops are directly subordinate to the main administration for internal troops of the USSR Ministry of Internal Affairs. In wartime, however, control of these troops will be assumed by the VGK, which would make requisite elements available to military districts to support territorial civil defense services for public order. Other elements for which the Ministry of Internal Affairs is responsible are subordinated in peacetime to republic and territorial government authorities. In wartime the MVD firefighting directorates would form the civil defense firefighting services,

the state auto inspectorate would be incorporated in the civil defense material and technical supply service, and the functions of the MVD internal passport control system would be closely linked to the operations of civil defense evacuation commissions.

16. The USSR Ministry of Internal Affairs in Moscow would require one or more exurban command posts. [

Other components of the MVD probably also need their own exurban command posts. For functions such as the internal passport control system, exurban facilities would probably include computerized central files [This approach also would facilitate the MVD's responsibility for maintaining records of casualties among the civilian population nationwide.

17. *Committee for State Security (KGB)*. Unlike the MVD, which would for the most part operate within the framework of the civil defense structure, we believe the KGB would follow peacetime practices and function independently of republic and territorial authorities in discharging its responsibilities. Functions of the KGB include intelligence and warning, internal security, and support functions related to war management. Some of these functions are unique to the KGB; others, such as communications, parallel those of ministries. Our conclusions about how individual KGB components will function in wartime and our estimates of KGB relocation requirements are based on our understanding of how the organization operates in peacetime. The KGB operates a highly centralized command structure from its Moscow headquarters down to departments at the lowest organizational level, resembling the management pattern of all-union ministries.

18. The First Main Directorate of the KGB collects and analyzes foreign intelligence in the political, military, economic, and scientific areas. We believe the First Main Directorate will require exurban command and control facilities in addition to those provided at its headquarters just inside the Moscow Ring Road []

19. The Second Main Directorate is charged with the detection and suppression of foreign espionage,

sabotage, and diversion within the USSR. This directorate also deals with internal political dissent. The directorate would probably extend its coverage of many of the same groups and individuals suspect in peacetime. The Second Main Directorate shares responsibility for domestic control with the Fifth Directorate of the KGB, which was established to control religious, literary, and ethnic dissent. These directorates may share wartime relocation facilities.

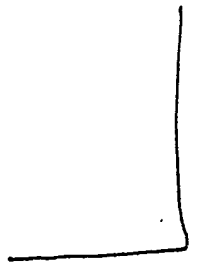
20. The Third Directorate is responsible for counterintelligence and political security in the armed forces and in troop units of the MVD and KGB. At present, the headquarters of the Third Directorate is reportedly located in the main KGB buildings. We believe this directorate would require dedicated relocation facilities to accommodate the wartime expansion of responsibilities and staff. It is probable that some subordinate elements—special directorates and departments—of the Third Directorate would utilize command posts and relocation facilities of the military units with which they are associated.

21. The Eighth Main Directorate is responsible for internal KGB communications, military and civil communications security, and for special communications support provided by its Directorate of Government Communications (UPS) to the civilian and military leadership (see chapter V, section C). Most of its offices are in a newly constructed complex in the Kuntsevo area on the outskirts of Moscow; however, the administrative headquarters of UPS has remained in downtown Moscow. []

[] we believe that the Eighth Main Directorate will require dedicated relocation facilities. The 16th Directorate, formerly part of the Eighth Main Directorate, is responsible for SIGINT collection operations which contribute to Soviet strategic warning capabilities. Its headquarters is in Moscow, and it would also require dedicated relocation sites. Both the Eighth Main and 16th Directorates might utilize existing exurban communications and intercept complexes.

22. The Ninth Directorate provides protection to Politburo members and Central Committee Secretaries. This involves normal bodyguard functions, responsibility for the physical security of all premises and conveyances occupied by these leaders, and ensuring

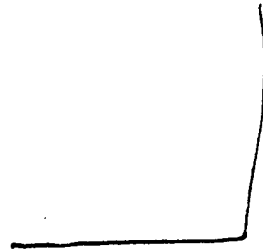
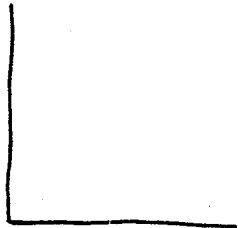
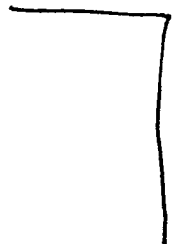
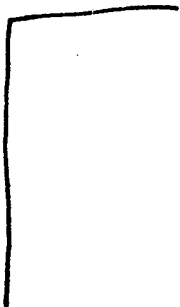
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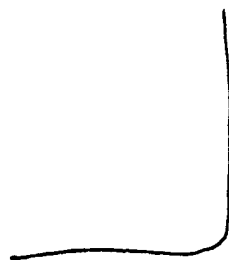
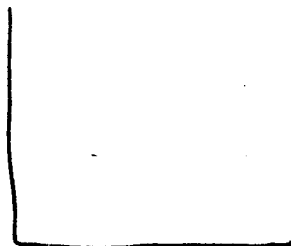
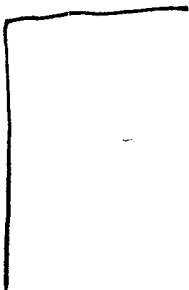


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the reliability of all individuals employed in any support capacity.

23. As of 1977, a 15th Directorate was formed. It absorbed responsibility for physical security of sensitive government installations from the Ninth Directorate. The exact delineation of the functions of these two directorates is not known, but wartime operating conditions would clearly place increased demands on both of them. The 15th Directorate is reportedly responsible for the security of relocation facilities dedicated to the National Command Authority. The Ninth and the 15th Directorates operate in peacetime from a newly constructed complex in Moscow [

] like other KGB organizations, the Ninth and 15th Directorates would also require exurban command posts. In addition, several detachments and mobile units would be needed to provide security at relocation sites and mobile command posts for key leaders. [

[

24. The Main Directorate of Border Troops is responsible for the security of Soviet land, sea, and air frontiers, and has its peacetime offices in the KGB headquarters in Moscow. In wartime, these forces would come under the operational control of the VVK and would be available to military districts for public security duties and for assignment to theater forces. Despite shifts in operational control, the Directorate would remain responsible for the administration of KGB border guard troops and would thus require a dedicated relocation facility.

25. Overall management of the KGB is accomplished through the Offices of the Chairman and the Collegium which are located on Dzerzhinskiy Square in Moscow. The headquarters contains the operational registry, the central archives, and other administrative and technical components. This "central apparatus" would certainly require extensive exurban relocation facilities. These would be in addition to the KGB facilities at the exurban relocation sites of the Defense Council and the Stavka and General Staff. The internal security directorates are presently collocated with

the KGB central apparatus. It is possible that these directorates would also occupy the same relocation facilities as the KGB leadership. Furthermore, in wartime significant numbers of KGB officials from the central apparatus and internal security directorates might be posted to subordinate KGB organizations in outlying areas where destruction caused by nuclear war could pose problems of political control.

Territorial Levels

26. *Military Districts.* The military district serves as the principal territorial component in the Soviet wartime management structure. Since World War II, the process for the transition of military districts from peacetime to wartime operations has undergone several modifications. Soviet military planners initially assumed that control of field forces located in military districts would be passed to the wartime fronts. After field forces departed the military districts where they were garrisoned, military district command and administrative structures would remain to continue military mobilization, training, and logistic support.² It became apparent, however, that, if military districts were to fulfill these responsibilities in a nuclear environment, their capabilities to deal with unprecedented levels of destruction in rear areas had to be improved. The assumption by MOD of full responsibility for civil defense in 1971 signaled the beginning of major changes in military district preparations for its wartime role.

27. After military districts assumed responsibility for civil defense operations in wartime, a number of improvements were made in civil defense planning and training. Innovations were introduced into the oblast-level civil defense structure, and efforts were made to integrate civil defense readiness stages with those of the armed forces (see paragraph 36 on the development of civil defense operational axes). New garrison regulations specified responsibilities of garrison commanders and their staffs for development of improved coordination with civil defense organizations, particularly with regard to the functioning of the

² Soviet doctrine envisages the creation of one or more armies and fronts from the resources of border military districts. These fronts would be subordinated to high commands of forces responsible for the conduct of military operations in a theater or directly to the General Staff in the absence of a high command.

"local defense" elements of the garrisons.³ These measures reflected growing awareness on the part of Soviet planners that implementation of civil defense plans in a crisis could adversely affect deployment of military units from garrison areas and achievement of increased levels of readiness of the armed forces. Soviet planners also came to appreciate the assistance civil defense formations could give armed forces units in coping with nuclear attacks on garrison areas, particularly in the initial stages of conflict.

28. In the late 1970s, however, the Soviet General Staff took several measures that suggested that it was

³ Every garrison in the USSR is required to establish a local defense (*mestnaya oborona*) organization at each installation. Analogous to civil defense at civilian installations, it is organized to protect personnel from nuclear effects, limit damage to facilities and equipment, and permit resumption of operations through rapid repair and recovery measures.

still not satisfied with arrangements for the transition of the military districts to wartime status:

- Plans were prepared for formal activation of "wartime military districts" responsible for directing the wartime activities of the district and for coordinating those activities with wartime fronts located in the district area. Training programs were initiated to acquaint military district staffs with this new wartime structure and its functions. [

]

— Closer integration of civil defense territorial organizations into the wartime military command structure was accomplished. [

— Coordination between civil defense staffs and military commissariats at the oblast level was strengthened [

— In peripheral areas of the USSR, command of assets belonging to the former PVO Strany (Air Defense of the Homeland) has passed to commanders of military districts. This change would facilitate air defense of the USSR with both tactical and former PVO air defense elements.⁴ Although we do not yet understand the full dimensions of this change, we believe air defense of the USSR is still controlled from Moscow through the air defense zonal headquarters as in the past. In any case, this change should improve coordination of civil defense and air defense elements on matters such as warning and alert and poststrike damage reporting. Local civil defense staffs, services, and formations charged with reconnoitering and operating in affected areas are trained to make contributions to the poststrike damage assessment.

29. The effect of these measures has been to enhance Soviet capabilities to ease the transition to wartime and to limit disruption of the rear in a nuclear war. The territorial management structure is well suited for centralized control from Moscow through General Staff communications channels. However, if damage from nuclear attacks should interrupt this control, the

military district would have the means and, we believe, the authority for decentralized operations. In wartime, the military council of the military district would in effect be a microcosm of the combined politicomilitary authority of similar bodies at national levels. Indeed, we would expect that the political member of the wartime military council at the military district level would be a senior party official, possibly with Politburo status.⁵ In addition, the ability of the military district to function on a decentralized basis would be enhanced by the presence of General Staff representatives and specialists.

30. We believe the wartime military district commander would operate from a command post at an exurban facility and would probably designate an alternate command post. In addition, the wartime military district will require at least two more exurban command posts, one to accommodate the deputy commander for civil defense, his staff, and probably representatives from the military district's Organization-Mobilization Directorate, to which military commissariats are subordinate. The other would probably accommodate rear service components of the wartime military district.⁶

31. *Union Republics.* The republics' wartime role reflects Soviet emphasis on incorporating existing territorial-administrative organizations into the war management structure. The wartime missions of union republics include:

— Coping with the centrifugal tendencies among nationalities that may arise from nuclear war.

⁴ The military councils of the military districts in peacetime are collegial bodies that provide for participation by party secretaries at union republic and oblast levels in the activities of the military district and offer a forum for dealing with issues of common concern. In wartime, oblast first secretaries would continue to be responsible for directing oblast activities including the operations of various components of the mobilized civil defense organization. The military council, on the other hand, will function at the military district command post. Its political member, probably with military rank, will be a senior party official who may or may not be selected from among the first secretaries of party committees serving in an area of responsibility of the military district. This member would attend all sessions of the council. We believe that any of the party first secretaries of the various oblasts in a military district could be summoned to participate in military district military council meetings of specific interest.

- Directing both economic and social activities in the republic according to guidelines established by national authorities.
- Providing for funding, staffing, and equipping the staffs, services,⁷ and formations of civil defense at territorial levels (oblast, city, and rayon) and at individual installations.

32. In wartime, control of all territorial civil defense will be exercised by the commanders of the military district and their military councils rather than by the republic civil defense staffs. The territorial limits of the 16 military districts in the USSR do not correspond to the boundaries of the union republics (with the sole exception of the Belorussian SSR). Thus, operational control by the military districts is exercised directly through the chiefs of civil defense of oblasts. The boundaries of oblasts in all republics coincide with boundaries of military districts. All but two of the republics are entirely contained within the boundaries of individual military districts (see figure III-7 for a display of the geographic relationships between republics and military districts).⁸

33. The RSFSR and the Ukrainian SSR present special problems because there are several military districts located within the borders of these republics. The Soviets have handled this problem by establishing civil defense organizations between the republics and the oblasts. The RSFSR has created eight civil defense zones whose headquarters are located in the same cities as the headquarters of the military districts. The boundaries of these zones correspond to the eight military districts in the RSFSR. The Ukrainian SSR, which has three military districts within its borders, apparently uses a zonal system similar to that of the RSFSR.

⁷ The concept of the civil defense service (*sluzhba*) derives from Soviet military usage in which services provide a centralized framework for controlling specialized support functions at all levels of the armed forces as in the case of the clothing and equipment supply service. The civil defense services, established by civil defense statute, would provide technical support to corresponding territorial services created from those ministerial entities whose peacetime functions match the wartime requirements of a specific service (see table III-2).

⁸ In republics without subordinate oblasts, military districts exercise operational control of civil defense organizations directly through republic civil defense staffs. For example, the civil defense staff of the Baltic Military District exercises operational control through the Baltic republics of Lithuania, Latvia, and Estonia.

34. Republic organizations would require extensive exurban relocation facilities, even though in most cases military districts would exercise operational control directly through oblast civil defense staffs. Continuity of the republic structure and its leadership in the postwar period is considered vital by the Soviets. In addition, republic ministries will retain technical responsibility for many economic and social functions. Each republic civil defense staff would require at least two relocation facilities for its top party and state leadership, one of which would be manned permanently by civil defense military personnel. In addition, we believe that each republic ministry with wartime responsibilities will require at least one relocation complex for its own use. These ministries will be required to provide the resources from which the various civil defense services will be formed. Table III-2 shows support of civil defense services by selected ministries and state committees.

35. *Oblast and Lower Levels.* Integration of the military and civilian aspects of war management is greatest at the oblast level. Oblast party and government leaders in their civil defense roles and assisted by their civil defense staffs and services would direct dispersal, evacuation, and poststrike recovery activities and ensure implementation of economic mobilization plans. Through prearranged coordination with local garrisons and military commissariats, the oblast civil defense staff would be in a position to respond rapidly to adjustments in plans ordered by the military district. The oblast civil defense staffs would have assigned representatives either from the military district or from the General Staff, depending on the strategic importance of the oblast. The presence of these representatives would facilitate acquiring resources from locations outside the oblast to augment local efforts. To meet these wartime responsibilities, oblast civil defense staffs would each require at least one exurban command post facility.

36. The oblast civil defense staff exercises its authority through the subordinate civil defense staffs of cities and rural rayons. In oblasts containing large cities with several city rayons, the oblast civil defense staff would designate commanders of "operational axes." These commanders would control both city and rural rayon civil defense staffs who deploy in sectors along the routes used for the dispersal of key workers, evacuation of the urban population, and movement of

**Table III-2
Ministerial Support of Civil Defense Services**

Probable Supporting Ministry/State Committee	Commu- nications	Maintaining Fire- Public Order fighting	Medical	Engineering	Communal- Technical	Animal/ Plant Life Protection	Transport	Power	Provisions and Supplies	Technical	Material- Technical Supply
Agriculture						X			X		
Communications	X										
Construction				X							X
Consumer Services					X						
Fish Industry						X			X		
Food Industry						X			X		
Forestry						X					
Health			X			X			X		X
Highway Construction and Maintenance				X			X		X		X
Internal Affairs (MVD)		X	X								
Meat/Dairy Industry						X			X		
Motor Transport							X			X	
Municipal Services		X	X	X	X		X			X	
Power/Electrification								X			
Procurement									X		
River Fleet Administration							X				
State Construction Affairs				X							X
State Material and Technical Supply				X							X
State Planning				X	X		X	X	X	X	X
State Security (KGB)		X									
State Supply and Sale of Petroleum Products				X			X		X		X
State Television and Radio Broadcasting	X										
Trade									X		X

Figure III-7
Territorial Limits of Union Republics and Military Districts in the Soviet Union



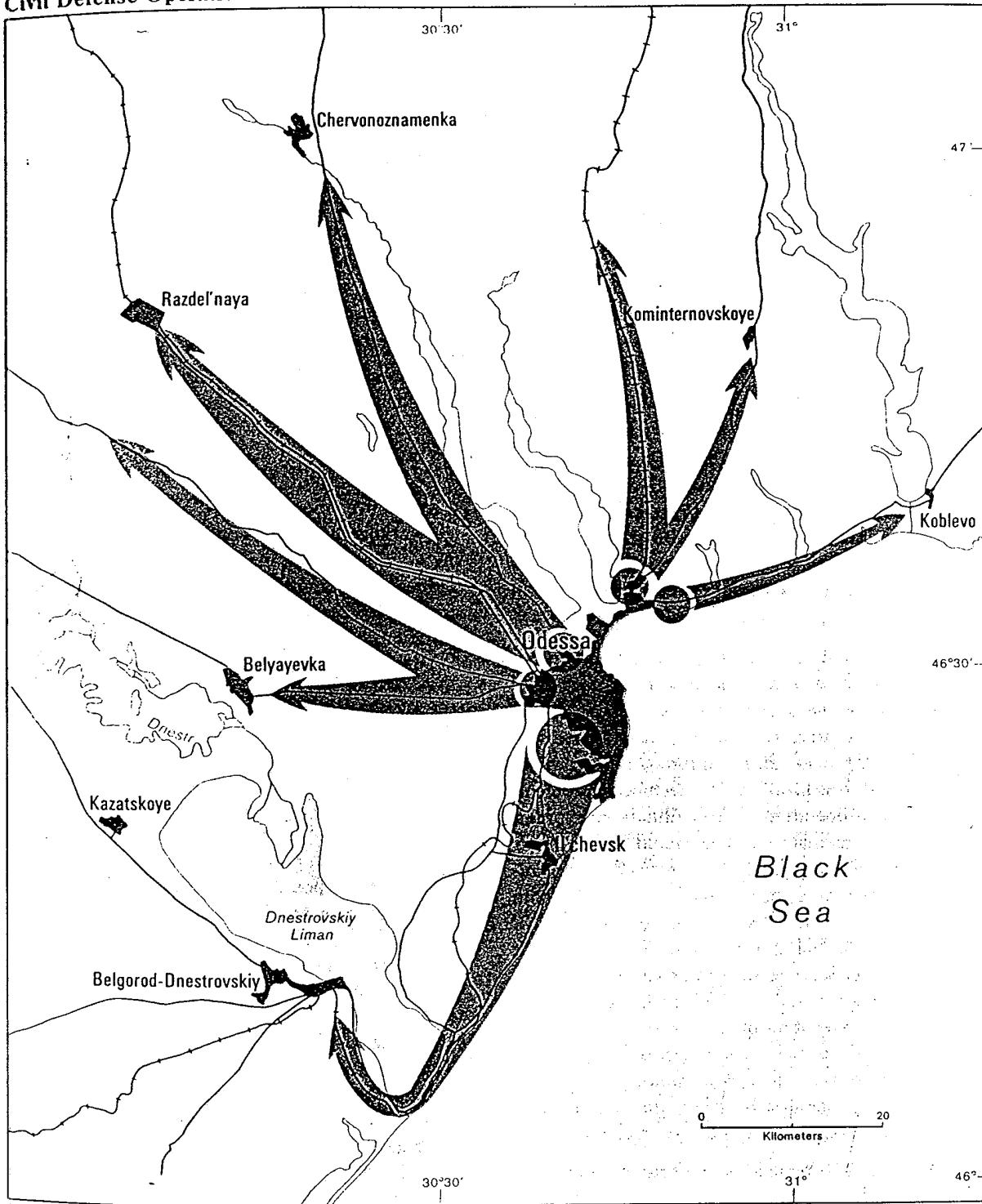
reserve and repair units to damaged urban areas in the poststrike period. Operational axes would also include the rail and road networks and hosting areas for evacuees from urban areas (see figure III-8). The civil defense staffs of cities, city rayons, and operational axes would require exurban command posts. Exurban facilities used in exercises generally have not been permanent structures, and the command posts were frequently shifted. Sources familiar with these operations reported that in some instances command posts of operational axes would be located in hardened, protective structures. [

] sources report the construction of hardened shelters at dispersal sites for

key workers. If so, these shelters could also serve as exurban command posts for operational axis commanders, their staffs, and service chiefs.

37. Many individual installations and enterprises would cease operations in urban areas and would be evacuated to exurban areas. Evacuated civil defense formations from these installations would be under control of the local territorial staffs. These formations would construct emergency protective structures and support postattack recovery operations. Enterprises whose industrial production or services are judged to be vital under Soviet economic mobilization plans would continue to function under special operating conditions. For wartime management of these enterprises, command posts are provided at their urban locations and at exurban dispersal facilities. We believe

Figure III-8
Civil Defense Operational Axes in Odessa Oblast



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most of these enterprises have hardened shelters for protection of the key work force on duty at the time of a nuclear attack. Urban command posts normally operate from these hardened shelters but may also be located in specially constructed underground facilities. Managers of the enterprises would receive guidance from ministerial representatives on territorial staffs in matters related to their economic mobilization plans. In wartime, command posts down to the enterprise level would facilitate decentralization of the management of key sectors of the economy and the distribution of goods and services. This provides ministerial entities with the capability for decentralized functioning of key sectors in periods of great disruption.

Other Territorial Organizations

38. There are some territorial organizations—largely service oriented and subordinated to all-union or union republic ministries—whose geographic areas of responsibility do not coincide with those of military districts, republics, or oblasts. These key regional organizations are vital to the support of military and civil defense operations with services such as transportation, power, communications, and control of food and material reserves.

39. The responsible ministries have created regional organizations whose geographic areas of responsibility are dictated by the special operating needs of the ministry. In wartime, the ministry headquarters in Moscow would provide direction through the intermediate regional organizations on technical problems associated with operations of subordinate enterprises. All of the intermediate echelons would require their own exurban relocation facilities. Intermediate organizations and their enterprises would be responsible both to their parent ministries and to the oblast civil defense staffs. The oblast staff would try to ensure that requirements for services such as power, communications, transportation, and control of reserves, which are essential to the execution of the oblast's civil defense program, would be met. The enterprises would provide the service using their own trained civil defense formations supplemented by labor drawn from non-priority installations located in the same oblast.

40. Having coordinated these plans in peacetime, the military district is in a position to direct their

implementation and modification in wartime regardless of the location and geographic responsibilities of the organization providing the service. These overlapping lines of authority and complex functional relationships are present throughout the Soviet peacetime and wartime management structure in both military and civilian organizations. They reflect the prevalence of the Soviet management concept of dual subordination. Dual subordination presents bureaucratic problems in peacetime, but might serve to enhance the Soviets' wartime management structure. The following are examples of such regional organizations:

— **Railways.** The Ministry of Railways operates the Soviet railroad system through 32 geographic regions, each having a regional railroad administration. These administrations are further subdivided into railroad operating divisions. In some cases, the rail nets of a given railroad administration may extend over the territory of more than one military district and those of operating divisions over more than one oblast. Despite this, by working through the railroad administrations and divisions, the Military Transportation Service of each military district would control all rail movements within the district. Postattack repair operations by railroad civil defense formations under the direction of the regional railroad administration would be coordinated with the oblast civil defense staffs in the area where the railroad facilities are located.

— **Communications.** The primary intercity radio relay and cable lines are controlled by a chief directorate of the USSR Ministry of Communications through a network of regional centers. The areas of responsibility of many of these regional centers coincide with military districts. In these districts wartime military communications requirements would be determined by the military district chief of signal troops. Other wartime communications needs and postattack repair operations would be coordinated through the military district's deputy commander for civil defense and subordinate oblast civil defense staffs (see chapter V for additional details on communications support to the wartime management system). Where the geographic area of responsibility of the regional center does not correspond

to that of the military district, establishing communications requirements and conducting repair operations are more complex but manageable.

— **Power.** The Ministry of Power and Electrification manages the power industry through 11 consolidated power systems. The heads of these 11 systems are responsible for continuous delivery of power to consumers. Their areas of responsibility do not coincide, however, with the boundaries of military districts. The Unified Power System—South controls several energy production associations whose areas of responsibility cover four military districts. The individual energy production associations, which are part of the consolidated power systems, control power networks in more than one oblast but these networks are normally contained within a single military district. The production associations operate exurban command and dispatching facilities. Coordination of the functions of energy production associations with other civil defense operations is done through the oblast civil defense staff.

— **Other Services.** The USSR Ministry of the Maritime Fleet also operates its subordinate steamship companies through intermediate organizations. Relocation facilities for the Black Sea and Baltic companies have been established near Odessa and Riga. Also, the Ministry of Civil Aviation operates its airports and aircraft through regional aviation administrations, not all of which coincide with military district or republic boundaries. Similarly, both the State Committee for Material Reserves and the State Committee for Material and Technical Supply have regional directorates.

Exurban Facility Requirements

41. We have estimated the overall Soviet requirements for exurban relocation facilities to support the wartime management and command functions we have described in this chapter. We believe the actual requirements for such facilities is within the range of our estimates of the minimum and maximum number of facilities that would be needed to accommodate national and territorial leaders (see table III-3). The minimum figures in the table are based on one

**Table III-3
Projected Requirements for
Wartime Relocation Facilities**

Level	Estimated Maximum	Estimated Minimum
Total	1,642	821
National Command Authority	16	8
Ministry of Defense components	70	35
National ministerial organizations	200	100
Military districts	64	32
Key regional organizations	190	95
Republics	806	403
Oblasts	296	148

exurban relocation facility for those organizations down through the oblast level that we believe perform wartime management functions. There is evidence that many elements have more than one relocation facility; therefore, the maximum figures in the table assume two exurban facilities for each organization that probably would be relocated. We believe the Soviets have established at least one facility for each leadership element, a number approximating our estimate of minimum requirements. (See annex D for a detailed breakdown of these projections.)

B. Wartime Leadership

42. The 1977 IIM, *Soviet Civil Defense: Objectives, Pace, and Effectiveness*, and the 1981 Memorandum to Holders of the IIM assessed the degree of protection that could be afforded Soviet leaders in civil defense shelters. An estimate was made of the total number of leaders at all levels that the Soviets would probably want to protect. The estimate of 110,000 included 5,000 party, government, and ministry officials at national and republic levels; 63,000 at oblast, city, and city rayon levels; 2,000 managers of "key installations"; and 40,000 full-time civil defense staff personnel. The estimate of 110,000 did not include the "top leadership" because the arrangements for their protection are not the responsibility of the civil defense organization. Our previous estimate did not include all the leadership cadres on which the Soviets would expect to rely for wartime management.

43. Our latest estimate has a different focus. It includes all the industrial level leadership but does not include managers of individual enterprises. We made an organization-by-organization count of high-level management personnel that would have an important role in wartime management. In counting these key wartime management personnel, we used the distinction made by the Soviets between leaders, specialists, and technical workers. We now estimate that approximately 179,000 officials make up the leadership of those organizations with important wartime responsibilities:

- At the national, military district, and republic levels we counted some 31,500 officials. This figure includes the top leadership at the national level as well as the leadership at republic and military district levels, but excludes other military leaders below the USSR Ministry of Defense.
- There are also some 80,000 oblast, city, and urban rayon officials whose functions are designated by the Soviets as essential in wartime.
- We also include some 60,000 full-time civil defense personnel.
- We calculate that there are 6,500 officials in other regional organizations of service-related ministries that do not conform to the existing Soviet military and political territorial structure.

Table III-4 provides a breakdown of the wartime leadership groups. Annex B describes the methodology used in arriving at these estimates.

44. Our estimate of 179,000 does not include all the leaders that would be involved in wartime management. Omitted from our estimate are the managers of key installations, partly because there is no consensus in the Intelligence Community as to which Soviet enterprises should be considered key installations.⁹ We are uncertain whether the Soviets regard them and their staffs as key management personnel or operational cadres. The directors of these installations would be supported by other management personnel such as the deputy director, chief engineer, the head of the party organization at the enterprise, and the civil defense chief.

⁹ The 2,000 installations were selected for use in the 1977 IIM on the basis of the value of their production compared with other installations in the same industrial sector. Installations selected on this basis probably would correspond only in part to those that the Soviets consider essential to poststrike repair and recovery operations.

Table III-4
Size of the Soviet Wartime Leadership

National	17,000
Military districts ^a	1,000
Republics	13,500
Key regional organizations	6,500
Oblasts	10,000
Cities	
Population 25,000 or above	32,000
Population below 25,000	20,500
City rayons	18,500
Subtotal	119,000
Civil defense staff	60,000
Total ^b	179,000

^a The figure of 1,000 for the military district includes 800 officers in their civil defense components plus senior command personnel.

^b The total figure includes the top national leaders but not military officers below the level of the Ministry of Defense, except for those at military districts and in civil defense staffs. Also, the total does not include civilian leaders at individual installations.

45. Our revised estimates of the wartime leadership do not include the essential support staff and service personnel who would accompany leaders to wartime relocation sites. Therefore, we have made a separate estimate of the peacetime support staffs of key Soviet leaders and estimated the percentage of that number necessary that would be likely to constitute their wartime staff requirements. Table III-5 shows the wartime staff requirements as a percentage of peacetime staffs.

C. Wartime Operations

46. All party and government organizations are included in Soviet planning for wartime operations. These plans call for common levels of readiness, compatible communications procedures, and the use of a variety of urban and exurban protective shelters and relocation facilities. Soviet leaders believe that the exurban facilities, particularly dual-purpose ones, would afford them a high degree of protection and operational flexibility in coping with a nuclear conflict and its aftermath.

Table III-5
Estimated Wartime Staff Support
Requirements of Civilian Leaders *

	Peacetime Staff	Wartime Staff Requirements (Percent of Peacetime)
National		
Ministry- and national government-level entries	91,400	45,700 (50)
National-level party staff	2,500	1,800 (70)
Republic		
Ministries and republic government entries	125,300	50,100 (40)
Republic party staff	3,200	2,200 (70)
Oblast		
Oblast local government	224,700	67,400 (30)
Oblast party	22,400	13,400 (60)
City/city rayon		
City government	247,800	62,000 (25)
City party		
Population 25,000 or above (947)	71,000	28,400 (40)
Population below 25,000 (1,127)	56,400	11,300 (20)
City rayon (615)	30,800	6,200 (20)

* These estimates represent staff support requirements in addition to the leadership. The estimates for the government hierarchy were derived from 1967 data on administrative personnel in national, republic, oblast, and city agencies, adjusted upward for estimated growth to 1982. (See *Trud v SSSR*, 1968, pp. 28-29.) Estimates for the party agencies were taken from *The Soviet Policy Process in Peacetime*, unpublished DIA study, November 1980.

The Command Post Network

47. In developing the nationwide system for war management, the Soviets have stressed the need for a unified command, control, and communications network. This network is designed to link territorial-administrative and ministerial components responsible for civil defense with military commands. Civilian wartime relocation facilities and procedures have been patterned after those of the armed forces to ensure compatibility of the two systems. One aspect of this pattern is the network of command posts provided for the leadership of all organizations in the war manage-

ment structure.¹⁰ Each territorial and ministerial component of the management structure from the national level down to selected individual enterprises would operate both urban and exurban command posts.

48. The functions of the component determine the number of its primary and alternate command posts, their size, the degree of protection offered against nuclear effects, as well as communications equipment, transport, and other support. (See chapter V for descriptions of the types of facilities currently in use as command posts.) Despite variations, the purpose of the command post network is to permit leadership cadres to exercise continuing control of the nation in all phases of conflict, including protracted war. At the highest levels of the national leadership and throughout the armed forces, increased emphasis is being placed on mobile command posts and related communications facilities. This trend is not yet as pronounced in subordinate territorial-administrative and ministerial organizations. We believe the present war management structure relies primarily on fixed command posts and will continue to do so because we doubt that the Soviets would be able to carry out their wartime management plans using only mobile command posts.

Concept of Operations

49. *Levels of Readiness.* Soviet transition to a wartime management structure under which urban and exurban relocation facilities would be manned would be linked to changes in the readiness posture of the USSR's armed forces. The Soviets have defined four stages of combat readiness, and they routinely exercise their command and control systems and military forces to transit through these stages. During a period of increased tension, Soviet political leaders would have the means to control the tempo of force and civil defense preparations by selectively applying these readiness stages to various force elements.

¹⁰ In Soviet usage, the terms "control post" (*punkt upravleniya*) and "command post" (*komandnyy punkt*) refer to specially designated and equipped facilities at which commanders and their staffs exercise control (*upravleniye*) over their forces. In Soviet writings, the term "command post" is generally used in reference to operational or combat elements. Other entities, such as rear services components, military commissariats, and civil defense staffs, use the term "control post." In practice, however, these expressions are often used interchangeably by the Soviets. In this Memorandum the term "command post" has been used.

50. During what the Soviets refer to as the threatening period, which could last a few days or many weeks, the armed forces would first be brought to "increased combat readiness." This stage would be followed by "threat-of-war readiness" during which more extensive preparations would be made including the dispersal of forces from their peacetime garrisons. When the level is raised to "full combat readiness," the forces deploy to operational positions and prepare to execute wartime missions. The readiness stages of civilian elements of the wartime management structure would generally parallel the pattern of readiness levels of the armed forces.

51. [

]

52. We are uncertain about the extent to which certain civil defense preparations would be made without a declaration of what the Soviets call a special period. The declaration of a special period under Soviet statutes gives the wartime leadership, which would be largely military, authority over civilians and civilian activities that they would not have in the absence of such a declaration. The concept of the special period originated in Soviet experiences in World War II. In the war it was necessary for the Soviets to declare a state of martial law in areas in which the military needed special powers to order compulsory civilian labor service, to confiscate property, and to establish special security regulations. Many of these same actions could be taken today after declaration of a special period. For example, the 1961 statute on civil defense provides that, upon declaration of a special period, "USSR citizens who are not liable for military service or who have draft exemptions are enlisted for compulsory service . . . in civil defense."

53. In peacetime certain key national-level and territorial organizations continually man their urban command posts with duty staffs and communicators. This is true of military districts and civil defense staffs down to oblast levels. In a period of "increased combat readiness," these duty staffs would be augmented. Organizations that did not maintain a duty staff at exurban reserve command posts would send operations groups as advance parties to prepare the facilities for

use. When "threat-of-war readiness" is achieved, exurban command posts could already be fully activated and some or all of the command functions would be transferred there. The shift to exurban command posts would be fully completed upon declaration of "full combat readiness."

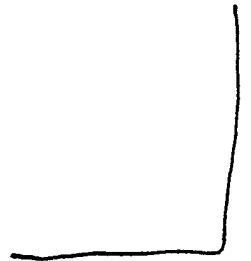
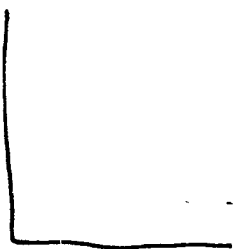
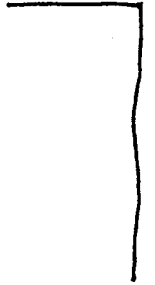
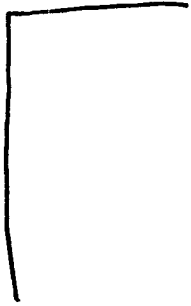
54. Urban command posts would be continually manned on a shift basis, even after activation of exurban command posts. Such groups would control essential activities that would continue in urban areas until warning is received of an enemy attack in progress or until the readiness levels are reduced. The essential urban activities would include:

- Directing final phases of evacuation or dispersal of personnel, critical equipment, and materiel.
- Continuing operation of essential services and utilities such as electric power, communications, water supply, and heating.
- Conducting security patrols designed to control sabotage and looting.
- Continuing industrial production by on-duty shifts at enterprises that have been designated to operate in place.

55. In the event of notification of imminent nuclear attack, leaders and other key personnel of ministries would move to designated urban shelters and command posts. Following the attack, they would be expected to utilize surviving communications capabilities to report on poststrike conditions in the urban area and to coordinate emergency rescue and repair operations.

56. *Manning Levels.* There is limited information on the operational procedures for staffing primary and alternate command posts, and on how leadership cadres and supporting staffs would be distributed among command posts at different stages of readiness. These facilities include not only hardened, underground structures dedicated to the command and control function, but also protective structures for off-duty personnel and other staff. The evidence available indicates, however, that the cadres at exurban command posts would be sizable. [

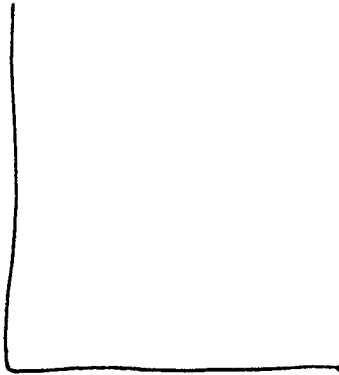
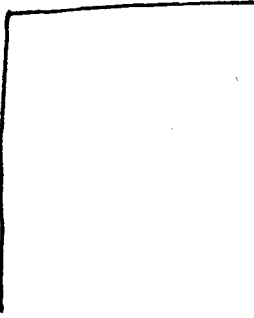
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57. The peacetime staff of the USSR Ministry of Chemical Industry reportedly numbered approximately 3,000 in the late 1970s. Following reductions in personnel due to military callups, those officials and employees who would man the Ministry's relocation facilities would not exceed 1,000. The relocation complex to be constructed by the RSFSR Ministry of Food Industry was planned to accommodate 420 ministry officials as well as families and support personnel for a total of 850.

58. The readiness levels introduced by the Soviets and the measures undertaken in response to them provide Soviet leaders with flexibility in coping with a situation of increasing threat. If international tensions and the threatening period are prolonged, they can make a number of civil defense and military preparations during the increased combat readiness stage without major interruptions of key sectors of the

economy. The Soviets undoubtedly recognize that a prolonged period of readiness would place strains on the production of essential goods and services. They have endeavored to minimize this problem by limiting such activity to that necessary to support the war effort, sustain the population, and enhance postattack recovery capabilities (we know that Soviet plans call for a majority of the economic installations to shut down and evacuate). In any case, this posture would afford the Soviets considerable flexibility in crisis management prior to the onset of nuclear attacks. They would, of course, be much less certain about the circumstances that would exist in a poststrike situation.

59. The Soviets realize that conflicts usually do not proceed as anticipated in prewar planning. Therefore, they are preparing their leadership and their forces to deal with a range of nuclear war contingencies. In a protracted war, for example, Soviet plans for exurban command posts with extensive living and working accommodations would permit the wartime leadership to direct the armed forces, economic activity, and rescue and recovery operations over an extended period.

CHAPTER IV

TYPES OF LEADERSHIP PROTECTION AND RELOCATION FACILITIES

1. The number of leadership protection and relocation facilities the Soviets require is determined by the functions that each management organization would perform in wartime. This also influences the degree of protection and the types of facilities provided.

A. Urban Facilities

2. In our analysis we emphasize exurban relocation facilities rather than urban facilities because the Soviets will try to relocate most of their leadership in the event of war. The Soviets have not, however, ignored the need for protective facilities in urban areas such as subway-related deep underground structures and hardened command posts. These urban facilities, which continue to undergo expansion and renovation, are intended to:

- Provide management cadres with protection and command and control capabilities in the event of an attack with minimum warning.
- Enhance the ability of the leadership to disperse to exurban sites rapidly, with a high degree of physical security and minimum risk of observation.
- Provide protection and command and control facilities for operational elements of management organizations that would remain in urban areas during and after an attack. These elements would be required to direct essential activity, report damage estimates, and conduct poststrike recovery operations.

3. Urban protective facilities provided for the leadership vary. For example, hardened structures have been built at or near the residences of many senior leaders. According to a source who worked on the projects, two shelters with extensive life support systems were constructed beneath an apartment building in Moscow where high-ranking CPSU officials lived. Other sources have confirmed that the building houses high-level officials. The Soviets are

also continuing to build multistoried detached bunkers adjacent to important government buildings. [

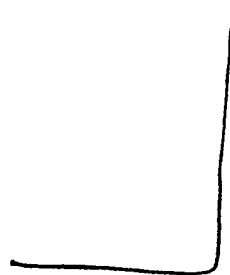
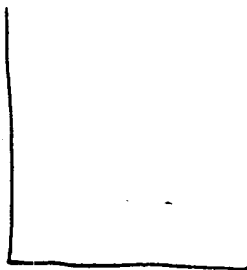
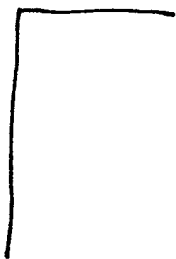
] Some of these structures are probably linked by special tunnels to the subway systems.

4. Subways continue to figure importantly in Soviet civil defense planning generally and in plans to protect leadership cadres in particular. It is apparently Soviet policy to provide a subway system for urban centers with populations of 1 million or more (see figure IV-3). The number of operating systems has increased from six to eight since 1977, three more are projected to begin operations by mid-1985, five more are under construction, and eight are in the planning stages, yielding a total of 24 potential systems.¹ Nine of the 15 union republic capitals are covered by this list, as are the headquarters cities of 13 of the 16 military districts. Our information confirms that there is a clear relationship between the subways, protective facilities for leadership in urban areas, and civil defense authorities. Construction and operation of facilities associated with the subways, referred to by the Soviets as "special installations," are the responsibility of the second department and civil defense staff of each individual subway administration. The subway administrations coordinate their plans with USSR Civil Defense, territorial civil defense staffs, and the organizations that would use the special facilities.

5. The subway systems and the special installations connected with them afford Soviet authorities the potential for covert movement between key points within urban areas and to exurban relocation sites, with minimum risk of detection. A former employee

¹ These figures do not include the three potential tram systems in Volgograd, L'vov, and Vilnius nor the system projected for Vladivostok, which will be either a tram or a subway. The underground portions of these systems may have some limited civil defense utility.

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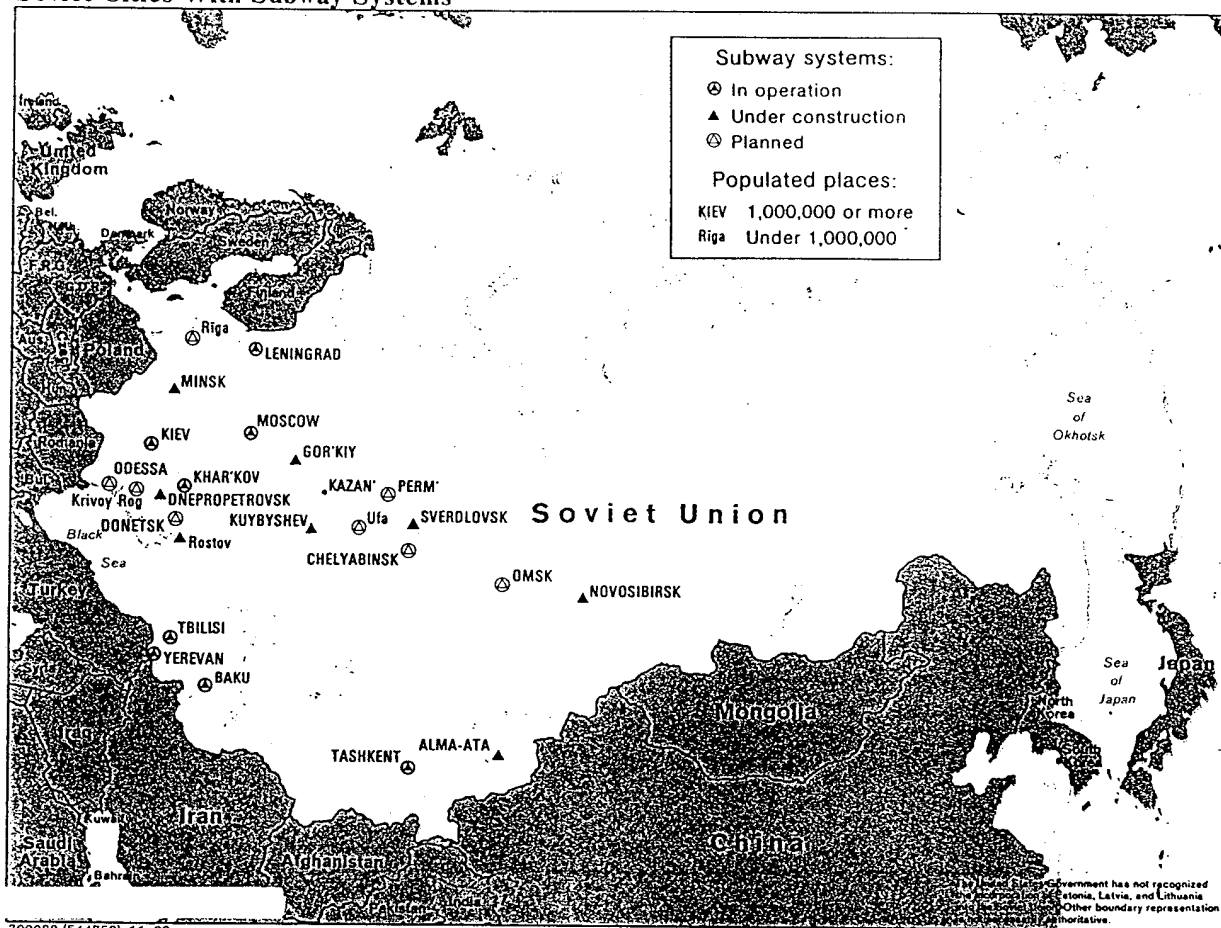
of the Moscow subway reported that several special installations designated for leadership use were served by subway tracks that entered the facilities from the regular lines. The entrances had closures similar to those used to seal subway stations from main tunnels and from surface entrances. These facilities would permit the leadership to board the subway cars within the special installations and to proceed from Moscow to the suburban areas, possibly via a combination of subways and suburban commuter trains.

6. New, multistoried detached bunkers, which are probably linked to the Moscow subway system by special tunnels, include [

Similar facilities are reported to exist in other cities. We believe that all cities with existing or projected subway systems will have these protective arrangements.

7. A number of sources have also reported that specially constructed underground rail lines exist that serve the top leadership. These dedicated lines would enable key military and civilian leaders to move rapidly and securely from central Moscow to exurban command posts. It has been reported that an underground rail line links the Kremlin-Red Square area with the Chekhov-Sharapovo leadership relocation complexes south of Moscow. Similar lines also are reported to connect central Moscow with the Air

Figure IV-3
Soviet Cities With Subway Systems



Defense Forces Headquarters at Chernoye and the VIP facilities at Vnukovo Airfield. [

Similar but less elaborate facilities can be found in smaller cities and in city rayons throughout the USSR.

8. It is almost certain, however, that Soviet preparations for leadership protection through the use of subways and associated facilities is much more extensive than the preparations on which we have evidence. Furthermore, there are urban command posts and protective underground structures in cities that do not currently possess subways. A detailed study of Odessa Oblast revealed that urban command posts exist for major party and government organizations in Odessa. It also indicated that the oblast civil defense staff would operate at least one permanently manned and probably one alternate urban command post bunker.

B. Exurban Facilities

9. In our analysis, we have emphasized facilities that serve Soviet command and management organizations responsible for defense of the homeland and the continuity and stability of the nation's activities. We have categorized these facilities as single or dual purpose. The total number of such facilities we have identified are summarized in table IV-1. The number of sites located represents only a small percentage of the total exurban leadership relocation sites which we believe exist, as discussed in chapter V.

Control Complex, the Chekhov National Command and Control Complex, and the Chaadayevka National Alternate Headquarters Complex (see figures IV-4 and IV-5).

12. Sharapovo and Chekhov were constructed in the late 1950s, but have been undergoing modification, expansion, and improvement since the early 1970s.² The deep underground facilities at these complexes for the National Command Authority would present a difficult targeting problem. A recent assessment of these sites indicates that they are harder, deeper, and much less vulnerable than previously estimated (see figure IV-6). [

] the Soviets may consider these two installations as one interrelated complex. However, we believe the facilities at Sharapovo are probably for the wartime Defense Council and those at Chekhov for the General Staff. Construction is also continuing on the complex at Chaadayevka, some 630 kilometers from Moscow, which we believe is an alternate national command facility.

13. [

Single-Purpose Facilities

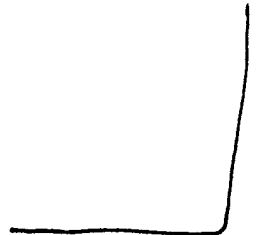
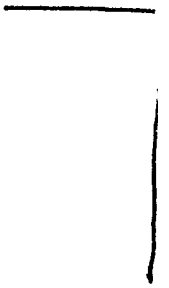
10. Single-purpose facilities are those that are intended to support wartime command functions only. They have military characteristics and are manned continuously in peacetime at levels that would facilitate a rapid transition to a wartime posture. Although the characteristics of these facilities vary according to command level and function, they can be grouped into three rough categories.

11. *Category I.* This category is characterized by large, multibunkered installations with extensive surface support facilities and accommodations for personnel. Some are also served by railroad spurs and helipads. Communications support for these complexes is provided by separate communications facilities to which the complexes are linked by underground cable, microwave radio relay, and mobile communications equipment. At present, only three facilities fall within this category: the Sharapovo National Command and

] Mobile facilities consisting of airborne and trainborne command posts have been developed for use by the top leadership to supplement these large, fixed complexes. It is also possible that, to reduce the vulnerability of the National Command Authority, many of its command and support functions would be dispersed to or replicated at fixed facilities that we have not yet identified, or at some of the category III facilities discussed below. (See table V-3 for information on the hardness of these category I facilities.)

14. *Category II.* Relocation facilities in this category are less elaborate than those in category I, although

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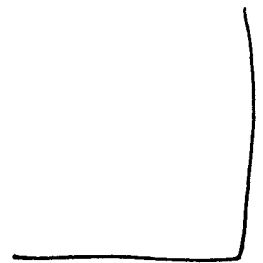
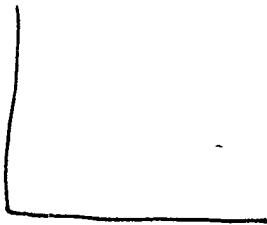
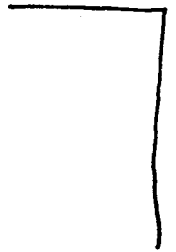
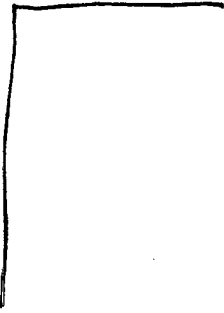


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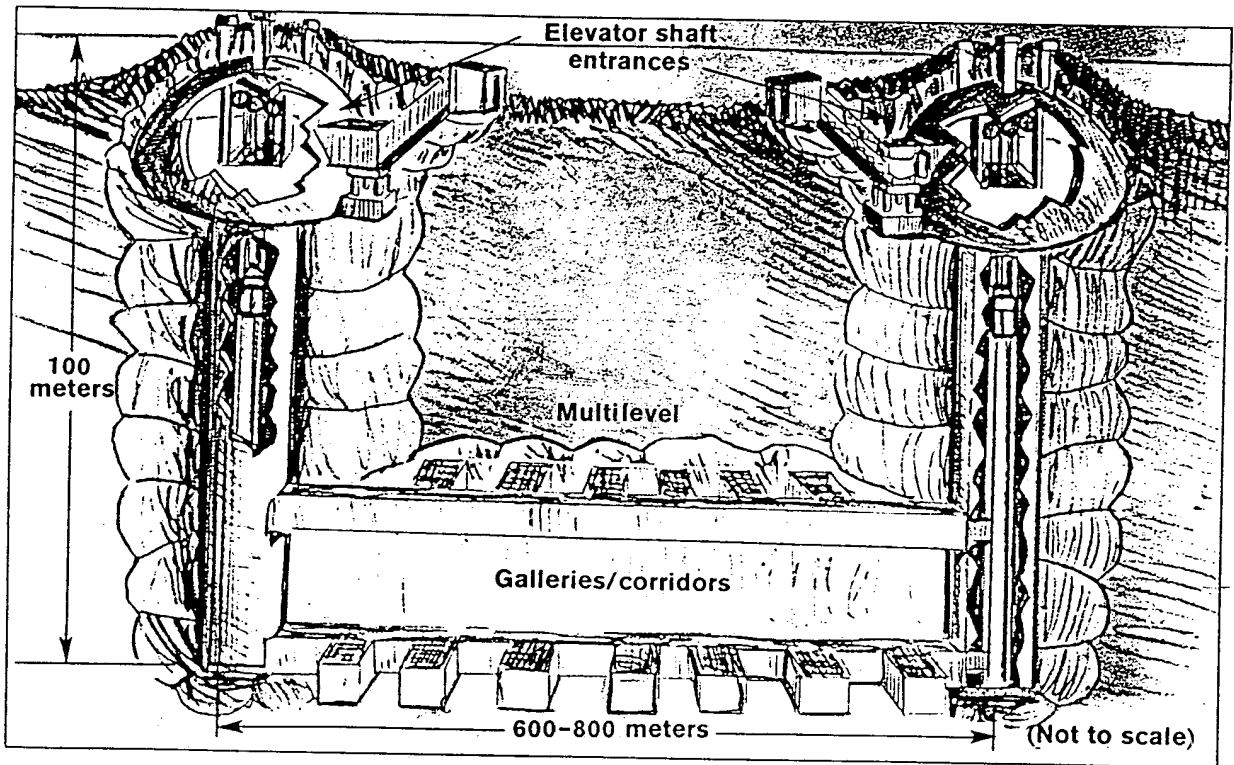
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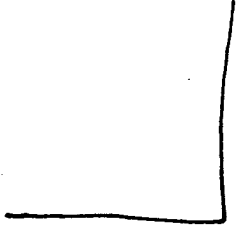
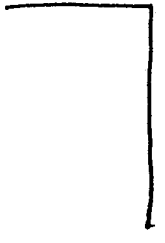
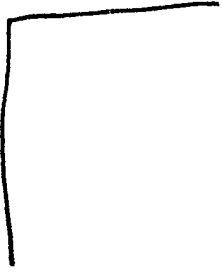
Figure IV-6
Artist's Concept of Reassessment of "Dome-Shaped" Bunkers
at Sharapovo and Chekhov



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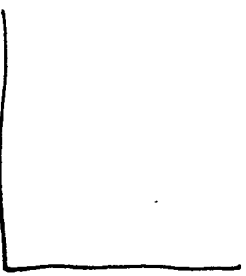
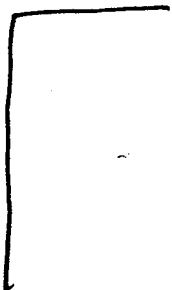
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they still offer extensive relocation possibilities. Most of those in the Moscow area were constructed in the early 1970s. They are uniformly large installations with multistoried underground bunkers some of which are covered by surface buildings.

15. Category II facilities possess surface structures that are generally military in character and provide a range of accommodations and support. They are deliberately located near water sources and some have recreational facilities. Not all possess buried antennas, relying instead on high-capacity intercity cable networks and in some cases on mobile communications facilities for access to the General Staff communications network. Examples of facilities in this category near Moscow are [

] Other facilities in this category, located throughout the USSR, serve as command posts and relocation facilities for wartime military districts. These have somewhat smaller surface support areas than those near Moscow. Examples are [

] The facilities serving military district headquarters invariably have buried antennas and are near other hardened communications complexes.

16. At virtually all of the sites in this second category, we have observed a continuing process of upgrading existing facilities and constructing new surface buildings to provide additional living and working space. This may be part of a trend toward providing protection for an increasingly larger percentage of administrative headquarters personnel at exurban facilities. This trend has long been evident in the expansion of the exurban facilities of the Strategic Rocket Forces and the Air Defense Forces. [

] It is possible that there are deep, multilevel underground structures at other category II sites.

17. *Category III.* The facilities in this category are markedly different from those in categories I and II.

Allocated for the most part to high commands in theaters of military operations and to fronts in the initial phases of the war, they generally possess a single, often multistory, bunker; have minimal surface facilities; and are supported by buried as well as aboveground antennas. Construction of this type of facility began in the late 1960s and continues, although at a reduced pace. Examples are [

] The support facilities at these sites are austere, and there are relatively small numbers of surface working or living accommodations. As theater forces achieve their objectives in neighboring countries, the high commands would move forward, leaving facilities in this category free for use by various components of the military district, rear services, and other elements of the war management infrastructure. Some of the installations we have included in this category may have been modified or are being modified by the construction of additional support facilities to serve the needs of military districts. They would then fall under category II.

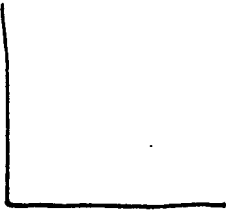
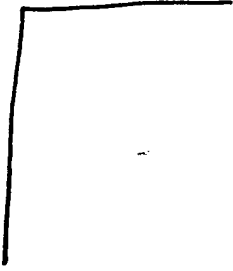
Dual-Purpose Facilities

18. We have designated as dual purpose those exurban command and control facilities that have peacetime functions different from their wartime roles. They are of two types: those with aboveground facilities only and those with both aboveground facilities and underground protective structures, either detached bunkers or basement shelters. Despite the importance of single-purpose facilities, dual-purpose facilities are more numerous and are used by all levels of Soviet leadership. [

] Dual-purpose facilities also predominate among the relocation complexes constructed for party and ministerial organizations at republic and oblast levels.

19. The dual-purpose concept is not new. Since the early 1960s, Soviet civil defense planning has called for the use of dual-purpose facilities in providing for wartime medical services, urban evacuation, dispersal of key personnel, and relocation of industries. The idea is to reduce the economic burden of prescribed civil defense preparations by using existing facilities and by

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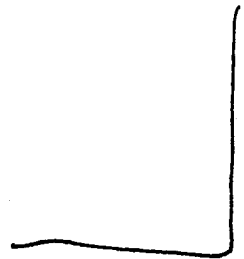
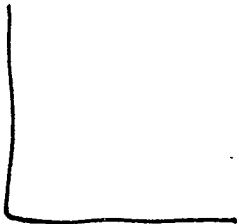
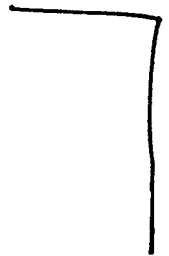
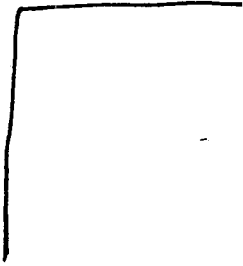
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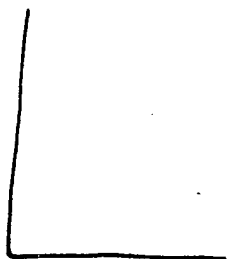
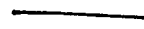
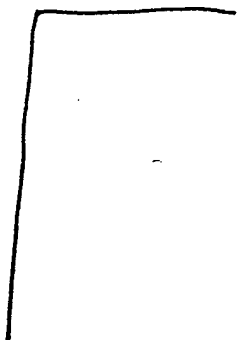
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planning any new construction to serve a beneficial peacetime as well as wartime function.

20. All such facilities that we have identified for leadership use have been significantly upgraded from their original peacetime configuration to fulfill their wartime roles. They all include communications centers with access to high-capacity intercity cables and fixed and mobile radio communications systems. In some instances, existing facilities have been retained and supplemented by additional structures to satisfy their wartime role. In other cases obsolete structures have been razed and wholly new facilities built. [

[In still other cases, where peacetime facilities could not be modified to satisfy the planned wartime requirements, all new complexes were designed and built to perform both a peacetime and a wartime role. Reports of modifications and newly constructed dual-purpose facilities for ministerial organizations at the national level. [

[indicate that this program, which began in the mid-1960s, is continuing. Other reporting confirms that the program is also being applied at the republic and oblast levels.

21. Dual-purpose exurban facilities have also been used to satisfy the wartime needs of elements of the Ministry of Defense and the military commands. For example, [

[Another probable command post for senior military authorities is [

[Additional dual-purpose facilities serving major military organizations are located elsewhere in the USSR. One source reported that [

[According to the source, the site operates in peacetime as a recreational facility, but it contains underground structures with repeater station equipment, which

permit communications with all elements of the Soviet high-frequency cable network. [

[The source stated that similar sites exist elsewhere in the USSR and were developed as part of a program to which Marshal Zakharov, Chief of the General Staff from November 1964 to September 1971, gave special attention.

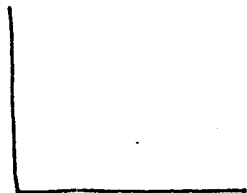
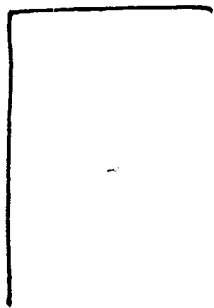
22. We have categorized dual-purpose exurban facilities according to their peacetime roles. The most numerous type of dual-purpose facilities are those that have rest, recreation, and health services as their peacetime function. Relocation facilities can also be found at educational institutions and research institutes in rural areas. Sites with other types of peacetime functions have been adapted to meet wartime relocation needs as well. Selection of facilities is limited by the guidelines established by USSR Civil Defense, which include:

- Proximity of likely targets.
- Hardness of underground and surface structures.
- Availability of communications.
- Accessibility to transportation.
- Redundant power sources.
- Availability of water.

23. *Rest, Recreational, and Health Facilities.* Included in this group are rest homes, pioneer camps, and sanitoriums, often combined in a single complex. Because of their location in rural, generally wooded areas, proximity to water supplies, and the easy adaptability of their peacetime installations to wartime requirements, this category of dual-purpose facilities appears to represent the preferred choice of leadership organization:

[dual-purpose relocation complexes [are at rest, recreational, or health facilities, which in peacetime are under the direct control of the Ministry or its subordinate components. In some cases, ministries are known to operate more than one dual-purpose facility for relocation purposes. [

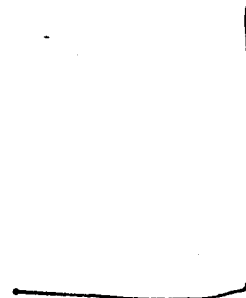
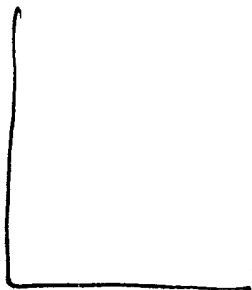
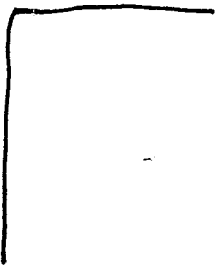
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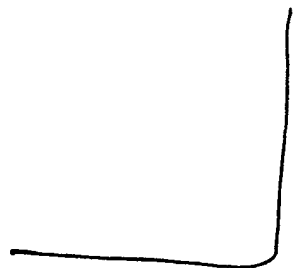
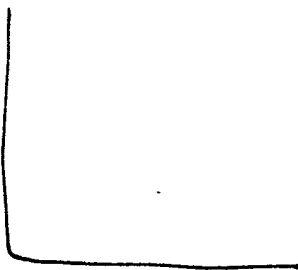
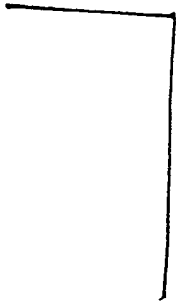
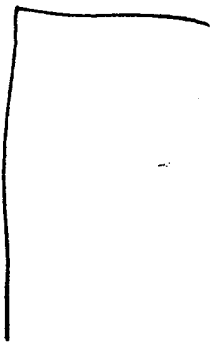
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[]
[]
— Ministerial organizations at republic level also use rest, recreational, and health facilities as relocation sites. Some of these, []

[] are probably intended for the use of more than one ministry.

24. It is not merely the suitability of the individual rest, recreational, and health facilities that causes Soviet leaders to prefer them in establishing relocation complexes. The continuing expansion of the numbers and types of such facilities throughout the USSR provides a high degree of flexibility in selecting sites that meet USSR Civil Defense specifications. The greatest growth in the number of these facilities (according to published Soviet statistics) began in the 1960s, a time of increased emphasis by civil defense officials on finding suitable relocation facilities for use by war management entities. This growth was certainly motivated by considerations other than civil defense, but the need for relocation sites was probably a factor. From 1950 to 1960 the number of sanatoriums, rest homes, and tourist bases remained constant at approximately 3,000. By 1965 the number had almost tripled, and by 1976 it quadrupled, with growth continuing through 1980 for a total of almost 16,000. During the period 1960 to 1980, the number of pioneer camps in rural areas increased from 8,776 to an estimated 40,000. If we include the pioneer camps, the estimated total number of rest, recreation, and health facilities in the USSR comes to approximately 56,000. Clearly, not all of these would be suitable or required as relocation sites.⁹

⁹ This figure is probably low. It could reach 70,000 to 75,000. We know that Soviet statistics and open literature articles on rest, recreational, and health facilities omit references to facilities under departmental (*vedomstvennyy*) rather than trade union control. (Departmental control normally applies when a ministerial or other entity establishes a relocation complex.) Suppression of references in open literature to such facilities began in the early 1960s. This is documented in the case of several national-level entities whose relocation complexes are at facilities they have controlled since at least the mid-1950s.

25. Within the rest, recreational, and health group, it is the pioneer camp that has appeared most frequently in reporting on planning of relocation sites. In the Moscow region, a pattern has developed whereby camps are initially upgraded to permit year-round use as relocation complexes. This in turn has enabled organizations using the sites to expand their peacetime utility by operating the facilities as pioneer camps in the summer and as rest homes in the winter. There are several relocation complexes in the Moscow region that fit this pattern, []

[] It has been reported that this same pattern will be followed by RSFSR ministries at sites in the Moscow Oblast or contiguous oblasts. Similar sites have been observed elsewhere in the USSR.

26. *Educational Institutions in Rural Areas.* This category ranks next to rest, recreational, and health facilities in the number of instances reported of relocation use and in the degree of flexibility they afford for adaptation to relocation requirements. In 1968 the USSR Ministry of Power and Electrification reportedly established its relocation complex at a vocational school []

[] Later reports indicated that a standard design was adopted in the Ukrainian SSR to permit rural secondary schools to be constructed over underground command posts serving oblast civil defense staffs. []

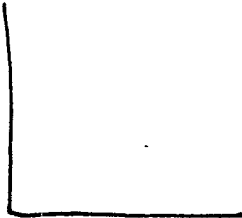
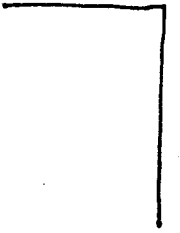
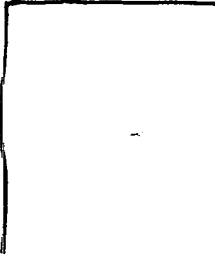
[] The fact that standard designs have been adopted in at least one republic and noted in a second suggests that the practice of using educational facilities as relocation sites may be quite widespread.

27. *Research Institutes.* Use of research institutes or experimental complexes located in rural areas as relocation sites has been reported []

[] The USSR Ministry of Tractor and Agricultural Machine Building established a relocation complex []

[] while the USSR Ministry of Coal Industry []

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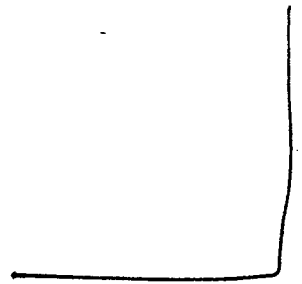
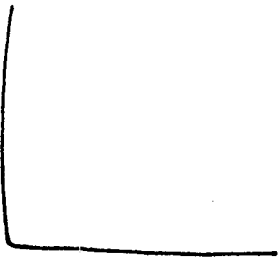
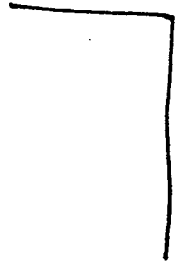
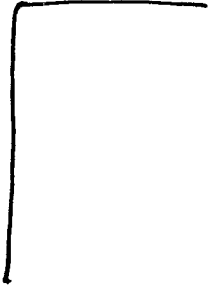
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[] Despite these instances, research institutes would not be a major category of relocation facilities. The number of research institutes in rural areas is very small compared with the number of rest, recreational, health, and educational facilities. A review of 84 research institutes subordinate to industrial ministries in Moscow showed that 33 of them were in the city of Moscow and most of the remainder were in other large urban centers.

28. *Other Dual-Purpose Arrangements.* Some relocation arrangements differ from the patterns previously described. Some examples:

[]

[]

[] Another variation on the dual-purpose approach found at the republic level is the use of several dual-purpose facilities in a single small town or in clusters of villages. Examples of this approach are []

[] In some cases, ministerial organizations plan to occupy buildings in towns equipped with underground command posts. []

[] reportedly will utilize the offices of the town's soviet executive committee; its command post will be underneath the local military commissariat. In more remote areas relocation facilities are probably not hardened.

C. Costs

29. We are unable to estimate the total costs of Soviet wartime management preparations. However, we have estimated the costs of construction and

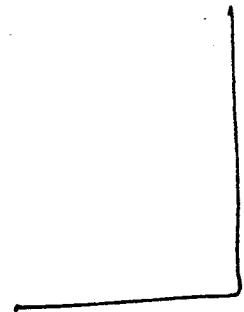
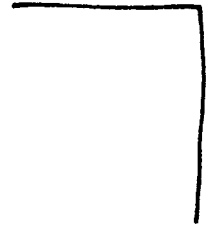
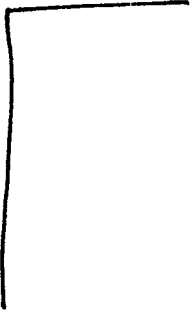
equipment for several types of urban and exurban leadership facilities that we have identified. There are both pricing and methodological uncertainties in the costing of Soviet facilities and equipment. Therefore, cost estimates of identified types of facilities should be regarded as approximations. As a measure of the magnitude of Soviet leadership preparations since the 1950s, we have also calculated the construction and equipment costs of those exurban leadership facilities that we have identified as well as the costs implied by our estimate of the total number of exurban leadership facilities throughout the USSR. These latter cost calculations reflect the additional uncertainty in our estimate of the total number of exurban leadership facilities nationwide. We have not calculated any annual costs of exurban leadership facilities, nor have we estimated the total number or costs of urban leadership facilities nationwide.

30. *Costing Method.* A sample of 17 sites was selected as representative of both urban and exurban facilities and was subjected to a detailed study. Construction costs were calculated in 1970 rubles based on cost data taken from a series of Soviet construction handbooks. Uncertainty in construction cost estimates is plus or minus 10 percent. Equipment costs were calculated as a share of construction costs based on Soviet data. These data revealed that equipment accounted for 40 percent of the value of military housing and support facilities, and construction accounted for 60 percent. Storage, motor pools, and other above-ground support facilities at such sites were estimated to have a distribution of 20 percent for equipment and 80 percent for construction. For bunkered facilities—most of which are estimated to contain elaborate electronics and communications and other equipment—it is estimated that equipment costs are equal to at least the construction cost of the bunker in which the equipment is installed.

31. *Identified Urban Leadership Facilities.* Estimates of the costs of the representative sample of hardened urban leadership facilities are summarized in table IV-2. The four complexes were chosen from among the leadership facilities in Moscow []

[] This is

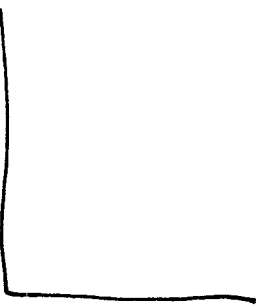
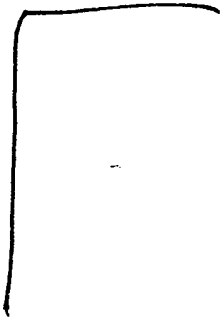
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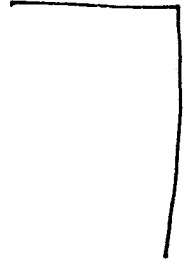
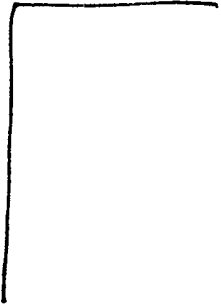


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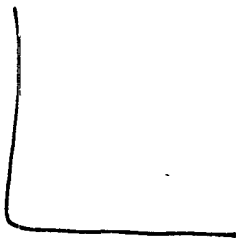
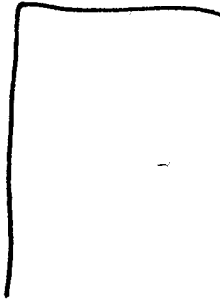


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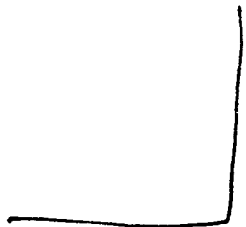


Table IV-2
Construction and Equipment Costs
of Selected Leadership Facilities in
Urban Areas ^a

	Construc- tion	Equip- ment ^b	Total
[redacted] Bunker	0.9	0.4	1.3
[redacted] (million US \$)	3.3	0.5	3.8
[redacted] Headquarters building complex	23.1	11.6	34.7
[redacted] Housing/admin area	0.8	0.3	1.1
[redacted] Support area	9.1	2.7	11.8
[redacted] Total	33.0	14.6	47.6
[redacted] Total (million US \$)	122.0	39.7	161.7
[redacted] Headquarters building complex	3.9	1.9	5.8
[redacted] Bunker	1.2	1.2	2.5 ^c
[redacted] Housing/admin area	2.4	1.0	3.4
[redacted] Total	7.5	4.1	11.7 ^c
[redacted] Total (million US \$)	28.0	11.4	39.4
[redacted] Headquarters building complex	1.9	0.9	2.8
[redacted] Bunker	0.2	0.3	0.5
[redacted] Total	2.1	1.2	3.3
[redacted] Total (million US \$)	7.8	3.6	11.4

^a 1970 rubles and 1981 dollars were used for the cost estimates in this table.

^b The equipment at relocation facilities was acquired at various times and ranges in type from sophisticated electronics systems to standard support items such as generators. Therefore, the ruble costs compared to the dollar costs of equipment (the ruble-dollar conversion ratio) vary widely.

^d Bunkers included in overall building cost.

^e Because of rounding, totals do not add across.

indicative of the magnitude of Soviet expenditures on protective facilities for the leadership in Moscow.

32. *Identified Exurban Relocation Facilities.* To arrive at a rough approximation of the cost of construction and equipment for all exurban facilities identified [redacted]

[redacted] we drew on the cost analysis of each type of exurban facility, both single and dual purpose, in our representative sample. We considered the entire cost of construction and equipment at dual-purpose facilities as attributable to their wartime use. A summary of the costs of the 13 facilities selected for our sample is

presented in table IV-3. Total costs of all of the identified relocation facilities were calculated by assigning a cost for each facility, based on its similarity to one of the sample facilities. The results of these calculations showed that the total cost was about 1.5 billion 1970 rubles. The same investment, if made in the United States, would approximate 5 billion 1981 dollars. Table IV-4 illustrates the distribution of these costs at each leadership echelon.

33. *Exurban Leadership Facilities Nationwide.*

For purposes of calculating the costs of construction and equipment of exurban leadership nationwide, we have assumed one exurban facility for each leadership element—the estimated minimum of 821 Soviet wartime relocation facility requirements as shown in table III-3. (As discussed in chapter III, we believe at least one facility exists for each leadership element—approximate total of over 800—even though we have not located all of them.) We have assumed that the facilities at various leadership echelons would correspond in type and cost to those we have identified at comparable echelons included in our representative sample. On this basis we calculated that the minimum total costs of construction and equipment for exurban leadership facilities nationwide incurred since the 1950s would amount to some 8 billion rubles, or some \$28 billion if acquired in the United States. In fact, some organizations such as military districts, certain national ministries, and some union republics are known to have created more than one relocation facility. Consequently, we believe the actual costs of Soviet exurban leadership facilities have been somewhere between 8 billion and 16 billion rubles, depending on whether there are one or two facilities for each leadership entity, or between \$28 billion and \$56 billion if acquired in the United States. Table IV-5 shows these costs for the minimum estimate by leadership echelon.⁴

34. There are several factors suggesting that the estimated costs of individual facilities are low. It is probable that the total cost of equipment installed in bunkers at some facilities exceeded the cost of construction. For example, we estimated that the cost of

[redacted] for the dual-purpose facility at [redacted] to be 2.3 million rubles, using our costing method. A Soviet emigre who participated in

⁴ The extrapolated costs are based on 115 facilities grouped in five categories according to their similarities to the control facilities whose costs are shown in table IV-3.

Table IV-3
Construction and Equipment Costs
of Selected Soviet Relocation Facilities *

Million rubles
(except where noted)

	Construc- tion	Equip- ment ^b	Total		Construc- tion	Equip- ment- ^b	Total	
Chaadayevka ^c								
Barracks and housing	15.1	6.0	21.1		Housing/admin area	2.0	0.8	2.8
Support areas	8.7	1.7	10.4		Bunker	0.4	0.4	0.8
Operations (bunkered)	20.3	20.3	40.6		Total	2.4	1.2	3.6
Total	44.1	28.0	72.1		Total (million US \$)	8.8	3.2	12.0
Total (million US \$)	157.6	62.2	219.8					
Sharapovo ^d					Bunker	2.1	2.1	4.2
Barracks and housing	18.7	7.1	25.8		Total (million US \$)	7.6	2.8	10.4
Support	1.1	0.2	1.3					
Operations (bunkered)	10.4	10.4	20.8		Housing/admin area	2.9	1.2	4.1
Total	30.2	17.7	47.9		Total (million US \$)	10.8	3.9	14.7
Total (million US \$)	112.1	43.0	155.1					
					Housing/admin area	8.9	3.6	12.5
Housing area (bunkers)	4.7	3.0	7.7		Operations area/bunker	8.5	8.5	17.0
Total (million US \$)	17.5	10.0	27.5		Support	4.5	0.9	5.4
					Total	21.9	13.0	34.9
Housing/admin area	1.2	0.5	1.7		Total (million US \$)	81.2	26.7	107.9
Bunkers	0.3	0.3	0.6					
Total	1.5	0.8	2.3		Housing/admin area	4.0	1.6	5.6
Total (million US \$)	5.6	2.0	7.6		Operation area/bunker	3.6	3.6	7.2
					Support	0.8	0.2	1.0
Housing/admin area	1.2	0.5	1.7		Total	8.4	5.4	13.8
Bunker/communications building	0.2	0.2	0.4		Total (million US \$)	23.5	10.8	34.3
Total	1.4	0.7	2.1					
Total (million US \$)	4.9	1.8	6.7		Operations area/bunker	2.0	2.0	4.0
					Total (million US \$)	7.3	2.8	10.1
Housing/admin area	1.7	0.7	2.4					
Bunker	0.1	0.1	0.3 ^e		Operations area/bunker	1.2	1.2	2.5 ^e
Total	1.8	0.8	2.7 ^e		Housing/admin area	10.8	4.3	15.1
Total (million US \$)	6.7	2.4	9.1		Total	12.0	5.5	17.6 ^e
					Total (million US \$)	44.5	16.6	61.1

^a 1970 rubles and 1981 dollars were used for the cost estimates in this table.

^b The equipment at relocation facilities was acquired at various times and ranges in type from sophisticated electronics systems to standard support items such as generators. Therefore, the ruble costs compared to the dollar costs of equipment (the ruble-dollar conversion ratio) vary widely.

^c High cost of Chaadayevka is due in part to a large recreational facility which includes a theater costing the equivalent of nearly \$4 million to build.

^d Recent analysis

indicates that hardened, underground facilities at Sharapovo may be much deeper (circa 100 meters) and more extensive than we had believed. Thus, these cost estimates would be very low.

^e Because of rounding, totals do not add across.

Table IV-4
Construction and Equipment Costs
of Identified Soviet Leadership
Relocation Facilities by Echelon

Echelon	Million 1970 Rubles	Million 1981 \$
Total	1,554	4,904
National	933	2,997
Military districts	226	690
Key regional organizations	28	126
Union republics	254	713
Oblasts	113	378

This table is Secret.

Table IV-5
Construction and Equipment
Costs of Projected Soviet
Relocation Facilities

Echelon	Million 1970 Rubles	Million 1981 \$
Total *	7,891.4	28,246.0
National	2,350.0	7,564.0
Military districts	290.6	852.0
Key regional organizations	116.4	2,150.0
Union republics	3,749.4	12,877.0
Oblasts	1,385.0	4,803.0

* Costs were estimated for 821 sites, the minimum number projected. For maximum costs, multiply all figures by two.

the planning and design of a relocation facility identical to [] reported that the preliminary cost estimate for the entire complex (both construction and equipment), including a hardened, underground communications center, was 5 million rubles. The source was confident that the final cost would exceed this amount but could not predict the final figure. Another source who designed pioneer camps for the USSR Ministry of Health and had also worked on a planned ministerial relocation site report-

ed that cost estimates for ordinary camps ran to 2.5 million rubles. Modifications for wartime use would amount to 5-6 million rubles. The difference between our estimate of the costs of these types of dual-purpose facilities and the estimates provided by former Soviet construction specialists could amount to about 2 million rubles per facility. This difference would increase our total estimate because []

Finally, relocation facilities alone do not reflect the full extent of capital investment in leadership survival and continuity. For this, urban sites would have to be added.⁵ We believe, therefore, that the overall cost of the program would be significantly greater than the at least \$28.2 billion we have estimated for relocation sites alone.⁶

35. *Annual Costs.* We are unable to estimate the annual construction and equipment costs for Soviet leadership relocation facilities over the 25-year life of their program (1958-83). Our evidence does not permit us to estimate the rate of annual new construction of relocation facilities. It is probable that the pace of the program largely followed that for overall Soviet civil defense activities. If so, there has been greater emphasis on construction of leadership relocation facilities during the past 10 years than in the prior period. The average annual construction and equipment costs implied by our projections of total leadership relocation facilities would range from \$1.1-2.2 billion.

⁵ The magnitude of the urban cost factor can be seen from the fact that the three sites belonging to the KGB and one to the USSR Ministry of Health reflect an investment of \$12.4 million in bunkers alone. We believe that the Moscow administrative headquarters of each of the more than 150 USSR and RSFSR leadership entities described in annex D would possess at least one hardened underground urban facility of some type. This does not, of course, take into consideration similar urban facilities elsewhere in the Soviet Union.

⁶ It also should be noted that these estimates do not include the investment in [] hardened command and control facilities that have been located in the USSR and are believed to serve military commands and would represent an additional capital investment.

CHAPTER V

MEASURES OF PERFORMANCE OF SOVIET WARTIME MANAGEMENT

1. The Soviets' confidence in their capability to conduct nuclear war is probably critically dependent on their assessment of the survivability and continuity of their leadership at all levels and the reliability of supporting command, control, and communications facilities. Their confidence would also depend on their judgments about the prospects for disrupting and destroying the ability of the United States and its Allies to command and operate their forces. The Soviets, therefore, are continuing extensive efforts to improve all aspects of the command, control, and communications capabilities of their wartime management structure. Their plans include the following:

- A well-defined wartime management organization.
- A clearly designated chain of authority and leadership responsibilities.
- Facilities and procedures to give leadership cadres and organizations a high probability of surviving a large-scale nuclear attack.
- Survivable, reliable communications networks.
- Exercises and training programs for key personnel and organizations at all levels of the wartime management structure.

2. The USSR has an extensive civil defense indoctrination and training program. While there is widespread apathy displayed by many to mandatory civil defense training, the general public nonetheless is well indoctrinated in civil defense planning, and we believe the public would respond to directions of the leadership in a nuclear crisis. Other factors bearing on the overall effectiveness of Soviet wartime management, as discussed in this chapter, are the numbers of leadership command and control facilities available, their vulnerability to the effects of a nuclear attack, the extent of supporting communications, and the level of training of Soviet leaders and key organizations in their wartime management roles.

A. Progress in Meeting Relocation Facility Requirements

3. The potential effectiveness of the USSR's wartime management structure would depend heavily on the extent to which the Soviets have completed planned preparations for the relocation and protection of the leadership.]

4. For previous IIMs on Soviet civil defense, we conducted complex computer simulations of large-scale US nuclear attacks on the USSR to assess the effects of differing degrees of civil defense preparations. We concluded that with as little as a few hours' warning the majority of Soviet leaders at all levels would probably survive a large-scale US nuclear attack.]

5. This conclusion has been substantiated by our increasing knowledge of the Soviet wartime management system. We have also identified many more relocation facilities during the past few years. We estimate, as discussed below, that the Soviets have established relocation facilities for their leadership at all levels.]

National Level

6. *National Command Authority Facilities.* The National Command Authority (NCA), will probably still rely primarily on the large deep underground

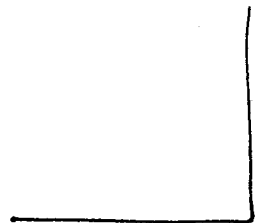
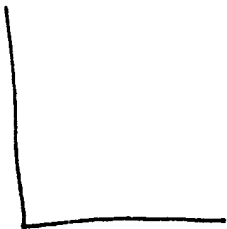
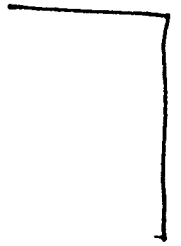
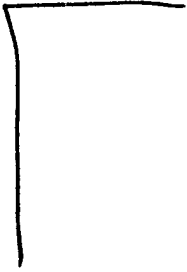
Table V-1
Progress in Meeting
Relocation Requirements

Level	Estimated Minimum Requirements	Estimated Maximum Requirements
Total	821	1,642
National Command Authority	8	16
Ministry of Defense components	35	70
National ministerial organizations	100	200
Military districts	32	64
Key regional organizations	95	190
Republics	403	806
Oblasts	148	296
Nonassociated relocation complexes	—	—

complexes at Sharapovo and Chekhov and the multi-bunker, rail-served complex at Chaadayevka in the Volga Military District. There are other facilities that could supplement these sites:

7. The number of large exurban relocation sites in the Moscow Oblast and the degree of protection they afford suggest that at least core elements of the national leadership will attempt to continue to operate from the greater Moscow area even though some elements will move to more distant complexes. This will also probably hold true for the individual military

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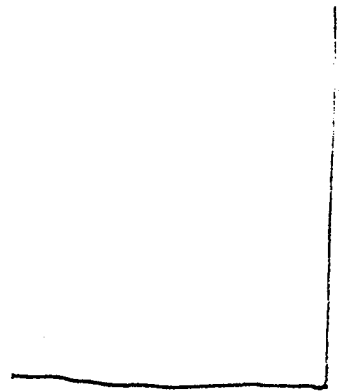
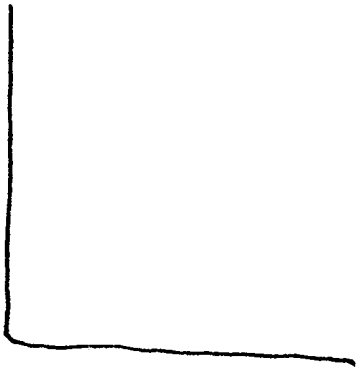
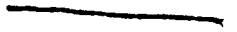
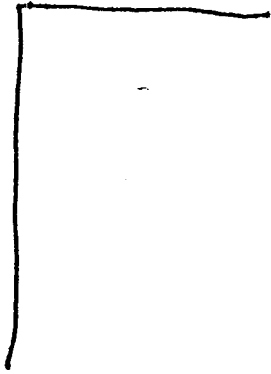


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service headquarters, which have confirmed exurban command posts in the Moscow Oblast. As in the case of the NCA and higher echelons of the MOD, each force headquarters is also believed to have relocation sites outside the immediate Moscow area, [

10. *Other Ministerial Organizations.* [

8. *USSR Civil Defense.* [] command and control complexes have been associated with the headquarters of USSR Civil Defense. [

11. []

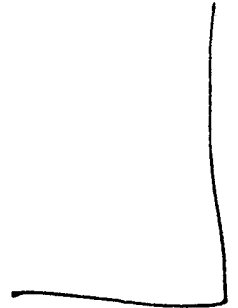
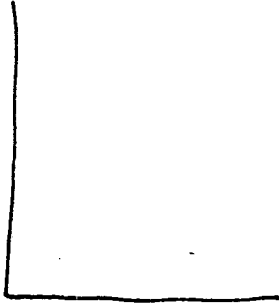
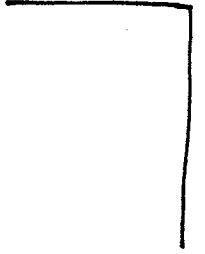
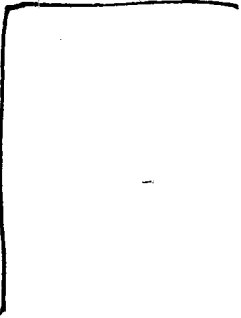
9. *Internal Security Organizations.* The Committee for State Security (KGB) is known to have had plans in effect since the 1950s to relocate to alternate sites in the Moscow Oblast [

[] We conclude from our evidence that all national-level ministerial organizations have or plan to have at least one relocation complex constructed to conform with technical specifications issued by the USSR Civil Defense Staff.

Territorial Levels

12. *Military Districts.* []

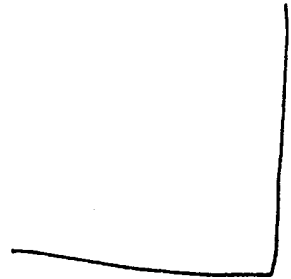
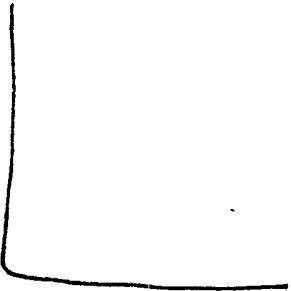
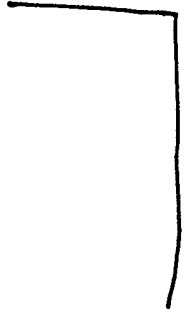
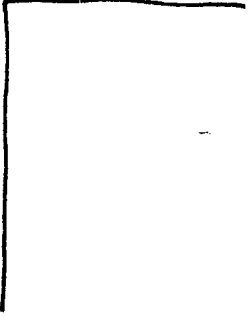
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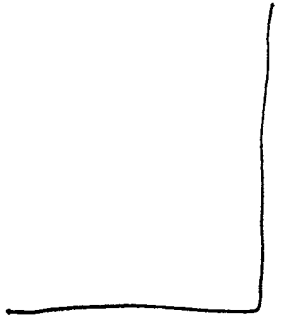
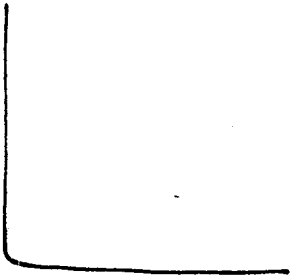
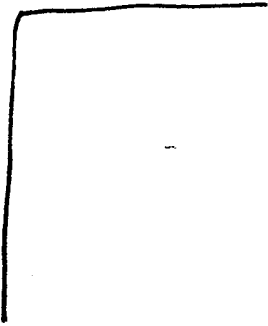
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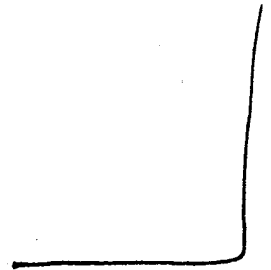
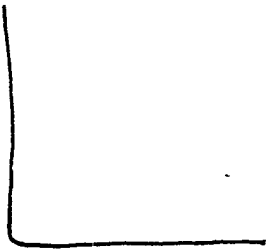
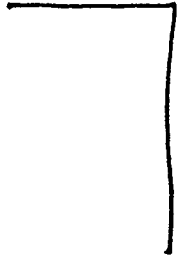
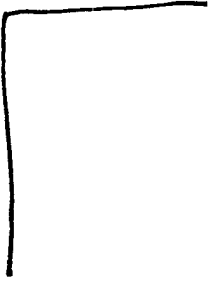
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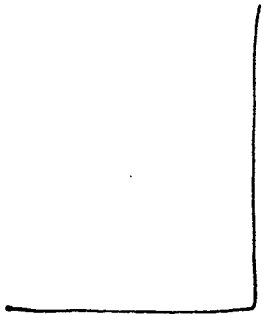
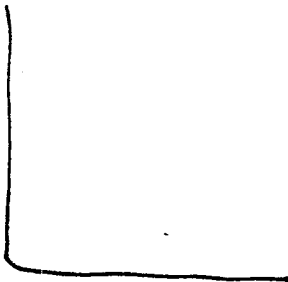
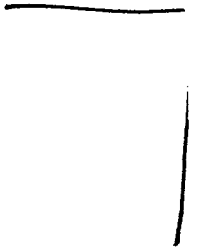
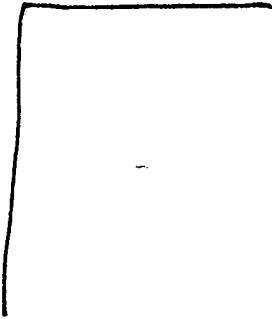
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supplemented by various types of dual-purpose facilities for republic-level ministerial organizations. Some of the dual-purpose sites would be occupied by more than one organization, while others appear to have been developed by individual ministries for their exclusive use. Human sources have reported on ministerial relocation sites in 14 republics. In addition, over 100 rest and recreation sites have been reported to be associated with republic-level ministerial organizations and could potentially be used as relocation facilities. The evidence leads us to believe that all 15 of the Soviet republics have exurban command posts.

Since the formalization of the wartime military district structure, we believe specific relocation facilities will be permanently assigned to those districts. However, all of the facilities in the table form part of the General Staff network, and could be allocated as the evolving military situation required.

13. The military districts would probably make use of dual-purpose facilities as well.

16. The relocation practices of republic-level ministerial organizations suggest that directives concerning relocation preparations have been extensively implemented with heavy reliance on the exploitation of dual-purpose facilities. Some of these exurban relocation sites have hardened facilities to reduce their vulnerability to the prompt effects of nuclear detonations. Others rely on their remote location for protection.

17. Oblasts.

14. We believe that the military districts have largely met the minimum requirements for relocation sites, or could meet them as wartime conditions evolve.

we believe every military district headquarters has multiple relocation facilities to accommodate the military district command and its civil defense and rear services organizations.

15. Republics. Single-purpose exurban command posts, reported to serve the leadership

exurban command posts for their civil defense staffs. Most are located in or near small towns, usually rayon centers. Some sites possess hardened, underground structures over which schools, clubs, or other relatively large buildings common to rural areas have been built. Others use available surface structures for relocation and command post facilities, relying on their distance from potential targets for protection.

18. We are less certain about the Soviets' progress in providing hardened exurban relocation facilities for oblast leaders than we are about their progress at higher levels. Nevertheless, we believe the Soviets have probably provided a relocation facility for each oblast. As in the case of other elements of the war management system, however, the degree of protection provided and the types of facilities available at each site will vary, depending on the importance of the oblast. Because of their extensive use of dual-purpose sites,

Our evidence indicates that these sites are

oblast-level facilities will remain the most difficult to locate.

19. *Regional Organizations.* As discussed in chapter III, there are organizations whose areas of responsibility do not coincide with military district, republic, or oblast boundaries. Most important to wartime management are the organizations responsible for transportation, communications, and power, such as the 32 regional railroads and the unified power systems.

We cannot be certain about the number of relocation facilities provided for these regional organizations. However, they are responsible for vital services of common concern to all levels of the political, administrative, and economic structure of the USSR, and we believe that ensuring continuity of operations would be of high priority. We assume that most, if not all, of these regional organizations have plans and preparations for relocation away from vulnerable target areas.

B. Survivability of Relocation Facilities

20. To be effective in wartime, exurban command, control, and communications facilities must be survivable. Under Soviet civil defense planning, leadership protection is provided by relocation to hardened facilities distant from probable target areas. In some instances, the Soviets have also used concealment and mobile facilities—aircraft, trains, and vehicles—to protect military and civilian leaders. Mobile facilities have been used primarily for top Soviet leaders.

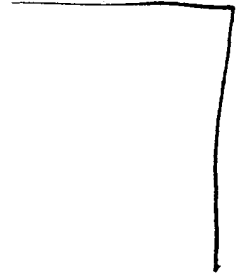
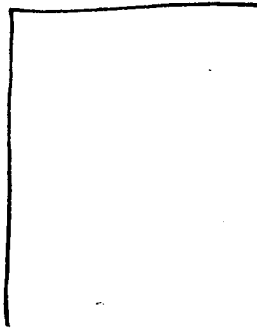
Camouflage, Concealment, and Deception

Physical Vulnerability

24. *Bunker Designs.* The structural design of hardened underground structures found at Soviet command, control, and communications facilities has been standardized in recent years. Such bunkers are of the flat-roof type and are constructed of precast concrete wall, column, girder, and roof elements. Monolithic

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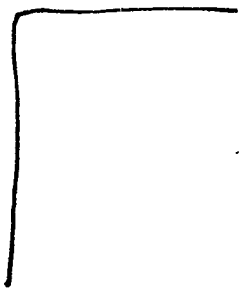
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action is obtained by welding steel reinforcement between elements. The roof resistance is increased by a reinforced concrete slab over the precast roof elements. Bunkers may be fully buried with soil backfill making them flush with normal surface grade or they may be only partially buried with a soil berm. In either case a minimum of 1 to 2 meters of soil cover is placed over the roof. Soil conditions, water tables, land contours, and other factors permitting, the Soviets appear to prefer fully buried structures. When covered over at grade level they can be readily masked by formal gardens, vehicle parks, athletic fields, or by surface buildings constructed over all or a portion of the bunker. []

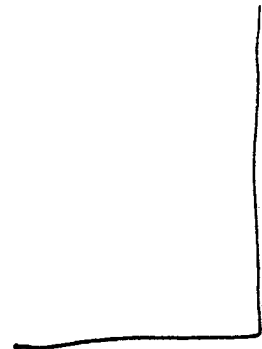
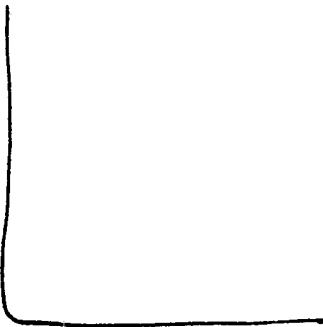
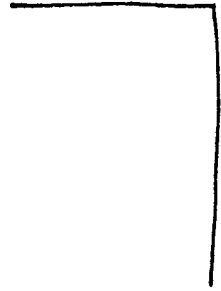
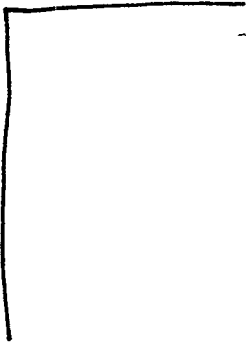
25. The US criterion for severe damage to flat-roof bunkers is collapse of the roof, which would preclude use of the bunker for any purpose. The high overpressure required to achieve 50-percent probability of severe structural damage to underground bunkers (see table V-3), would destroy any surface buildings con-



structed above them. Therefore, aboveground structures are not considered in our assessments of the vulnerability of the bunkers below them. An improved analytical method has been developed for calculating the dynamic response to overpressure of shallow-buried structures like most Soviet hardened bunkers, and a large number of Soviet protective underground structures have recently been reanalyzed using this method. As a result, our calculations of the overpressures required to achieve severe damage are higher than those published in the 1977 IIM. It should be recognized, however, that significant uncertainties remain in all these analyses. (See annex B for comparisons and a description of the methodology used in our calculations.)

26. *Single-Purpose Facilities.* We have assessed the vulnerability of bunkers at three types of single-purpose relocation facilities described in chapter V: national leadership complexes (including deep underground structures), military complexes with bunkers, and single bunker installations. Bunkers intended for

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the use of the highest levels of leadership are the hardest (see table V-3). Bunkers at other single-purpose facilities were assessed to have similar hardness levels. Except for national-level complexes like Chekhov and Sharapovo, we found no significant statistical relationship between the degree of hardness of bunkers and the functions or organizational level of intended users. The hardened facilities were constructed at different times and perhaps to different specifications, and there are uncertainties in our data on the structural features of the facilities as well as on their intended users.

27. A reassessment of the sites at Chekhov and Sharapovo indicates that they are harder, deeper, and much less vulnerable than previously estimated. For more than a decade the Soviets have been expanding and improving these sites, but have concealed the extent of their activities.

28. In addition to providing blast protection, bunkers at single-purpose facilities also provide protection against thermal radiation, initial nuclear radiation, and fallout radiation. We did not assess the degree of protection the bunkers would afford against these effects. It is assumed that other elements, such as entranceways and ventilation equipment, are as hard as the structure itself.

29. *Dual-Purpose Facilities.* The characteristics of dual-purpose facilities intended for wartime command, control, and communications at exurban locations vary considerably. For the purpose of assessing their physical vulnerability, however, we have divided them into two general categories:

— The first group consists of those complexes with identified single- or multi-storied flat-roof underground bunkers and extensive surface structures associated with the peacetime function of the facility. The bunkers at these sites are primarily of the detached variety, although some are wholly or partially covered by surface structures. Among those examined from this first group

were [

]

— The second group consists of complexes which lack underground bunkers. Although they have extensive surface features similar in many respects to those in the first group, some of these complexes have basement-type shelters. Examples of this group are [

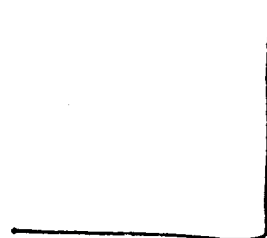
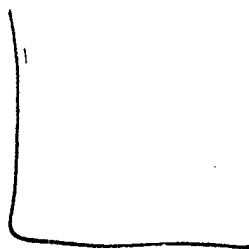
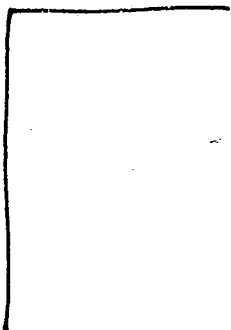
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30. The protection that would be afforded by the aboveground installations at both types of dual-purpose complexes would be comparable to that provided by reinforced concrete structures of standard design. The basement-type shelters would provide somewhat more protection, while the underground bunkers at these facilities are assessed to have hardness values comparable to those of the single-purpose facilities. Table V-3 summarizes our assessments of the hardness of the bunkers, basement shelters, and aboveground installations at dual-purpose complexes.

31. As noted previously, there does not appear to be a positive correlation between the degree of protection at dual-purpose relocation facilities and the functions or level of organization they are intended to serve. However, there does appear to be some correlation between the periods of construction of dual-purpose relocation facilities and the nature of the hardened structures provided. [

] there appear to have been three partially overlapping periods with quite distinct patterns of construction. The first began in the late 1960s, with construction reaching a peak in the early 1970s, and ended in 1973. The second began in 1973, with peak construction in the mid-1970s, and ended in about 1978. The third period began in the late 1970s. This phase is continuing, although construction may have peaked in 1980-81. The construction of detached, underground bunkers occurred in the first and second periods, with slightly more in the first. The construction of surface buildings over all or a portion

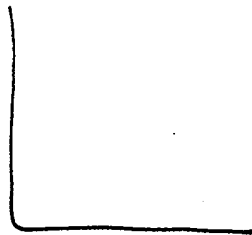
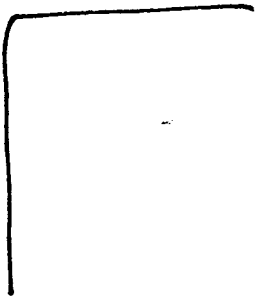
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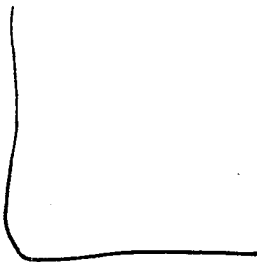
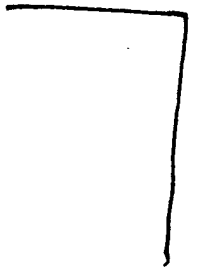
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Table V-4
Fallout Radiation Protection Factor
for Personnel in Structures at
Relocation Facilities

Structure Type	Protection Factor
In the open	2
Wooden building	3
Multistory concrete reinforced building	10
Basement	20
Underground bunkers and shelters	1,000
Underground complexes for top national leaders	More than 1,000

of the underground bunkers occurred primarily in the second period. Hardened basement shelter construction began primarily in the latter part of the second period and has continued to the present.

32. *Vulnerability to Radiation From Fallout.* If a Soviet relocation facility were not directly attacked, the principal risk to the personnel at the command post would be from fallout. We have considered protection factors for each type of structure at relocation facilities (see table V-4). The protection factor (PF) is the ratio of the dose rate of radiation outside of the structure to the dose rate inside the structure.

33. The actual protection that would be afforded personnel in structures at relocation facilities would depend on the physical parameters of the structure, the distance of the facility from targets being attacked with nuclear weapons, and on such factors as the yield and height of weapon burst, number of nuclear detonations, and weather conditions. We assume, however, that under the most likely attack scenario, personnel at relocation sites would be located prior to the attack in those structures that would afford the greatest protection. Other analyses (including those in the Memorandum to Holders of the 1977 IIM) indicate that personnel in structures at relocation facilities with PFs of 20 or above would probably be able to continue to function in their wartime management role following a large-scale US nuclear attack, assuming the facilities were not destroyed.

34. *Location of Exurban Command Posts.* The distance of relocation facilities from probable target areas has been a key factor in the USSR Civil Defense guidelines. Close cooperation exists between elements of the Ministry of Defense concerned with the development and testing of nuclear weapons and USSR Civil Defense. This cooperation provides the basis for planning guidelines with regard to potential damage to various types of targets likely to be attacked with nuclear weapons, including relocation facilities.⁴ Guidelines for the design and the location of exurban command posts appear to have been altered in response to changes in Soviet perceptions about nuclear weapon effects, the potential size of a nuclear attack, and probable targets in the USSR. For example, a change in the guidelines can be inferred from a directive (circa 1972) from USSR Civil Defense to the Ministry of Chemical Industry to establish a second, "distant" command post 900 km east of Moscow, even though it already possessed a site 70 km north of the city. □

35. Despite indications that the Soviets have attempted to locate relocation facilities away from other probable targets, there does not seem to be a positive

⁴ For additional background on cooperation between Ministry of Defense nuclear weapons specialists, USSR Civil Defense, and an industrial ministry, see DIA DDB-2260-7-81-SAO, *USSR: Ministry of the Coal Industry Civil Defense Program—Emphasis on Command and Control*.

⁵ The reference to a "categorized" city is believed to derive from the system of categorization applied to large administrative centers and industrial cities by the USSR 1961 Civil Defense Statute.

correlation between the distance of sites from Moscow and the period during which they were constructed. For example, [

38. USSR Civil Defense guidelines specify the degree of protection required at each facility based on its proximity to potential targets. A source [

] reported that designers were notified of a "protective coefficient," specified by civil defense authorities, that was based on the risk of fallout to the locality in which the facility was to be constructed. The protective coefficient is probably similar to the protection factors we have calculated in table V-4. Utilizing standard tables, this coefficient was translated into appropriate strengths and thicknesses of walls. Whenever the coefficient was greater than a specified level, special ventilation and filtering devices were required in basement-type shelters. Other measures, such as sandbag and brick-wall radiation screens, were included in the plans for construction. Apparently, these coefficients were regularly reviewed by civil defense staffs.

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36. Similarly, the distance of relocation sites from likely military targets does not show a consistent pattern. [

[

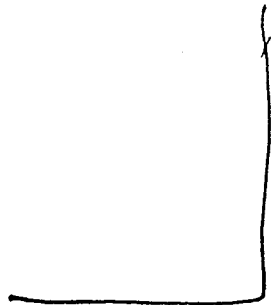
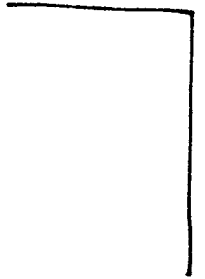
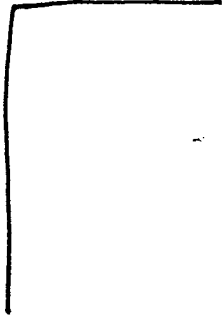
37. The absence of any consistent patterns with regard to location of relocation facilities is undoubtedly due to the latitude often given to organizations in planning relocation sites. For reasons of convenience and economy, ministries have preferred to meet their relocation requirements by using rest, recreation, or other facilities already under their control (see table V-5). In addition, many ministries, particularly those in the Moscow region, obtained approval to use preferred sites even if it required some deviation from USSR Civil Defense guidelines. The lack of uniform planning in the 1970s probably accounts for the statutory change in 1980 requiring relocation sites to be located at least 180 km from Moscow. It is too early to judge how vigorously this requirement will be enforced; however, as noted above, after passage of the statutory change, one ministry had to abandon a planned site in favor of one more distant from an urban target area.

Active Defense

39. Active as well as passive defense would enhance the survivability of Soviet leaders responsible for war management. We have reviewed ongoing and projected improvements in Soviet air and ballistic missile defense (BMD) systems that could protect selected urban areas and key relocation facilities, in both the Moscow region and elsewhere in the USSR.

40. *Moscow Area.* The Soviets have constructed many large, multistory bunkers within the main Moscow Ring Road and new bunkers are under construction [] New multistory bunker construction is also evident beyond the Ring Road. For example, the State Committee for Television and Radio Broadcasting began constructing its underground emergency wartime broadcasting center in late 1979. Upgrade and construction of other exurban command, control, and communications complexes continue at numerous sites in the Moscow Oblast. Almost all of these facilities are within the E-Ring Road with more than half between the C-Ring and E-Ring Roads. The majority are located within the southwest quadrant. These areas contain the most modern and the most densely deployed air defenses in the USSR. In addition, ballistic missile defenses are deployed around Moscow and are currently being

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upgraded, apparently within the limits of the ABM Treaty. While these defenses could not significantly reduce damage to Moscow from a large-scale US attack, they might be effective in preferentially defending key leadership facilities.

41. Moscow is protected by the full range of strategic surface-to-air missile (SAM) systems. Medium- to high-altitude SAM coverage is provided by the SA-2 and SA-5, as well as the obsolescent SA-1 which encircles Moscow in two defensive rings. Until 1981, low-altitude defense was provided by the SA-3, which protected only the western approaches to the city. Since then, the new all-altitude SA-10 is being deployed around Moscow (see figure V-14), providing better protection against the threat from US bombers and cruise missiles. All but a few of the known relocation bunkers would be within the area of coverage of these new defenses. Deployments of SA-10s at other Soviet cities will not be as dense as those around Moscow but will substantially contribute to local defenses. Moscow's defenses also are buttressed by a number of fighter-interceptor regiments.

42. The Soviets almost certainly expect that leadership facilities in the Moscow area would be attacked by US ballistic missiles. Present ballistic missile defenses and any future defenses deployed under ABM Treaty limits could be easily overcome by a large-scale US ballistic missile attack on Moscow. Nevertheless, if the Soviets were able to execute an effective, well-coordinated first strike on US ICBMs, the number of highly accurate warheads necessary to attack the leadership facilities would be reduced. Under these circumstances the Soviets' ABM defenses could assume greater importance in protecting the national-level leadership.

43. The improvements now under way at Moscow appear to be designed to achieve a two-layer defensive system, increasing the number of launchers to the maximum of 100 permitted by the Treaty. In addition to increasing the number of available interceptors, the new silos will provide some degree of protection to the launchers from nuclear weapon effects. The Soviets' objectives for their ballistic missile defense program are now, at a minimum, to improve their ABM defenses at Moscow, to provide options for widespread ABM defenses in the 1980s, and to advance the USSR's ABM technology as a hedge against an uncertain future.

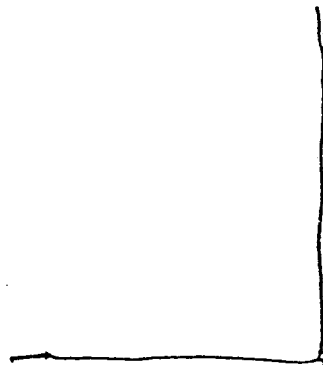
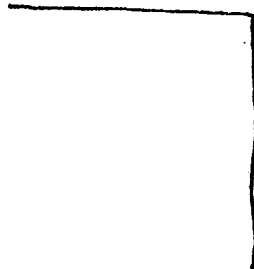
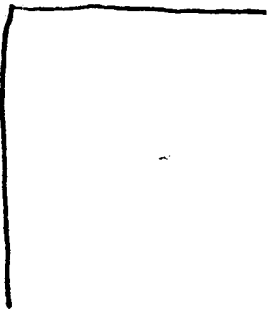
44. *Other Areas of the USSR.* The military district has become the focal point for the management of peacetime and wartime activities to provide for the continuity and stability of the rear. The Soviets have made provisions for air defense of the cities that are military district headquarters and their environs. Moreover, under the 1980 reorganization of Soviet air and air defense forces, strategic air defenses in most peripheral areas were combined with their tactical counterparts and were placed under military district command. Overall, we project major improvements in Soviet air defense weapons and command and control during the 1980s.

45. Ballistic missile defenses might be extended beyond Moscow under some circumstances. If the ABM Treaty were abrogated by either party, we believe the Soviets could undertake a widespread ABM deployment to protect key targets in the USSR. It is possible that command and control facilities for the wartime management structure, particularly military district facilities, would receive high priority for ballistic missile defense. Also, the Soviets are developing an advanced tactical SAM system that could be capable of intercepting some types of ballistic missile reentry vehicles.

C. Communications Support

46. Communications support is the joint responsibility of the Ministry of Communications (MOC) and the Ministry of Defense (MOD). These responsibilities have evolved over the past 20 years along with changes in the wartime management structure. Under the 1961 Civil Defense Statute the "organization of a warning and communications system" was defined as a "main task" with primary responsibility given to the MOC assisted by the MOD. Working together, these ministries developed redundant networks, supporting facilities, and operational procedures, which were aimed at providing the national leadership with continuity of control over all activities in the Soviet homeland following a nuclear attack. As the role of the MOD and the military districts supporting the wartime management structure expanded, increased reliance was placed on the communications networks normally available to the General Staff, supplemented by communications of the KGB Directorate of Government Communications (UPS). Despite this shift in emphasis,

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the MOC and other ministries that operate their own communications systems continue to have important responsibilities for providing communications support to the wartime leadership.

Ministry of Communications

47. The 1961 Civil Defense Statute directed the USSR MOC to:

- "Develop measures . . . that ensure the dependable functioning of the means of communication, warning, and radiobroadcasting of the country in peacetime and during the 'special period.'
- "Provide Civil Defense in peacetime and during the 'special period' with communications; during the 'special period' organize centralized use of all state and departmental means of communications.
- "Provide the organization of warning and communications services in republics, krays, oblasts, towns, and rayons, and effect the management and supervision of their activities."

48. To implement these directives, the USSR Minister of Communications, in his role as Chief of Civil Defense of MOC and principal communications officer of the Soviet Government, followed the standard civil defense management pattern by creating second departments (to integrate the wartime functions of the ministry with civil defense plans) and civil defense staffs at the all-union and territorial levels of the ministerial structure. Similar actions were taken in the republic ministries of communications. At oblast levels and below, departments and sections of communications provided the manpower and equipment for the communications services and formations of the territorial civil defense staffs.

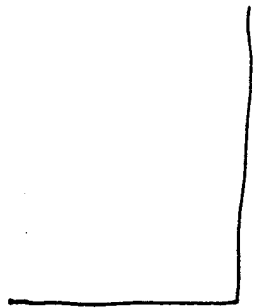
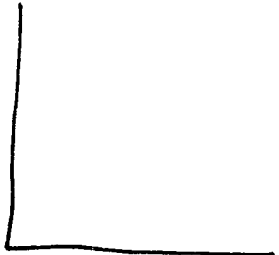
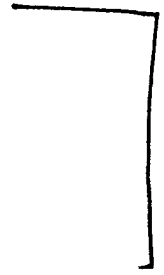
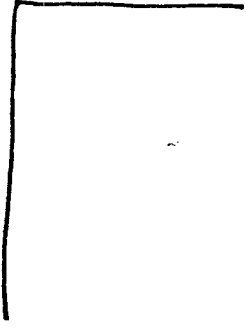
49. Concern for the survivability and dependability of communications in wartime resulted in the adoption of several corrective measures beginning in the early 1960s, and improvements continue to be made. Some of these measures grew out of a broader MOC program to expand, improve, and automate its common-user service. These measures included constructing hardened reserve telephone exchanges in major cities (some of which are colocated with underground urban command posts for territorial civil defense

organizations), installing underground intercity cables to circumvent vulnerable urban areas, and building bunkered cable switching points and network control centers. Most important, the MOC developed plans for 16 automated regional communications control centers, such as [] Sources who served in the MOC have expressed the view that the 16 communications regions served by these centers were intended to provide military district commanders with the capability to manage communications systems in their area on a decentralized basis if necessary after a nuclear attack. Although wartime considerations were presumably not the sole motivation for adopting this regional arrangement, they probably were a major factor in the decision. The MOD and all elements of the party, state, and national economy would depend heavily on the systems of the Ministry of Communications in wartime.

50. The Soviets expect their communications systems to suffer damage in a nuclear attack, despite their efforts at hardening underground cable networks. Poststrike restoration of communications services constitutes an important function of the civil defense elements of the MOC at all levels. For the most part, the civil defense elements of oblast and lower level MOC organizations are responsible for repairing damage to secondary networks. Personnel would be drawn from the appropriate departments and would use standard-issue MOC equipment in their emergency repair work. Similar patterns would be followed by those regional communications organizations under the MOC that are responsible for intercity networks. However, civil defense components of regional communications organizations would be supplemented by dedicated, subordinate field stations possessing wartime reserves of cables, mobile radio relay units, and mobile repeater stations. These stations are staffed by full-time personnel responsible for maintaining a wartime capability to repair important intercity cable lines damaged by a nuclear attack. Components of the Ministry of Communications regularly conduct exercises simulating these repair activities.

51. All elements of the war management structure rely heavily on the common carrier communications facilities provided by the MOC. The leadership at

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exurban relocation sites would probably be able to access common carrier underground cables for their communications needs and to supplement these common carrier systems with fixed and mobile radio systems. According to human sources, ministerial command post facilities rely heavily on buried cables. Analyses of imagery of these complexes confirm this practice.

52. In its role as the "communications service" of civil defense, the MOC created a "backup," high-frequency (HF) radio network in 1962 paralleling the mainline common carrier systems and linking communications elements in oblast centers with republic MOCs and with Moscow. This network also links oblast stations with civil defense communications services in cities and rural areas. The network employs both fixed and mobile HF stations, and is intended to handle high-priority communications traffic on civil defense matters and to replace damaged common carrier links. [

vided assistance directly to USSR Civil Defense in Moscow, but assistance from the Ministry of Defense to republic and local civil defense staffs was channeled through the military districts. Communications support for this civil defense structure was provided by a dedicated military radio communications network first detected in 1959. This military involvement in civil defense would facilitate the later incorporation of civil defense into the MOD.

55. [

56. At republic and oblast levels, civil defense communications centers are staffed by military operators. Personnel from these centers would be drawn upon to man communications facilities at republic and oblast exurban relocation complexes. [

53. The MOC would play an important role in advising civil defense officials and the population of emergency alerts, including impending attacks. The MOC components at all levels would use the full range of communications available, which have already been tested, to relay warning information received from higher echelons or from territorial civil defense organizations. The communications means would include the local telephone systems, radio stations, and wire transmissions. Communications arrangements also have been made that permit selected officials to receive civil defense warnings or instructions without alerting the general population.

Ministry of Defense

54. The 1961 statute that subordinated USSR Civil Defense to the Council of Ministers called on the MOD to "assist" in the implementation of civil defense measures. Among the items MOD was to provide for in its budget were military personnel assigned to civil defense communications centers. The MOD pro-

civil defense organizations would be supported in wartime by the full range of military communications nets available to the Soviet General Staff, the military districts, and other components of the armed forces. As the General Staff works to improve procedures for controlling the functions of the wartime military districts, provisions will be made under which civil defense operations would be even more closely integrated with the military command and control structure.

57. [



58. The military civil defense units have their own organic communications elements. The communications procedures used by these troops have always conformed to those of other ground forces units, enabling the military districts to coordinate their operations with those of ground forces units.

KGB Directorate of Government Communications (UPS)

59. The Directorate of Government Communications provides the top Soviet leadership with the capability to communicate with all military commanders down to army level and with key republic and oblast officials. These communications systems, both fixed and mobile, largely parallel but are independent of MOD and MOC systems, and they would permit the leadership to bypass normal military and government chains of command. The KGB communications network would probably also support republic and oblast civil defense officials. The Eighth Department of the KGB of the Armenian SSR was reported to operate a communications station at the exurban command post of the republic's civil defense staff. The station operated independently of other communications facilities at the site. There is also evidence that space was allocated during the construction of a civil defense command post in the Siberian Military District to an element of the KGB, probably for representatives of the KGB Directorate of Government Communications.

Other Ministries

60. In addition to the national telecommunications system operated by the MOC, the military communications networks, and the KGB UPS, there are communications systems designed to meet the special needs of the Ministry of Railways, the Ministry of Maritime Fleet, and the Ministry of Power and Electrification. Soviet law requires that these communications systems conform to the regulations and technical standards established by the Ministry of Communications. In wartime the MOC would assume control of these ministerial communications systems.

61. Each ministry would utilize its communications network in wartime in accordance with the civil

defense and mobilization plans developed by the second department of that ministry. For example, within the Ministry of Railroads, each railroad administration's chief of communications is responsible for providing communications support to the railroad's civil defense components in wartime. The railroad communications service would provide maintenance and emergency repair of communications at stations and depots and along railroad rights-of-way, and would install, operate, and service communications equipment at railroad urban and exurban command posts. [

] These ministries have also followed the MOC practice of creating dedicated units, which are responsible for the operation and maintenance of all emergency communications systems. These units participate in civil defense exercises and are responsible for maintaining stockpiles of reserve communications equipment, fixed and mobile.

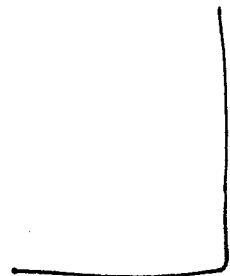
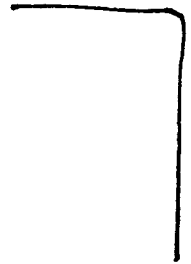
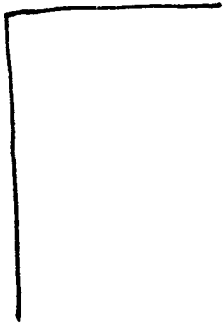
D. Exercises and Training

62. The ability of the Soviet war management structure to ensure the survival of the Soviet system and recovery of the economic infrastructure depends on its ability to implement several highly complex measures under conditions of extreme stress. Management must activate dispersal and evacuation plans without interfering with military mobilization or force deployment, and without inhibiting the continuing functioning of the logistics base supporting military operations. If nuclear strikes occur, the wartime management must then direct rescue, damage-limitation, and repair operations to restore priority economic activity. One of the prerequisites for carrying out these wartime tasks is the training and exercising of leadership elements and key organizations to enable their wartime management to maintain control under increasingly complex conflict situations.

Installations

63. Integrated exercises at the installation level test the leadership's ability to conduct the full range of civil defense operations from dispersal and evacuation to poststrike rescue and repair. They involve very large numbers of personnel and provide the basic skills

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required for effective action in a disaster. Various intelligence sources indicate that installation exercises closely resemble those described in open literature. We have no basis for judging the effectiveness of installation exercises relative to Soviet civil defense standards and requirements. However, the fact that the exercises occur increases the prospects that the installation's civil defense plans would be carried out in a crisis.

Oblasts and Subordinate Cities and Rayons

64. The Soviets give greatest emphasis to exercises testing the ability of command elements to integrate and direct the operations of a number of installations and civil defense organizations. They regard these exercises as critical to the potential effectiveness of the wartime management structure.

65. Integrated exercises involving several installations are controlled by city, city rayon, and rural rayon civil defense staffs. These staffs primarily monitor the peacetime preparations and exercise activities of installations, but may also conduct parallel command post exercises as part of the training of their own personnel.

66. When several territorial organizations—cities and rayons—participate in exercises simultaneously, they are controlled by the oblast civil defense staff, its service chiefs, and the chiefs of the relevant operational axes. In the course of the training year, the oblast civil defense staff also conducts command post exercises (CPXs) involving only its own command, staff, and communications support personnel. The oblast staffs operate from both hardened urban command posts and from exurban relocation sites in multicity and multirayon exercises as well as CPXs.

67. Open literature reflects training exercises at the oblast level only indirectly, because of Soviet military security practices. Very few emigre sources have participated in civil defense activities at the oblast level; therefore, human source reporting on oblast exercises has been relatively limited. We were able to trace the development of oblast-level exercises over several years in the Odessa Oblast, however, based on the reports of several sources who had participated in them. The pattern of exercises and training was as

described in the preceding paragraphs. [

] Reports of exercises in other oblasts from 1976 to the present confirm the information from Odessa on the nature of civil defense exercises and their timing.

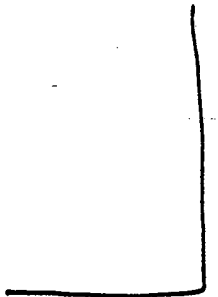
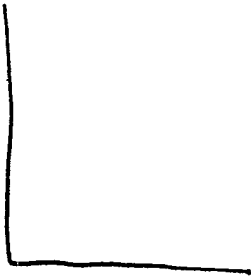
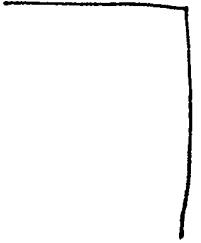
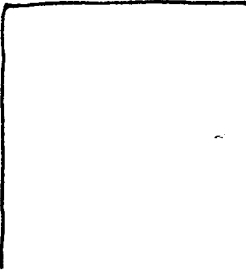
Republics

68. Responsibility for establishing training and exercise schedules and monitoring performance of oblast, city, rayon, and installation civil defense organizations during the training year rests in the first instance with republic civil defense staffs. These yearly training schedules prescribe the types of training activity that is to be conducted and designate the participants. One such schedule approved in 1982 by the republic staff for an oblast of the RSFSR included such things as command post exercises, integrated rayon exercises, specialized tactical exercises for various services at all organizational levels, and assembly points for chiefs of city and rayon civil defense staffs. The RSFSR Civil Defense Staff reportedly controlled exercises involving the evacuation, via motor transport, of essential personnel from an industrial enterprise in a large city to the territory of an adjoining oblast. In 1978 in the Ukrainian SSR, a three-oblast exercise was held involving the evacuation and dispersal of more than 6,000 people from 19 enterprises. A source also described an integrated exercise held in 1973 at a state farm northwest of Odessa that involved the movement of approximately 5,000 evacuees from an urban area to a farm area. The exercise was controlled by military personnel equipped with mobile radio vans. Exercises on this scale are probably not uncommon.

General Staff and Military Districts

69. Exercise activity at oblast levels and below does not fully meet Soviet needs for the development of an integrated war management structure unless the military districts are involved. Military district involvement in oblast-level civil defense exercises began in the early 1960s and probably increased in the early

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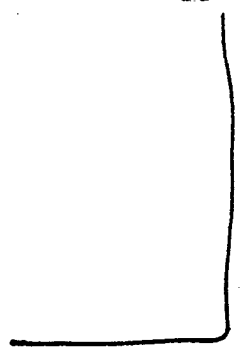
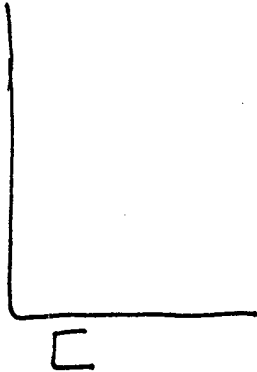
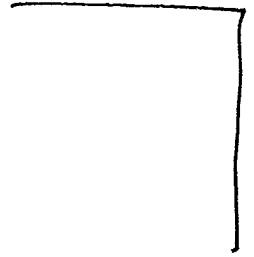
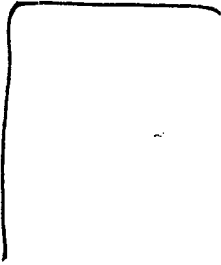


1970s following the assumption of full control of civil defense by the Ministry of Defense. [

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71. In sum, our evidence indicates that the Soviets are conducting a broadly based training program at all levels of the wartime management structure.

The program gives civilian leaders and key civil defense elements experi-

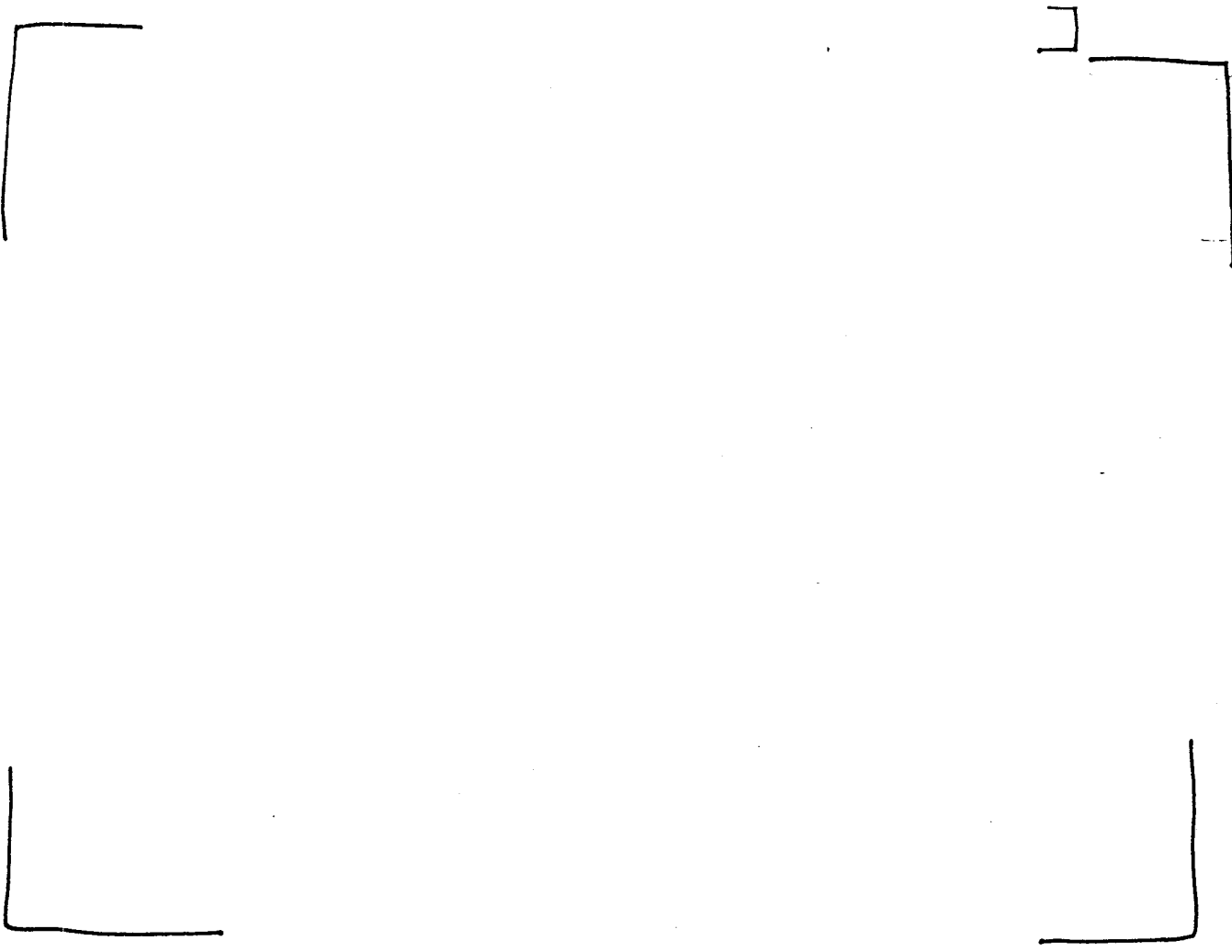
ence in operating in a simulated nuclear environment. We believe this experience improves Soviet prospects for dealing with the many contingencies of a nuclear conflict.

E. Susceptibility to Attack

72. The wartime effectiveness of the Soviet war management system would ultimately depend on whether it could be targeted and successfully attacked. This would require, among other things, the existence of a comprehensive and precise target intelligence data base on key leadership relocation facilities at national and territorial levels. Table V-6 depicts our assessment of the damage expectancy of US weapons against Soviet relocation facilities.

73. [

gence over the past three years. Significant shortfalls still exist in the data base for both the urban and exurban command posts assigned to each leadership echelon. The precise location of administrative headquarters and their associated urban command posts has yet to be determined for the majority of leadership. This is especially true for those in urban centers located in areas closed to foreigners. The most critical problem for target intelligence, however, remains the data base shortfall for the exurban facilities of the Soviet war management structure. Significant progress has been made over the past two years in the development of signature data and research methodologies for locating these targets and associating them with their intended wartime occupants. However, this improve-



74. The Soviet war management system offers the leadership great flexibility in implementing the increased combat readiness stage of preparations of the military forces, state apparatus, and economy with minimum organizational disruption. Even at the threat of war stage of readiness, leaders can disperse and key sectors of the economy can continue operating without complete disruption. Leaders can maintain control of their operations through urban command posts while they are relocating to exurban facilities. This transition could occur under conditions of maximum security which would minimize the risk of disclosure of civil defense preparations to US intelligence collection. Consequently, it is likely that preparations for the transition to a wartime management posture would be activated by the Soviets well before a nuclear attack became imminent.

75. Under the Soviets' war management concept, Soviet leadership entities at the national level are able to delegate decisionmaking authority to their subordinate echelons. This delegation could include endowing selected leaders of subordinate territorial and economic entities with additional special authority. Another, more likely procedure would be to dispatch senior representatives of national-level entities to the wartime relocation facilities of subordinate echelons, resulting in a form of distributed centralization. This could involve the assignment of Politburo-rank officials to the military councils of military districts. A similar practice could be followed by the military district staffs as well, in regard to subordinate oblasts. Such decentralization would enhance command and management capabilities during wartime when communications with the central leadership might be interrupted. The integrated, redundant communica-

tions systems that exist, linking relocation facilities at all levels, would probably be adequate to support decentralization of decisionmaking.

76. Under wartime conditions, Soviet leaders, particularly at the higher levels, will make increased use of mobile command post systems to supplement fixed facilities. However, current Soviet mobile systems are limited with respect to personnel capacity, connectivity, endurance, and data storage and processing capabilities. Therefore, it is likely that the Soviets will continue to rely primarily on fixed sites for their wartime command and control requirements.

77. The Soviets may not expect their war management system to be subjected to a full, undegraded attack by US strategic forces although they almost certainly plan against that contingency. The effectiveness of their wartime management system would be enhanced through the attrition of US nuclear forces in the event of a Soviet first strike and by the operations of active defenses. At present, US land-based ICBM and long-range cruise missile forces are the principal threat to the hardened facilities of the Soviet war management system. A Soviet preemptive counterforce attack against US offensive forces and related command, control, and communications systems could severely degrade US potential to attack these facilities. Following the initial period of a nuclear war, the Soviets probably expect successive attacks from surviving elements of the US strategic forces. Consequently, they emphasize assuring the endurance of their wartime management system during a period of protracted nuclear war, primarily through the hardening, redundancy, and dispersal of facilities and the potential for the decentralization of control.

CHAPTER VI

TRENDS AND IMPLICATIONS

1. We believe the Soviets will continue to make steady improvements in the programs and systems that aim at achieving survivable command and control for the forces, the party and state apparatus, and key sectors of the economy. We do not anticipate any dramatic changes in either the pace or direction of the effort. We foresee:

- Continuing construction, expansion, and hardening of urban and exurban command post facilities.
- Growing reliance on dual-purpose facilities.
- Continuing development of specialized transportation systems to facilitate relocation.
- Increasing numbers of mobile command post systems available to key national and territorial leaders, although the Soviets will continue to base their program around a network of fixed, hardened shelters.
- Improving military district capabilities to integrate active and passive measures for defense against nuclear attack and assure manpower and logistic support required by the war effort.
- Continuing upgrade of communications support for both urban and exurban facilities through hardening, increased system redundancy, and improved capabilities to effect emergency repairs and restore service.

2. The scope of the Soviets' program to provide for leadership continuity in nuclear war and the determination with which they have pursued it over 25 years reinforces our previous judgments that they are attempting to assure the continuity of a wartime management structure capable of exercising control over those national assets that survive a nuclear attack and to utilize those assets for recovery and war support operations. This Soviet program is an integral part of their overall war-fighting capabilities.

3. The Soviets may believe that deep underground structures such as those near Moscow will assure the survivability of the top leadership—a priority objective of their wartime management plans. We have not yet assessed the implications of such a perception by Soviet leaders. Nonetheless, their confidence in the effectiveness of their overall wartime management structure is almost certainly tempered by the belief that civilian as well as military leadership facilities would be high on the list of US targeting priorities in a nuclear conflict. [

] They would certainly assume that US capabilities would improve in the future. Therefore, future improvements in Soviet wartime management preparations may include greater use of mobile command posts and communications equipment, especially for some of the top national leaders. We doubt, however, that the Soviets could carry out their wartime management plans following a large-scale nuclear attack relying only on mobile facilities. We therefore believe they will continue to base their program around an extensive network of fixed, hardened facilities and to engage in concealment practices that make many difficult to detect.

4. Previously, we concluded that a large percentage of the leadership on which the Soviets would rely for wartime management would probably survive a large-scale US nuclear attack with as little as a few hours' warning. We have no reason to alter this judgment, [

] However, destruction of those leadership sites that we have located—at the national, republic, and military district levels—together with their related communications nodes could have a serious effect on the Soviet wartime management structure, particularly in the Moscow area.

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ANNEX A

METHODOLOGY FOR MANPOWER ESTIMATE (Full-Time Soviet Civil Defense Personnel)

A. 1977-81 Estimates

1. The number of full-time civil defense workers in staff organizations at oblast, city, and rayon levels was estimated as 38,170 in the 1977 IIM and in the 1981 Memorandum to Holders. That figure was broken down as follows:

	Military	Civilian	Total
Oblast	4,600	4,600	9,200
City	1,660	11,130	12,790
Rayon	1,080	15,100	16,180
Total	7,340	30,830	38,170

2. The oblast estimates were arrived at by multiplying 63 (the number of slots reportedly authorized for the Magadan Oblast Civil Defense Staff as of May 1972) by 146 (the number of oblasts, krays, and autonomous republics at that time), yielding a total of 9,200—divided evenly between military and civilian personnel. The figures for city and rayon staffing were based on extrapolations from human source reports. Subsequent analysis of the original report on Magadan Oblast indicates that the total number of military and civilian personnel at oblast, city, and rayon levels was underestimated. This analysis also clarified Soviet practices relative to the allocation of full-time positions within civil defense organizations.

B. Current Estimate—Oblast and Below

3. A reexamination of the original report of May 1972 revealed that, whereas the table of organization of the Magadan Oblast Civil Defense organization authorized 63 persons, apparently from MOD rolls, there were also 37 persons assigned to oblast civil defense duties from the Magadan Oblast Soviet. This is consistent with the provisions of the 1961 Civil Defense Statute, whereby civil defense positions are filled

by employees of the Ministry of Defense, councils of ministers, and executive committees of Soviet workers' deputies. The MOD positions are filled by active-duty servicemen and MOD civilian employees. The executive committee positions are filled by civilian employees of republic councils of ministers and local Soviets. The total number of civil defense positions was based on the size of the population. Magadan Oblast, because it had a population of approximately 500,000, was authorized 63 MOD slots and 37 civilian slots, for a total of 100 full-time positions.¹

4. The use of population figures as a basis for establishing civil defense staffing patterns conforms to standard civil defense practice in other situations. For example, population is an important consideration in determining the civil defense category to which a city belongs. Given this practice, it is evident that the total number of full-time oblast staff positions cannot be obtained simply by multiplying the 63 positions for Magadan Oblast by 146. First, the omission of the 37 non-MOD positions distorted the results. Second, Magadan Oblast has the smallest population of any oblast in the RSFSR. Therefore, it would be more realistic to estimate the number of full-time positions in civil defense organizations at oblast levels and below by relating staffing positions to population ratios. For example, using 63 MOD positions allocated to an oblast with a population of approximately 500,000, we

¹ The population figure for Magadan Oblast in the 1972 RSFSR Administrative-Territorial Divisions Handbook was 353,000; in the 1980 USSR Administrative-Territorial Divisions Handbook it was listed as 478,000. It is our assumption, therefore, that the figure of 500,000 referred to in the 1972 report probably was intended to cover oblasts with populations of not less than 250,000 and not more than 500,000. The 1972 report indicated that 37 executive committee positions were too many for an oblast with a population level of 500,000. Thus, this figure might be lowered. Since the total of 63 authorized positions involved a reduction of six from 69, we assume that the figure would be reduced by only two or three slots.

arrive at a ratio of one position to every 7,936 inhabitants. The ratio of executive committee positions would be 1:13,513. Combined, the ratio of positions to inhabitants would be 1:5,000. Thus, if we take the total population of the USSR (270 million) and apply these ratios, we arrive at the following: 34,022 MOD positions and 19,980 Council of Minister positions, totaling 54,002.

5. If we apply the same ratios to an oblast such as Leningrad, we find a total of 1,130 full-time civil defense positions (712 MOD, 418 executive committee). A human source has stated that the combined Leningrad oblast-city civil defense staff had a total of 500 civil defense workers. Considering that Leningrad Oblast has 16 cities of oblast subordination (of which 11 have populations ranging from 27,000 to 78,000) and 17 rural rayons for which it has to provide civil defense staffs, the figure 1,130 seems reasonable for the entire oblast.

C. Republic-Level Estimates

6. The figures for republic civil defense staffs presented in the 1977 Memorandum were arrived at by multiplying those reported for the Armenian SSR by the 15 union republics for a total of 2,700 (2,250 military and 450 civilians). This method failed to take into consideration differences in population in the various republics. While the same ratios that were used in connection with oblast staffs and below cannot be applied to republic staff tables of organization, it would seem logical that republics with larger populations have a greater number of subordinate civil defense territorial and installation staffs to supervise. The Armenian SSR has a population of 3,074,000 and reportedly has a civil defense staff of 150 military and 30 civilian personnel. There are seven other republics whose populations range from 1,474,000 (Estonian SSR) to 3,968,000 (Moldavian SSR) which could logically be allocated about the same number of personnel. Other republics would have large staffs, with the RSFSR (population of 138,365,000) having the largest republic civil defense staff. Some indication that the population size of a republic determines the civil defense staffing pattern is evident in the assignment of general colonels as chiefs of staff for the RSFSR and

the Ukrainian SSR civil defense organizations, a general lieutenant for the Uzbek SSR (third largest in population), while the remainder are staffed by general majors. Thus, to estimate the total number of positions at republic civil defense staffs, we multiply the 180 allocated to the Armenian SSR by the eight republics of comparable population for a total of 1,200. Staffs for the Georgian, Azerbaijan, and Belorussian SSRs would follow population patterns and approximately double the size of their civil defense staffs for a total of 900. Uzbek and Kazakh SSRs each would have about 400; the Ukrainian SSR, 600; and the RSFSR, 800. The republic total is 4,300.

D. National-Level Estimate

7. The 1977 IIM estimated a total of 300 military and civilian personnel at the USSR Civil Defense Staff headquarters []

[] floorspace at the headquarters has increased from about 7,500 square meters in 1975 to approximately 20,000 square meters in 1980. This translates to a capacity of between 1,400 and 1,900, using criteria based on analysis of national-level staffing patterns []

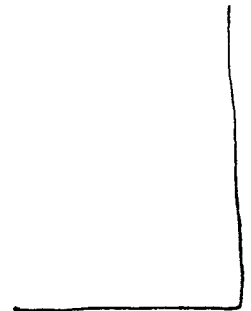
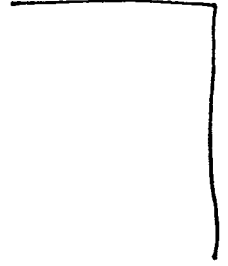
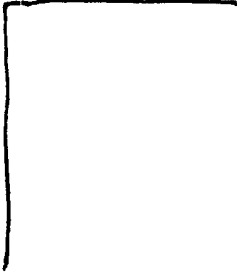
[] It is believed that the best estimate for current staffing of USSR Civil Defense Staff is 1,700.

8. In the 1977 IIM the civil defense academy at Balashikha [] was estimated to have 400 students. []

[] as of April 1980 the total number of students would be 550. The size of the faculty was not estimated. We believe it to be at least 100 []

[] the civil defense advanced officers training courses near Khimki, in the northwestern environs of Moscow, were reported to have a total enrollment of about 500. There were 150 staff personnel of which 120 were officers. Thus, total staffing for civil defense academies at the national level would come to 550 at Balashikha plus at least 200 faculty members at both Balashikha and Khimki (the student body at Khimki is composed of foreign officers and Soviet officers—the latter are covered in the estimates for personnel of civil defense organizations elsewhere). This brings the total to 750.

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E. Military District Estimates

9. The 1977 IIM put the number of personnel engaged full time in civil defense work at the military district level at 480. This was based on the previous estimate of 400 to which 80 was added to allow for the presence of civilian employees. The 1976 estimate was based on reporting from the mid-1960s which gave the strength of civil defense departments in military districts as 20 to 25. That IIM recognized that, as military district responsibilities for civil defense increased (which indeed happened after the 1971-72 reorganization), the number of personnel also would expand. That this occurred may be seen in a 1971 report describing the civil defense entity of the "Western Air Defense District (ADD) Headquarters, responsible for the three Baltic republics." Supplementary reports indicate that the civil defense entity ascribed by the source to the Western ADD was actually the Civil Defense Directorate of the Baltic Military District.² The component was headed by a general major who was designated Deputy Commander for Civil Defense. During field inspections made by this officer, he was attended by a staff of an estimated 20 colonels and lieutenant colonels, each of whom directed a specific civil defense function, ranging from supervision of civil defense troops to direction of individual civil defense services and their formations. These staff officers were assisted by approximately 20 junior officers. Given the fact that some portion of the officer strength of the military district's civil defense directorate would have remained at military district headquarters, and that support and service personnel must be added to the officer strength, we would estimate the current strength of each directorate to be 75. This does not seem excessive given the fact that a union republic the size of Armenia had a reported civil defense staff of 150. The total estimate for the 16 military districts would be 1,200, of which about 800 would be classified as key leaders.

F. Numbers of Active-Duty Servicemen Versus MOD Civilians

10. The exact ratio of active-duty servicemen to MOD civilian employees serving in MOD positions at

² Further confirmation of this may be found in the fact that the source named a General of the Army Khitogurov as commander of the Western Air Defense District. In fact, General Khetaguro (spelling corrected) was commander of the Baltic Military District at the time.

national, republic, oblast, and other territorial staffs is not known, nor is the figure known for military districts. It certainly varies with the level of the territorial organization. The ratio of 5 military to 1 civilian personnel on republic staffs would probably be duplicated in large oblast staffs or in cases in which oblast and city staffs have been combined. At lower levels, the ratio would be reversed and, in the case of rural rayons, we see almost no active-duty servicemen.

G. Republic Communications Centers

11. The 1977 IIM estimated that there were 900 active-duty servicemen involved in civil defense communications activity. This figure was derived from a report which stated that there were 60 persons assigned to the communications center of the Armenian SSR Civil Defense Staff. Subsequent reporting from human sources on the communications centers of other republics indicates that the numbers vary. For example, the center at the Lithuanian SSR has 80 persons; the Latvian SSR, 50; and the Estonian SSR, 67. The Soviet republics in the Baltic and Transcaucasus regions are all in the lower range of population size. The Ukrainian SSR has a communications unit of 60 personnel plus a communications training unit of 150. We are not sure about the RSFSR; its military communications center needs may be served by the national-level component. In any case, it is possible that there is a minimum peacetime table of organization for a republic-level communications center to serve the urban administrative headquarters, urban command post, and exurban relocation facilities on a 24-hour basis (all centers as well as other civil defense troop units will be sharply augmented in wartime through reservist assignment). If we use 60 persons per communication unit as that base and allow for fluctuations arising from republic size and local considerations, there would be a minimum of 1,000 personnel for all republics.

H. Oblast Communications Centers

12. The 1977 IIM did not include oblast communications centers in its estimates of military communications personnel. A 1978 report describes the manning and equipment tables of the communications center of the Sverdlovsk Oblast Civil Defense Staff. The number

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of officers, warrant officers, and enlisted men was put at 41. Because of its size, the Sverdlovsk Oblast Civil Defense Staff may have a larger communications center than a smaller oblast. Additionally, there is a minimum size necessary to maintain communications service. Thus we would assign a figure of 41 to the 14 oblasts with populations over 2 million, yielding a total of 574. The remaining 133 would be accorded communications centers with at least 26 positions, yielding a total of 3,458. The total staffing at oblast-level communications centers would be 4,032.

I. National Communications Center

13. The 1977 estimates for communications personnel did not include personnel at the national level. According to human source reporting, there is a Central Communications Center of the USSR Civil Defense Staff. [

[A minimum of 300 personnel would be required for the Central Communications Center.

14. Based on the foregoing, the total number of military communications center personnel at national (300), republic (1,000), and oblast (4,030) levels would be 5,330.³

³ This figure does not include the communications units, generally of platoon size, which are organic to the military civil defense units located in the vicinity of major Soviet cities. At present, 59 such units have been identified with a combined manpower of about 34,000. In wartime, these units will increase to division size and their manpower will number about 105,000.

J. Military Civil Defense Units

15. Based on recent analysis of the civil defense military units, we estimate that the current peacetime manpower for the 59 identified units is about 34,000. This is an increase of 9,000 over the total published in the 1981 Memorandum to Holders. This increase results from an improved understanding of the organization of the units rather than an actual increase in manpower at these units.

16. [

K. Full-Time Civil Defense Personnel at Individual Installations

17. The 1977 IIM estimated the total number of full-time civil defense personnel at factories, scientific-research institutes, educational institutions (universities, technical and secondary schools), cooperative and public organizations, housing administrations, and public utilities to be 47,500. Of these, 3,000 were military personnel assigned as civil defense instructors at educational institutions. The remainder were civilians whose positions are established and funded by the civil defense elements of the ministries and departments to which these installations are subordinate. There is no basis for changing this estimate.

ANNEX B

METHODOLOGY FOR ESTIMATING WARTIME LEADERSHIP STRENGTH

1. In developing our estimates of the number of key leaders at national and republic levels, we have relied heavily on data that reflect the peacetime activities of these entities because we believe they can shift to a war management posture with only minor modifications in structure or function. Separate estimates were generated for national-level leaders and senior cadres of various organizations. Estimates for the top party staff (Central Committee Secretariat apparat) were derived by counting the party secretaries, the chiefs and four deputy chiefs of 23 departments, and 10 personal aides. Senior cadre estimates for the Central Committee apparat included the chiefs and deputy chiefs of each of an estimated 175 sections. Estimates for the top leaders of the Council of Ministers Presidium included the premier, 1st deputy premier, eight deputy premiers, 20 department chiefs, the chief of the Affairs Directorate, and seven aides. Senior cadres included two additional deputy chiefs and two senior reviewers from each of 20 departments.

2. A similar strategy was used to assess the ministerial leadership. With the exception of certain selected ministries such as the Ministry of Defense¹ and the KGB, the top leaders of a ministry with a key wartime mission include the minister, all deputy ministers, and the chiefs and three deputy chiefs of all line chief directorates. Senior cadres of such a ministry were calculated to include four department and four deputy department chiefs of chief directorates, plus the chiefs, two deputy chiefs, and two key department chiefs of all identified functional components (that is, chief directorate for planning, supply, personnel, training, and so on). Top leaders for ministries and state committees of less significance for wartime management include the ministers, deputy ministers, plus chiefs and one deputy chief of each line element.

¹ This estimate does not include military command, control, and communications requirements or the command echelons in the armed forces below headquarters level.

Senior cadres of such ministries include two additional deputy chiefs of line components plus chiefs and deputy chiefs of functional components. Functional and line components for each ministry were identified with the aid of the CIA *Directory of Soviet Officials: National Organizations*, May 1981, the Moscow 1982 telephone directory (which lists subcomponents of selected ministries), specialized Soviet monographs on individual ministries and state committees, and trade journals. Because the top MOD and KGB leadership is of crucial importance for the prosecution of war, a finer organizational breakdown was used for these two ministries. The total estimate for leadership at the national level is 17,217.

3. For the republic elements, a slightly different strategy was used. The five largest republics—the RSFSR, Ukrainian, Belorussian, Kazakh, and Uzbek—were estimated individually. For the RSFSR, separate estimates for top leaders and senior cadres were generated in a manner analogous to that used for national-level ministries. These data yield an estimate of 1,254 top leaders and 2,802 senior cadres. Estimates for the four remaining republics were generated by identifying each union republic and republic ministry and developing estimates for each based on the analogous RSFSR ministry, adjusted downward for the population size of each republic. Estimates for the top party and government personnel for each republic were derived from organizational data provided in the CIA *Directory of Soviet Officials: Republic Organizations*, October 1981, and republic capital telephone books. This method yielded the following estimates:

	Top Leaders	Senior Cadres
Ukrainian	706	1,318
Belorussian	298	539
Uzbek	461	853
Kazakh	462	851

Estimates for the remaining 10 republics were derived by generating an estimate for a typical small republic (Kirgiz) and multiplying by 10. The estimates generated for Kirgiz were 161 for the top leaders and 294 for the senior cadres. The total republic level leadership is 13,495.

Oblasts

4. We have followed a different approach for oblast and lower levels because we have better information on the wartime operations of these echelons. After selecting an appropriate mix of party and government leaders for each entity, we have used the civil defense services as the best base for estimating the remainder of the leadership at these levels. These services, mandated by USSR Civil Defense, would each perform vital functions; hence their chiefs are clearly key leaders.

5. The wartime oblast party and government leadership (not including full-time civil defense personnel) was calculated separately for oblasts with populations over 3 million, between 1 and 3 million, and less than 1 million. For the largest oblasts, the leadership is comprised of 29 party leaders (five secretaries, and the chiefs and deputy chiefs of 12 departments) and 73 local government managers (the chairmen, four deputy chairmen, and the secretaries of oblast executive committees, the chiefs, deputy chiefs, and two department heads of 12 civil defense services). Two elements not included in the foregoing are senior KGB officials (the chief, two deputy chiefs, and eight senior officials),² plus the head and deputy head of the oblast planning commission. This amounts to 113 officials per oblast, yielding a total of 1,695 officials. For oblasts with populations between 1 and 3 million, a scaled-down version of this staffing pattern was used. The leadership estimate for these oblasts consists of 24 party leaders, 34 local government leaders (civil defense service chiefs and deputy chiefs), and eight top KGB officials. These figures add up to 66 personnel for each oblast, or a total of 5,082 officials. There are 56 oblasts with populations under 1 million. The leadership estimate for each is 54 (20 party leaders, 30 local government, and four KGB officials) yielding a total of 3,024 officials. The total for all 148 oblasts is 9,801.

² Because of their geographic location or other operational considerations, certain oblast centers possess large KGB headquarters establishments. They include First Chief Directorate and other specialized components directly subordinate to Moscow headquarters. These cases are not included in this estimate.

Cities

6. There are 947 cities in the Soviet Union with populations exceeding 25,000.³ In most cases these cities are subordinated directly to oblast governments. In estimating their wartime leadership cadres, we have counted the first and second secretaries of the city party committees and one department head or senior instructor, as well as the chairmen of the city executive committee (also chiefs of civil defense). Also included are the chiefs and deputies of the second departments, the chiefs and one deputy of each of the 12 civil defense services, and the four most senior officials of the KGB. Thus, a city in this category would have 34 key leaders, yielding a total of 32,198 for the entire USSR.

7. There are 1,127 cities in the Soviet Union with fewer than 25,000 inhabitants. Most of these cities are rural rayon centers. While in certain respects they are not as critical as cities with larger populations, their leaders have been given specific wartime management functions and also provide a pool on which oblasts can draw to replace casualties at higher levels. In estimating the number of key leaders, we counted the first and second secretaries of the city party committees, the chairmen of the executive committees (chiefs of civil defense) and one deputy chairman, the chiefs of the 12 civil defense services, and two senior KGB officials. This group of 18 leaders extrapolates to 20,286 for all cities in this category. This estimate does not include the leadership of the 3,176 rural rayons in the USSR.

City Rayons

8. For each of the approximately 615 city rayons in the Soviet Union, we counted as key leaders the first and second secretaries of the rayon party committees (raykom), the chairman of the rayon executive committee (chief of civil defense) and his first deputy, the chiefs and deputy chiefs of the 12 civil defense services, and the two senior KGB officials in the rayon. With 30 key leaders for each city rayon, the total for the USSR is 18,450.

³ According to the 1980 Soviet publication *USSR—Administrative Territorial Divisions of the Union Republics*, there are 947 cities categorized as subordinate directly to "union republics, krays, oblasts, and okrugs (districts)." The populations of these cities generally exceed 25,000. Current DIA estimates place the number of cities with populations of 25,000 or greater at 943.

Key Regional Organizations

9. Leaders whom we believe deserve special consideration are those responsible for managing the regional components of service industries which are vital in wartime but do not fit existing Soviet territorial-administrative divisions. Three critical examples are the railroads, the electric power industry, and the intercity cable system of the USSR Ministry of Communications:

- Railroads: There are 32 regional railroad administrations in the USSR to which 180 operating divisions are subordinated.⁴ The leadership of an administration would include the chief and deputy chief plus 13 key department heads. Operating divisions include chiefs and deputy chiefs plus the heads of six key departments. Thus the total for the railroad system would be 1,920.
- Intercity Cable System: There are approximately 24 regional administrations of intercity cable and radio relay systems in the USSR under which there are about 160 network control centers. Each regional administration has 12 key officials including the chief, the head of the second department, and the heads of other major departments and services. At each network control center, key officials would include the chief and chief engineer. The total number of leaders in the intercity communication system would be 608.
- Electric Power Industry: There are 91 administratively independent regional energy systems or energy production associations in the USSR. There are 12 key officials at each association, including the chiefs and heads of second departments. The total for the USSR is 1,092.

⁴ The number of operating divisions per administration varies according to the geographic size of the individual administration.

10. For these three regional entities, the total number of key officials is about 3,620. Eleven additional entities with similar organizational structures were examined.⁵ The total for all 14 territorial entities identified as crucial to wartime management is 6,382.

Total Wartime Leadership Strength

11. These data yield a total leadership estimate (exclusive of the full-time civil defense leadership) of 117,824. This figure is fairly consistent with that generated through an alternate method. The 1970 Soviet census provides figures for top leaders of government agencies, party organizations, and their structural components. The data (projected to 1982) were used to derive an estimate of about 200,000 leaders down to and including urban and rural rayon level. If we exclude the management personnel of 3,200 rural rayons, the leadership estimate would be reduced to about 136,000. Given the fact that our count excluded top leaders in lower level organizations not directly involved in wartime management, this alternate method yields an estimate quite compatible with the organization approach.

12. This estimate of wartime leadership strength does not include all staff and service support personnel required by these officials for the accomplishment of their war management duties. In most cases, these additional personnel will be colocated with the leadership in the various protective facilities provided for all levels of Soviet administration. Therefore, this estimate of the size of the wartime leadership does not reveal the occupancy levels of wartime command posts and relocation facilities.

⁵ The State Committee for Material and Technical Supply, RSFSR Ministry of Motor Transport, Ministry of Civil Aviation, Ministry of Coal Industry, Ministry of Construction, Ministry of Gas Industry, Ministry of Industrial Construction, Ministry of Maritime Fleet, Ministry of River Fleet, Ministry of Petroleum Industry, and Ministry of Rural Construction.

ANNEX C

METHODOLOGY FOR VULNERABILITY ANALYSIS OF SHALLOW-BURIED FLAT-ROOF BUNKERS

1. The Vulnerability Analysis Method (VAS 1968),¹ originally developed by the University of Illinois for DIA to analyze dynamically loaded structures, is based on an idealized elasto-plastic, single-degree-of-freedom system. The method, which has been published by Newmark in a number of documents,^{2,3} requires three structural parameters; the natural period (T), yield resistance (Q1), and ductility ratio (u). The ductility ratio (the ratio of the maximum deflection of an element to its yield deflection) has traditionally been used to describe the degree of damage to a structure subjected to a blast loading. VAS 1968, or a similar computerized method, was used by DIA to analyze the vulnerability of flat-roof bunkers until it was revised in 1976.⁴

2. An improvement in VAS 1976 was the inclusion of inplane forces, which are developed in the roof slabs of buried structures as a result of the lateral soil load on the exterior walls during the passage of a soil stress wave.

3. In 1977 the US Army Engineer Waterways Experiment Station (WES), under a contract with the Defense Nuclear Agency, undertook an experimental and analytical program to verify the vulnerability assessments of shallow-buried flat-roof structures.⁵ The experimental program consisted of static laboratory tests of 2-foot reinforced concrete models, and FOAM high explosive simulation technique (HEST) field tests

for 4-foot reinforced concrete models. Periodic data reports were issued on the test program, and an initial analytical method developed by WES under this program was published as a working draft report in July 1980;⁶ the method was revised in June 1981.⁷ The final version of the computer code used in the bunker analyses herein, the Analysis of Shallow-Buried Flat-Roof Structures (VSBS), was received from WES in January 1982.

4. The test program demonstrated that earlier methods had underestimated the hardness of these structures. The primary improvements in VSBS (leading to an increase in the predicted collapse overpressure of bunkers) involved both the loading and resistance functions, as noted below:

Loading

- Arching, as a result of soil-structure interaction.
- Parabolic load distribution on bunker roof.

Resistance Function

- Inplane forces in roof slab.
- Tensile membrane mode.
- Large deflection of reinforced concrete beam and slab elements.

These improvements are illustrated in figures C-1 and C-2. Figure C-1 indicates an element with a uniform load and an elasto-plastic resistance function as used in previous analyses. Figure C-2 illustrates the modified parabolic loading and the improved membrane resistance function; note that the inplane force increases the

¹ Newmark, Hansen, and Associates, *Vulnerability Analysis System*, vols. I, II, III, University of Illinois, November 1968.

² Newmark, N. M., *A Method of Computation for Structural Dynamics*, ASCE Transactions, Paper No. 3384, vol. 127, Part I, 1962.

³ Newmark, N. M., and J. D. Haltiwanger, *Air Force Design Manual*, AFSWC-62-138, University of Illinois, December 1962.

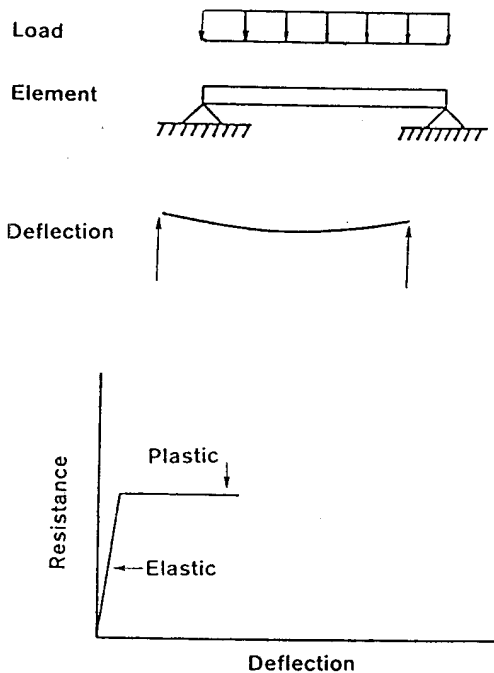
⁴ Haltiwanger, J. D., W. J. Hall, and N. M. Newmark, *VAS—A Basis for Revision*, University of Illinois, 15 June 1976.

⁵ Getchell, J. V., and S. A. Kiger, *Vulnerability of Shallow-Buried Flat-Roofed Structures*, Report 4, FOAM HEST 3 and 6, USA Waterways Experiment Station, December 1981.

⁶ Kiger, S. A., *Vulnerability of Shallow-Buried Flat-Roofed Structures*, Working Draft Report, USA Waterways Experiment Station, July 1980.

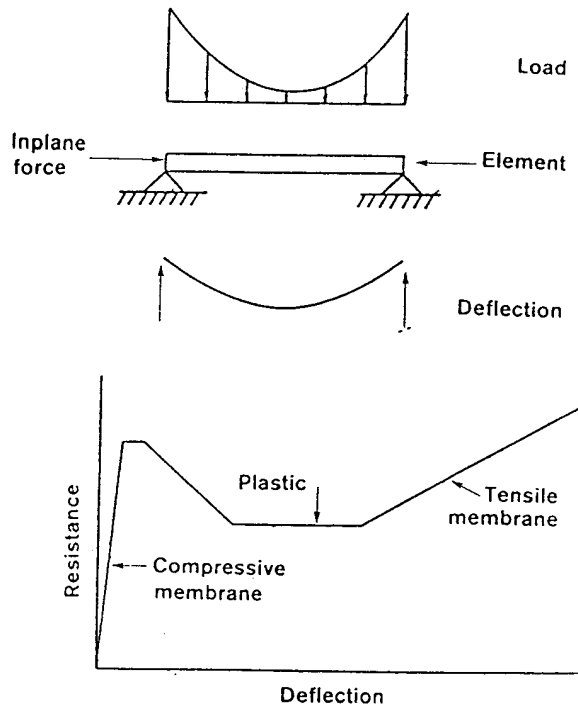
⁷ Kiger, S. A., *Vulnerability of Shallow-Buried Flat-Roofed Structures*, Working Draft Report, USA Waterways Experiment Station, June 1981.

Figure C-1
Elasto-Plastic Resistance Function



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Figure C-2
Membrane Resistance Function

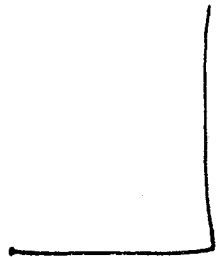
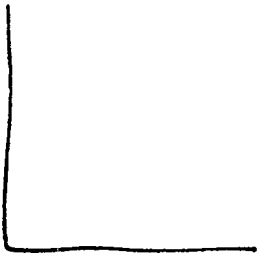
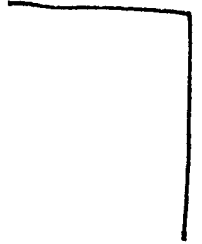
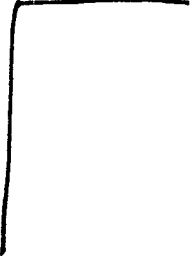


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maximum elastic resistance and the tensile membrane region accounts for the much larger deflections observed in both static and dynamic tests.

5. The use of the VSBS analysis method resulted in an increase in the hardness level of all Soviet bunkers analyzed.]

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ANNEX D
TABULAR DATA

Table D-1
Leadership Relocation Requirements

	Relocation Requirements			Relocation Requirements	
	Minimum	Possible Maximum		Minimum	Possible Maximum
<i>Total</i>	<i>821</i>	<i>1,642</i>	Naval Forces	2	4
National	143	286	Rear Services	8	16
Politburo	1	2	Special Troops	3	6
Central Committee CPSU	1	2	Construction and Billeting of Troops	1	2
Defense Council (GKO)	2	4	(State) Committee for State Security (KGB) (U-R)	8	16
Supreme High Command (VGK) plus General Staff	4	8	Central Headquarters	1	2
Main Operations Directorate	1	2	First Main Directorate	1	2
Organization/Mobilization Directorate	1	2	Second Main Directorate	1	2
Main Intelligence Directorate	1	2	Third Directorate	1	2
Communications Directorate	1	2	Eighth Main Directorate	1	2
Ministry of Defense (A-U)	35	70	15th Directorate	1	2
Fourth Main Directorate	1	2	Ninth (Guards) Directorate plus 16th Main Directorate	1	2
Fifth Main Directorate	1	2	Border Guards Directorate (GUPV)	1	2
12th Main Directorate	1	2	Council of Ministers Presidium plus Staff	1	2
Main Inspectorate	1	2	Ministry of Agriculture (U-R)	1	2
Central Archives Directorate	1	2	Ministry of Automotive Industry (A-U)	1	2
Central Auto-Tractor Directorate	1	2	Ministry of Aviation Industry (A-U)	1	2
Main Directorate for Military Educational Institutions	1	2	Ministry of Chemical Industry (A-U)	1	2
Main Political Directorate	1	2	Ministry of Chemical and Petroleum Machine Building (A-U)	1	2
Tank Directorate	1	2	Ministry of Civil Aviation (A-U)	1	2
Main Personnel Directorate	1	2	Ministry of Coal Industry (U-R)	1	2
Main Rocket and Artillery Directorate	1	2	Ministry of Communications (U-R)	1	2
Civilian Military Training Directorate	1	2	Ministry of Communications Equipment Industry (A-U)	1	2
National Civil Defense Staff	1	2	Ministry of Construction	1	2
Strategic Rocket Forces	2	4	Ministry of Construction in the Far East and Transbaikalian Regions (A-U)	1	2
Ground Forces	2	4			
Air Forces	2	4			
Air Defense Forces	2	4			

Table D-1 (continued)
Leadership Relocation Requirements

	Relocation Requirements			Relocation Requirements	
	Minimum	Possible Maximum		Minimum	Possible Maximum
Ministry of Construction of Heavy Industry Enterprises (U-R)	1	2	Ministry of Land Reclamation and Water Resources (U-R)	1	2
Ministry of Construction Materials Industry (U-R)	1	2	Ministry of Light Industry (U-R)	1	2
Ministry of Construction of Petroleum and Gas Industry Enterprises (A-U)	1	2	Ministry of Machine Building (A-U)	1	2
Ministry of Construction, Road, and Municipal Machine Building (A-U)	1	2	Ministry of Machine Building for Animal Husbandry and Fodder Production (A-U)	1	2
Ministry of Culture (U-R)	1	2	Ministry of Machine Building for Light and Food Industry and Household Appliances (A-U)	1	2
Ministry of Defense Industry (A-U)	1	2	Ministry of Machine Tool and Tool Building Industry (A-U)	1	2
Ministry of Education (U-R)	1	2	Ministry of Maritime Fleet (A-U)	1	2
Ministry of Electrical Equipment Industry (A-U)	1	2	Ministry of Meat and Dairy Industry (U-R)	1	2
Ministry of Electronics Industry (A-U)	1	2	Ministry of Medical Industry (A-U)	1	2
Ministry of Ferrous Metallurgy (U-R)	1	2	Ministry of Medium Machine Building (A-U)	1	2
Ministry of Finance (U-R)	1	2	Ministry of Mineral Fertilizer Production (U-R)	1	2
Ministry of Fish Industry (U-R)	1	2	Ministry of Nonferrous Metallurgy (U-R)	1	2
Ministry of Food Industry (U-R)	1	2	Ministry of Petroleum Industry (A-U)	1	2
Ministry of Foreign Affairs (U-R)	1	2	Ministry of Petroleum Refining and Petrochemical Industry (U-R)	1	2
Ministry of Foreign Trade (A-U)	1	2	Ministry of Power and Electrification (U-R)	1	2
Ministry of Fruit and Vegetable Industry (U-R)	1	2	Ministry of Power Machine Building (A-U)	1	2
Ministry of Gas Industry (A-U)	1	2	Ministry of Procurement (U-R)	1	2
Ministry of General Machine Building (A-U)	1	2	Ministry of Radio Industry (A-U)	1	2
Ministry of Geology (U-R)	1	2	Ministry of Railways (A-U)	1	2
Ministry of Health (U-R)	1	2	Ministry of Rural Construction (U-R)	1	2
Ministry of Heavy and Transport Machine Building (A-U)	1	2	Ministry of Shipbuilding Industry (A-U)	1	2
Ministry of Higher and Secondary Specialized Education (U-R)	1	2	Ministry of Timber, Pulp and Paper, and Wood Processing Industry (U-R)	1	2
Ministry of Industrial Construction (U-R)	1	2	Ministry of Tractor and Agricultural Machine Building (A-U)	1	2
Ministry of Installation and Special Construction Work (U-R)	1	2	Ministry of Trade (U-R)	1	2
Ministry of Instrument Making, Automation Equipment, and Control Systems (A-U)	1	2	Ministry of Transport Construction (A-U)	1	2
Ministry of Internal Affairs (MVD) (U-R)	1	2			
Ministry of Justice (U-R)	1	2			

Table D-1 (continued)
Leadership Relocation Requirements

	Relocation Requirements			Relocation Requirements	
	Minimum	Possible Maximum		Minimum	Possible Maximum
State Committee for Cinematography (U-R)	1	2	Main Administration of the Microbiological Industry	1	2
State Committee for Civil Construction and Architecture (U-R)	1	2	Main Administration for Safeguarding State Secrets in the Press	1	2
State Committee for Construction Affairs (Gosstroy) (U-R)	1	2	Central Statistical Administration (U-R)	1	2
State Committee for Foreign Economic Relations (A-U)	1	2	USSR State Bank (Gosbank) (U-R)	1	2
State Committee for Forestry (U-R)	1	2	Telegraph Agency of the Soviet Union (TASS)	1	2
State Committee for Hydro-meteorology and Environmental Control (A-U)	1	2	Academy of Sciences	1	2
State Committee for Inventions and Discoveries (A-U)	1	2	Territorial	678	1,356
State Committee for Labor and Social Problems (U-R)	1	2	Military Districts	32	64
State Committee for Material Reserves (A-U)	1	2	Baltic Military District	2	4
State Committee for Material and Technical Supply (Gossnab) (U-R)	1	2	Belorussian Military District	2	4
State Planning Committee (Gosplan) (U-R)	1	2	Carpathian Military District	2	4
State Committee for Prices (U-R)	1	2	Central Asian Military District	2	4
State Committee for Publishing Houses, Printing Plants, and the Book Trade (U-R)	1	2	Far Eastern Military District	2	4
State Committee for Science and Technology (A-U)	1	2	Kiev Military District	2	4
State Committee for Standards (A-U)	1	2	Leningrad Military District	2	4
State Committee for Supply of Petroleum Products (U-R)	1	2	Moscow Military District	2	4
State Committee for Supply of Production Equipment for Agriculture (A-U)	1	2	North Caucasus Military District	2	4
State Committee for Television and Radio Broadcasting (U-R)	1	2	Odessa Military District	2	4
State Commission for Utilization of Atomic Energy (A-U)	1	2	Siberian Military District	2	4
State Committee for Vocational and Technical Education (U-R)	1	2	Transbaikal Military District	2	4
Committee for Supervision of Safe Working Practices in Industry and for Mine Supervision (U-R)	1	2	Transcaucasus Military District	2	4
Committee of People's Control (U-R)	1	2	Turkestan Military District	2	4
			Ural Military District	2	4
			Volga Military District	2	4
			Republics *	403	806
			Armenian SSR	27	54
			Azerbaijan SSR	29	58
			Belorussian SSR	28	56
			Estonian SSR	24	48
			Georgian SSR	27	54
			Kazakh SSR	31	62
			Kirghiz SSR	24	48
			Latvian SSR	23	46
			Lithuanian SSR	25	50
			Moldavian SSR	27	54

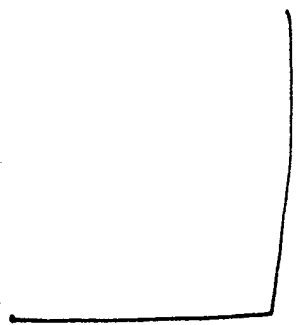
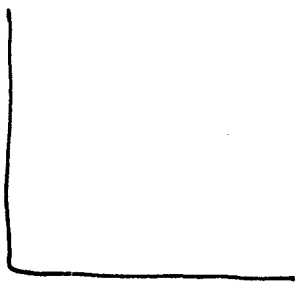
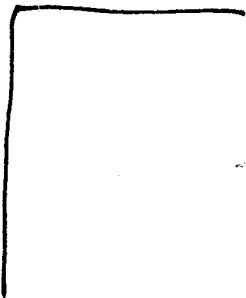
Minimum projections based on one relocation site per ministry with key wartime management responsibilities plus one exurban command post per republic civil defense staff.

Table D-1 (continued)
Leadership Relocation Requirements

	Relocation Requirements			Relocation Requirements	
	Minimum	Possible Maximum		Minimum	Possible Maximum
RSFSR	22	44	Coal Regions	7	14
Tajik SSR	28	56	Electric Power Systems	11	22
Turkmen SSR	26	52	Merchant Fleet Steamship Companies	17	34
Ukrainian SSR	32	64	Petroleum Regions	5	10
Uzbek SSR	30	60	Regional Railways	32	64
Oblasts^b					
Oblast Civil Defense Staff	148	296			
Other Territorial Entities	95	190			
Civil Aviation Administrations	23	46			

^b Based on 122 oblasts, 20 autonomous republics (ASSR), and six krays.

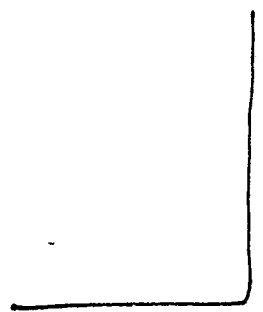
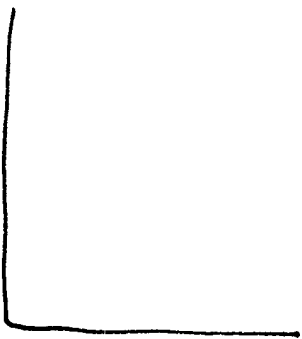
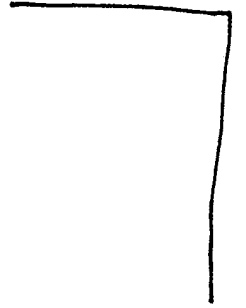
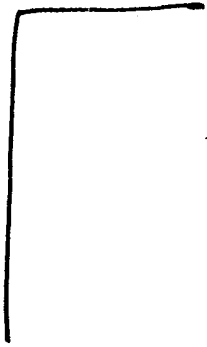
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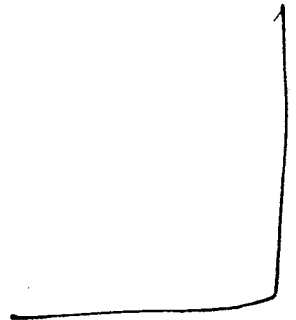
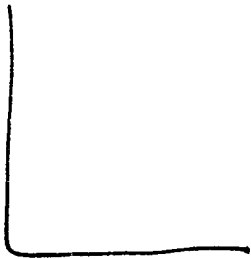
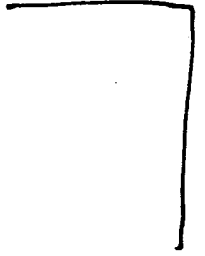
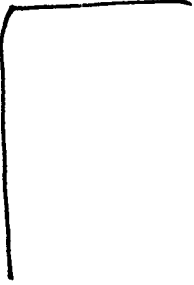
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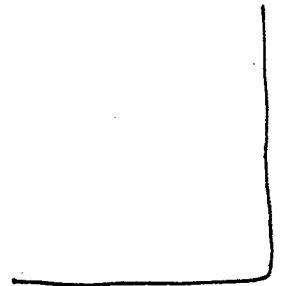
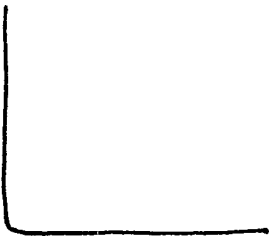
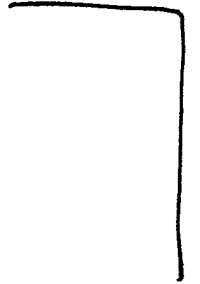
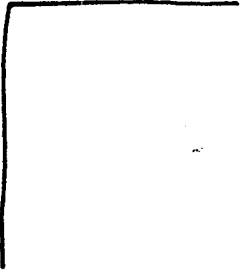
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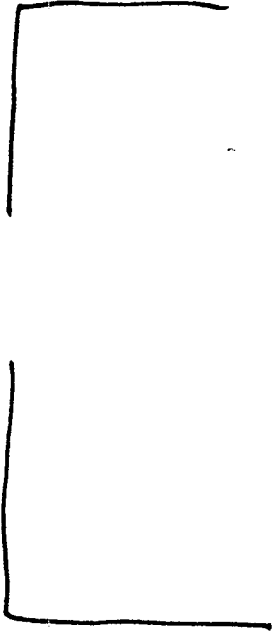


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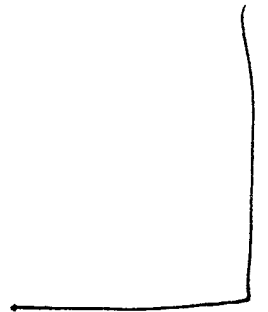
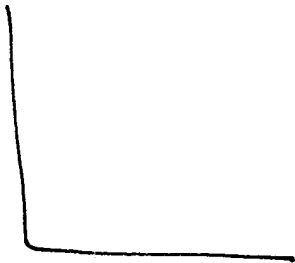
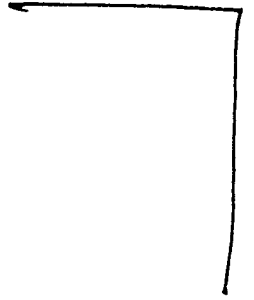
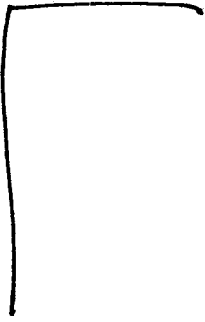
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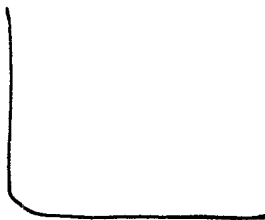
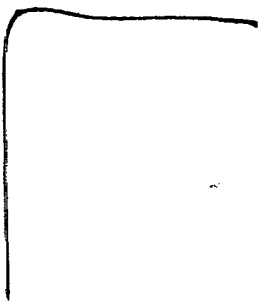


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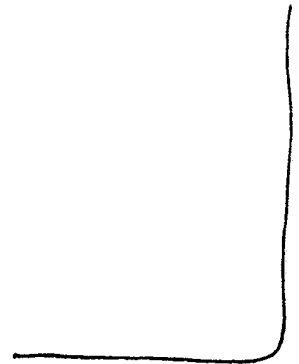
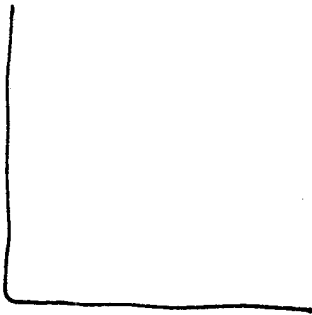
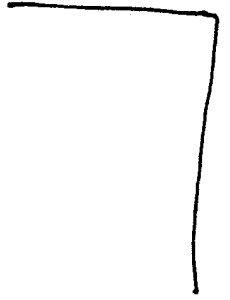
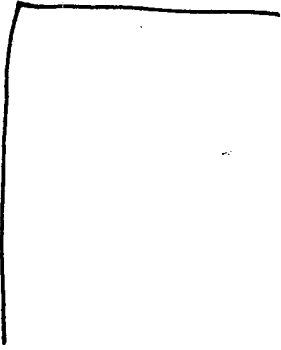
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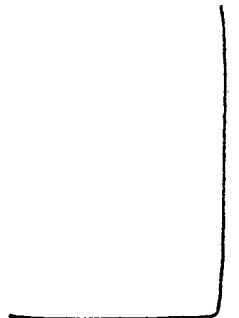
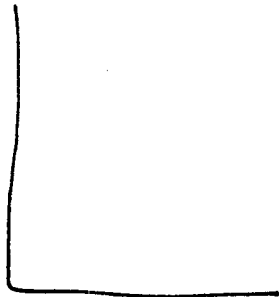
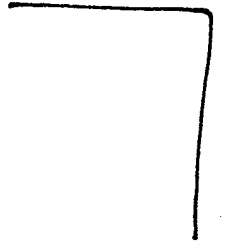
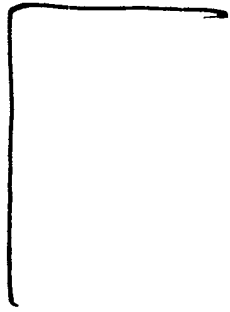


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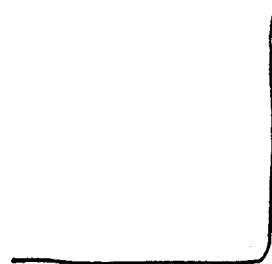
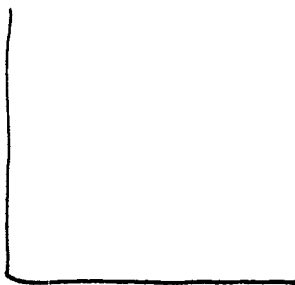
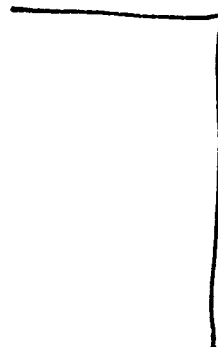
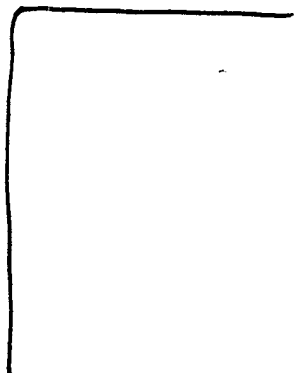
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ANNEX E



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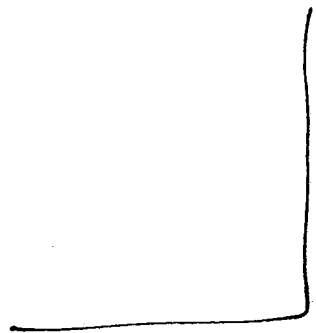
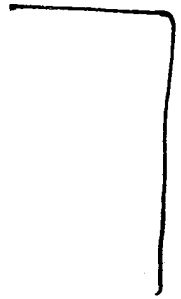
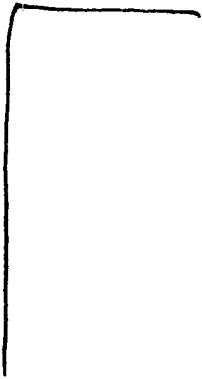
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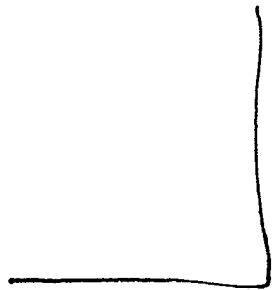
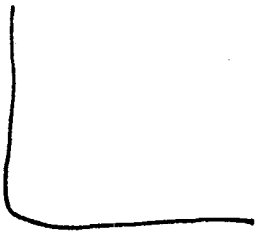
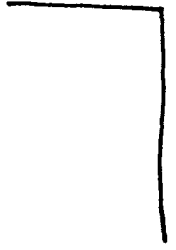
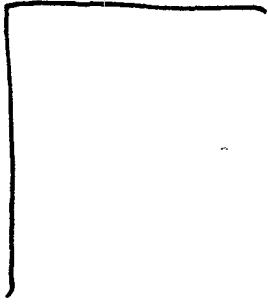
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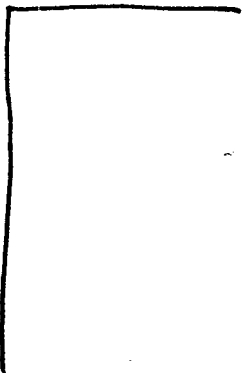
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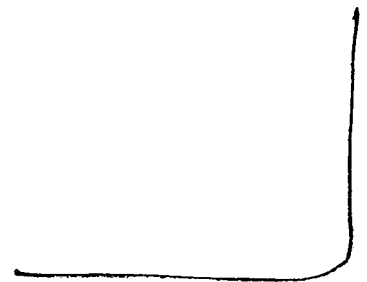
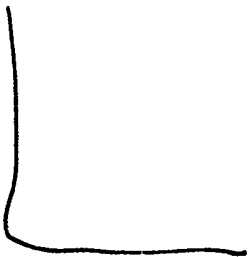
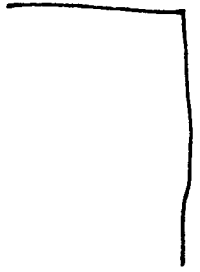
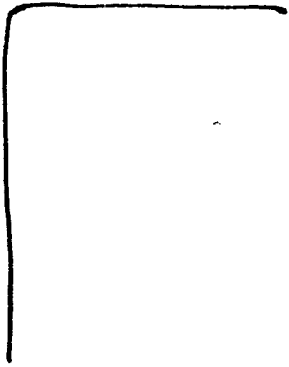


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ANNEX G

GLOSSARY

Civil Defense Formations—Teams made up of selected civilian personnel at installations who are organized and trained in peacetime for civil defense. The mission of these formations is to prepare for protection of workers prior to attack, to reduce damage to plants and equipment, and to engage in emergency rescue and repair work following an attack. Each formation is assigned a specific task such as first aid, evacuation, communications, or decontamination.

Command Post—The Soviet terms "command post" (*komandnyy punkt*) and "control post" (*punkt upravleniya*) both refer to specially equipped facilities at which commanders and managers exercise operational control over subordinate units. Command post is generally used in reference to combined arms units, while control post is used by rear services, civil defense staffs, military commissariats, and other organizations. However, the Soviets often use these terms interchangeably.

Defense Council—Chaired by the CPSU General Secretary and composed of the most senior Politburo members, the Defense Council serves as the Soviets' supreme decisionmaking organization for national security policy. It is described in Soviet administrative law as responsible in peacetime for "coordination of the activities of the organs of state administration concerned with defense of the country" and for "determination of the basic direction of military development in the USSR." It makes peacetime policy decisions affecting Soviet military doctrine and strategy, defense expenditures, weapons procurement, force structure, and the entire range of preparations necessary for the wartime mobilization of the nation's resources. Its decisions probably receive the pro forma endorsement of the Politburo at large. The Council also would provide centralized leadership and streamlined wartime management during the period immediately prior to the outbreak of hostilities. After the

outbreak of hostilities, the Defense Council's membership, staff support, and functions would probably expand to form a modern-day equivalent of the State Defense Committee (GKO) of World War II.

Dual-Purpose Facilities—Facilities that, regardless of their use in peacetime, have been modified for use as command posts for the wartime leadership. The majority of these are rest homes, sanatoriums, pioneer camps, and recreation facilities.

GKO (State Defense Committee)—The World War II predecessor of the wartime Defense Council. All power was concentrated in the GKO, chaired by Stalin, which was responsible for directing the entire national war effort. During World War II the GKO made major decisions on the conduct of the war and generally supervised the wartime economy.

Integrated Exercise—Exercises involving all of an installation's civil defense formations, or more than one installation. These operations test the full range of civil defense activities, from dispersal and evacuation to poststrike rescue and repair.

Installations—Facilities of the national economy—factories, educational institutions, collective farms, communal services such as utilities and hospitals, and other such enterprises.

Military Civil Defense Units—Dedicated civil defense regiments and independent battalions that are a part of the Soviet armed forces. Their mission is to reestablish communications, reconnoiter and mark contaminated zones, perform decontamination, reopen blocked transportation routes, and participate with civilian formations in emergency rescue work.

Military Commissariats—Military administrative entities organized according to Soviet territorial and administrative subdivisions. They supervise preinduction and reserve military training, maintain registers of military reservists, conduct annual callups, identify local resources for potential military use, and implement mobilization.

National Command Authority—A strict analogy cannot be drawn between the US notion of a National Command Authority and Soviet strategic leadership in wartime. The latter includes the CPSU Politburo, the wartime Defense Council, and the Supreme High Command. The Defense Council, which may serve as the supreme authority in a crisis, will expand into the senior organ of national leadership in wartime.

Nomenklatura—System by which the CPSU controls the assignment of party officials to key government, military, and economic posts.

Operational Axes—Local organizations created by oblast civil defense staffs for cities with several city rayons. They are designed to coordinate the civil defense operations of city and rural rayons in sectors located along principal transportation routes.

Pioneer Camps—Recreation facilities of the Communist Party's Pioneer youth program for 10- to 15-year-olds.

Protracted War—A prolonged conflict continuing after the major exchanges of nuclear weapons. Although the Soviets do not clearly define protracted conflict in terms of length, they generally describe it to include conventional and nuclear combat extending for several weeks or months subsequent to the major exchanges.

Rear Services—Elements of the Soviet armed forces which provide support to all components and control an extensive network of logistic units, depots, transportation systems, and other facilities.

Relocation Facilities—Those exurban command posts to which the military and civilian leaders and their staffs will relocate in wartime for the purpose of exercising command and management functions. Relocation facilities can be either single or dual purpose.

Single-Purpose Facilities—Those facilities that are designed and constructed to support wartime command functions only.

Special Period—Soviet civil statutes provide for the declaration of a special period that gives the wartime military leadership special authority over civilians. Authority granted to the military during the special period may include the power to order compulsory civilian labor service, to confiscate property, and to establish special security regulations.

Stavka of the Supreme High Command—As the executive organ of the Supreme High Command, the Stavka provides strategic direction to the Soviet armed forces during wartime. Although we are uncertain of the exact composition of the Stavka during war, its head would be both the Supreme Commander in Chief and the Chairman of the Defense Council. Subordinate to the Stavka and part of the Supreme High Command are the General Staff and the key directorates of the Ministry of Defense.

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