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**APPENDIX G**  
**INTELLIGENCE REQUIREMENTS**  
**CHECKLISTS FOR URBAN OPERATIONS**

*Commanders use priority intelligence requirements (PIR) and essential elements of information (EEI) to facilitate rapid crisis planning. Intelligence staffs at all levels must be prepared to react to crisis situations and provide commanders with accurate, timely, and detailed intelligence and information in support of urban operations. (See FM 34-130 for more detailed information.)*

**Section I. CULTURAL INTELLIGENCE REQUIREMENTS**

Accommodating the social fabric of a city is potentially the most influential factor in the conduct of urban operations (UO). Unfortunately, this accommodation is often the most neglected factor. Social factors have greater impact in UO than in any other environment. The density of civilians and the constant interaction between them and US forces greatly increase the importance of social considerations. The fastest way to damage the legitimacy of an operation is to ignore or violate the social mores or precepts of a particular population.

**G-1. CULTURAL NORMS**

The interaction of different cultures during UO demands much greater recognition than in other environments. This greater need for understanding comes from the increased interaction with the civilian populace. Every culture has a set of norms and values, which could involve such diverse areas as food, sleep patterns, casual and close relationships, manners, and cleanliness. Understanding these differences is only the start in preparing for cultural differences.

**G-2. RELIGIOUS BELIEFS**

Religious beliefs and practices are among the most important and least understood aspects of the cultures of other peoples. In many parts of the world, religious norms are a matter of life and death. In many religious wars, it is not uncommon to find suicidal acts in the name of a particular god. In those situations, religious beliefs may be considered more important than life itself. Failure to recognize and respect religious beliefs will quickly erode the legitimacy of the US mission.

**G-3. LOCAL GOVERNMENT**

In many US military missions, forces respond in support of a given political entity. Consequently, promoting the supported government aids in legitimizing the military mission. While it is important to articulate US contributions, it is also important to advocate the accomplishments of the native government for long-term success. If legitimacy is not established for the native government, stability may be only temporary. US military planners must identify key governmental officials and integrate them as appropriate early in the operation. There are two benefits to this early integration. First, they can provide valuable information needed for successful completion of the operations to include city infrastructure, locations of enemy concentration, and a common picture of

cultural norms. Second, close cooperation with government officials provides the host government the catalyst to attain legitimacy with the populace for involvement of US forces.

a. In some developing countries, governments are characterized by nepotism, favor-trading, subtle sabotage, and indifference. Corruption is sometimes pervasive and institutionalized as a practical way to manage excess demand for city services. The power of officials is primarily based on family connections, personal power base, and age, and only after that on education, training, and competence.

b. A local government's breakdown from its previous level of effectiveness quickly exacerbates problems of public health and mobility. Attempts to get the local-level bureaucracy to function along US lines produce further breakdown or passive indifference. Any unintentional or intentional threat to the privileges of ranking local officials or to members of their families will be stubbornly resisted. Avoiding such threats and assessing the importance of particular officials requires knowledge of family ties.

#### **G-4. LOCAL POPULATION**

US military planners must also recognize that the urban populace will behave as they see their own self-interest. They are keenly aware of four sets of interests at work: those of the US forces; those of hostile elements; those of local *opportunists*; and those of the general population. They size up these interests constantly in order to ascertain their own stakes, risks, and payoffs.

#### **G-5. REFUGEES**

Another significant cultural problem is the presence of refugees within an urban area. Rural immigrants, combined with city residents displaced by urban conflict, can create a significant strategic problem. Noncombatants and refugees without hostile intent can overwhelm the force of an advancing platoon. Additionally, there may be enemy troops, criminal gangs, vigilantes, paramilitary factions, and factions within those factions hiding in the waves of the displaced. The threat knows that it is impossible to tell friend from foe from disinterested. Local combat situations can change with bewildering speed, as the supposed innocent becomes the opposition within close quarters and indefensible positions. Chechen rebels and the Hezbollah effectively used the cover of refugees to attack occupying forces and counted on heavy civilian casualties in the counterattack to gain support with the native population. The goal is to place incalculable stresses on the individual soldier in order to break down discipline and operational integrity. From Belfast to Lebanon, the constant pressure of differentiating friend from foe taxed and sometimes undermined rules of engagement, and in some cases, entire missions.

#### **G-5. INTELLIGENCE REQUIREMENTS**

Tables G-1 and G-2 display intelligence requirement checklists for the population and urban social structure.

<p><b>What is the urban population?</b></p> <ul style="list-style-type: none"> <li>• Total.</li> <li>• City core.</li> <li>• Trend (increasing/decreasing for each area).</li> </ul>
<p><b>What is the age structure?</b></p> <ul style="list-style-type: none"> <li>• Males and females under age 15 or over age 65.</li> <li>• Males age 15-49 (potential military age).</li> <li>• Youth bulge (percent under 15).</li> </ul>
<p><b>Is there a refugee/displaced people situation?</b></p> <ul style="list-style-type: none"> <li>• Where are the refugees originally from?</li> <li>• What is the size of the refugee population?</li> <li>• What is the size of the original population?</li> <li>• Why did they come here?</li> <li>• What is the relationship between the refugees and the city populace?</li> <li>• Do they support each other?</li> <li>• Are they hostile towards each other?</li> <li>• Is there a segment of the population that fled the city?</li> <li>• Why did they leave?</li> <li>• Where did they go?</li> <li>• Under what circumstances will they return?</li> </ul>
<p><b>What is the population of the rural areas surrounding the urban area?</b></p> <ul style="list-style-type: none"> <li>• Size.</li> <li>• Location and distance from urban area.</li> <li>• Do they travel to the urban area?</li> <li>• Frequency of travel.</li> <li>• What is their relationship with the urban population?</li> <li>• Role in conflict.</li> </ul>

**Table G-1. Population intelligence requirements checklist.**

<p><b>What is the ethnic structure?</b></p> <ul style="list-style-type: none"> <li>• Percent of population by ethnic group.</li> <li>• Is one ethnic group dominant? If so, why?</li> <li>• Bias of one group towards another.</li> <li>• Physical boundaries of influence.</li> <li>• Boundary overlaps.</li> <li>• Role in conflict.</li> <li>• Key personnel and location.</li> </ul>
<p><b>What is the racial structure?</b></p> <ul style="list-style-type: none"> <li>• Percent of population.</li> <li>• Is one racial group dominant? If so, why?</li> <li>• Bias of one race towards another.</li> <li>• Physical boundaries of influence.</li> <li>• Boundary overlaps.</li> <li>• Role in conflict.</li> <li>• Key personnel and location.</li> </ul>

**Table G-2. Urban social structure intelligence requirements checklist.**

<p><b>What is the religious structure?</b></p> <ul style="list-style-type: none"> <li>• Beliefs.</li> <li>• Percent of population.</li> <li>• Importance in society.</li> <li>• Leaders.</li> <li>• Practices.</li> <li>• Bias of one religion towards another.</li> <li>• Is one religious group dominant? If so, why?</li> <li>• Physical boundaries of influence.</li> <li>• Boundary overlaps.</li> <li>• Role in conflict.</li> <li>• Key personnel and location.</li> </ul>
<p><b>What is the structure of national origin?</b></p> <ul style="list-style-type: none"> <li>• Percent of population.</li> <li>• Bias of one group towards another.</li> <li>• Physical boundaries of influence.</li> <li>• Boundary overlaps.</li> <li>• Role in conflict.</li> <li>• Key personnel and location.</li> </ul>
<p><b>What is the tribal/clan structure?</b></p> <ul style="list-style-type: none"> <li>• Basis of affiliation.</li> <li>• Percent of population.</li> <li>• Is one tribe/clan dominant? If so, why?</li> <li>• Bias of one tribe/clan towards another.</li> <li>• Physical boundaries of influence.</li> <li>• Boundary overlaps.</li> <li>• Role in conflict.</li> <li>• Key personnel and location.</li> </ul>
<p><b>Is there a terrorist structure?</b></p> <ul style="list-style-type: none"> <li>• Motivation.</li> <li>• Activities confined to urban area.</li> <li>• National connections.</li> <li>• International connections, external support.</li> <li>• State sponsored.</li> <li>• Popular support.</li> <li>• Connections to political parties, militias, terrorist groups.</li> <li>• Strength: active fighters, supporters.</li> <li>• Membership profile: age, sex, education, political ideology, economic background.</li> <li>• Type of support: arms, explosives, technical expertise, money, intelligence, safe haven, cache.</li> <li>• Modus operandi.</li> <li>• Physical boundaries/areas of operation.</li> <li>• Weapons and equipment.</li> <li>• Role in conflict.</li> <li>• Key personnel and location.</li> </ul>

**Table G-2. Urban social structure intelligence requirements checklist (continued).**

<p><b>Is there a gang structure?</b></p> <ul style="list-style-type: none"> <li>• Basis of affiliation.</li> <li>• Criminal behavior.</li> <li>• Are activities confined to urban areas?</li> <li>• Is there more than one gang? If so, do they compete or cooperate?</li> <li>• Is competition violent?</li> <li>• Support of local populace.</li> <li>• Physical boundaries of influence.</li> <li>• Boundary overlaps.</li> <li>• Strength.</li> <li>• Weapons and equipment.</li> <li>• Role in conflict.</li> <li>• Key personnel and location.</li> </ul>
<p><b>Is there an organized crime structure?</b></p> <ul style="list-style-type: none"> <li>• Type of crimes.</li> <li>• Are activities confined to urban areas?</li> <li>• National connections.</li> <li>• International connections.</li> <li>• Is there more than one crime organization? If so, do they compete or cooperate?</li> <li>• Is the competition violent?</li> <li>• Do city, military, terrorist or other officials/members aid or otherwise support an organized crime organization.</li> <li>• Support of local populace.</li> <li>• Physical boundaries of influence.</li> <li>• Boundary overlaps.</li> <li>• Strength.</li> <li>• Weapons and equipment.</li> <li>• Role in conflict.</li> <li>• Key personnel and location.</li> </ul>
<p><b>What is the structure of the economic classes?</b></p> <ul style="list-style-type: none"> <li>• Distribution of wealth.</li> <li>• Per capita income.</li> <li>• Number per family employed.</li> <li>• Percentage of population by economic sector (industry, service, and so forth).</li> <li>• Percentage of population living in poverty.</li> <li>• Percentage of population dependent on economic aid.</li> <li>• Type of aid.</li> <li>• Unemployment rate.</li> <li>• Under employment rate.</li> <li>• Are there trade unions?</li> <li>• Is membership in union's compulsory?</li> <li>• How do unions influence the urban area (politically, economically, and so forth)?</li> <li>• Union key personnel and location.</li> </ul>

**Table G-2. Urban social structure intelligence requirements checklist (continued).**

<p><b>What is the structure of the economic classes? (Continued)</b></p> <ul style="list-style-type: none"> <li>• Is there a management class?</li> <li>• How does the management class influence the urban area?</li> <li>• Management class key personnel and location.</li> <li>• Is there an urban economic elite class?</li> <li>• How does the economic elite influence the urban area?</li> <li>• Does the economic elite control the urban area?</li> <li>• Economic elite key personnel and location.</li> <li>• Physical boundaries based on economics.</li> <li>• Boundary overlaps.</li> <li>• Economic status role in conflict.</li> </ul>
<p><b>What is the political structure?</b></p> <ul style="list-style-type: none"> <li>• Factions within urban area based on political beliefs.</li> <li>• Structured political parties.</li> <li>• Percent of population belonging to political faction or party.</li> <li>• Is one faction or party dominant? If so, how?</li> <li>• Are any political factions, parties or beliefs banned or illegal?</li> <li>• Suffrage.</li> <li>• Election turnout.</li> <li>• Election fraud.</li> <li>• Other election irregularities.</li> <li>• Physical boundaries based on political beliefs.</li> <li>• Boundary overlaps.</li> <li>• Key personnel and location.</li> <li>• Role in conflict.</li> </ul>
<p><b>What is the structure of the city government?</b></p> <ul style="list-style-type: none"> <li>• Elected or appointed? If appointed, by whom?</li> <li>• Executive branch.</li> <li>• Judicial branch.</li> <li>• Key personnel and location.</li> <li>• Administrative divisions.</li> <li>• Legislative branch.</li> <li>• Physical boundaries of administrative divisions.</li> </ul>
<p><b>What social actions are taboo or insulting to the urban population?</b></p> <ul style="list-style-type: none"> <li>• Verbal.</li> <li>• Nonverbal (body gestures/manner of dress).</li> </ul>
<p><b>What languages are spoken in the urban area?</b></p> <ul style="list-style-type: none"> <li>• Dialects.</li> <li>• Common languages for business transactions.</li> </ul>
<p><b>Are there any overlaps and or splits among the social divisions?</b></p> <ul style="list-style-type: none"> <li>• Do union members belong to one or a few religious or racial groups?</li> <li>• Are there ideological divisions within a profession?</li> </ul>
<p><b>Are the composite groups based on political behavior?</b></p> <ul style="list-style-type: none"> <li>• Those who actively or passively support the government, an economic or social urban elite organization, an insurgency, a criminal organization, a terrorist organization, or are they neutral?</li> <li>• Component.</li> <li>• Composite strength.</li> </ul>

**Table G-2. Urban social structure intelligence requirements checklist (continued).**

<p><b>What are the active or potential issues motivating the political behavior of each group/subgroup?</b></p> <ul style="list-style-type: none"> <li>• Economic benefits.</li> <li>• Social prestige.</li> <li>• Political participation.</li> <li>• Perception of relative deprivation.</li> <li>• Population growth or decline.</li> <li>• Average distribution.</li> <li>• Changes in location of each group.</li> </ul>
<p><b>What is the history of conflict in the state?</b></p> <ul style="list-style-type: none"> <li>• Internal and external.</li> <li>• Recent conflicts.</li> </ul>
<p><b>Does the city, other local, or national government control the city? If not, who does?</b></p> <ul style="list-style-type: none"> <li>• Key personnel and location.</li> <li>• Reason for control (economic elite, military, criminal, other).</li> </ul>
<p><b>What is the popular support of the city, other local and national governments?</b></p> <ul style="list-style-type: none"> <li>• Total.</li> <li>• By social structure group.</li> <li>• By overlap in social structure groups.</li> </ul>
<p><b>What is the popular support of US/coalition government?</b></p> <ul style="list-style-type: none"> <li>• Total.</li> <li>• By social structure group.</li> <li>• By overlap in social structure groups.</li> <li>• If coalition, posture by each country.</li> </ul>
<p><b>What is the local posture toward US/coalition government?</b></p> <ul style="list-style-type: none"> <li>• Active or passive.</li> <li>• Violent or non-violent.</li> <li>• If coalition, posture by country.</li> <li>• What would change this posture?</li> <li>• By total, group, and overlap in social structures.</li> </ul>
<p><b>What posture should US/coalition forces adopt in order to gain maximum local support?</b></p> <ul style="list-style-type: none"> <li>• Total.</li> <li>• By social structure group.</li> <li>• Identify contradictions: particular postures favorable to one group, unfavorable to another.</li> <li>• What forms of posture ought to be avoided?</li> </ul>
<p><b>What is the influence of the media?</b></p> <ul style="list-style-type: none"> <li>• By form: print, radio, television.</li> <li>• By origin: local, national, international.</li> <li>• What media is controlled or influenced by a social structure group?</li> <li>• Describe any media bias.</li> </ul>
<p><b>What propaganda is currently being disseminated?</b></p> <ul style="list-style-type: none"> <li>• Type.</li> <li>• How is it disseminated?</li> <li>• How effective is it?</li> <li>• Why is it effective or not effective?</li> </ul>

**Table G-2. Urban social structure intelligence requirements checklist (continued).**

<p><b>What is the relationship between the urban and rural areas?</b></p> <ul style="list-style-type: none"> <li>• Social structure ties, bias, or conflict.</li> <li>• Dependency of one to another for critical goods or services.</li> </ul>
<p><b>Describe the urban social make-up, to include:</b></p> <ul style="list-style-type: none"> <li>• City core.</li> <li>• Commercial ribbon.</li> <li>• Core periphery.</li> <li>• Residential sprawl.</li> <li>• Outlying industrial areas.</li> <li>• Outlying high-rise areas.</li> </ul>
<p><b>What is the urban area's importance?</b></p> <ul style="list-style-type: none"> <li>• Internationally.</li> <li>• Nationally.</li> <li>• Religiously.</li> <li>• Militarily.</li> <li>• Economically.</li> <li>• Socially.</li> <li>• Historically.</li> </ul>
<p><b>Are there any historic structures?</b></p> <ul style="list-style-type: none"> <li>• Religious.</li> <li>• Historic.</li> <li>• Cultural.</li> <li>• Other.</li> <li>• Are any significant to one portion of populace but offensive to another?</li> <li>• Location.</li> </ul>
<p><b>What types of identification are required or in use in the urban area?</b></p> <ul style="list-style-type: none"> <li>• National.</li> <li>• Local.</li> <li>• Government service.</li> <li>• Military.</li> <li>• Driver's license.</li> <li>• Professional/trade/union.</li> <li>• Voters.</li> <li>• Other.</li> <li>• Photo IDs.</li> <li>• Who issues/What are the requirements?</li> <li>• Where are they issued?</li> <li>• Are forgeries in use?</li> </ul>
<p><b>What crisis management procedures exist within the urban area?</b></p> <ul style="list-style-type: none"> <li>• Who are the decision-makers?</li> <li>• Is there a civil alert system?</li> <li>• How is an alert communicated?</li> <li>• Has it been tested?</li> <li>• Is it effective?</li> <li>• Is there a civil evacuation plan?</li> <li>• Has it been tested?</li> <li>• Is it effective?</li> </ul>

**Table G-2. Urban social structure intelligence requirements checklist (continued).**



## Section II. CITY INFRASTRUCTURE AND SERVICES

A city is more than a change in terrain on which to apply conventional tactics. A city is a system of systems that supports the total functioning of an urban area—no part functions independent of the others. The systems within the city include its physical composition, supporting utilities, and social factors. Each component impacts on the population, the normal operation of the city, and potentially the long-term success of military operations conducted there. Military planners must understand the functions and interrelationships of these systems in order to achieve success. (Tables G-3 through G-24, pages G-12 through G-34, provide intelligence requirements checklists for urban operations.)

### G-6. CITY INFRASTRUCTURE SYSTEMS

Urban infrastructure is the city's foundation. This infrastructure includes buildings, bridges, roads, airfields, ports, subways, and similar physical structures. These structures provide the base on which the rest of the city is developed.

a. **Transportation.** The transportation network of a city is an integral part of its operation. This network includes roads, railways, subways, and ports (air and sea). Transportation facilitates the inter- and intra-movement of material and personnel that form the lifeblood of the city.

(1) Control of these transportation nodes may be important for both a given military operation and the normal functioning of the city. Supplies, which travel through this transportation system, could include food, medicine, heating oil and gas, and military supplies such as ammunition and spare parts. Personnel who are moved along this transportation network could include people with various skills and intent such as doctors, government officials, repairmen or military reinforcements. US military forces may have to limit the transit of enemy supplies and reinforcements while facilitating the transport of critical civilian supplies and personnel.

(2) Operationally, securing air and seaports may be imperative for follow-on forces and supplies, but there are many possible implications of securing all the transportation nodes and stopping all inter- and intra-city movement. While the US mission may be immediately facilitated, there are critical needs of the noncombatant populace that would go unmet. Although it might be attractive to isolate the city, military planners must be aware of the noncombatants' needs for medical personnel and supplies, heating supplies, food, transit to work and school, and all the other items that minimize hardship and promote normalcy within the city. Reducing this hardship contributes to gaining the mission's legitimacy.

(3) Most developing country urban areas have two transportation systems: formal and paratransit. Formal systems are characterized by large organizations, bureaucracy, imported technology, scheduled services, fixed fares/rates, and limited employment opportunities for the urban populace. Paratransit is characterized by great decentralization; low barriers to entry, family and individual entrepreneur organization, adapted technology, negotiated prices, and flexible routes, destinations, and times of service. Paratransit tends to be labor absorbing and covers a much greater area of the city than the formal system. Therefore, paratransit is more likely to function through turbulence and conflict. Paratransit often includes a waterborne element. Together with elements of the formal system, paratransit plays a key role in the movement of goods and people into, out of, and within the urban area. This key role also includes the city's food

supply zone that may extend up to 100 kilometers from the urban center. Understanding both systems will help US Forces monitor or control movement in a developing country city.

b. **Physical Composition.** The physical composition of the city provides the fundamental structure in which the city community conducts normal activities. Physical features of the city have more than military significance. In addition to housing an enemy, the buildings of the city also accommodate the businesses, government, noncombatants, schools, and similar functions critical to the normal conditions of the city. Military planners and personnel must restrain the urge to rubble structures, even when they identify enemy within. There are both legal and moral reasons for this restraint. The Geneva Convention states “any destruction by the occupying power of real or personal property belonging individually or collectively to private persons, or to the state, or to other public authorities, or to social or cooperative organizations, is prohibited, except where such destruction is rendered absolutely necessary by military operations.” This restriction also has a moral consideration. While the enemy may be inside the building, so too may be innocent civilians. Therefore, the tactical commander must carefully consider a full range of implication before leveling a building housing the enemy. Military success may well be measured by how a mission is accomplished while minimizing the destruction. Minimizing collateral damage reduces the hardship within the city and leads to a faster return to normalcy during the post-hostilities phase.

c. **Utilities.** Urban utilities include communications, natural gas, electricity, water, and health services.

(1) **Communications.** Communications is a utility that impacts the military mission and the civilian populace. Besides face-to-face conversation, the communications system controls the information flow within the city. Telephones (wire and cellular), radio, television, newspapers, and the Internet provide a community information and thus influences individual perspectives. Information can relieve much of the populace’s tension and at the same time provide essential intelligence for friendly forces. The management of information to enhance legitimacy may occur in three distinct ways.

(a) First, communication with the local populace serves to enhance the legitimacy of the mission to the population, which includes factors such as the intent of the mission, locations of services available, or the manner in which the population can assist the mission. If the populace does not understand the mission, false expectations may be created that US forces may not be able to meet. The use of civil affairs personnel is the most effective way to communicate with the civilian populace on these matters.

(b) A second function of information management is to enhance the legitimacy of the US involvement in the eyes of the international community. This function is done through the media and may include a candid assessment of the current operation, changes in the mission, or any other newsworthy story. The public affairs office (PAO) can use the communication system to link with the media and subsequently the international community.

(c) Third, information management affords the US commander the ability to carry out his psychological operations (PSYOP) plan. Used as a force multiplier, PSYOP has the potential to convince enemy combatants that further resistance would be futile. Controlling the city’s communication facilitates this and, at the same time, limits the enemy’s use for their operations.

(2) **Natural Gas.** Natural gas provides the basic heating for the population in many parts of the world. The natural gas industry consists of three components: production, transmission, and local distribution. The gas companies must transport the gas to central areas and then store it in numerous facilities before pumping it to homes and businesses for use. From a tactical and operational perspective, control of this system provides minimal advantage to friendly forces, but protecting its destruction or damage would prevent unnecessary hardship to the civilian population.

(3) **Electricity.** Electricity is critical to the normal state within a city. Power companies in a community provide a basic service which allows the population to cook, communicate, heat water, and see at night.

(a) There are three stages to this process: generation, transmission, and distribution. Generation is the process of producing electricity. Transmission connects power systems to the market areas. Distribution is the process of delivering the electricity to the consumer. A key factor is that electricity cannot be stored in any sizable amount and that damage to any portion of this utility causes an immediate impact on the population.

(b) While electricity facilitates many functions of normality, there are also military considerations. For example, the combination of equipment and training affords US forces a marked advantage over most adversaries during night operations. Consequently, US forces may want to control the electric system so that they may maintain this advantage during certain time periods. Likewise, the commander may want to deny enemy access to services provided through electricity. Rather than destroying a power generation capability, forces may gain an advantage by selectively turning off power for a specified time, retaining the ability to return to normal operation at a moment's notice.

(4) **Water.** Water is essential to many basic human needs. Water companies provide the population clean water to drink, cook, bathe, and wash. Water production and distribution are also basic processes. The water companies refine the water, pump it to storage facilities, and finally pump it to the consumer. The tactical implications of controlling this system are similar to that of natural gas. US forces may gain no marked tactical advantage by controlling this system, but its protection minimizes the population's hardship and thus contributes to overall mission success.

(5) **Health Services.** Health services are significantly lacking in many countries. Compounding this problem is the presence of deadly parasites and diseases that are abundant in many areas. Disasters (natural or manmade) can significantly worsen the already poor health services condition. Contaminated water, the lack of fuel for heating and sterilization, and increased injuries could easily overwhelm the medical infrastructure of a city. Support to an existing medical system may enhance the US mission, as well as foster its legitimacy.

<p><b>Police or military units with police authority/mission.</b></p> <ul style="list-style-type: none"> <li>• Station locations.</li> <li>• Substation locations.</li> <li>• Headquarters location.</li> <li>• Operating borders.</li> <li>• Jurisdiction borders.</li> <li>• Number of police—active and reserve.</li> <li>• Number of administrative personnel.</li> <li>• Types of units—uniformed, plainclothes, special.</li> <li>• Weapons and equipment.</li> <li>• Communications equipment, procedures, and frequencies/phone numbers.</li> <li>• Training.</li> <li>• Proficiency.</li> <li>• Capabilities.</li> <li>• Limitations.</li> </ul>
<p><b>Fire.</b></p> <ul style="list-style-type: none"> <li>• Station locations.</li> <li>• Substation locations.</li> <li>• Operating borders.</li> <li>• Number of firefighters—active and reserve.</li> <li>• Full-time or volunteer.</li> <li>• Number and types of vehicles (pump, ladder, and so forth).</li> <li>• Other fire fighting equipment.</li> <li>• Location and condition of fire hydrants.</li> <li>• Communications equipment, procedures, and frequencies/phone numbers.</li> <li>• Training.</li> <li>• Proficiency.</li> <li>• Capabilities</li> <li>• Limitations.</li> <li>• Airport/airfield fire fighting capabilities.</li> <li>• Port fire-fighting capabilities.</li> <li>• Fire fighting units outside urban area that assist in city emergencies.</li> </ul>
<p><b>Medical.</b></p> <ul style="list-style-type: none"> <li>• Hospital/Medical clinic locations.</li> <li>• Number of trained medical personnel.</li> <li>• Doctors per population.</li> <li>• Number of emergency rooms and equipment capabilities.</li> <li>• Number of operating rooms and equipment capabilities.</li> <li>• Number of hospital beds.</li> <li>• Capabilities.</li> <li>• Limitations.</li> </ul>

**Table G-3. Critical urban services checklist.**

<p><b>Water.</b></p> <ul style="list-style-type: none"> <li>• Types and locations of water sources (intake crib on lake, piped or trucked in).</li> <li>• Location and condition of filtration plants.</li> <li>• Location and condition of pumping stations.</li> <li>• Location and condition of distribution shafts and tunnels.</li> <li>• Water quality.</li> <li>• Other water distribution methods (trucks, bulls, bottles), location of distribution points.</li> </ul>
<p><b>Graves/casualty disposal.</b></p> <ul style="list-style-type: none"> <li>• Morgues.</li> <li>• Cemeteries.</li> <li>• Capacity.</li> </ul>
<p><b>Trash disposal.</b></p> <ul style="list-style-type: none"> <li>• Collection.</li> <li>• Transport.</li> <li>• Incinerators.</li> <li>• Dumps/landfills.</li> <li>• Dumps/landfills outside urban area that are used by the city.</li> <li>• Toxic waste.</li> <li>• Medical waste.</li> </ul>
<p><b>Food supply.</b></p> <ul style="list-style-type: none"> <li>• Location of markets.</li> <li>• Location of storage facilities.</li> </ul>
<p><b>Schools and churches.</b></p> <ul style="list-style-type: none"> <li>• Location.</li> <li>• Types.</li> </ul>
<p><b>Other structures of political or social significance.</b></p> <ul style="list-style-type: none"> <li>• Locations.</li> <li>• Types.</li> <li>• Significance.</li> </ul>

**Table G-3. Critical urban services checklist (continued).**

<p><b>What are the capabilities concerning fuel resources?</b></p> <ul style="list-style-type: none"> <li>• Storage.</li> <li>• Transportation.</li> <li>• Emergency supply.</li> <li>• Access.</li> <li>• Distribution.</li> <li>• Production.</li> <li>• Types.</li> </ul>
<p><b>Where are the material-producing factories in the urban area?</b></p> <ul style="list-style-type: none"> <li>• Location.</li> <li>• Material produced.</li> <li>• Size of factory.</li> <li>• Number of employees.</li> <li>• Sector of production.</li> </ul>

**Table G-4. Resources and material production checklist.**

<p><b>Are any materials produced used for a military purpose?</b></p> <ul style="list-style-type: none"> <li>• Type.</li> <li>• Purpose.</li> <li>• Location of military production.</li> <li>• Local use or export.</li> </ul>
<p><b>What makes the production significant to the urban area?</b></p>
<p><b>How can materials be used in conflict?</b></p>
<p><b>Where are the machine shops?</b></p> <ul style="list-style-type: none"> <li>• Location.</li> <li>• Owners.</li> <li>• Capacity.</li> <li>• Normal activity.</li> </ul>
<p><b>Where are the foundries?</b></p> <ul style="list-style-type: none"> <li>• Location.</li> <li>• Owner.</li> <li>• Capacity.</li> <li>• Normal activity.</li> <li>• Condition.</li> </ul>
<p><b>What is the fire protection?</b></p> <ul style="list-style-type: none"> <li>• Fire boats (type, power, location, number, pumping capacity, condition).</li> <li>• Shore fire-fighting equipment (location, type, number, and condition).</li> <li>• Water supply (source, adequacy, and distribution system).</li> <li>• Equipment available.</li> <li>• Dredging requirements.</li> <li>• Rehabilitation requirements.</li> </ul>
<p><b>Where is the water supply?</b></p> <ul style="list-style-type: none"> <li>• Source.</li> <li>• Potability.</li> <li>• Distribution.</li> <li>• Capacity.</li> <li>• Adequacy.</li> <li>• Storage (location, type, capacity).</li> </ul>
<p><b>What is the source of electricity?</b></p> <ul style="list-style-type: none"> <li>• Current characteristics.</li> <li>• Substations.</li> <li>• Labor resources.</li> </ul>

**Table G-4. Resources and material production checklist (continued).**

<p><b>What is the location of the airfield?</b></p>
<p><b>Description.</b></p> <ul style="list-style-type: none"> <li>• Construction.</li> <li>• Security.</li> <li>• Area.</li> <li>• Access.</li> </ul>
<p><b>What is the status of the airfield?</b></p>
<p><b>Who is in control of the airfield?</b></p>

**Table G-5. Airfields checklist.**

<b>What type of airfield is it?</b> <ul style="list-style-type: none"> <li>• Civilian.</li> <li>• Military.</li> <li>• Joint.</li> </ul>
<b>What is the principle use?</b>
<b>Where are the storage areas?</b> <ul style="list-style-type: none"> <li>• Jet fuel.</li> <li>• Aviation gas.</li> <li>• Jet oil.</li> <li>• Aviation oil.</li> <li>• Lubricants, manifolds, and filters.</li> <li>• Pipelines.</li> <li>• Above and below ground storage and capacity.</li> <li>• Pumps.</li> <li>• Fuel trucks.</li> </ul>
<b>Where are the maintenance facilities?</b> <ul style="list-style-type: none"> <li>• Size.</li> <li>• Capacity.</li> </ul>
<b>Where is the administration building located?</b>
<b>Where is the electrical power source?</b> <ul style="list-style-type: none"> <li>• Location of master switch.</li> <li>• Current characteristics.</li> <li>• Emergency power available (type, location, generating capacity and delay).</li> <li>• Location of transformers.</li> </ul>
<b>Where is the natural gas source?</b>
<b>Where are the medical facilities?</b> <ul style="list-style-type: none"> <li>• Type and location.</li> <li>• Capability and characteristics.</li> <li>• Prevailing weather conditions.</li> </ul>
<b>Describe any terrain key to both the airfield and urban area.</b>
<b>Are there any vertical obstructions, not contained in published data, that pose a threat to helicopters or other aircraft at/under 50 feet above ground level (AGL)?</b>
<b>Are there any obstacles to flight within 5 to 10 kilometers of the airfield?</b>
<b>What radar equipment and type are associated with the airfield?</b>
<b>Do we have access to blueprints of the airfield and its facilities?</b>
<b>Where are the emergency facilities located?</b> <ul style="list-style-type: none"> <li>• Type.</li> <li>• Equipment.</li> <li>• Capabilities.</li> <li>• Limitations.</li> </ul>
<b>What kind of and how many ground security forces are routinely present?</b> <ul style="list-style-type: none"> <li>• Civilian.</li> <li>• Military.</li> </ul>

**Table G-5. Airfields checklist (continued).**

<b>What is/are the locations of LZs?</b>
<b>What are the characteristics of the LZ?</b> <ul style="list-style-type: none"> <li>• Site.</li> <li>• Dimensions.</li> <li>• Landing points</li> <li>• Capacity by type.</li> <li>• Surface material.</li> <li>• Soil trafficability.</li> <li>• Obstacles (existing, reinforcing).</li> <li>• Slope (direction, degree).</li> <li>• Lighting conditions.</li> </ul>
<b>Identify any buildings with rooftop HLZs.</b> <ul style="list-style-type: none"> <li>• Location.</li> <li>• Dimensions.</li> <li>• Landing points.</li> <li>• Capacity by type.</li> <li>• Obstacles.</li> </ul>
<b>What are the distance and direction from the designated objectives?</b>
<b>What/where is the anti-air threat?</b> <ul style="list-style-type: none"> <li>• Small arms.</li> <li>• Shoulder-fired antitank grenade launchers (RPGs).</li> <li>• MANPADs.</li> <li>• SAMs (mobile/fixed).</li> <li>• Anti-helicopter mines.</li> <li>• Anti-aircraft artillery (AAA) (mobile/fixed).</li> </ul>

**Table G-6. Helicopter landing zones checklist.**

<b>What are the classifications of routes in the urban area?</b> <ul style="list-style-type: none"> <li>• Highways.</li> <li>• Streets.</li> <li>• Alleys.</li> <li>• Trails.</li> <li>• Bike paths.</li> <li>• Pedestrian paths.</li> </ul>
<b>What is the location?</b>
<b>Is the route trafficable?</b>
<b>What is the length of the route?</b>
<b>What are the roadway characteristics?</b> <ul style="list-style-type: none"> <li>• Width.</li> <li>• Surface material.</li> <li>• Maximum wheel load.</li> </ul>
<b>Where are the side hill cuts?</b>
<b>Where are the through cuts?</b>

**Table G-7. Roadways checklist.**



<p><b>Where are the bridges?</b></p> <ul style="list-style-type: none"> <li>• Total number of segments.</li> <li>• Number greater than 18 meters.</li> <li>• Load bearing capacity.</li> <li>• Width.</li> <li>• Location.</li> <li>• Vehicle capacity.</li> <li>• Facilities.</li> <li>• Surface material.</li> </ul>
<p><b>Where are the fords?</b></p>
<p><b>Where are the ferries?</b></p>
<p><b>Where are the tunnels, galleries and snowsheds?</b></p> <ul style="list-style-type: none"> <li>• Dimensions.</li> <li>• Capacity.</li> </ul>
<p><b>Where are the underpasses/vulnerable points?</b></p>
<p><b>Where are the areas subject to blockade?</b></p>
<p><b>Where are the checkpoints?</b></p>
<p><b>Where are the obstacles?</b></p> <ul style="list-style-type: none"> <li>• Type.</li> <li>• Effort required to remove.</li> </ul>
<p><b>What is the civilian use?</b></p> <ul style="list-style-type: none"> <li>• Importance to economy.</li> <li>• Possible rerouting.</li> </ul>
<p><b>What are the street patterns?</b></p> <ul style="list-style-type: none"> <li>• Radial.</li> <li>• Rectangular.</li> <li>• Concentric.</li> <li>• Contour conforming.</li> <li>• Medieval irregular.</li> <li>• Planned irregular.</li> <li>• Numbering and mailing system.</li> <li>• Traffic control system.</li> </ul>
<p><b>Do maps correspond with the routes?</b></p>
<p><b>Are routes compartmentalized?</b></p>

**Table G-7. Roadways checklist (continued).**

<b>Where are the freight handling facilities?</b>
<b>Where are the repair shops/locomotive terminals?</b>
<b>Where are the fuel facilities?</b> <ul style="list-style-type: none"> <li>• Location.</li> <li>• Type of fuel.</li> <li>• Storage and capacity.</li> <li>• Quantity of fuel on-hand.</li> <li>• Method of loading.</li> </ul>
<b>Where is the rolling stock?</b> <ul style="list-style-type: none"> <li>• Types of trains.</li> <li>• Types of railcars and carrying capacity.</li> </ul>
<b>Describe railheads.</b> <ul style="list-style-type: none"> <li>• Supply transfer points.</li> <li>• Characteristics (spurs, sidings, piles of materials, tract trucks, wagons, tents, huts, guards and supply handlers).</li> </ul>

**Table G-8. Railways checklist.**

<b>Location?</b>
<b>What obstacle is crossed?</b>
<b>What is the route designation?</b>
<b>What are the military load classifications?</b>
<b>What is the maximum load capacity?</b>
<b>What is the condition of the bridge?</b>
<b>What extent of effort would be required to repair it?</b>
<b>Where and what condition are the bypasses?</b>
<b>What is the condition of the approaches?</b>
<b>What is the condition of the banks?</b>
<b>What is the overall bridge length?</b>
<b>What is the structure type?</b>
<b>What is the military nomenclature?</b>
<b>What is the number of spans?</b> <ul style="list-style-type: none"> <li>• Type of control (mechanical, electronic).</li> <li>• Time required to move.</li> </ul>
<b>What is the condition of the abutments/piers?</b>
<b>What is the width of the roadway?</b>
<b>What is the under-bridge clearance?</b>
<b>Where are the walkways?</b>
<b>What is the condition of the spans?</b>
<b>What is the condition of the suspension system?</b>
<b>What are the characteristics of any moveable spans?</b>
<b>What is the condition of the intermediate supports?</b>
<b>What are the characteristics of a floating bridge?</b>
<b>What are the safety and security features?</b>
<b>Where are the traffic control markings?</b>
<b>What is the effect of weather and climate?</b>

**Table G-9. Bridges checklist.**

<b>What type of bridge is it?</b>
<b>Is the bridge significant in linking the urban area together?</b>
<b>If the use of the bridge is denied, what is the result?</b>
<b>Are there any alternate routes?</b>
<b>What is the horizontal clearance?</b>
<b>What is the vertical clearance?</b>

**Table G-9. Bridges checklist (continued).**

<b>Are maps available of the subway system?</b> <ul style="list-style-type: none"> <li>• Are the maps of the actual tracks or an altered rendition of lines and stations?</li> <li>• Are blueprints available of stations, maintenance areas, and so forth?</li> </ul>
<b>Where are the entrances and exits of the system?</b>
<b>What is the schedule of trains?</b>
<b>How can the system be accessed?</b> <ul style="list-style-type: none"> <li>• Pedestrian traffic routes.</li> <li>• Stairs, escalators, elevators.</li> <li>• Security obstructions (gates, turnstiles).</li> <li>• Maintenance and utility tunnels.</li> <li>• Drains.</li> <li>• Transition areas between above/below ground portions of the lines.</li> </ul>
<b>Describe the tunnels.</b>
<b>Describe the rails.</b>
<b>Describe the trains.</b> <ul style="list-style-type: none"> <li>• Type.</li> <li>• Speed.</li> <li>• Size and capacity of cars.</li> </ul>
<b>What is the soil, rock or compound that the tunnels are cut through?</b>
<b>How would demolition in the subway affect the urban area? (surface structure, subterranean foundation).</b>
<b>What is the composition of the subway system?</b>
<b>What is the electrical source?</b>
<b>How is the subway operated and managed?</b>
<b>What is the emergency response?</b>
<b>What is the condition of the subway system?</b>
<b>What is the decibel level around the trains? At what distance is noise a factor to ground operations?</b>
<b>Type of construction.</b> <ul style="list-style-type: none"> <li>• Typical subway near surface with flat roof and I-beams for roof and sides, supported between tracks with steel bulb-angle columns.</li> <li>• Flat roof typical subway of reinforced concrete construction supported between tracks by steel bulb-angle columns, used for short distances.</li> <li>• Concrete lined tunnel of open cutwork, and rock tunnel work.</li> <li>• Elevated road on steel viaduct.</li> <li>• Cast iron tubes used under water (river, lakes).</li> </ul>

**Table G-10. Subways checklist.**

<b>What is the location of crossover sections?</b>
<b>Where are the controls for the crossover sections?</b>
<b>What reinforcements are part of the construction to add support and waterproofing? (Example: hard burned brick laid in hot asphalt.)</b>
<b>Describe the layers of the inner subway construction.</b>
<b>Locate manholes.</b>
<b>What is the evacuation plan?</b>
<b>What is the construction of beams and shafts?</b>
<b>Where are any turns or corners?</b>
<b>Where are terminals located?</b>
<b>Where are the maintenance facilities located?</b>
<b>Describe the railbed (grade, subgrade, rail embedding).</b>
<b>Describe any subterranean structures.</b>
<b>What is the security of the subway?</b>
<b>Describe the ventilation system.</b>
<b>Is there a vagrant/squatter population residing in the subway system?</b>
<ul style="list-style-type: none"> <li>• Approximate numbers.</li> <li>• Primary locations/concentrations.</li> </ul>

**Table G-10. Subways checklist (continued).**

<b>What is the location of the tunnel/passage?</b>
<b>What is the location of the portals on roof?</b>
<b>What does the tunnel/passage connect in the urban area?</b>
<b>If the use of the tunnel were denied, what would result? Where would redirection occur?</b>
<b>What is the length?</b>
<b>What is the type?</b> <ul style="list-style-type: none"> <li>• Maintenance access tunnel.</li> <li>• Electric grid/utility line.</li> <li>• Pedestrian passageway.</li> <li>• Sewer drainage systems and waterways.</li> <li>• If sewer, is it a sanitary, storm or combination?</li> <li>• Natural underground passage.</li> </ul>
<b>What are the features?</b> <ul style="list-style-type: none"> <li>• Shape.</li> <li>• Width at narrowest point.</li> <li>• Width at widest point.</li> <li>• Maximum height.</li> <li>• Minimum height.</li> <li>• Rise of arch.</li> </ul>
<b>Where are the horizontal and vertical constructions? (Type, least clearance, location from portal).</b>

**Table G-11. Other subterranean features checklist.**

<p><b>What are the features of the sewer/drainage systems?</b></p> <ul style="list-style-type: none"> <li>• Cross-section, dimensional.</li> <li>• Sides.</li> <li>• Bottom.</li> <li>• Normal depth.</li> <li>• Normal current velocity.</li> </ul>
<p><b>What is the alignment?</b></p> <ul style="list-style-type: none"> <li>• Horizontal (position, curve radius, curve location).</li> <li>• Vertical (grade percent, length, location).</li> </ul>
<p><b>How many man-ways are there?</b></p> <ul style="list-style-type: none"> <li>• Dimensions.</li> <li>• Spacing.</li> </ul>
<p><b>What is the obstacle tunneled?</b></p>
<p><b>What are the features of the portals?</b></p> <ul style="list-style-type: none"> <li>• Design.</li> <li>• Materials.</li> <li>• Dimensions.</li> </ul>
<p><b>What are the features of the lining materials?</b></p> <ul style="list-style-type: none"> <li>• Type.</li> <li>• Thickness.</li> <li>• Condition.</li> <li>• Point of change.</li> </ul>
<p><b>Where are the shoring and bracing?</b></p> <ul style="list-style-type: none"> <li>• Location of spacing.</li> <li>• Design.</li> <li>• Materials.</li> <li>• Dimensions.</li> <li>• Arrangements.</li> </ul>
<p><b>What is the geological data?</b></p>
<p><b>What is the overburden? (Material, depth).</b></p>
<p><b>Where are the demolition chambers? (Location, dimension).</b></p>
<p><b>Where is the ventilation? (Description, adequacy).</b></p>
<p><b>What is the drainage system? (Description, location, power source).</b></p>
<p><b>Where are the lighting facilities? (Type, location, power source).</b></p>
<p><b>What is the year of construction?</b></p>
<p><b>Where are the bypasses?</b></p> <ul style="list-style-type: none"> <li>• Location.</li> <li>• Condition.</li> <li>• Effort required to establish.</li> </ul>
<p><b>Where are the alternate routes?</b></p>
<p><b>What are the traffic control markings?</b></p>
<p><b>What are the surface features over tunnels?</b></p>
<p><b>What are the effects of climate and weather?</b></p>
<p><b>What are the special geophysical phenomena?</b></p>
<p><b>What is the susceptibilities to above ground demolitions?</b></p>
<p><b>Describe adjacent key terrain.</b></p>

**Table G-11. Other subterranean features checklist (continued).**

<p><b>Do buildings in the urban area have basements/subbasements/sub-subbasements?</b></p> <ul style="list-style-type: none"> <li>• Residential.</li> <li>• Government.</li> <li>• Military.</li> <li>• Commercial.</li> <li>• Industrial.</li> <li>• How deep/how many layers?</li> <li>• Access points/methods.</li> <li>• Stairs, ladders, ramps, elevators, and dumb waiters.</li> <li>• Hidden access points.</li> <li>• Above ground windows.</li> <li>• Wall, floor and ceiling construction.</li> <li>• Ceiling support.</li> <li>• Typical use (storage, living quarters, office, and so forth).</li> </ul>
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**Table G-11. Other subterranean features checklist (continued).**

<p><b>What type of plant is it?</b></p> <ul style="list-style-type: none"> <li>• Conventional.</li> <li>• Nuclear.</li> </ul>
<p><b>What is the economic significance of the power plant?</b></p>
<p><b>What is the social significance of the power plant?</b></p>
<p><b>What is the fuel source?</b></p> <ul style="list-style-type: none"> <li>• Type.</li> <li>• Location.</li> <li>• Available reserve.</li> <li>• Usage rate.</li> </ul>
<p><b>Where are the generators?</b></p> <ul style="list-style-type: none"> <li>• Quantity.</li> <li>• Power output.</li> </ul>
<p><b>Where are the exciters? (Quantity).</b></p>
<p><b>Where are the turbines? (Quantity).</b></p>
<p><b>Where are the boilers? (Steam power plant).</b></p>
<p><b>Where are the compressors? (Gas power plant).</b></p>
<p><b>Where are the combustion chambers? (Gas power plant).</b></p>
<p><b>Where are the diesel engines? (Diesel power plant).</b></p>
<p><b>Where are the reactor containment structures? (Nuclear power plant).</b></p>
<p><b>Where are the water intakes and outlets? (Nuclear power plant).</b></p>
<p><b>Where are the power transformers?</b></p>
<p><b>Where are the switchyards?</b></p>
<p><b>What is the threat to the surrounding area should this facility be damaged? (Nuclear power plant).</b></p> <ul style="list-style-type: none"> <li>• Inhabitants.</li> <li>• Animal life.</li> <li>• Surrounding ecosystem</li> <li>• No effect on surrounding area.</li> </ul>

**Table G-12. Power plants checklist.**

<b>Is there a power generator backup?</b>
<b>What is the power grid that the power plant services and its location?</b> <ul style="list-style-type: none"> <li>• Power generation system.</li> <li>• Power transmission system.</li> <li>• Power distribution system.</li> <li>• Streetlights, time on/off.</li> </ul>
<b>What is the best component to disable the facility, and for how long will it be disabled?</b>
<b>Where are the power plant step-down transformers for plant power distribution located?</b> <ul style="list-style-type: none"> <li>• Control rooms.</li> <li>• Condensers.</li> <li>• Water pumps.</li> </ul>
<b>Who controls the power plant?</b>
<b>Who controls the maintenance?</b>
<b>Where are the substations located?</b>
<b>How are the substations powered?</b>
<b>What (sub) station is the primary power plant for the incident urban area?</b>
<b>Does the power plant control interconnected energy?</b>
<b>Where is the water storage center?</b>
<b>Where are the fuel storage centers?</b> <ul style="list-style-type: none"> <li>• Size/capacity.</li> <li>• Fuel type.</li> <li>• Usage rate.</li> </ul>
<b>Where are log booms located?</b>
<b>What kind of physical security measures are present?</b> <ul style="list-style-type: none"> <li>• Military/civilian personnel.</li> <li>• Fencing and or other physical security obstruction.</li> </ul>
<b>Describe any other components of the facility's layout.</b>

**Table G-12. Power plants (continued).**

<b>Where is the water control center located?</b> <ul style="list-style-type: none"> <li>• Size/output.</li> <li>• Method of purification.</li> <li>• Grid/pipe layout.</li> </ul>
<b>Are there any substations?</b>
<b>Does the incident urban area have water supply towers?</b>
<b>Does the incident urban area have wells available for use?</b>
<b>How available are local streams, rivers, lakes and ocean waters?</b>
<b>How effective is the incident country at leak detection?</b>
<b>Is the incident urban area currently experiencing any water shortage?</b>
<b>How is irrigation in the area? (Poor irrigation practices consume 90 percent of all water used in poor countries.)</b>
<b>Is incident country or urban area receiving aid to be spent on projects to increase potable water output?</b>

**Table G-13. Water systems checklist.**

<b>How reliable are the engineering and environmental testing?</b>
<b>Is water treatment privatized?</b>
<b>Is there any trenchless construction?</b>
<b>What type of pipes have been installed?</b>
<b>What are the health risks from raw water?</b>
<b>What type of security is present at the facility?</b>
<b>Do any rivers/canals run through the city?</b> <ul style="list-style-type: none"> <li>• Location.</li> <li>• Depth.</li> <li>• Width.</li> <li>• Tide.</li> <li>• Current.</li> <li>• Seasonal changes (for example, time frozen, flooded, and or dried out).</li> <li>• Dams.</li> </ul>

**Table G-13. Water systems checklist (continued).**

<b>How adequate is the sewage and waste disposal system?</b>
<b>What action (for example, combat) will lead to the breakdown of the waste disposal system?</b>
<b>Who/where are the points of contact to ensure the sewage and waste disposal system is maintained?</b>
<b>Where is the control center of the sewage system?</b>
<b>How is it operated?</b>
<b>What is the schedule of operation?</b>
<b>What is the security of the facility?</b>

**Table G-14. Sewage and waste disposal checklist.**

<b>Where are the fields located?</b>
<b>Who owns the fields?</b>
<b>What type of field is it?</b>
<b>What is the size of the field?</b>
<b>What is the status of the field?</b>
<b>What is the level of production? (Barrels, tons, cubic feet per time period).</b>
<b>What are the number and location of the producing wells?</b>
<b>What percent of national production does this field produce?</b>
<b>What is the product?</b> <ul style="list-style-type: none"> <li>• Type.</li> <li>• Characteristic.</li> </ul>
<b>Where are the reserves?</b> <ul style="list-style-type: none"> <li>• Proven.</li> <li>• Unproven.</li> </ul>

**Table G-15. Petroleum and natural gas facilities checklist.**



<b>What is the planned expansion?</b> <ul style="list-style-type: none"> <li>• Expected increase.</li> <li>• Date.</li> <li>• Method.</li> </ul>
<b>What is the transportation method?</b> <ul style="list-style-type: none"> <li>• Method.</li> <li>• Identification.</li> <li>• Destination.</li> </ul>
<b>What is the easiest method for rendering the field inoperable? For what period of time?</b>
<b>What is the percentage of infield processing?</b>
<b>What is the percentage of refinery processing?</b>
<b>What is the distance to the nearest refinery?</b>
<b>What are the transportation methods for product movement to the refinery?</b>
<b>What is the location of the processing plants?</b>
<b>What type of plant is it?</b>
<b>What percent of national refining/cracking does this plant represent?</b>
<b>When was it completed?</b>
<b>What is the general condition?</b>
<b>What is the rated production capacity?</b>
<b>Where is the refinery processing area?</b>
<b>Where are the atmospheric distillation towers?</b>
<b>Where are the crude oil feed furnaces?</b> <ul style="list-style-type: none"> <li>• Type.</li> <li>• Number feeding towers.</li> </ul>
<b>Where are the receiving facilities and crude oil storage?</b>
<b>Where are the catalyst vessels?</b> <ul style="list-style-type: none"> <li>• Type.</li> <li>• Function.</li> </ul>
<b>Where are the vapor vessels?</b> <ul style="list-style-type: none"> <li>• Type.</li> <li>• Function.</li> <li>• Location.</li> </ul>
<b>Where is the ancillary equipment?</b> <ul style="list-style-type: none"> <li>• Type.</li> <li>• Function.</li> <li>• Location.</li> </ul>
<b>What is the output?</b> <ul style="list-style-type: none"> <li>• Product.</li> <li>• Quantity.</li> <li>• Quality.</li> </ul>
<b>What is the power source of the plant?</b>
<b>What is the water source of the plant?</b>
<b>What type of transportation is used?</b> <ul style="list-style-type: none"> <li>• Raw materials in. (Identification, method, origin.)</li> <li>• Finished products out. (Identification, method, origin.)</li> </ul>

**Table G-15. Petroleum and natural gas facilities checklist (continued).**

<b>What is the planned expansion?</b>
<b>Where are the administration and maintenance buildings?</b>
<b>Where are the finished product storage areas?</b> <ul style="list-style-type: none"> <li>• Type.</li> <li>• Location.</li> <li>• Function.</li> </ul>
<b>Are refinery flow charts/diagrams available to include distribution facilities?</b>
<b>Where are the critical damage points?</b>
<b>What type of storage is there?</b>
<b>Who owns the storage facility?</b>
<b>What is the total storage capacity?</b>
<b>What percent of the national total is stored?</b>
<b>What is the general condition?</b>
<b>Where are the storage tanks?</b> <ul style="list-style-type: none"> <li>• Location.</li> <li>• Displacement (above/below ground).</li> <li>• Shape.</li> <li>• Top.</li> </ul>
<b>Where are the storage drums?</b> <ul style="list-style-type: none"> <li>• Manufacturing (location and capacity).</li> <li>• Cleaning and reclamation (location and capacity).</li> <li>• Filling facilities (location, equipment and capacity).</li> </ul>
<b>What is the transportation method?</b> <ul style="list-style-type: none"> <li>• Number.</li> <li>• Type.</li> <li>• Characteristics.</li> </ul>
<b>Where are the receiving and distribution facilities?</b>
<b>Where are the support facilities?</b>
<b>What is the easiest method for rendering the storage facility inoperable? Time?</b>

**Table G-15. Petroleum and natural gas facilities checklist (continued).**

<b>What are the locations of telecommunication and broadcasting assets (such as radio and television) and their primary use?</b>
<b>What are their economic and strategic/tactical importances?</b>
<b>What is the controlling government administration?</b> <ul style="list-style-type: none"> <li>• Agency involved.</li> <li>• Function.</li> <li>• Location.</li> <li>• Relationship to military.</li> </ul>
<b>Where is the transmitting/receiving equipment?</b> <ul style="list-style-type: none"> <li>• Location.</li> <li>• Type.</li> <li>• Frequency range.</li> </ul>

**Table G-16. Communications checklist.**

<b>Where are the control buildings?</b>
<b>What is the power source?</b> <ul style="list-style-type: none"> <li>• Type.</li> <li>• Voltage.</li> <li>• Transformer requirement.</li> </ul>
<b>What are the auxiliary power sources?</b> <ul style="list-style-type: none"> <li>• Type.</li> <li>• Voltage.</li> <li>• Duration of usage.</li> </ul>
<b>Where are the antenna fields?</b> <ul style="list-style-type: none"> <li>• Location.</li> <li>• Dimensions.</li> <li>• Feed system.</li> <li>• Use.</li> <li>• Polarization.</li> <li>• Mounting position.</li> <li>• Band width capacity.</li> <li>• Operating frequency.</li> <li>• Mounting structure.</li> <li>• Radiation pattern.</li> </ul>
<b>Where is the support area?</b> <ul style="list-style-type: none"> <li>• Location.</li> <li>• Housing area.</li> <li>• Equipment storage.</li> </ul>
<b>Where are the radio relay stations?</b>
<b>What is the military communications establishment?</b> <ul style="list-style-type: none"> <li>• Background.</li> <li>• Staff control.</li> <li>• Type.</li> <li>• Other facilities under military control.</li> <li>• Source.</li> <li>• Key personnel.</li> <li>• Training.</li> </ul>
<b>Where is the research and development?</b> <ul style="list-style-type: none"> <li>• Installation.</li> <li>• Projects (type, location and purpose).</li> <li>• Performance data.</li> <li>• Progress.</li> <li>• Foreign contributions.</li> </ul>
<b>Where are the intercept and direction-finding stations?</b> <ul style="list-style-type: none"> <li>• Location.</li> <li>• Line of communication.</li> <li>• Type shelter.</li> <li>• Antenna layout.</li> <li>• Rotating antenna (type, number, description and pattern).</li> </ul>

**Table G-16. Communications checklist (continued).**

<p><b>Where are the telephone and telegraph facilities?</b></p> <ul style="list-style-type: none"> <li>• Line routes.</li> <li>• Construction type.</li> <li>• Exchanges and offices.</li> <li>• Repair facilities.</li> <li>• Interconnection of system.</li> </ul>
<p><b>Where is the construction line?</b></p> <ul style="list-style-type: none"> <li>• Open-wire line (material, spacing, treatment and conductor).</li> <li>• Poles (materials, treatment, spacing and number of cross-arms).</li> <li>• Underground and underwater cables (method, type, and location).</li> </ul>
<p><b>Where are the submarine cable facilities?</b></p> <ul style="list-style-type: none"> <li>• Cable (type, location, length and description).</li> <li>• Terminal and operation equipment (type, dimension, power requirements, technical characteristics, and land line connections).</li> </ul>
<p><b>What are the technical details?</b></p> <ul style="list-style-type: none"> <li>• Equipment identification.</li> <li>• Frequency range.</li> <li>• Function.</li> <li>• Operator requirements.</li> <li>• Operator status.</li> <li>• Maximum reliable range.</li> <li>• Power source requirements.</li> <li>• Transmitter specifications.</li> <li>• Receiver specifications.</li> <li>• Antennas.</li> </ul>
<p><b>Is there any electromagnetic (EM) activity site areas that would hamper communications?</b></p>
<p><b>Is there an in-city trucking capability to include cross-country and cross-border trucking?</b></p>
<p><b>Who provides or produces the military and commercial communication equipment?</b></p> <ul style="list-style-type: none"> <li>• Security at the installation.</li> <li>• Power sources.</li> </ul>
<p><b>Where are the high voltage/em radiation hazard areas?</b></p>
<p><b>Are there schematics or diagrams of the facility? Where can they be obtained?</b></p>
<p><b>What is the connectivity to local/national communication systems?</b></p>
<p><b>What is the data transmission capability through satellite communications (SATCOM)?</b></p>
<p><b>What are the locations and capabilities of technicians to repair the facility?</b></p>
<p><b>Where are central locations for the control facilities?</b></p>
<p><b>How many television channels are there?</b></p>
<p><b>How many satellite earth stations are there?</b></p> <ul style="list-style-type: none"> <li>• Number.</li> <li>• Locations.</li> </ul>
<p><b>What computer networks are available?</b></p> <ul style="list-style-type: none"> <li>• Types of computers and locations.</li> <li>• Types of networks and control centers.</li> </ul>

**Table G-16. Communications checklist (continued).**

<b>Where are the medical facilities?</b>
<b>How many patients can the facility accommodate?</b> <ul style="list-style-type: none"><li>• Number of beds.</li><li>• Number of surgical operating rooms.</li></ul>
<b>Who manages the facility?</b>
<b>Is the facility accessible to the public?</b>
<b>Are private medical facilities available?</b>
<b>How advanced is the medicine being practiced?</b>
<b>Is medicine practiced different from that in the US?</b>
<b>How adequate are the facilities supplies? Resupply?</b>
<b>How well staffed is the facility?</b>
<b>At what level will medical care become overwhelmed should combat occur?</b>
<b>What is the predicted infectious disease risk and occurrence?</b>
<b>Where are the blood banks?</b>
<b>How much blood is stored?</b>
<b>Is blood adequately screened for infectious disease?</b>
<b>Where are the medical manufacturers?</b>
<b>What medical capable transport is available from the host nation?</b>
<b>What is the environmental health risk?</b>
<b>What is the acquired immune deficiency syndrome (aids) risk?</b>

Table G-17. Medical facilities checklist.

<b>Where are all the entrances to the building? (Include fire escapes.)</b>
<b>What size is the building?</b> <ul style="list-style-type: none"><li>• Dimensions.</li><li>• Stories.</li></ul>
<b>What is the building used for?</b>
<b>Describe the occupants.</b>
<b>What type of security system or other protective devices are in use?</b>
<b>Are there security personnel?</b> <ul style="list-style-type: none"><li>• Quantity.</li><li>• Civilian/military.</li></ul>
<b>What is the composition of the outer walls?</b>
<b>What type of insulation is used in the walls? Is it flammable?</b>
<b>Can small arms fire penetrate the external walls?</b>
<b>Can the utilities be regulated from outside the building?</b>
<b>What types of utilities are in the building?</b>
<b>Are there flammables or fuel stored in or around the building?</b>
<b>What are the dimensions of the inside rooms?</b>
<b>Where are the inside doorways?</b>
<b>Can small arms fire penetrate the inner walls? Are they reinforced?</b>
<b>Is there a basement or cellar?</b>

Table G-18. Building construction checklist.

<b>Is there an attic or roof crawl space?</b>
<b>Are there any telephones?</b>
<b>Are there other communications means?</b> <ul style="list-style-type: none"> <li>• Radios.</li> <li>• Internet.</li> <li>• Cellular phones.</li> </ul>
<b>Where are the stairwells?</b>
<b>Are there blueprints, engineer plans or wiring diagrams of the building?</b>
<b>Are there photographs of the building and surrounding area?</b>
<b>Identify personnel who are able to describe the building and it's interior.</b>
<b>Describe the pattern of construction.</b>
<b>Describe the roof.</b>
<b>Describe any subterranean construction.</b> <ul style="list-style-type: none"> <li>• Sewers.</li> <li>• Subways.</li> <li>• Basements/cellars.</li> <li>• Other utility tunnels (water, maintenance, electric, gas or telephone).</li> </ul>
<b>Describe any stadiums.</b> <ul style="list-style-type: none"> <li>• Location.</li> <li>• Area.</li> <li>• Capacity.</li> <li>• Routes in/out.</li> <li>• Height.</li> <li>• Protection from observation.</li> <li>• Observation posts.</li> <li>• Levels.</li> <li>• Type of construction.</li> </ul>
<b>What type of support structure is used in the buildings?</b>
<b>Are there any mouseholes?</b>
<b>NOTE:</b> The design and construction of buildings within a certain urban area are influenced by numerous factors to include climate, materials available, function, and cultural development of the region. Critical factors to be considered in evaluating the construction of a building for attack, defense or destruction include: <ol style="list-style-type: none"> <li>1. The protective value offered by walls, roof, ceilings and doors.</li> <li>2. The ease with which it may be demolished.</li> <li>3. The availability of internal lines of communications and the effort required to breach exterior walls.</li> <li>4. The time, effort, and material required to use the building.</li> <li>5. Potential fire hazard.</li> </ol>

**Table G-18. Building construction checklist (continued).**

<b>Are civil defense plans in place and accessible?</b>
<b>What is the organization of the civil defense agency?</b>
<b>Who are the key personnel in the civil defense?</b>
<b>What facilities are available for civil defense?</b> <ul style="list-style-type: none"> <li>• Key industry sites.</li> <li>• Underground shelters.</li> <li>• Food storage sites.</li> <li>• Potable water sites.</li> <li>• Medical supplies.</li> <li>• Hospitals.</li> </ul>
<b>What are the warning and alert procedures?</b>
<b>What are the evacuation routes and capacities?</b>

**Table G-19. Civil defense checklist.**

<b>Has the enemy fought in an urban area?</b>
<b>What is the enemy experience in an urban environment?</b> <ul style="list-style-type: none"> <li>• Urban training.</li> <li>• Tactics, techniques and procedures.</li> </ul>
<b>What is the enemy center of gravity in urban warfare?</b>
<b>What is the enemy's critical vulnerability?</b>
<b>What is the enemy sniper capability?</b> <ul style="list-style-type: none"> <li>• Training.</li> <li>• Weapons.</li> <li>• Tactics, techniques, and procedures of employment.</li> </ul>
<b>Does the enemy possess mechanized assets? How do they intend to employ mech.?</b>
<b>Will they attack or defend?</b>
<b>How will they fight? (attrit, destroy, clear, and so forth).</b>
<b>Will the enemy use the local populace? Will the local populace cooperate?</b>
<b>Where will they employ crew-served weapons from?</b>
<b>Does the enemy have indirect fire support?</b>
<b>Are there mines and booby traps in the urban area?</b>
<b>How large of a force can the enemy deploy?</b>
<b>How will they reinforce?</b>

**Table G-20. Conventional military threat checklist.**

<b>Why does the organization exist?</b>
<b>What is their political ideology?</b>
<b>How many members are in the organization?</b>
<b>Are they a threat to US forces? To local government forces? To police?</b>
<b>Identification features.</b> <ul style="list-style-type: none"> <li>• Clothing.</li> <li>• Propaganda.</li> </ul>

**Table G-21. Paramilitary threat checklist.**

What external groups are they involved with?
Who do they fight for?
What do they fight for?
Who are their leaders?
How can we recognize them?
Is the group demanding anything?
How do they operate?
What is their command and control?
Are they fighting against any certain group?
Where is the organization's headquarters?
Do they have allies? (who)
Do security forces support them?
What types of weapons do they employ?
What do they use for transportation?
Where do they fight?
What tactics do they employ?
How are the forces organized?
What type of weapons technology do they have access to?
How are they trained?
How well are they trained?
Describe their weapons. <ul style="list-style-type: none"> <li>• Firearms.</li> <li>• Explosives.</li> <li>• Incendiary.</li> <li>• Indirect fire weapons.</li> <li>• Mechanized.</li> </ul>

**Table G-21. Paramilitary threat checklist (continued).**

What group/subgroup does the insurgent identify with?
What political ideology is the insurgency supporting?
What issues is/are driving the insurgency?
What is the desired result of the insurgency?
What allows the insurgents to sustain the conflict? (support?)
Who are the leaders?
Describe the command and control.
How do they recruit supporters?
What is the reaction of the genuine opposition?
Is the opposition a one-party state?
What type of governmental rule is established?
What fighting strategy and tactics do they employ?
What kind of military capabilities do they have?

**Table G-22. Insurgent threat checklist.**



<b>What is the crime rate within the urban area? By section?</b>
<b>What criminal organizations are known to be in the urban area?</b> <ul style="list-style-type: none"> <li>• Local.</li> <li>• Regional.</li> <li>• International.</li> </ul>
<b>What activities are criminal organizations involved in?</b> <ul style="list-style-type: none"> <li>• Finance.</li> <li>• Narcotics.</li> <li>• Technology transfer.</li> <li>• Arms dealing.</li> <li>• Illegal immigration.</li> <li>• Counterfeiting operations.</li> <li>• Armed robbery.</li> <li>• Prostitution.</li> <li>• Gambling (if illegal).</li> <li>• Other.</li> </ul>
<b>What are the structure and organization of criminal organizations?</b>
<b>What are the territorial divisions?</b>
<b>What weapons and equipment do the criminal organizations possess?</b>
<b>What are the management and organization of law enforcement agencies?</b> <ul style="list-style-type: none"> <li>• Personnel.</li> <li>• Weapons and equipment.</li> <li>• Key leaders.</li> <li>• Organizational structure.</li> <li>• Training of police.</li> <li>• Tactics, techniques and procedures.</li> <li>• Locations of police stations.</li> <li>• Where are their facilities?</li> <li>• What are their shipment routes?</li> <li>• What front companies are known to be involved?</li> </ul>
<b>What are their essential chemicals and where/how are they acquired/produced?</b> <ul style="list-style-type: none"> <li>• Cocaine hydrogen chloride.</li> <li>• Heroin hydrogen chloride.</li> <li>• Ether.</li> <li>• Methyl ethyl ketone.</li> <li>• Acetic anhydride.</li> </ul>
<b>Describe any prior civilian riot activity.</b>
<b>Does the population own/carry any weapons on a large scale?</b>

**Table G-23. Crime threat checklist.**

<p><b>What are the units in the urban area?</b></p> <ul style="list-style-type: none"> <li>• Committed.</li> <li>• Reserves.</li> <li>• Reinforcements.</li> <li>• Composition, location, commander and headquarters.</li> </ul>
<p><b>What are the weapons and equipment?</b></p> <ul style="list-style-type: none"> <li>• Organic weapons.</li> <li>• Attached weapons.</li> <li>• Locations.</li> <li>• Communications equipment.</li> <li>• Frequencies used.</li> <li>• Special equipment.</li> </ul>
<p><b>What units can reinforce within 3, 6, 12, 24 and 72 hours?</b></p> <ul style="list-style-type: none"> <li>• Composition.</li> <li>• Location.</li> <li>• Commander.</li> <li>• Time to reinforce.</li> <li>• Most likely routes.</li> </ul>
<p><b>What are their logistics capabilities?</b></p>
<p><b>What tactics, techniques and procedures does the enemy employ in an urban environment?</b></p>
<p><b>Will the enemy use the locals to blend in?</b></p>
<p><b>How does the enemy use snipers?</b></p>
<p><b>How does the enemy use mech.?</b></p>
<p><b>How does the enemy use indirect fires?</b></p>
<p><b>What area of the city does the enemy control? Occupy? Influence?</b></p>
<p><b>Where are the hardened defensive sites within the urban area?</b></p>
<p><b>What weapons systems and artillery can deliver fire within the urban area?</b></p>
<p><b>Where are the obstacles other than those of natural structure and part of the construction?</b></p>
<p><b>Where are the mined areas?</b></p>
<p><b>Are there any forces in the urban area that might fight with the enemy?</b></p> <ul style="list-style-type: none"> <li>• Police forces.</li> <li>• Paramilitary.</li> </ul>

**Table G-24. Ground order of battle checklist.**