

## SECTION THIRTEEN

# ACTIONS TO INCREASE PUBLIC WORKS ENGINEERING READINESS

This section outlines crisis actions which may be taken by local government public works engineering departments,<sup>1</sup> to increase readiness to deal with the engineering problems which could be created by a nuclear attack upon this country.

This section is not intended as a detailed guide for engineering readiness actions to meet a possible nuclear attack. These must be defined by the application of the professional knowledge and skills of the senior officials of local public works engineering departments.

The actions suggested in this section are aimed at increasing readiness progressively from a review of engineering plans to full readiness to carry out the local actions planned.

The Increased Readiness actions described in this section would be the responsibility of the director of the public works engineering department. He would act under directions from the head of local government and would coordinate as necessary with other department heads and the civil defense director.

### **Actions to Increase Public Works Engineering Readiness**

#### *1. Review and Update Public Works Engineering (PWE) Plans*

Review nuclear attack emergency plans and update as necessary. This must be a cooperative effort involving public and private utilities' representatives, representatives of general contractors such as the chapter officers of the Associated General Contractors of America, representatives of materials suppliers, and representatives of the building trades and other appropriate unions, under the coordination of the senior public works officer of local government.

<sup>1</sup>Note: The term "Public Works Engineering," as used in this section, includes not only professional engineers and their activities, but also the personnel and equipment of the construction industry, highway and road departments, public and private utilities, sanitation departments, and similar organizations.

The term "Public Works Engineering Department" similarly refers to any local government department or group of departments which perform these functions. It would include such units as Service Departments, Highway Departments, Utilities Departments, City Engineers, Parks Department Maintenance and Construction Units, etc.

Because many aspects of PWE, such as power, water, and gas utilities, are areawide in operation, it is particularly necessary that emergency PWE plans be coordinated on an interjurisdictional basis.

In addition to the basic PWE emergency operations plan, review mobilization plans, including Plan Bulldozer, heavy and mobile equipment inventories, mobilization and deployment plans, interchange of personnel and equipment plans, accelerated training plans, and local expedient shelter construction or modification plans, and any required utility plant shut-down plans and procedures.

In communities where traffic control devices are the responsibility of the public works engineering department, review plans for positioning emergency signs, cones, barricades, or other traffic control devices needed for movement to shelter or for crisis relocation. (Coordinate as necessary with police department.)

Following review within the public works engineering group, these plans should be checked as appropriate with the local chief executive(s), civil defense director(s), and other department heads—as well as State and Federal highway officials, and others concerned, to ensure that all plans are compatible.

Review vital records needed for continuity of operations or reconstruction of damaged facilities (e.g., sewer or water system maps, etc.), including plans to have such vital records available in the EOC.

#### *2. Review Personnel Assignments*

Review nuclear attack emergency assignments of local government, utility, and general contractor personnel.

Review engineering personnel alerting lists.

Review State employment service and union hiring hall arrangements for obtaining additional personnel as needed.

Include necessary utility and other public works engineering representatives for primary EOC, support EOC's, and Shelter Complex Headquarters as appropriate.

#### *3. Check Readiness of Emergency Public Works Engineering Equipment and Facilities*

Check present availability and state of readi-

ness of heavy equipment, trucks, building supplies and materials, and utility maintenance, repair, and operating supplies and equipment.

Check highway department yards, utility warehouses and yards, general contractors' yards, or other facilities selected as emergency sites for marshalling and dispatch of heavy equipment to determine fuel, spare parts, radiological monitoring instruments, and other supplies and equipment, including communications, needed for maximum operational readiness.

Check readiness (fallout protection, communications, etc.) of any support EOC(s) needed for direction and control of public works engineering operations.

#### 4. *Correct Deficiencies in Facility and Equipment Readiness*

Accelerate maintenance of heavy equipment, trucks, and specialized equipment to ensure maximum availability of all equipment for emergency duty.

Ensure that fuel tanks and fuel tankers at selected emergency sites for heavy equipment marshalling are kept full.

Procure and pre-position as required spare parts, supplies, and specialized equipment identified as needed in step 3 above.

Take any measures such as activating standby telephone service, moving available radio equipment, and filling emergency generator fuel tanks required to make public works engineering emergency headquarters (e.g., support EOC's), heavy equipment depots, and other facilities fully operational.

Obtain and place any needed operating, maintenance, or repair spare parts, supplies, and equipment needed at utility installations such as water and sewer pumping stations, filtration plants, generating stations, pipe line control and pumping stations, etc., to bring these facilities to maximum readiness for emergency operations.

In communities where traffic control devices are the responsibility of the public works engineering department, procure, modify, or preposition devices for control of movement to shelter or for crisis relocation, as requested by the police department.

#### 5. *Alert Public Works Engineering Personnel*

Alert all municipal/county, contractor, and utility public works engineering personnel. Brief them on their emergency assignments, public works engineering emergency plans, and special instructions. Also brief personnel as necessary

on weapons effects and hazards, shelter, etc.

Cancel leave for public employees and request cancellation of vacations for private employees, and alert all personnel to be ready for immediate emergency mobilization.

Advise all personnel to review shelter and survival plans for their families.

#### 6. *Commence Accelerated Training, As Necessary*

As necessary, commence accelerated training of local government, contractor, and utility public works engineering personnel in special emergency skills—such as using radiation monitoring equipment, or heavy rescue techniques. (See Section Four of this guide on accelerated training.)

If needed, commence accelerated training of other able-bodied men to participate in expedient shelter construction or other emergency tasks.

#### 7. *Mobilize Emergency Public Works Engineering Personnel and Equipment*

Call all PWE personnel (government, contractor, and utility) to duty and deploy them to their initial nuclear attack emergency assignments in public fallout shelters, or in fallout-protected operating positions in utility plants and stations, or in available fallout protection at selected heavy equipment depots.

Deploy heavy equipment and trucks in accordance with plans.

Initiate, *if appropriate*, emergency shut-down of utilities, in conjunction with local utility authorities.

Install or position any traffic control devices needed for movement to shelter or for crisis relocation, upon request of the police department.

#### 8. *Commence Shelter Upgrading, or Expedient Shelter Construction or Modification*

Mobilize the public and private construction capability of the local area, augmenting normally available manpower with other available personnel as necessary and possible. Commence construction of expedient group shelter or "upgrading" (physical improvement) of existing buildings to provide additional shelter spaces in accordance with any local shelter development plan.