

NFPA 1061

Standard for Professional Qualifications for Public Safety Telecommunicator

2002 Edition



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An International Codes and Standards Organization

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NFPA 1061

Standard for

Professional Qualifications for Public Safety Telecommunicator

2002 Edition

This edition of NFPA 1061, *Standard for Professional Qualifications for Public Safety Telecommunicator*, was prepared by the Technical Committee on Public Safety Telecommunicator Professional Qualifications, released by the Technical Correlating Committee on Professional Qualifications, and acted on by NFPA at its November Association Technical Meeting held November 10–14, 2001, in Dallas, TX. It was issued by the Standards Council on January 11, 2002, with an effective date of January 31, 2002, and supersedes all previous editions.

This edition of NFPA 1061 was approved as an American National Standard on January 31, 2002.

Origin and Development of NFPA 1061

The Committee on Public Safety Telecommunicator Professional Qualifications was organized in 1992 to have primary responsibility on professional qualifications for public safety dispatchers. The first edition of NFPA 1061 was published in 1996.

For the 2002 edition, the committee reviewed the 1996 edition of the standard and updated some JPRs, requisite knowledge, and requisite skills where needed. The entire document was reformatted to comply with the new NFPA *Manual of Style*.

In Memoriam, September 11, 2001

We pay tribute to the 343 members of FDNY who gave their lives to save civilian victims on September 11, 2001, at the World Trade Center. They are true American heroes in death, but they were also American heroes in life. We will keep them in our memory and in our hearts. They are the embodiment of courage, bravery, and dedication. May they rest in peace.

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These lists represent the membership at the time the Committees were balloted on the final text of this edition. Since that time, changes in the membership may have occurred. A key to classifications is found at the back of the document.

NOTE: Membership on a committee shall not in and of itself constitute an endorsement of the Association or any document developed by the committee on which the member serves.

Contents

Chapter 1 Administration	1061- 5	Chapter 5 Public Safety Telecommunicator II	1061- 7
1.1 Scope	1061- 5	5.1 General	1061- 7
1.2 Purpose	1061- 5	5.2 Receive	1061- 7
1.3 General	1061- 5	5.3 Process	1061- 7
Chapter 2 Referenced Publications (Reserved) ...	1061- 5	5.4 Disseminate	1061- 7
Chapter 3 Definitions	1061- 5	Annex A Explanatory Material	1061- 8
3.1 General	1061- 5	Annex B The Communication Process	1061-10
3.2 NFPA Official Definitions	1061- 5	Annex C Guide for Telecommunicator Training	
3.3 General Definitions	1061- 5	Authority	1061-12
Chapter 4 Public Safety Telecommunicator I	1061- 6	Annex D Explanation of the Standard and	
4.1 General	1061- 6	Concepts of JPRs	1061-15
4.2 Receive	1061- 6	Annex E Informational References	1061-18
4.3 Process	1061- 6	Index	1061-19
4.4 Disseminate	1061- 6		

NFPA 1061**Standard for****Professional Qualifications for Public Safety
Telecommunicator****2002 Edition**

NOTICE: An asterisk (*) following the number or letter designating a paragraph indicates that explanatory material on the paragraph can be found in Annex A.

Changes other than editorial are indicated by a vertical rule beside the paragraph, table, or figure in which the change occurred. These rules are included as an aid to the user in identifying changes from the previous edition. Where one or more complete paragraphs have been deleted, the deletion is indicated by a bullet between the paragraphs that remain.

A reference in brackets [] following a section or paragraph indicates material that has been extracted from another NFPA document. As an aid to the user, Annex E lists the complete title and edition of the source documents for both mandatory and nonmandatory extracts. Editorial changes to extracted material consist of revising references to an appropriate division in this document or the inclusion of the document number with the division number when the reference is to the original document. Requests for interpretations or revisions of extracted text shall be sent to the appropriate technical committee.

Information on referenced publications can be found in Chapter 2 and Annex E.

Chapter 1 Administration

1.1 Scope. This standard identifies the minimum job performance requirements for public safety telecommunicators.

1.2 Purpose. The purpose of this standard is to specify the minimum job performance requirements for service as a public safety telecommunicator.

1.2.1 It is not the intent of this standard to restrict any jurisdiction from exceeding these minimum requirements.

1.3 General.

1.3.1* The authority having jurisdiction (AHJ) shall establish the operational guidelines within which telecommunicators will perform.

1.3.2 The AHJ shall establish educational and age requirements for telecommunicators.

1.3.3 The AHJ shall establish criteria for evaluating the background and character of telecommunicator candidates.

1.3.4* Medical and physical requirements shall be developed by the AHJ that are job related and in compliance with Equal Opportunity, Americans with Disabilities Act, and other applicable legal requirements.

1.3.5* Cognitive and psychomotor skill requirements for areas of reading, spelling, speech, mathematics, basic language, written communication, and listening in addition to other requirements developed by the AHJ.

1.3.6* The AHJ shall define and validate the behavioral characteristics or traits required of the telecommunicator.

1.3.7* The performance of each requirement of this standard shall be evaluated by individuals approved by the AHJ.

1.3.8* It is not required for the job performance requirements to be mastered in the order they appear. Any training program shall establish the instructional priority and the training program content to prepare individuals to meet the job performance requirements of this standard.

1.3.9* The public safety telecommunicator shall remain current with communication technology and telecommunication methodology as provided by the AHJ.

1.3.10 The public safety telecommunicator shall operate within acceptable standards in response to public expectations for timely and efficient service as established by the AHJ.

1.3.11 The public safety telecommunicator candidate shall meet all of the requirements defined in Chapter 4 prior to certification as a Public Safety Telecommunicator I.

1.3.12 The Public Safety Telecommunicator I shall meet all of the requirements defined in Chapter 5 prior to certification as a Public Safety Telecommunicator II.

Chapter 2 Referenced Publications (Reserved)**Chapter 3 Definitions**

3.1* General. The definitions contained in this chapter shall apply to the terms used in this standard. Where terms are not included, common usage of the terms shall apply.

3.2 NFPA Official Definitions.

3.2.1* Approved. Acceptable to the authority having jurisdiction.

3.2.2* Authority Having Jurisdiction (AHJ). The organization, office, or individual responsible for approving equipment, materials, an installation, or a procedure.

3.2.3 Shall. Indicates a mandatory requirement.

3.3 General Definitions.

3.3.1 Emergency Incident. An event requiring the urgent response of a public safety agency.

3.3.2 Incident Management System. An organized system of roles, responsibilities, and standard operating procedures used to manage emergency operations. Such systems are often referred to as Incident Command Systems (ICS). [1021:1-4]

3.3.3 Job Performance Requirement. A statement that describes a specific job task, lists the items necessary to complete the task, and defines measurable or observable outcomes and evaluation areas for the specific task. [1000:2.1.6]

3.3.4 Protective Signaling System. Electrically operated circuits, instruments, and devices, together with the necessary electrical energy, designed to transmit alarms, supervisory, and trouble signals necessary for the protection of life and property.

3.3.5 Public Safety Agency. Organizations providing law enforcement, emergency medical, fire, rescue, communications,

and related support services. The term *public safety agency* shall include any public, governmental, private, industrial, or military organization engaged in one or more of these activities.

3.3.6 Public Safety Telecommunicator Candidate. The person who has fulfilled the entrance requirements of Chapter 1 of this document but who has not met the requirements of Public Safety Telecommunicator I.

3.3.7 Public Safety Telecommunicator Levels.

3.3.7.1 Public Safety Telecommunicator I. The initial contact in managing requests for services who obtains and prepares the pertinent information for the allocation of public safety resources. The Public Safety Telecommunicator I makes independent decisions, conveys information, and provides referrals; works in cooperation with a Public Safety Telecommunicator II.

3.3.7.2 Public Safety Telecommunicator II. Prioritizes, initiates, and coordinates the response of public safety agencies; manages the flow of incident related information to and from field units and/or public safety resources; monitors status of field units and assigns additional resources as requested and/or required.

3.3.8 Requisite Knowledge. Fundamental knowledge one must have in order to perform a specific task.

3.3.9 Requisite Skills. The essential skills one must have in order to perform a specific task.

3.3.10 Service Request. Any communication from the public or other agency that prompts action by a telecommunicator.

3.3.11 Task. A specific job behavior or activity. [1002:1-4]

3.3.12 Telecommunicator. An individual whose primary responsibility is to receive, process, or disseminate information of a public safety nature via telecommunication devices.

Chapter 4 Public Safety Telecommunicator I

4.1 General. The Public Safety Telecommunicator I shall meet the job performance requirements defined in Sections 4.2 through 4.4 of this standard.

4.2 Receive.

4.2.1 Description of Duty. To acquire information from citizens and other entities requesting public safety services or assistance.

4.2.2 Establish verbal communication with a service requester, given a telephone or other communication device, a means of collecting information, operating procedures, and a work station, so that a communication link with the requester is achieved.

(A)* Requisite Knowledge. Verbal communication process.

(B)* Requisite Skills. Operation and basic troubleshooting of telephone and communication systems and devices, such as recording, verbal communication abilities.

4.2.3 Extract pertinent information, given a request for public safety service, so that accurate information regarding the request is obtained.

(A) Requisite Knowledge. None indicated.

(B) Requisite Skills. Controlling the conversation utilizing established questioning techniques, active listening techniques, and managing situations such as exited or hysterical callers, foreign languages, suicidal callers, and other calls requiring special handling including mass casualty and weapons of mass destruction.

4.2.4 Establish nonverbal communications, given a request for public safety service through a communications device, so that accurate information regarding the request is obtained.

(A)* Requisite Knowledge. Nonverbal communication protocols.

(B)* Requisite Skills. Use of nonverbal communication devices.

4.3 Process.

4.3.1 Description of Duty. Prepares data for dispatch or referral by evaluating, categorizing, formatting, and documenting the incident or service-related information.

4.3.2 Generate records of public safety services requests, given agency policies, procedures, guidelines, and resources, so that the record is correct, complete, and concise.

(A) Requisite Knowledge. None indicated.

(B) Requisite Skills. Application of basic language and writing skills, interpreting and condensing information, keyboarding, typing skills, legible handwriting.

4.3.3 Analyze information provided by a service requester, given the policies, procedures, and guidelines of the agency, so that the request is accurately categorized and prioritized.

(A)* Requisite Knowledge. Incident categories, priority levels, identification of potential threats, risks, and hazards.

(B) Requisite Skills. None indicated.

4.3.4* Assess incomplete, conflicting, or inconclusive information or data, given special or unusual circumstances and policies, procedures, and guidelines, so that an allocation of resources is determined.

4.3.5* Evaluate a categorized and prioritized service request, given available resources, so that an allocation of resources is determined.

(A) Requisite Knowledge. Available resources, agency jurisdictions, and boundaries.

(B) Requisite Skills. Map and chart reading and use of resource lists.

4.3.6 Initiate the timely addition, deletion, and correction of data, given agency policies, procedures, and guidelines, so that documents, files, databases, maps, and resource lists are accurately maintained.

4.4 Disseminate.

4.4.1 Description of Duty. Release information and data, as required for the incident or service request, to the citizen, other telecommunicators, or another agency that results in resolution, referral, or response.

4.4.2 Convey instructions, information, and directions to the service requester, given agency policies, procedures, and guidelines, so that information appropriate to the incident is consistent with those policies and procedures.

(A)* Requisite Knowledge. Availability of resources, policies, and procedures regarding pre-arrival instructions.

(B)* Requisite Skills. Voice control, providing directions, route callers, operate telecommunication devices.

4.4.3* Relay information to other telecommunications personnel or entities, given processed data, so that accurate information regarding the request for service is provided.

4.4.4 Respond to requests for information, given an inquiry from the public or the media, so that the policies, procedures, and guidelines are followed.

Chapter 5 Public Safety Telecommunicator II

5.1 General. The Public Safety Telecommunicator II shall meet the job performance requirements in Chapter 4 for Public Safety Telecommunicator I and those defined in Sections 5.2 through 5.4 of this standard.

5.2 Receive.

5.2.1 Description of Duty. To acquire information from multiple sources requiring public safety services or assistance. These sources can include other telecommunicators, field units, or electronic devices.

5.2.2 Monitor public safety radio systems, given equipment used by the agency, so that information requiring action by the telecommunicator is identified.

(A)* Requisite Knowledge. Basic radio system technology and standard terminology used by the AHJ including radio codes, unit identifiers, and phonetic alphabet.

(B) Requisite Skills. Operation of radio equipment, differentiate between various audio stimuli, and effective listening abilities.

5.2.3* Monitor electronic data systems, given equipment used by the agency, so that information requiring action by the telecommunicator is identified.

(A) Requisite Knowledge. Response to audio and visual stimuli and can include familiarity with computer operations and technology.

(B) Requisite Skills. Keyboarding and mouse skills, interpreting visual symbols, and can include data system messages.

5.2.4 Monitor alarm systems, given equipment used by the agency, so that information requiring action by the telecommunicator is identified.

(A) Requisite Knowledge. Familiarity with alarm equipment and system operation and technology.

(B) Requisite Skills. Interpreting alarm system signals, data, or messages.

5.3 Process.

5.3.1 Description of Duty. Analyze, classify, and summarize data for dispatch or referral. Monitor status of resources and determine units for deployment.

(A) Requisite Knowledge. Operational principles, practices, and procedures of special equipment and systems provided in the communications center.

(B)* Requisite Skills. Maintain and use special equipment and systems.

5.3.2 Evaluate incident information, given a validated request for service, available resources, and agency policies, procedures, and guidelines, so that an appropriate response is determined and a resource allocation prepared.

(A) Requisite Knowledge. Policies, procedures, and guidelines, related to the allocation of resources and the duties and functions of response units.

(B) Requisite Skills. Interpretation of incident information.

5.3.3* Maintain location and status of units, given the resources available to the agency and utilizing the systems and equipment in the communications center, so that the current availability, status, and safety of all deployable resources is known.

(A) Requisite Knowledge. Capabilities and functions of personnel, units, specialized equipment and tools, and their location.

(B) Requisite Skills. Operation of communications center systems and equipment used for maintaining status.

5.3.4 Analyze alarm information, given signals, messages, codes, and data, so that the information is properly interpreted in preparation for the allocation of resources.

(A) Requisite Knowledge. Operational principles, practices, procedures, and guidelines, of alarm systems provided in the communications center, agency policies related to alarm system operations.

(B) Requisite Skills. Keyboarding and mouse skills, differentiation between multiple audio-visual stimuli, user maintenance and use of alarm systems.

5.3.5 Assess the priority of a service request, given information provided by other telecommunicators or field units and the agency policies, procedures, and guidelines, so that the priority of the request is refined.

(A) Requisite Knowledge. Policies, procedures, and guidelines, related to call prioritization, incident categories, priority levels, identification of potential threats, risks, and hazards.

(B) Requisite Skills. Operation of systems and aids provided in the communications center for call prioritization; decision-making skills.

5.3.6* Formulate a response, using the validated and prioritized request for service and the availability of deployable resources, so that the most appropriate response is selected and the safety of response units is considered.

(A) Requisite Knowledge. Procedures for the allocation or assignment of resources and requesting mutual aid.

(B) Requisite Skills. None indicated.

5.4 Disseminate.

5.4.1 Description of Duty. The action that results in the resolution of the request for services. This is achieved by the transmission and relay of information or data to field units or other resources.

(A)* Requisite Knowledge. Applicable FCC rules, radio procedures and protocols, codes, agency policies, procedures, and guidelines, an incident management system, and the telecommunicator's role and function within the system.

(B)* Requisite Skills. Operate telecommunications equipment and voice control.

5.4.2* Initiate deployment of response units, using the validated and prioritized request for service given the agencies' telecommunications equipment, so that service request information is conveyed to units designated for response.

5.4.3 Relay service request information, given available resources and telecommunications equipment, so that all pertinent information is communicated to all responding units and agencies.

5.4.4 Acquire supplemental information, given a service request, so that current information is evaluated, prioritized, and relayed to response units or other personnel and agencies as needed.

(A) Requisite Knowledge. Resource information available to the telecommunicator.

(B)* Requisite Skills. Use of printed and electronic reference materials, databases, and emergency action plans.

5.4.5* Activate the community emergency action plan, given data indicating the likelihood or onset of a critical situation beyond the normal scope of operations, so that the implementation is timely and in accordance with agency policies, procedures, and guidelines.

5.4.6 Activate communication center emergency action plan, given internal emergency and agency policies and procedures, so that the integrity of the communications system is maintained and the safety of center personnel is achieved.

Annex A Explanatory Material

Annex A is not a part of the requirements of this NFPA document but is included for informational purposes only. This annex contains explanatory material, numbered to correspond with the applicable text paragraphs.

A.1.3.1 The AHJ has the responsibility to establish and provide the telecommunicator with the applicable organizational mission statement, principles, philosophies, values, directives, policies, procedures, guidelines, rules, regulations, and descriptions of positions.

A.1.3.4 The AHJ is required under the Americans with Disabilities Act to identify the functional requirements for the performance of the job. The AHJ should consider the physical arrangement of the work space and the various pieces of equipment required for operation by the employee. Specific medical and physical abilities are required in order to perform essential functions of the job.

They include, but are not limited to, the following:

- (1) *Hearing.* Distinguish, differentiate, and respond to multiple audible stimuli from personnel or equipment, such as telephone, radio, or alarms.
- (2) *Sight.* Distinguish, differentiate, and respond to multiple visual stimuli such as printed documents, CRT displays, and indicator lights.
- (3) *Manual Dexterity.* Operate radios, computers, and other equipment used in a telecommunications center.
- (4) *Speech.* Clearly convey verbal messages utilizing telecommunication devices.

The public safety telecommunicator is the initial contact in managing requests for services provided by public safety agencies. Decisions are made based on incoming and updated in-

formation. The ability to receive information audibly is essential to the job. Additionally, much emphasis is placed on visual ability and manual dexterity. Identification of audio and visual queues, incoming telephone lines, 9-1-1 screens, incident cards/screens, messages, requests, memorandums, and so forth, are imperative to perform required job duties.

A.1.3.5 The committee recommends that the following skills be considered by the AHJ for the telecommunicator candidate:

- (1) Ability to spell
- (2) Basic reading skills
- (3) Basic math calculation
- (4) Ability to speak clearly
- (5) Basic writing skills
- (6) Manual dexterity
- (7) Ability to follow written and verbal instructions
- (8) Ability to alphabetize and catalogue
- (9) Keyboarding and mouse skills as required

A.1.3.6 The committee has identified the following list of behavioral characteristics or traits in order to assist the hiring or certifying authority:

- (1) Adjust to various levels of activity
- (2) Ability to multi-task
- (3) Make decisions and judgments based on decision-making skills
- (4) Maintain composure
- (5) Form conclusions from disassociated facts
- (6) Work with others/teamwork
- (7) Handle criticism
- (8) Ability to remember and recall information
- (9) Deal with verbal abuse
- (10) Interpersonal relations
- (11) Function under stress
- (12) Maintain confidentiality

A.1.3.7 It is recommended, where practical, that evaluators be individuals who were not directly involved as instructors for the requirement being evaluated.

A.1.3.8 The committee recognizes the need for formal training programs to provide the necessary skills and knowledge to perform the job of a telecommunicator.

These programs can be developed or administered by local, state, provincial, or federal agencies as well as professional associations.

In many jurisdictions, part of this formal training includes some form of on-the-job training. (*See Annex C for a discussion of the considerations for the training of enhanced telecommunicator skills.*)

A.1.3.9 This requirement can be fulfilled by attending workshops and seminars, or through professional publications and journals, or continuing education as established by the AHJ.

A.3.1 Definitions of action verbs used in the job performance requirements in this document are based on the first definition of the word found in *Webster's Third New International Dictionary of the English Language*.

A.3.2.1 Approved. The National Fire Protection Association does not approve, inspect, or certify any installations, procedures, equipment, or materials; nor does it approve or evaluate testing laboratories. In determining the acceptability of installations, procedures, equipment, or materials, the authority having jurisdiction may base acceptance on compliance with NFPA or other appropriate standards. In the absence of such standards, said authority may require evidence of proper

installation, procedure, or use. The authority having jurisdiction may also refer to the listings or labeling practices of an organization that is concerned with product evaluations and is thus in a position to determine compliance with appropriate standards for the current production of listed items.

A.4.3.2.2 Authority Having Jurisdiction (AHJ). The phrase “authority having jurisdiction,” or its acronym AHJ, is used in NFPA documents in a broad manner, since jurisdictions and approval agencies vary, as do their responsibilities. Where public safety is primary, the authority having jurisdiction may be a federal, state, local, or other regional department or individual such as a fire chief; fire marshal; chief of a fire prevention bureau, labor department, or health department; building official; electrical inspector; or others having statutory authority. For insurance purposes, an insurance inspection department, rating bureau, or other insurance company representative may be the authority having jurisdiction. In many circumstances, the property owner or his or her designated agent assumes the role of the authority having jurisdiction; at government installations, the commanding officer or departmental official may be the authority having jurisdiction.

A.4.2.2(A) For additional information on the verbal communication process, see Annex B.

A.4.2.2(B) The Public Safety Telecommunicator I should be capable of operating, testing, troubleshooting, and maintaining the continuity of the communication system. The Public Safety Telecommunicator I might also be required to switch to and operate back-up components or alternate systems.

A.4.2.4(A) Nonverbal communication protocols include American Sign Language (ASL) syntax. The telecommunicator should also know common abbreviations used in nonverbal communications. Individuals who are hearing or speech impaired often use American Sign Language (ASL) syntax while communicating via the TTY/Text phone. ASL is a separate language that uses English words with its own rules for syntax and sentence construction.

A.4.2.4(B) The Americans with Disabilities Act (ADA) requires equal access to emergency services by speech and hearing impaired individuals. This most often takes the form of TTY/Text phone using Baudot or ASCII code. Other nonverbal devices include computer communication, digital terminals, analog devices, alarm systems, FAX machines, or other mechanical or electronic medium.

A.4.3.3(A) The Telecommunicator I is expected to question callers regarding potential threats, risks, and hazards that responders can encounter. Examples include details pertaining to the involvement of weapons, hazardous materials, violent subjects at the scene, unsafe conditions en route to or at the scene, and so forth.

A.4.3.4 Special or unusual circumstances are most often typified by hang-up calls or silent calls. These circumstances will be handled by following the procedures, policies, or guidelines of the AHJ.

A.4.3.5 The Telecommunicator I evaluates requests for service and determines what agencies or services are appropriate for allocation. Examples include calls requiring both police and fire response, referrals to social service agencies, utilities, or other governmental agencies.

A.4.4.2(A) A pre-arrival instruction or information will be provided based on policies, procedures, or guidelines of the AHJ.

The functions of the Public Safety Telecommunicator might include the use of predetermined questions, pre-arrival telephone instructions, and pre-assigned actions that are an integral part of the responsibility to prioritize calls and assist in the stabilization of the situation.

A pre-arrival reference system should be in a uniform format that is an accessible and reproducible document based on current guideline and administrative protocols.

A.4.4.2(B) Voice control includes the ability to maintain balanced tone, modulation, volume, and inflection while communicating.

A.4.4.3 In some jurisdictions the on-duty telecommunicator could be responsible for both call taking and dispatching. Other entities can include social service agencies, utilities, other emergency service providers, or other governmental units. Resolution might be accomplished by referral to, or response by, one of these agencies.

A.5.2.2(A) The Public Safety Telecommunicator II should be capable of operating, testing, troubleshooting, and maintaining the continuity of the communication systems. The Public Safety Telecommunicator II might also be required to switch to and operate back-up components or alternate systems.

A.5.2.3 These systems might include computer-aided dispatch systems, recording systems, automatic vehicle tracking systems, mobile data systems, and computer systems linking the telecommunicator with other agencies.

A.5.3.1(B) Special equipment and systems could include interagency computer networks, databases, computer-aided dispatch systems; TTY/Text phone; fire station alerting systems; municipal fire alarm systems; National Crime Information Center (NCIC); National Law Enforcement Telecommunications System (NLETS); National Warning System (NAWAS); security systems; and other equipment and systems provided in the communications center.

A.5.3.3 Deployable resources include those individuals, equipment, and specialized units that are dispatched by the agency.

A.5.3.6 This action is not a static decision but rather a dynamic process that changes and evolves during the handling of an event. The Public Safety Telecommunicator II is required to make many decisions that might not change the action originally initiated. Factors that cause changes to decisions or actions are the receipt and processing of additional information, or updates. The Public Safety Telecommunicator II makes necessary decisions and takes actions that will result in the appropriate assignment of resources, emphasizing the safety of the public and the response units. (See Figure A.5.3.6.)

A.5.4.1(A) The telecommunicator should operate within the incident management system prescribed by the AHJ such as defined in NFPA 1561, *Standard on Emergency Services Incident Management System*.

A.5.4.1(B) The telecommunications equipment used by public safety agencies is widely varied. The term *telecommunications equipment* includes all equipment in use by an agency for the purpose of alerting or notifying response units and the continued exchange of information between those units and the communications center. Examples include computer-aided dispatch (CAD) systems; mobile data terminals (MDT); two-way radios; paging systems; alerting devices; telegraph systems; telephone systems; voice alerting and PA systems; and data terminals.

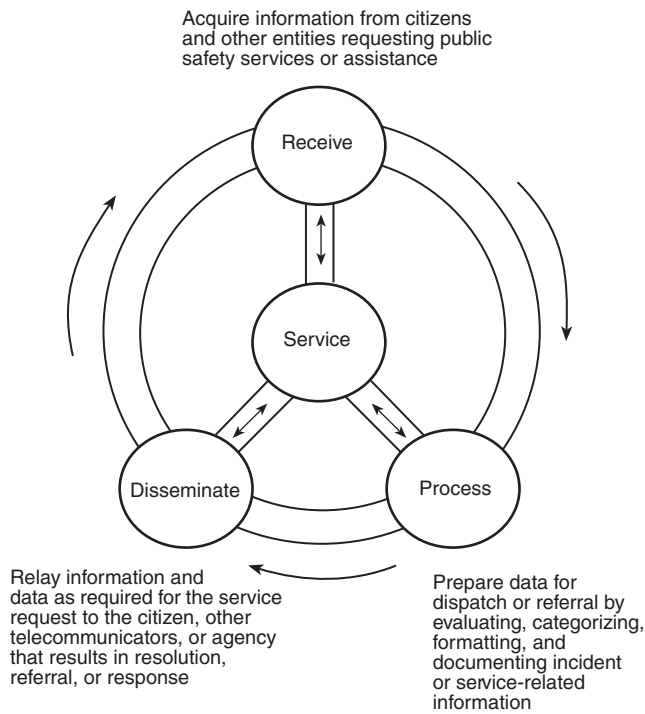


FIGURE A.5.3.6 Model of Processing a Request for Service.

A.5.4.2 In the case of unfounded service requests, hang-up calls, or invalid locations, the telecommunicator should make every effort to verify the accuracy of a location or the validity of a service request within the policies established by the AHJ.

A.5.4.4(B) Supplemental information could include relevant databases and documentation that might be internal or external to the agency available to provide on-going support to response units.

A.5.4.5 Situations beyond the normal scope of operation could include major crime occurrence, major fire, mass casualty incidents, weapons of mass destruction, and man-made or natural disasters.

Annex B The Communication Process

This annex is not a part of the requirements of this NFPA document but is included for informational purposes only.

B.1 Speech is the unique process of symbolic communication that involves interaction between persons. It is the most unique and universal of human functions; yet, because it is so commonplace, few of us appreciate its enormous power and potential.

The nearly universal lack of speech training in our schools is most likely based on the faulty assumption that because most children can speak and listen by the time they enter preschool and primary programs they need no special instruction in that area. This conditioning is not sufficient to make them fully effective in speaking and listening.

It seems almost incredible that so important a skill as speaking should receive so little attention or training.

Speech communication includes all the factors that are brought into play on and by a person as she or he attempts to establish communication relationships with others.

Communication is necessary in order to establish all social ties, to conduct action with or against others. Without it there can be no dialogue, no response, no establishment of common meaningful concepts; no informative, instructional, or directive action; and no invention, recording, accumulation, or transmission of knowledge.

Results of the reciprocal relationship of speech communication take the following three significant forms: the utilitarian, the aesthetic, and the therapeutic. These results often occur together. For instance, a theater performance might yield all three results.

The *utilitarian* result is some practical accomplishment of value to one or more members of the interaction. Gerald R. Miller implied this concept when he said:

Speech communication is important because it is one of the primary tools that man employs to manipulate, to control and to understand his environment.

The *aesthetic* result is some measure of enjoyment, pleasure, or entertainment for one or more members of the interaction. Speech that is used in television or in a theater performance, in reading literature aloud, in storytelling, and in various other forms of artistic expression becomes a tool to create pleasure.

The *therapeutic* result is a treatment, a cure, the removal of an inhibition, the diagnosis of a problem, or the re-establishment of the communicative personality. Speech becomes therapeutic when it allows a person to release tensions and to find himself, when it assists a person to explore and examine personal problems that affect his communicative bond with other people, and when it aims specifically at rehabilitating, restoring, and perhaps creating the instruments of human communication.

The effective interaction of speaking and listening requires a particularly close relationship between the participants.

Writing and printing have had a tremendous impact on the recording of ideas, but the key interaction that forms the base of our society is still the spoken word. There is close agreement in the findings of a number of studies of the relative amounts of time we spend in use of the four communicative behaviors. The breakdown of time spent in normal communicative discourse by the average American falls into the following pattern:

Listening	42%
Speaking	32%
	<hr/>
	74%
Reading	15%
Writing	11%
	<hr/>
	26%

The speaking and listening behaviors are functions usually included in the study of speech-communication. On the average, interactions involving speech account for 74 percent of our communication time.

We should use this data carefully. The data tells us nothing about the relative amounts of information transmitted and

actually received by means of writing and reading as compared with speaking and listening. We have no research findings on this question, but it seems probable that in any given time more information could be acquired on a precise subject through written words than through spoken words. The key to the matter could lie with the precision of the information transmitted and with the use of the language. In speech, the total message includes much information in addition to the actual spoken words, and the imprecision and redundancy characteristic of speech do not normally occur in written material.

We cannot compare the two forms in terms of the relative amount of meaning that can be developed from them, since the meaning is a function of the person(s) involved. As personal tape recorders are more widely used, more and more spoken material can be reheard. The capability of replaying recorded speech could increase the precision of information being transmitted. As people become more skilled in speaking and in listening, with or without tape recorders, we can expect greater efficiency in speech-communication.

Because of the highly transitory nature of the speech act, each effort at the communicative interaction through speech should be as effective as possible. Both speaker and listener should concentrate on grasping as much as possible of all that occurs in the moment of the speech act in order that maximum effectiveness can be achieved in the interaction.

The skills necessary to maximize speech-communication events are developed in many ways. The important skills in the use of language involve behavior that is bimodal, since language is composed of both verbal and nonverbal factors. Verbal skills relate to the spoken words and other vocal sounds that carry information and stimulate meaning. The nonverbal skills relate to the movements of the body and the nonverbal sounds (such as a snap of the fingers) that might occur as information-giving parts of the event.

Language skills are needed not only for transmission but also reception. Transmission and reception are two different processes and require different skills.

A second area of skill development is the creation and construction of messages themselves. We should know what result we want from an effort to communicate an idea. Unless we clearly know what we want to accomplish, we cannot select effective content and materials for the message, nor can we properly evaluate the effectiveness of what we have said.

The substance of the message is central in the speech event and arises from the purpose of the communication. The selection and the arrangement of the materials and the emphasis upon them should meet the requirements of our intent and of the situation. They should also meet the needs of our listener. That is, we should select content that they can receive, understand, and respond to; and we should take care that arrangement and emphasis do not block reception, understanding, and response.

Skills needed for perception and reception of messages are also important. Listening involves more than just hearing the sounds; observing involves more than just seeing what happens; and relating to the speaker involves more than just listening and observing. The content of the message should be organized by the receiver as well as by the transmitter.

The communication process as a total event has been the subject of many studies. Some researchers have used models, or structural descriptions, of the communication event to aid

understanding of how the elements we have discussed fit into the general picture, or organization, of the total event. Models provide clues that permit predictions of behavior.

A model provides us with a way to classify and to describe the parts of the process and to indicate how they fit together. Each of the several model types that are used to describe the speech-communication process contributes to an understanding of the total communicative event.

The simplest model consists of the following three elements: the sender, the receiver, and the message [see Figure B.1(a)]. In the primary process of this model, a sender transmits a message to a receiver who sends it back. This description obviously omits much of the process, particularly the human factor.

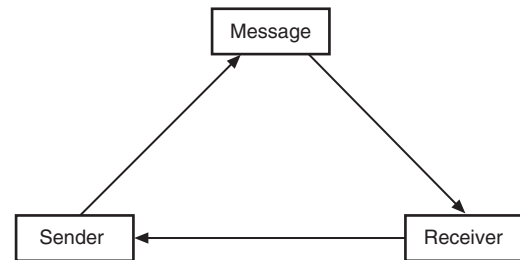


FIGURE B.1(a) Basic Communications Model.

A more detailed model, which is still quite a general one, is described in Figure B.1(b). Note that this model incorporates several additional factors including the attitudes of both speaker and listener (which introduces human factors); the encoding skills of the speaker and the decoding skills of the listener; and feedback of both positive and negative nature.

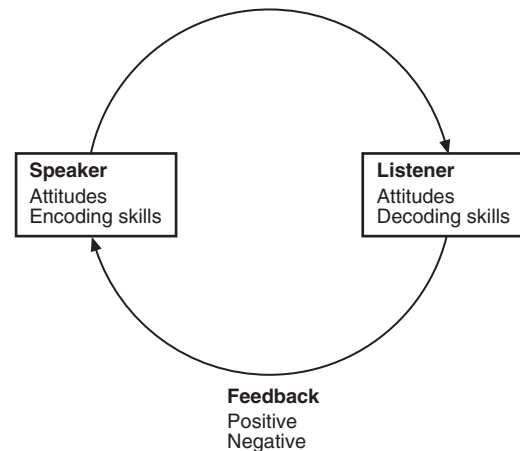


FIGURE B.1(b) Communications Model with Feedback.

A third model of a somewhat different form is based on the concept of the major elements of the communication event, which are the Source, Message, Channel, and Receiver (the SMCR model). Note that this model is organizational, rather than descriptive of the process. [See Figure B.1(c) and Figure B.1(d).]

Source	Message	Channel	Receiver
Communication skills Attitudes Knowledge Social system Culture	Elements Structure Content Treatment Code	Seeing Hearing Touching Smelling Tasting	Communication skills Attitudes Knowledge Social system Culture

FIGURE B.1(c) Elements of the SMCR Model.

According to this model, the source and the receiver are affected by the factors of communication skills, attitude, knowledge, the social system, and the culture. The message is developed by means of the factors of elements, structure, content, treatment, and code. The channels are related to the functions of the five senses: seeing, hearing, touching, smelling, and tasting.

All the models described here have certain common elements. They involve at least two individuals and the creation of messages into the form of physical stimuli that affect the behavior of the individuals.

The availability of people to each other, their common referents, their abilities to use the sensory systems, the character of meaning, the nature of a message and information, and the like are all involved in the process of communication.

As we attempt to control and to increase the effectiveness of our communication events, we discover that it is not enough merely to condition or to refine our skills of creating sound and visible stimuli. We should understand and become sensitive to all the factors that are operative in the event. Then we can examine the processes that are a part of the total event in order to find the fundamental problems that could be affecting our individual communication effort.

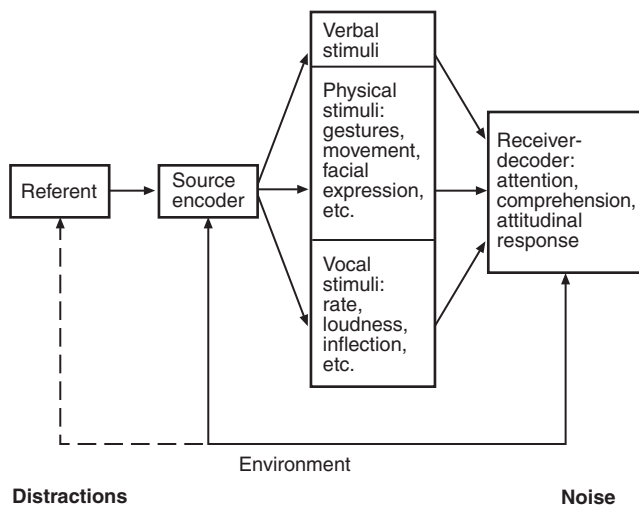


FIGURE B.1(d) Source, Message, Channel, Receiver (SMCR) Model.

Annex C Guide for Telecommunicator Training Authority

This annex is not a part of the requirements of this NFPA document but is included for informational purposes only.

C.1 Training Considerations for the Training of Enhanced Telecommunicator Skills. Job performance requirements are addressed in this standard. It is recognized that the elements of training basic, formal skills to telecommunicators has been formalized in many documents. This annex will address the transition between classroom and job performance.

C.1.1 Background/Overview. Training that involves actual workplace conditions is an element that ensures that the linkage between classroom knowledge and job performance skills is completed. In many processes, this linkage is created through the use of On-the-Job Training (OJT).

C.1.2 Elements. Many visualize the procedure of placing a new employee with an experienced worker and allowing the new employee to watch over his or her shoulder to learn the job. Under these conditions, the process has only limited success at best. Often it leaves the employer and employee dissatisfied with the outcome.

The employee feels apprehension from being overwhelmed with too many sensory stimuli of new duties and new people. It is a human characteristic to attempt to absorb the new environment, but it can be distracting from the task at hand. He or she might also feel apprehension about taking too long to become "productive."

The employer will, in some cases, feel the process takes too long before seeing a return on the investment. Even then, is the employee as productive as he or she could be?

If these are the bad aspects, what are the good aspects of OJT? According to William J. Rothwell and H. C. Kazanas in their article, "Planned OJT Is Productive OJT," found in the *Training and Development Yearbook*, 1991, OJT is normally associated with the process of orienting newly hired employees to their work but can be used for other goals, such as the following:

- (1) To upgrade the skills of experienced workers when new technology or new work methods produce on-the-job changes
- (2) To cross-train employees within a work unit or department
- (3) To orient transferred or promoted employees to their new jobs

C.1.3 Formal Classroom. The formal classroom provides the traditional forum through which the student is educated in the necessary knowledge base, introduced to skills, professional background, and history. It creates the body of basic knowledge that the student will build on during this career. Instructors should ensure presentations are factual, relevant, and progress from the known to the unknown.

C.1.4 Training in Context. Good aspects are woven into many of the "new" training concepts. One such concept is the "training in context" process where an attempt is made to replicate actual working conditions, groups of experienced workers, actual equipment, and realistic scenarios through which the skills necessary to perform a job or task can be passed. The primary difference between "training in context" and the actual job is that the effects of mistakes can be minimized. Additionally, the evolution can be started over if a step is performed incorrectly or missed. This is a luxury not available during actual incidents. This process relies heavily on coach-

ing and mentoring by the experienced members of the team. Coaching and mentoring are also major elements of OJT. Therefore, training in context is performing on-the-job training but doing it in a manner that is structured to teach a step-by-step process in a secure atmosphere.

C.1.5 Collaborative Learning. Another teaching/learning style that involves elements of OJT is collaborative learning. In the collaborative processes, groups of like-experienced workers are put together to solve problems and synthesize the problem-solving elements necessary on virtually any incident. Scenarios and conditions can be structured to closely replicate actual working conditions to enhance the learning experience. The knowledge and background experience of each of the participants can be pooled to create innovative solutions to problems. These problems are structured to lead to the completion of stated objectives of the class. Students can come away from a collaborative learning experience with a new sense of self-confidence and appreciation for the skills and knowledge of their fellow students.

Many elements of collaborative learning are useful whenever a new piece of equipment is purchased or a new procedure to accomplish a task is required. Typically, in many departments, a new piece of equipment comes in and a group of employees are selected to research the manuals, look for similarities to older equipment, look at the differences, discuss it with the training section and then develop operating procedures for that new piece of equipment. Perhaps an information processing technique is not as effective as it could be. Again, a group of employees can be formed to study the old technique, research procedures by other departments, talk with their training section, talk with their state training personnel and then develop a procedure that might do the task better and more efficiently.

C.1.6 Multimedia Teaching Resources. Multimedia is any form of communication that uses more than one medium to present information, such as a computer program integrating text, graphics, video, animation, sound, and interactive links.

Because multimedia presents information in a variety of forms, it is extremely effective in relaying new ideas and concepts. Many users of this type of training find that multimedia provides a more natural learning environment.

Computer-based training allows the student to progress at his or her own learning rate. Instead of proceeding sequentially from chapter to chapter, as with the traditional learning process, the student can access more information immediately (perhaps in the form of a picture) on the computer.

Since the student is not forced to read through information in a rigid format, more advanced students can avoid basic information and move rapidly to more advanced concepts. Beginning students, on the other hand, could continue to obtain more help and explanation before moving on, ensuring that they understand the basic concepts as building blocks for further learning.

A relatively new multimedia process is virtual reality (VR). VR is an artificial reality created by three-dimensional computer graphics, high resolution display technology, and multi-sensory, interactive interface devices that submerge the participants into a pseudo-reality that can give the sensory perception of actually being involved in a real-life, real-time incident. The technology is costly and therefore limited to customized locations such as universities and governmental agencies. Expect the availability and use of this technology to increase in the future. This will provide the method to teach

many of the skills in an on-the-job fashion without the attendant danger.

A multimedia training program is helpful to students with varying levels of knowledge and experience as it allows them to proceed at their own pace. Instructors often find that multimedia application motivates students to learn and to take a more active part in the learning process.

C.1.7 Apprenticeships. Apprenticeships are receiving a fresh look from some leaders in the business world. Businesses are faced with a shrinking labor pool and rapidly changing technology. Many people like the combination of earning and learning elements of apprenticeships. In its best form, this process combines classroom work and on-the-job training. In German models, the process starts while the youth is still in school. The United States and Canada tend to delay the process until people are in their early 20s. Regardless, the system uses what is best about OJT, that is, experienced co-workers aid in the building of an experience base for the new employee.

C.2 The Practice and Use of On-The-Job Training. On-the-job training is happening in many departments every day regardless of what it is called. Many do not know they are performing a training activity while they are in the process. Every call in which the new person participates is a training activity. Most will agree that something is learned on virtually every call. It is up to the experienced personnel to ensure that it is as positive as possible for the new person.

C.2.1 One Possible Definition of the OJT Process. A structured process that refines and enhances skills and knowledge, previously learned by the candidate, in a real-life situation while creating a practical experience base.

C.2.2 Organization of the Process. Well-organized on-the-job training can be a very effective training method. Many departments still give too little formal training to their new recruits and rely on experienced employees to pass along skills without formalizing the process. Too often the new person is told to do what the more experienced employee tells him or her to do. Industry has had similar experiences. However, a faction of industry is becoming increasingly aware of a combination training process that turns out more productive and safer workers in a shorter period of time. The military has successfully used some of these elements for years. Some departments have very good programs that contain all the necessary steps, but perhaps others in the service can learn from examples set by the military and industry. The model should consist of four phases, and although the phases are expressed in explicit form, OJT should be interwoven throughout all the phases. OJT in its purest form will be found in phase two, but elements of it should also be included in the other phases as well.

Phase One	Formal or Classroom Instruction
Phase Two	Structured On-the-Job Training
Phase Three	Skill Demonstration
Phase Four	Skill Maintenance

The process is depicted in Figure C.2.2.

C.2.3 It is very difficult for OJT to be successful without first exposing the new person to a formal training phase that teaches skills, roles, role relationships, duties, job performance requirements and expectations contained in the new

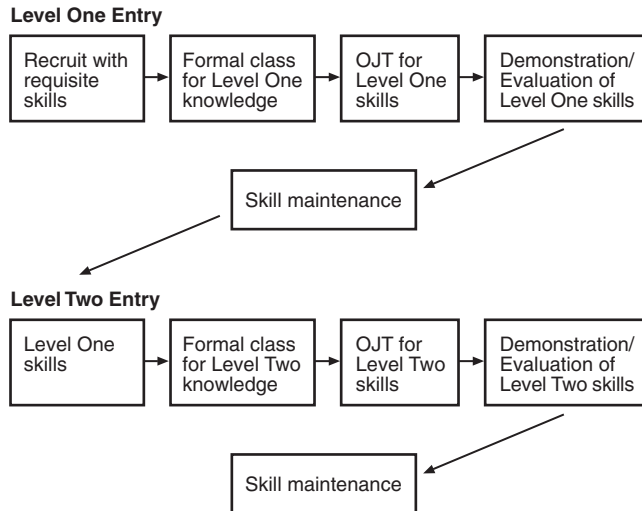


FIGURE C.2.2 On-the-Job Training as Part of an Overall Training Program.

job. It is also helpful to include the history and tradition of the job during this phase to educate the new person in the evolution of the job and the reasons for certain characteristics of the job. During this phase, in addition to the current job assignment preparation, the new person should be exposed to the requirements for advancement into other areas of the profession.

C.2.4 Once the new employee has a firm grasp on the skills and knowledge required to perform the job, he or she might still be unsure about how it all fits together or exactly when to apply certain theories and practices. At this point, the employee should be entered into a structured on-the-job training program. Structured in this case would mean a work process and a record-keeping system that ensures certain tasks are experienced by the new employee under the guidance of an experienced co-worker prior to working independently. This person should be allowed to develop an experience base that complements the formal training received earlier. From a safety and productivity standpoint, it would seem to be well worth the time and energy. The process would have to include identifying key tasks that are to be experienced by the recruit, and a record system that records when, where, and by whom the tasks were experienced. The responsible OJT supervisor and all other pertinent information should be recorded. Based on the completion of the identified tasks and proper record documentation, the training officer would then recommend to supervision that the recruit has progressed to the point where he or she no longer requires immediate, constant supervision.

C.2.5 The trainee can now be entered into the next phase of skill demonstration or evaluation. This represents a period of time where the trainee performs duties as any other employee but is in an evaluation status that determines if he or she is capable of performing the various tasks without reliance on other people to help in the difficult moments. Some organizations might choose to call this a probation period. Others might find the word *probation* too pejorative and choose to call it something else. Regardless, it is a period during which the employee and employer can determine if the job fits the individual and vice versa.

C.2.6 If the employee now has good base knowledge and a good experience base from which to make judgment calls, what next? Many departments stop at this point and allow the passing years to develop the individual. This practice occasionally permits some skills to become rusty or forgotten completely, bad habits to develop, and complacency to set in. A skill maintenance process can be established that requires practice/demonstration on a timely basis. It could include procedures contained within team responses and/or individual demonstration of standard meeting skills. Some skills, such as life safety skills, might need to be demonstrated more often than others. Demonstration of some skills might be necessary each quarter, while it might be sufficient to demonstrate others each year. Members of the individual organization can agree what fits the situation; the main point is that demonstration intervals should be identified and followed. Even when an employee uses the skill daily, some bad habits might slip into the procedure.

C.3 Recruit Trainers. It is important that the right people are selected to perform the OJT process for recruits.

C.3.1 Positive attitudes and work habits of the trainers will be beneficial in the training of the recruits.

C.3.2 People selected to perform this duty should be conscientious, open-minded, and interested in working with other people.

C.3.3 People selected to perform OJT training should be willing to change procedure where it is called for. They should strive to look for better ways to accomplish goals and not just be content with doing it one way because that is the way it has always been done.

C.3.4 People selected to perform OJT training should take pride in helping train an additional member of the team and not view it as a bother to their normal routine.

C.3.5 If the right people are selected in the employment process and are armed with a good knowledge base, the right OJT supervisors are selected, and identification of the proper skill demonstrations is held at the correct intervals and tied together with a workable documentation process, then fellow workers who are efficient and a pleasure to work with is the likely result.

C.4 Continuing Education and In-Service Training. It is recognized that some individuals grow complacent or stagnant when plateaus are reached in skill and knowledge levels. In-service training and on-going education are methods of dealing with this problem. This responsibility is shared by both the individual and the AHJ.

C.4.1 Employees should be encouraged to continue professional education through in-service or job-related classes completed outside the workplace.

C.4.2 Professional associations or regional and state training entities could be a source for this type of training program.

C.4.3 Training and education should be tied directly to skill demonstration and maintenance.

C.4.4 In-service training should be conducted whenever skill levels fall below minimum standards, the workplace experiences a significant change in procedure or obtains new equipment.

C.4.5 A variety of outside training and educational opportunities are beneficial to both the individual and the organization. The AHJ should develop a policy regarding the participation

by the employees in in-service training and identify acceptable outside training and continuing education programs. The content of, and attendance at, all training programs should be documented.

Annex D Explanation of the Standard and Concepts of JPRs

This annex is not a part of the requirements of this NFPA document but is included for informational purposes only.

D.1 Explanation of the Standards and Concepts of Job Performance Requirements (JPRs). The primary benefit of establishing national professional qualifications standards is to provide both public and private sectors with a framework of the job requirements for the fire service. Other benefits include enhancement of the profession, individual as well as organizational growth and development, and standardization of practices.

NFPA professional qualifications standards identify the minimum JPRs for specific fire service positions. The standards can be used for training design and evaluation, certification, measuring and critiquing on-the-job performance, defining hiring practices, and setting organizational policies, procedures, and goals. (Other applications are encouraged.)

Professional qualifications standards for a specific job are organized by major areas of responsibility defined as duties. For example, the telecommunicator's duties might include acquiring information from citizens and preparing data for dispatch. Duties are major functional areas of responsibility within a job.

The professional qualifications standards are written as JPRs. JPRs describe the performance required for a specific job. JPRs are grouped according to the duties of a job. The complete list of JPRs for each duty defines what an individual must be able to do in order to successfully perform that duty. Together, the duties and their JPRs define the job parameters, that is, the standard as a whole is a description of a job.

D.2 Breaking Down the Components of a Job Performance Requirement. The JPR is the assembly of three critical components. See Table D.2. These components are as follows:

- (1) Task that is to be performed
- (2) Tools, equipment, or materials that must be provided to successfully complete the task
- (3) Evaluation parameters and/or performance outcomes

Table D.2 Example of a JPR

(1) Task	(1) Establish verbal communication with a service requester
(2) Tools, equipment, or materials	(2) Given a telephone or other communication device, a means of collecting information, operating procedures, and a work station;
(3) Evaluation parameters and/or performance outcomes	(3) So that a communication link with the requester is achieved

D.2.1 The Task to Be Performed. The first component is a concise, brief statement of what the person is supposed to do.

D.2.2 Tools, Equipment, or Materials that Must be Provided to Successfully Complete the Task. This component ensures that all individuals completing the task are given the same minimal tools, equipment, or materials when being evaluated. By listing these items, the performer and evaluator know what must be provided in order to complete the task.

D.2.3 Evaluation Parameters and/or Performance Outcomes. This component defines how well one must perform each task — for both the performer and evaluator. The JPR guides performance toward successful completion by identifying evaluation parameters and/or performance outcomes. This portion of the JPR promotes consistency in evaluation by reducing the variables used to gauge performance.

In addition to these three components, the JPR contains requisite knowledge and skills. Just as the term *requisite* suggests, these are the necessary knowledge and skills one must have prior to being able to perform the task. Requisite knowledge and skills are the foundation for task performance.

Once the components and requisites are put together, the JPR might read as follows:

D.2.3.1 Example 1. The Telecommunicator I shall establish verbal communication with a service requester, given a telephone or other communication device, a means of collecting information, operating procedures, and a work station, so that a communication link with the requester is achieved.

(A) *Requisite Knowledge:* Verbal communication process.

(B) *Requisite Skills:* Operation and basic troubleshooting of telephone and communication systems and devices, verbal communication abilities.

D.2.3.2 Example 2. The Telecommunicator II shall monitor public safety radio systems, given equipment used by the agency, so that information requiring action by the telecommunicator is identified.

(A) *Requisite Knowledge:* Basic radio system technology and standard terminology used by AHJ including radio codes, unit identifiers, and phonetic alphabet.

(B) *Requisite Skills:* Operation of radio equipment, differentiate between various audio stimuli, and effective listening abilities.

D.3 Examples of Potential Uses.

D.3.1 Certification. JPRs can be used to establish the evaluation criteria for certification at a specific job level. When used for certification, evaluation must be based on the successful completion of JPRs.

First, the evaluator would verify the attainment of requisite knowledge and skills prior to JPR evaluation. Verification might be accomplished through documentation review or testing.

Next, the candidate would be evaluated on completing the JPRs. The candidate would perform the task and be evaluated based on the evaluation parameters, the performance outcomes, or both. This performance-based evaluation can be either practical (for psychomotor skills such as “operation of the telephone”) or written (for cognitive skills such as “know the phonetic alphabet”).

Note that psychomotor skills are those physical skills that can be demonstrated or observed. Cognitive skills (or mental

skills) cannot be observed, but are rather evaluated on how one completes the task (process oriented) or the task outcome (product oriented).

Using Example 1 in D.2.3.1, a practical performance-based evaluation would measure one's ability to "establish verbal communications." The candidate passes this particular evaluation if the standard was met, that is, the candidate successfully recognized the incoming audio/visual signal of the verbal communications device, responded to the signal, and established two-way verbal communications with a service requester.

For Example 2 in D.2.3.2, when evaluating the task "knows the phonetic alphabet," the candidate could be given a written assessment, such as a test to identify a number of phonetic terms for letters of the alphabet.

Remember, when evaluating performance, the person must be given the tools, equipment, or materials listed in the JPR, for example, a telephone or other telecommunications device, before he or she can be properly evaluated.

D.3.2 Curriculum Development/Training Design and Evaluation.

The statements contained in this document that refer to job performance were designed and written as JPRs. Although a resemblance to instructional objectives might be present, these statements should not be used in a teaching situation until after they have been modified for instructional use.

JPRs state the behaviors required to perform specific skill(s) on the job, as opposed to a learning situation. These statements should be converted into instructional objectives with behaviors, conditions, and standards that can be measured within the teaching/learning environment. A JPR that requires a telecommunicator to "establish verbal communication with a service requester" should be converted into a measurable instructional objective for use when teaching the skill. [See Figure D.3.2(a).]

Using Example 1 in D.2.3.1, a terminal instructional objective might read as follows:

The learner will establish verbal communication with a service requester, given a telephone or other communication device, a means of collecting information, operating procedures, and a work station so that 100 percent accuracy is attained on the skills checklist. (At a minimum, the skills checklist should include each of the measurement criteria from the JPR.)

Figure D.3.2(b) is a sample checklist for use in evaluating this objective.

Although the differences between job performance requirements and instructional objectives are subtle in appearance, the purpose of each statement differs greatly. JPRs state what is necessary to perform the job in the "real world." Instructional objectives, however, are used to identify what students must do at the

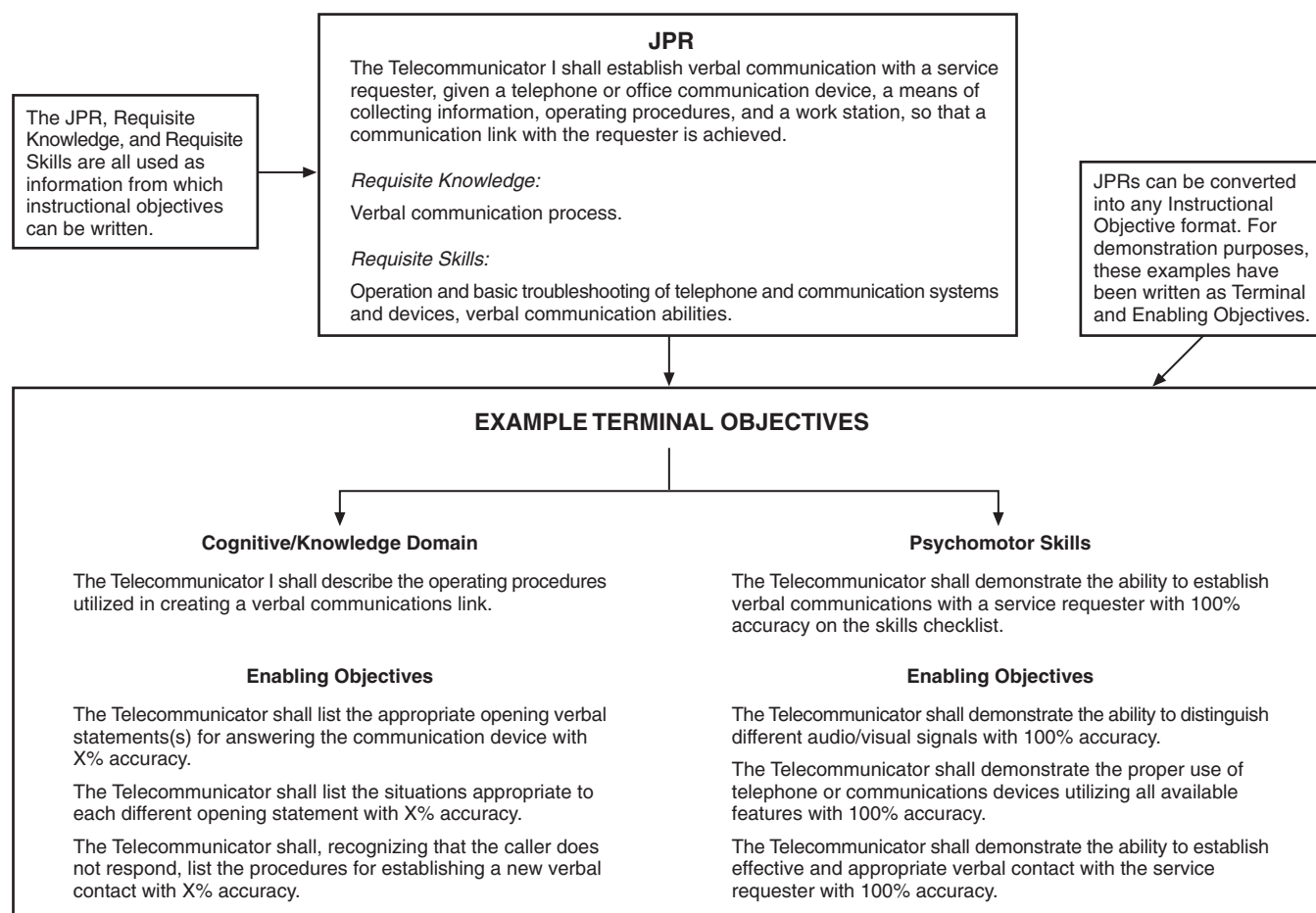


FIGURE D.3.2(a) Converting JPRs into Instructional Objectives.