

Additional contact by the individual police unit may be made with the center via mobile digital terminals and via a special support radio net (Net 8) over which additional operators provide other services to officers (tows, wants and warrants, checks, etc.).

As described in the proceeding section, call handling and dispatch activities are each supervised from a separate console staffed by appropriate senior center personnel.

A 2.2.2 Emergency Medical Communications System at Kettle Butte  
(Exhibit A)

Incoming calls will be received through a separate four-trunk, seven-digit telephone number as well as 911.

Two operators would be on duty at all times. Each would be capable of receiving and dispatching calls. Up to three additional operators including the police complaint coordinator would be available to handle overflow calls when the primary and secondary operators were busy. This should occur very infrequently due to the expected call volume for EMS. The call will be screened to determine whether or not it fits the criteria for EMS dispatch and a minimum of name, address and type of injury or illness would be collected. If the call is to be dispatched, it will then be given to the dispatch operator who will select an available unit from a manual and semi-automated status keeping system located on the console. Unit selection will also be aided by means of a computer print-out or microfiche specifying the location of all units in the County in relation to all County addresses.

The dispatch operator may then dispatch the unit by direct phone line or radio to any ambulance unit in the system. Fire units will be dispatched by direct phone line to either District 10 or PFB dispatch centers. The dispatch operator

will also enable the responding unit to communicate with the medical control (advisory) component at the University of Oregon Health Sciences Center.

In all cases, responding units will be selected on the basis of the nearest available unit. The available units will be of two types, basic and advanced life support. Advance life support units not called initially will be dispatched either simultaneously or subsequently, based on a system of protocol.

All EMS equipped positions will have full transfer and conference capabilities with the emergency system including police and fire.

According to established EMS protocol, any call received at any number other than the main EMS number will immediately be transferred to the EMS number for screening. This includes calls received at fire dispatch centers, the police system number and at private ambulance company numbers.

Calls for medical services not within the acceptable range for the EMS will be transferred to private ambulance companies or other responding agencies according to system protocol.

#### A2.2.3 Fire Communications Systems

The Portland Bureau of Fire Command and Control Center (CCC), is the Fire Alarm Telegraph Office located at 915 NE 21st Avenue. Under normal conditions, all dispatching, status-keeping, corresponding, reporting and other command and control activities are performed here. The CCC is the hub of all PBF communications activity. The procedures for the use of these communications systems by CCC personnel will be covered here.

a. Fire Alarm Telegraph System

The City of Portland owns and maintains its own fire alarm telegraph system consisting of about 1400 alarm boxes\* located throughout the City, the associated DC lines and circuitry, and the necessary information output devices. All of the alarm box circuits ultimately terminate in the CCC.

Thirty-eight of the box circuits are routed through four substations, Engine Houses 3, 10, 25 and 26. The remaining 30\*\* circuits are routed directly to the CCC. There are approximately 30 alarm boxes on a typical circuit. All the switchgear and circuit consoles for receiving signals, testing or ascertaining abnormal conditions is located in the CCC peripheral to, and easily visible from, the dispatch console positions.

When a box alarm is received at the CCC, the box number is "tapped out" on one of ten punch registers located at the dispatch consoles. Each box will transmit to the registers its own unique code, a four-digit number, identifying the box that has been activated.

Associated with the box circuits are eight alarm circuits which fan out from the CCC to the station houses. Further, these alarm circuits also control the bells used for signaling the arrival of a fire alarm.

The circuit terminal cabinets also provide voltage reading and other indications of the condition of the circuits. For example, when a box circuit has been activated, an indicator light on the front panel of the cabinet is automatically turned on. After two minutes, if the box circuit is not manually reset (restored) by a panel switch, a reminder bell rings.\*\*\*

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\* These are of both the "regular" and "master" box type.

\*\* Two are spares.

\*\*\* For further information see NFPA Pamphlet 73 -- the specification to which the Portland system was built.

The fire alarm telegraph system provides a completely independent communications channel for carrying out fire dispatch and support operations, including communications from the fireground. The telegraph system is, in short, one means by which notification of a fire\*\*\*\* may be received, and the necessary fire apparatus dispatched without the intervention of any other system. In practice, of course, other systems are used, and these systems also have the CCC as a nucleus.

Recorders. Several types of recorders are used to monitor message processing. Dictaphone office-type plastic belt recorders are used to record all telephone conversations. There are two of these for each console to provide continuous coverage while changing belts. Two recorders of the same type are also used for each of the three radio channels, F1, F2 and F3. There are also recorders of the same type for the PA system. All these recorders operate only when the channels they record are actually carrying traffic. There is a continuously operating 10-channel tape recorder (Dictaphone 2000) that monitors all the above channels and provides a sequential record of all incoming and outgoing communications.

Status Boards. There are two status boards. One is located between the console positions. The master status board is mounted overhead. It is an electrically lighted map of Portland with a two-color lamp position for each engine house. The lamp code is:

- ...No light -- in service, at home
- ...White light -- in service, contact by radio
- ...Red light -- out of service

Further information, if required, is communicated directly to the rolling units or from the CCC on the radio system.

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\*\*\*\* Or a false alarm.

Assignment Selection. The running box cards are developed by the Fire Alarm Dispatch personnel and contain the basic assignments of apparatus and command personnel associate with that box. The assignments cover first alarms, second alarms, etc., on through maximum commitment of available resources.

Initiaton of Dispatch. The operator announces over the PA system and F1 radio channels the alarm and its type. If it is a "phantom box," this fact is given first, followed by the appropriate box number, followed by the address of the incident. Then the first assignment is given. If the alarm was received from a street box, the box number and its location are given. The Gamewell Transmitter Card is then placed in the transmitting device which is then actuated.

The Gamewell cards control the bells, doors and stove turn-off for the firehouse being tapped out. The cards provide these control operations only to the station that is tapped out on the Gamewell Card. The Gamewell Transmitter Cards have only first alarm assignments and the apparatus for these first alarm assignments are sometimes not available. Therefore, the final authority for assignments is the dispatcher.

Between the hours of 7:00 a.m. and 11:00 p.m., this announcement of an alarm will be received at all stations. Outside these hours, a "silent system" is put into effect.

To reiterate, the unit assignments are given to all houses via the PA and radio systems. A "street box" is announced by number and street location, followed by the assignment. A "phantom box" is stated as such, followed by the nearest "street box" number, followed by the actual address of the incident, followed by the assignment. It may be noted at this point that fire stations have a running box card file at their watchdesks so that the potential exists for a fire station to be self-assigning if given only the box number (on PA, coded bells, etc.) but this capability is not required for normal operations.

Verification of Response. The "tattle-tale" system, activated as the unit rolls over a switch, provides response verification. In addition, alarm receipt verification is received at the CCC via the unit's radio if on the air. Verification is also checked from the CCC using the fire-phone system to the station. The station can likewise verify the response by calling the CCC over the same system. All unit response is verified by the dispatcher.

Recall for Box Alarm. A recall is initiated when:

- ...The "first-in" unit finds adequate firefighting capacity is available to handle the incident -- as in the case of a small fire such as a car fire, etc.

b. Public Address System

There are eight public address circuits available in the CCC to broadcast information, via loudspeakers, to the fire houses and certain administrative and executive offices.

- ...The "Daily Report of Alarms" is kept for submission to the Portland Fire Marshall's office on a daily basis.
- ...The "Activity Report for Emergency Incidents Where No Fire is Involved" is submitted to the State Fire Marshall's office on a monthly basis.
- ...The "Alarm Room Memo" is used to convey relevant information to the CCC personnel. A file of these memos is kept on a clipboard near the console positions.

Also maintained within the CCC and updated as required is procedural information covering:

- ...Accidents
- ...Explosive carrier precautions
- ...Cave-ins
- ...Special equipment location (e.g., jack hammers, safety lamps)
- ...Supplemental Alerting procedures
- ...Standard Operating Procedures
- ...Bureau General Orders

All of these are kept on the records table close to the console positions. Maps for the Portland area and the Rural Fire Protection Districts are also kept in the CCC, enabling it to function as a dispatch center to the limits of the range of its communication equipment.

There are procedures within the CCC for updating the Running Box card file, Street Index file, etc. Other procedures exist for updating the other files. In summary, a well-defined set of procedures exists within the CCC for the collection of data, maintenance of data bases, and dissemination of information related to the entire PBF fire dispatching/firefighting process.

c. System Maintenance and Testing Summary

The various communication systems (phone, PA, radio) are tested twice daily (8 a.m. and 8 p.m.). The circuitry for the Fire Alarm Telegraph is electrically monitored continually both at the CCC and at the four alarm circuit substations and tested at 7:15 a.m. on a daily basis.

The voltage between alarm circuits is tested weekly and recorded. The regular alarm boxes are tested every sixty days by PBF personnel. The "owned" Master Boxes are tested by owners on a monthly basis and the CCC is notified by phone prior to conducting these tests.

Primary Power. The CCC is capable of operation independent of external power for indefinite periods. Floating on the power input line in service are batteries providing power for complete CCC and alarm system operation for 24 hours. In case of power failure, a diesel-generator set located in the basement, automatically starts up. there is a standby gasoline engine/generator set that can be placed into operation to provide "back-up" for the diesel/generator set.

Private Alarm Systems. Only the output devices of private alarm systems are located in the CCC. There is an indicator panel for the ADT and Honeywell systems and two punch registers. The punch registers are connected to private boxes in the Union Pacific Building and the Public Service Building.

Consoles. The general equipment complement of each of the 148992 two dispatch consoles includes the following:

- ...Telephone switchboard and handset
- ...Radio transmitter panel
- ...Speakers (mounted overhead) for F1, F2 and F3
- ...Dual microphone (PA and F1, F2 and F3)
- ...Two punch registers
- ...Manual tap-out key

In addition, mounted across the top of both console positions are the Box Alarm cards, the Street Index file, and the Gamewell Transmitter card file. The Gamewell Transmitter device is located to the right of the right-hand console.

Radio Transmitters. Ninety watt emergency transmitters for F1, F2, F3 and F4 are maintained in the CCC. These Transmitters may be used in an emergency via an antenna mounted on the roof. The fifth transmitter (72.98MHz) is maintained for the City/County disaster network and is not involved in normal fire dispatch operations. This transmitter is keyed from a desk top console to the right of the Gamewell Transmitter. The five transmitters are located in the basement. All have back-up controls independent of the consoles that operate the transmitters in that building.

#### d. CCC Operations

The status-keeping functions of the CCC involve the maintenance of a continuously up-dated data base containing information on systems, physical units, plant and personnel. This data base includes:

- ...Status and location of equipment
- ...Serviceability of fire hydrants
- ...Availability and location of personnel
- ...Dispositions of units in tactical situation
- ...Serviceability of the fire alarm telegraph system
- ...Readiness of other communications links

The large wall-mounted status board in the CCC is an illuminated translucent map of the Portland area showing the home station locations of engines, trucks and fireboats. The status of these units is displayed by lights behind the board.



Behind the console positions is an additional status board that displays, with small lamps, the location and status of units, key personnel and task forces.\*

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A hydrant record is also maintained. This information is provided to the firehouses when any abnormal condition exists that might adversely affect firefighting operations.

Special situational data is also kept, such as closed roads, street repairs, bridges out, etc. this information is again supplied to units on an "as applicable basis."

The status-keeping function provides the necessary information to carry out the "move-ups" and reserve call-ups that will be described below in the dispatch functions of the CCC.

Receipt of Alarms. There are several methods of receiving alarms. The most obvious is through the telephone at any of the three console positions. The telephone call can come through the six Fire Department emergency lines, from four information lines, or from a fire station itself via the station hot line. In either case, the information is recorded by the dispatcher on a scratch pad at the console. This information will include either the street address of the incident or the street intersection to which the incident is in proximity.\*\* The incident being reported may be either a fire or other emergencies. In either case, the telephone receipt is the same. Recorded on the scratch pad will be:

...Time (e.g., 1532)  
...Address (e.g., 222 SW Harrison St.)  
...Run Number (e.g., 78-10515)  
...Incident type (e.g., structure fire)

Later in the process, the assignment will also be recorded on the pad, completing the data items from which the formal record of the incident will be made.

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\* Task forces are aggregates of firefighting units dedicated to a specific fire mission requirement.

\*\* Alarms received by phone and dispatched by street address as well as well as box number are called "phantom boxes."

Other paths by which an alarm may be received are hot-lines 148992 from ECOC, RFPF #10, ADT, Action Alarm, Port of Portland, Airbase and the State Radio Network. These arrangements enable rapid transmission of fire or rescue incident reports from police and sheriff units in the field through their own radio dispatch center to the CCC. Finally, another voice-path is the PBF radio system itself. An incident can be reported directly to the CCC from any unit equipped with an F1, F2, F3 or F4 radio transmitter.

An entirely separate system of fire incident reporting is the municipally owned fire alarm telegraph system. When an incident is reported in this manner, receipt of the alarm in the CCC is recorded on punch-tape registers at the consoles. The tape punches record the number of the box that has been activated. A "street box" is activated by an individual at the box location. A "master box" is activated as a street box or from the building manually or by means of fire-detection sensors connected to the box. In either case, the recording process is the same.

Initial Alarm Processing. Two slightly different procedures are required to process a received alarm requiring a box assignment on whether the alarm was received from a box, or by the telephone or radio links described above. In the latter case, after the incident, information has been recorded on the scratch pad and the dispatcher checks the Street Index file to convert the given address into the number of the fire alarm box in closest proximity to the incident. Entry to the file is by street name. Block numbers and intersections for the street are listed with the equivalent fire box. Having the box number, the dispatcher compares the Running Box Card file with the box number. At this point the two alarm processes merge. If the alarm had come in on a box alarm register, the dispatcher would have gone directly to the Running Box Card file without the intervening step of searching the Street Index file. Another file is also

searched by box number. This is the file for the Gamewell 148992 Transmitter cards. In actual practice of processing a single alarm the second dispatcher often searches this file at the same time the first dispatcher is retrieving the Running Box card. This parallel effort would not be possible during a situation of several alarms, but the alarm supervisor also is available in such situations to assist in expediting the above procedures.

If the incident being handled is an EMS dispatch, the general procedure is for the operator to dispatch by phone the nearest fire company and a rescue unit. If a full box assignment is not required, telephone dispatch will be initiated.

- ...It is determined the cause for the alarm has passed -- as in the case of a fire having been extinguished by industrial personnel with on-site equipment.
- ...It is determined a false alarm has been initiated.
- ...Some, but not all, of the dispatched apparatus is needed -- in this case, unneeded equipment would be recalled and returned to service as soon as possible.

The information needed to initiate the recall is transmitted by the officer ordering the recall (or other direction). The operator at the CCC then announces the recall over the radio, identifies the equipment that may be still needed and directs the unneeded companies to such service as determined by the dispatcher.

Special Requests. Units assigned to a given box, but not available, are passed over, and the next unit in the assignment sequence is dispatched. As assignments are made, the apparatus status of the assigned units is continuously updated, providing the operators with a time valid representation of the resources available for additional incidents that may arise, or changed conditions at an incident already in progress.

One such example of "changed conditions" at an incident is the initiation of the Greater Alarm process. Conditions at a fireground may warrant additional firefighting support. The CCC will, upon notification, begin established communication procedures for providing additional equipment, noti-

fyng key personnel, etc. The mobilization procedures for Greater Alarms are thoroughly detailed in PBF General Order No. 3. The important point is that requests for Greater Alarms are made from the fireground by radio, with communication back-up provided by the manual alarm telegraph key in the designated fire alarm box, and that command and control of the remainder of the firefighting forces and other emergencies is directed according to prescribed procedures entirely from the CCC. Greater Alarms are also given special documentation.

Special requests for the fireground for assistance of other agencies ( i.e., police, utility companies, investigators, water bureau, etc.) are handled by fire alarm operator/dispatcher.

In each case, the CCC acts as the relaying agency of the message to the proper authority. These messages are normally handled by telephone, although certain disaster and other emergency procedures can be initiated by radio as well (e.g., using the City/County disaster net).

Information Records. During field operations the CCC receives a continuous flow of information from the fireground or incident scene. The F1, F2, F3 and F4 frequencies are monitored and incident information is recorded. The data from the scratch pads are transferred as soon as feasible to the operators/dispatchers journal at the console positions. This provides a readily accessible record of all the incidents in progress and their status. The master record is the "Operator's Journal." The "Daily Report of Alarms" is compiled on a shift period basis from the daily log, and any other pertinent information accumulated at the CCC during the shift.

Silent Alarm Systems. As mentioned earlier, the above sequence of procedures is modified slightly between the hours of 11:00 p.m. and 7:00 a.m. when the "silent system" is in operation. The system is placed into operation by a mode

switch located in the CCC. Under the silent system only the fire companies that are to respond are tapped out. The PA is directed only to those responding companies. Otherwise, the dispatch procedure is the same.

Move-ups. A special operational option called "move-up" is common to fire suppression systems. In a Greater Alarm or other emergency requiring the commitment of additional apparatus, there is a point where additional assignments will reduce the coverage for certain areas of the City to an intolerable level (i.e., the available equipment would be insufficient to adequately respond to a new alarm incident). There are three levels of protection to the present system, each procedurally defined in the department's General Orders. The three levels are "move-up of in-service companies," use of mutual aid companies, and the calling up of reserve units and off-duty firefighters.

The Running Box Cards contain the necessary information for moving up equipment from regular quarters to temporary occupancy of the quarters of committed companies during the several possible stages of a Greater Alarm. It must be realized, however, that Greater Alarms and other comparable emergencies also initiate tactical provisions for increasingly higher levels of command officers to move into the CCC. The final decisions on move-ups are not automatic, but depend on the experience and situational appraisals of the officers present.

The same comment is equally applicable to the call-up of reserve units. Present departmental procedures (see, for example, General Order No. 3) ensure the presence of experienced command officers in the CCC when such situations occur.

In summary, the General Orders, move-up provisions, mutual aid and reserves provide the elements from which the tactical plan for fighting a major fire may be implemented. The changing tactical situation and disposition of units is continually posted on the status board.

e. Additional Reports

Within the operational context of the CCC, other (non-dispatch oriented) data bases are maintained and other reports are generated that provide for the collection and dissemination of information to concerned agencies.

- ...The "Alarms Received" report provides a daily summary of alarms by type and method of receipt for each month.
- ...The "Field Fire and News Report" is used by the CCC personnel to disseminate fire-oriented news to the media.
- ...State Fire Marshall's Daily Report.

A2.2.4 Rural Fire District 10 Communications System

Rural Fire District 10, as mentioned above, has 10 stations, an independent CCC, and covers a 90 square mile area of Multnomah County containing 160,000 people. There are 208 fully-paid employees. The equipment inventory includes:

- a. 3 rescue units
- b. 10 engines
- c. 10 reserve pumpers
- d. 3 trucks
- e. 1 chemical unit

The headquarters for RFPD 10 is located at Fire Station No. 5, 1927 SE 174th Avenue. The Fire Alarm Office -- the command/control center for dispatch operations -- is also located within the headquarters building. The Fire Alarm Office has alternate transmitter/receivers for its own assigned F1, F2 and F3 dispatch frequencies, the State Fire Net (F4) and for Portland F2 (called F3 at RFPD 10).

Emergency power is provided for CCC operations by an engine/generator set on an automatic startup system without floating batteries. A back-up antenna for the radio system is also located at the CCC site.

Communications for dispatch, then, is by radio to the <sup>148992</sup> stations, with fire station direct (hot) lines as the secondary channel. The bells, stove shut-off and lights of a station being "tapped out" are controlled by tones sent over the radio or by phone. The "tattle-tale" system for verification is by landline.

The CCC itself consists of two separate consoles containing direct (hot) lines; a PBX, F1, F2 and F3 radio, telephone hand set and tone controls.\*

Also in the CCC are automatic alarm systems of the following private alarm companies: ADT, AART and Notifier. Two completely duplicated sets of files used in dispatch are over the consoles, and will be described further below. A dictaphone tape recorder records all telephone and radio traffic. The tape "feet" that has run is periodically recorded in the console dispatch to assist in replays.

The console dispatch log provides the on-line status of alarms in progress, greater alarms, recalls, etc. The "Daily Fire Report Data" log is also kept at the console and updated as the information required becomes available. The two logs together provide the ongoing data base for the conduct on alarm receipt and equipment dispatch\*\* operations which will now be described in further detail.

CCC Dispatching Procedures. The dispatch operations of the RFPD 10 CCC are nearly identical to PBF CCC operations, modified to cover the equipment-related exceptions noted above (e.g., no alarm boxes or Gamewell Transmitter, etc.). Every street intersection in the district is considered the location of a "phantom", or non-existing box. This is different terminology from that used at PBF. There, any dispatch to

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\* District 10 units that operate near Portland are equipped with Portland F2. There is also a telephone direct (hot) line between the two CCCs.

\*\* The radio log will include "move-ups" as well as dispatches, greater alarms, etc.

a street address is announced as a "phantom box" but the assignment is drawn from a real, physical box in proximity to the incident -- and that box number is announced as well. At RFPD 10, since there are no boxes at all, street intersections are made to "stand for" physical alarm boxes for purposes of assignment and dispatch. Of course, the only methods for receiving an alarm under this system are the telephone or radio systems.

When an alarm is received, the address and other relevant information is recorded on a scratch pad. Again, as in PBF, regardless of whether fire or rescue services are required, the initial processes are the same. The address is converted into a "phantom box" number by reference to the street cross index file. With the "phantom box" number, the operator/dispatcher can pull the corresponding Running Box Card from the Running Box Card file. This card, as illustrated, contains assignment sequences, move-ups and reference to the associated hydrant map. The operator/dispatcher in a fire alarm will then announce:

- ...District 10 calling box (box number, description) fire at (address, assignment, map number).
- ...The tones will be activated.
- ...The fire and type will be repeated, followed by a repetition of the address, assignment and map number.
- ...The operator will clear the station and give the time (e.g., KOK 263 clear at 8:37 a.m.).

The same procedure will generally be followed for single unit dispatch in PBF: the responding equipment will be called on radio, followed by a telephone tap-out. In public assists, the station will be rung by the operator on the telephone direct (hot) line and the necessary information will be transmitted by voice.



Responses to private alarm systems are similar to the preceding fire alarm procedures, in that the address of the alarm is given as well as the installation name that has activated the ADT, Notifier or AART, etc.

It might be noted here that so similar are RFPD 10 procedures for dispatch to PBF's that the RFPD 10 CCC could -- in an emergency -- act as a satellite dispatch center for Portland.

Public Assistance and Rescue. As mentioned above, rescue and assistance calls are also handled in the CCC. In fact, in 1971, there were 1900 calls for rescue and 1500 fire alarms. There are three rescue vehicles but the trucks or an engine will be dispatched for rescue missions as required. The rescue teams of RFPD 10 receive emergency medical training (EMT) under a program operated by the Portland Medical Association. The availability of these trained first-aid personnel is considered important in rural areas where formal medical care may be far from the scene.

If the CCC receives a call for an ambulance, the operator will call the ambulance company directly.

Greater Alarms. As shown in an example (Figure ), greater alarms are recorded on the radio log. Also, key personnel are notified according to a prescribed procedure (Figure ). The provisions for greater alarms do not differ appreciably from those in effect at PBF.

## A2.3 Direct Transfer Lines from Kelly Butte, 2950 SE 103rd Avenue

### A2.3.1 Fire

Washington County Emergency Services  
Portland Fire Bureau  
Fire District #10  
Clackamas Fire District #1  
Fire District #20  
Washington Fire District #1  
Gresham Fire

A2.3.2 Police

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Clackamas County Emergency Services  
Multnomah County Sheriff's Office--Non-emergency  
Beaverton Police  
Gresham Police  
Portland Police--Non-emergency  
Multnomah Sheriff/Portland Police Emergency  
Troutdale Police  
Oregon State Police

A2.3.3 Emergency Medical Services

EMS  
Hospital Emergency Administration Radio (HEAD)  
Suicide Prevention and Personal Crisis Services, Inc.  
Poison and Drug Control

## EXHIBIT A

## DESCRIPTION OF KELLY BUTTE FACILITY

The communications Center at Kelly Butte is constructed of walls two feet thick composed of concrete and steel framing. The first floor (142' x 84') is 11,928 square feet. This floor houses the call receipt room which takes up roughly half of the space. The other half of the first floor houses the computer storage rooms and office, radio room, engine room and electrical room, utilities rooms (boiler, fan, well, sprinkler, and filter), battery room, transformer room, locker rooms (2), women's lounge/restroom, reception area, men's lounge/restroom, operations office, report room, and shift supervisor's office.

The second floor (71' x 85') is 6,035 square feet. The four offices on the second floor view the call receipt room below through smokey glass. Also on this floor are a telephone equipment room, canteen/kitchen, recreation room, men's restroom, conference room, women's restroom/shower, and two storage rooms.

In an emergency the building can house 250-300 people for a week.<sup>1</sup> The facility has its own water and food supply; can generate its own energy; and has a ventilation system designed to filter out various noxious gasses.

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1. Grow, Robert G., Foresight, DCPA/Region 8, Sept./Oct., 1974, p. 8-11.

At present there are sixteen positions in the call receipt and report writing rooms:

- 6 A System only
- 2 A or B System
- 4 Dispatch
- 2 Net 8 (Service Operators)
- 1 Dispatch Coordinator
- 1 Complaint or Call Taking Coordinator

To implement 911 at the level of service recommended by the User/Provider Board, 90% of the calls answered within 4 seconds and .01% answered after 20 seconds, 4 new positions must be added. The positions on the floor would then total 20 (2 of which are in the report room).

It has been determined that the call receipt room can house 31 positions with ease.<sup>2</sup> In the event more than 31 positions must be created, "a significant amount...of additional floor space...could be made available by extending the second floor over the operations room" (3,080 sq. ft.).<sup>3</sup>

The air-conditioning system was designed to accommodate 78 people.<sup>4</sup> At present not more than 50 people habitually occupy the building at any given time. Implementation of 911 would only negligibly raise that number. Even with the eventuality of co-location with fire, at the outside, 60 people would inhabit the building at any one time in the near future.

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2. Public Safety Systems Incorporated, Portland/Multnomah County Communications and Dispatch system, Central Facility Review, Dec., 1973, p. 3136.

3. *ibid.*

4. *ibid.*

The restrooms are centrally located. Both the men's and women's rooms have at least one lounge or locker room connected. The women's room on the second floor has a shower which, with some managerial ingenuity, could service both men and women.

The kitchen facilities are adequate for incidental or emergency use. They are less than adequate for prolonged, habitual use in lieu of homemaking elsewhere.

All reasonable precautions have been taken to secure the facility. There are two security doors; both stay locked at all times. One must either punch a code or verbally identify oneself while being viewed on a closed circuit monitor. Once in the building, one must clip on a visitor's pass to be permitted within the operations' portion of the building. And, once in there, receptionists intercept visitors. Unauthorized entry is unlikely.

Personnel can easily move about the building without passing through either one of the security barriers.

Both security doors open outward and are fitted with break-lock panic bars in case of emergency within.

Kelly Butte First Floor (142' x 84')

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<u>Space Usage</u>	<u>Square Feet</u>
Call Receipt Room	3,905
Computer Storage and Office	864
Radio Room	1,120
Engine Room and Electrical Room	1,120
Locker Rooms (2)	294
Women's Lounge/Restroom	456
Reception Area	1,280
Men's Lounge/Restroom	872
Operation Office	180
Report Room	368
Shift Supervisor's Office	192
Passageways/Crawl Space	<u>1,277</u>
	11,928

Annex (22' x 77' and 8' x 11')

<u>Space Usage</u>	<u>Square Feet</u>
Utilities	786
Battery	336
Transformer	88
Entryway	<u>572</u>
	1,782

Second Floor (71' x 85')

<u>Space Usage</u>	<u>Square Feet</u>
Offices (4)	1,949
Telephone Equipment	615
Canteen Kitchen	318
Recreation	672
Men's Restroom	108
Conference	1,012
Women's Restroom/Shower	140
Storage (2)	126
Passageways/Unusable Space	<u>1,095</u>
	6,035

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ATTACHMENT 3

BID BOND

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KNOW ALL MEN BY THESE PRESENTS that we, \_\_\_\_\_

\_\_\_\_\_, as Principal, and \_\_\_\_\_, a corporation organized and existing under the laws of the State of \_\_\_\_\_ and duly authorized to transact a surety business in the State of Oregon, as surety, are held and firmly bound unto the CITY OF PORTLAND, a municipal corporation of the State of Oregon, in the penal sum of \_\_\_\_\_

Dollars (\$ \_\_\_\_\_) lawful money of the United States of America, for the payment whereof well and duly to be made, we and each of us, jointly and severally bind ourselves, our heirs, executors, administrators, successors and assigns, firmly by these presents.

THE CONDITIONS OF THIS OBLIGATION ARE SUCH that whereas the Principal has submitted or is about to submit a proposal irrevocable for the period specified in the proposal to the Obligee on a contract for \_\_\_\_\_

NOW THEREFORE, in the event the Principal seeks to revoke his offer for any reason not authorized by law and not consented to by Obligee within the irrevocable period and if awarded the contract and the said Principal fails, neglects, or refuses to enter into a contract to perform said work and furnish said labor, equipment and/or material, and to furnish performance and labor material payment bonds as required within the time specified, then the amount herein stated shall be declared to be forfeited and become due and payable to the City of Portland.

SIGNED, SEALED AND DATED this \_\_\_\_\_ day of \_\_\_\_\_ 19\_\_\_\_.

\_\_\_\_\_  
Principal

\_\_\_\_\_  
Address

BY \_\_\_\_\_  
Title

\_\_\_\_\_  
Surety

BY \_\_\_\_\_  
Attorney in Fact

\_\_\_\_\_  
Oregon Agent for Service

\_\_\_\_\_  
Address

CORPORATE SEAL (PRINCIPAL)

CORPORATE SEAL (SURETY)



ORDINANCE NO. 148992

An Ordinance authorizing an agreement with the firm of Michaud, Cooley, Hallberg, Erickson and Associates, Inc. for professional services in connection with engineering and management alternatives for the implementation of 911, an emergency telephone number, at a cost not to exceed \$34,125.00, authorizing the drawing and delivery of warrants pursuant thereto, and declaring an emergency.

The City of Portland ordains:

1. That the City will be best served by hiring an engineering firm to design the 911 emergency telephone system.
2. That the firm of Michaud, Cooley, Hallberg, Erickson and Associates, Inc. was selected to perform the necessary professional services for preliminary engineering, final design, and service during the implementation phase of the project.
3. That the selection was made upon recommendation of a consultant selection committee established in accordance with Chapter 5.68 of the City Code, Consultant Services Contracts, and that the selection was subsequently approved by the Commissioner of Public Works.
4. That the Consultant Selection Committee which was comprised of the User/Provider Board voted unanimously in favor of this consultant.
5. That the cost of the services necessary for completion of this project engineering is \$34,125.00

NOW, THEREFORE, the Council directs:

- a. The Mayor and Commissioner of Public Works are hereby authorized to enter into an agreement with the firm of Michaud, Cooley, Hallberg, Erickson and Associates, Inc., which is similar in form to the agreement attached as Exhibit "A" for an amount not to exceed \$34,125.00.

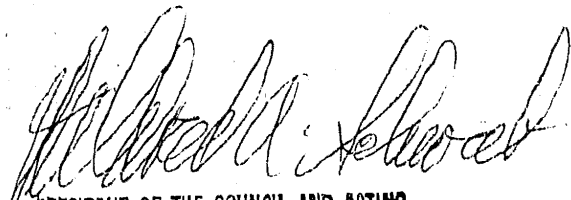
ORDINANCE No.

- b. The work herein shall be charged to the 1979-80 special appropriations, implementation of 911 emergency service number, Office of the Commissioner of Public Works, Line Item 210, BUC 19300013/ Project 0002.
- c. The Mayor and Auditor are hereby authorized to draw and deliver warrants for payments due pursuant to the agreement.


Section 2. The Council declares that an emergency exists because a delay in proceeding with the project will seriously endanger the possibilities of meeting the projected completion date; therefore this ordinance shall be in force and effect from and after its passage by Council.

Passed by the Council, **JAN 2 1980**

Commissioner Lindberg  
 December 19, 1979  
 Merry Hanson/ms  
 BUC 19300013, Line Item 210  
 Project No. 0002

  
 PRESIDENT OF THE COUNCIL AND ACTING  
 Mayor of the City of Portland

Attest:

  
 Auditor of the City of Portland

Calendar No. 36

**ORDINANCE No. 148992**

**Title**

An Ordinance authorizing an agreement with the firm of Michaud, Cooley, Hallberg, Erickson and Associates, Inc. for professional services in connection with engineering and management alternatives for the implementation of 911, an emergency telephone number, at a cost not to exceed \$34,125.00, authorizing the drawing and delivery of warrants pursuant thereto, and declaring an emergency.

THE COMMISSIONERS VOTED AS FOLLOWS:		
	Yeas	Nays
Ivancie	1	
Jordan	1	
Lindberg	1	
Schwab	1	
McCready		1

FOUR-FIFTHS CALENDAR	
Ivancie	
Jordan	
Lindberg	
Schwab	
McCready	

INTRODUCED BY
COMMISSIONER LINDBERG

NOTED BY THE COMMISSIONER
Affairs
Finance and Administration
Safety
Utilities
Works <i>MZ/DHR</i>

BUREAU APPROVAL	
Bureau:	
Prepared By: M. Hanson/ms	Date: 12/19/79
Budget Impact Review:	
<input type="checkbox"/> Completed <input type="checkbox"/> Not required	
Bureau Head:	

NOTED BY
City Attorney
City Auditor <i>[Signature]</i>
City Engineer

Filed DEC 27 1979

**GEORGE YERKOVICH**  
Auditor of the CITY OF PORTLAND

By *[Signature]*  
Deputy