

HELENA FIRE DEPARTMENT

1986 ANNUAL REPORT

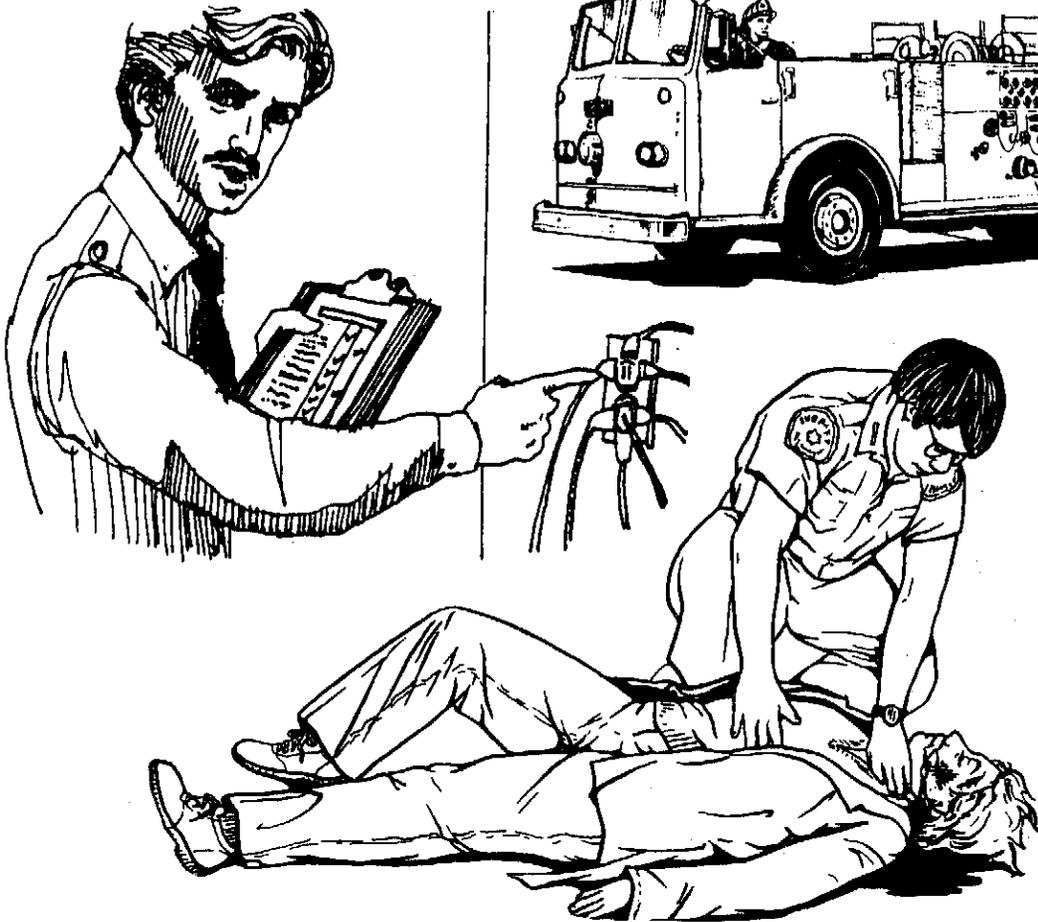
AS SUBMITTED TO

THE HONORABLE MAYOR AND THE CITY COMMISSION

NORM GRAY, FIRE CHIEF

RICH COE, ASS'T CHIEF

BOB KNUDSON, FIRE MARSHAL



**FIRE PREVENTION, FIRE SUPPRESSION,
EMERGENCY MEDICAL SERVICES**

"YOUR FULL SERVICE FIRE DEPARTMENT"

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Commissioners
 Russell J. Ritter, Mayor
 Rayleen Beaton
 Michael J. DaSilva
 Rose Leavitt
 Blake Wordal



January 16, 1987

Fire Department
 Mailing Address:
 City-County Admin. Bldg.
 316 North Park
 Helena, MT 59623
 Phone 406/442-9920
 Office Location:
 Civic Center Building

William J. Verwolf
 City Manager

Fire Chief
 Norm Gray

Mr. Bill Verwolf
 City Manager
 316 N. Park
 Helena, MT 59623

Dear Mr. Verwolf,

I am pleased to present to you the 1986 Annual Report of the Helena Fire Department which contains statistical data and information for the past year.

This year has been a very interesting and rewarding year for the Helena Fire Department in the three (3) major functions of the department.

Fire Prevention: Under the direction of Fire Marshal, Bob Knudson, the Fire Prevention Bureau met or exceeded all goals for the year, 1,362 inspections and re-inspections were conducted. Approximately 2,500 adults and children were talked to directly, and an undetermined amount of people were indirectly talked to through the use of the media, under our Public Education Program. Our Plan Review Program, with the co-operation of the City Building Department, is also moving ahead. The Fire Prevention Bureau has made great strides in the past several years and our goal is to continue up-grading the quality of this important function of the Helena Fire Department.

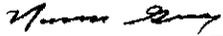
Fire Suppression: The combat crews of the Helena Fire Department responded to 956 alarms in 1986. Of this number 149 alarms were actual fires. There were 58 fires in buildings, 12 wild land fires, 24 vehicle fires, 37 dumpster fires, and 18 miscellaneous fires. Our total fire loss for the year was \$199,890.00. We had no major fires this year, but we did have one (1) civilian fire death. Our new pumper was delivered in February, and has proven to be an excellent piece of equipment. Under the supervision of Ass't Chief, Rich Coe, the combat crews are doing a great job. Our on-going training programs, along with new training is helping our firefighters to be ready to meet any crisis. The new communications system is proving to be very successful and has added to our capabilities.

Emergency Medical Services: With the certification of three (3) new firefighters as Emergency Medical Technicians, we now have fourteen (14) EMT's. We responded to 570 EMS calls in 1986. This service is proving to be relied on more each year by the citizens of the City of Helena. All of our EMT's have taken a course in defibrillation and are now certified EMT-D's. They now can defibrillate a cardiac arrest patient in the field, which will increase the survival rate of heart attack victims. The City of Helena can be very proud of these dedicated firefighters for their performance in the past, and for taking on this added responsibility.

Our goals for the coming year are to continue, to the best of our ability, to protect the citizens of the City of Helena, through Fire Prevention, Fire Suppression, and Emergency Medical Services.

I would like to thank you, the City Commission and the dedicated members of the Helena Fire Department for the help and support which I have received this past year.

Respectfully submitted,


Norm Gray, Fire Chief
Helena Fire Department

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MAYOR
RUSS RITTER

COMMISSION
RAYLEEN BEATON
MIKE DASILVA
ROSE LEAVITT
BLAKE WORDAL

CITY MANAGER
BILL VERWOLF

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Norm Gray

HELENA FIRE DEPARTMENT

FIRE CHIEF

NORM GRAY

ASS'T . FIRE CHIEF

RICH COE

FIRE PREVENTION BUREAU

FM - FR BOB KNUDSON

FPO - HARRY CRAWFORD

CFF - FRITZ ZETTEL

COMBAT

SHIFT #1

Capt. Ron Jacobsen
LT. - FR Ted Simpson
FF 1/C-FR Ron Morris
FF 2/C-EMT Jim Skinner
FF III-EMT Warren Ziegler
FF III Don Gage
FF III Doug Duncan
FF I-EMT Pat Clinch
CFF-EMT Larry Ross

SHIFT #2

Capt. Joe Cross
LT. Dennis Sorrels
FF 1/C Bob Olson
FF 2/C-FR Mike Spotorno
FF III-EMT Jim Feucht
FF III-EMT Ed Flies
FF III-EMT Steve Larson
CFF-EMT Bob Fearon
CFF-EMT Jim Mitchell

SHIFT #3

Capt. Bob Pare
LT.- Mech. Don Hurni
FF 1/C-EMT Mike Foster
FF 2/C-EMT Jay Moore
FF III Dale Klugman
FF III-EMT Norb Roth
CFF-EMT Joel King
CFF-EMT Roy Swanby
PFF Kevin Kelly

SECRETARY

BERNIE MARTIAN

New Man - Kevin Kelly

Retired - FF 1/C Art Kreiger

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Fire Chief
Norm Gray

FIRE APPARATUS

<u>APPARATUS #</u>	<u>STATION</u>	<u>TYPE APPARATUS</u>	<u>DESCRIPTION</u>	<u>YEAR</u>
Engine 1	1	1250 Pumper	Sutphen	1986
Engine 2	2	1250 Pumper	Hahn	1980
Engine 3	1	1250 Pumper	Seagraves	1975
Truck 1	1	85' Tower	Sutphen	1976
Truck 2	2	75' Ladder	Pirsch	1946
Squad 1	1	Mini/Rescue	Dodge	1976
Squad 2	2	Mini/Rescue	Chevrolet	1979
#127	1	Staff	Ford 2 dr	1980
#128	1	Staff	Ford 4 dr	1980
#129	1	Staff Pickup	Ford PU	1981
#130	1	Staff Pickup	Ford PU	1985



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Fire Chief
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FIRE INCIDENT STATISTICAL REPORT

Source of Alarm

	<u>This Year</u>	<u>Last Year</u>
Fire Department telephone.....	54	350
Police Department telephone.....	795	502
Alarm Board.....	72	53
Radio.....	25	31
Direct report.....	10	20
Total.....	<u>956</u>	<u>956</u>

Type of Situation Found

	<u>This Year</u>	<u>Last Year</u>
Fire, explosion, etc.....	149	204
Smoke scare.....	63	57
Rescue, crash emergency.....	570	494
Hazardous condition.....	44	46
Public Service.....	14	20
Alarm - (no fire).....	83	89
False alarm (malicious).....	12	10
Electrical problem.....	15	25
Miscellaneous.....	6	11
Total.....	<u>956</u>	<u>956</u>

	<u>This Year</u>	<u>Last Year</u>
In City.....	921	918
Fire District.....	28	33
Contract.....	2	3
Mutual Aid.....	5	2
Total.....	<u>956</u>	<u>956</u>

-continued on next page

Fire Location

	<u>This Year</u>	<u>Last Year</u>
In building.....	58	74
Wild Land.....	12	32
Rubbish near building.....	2	7
Rubbish in vacant lot.....	10	11
Trash cans.....	2	0
Vehicles.....	24	46
Dumpsters.....	37	30
Miscellaneous.....	4	4
Total.....	<u>149</u>	<u>204</u>

Fire Control Method

	<u>This Year</u>	<u>Last Year</u>
By Fire Department.....	121	166
By occupants.....	9	5
Sprinkler system.....	1	0
Fire out on arrival.....	18	28
Other.....	0	5
Total.....	<u>149</u>	<u>204</u>

Fire Causes (In Building)

	<u>This Year</u>	<u>Last Year</u>
Chimneys and wood burning appliances.....	26	29
Combustibles near heaters.....	7	6
Careless use of open flame.....	4	4
Careless use of smoking material.....	5	3
Children with matches.....	3	2
Defective electrical.....	6	10
Flammable liquids.....	1	1
Fireworks.....	0	0
Natural conditions.....	2	1
Incendiary.....	1	8
Suspicious.....	0	4
Unknown.....	0	0
Miscellaneous.....	3	6
Total.....	<u>58</u>	<u>74</u>

Fire Loss Analysis

	<u>This Year</u>		<u>Last Year</u>	
	<u>Fires</u>	<u>Loss</u>	<u>Fires</u>	<u>Loss</u>
Public buildings.....	1	\$ 0	1	\$ 500.00
Dwellings.....	51	\$172,290.00	59	\$828,735.00
Mercantiles.....	6	\$ 5,120.00	4	\$ 1,050.00
Manufacturing.....	0	\$ 0	0	0
Miscellaneous.....	0	\$ 0	7	\$ 2,500.00
Outdoor (vehicles).....	61	\$ 22,440.00	78	\$ 33,025.00

Total Fire Loss

	<u>This Year</u>	<u>Last Year</u>
Outdoor fires (vehicles & dumpsters).....	\$ 22,440.00	\$ 33,025.00
Building fires.....	\$177,410.00	\$832,785.00
TOTAL ESTIMATED FIRE LOSS.....	\$199,850.00	\$865,810.00

Death and Injury

	<u>This Year</u>	<u>Last Year</u>
Civilians injured.....	4	1
Firefighters injured.....	0	7
TOTAL.....	4	8
Civilians killed.....	1	0
Firefighters killed.....	0	0
TOTAL.....	1	0

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Fire Chief
Norm Gray

TO: Norm Gray, Fire Chief
FROM: Bob Knudson, Fire Prevention Officer
DATE: January 16, 1987
SUBJECT: Annual Report from the Fire Prevention Bureau
for the Year of 1986

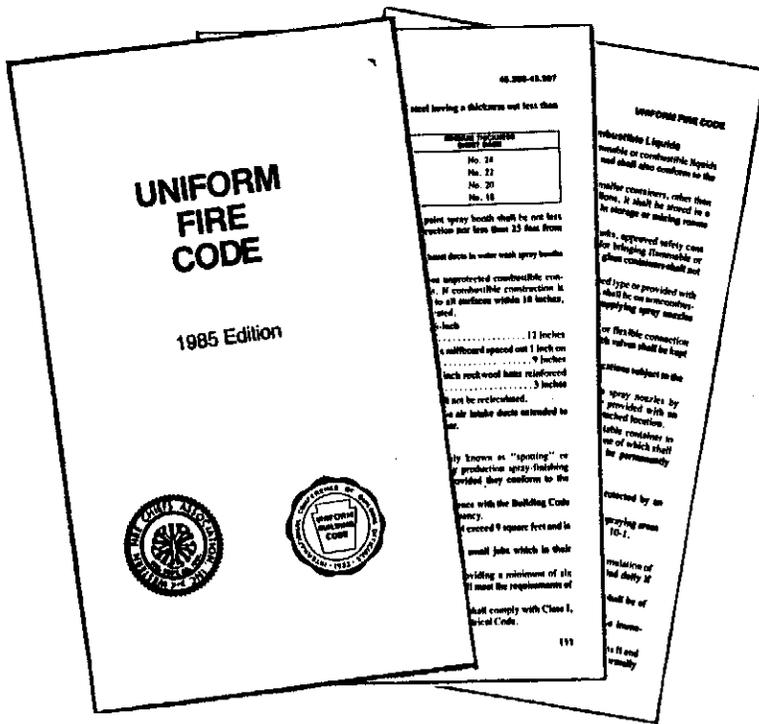
COMMENTARY:

Each year through the Fire Department's annual report to the elected officials and the citizens of Helena, the Fire Prevention Bureau strives to stress the importance of fire prevention. Fire is a potential threat to every human being and to practically all property. Despite improvements in building construction, consumer products, and fire protection methods, deaths from fire are averaging about 8,800 a year in the United States. In 1985, the latest year that figures are available, more than 2.3 million fires were reported, with a loss of 6,305 lives, more than 100,000 injuries, and an estimated \$7.3 billion in property damage.

Reducing the number of deaths and injuries from fire begins with three basic principles: Engineering, education and enforcement. Engineering principles related to fire prevention and fire protection includes such subjects as building design and construction, building equipment and facilities, fire protection systems and devices and the reviewing of proposed project plans and drawings for new construction and modifications for existing structures. Education - the Fire Prevention Bureau is responsible for developing and conducting a continuing public education program which is aimed at maintaining a high level of fire safety consciousness, in addition a number of specific programs dealing with fire safety for specific groups are also conducted by the bureau, such as Fire Prevention Week and counseling of juvenile fire setters. Enforcement - the enforcement of fire and building codes is a major role of the Fire Prevention Bureau, throughout history governments have recognized the need to have some

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January 16, 1987
page 2

form of "fire code", historically, the first recorded attempts to control the ravages of fire took place about 300 B.C. in Rome when fire fighting duties were delegated to a band of slaves, the Familia Publica, supervised by committees of citizens. Today both the State of Montana and the City of Helena adopt the "Uniform Fire Code" a model code that serves to protect the citizens of Montana from the threat of fire. A more complete summary of some of the functions and activities of the bureau are contained in the following pages.



CODE ENFORCEMENT ACTIVITIES

The Uniform Fire Code was initially developed by the California Fire Chiefs Association and was first published in 1971 by the International Conference of Building Officials and the Western Fire Chiefs Association. A revised edition was published in 1973 and subsequent editions have been published at three-year intervals. New editions incorporate changes approved at annual meetings of the Western Fire Chiefs Association.

It is the intent of the International Conference of Building Officials and the Western Fire Chiefs Association to correlate

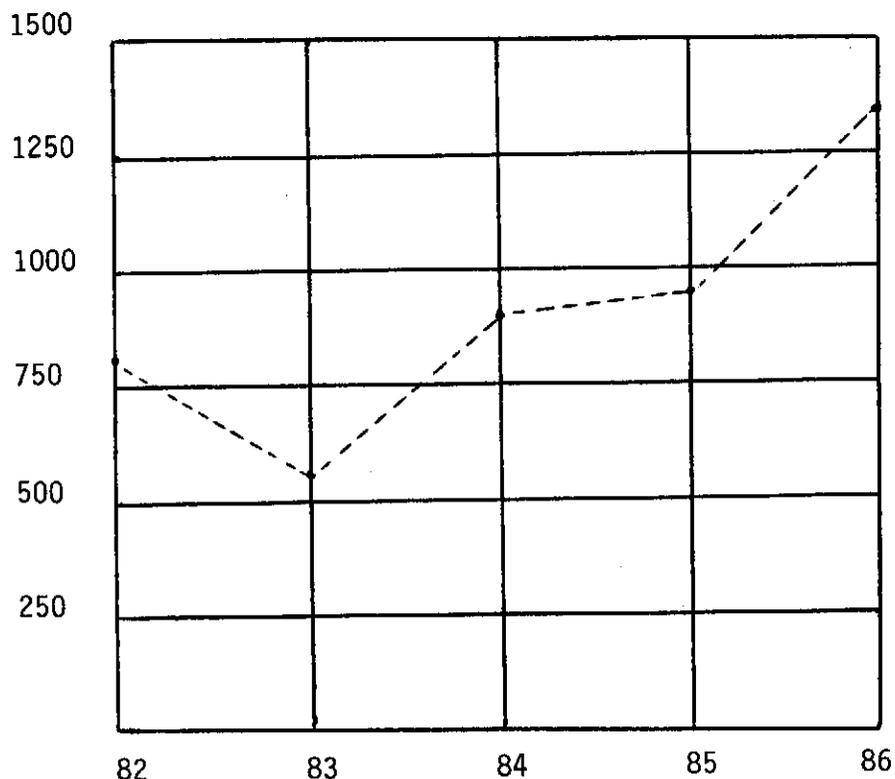
the provisions of the Uniform Fire Code and the Uniform Building Code so that there is no conflict between them. Neither code is intended to stand alone; rather, the total package, i.e., the Uniform Fire Code, the Uniform Building Code, the Uniform Mechanical Code, the Uniform Plumbing Code and the National Electrical Code, give cities and counties a complete and comprehensive program of model codes that are compatible with each other.

Both the State of Montana, and the City of Helena adopt the Uniform Fire Code. The Fire Prevention Bureau is required to inspect, as often as may be necessary, all buildings and premises, including such other hazards or appliances as the chief may designate for the purpose of ascertaining and causing to be corrected any conditions which would reasonably tend to cause fire or contribute to its spread, or any violation of the purpose or provisions of the fire code and of any other law or standard affecting fire safety.

INSPECTIONS

<u>OCCUPANCY TYPE</u>	<u>NUMBER OF INSPECTIONS 1986</u>	<u>NUMBER OF INSPECTIONS 1985</u>
Mercantile.....	59.....	134
Educational.....	22.....	21
Public Assembly.....	62.....	54
Residential.....	124.....	120
Business.....	286.....	172
Industrial.....	176.....	107
Miscellaneous.....	50.....	54
Sub-Total.....	779.....	662
Re-inspections conducted.....	483.....	270
TOTAL INSPECTIONS FOR 1985-86.....	1362.....	932

TOTAL INSPECTIONS - FIVE YEAR COMPARISON



NOTICES, ORDERS & CITATIONS:

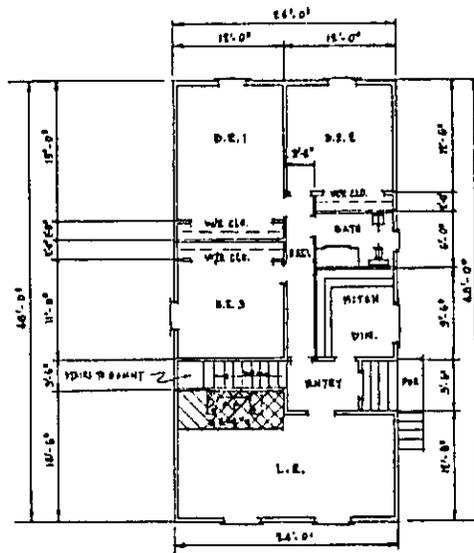
Notices are issued for the correction of routine code violations, orders are issued for the correction of more hazardous violations, and to gain code compliance, after all other measures have failed a citation is issued.

During 1986, the bureau issued 570 notices, 25 orders, and 9 citations.

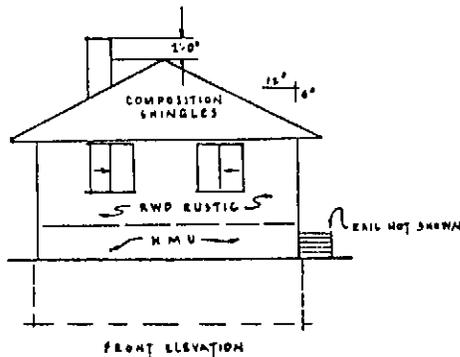
COMPLAINT INVESTIGATIONS

The Fire Prevention Bureau conducts investigations of complaints received from local businesses and the citizens of Helena, concerning code violations, hazardous conditions, and public safety. During 1986, the bureau received and investigated 62 complaints. Some of the complaints received concerned:

- Vehicles parked in the fire lanes at Capital and Helena High Schools.
- Gasoline/solvent fumes entering a business from a sewer line.



FLOOR PLAN
Figure 1-3



FRONT ELEVATION
Figure 1-4

PLAN REVIEWS

Traditionally, the activity of the Building Department has involved the design, construction, and final occupancy inspection of the building. The Fire Department's role has usually begun upon occupancy of the building and has concerned the maintenance of life safety conditions and the handling of contents.

Today, the Fire Department's role in the building construction process is changing. The participation of the Fire Marshal in the review of building plans and specifications and the construction process, has become an increasingly important fire prevention function. The plan review process is conducted in close cooperation with the Building and Safety Department, and provides the Fire Department with its best opportunity to see that fire protection standards are met prior to the completion of construction and occupancy of the building.

If questions and issues concerning the effect of construction on fire safety are discussed during the plan review process with

the architect, engineers, contractors and other code officials, misunderstandings and conflicts that may arise during the construction or final finish phase can be prevented, if not eliminated. Design professionals benefit from this process as well because problems which would otherwise cost them time and money are eliminated before construction begins.

During 1986, the Fire Prevention Bureau devoted 48 hours to plan reviews.



FIRE INVESTIGATIONS

As required by State law, the Fire Prevention Bureau is responsible for investigating all fires within its jurisdiction. The term "fire investigation" describes a broad range of activities dealing with post-fire data gathering and analysis to document fire ignition scenarios, fire development, material identification, human behavior, and important fire safety lessons learned.

Investigations of this type are usually concerned with ignition scenario and area of origin determination, with particular emphasis on the investigation of incendiary and suspicious or fatal fires. Fire incidents are also investigated for loss analysis and prevention purposes. These investigations are usually conducted to determine what can be learned from a particular fire incident. Investigations conducted for loss analysis purposes focus on the reasons for fire spread, performance of fire protection features, and those factors contributing to life loss or property damage in addition to the fire cause and origin details.

At the present time all Fire Prevention Bureau personnel have completed the State Fire Marshal Bureau's, basic and advanced arson investigation programs and are members of the International Association of Arson Investigators.

In 1986, the Bureau investigated a total of 16 fires, 10 were determined accidental, and 6 incendiary.

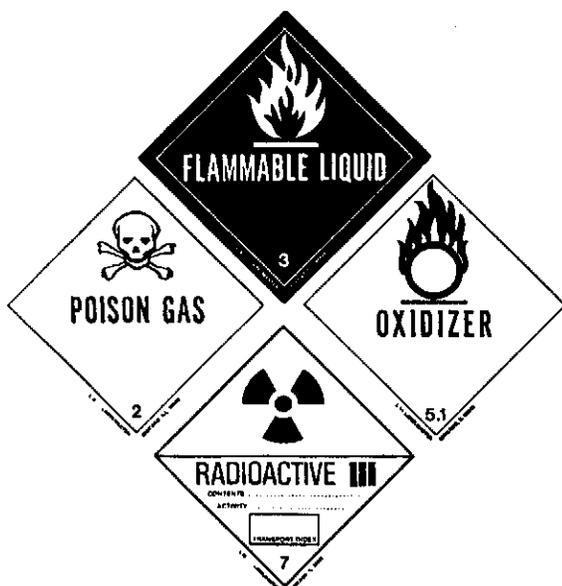
FIVE YEAR COMPARISON

<u>YEAR</u>	<u>NO. INVESTIGATED</u>	<u>INCENDIARY</u>	<u>ARRESTS</u>	<u>CONVICTIONS</u>
1986	16	6	1	0
1985	24	8	0	0
1984	16	1	0	0
1983	28	15	1	1
1982	31	11	0	0

FIREWORKS

During 1985, the Helena Police and Fire Departments received a total of 174 complaints concerning the use of fireworks within the City of Helena. Under the provisions of State Fire Code, Section 50-37-106, the sale of fireworks is restricted to a 12 day period commencing on June 24th and running through July 5th. In an eleven (11) day period in 1985, running from June 25th to July 5th, the Helena Fire Department responded to 13 fires caused by fireworks. The Uniform Fire Code as adopted by the City of Helena, prohibits the possession, sale, offering for sale, storage or use of fireworks within the City of Helena.

In 1986, the Helena Fire Department, in an effort to combat the fireworks problem, began a program of stepped-up enforcement of the Uniform Fire Code. By working together with the Helena Police Department and through the use of the news media, the number of fires resulting from fireworks during the twelve (12) day period in which they may be legally sold, dropped to zero. The total number of complaints received dropped to 92.



HAZARDOUS MATERIALS

Hazardous materials are regulated under a number of provisions of the Uniform Fire Code. In addition to which the Fire Prevention Bureau participates in a number of programs in conjunction with the National Fire Protection Agency, and the Montana Department of Health and Environmental Sciences. The Bureau is also responsible for compliance with certain provisions of the Employee/Community Hazardous Chemical Information Act.

The Bureau conducts an on-going hazard assessment and risk analysis of all facilities involved in the transportation, storage, handling and use of hazardous materials within the city. This is done as part of the Bureau's uniform inspection procedure. A summary of some of the programs dealing with hazardous materials is included in this section.

Underground Storage Tank Program

The United States Environmental Protection Agency (EPA) estimates that three to five million underground tanks in the United States contain petroleum or "hazardous substances". It has been estimated that thousands of these tanks are currently leaking, and many more are expected to leak within the next five years.

In addition to the fire and explosion potential, growing evidence indicates that such tanks are a major cause of groundwater contamination. Because half the population of the United States depends on groundwater as a source of drinking water, the underground-storage-tank problem has been recognized as one of national significance requiring federal legislation.

Congress responded to the problem by incorporating a new subtitle in the Hazardous and Solid Waste Amendments of 1984, which President Reagan signed on November 8, 1984. This Subtitle I provides for the development and implementation of a comprehensive regulatory program for underground storage tanks.

The installation, operation and use of underground storage tanks, piping and related fuel handling equipment is regulated under the provisions of Article 79 of the Uniform Fire Code, and as such the Fire Prevention Bureau has the primary responsibility for conducting inspections of underground storage tanks, piping and equipment to insure compliance with the Fire Code and other applicable regulations.

During 1986, the Bureau has worked with the State Solid and Hazardous Waste Bureau to improve the Fire Department's inspection program and has provided local businesses with information and forms regarding the notification of the Solid and Hazardous Waste Bureau concerning underground storage tanks as required under the new provisions of State and Federal Law.

Chemical Emergency Preparedness Program

In June of 1985, the Environmental Protection Agency began a program to assure that communities are prepared to deal effectively with possible accidental releases of acutely toxic chemicals.

The Environmental Protection Agency has developed criteria to identify acutely toxic chemicals, and a list of such chemicals. These acutely toxic chemicals can cause death or injury in the event of an accidental release into the air. The extent of harm will depend on the chemical involved, its physical state, how it is handled at the site, the amount released, the prevailing weather conditions at the time of release, the population potentially affected, the emergency preparedness measures in place in the community, and the actual response actions taken.

The EPA's criteria has been incorporated into the Helena Fire Department's hazard assessment and risk analysis for hazardous materials. In addition to which many of the programs criteria are covered under the Bureau's permit system and the requirements of the Uniform Fire Code.

At the present time there remains quite a bit of work to be completed, however, the Bureau feels that the City of Helena is ahead of many other communities in the state in accomplishing this task.

Methane Gas Monitoring

The City of Helena landfill is listed on the Environmental Protection Agency's Comprehensive Environmental Resource Compensation and Liability Information System (CERCLIS) list. The site was included on the original list primarily because of the potential for methane gas problems associated with the landfill and also because of the potential of groundwater contamination from landfill leachate.

The Fire Prevention Bureau conducts periodic sampling and monitoring of methane gas levels at various test sites on and around the landfill and in adjoining buildings. Results of sampling and monitoring are measured in terms of percent L.E.L. (lower explosive level) and percent gas present and serve to readily identify any problems.

PCB Monitoring Program

in 1976, congress passed the Toxic Substances Control Act (TSCA) and specifically directed the Environmental Protection Agency to regulate polychlorinated biphenyls (PCBs).

More recently EPA has adopted regulations for the manufacturing, processing, distribution in commerce, and use prohibitions for PCBs under the Toxic Substances Control Act. Under these regulations and effective on December 1, 1985, notification was required to be provided to the Fire Department in whose jurisdiction, all PCB transformers (including PCB transformers in storage) are located.

In addition to which requirements on storage, and use locations with regard to fire safety were addressed. Under this program the Fire Prevention Bureau maintains a list of all locations of PCB transformers and conducts inspections of these locations as necessary.

Small Quantity Generator Hazardous Waste Program

In 1976, congress passed the Resource Conservation and Recovery Act (RCRA) which directed the Environmental Protection Agency to develop a program to protect human health and the environment from improper hazardous waste management practices. The program is designed to control the management of hazardous waste from its generation to its ultimate disposal from "cradle to grave".

In late November 1984, the Hazardous and Solid Waste Amendments to RCRA were signed into law. With these amendments, congress directed EPA to establish new requirements that would bring small quantity generators who generate 100 to 1000 kilograms (kg) of hazardous wastes in a calendar month into the hazardous waste regulatory system. EPA issued final regulations for these 100 to 1000 kg/mo generators on March 24, 1986. Most of the requirements became effective on September 22, 1986.

While the Fire Prevention Bureau does not have direct responsibility for the enforcement of hazardous waste laws the Bureau does participate in a joint EPA/NFPA program to provide assistance and information to local businesses concerning hazardous wastes.



NEW MASCOT — 'Sparky,' the new Helena Fire Department mascot, joined Central School second graders this morning at the Civic Center station to watch a demonstration on how fires are caused. The students also toured the station and got fire hats. It was all part of National Fire Prevention Week. (Staff photo by Gene Fischer) (Independent Record)



THE HISTORY OF FIRE PREVENTION WEEK

On the night of October 9, 1871, a fire broke out in the vicinity of the barn owned by Mr. and Mrs. Patrick O'Leary at 137 DeKoven Street (now the site of the Chicago Fire Department Training Academy). Tradition lays the blame for the start of the fire and resulting conflagration on Mrs. O'Leary's cow who supposedly kicked over a kerosene lantern and kindled the fire. Whether the cow was to blame or not remains unknown, but most other circumstances surrounding the fire, including the extent of losses, are well known. The fire burned for twenty-seven hours, destroying 17,500 buildings, killing 250 to 300 people, and leaving approximately 100,000 homeless. The fire loss was estimated at \$200 million dollars.

On the same day that Chicago was being devastated by fire, the small lumbering community of Peshtigo, Wisconsin, suffered one of the most severe fires in terms of loss of life experienced in the history of the United States. On October 9, 1871 a forest fire in the area surrounding Peshtigo accelerated into a fire storm and swept through the town destroying every building except for one home under construction. Being a lumbering town, Peshtigo was built of wood. Not only were the buildings and sidewalks constructed of wood, but sawdust was used on the roads to reduce dust. The fire moved so fast the people could not flee in time to escape, and nearly 800 people perished in the fire that destroyed timber in an area sixty miles north and south and twenty miles east and west.

Fire Prevention Week, established in 1922 on the anniversary of these fires, is intended to serve as a reminder of the destructiveness of fire and the importance of its prevention.



Firesafety Crossword

Across

2. It's what catches on fire.
3. It's what you use to put out a fire.
4. It's what you use to put out a fire.
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During Fire Prevention Week and throughout the year the Helena Fire Department distributes a number of different fire safety materials, ranging from coloring, and comic books to crossword puzzles. These materials designed to teach fire safety to the children of Helena serve a valuable purpose.

Each year throughout the nation many young children are burned and injured by the ignition of their clothing. Clothing fires cause more severe burns than burns on an unclothed area. Injury from clothing fires can be greatly reduced if a child will immediately stop, drop and roll.

This action protects the face, neck and breathing passages. Heat and flame rise, so that when a child is standing up they go straight into the face, nose and mouth. This is aggravated if the child runs and fans the flame. When the child drops and becomes horizontal, the heat and flame still go up, but away from sensitive areas. Rolling smothers the fire to extinguish it.

Various other aspects of fire safety are also covered in these materials, such as preventing fires in and around the home, and what to do if a fire strikes.

PUBLIC SERVICE ANNOUNCEMENTS



Among the many measures that can be taken to reduce fire losses, perhaps none is more important than educating people about fire. Americans must be made aware of the magnitude of fire's toll and its threat to them personally. They must know how to minimize the risk of fire in their daily surroundings. They must know how to cope with fire, quickly and effectively, once it has started.

The prevention of fires due to human carelessness is not all that fire safety education can hope to accomplish. Many fires caused by faulty equipment rather than carelessness could be prevented if people were trained to recognize hazards. And, many injuries and deaths could be prevented if people knew how to react to a fire, whatever its cause.

Each year through the use of Public Service Announcements, conducted with the cooperation and assistance of the local news media, the Fire Prevention Bureau strives to make the public aware of various fire hazards.

Some of the subjects covered by these PSA's include spring clean-up week, fireworks safety, fire prevention week, and holiday and Christmas safety.

During 1986, the bureau conducted 16 Public Service Announcements.



COUNSELING JUVENILE FIRE SETTERS

Learning about fire is a part of every child's growth process. A passing interest in fire is quite normal from the ages of approximately 2 - 7 years. This interest is often exhibited when children light small fires or play with matches, lighters, or candles. Children are great imitators. They mimic the adults they see lighting cigarettes, candles, and fireplaces. To most children under seven there is little understanding of fire and its destructive consequences. To them fire has a magical quality. Small children can strike a match and start a small fire. They can then touch the lighted match to a small pile of papers and create a large, warm, bright fire, all through the magic of their match.

If the fire rapidly spreads beyond the initial pile of papers, the curious fire players will usually attempt to extinguish the fire or run for help. This fire play, however innocent, is dangerous and must be controlled. Each year the Fire Prevention Bureau receives requests from parents of children playing with fire for counseling. As part of the Bureau's public education program the Fire Marshal works with the parents and child involved to channel this curiosity about fire into protective and non-destructive areas. During 1986, the Fire Prevention Bureau counseled six (6) juvenile fire setters.

Commissioners
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Rayleen Beaton
Michael J. DaSilva
Rose Leavitt
Blake Wordal

William J. Verwolf
City Manager



Fire Department
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Helena, MT 59623
Phone 406/442-9920
Office Location:
Civic Center Building

Fire Chief
Norm Gray

TO: Norm Gray, Fire Chief
FROM: Rich Coe, Ass't Fire Chief
DATE: January 16, 1987
SUBJECT: Fire Department Training

Fire Department training for 1986:

- 1) There were 34 company inspections conducted during the year. These are done mainly to familiarize firefighters with buildings in their response area.
- 2) Five hundred (500) fire hydrants were flushed. This procedure has several purposes; to check for malfunctioning equipment, to check and record the water available and to flush silt and rust from water lines.
- 3) Classes were held to familiarize Fire Department personnel with chlorine cylinder kits. The kits are used to control a leak if one should occur.
- 4) Eighteen (18) men attended "Fire Command I", a twelve (12) hour course.
- 5) Eighteen (18) men attended "Basic Arson Investigation" and "Advanced Arson Investigation", each a sixteen (16) hour course.
- 6) Three of the men hired in 1986 are now E.M.T. certified, making a total of fourteen (14). The fourth man will be taking the course when it is given again.

Fire Department Training
January 16, 1987
page 2

- 7) All E.M.T.'s are now E.M.T.-D certified. They have had the required instruction and passed a test, which qualifys them to use heart defibrillators.
- 8) Firefighters were recertified in C.P.R.

The preceding items are in addition to the day to day fundamental training. Included are such things as driving and pump practice, hose evolutions, mask drills, ladder drills and streets and addresses. Apparatus and equipment is checked daily and/or weekly. All fire pumps and hose are tested annually.

The City Fire Department, as well as other Fire Departments in this area, are limited as to the practical training that can be accomplished. This is due mainly to the lack of a Fire Department training area or facility.

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William J. Verwolf
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Fire Chief
Norm Gray

TO: Norm Gray, Fire Chief
FROM: Don Hurni, Mechanic
DATE: January 16, 1987
SUBJECT: 1986 Truck and Equipment Maintenance

Major work on apparatus and equipment is performed by the Fire Department mechanic, and most minor work and preventative maintenance is performed by shift members.

Following is a breakdown of costs of repairs by vehicle.

Engine 1 (1986 Sutphen).....	\$ 354.92
Engine 2 (1980 Hahn).....	\$ 447.31
Engine 3 (1975 Seagraves).....	\$ 307.66
Truck 1 (1976 Sutphen).....	\$1,220.67
Truck 2 (1946 Pirsch).....	-0-
Squad 1 (1976 Dodge).....	\$ 69.61
Squad 2 (1980 Chevrolet).....	\$ 86.08
#127 (1980 Ford Sedan).....	\$ 157.47
#128 (1980 Ford Sedan).....	\$ 178.53
#129 (1980 Ford Pickup).....	\$ 264.43
#130 (1985 Ford Pickup).....	\$ -0-
	<u>\$3,086.68</u>

-continued on next page

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City shop service charge.....	\$1,566.00
Total vehicle repairs.....	\$4,649.68
Total equipment repairs.....	\$1,742.26
Total vehicle's equipment repair 1986.....	\$6,391.94
Total man hours for mechanic.....	480 hours
Total man hours shift personnel.....	3,963 hours

GUARDIAN OF THE GULCH



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HELENA FIRE DEPARTMENT

YEARLY FUEL REPORT

(January 1, 1986 to December 31, 1986)

<u>VEHICLE</u>	<u>FUEL</u>	<u>MILES</u>	<u>M.P.G.</u>
Engine 1 (Diesel).....	437 gallons.....	1,804.....	4.1
Engine 2 (Diesel).....	357 gallons.....	2,062.....	5.7
Engine 3 (Diesel).....	143 gallons.....	348.....	2.4
Squad #1 (Gasoline).....	448.9 gallons.....	1,721.....	3.8
Squad #2 (Gasoline).....	385 gallons.....	1,718.....	4.4
Truck #1 (Diesel).....	286 gallons.....	819.....	2.8
Truck #2 (Gasoline).....	37 gallons.....	35.....	.9
#127 Ford (Gasoline).....	316.9 gallons.....	4,884.....	15.4
#128 Ford (Gasoline).....	357 gallons.....	5,149.....	14.4
#129 Ford Pickup (Gasoline)...	447.8 gallons.....	4,950.....	11.0
#130 Ford Pickup (Gasoline)...	379 gallons.....	5,600.....	14.7
TOTAL GALLONS OF GASOLINE (NON LEAD).....1,501.1 gallons			
TOTAL GALLONS OF DIESEL.....1,223 gallons			
TOTAL GALLONS OF GASOLINE (REGULAR).....871.2 gallons			
TOTAL GALLONS OF FUEL.....3,595.3 gallon			
TOTAL MILES (ALL VEHICLES).....29,090 miles			
AVERAGE M.P.G. (ALL VEHICLES).....8 M.P.G.			

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BUILDING MAINTENANCE

Members of the Helena Fire Department devote many hours each year to building maintenance. This includes all janitorial work and most minor repairs. Members of the Helena Fire Department take pride in keeping their quarters clean and in good repair.

Following is a breakdown of building maintenance costs and utility costs for both stations from January 1, 1986 to December 31, 1986.

BUILDING MAINTENANCE COSTS:

Station 1.....	\$ 1,952.20
Station 2.....	\$ 2,908.30
Total.....	\$ 4,860.50

UTILITY COSTS: (1986)

Station 1	
Gas.....	\$ 4,449.35
Water & sewer.....	\$ 483.72
Sanitation.....	\$ 372.60
Station 2	
Electric.....	\$ 1,870.33
Gas.....	\$ 2,070.01
Water & sewer.....	\$ 722.42
Sanitation.....	\$ 243.72
Total Utilities.....	\$10,212.15

JANITORIAL COST: (1986)

Station 1 & Station 2....	\$ 830.25
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MAN-HOURS SPENT IN BUILDING MAINTENANCE - 3,262 hours

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HELENA FIRE DEPARTMENT OPERATIONAL PROCEDURE

IN-CITY ALARMS:

Small fires: Grass, brush, cars, dumpsters, garbage, etc.

Two (2) men - either squad or 1250 pumper
East of Montana - East Side Station
West of Montana - Main Station

Small structure fire: (Initial attack)

East of Montana - Engine 2 and three (3) men
Engine 1 and two (2) men

West of Montana - Engine 1 and three (3) men
Engine 2 and two (2) men

Extra man - Truck 1

Large structure fire: (Initial attack)

East of Montana - Engine 2 and three (3) men
Engine 1 and two (2) men
Truck 1 and one (1) man

West of Montana - Engine 1 and two (2) men
Truck 1 and one (1) man
Engine 2 and three (3) men

MUTUAL AID:

East Helena:

Engine 2 and two (2) men (call in two (2) men to standby)

West Valley:

Engine 2 and two (2) men (call in two (2) men to standby)



OPERATIONAL PROCEDURE:

Fire District #3:

Engine 1 and three (3) men (Squad 2 and Engine 2 move to main Station if working fire)

V.A. Hospital:

Engine 1 and three (3) men (Squad 2 and Engine 2 move to Main Station if working fire)

(Call in three (3) men to standby if working fire)

Highway Shops:

Engine 1 and three (3) men (Squad 2 and Engine 2 move to Main Station if working fire)

(Call in three (3) men to standby if working fire)

Fairgrounds:

Engine 1 and three (3) men (Squad 2 and Engine 2 move to Main Station if working fire)

(Call in three (3) men to standby if working fire)

If additional help is needed call Police desk and instruct dispatcher how many men will be needed. If only one shift is needed call in shift which was relieved.

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FIRE PROTECTION CONTRACTS

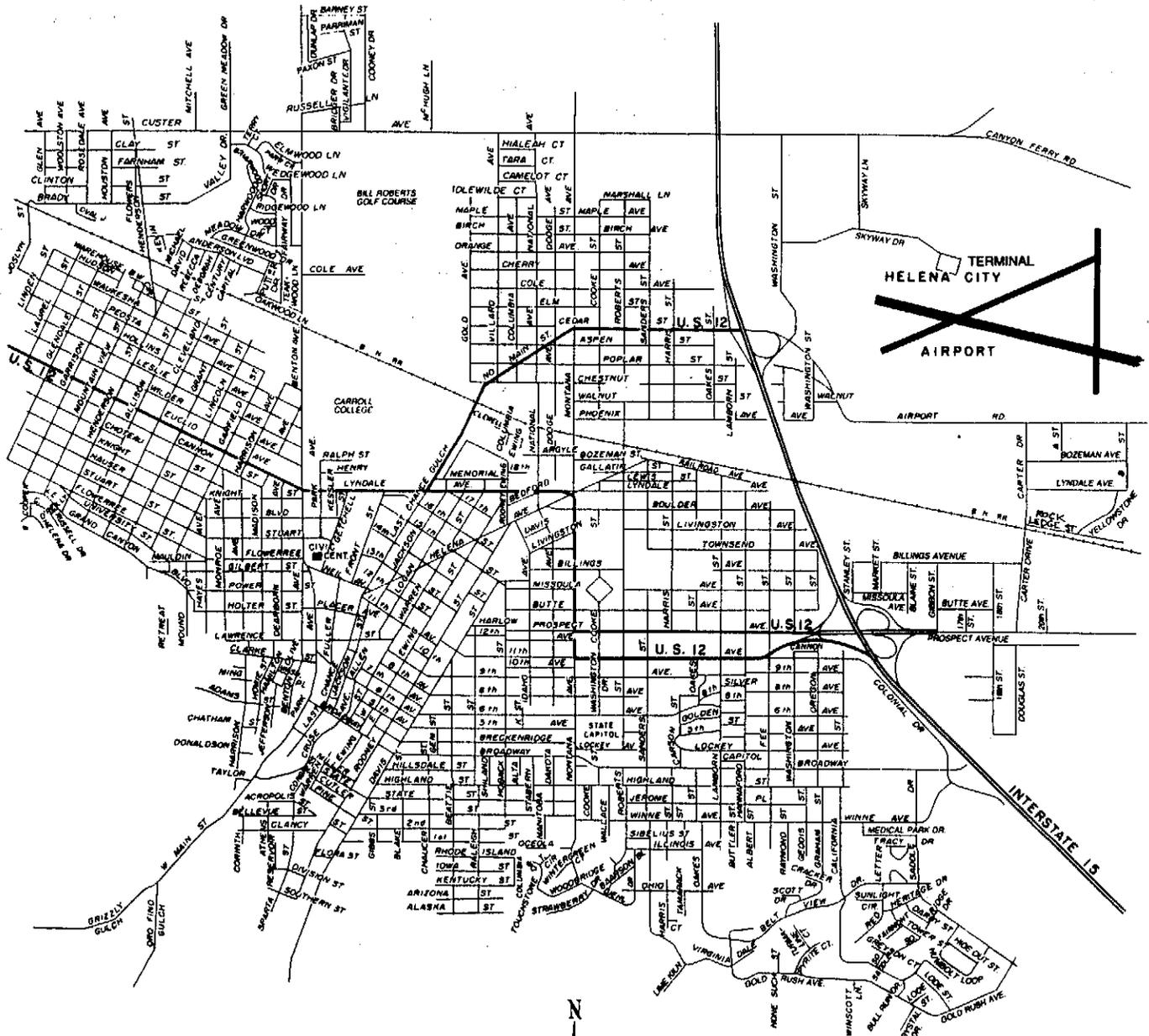
At the present time the City of Helena has several Fire Protection contracts with areas outside the city limits. These include the Veteran's Administration Hospital, the County Fairgrounds, the State Highway Shops, and the area west of the city which is Fire District #3. We cover these areas with one (1) pumper and three (3) men. The cost of the fire protection for these areas is computed by mill levy necessary for operating the Helena Fire Department. The cost for taxpayers in the fire district is computed on the same basis as the people who live in the city limits. The private protection contracts are re-negotiated each year after it is determined what the operational budget for the Helena Fire Department is.

Following is a breakdown of the money received by the City of Helena from these contracts:

VETERAN'S ADMINISTRATION HOSPITAL.....	\$21,869.00
COUNTY FAIRGROUNDS.....	\$ 2,803.00
HIGHWAY SHOPS.....	\$ 1,575.00
FIRE DISTRICT #3.....	<u>\$29,066.00</u>
TOTAL.....	\$55,313.00

The Helena Fire Department also has two (2) Mutual Aid contracts. These contracts are with the West Helena Valley Volunteer Fire Department and the East Helena Volunteer Fire Department. These contracts state that in the event of a large fire, the Helena Fire Department would receive one (1) pumper and ten (10) men from each fire department for a total of two (2) pumpers and twenty (20) men. If either of the volunteer fire departments should need our help, we are obligated to send one (1) pumper and two (2) men.

MAP OF HELENA



WEST OF MONTANA

Fires - 95
 EMS - 396
 Misc. - 137
 Total- 628

EAST OF MONTANA

Fires - 54
 EMS - 174
 Misc. - 100
 Total- 328

TOTAL CALLS BOTH EAST AND WEST SIDE - 956

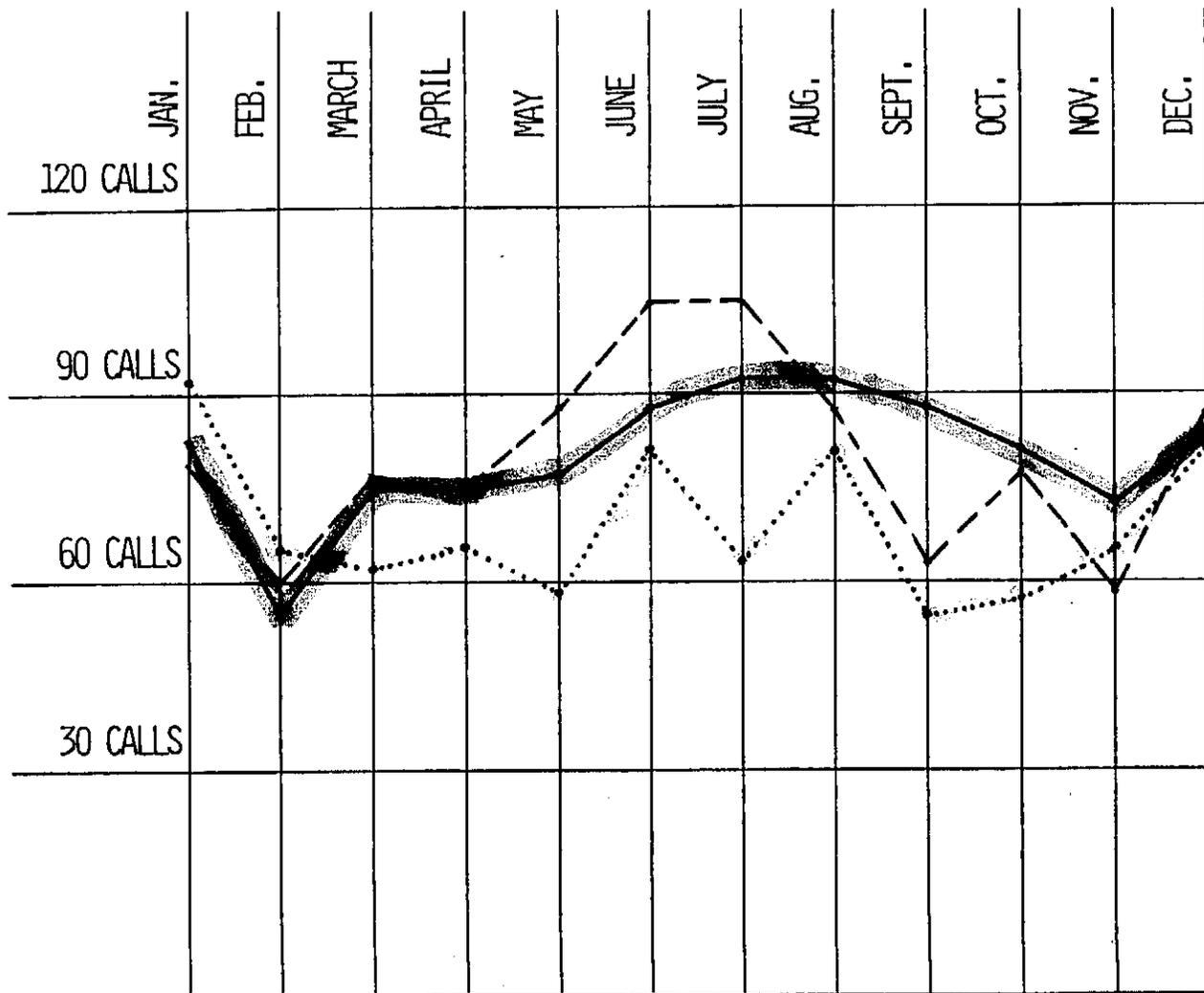
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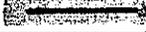


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CALLS PER MONTH OF YEAR - 1986 
 CALLS PER MONTH OF YEAR - 1985 
 CALLS PER MONTH OF YEAR - 1984 

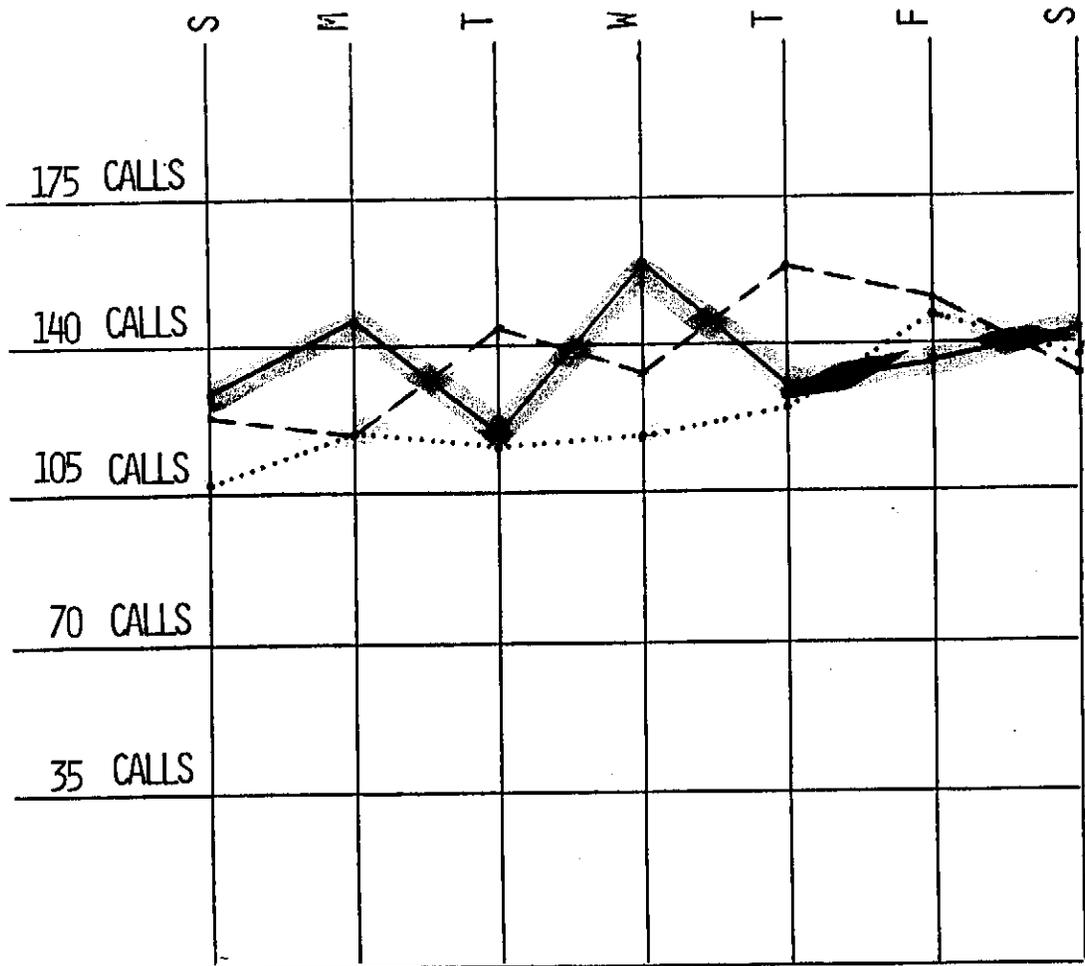
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CALLS PER DAY OF WEEK - 1986

CALLS PER DAY OF WEEK - 1985

CALLS PER DAY OF WEEK - 1984

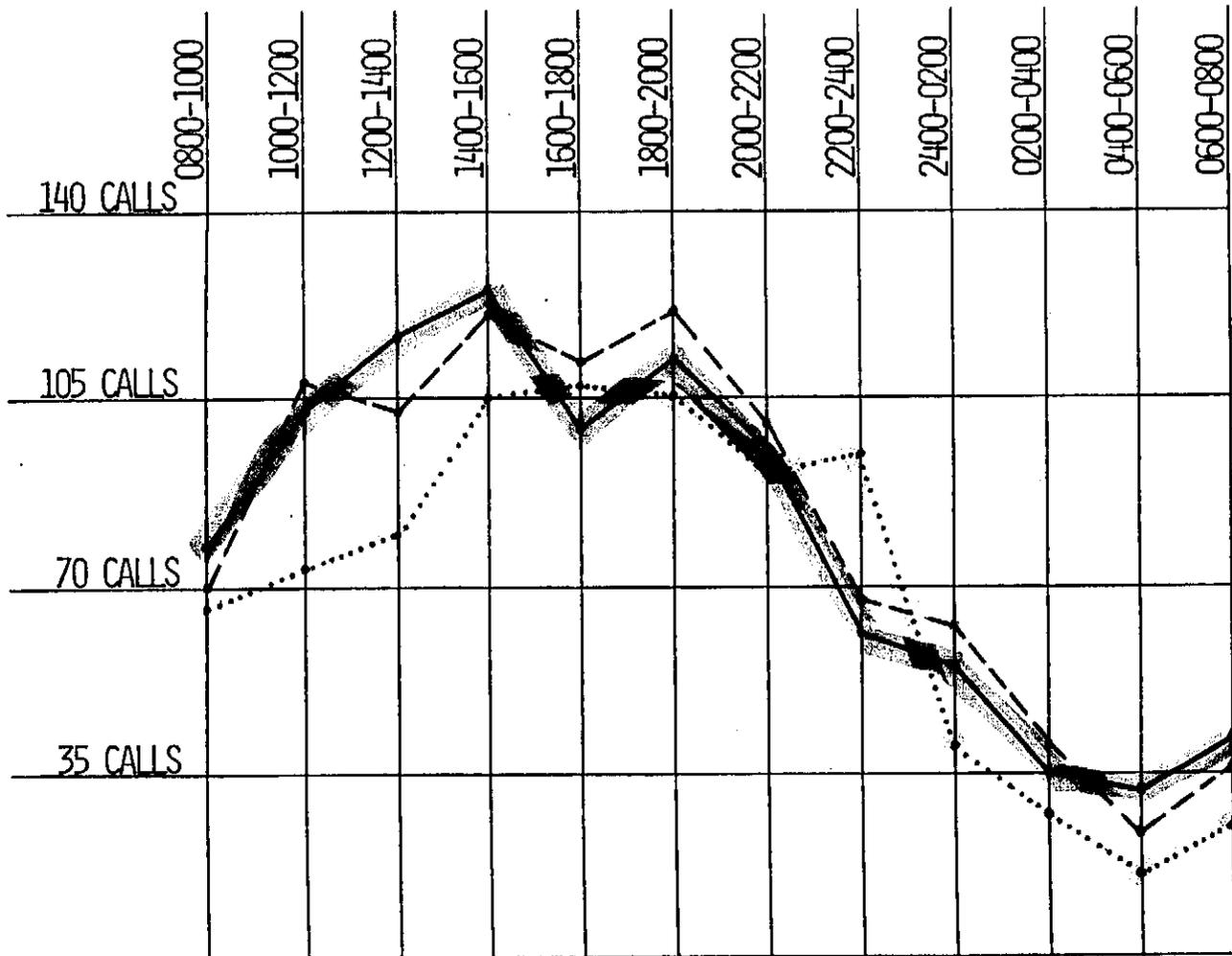
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CALLS PER HOUR OF DAY - 1986
 CALLS PER HOUR OF DAY - 1985
 CALLS PER HOUR OF DAY - 1984