

**REPORT OF THE
VIRGINIA DEPARTMENT OF HEALTH**

**FEASIBILITY OF ESTABLISHING
A SOUTHWEST VIRGINIA
REGIONAL OFFICE OF THE
CHIEF MEDICAL EXAMINER**

**TO THE GOVERNOR AND
THE GENERAL ASSEMBLY OF VIRGINIA**



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**COMMONWEALTH OF VIRGINIA
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COMMONWEALTH of VIRGINIA

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TO: The Honorable George F. Allen

and

The General Assembly of Virginia

The report contained herein is pursuant to House Joint Resolution 214, agreed to by the 1996 General Assembly.

This report constitutes the response to the request of the Department of Health to study the feasibility of establishing a regional Office of the Chief Medical Examiners in Southwest Virginia.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "Randolph L. Gordon".

Randolph L. Gordon, M.D., M.P.H.
Commissioner

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EXECUTIVE SUMMARY

House Joint Resolution 214, passed by the 1996 General Assembly, requested the Department of Health to study the feasibility of establishing a regional Office of the Chief Medical Examiner in Southwest Virginia. The Department was to consider the most appropriate site for an office; the availability of funds and necessary support services; the potential caseload; issues surrounding transportation and the lost time to the family, police officers, funeral directors and the courts; and such other issues as were appropriate.

Multiple-choice questionnaires were developed by a task group consisting of the Western District Pathologist, The Chief Medical Examiner and two administrators, analyzed by a biostatistician, reworded for statistical validity, and distributed to key groups who use the services of the Office of the Chief Medical Examiner. These groups included: all commonwealth's attorneys, local county and city medical examiners, heads of law enforcement agencies, and funeral directors in the 13 counties and three independent cities identified as the region known as Southwest Virginia.

A large majority of law enforcement and Commonwealth's Attorney respondents reported that a Southwest Virginia medical examiner's facility would facilitate their attendance at autopsies, allow better communication with the pathologist, and provide more convenient access to court for the pathologist thereby improving the overall quality of death investigation. They also recommended that the medical examiner's facility be co-located with a regional office of the Division of Forensic Science that would provide core services of drug analysis, firearms and fingerprints examinations to facilitate "one-stop" shopping on case investigation.

A Southwest Virginia regional facility, if it were to meet the standard of service as the Roanoke facility, would need a similar physical plant for both the Office of the Chief Medical Examiner and the Division of Forensic Science. It would need two pathologists if daily coverage of the office is to be provided, despite the fact that the caseload would provide only about 100 autopsies per year per pathologist. The office would also need an administrator, two morgue assistants to provide the present six days per week coverage and a secretary if it is to provide the same timeliness and quality of service that is presently provided at the Roanoke facility. Based on capitalization costs and operating costs for the Roanoke facility, estimates for future construction are it will cost more than \$3 million to establish a smaller but similar combined facility in Southwest Virginia and more than \$490,000 annually in operating costs.

The study concluded that more convenient, timely and accessible service to the Southwest region of the state would be achieved by development of a facility in Southwest Virginia staffed by Medical Examiner and Division of Forensic Science professionals. However, such an endeavor is not cost effective when population projections and funding are considered. When considering costs alone, resources might better be expended in augmenting services provided by the Western district in Roanoke rather than establishing an Abingdon office in the Southwestern area. The present and projected caseload of Southwest Virginia autopsies justify the addition of one pathologist and modest additions to the staff and equipment of the present Medical Examiner/Division of Forensic Science facility in Roanoke. Construction of a freestanding

medical examiner's facility is not recommended at this time.

PURPOSE

House Joint Resolution 214, passed by the 1996 General Assembly, requested the Department of Health to study the feasibility of establishing a regional Office of the Chief Medical Examiner in Southwest Virginia (See Appendix I). Patrons were Delegates Jackie T. Stump, Joseph P. Johnson, Jr., Terry G. Kilgore, Clarence E. Phillips and Senator Jackson E. Reasor, Jr. The Department was to consider the most appropriate site for an office; the availability of funds and necessary support services; the potential caseload; issues surrounding transportation and the lost time to the family, police officers, funeral directors and the courts; and such other issues as may be appropriate.

INTRODUCTION

Four regional offices of the Office of the Chief Medical Examiner (OCME) provide death investigation services and medicolegal autopsies for the citizens of the Commonwealth, law enforcement officials, the courts, families, insurers, and others who require competent determinations of cause and manner of death. The four regional offices include the Northern Virginia District (Fairfax), the Tidewater District (Norfolk), the Central District (Richmond), and the Western District (Roanoke). The Regional Office of the Chief Medical Examiner located closest to Southwest Virginia is in Roanoke.

Transportation of medical examiner cases from Southwest Virginia to the Roanoke Office for medicolegal autopsy can take between a one and a half to five hours under the best of road and weather conditions. The long distances and travel time frequently result in one or more of the following:

- Inconvenience, lost time and delays in service to police investigators, funeral directors, and court witnesses
- Delays in scheduling transport of bodies for autopsies with funeral homes
- Delays in examining dead bodies
- Delays in the return of the dead body for burial from one to three days depending on weather
- Difficulties for investigators in scheduling attendance at autopsies thereby reducing the opportunity for timely communication of autopsy findings and correlation with preliminary scene and investigative information
- Difficulties in the timely communication of autopsy findings to families during a time of tragedy
- Medical examiners being delayed in signing the official death certificate within the time limit established by the regulations of the Office of Vital Records
- Prolonged absences of the pathologists from the Western Regional OCME due to court appearances that take between eight and 17 hours and that often requires an overnight

stay

Delays in examination of the body for the collection of medical evidence by the pathologist and submission of that evidence by investigators to the Division of Forensic Science may ultimately: (1) reduce the quality of the evidence collected; (2) increase the difficulty of analyses; (3) and impair scientific conclusions that may be drawn from the evidence. The timely collection of time-sensitive medical evidence, such as sexual assault kits, toxicology, DNA, and gunshot residues, is also critical in criminal cases.

As directed by HJR 214, a study was undertaken to determine the feasibility of establishing a Southwest Regional Office of the Medical Examiner that would provide more prompt service, improve collection and preservation of medical evidence, and reduce time lost by multiple interested parties. Because the existing four regional offices of the Medical Examiner (Department of Health) are co-located with a Regional Office of the Division of Forensic Science (Department of Criminal Justice Services), a preliminary assessment of the need of users and the feasibility of establishing and co-locating a regional office of the Division of Forensic Science to provide basic forensic science support services to the medical examiner and law enforcement was also carried out.

BACKGROUND

The Virginia Office of the Chief Medical Examiner (OCME) was established by the General Assembly in 1946 as a statewide Medical Examiner system. By 1967, in response to the need for skilled forensic autopsies, court appearances by the pathologists and administrative support for local medical examiners, three regional offices were established with one being in Roanoke. Today, there are four regional offices located in Richmond, Fairfax, Norfolk and Roanoke. The regional office in Roanoke serves the western most 34 counties and 17 independent cities in the State, including the 13 counties and three independent cities located in the region known as Southwest Virginia (See Appendix II). System policy states that all medicolegal autopsies required on Virginia Medical Examiner cases are to be performed by pathologists certified by the American Board of Pathology in forensic pathology, operating within and according to the standards and procedures of the Virginia Office of the Chief Medical Examiner.

In 1977, the Virginia Department of Health proposed that an additional regional office be established in Southwest Virginia in Abingdon. At that time, there were approximately 455 medical examiner autopsies per year performed in the Roanoke Office which was staffed by only one pathologist. Recognizing at that time that a second pathologist was needed in Roanoke to assist with the high workload, it was proposed that a Southwest Regional Office be established and staffed by one pathologist, one administrator, one secretary and one autopsy assistant. This proposal was submitted to the Department of Planning and Budget in 1977 and was also submitted as a budget addendum for the 1982 - 1984 biennium budget. Consideration was also given to this proposal during the 1984 -1986 budget processes.

Despite strong support from the Commissioner of Health at that time and by several members of the General Assembly, the proposal was not included in the Governor's budget. There have been no additional proposals for a Southwest Regional Office since that time. In 1982, a second pathologist was added to the staff of the Roanoke Regional Office, providing additional support for the increasing autopsy and medical administrative work load.

METHODOLOGY

The feasibility study requested by HJR 214 was conducted by a work group composed of the Western District pathologists, the Chief Medical Examiner and two administrators. Multiple-choice questionnaires were developed by the task group, analyzed by a biostatistician, reworded for statistical validity, and distributed to key groups who use the services of the Office of the Chief Medical (See Appendix III). These groups included: all commonwealth's attorneys, local county and city medical examiners, heads of law enforcement agencies, and funeral directors in the 13 counties and three independent cities identified as the region known as Southwest Virginia. The questionnaires addressed the following points:

- Need for a Southwest Regional Medical Examiner's Office
- Whether access to a Southwest Regional Medical Examiner's Office would improve the timeliness and quality of medical examiner, law enforcement, and Commonwealth Attorney's case work in Southwest Virginia.
- Whether investigations would be facilitated if there was a Regional Medical Examiner's Office in Southwest Virginia
- Most appropriate site for a Southwest Regional Medical Examiner's Office
- Issues surrounding transportation
- Issues surrounding lost time to the family, police officers, funeral directors, and the courts
- Need for co-locating a regional office of the Division of Forensic Science and what forensic support services were needed
- Whether a Southwest Regional Medical Examiner's Office would significantly reduce time expended and inconvenience for funeral directors, families, law enforcement, and commonwealth's attorneys

The responses of the questionnaires were tabulated, statistically evaluated, and analyzed. An assessment was conducted of travel time lost, and time that would be saved for all users if a Regional Office were established in Abington. Savings that would result from better utilization of pathologist manpower and the reduction of caseload and transportation expense for the Roanoke office were calculated. Cost estimates for a facility and staff were developed. Options, conclusions, and recommendations were formulated. The number of users surveyed and the number who responded are listed in Table 1. Survey findings are discussed in the following sections.

Table 1 - Customer Response to Questionnaire

Group	Number Sent	Number of Responses	Percent Responded (%)
Medical Examiners	31	29	94
Funeral Directors	76	54	71
Commonwealth's Attorneys	16	9	56
Law Enforcement	45	31	69

FEASIBILITY ISSUES - FINDINGS

Establishment of Need

Nationally, medical examiner caseloads increase with increases in population. In the United States about 1 percent of the population dies each year. According to the Virginia Division of Vital Records, the Virginia population in 1995 was 6,551,576. In that same year there were 52,507 deaths which represented 0.8% of the population. Most medical examiner systems, utilizing core criteria of sudden, unexpected or violent deaths as "deaths of public interest," take charge or "jurisdiction" over one in five to one in seven deaths. Virginia, having a well trained local medical examiner corps and operating under very tight budget stringencies, assumes jurisdiction over one death in ten, relying on local medical examiners and law enforcement personnel to determine elements of risk for subtle violence in obviously nonviolent deaths. On average, between 50- 60% of Virginia medical examiner cases require medicolegal autopsies to establish cause of death and manner of death, collect medical evidence and/or reconstruct how violent injury occurred.

The population of the Western District (including Southwest Virginia) for 1995 was 1,483,287 according to the Virginia Statistical Abstract (See Appendices IV and V). The predicted population for the Western Region for the year 2000 is 1,493,121. If 0.8% of the predicted 1,493,121 citizens in Western Virginia die, resulting in 11,945 deaths and one death in ten is a medical examiner's case, then the predicted caseload of death investigations for the year 2000, for the Western District will be 1,195. If in the year 2000, 60% of the predicted 1,195 cases require medicolegal autopsies, then the predicted autopsy caseload will be 717 autopsies for the Western District.

The medical examiner investigation and autopsy workload of the Roanoke District has been increasing incrementally over the past five years as tabulated from medical examiner caseload statistics (See Table 2). In 1995, two forensic pathologists supervised the investigation of 1,342 medical examiner cases and performed 659 autopsies for the Western District. Looking at past statistics, as another method of predicting caseload, the average yearly increase in investigations was 34 per year for the four years between 1991-1995. If the investigation caseload increases by

34 for the five years, 1996-2000, the predicted increase in caseload will be 170 for an estimated investigation caseload of 1,512. In regard to autopsies, the average increase of autopsies from 1992-1995 was 26 per year. The predicted number of autopsies for the year 2000 would therefore be 789.

**Table 2 -Actual and Predicted Investigations and Autopsy Caseload - Roanoke District
1991 - 1995**

	1991	1992	1993	1994	1995	2000
Investigations	1,203	1,213	1,241	1,290	1,342	1,512
Autopsies	483*	581	557	621	659	789

* One pathologist was called to active service for Desert Storm and some cases were referred to other districts for autopsy.

Standards promulgated by the National Association of Medical Examiners (NAME) define the appropriate workload per pathologist at 200 autopsies per year acknowledging the administrative, court, and other professional efforts associated with staffing a medical examiner's office. When the 1995 Roanoke caseload was analyzed for the city/county of origin of each case, 376 deaths were investigated and 206 autopsies were performed for the cities and counties of the projected Southwest Regional Office. Appendix VI shows the investigations and autopsies performed for the 13 counties and three cities of the proposed Southwest Virginia District for 1993-1995. Using the NAME standard of 200 cases per year per pathologist, the 1995 caseload of 206 autopsies is sufficient to support one full-time forensic pathologist regardless of whether the pathologist resides at the Western Office or in a Southwest Office.

In Virginia, when social, public health and public safety conditions remain the same, the medical examiner caseload historically increases or decreases with population. While most recent population projections indicate the population of the entire Western District is increasing, the population of the Southwest area is decreasing slightly. The Virginia Statistical Abstract, 1994-95 Edition shows the population of the Southwest counties and cities decreasing from 386,673 in 1995 to 380,143 by 2000 (See Appendices IV and V). Therefore, the predicted decrease, however slight, is of interest. It suggests that the number of medical examiner cases should decrease with the population. The 376 death investigations carried out during 1995 represent 0.001% of the total population. If the same percentage of the population were to require death investigation in 2000, the projected number of investigations would be 369, a 2% decrease. The 206 autopsies performed on Southwest Virginia deaths represent 0.0005% of the population. If the same percentage of the predicted decreased population were autopsied the projected number of autopsies for 2000 would be 190 autopsies. Based on the estimated decrease in population, investigations and autopsies, the placing of a pathologist in Southwest Virginia would not be justified.

However, a majority of respondents in all four groups stated that they expect their work load to

increase in the next four years. Law enforcement officers, in particular, predicted an increase in their caseload and expressed an increased need for services, particularly forensic science support. This may reflect the familiarity of law enforcement with the experience of some cities which have lost population over the past decade but have experienced an increase in crime and homicide. Other factors expected to increase the caseload in all regions are increased numbers of deaths of prisoners (mandatory medical examiner cases) due to higher rates of HIV and reduced opportunity for parole. It is also likely that a larger number of non-criminal violent deaths will require autopsies to assist trauma registries in their death prevention efforts as well as non-criminal unnatural child deaths in an attempt to improve mandated analysis by the Virginia State Child Fatality Review Team. If organ and tissue donation increases in the future, the number of autopsies required on donors that are medical examiner cases, to determine the presence of occult disease, in order to safeguard recipients, will also increase.

When asked if a Southwest Regional Office of the Chief Medical Examiner were needed, the majority of the groups surveyed indicated that they would like to see a regional facility established in Southwest Virginia as shown below in Table 3. The favorable responses correlated with groups that make the most trips to the medical examiner’s office and who are most inconvenienced by the long distances. Medical examiners make very few trips to the Roanoke office.

Table 3 - Customer Response to Establishing a Southwest Medical Examiner’s Office

Group	% Favorable Response
Medical Examiners	71.4
Funeral Directors	98.1
Commonwealth’s Attorneys	88.9
Law Enforcement	96.7

Issues Relating to Improving Case Investigations

When asked about improving case investigations, 100% of the commonwealth’s attorneys, 68% of the medical examiners, and 87% of law enforcement surveyed reported that easier access to a pathologist would improve the timeliness and quality of an investigation. As a rule, the most critical elements in enhancing the quality of investigation are the number and experience of the people working in the facility and the quality of the facility, with the location of the facility a less critical component. However, if a user group perceives ease of access to a Southwest Regional Office as promoting: (1) enhanced consultation with forensic experts by law enforcement and prosecutors; (2) more timely and more convenient submission of evidence by law enforcement and; (3) the depth and quality of investigation, then proximity to a Southwest Office may be beneficial.

In Virginia, medical examiners and commonwealth attorneys are empowered to order autopsies by statute. As part of the survey medical examiners, commonwealth's attorneys and heads of law enforcement agencies were asked if the distance from Southwest Virginia to Roanoke discouraged them from requesting the medicolegal autopsies that assist in case investigation. The majority of these two groups agreed that the distance between Southwest Virginia and Roanoke is not a consideration when they believe there is an indication for a medicolegal autopsy (See Table 4).

Table 4 - Influence of Distance on the Decision to Request Autopsies

Group	Distance Discourages Autopsies %	Distance Does Not Discourage Autopsies %	Did Not Respond %
Commonwealth's Attorneys	12.5	87.5	0
Medical Examiners	17.9	75	7.1

When asked how often they attend autopsies, no group indicated that they attend every autopsy on every case they investigate. Approximately 11% of commonwealth's attorneys and 28% of law enforcement indicated they currently attend most cases (See Table 5).

Table 5 - Attendance at Autopsies at Roanoke Office

Group	Presently Attend Most Cases %	Some Cases %	Few Cases %	Never %
Commonwealth's Attorneys	11.1	44.4	22.2	22.2
Law Enforcement	28	24	20	28

A large majority of law enforcement and commonwealth's attorney respondents reported that a Southwest Virginia facility would facilitate attendance at autopsies thus permitting correlation of scene information with the pathological findings, information about possible weapons and information that would permit more timely development of warrants for further searches. When asked how often they would attend autopsies if they were being performed in a Southwest Virginia Regional facility, 88.9% of both groups stated that they would attend most or every autopsy for cases that they investigate.

Respondents also reported that the facility would enable more convenient access to court for the pathologist, resulting in savings for the taxpayer and an overall improvement in the quality of investigation by law enforcement and local medical examiners (See Tables 6 and 7).

Table 6 - Would a Southwestern Office Facilitate Attendance at Autopsies, Result in More Court Time for the Pathologist and Save Money?

Group	Watch More Autopsies %	More Court for Pathologist %	Save Money %
Commonwealth's Attorneys	77.8	88.9	55.6
Medical Examiners	56	40	44
Law Enforcement	82.1	84	74.1

Table 7 -Improvements in Case Investigation Due to Easier Access to the Pathologist

Group	Better Communication %	Improve Case Investigation by Law Enforcement %	Improve Case Quality by Medical Examiners %
Commonwealth's Attorneys	88.9	88.9	77.8
Medical Examiners	56.0	56.0	56.0
Law Enforcement	78.6	81.5	76.9

It is important to note that a smaller percentage of medical examiners agreed with the statements in Tables 6 and 7. The medical examiner's responses may reflect the fact that local medical examiner activity deals with the body before the body is sent for an autopsy. Local medical examiners rarely attend autopsies and subsequent case investigation does not require travel to the regional office. In addition, a minority of the medical examiners agreed with the statements pertaining to more court time for the pathologist and saving the taxpayers money. One should also note that if court time for a single regional pathologist increases, as predicted, due to easier availability and the desire to have information communicated at an autopsy presented at court, it may result in delays in the performance of medicolegal autopsies. This paradoxical impact could obviate any time savings accrued by establishing a Southwest Regional Office.

Pretrial conferences allow investigators and prosecutors and defense attorneys to review findings, ask questions and develop inferences from correlating the pathologic findings with investigative information. Face-to-face conferences enhance the interpretation of case components such as autopsy reports, photos, diagrams and permit case conferences with other forensic experts. Law enforcement respondents reported they "always have a pretrial conference" 20% of the time and 58.6% indicated they confer only a "few times" or "never." The low number of pretrial conferences was validated by the two pathologists in the Roanoke office. With 14 and 24 years of service, respectively, both pathologists responded that, pretrial conferences in Roanoke before the date of trial are rare. Pretrial telephone conferences and conferences on the site of the trial on

the day of trial, however, are relatively common.

According to the survey, the frequency of pretrial conferences, attendance at autopsies and related improvements in case investigation would change very dramatically if a Southwest Regional Office were established. Commonwealth's attorneys said they would "always have pretrial conferences" 77.8% of the time and an additional 11.1% said they would "almost always confer." Eighty-two percent of law enforcement officers indicated they would "always confer" before a trial with an additional 17.9% indicating they would "almost always confer."

Commonwealth's attorneys and law enforcement officers reported that face-to-face conferences would definitely enhance the interpretation of autopsy reports, photos, and diagrams as well as permit prosecutors, law enforcement and defense attorneys to more conveniently confer on a case with the OCME pathologist and Division of Forensic Science (DFS) forensic scientists.

Preliminary hearings take place before a suspect is tried in circuit court. Generally, prosecutors present only enough evidence to convince a judge that the State's case should be certified to the circuit court. The majority of survey respondents indicated that the appearance of the pathologist at the preliminary hearing phase of a trial is infrequent which is customarily the case, provided the cause of death as certified by the pathologist is clearly violent and due to homicide. The detailed evidence linking an assailant to a particular decedent is presented at trial in circuit court. This practice is consistent with prosecutors reporting that they subpoenaed the pathologist 44% of the time for "some" preliminary hearings, 33.3% of the time for a "few" preliminary hearings and "never" 22.2% of the time.

In a contradistinction, the appearance of the pathologist as a witness at the murder trial itself is common. All (100%) of the commonwealth's attorney respondents said that the pathologist are presently summoned to court for every murder trial. From November 1, 1995 through October 31, 1996, the two Western District pathologists made 57 court appearances and spent 408 hours in court. At the same time, 88.9% of respondents said that if a regional Southwest Virginia facility were established, they would summon the pathologist to court on every murder, which is 11.1% less than is the case at present. Presumably this would mean that the easier it would be for the pathologist to appear on short notice, the less often they would need to subpoena the pathologist "just in case." The decision to actually require testimony from the pathologist, whether present at court or not, is a decision partly based on trial tactics. In the future, it is possible that some of the difficulty in summoning distant experts may be alleviated by new communications technologies such as teleconferencing. It is noteworthy that one of the pathologists has already given testimony for Tazewell County and Roanoke City Circuit Courts on a videotape prerecorded before the date of the trial.

A small percentage of these same commonwealth's attorneys (22.5%) said that the two reasons they do not summon the pathologist to court are because of the long drive and scheduling problems, while 44.4% disagreed this was a consideration in summoning the pathologist. This response seems inconsistent with the response above, where all of the commonwealth's attorneys said that they presently summon the pathologist to court on every murder trial. Perhaps they are

referring to preliminary hearings only.

Site Options

All of the four groups surveyed were given a choice of seventeen locations as possible sites for a Southwest Medical Examiner facility and asked to choose which was closest. The seventeen sites listed were cities and towns in Southwest Virginia. Ideally, the location of a Southwest Office should be located near to the largest number of customer/users and accessible by good highways year round to forensic and other support services. A substantial majority of the respondents indicated that they were closer to Abingdon than to Roanoke as seen in Table 8. When queried about the best location for an office, Abingdon, was selected as the best place and the next best place to establish a Medical Examiner facility by the majority of all four groups of respondents. Thus, upon consideration of distances, travel time, highway accessibility and hospital support services, Abingdon appeared to be the preferred site.

Table 8 - Customer Proximity and Site Preference

Group	Closer to Abingdon than Roanoke %	Selected Abingdon as First Choice for Site (%)	Selected Abingdon as Next Best Place for Site
Medical Examiners	89.3	36	36.4
Funeral Directors	98.1	48.9	12.7
Commonwealth's Attorneys	88.9	28.6	33.3
Law Enforcement	76	30.8	30.4

Transportation and Time Expenditure Issues

Southwest Virginia is located further away from its Regional Medical Examiner's Office than any other region of the state resulting in longer transport and travel times for funeral directors, law enforcement and commonwealth's attorneys. The amount of time a body is away from the locality of origin was identified as a major problem by funeral directors and local law enforcement. When asked how much time is too much time for a body to be away for an autopsy, a clear majority of medical examiners (70.3%) and law enforcement respondents (77.7%) believed that a day or more was too long while 94.2% of funeral directors indicated that 7-12 hours or more was too long. When asked how long bodies are actually away when transported from Southwest Virginia to the Roanoke Office, about half (52.9%) of the funeral directors indicated that bodies are away for 12 hours or less but with only 5.7% gone for less than seven hours, the time away funeral directors preferred. When funeral directors were polled on what they predicted the time away would be if an Abingdon Office was established, 72.5% felt that the body would be gone for less than six hours which is within their preferred time frame. Law enforcement respondents, who would be traveling at about the same amount of time to view

autopsies, felt that 82% of cases would still be gone for 7-12 hours or more, this indicating they did not believe there would be significant improvement in the time the body was away if an Abingdon office was established.

Driving times to Abingdon, the site preferred for a Southwest office, were calculated. Using the location of a county/city court as the reference for county/city distances to Roanoke, Table 9 shows driving times and the hours that would be saved by all traveling parties if a Southwest regional office were to be established in Abingdon.

Based upon calculations, transportation to and from Abingdon, as opposed to transportation to and from Roanoke, from distant locations in the Southwest Virginia region could result in a time savings of up to six hours. Funeral directors, law enforcement officers and medical examiners were asked how much time would be saved if a body were sent to Abingdon rather than Roanoke for an autopsy. All three groups agreed that there would be a time savings of greater than six hours. This may reflect presumed improvements in scheduling so that the funeral home do not need to make two trips. For example, an autopsy may be delayed so that the funeral home can arrive early in the morning and return home the same day rather than deliver the body in the late afternoon and make a second trip to pick it up the next day. This may also reflect the assumption that delays at the autopsy facility itself (multiple cases requiring x-rays, case volume and case prioritizing, equipment problems, personnel shortages, case complexity, etc.) would be less in a lower volume Regional Southwest Office than in Roanoke. Theoretically, actual time spent performing each autopsy should remain the same. However, it is possible that additional delays could be greater in a Southwest Office if the design of the physical plant and personnel were not equal to that which currently exists in Roanoke.

Table 9 - Transportation and Time Expenditure Issues for Funeral Directors, Law Enforcement, Commonwealth's Attorneys and Pathologists Traveling to Court

City/County	County Courthouse Location	Average Round Trip Driving Time for Travelers to and from Roanoke (hrs)	Average Round Trip Driving Time to Abingdon (hrs)	Time Saved Abingdon Office vs. Roanoke Office for All Travelers (hrs)
Bland	Bland	4	3	1
Buchanan	Grundy	9	4	5
Carroll	Hillsville	3	3	0
Dickenson	Clintwood	8	4	4
Grayson	Independence	4	3	1
Lee	Jonesville	9	3	6
Russell	Lebanon	6	2	4
Scott	Gate City	8	2	6
Smyth	Marion	5	1	4
Tazewell	Tazewell	6	3	3
Washington	Abingdon	4	0	4
Wise	Wise	8	3	5
Wythe	Wytheville	3	2	1
Bristol City	N/A	7	1	6
Galax City	N/A	4	4	0
Norton City	N/A	9	3	5

The cost of transporting bodies from the Southwest region to Roanoke was calculated by reviewing transportation vouchers and by calculating the distances as noted in the above table. The cost of reimbursement to funeral directors and transporters for the transportation of dead bodies from Southwest Virginia to Roanoke for 1995 was calculated as \$47,918. The estimated cost for transporting bodies, to Abingdon was estimated at \$21,200, a potential savings of \$26,718 for 1995.

Funeral Director Transportation and Cost Issues

Nearly two thirds of funeral directors, who transport bodies to the regional offices for an autopsy and who pick up bodies to prepare them for funerals, indicated that, at present, they break even financially transporting bodies to Roanoke. Only 3.8% said that they made money with 35.9% stating they lose money transporting bodies. Interestingly, one third of the funeral directors said that they would make less money than they are making now if a Southwest Virginia Regional facility were established, with 79.2% stating that they would make less or no more money than they are making now. Funeral directors estimated that they would save between one and five

hours in transportation time one way with a mean total time of 6.5 hours. It was not specified over what time period this savings would occur. The maximum time savings calculated for transporting a body to Abingdon as opposed to transporting a body to Roanoke was six hours per trip driving time per case. Theoretically, seventy-six funeral establishments would share this time savings. If there were 206 autopsies every year and there was a six-hour time savings on each one, 1,236 hours would be saved per year, 24 hours per week, and 3.4 hours saved per day distributed among 76 transporters. The benefit to the individual funeral home in terms of time savings would appear to be small. A small percentage (2%) said that they would not save time. What was difficult to assess was the difference the six hours would make in scheduling autopsies and how often a prolonged trip actually results in delaying a case by a day to enable same day delivery and return. A greater percentage of funeral directors (94%) indicated that a Southwest Virginia Regional Office would save time than indicated it would save money at (62%).

Other Issues of Concern

Death certificates are sometimes sent with bodies to be completed by the pathologist upon completion of the autopsy so that the body and the certificate can be picked up by funeral homes. Other times the death certificates are held by local medical examiners until the autopsy is completed and they speak with the pathologist before entering cause and manner of death on the certificate. Regulations of the Division of Vital Records require filing of the certificate of death within three days. Therefore, delays in autopsies sometimes delay the filing of death certificates. Delayed completion of pending certificates, or correction of erroneous entries may result in some funeral directors having to make an extra trip to pick up certificates. Almost half of the funeral directors (43.4%) believed that the presence of a regional facility would make it easier for them to get death certificates. However, 56% did not foresee any change in obtaining death certificates, resolving pending certificates or filing death certificates. In general, most death certificates are issued by local medical examiners with regional facilities acting only to amend certificates. Regional offices amend pending certificates by sending an amendment form to the Bureau of Vital Records in Richmond. This process theoretically should take no longer from Roanoke than from a Southwest Virginia Regional facility.

A small telephone survey was conducted of ten families who called the Roanoke OCME in the course of inquiring about a death during the course of the study. When queried about inconvenience related to the distance of the Office they did not identify distance as an issue.

Staffing and Support Services

The establishment of a Medical Examiner's office requires certain core staff as outlined by the Standards of the National Association of Medical Examiners. Based upon these standards, staff required for the operation of a Southwestern Medical Examiner's Office performing 206 autopsies per year would include one pathologist, one and one-half autopsy technicians to enable six days a week service, an office manager/administrator, one medical secretary, and as caseload increases, one office services clerical person. Histology services, required for an autopsy

microscopic examination, may be achieved by contract if possible, or by dividing the work between the Central and Tidewater office histologists or by staffing the Roanoke histology laboratory.

The office would require: (1) a morgue; (2) a refrigerator; (3) freezer for the preservation of remains; (4) full body and dental radiology services; (5) toxicology refrigerator and freezer; (6) autopsy instruments, cameras; (7) a microscope and; (8) the standard office and computer equipment required for the preparation, distribution, and archiving of official reports. Electronic access and networking to the OCME Central office network and electronic access to the medical literature and other medical data bases would be essential, the former to ensure communication and permit consultation with other district offices and the latter to assist in maintaining competency and assist with case work research. The pathologist should have access to hospital clinical chemistry and microbiology services and to the consultation services of surgeons, subspecialty internists, subspecialty pathologists and pediatric colleagues. Forensic science support is discussed below.

Co-location of a Regional Office and the Division of Forensic Science

The Division of Forensic Science (DFS), Department of Criminal Justice Services, provides forensic science support to the district Offices of the Chief Medical Examiner, law enforcement, and commonwealth's attorneys. Presently, the medical examiner and the Division of Forensic Science are co-located in the existing four regional offices. Forensic science support and contemporaneous access to forensic scientists at the time of autopsy are important to the forensic pathologists who are charged with the determination of cause of death and distinguishing whether a death is natural, accidental, homicide, or suicide. Access to the toxicologist, and firearms and fingerprint examiners are particularly important. Most homicides and suicides require several analyses from several of the forensic science laboratories.

The forensic science toxicology laboratory performs analyses on blood and tissues obtained by the pathologist at an autopsy. Testing is performed for alcohols, street drugs, prescription drugs, carbon monoxide, cyanide and other poisons. Industrial deaths may require analyses for environmental and industrial toxins. Nearly all medical examiner cases require testing for alcohols. Most violent deaths, all homicides, suspected drug-related deaths, and suspected overdose deaths require multiple toxicologic analyses.

The firearms and toolmarks examiners conduct tests on weapons and recovered missiles to identify the weapon of origin and distance patterns to assist in distinguishing accidents from homicides and suicides. The laboratory also examines weapons employed in blunt force, beating and cutting injuries. Access to the firearms and toolmarks examiner in the morgue at the time of autopsy can confirm the caliber of bullets, brand of ammunition and class characteristics of a weapon so an investigator can search quickly for a suspect weapon. The fingerprints laboratory staff collects fingerprints from unidentified, burned and decomposed decedents for purposes of identification utilizing the automated fingerprint identification system (AFIS). Fingerprints

examiners, possessing alternate light source instrumentation, assist in illuminating trace evidence on body surfaces for recovery by the pathologist. Gunshot residue testing helps differentiate self-inflicted gunshot wounds from homicidal wounds. Other forensic laboratories also assist with the medicolegal investigation of deaths. For example, forensic DNA analysis is used to identify decedents and match body parts on damaged bodies as well as document sexual assault. Accelerants testing identifies suspected arson-homicide, arson-concealed homicide, and self-immolation. The forensic photography section develops the photos that document Medical Examiner case injuries and assists with infrared and ultraviolet photography to visualize scars, seminal fluid, tattoo pigments, trace evidence and resolving contusions.

When queried about the benefit of co-locating an office of the Division of Forensic Science, a substantial majority of commonwealth's attorneys (78%) and law enforcement respondents (79%) reported that co-locating a regional forensic science office with a medical examiner facility would improve the quality of death investigation (See Table 10).

Table 10 - Preference for Co-Locating a Division of Forensic Science with a Regional Office of the Medical Examiner

Group	Benefit by Co-location %	No Opinion %	Disagree %
Commonwealth's Attorneys	77.8	22.2	0
Law Enforcement	79.3	13.8	6.9

When asked if they agreed or disagreed if there were specific benefits to establishing a Regional Office, all surveyed commonwealth's attorneys and a large majority, over 75%, of law enforcement respondents agreed with the five reasons for establishing a facility as cited in Table 11.

Table 11 - Benefits of Co-Locating a Southwestern Office of the Medical Examiner's Office with a Branch of the Division of Forensic Science

Group	Easier Evidence Delivery %	Easier Forensic Consultation %	More Court Appearances for Forensic Scientists %	Cases Worked Up Quicker %	One-Stop Shopping %
Commonwealth's Attorneys	100	100	100	100	100
Medical Examiners	59.3	59.3	33.3	51.9	51.9
Law Enforcement	86.7	86.7	76.7	76.7	80.0

From the point of view of the pathologists, the minimal forensic support services on-site for a competent medical examiner regional office, based on analyses required as part of firearms and drug related forensic autopsies and for identification of unknown dead, are drug analysis and toxicology, firearms examination and fingerprints. When commonwealth's attorneys and law enforcement were asked to specify all the forensic science services they would like to see co-located in a Southwest regional office, respondents requested the following services be co-located with a regional medical examiner facility.

- Drug analysis
- DUID (Driving Under the Influence of Drugs)
- Firearms examination
- Latent prints
- Hairs and fibers
- DNA/serology
- Blood Spatter Analysis
- Toxicology

Law enforcement investigators regularly receive and collect evidence on cases from the pathologist at the time of autopsy and submit it directly to the co-located laboratory. "One-stop-shopping" improves the efficiency of case workup by providing investigators with immediate forensic science consultation on the most appropriate tests to request on the case and by decreasing the waiting time for results. Table 12 displays the number of examinations requested in 1995 of the forensic laboratory by law enforcement in the proposed Southwest region. Although some investigations require more than one examination and several examinations might be requested at the same visit to the laboratory, the number of requests represents several hundred visits to the forensic laboratory by law enforcement officers during the 1995 calendar year.

Table 12 - Virginia Division of Forensic Science Examinations as Requested by Law Enforcement in the Proposed Southwest District 1995*

Laboratory	Totals
Drug Analysis	1297
Firearms/Toolmarks including:	58
Firearms	
Numbers restoration	
Speedometer	
Toolmarks	
Vehicle Lamps	
Fingerprints including:	328
Latent prints	
Impressions	
Image Enhancement	
Questioned Documents/Impressions	30
Hairs/Fibers	18
DNA (PCR, RFLP)	25
Serology	108
Accelerants/Explosives	69
Gunshots Residue	13
Microanalysis/Trace	25
Blood spatter analysis	2
DUID	88
Toxicology	33
Total	2094

* Tests requested directly by the Medical Examiner are not tallied in this table.

Site Options

All groups were queried in reference to possible sites for a Southwest Regional Office. A minority of respondents had knowledge of potential property to be used as a site for a medical

examiner facility. A few specific sites were named as listed in Appendix VII. Abingdon, as the most preferred site and with the most potential, was visited by two of the pathologists and assessed according to the Standards of the National Association of Medical Examiners. Inquiry was also made in regard to space at the Department of Mental Health, Mental Retardation and Substance Abuse Services (DMHMRSAS) facility at Marion, Virginia. The assessments are discussed under the section on Options.

In terms of services and support, proximity to a hospital for clinical laboratory support and other medical specialists would be preferred by the forensic pathologist in order to investigate metabolic and infectious causes of death and to consult with clinical specialists. Access to forensic science was not addressed in previous proposals and was less of an issue than now, given the greater sophistication now required now in toxicology, the need for automated fingerprint identification systems (AFIS), and firearms services. Based upon the findings of this study, if a regional forensic science laboratory is not constructed at the time of establishing a regional medical examiner's office, a site with sufficient space for the future construction of a laboratory should be chosen.

In terms of square footage of space, space requirements vary with the options described in the section on Options and are based on the construction history of the four regional offices, all of which will be housed in new buildings by 1998. Add-on space requirements were developed, assuming that a suitable existing hospital morgue facility was in place that could add space to accommodate 206 autopsies a year, and could be expanded to include other unique needs of a medical examiner facility. If the autopsy suite in place was adequate, it is estimated that at least 2,000 additional add-on sq. ft. would be needed to meet current needs and 3,000 sq. ft. to meet future needs for a ten-year projection. No such facility was found in Southwest Virginia. Square footage for a new autopsy suite alone to accommodate 200 autopsies per year is 4,000 sq. ft. New construction of a stand alone medical examiner facility, which would house autopsy facilities and administrative offices, for a ten-year projection, would require construction of a total of 7,000 sq. ft. An estimate of the square footage for a combined OCME/DFS facility is 10,000 sq. ft. if DFS adds only the three most preferred laboratories of firearms, fingerprints and toxicology.

In order to provide the medical examiner services in Southwest Virginia the following options were explored:

1. Share, rent and add-on space in an existing hospital facility in the Abingdon region:

There is one hospital in the Abingdon region, Johnston Memorial Hospital. With the cooperation of the administrative and pathology staff, the facility was assessed for its suitability for a high volume forensic pathology operation. The morgue facility has undergone recent renovation and has one autopsy table and refrigeration for two bodies. Advantages of this option are there is an autopsy room in place and the hospital could provide the necessary clinical chemistry and basic microbiology support. Disadvantages in regard to the facility include the following: (1) there is

no body freezer to hold decomposed or unidentified bodies and a refrigerator for two bodies are not adequate; (2) a second autopsy table would be needed as well as full body radiography and dental radiography to examine and identify decomposed, dismembered and burned bodies which are ordinarily not permitted in hospital radiology departments; and (3) a special ventilation system would be required by a forensic pathology medical examiner morgue, as well as additional cooler and specimen freezer space, and evidence and records security and storage. Basement space in the hospital complex was also evaluated and was insufficient in square footage, ceiling height, lighting, drainage and ventilation. Administratively, a pathologist(s) office and conference space, office support space, family viewing, facility support services and security would also need to be added.

The study assessed whether the existing hospital morgue or other existing hospital space could be made to meet the accreditation standards of the National Association of Medical Examiners for a medicolegal death investigation facility. At this time it could not accommodate a caseload of 200 medical examiner cases per year and does not have the requisite support or support space.

If a co-located division of the forensic science laboratory were to be established, additional space would be needed for laboratories and offices plus space evidence storage and administrative support space. No structure elsewhere in Abingdon was identified that could be remodeled to accommodate the medical examiner office, or a combined facility for the medical examiner and the forensic laboratory. Mattie Williams Hospital in Richlands was identified by respondents as a possible site for add-on space. However, it is not sufficiently centrally located to serve Southwest Virginia.

Theoretically, if a hospital facility were available that could be remodeled to add the additional space, air-handling and other medical examiner morgue needs notwithstanding, the cost would be \$107,500 for start-up costs and \$319,860 in total recurring expenditures per year. The breakdown of the cost estimates are listed in Appendix VIII.

2. Contract pathology services:

Performance of medicolegal autopsies outside of the Medical Examiner System was considered. This option would permit medicolegal autopsies, including homicides and other court involved cases to be performed by non-forensic pathologists in a hospital setting either in Southwest Virginia or by pathologists out-of-state in Tennessee. Eastern Tennessee has forensic pathologists in Knoxville. Otherwise, there are no private forensic laboratories nor American Board of Pathology certified forensic pathologists in the Southwest Virginia region. Costs for the autopsies, expert witnesses' fees and the logistics of body transportation across the mountains, evidence collection, preservation and security of evidence, facility security and interstate transportation arrangements would need to be worked out if Virginia cases are to be examined in another state. The disadvantages of out sourcing forensic pathology services include the inability to control quality, logistical difficulties of transportation and travel across the mountains, tracking of evidence collection and transmission to preserve the "chain of custody"

and absence of contemporaneous consultation with the forensic laboratory. The Office of the Attorney General, which defends appeals on Virginia cases, opposes such subcontracting of any medicolegal autopsies, particularly capital cases.

It should be noted that the Medical Examiner System endeavored over 30 years to develop a statewide regionalized medicolegal death investigation system within which all medicolegal autopsies were performed by American Board of Pathology certified forensic pathologists in accordance with system-wide standards and utilizing system-wide procedures. The purpose of establishing the system was to eliminate the performance of medicolegal autopsies by non-forensic pathologists and the unpredictable, uneven and usually substandard quality of care medicolegal autopsies receive in a low volume, unequipped morgues. The co-location of regional offices of the Division of Forensic Science that permitted close real time case consultations in cooperation with the Medical Examiner district offices was the second development in achieving excellence of service. The present system represents a level of excellence that has achieved national recognition and has served as a model for other systems.

Were such an option advisable, the cost for 206 autopsies at \$1,000 per case would be \$206,000. Minimum transportation costs would be \$100 per case for transportation costs of \$20,600. If one case in six or 34 cases were to require a court appearance at \$1,500 per day plus \$500 per case for travel, lodging and other miscellaneous costs, the expert witness cost would be \$68,000. Estimated total yearly expenditures for subcontracting forensic pathology services would be \$294,000 not including costs for reappearances for retrials, pretrial conferencing in Virginia or any other fee for service per hourly costs. Costs would likely increase for defense attorneys as well as for the Commonwealth.

3. Utilize State-owned space or land:

The lease of State-owned space or construction on State-owned land for a medical examiner facility in Southwest Virginia in Abingdon was explored. The major advantage of this approach would be the utilization of State-owned property with a lower than market cost of rental and land purchase cost. All State facilities currently located in Abingdon lease private sector buildings and property. Inquiry of the Department of Highways, disclosed there is no State-owned land available in the Abingdon area for use or development. The Department of General Services has undertaken a search of its records for suitable sites in Abingdon and elsewhere in Southwest Virginia. One State owned facility, a hospital administered by the Department of Mental Health, Mental Retardation and Substance Abuse Services (DMHMRSAS) in Marion was identified. A building on premises which previously (but, no longer) housed laboratory facilities is scheduled for renovation as office support. An additional disadvantage is that Marion is a less preferred and less central location. Suitable land or buildings, other than facilities of (DMHMRSAS) and the Department of Highways, is the major disadvantage of this plan.

4. Construct a new freestanding building:

A facility for the Medical Examiner could be constructed on purchased or leased property in Abingdon. Survey recipients were asked to identify any sites they thought would be appropriate, with no obvious suitable candidates identified. The advantage of new construction is that the expertise of the Medical Examiner derived from the recent designing and building of three new facilities could be used to design an efficient state-of-the-art facility. Disadvantages of this option are the cost and the absence of forensic science support. Another disadvantage is the placing of a single pathologist with all the attendant difficulties of scheduling cases around courts and travel. The effects of professional isolation are difficult to measure but include the inability to consult in-house with other forensic pathologists at the time of autopsy, an important component of quality assurance.

Cost estimates were developed based on the construction costs of the new Roanoke OCME/DFS facility which opened in 1995. The recently completed 12,000 sq. ft. OCME portion of the Roanoke facility cost \$180. per sq. ft., for an OCME total cost of \$2,160,000. For a 7,000 sq. ft. facility the cost would be \$1,260,000. More detailed preliminary estimates of personnel costs, start up and recurring expenses of equipping and staffing a new facility (Option 4) is depicted in Appendix VII. If no Southwest facility is established, the Roanoke office space would be sufficient for any increased need but staffing would need to be increased by 1-2 pathologists, an additional secretary and office services specialist and 1-2 morgue support staff to perform the workload of the year 2000.

5. Construct and co-locate a New Combined Medical Examiner and Forensic Science Facility:

Consideration was given to constructing a new Southwest combined OCME/DFS facility. The major advantage of new construction is that it would provide all the services requested by funeral directors, Commonwealth's Attorneys, law enforcement and Medical Examiners in a more convenient and accessible location. The new (1995) combined Western (Roanoke) OCME/DFS facility is 56,000 sq. ft. and cost \$10,400,000. An Abingdon facility, if it provided the services of the Medical Examiner and only the three forensic laboratory examinations identified as most needed by law enforcement, would require less space than the other three regional offices which offer more than basic services.

Estimated space requirements for a new combined OCME/DFS facility are 10,000 sq. feet, allocating 7000 sq. ft. for the OCME and 3000 sq. ft. for the forensic laboratory. At a cost of \$180. per sq. ft. the total cost for both facilities would be \$2,981,860. Recurring costs and maintenance, as well as the addition of one clerical staff person and an administrator, would add \$406,360 to the OCME budget per year for a new facility per year and \$343,500 for the laboratory. The obvious disadvantage of new construction is the cost, which by time of construction, would probably approximate the cost of the Roanoke office at several million dollars.

The cost savings to the Roanoke office budget for the transferring of 376/1342 case investigation fees would be \$18,000 for case investigations by local Medical Examiners. At an estimate of \$800 per autopsy, for the 206 Southwest cases presently performed at Roanoke, \$164,800 would be reallocated to the Abingdon office budget. When the savings of \$26,718 for transportation is added, there is a combined total savings of \$182,000 for the Roanoke budget. The savings would partially offset, by 12%, the projected OCME costs of \$1,791,360 operating a new Southwest Office.

Specific costs associated with establishing and co-locating the OCME and a regional office of the Division of Forensic Science as developed by the Division of Forensic Science are listed in Appendix IX. Costs for establishing a new combined OCME/DFS facility at \$180.00 per square foot (cost of Roanoke construction) and staff costs are shown in Table 13.

Table 13 - Total Start-up and Recurring Costs - Combined Facility Office of the Chief Medical Examiner (complete) and Division of Forensic Science (toxicology, firearms, latent prints labs)

Office	Square footage	Start-up Cost	Recurring Cost	Total Cost per Office
Office of Chief Medical Examiner	7,000	\$1,385,000.00	\$406,360.00	\$1,791,360.00
Division of Forensic Science	3,000	\$847,000.00	\$343,500.00	\$1,190,500.00
GRAND TOTAL	10,000	\$2,232,000.00	\$749,860.00	\$2,981,860.00

In reference to funding, the services provided by the Medical Examiner System are mandated by the Code of Virginia, §32.1-283 et seq., and are funded from the General Fund. The present level of funding does not permit establishment of a regional office in Southwest Virginia. Creation of a Southwest regional office would require a special appropriation or another funding mechanism for all options except Option 6 which is to maintain the present arrangement for services.

6. Continue with services as presently provided:

The Roanoke office can continue to provide service to Southwest Virginia. Any increase in caseload would be accommodated by the addition of an additional pathologist(s) and staff as needed. The obvious advantage is that costs would be lower and incrementally absorbed into the OCME budget. The disadvantage of this option is that it would not address the issues of travel time, inconvenience and improved quality of case investigation by improving accessibility of users to the pathologist and laboratory.

Customer Preference in Relation to Cost

In regard to costs, a plurality of respondents in all four groups indicated that a medical examiner facility should be established only if the costs are reasonable. A majority of respondents were in favor of such a facility even though it would cost the taxpayers money. Substantial numbers said the facility should be established "at all costs." Only a small percentage (7.1%) of the medical examiner group, however, felt that this facility should be established at all cost which is consistent with that group being the least likely to travel to a regional office. Respondent preference in relation to cost is shown in Table 14.

Table 14 - Preference of Respondents for a Southwest Office in Relation to Cost

Group	At All Costs %	If Costs Are Reason-able %	If State Breaks Even %	If It Saves The State Money %	Should Not Be Done At All %
Funeral directors	20	54	14	10	2
Commonwealth's Attorneys	44.4	44.4	11.2	0	0
Medical Examiners	7.1	46.4	17.9	25	3.6
Law Enforcement	26.7	46.7	10	16.6	0

The percentages of respondents who favor establishing an office at all costs or at reasonable cost is slightly higher than the combined responses of those who prefer that the facility should only be established if the State breaks even or the State saves money. Those who felt the facility should only be established if it saves the State money or not at all were definitely in the minority. These responses indicate that even though establishing a medical examiner facility will cost money, respondents are in favor of it even if it does, as seen in Table 15.

Table 15 - At What Cost Should a Facility Be Built?

Group	At Costs or at all reasonable Cost %	At Reasonable Cost or Break even but not at all cost %	Only if the state breaks even or the state saves money %
Funeral directors	74.0	68	24
Commonwealth's Attorneys	88.8	56.5	11.1
Medical Examiners	53.5	64.3	42.9
Law Enforcement	73.4	61.	26.7

The study showed that costs for personnel, utilities, equipment, supplies, fees, construction, etc., would increase if the Medical Examiner system opens an additional regional facility. A Southwest Virginia facility does not reduce the cost of operating the overall system, nor can it be expected not to add to present costs as reflected by the startup and maintenance costs.

DISCUSSION

Presently, all autopsies for Western Virginia are performed at a new \$10 million, state of the art facility in Roanoke. This facility is co-located in the same building as the Division of Forensic Sciences and has been in service since August of 1995. It was designed and constructed for the purpose of providing high quality, state-of-the-art death investigation and forensic technological analyses to the approximately 1.6 million people who reside in Western Virginia including Southwest Virginia. It also provides services to areas in Northwest Virginia which are as far or farther away from Roanoke as some of the localities in Southwest Virginia. The counties of Wise, Dickenson, Buchanan, Lee and parts of Washington and Russell counties are the only locations farther away than parts of Rockingham and Highland County to the north. The counties of Carroll and Grayson and the city of Galax would actually be farther away by road from a regional facility than from Roanoke if a Southwest Virginia office were established. The Roanoke facility was designed and constructed not only to handle the day to day caseloads from Western and Southwestern Virginia but also to handle any major disaster which might occur anywhere in this region. This facility has space to accommodate an additional pathologist, an additional secretary, one or two more morgue assistants, a histotechnologist and an investigator.

A Southwest Virginia regional facility, if it were to meet the standard of service as the Roanoke facility, would need a similar physical plant for both the Office of the Chief Medical Examiner and the Division of Forensic Science. It would need two pathologists if daily coverage of the office is to be provided, despite the fact that the caseload would provide only about 100 autopsies per year per pathologist. It would need an administrator, two morgue assistants to provide the present six days per week coverage and a secretary if it is to provide the same timeliness and quality of service that is presently provided at the Roanoke facility. Based on capitalization costs and operating costs for the Roanoke facility, estimates for future construction are it will cost over \$3 million to establish a smaller but similar combined facility in Southwest Virginia and more than \$490,000 annually in operating costs.

CONCLUSIONS

A large majority of law enforcement and Commonwealth's Attorney respondents reported that a Southwest Virginia medical examiner's facility would facilitate their attendance at autopsies, allow better communication with the pathologist, and provide more convenient access to court for the pathologist thereby improving the overall quality of death investigation. However, improvement in quality of investigation by law enforcement and others that would follow from

easier access to the pathologist cannot be measured at this time.

Survey respondents also recommended that the medical examiner's facility be co-located with a regional office of the Division of Forensic Science that would provide core services of drug analysis, firearms and fingerprints examinations to facilitate "one-stop" shopping on case investigation. When examining potential sites for establishing a Southwest office no facility suitable for sharing or rental was found. The cost of building a free standing medical examiner facility does not appear to be cost-effective based on the investigation and autopsy caseload alone.

RECOMMENDATIONS

1. While the study concluded that more convenient, timely and accessible service to the Southwest region of the state would be achieved by the development of a facility in Southwest Virginia staffed by Medical Examiner and Division of Forensic Science professionals such an endeavor is not cost effective when population projections and funding are considered. Construction of a freestanding medical examiner's facility is not recommended at this time.
2. When considering costs alone, resources might better be expended in augmenting services provided by the Western district in Roanoke rather than establishing an Abingdon office in the Southwestern area. It would appear that improved service, when considering population growth projections and the scheduling of autopsies could be better provided to not only Southwest Virginia but also all of Western Virginia by adding one additional pathologist, filling the position of histotechnologist, and engaging a second half time autopsy technician and one secretary in the Roanoke facility. This could be provided for less than \$200,000 in costs (personnel and expenditures for histology equipment for the presently unequipped Western histology laboratory) and less than \$192,000 in annual operating expenses. The additional personnel would clearly improve service in scheduling autopsies and thereby decrease waiting time after delivery of the body, more timely autopsy reports and more availability for court by decreasing scheduling conflicts for court and for interaction with police, attorneys, decedents' family members and others.

Appendix I

HOUSE JOINT RESOLUTION NO. 214

Requesting the State Department of Health to study the feasibility of establishing a regional Office of the Chief Medical Examiner in southwest Virginia.

Agreed to by the House of Delegates, February 8, 1996

Agreed to by the Senate, February 29, 1996

WHEREAS, the regional Office of the Chief Medical Examiner located closest to southwest Virginia is in Roanoke; and

WHEREAS, transportation to the Roanoke Office of the Chief Medical Examiner can require a four-hour to five-hour trip under the best weather and road conditions; and

WHEREAS, the long distance to the nearest medical examiner in southwest Virginia presents a tremendous inconvenience to families, police officers, funeral directors, and court witnesses; and

WHEREAS, the distance to the nearest medical examiner in southwest Virginia delays court cases and imposes substantial lost time for police officers who must attend autopsies and medical examiners who must testify in court; and

WHEREAS, the delays in performing autopsies due to transportation hinder the answering of families' critical questions during a time of tragedy; now, therefore, be it

RESOLVED by the House of Delegates, the Senate concurring, That the State Department of Health be requested to study the feasibility of establishing a regional Office of the Chief Medical Examiner in southwest Virginia. The Department shall consider the most appropriate site for such an office; the availability of funds and necessary support services; the potential case load; issues surrounding transportation and the lost time to the family, police officers, funeral directors and the courts; and such other issues as may be appropriate.

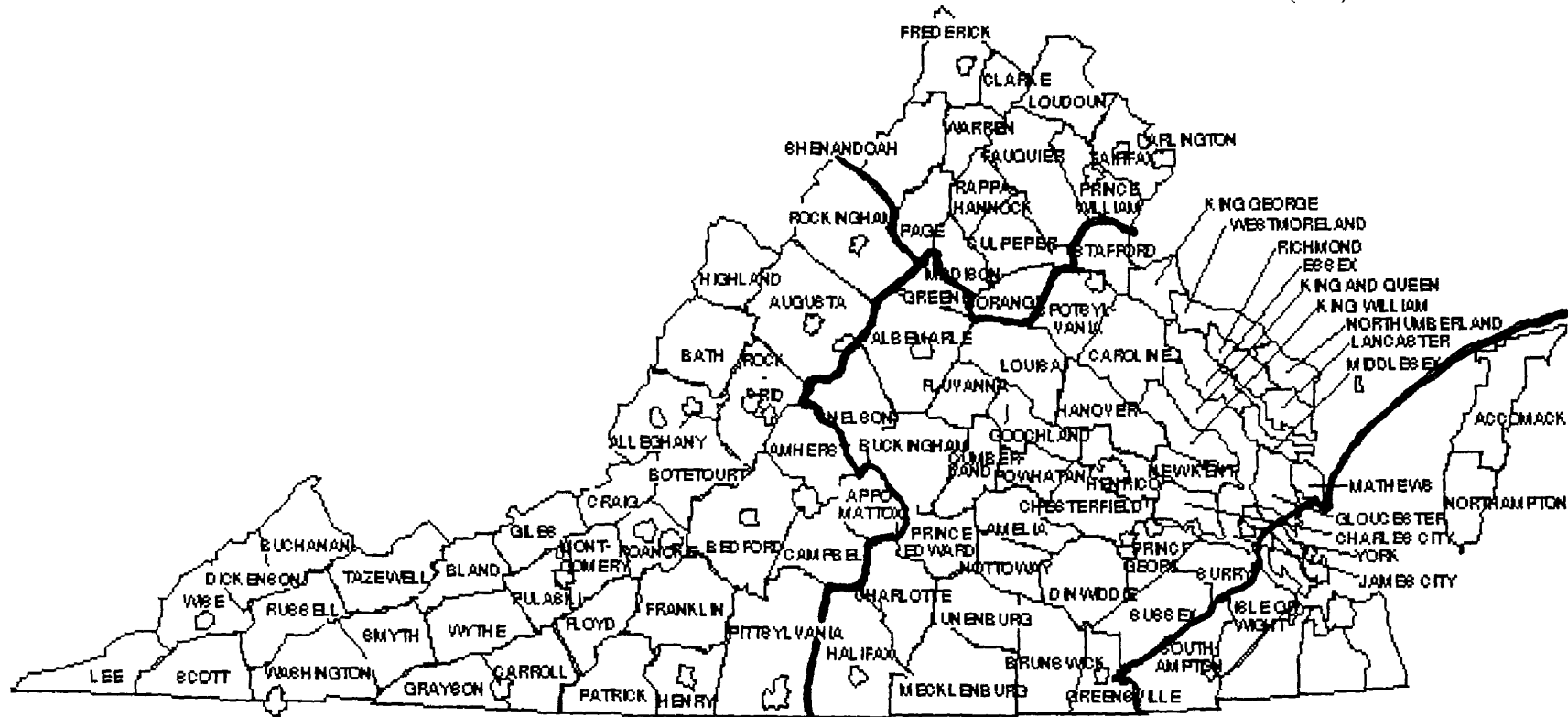
All agencies of the Commonwealth shall provide assistance to the State Department of Health, upon request.

The State Department of Health shall complete its work in time to submit its findings and recommendations to the Governor and the 1997 Session of the General Assembly as provided in the procedures of the Division of Legislative Automated Systems for the processing of legislative documents.

**COMMONWEALTH OF VIRGINIA
DEPARTMENT OF HEALTH
OFFICE OF THE CHIEF MEDICAL
EXAMINER**

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Needs Assessment For Establishing A Southwest Regional Medical Examiner's Office
Commonwealth's Attorneys

Instructions: (Circle or check)

1. I would like to see the State establish a regional Medical Examiner's Office in Southwest Virginia. Answer as follows: *Please circle one*
 - a. Strongly agree
 - b. Agree
 - c. No opinion
 - d. Disagree
 - e. Strongly disagree

2. Presently, I conduct a face to face pretrial conference with the pathologist with a review of the autopsy report, photographs and testimony. *Please circle one*
 - a. Before every murder trial
 - b. Before most murder trials.
 - c. Before some murder trials.
 - d. Before few murder trials.
 - e. Never

3. If a regional Medical Examiner's office were established in Southwest Virginia, a face to face pretrial conference with the pathologist with a review of the autopsy report, photographs and testimony would be conducted: *Please circle one*
 - a. Before every murder trial
 - b. Before most murder trials.
 - c. Before some murder trials
 - d. Before few murder trials.
 - e. Never

4. In your jurisdiction, the pathologist who performed the autopsy is summoned to court to testify: *Please circle one*
 - a. On every murder trial
 - b. On most murder trials.
 - c. On some murder trials.
 - d. On few murder trials.
 - e. Never

5. In your jurisdiction, the pathologist who performed the autopsy is summoned to testify at the preliminary hearing phase of a murder trial. *Please circle one*
 - a. On every murder trial
 - b. On most murder trials.
 - c. On some murder trials.
 - d. On few murder trials.
 - e. Never

6. The pathologist who performed the autopsy is not summoned to court to testify in a murder trial because it's too far to drive here all the way from Roanoke. *Please circle one*
- a. Strongly agree
 - b. Agree
 - c. No opinion
 - d. Disagree
 - e. Strongly disagree
7. The pathologist who performed the autopsy is not summoned to court to testify in a murder trial because it's too difficult to schedule. *Please circle one*
- a. Strongly agree
 - b. Agree
 - c. No opinion
 - d. Disagree
 - e. Strongly disagree
8. How often would the pathologist who performed the autopsy be summoned to court in a murder trial, if a regional Medical Examiner's Office were established in Southwest Virginia. *Please circle one*
- a. On every case
 - b. On most cases.
 - c. On some cases.
 - d. On few cases.
 - e. Never
9. How often do the police/sheriff's deputies in your jurisdiction attend medico-legal autopsies in Roanoke on cases they investigate? *Please circle one*
- a. On every case
 - b. On most cases.
 - c. On some cases.
 - d. On few cases.
 - e. Never
10. If a regional Medical Examiner's Office were established in Southwest Virginia, how often would the police/sheriff's deputies in your jurisdiction attend medico-legal autopsies? *Please circle one*
- a. On every case
 - b. On most cases.
 - c. On some cases.
 - d. On few cases.
 - e. Never

11. I do not order/request medico-legal autopsies because Roanoke is too far away and too inconvenient for the people here to transport a body. Answer as follows: *Please circle one*
- a. Strongly agree
 - b. Agree
 - c. No opinion
 - d. Disagree
 - e. Strongly disagree
12. Easier access to the pathologist and autopsies would improve the quality and timeliness of my death investigation cases. *Please circle one*
- a. Strongly agree
 - b. Agree
 - c. No opinion
 - d. Disagree
 - e. Strongly disagree
13. Select one:
- a. I/we are closer to Abingdon than to Roanoke.
 - b. I/we are closer to Roanoke than to Abingdon
 - c. Roanoke and Abingdon are about the same distance from me/us.
14. If a regional Medical Examiner's Office were opened in Southwest Virginia, the pathologist who performed the autopsy would be summoned to testify at the preliminary hearing phase of a murder trial: *Please circle one*
- a. In every case
 - b. In most cases.
 - c. In some cases.
 - d. In few cases.
 - e. Never
15. If there were a regional Medical Examiner's Office in Southwest Virginia, I would order/request: *Please circle one*
- a. More autopsies than I order now.
 - b. About the same number of autopsies that I order now.
 - c. Fewer autopsies than I order now.

16. A Medical Examiner's Office established in Southwest Virginia would: Please respond to the following statements as they relate to the establishment of a Southwest Regional Medical Examiner's Office:

- 1. Strongly agree
- 2. Agree
- 3. No opinion
- 4. Disagree
- 5. Strongly disagree

- I would be able to attend and watch autopsies.
- I would be able to summon the pathologist and other personnel to court more often.
- It would save the taxpayers money.
- I would have better communication with the pathologists.
- It would improve the overall quality of death investigation in Southwest Virginia
- It would improve the overall quality of investigation by law enforcement.
- It would improve the overall quality of investigation by local Medical Examiners.

17. I would not like to see a Medical Examiner's Office established in Southwest Virginia for the following reasons:

18. I believe that if the State were to establish a regional Medical Examiner's Office in Southwest Virginia, it would:
Please circle one

- a. Cost the taxpayers a lot of money in the long run.
- b. Cost the taxpayers money in the long run.
- c. Cost the taxpayers about the same amount of money as it does now in the long run.
- d. Cost the taxpayers less money in the long run
- e. Cost the taxpayers a lot less money in the long run.

19. Please rank the following locations as to distance from your workplace (1=closest, 2= next closest, 3= farthest away).

- | | |
|--|---|
| <input type="checkbox"/> Abingdon | <input type="checkbox"/> Lebanon |
| <input type="checkbox"/> Big Stone Gap | <input type="checkbox"/> Marion |
| <input type="checkbox"/> Bland | <input type="checkbox"/> Norton |
| <input type="checkbox"/> Bristol | <input type="checkbox"/> Pennington Gap |
| <input type="checkbox"/> Castlewood | <input type="checkbox"/> Richlands |
| <input type="checkbox"/> Coeburn | <input type="checkbox"/> St. Paul |
| <input type="checkbox"/> Galax | <input type="checkbox"/> Tazewell |
| <input type="checkbox"/> Gate City | <input type="checkbox"/> Wise |
| <input type="checkbox"/> Grundy | <input type="checkbox"/> Wytheville |
| <input type="checkbox"/> Independence | |
| <input type="checkbox"/> Jonesville | |

20. If a regional Medical Examiner's Office were established in Southwest Virginia, I would like it to be located in (1=best place, 2=next best place, 3= worst place).

- | | |
|--|---|
| <input type="checkbox"/> Abingdon | <input type="checkbox"/> Jonesville |
| <input type="checkbox"/> Big Stone Gap | <input type="checkbox"/> Lebanon |
| <input type="checkbox"/> Bland | <input type="checkbox"/> Marion |
| <input type="checkbox"/> Bristol | <input type="checkbox"/> Norton |
| <input type="checkbox"/> Castlewood | <input type="checkbox"/> Pennington Gap |
| <input type="checkbox"/> Coeburn | <input type="checkbox"/> Richlands |
| <input type="checkbox"/> Galax | <input type="checkbox"/> St. Paul |
| <input type="checkbox"/> Gate City | <input type="checkbox"/> Tazewell |
| <input type="checkbox"/> Grundy | <input type="checkbox"/> Wise |
| <input type="checkbox"/> Independence | <input type="checkbox"/> Wytheville |

21. I believe that establishing a Medical Examiner's Office in Southwest Virginia: *Please circle one*

- a. Should be done at all costs.
- b. Should be done only if costs are reasonable.
- c. Should be done only if the state will break even costwise.
- d. Should be done only if it saves the state money.
- e. Should not be done at all even though it saves the state money.

22. I would like to see a regional office of the Division of Forensic Science co-located with a Department of Health, Southwest office of the Medical Examiner. *Please circle one*

- a. Strongly agree
- b. Agree
- c. No opinion
- d. Disagree
- e. Strongly disagree

23. A co-located regional office of the Division of Forensic Science would allow: *Check all that apply*

- easier delivery of forensic evidence
- easier consultation with forensic scientists
- forensic scientists to appear more frequently as expert witnesses
- cases to be worked up quicker
- allow "one stop shopping" on death cases

24. Access to co-located Southwest regional office of the Division of Forensic Science would improve the quality of death investigation in my jurisdiction.

YES _____ NO _____ NO EFFECT _____

25. If a Southwest Regional Office of the Division of Forensic Science were to be co-located with a Department of Health Southwest Regional Medical Examiner's Office, the laboratories that I would like to see co-located are:

- Drug Analysis
- Firearms
- Number Restoration
- Speedometer
- Toolmarks
- Vehicle Lamps

- Image Enhancement
- Impressions
- Latent Prints

- Questioned Documents
- Impressions

- Hairs and Fibers
- PCR DNA
- RFLP DNA
- Serology

- Accelerants
- Explosives
- Fabric Separation Exam
- Fracture Match
- General Chemical
- Gunshot residue
- Instrument Support
- Paint
- Soils
- Synthetic Fibers

- Blood Spatter

- DUID
- Toxicology

26. Do you anticipate an increase or decrease in population in your jurisdiction by the year 2000?
Increase _____ Decrease _____

27. Do you anticipate an increase or decrease in caseload in your jurisdiction by the year 2000? Please estimate the number of case increase _____ or case decrease _____.
See following page for your 1995 caseload.

CA _____

28. Are you aware of a location that you think would be suitable for a Southwest Regional Office? Yes _____,
No _____, Unknown _____.
If so, give location _____

29. Is this property?
A. Privately owned
B. City or county property
C. State owned

30. Who should be contacted in reference to the property?

Name: _____

TITLE: _____

PHONE: _____

31. Please note any comments or questions you have about establishing a Southwest Regional Medical Examiner's Office.

YOUR NAME: _____
(optional, but it would be helpful)

TITLE: _____

PHONE: _____

Address any questions or calls to:

Drs. William Massello or David Oxley
Deputy Chief Medical Examiners
Office of the Chief Medical Examiner, Roanoke
6600 Northside High School Road
Roanoke, Virginia 24019 OR
540-561-6615
FAX: 540-561-6619
email: Wmassello@VDH.STATE.VA.US
email: Doxley@VDH.STATE.VA.US

Marcella F. Fierro, MD
Chief Medical Examiner
9 North 14th Street
Richmond, Virginia 23219
804-786-1033
FAX: 804-371-8595
email: Mfierro@VDH.STATE.VA.US

PLEASE RETURN BY June 15, 1996 in the enclosed self addressed envelope or FAX to 804-371-8595

Needs Assessment For Establishing A Southwest Regional Medical Examiner's Office
Medical Examiner

Instructions: (Circle or check)

1. I would like to see the State establish a regional Medical Examiner's Office in Southwest Virginia. *Please circle one.*

- a. Strongly agree
- b. Agree
- c. No opinion
- d. Disagree
- e. Strongly disagree

2. I do not order/request medico-legal autopsies because Roanoke is too far away and too inconvenient for the people here to transport a body. *Please circle one.*

- a. Strongly agree
- b. Agree
- c. No opinion
- d. Disagree
- e. Strongly disagree

3. Easier access to the pathologist and autopsies would improve the quality and timeliness of my death investigation cases. *Please circle one*

- a. Strongly agree
- b. Agree
- c. No opinion
- d. Disagree
- e. Strongly disagree

4. How much time, in your estimation, would be saved by sending bodies from your jurisdiction to Abingdon for an autopsy, rather than to Roanoke? *Please circle one*

- a. More than 2 days
- b. More than a day
- c. 19-24 hours
- d. 13-18 hours
- e. 7-12 hours
- f. Less than 6 hours
- g. It would take more time to send the body to Abingdon rather than to Roanoke.

5. How much time is, in your opinion, too much time for a body to be gone for an autopsy? *Please circle one*

- a. More than 2 days
- b. More than a day
- c. 19-24 hours
- d. 13-18 hours
- e. 7-12 hours
- f. Less than 6 hours
- g. It would take more time to send the body to Abingdon rather than to Roanoke.

6. Select one:

- a. I/we are closer to Abingdon than to Roanoke
- b. I/we are closer to Roanoke than to Abingdon
- c. Roanoke and Abingdon are about the same distance from me/us.

7. If there were a regional Medical Examiner's Office in Southwest Virginia, I would order/request: *Please circle one.*

- a. More autopsies than I order now.
- b. About the same number of autopsies that I order now.
- c. Fewer autopsies than I order now.

8. A Medical Examiner's Office established in Southwest Virginia would allow: Please respond to the following statements as they relate to the establishment of a Southwest Regional Medical Examiners Office:

- 1. Strongly agree
- 2. Agree
- 3. No opinion
- 4. Disagree
- 5. Strongly disagree

- () I would be able to attend and watch autopsies.
- () It would save the taxpayers money.
- () I would have better communication with the pathologists.
- () It would improve the overall quality of death investigation in Southwest Virginia
- () It would improve the overall quality of investigation by law enforcement.
- () It would improve the overall quality of investigation by local Medical Examiners.

9. I would not like to see a Medical Examiner's Office established in Southwest Virginia for the following reason(s):

10. I believe that if the State were to establish a regional Medical Examiner's Office in Southwest Virginia, it would: *Please circle one*

- a. Cost the taxpayers a lot of money in the long run.
- b. Cost the taxpayers money in the long run.
- c. Cost the taxpayers about the same amount of money as it does now in the long run.
- d. Cost the taxpayers less money in the long run
- e. Cost the taxpayers a lot less money in the long run.

11. Please rank the following locations as to distance from your workplace (1=closest, 2= next closest, 3= farthest away).

- | | |
|--|--|
| <input type="checkbox"/> Abingdon | <input type="checkbox"/> Jonesville |
| <input type="checkbox"/> Big Stone Gap | <input type="checkbox"/> Lebanon |
| <input type="checkbox"/> Bland | <input type="checkbox"/> Marion |
| <input type="checkbox"/> Bristol | <input type="checkbox"/> Norton |
| <input type="checkbox"/> Castlewood | <input type="checkbox"/> Penington Gap |
| <input type="checkbox"/> Coeburn | <input type="checkbox"/> Richlands |
| <input type="checkbox"/> Galax | <input type="checkbox"/> St. Paul |
| <input type="checkbox"/> Gate City | <input type="checkbox"/> Tazewell |
| <input type="checkbox"/> Grundy | <input type="checkbox"/> Wise |
| <input type="checkbox"/> Independence | <input type="checkbox"/> Wytheville |

12. If a regional Medical Examiner's Office were established in Southwest Virginia, I would like it to be located in (1=best place, 2=next best place, 3 =worst place).

- | | |
|--|--|
| <input type="checkbox"/> Abingdon | <input type="checkbox"/> Jonesville |
| <input type="checkbox"/> Big Stone Gap | <input type="checkbox"/> Lebanon |
| <input type="checkbox"/> Bland | <input type="checkbox"/> Marion |
| <input type="checkbox"/> Bristol | <input type="checkbox"/> Norton |
| <input type="checkbox"/> Castlewood | <input type="checkbox"/> Penington Gap |
| <input type="checkbox"/> Coeburn | <input type="checkbox"/> Richlands |
| <input type="checkbox"/> Galax | <input type="checkbox"/> St. Paul |
| <input type="checkbox"/> Gate City | <input type="checkbox"/> Tazewell |
| <input type="checkbox"/> Grundy | <input type="checkbox"/> Wise |
| <input type="checkbox"/> Independence | <input type="checkbox"/> Wytheville |

13. I believe that establishing a Medical Examiner's Office in Southwest Virginia:

- a. Should be done at all costs.
- b. Should be done only if costs are reasonable.
- c. Should be done only if the state will break even costwise.
- d. Should be done only if it saves the state money.
- e. Should not be done at all even though it saves the state money.

14. I would like to see a regional office of the Division of Forensic Science co-located with a Department of Health, Southwest office of the Medical Examiner. *Please circle one.*

- a. Strongly agree
- b. Agree
- c. No opinion
- d. Disagree
- e. Strongly agree

15. A co-located regional office of the Division of Forensic Science would allow: *Check all that apply.*

- () easier delivery of forensic evidence
- () easier consultation with forensic scientists
- () forensic scientists to appear more frequently as expert witnesses
- () cases to be worked up quicker
- () allow "one stop shopping" on death cases

16. Access to a co-located Southwest regional office of the Division of Forensic Science would improve the quality of death investigation in my jurisdiction.

YES _____ NO _____ NO EFFECT _____

17. Do you anticipate an increase or decrease in the population of your jurisdiction by the year 2000?

Increase _____ Decrease _____

18. Do you anticipate an increase or decrease in caseload in your jurisdiction by the year 2000? Please estimate the number of case increase _____ or case decrease _____.

19. Are you aware of a location that you think would be suitable for a Southwest Regional Office? If so, give location -
Yes _____, No _____, Unknown _____

20. Is this property?

- A. Privately owned
- B. City or county property
- C. State owned

21. Who should be contacted in reference to the property?

Name: _____

TITLE: _____

PHONE: _____

ME _____

22. Please note any comments or questions you have about establishing a Southwest Regional Medical Examiner's Office.

YOUR NAME: _____
(optional, but would be helpful)

TITLE: _____

PHONE: _____

JURISDICTION: City or County: _____

Address any questions or calls to:

Drs. William Massello or David Oxley
Deputy Chief Medical Examiners
Office of the Chief Medical Examiner, Roanoke
6600 Northside High School Road
Roanoke, Virginia 24019
540-561-6615
FAX: 540-561-6619
email: Wmassello@VDH.STATE.VA.US
email: Doxley@VDH.STATE.VA.US

OR

Marcella F. Fierro, MD
Chief Medical Examiner
9 North 14th Street
Richmond, Virginia 23219
804-786-1033
FAX: 804-371-8595
email: Mfierro@VDH.STATE.VA.US

PLEASE RETURN BY JUNE 15, 1996 in the enclosed self addressed envelope or FAX to 804-371-8595.

Needs Assessment For Establishing a Southwest Regional Medical Examiner's Office
Law Enforcement

Instructions: (Circle or check)

1. I would like to see the State establish a regional Medical Examiner's Office in Southwest Virginia. *Please circle one.*
 - a. Strongly agree
 - b. Agree
 - c. No opinion
 - d. Disagree
 - e. Strongly disagree

2. Presently, I conduct a face to face pretrial conference with the pathologist with a review of the autopsy report, photographs and testimony. *Please circle one.*
 - a. Before every murder trial
 - b. Before most murder trials.
 - c. Before some murder trials.
 - d. Before few murder trials.
 - e. Never

3. If a regional Medical Examiner's office were established in Southwest Virginia, a face to face pretrial conference with the pathologist with a review of the autopsy report, photographs and testimony would be conducted: *Please circle one*
 - a. Before every murder trial
 - b. Before most murder trials.
 - c. Before some murder trials.
 - d. Before few murder trials.
 - e. Never

4. In your jurisdiction, the pathologist who performed the autopsy is summoned to testify at the preliminary hearing phase of a murder trial. *Please circle one.*
 - a. On every murder trial
 - b. On most murder trials
 - c. On some murder trials
 - d. Before few murder trials
 - e. Never

5. In your jurisdiction, the pathologist who performed the autopsy is summoned to court to testify: *Please circle one*
 - a. On every murder trial
 - b. On most murder trials
 - c. On some murder trials
 - d. Before few murder trials
 - e. Never

6. How often do the police/sheriff's deputies in your jurisdiction attend medico-legal autopsies in Roanoke on cases they investigate? *Please circle one*
- a. On every case
 - b. On most cases.
 - c. On some cases.
 - d. On few cases.
 - e. Never
7. If a regional Medical Examiner's Office were established in Southwest Virginia, how often would the police/sheriff's deputies in your jurisdiction attend medico-legal autopsies? *Please circle one*
- a. On every case
 - b. On most cases.
 - c. On some cases.
 - d. On few cases.
 - e. Never
8. I do request medico-legal autopsies because Roanoke is too far away and too inconvenient for the people here to transport a body. *Please circle one.*
- a. Strongly agree
 - b. Agree
 - c. No opinion
 - d. Disagree
 - e. Strongly disagree
9. Easier access to the pathologist and autopsies would improve the quality and timeliness of my death investigation cases. *Please circle one.*
- a. Strongly agree
 - b. Agree
 - c. No opinion
 - d. Disagree
 - e. Strongly disagree
10. On the average, about how long from the time a body leaves your jurisdiction to the time it returns, is a body gone for a medicolegal autopsy in Roanoke: *Please circle one*
- a. More than 2 days
 - b. More than a day.
 - c. 19-24 hours
 - d. 13-18 hours.
 - e. 7-12 hours.
 - f. Less than 6 hours.

11. How much time, in your estimation, would be saved by sending bodies from your jurisdiction to Abingdon for an autopsy, rather than to Roanoke? *Please circle one*
- a. More than 2 days
 - b. More than a day.
 - c. 19-24 hours
 - d. 13-18 hours.
 - e. 7-12 hours.
 - f. Less than 6 hours.
12. How much time is, in your opinion, too much time for a body to be gone for an autopsy? *Please circle one*
- a. More than 2 days
 - b. More than a day.
 - c. 19-24 hours
 - d. 13-18 hours.
 - e. 7-12 hours.
 - f. Less than 6 hours.
13. On the average, about how long from the time a body leaves your jurisdiction to the time it returns, would you expect a body to be gone for a medicolegal autopsy in an office established in Abingdon? *Please circle one*
- a. More than 2 days
 - b. More than a day.
 - c. 19-24 hours
 - d. 13-18 hours.
 - e. 7-12 hours.
 - f. Less than 6 hours.
14. Select one:
- a. I/we are closer to Abingdon than to Roanoke.
 - b. I/we are closer to Roanoke than to Abingdon
 - c. Roanoke and Abingdon are about the same distance from me/us.
15. If there were a regional Medical Examiner's Office in Southwest Virginia, I would order/request:
- a. More autopsies than now.
 - b. About the same number of autopsies that I request now.
 - c. Fewer autopsies than now.

16. A Medical Examiner's Office established in Southwest Virginia would allow: Please respond to the following statements as they relate to the establishment of a Southwest Regional Medical Examiner's Office:

- 1. Strongly agree
- 2. Agree
- 3. No opinion
- 4. Disagree
- 5. Strongly disagree

- () I would be able to attend and watch autopsies.
- () I would be able to summon the pathologist and other personnel to court more often.
- () It would save the taxpayers money.
- () I would have better communication with the pathologists.
- () It would improve the overall quality of death investigation in Southwest Virginia
- () It would improve the overall quality of investigation by law enforcement.
- () It would improve the overall quality of investigation by local Medical Examiners.

17. I would not like to see a Medical Examiner's Office established in Southwest Virginia for the following reasons:

18. I believe that if the State were to establish a regional Medical Examiner's Office in Southwest Virginia, it would: *Please circle one*

- a. Cost the taxpayers a lot of money in the long run.
- b. Cost the taxpayers money in the long run.
- c. Cost the taxpayers about the same amount of money as it does now in the long run.
- d. Cost the taxpayers less money in the long run
- e. Cost the taxpayers a lot less money in the long run.

19. Please rank the following locations as to distance from your workplace (1=closest, 2= next closest, 3= farthest away).

- | | |
|-------------------|--------------------|
| () Abingdon | () Jonesville |
| () Big Stone Gap | () Lebanon |
| () Bland | () Marion |
| () Bristol | () Norton |
| () Castlewood | () Pennington Gap |
| () Coeburn | () Richlands |
| () Galax | () St. Paul |
| () Gate City | () Tazewell |
| () Grundy | () Wise |
| () Independence | () Wythville |

20. If a regional Medical Examiner's Office were established in Southwest Virginia, I would like it to be located in (1=best place, 2=next best place, 3= worst place).

- | | |
|--|---|
| <input type="checkbox"/> Abingdon | <input type="checkbox"/> Jonesville |
| <input type="checkbox"/> Big Stone Gap | <input type="checkbox"/> Lebanon |
| <input type="checkbox"/> Bland | <input type="checkbox"/> Marion |
| <input type="checkbox"/> Bristol | <input type="checkbox"/> Norton |
| <input type="checkbox"/> Castlewood | <input type="checkbox"/> Pennington Gap |
| <input type="checkbox"/> Coeburn | <input type="checkbox"/> Richlands |
| <input type="checkbox"/> Galax | <input type="checkbox"/> St. Paul |
| <input type="checkbox"/> Gate City | <input type="checkbox"/> Tazewell |
| <input type="checkbox"/> Grundy | <input type="checkbox"/> Wise |
| <input type="checkbox"/> Independence | <input type="checkbox"/> Wythville |

21. I believe that establishing a Medical Examiner's Office in Southwest Virginia: *Please circle one*

- Should be done at all costs.
- Should be done only if costs are reasonable.
- Should be done only if the state will break even costwise.
- Should be done only if it saves the state money.
- Should not be done at all even though it saves the state money.

22. I would like to see a regional office of the Division of Forensic Science co-located with a Department of Health, Southwest office of the Medical Examiner. *Please circle one*

- Strongly agree
- Agree
- No opinion
- Disagree
- Strongly agree

23. A co-located regional office of the Division of Forensic Science would allow: *Please check all that apply*

- easier delivery of forensic evidence
- easier consultation with forensic scientists
- forensic scientists to appear more frequently as expert witnesses
- cases to be worked up quicker
- allow "one stop shopping" on death cases

24. Access to co-located Southwest regional office of the Division of Forensic Science would improve the quality of death investigation in my jurisdiction. *Please check one*

YES _____ NO _____ NO EFFECT _____

25. If a Southwest Regional Office of the Division of Forensic Science were to be co-located with a Department of Health Southwest Regional Medical Examiner's Office, the laboratories that I would like to see co-located are:
Please check all that apply.

- Drug Analysis
- Firearms
- Number Restoration
- Speedometer
- Toolmarks
- Vehicle Lamps
- Image Enhancement
- Impressions
- Latent Prints
- Questioned Documents
- Impressions
- Hairs and Fibers
- PCR DNA
- RFLP DNA
- Serology
- Accelerants
- Explosives
- Fabric Separation Exam
- Fracture Match
- General Chemical
- Gunshot residue
- Instrument Support
- Paint
- Soils
- Synthetic Fibers
- Blood Spatter
- DUID
- Toxicology

26. Do you anticipate an increase or decrease in population in your jurisdiction by the year 2000? Please check one
Increase _____ Decrease _____

LE _____

27. The columns below represent submissions by your jurisdiction to the Division of Forensic Science. If a Southwest Regional Office of the DFS were to be co-located with the Medical Examiner, please estimate the number of cases you would be submitting by the year 2000.

County/City - _____ 1995 caseload

28. Do you anticipate an increase or decrease in caseload by the year 2000? Please estimate the number of case increase _____ or case decrease _____. *Please check one*

LE _____

29. Are you aware of a location that you think would be suitable for a Southwest Regional Office? If so, give location:
Yes _____, No _____, Unknown _____.

30. Is this property?
A. Privately owned
B. City or county property
C. State owned

31. Who should be contacted in reference to the property?

Name: _____

TITLE: _____

PHONE: _____

32. Please note any comments or questions you have about establishing a Southwest Regional Medical Examiner's Office.

YOUR NAME: _____

(optional but it would be helpful)

TITLE: _____

PHONE: _____

Jurisdiction, City or County _____

Address any questions or calls to:

Drs. William Massello or David Oxley
Deputy Chief Medical Examiners
Office of the Chief Medical Examiner, Roanoke
6600 Northside High School Road
Roanoke, Virginia 24019
540-561-6615
Fax: 540-561-6619
email: Wmassello@VDH.STATE.VA.US
email: Doxley@VDH.STATE.VA.US

OR

Marcella F. Fierro, MD
Chief Medical Examiner
9 North 14th Street
Richmond, Virginia 23219
804-786-1033
804-371-8595
email: Mfierro@VDH.STATE.VA.US

PLEASE RETURN BY June 15, 1996 in the enclosed self addressed envelope or fax to 804-371-8595.

Needs Assessment For Establishing a Southwest Regional Medical Examiner's Office
Funeral Directors

Instructions: (Circle or check)

1. I would like to see the State establish a regional Medical Examiner's Office in Southwest Virginia. *Please circle one*

- a. Strongly agree
- b. Agree
- c. No opinion
- d. Disagree
- e. Strongly disagree

2. Which of the following statements is most accurate concerning your establishment's transporting a body to the Roanoke Medical Examiner's Office. *Please circle one*

- a. I/we make a lot of money
- b. I/we make money
- c. I/we financially break even.
- d. I/we lose money
- e. I/we lose a lot of money.

3. Please estimate the savings in time and money you would experience if a Southwest Virginia Medical Examiner's Office were to be established in the Abingdon area.

_____ Hours of transportation per case.

_____ \$ in time per case.

4. Which of the following statements do you believe would most accurately reflect your situation regarding body transportation to and from the Medical Examiner's Office if a regional Medical Examiner's Office were established in Southwest Virginia? *Please circle one*

- a. I/we would make less money than I'm/we're making now.
- b. I/we would make the same amount of money I'm/we're making now.
- c. I/we would make more money than I'm/we're making now.

5. On the average, about how long from the time a body leaves your jurisdiction to the time it returns, is a body gone for a medicolegal autopsy in Roanoke: *Please circle one*

- a. More than 2 days
- b. More than a day
- c. 19-24 hours
- d. 13-18 hours
- e. 7-12 hours
- f. Less than 6 hours
- g. It would take more time to send the body to Abingdon rather than to Roanoke.

6. On the average, about how long from the time a body leaves your jurisdiction to the time it returns, would you expect a body to be gone for a medicolegal autopsy in an office established in Abingdon? *Please circle one*

- a. More than 2 days
- b. More than a day
- c. 19-24 hours
- d. 13-18 hours
- e. 7-12 hours
- f. Less than 6 hours
- g. It would take more time to send the body to Abingdon rather than to Roanoke.

7. How much time is, in your opinion, too much time for a body to be gone for an autopsy? *Please circle one*

- a. More than 2 days
- b. More than a day
- c. 19-24 hours
- d. 13-18 hours
- e. 7-12 hours
- f. Less than 6 hours

8. How much time, in your estimation, would be saved by sending bodies from your jurisdiction to Abingdon for an autopsy, rather than to Roanoke? *Please circle one*

- a. More than 2 days
- b. More than a day
- c. 19-24 hours
- d. 13-18 hours
- e. 7-12 hours
- f. Less than 6 hours
- h. It would take more time to send the body to Abingdon rather than to Roanoke.

9. Select one:

- a. I/we are closer to Abingdon than to Roanoke.
- b. I/we are closer to Roanoke than to Abingdon
- c. Roanoke and Abingdon are about the same distance from me/us.

10. A Medical Examiner's Office established in Southwest Virginia would: Please respond to the following statements as they relate to the establishment of a Southwest Regional Medical Examiner's Office:

- 1. Strongly agree
- 2. Agree
- 3. No opinion
- 4. Disagree
- 5. Strongly disagree

- () It would save me/us **time** taking a body to and from the Medical Examiner's Office.
- () It would save me/us **money** taking a body to and from the Medical Examiner's Office.
- () I would make more money taking a body to and from the Medical Examiner's Office.
- () I would finally have a place to store bodies.
- () I would not be able to store bodies where I am storing them now.

11. I would not like to see a Medical Examiner's Office established in Southwest Virginia for the following reasons:
Please list your reasons.

12. I believe that if the State were to establish a regional Medical Examiner's Office in Southwest Virginia, it would: *Please circle one*

- a. Cost the taxpayers a lot of money in the long run.
- b. Cost the taxpayers money in the long run.
- c. Cost the taxpayers about the same amount of money as it does now in the long run.
- d. Cost the taxpayers less money in the long run
- e. Cost the taxpayers a lot less money in the long run.

13. I believe that if a regional Medical Examiner's Office were established in Abingdon, it would be: *Please circle one*

- a. Much easier to get death certificates.
- b. Easier to get death certificates.
- c. No real change in how easy it is to get a death certificate from the way it is right now.
- d. Harder to get death certificates.
- e. Much harder to get death certificates.

14. Please rank the following locations as to distance from your workplace (1=closest, 2= next closest, .3= farthest away).

- | | |
|-------------------|--------------------|
| () Abingdon | () Jonesville |
| () Big Stone Gap | () Lebanon |
| () Bland | () Marion |
| () Bristol | () Norton |
| () Castlewood | () Pennington Gap |
| () Coeburn | () Richlands |
| () Galax | () St. Paul |
| () Gate City | () Tazewell |
| () Grundy | () Wise |
| () Independence | () Wytheville |

15. If a regional Medical Examiner's Office were established in Southwest Virginia, I would like it to be located in (1=best place, 2=next best place, 3= worst place).

- | | |
|--|---|
| <input type="checkbox"/> Abingdon | <input type="checkbox"/> Jonesville |
| <input type="checkbox"/> Big Stone Gap | <input type="checkbox"/> Lebanon |
| <input type="checkbox"/> Bland | <input type="checkbox"/> Marion |
| <input type="checkbox"/> Bristol | <input type="checkbox"/> Norton |
| <input type="checkbox"/> Castlewood | <input type="checkbox"/> Pennington Gap |
| <input type="checkbox"/> Coeburn | <input type="checkbox"/> Richlands |
| <input type="checkbox"/> Galax | <input type="checkbox"/> St. Paul |
| <input type="checkbox"/> Gate City | <input type="checkbox"/> Tazewell |
| <input type="checkbox"/> Grundy | <input type="checkbox"/> Wise |
| <input type="checkbox"/> Independence | <input type="checkbox"/> Wytheville |

16. I believe that establishing a Medical Examiner's Office in Southwest Virginia: *Please circle one*

- a. Should be done at all costs.
- b. Should be done only if costs are reasonable.
- c. Should be done only if the state will break even costwise.
- d. Should be done only if it saves the state money.
- e. Should not be done at all even though it saves the state money.

17. Do you anticipate an increase or decrease in caseload in your jurisdiction by the year 2000? Please estimate the number of case increase _____ or case decrease _____.

18. Are you aware of a location that you think would be suitable for a Southwest Regional Office? If so, give location Yes _____, No _____, Unknown _____

19. Is this property?

- a. Privately owned
- b. City or county property
- c. State owned

20. Who should be contacted in reference to the property?

Name: _____

TITLE: _____

PHONE: _____

21. Please note any comments or questions you have about establishing a Southwest Regional Medical Examiner's Office.

YOUR NAME: _____
(optional but would be helpful)

TITLE: _____

PHONE: _____

JURISDICTION City/County _____

Address any questions or calls to:

Drs. William Massello or David Oxley
Deputy Chief Medical Examiners
Office of the Chief Medical Examiner, Roanoke
6600 Northside High School Road
Roanoke, Virginia 24019
540-561-6615
FAX: 540-561-6619
email: Wmassello@VDH.STATE.VA.US
email: Doxley@VDH.STATE.VA.US

OR

Marcella F. Fierro, MD
Chief Medical Examiner
9 North 14th Street
Richmond, Virginia 23219
804-786-1033
FAX: 804-371-8595
email: Mfierro@VDH.STATE.VA.US

PLEASE RETURN BY June 15, 1996 in the self addressed envelope or FAX to 804-371-8595.

Appendix IV
Population for Western District

COUNTY	1995	2000	2005	2010
Alleghany Co.	12,812	12,482	12,295	12,107
Amherst Co.	28,845	29,100	29,407	29,713
Appomattox Co.	12,661	13,007	13,275	13,542
Augusta Co.	56,452	58,143	59,601	61,058
Bath Co.	4,648	4,501	4,500	4,498
Bedford Co.	50,460	56,018	59,047	63,078
Bland Co.	6,559	6,602	6,554	6,506
Botetourt Co.	25,751	26,474	26,775	27,075
Buchanan Co.	29,659	28,064	26,989	25,913
Campbell Co.	48,243	48,883	49,448	50,000
Carroll Co.	26,364	26,184	26,989	25,794
Craig Co.	4,598	4,814	4,961	5,108
Dickenson Co.	16,994	16,397	16,050	15,702
Floyd Co.	12,218	12,469	12,679	12,898
Franklin Co.	41,364	43,093	44,318	45,542
Giles Co.	16,241	16,121	16,082	16,042
Grayson Co.	16,153	16,033	15,916	16,798
Henry Co.	56,774	56,814	56,635	56,456
Highland Co.	2,514	2,399	2,400	2,401
Lee Co.	24,185	23,888	23,632	23,376
Montgomery Co.	76,828	79,604	81,780	83,915
Patrick Co.	17,489	17,504	17,456	17,406
Pittsylvania Co.	55,577	55,486	55,449	55,198
Pulaski Co.	34,347	34,206	34,202	34,198
Roanoke Co.	81,497	83,559	85,492	87,424
Rockbridge Co.	19,582	18,802	19,108	19,410
Rockingham Co.	59,798	62,003	63,465	64,926
Russell Co.	27,711	26,800	26,552	26,303
Scott Co.	22,771	22,359	22,007	21,655
Smyth Co.	32,956	33,679	33,671	33,760
Tazewell Co.	44,422	42,969	42,212	41,465
Washington Co.	45,648	45,421	45,208	44,994
Wise Co.	38,841	37,754	37,035	36,316
Wythe Co.	<u>25,431</u>	<u>25,382</u>	<u>25,347</u>	<u>25,302</u>
TOTAL	1,076,393	1,087,014	1,096,537	1,105,879

Appendix IV
Population for Western District
Page 2

CITIES	1995	2000	2005	2010
Bedford	8,101	8,129	8,126	8,123
Bristol	18,150	17,868	17,740	17,591
Buena Vista	6,299	6,198	6,098	5,994
Clifton Forge	4,488	4,302	4,250	4,198
Covington	6,628	6,267	6,103	5,938
Danville	52,771	52,500	52,201	51,901
Galax	6,739	6,764	6,842	6,919
Harrisonburg	32,394	34,000	35,368	36,731
Lexington	6,983	7,006	7,048	7,089
Lynchburg	66,227	66,397	66,398	66,399
Martinsville	15,720	15,300	15,151	15,001
Norton	4,090	3,940	3,936	3,932
Radford	16,587	17,203	17,601	17,999
Roanoke City	94,877	93,322	91,960	90,597
Salem	23,576	23,404	23,299	23,194
Staunton	24,537	24,610	24,482	24,354
Waynesboro	<u>18,727</u>	<u>18,897</u>	<u>19,020</u>	<u>19,143</u>
	406,894	406,107	405,623	405,103
GRAND TOTAL	1,483,287	1,493,121	1,502,160	1,510,982

Appendix V
Population of Southwestern Virginia

COUNTY/CITY	1985	1990	1995	2000
Bland County	6,469	6,514	6,559	6,602
Buchanan County	36,718	31,333	29,659	28,084
Carroll County	27,920	26,594	26,364	26,184
Dickenson County	20,031	17,620	16,994	16,397
Grayson County	16,817	16,278	16,153	16,033
Lee County	26,584	24,496	24,185	23,888
Russell County	32,418	28,667	27,711	26,900
Scott County	25,554	23,204	22,771	22,359
Smyth County	33,156	32,370	32,956	33,579
Tazewell County	50,798	45,960	44,422	42,958
Washington County	46,934	45,997	45,648	45,421
Wise County	45,081	39,673	38,841	37,754
Wythe County	<u>25,586</u>	<u>25,471</u>	<u>25,431</u>	<u>25,392</u>
	394,066	364,177	357,694	351,551
City of Bristol, VA	18,094	18,428	18,150	17,888
City of Galax	6,794	6,670	6,739	6,764
City of Norton	<u>4,575</u>	<u>4,247</u>	<u>4,090</u>	<u>3,940</u>
	29,463	29,345	28,979	28,592
GRAND TOTAL	423,529	393,522	386,673	380,143

***Source: "Virginia Statistical Abstract, 1994-95 Edition", Center for Public Service,
University of Virginia (furnished via Joint Industrial Development
Authority of Wythe County)

Appendix VI

Investigations and Autopsies - 1993 - 1995 Medical Examiner Case Distribution in the Counties and Cities of the Proposed Southwest District

INVESTIGATIONS			
	1993	1994	1995
Total Cases Investigated	366	345	376
AUTOPSIES			
City/County			
Bland	2	6	5
Buchanan	12	8	18
Carroll	5	9	9
Dickenson	10	1	10
Grayson	2	1	8
Lee	8	10	6
Russell	11	6	22
Scott	10	9	7
Smyth	10	5	15
Tazewell	20	9	29
Washington	17	11	33
Wise	13	15	20
Wythe	12	11	13
Bristol City	5	2	4
Galax City	6	3	4
Norton City	4	1	4
TOTAL AUTOPSIES	147	99	206

Appendix - VII

Locations Identified As Possible Sites for a Southwest Regional Office

LOCATION	COUNTY	OWNED BY
Southwest (DMHMRSAS) State Mental Health Facility at Marion, 6 responses	Smyth	State
Mattie Williams Hospital, Richlands, 2 responses	Tazewell	County
Location not specified, 6 responses	No county specified	County 3, City 3
Lonesome Pine Hospital, Big Stone Gap, 2 responses	Wise	Private Corporation
Old Bristol Medical Center, Bristol	Washington	County/City
"Near St. Paul on Rt. 58 Alt"	Washington	Private
Old Hotel Norton, Norton	Wise	City/County
Wytheville or Marion, unspecified location	Wythe and Smyth	Unspecified
Bristol, Unspecified location	Washington	Unspecified
Unused Westmoreland Coal Co. Offices, Big Stone Gap	Wise	Private
Lebanon New Bldg, unspecified location Russell	Russell	City/County
Lebanon Industrial Park, Lebanon	Russell	City/County
Old Health Dept. Building, Gate City	Scott	State
York Farm, Duffield	Lee	Private
Gate City, unspecified location	Scott	Unspecified
Grayson Co. Industrial Park Independence	Grayson	County

Appendix VIII

Cost of Establishing a Southwest Virginia Regional Medical Examiner's Office

START-UP COST

COST ITEM	RENT EXISTING SPACE	NEW FACILITY
Computer Equipment	\$ 26,000	\$ 26,000
Office Equipment	15,000	15,000
Microscope	14,000	14,000
Morgue Equipment	7,500	25,000
X-Ray Equipment (if unavailable)	25,000	25,000
State Hearse	20,000	20,000
Construction (7000 sq. ft.)		1,260,000
Sub-Total	\$ 107,500	\$1,385,000

RECURRING EXPENSES

	RENT EXISTING SPACE	NEW FACILITY
Office and Morgue Rental	\$ 30,000	\$ 95,000
Office Supplies	7,000	7,000
Morgue Supplies	10,000	15,000
Morgue Service - X-Ray, Histology, Clinical Lab.	27,000	20,000
Communication Services	6,000	12,000
Photographic Supplies	6,000	6,000
Maintenance/Utilities		17,500
Sub-Total	\$ 86,000	\$172,500

PERSONNEL (SALARY & BENEFITS)

Assistant CME (Grade 23)	\$ 97,541	\$ 97,541
Human Services Program Coordinator. (Grade 12)	33,486	33,486

Exec. Sec. (Medical) (Grade 7)	21,449	21,449
Forensic Autopsy Tech. Sr. (Grade 7)	21,449	21,449
Part-Time Forensic Autopsy.-Tech (Grade 6)	14,350	14,350
Personnel Costs (Less Fringes)	\$188,275	\$188,275
Fringes	\$ 45,585	\$ 45,585
Total Personnel Costs	\$233,860	\$233,860

GRAND TOTAL	\$427,360	\$1,771,360
TOTAL RECURRING EXPENDITURES (Less Start-up Expense)	\$319,860	\$406,360

Appendix IX
Costs of Establishing a Regional Division of Forensic Science Laboratory

START-UP COST

	TOXICOLOGY	FIREARMS	LATENT PRINTS
Computer Equipment	\$5,000.00	\$5,000.00	\$5,000.00
Office Equipment	5,000.00	5,000.00	5,000.00
Laboratory Equip	207,000.00	60,000.00	10,000.00
Construction	180,000.00	180,000.00	180,000.00
Subtotal	397,000.00	250,000.00	200,000.00

RECURRING EXPENSES

	TOXICOLOGY	FIREARMS	LATENT PRINTS
Office Supplies	\$1,000.00	\$500.00	\$500.00
Laboratory Supplies	15,000.00	3,000.00	2,000.00
Communications	1,500.00	1,500.00	1,500.00
Photographic	---	1,000.00	3,000.00
Maintenance/Utilities	5,000.00	2,500.00	2,500.00
Subtotal	22,500.00	8,500.00	9,500.00

PERSONNEL (SALARY & BENEFITS)

Toxicologist	\$60,000.00		
Chemist Assistant	30,000.00		
Firearms Examiner		50,000.00	
Security Officer		28,000.00	
Office Service Specialist		25,000.00	
Latent Examiner			\$50,000.00
Laboratory Director			60,000.00
Subtotal	90,000.00	103,000.00	110,000.00

GRAND TOTAL	\$509,500.00	\$361,500.00	\$319,500.00
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