Memo

Date: January 15, 2004

Memo to: David Manning

From: Kim McDoniel

Regarding: Police Crime Lab Request

At your request, we asked Matrix Consulting Group to do an independent assessment of the Police Department's (MNPD) capital and operating budget request for a full service crime lab. MNDP currently does latent fingerprint and firearms testing in-house, with DNA, blood alcohol and most other scientific crime analysis done by the Tennessee Bureau of Investigation (TBI). TBI does the testing without charge, but MNPD uses private labs under certain circumstances at an annual cost of approximately $10,000.

The MNPD proposal is to bring all crime lab testing in-house. Matrix does not recommend that Metro fund this request for the following reasons.

1. The current TBI service levels are high.

2. It would take several years for a new crime lab to get accredited. Courtroom evidence from an unaccredited lab in the interim could be viewed negatively by juries.

3. TBI testing is currently done without cost to Metro, but a new crime lab would require capital expenditures of an estimated $3 million and annual operating expenditures of an estimated $900,000.

MNPD's current crime lab facility will be evaluated as part of the ongoing MNPD facility assessment. The full Matrix report is attached. Please let me know if you have any questions or would like additional information.

Copy: Chief Ronal Serpas
Talia Lomax-O'dneal
Metropolitan Council Audit Committee

Crime Lab Feasibility Study

METROPOLITAN NASHVILLE – DAVIDSON COUNTY, TENNESSEE

matrix consulting group

January 12, 2004

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1. INTRODUCTION AND EXECUTIVE SUMMARY

The Matrix Consulting Group was retained by the Metropolitan Government of Nashville – Davidson County to examine the feasibility of the creation of a Metro Police Department Crime Lab. The focus of the study is whether or not there would be operational or fiscal benefits to Metro if the Police Department were to open its own, "full-service" law enforcement laboratory.

This study was requested by Metro following a proposal made by the Metro Nashville Police Department (MNPD) for the development of a crime lab within the Police Department. The basic elements of this plan were to do the following:

- Eliminate the Department's reliance on outside agencies for the analysis of evidence collected at crime scenes.
- Specifically, for the development of the capability to conduct serology and DNA analysis work in-house.
- To continue to expand on the Department's relatively new capabilities with regards to working with firearms.
- To improve the facilities in which existing work is conducted (i.e., identification and "lifting" of latent fingerprint evidence, examination of items recovered at crime scenes, etc.).

The project team from the Matrix Consulting Group views the Department's proposal as actually focusing on two primary goals that should be addressed by this study:

- Adequacy of current facilities for current work and workload.
- Feasibility of expanding the capabilities of the MNPD into new areas of crime lab work.

The following section provides a summary of the key recommendations from this report.

EXECUTIVE SUMMARY

The Matrix Consulting Group project team's key findings and recommendations include the following points:

- Current service levels provided by in-house staff (latent fingerprints and firearms) and by the TBI Lab are very high.
- Metro currently spends very little (less than $10,000 per year) obtaining laboratory services that cannot be provided by the TBI or in-house.
- The cost of starting an independent forensics lab in Nashville would be significant. This is true in terms of start up costs ($3 million) and annual costs (almost $1 million).
- Metro and the Police Department already benefit significantly from the proximity of the state's primary forensics lab (it is located in Nashville).
- Achieving accreditation (and maintaining it) would be time-consuming and expensive. This step must be accomplished in order for the Department's investigators to continue feeling comfortable going into court with evidence processed in a lab setting.
- The Matrix Consulting Group does not recommend that Metro pursue the Police Department's proposed forensics (crime) lab at this time.

The following sections provide a summary of the current approaches used to acquire and provide crime lab services, the Department's proposed approach to crime lab service and the Matrix Consulting Group project team's analysis of the need for and feasibility of the development of expanded crime lab capabilities within the MNPD.

2. SUMMARY OF THE CURRENT APPROACH

This chapter provides a summary of the current approaches used to acquire and provide crime lab services within the Police Department. There are several ways in which evidence can be analyzed or professionally evaluated at this time. These include the following:

- Fingerprints are recovered ("lifted") from evidence by the staff of the Identification Division. These latent fingerprints are recovered from materials collected at crime scenes by MNPD staff.

- Identification of fingerprints is done in-house by civilian staff who are trained to evaluate latent and inked fingerprints. Identification is performed using both electronic and manual means.

- Firearms are, in general, processed by the staff of the Identification Division. The work performed by MNPD staff includes test firing, comparisons, determining if a weapon can be made "useable" and entry of data regarding the weapon into state and national electronic databases.

- Blood evidence (serology) of any kind is sent out to the Tennessee Bureau of Investigation (TBI). The TBI has a lab in Nashville which is a full-service facility (it provides all of the services available in the system – other labs in the state do not offer all services).

- DNA testing (a sub-category) is also handled by the TBI Lab in Nashville.

- Micro-analysis (looking at fibers, hair, particulate matter) is provided by the TBI Lab in Nashville or by the Federal Bureau of Investigation (FBI) in Quantico, VA.

Current services provided by the Police Department are delivered by the staff of the Identification Division. Specifically, the staff who are directly engaged in laboratory work include the following:

Function	Current Staffing
Latent Fingerprint / Photography	• One Police Officer assigned to deal with processing fingerprint evidence from the collected evidence. • This same Office is also responsible for processing any photographic evidence (the Department has been moving towards electronic photography and processing).
Firearms	• One supervisor and four Police Officers are assigned to handle the processing of firearms evidence within the facility. • These staff work to determine if a weapon can be fired, develop the "fingerprint" of the weapon for inclusion in various data bases and conduct comparisons of known weapons with evidence collected from crime scenes.

It is also important to understand the workload that is being handled currently through various providers. The Table, that follows, shows the volume of work that is being processed locally (i.e, the number of weapons and latent fingerprints being evaluated):

Summary of Latent Statistics
Metropolitan Nashville Davidson Police Department

Category	Annualized 2003 Totals		
	Non-AFIS	AFIS	TOTAL
Miscellaneous	41	33	75
Thefts	23	77	100
Attempted Homicide	3	8	11
Robberies	27	60	87
Homicides	33	27	60
Rape	4	7	11
Burglary	40	151	191
Auto Theft	13	225	239
TOTAL	184	588	772

The next Table shows the volume of work processed as evidence and the volume of work that was sent to the TBI crime lab in 2002 and 2003 (annualized from available data) by major case type:

Type of Property	2002		Annualized 2003	
	Number of Cases Processed	Cases to/from Lab	Number of Cases Processed	Cases to/from Lab
Firearms and Related Items	4,340	36	4,445	46
Drugs/Narcotics & Paraphernalia	8,757	3,511	10,296	4,519
BAC Kits	470	494	511	562
Rape Kits	207	111	206	146
General Property	11,584	228	12,950	271
Total	**25,358**	**4,380**	**28,409**	**5,544**

It is important to note the following findings from the Table:

- Firearms cases make up a large portion of the evidence taken into the property room, but only a very small fraction of it is sent to the state lab for processing (less than 1%). The Department has its own capability to handle these cases internally, resulting in the low rate sent to the state Crime Lab.

- Drug / Narcotic cases make up the single largest source of traffic to the lab, with more than 44% of all cases being processed by the lab.

- More than 70% of rape kits and all blood alcohol kits (BAC) are sent to the lab for processing. Those rape kits that are not sent to the lab are not tested due to either a prosecutorial, investigatory or the victim's decision (perhaps the victim recants, etc.).

- Very little "general property" is sent to the lab for testing, with just over 2% being processed for some reason or another (often for fingerprints). This is a commonly low rate (field officers often pick up "evidence" that is never processed for a variety of reasons including lack of utility as evidence, plea-bargaining obviating the need for processing evidence and so on).

While the volume of traffic is interesting, it does not allow for the ready assessment of the quality of service that the MNPD is receiving under the current system. The following Table shows the current turnaround times associated with having evidence processed by the TBI Lab in Nashville:

Average Turnaround Times for Selected Lab Tests
Tennessee Bureau of Investigation
October, 2002 through September, 2003

Test Type	Average Turnaround Time (Weeks)
Blood Alcohol	2.1
Drug Chemistry	7.2
Firearms	12.4
Latent Prints	18.5
Microanalysis	9.0
Arson	2.6
Gunshot Residue Analysis (GSR)	4.2
Serology/DNA	7.0
Toxicology	10.9

It is important to note several key factors from these data:

- With the exception of the drug data (see below) it was impossible to independently verify these turnaround times as they apply to the MNPD (however, the assessment we were able to do of drug test turnaround times reaffirms the data from the TBI Lab).

- Turnaround time accounts for the time elapsed between when the lab received the evidence to when the report is faxed to the requesting agency. This time does not account for either of the following:

  - The time elapsed between when an item is collected as evidence and when the decision is made to have it tested by the lab. This can be a very lengthy period of time depending on the specific elements of each crime. It is obvious that neither the TBI nor any other lab has any control over the timing of the decision to have an item examined.

  - The time elapsed between the completion of testing and when an item is retrieved by the MNPD. The TBI has no control over this time period (though they do encourage rapid retrieval as they strive to manage their own storage issues) and so does not track it as part of turnaround time (failure to pick up an item in a timely fashion is not a reflection on their level of service).

- Turnaround times on all items that are not currently processed in-house by the MNPD are quite good. For example:

  - Blood Alcohol in 2.1 weeks (10 working days)

- DNA in 7.0 weeks (35 working days)
- Toxicology in 10.9 weeks (55 working days)

- The MNPD already provides analytical services to process Latent Prints and Firearms (two areas in which TBI Lab turnaround times are higher than other areas).

- Testing turnaround times compare favorably to other agencies around the United States. For example, reported DNA test turnaround times at selected labs around the United States include:
  - Colorado State Lab: 100 working days from submission to test completion.
  - Florida State Lab: 164 total days (at least 120 working days).

To further evaluate the quality of the TBI data regarding turnaround times, the project team sampled every other month of drug evidence submissions to the lab using the MNPD's own files. The results of this assessment showed that average turnaround time for drug evidence processing was 56 days during the past 12 months. This compares quite well to the data provided by the TBI regarding lab processing turnaround times.

It should also be noted that the project team documented the amount of money spent at outside (private) labs during the past two years. The MNPD Fiscal unit provided documentation of approximately $25,000 (over three years) in outside charges for fewer than one dozen specialty tests.

3. COMPARATIVE CRIME LAB INFORMATION

This section provides information regarding the presence of crime labs in municipal law enforcement agencies (either cities or counties) in the United States (a list of accredited agencies is provided in this section). The Matrix Consulting Group project team also conducted five case analyses of Crime Laboratories, and has summarized the results in this section. These case analyses attempted to request a standard set of information from each in order to form the basis for comparison to the Metro Nashville-Davidson County Police Crime Lab.

Specifically, the case study analyses determined the following from each of the locations in the study:

- The presence of an internal crime lab
- The types of analyses performed within each lab
- The status of accreditation of the lab
- The degree to which each of the locations utilizes external laboratories, and the types of analyses that are performed by these labs
- The "turnaround" times for receiving the results of analyses from external labs

In conducting the analyses of similar crime labs to that of Nashville-Davidson County's Police Department, the project team included the following locations:

- Austin, Texas
- Charlotte-Mecklenburg, North Carolina
- Columbus, Ohio
- Indianapolis/Marion County, Indiana

- Jacksonville-Duval County, Florida

These locations compare to Nashville-Davidson County as is shown in the following Table:

City	2000 Population	Growth Rate 1990 - 2000	Land Area (Sq. Miles)
Austin, TX	656,562	41.0%	251.5
Charlotte, NC	540,828	36,6%	242.3
Columbus, OH	711,470	12.4%	210.3
Indianapolis, IN	781,870	6.9%	361.5
Jacksonville, FL	735,617	15.8%	758.7
Nashville, TN	**545,524**	**11.7%**	**473.3**

The following sections present the results of the project team's case analyses for each of the above locations.

1 AUSTIN, TEXAS HAS A CRIME LAB WITH PENDING ASCLD CERTIFICATION.

The City of Austin has a crime lab in its Police Department, with a pending application for accreditation by ASCLD-LASB. The lab performs the following analyses internally:

- Firearms
- Trace (including blood alcohol)
- Latent prints
- Controlled substances
- Toxicology
- Questioned documents
- Crime scene
- Biology screening
- DNA analysis

The City of Austin was unique in the five case studies performed by the project team, in that it performs all analyses in house and does not utilize external labs.

2. CHARLOTTE-MECKLENBURG, NORTH CAROLINA HAS AN INTERNAL CRIME LAB CERTIFIED BY ASCLD.

Charlotte-Mecklenburg has an internal crime lab which is accredited by ASCLD-LAB. The lab performs the following analyses internally:

- Questioned documents
- Firearms
- Toolmark
- Shoe/Tire analysis
- Latent fingerprint
- Drug
- Blood alcohol
- Arson
- Hair
- Fiber
- Glass
- Tape
- Headlamp
- Serology
- DNA STR

The crime lab utilizes the North Carolina Bureau of Identification in Raleigh, and on occasion utilizes Lab Corp for paternity or MtDNA. The crime lab reports that

turnaround times for gunshot residue is 5-6 weeks; toxicology is 3-6 months; and paint is 10-12 weeks.

3. COLUMBUS, OHIO HAS AN ASCLD CERTIFIED CRIME LAB. HOWEVER, ALCOHOL AND TOXICOLOGY TESTS ARE SENT TO THE STATE LAB.

The City of Columbus has a crime lab which is accredited by ASCLD. It performs the following types of analyses internally:

- Controlled substance
- Firearms testing and comparisons
- Forensic biology (including DNA)

The lab has recently discontinued alcohol/toxicology analysis, but reports that it may resume alcohol testing at some point in the future. Alcohol/toxicology cases are currently sent to the Ohio State Patrol crime lab. The City's crime lab reports that these results are typically returned within one month. The City's lab staff report that trace evidence cases are sent out to the Ohio Bureau of Criminal Identification and Investigation. Although average turnaround times are not known, the lab reports that results from these cases can take up to 6 months.

It should also be noted that fingerprint comparisons and document examinations are performed in other divisions of the City's Police Department. In the case of fingerprint comparisons, these are conducted in the Identification Division. The Forgery/Fraud Division conducts document examinations.

4. THE METRO GOVERNMENT OF INDIANAPOLIS – MARION COUNTY, INDIANA HAS AN ASCLD CERTIFIED CRIME LAB.

The crime lab, which is an agency of Marion County, processes all analyses for Indianapolis and Marion County. This lab is accredited by ASCLD-LAB. It performs all

analyses internally, and does not rely upon the State lab or any external private labs. The following analyses are performed at the lab:

- Firearms
- Trace (including blood alcohol)
- Latent prints
- Controlled substances
- Toxicology
- Questioned documents
- Crime scene
- Biology screening
- DNA

The lab does not record or analyze turnaround times and does not, as a matter of policy, make estimates regarding these times. However, the laboratory recently estimated the numbers of additional internal staff necessary to achieve a 30 day turnaround time for its various lab analyses. These are presented in the Table, which follows:

Analysis Type	Estimated Number of FTE's Currently Engaged in Analysis Type	Estimated Additional Staff to Achieve 30-Day Turnaround Time
Firearms	4	0
Trace	2	0
Latent prints	5	3
Controlled substances	8	3
Questioned documents	2	0
Crime scene	13	5
Biology screening	5	1
DNA	5	1

Given that the lab estimates that no additional staff are necessary to achieve a 30 day turnaround time for firearms, trace and questioned documents, it may be inferred

that it is currently achieving this benchmark. There are, however, varying numbers of additional staff estimated to be necessary to achieve a turnaround time of 30 days for other types of analyses, which prohibits making definitive statements regarding these.

5. JACKSONVILLE – DUVAL COUNTY, FLORIDA PERFORMS ONLY LIMITED CRIME LAB FUNCTION INTERNALLY. MOST CRIME LAB WORK IS PERFORMED BY THE STATE LAB.

Crime lab analysis is performed by the Sheriff's Office in Jacksonville and Duval County. This laboratory is not accredited. It performs only fingerprint analysis internally, but reports that it will soon begin analyses of Footwear and Tiretracks. The County utilizes the State Crime Lab for drugs, rape kits and serology, however it does not provide estimates for turnaround times for these analyses.

6. THERE ARE 60 ASCLD CERTIFIED MUNICIPAL CRIME LABS IN THE UNITED STATES. CERTIFICATION SETS HIGH STANDARDS FOR THE LEVEL OF SCIENCE AND SERVICE IN A LAB.

The American Society of Crime Lab Directors (ASCLD) maintains a certification program for crime labs in the United States and internationally. At this time (as of November 1) there are 255 certified crime labs in the United States, of which 60 are operated by municipalities. The list, that follows, represents the municipal crime labs currently certified by ASCLD:

- Arizona:
  - Mesa
  - Phoenix
  - Scottsdale
  - Tuscon
- California:

  - Los Angeles (City)
  - Los Angeles County
  - Oakland
  - Orange County
  - Sacramento County
  - San Bernardino County
  - San Diego
  - Santa Clara County
  - Ventura County
- Colorado – Greeley Police / Weld County
- Florida:
  - Broward County
  - Miami-Dade County
  - Palm Beach County
  - Pinellas County
- Illinois - DuPage County
- Indiana – Indianapolis / Marion County
- Kansas:
  - Johnson County
  - Sedgwick County
- Maryland:
  - Anne Arundel County
  - Baltimore County

- Massachusetts – Boston
- Missouri – St. Louis
- Nevada:
  - Las Vegas Metro
  - Washoe County
- New Mexico – Albuquerque
- New York:
  - Erie County
  - Monroe County
  - Nassau County
  - Niagara County
  - New York City
  - Onondaga County
  - Suffolk County
  - Westchester County
  - Yonkers
- North Carolina – Charlotte / Mecklenburg
- Ohio:
  - Columbus
  - Hamilton County
  - Lake County Regional
  - Miami Valley Regional
- South Carolina – Charleston

- Texas:
  - Bexar County
  - Dallas County
  - Harris County
  - Tarrant County

The majority of certified labs are those which are operated by a state program. These include the TBI Labs in Tennessee (as well as similar systems in Georgia, Florida, Kentucky, North Carolina and South Carolina). Certification requires that the lab meet a number of standards addressing science, handling of evidence, access to the facility, storage of evidence, training of personnel, safety and so on. It should also be noted that non-certified forensics laboratories do operate in a number of lab settings

4. THE PROPOSAL FOR A CRIME LAB

The MNPD has proposed the development of expanded in-house Crime Lab capability. The primary elements of the Department's proposal include the following:

- The MNPD would continue to provide the latent fingerprint and weapons processing services it has provided historically.
- The MNPD would begin to provide additional services in the area of serology, DNA and other blood work (toxicology and alcohol testing). This would involve shifting these analyses away from the TBI Lab in Nashville to keep the work in-house.
- The MNPD plans to be able to provide other services (such as drug testing and micro-analysis) in the future but would not begin to provide those services immediately.
- A new facility would be required to replace the current lab facility (located proximate to the Police Headquarters in a separate facility).
- New personnel would be required to provide the services being considered. These staff would need to be highly educated and trained to provide the services.
- The cost of the MNPD proposal was for $775,000 in equipment with annual personnel ranging between $470,000 and $490,000. Additional annual costs of approximately $200,000 were also projected for supplies and other costs. A building was projected to cost $912,000 (at a $90 / square foot).

The specific proposal of the Police Department (formally made in 2001) presented two alternatives. These differ primarily in that one envisions the use of lower-cost technicians to do certain kinds of support work. The project team has maintained these two approaches in our own analysis. The following points provide a summary of the key changes and additions made by the Matrix Consulting Group project team:

- Personnel cost estimates were increased to include benefits (on top of the salaries included in the Department's original proposal) by 26%.

- The salary ranges seem "reasonable" given what is paid within the TBI Labs – so these were not changed from the Police proposal.

- The project team from the Matrix Consulting Group has also increased the per square foot cost for the construction of the facility from $90 to $190. This was done to bring the cost projection into line with the construction costs recently used to build the TBI's Nashville facility. The $190 rate is a blend of the costs for office and laboratory space identified by Metro's facilities personnel. This increased cost does not include the cost of equipment.

- The project team increased the number of analysts projected for the lab (when compared to the Police Department's original proposals which had a total of six (6) analysts) to a total of 11. This increase was made for two reasons:

  - Though the Police Department's assessment of the reasonable workload per analyst is approximately 1.5 DNA analyses per week per analyst, workload for conducting serology and DNA work has increased to more than 600 cases per year based on the number of tests sent to the TBI Lab for testing. This level of workload per analyst continues to be viewed as reasonable in the research conducted by the project team.

  - The demand for the lab will continue to grow in the near and longer term. Projecting staff requirements for the unit at such levels (i.e., six analysts) significantly under accounts for the number of personnel who will be required in even the near term.

- The MNPD lab would have to be accredited by ASCLD in order to have widespread credibility in the eyes of the courts and law.

All of these changes resulted in a significant increase in the projected annual cost when compared to the Police Department's original proposal. The following chapter provides the Matrix Consulting Group's analysis of the feasibility of developing increased lab capabilities within the Police Department.

5. ANALYSIS AND RECOMMENDATIONS

The Police Department has proposed to develop an improved forensics lab capability within agency. The preceding section has provided an update to the Department's proposal in terms of staffing and operational costs. The focus of this chapter is to address the major issues identified in the course of this study and to make a recommendation regarding the feasibility and practicality of expanding MNPD laboratory capabilities.

Two analyses are presented as Exhibits on the following pages. These show two variations on staffing the new laboratory (using all analysts or using some lower-compensated technicians as assistants). The paragraphs, which follow, summarize the key elements of each analysis:

- Total projected personnel costs under the two scenarios range between $740,000 and $790,000 per year including salaries and benefits.
- The projected costs for equipment under both scenarios represents a cost of $1.3 million.
- Annual operating costs are estimated at approximately $190,000. This includes maintaining an equipment replacement fund, providing for operating supplies, continuing education and other similar costs.

Overall, the estimates show that first year costs (including personnel) would be approximately $4 million (with a slight variance between the two approaches). The annual on-going costs (personnel, supplies and equipment replacement) would range between $980,000 and $930,000.

Summary of Personnel and Equipment Costs
for In-House DNA Facility
Metropolitan Nashville Davidson Police Department

METHOD 1

Personnel	Number	Average Salary	Benefits Cost at 26%	Total Annual Cost
DNA Analysts	7	$45,000	$11,700	$396,900
DNA Technician	4	$35,000	$9,100	$176,400
Lab Director	1	$62,500	$16,250	$78,750
CODIS Personnel	1	$35,000	$9,100	$44,100
Clerical Staff	1	$35,000	$9,100	$44,100
Total Personnel Cost	**14**	**$212,500**	**$55,250**	**$740,250**

Equipment	Unit Cost		Total Cost
Lab Equipment	$550,000		$550,000
Lab Supplies	$100,000		$650,000
Library	$25,000		$675,000
Lab Furniture	$550,000		$1,225,000
Computer Hardware	$25,000		$1,250,000
Computer Software	$25,000		$1,275,000
CODIS Equipment	$10,000		$1,285,000
CODIS Communication Links & Supplies	$1,500		$1,286,500
Total Equipment Cost (Method 1)			**$1,286,500**

Facility Related Costs	Total Cost
Construction Cost (9,000 sq. ft. @$190 per sq. ft.)	**$1,710,000**

Ongoing Maintenance and Utilities	Annually
Equipment Replacement	**$55,000**
Library Maintenance	**$2,000**
Ongoing Education	**$18,000**
Performance Audits	**$5,000**
Lab Supplies	**$100,000**
Professional Services	**$10,000**
Total Ongoing Maintenance and Utilities	**$190,000**

TOTAL COST OF METHOD 1 IN YEAR 1	**$3,926,750**
TOTAL ONGOING COSTS AFTER YEAR 1	**$930,250**

Summary of Personnel and Equipment Costs
for In-House DNA Facility
Metropolitan Nashville Davidson Police Department

METHOD 2

Personnel	Number	Average Salary	Benefits Cost at 26%	Annually
DNA Analysts	11	$45,000	$11,700	$623,700
Lab Director	1	$62,500	$16,250	$78,750
CODIS Personnel	1	$35,000	$9,100	$44,100
Clerical Staff	1	$35,000	$9,100	$44,100
Total Personnel Cost	**14**	**$177,500**	**$46,150**	**$790,650**

Equipment	Unit Cost		Total Cost
Lab Equipment	$550,000		$550,000
Lab Supplies	$100,000		$650,000
Library	$25,000		$675,000
Lab Furniture	$550,000		$1,225,000
Computer Hardware	$25,000		$1,250,000
Computer Software	$25,000		$1,275,000
CODIS Equipment	$10,000		$1,285,000
CODIS Communication Links & Supplies	$1,500		$1,286,500
Total Equipment Cost (Method 2)			**$1,286,500**

Facility Related Costs	Total Cost
Construction Cost (9,000 sq. ft. @$190 per sq. ft.)	**$1,710,000**

Ongoing Maintenance and Utilities	Annually
Equipment Replacement	**$55,000**
Library Maintenance	**$2,000**
Ongoing Education	**$18,000**
Performance Audits	**$5,000**
Lab Supplies	**$100,000**
Professional Services	**$10,000**
Total Ongoing Maintenance and Utilities	**$190,000**

TOTAL COST OF METHOD 2 IN YEAR 1	**$3,977,150**
TOTAL ONGOING COSTS AFTER YEAR 1	**$980,650**

The Table, that follows, provides a summary of the major issues and the project team's assessment of the impact that a MNPD forensics lab might have on each:

		Analysis Favors	
Issue	**Analysis**	**MNPD**	**TBI / Others**
Turnaround Time	• TBI is meeting or exceeding national levels of turnaround time by wide margins. • Matrix Consulting Group was able to validate the TBI's turnaround time data for one the one category for which centralized records are kept (narcotics). There are no centralized records for other items sent to the lab – they are maintained by individual investigators. • Total "turnaround time" often includes a delay as prosecutors, investigators or others choose to await testing until some key event or decision has been made (for example, some samples will not be tested if the accused is expected to accept a plea bargain – only when they choose to contest the charges in court will the sample be tested). • Some evidence is never tested. This may result from decisions made by investigators or prosecuters. • The TBI will clearly make exceptions to the queue for high-profile or high-priority cases where rapid turnaround is required due to life, safety or some other exigent circumstance.		**V**
Quality of Work	• No one has challenged the quality of work from the TBI or the other labs used by the Department (including the FBI in some cases). • Interviews with MNPD investigative managers, supervisors and others revealed generally high levels of satisfaction with the current process. • Developing and maintaining the high standards required in this field will take significant investment in time and resources by the MNPD if they take on these services.		**V**
Cost of Services	• Current services received from the TBI, FBI, etc. are free. • Fiscal data show that the MNPD has spent only $25,000 in past two years on outside (private) labs to have special samples tested. • MNPD proposal shows that the annual cost of developing and maintaining a crime lab would approach $1 million. Initial costs for construction and procurement of equipment would be approximately $3 million.		**V**

		Analysis Favors	
Issue	**Analysis**	**MNPD**	**TBI / Others**
Availability of Lab	• The Tennessee Bureau of Investigation maintains its primary laboratory facility in Nashville. • This lab has recently been upgraded in a new facility. • The current lab is within a half-hour drive of the main property and evidence facility. The MNPD staff make multiple trips each week to the facility to drop off and pick up items for the lab. • Availability of a lab within the Department might be desirable from a command and control perspective. • Some perceptions within the MNPD regarding the lab's ability to "handle" certain volumes of caseload appear to be unfounded. The most specifically cited example within the MNPD is the "backlog" of rape kits that have not been tested. Interviews with investigative managers indicate that these kits are not likely to ever be tested due to new information from complainants, death of suspects or other factors that contra-indicate testing of the sample.		**V**
Accreditation	• The TBI Labs are all accredited by ASCLD. This organization is nationally recognized as the certifying agency of forensics labs. • The ASCLD accreditation requires compliance with a large number of specific standards. These require investments in facilities, continuing education, equipment, policies and procedures, etc. • Equally important, the accreditation process requires an investment of time. This would present a challenge to the MNPD – defense counsel would be free to ask why the MNPD shifted from an ASCLD accredited lab to their own (non-accredited in the interim) facility.		**V**

The analysis above supports neither the feasibility nor the need for an expanded forensics lab in the MNPD. The paragraphs, that follow, provide a summary of the key points for consideration:

- The cost difference between the current approach and a Police Department proposal is significant. Current expenditures for forensics lab services are equivalent to less than $10,000 per year. The annual cost of running a local lab would be more than 90 times this figure.

- Investigative management and supervisory staff in the MNPD report no problems with the current capabilities or responsiveness of the TBI Lab. High-priority requests are given preferential treatment when warranted.

- The perception that there is a back-log of rape kits and other key evidence that has not been processed due to a breakdown in the current system is false. Tests that have not been performed remain pending due to prosecutorial or investigatory decisions – not due to the inability of the MNPD Property and Evidence unit or the TBI Lab to handle the workload associated with processing the samples.

- A conscious decision is also made on the part of MNPD investigators to refrain from testing when the alleged victim withdraws the accusation. The primary concern is on avoiding entering a non-suspect into the CODIS database.

- The MNPD would face a long process in an effort to bring their own lab to the same level of competence and professionalism that has been developed by the TBI Lab. This process, which would ultimately culminate with a peer review process, could take several years of work (for a new lab) to achieve.

- The Police Department and Metro in general benefit from the proximity of the State's primary lab facility (located in Metro).

- Concerns regarding the recent closure of lab facilities around the state (and the result increase in workload experienced at the Lab in Nashville) are unwarranted. In conjunction with those closures, the TBI has transferred personnel to the Nashville Lab (with its new facilities and equipment) to ensure that workload continues to be handled expeditiously.

The project team from the Matrix Consulting Group recommends that the Police Department and Metro take the following steps:

- Address the condition of the current lab facilities through the police facilities study being conducted by another team from the Matrix Consulting Group.

- Continue providing services at current levels in-house (i.e., latent fingerprint and firearms processing, testing and identification).

- Continue utilizing the TBI Lab for serology / DNA, toxicology, micro-analysis, etc. as has been the recent approach to dividing the work.

The data and analyses presented previously in this study support these conclusions.