ATTACHMENT B
BEST MANAGEMENT PRACTICES ANALYSIS
METROPOLITAN NASHVILLE AND DAVIDSON COUNTY
PUBLIC WORKS DEPARTMENT

Beginning on the following page, we have identified various industry best practice standards that are applicable to the Nashville Department of Public Works. MAXIMUS project staff selected the best management practices and identified what we perceived to be departmental strengths based on our interviews, field observations and data collection. The Department reviewed the report and provided additional input concerning various operations. We have included those in this analysis document.

STREETS AND ROADS		
Best Management Practice	**Strengths**	**Potential Improvements**

STREETS AND ROADS		
Best Management Practice	**Strengths**	**Potential Improvements**
Existence of formal work planning and scheduling system.	The Streets and Roads Division formally plans for the paving of streets in Metro, as these are contracted out to 4 contractors. Similarly, traffic signal installations, CBD street sweeping and other contracted services are planned and scheduled. The division plans and schedules "scheduled services". These include: - Street Sweeping Countywide - Street Cleaning C.B.D. - Roadside Mowing - Median Mowing - Litter Pickup - Litter Receptacle Route service - R/W Trimming All "projects" performed by the division (e.g. paving, milling, traffic signal installations, and other const.) are scheduled so as to coordinate with other utilities, projects, and to ensure public notification. All "requested services" are scheduled (projected start and completion dates).	Beyond the routine contractual services noted at left, the Division does not engage in formal planning of annual activities. Although many of these activities are reactive in nature (e.g., lot clean-up, shoulder repair, sidewalk repair, milling, etc.), data exist (although not in readily-accessible formats) to determine the probable numbers of requests, associated person hours, as well as workload measures, to allow the Division to project the activities in which it will engage in the upcoming year. These should be projected in order to develop service level "targets", and to provide Departmental and Metro management with accountability measures for the Division.

STREETS AND ROADS		
Best Management Practice	**Strengths**	**Potential Improvements**
Time tracking information is available in sufficient detail to allow analysis of work practices.	Streets and Roads (both in the maintenance and traffic control sections) reports workloads and activities at a depth of detail sufficient to develop and analyze costs sufficient for managers to make informed decisions regarding probable workloads by month, equipment usage, etc.	The current information system, CostSum, is used to accumulate direct costs of projects, as well as the "cost" of equipment usage. However, this information is not being analyzed by management, and it is not combined with workload metrics to enable unit costs. In addition to the fact that it is not analyzed, the project team questions the value of the information in the form in which it is captured. For example, capturing costs by project does not provide a meaningful historical measure, as costs may be expected to increase over time. Further, the reported equipment costs do not appear to be based on actual cost calculations, as interviews indicate that these costs have been in effect for many years.
Formal pavement management system (PMS) in place.	This is a relative strength of the Division. The Technical Services Section of Streets and Roads, through contract with IMS, rates road conditions and performs "what if" scenarios relating to probable road conditions given various levels of paving expenditures.	The process of notifying the Technical Services Section of road sections damaged and repaired through utility cuts should be modified.

STREETS AND ROADS		
Best Management Practice	**Strengths**	**Potential Improvements**
Annual inspection of all roads.	The Technical Services Section, though IMS, inspects Metro roads on a 5-year cycle. In 1993, all roads were reportedly graded to establish a base line.	
Existence of concrete/sidewalk inspection program.	The concrete inspection program is currently being performed by a private contractor.	It is unclear through interviews whether this program will be continued and carried out through Streets and Roads on a periodic basis. There should be both formal and informal approaches to concrete inspections which ensure an annual inspection of all segments.
Streets are resurfaced on a cycle of 5% - 8% of the system per year.	The Division reportedly repaved 110 of 2,154 center line miles of road in 2001, equating to 5.1% of the inventory. This is at the low end of the "acceptable" range.	Metro has recently significantly increased the budgeted expenditures for repaving streets and roads, as well as for installing and repairing concrete sidewalks. This increased expenditure level will place a far greater demand upon the Department in coordinating work with outside agencies such as utilities an contractors, and will necessitate greater resources in project management.

STREETS AND ROADS		
Best Management Practice	**Strengths**	**Potential Improvements**
Major road repairs and reconstruction contracted out.	The Streets and Roads Division contracts out most road paving, although it maintains a paving crew for street segments which are of lengths which contractors are reportedly uninterested in paving. In addition, the Division maintains a milling crew which performs almost all milling in Metro. These functions will be further analyzed by the project team to determine cost effectiveness and efficiency.	
Catch basins are cleaned on a 2 year cycle.	There is a complete inventory of all catch basins countywide outside the CSO areas. This is the area that Public Works was responsible for maintaining. This inventory is available on G.I.S.	There is no targeted service level for ensuring the periodic cleaning of catch basins in Metro. The responsibility for this function was transferred to Water Services in April.

STREETS AND ROADS		
Best Management Practice	**Strengths**	**Potential Improvements**
Evaluation of contracting conducted in other areas of road maintenance.	The Department has contracts with 4 asphalt paving contractors to perform paving of Metro roads. These contracts are primarily in areas containing longer road segments. The Department paves many roads with an in-house crew. The Department also contracts for chipper service, street sweeping in the Central Business District, traffic signal installation, street markings and other services on a selected basis.	The project team will continue to analyze the cost effectiveness of other functions performed in-house, such as road milling, concrete installation, mowing, etc. Further, the project team will continue to analyze services currently performed on contract which may be more cost-effectively performed in house.
Existence of sign inventory.		The Signs and Markings unit of Traffic Control maintains a manual record of signs, however this is not automated, and cannot provide immediate access to the maintenance history or exact location of each sign in inventory.
Annual inspection of sign reflectivity.		Sign reflectivity is checked as Technicians and other Metro employees are in areas of signs. There is, however, no defined practice or methodology for ensuring each Metro sign is checked on an annual basis.

STREETS AND ROADS		
Best Management Practice	**Strengths**	**Potential Improvements**
Annual painting of school cross walks.	This is accomplished on contract. Interviews indicate that these are done annually.	
Bi-annual painting of other cross walks.	This is accomplished on contract. Interviews indicate that these are done annually.	
Legends repainted: - Arterials: 12 months. - Collectors: 18 months. - Residential: 24 months.	The Signs and Markings unit of Traffic Control annually identifies all road segments which have pavement index ratings over 72 (as those under 72 are candidates for repaving), and performs physical examination of these street segments to determine which should be re-striped. Interviews indicate that Metro complies with the targeted levels, at left.	
One Signal Technician per 30 to 35 signalized intersections.		With approximately 800 signalized intersections, and 12 field Traffic Technicians, the ratio is about 67:1.
Signal operability targeted at 99% or above.		The Traffic Control section does not monitor signal operability. Interviews indicate, however, that a large percentage of signals is aging and includes poor cabling, plastic housing, etc., which are causing excessive maintenance problems.

ENGINEERING		
Best Management Practice	**Strengths**	**Opportunities for Improvement**
ENGINEERING ADMINISTRATION		
The engineering organization is centralized to capture economies of scale.		The engineering staff resources to support the water and wastewater utility are decentralized. The Water Resources Department has 54 Engineering Technician's, 9 Engineers (1, 2 or 3), and 7 CAD/GIS Analysts. Pavement management is assigned to the Streets and Roads Division, not the Engineering Division.
The engineering organization allows for functional decentralization in order to meet unique customer needs.	An Engineer 1 has been physically based at the Code Enforcement Department to provide engineering review for building permits.	Other Engineering Division development services staff are based at their offices at 720 S. Fifth Street, and not at the offices of the Planning Organization. This includes both traffic engineering staff and development services staff.

ENGINEERING		
Best Management Practice	**Strengths**	**Opportunities for Improvement**
A formal business plan has been prepared for the Engineering Division to identify priorities, challenges, risks, and competitive issues – and to develop goals, objectives and performance measures to address problem areas.		A formal business plan needs to be prepared for both Engineering and the Department to provide clear goals, objectives, and performance measures. The annual operating budget does not provide such clear goals, objectives, and performance measures for the Engineering Division.
Policies and procedures for the Engineering Division are well documented.	The Capital Projects Section has begun to develop capital project management procedures. We have approx. 35 written policies for traffic, permits, and capital projects, and are in the process of developing other procedures.	The procedures being developed by the Capital Projects Section are in their infancy. Other sections have not yet developed such policies and procedures.

ENGINEERING		
Best Management Practice	**Strengths**	**Opportunities for Improvement**
A long-term information technology plan has been prepared for the Engineering Division.		A long-term information technology plan needs to be prepared to provide direction for the development of technology within the Engineering Division. While some areas of the division are utilizing technology to enhance productivity (e.g., Capital Improvement Projects), others are not (e.g., survey crew).
TRAFFIC ENGINEERING		
A transportation master plan has been developed.	The Metropolitan Planning Organization has developed a transportation master plan for the five county region. Arterial streets are the focus.	
Existing level of service is known for arterial and collector streets identifying the performance of the street in terms of traffic congestion and travel time delay.	The staff indicates that it routinely calculates the level of service of intersections on an as-needed basis.	The Traffic Engineering Section relies primarily on other agencies or consulting engineers on behalf of developers or the Engineering Division to develop such levels of service other than on an on-call basis; the Department's planning efforts should institutionalize this information gathering.

ENGINEERING		
Best Management Practice	**Strengths**	**Opportunities for Improvement**
Traffic counts are routinely conducted for arterial and collector streets.	TDOT collects traffic counts for major streets. An Engineering Technician I is allocated to traffic counts.	The Traffic Engineering Section doesn't have a traffic count updating program or schedule. Traffic counts are not routinely collected for collectors. Only eight of the new computer-based traffic counters are available.
A computer-based traffic-forecasting model is utilized to assess the trips generated by development, model different land-use options, develop long-term forecasts of traffic, and the benefits of mitigation measures.	The Metropolitan Planning Organization has developed a computer-based traffic-forecasting model.	The Traffic Engineering Section lacks such a computer model. The section relies on consulting engineers working on behalf of developers to identify the number of trips generated.
A traffic safety program is in place to proactively identify high accident intersections and develop mitigation measures.	A consulting firm conducted detailed site investigations, identified the thirty highest accident intersections, and developed recommended solutions. The Engineering Division is working with the Police Department to develop a real-time basis for accident reporting, and develop an in-house capacity for traffic accident analysis.	The Traffic Engineering Section is largely reactive, and relies on consultants for proactive traffic engineering services.

ENGINEERING		
Best Management Practice	**Strengths**	**Opportunities for Improvement**
A traffic improvement program is in place to design and implement traffic system management measures to maximize existing street system traffic capacity and reduce traffic congestion and travel time delay	The 50 most congested intersections in Metro Nashville have been evaluated by the Department or a consulting firm and improvements identified to reduce congestion. The Division has selected five intersections to address; the improvements at these five intersections are funded through CMAC and TIP. In the next year or two, funding for the remaining five intersections the remaining five will be addressed.	The Traffic Engineering Section is largely reactive, and relies on consultants for proactive traffic engineering services. 90% of traffic signal rephasing is based upon citizen complaints. There is not an in-house staff capacity to evaluate congested intersections and identify improvements. The Traffic Engineering Section is largely reactive, and relies on consultants for proactive traffic engineering services. Only 50 intersections have been evaluated out of a possible 700 intersections.
A computer-based traffic signal system is in place that adjusts the timing of signals on a real-time basis and provides the automated flexibility to change the timing of signals in response to both daily and seasonal traffic patterns (e.g., Tennessee Titans games).	The Engineering Division has been successful in obtaining grants to construct an Intelligent Transportation System. Total funding, including the local match, amounts to approximately $17.9 million.	

ENGINEERING		
Best Management Practice	**Strengths**	**Opportunities for Improvement**
A traffic mitigation fee has been developed and adopted based upon a comprehensive transportation master plan that identifies deficiencies in the street network, weaknesses in the traffic control system, etc.	The Metropolitan Planning Organization is developing a financial strategy for the five county region.	
A citizen request system responds to requests in a timely fashion and maintains automated records to avoid restudying the same problem.	The Traffic Engineering Section responds to citizen requests typically within two to three weeks. An automated database is maintained for these accidents.	
Traffic control improvements (i.e., stop signs, red curbing for line-of-sight, etc.) are identified and studied proactively by staff rather than responding solely to citizen requests.		The Traffic Engineering Section is largely reactive to citizen requests, and relies on consultants for proactive traffic engineering services.
Opportunities to improve pedestrian safety and bicycle safety are proactively investigated and measures developed and implemented to address these needs.	A consulting firm is in the beginning stages of the development of a bike and pedestrian master plan. The master plan is scheduled to be completed in June.	The Traffic Engineering Section is largely reactive to citizen requests, and relies on consultants for proactive traffic engineering services.
The extent of staff assigned to signal design and inspection is based upon cost of construction guidelines.		Cost of construction guidelines are not utilized.

ENGINEERING		
Best Management Practice	**Strengths**	**Opportunities for Improvement**
Effective project management techniques are utilized for signal design and inspection capital improvement projects.		Effective project management techniques are not utilized. Some staff within the Traffic Engineering Section are ineffectively utilized.
The extent of traffic engineering professional and technician staffing is comparable to the range identified in the 1995 report issued by the Institute of Transportation Engineers: *Status and Effectiveness of Urban Traffic Engineering Agencies.*		There are a total of eleven traffic-engineering professionals and technicians within the Engineering Division or 1.9 staff per 100,000 population. This is comparable to the lower end of the range of other agencies in the 1995 report. The average for the twenty-nine agencies with a population of 250,000 or more was 6.7 staff per 100,000 population or three and one-half times greater than Metro Nashville.
STREET CLOSURE, EXCAVATION, AND ENCROACHMENT PERMITS		
Full-time staff are dedicated to the issuance and inspection of street closure, excavation, and encroachment permits.	The Engineering Division devotes full-time staff to street closure, excavation, and encroachment permits.	It is unclear that eleven staff are required to effectively administer this program.

ENGINEERING		
Best Management Practice	**Strengths**	**Opportunities for Improvement**
Inspections are formally documented on a written inspection form. Automated records are maintained of these inspections and safety violations.		Inspections are not formally documented.
Contractors are required to submit proof that their first level supervisors have been trained in work zone safety.	The employees of the barricade contractor utilized by most construction contractors – Blinker Light Safety – have been certified.	Minor contractors are not required to submit proof that their first level supervisors have been trained in work zone safety.
A traffic control plan must be submitted for the issuance of street closure permits.	Traffic control plans are plan checked for proposed signage, traffic flow, etc.	
Fees are charged for the issuance and inspection of street closure, excavation, and encroachment permits to fully recover the Metro Nashville's cost of administration	Fees are collected for issuance and inspection of excavation permits.	While a fee schedule was adopted for street closure permits in 1997, the Department has not begun collecting those fees.
A systematic approach has been developed for inspection of street closure, excavation, and encroachment permits.	Inspectors are assigned to districts. Inspectors inspect the street closures for major thoroughfares focusing on the first day of the lane closure, and then every two or three days after that. Excavations (or utility cuts) are inspected at the front end for lane closure, at backfill at temporary patch, and for permanent patch.	Other than the major thoroughfares, other street closures are inspected on a complaint-basis.

ENGINEERING		
Best Management Practice	**Strengths**	**Opportunities for Improvement**
Requests for street closure, excavation, or encroachment permits may be submitted by customers on-line or by fax.		This capacity has not yet been developed.
Requirements for issuance of street closure, excavation, or encroachment permits are available at the Engineering Division's web site.		These requirements are not available at the Engineering Division's web site. The Department should consider expanding the site both to include the requirements and to enable customers to apply for and receive permits on-line.
Engineering Technicians conduct thirteen to fifteen inspections per day.		Data regarding the number of inspections is not routinely collected. The Technical Specialist 2 is collecting a "snapshot" for MAXIMUS.
The regulations regarding issuance of street closure, excavation, or encroachment permits apply to all utilities including those owned by Metro Nashville.	All utilities must meet these regulations, including those utilities owned by Metro Nashville.	
An automated system of tracking issuance of street closure, excavation, or encroachment permits is utilized.	The Land Information System is utilized to track the issuance of street closure, excavation, or encroachment permits.	It is difficult to obtain reports from the mainframe based system.

ENGINEERING		
Best Management Practice	**Strengths**	**Opportunities for Improvement**
CAPITAL PROJECTS MANAGEMENT		
A five-year capital improvement program has been developed by Metro Nashville and adopted by the City Council.	A five-year capital improvement program has been developed by Metro Nashville.	
The five-year capital improvement program for the Engineering Division clearly identifies the goals, priorities, and expected outcomes of the program within the context of *Managing for Results.*		The goals, priorities, and expected outcomes of the capital improvement projects assigned to the Engineering Division are not defined.
Staffing requirements for the all of the capital projects in the first year of the five-year capital improvement program have been identified.		Staffing requirements for all of the capital projects in the first year of the five-year capital improvement program have not been identified.
Staffing for design and inspection of capital projects is based upon cost of construction guidelines.	Cost of construction guidelines appear to be used to determine budgets for engineering and inspection services.	
An appropriate mix of in-house staff and consulting engineers are utilized for the design and inspection of capital improvement projects based upon the expertise required and the continuity of the workload.	Consulting engineers are being utilized for roadway and bridge design and construction inspection.	Consulting engineers and inspection staff are being utilized for capital projects that could be accomplished with in-house staff (e.g., use of USI Infrastructure for sidewalk construction inspection).

ENGINEERING		
Best Management Practice	**Strengths**	**Opportunities for Improvement**
Staff resources are allocated to fit the design and inspection workload to the available resources.		Staff resources are not allocated to fit the design and inspection workload to the available resources.
"Billability" targets have been set for engineering staff for the design and inspection of capital improvement projects and management monitors their success in meeting these guidelines.		"Billability" targets have not been set for engineering staff for the design and inspection of capital improvement projects
A Gantt chart schedule has been developed for capital improvement projects for a two to three year period.	The Division uses Microsoft Project for project scheduling activity.	A Gantt chart schedule has not been developed for capital improvement projects for a two to three year period.
There are clear, easily read capital improvement program and project status reports that match the level of detail needed by the expected audience.		There are not clear, easily read capital improvement program and project status reports.
A project cost accounting system is utilized to enable comparisons of planned versus actual staff hours for the design and inspection of capital projects.		A project cost accounting system is not utilized.

ENGINEERING		
Best Management Practice	**Strengths**	**Opportunities for Improvement**
Capital projects are scoped and cost estimates developed before the commencement of design.		Capital projects are not scoped and cost estimates developed before the commencement of design.
Project managers have access to the Metro Nashville automated financial management system to monitor the actual versus planned design, inspection, and construction costs for capital projects.		Project managers do not have access to the Metro Nashville automated financial management system.
Feedback mechanisms (e.g., final report) have been developed at the completion of capital improvement projects to enhance learning and correction of problems.		Feedback mechanisms (e.g., final report) have not been developed.
A team approach is utilized in the approach to design in which engineers and engineering technicians are organized into teams with each team having responsibility for certain types of projects (i.e., bridges, streets, etc.).		A team approach is not utilized.
A single manager is assigned to the management of the design, construction inspection, and construction management of capital improvement projects.	A single manager – an Engineer 3 – is assigned to the management of the Division's capital improvement program.	

ENGINEERING		
Best Management Practice	**Strengths**	**Opportunities for Improvement**
Project managers are responsible for capital improvement projects from "cradle to grave", with responsibility for project development, design, construction inspection, construction management, and closeout.		Project managers are not responsible for capital improvement projects from "cradle to grave".
Experienced and qualified project managers are utilized for project management.	The Engineering Division has experienced and qualified project managers.	
Performance measures have been developed for project management that include components regarding scheduling, budgeting, scoping, and quality of capital improvement projects.		Performance measures have not been developed for project management.
A project management procedures manual has been developed. The manual should define, at a minimum, a communication plan; project management and reporting processes for monitoring scope, schedule and budget; processes for handling change orders, claims, and project issues; and document management.		A project management procedures manual has not been developed.

ENGINEERING		
Best Management Practice	**Strengths**	**Opportunities for Improvement**
Well-developed change order control procedures are in place.		While the Department uses change order processes as established by Metro standards, the management of the change order process could be enhanced by improved documentation maintained in a central data system.
An automated project management system has been acquired, and all of the engineering staff have been trained in and utilize the system.	The Division uses Microsoft Project, which is a base level project management tool.	The scope of project management needs to be greatly expanded, including improvements to project documentation
AutoCAD and other productivity enhancing design tools are utilized.	Some engineering staff utilize AutoCAD Map 2002 and Eaglepoint to enhance their productivity.	A mix of professional engineers and engineering technicians are not utilized for design, with the engineering technicians performing the technical design work utilizing AutoCAD Map 2002 and Eaglepoint.
30%/60%/90% reviews of the design of capital improvement projects are conducted by construction inspectors.		30%/60%/90% reviews of the design of capital improvement projects are not conducted by construction inspectors.
A standard project documentation system is in place for each project under construction to mitigate the risks associated with claims.		A standard project documentation system is not in place.

ENGINEERING		
Best Management Practice	**Strengths**	**Opportunities for Improvement**
Prior to commencement of the construction phase, a detailed structure for the document management file index system is developed.		A detailed structure for the document management file index system is not developed prior to construction.
Engineering Technicians utilize automated input devices to record inspection results or display inspection history while in the field.		Automated input devices are not utilized.
The survey crew utilizes robotic survey equipment to enhance their productivity.		The survey crew utilizes total station equipment, and not robotic survey equipment. Despite using total station equipment, a three-person crew size is utilized.
DEVELOPMENT SERVICES		
An automated voice-activated inspection request system is utilized to receive inspection requests with linkage to the automated permit information system.		An automated voice-activated inspection request system is not utilized.
Engineering Technicians utilize automated input devices to record inspection results or display inspection history while in the field.		Automated input devices are not utilized.

ENGINEERING		
Best Management Practice	**Strengths**	**Opportunities for Improvement**
An Engineering Technician responds to inspection requests within one workday of the receipt of the request.	Engineering Technicians respond to inspection requests within one workday.	
Plat map plan checking and building permit plan checking is accomplished concurrently by all of the departments involved in the process.	Plat maps that involve multiple departments are plan checked concurrently. Building permits are checked concurrently.	
Turnaround times for first plan check of plat maps are responsive.	The Planning Commission has established a twenty-eight-calendar day turnaround time for processing preliminary and final plat maps.	
A "one stop" system exists for submittal of development service applications. Applicants do not have to walk or drive their submittal from department-to-department.	An Engineer 1 has been physically based at the Code Enforcement Department to provide engineering review for building permits.	Other Engineering Division development services staff are based at their offices at 720 S. Fifth Street, and not at the offices of the Planning Organization. This includes both traffic engineering staff and development services staff.
An automated case management system has been developed and installed in all departments in Metro Nashville to manage the length of time required for development services..	The Land Information System is utilized to track the issuance of development-related permits.	It is difficult to obtain reports from the mainframe-based system.

ENGINEERING		
Best Management Practice	**Strengths**	**Opportunities for Improvement**
The costs of plan checking plat maps are fully recovered though development fees.		Fees to recover the costs of the development services provided by the Engineering Division have not been adopted.
Inspection of public improvements (i.e., streets, sidewalks, curb and gutters, etc.) resulting from the development of subdivisions or from commercial or industrial building permits for conformance with standard details or specifications has been centralized.	Inspection of public improvements (i.e., streets, sidewalks, curb and gutters, etc.) resulting from the development of subdivisions for conformance with standard details or specifications has been centralized.	Inspection of public improvements (i.e., streets, sidewalks, curb and gutters, etc.) resulting from the development of commercial or industrial building permits for conformance with standard details or specifications are assigned to the Street Closure, Excavation, and Encroachment Permits inspection staff.
Engineering Technicians each conduct thirteen to fifteen inspections per day.		Data regarding the number of inspections is not routinely collected. The Technical Specialist 2 is collecting a "snapshot" for MAXIMUS.
A policies and procedures manual has been developed describing the functions, procedures, and tasks associated with plat map review.		A policies and procedures manual has is being developed.

ENGINEERING		
Best Management Practice	**Strengths**	**Opportunities for Improvement**
Engineering Technicians utilize automated input devices to record inspection results or display inspection history while in the field.		Automated input devices are not utilized.
Responsibility for the assignment of street names and addresses for new development have been centralized.	Responsibility for the assignment of street names and addresses for new development have been centralized.	This function is assigned to the Capital project Management Section, and not the Development Services Section.
Final plat maps are digitally scanned and indexed within GIS.		Final plat maps are microfilmed rather than digitized.

PARKING OPERATIONS		
Best Management Practice	**Strengths**	**Potential Improvements**
PARKING GARAGE		
Garage operations are privatized.	Current operations are partially privatized.	Potential for determining whether the Division should could continue to provide maintenance and supplies for garage operations.
Garage operations are treated as an enterprise fund.		Garage operations have been treated as a general fund service since the mid 1980's. The fund statements do not reflect full costs, including outstanding debt service, so it is not possible to determine actual profitability of the garage operations.
Construction costs for garages should be considered a revenue bond item.		Remaining debt service appears to be general obligation debt.
For contracts operated on a formula using revenue as a basis, there should be an on-going audit of revenue activity.	The Parking Division performs regular, very detailed audits of garage transactions.	
METER OPERATIONS – INSTALLATION AND MAINTENANCE		
Meter repair should occur within one working day of notification of a defect.	Repair or replacement occurs within one working day.	

PARKING OPERATIONS		
Best Management Practice	**Strengths**	**Potential Improvements**
Maintenance of a meter inventory	The Division maintains a basic computerized inventory and an inventory log book.	The inventory system should be updated and incorporated within the City's GIS operations.
Meter revenues should be collected on a regular schedule.	The Division has a standing schedule for collections based on location and transaction volume.	
Meter collections should be processed through a counting house, with direct deposit.	The City contracts with Brinks for counting and depositing services.	There is presently no procedure for spot checking the accuracy of the counting services.
PARKING METER ENFORCEMENT		
Meter enforcement is commonly the responsibility of a law enforcement agency.	Meter enforcement is shared by the Parking Division and the Metropolitan Police Department. Division enforcement personnel are actually newly hired Sheriff's Deputies, performing entry service until assigned to Detention duties.	
Ticket issuance is automated.		Development of an automated system is being delayed while the Division and Metro PD make a joint decision on appropriate systems and technology.

PARKING OPERATIONS		
Best Management Practice	**Strengths**	**Potential Improvements**
Daily activity of enforcement officers is monitored.	The Division maintains a daily log of activity and the field supervisor and Parking Supervisor review the information regularly.	The activity log is currently prepared manually by staff in another division of the Department based on a manual count of tickets.
Enforcement officers are frequently rotated to different zones.	Officers are rotated on a regular basis among zones; additionally, the staffing system has the effect of rotating personnel approximately every six months.	
Assignment of special zones is commonly a function of Traffic Engineering.		Assignment of special zones is the responsibility of the Parking Supervisor, with approval from the Traffic and Parking Commission.

STAFF SERVICES: FINANCIAL MANAGEMENT		
Best Management Practice	**Strengths**	**Potential Improvements**
FINANCE AND ACCOUNTING		
There is a clear delineation of duties and responsibilities among finance staff.		Interviews indicate significant overlap in duties, with five employees having four job titles performing similar work.
Adequate controls are in place to assure proper management of revenues.	Review of financial procedures do not indicate any deficiency in formal procedures for financial controls.	The Department has a large number of approval sign-offs for routine procurements. For some contracts, the project staff responsible for reviewing the vendor invoice and the finance staff responsible for processing the payment transaction are married. There are some operational procedures that result in the possibility of checks being lost or misplaced; those have already been discussed with the Department.
Accounts payable transactions are processed in a timely fashion.	The Department appears to be processing all accounts payable in a timely fashion.	

STAFF SERVICES: FINANCIAL MANAGEMENT		
Best Management Practice	**Strengths**	**Potential Improvements**
Fees are based on an analysis of cost of service and are based on a clearly defined standard of cost distribution.	Fees for parking services are calculated regularly on the basis of potential lost revenue.	Other fees of the Department are not based on actual costs of service.
Budget planning includes development of spending plans based on analysis of historic patterns.	The Department tracks its budget performance on a quarterly basis for the purposes of budget management.	Interviews indicate that the Department does not use its expenditure evaluation for purposes of work planning.
Project costs are tracked to project status to assure that payments are proper.		The Department does not track project costs and project status in a meaningful fashion.
Financial data is provided on a regular basis to managers, in formats that provide managers with detailed performance information.	Finance staff attempt to respond to management requests for budgetary performance information.	Project staff have the impression that the Department does not maximize the reporting capacity of FastNet.
INFORMATION TECHNOLOGY		
Standard of one information technology staff person per 125 work stations	The Department has two persons to support 140 personal computers, 9 network servers, 20 printers, and approximately 10 specialized units.	
Access to network servers and telecommunications links is tightly controlled.		There are no controls to physical access.

STAFF SERVICES: FINANCIAL MANAGEMENT		
Best Management Practice	**Strengths**	**Potential Improvements**
Information systems are inventoried	The Department has just completed a preliminary inventory of applications.	
Information systems are well documented, with source codes stored in a secured place.	Mainframe applications are maintained by the Metro I.S. Department	Individual applications are not documented or backed up.
Users have the opportunity to participate in periodic application training.	Metro requires certain training for access to the FastNet financial management system.	Only training opportunities provided by Metro I.S. are available. It does not appear that managers receive training in FastNet that enable them to develop customized financial reporting.

HUMAN RESOURCE MANAGEMENT		
Best Management Practice	**Strengths**	**Potential Improvements**
RISK MANAGEMENT-SAFETY/LOSS CONTROL		
Existence of a Departmental safety plan.	The Safety division has developed a detailed departmental plan.	Work with supervisors and managers to keep line staff informed of the safety plan and procedural changes.
Existence of a safety committee. Coordinated with Metro Human Resources?	The Safety division of Public Works participates in the Metro safety committee, attending regular trainings and informational seminars.	Currently, the Public Works Department does not have a committee relating to safety in which line staff can participate.
Are required programs in place (e.g., OSHA, Drug Free Workplace)?	Yes, the Department provides trainings to meet TOSHA and OSHA requirements. It participates in the volunteer inspection program.	Utilize the information systems to determine need and schedules to state and federal requirements. Maintain accurate and current records of staff training completions and needs.
RISK MANAGEMENT-LIABILITY PROTECTION		
Is there a liability prevention program in place?	Public Works has an informal plan. Safety division educates staff to prevent situations that would case internal claims, such as job site setup programs and inspects job sites to ensure understanding of requirements	Establish formal liability prevention program. Work with Metro to develop the program. Ensure consistency of program through Department.

HUMAN RESOURCE MANAGEMENT		
Best Management Practice	**Strengths**	**Potential Improvements**
Statistics available to assess losses by type.	Maintains data for employee related loss by type. Metro maintains statistics relating to loss from claims citizens claims.	Review all statistics and data relating to loss periodically.
Litigation reviewed and evaluated for legitimacy.	Public Works captures and provides data on the "who, what, when and why" of situations leading to litigation. Metro Legal Department is responsible for reviewing and evaluating the legitimacy	Work with Metro to implement standard approach for evaluation of legitimacy
PERSONNEL-RECRUITMENT AND SELECTION		
Average recruitment turnaround times within: - 45 – 60 days for clerical - 45 – 60 days for operational - 60 –90 days for paraprofessional and technical - 60 –90 days for professional - 120 – 150 days for management	No records available at DPW to confirm these turnaround times. Metro HR maintains a list, accepting continuous applications for the Maintenance and Repair Worker I positions, which reduces the length of the recruitment. However, for all other positions, Metro HR must re-initiate the advertising and recruitment process as each opening occurs.	Establish target recruitment turnaround times. Review targets with Metro HR and develop recruitment efforts to meet targets.
Proactive advertising and recruiting techniques used for all positions.	Position openings are promoted internally, as well as externally. HR works with Metro HR to advertise. promotions and job openings.	Proactive advertising and recruiting techniques used for all positions.

HUMAN RESOURCE MANAGEMENT		
Best Management Practice	**Strengths**	**Potential Improvements**
Searches for management personnel are national in scope.	This is conducted by Metro HR.	Searches for management personnel are national in scope.
PERSONNEL-PAY AND CLASSIFICATION		
Classifications are comprehensively reviewed every 5 years? Reclassifications evaluated on an ongoing basis?	This is conducted by Metro HR.	
Turnover is targeted to be less than 10% annually.	Statistics are maintained to determine annual turnover rate. Rate for past two years is 11.2%. Over one third of turnover attributable to retirements.	
Performance ratings linked directly to compensation.	Yes, supervisors and managers perform periodic performance evaluations of staff. Evaluations and subsequent merit raises are tracked by Public Works HR.	
PERSONNEL-LABOR RELATIONS		

HUMAN RESOURCE MANAGEMENT		
Best Management Practice	**Strengths**	**Potential Improvements**
Does the HR Department handle grievances and/or complaints from employees?	Yes, Public Works HR handles grievances and complaints from employees. If the employee is not satisfied with the resolution, he/she must then take the issue to Metro HR.	
Grievance guidelines clearly defined in the personnel regulations.	Guidelines are set by Metro. Initial drafts of new department handbook have been completed and will include section on grievance procedures in simplified language.	Continue to work with Metro HR to inform staff of guidelines.
Is there an employee handbook and/or employee procedures manual which clearly outlines policies and procedures?	The Training division publishes a supplemental policy and procedures booklet of recent memos issued by management.	Review and update employee handbook periodically. Inform staff of policy changes.
Are periodic surveys conducted to address employee issues and concerns?	Informal meetings are conducted with managers and supervisors to determine the needs of line staff with regard to training.	Develop a formal mechanism, through which line staff, as well as supervisors, can provide input regarding issues.

HUMAN RESOURCE MANAGEMENT		
Best Management Practice	**Strengths**	**Potential Improvements**
Do training courses exist? Do they concentrate on professional as well as personal development?	Training Section has developed, and currently delivers, GED and CDL Driver Training programs; has worked with management and staff to identify training needs; and is currently working on a comprehensive annual training program for department to include supervisory, professional, customer service, technical, basic literacy and personal development The Training division collects and distributes information relating to available courses provided in community and Metro.	