APPRAISALS, RELOCATION AND OPERATIONS ANALYSIS

of the

IMPOUND LOT

CONCRETE CRUSHING

LINDEN YARDS OPERATIONS STORAGE

March 19, 2001

City-Owned Land Work Group

Planning Department, Public Works Department, Mayor's Office, City Coordinator's Office, MCDA, Police Department, Finance Department

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Executive Summary

This report has been prepared in response to a November, 1999, City Council and Mayor directive requesting the MCDA and City staff to conduct appraisals, site survey work, geotechnical and environmental analysis, and a parking and theater location analysis for the Parade Area; and to identify Impound Lot, Concrete Crushing, and Linden Yards Operations Storage relocation and operations alternatives.

The City-Owned Land Work Group was convened in November 1999, to conduct this analysis. The Work Group included representatives from MCDA, the Mayor's Office, the City Coordinator's Office, and the Planning, Public Works, Finance, and Police departments. The Work Group was led by Chuck Ballentine of the Planning Department.

The analysis was initiated to accommodate: 1) the possible Guthrie Theater expansion in the Parade Stadium Area, 2) the proposed North-South Boulevard Connector for the Near Northside Redevelopment, and 3) the Bassett Creek Valley Master Plan which includes the property of the Impound Lot, Concrete Crushing, and the Linden Yards Storage Area.

When the Guthrie Theater selected the Mississippi River site for expansion, the analysis was re-focused on the Impound Lot, Concrete Crushing, and the Linden Yards Operations Storage appraisals, relocation and operations alternatives.

Short-Term Strategies and Long-Term Options

The Impound Lot, Concrete Crushing, and the Linden Yards Operations Storage were analyzed as three separate operations and the recommended actions for each of the operations have been developed as short-term strategies and long-term options. It is recommended that the short-term strategies occur between the years 2001-2005. The selection and success of a long-term option will be dependent upon the successful implementation of the short-term strategies. It is recommended that the long-term options occur between the years 2006-2010.

The short-term strategies are highlighted in Table 1, Table 2, and Table 3, and the long-term options are shown in the attached flowcharts.

Table 1
Impound Lot - Short-Term Strategies (2001-2005)

Strategy	Responsible Departments	Additional Revenue /(Expense)	Completion and Reporting Schedule
Reduce Number of Vehicles on Police hold	Public Works and Police	Negligible	Annually report to T&PW and PS&RS
Utilize I-394 and I-94 ROW for Overflow Impounds	Public Works	Negligible	Fall 2001 report to T&PW
Develop Shared-Use Plan with Park and Recreation Board for West Overflow Lot	Public Works and Park and Recreation Board	To be determined	Spring 2002 report to T&PW
Create a feasibility plan for the NWIP site, and investigate alternative sites for relocation	MCDA and Public Works	($100,000 – includes Concrete Crushing site investigation costs)	Spring 2002 report to CD & T&PW
Analyze Department procedures that create impounds; create a landscape plan for existing site; investigate privatization	Public Works, Police, Operations and Regulatory Services	To be determined	Spring 2002 report to T&PW and PS&RS
Create Plan to Downsize to East Area and Redevelop West Area	Public Works, MCDA, Planning	To be determined	Spring 2002 report to T&PW and

The selection and success of any long-term option will be dependent upon the successful implementation of some or all of the short-term strategies. The long-term options are summarized in Flowchart 4, and are as follows:

- Maintain a Downsized Operation at Existing Site
- Relocate to a New Surface Lot or a New Parking Facility
- Significantly Reduce the City's Role in Providing Impound Services

Table 2
Concrete Crushing – Short-Term Strategies (2001-2005)

Strategy	Responsible Departments	Additional Revenue /(Expense)	Completion and Reporting Schedule
Administer crushing operation at existing site	Public Works	negligible	Spring 2001 report to T&PW
Lease site to an operator which sells excess rubble and aggregate	Public Works	To be determined	Fall 2001 report to T&PW and W&M
Administer bids for crushing on an alternative City-owned site	Public Works	To be determined	Spring 2002 report to T&PW and W&M
Conduct bidding for a private operator to lease an alternative City-owned site	Public Works	To be determined	Spring 2002 report to T&PW and W&M
Investigate the purchase/lease of alternative sites and create a plan for redevelopment of existing site	Public Works, MCDA and Planning	Costs included in Impound Lot site investigation costs	Spring 2002 report to CD and T&PW
Investigate the City becoming a customer at a private vendor's site	Public Works	To be determined	Spring 2002 report to T&PW

The selection and success of any long-term option will be dependent upon the successful implementation of some or all of the short-term strategies. The long-term options are summarized in Flowchart 5, and are as follows:

- Relocate to one or more alternative sites and lease site to a private operator
- Relocate to one or more sites and use a vendor to crush only the quantities required for the City's needs
- City becomes a customer of a private operator's site

Table 3
Linden Yards Operations Storage
Short-Term Strategies (2001-2005)

Strategy	Responsible Departments	Revenue /(Expense)	Completion and Reporting Schedule
Relocate seasonally accessed equipment to other City-owned sites	Public Works	Negligible	Spring 2002 report to T&PW
Consolidate frequently accessed materials and equipment at existing site	Public Works	Negligible	Spring 2002 report to T&PW
Consolidate frequently accessed bulk storage/transfer operational materials at existing site	Public Works	Negligible	Spring 2002 report to T&PW
Investigate the purchase/lease of alternative sites and create a plan for redevelopment of existing site	Public Works, MCDA and Planning	Costs included in Impound Lot site investigation costs	Spring 2002 report to T&PW and CD

The selection and success of any long-term option will be dependent upon the successful implementation of some or all of the short-term strategies. The long-term options are summarized in Flowchart 6, and are as follows:

- Purchase/lease alternative sites for the remaining materials, equipment, and bulk storage/transfer operational materials

Requested Actions

1. Direct the responsible departments listed in the above Table 1, Table 2, and Table 3, to complete the short-term strategies within each table and report back to City Council Committees in accordance with the completion and reporting schedule shown within each table.

2. Allocate $100,000 for alternative site investigation to be conducted by the MCDA on behalf of the Public Works Department. Tasks to be completed may include appraisals, title searches, environmental and geotechnical assessments, and other assessments as required.

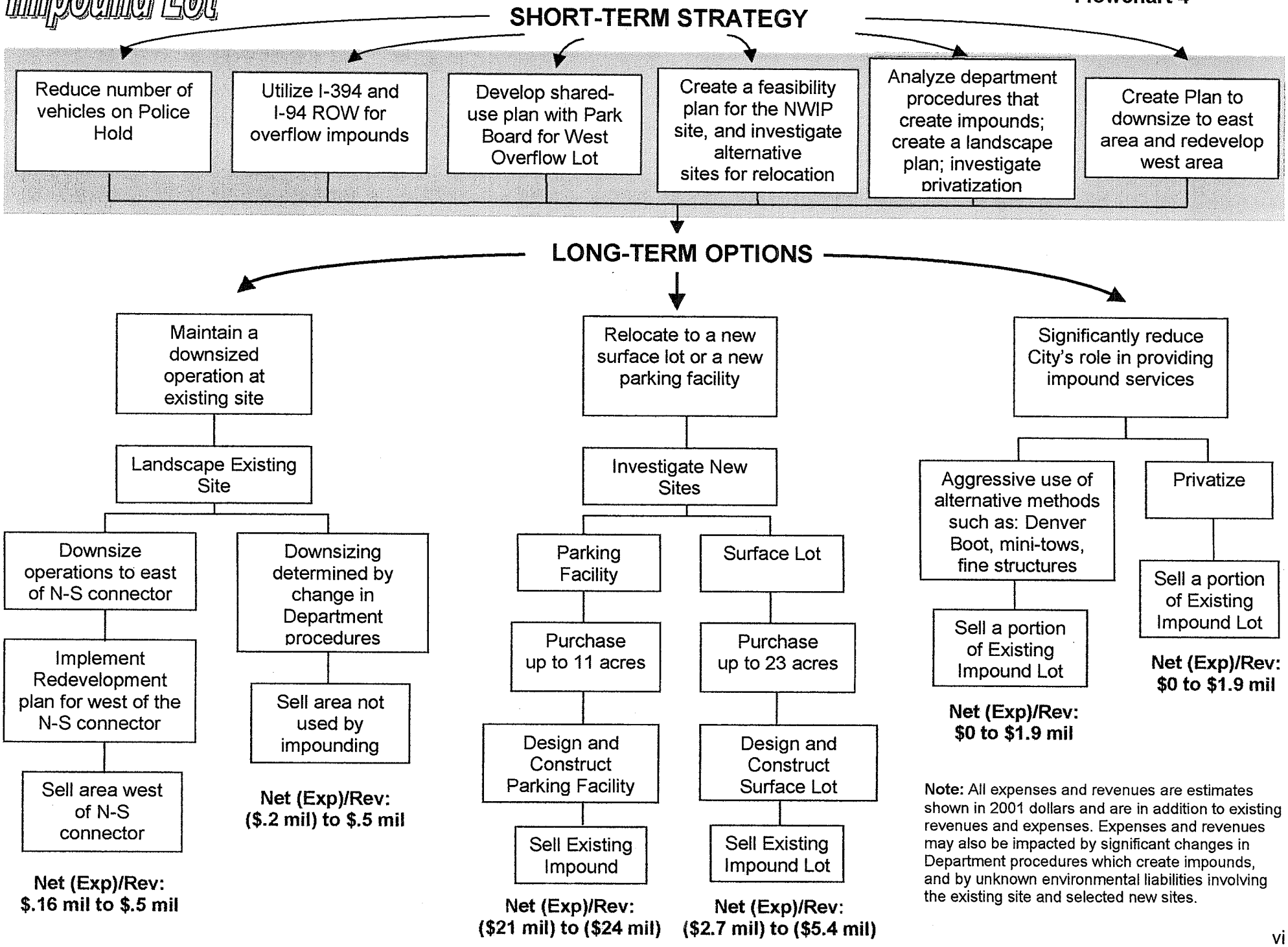
3. Refer this matter to the Transportation and Public Works Committee.

4. Refer this matter to the Minneapolis Community Development Agency Operating Committee.

5. Refer this matter to the Ways & Means Committee.

Impound Lot

Flowchart 4



Note: All expenses and revenues are estimates shown in 2001 dollars and are in addition to existing revenues and expenses. Expenses and revenues may also be impacted by significant changes in Department procedures which create impounds, and by unknown environmental liabilities involving the existing site and selected new sites.

Concrete Crushing

Flowchart 5

SHORT-TERM STRATEGY

- Administer crushing operation at existing site
- Lease site to an operator that sells excess rubble and aggregate
- Administer bids for crushing on an alternative City-owned site
- Conduct bidding for a private operator to lease an alternative City-owned site
- Investigate the purchase/lease of alternative sites and create a plan for redevelopment of existing site
- Investigate the City becoming a customer at a private vendor's site

LONG-TERM OPTIONS

Relocate to 1 or more alternative sites and lease site to a private operator

Purchase 7 acres

Lease site to a private operator that accepts and supplies quantities for the City at a reduced rate

Private operator is allowed to accept and sell excess quantities

Sell acreage of Concrete Crushing site – 7 acres

One-time Net (Exp)/Rev: ($.3 mil) to ($3.2 mil)
Annual Net (Exp)/Rev: $0 to ($.2 mil)

Relocate to 1 or more alternative sites and use a vendor to crush only quantities required for the City's Needs

Purchase 7 acres

Use a vendor to crush only the quantities required for the City's needs

Sell acreage of Concrete Crushing site – 7 acres

One-time Net (Exp)/Rev: ($.3 mil) to ($3.2 mil)
Annual Net (Exp)/Rev: $0 to ($.3 mil)

City becomes a customer of a private operator's site

City pays tipping fee to dispose of rubble and purchases aggregate at market rates

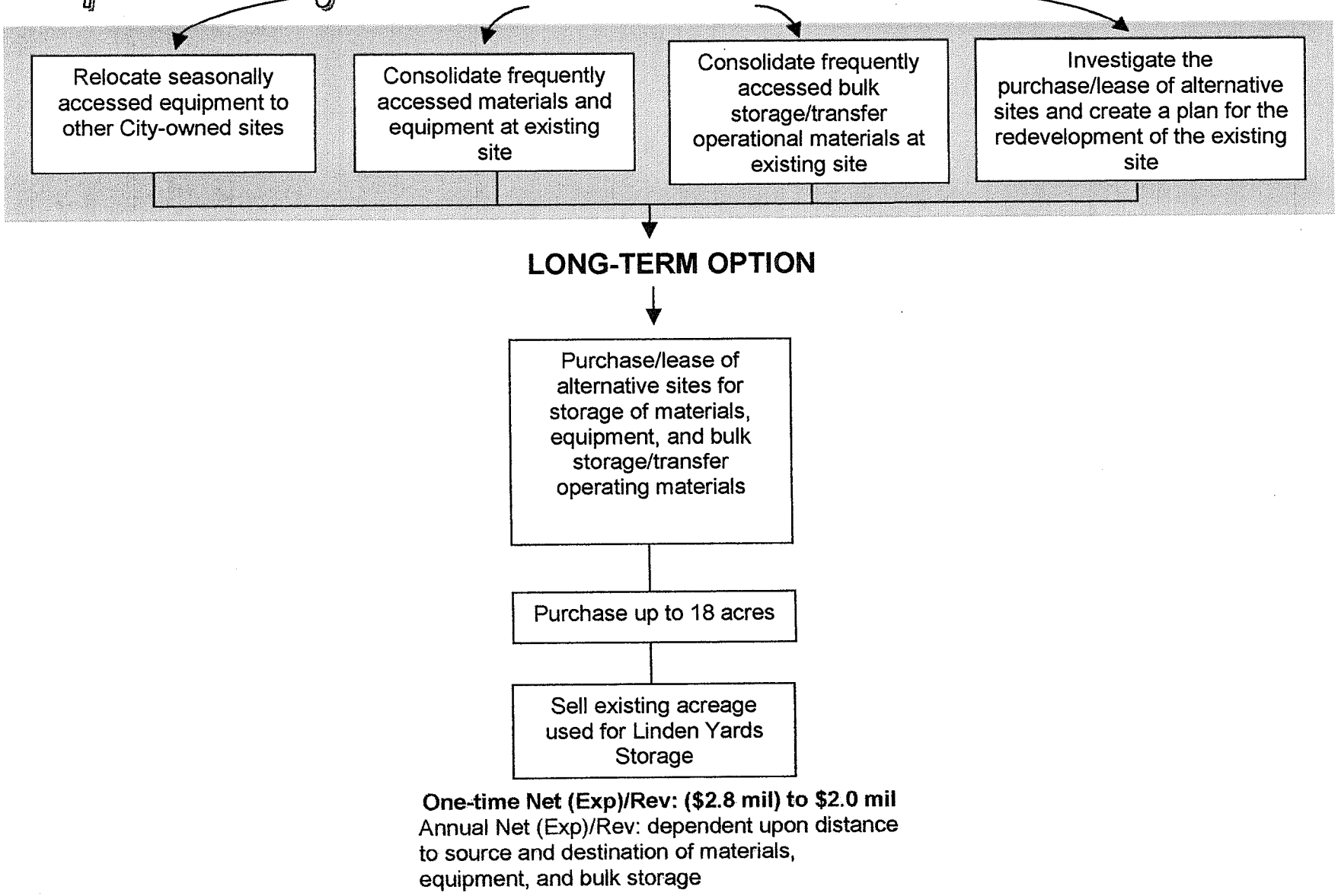
Sell acreage of Concrete Crushing site – 7 acres

One-time Net (Exp)/Rev: $.8 mil
Annual Net (Exp)/Rev: ($.3 mil) to ($.4 mil)

Note: All expenses and revenues are estimates shown in 2001 dollars. Expenses and revenues may also be impacted by unknown environmental liabilities involving the existing site and selected new sites.

Linden Yards Operations Storage

Flowchart 6



Note: All expenses and revenues are estimates shown in 2001 dollars and are in addition to existing revenues and expenses. Expenses and revenues may also be impacted by unknown environmental liabilities involving the existing site and selected new sites.

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Final Report
March 19, 2001

Purpose of Report

This report has been prepared in response to the City Council and Mayor directive that the MCDA and City staff conduct appraisals, site survey work, geotechnical and environmental analysis, and a parking and theater location analysis for the Parade Area; and identify Impound Lot, Concrete Crushing, and Linden Yards Operations Storage relocation and operations alternatives.

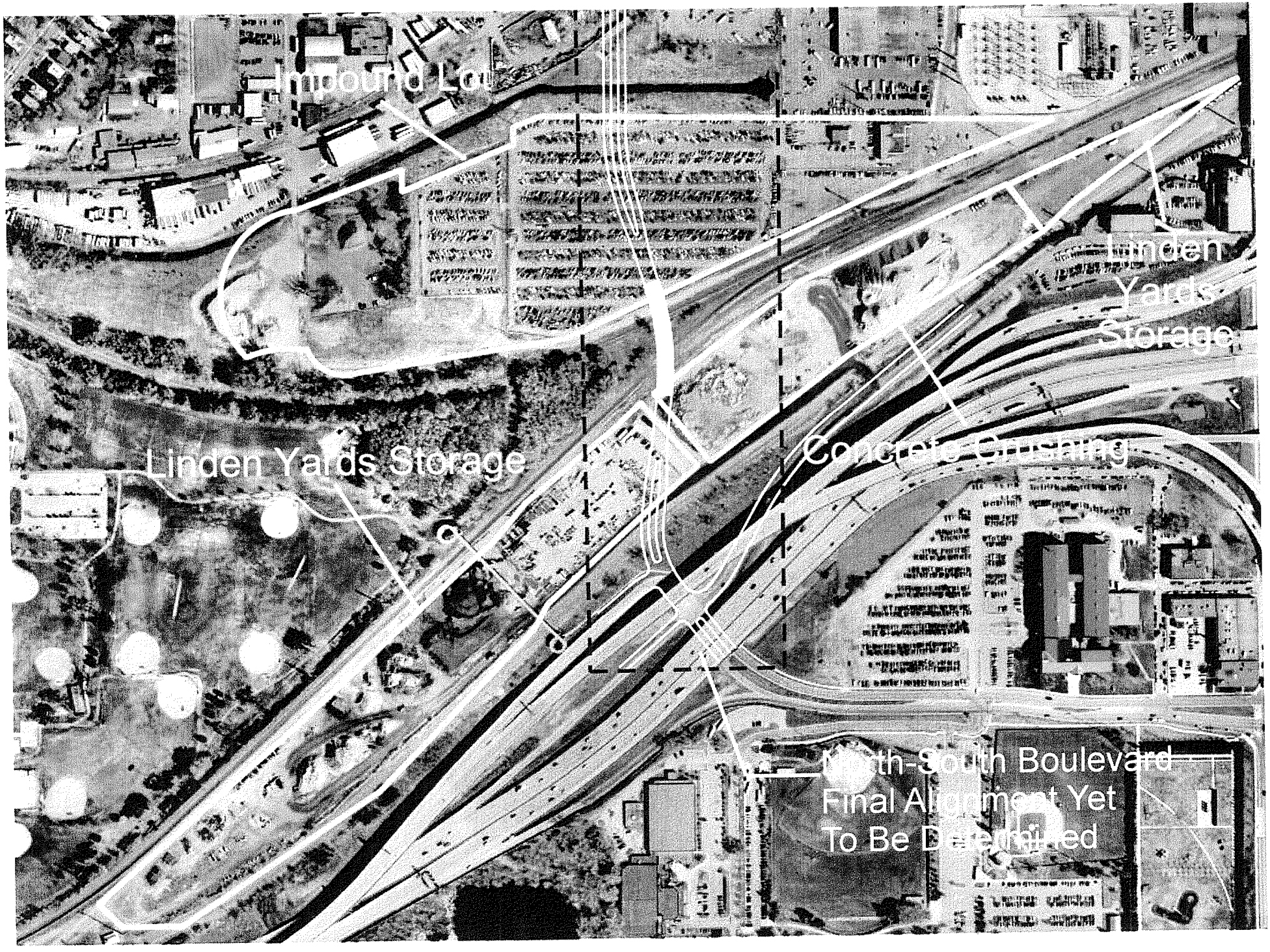
The analysis was initiated to accommodate: 1) the possible Guthrie Theater expansion in the Parade Stadium Area, 2) the proposed North-South Boulevard Connector for the Near Northside Redevelopment, and 3) the Bassett Creek Valley Master Plan which includes the property of the Impound Lot, Concrete Crushing, and the Linden Yards Storage Area.

When the Guthrie Theater selected the Mississippi River site for expansion, the analysis was re-focused on the Impound Lot, Concrete Crushing, and the Linden Yards Storage Area appraisals, operations and relocation options. The location of each of the operations is shown in Map 7.

Recent City Council and Mayor Actions Relating to the Impound Lot, Concrete Crushing, and the Linden Yards Operations Storage

On January 11, 1999 the City Council authorized a Master Planning Process for the Bassett Creek Area which includes the area occupied by the Impound Lot, Concrete Crushing Operation, and the Linden Yards Storage Area.

On April 23, 1999, the City Council directed that a comparative analysis be conducted for potential sites for Public Works facilities and operations in the


Linden Yards Storage
Concrete Crushing
North-South Boulevard
Final Alignment Yet
To Be Determined

Bassett Creek Valley Area. This study was completed in August 1999, and it provided a preliminary review of options and impacts for relocating the Impound Lot, Concrete Crushing Operation, and the Linden Yards Storage Area.

On September 14, 1999, the City Council directed that a Development Framework be prepared which facilitates the expansion of the Guthrie Theater and a real estate exchange between the Minneapolis Park and Recreation Board and the City of Minneapolis.

On November 24, 1999, the City Council reviewed the MCDA Development Framework Report for the expansion of the Guthrie Theater and approved a substitute report which directed MCDA and City staff to conduct appraisals, site survey work, geotechnical and environmental analysis, and a parking and theater location analysis of the Parade Area, as well as the Impound Lot, Concrete Crushing and Linden Yards Operations Storage relocation and operations alternatives.

On March 24, 2000, the City Council and Mayor approved the Bassett Creek Valley Master Plan. This Plan called for the relocation of the Impound Lot, Concrete Crushing, and Linden Yards Operations Storage outside of the Bassett Creek Valley/Bryn Mawr area. The Plan further recommended that the Impound Lot be made available to the Minneapolis Park and Recreation Board for expansion of Bryn Mawr Meadows Park, and that the Concrete Crushing and Linden Yards Storage areas be redeveloped for commercial/light industrial activities. The City Council action also approved the North-South Boulevard between Glenwood Avenue and I-394, but did not approve the general alignment of the Boulevard.

On July 28, 2000 the City Council and Mayor approved the center alignment of the Connector Boulevard between Fremont Avenue and Linden Avenue (through the center of the existing Impound Lot site). The Near North Redevelopment Project road planning is being conducted utilizing this center alignment.

City-Owned Land Work Group

In response to the November 24, 1999 directive, the Minneapolis Planning Director convened a City and MCDA Working Team to explore options for the relocation of the Guthrie Theater, the Impound Lot, Concrete Crushing, and the Linden Yards Operations Storage. The Working Team was identified as the City-Owned Land Work Group and included the following:

Planning Department
Chuck Ballentine
Tom Leighton

Finance Department
Susan Von Mosch
Tim David

City Coordinator's Office
Lois Eberhart

Public Works
David Sonnenburg
Brian Lokkesmoe
Steve Kotke

Police Department
Greg Hestness
Lucy Gerold

MCDA
Steve Cramer
Patrick Connoy
Chuck Lutz
Darrell Washington
Larry Heinz

Mayor's Office
Ron Thaniel

The MCDA and City staff initiated work in late 1999 and continued the analysis work after the Guthrie Theater selected the Mississippi River site for relocation during January 2000. The MCDA took the lead in conducting market appraisals, geotechnical reports and alternative site studies. The Management Analysis Division of the Finance Department took the lead in the analysis of the Impound Lot, Concrete Crushing, and Linden Yards Operations Storage relocation and operations alternatives.

The following work activities were undertaken and completed as directed by the City Council and the Mayor:

- Appraisal of Minneapolis Park and Recreation Board property at Parade Stadium
- Appraisal of Minneapolis Public Works Linden Yards Area
- Appraisal of Minneapolis Public Works Impound Lot Area
- Appraisal of potential Impound Lot relocation site in North Washington Industrial Park (NWIP).
- Parking demand study for the Parade Stadium area.
- Guthrie Theater location analysis for the Parade Stadium area.
- Impound lot reuse options based on environmental and geotechnical conditions.
- Environmental and geotechnical analysis of the Parade Stadium area (conducted by the Guthrie Theater).
- Economic reuse options for the Linden Yards.
- Relocation and operations analysis for the Impound Lot, Concrete Crushing, and Linden Yards Operations Storage.

Summary of Findings - Impound Lot

The Impound Lot is situated on a 23 acre site located immediately west of downtown Minneapolis. The Public Works Department operates this facility and provides impounding services for numerous City departments including the Police Department, Public Works Department, and the Department of Operations and Regulatory Services. This service has been provided by City staff since 1986 and it is a revenue neutral operation.

Market Appraisals and Geotechnical Reports – Impound Lot

Recent market appraisals and geotechnical reports have identified the Impound Lot site to have a land value of $1.15 million (if no further environmental remediation is required), and a total value of $1.90 million "as improved" with the existing buildings located on the site. The appraisals and reports also stated that the site has very poor geotechnical soil characteristics, lies within the 100-year flood plain of Bassett Creek, and soils and groundwater are heavily contaminated. Cleaning the site to a level at which residential development would be allowed is not technically or economically feasible, however, the site could be developed as park or open space without being cleaned to a residential standard. The highest and best use of the site if it were vacant would be to develop it with land intensive industrial uses, and the highest and best use "as improved" with the existing buildings is to continue the use as an impound lot.

Analysis of Use – Impound Lot

During 1999, a total of 47,460 vehicles were impounded at the Impound Lot. The site has a capacity to accommodate 2300 impounded vehicles per day.

The largest number of vehicles impounded annually are the result of Police Department operations, primarily the "booking" procedure. The "booking" procedure separates an arrested suspect from their vehicle and the vehicle is then towed and impounded. In 1999, the number of vehicles impounded as the result of the "booking" procedure was 15,656 (33% of all vehicles impounded). The total number of all vehicles impounded as the result of all Police Department operations was 29,748 (63% of all vehicles impounded). The Police Department is the largest user of the Impound Lot. Changes in the Police Department operations, primarily the "booking" procedure, may result in fewer impounded vehicles and allow downsizing of the Impound Lot operation.

The next largest number of vehicles impounded annually are the result of the Public Works snow emergency plowing (7,273 vehicles, or 15%, in 1999) and spring and fall street cleaning procedures (5,793 vehicles, or 12%, in 1999). Changes in the Public Works Department snow emergency plowing and street cleaning procedures may result in fewer impounded vehicles and allow downsizing of the Impound Lot operation.

Declared snow emergencies create the largest number of impounded vehicles during a very short time period. During a three-day snow emergency up to 1500 vehicles are often impounded. Recent consecutive snow emergencies declared within a few days of each other have resulted in over 2000 vehicles impounded within a few days. While the West Overflow Lot is used primarily for these short duration impounds during the winter, spring and fall months, the capacity of this lot is often exceeded and vehicles must be stored in the I-394 bridge right-of way and

in the Linden Yards Operations Storage Area. The addition of alternative overflow lots for the short duration impounds would help avoid exceeding lot capacity and may allow for alternative uses of the West Overflow Lot during the summer months.

Vehicles impounded as the result of a Police Department operation are often placed on "Police Hold" in the event the vehicle is required for evidentiary purposes. These vehicles are impounded for the longest amount of time of all vehicles and previously averaged 53 space days/vehicle, or 42% of all of the space available. A recent change in the operating procedures between the Police Department and Public Works has reduced the amount of time these vehicles are impounded. Continued implementation of the "Police Hold" release policy will reduce the amount of space required for impounded vehicles.

The majority of vehicles impounded were towed from neighborhoods in the Downtown area, the northwest quadrant of the City, immediately south of Downtown, and the University of Minnesota area. The location of Minneapolis registered owners of vehicles towed in 1999 is shown in Map 8.

Minneapolis residents were the registered owners of 55% of all impounded vehicles. The largest category by gender and age of registered owners is male, ages 20 to 29.

North-South Connector Boulevard – Impound Lot

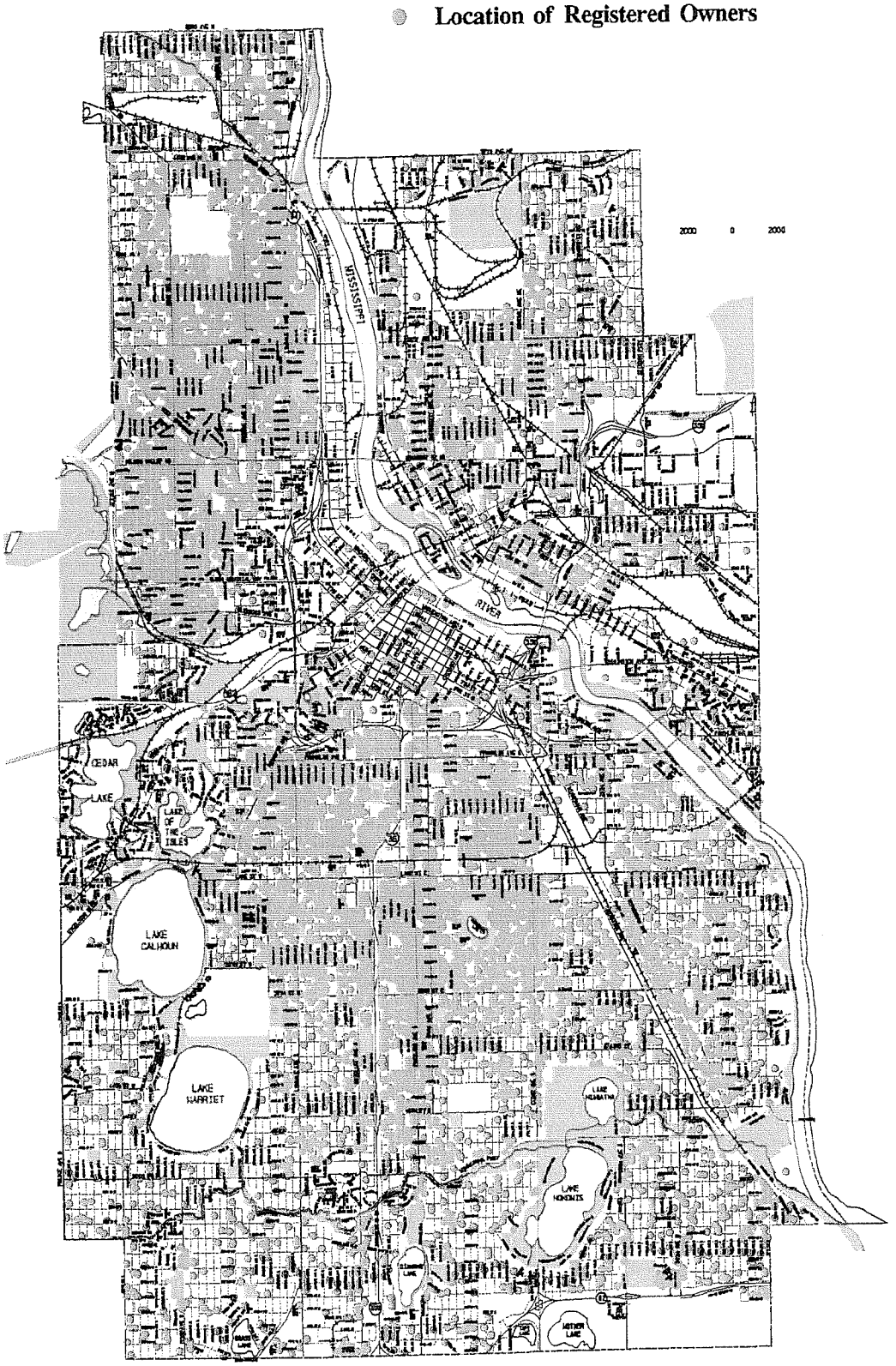
The North-South Connector Boulevard that is planned to connect Fremont Avenue with Dunwoody Boulevard will be constructed through the center of the Impound Lot and will divide the Impound Lot into an east lot and west lot. It is anticipated that the design of the boulevard will include an elevated bridge over a portion of the Impound Lot that will allow access between the east lot and west lot. The right-of-way of the boulevard will reduce the capacity of the Impound Lot by 10%. The Public Works Department has indicated that with access between the east and west lot, the Impound Lot can continue operations on the site with the connector boulevard.

Alternative Sites – Impound Lot

A number of alternative sites were reviewed for the possible relocation of the Impound Lot facility. However, because of the large acreage required for a comparable new surface lot facility, and because of the location of the existing lot to the central portion of the City where the majority of the impounded vehicles originate, most of the alternative sites were determined to be inappropriate. The alternative sites were smaller acreage, located near residential areas, or located near the northern or southern boundaries of the City or outside of the City.

Location of Registered Owners of Vehicles Towed in 1999

Location of Registered Owners



DATA:10/01/1999 PMQ/ASSESSORS MAP:02/01/1997 ENG. DESIGN PLOT:05/18/2000 ENG. DESIGN

It was determined that the most viable alternative relocation site is within the North-Washington Industrial Park (NWIP) being redeveloped by the MCDA. An 11 acre site exists in the northeast quadrant of the intersection of Plymouth Avenue and 2ND Street North that could accommodate a parking facility with a capacity for 1900 impounded vehicles.

As part of the short-term strategies for the Impound Lot, a feasibility plan will be created for the construction of a parking facility at this site with tax generating, light-industrial use on the first level, and the impound facility on the levels above the first level.

Best Practices – Impound Lot

The best practices research focused on alternative business practices that reduce the number of impounded vehicles. Fourteen comparable cities were surveyed and the following alternative programs were identified:

Program	Description of Program	Cities Using Program
Denver Boot	Metal bar and locking device immobilizes the vehicle	Denver CO, Buffalo NY, Detroit MI, Kansas City MO
Mini-tow / Tow around the corner	Tow a violating vehicle a distance of 500' or less	Kansas City MO, Buffalo NY, Milwaukee WI, Detroit MI, Denver CO
Neighborhood Sweep	Check all license plates within an area for violations and tow prior to snow season	New York NY
Mailed Notice of Violation and Pending Tow	Send placard to owner upon first violation and tow upon second violation	Milwaukee WI
Residential Parking Snow Sticker	Residents vehicles receive stickers to exempt vehicles from tows	Toronto Canada
Flashing Parking Ban	Billboard style signage used to inform residents of parking bans	Portland OR

Short-Term Strategies and Long-Term Options – Impound Lot

The short-term strategies and long-term options have been developed from reviews of the market appraisals and geotechnical reports, extensive operations

and relocation analysis, and extensive discussion among the members of the City-Owned Land Work Group.

The detailed short-term strategies and long-term options for the Impound Lot are shown in Matrix 9 and Matrix 10.

It is recommended that work on the short-term strategies begins in 2001 and be conducted in accordance with the schedule shown in the matrices.

The selection and success of a long-term option will be dependent upon the successful implementation and results of the short-term strategies. It is anticipated that it may require up to 5 years to determine the long-term solution for the Impound Lot. The large number of vehicles impounded and the large acreage required are the result of aggressive towing operations by City departments and supported by many policy decisions. A significant part of the short-term strategies will be to review those operations and identify opportunities for policy changes that may significantly affect the number of vehicles impounded, and therefore affect the selection of the long-term option.

It is recommended that the long-term option occur between the years 2006-2010.

Impound Lot

Short - Term Strategy : One - Five Years

Matrix 9

OPTION: Reduce Size of Operations at Existing Site, and Utilize Nearby Sites for Overflow Impounds

Action Steps	Responsible Department	Year: 2000	2001	2002	2003	2004	2005	One-time Revenue/ (Expense)[1]	On-going Revenue/ (Expense)[1]	Significant Opportunity Gain/ (Loss)[1]
1. Confirm Police Hold policy and implement procedures to reduce and maintain the number of Police Holds to 375 vehicles per day.	Public Works and Police	Confirm	Implement →							Reduce size of lot required by 1 acre
2. Utilize I-394 Overflow Lot for up to 400 snow emergency and street cleaning impounds.	Public Works	Fall 2000 →						(PW estimate)	($12,000/yr - lease) (FTE's and hours will vary)	Reduce need for West Overflow Lot
3. Utilize West Overflow Lot for snow emergency and street cleaning impounds.	Public Works	Fall 2000 →	→							Utilize until agreement reached w/State for use of I-94
4. Develop a Shared-Use Plan for the existing West Overflow Lot with intermittent use for 50+ snow emergency and street cleaning impounds.	Public Works and Park and Recreation Board		Develop →		Implement →			$244,000 - sell West Overflow Lot, 7 acres	(Unknown environmental liabilities)	
5. Utilize I-94 Overflow Lot for up to 350 snow emergency and street cleaning impounds.	Public Works		Develop	Implement →				(PW estimate)	($12,000/yr - lease) (FTE's and hours will vary)	Reduce need for West Overflow Lot
6. Develop Landscaping plan and implement if long-term strategy is to remain at existing site.	Public Works		Develop →		Implement →			($400,000)	($10,000)	Improve visual screening of existing site
7. Analyze operations and create recommendations to reduce the number of vehicles impounded:										
- Police "Booking" and "Miscellaneous"	Police and Public Works		Analyze	Implement →				to be determined	to be determined	to be determined
- Public Works "Street Sweeping"	Police and Public Works		Analyze	Implement →				to be determined	to be determined	to be determined
- Public Works "Snow Emergency"	Public Works		Analyze	Implement →				to be determined	to be determined	to be determined
- Operational and parking violations fine structures	Police, Public Works, and Reg Services		Analyze	Implement →				to be determined	to be determined	to be determined

1 All revenue and expense estimates are shown in 2001 dollars, and are in addition to existing revenues and expenses.

Action Steps		2000	2001	2002	2003	2004	2005	One-time Revenue/ (Expense)[1]	On-going Revenue/ (Expense)[1]	Opportunity Gain/ (Loss)[1]
8. Investigate a new site for the Impound Lot.	Public Works and MCDA									
A. North Washington Industrial Park site - 11 acres			Investigate	Acquire	Relocate	Demo		(+$3.3 million)[2,3]	(Lot operation costs are constant. Cost of towing vendor contracts will be dependent upon distance of lot from Central Business District)	$1.15-1.90 million sell existing site. (Unknown environmental remediation costs)
B. Alternative sites			Investigate	Acquire	Relocate	Demo		($1.2 - $4.0 million)[3]		
9. Design and Construct a Parking Facility (If long-term option of relocation to a ramp is selected)	Public Works and MCDA			Design determined by site ——>			Construct	($19.7 million 1700 stall, 2 deck)	Commercial/industrial use of lower level creates revenue, and possible development grants	
10. Design and Construct a Surface Lot (If long-term option of relocation to a surface lot is selected)	Public Works and MCDA			Design determined by site ——>			Construct	($1.4 million bldgs, lot, security)		
11. Analyze privatization of Impound Lot operations:										
- Dealer Auction, Public Auction, Police Holds	Public Works		Analyze ——>					to be determined	to be determined	to be determined
- Entire Impound operation (including Autodesk and Forensics)	Public Works and Police		Analyze ——>					to be determined	to be determined	to be determined
12. Investigate alternative Remote Overflow Lots for snow emergency and street cleaning impounds.	MCDA and Public Works									
- North Washington Industrial Park site - 7 acres			Investigate	Acquire	Relocate	Demo		($2.1 million)[2,3]	(FTE's and hours will vary)	(Increased customer confusion about where vehicle is impounded.) Multiple sites may be close to the customer. Adds to parcels available for City facilities.
- Alternative sites			Investigate	Acquire	Relocate	Demo		($1.1 - $4.0 million)		
13. Design and Construct Alternative Remote Overflow Lots	Public Works			Design determined by site ——>			Construct	($150,000 build-out per site)		Construct smaller surface lot or parking facility at new main site

[1] All revenue and expense estimates are shown in 2001 dollars, and are in addition to existing revenues and expenses.

[2] Expenses are dependent upon availability of relocation sites.

[3] Expenses are dependent upon unknown costs for environmental remediation.

Impound Lot

Long - Term Strategy : Five Years Plus

Matrix 10

OPTION: Maintain a Downsized Operation at Existing Site

Action Steps	Responsible Department	Year 2006	2007	2008	2009	2010	One-time Revenue/ (Expense)[1]	On-going Revenue/ (Expense)[1]	Significant Opportunity Gain/ (Loss)[1]
1. Maintain the number of Police Holds at 375 vehicles per day or less.	Public Works and Police	Maintain Police Holds at 375 or less →							Reduce size of lot required by 1 acre
2. Utililze I-394 Overflow Lot for up to 400 snow emergency and street cleaning impounds.	Public Works	Utilize I-394 Overflow Lot →						($12,000/yr-lease) (FTE's and hours will vary)	Reduce need for West Overflow Lot
3. Utilize I-94 Overflow Lot for up to 350 snow emergency and street cleaning impounds.	Public Works	Utilize I-94 Overflow Lot →						($12,000/yr-lease) (FTE's and hours will vary)	Reduce need for West Overflow Lot
4. Utilize West Overflow Lot for snow emergency and street cleaning impounds in coordination with Minneapolis Park and Recreation Board.	Public Works and Park and Recreation Board	Utilize West Overflow Lot →						(unknown environmental liabilities)	
5. Continue reduced number of impounds resulting from analysis and recommendations for "Booking", "Miscellaneous", "Snow Emergency", "Street Sweeping", and Fine structure.	Public Works and Police	Reduced Number of Impounds →					to be determined in short-term strategy	to be determined in short-term strategy	to be determined in short-term strategy
6. Possible use of Alternative Remote Overflow Lots resulting from analysis of Humboldt Yards, Shoreham Yards, SEMI, 28th Ave and Hwy 62, Cedar Ave and 58th St, or State Fair Grounds, for snow emergency and street cleaning impounds.	Public Works	Use Alternative Overflow Lots →						(FTE's and hours will vary) (unknown environmental liabilities)	(Increased customer confusion about where vehicle is impounded.) Multiple sites may be closer to the customer. Adds to parcels available for City facilities.
7. Maintain Landscaping	Public Works	Maintain Landscaping →						($10,000/yr.)	

[1] All revenue and expense estimates are shown in 2001 dollars, and are in addition to existing expenses and revenue.

Impound Lot

Long - Term Strategy : Five Years Plus

Matrix 10 continued

OPTION: Relocate to a New Surface Lot or a New Parking Facility

Action Steps	Responsible Department	Year: 2006	2007	2008	2009	2010	One-time Revenue/ (Expense)[1]	On-going Revenue/ (Expense)[1]	Significant Opportunity Gain/ (Loss)[1]
1. Maintain the number of Police Holds at 375 vehicles per day.	Public Works and Police	Maintain Police Holds at 375 or less →							Reduce size of lot required by 1 acre
2. Continue reduced number of impounds resulting from analysis and recommendations for "Booking", "Miscellaneous", "Snow Emergency", "Street Sweeping", and Fine structure.	Public Works and Police	Reduced number of impounds →					to be determined in short-term strategy	to be determined in short-term strategy	to be determined in short-term strategy
3. Relocate to a new site determined by site investigation conducted in 2001-2005.	Public Works and MCDA								
A. North Washington Industrial Park site		Relocate	Operate →				($77,000-move impounded vehicles and move staff)	(Lot operation costs are constant. Cost of towing vendor contracts will be dependent upon distance of lot from Central Business	New site adds to parcels available for City facilities.
B. Alternative sites		Relocate	Operate →						
4. Possible use of Alternative Remote Overflow Lots resulting from analysis of Humboldt Yards, Shoreham Yards, SEMI, 28th Ave and Hwy 62, Cedar Ave. and 58th St., State Fair Grounds, and the existing Impound Lot site for snow emergency and street cleaning impounds.	Public Works	Use Alternative Overflow lots →						(FTE's and hours will vary)	(Increased customer confusion about where vehicle is impounded.) Multiple sites may be closer to the customer. Adds to parcels available for City facilities.
5. Sell existing Impound Lot site.	MCDA and Public Works	Sell Site					$1.15 - $1.90 million sell site. (unknown one-time environmental clean-up costs)	(unknown costs for environmental remediation)	$1.15 - $1.90 million sell site. (unknown costs for environmental remediation) (reduces parcels available for City facilities)

[1] All revenue and expense estimates are shown in 2001 dollars, and are additional to existing revenues and expenses.

Impound Lot

Long - Term Strategy : Five Years Plus

Matrix 10 continued

OPTION: Reduce City's Role in Providing Impound Services

Action Steps	Responsible Department	Year: 2006	2007	2008	2009	2010	One-time Revenue/ (Expense)[1]	On-going Revenue/ (Expense)[1]	Significant Opportunity Gain/ (Loss)[1]
1. Aggressive use of alternative methods to reduce towing and impounding such as use of the Denver Boot, Mini-tows, Neighborhood Sweeps, and extensive Ticketing.	Public Works and Police and Reg Services	Reduce Towing and Impounding →					to be determined in short-term strategy	to be determined in short-term strategy	to be determined in short-term strategy
2. Privatize Operations.									
- Dealer Auction	Public Works	Privatize →					to be determined in short-term strategy	to be determined in short-term strategy	to be determined in short-term strategy
- Public Auction	Public Works	Privatize →					to be determined in short-term strategy	to be determined in short-term strategy	to be determined in short-term strategy
- Police Holds	Public Works and Police	Privatize →					to be determined in short-term strategy	to be determined in short-term strategy	to be determined in short-term strategy
- Entire Impound Lot operation (including Autodesk and Forensics)	Public Works and Police	Privatize →					to be determined in short-term strategy	to be determined in short-term strategy	to be determined in short-term strategy
3. Sell existing Impound Lot site.	Public Works and MCDA	Sell Site					$1.15 - $1.90 million - sell site. (unknown one-time environmental clean-up costs)	(unknown costs for environmental remediation)	$1.15 - $1.90 million sell site. (unknown costs for environmental remediation) (reduces parcels available for City facilities)

[1] All revenue and expense estimates are shown in 2001 dollars, and are in addition to existing revenues and expenses.

Summary of Findings - Concrete Crushing

The Concrete Crushing operation occupies approximately 7 acres in the Linden Yards area immediately west of downtown Minneapolis. The Public Works Department administers the operation. During the construction season, rubble from the demolition of City streets and other City infrastructure is delivered to the west end of this site. During the winter months the rubble is crushed into aggregate by a vendor and is stored on-site. The aggregate is then available for City use during the next construction season. The location of the Concrete Crushing operation is shown in Map 1.

Market Appraisals and Geotechnical Reports – Concrete Crushing

Recent market appraisals and geotechnical appraisals completed for the Linden Yards area indicate the site occupied by the Concrete Crushing operation has a land value of $2.55/sq. ft. without structural soil correction costs ($7.00/sq. ft. with structural soil correction). The total value of the 7 acres which comprise the operation have a market value of $778,000 without any structural soil correction costs.

The site is known to have limited soil and groundwater contamination. However, the appraisal did not consider any environmental contamination costs.

The geotechnical reports indicate the site is characterized as high risk with soils that may present a risk to developers in excess of what the market would view as acceptable.

The site is zoned I-2. Concrete Crushing requires I-3 zoning within the City of Minneapolis.

The highest and best use of the site is suggested to be multiple, smaller buildings which would reduce the cost of pilings. Uses of the site could include auto dealerships, retail service buildings, or automobile service facilities.

Analysis of Operations – Concrete Crushing

The Concrete Crushing operation has evolved primarily from the City's need to dispose of rubble generated from the demolition of streets and the need for a supply of aggregate required for construction of streets as part of the 30 year paving project which has now been completed.

The recycling of rubble into aggregate within the Linden Yards area has allowed the Public Works Department to avoid "tipping" fees for the disposal of rubble and has generated aggregate for City use at well below the retail cost of aggregate.

During the past 20 years the City has recycled approximately 100,000 tons of rubble each year. As of June 2000, there was an inventory of approximately 40,000 tons of concrete rubble and 95,000 tons of aggregate stored on the Concrete Crushing site.

The present street rehabilitation program will generate much smaller quantities of rubble and require smaller quantities of aggregate. During the next 5 years it is estimated that the quantity of rubble generated will average 25,000 tons per year, and the quantity of aggregate required will average 27,000 tons. The quantities of rubble to be generated and the quantities of aggregate to be required during the five-year CIP projects are as follows:

	Rubble (1 yd = .8 tons)		**Aggregate*** (1yd = 1.5 tons)	
CIP Year	**Yards**	**Tons**	**Yards**	**Tons**
2000	24,275	19,420	15,092	22,638
2001	26,687	21,350	11,820	17,730
2002	17,186	13,749	11,032	16,548
2003	53,963	43,170	32,868	49,302
2004	34,616	27,693	18,882	28,323
Total	156,727	125,382	89,694	134,541

* Quantity is two times the CIP estimates to account for aggregate used as miscellaneous fill per the Public Works Department.

The large quantity of material that is stockpiled may be a product that could be sold to other entities. Currently Minnesota Statute restricts the sale of City processed road building materials to other governmental units. A change in Minnesota Statute, or a possible leasing arrangement of the Concrete Crushing site may allow for the City to dispose of excess quantities in the private market.

The most significant cost variable for this operation has been identified as the transportation costs. The location of the Concrete Crushing to the central portion of the City has kept those costs relatively low in comparison to other outlying alternatives. It is estimated that the transportation costs for the next 5 years of CIP projects using the existing site will be $842,000. The transportation costs of an alternative site located near the boundaries of the City would be $1,274,000.

North-South Connector Boulevard – Concrete Crushing

The North-South Connector Boulevard that is planned to connect Fremont Avenue with Dunwoody Boulevard will be constructed along the west edge of the existing Concrete Crushing operation. It is anticipated that the Connector Boulevard will not disrupt the operation of the Concrete Crushing operation if the operation remains at the present location.

Alternative Sites – Concrete Crushing

A number of alternative sites were reviewed for the possible relocation of the Concrete Crushing. However, because of the large acreage required, the I-3 zoning required, higher transportation costs for a non-central location, and the less desirable features of this operation such as noise, dust, heavy-truck traffic, and unsightly material stockpiles, a viable alternative site has not been identified.

Best Practices –Concrete Crushing

Very few municipalities conduct concrete crushing operations. Most municipalities bid their street projects to private vendors that are responsible for disposal of the rubble and purchase of the aggregate. Also, the majority of municipal streets are constructed of asphalt rather than concrete. The City of Portland operates a smaller concrete crushing operation with operating costs of $152,000 per year, plus trucking costs. The City is preparing to move their operation to City-owned land near their airport. The City of Chicago conducts some concrete crushing utilizing a private vendor for the crushing operation, however there is no formal contract for the operation. The City disposes of the rubble at the vendor's site with no "tipping" fee, and then purchases aggregate from the vendor for approximately $8 per ton.

Short-Term Strategies and Long-Term Options – Concrete Crushing

The short-term strategies and long-term options have been developed from reviews of the market appraisals and geotechnical reports, extensive operations and relocation analysis, and extensive discussion among the members of the City-Owned Land Work Group.

The detailed short-term strategies and long-term options for the Concrete Crushing are shown in Matrix 11 and Matrix 12.

It is recommended that work on the short-term strategies begins in 2001 and be conducted in accordance with the schedule shown in the matrices.

The selection and success of a long-term option will be dependent upon the successful implementation and results of the short-term strategies. A successful leasing arrangement that allows the sale of aggregate to a larger market, along with the smaller quantities generated during the next 5 years; should allow the size of the existing stockpile to be reduced. The continued investigation of an alternative site, the possible reduction in the required size of a site, and the interest of private vendors to operate a concrete crushing on an alternative site, will help determine the selection of the long-term option.

It is recommended that the long-term option occur between the years 2006-2010.

Concrete Crushing

Short - Term Strategy : One - Five Years

Matrix 11

OPTION: Lease Existing Site to a Private Operator and Reduce the Quantity of Rubble and Aggregate Stockpiled.

Action Steps	Responsible Department	Year: 2000	2001	2002	2003	2004	2005	One-time Revenue/ (Expense)[1]	On-going Revenue/ Expense[1]	Opportunity Gain/ (Loss)[1]
1. Administer Crushing Operation at existing site.	Public Works	Administer Operation								
2. Lease Existing Site to an operator. Operator will accept and crush rubble generated by the City, and supply aggregate needed by the City at a reduced rate. Operator will be allowed to accept and crush excess rubble and sell excess aggregate.	Public Works		RFP --->	Implement --->	--->	--->	--->	to be determined	to be determined	Reduce quantity of material stockpiled. Allow sidewalk contractors to dispose of rubble at Linden Yards.
3. Administer bids for crushing concrete on an alternative City-owned and City operated site.	Public Works		Bid Process --->					*to be determined*	*to be determined*	*Identify interest in providing services*
4. Conduct bidding process for a private operator to lease and operate an alternative City-owned site.	Public Works		Bid Process --->					*to be determined*	*to be determined*	*Identify interest in providing services*
5. Investigate the purchase/lease of alternative sites. (A total of 7 acres is required).	Public Works and MCDA		Investigate site --->		Acquire	Relocate	Demo	($1.07 million - acquisition of ***7 acres @ $3.5/ft.***)[2,3] (Dust/noise/visual abatement) efforts may be required: $250,000		***$778,000 - sell existing 7 acre site. (unknown environmental remediation costs)***

Action Steps	Responsible Department	Year 2000	2001	2002	2003	2004	2005	One-time Revenue/ (Expense)[1]	On-going Revenue/ Expense[1]	Opportunity Gain/ (Loss)[1]
6. Investigate the City becoming a customer at a private vendor's site.	Public Works									
- Bolander - St. Paul - 6 blocks north of University Avenue W. and Vandalia St.			Investigate ——>							*$778,000 - sell existing 7 acre site. (unknown environmental remediation costs)*
- Barton - Maple Grove			Investigate ——>							
- Kraemer - Burnsville			Investigate ——>							
- Frattalone - Little Canada			Investigate ——>							
- T A Schifsky - North St. Paul			Investigate ——>							
- Midwest - New Brighton			Investigate ——>							
- CAMAS - Maple Grove			Investigate ——>							
- Bury and Carlson - Burnsville			Investigate ——>							
- McCrossan			Investigate ——>							

[1] All revenue and expense estimates are shown in 2001 dollars, and are in addition to existing revenues and expenses.
[2] Expenses are dependent upon availability of relocation sites.
[3] Expenses are dependent upon unknown costs for environmental remediation.

Concrete Crushing

Long - Term Strategy : Five Years Plus

Matrix 12

OPTION: Relocate to 1 or More Alternative Sites and Lease Site to a Private Operator.

Action Steps	Responsible Department	Year: 2006	2007	2008	2009	2010	One-time Revenue/ (Expenses)[1]	On-going Revenue/ (Expense)[1]	Opportunity Gain/ (Loss)[1]
1. Relocate to 1 or more alternative sites identified during the 2000-2005 site investigation, and lease site to a private operator. Operator accepts and supplies quantities for the City at a reduced rate, and operator is allowed to accept and sell excess quantities.	Public Works	Relocate	Implement ——>				Relocation costs	Trucking costs: ($204,000) to $6,000/yr.	***Reduced rate for rubble disposal and aggregate purchase, $0-$263,000 savings.***
2. Sell acreage of Concrete Crushing site - 7 acres.	Public Works and MCDA	Sell property——>					$778,000 - sell existing 7 acre site. (unknown one-time environmental clean-up costs)	(unknown costs for environmental remediation)	$778,000 - sell existing 7 acre site. (unknown costs for environmental remediation)

1 All revenues and expense estimate are shown in 2001 dollars, and are in addition to existing revenues and expenses.

Long - Term Strategy : Five Years Plus

OPTION: Relocate to 1 or More Alternative Sites and Use a Vendor to Crush Only the Quantities Required for the City's Needs.

Action Steps	Responsible Department	Year 2006	2007	2008	2009	2010	One-time Revenue/ (Expenses)[1]	On-going Revenue/ (Expense)[1]	Opportunity Gain/ (Loss)[1]
1. Relocate to 1 or more remote sites identified during the 2000-2005 site investigation, and use a vendor to crush only the quantities required for the City's needs.	Public Works	Relocate	Implement --->				Relocation costs	Trucking costs, and crushing contract costs: ($48,000) to ($258,000)/yr.	*(Crushing contract adds $54,000 cost)*
2. Sell acreage of Concrete Crushing site - 7 acres.	Public Works and MCDA	Sell property --->					$778,000 - sell existing 7 acre site. (unknown one-time environmental clean-up costs)	(unknown costs for environmental remediation)	$778,000 - sell existing 7 acre site. (unknown costs for environmental remediation)

[1] All revenue and expense estimates are shown in 2001 dollars, and are in addition to existing revenues and expenses.

Concrete Crushing

Long - Term Strategy : Five Years Plus

Matrix 12 continued

OPTION: City Becomes a Customer of a Private Operator's Site.

Action Steps	Responsible Department	Year: 2006	2007	2008	2009	2010	One-time Revenue/ (Expenses)[1]	On-going Revenue/ (Expense)[2]	Opportunity Gain/ (Loss)[1]
1. City becomes a customer of a private operator's site.	Public Works							Trucking costs, tipping fee, and aggregate purchase:	
- Bolander St. Paul site - 6 blocks north of University Avenue and Vandalia		Customer →						($271,000)/yr.	*Avoid purchase of 7 acre site for $1.07 million. (City is subject to the variability of costs for disposal of rubble and purchase of aggregate.)*
- Barton - Maple Grove		Customer →						($404,000)/yr.	
- Kraemer - Burnsville		Customer →						($407,000)/yr.	
- Frattalone - Little Canada		Customer →						($376,000)/yr.	
- T A Schifsky - North St. Paul		Customer →						($379,000)/yr.	
- Midwest - New Brighton		Customer →						($351,000)/yr.	
- CAMAS - Maple Grove		Customer →						($427,000)/yr.	
- Bury and Carlson - Burnsville		Customer →						($364,000)/yr.	
2. Sell acreage of Concrete Crushing site - 7 acres.	Public Works and MCDA	Sell property →					$778,000 - sell existing 7 acre site. (unknown one-time environmental clean-up costs)	(unknown costs for environmental remediation)	$778,000 - sell existing 7 acre site. (unknown costs for environmental remediation)

1 All revenue and expense estimates are shown in 2001 dollars, and are in addition to existing revenues and expenses.

Summary of Findings – Linden Yards Operations Storage

The Linden Yards Operations Storage occupies approximately 18 acres in the Linden Yards area immediately west of downtown Minneapolis. The Public Works Department manages this operation.

Market Appraisals and Geotechnical Reports – Linden Yards Operations Storage

Recent market appraisals and geotechnical appraisals completed for the Linden Yards area indicate the site occupied by the Linden Yards Operations Storage has a land value of $2.55/sq. ft. without structural soil correction costs ($7.00/sq. ft. with structural soil correction). The total value of the approximately 18 acres which comprise the operation have a market value of $2.0 million without any structural soil correction costs.

The site is known to have limited soil and groundwater contamination. However, the appraisal did not consider any environmental contamination costs.

The geotechnical reports indicate the site is characterized as high risk with soils that may present a risk to developers in excess of what the market would view as acceptable.

The highest and best use of the site is suggested to be multiple, smaller buildings which would reduce the cost of pilings. Uses of the site could include auto dealerships, retail service buildings, or automobile service facilities.

Analysis of Use – Linden Yards Operations Storage

The Linden Yards Operations Storage is used by numerous Divisions of the Public Works Department for storage and transfer of equipment and materials. The distribution of uses within the area is shown in Map 13. Some of the items stored include construction trailers, catch basins, tandem trailers, lights, signals, Nicollet Mall benches and planters, and snow and street sweepings. A recent inventory of the items was completed and is shown in Table 14.

The central location of this site within the City has allowed quick access to items frequently needed by the various Public Works construction sections. The Department has begun identifying the equipment that is infrequently accessed and determining which items may be relocated to other Public Works sites. The remaining items are intended to be consolidated to utilize only the amount of space required for the frequently accessed operational equipment and materials.

SEWER STORAGE
PAVING
22,847
PAVING
210'
VACUUM
TRUCK
32,865
SHERIFF
BUILDING
15,788
ESD
17,467'
TRAFFIC
16,801'
TIMPOUND LOT
107,021'
STOCKPILE
218,181'
STREET
SWEEPER
PILES
204,482'

Table 14

Item No.	Description of equipment / materials	Quantity	Page No.	Picture No.
	Area: Sewer/Paving (easterly section)	**Approximate Area in Acres - 1.6**		
1	Catch basin, manholes and grates	100-200	4	Sewer006,7
2	Trailer and pump	1	4	8
3	Power sewer roder	1		
4	Small trailer	1	5	11
5	Trailer and roller	1	4	9
6	Small covered crew trailers	4	5	10
7	Small trailer	1	5	11
8	Small trailer and bob cat	1	5	12
9	Small trailer flex pipe cleaning machine	1	5	13
10	Roll of wire/hose	1	5	14
11	Small wire trailer	1	5	15
12	Small trailer (electric. service)	1	5	16
13	Metal steps	2	6	17
14	Metal box	1	6	18
15	Misc. sewer pipe (pvc, clay, flex)	100	6	19
16	Scrap metal/ shoring equipment	Pile	6	20
17	Power poles temp service	2	6	21
18	Misc. poles, fence, gates	Area	6	22
19	4 sets of tires for moving equipment	4	7	23
20	Metal tubes/pipe	10--20	7	24
21	Large yellow mechanical shoring	Area	7	25
22	Wood pallets	20	7	26
23	Metal access covers	4	7	27
24	Augers	20+	7	28
25	Rafters	18+	8	29
26	Wood sifter	8		
27	Snow fence/construction fence	6	8	30
28	Misc. wood scraps	Area	8	31
29	Large wagon	3	8	32
30	Construction shack materials only	2	8	33
31	Tandem axle metal trailer	1		
32	Large crew shacks (wood)	3	8	34
33	Metal crew shack	1	9	35
34	Motor home/trailer	1	9	36
35	Dump trucks	2	9	37
36	Sewer trailers (new style metal)	3	9	38
37	Dump box	1	9	39
38	Pipes of misc. casing	Area	9	40
39	Packer	1	10	41
40	Recycling truck boxes	2	10	42
41	Sander boxes	2	10	43

Table 14 – continued

Item No.	Description of equipment / materials	Quantity	Page No.	Picture No.
	Area: Paving *(2nd in from east/Crushed concrete mass storage)*	**Approximate Area in Acres - 7.1**		
1	Massive pile of crushed concrete	1	1	Paving001
2	Small pile of crushed concrete	1	1	2
3	Entrance trailer	1	1	3
4	Front end loaders	2	2	7
5	Cement mixer area	Area	2	4
6	Cat with ground breaker	1	13	St-Br-0022
7	Elevator	1		
8	Portable lights	2		
9	Yard area	Area	2	6
10				
	Area: Equipment *(3rd in from east/ fenced in storage area)*	**Approximate Area in Acres - 0.4**		
1	Piles of granite	20-30	1	Equip-001
2	Rolls of fence	20	1	2
3	Tandem trailer	2	1	2
4	Pile of wood shred	1	1	2
5	Pile of dirt (small)	1	1	2
	Area: Street/Bridge/Traffic *(4th in from east)*	**Approximate Area in Acres - 3.08**		
		(Street/Bridge 2.7ac. / Traffic .38 ac.)		
1	Small crew shacks	6	15	2
2	Tar trailers	10	15	3
3	Tree clippers	2		
4	Vehicle parking	10		
5	Tandem trailers	4	10	1
6	Single axle trailers	3	10	2
7	Air compressor trailers	2	11	8
8	Scrap metal pile	1	10	3
9	Water tankers	2	11	4
10	Crew shields for pick up	4	11	7
11	Semi trailers	2	11	6
12	Large crew shacks	8	11	5
13	Portable biffs	5	11	9
14	Pile of concrete retaining wall block	1	12	10
15	Pile of heavy wood shoring, planking	1	12	11
16	Concrete barriers	4	12	12
17	Lawn mower trailers	5	12	13
18	Crane	1		
19	Rack of metal	1	12	14
20	Skyway looking structure	1	12	15
21	Piles of wear rock	2	13	16
22	Area of ornamental building pieces	2	13	17
23	Sections for a crane	4	13	18
24	Curb & gutter machine	1	13	19
25	Roller	1	13	21

Table 14 – continued

Item No.	Description of equipment / materials	Quantity	Page No.	Picture No.
	Area: Street/Bridge/Traffic *(4th in from east)*	**Approximate Area in Acres - 3.08** (Street/Bridge 2.7ac. / Traffic .38 ac.)		
26	Cat with ground breaker	1	13	St-br022
27	Sheet pile	4	14	26
28	Asphalt spreader	1		
29	Water tank plastic	1	14	25
30	Crane scoops	6	13	23
31	Snow plow blade	1	14	24
32	Bridge decking	pile	14	29
33	16' fiberglass low level lights and heads	50+	15	Traffic001
34	Concrete doughnuts	18	15	1
35	Pipes for doughnuts	30	15	1
36	40' wood poles	50	15	1
37	Metal cabinet extra large	1	15	1
38	Metal poles (e.g. lights, signals, sweeps etc.)	200-300	15	2
39				
40				
	Area: Street/Nicollet Mall Storage *(5th in from east)*			
1	Nicollet Mall Storage (e.g. benches,trash cans, planters, etc.)	40'x120'	1	Nicmall001
	Area: Sewer stockpile/ Street Sweeper Piles *(Most westerly)*	**Approximate Area in Acres - 9.7**		
1	Portable shoring	10	3	Sewer-w0004
2	Misc. sewer pipe area	50'x100'	3	3
3	Misc. rock pipes	Area	2	2
4	Yard area	Area	2	2
5	Metal casing pipe	20-30	3	3
	Linden Yard Acreage Total = 21.88 ac.*			
	*The acreage calculation was produced from a Digital Ortho photo.			

North-South Connector Boulevard – Linden Yards Operations Storage

The North-South Connector Boulevard that is planned to connect Fremont Avenue with Dunwoody Boulevard will be constructed through a small, narrow portion of the Linden Yards Operations Storage. It is anticipated that the Connector Boulevard will not significantly disrupt the operation of the Linden Yards Operations Storage if the operation remains at the present location.

Alternative Sites – Linden Yards Operations Storage

A number of alternative sites were reviewed for the possible relocation of the Linden Yards Operations Storage. However, because of the large acreage required, and the less desirable features of this operation such as noise, dust, heavy-truck traffic, and unsightly material stockpiles, a viable alternative site has not been identified.

Short-Term Strategies and Long-Term Options – Linden Yards Operations Storage

The short-term strategies and long-term options have been developed from reviews of the market appraisals and geotechnical reports, extensive operations and relocation analysis, and extensive discussion among the members of the City-Owned Land Work Group.

The detailed short-term strategies and long-term options for the Linden Yards Operations Storage are shown in Matrix 15 and Matrix 16.

It is recommended that work on the short-term strategies begins in 2001 and be conducted in accordance with the schedule shown in the matrices.

The selection and success of a long-term option will be dependent upon the successful implementation and results of the short-term strategies. The relocation of infrequently accessed items and the consolidation of the remaining equipment and materials will reduce the size of the acreage used by the Linden Yards Operations Storage. The investigation of alternative sites for the remaining equipment and materials will help determine the selection of the long-term option.

It is recommended that the long-term option occur between the years 2006-2010.

Linden Yards Operations Storage

Short - Term Strategy : One - Five Years

Matrix 15

OPTION: Reduce Size of Existing Operations at the Current Location

Action Steps	Responsible Department	Year: 2001	2002	2003	2004	2005	One-time Revenue/ (Expense)[1]	On-going Revenue/ Expense[1]	Opportunity Gain/ (Loss)[1]
1. Relocate seasonally accessed equipment to other City-owned sites.	Public Works	Identify sites and Relocate →					negligible	negligible	Reduce the acreage used for storage.
2. Consolidate frequently accessed materials and equipment at existing site and utilize only the amount of space required for these materials and equipment at the existing site.	Public Works	Consolidate →					negligible	negligible	Reduce the acreage used for storage.
3. Consolidate frequently accessed bulk storage/transfer operational materials at existing site and utilize only the amount of space required for these operational materials at the existing site: - snow - leafs - street sweeping refuse - common fill - miscellaneous aggregate - seal coat chips - AC millings - storm debris and refuse	Public Works	Consolidate →					negligible	negligible	Reduce the acreage used for storage.

[1]All revenue and expense estimates are shown in 2001 dollars, and are in addition to existing revenues and expenses.

Linden Yards Operations Storage

Long - Term Strategy : Five Years Plus

Matrix 16

OPTION: Relocate Linden Yards Storage to 2 or More Remote Sites.

Action Steps	Responsible Department	Year 2006	2007	2008	2009	2010	One-time Revenue/ (Expenses)[1]	On-going Revenue/ (Expense)[1]	Opportunity Gain/ (Loss)[1]
1. Investigate the purchase/lease of alternative sites for storage of materials, equipment, and bulk storage/transfer operating materials.	Public Works and MCDA	Investigate, Acquire, Relocate					to be determined	On-going expenses are dependent upon the distance to the source and destination of materials, equipment, and bulk storage, and the alternative sites.	General assumption is that the revenue from the sale of existing acreage used for Linden Yards Storage will offset the cost of alternative sites.
2. Sell existing acreage used for Linden Yards Storage.	Public Works and MCDA		Sell site				$2.0 million - sell existing 18 acres used for storage. (unknown one-time environmental	(unknown costs for environmental remediation)	$2.0 million - sell existing 18 acres used for storage. (unknown costs for environmental

[1]All revenue and expense estimates are shown in 2001 dollars, and are in addition to existing revenues and expenses.

Appendix A

Bassett Creek Valley Master Plan

On March 24, 2000, the City Council approved the Bassett Creek Valley Master Plan, which called for the relocation of the Impound Lot, Concrete Crushing, and Linden Yards Storage outside of the Bassett Creek Valley/Bryn Mawr area. The Plan further recommended that the Impound Lot be made available to the Minneapolis Park and Recreation Board for expansion of Bryn Mawr Meadows Park, and that the Concrete Crushing and Linden Yards Storage areas be redeveloped for commercial/light industrial activities. The City Council action also approved the North-South Boulevard between Glenwood Avenue and I-394, but did not approve the general alignment of the Boulevard.

The Bassett Creek Valley (BCV) Master Plan taken in combination with the Near Northside Master Plan (also approved on March 24, 2000) define a future vision for the area bounded by Glenwood Avenue on the north, Interstate 394 on the south, Lyndale Avenue and Cedar Lake Road on the east and west. Heavy industrial uses a few steps from residential properties would be replaced by more community compatible uses. Bassett Creek would become more accessible to the public. Multiple pedestrian and bicycle linkages would flow through the area, connecting the new Near Northside development to Theodore Wirth Park, the chain of lakes, and downtown Minneapolis. The outdoor city operations of the Impound Lot, Concrete Crushing, and Linden Yards Storage would become increasingly visible due to the construction of the new north-south boulevard, and would be relocated when alternative sites and/or operational changes are identified. The land thus made available would be utilized for commercial/industrial development and the expansion of Bryn Mawr Meadows Park. The north-south boulevard is recognized to be an important new gateway to the Near North community. Connecting to Dunwoody Boulevard and I-394 on the south, and running through the new Near Northside development on the north, it is hoped that it will, in the words of the City Council approved *Development Framework for the Near Northside*, "extend the character and content of the southern end of the corridor, with its predominance of cultural, educational and recreational uses, punctuated by residential and commercial uses."

Within the context of these policy decisions, the City Owned Land Work Group has taken on the task of developing alternatives for the City Impound Lot, Concrete Crushing, and Linden Yards Storage operations in the Bassett Creek Valley area.

Appendix B

Appraisals, Geotechnical Reports, and Theater Location Analysis - Parade Stadium Area

1. **Limited appraisal Summary Report of Minneapolis Park and Recreation Board properties in the Parade Stadium Area** – was prepared for the MCDA by Patchin Messner Appraisals, Inc. on March 3, 2000. This was the site the Guthrie Theater originally sought to relocate its theater complex. This R2 zoned site is approximately 334,800 square feet (7.68 acres) and includes an 184,800 square foot baseball field and 444 parking spaces. Highest and best use as vacant was institutional, mixed use, parking or residential development. Highest and best use as improved was continued recreational use and income generating parking lot. Market value of the site was estimated to be $2,400,000 to $3,400,000 depending upon geotechnical soil conditions. It was estimated that any building constructed on the site should be built on a driven pile foundation with piles of 60 to 80 feet recommended.

2. **Conceptual Development Alternatives for Guthrie Theater Expansion at the Parade Site and Parking Analysis** – was prepared for the MCDA by Bonestroo, Rosene, Anderlik and Associates, Inc. on March 2000. The report presented two alternatives to provide space in the Parade Stadium Area for both the proposed Guthrie Theater and replacement Minneapolis Park and Recreation Board athletic fields. Both of the options would technically satisfy the Guthrie Theater's request, however each results in different impacts on parking, public and private property, and public right-of-way. Option A provides baseball and softball fields in conjunction with a two-story public parking ramp, without encroaching on adjacent private property or public right-of-way. The preliminary cost estimate for public improvement, including the parking ramp is $19,475,000. Option B provides fields for baseball, softball and soccer in conjunction with a four-story public parking ramp. Public right-of-way and private property are impacted as Dunwoody Boulevard would be re-routed and Dunwoody Institute would lose some of its property to accommodate athletic fields. The preliminary cost estimate for public improvements, including the parking ramp is $14,865,000. These options assume:
   - Guthrie Theater footprint of 250,000 square feet;
   - 1,000 space parking structure;
   - replacement of Minneapolis Park and Recreation athletic fields lost to the Guthrie Theater and parking ramp;
   - Peak parking demand of 3,000 spaces (including Dunwoody Institute and the Walker Art Center); and,
   - Compatibility with the Bassett Creek Valley Master Plan.

3. **Preliminary Geotechnical Evaluation Report for the Keewaydin Group of the Parade Stadium for the Proposed Guthrie Theater** – was prepared for the MCDA by Braun Intertec on December 29, 1999. The report suggested that any new theater facility would need to be supported on deep pile foundations. The concrete filled piles would need to be driven to 70-80 foot depths.

4. **Limited Environmental and Geotechnical Data review of the Parade Ball Fields and Sculpture Garden** – was prepared for the MCDA by Braun Intertec on February 16, 2000. This report concurred with the above geotechnical recommendations. The environmental assessment found limited amounts of potential contaminant compounds that would need to be addressed.

Appendix C

Appraisals And Geotechnical Reports - Impound Lot, Concrete Crushing Area, And Linden Yards Operations Storage

1. **Limited Appraisal Summary Report of the Minneapolis Public Works Linden Yards land, excluding improvements** – was prepared for the MCDA by Patchin Messner Appraisals, Inc. on March 21, 2000. The Linden Yards is an irregular parcel of approximately 25 acres bounded on the southeast by I-394 and on the northwest by Burlington Northern Santa Fe railroad tracks. The Cedar Lake trail runs lengthwise through the site. Highest and best use is suggested to be auto dealerships and related commercial development. The site has documented environmental and geotechnical soil correction issues. Assuming stable soils the site has a value of approximately $7,625,000. Value as is assuming a deduction for soil correction and utility installation costs is $2,775,000. The appraisal did not consider any environmental soil contamination costs. The storage and concrete crushing on this site is not allowed in the I-2 zoning, but actually requires I-3 zoning. The north-south boulevard is planned to cross the Linden Yards. The Bassett Creek Master Plan calls for light industrial or office development in the Linden Yards, but piling costs due to unstable soil conditions may make these uses very expensive. In addition, the Bassett Creek tunnel runs directly underneath much of the eastern end of the Linden Yards. The Minneapolis Park and Recreation Board had indicated an interest in using this site for athletic fields.

2. **Limited Environmental and Geotechnical Data Review of the Impound Lot/former Irving Avenue Dumpsite -** was prepared for the MCDA by Braun Intertec on March 13, 2000. About 50 percent of the current Impound Lot is located on top of the former Irving Avenue Dump Site. This site is heavily contaminated and is on the Minnesota Superfund Permanent List of Priorities. The remainder of the Impound Lot and the Linden Yards were formerly rail yards, although a grain elevator was also located on the Linden Yards site.

   The Impound Lot area has very poor geotechnical soil characteristics and lies within the Bassett Creek 100-year flood plain. Soils and groundwater in the Impound Lot area are heavily contaminated with heavy metals, volatile organic compounds (VOC's), polynuclear aromatic hydrocarbons (PAH's) and polycholorinated biphenyls (PCB's). The primary metal contaminant is lead.

   The Linden Yards area has poor geotechnical soil characteristics, especially in the western portion of the site. Deep foundation systems would be necessary to support new development in the Linden Yards. Environmental conditions of the Linden Yards were not considered a serious impediment to site use.

   This report considered the reuse potential of the Impound Lot and Linden Yards as either a continuation of the existing uses, light industrial, residential and park, recreation, green space. The Impound Lot could continue as is, if the City completes the MPCA end use plan, capping lead soils and restricting public access to the site.

Public Works staff estimates it will cost approximately $512,000 to fully comply with the MPCA. Light industrial uses would require site excavation, and excavated contaminated soils would either have to be reused on site or disposed of off site at a permitted facility. Deep pilings would be required to support buildings and utilities and the 100 year Basset t Creek flood plain would restrict development. Limited green space use is possible but would require capping of the lead soils and some fencing to restrict public access. If accessible to the public, a clean fill/soil cover should be placed over the unpaved portions of the former Irving Dumpsite. Residential use would probably not be allowed on the former Irving Dumpsite unless all environmentally contaminated soils were to be removed. In addition deep pilings would be necessary to support buildings and utilities and the 100-year Bassett Creek flood plain would restrict development.

The Linden Yards area would be more feasible for reuse than the Impound Lot because of less negative environmental impacts and somewhat more manageable geotechnical conditions.

3. **Limited Appraisal Summary Report of the Minneapolis Impound Lot** was prepared for the MCDA by Patchin Messner Appraisals, Inc. on June 5, 2000. The site is an irregular shaped 33-acre land parcel bordered on the south by the Burlington Northern Railroad tracks and bordered on the north by Bassett Creek. The site contains three buildings, paving, fencing and lighting which make up the vehicle impound site. Highest and best use if vacant is land intensive light industrial and as improved continued impound lot use. Land value alone is estimated to be $1,150,000 if no further environmental remediation is required and $1,900,000 as improved with buildings. The appraisers reviewed available environmental and geotechnical information about the site, but did not recognize the costs of future site remediation.

Appendix D

Impound Lot Analysis

Background

The City is authorized to tow and impound vehicles by Chapter 168B of the Minnesota Statutes, Article X of the Minneapolis Traffic Code, and Section 478.1041 to 478.1170 of the Minneapolis Ordinances.

The City of Minneapolis has been involved in towing and impounding since 1936. From 1936 to 1983 both of these activities were conducted entirely by private vendors under contract with the City. Since 1983, the City of Minneapolis has contracted with private vendors for towing and has operated the Impound Lot as a Public Works Department function.

The Impound Lot is staffed by 21.8 FTEs, including a Supervisor of Towing and Impounding, three Vehicle Records Shift Supervisors, 11.5 Vehicle Records Aides, five Attendants, one Clerk Typist II, and 0.3 Engineer III. A combination of these staff are present at the Lot 24 hours a day, seven days a week.

In 1999, the authorized budget for the Impound Lot was $3.782 million. The costs included in that budget were as follows:

- $1.050 million in personnel
- $2.681 million in contractual services, primarily towing contracts
- $51,000 in other non-personnel expenses.

The revenue to offset these expenditures was received from the following:

- Tow fees (60%)
- Storage fees (16%)
- Auctions of abandoned vehicles (22%)
- Commission on sale of City vehicles and other sources (2%)

In 2000, the authorized budget for the Impound Lot was $3.898 million.

Since 1983 the Impound Lot has been operated as a revenue-neutral function. The pricing of the tow fee and storage fee is determined by identifying the cost of the Impound Lot operations, and dividing that cost by the estimated number of impounded vehicles. The current tow fee is $75 and the storage fee is $15/day.

Description of Site

The Impound Lot is currently situated on a 29.9 acre site located to the west of downtown Minneapolis. The site includes the following facilities:

Facility	Acreage
Administration Building	.25
Public Parking	.50
Forensics Garage	.25
Main Lot	11.0
Police Hold Lot	3.0
Overflow Lot	7.0
Auction Lot	1.0

The main lot is used for vehicles that are not needed for evidentiary purposes. The majority of impounds are stored within this lot.

The Police Hold Lot is used for vehicles that are needed for evidentiary purposes. This lot has more extensive security measures in place to protect the impounded vehicles.

The Overflow Lot is used for vehicles impounded during snow emergencies and street cleaning events.

The Forensics Garage is a Police Department operation that includes a four-stall drive through garage with 12-foot doors for processing over-sized vehicles. It includes a secure parking area for up to 23 impounded vehicles.

The Auction Lot is used to store impounded vehicles that will be sold during the auctions of abandoned vehicles. The auctions are held each Thursday.

The Public Parking is used primarily for individuals attending the auctions held each Thursday.

Use Analysis

Prior to a complete evaluation of relocation options, it is important to understand how the Impound Lot is utilized and which City Department's operations will affect, or be affected by a possible relocation.

The following analysis assists in determining how much space is required, when it is required, which Department operations will affect or be affected by relocation, and what type, number and location of relocation sites would be appropriate.

The analysis was structured to answer the following questions:

- How many vehicles are impounded, and when are they impounded?
- Why are the vehicles impounded and which City Department is responsible for creating the impounds?

- How long are vehicles impounded? Which vehicles require the largest number of "space days"?

- Where are the vehicles towed from?

- Who owns the vehicles that are being towed?

- What is the daily space requirement for the Impound Lot?

- Additional operational issues?
  Near Northside Redevelopment Project: Connector Boulevard Alignment
  Forensics Garage

Analysis was conducted using extensive interviews with operations staff and management from Public Works, Police Department, Regulatory Services, Minneapolis Parks and Recreation Board, and other Departments that interact with the Impound Lot. The analysis also used an extensive database that contained over 50 variables of information for each vehicle that was impounded including items such as date and time of impound, date and time of release, reason for impound, and vehicle identification numbers. The analysis used data from 1999 for the report.

How Many Vehicles Are Impounded, And When Are They Impounded?

This analysis helps determine the number of vehicles that must be managed under current operational procedures, and when during the year those vehicles require space at the Impound Lot. The number of vehicles impounded each day during 1999 is shown in Chart D-1.

A total of 47,460 vehicles were impounded during 1999. This creates an average of 130 vehicles impounded each day.

The number of impounds each day are relatively consistent throughout the year with the exception of snow emergency and street cleaning events. The snow emergency events appear as extremely short duration spikes during January and March. The street cleaning events appear as longer duration but less sever spikes during late April and early November.

A relocation option must be able to accommodate the short-duration spikes of the snow emergency events during the winter months, accommodate the longer-duration street cleaning events during the spring and fall seasons, and be able to accommodate a base loading of 130 cars per day under existing operating procedures.

Snow Emergencies Short-Duration Spikes

Snow emergencies can create over 1500 vehicles impounded within a three-day period. These events appear as the spikes on Chart 1 during January to March. These spikes are variable, depending on the number and timing of declared snow emergencies. These

spikes indicate the large, short-duration loading that can occur at the Impound Lot as the result of the snow emergency procedures.

The vehicles impounded during these spikes exceed the capacity of the main lot and are stored in the Overflow Lot at the west end of the IL. If a snow emergency is declared within a few days of a previous snow emergency, the Overflow Lot capacity is exceeded and vehicles are be stored under the I-394 bridges to the south of the Linden Yards storage area. During 1999 there were five snow emergencies declared.

Historically, over the last 10 years the City has averaged 3.4 snow emergencies declared per year.

Currently the Main Lot of the Impound Lot is sized to accommodate the average daily loading of 130 vehicles. The short-duration loading of the snow emergency impounds during the winter months requires the use of the overflow lot. If the spikes of the snow emergency events could be reduced, then the need for the Overflow Lot could be reduced.

Street Cleaning Long-Duration Spikes

Street sweeping events created 28,721 vehicles impounded during the Spring and Fall street sweeping programs during 1999. These events appear as lower, longer-duration spikes during late April and early May which is the Spring street cleaning program, and late October and early November which is the Fall street sweeping program. These vehicles are also stored primarily in the Overflow Lot.

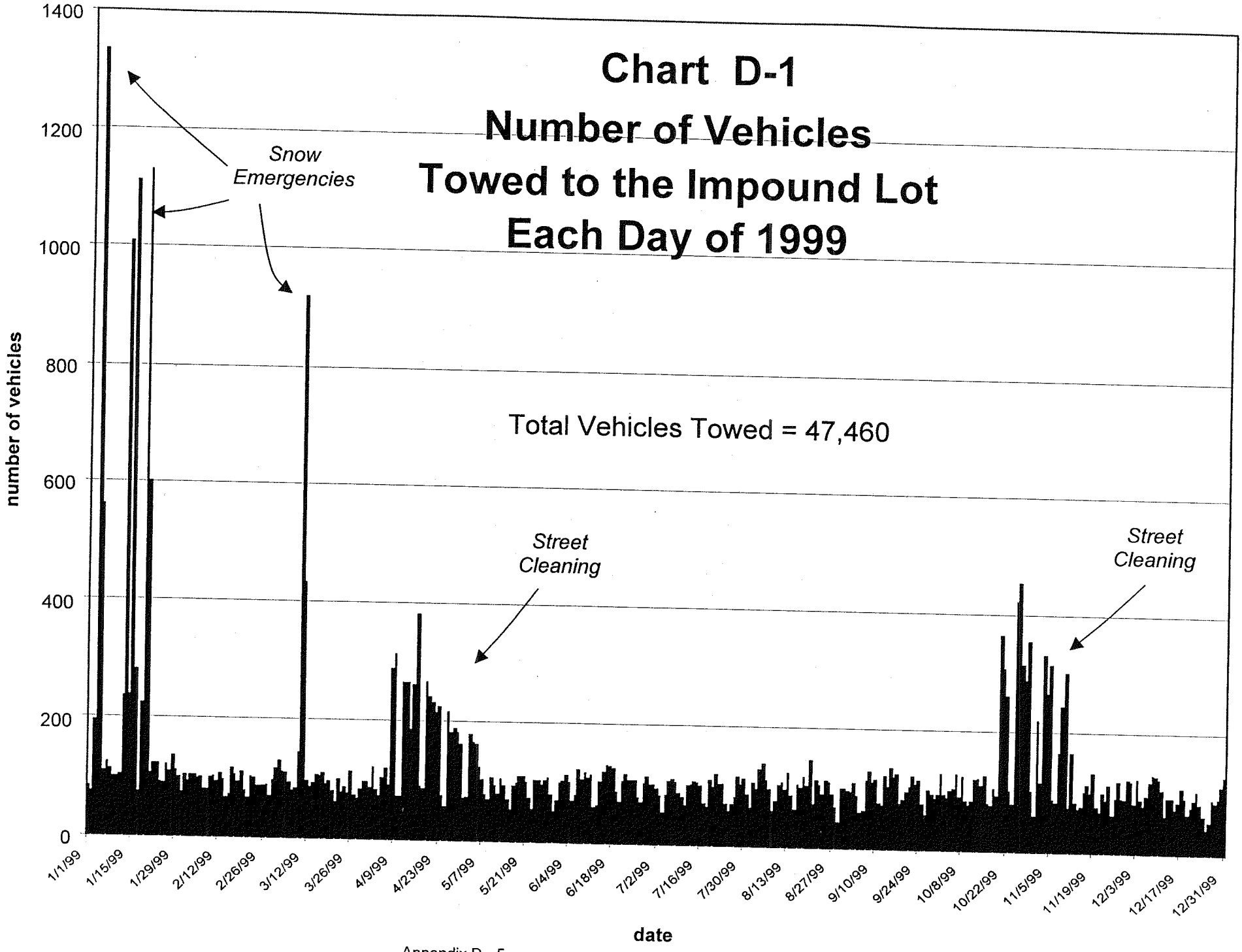


Chart D-1
Number of Vehicles
Towed to the Impound Lot
Each Day of 1999
Snow Emergencies
Street Cleaning
Street Cleaning
Total Vehicles Towed = 47,460
number of vehicles
1400
1200
1000
800
600
400
200
0
1/1/99
1/15/99
1/29/99
2/12/99
2/26/99
3/12/99
3/26/99
4/9/99
4/23/99
5/7/99
5/21/99
6/4/99
6/18/99
7/2/99
7/16/99
7/30/99
8/13/99
8/27/99
9/10/99
9/24/99
10/8/99
10/22/99
11/5/99
11/19/99
12/3/99
12/17/99
12/31/99
date

Why Are The Vehicles Impounded, And Which City Department Is Responsible For Creating The Impounds?

This analysis identifies the "reason" vehicles are impounded. It also identifies which City Department operations are responsible for creating the impounds, and allows for discussion of how these operations may be modified to affect a relocation option.

The Departments responsible for creating the impounds are as follows:

Responsible Department	Total Number of Impounds Created	Percentage of All Vehicles Impounded
Police Department	29,748	63%
Public Works, Field Services	13,066	28%
Public Works, Transportation	2,717	6%
Undetermined	1,093	2%
Inspections Division	836	2%
Total	**47,460**	**100%**

In 1999 there were 36 "reasons" for which a vehicle may have been impounded.

The number of vehicles impounded for each of the 36 reasons in 1999 is shown in Table D-2, and in Chart D-3.

The top three reasons of booking, snow emergency, and street cleaning account for 60% of all the vehicles impounded.

A description for each of the reasons is contained in Table D-4.

Police Department – "Booking" Reason for Impound

This analysis provided a significant insight that had not been previously identified. The largest number of vehicles impounded at the Impound Lot are for the reason of "booking". A vehicle is impounded for this reason when the Police Departments arrests a suspect and separates the suspect from their vehicle. The vehicle is then impounded as evidence or impounded to protect the vehicle once the driver has been separated from the vehicle and detained.

During 1999 there were 15,655 vehicles impounded for the reason of a Police Department booking. This was 33% of all vehicles impounded. The number of vehicles impounded for booking is larger than the number of snow emergency and street cleaning vehicles combined.

The identification of this large contribution to the loading of the Impound Lot initiated a more active involvement of the Police Department in Impound Lot relocation discussions.

The Police Department has begun discussions about reducing the number of vehicles impounded for the reason of booking. One operational change would be to allow the vehicle to be left at the curb, or site of the arrest. The Police Department has expressed a concern regarding the City's liability for the safety of the vehicle once the driver has been arrested and removed from the vehicle. It has been suggested that the arrestee could be given the option of signing a consent/request waiver that the car remain at the curb or site of the arrest and not be towed and impounded if it is not required for evidentiary purposes. The Police Department has received an opinion from the City Attorney's office regarding the City's liability for the safety of the vehicle that concludes... "a signed consent or request by the driver or owner at the arrest scene that the car be left there, would be helpful in the defense of a subsequent action for damage to the vehicle brought against the City".

The Police Department has also expressed concern that if a vehicle is not impounded at the time of arrest, there may be a loss of additional evidence that may be discovered from the impounded vehicle during the time of impound.

Public Works – "Snow Emergency" Reason for Impound

The next largest number of vehicles are impounded for the reason of snow emergencies. During 1999, a total of 7,272 vehicles were impounded for snow emergencies. This accounts for 15 % of the total vehicles impounded at the IL.

Extensive discussions occurred regarding operational and/or policy changes that could reduce this number of impounds, and therefore affect relocation options. The changes discussed included the following:

- Implement a season-long one-sided residential parking ban after the first snowfall.
- Mini-tows to move a tagged car around the block to allow plowing to occur.
- Additional media placement of snow emergency policies, and notification of declared snow emergencies

The Public Works Department has stated that they anticipate the number of vehicles towed for snow emergencies will be increasing because of current policies and desired service levels and increased efficiencies with the towing contractors.

Public Works – "Street Cleaning" Reason for Impound

Street Cleaning contributed 5,793 vehicles to the Impound Lot during 1999. This is 12% of the total number of vehicles impounded.

Operational changes were discussed including placing better signage throughout neighborhoods prior to sweeping, and sending mailing notices to neighborhoods prior to sweeping.

The number of vehicles to be impounded because of street cleaning is projected to increase during 2000 as the result of the additional sweeping to occur during the Summer 2000 sweeping program in June, July and August.

Table D-2

Number of Vehicles Impounded by Reason in 1999

	Reason for Impound	Number of Vehicles	Cumulative Number of Vehicles	Percentage of all Vehicles	Cumulative Percentage	
1	BOOKING	15655	15655	33.05%	33.05%	Top 3 Reasons = 60% of all impounds
2	SNOW EMERGENCY	7273	22928	15.35%	48.40%	
3	STREET CLEANING	5793	28721	12.23%	60.63%	
4	MISCELLANEOUS	5716	34437	12.07%	72.69%	Top 10 Reasons = 92% of all impounds
5	ACCIDENT	2586	37023	5.46%	78.15%	
6	STOLEN RECOVERY	2440	39463	5.15%	83.30%	
7	INSPECTIONS	1213	40676	2.56%	85.86%	
8	7 to 9 PKING VIOLATION	1118	41794	2.36%	88.22%	
9	4 to 6 PKING VIOLATION	930	42724	1.96%	90.18%	
10	72 HR PKING VIOLATION	863	43587	1.82%	92.01%	
11	BLOCKING DRIVEWAY	706	44293	1.49%	93.50%	
12	DWI	668	44961	1.41%	94.91%	
13	3 to 6 PKING VIOLATION	503	45464	1.06%	95.97%	
14	ABANDON	332	45796	0.70%	96.67%	
15	HIT & RUN	322	46118	0.68%	97.35%	
16	SCOFFLAW	316	46434	0.67%	98.02%	
17	HYDRANT	158	46592	0.33%	98.35%	
18	TABS OVER 90	145	46737	0.31%	98.66%	
19	REGISTRATION	137	46874	0.29%	98.94%	
20	TAXI	81	46955	0.17%	99.12%	
21	DRIVING AFTER SUSP	66	47021	0.14%	99.25%	
22	NO INSURANCE	58	47079	0.12%	99.38%	
23	DRIVING AFTER REVOC	56	47135	0.12%	99.50%	
24	BUM TABS/PLATES	43	47178	0.09%	99.59%	
25	SCHOOL ZONE	34	47212	0.07%	99.66%	
26	HANDICAP	32	47244	0.07%	99.73%	
27	X90	24	47268	0.05%	99.78%	
28	ROBBERY	22	47290	0.05%	99.82%	
29	TAXI/VALET ZONE	19	47309	0.04%	99.86%	
30	ARSON	17	47326	0.04%	99.90%	
31	NO PLATES	13	47339	0.03%	99.93%	
32	SEX CRIME	11	47350	0.02%	99.95%	
33	WEAPONS	11	47361	0.02%	99.97%	
34	VIN	10	47371	0.02%	99.99%	
35	GANG	2	47373	0.00%	100.00%	
36	VICE	1	47374	0.00%	100.00%	
		47374		100.00%		

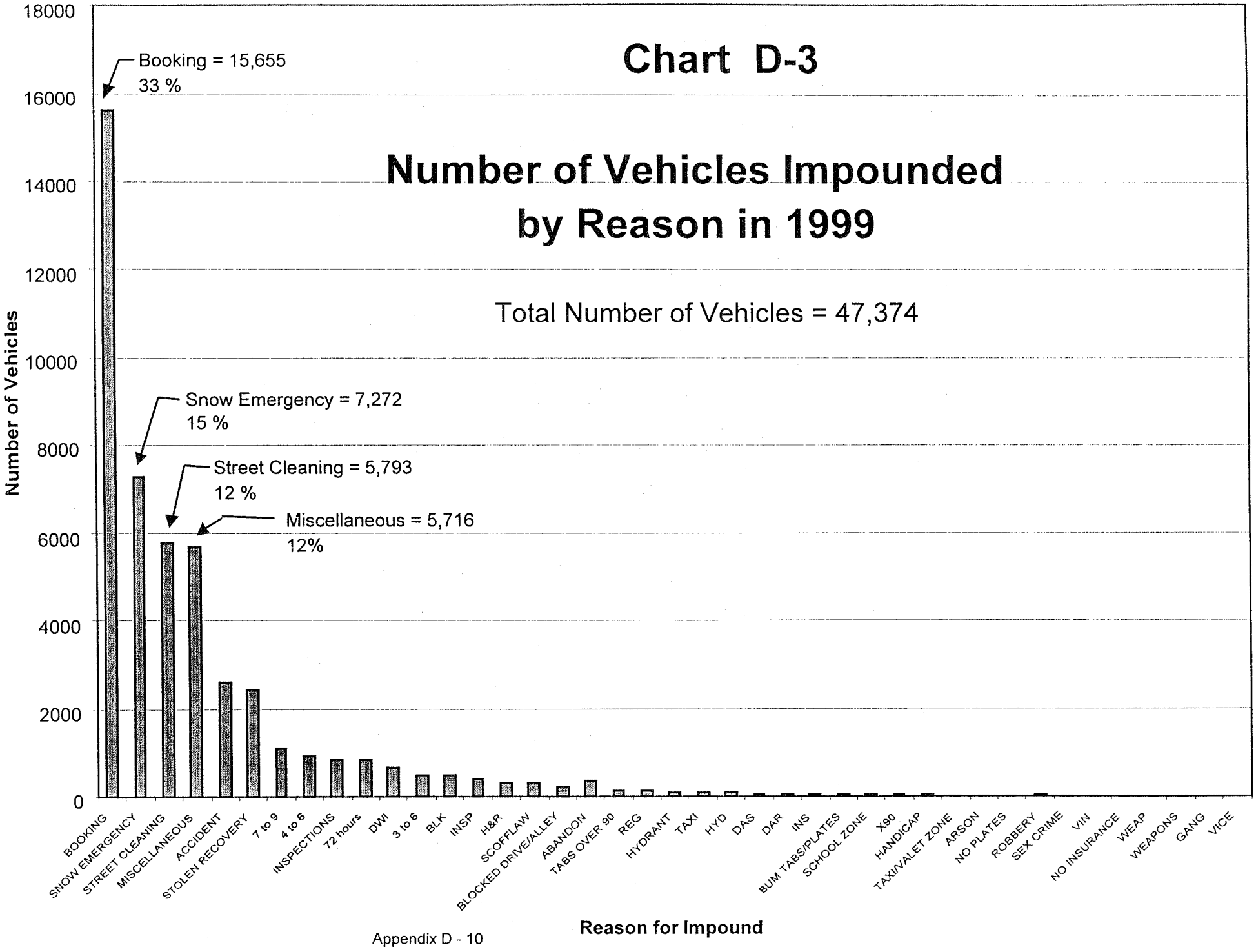


Chart D-3
Number of Vehicles Impounded by Reason in 1999
Total Number of Vehicles = 47,374
Booking = 15,655
33 %
Snow Emergency = 7,272
15 %
Street Cleaning = 5,793
12 %
Miscellaneous = 5,716
12%
Number of Vehicles
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
BOOKING
SNOW EMERGENCY
STREET CLEANING
MISCELLANEOUS
ACCIDENT
STOLEN RECOVERY
7 to 9
4 to 6
INSPECTIONS
72 hours
DWI
3 to 6
BLK
INSP
H&R
SCOFFLAW
BLOCKED DRIVE/ALLEY
ABANDON
TABS OVER 90
REG
HYDRANT
TAXI
HYD
DAS
DAR
INS
BUM TABS/PLATES
SCHOOL ZONE
X90
HANDICAP
TAXI/VALET ZONE
ARSON
NO PLATES
ROBBERY
SEX CRIME
VIN
NO INSURANCE
WEAP
WEAPONS
GANG
VICE
Reason for Impound

Table D-4
Definition of Terms for "Reasons for Impound"

Booking
A vehicle impounded after a police suspect has been separated from their vehicle. Vehicles are towed for evidence or in order to protect the vehicle once the driver/owner has been detained.

SE/Snow Emergency
Impounded due to a violation of the City's Snow Emergency regulations.

SC/Street Cleaning
A vehicle that was impounded because it interfered with the Street Cleaning process.

Miscellaneous
Impounded due to various reasons. This category is used when the tow was not a result of an already coded reason (i.e., Booking, Snow Emergency, Bum Plates/Tabs, etc.). "Miscellaneous" also represents a vehicle that is impounded for numerous reasons, not simply one violation.

Accident
Involved in an automobile accident

Stolen Recovery
Reported stolen and recovered by police, etc.

Inspections
An abandoned vehicle that is impounded after being reported to authorities (Public Works, Inspections, MPD, etc.) and is on private property.

7 – 9 Parking Violation, 4 – 6 Parking Violation, 3 – 6 Parking Violation
These represent parking violations. These regulations are many times in areas that experience increased traffic during rush hours and are in effect only during specified hours in order to manage increased traffic congestion.

Parking over 72 Hours
Parked in the same place for over 72 hours.

Blocked Drive/Alley
Blocking a residential or commercial driveway or alley

DWI (Driving While Intoxicated)
Driver or owner was arrested for driving while intoxicated

Abandon
Not on private property and reported to City of Minneapolis authorities as abandoned

H&R, Hit and Run

Involved in a hit and run accident

Scofflaw
Unpaid fines

Hydrant
Blocking a fire hydrant

Tabs Over 90, Bum Plates/Tabs
Expired plates or tabs

Driving After Suspension
Driver was operating the vehicle after having his or her license suspended

No Insurance
Driver was not covered by valid auto insurance

Driving After Revocation
Driver was operating the vehicle after having his or her license revoked

School Zone
Parked in a school zone during restricted hours

Handicap
Parked in a handicap zone/parking space without a valid or visible permit

Robbery
Involved in a robbery, per the MPD's request

Arson
Involved in an arson, per the MPD's request

No Plates
Invalid or no license plates

Sex Crime
Involved in a sex crime, per the MPD's request

Weapons
Weapons issue, per the MPD's request

VIN
Impounded vehicle without a proper Vehicle Identification Number (i.e., no VIN, stolen VIN, etc.)

Gang
Impounded per the MPD Gang Unit's request

Vice
Impounded per the MPD Vice Unit's request

How Long Are Vehicles Impounded? Which Vehicles Require The Largest Number Of "Space Days"?

This analysis identifies how long vehicles are impounded and which vehicles require the most "space days" at the IL. The reason a vehicle is impounded is often an indicator of how long it will be stored at the Impound Lot and how much space or "space days" it will require.

A space day is defined as one Impound Lot stall (approximately 400 sq. ft.) for a 24-hour period.

Changes to operations that require the largest number of space days could significantly change the amount of space required for a relocation option.

The number of space days used in 1999, for each reason a vehicle is impounded, is shown in Chart D-5. A summary of space days required by the top 4 reasons is as follows:

Reason	Average space days/vehicle	Total space days all vehicles	% of all space days
Booking	8.75	136,970	32 %
Miscellaneous	9.70	55,598	13 %
Street Cleaning	5.60	32,379	8 %
Snow Emergency	4.00	29,309	7 %

As expected the largest number of space days required in 1999 were for vehicles impounded for the reason of booking. These vehicles are stored for an average of 8.75 space days. These vehicles required 32% of all Impound Lot space days.

The next largest number of space days required in 1999 was for the reason of miscellaneous. These are vehicles impounded primarily for multiple Police reasons. These vehicles are stored for an average of 9.7 space days. This reason requires 13% of all Impound Lot space days.

Street Cleaning vehicles are stored for an average of 5.6 days. This reason requires 8% of space days.

Snow Emergency vehicles are held an average of 4.0 space days and require 7% of space days.

"Police Hold" Space Days Requirements

A significant number of the vehicles that are impounded for various reasons are placed on "Police Hold". This indicates that the Police Dept requires this vehicle to be held for

an undetermined amount of time for evidentiary purposes. In past years these vehicles were held until a Police Dept representative would notify the Impound Lot that the vehicle could be released. These Police Hold vehicles were often held for long periods of time. The average Police Hold was stored for almost 60 days. In 1999, the Impound Lot averaged 500 vehicles on Police Hold each day. This category of impounded vehicles uses approximately 182,000 space days in 1999. This is 42% of all space days at the IL.

The Impound Lot has recently started applying a Police Department approved policy that vehicles on Police Hold will be released within 15 days of being impounded unless there is an affirmative request from the Police Department that the vehicle should continue to be on Police Hold past the 15 day deadline.

If this policy is continually applied, it can reduce the number of vehicles on Police Hold from 500, to an estimated 375 each day. This would substantially reduce the number of space days required within the Impound Lot and the amount of space required for a relocation option.

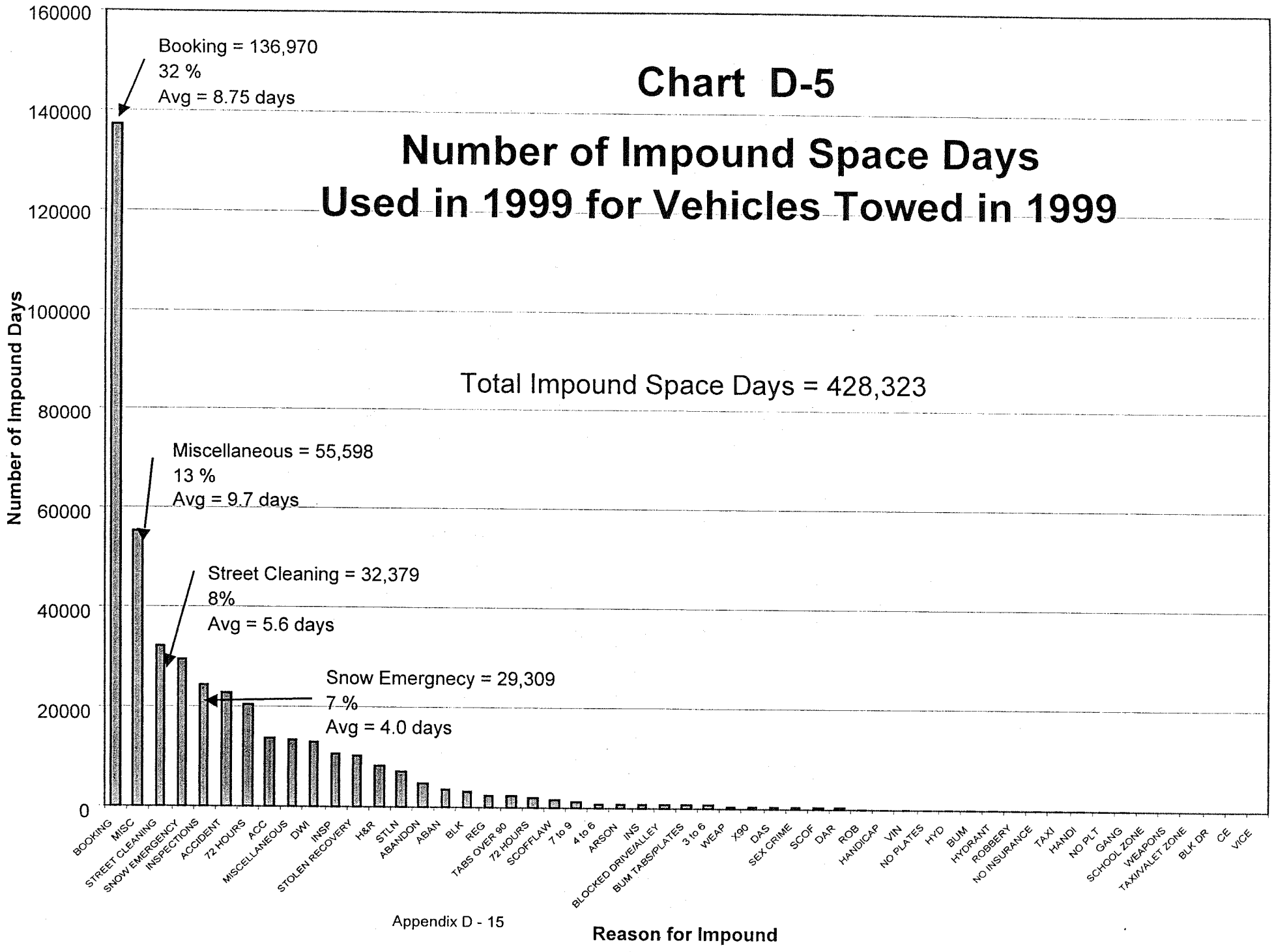


Chart D-5
Number of Impound Space Days
Used in 1999 for Vehicles Towed in 1999
Total Impound Space Days = 428,323
Booking = 136,970
32 %
Avg = 8.75 days
Miscellaneous = 55,598
13 %
Avg = 9.7 days
Street Cleaning = 32,379
8%
Avg = 5.6 days
Snow Emergnecy = 29,309
7 %
Avg = 4.0 days
Number of Impound Days
160000
140000
120000
100000
80000
60000
40000
20000
0
BOOKING
MISC
STREET CLEANING
SNOW EMERGENCY
INSPECTIONS
ACCIDENT
72 HOURS
ACC
MISCELLANEOUS
DWI
INSP
STOLEN RECOVERY
H&R
STLN
ABANDON
ABAN
BLK
REG
TABS OVER 90
72 HOURS
SCOFFLAW
7 to 9
4 to 6
ARSON
INS
BLOCKED DRIVE/ALLEY
BUM TABS/PLATES
3 to 6
WEAP
X90
DAS
SEX CRIME
SCOF
DAR
ROB
HANDICAP
VIN
NO PLATES
HYD
BUM
HYDRANT
ROBBERY
NO INSURANCE
TAXI
HANDI
NO PLT
GANG
SCHOOL ZONE
WEAPONS
TAXI/VALET ZONE
BLK DR
CE
VICE
Reason for Impound

Where Are the Vehicles Towed From?

This analysis assists in identifying the location that impounded vehicles are towed from, and assists in siting potential relocation alternatives.

A series of maps were created to show the location from where impounded vehicles were towed, for each of the top four reasons for impound. These maps help show the adjacency of the source of the impounds to the existing Impound Lot location, and assist in siting potential relocation options.

Location of Tows for Booking

The location of vehicles towed to the Impound Lot during 1999 for booking is shown in Map D-6. This map shows a large number of impounds originating in the downtown area and neighborhoods immediately south of downtown.

An additional large number of impounds originates in the Near North neighborhood and the entire northwest quadrant of the City. The intersection of Central Avenue and Lowry Ave is also a significant source of impounds. Additional major roadways such as University Avenue and Lake Avenue are significant sources of impounds.

The location of the Impound Lot is approximately midway between the impounds located in downtown and south of downtown, and the impounds located in the northwest quadrant of the City.

Location of Tows for Snow Emergency

The location of vehicles towed to the Impound Lot during 1999 for snow emergency is shown in Map D-7. This map shows a large numbers of impounds originating immediately east of Lake Calhoun and extending over to the Corcoran neighborhood.

The neighborhoods immediately south of the downtown area also provide a significant amount of impound vehicles.

Location of Tows for Street Cleaning

The location of vehicles towed to the Impound Lot during 1999 for street cleaning is shown in Map D-8. This map shows the widest, most even distribution for the source of impounded vehicles throughout the City.

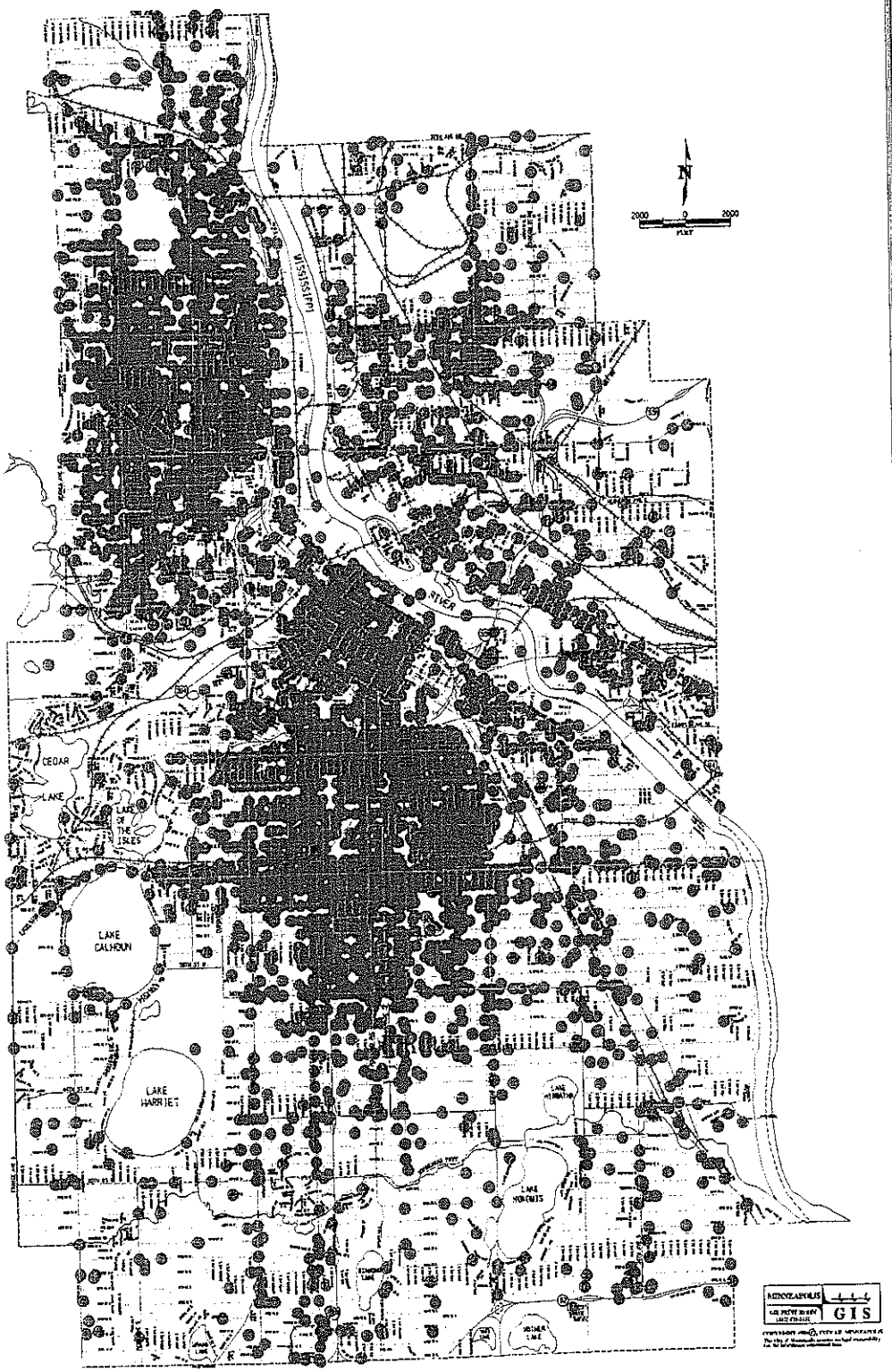
A concentration of impounds does appear to the east of Lake Calhoun and into the neighborhoods east of Lake of the Isles, and the U of M area.

Location of Tows for Miscellaneous

The location of vehicles towed to the Impound Lot during 1999 for miscellaneous (primarily Police operations impounds) is shown in Map D-9. This map shows an even distribution throughout the downtown area, the northwest quadrant of the City, and the U of M, Marcy Holmes neighborhoods and the surrounding neighborhood areas.

Vehicles Towed to the Impound Lot During 1999 For Booking

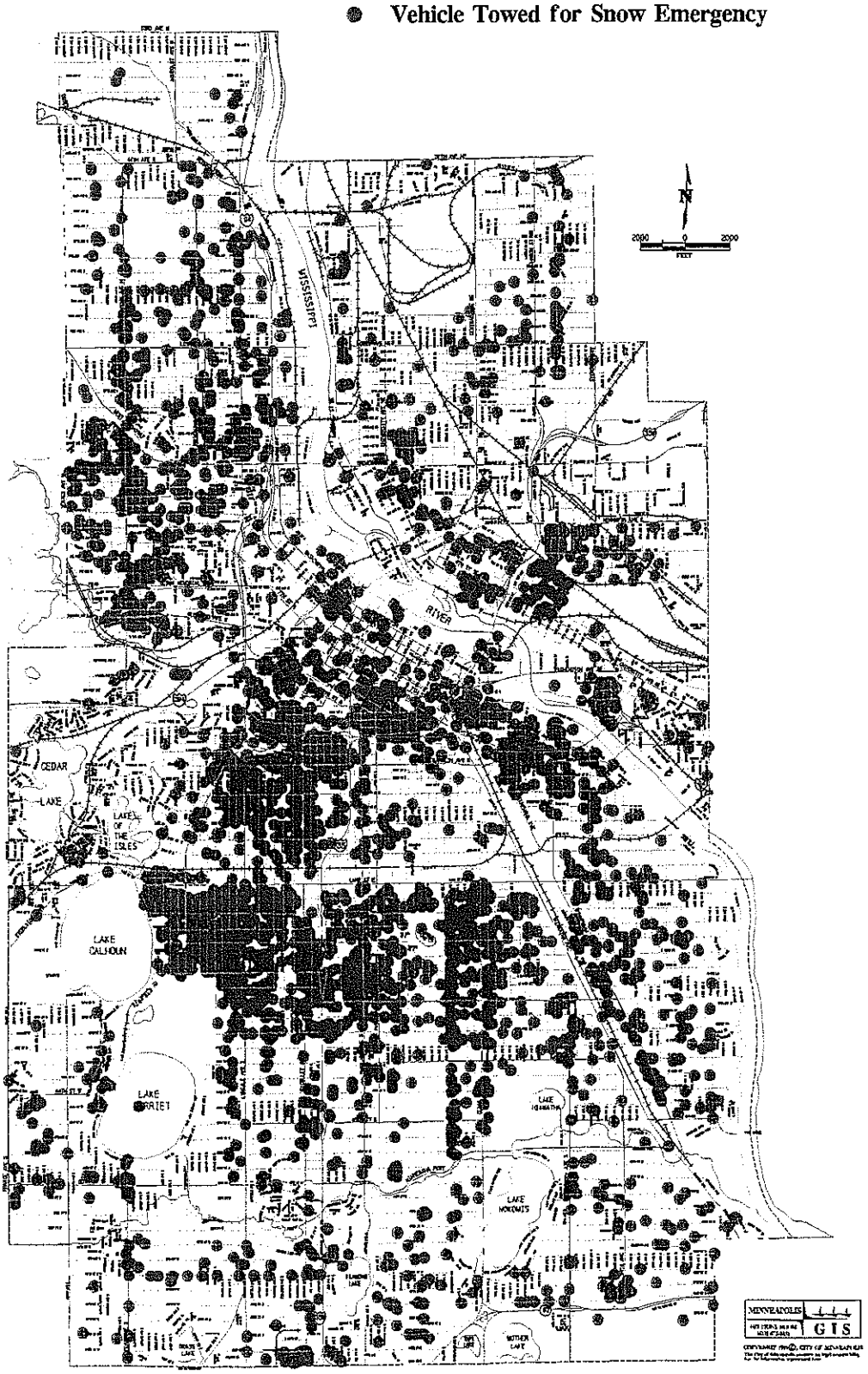
● Vehicle Towed for Booking



DATA:10/01/1999 PMQ/ASSESSORS MAP:02/01/1997 ENG. DESIGN PLOT:07/27/2000 ENG. DESIGN

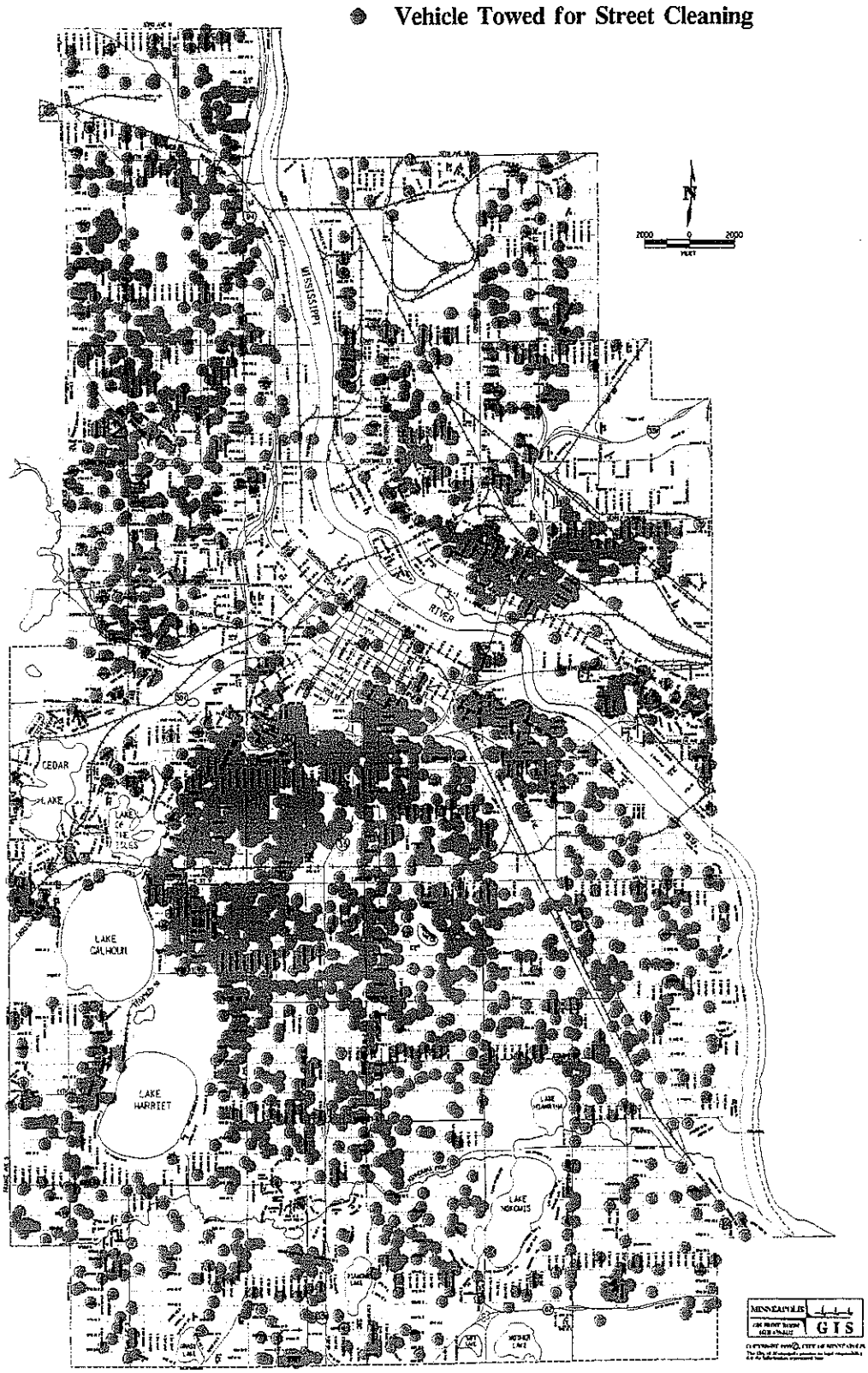
Vehicles Towed to the Impound Lot During 1999 For Snow Emergency

● Vehicle Towed for Snow Emergency



DATA:10/01/1999 PMQ/ASSESSORS MAP:02/01/1997 ENG. DESIGN PLOT:07/26/2000 ENG. DESIGN

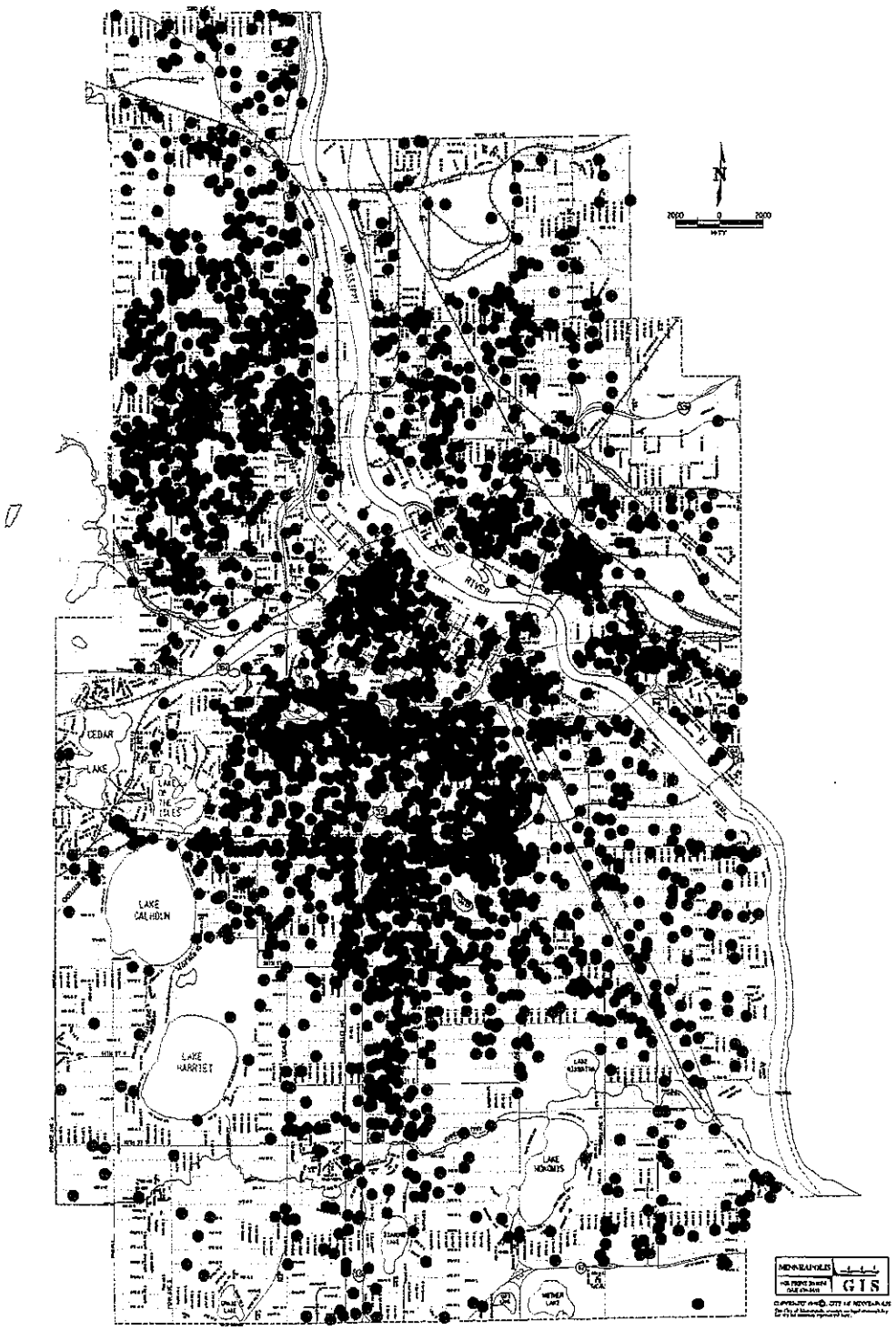
Vehicles Towed to the Impound Lot During 1999 For Street Cleaning



DATA:10/01/1999 PMQ/ASSESSORS MAP:02/01/1997 ENG. DESIGN PLOT:07/27/2000 ENG. DESIGN

Vehicles Towed to The Impound Lot During 1999 For Miscellaneous

● Vehicle Towed for Miscellaneous



MINNEAPOLIS GIS

N

MAP:ENG. DESIGN PLOT:05/05/2000 ENG. DESIGN

Who Owns The Vehicles That Are Being Towed?

This analysis helps identify which City of Minneapolis residents will be affected by possible changes to the Impound Lot operations or location.

During 1999, City of Minneapolis residents owned 55% of all vehicles impounded.

The following map showing the location of registered owners of vehicles towed during 1999 indicates the majority of the vehicles are owned by residents in the northwest quadrant of the City and the neighborhoods immediately south of the Downtown area, such as Phillips, Whittier, Lyndale, Central, and Powerhorn Park and adjacent neighborhoods.

Males comprise 55% of all registered owners of impounded vehicles, and females comprise 31%, of all registered owners of impounded vehicles. An additional 14% of all impounded vehicles are registered to organizations and businesses.

The age of registered owners of impounded vehicles is as follows:

Age Category (years)	% of all Vehicles Impounded (%)
19 and under	3 %
20 – 29	40 %
30 – 39	27 %
40 – 49	19 %
50 – 59	8 %
60 – 69	2 %
70 +	1 %

Almost 3,000 vehicles that were impounded are registered to owners residing in St. Paul. Large numbers of vehicles were impounded from registered owners residing in Ramsey, Anoka, and Dakota County. A complete list of the municipal residency of impounded vehicles is shown in Table D-11, and a list of county and state residency is shown in Table D-12.

Location of Registered Owners of Vehicles Towed in 1999

MINNEAPOLIS GIS

N

DATA:10/01/1999 PMQ/ASSESSORS MAP:02/01/1997 ENG. DESIGN PLOT:05/18/2000 ENG. DESIGN

Table D-11

Municipal Residency of Registered Owners of Impounded Vehicles*

Municipality	Number of vehicles contributed
Minneapolis	19,690
Saint Paul	2,929
Brooklyn Park	813
Bloomington	669
Richfield	483
Brooklyn Center	443
St. Louis Park	408
Burnsville	332
Fridley	299
Coon Rapids	287
Plymouth	278
Eagan	251
Eden Prairie	242
Columbia Heights	230
Blaine	199
Edina	198
Minnetonka	193
Roseville	183
Hopkins	173
Apple Valley	173
Crystal	172
Robbinsdale	161
St. Cloud	151
New Brighton	151
New Hope	147
Golden Valley	143
Maple Grove	138
Atlanta, GA	133
Rochester	128
Deerfield	117
Anoka	105
Duluth	103
Spring Lake Park	100
Total	**30,222**

* municipalities with over 100 registered owners

Table D-12

County and State Residency of Registered Owners of Impounded Vehicles*

County or State	Number of vehicles	Percentage of all vehicles
Hennepin	24,899	69.21%
Ramsey	3,488	9.70%
Anoka	1,445	4.02%
Dakota	1,242	3.45%
Washington	401	1.11%
Illinois (IL)	235	0.65%
Scott	213	0.59%
Wright	211	0.59%
Stearns	203	0.56%
St. Louis	192	0.53%
Carver	177	0.49%
Olmstead	155	0.43%
Georgia (GA)	144	0.40%
Sherburne	130	0.36%
Isanti	127	0.35%
Chisago	121	0.34%
Rice	110	0.31%

* counties and states with over 100 registered owners

What Is The Daily Inventory For The Impound Lot?

This analysis combines information discussed in previous sections and identifies the daily inventory of vehicles stored in the Impound lot. The daily inventory is shown in Chart D-13.

This chart includes the date the vehicles are towed to the Impound Lot and the date released, the number of vehicles in storage, and the number of those vehicles that are on Police Hold. The chart also shows the cumulative capacity of the Police Hold Lot, the Main Lot, and the Overflow Lot.

The chart shows that the number of Police Holds is consistently at 500 vehicles, which significantly exceeds the capacity of the Police Hold Lot.

The number of vehicles in storage remains relatively constant at 1100 – 1200 vehicles with the exception of the spikes from snow emergencies, and street cleaning. When the number of vehicles is at 1100 – 1200 the Impound Lot is operating at 78% capacity of the combined Main Lot and Police Hold Lot capacity.

The spikes from the snow emergency events exceed the capacity of the combined Main Lot and Police Hold Lot, and these vehicles are then stored in the Overflow Lot.

The street cleaning events do not exceed the Main Lot capacity, although the fall street cleaning in late October almost meets the combined capacity of the combined Main Lot and Police Hold Lot capacity.

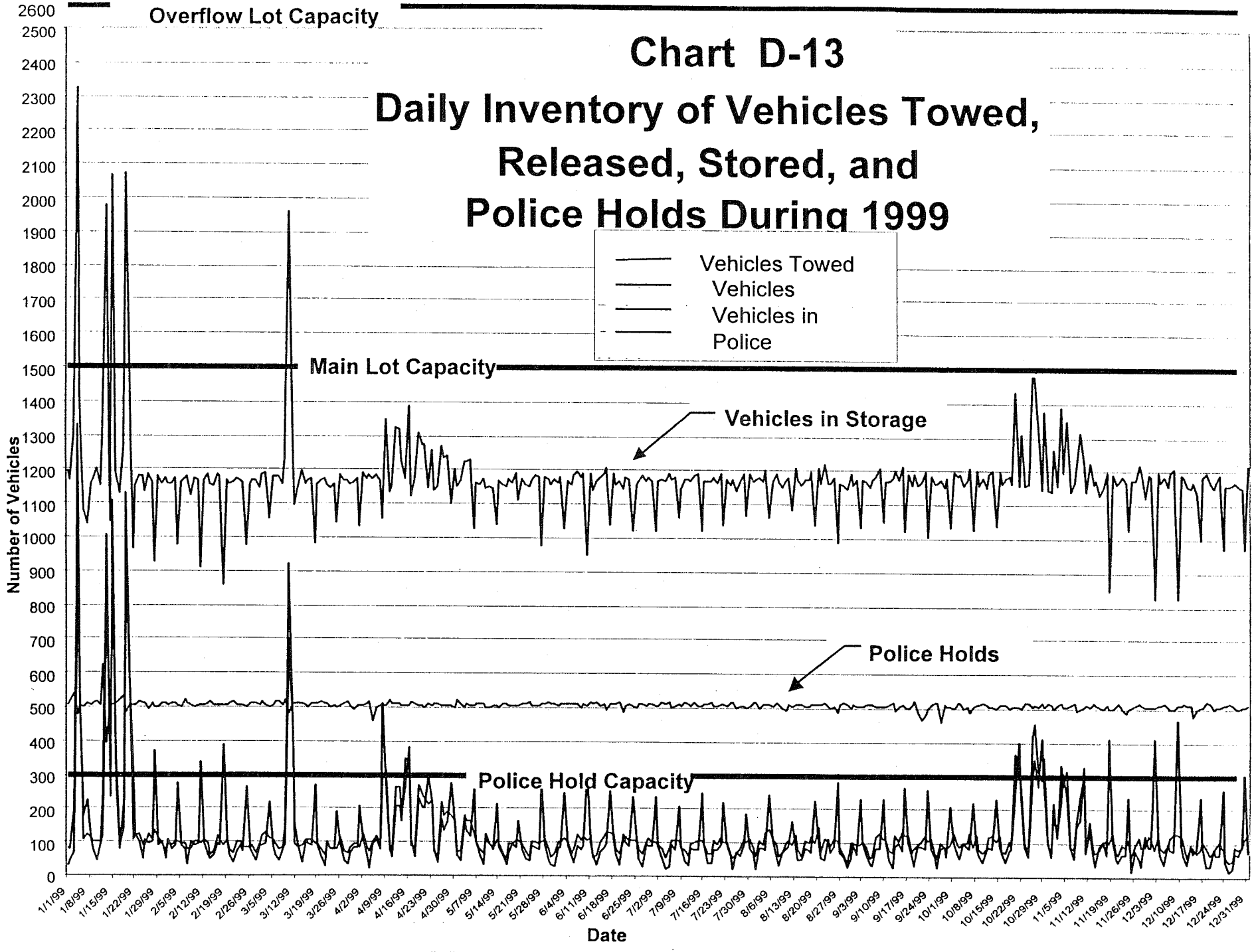


Chart D-13
Daily Inventory of Vehicles Towed, Released, Stored, and Police Holds During 1999
Overflow Lot Capacity
Main Lot Capacity
Police Hold Capacity
Vehicles in Storage
Police Holds
Vehicles Towed
Vehicles
Vehicles in Police
Number of Vehicles
Date

Additional Operational Issues

Near Northside Redevelopment Project: Connector Boulevard Alignment

As part of the Near Northside Redevelopment Project, a north – south connector boulevard will be constructed to connect Fremont Avenue and Dunwoody Boulevard. This connector will be constructed through the area occupied by the Impound Lot and 3 alignments were considered for the alignment of the connector.

After preliminary discussion within the Working Team for this project, it was identified that the central and western alignment were the most viable options.

The center alignment would travel north to south through the center of the Main Lot of the IL. It was assumed that a portion of the roadway would be an elevated bridge and that an access road would be created under the bridge to allow Public Works operations to easily access the remaining east and west portions of the Main Lot. This alignment would reduce the Main Lot capacity by 155 stalls, which is a 10% overall reduction in the Impound Lot capacity.

The western alignment would travel north to south along the western edge of the Main Lot and travel through a portion of the Police Hold Lot and the Overflow Lot. It was also assumed that a portion of the roadway would be an elevated bridge and that an access road would be created under the bridge to allow Public Works operations to easily access the remaining Police Hold Lot and the Overflow Lot from the Main Lot. This alignment would decrease the Main Lot capacity by 67 stalls and the Police Hold capacity by 86 stalls, for a total of 153 stalls. This is a 10% overall reduction in the Impound Lot capacity. The Overflow Lot would loose 64 stalls, however these are used for short-duration events and the total capacity lost is minimal.

The reduced capacity within the Impound Lot for either of the alignments was nearly identical.

The Public Works Department identified that the cost for changes for fencing, grading, and other incidental costs would be $47,900 to accommodate the western alignment and $35,900 to accommodate the center alignment.

The difference in the costs for facilities modifications for either of the alignments was $8,000.

Additional discussion within the COLWG determined that the center alignment was the most preferred alignment.

However, if the number of vehicles impounded was reduced enough to create a downsized IL, the Public Works Department has stated they would prefer a western alignment which would allow all of the downsized Impound Lot to operate east of the north – south connector.

The effect of the center alignment on the capacity of the Impound Lot is shown in Chart D-14.

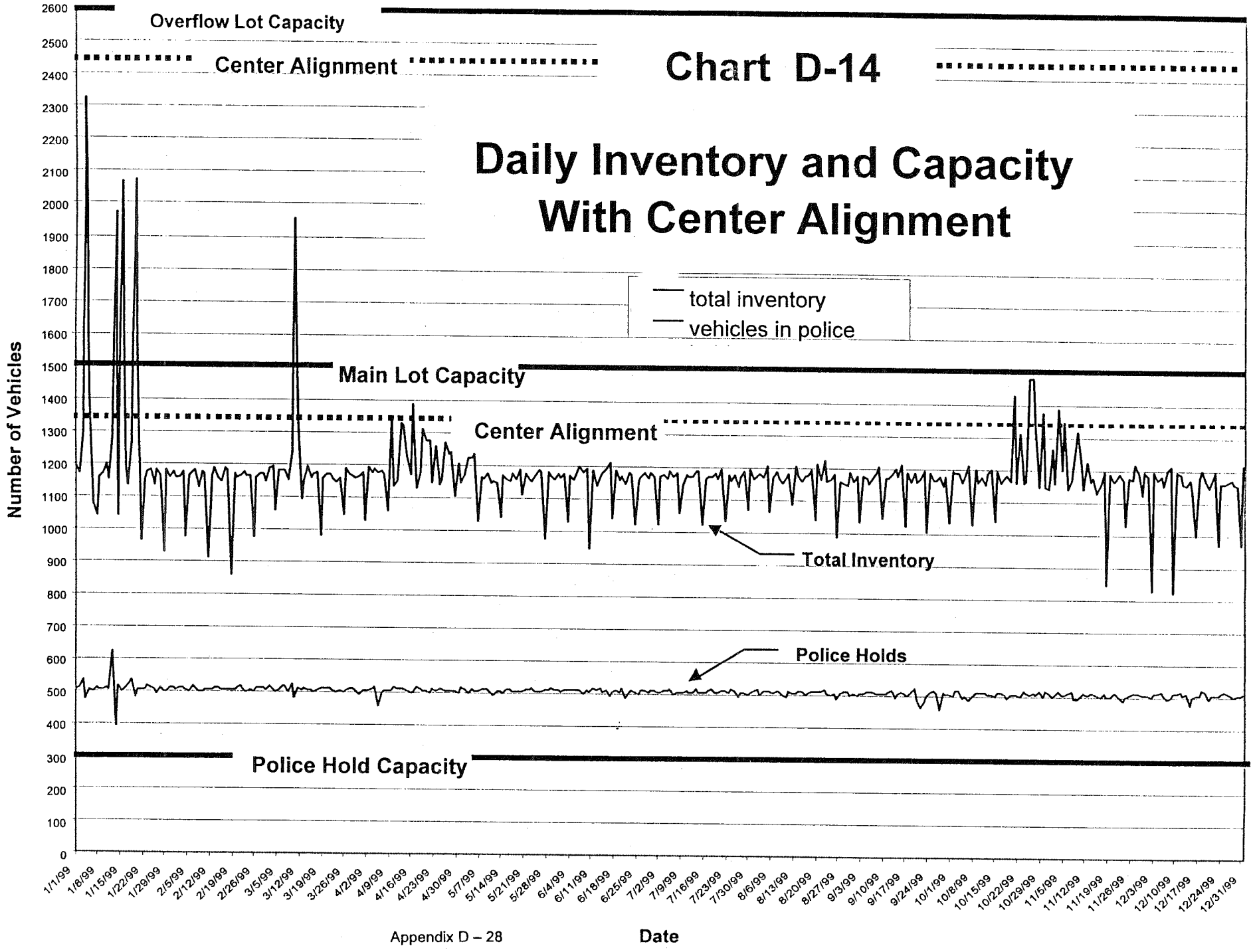


Chart D-14
Daily Inventory and Capacity
With Center Alignment
Overflow Lot Capacity
Center Alignment
Main Lot Capacity
Center Alignment
Total Inventory
Police Holds
Police Hold Capacity
total inventory
vehicles in police
Number of Vehicles
Date
2600
2500
2400
2300
2200
2100
2000
1900
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
400
300
200
100
0
1/1/99
1/8/99
1/15/99
1/22/99
1/29/99
2/5/99
2/12/99
2/19/99
2/26/99
3/5/99
3/12/99
3/19/99
3/26/99
4/2/99
4/9/99
4/16/99
4/23/99
4/30/99
5/7/99
5/14/99
5/21/99
5/28/99
6/4/99
6/11/99
6/18/99
6/25/99
7/2/99
7/9/99
7/16/99
7/23/99
7/30/99
8/6/99
8/13/99
8/20/99
8/27/99
9/3/99
9/10/99
9/17/99
9/24/99
10/1/99
10/8/99
10/15/99
10/22/99
10/29/99
11/5/99
11/12/99
11/19/99
11/26/99
12/3/99
12/10/99
12/17/99
12/24/99
12/31/99

Forensics Garage

The Minneapolis Police Department operates a Forensics Garage Facility located within the Impound Lot site. The facility includes a four stall drive through garage with 12 foot-high doors to allow processing of oversize vehicles, a secure parking area, and an office area where reports are written and a workshop processing area where evidence is processed and packaged.

When a vehicle is towed to the Impound Lot and requires evidentiary processing it can be delivered directly to the secured Forensics facility. After processing is complete the vehicle can easily be moved to the Police Hold Lot, or the Main Lot. The co-location of the Forensics Garage within the Impound Lot also allows for the easy transfer of vehicles from the Main Lot to the Forensics Garage when additional processing is required. During 1999, 517 vehicles were processed within the Forensics Facility.

Any relocation of the Impound Lot operation should include a facility capable of conducting the evidentiary processing occurring within the existing Forensics Garage Facility.

Best Practices

The best practices research focused on alternative business practices that reduce the number of impounded vehicles. Fourteen comparable major municipalities completed a survey regarding their impounding operations. The results of the survey are shown in the following Table D-15 of Major Municipalities Best Practices – Impound Lot.

The tow release and storage fees of comparable cities and local cities is shown in Table D-16.

The best practice research and the analysis of the Impound Lot use were presented to the City Departments that contribute vehicles to the Impound Lot, and the results of a preliminary discussion of current operations trends and potential operations changes are presented in Table D-17.

The following alternative programs were identified during the best practices research.

Snow Emergency - Two Tickets, Short Tow, and "Denver Boot"

City of Denver, CO

If a vehicle has received two tickets during a snow emergency and has not been moved, a third ticket is given to the vehicle and a "short tow" will move the vehicle "around the block". The third ticket is an $80 charge.

If a vehicle is identified to have three unpaid violations, a "boot" will be placed on the vehicle. The owner has 72 hours to pay the "boot" charge of $100 and pay the outstanding violations. If the owner does not pay within 72 hours, the vehicle is towed and impounded.

Neighborhood Sweep - Random License Plate Checks

New York, NY

The Sheriff's Department randomly selects areas within the City, and runs license checks on all of the parked vehicles. If a vehicle has more than $230 of outstanding violations, the vehicle will be towed. The owner then must pay the outstanding violations and the $230 to recover the vehicle.

Mailed Notice of Violation and Pending Tow

Milwaukee, WI

If a ticketed vehicle is not moved within 24 hours of the first violation, a placard is sent to the registered owner that states the vehicle will be towed within 48 hours. If the vehicle is not moved within the 48 hours, it is given another citation and it is towed.

Residential Parking Snow Sticker

Toronto, Canada

The City has created a "permit" system that allows residents with on-street parking to purchase a "permit" to avoid being towed during snow emergencies. Any non-permitted vehicles are towed.

Snow Sticker Program

City of Crestwood
One Detjen Drive
Crestwood, MO 63126

Crestwood's Snow Sticker Program was implemented to limit the number of cars parked on streets during the snow removal process. A city ordinance (No. 1882) prohibits parking on streets during declared snow emergencies unless a current snow sticker is visible in a vehicle's window. Police issue citations to those vehicles that do not display the snow sticker. Eligibility criteria to receive a snow sticker include: "if the driveway has a severe incline (over ten percent), if a residence does not have a driveway, and/or if a driveway is too small for the number of cars in the household." Snow stickers are issued if one or more of the criteria are met.

Flashing Parking Ban Message

City of Portland:
Parks and Public Works Department
389 Congress Street
Portland, ME 04101

To let citizens know a parking ban is in effect for snow emergencies, a "parking ban" message will flash from 4pm to 7am. The sign used is the same sign used for time and temperature and is one of the most visible signs in the city. The chamber of commerce agreed to the city's request for the flashing "parking ban" message.

MAJOR MUNICIPALITIES BEST PRACTICES - IMPOUND LOT

Management Analysis Division - Finance Department - 11/16/00

Table D-15

City	1. What is the vendor/city arrangement?	2. Who is responsible for your towing and impounding?	3. How many vehicles do you tow and impound in each category?	4. What is the percentage of vehicles in those categories to the total number of tows?	5. Do you tag vehicles prior to towing and impounding?	6. What is the fine, tow charge and storage charge.	7. Of the vehicles that you tag, what percentage do you tow?	8. What methods do you use to discourage residents from leaving cars in non-parking areas?	9. What methods do you use to deal with vehicles that need to be moved for operations?	10. How many vehicles do you tow each year?	11. How do you dispose of unclaimed vehicles? A - After how many days do you Auction? B - How frequent are Auctions?	12. What kind of facility do you keep the vehicles in?	13. Are police hold vehicles also kept in this facility?	14. How many police holds do you typically have at any one time?	15. Are there any other functions at this location?	16. How many FTE's do you have working on your impounding and towing, and what jobs do they hold?	17. Is the Impound Lot operation designed to break even, in budget terms?	18. Does you City Plow after snow falls, and what methods are used for towing after snowplows?
Buffalo, NY	City Service and Contractor Service	Finance Department	☑ Stolen Vehicles - 816 ☑ Accidents - 162 ☑ Street Sweepings ☑ Snow Emergencies - 156 ☑ Parking Violations - 587 ☐ Police Activity - 156 ☑ Abandoned Vehicles - 892 ☐ Other (please specify)	14%- Abandoned 9%- Parking violations 13%- Stolen vehicles 57% mini tows-no impound.	☑ YES ☑ NO	Fines are not part of Impound Operation. Standard tow of $82, plus daily storage @ $9 per day.	No estimate given.	Boot - immobilization device used for non-parking violations who currently have previous outstanding citations.	Enforce a "mini tow". A mini tow is used to move a vehicle 500 feet or less in an emergency situation, such as fire, water break, snow storm, blocked driveway etc... An additional $20.00 ticket if mini-towed.	7,000 to 8,000	Auction and Scrap. If vehicle is worth $700 or less, scrap contractor purchases vehicle for $75.00. A - date limit of 10 days with certified letter prior to taking possession to sell. B - Weekly	Decentralized location. Police and Standard towing in two different locations.	☑ YES ☐ NO Police hold are kept at the facility with the exception of investigation evidence. Investigation case, Police have their own	500	☑ YES ☐ NO	30 FTE's - 1-Director 1-Superintendent of Fleet Operations 1-Superintendent of Parking Enforcement 2-Operation Supervisors 25-Lot attendant and clerks	Yes - Has met that goal.	Yes - During a Snow Emergency, the city has a standard route. Split Week/Certain days, certain sides of the road.
Milwaukee, WI	Abandoned vehicle tows and citation tows contracted out. Two separate contracts.	Public Works Department	☑ Stolen Vehicles ☑ Accidents ☐ Street Sweepings ☑ Snow Emergencies ☑ Parking Violations ☑ Police Activity ☑ Abandoned Vehicles ☐ Other (please specify) Parking - 12,471-includes Accident, snow, sweep and police activity.	46% - Abandoned vehicles 39% parking violations 13% of tow tag do not get towed due to a 48 hour notice.	☑ YES ☑ NO	Fines are not part of Impound Operation. Standard tow of $80 plus daily storage @ $11 per day.	40% to 50% - 2% plow from 6pm-4am only.	If a vehicle is parked in a non-parking area/has 2 or more outstanding tickets, the vehicle gets marked for tow automatically. A vehicle ticketed has 24 hours to , after citation, move or get a "Placard". A placard is a notification sent to owners with notification of tow in 48 hours. If 48 hours expires, another citation and tow occur.	Emergency relocation, (fire, water pipe break) warrant a tow around the corner. No Charge.	30,000	Auction and Scrap. If valued at $200 or less. Valuation of vehicle is done daily. A-a vehicle can be auctioned after all state possession requirements are met. (usually monthly). B-Auctions are held monthly.	Lot, City owned. 18 acres with capacity of 2200 vehicles.	☑ YES ☐ NO Police hold are kept at the facility with the exception of investigation evidence. Investigation case, Police have their own site.	500	☑ YES ☐ NO Sanitation, Water and Municipal Equipment. (40-50 acres).	23 FTE's 1-Parking Enforcement Manager, 1-Assistant Manager, 2-Supervisors, 2-Lead Workers, 17-Clerical and yard Attendants.	Yes - Has not yet met that goal due to a long-term liability of a 20 year Capital Improvement Loan taken out in 1998.	Yes -Odd day, Even day method. Public Notice of plowing and standard tow.
Kansas City, MO	Contracted out for towing, bring to impound lot which is leased from a private land owner.	Neighborhood & Community Services Department	☑ Stolen Vehicles ☑ Accidents - 2,400 ☑ Street Sweepings ☑ Snow Emergencies ☑ Parking Violations ☐ Police Activity - 4,800 ☐ Abandoned Vehicles - 1,500 ☐ Other (please specify)	7%-Abandoned 17%-Parking violation 24% Stolen vehicles 27% Police (17%-accidents, 10% - arrests).	☑ YES ☐ NO	Fines are not part of Impound Operation. Standard tow of $105 plus daily storage @ $10 per day.	25%, no tag for snow emergency.	No - Just tickets and fines.	A ticket is given for 1st do violation in the case of snow emergency. After two tickets, a short tow (which is around the corner) with an $80 ticket is done. If three times are not paid, and the car is illegally parked again, they get a "boot" placed on the vehicle and incur all associated costs.	16,000	Auction & Scrap. A-after 5 days at impound, a certified letter tow owner & lean holder. After 30 to 45 days after letter, the vehicle is up for auction. B-auctions are held monthly.	Lot, City owned. Flat surface, one location at edge of the city limits.	☑ YES ☐ NO	20 to 50	☐ YES ☑ NO	14 FTE's - 4-Dispatchers, 3-Equipment Operators, 3-Crew Leaders, 1-Manager, 1-Assistant Manager, 2-Administrative Asst.	Yes - Has not met that goal and sometimes has excess of revenues. This goal was not met until the re-organization of the Impound Operation to the Neighborhood Services. Also, the Park increased the tow fee from $67 to $105 to reach that goal.	Only Storms
Detroit, MI	A-Band sticker accidents - ends up abandoned vehicle after 48 hours. TR52 - Notice of abandoned vehicle mailed out to the registered owner and lien holders after 21 days.	Police/Sheriff - Contractors	☑ Stolen Vehicles ☑ Accidents ☑ Street Sweepings ☑ Snow Emergencies ☑ Parking Violations ☑ Police Activity ☑ Abandoned Vehicles ☑ Other (please specify)	No Information	☑ YES ☐ NO	Fines are not part of the Impound Operation. Standard Tow of $75 and daily storage @ $8 per day.	3% all vehicles, .02% snow emergency.	Police ticket and utilize the "Boot". An individual cannot renew their drivers license if they have outstanding violations which have not been paid in full.	Only in the case of an emergency such as a fire, in which they tow a vehicle around the corner. No fine is incurred to the vehicle owner in the case of an emergency.	8,500	Auctions all vehicles - According to state law. Auction starting bid is the price of all outstanding charges to the vehicle. - No answer to timing of auctions.	Contractors facility with the exception of Police evidence, then city lot which holds roughly 1,000 vehicles.	☐ YES ☑ NO	100 (City only holds police holds a City owned facility)	☐ YES ☑ NO	5 FTE's 1-Sergeant, 4-Officers.	Yes and has met that goal.	Yes, advertising done with signs and news media. Standard tow in effect.
Denver, CO	Ticket and Tow	Sheriff	☑ Stolen Vehicles ☐ Accidents ☑ Street Sweepings ☑ Snow Emergencies ☐ Parking Violations ☑ Police Activity ☑ Abandoned Vehicles ☐ Other (please specify)	30%-Abandoned 40%Police act 10% stolen All parking get "boot"	☑ YES ☐ NO	Fines are not part of Impound Operation. Standard Tow of $100 plus daily storage @ 12 per day. (If 3/4 ton or over, Tow charge $150 and daily storage $130 per day.) (If pulling a trailer, double the charges, if a 4-wheeler is on the trailer, triple the charge.)	90% of all vehicles. 10% of snow emergency vehicles.	The "Denver Boot". If a vehicle is identified with three tickets unpaid monitor installs a boot. The owner has 72 hours till tow to pay a charge of $100 for the boot/all outstanding fines. If this leads to a tow, the owner pays $100 for the boot, all outstanding fines along with $100 impound charge and $12 per day storage charge. (if vehicle is 3/4 ton or more, increases).	A ticket is given for 1st do violation in the case of snow emergency. After two tickets, a short tow (which is around the corner) with an $80 ticket is done. If three times are not paid, and the car is illegally parked again, they get a "boot" placed on	19,200	Auction & Crushing is valued under $300. A-After 5 days at impound, a certified letter to owner & lean holder. After 30 to 45 day after the letter, the vehicle is up for auction. B - Auctions are held on a Bi-weekly Basis.	Lot, City owned. 22 acres with capacity of 900 (can fit 11,000).	☑ YES ☐ NO	650	☐ YES ☑ NO	42 FTE's 6-Swarn Officers, 1-Manager, 1-Staff Assistant, 4-Clerical Supervisors, 22-Car Pound Attendants, 4-Cashiers.	NO - Operation runs on Barter. Operation has an Operating Budget in the General Fund of $750,000. The Operation brings in $3.2 Million in Revenues.	Short tows.
New York, NY	All contracted out. Responsibility of impound lies in each of the individual five counties. The tow companies and the city split associated fees.	Police/Sheriff - Contractors	☑ Stolen Vehicles ☐ Accidents ☐ Street Sweepings ☐ Snow Emergencies ☑ Parking Violations ☑ Police Activity ☐ Abandoned Vehicles ☐ Other (please specify) 24,000 between stolen, parking and different police activity.	300 stolen vehicles a month 2,000 parking violations a month	☑ YES ☐ NO	Fines are not part of Impound and are handled by the NYPD. Standard tow of $150 plus total of $45 (+5% of total poundage) along with a $10 per day storage fee.	No estimate given.	The NY Sheriffs department randomly selects an area within the city and runs plate numbers. If the vehicle has more than $230 of outstanding summons, this warrants a tow. The vehicle owners then incur the cost of impound/storage and the total amount of outstanding summons.	No information	70,000	Auction and Salvage. Revenue from salvage varies from $25 to $75 per vehicle. A - This is the responsibility of the tow companies. All services are contracted out to each of the five counties. B - Same as A	Each county has its own lot about 3 to 4 acres in size.	☐ YES ☑ NO	Police Activity involving Sheriff-approx. 300 a month.	☐ YES ☑ NO	No FTE's - private county function.	In a Sense. No budget for impound, but have and operational budget for towing and processing. The tow company and the City split the fees. Works like an Enterprise Fund. What goes out = what comes in.	???
Toronto, Canada	Contract pounds for most situations. Relocate with Police tow trucks. Contact owners to move vehicles.	Private contractors	☑ Stolen Vehicles ☑ Accidents ☑ Street Sweepings- ☑ Snow Emergencies ☑ Parking Violations ☑ Police Activity ☐ Abandoned Vehicles ☑ Other (please specify) Improper registration. Total tows per year is 70,000.	20% Stolen Vehicles 5% - Accidents 5%-Snow Emergency 50% Parking (mostly during rush hour traffic) 5% - Police Activity 10% - Abandoned 5% Other	☑ YES ☐ NO Bylaw violations only.	Fine varies from 10$ to $100. Average tow of $75 @ $16 - $20 per day storage. (6 different contract pounds)	About 80% - most are rush hour routes. Snow - about 50%.	No. The City of Toronto has a "Permit" system for people living on streets that are valid only for that location. Any others can be tagged & towed.	Relocations - Snow removal. This is done by the police tow trucks.	70,000	Contract pounds dispose of vehicles as per the "storage and liens act - Ontario". 1) scrap 2) Public auction or 3) private sale. A-Minimum of 60 days. B-up to individual pounds.	Decentralized or satalite location. (6)	☑ YES ☐ NO	Approximately 10+	☐ YES ☑ NO	No Information	No - Relocations by police tow trucks - included in police budget as per previous years.	Yes, contract pounds tow from marked snow routes. Emergencies delared via media.

City	1. What is the vendor/city arrangement?	2. Who is responsible for your towing and impounding?	3. How many vehicles do you tow and impound in each category?	4. What is the percentage of vehicles in those categories to the total number of tows?	5. Do you tag vehicles prior to towing and impounding?	6. What is the fine, tow charge and storage charge.	7. Of the vehicles that you tag, what percentage do you tow?	8. What methods do you use to discourage residents from leaving cars in non-parking areas?	9. What methods do you use to deal with vehicles that need to be moved for operations?	10. How many vehicles do you tow each year?	11. How do you dispose of unclaimed vehicles? A - After how many days do you Auction? B - How frequent are Auctions?	12. What kind of facility do you keep the vehicles in?	13. Are police hold vehicles also kept in this facility?	14. How many police holds do you typically have at any one time?	15. Are there any other functions at this location?	16. How many FTE's do you have working on your impounding and towing, and what jobs do they hold?	17. Is the impound Lot operation designed to break even, in budget terms?	18. Does you City Plow after snow falls, and what methods are used for towing after snowplows?
Winnipeg, Canada	Tow	Private contractors	☑ Stolen Vehicles ☐ Accidents ☑ Street Sweepings ☑ Snow Emergencies ☑ Parking Violations ☑ Police Activity ☑ Abandoned Vehicles ☐ Other (please specify) PARKING - rush hour, bus stops, obstruct traffic	No information given	☑ YES ☐ NO for rush hour towing and parking offences	Fine varies per offence. Bylaw - Release $65 and $45. Contract - $110 and $45. Storage is $2 per day	No Information provided.	Parking offence notices and towing only.	Tow to another street, (handled by city workers who are special constables and use tow company under contract to city).	No information given	Auction A - 30 days after letter to owner by garage keeper. B - No information given.	Other - tow company lots.	☑ YES ☐ NO	6 to 12	☐ YES ☑ NO	No information given	No information given	Yes, bus routes, main routes, areas signed as no parking - snow routes. We tow if necessary.
Salt Lake City, UT	Vehicles impounded by parking enforcement/SLC Police. Ticket with 48 hr notice to tow (ordinance) and 5 or more outstanding tickets can impound (ordinance).	Towing: Private contactors Impounding: SLC Police-Parking enforcement	☑ Stolen Vehicles ☑ Accidents ☐ Street Sweepings ☑ Snow Emergencies ☑ Parking Violations ☐ Police Activity ☑ Abandoned Vehicles ☐ Other (please specify)	40%- Stolen, out of 80% for police. 20% - Parking/Abandoned 80%-Police, with 40% of that stolen	☑ YES ☐ NO Our towing is contracted out. We only store and release the vehicles.	No fine. Minimum of $105 (depending on towing fee) and $10 per day storage.	No Information provided.	Parking Enforcement has developed a booting program.	I know that the contracted company with the city, relocates vehicles for the streets department and other city departments. The Impound lot doesn't have anything to do with the activity.	3,000	Auction (public). A-Our goal is 30 to 45 days then auction. It usually takes 90 days if we get behind. B-Auctions held weekly.	Lot	☑ YES ☐ NO	100-150	☐ YES ☑ NO	8 FTE's - 4-Lot Attendants, 1-Supervisor, and 3-Temporary /weekend coverage.	Yes, has achieved goal.	Yes, Towing requests are dispatched through SLC Police Dept and Parking Enforcement only.
Prince George, BC	We have a contract with a lacal tow company. Contract duration ia 3 years.	Towing: Police Department/Sheriff, Inspection Dept, and Private Contractors. Impounding: Private Contractors	☑ Stolen Vehicles - 10-2 ☐ Accidents ☑ Street Sweepings - 5-10 ☑ Snow Emergencies - 10-20 ☑ Parking Violations - 60-120 ☐ Police Activity ☑ Abandoned Vehicles - 15-30 ☐ Other (please specify)	10% - Stolen 5% - Street Sweeping 10% - Snow emergency 60% - Parking, oustanding tickets/expired time 15% - Abandoned	☑ YES Mostly an authorization for tow. ☐ NO	Fine location anywhere, &8, $15 on avenues and $50 for handicap & fire lane. Contract Wrecker. $50-release @ $10 per day storage.	100% - all vehicles 100% - snow emergency. Once tagged with a tow order they go.	No, ticket and tow if not paying attention. We do warnings and some advertising prior to snow removal time.	If vehicle is "Ringed by snow" they get ticket. Towed on 2nd complaint. Once on wrecker vehicle goes to impound.	100/200, this could be low. Sometime average one per day.	Under $800 we send to car crusher. Over $800 contractor starts "lien Action" we try to see if vehicle has bank lien. Turn over that way. A-No auction as above. B-On all other property once/twice per year.	Lot.	☑ YES ☐ NO	They do their own.	☑ YES ☐ NO General tows ie. Accidents, owner request, court seizures etc..	Nil: Contracted service	No - No Budget, successful bidder gets revenue from towes for the 3 years.	Yes, the city plows. As previous contract wrecker called.
Duluth, MN	License Tow list/all vendor out.	Police/Sheriff - Contractors	☑ Stolen Vehicles ☑ Accidents ☑ Street Sweepings ☑ Snow Emergencies ☑ Parking Violations ☑ Police Activity ☑ Abandoned Vehicles ☐ Other (please specify)	5%- Stolen vehicles 5%- Stolen vehicles 25%- Accident vehicles 35%-Snow emergency 10%-parking violations 25%-police activity	☑ YES ☑ NO	Fines are not part of Impound Operation. Standard tow of $55 and daily storage based on size of $8 or $10 per day.	? All vehicles. 85% are snow emergency.	No	No	3,500	The city contracts out the Impound service, therefore there are no auctions on the city's behalf, but on the contractors site and cost.	N/A - Contracted	☑ YES ☐ NO With the exception of vehicles being held as evidence.	Unknown	☐ YES ☑ NO	68 FTE's - 3-Customers Services Staff, 65-Sworn Officers Daily.	No Budget - Contracted out.	Yes, the city provides a two day (prior) notice to the community of a snow removal, or sweeping.
Bloomington, MN	Impound is contracted - various out for bid on a two-year basis.	Private Contractors	☑ Stolen Vehicles - 120 ☑ Accidents - 120 ☐ Street Sweepings ☑ Snow Emergencies - 80 ☑ Parking Violations - 120 ☑ Police Activity - 960 ☐ Abandoned Vehicles ☐ Other (please specify)	No % but all vehicles are towed in these areas. The only exception is accidents. If the vehicle is driveable, they can take it away.	☑ YES ☐ NO	$30.00 Citation. Standard tow of $70 (contractor control) and daily storage of estimate of $15 per day.	10% of all vehicles. 95% of snow emergency tags.		In case of fire, the fire trucks push the vehicle out of the way.	1,500	The city contracts out the Impound service, therefore there are no auction on the city's behalf, but on the contractors site and their cost.	Contractors facility with the exception of Police evidence, then held a city owned location (and that varies)	☑ YES ☐ NO If evidence, Police have their own site.	35 to 50	☐ YES ☑ NO	5 FTE's - 1-Patrol Officer, 1-Lieutenant, 2-Clerical Staff, 1-Sergeant.	There is not a budget for impounding due contract. The procedure for the satellite location of Police activity vehicles held on city land is funded by the General Fund and does break even as far as revenues and expenditures.	Yes
Rochester, MN	All towing is done by private tow companies.	Private Contractors	☑ Stolen Vehicles ☐ Accidents ☐ Street Sweepings ☑ Snow Emergencies ☑ Parking Violations ☐ Police Activity ☑ Abandoned Vehicles ☐ Other (please specify) 150-200	No information given	☑ YES ☐ NO	$10.00 Fine. Standard tow of $55 and $15 per day storage. Tow and storage is paid directly to the tow company.	Tag and tow occurs at the same time.	N/A No	We have a 2am till 6am "No parking in the downtown area" for street cleaning. In most cases, we just tag then.	200-300	No Auctions - A-No auctions, B-N/A	Tow company's own facility, unless police evidence.	☐ YES ☑ NO Separate police facility, at another site.	12-15	☐ YES ☑ NO	None	Yes, for the most part.	Yes, Streets are posted at least 12 hours in advance of the plowing.
St. Paul, MN	Citation and Tow "A" tows, police must be present for tow, "B" tow, police need not be present.	Police/Sheriff	☑ Stolen Vehicles - 360 ☑ Accidents - 1,200 ☑ Street Sweepings ☑ Snow Emergencies ☑ Parking Violations - 3,000 ☑ Police Activity - 1800 ☑ Abandoned Vehicles ☐ Other (please specify) Do not currently have #'s for abandoned, but a fair amount. 5,240	20% Snow emergency, 40% Parking 20% police activity.	☑ YES ☐ NO	Fines are not part of Impound operation. Standard tow of $120 and daily storage $12 per day.	15% all vehicles. 10% snow emergency.	Warnings for possible health code violations.	"Drops" drops are when the vehicle has no yet been towed, but is being hooked onto the tow truck and the vehicle owner arrives. They pay a $50 fine for them to "drop" the vehicle and leaves. During a snow emergency, the drop charge is $90. During a street sweep, the charge is $20.	14,000	Auction and Salvage - Current contract with a salvage company to purchase cars. A-On 1st day of impound, legal processing begins. After 21 days, vehicle is up for auction. B-Auction are held on a bi-weekly basis.	Lot, City owned. Can hold 700 vehicles. Has a gravel base.	☑ YES ☐ NO	30% of the inventory.	☑ YES ☐ NO recovery (bicycles, car radios, misc. auction material.	10 to 12 FTE's (seasonal) - 1-Supervisor, 1-Temp Property Clerks, 4-Clerical Supervisors, 22-Car Pound Attendants, 4-Cashiers.	Yes, and meets that goal.	Yes

Table D-16

Comparable Cities Tow Release and Storage Fees

Management Analysis Division – Finance Department

11/16/00

Major Cities	Standard Tow Release Fee	Daily Storage Fee	Number of Tows Annually
New York, NY	$195	$10	70,000
St. Paul, MN	$80 – normal $128 – snowtow	$15	14,000
Winnipeg, Canada	$45-$110	$2	NA
Kansas City, MO	$105	$10	16,000
Salt Lake City. UT	$105	$10	3,000
Denver, CO	$100	$12	19,200
Toronto, Canada	$10-$100	$16-$20	70,000
Buffalo, NY	$82	$9	7,000-8,000
Milwaukee, WI	$80	$11	30,000
Minneapolis, MN	$75	$15	47,500
Detroit, MI	$75	$8	8,500
Local Cities			
St. Paul	$80-normal $128-snowtow	$15	14,000
Golden Valley	$65-$105	$18	1,000
Minneapolis	$75	$15	47,500
Brooklyn Center	$65+	$15	NA
Bloomington	$35-$60	$20-$27	NA
Richfield	$30-$55	$9-$15	1,200
St. Louis Park	$5	$30	100-200

Table D-17
Potential Changes to Department Operations That Contribute Vehicles to the Impound Lot

Operation	Current Operations Trends (Without Changes) + Increase/ - Decrease		Potential Operations Change Department suggesting the change: PWIL – Impound Lot MPD – Mpls. Police Dept. TCA – Traffic Control Authority PWFS – Public Works Field Services INSP – Inspections
	Vehicles	Space Days	
Booking – Mpls. Police 15, 655 Vehicles 33% of Total Vehicles	+1,403	+12,627	◆ Leave the vehicles at the curb, or release the vehicles to a responsible party. (MPD) ◆ Allow arrested suspect the option of signing a form to accept responsibility if the vehicle is left on the street and not towed. (PWIL)
Miscellaneous – Mpls. Police 5,716 vehicles 12% of total vehicles	+838	+8,380	◆ Conduct a Police District sweep to tow disabled vehicles prior to snow and street cleaning. ◆ Utilize the "BOOT". (TCA)
Snow Emergency – PW Field Services 7,273 vehicles 15% of total vehicles	+1,050	+4,200	◆ Implement season-long one-sided residential parking ban after the first snowfall. Existing ordinances allow for this option. This option has been used several times during the last 10 years. (PWFS) ◆ Mini-tows for construction and maintenance activities. (PWFS) ◆ "BOOT" is not an option because these cars need to be moved. Residential snow stickers are not an option because these cars need to be moved. (PWFS) ◆ Radio and television crawlers across the bottom of the screen when snow emergencies are declared (PWIL).
Street Cleaning – PW Field Services 5,793 vehicles 12% of total vehicles	+151 +600	+906 +3,600	◆ Place larger temporary signs within neighborhoods scheduled for street cleaning. (PWIL) ◆ Mail notices to residents prior to street sweeping. (PWIL)
Accident – Mpls Police Dept. 2,588 vehicles 5% of total vehicles	+351	+3,159	◆ Utilize the "BOOT". (TCA)

Stolen Recovery – Mpls. Police Dept. 2,440 vehicles 5% of total vehicles	-182	-766	◆ Release vehicles to owners prior to impound if vehicle is not involved in an additional crime. (MPD) ◆ ECC could assist in reaching victims who have reported stolen vehicle. (MPD)
Police Holds – Mpls. Police Dept. and PW 500 average/day in 1999 375 average/day in 2000	-125/day	-45,625	◆ Continue policy of releasing vehicles on Police Hold within 15 days, unless Police Dept. requests extension. (PW)
Inspections Tow – Inspections Div. 836 vehicles 2% of total vehicles	+10	+292	◆ An administrative fee of $75 is proposed to be charged to owners of these vehicles and that fee will be added onto property taxes as a special assessment. (INSP) ◆ Tow the vehicle directly to the auction lot and sell at the next scheduled auction (PWIL).
72 Hours, Scofflaw, Bum Tabs/Plates – Mpls. Police 1391 vehicles 3% of total vehicles	-54	-162	◆ Utilize "BOOT". (TCA)
Total	**+ 4,492 Vehicles**	**-13,389 Space Days**	

Appendix E

Concrete Crushing Analysis

Description of Site

The concrete crushing operation currently occupies 7 acres within the Linden Yards area. Concrete rubble is deposited at the west end of the site and then crushed into aggregate and stockpiled at the east end of the site. The aggregate is stored on-site until it is needed for road construction projects. As of June 1, 2000, there were approximately 40,000 tons of concrete rubble and 95,000 tons of aggregate being stored at the crushing site.

The most significant component of the operation's current site is its central location. The crushing operation itself could function adequately on any properly zoned site of 7-10 acres that could be made available. The importance of the location for this activity relates directly to the trucking costs incurred in hauling the rubble concrete base to and from the City's various street construction projects. The operation's current location has proven to be extremely advantageous due to its central location and quick access to the freeway system.

The crushing operation is currently located on land that is not zoned I-2. Concrete crushing requires I-3 zoning. The Parcels zoned I-3 within the City of Minneapolis are shown in Map E-1.

Operational Analysis

Preliminary analysis in 1999 identified that transportation costs were the most significant factor in the operations of the concrete crushing operation. These costs are a function of the quantities of rubble and aggregate to be generated and used, and a function of the distance from the source of the rubble to the crushing operation and the distance from the crushing operation to the site where the aggregate will be used.

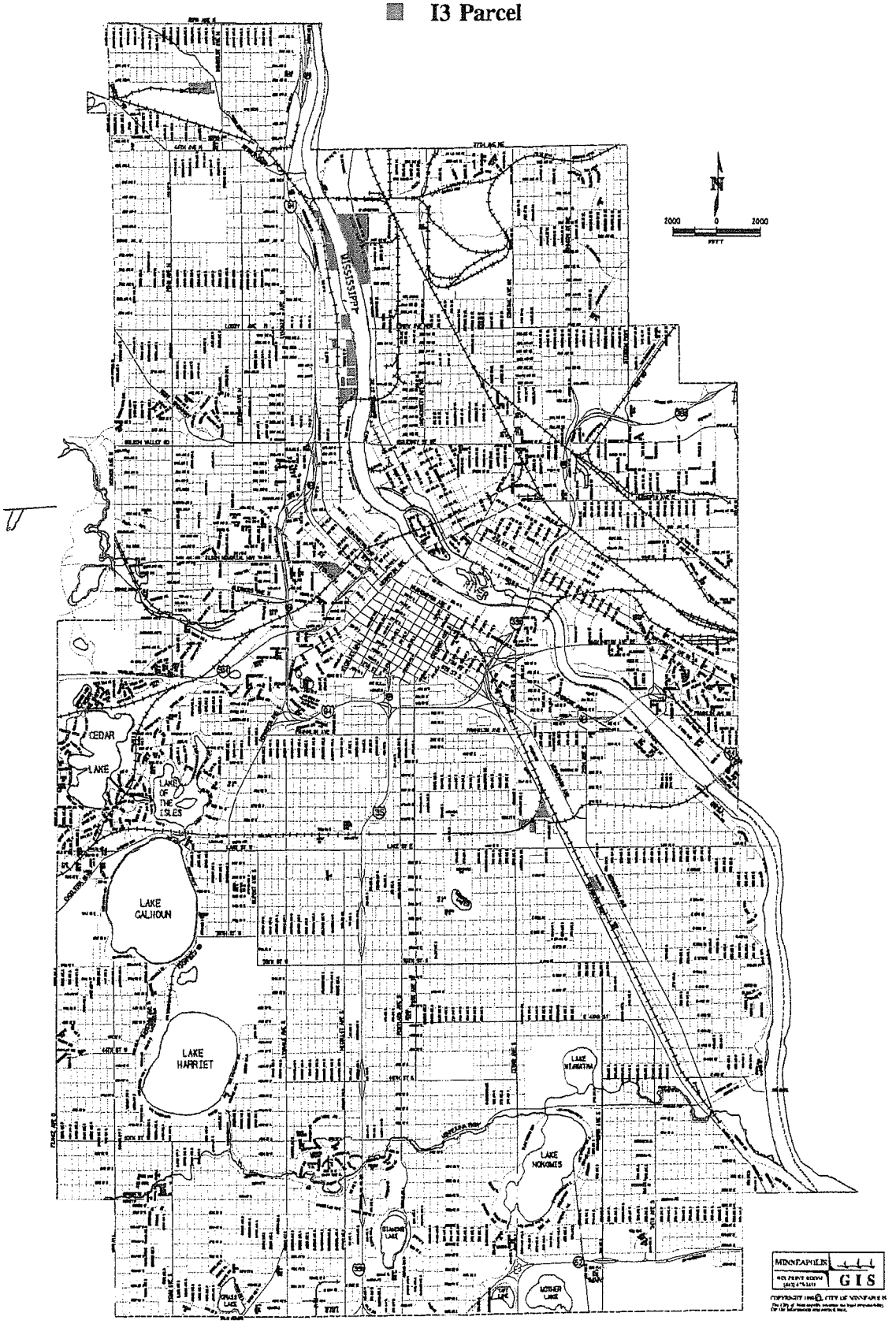
In computing the estimated costs associated with the crushing operation the following variables were considered based on the 2000-2004, 5 year Capital Improvement Project (CIP):

- Quantity of rubble to be generated over the next five years
- Quantity of aggregate to be used over the next five years
- Location of each street construction project for the next five years
- Travel time to and from street construction projects and concrete crushing operation

The analysis of these four variables allowed five-year transportation costs to be estimated for Linden Yards and three potential alternate crushing sites. The analysis showed that the CIP projects slated for completion in 2000-2004 will result in approximately 125,000 tons

Parcels Zoned I3

I3 Parcel



DATA:Planning 2/24/2000 MAP:02/01/1997 ENG. DESIGN PLOT:03/01/2000 ENG. DESIGN

of rubble being generated. Furthermore, the projects will require approximately135,000 tons of aggregate base for reuse in projects scheduled through 2004.

These results show a decreasing amount of concrete rubble being generated, coupled with a decreasing need for aggregate base. Past years have resulted in approximately 100,000 tons of concrete rubble being crushed at Linden Yards, however this number is expected to decrease in the coming years averaging approximately 25,000 tons per year. The quantities to be generated are shown as follows:

	Rubble (1 yd = .8 tons)		Aggregate* (1yd = 1.5 tons)	
CIP Year	**Yards**	**Tons**	**Yards**	**Tons**
2000	24,275	19,420	15,092	22,638
2001	26,687	21,350	11,820	17,730
2002	17,186	13,749	11,032	16,548
2003	53,963	43,170	32,868	49,302
2004	34,616	27,693	18,882	28,323
Total	156,727	125,382	89,694	134,541

* Quantity is two times the CIP estimates to account for aggregate used as miscellaneous fill per the Public Works Department.

The concrete crushing operation functions as an internal service fund within the City's capital project funding with costs recovered through the "sale" of the finished product to the projects on which it is used.

There are four components to the costs of the operation:

- The contract with the private crushing company
- Trucking costs, incurred hauling the concrete rubble base and the crushed aggregate to and from project sites
- City staff to oversee the concrete loading, unloading and crushing
- On-going non-personnel expenses, such as site and stockpile maintenance

Crushing is done at intervals based on several factors: the amount of rubble and aggregate base stockpiled at the site and the projected amounts of aggregate to be

needed in future projects. The City did not crush in 2000, however between February 22nd and May 4th, 1999 the City crushed over 118,000 tons of concrete rubble. The contract with Premier Aggregate for this crushing amounted to $211,000, a unit price of $1.78 per ton.

The most significant cost variable for this operation has been identified as the transportation costs. The further a truck has to travel the more it costs the City in driver time, number of trucks and maintenance. A 10-ton tandem dump truck costs approximately $60.00 per hour and transports approximately 6.75 tons of concrete rubble and 7.75 tons of crushed aggregate base per trip. It is estimated that the City will generate approximately 125,000 tons of concrete rubble and 135,000 tons of aggregate base in the next five years which will require 34,439 trips truck trips. The cost to the City will be approximately $840,000 to transport this material to and from Linden Yards.

Hauling 100,000 tons of rubble concrete to the site at eight tons per load generates 12,500 loads per year. With an average of 45 minutes round trip, usually 10 loads per day per truck can be hauled. This equates to an average cost for concrete rubble disposal of $6.00 per ton or $600,000 per 100,000 tons.

If the City's concrete crushing activities were relocated so that there was an increase in round time trip to 60 minutes, then an average of seven loads per day would be hauled. This equates to an average cost of $8.57 per ton, or $857,000 per 100,000 tons, or an increase of $257,000. An increase of 15 minutes in truck time increases the cost of concrete disposal by 43%.

The second half of the trucking equation is the delivery of the crushed aggregate base to the appropriate construction project sites. In this case there are, on average, 10 tons per load, and at a 45 minute round trip the hauling cost is $4.80 per ton, with an annual total of $480,000. At a 60 minute round trip the cost is $6.86 per ton with an annual total cost of $686,000, once again, a 43% increase in cost.

As can be seen from these examples, even a moderate change in the average round trip time can have a very significant impact on cost. In the example above the total annual in and out trucking costs would increase from $1.080 million to $1.543 million, which is an increase of $463,000.

The estimated transportation costs for the CIP Year 2003 have been included in this report as an example to show how the distance to site, travel time to site, cost of travel time and number of trips, were used to compute the transportation costs. These costs are shown in Table E-2 and Table E-3.

The summary of costs for transporting rubble and the costs for transporting aggregate to and from a number of possible alternative sites is shown in Table E-4 and Table E-5.

CIP Year 2003 - Table E-2

Concrete Crushing Project: Analysis of Cost for Transporting Rubble

Public Works (P.W.) Project No.	Yr. Project Listed on P.W. Project Map	*Year 2003*	CIP Rubble Cu. Yd.	Water Cu. Yd.	Sewer Cu. Yd.	Other Sources Cu. Yd.	Total Rubble Cu. Yd.
8	2003	Nicollet Avenue South (Phase I and Phase II)	5933	771	771	475	7,950
7	2003	27th Avenue South	6,217	808	808	497	8,331
13	2003	Logan Park Industrial	3,378	439	439	270	4,527
5	2003	15th Avenue SE	3,550	462	462	284	4,757
23	2003	Oak Lake, 10th & 6th Avenue N	3,522	458	458	282	4,719
22	2003	North Loop Industrial	10,972	1,426	1,426	878	14,702
22	2002	Lynhurst	1,252	163	163	100	1,678
23	2002	Hale/Hale East	1,055	137	137	84	1,414
18	2003	Bryn Mawr	1,399	182	182	112	1,875
20	2003	8th Avenue NE	63	8	8	5	84
21	2003	Como South	2,930	381	381	234	3,926
		Total	40,271	5,235	5,235	3,222	63,963

	*Distance to Crushing Site (miles)	*Travel Time to Crushing Site (one-way, minutes)	Cost of Travel Time Cost: $1/Minute	No. of Trips From Rubble Site to Crushing Site (hauling 8 yds of rubble per trip)	No. of Trips From Crushing Site to Rubble Site (dead haul)	**Cost to Truck to Crushing Site	** Cost to Return to Rubble Site	
Semi Site								
8	7	13	$13	994	994	$12,920	$12,920	
7	2	6	$6	1,041	1,041	$6,245	$6,245	
12	4	11	$11	566	566	$6,225	$6,225	
5	1	5	$5	595	595	$2,975	$2,975	
23 (2003)	4	11	$11	590	590	$6,490	$6,490	
22	3	10	$10	1,838	1,838	$18,380	$18,380	
22 (2002)	8	19	$19	210	210	$3,990	$3,990	
23 (2002)	7	16	$16	177	177	$2,830	$2,830	
18	6	14	$14	234	234	$3,275	$3,275	
20	3	10	$10	11	11	$110	$110	
21	2	8	$8	491	491	$3,930	$3,930	Total
	47	123	$123	6,745	6,745	$67,370	$67,370	$134,740
Linden Yards								
8	6	15	$15	994	994	$14,910	$14,910	
7	4	11	$11	1,041	1,041	$11,455	$11,455	
12	4	13	$13	566	566	$7,360	$7,360	
5	4	15	$15	595	595	$8,925	$8,925	
23 (2003)	2	7	$7	590	590	$4,130	$4,130	
22	1	5	$5	1,838	1,838	$9,190	$9,190	
22 (2002)	7	19	$19	210	210	$3,990	$3,990	
23 (2002)	7	18	$18	177	177	$3,185	$3,185	
18	2	6	$6	234	234	$1,405	$1,405	
20	3	11	$11	11	11	$120	$120	
21	5	15	$15	491	491	$7,365	$7,365	Total
	45	135	$135	6,745	6,745	$72,035	$72,035	$144,070
Bolander Site								
8	9	17	$17	994	994	$16,900	$16,900	
7	4	10	$10	1,041	1,041	$10,410	$10,410	
12	6	14	$14	566	566	$7,925	$7,925	
5	3	10	$10	595	595	$5,950	$5,950	
23 (2003)	7	18	$18	590	590	$10,620	$10,620	
22	6	16	$16	1,838	1,838	$29,410	$29,410	
22 (2002)	11	23	$23	210	210	$4,830	$4,830	
23 (2002)	9	20	$20	177	177	$3,540	$3,540	
18	8	17	$17	234	234	$3,980	$3,980	
20	6	15	$15	11	11	$165	$165	
21	3	10	$10	491	491	$4,910	$4,910	Total
	72	170	$170	6,745	6,745	$98,640	$98,640	$197,280
Shorham Site								
8	9	20	$20	994	994	$19,880	$19,880	
7	6	17	$17	1,041	1,041	$17,695	$17,695	
12	2	7	$7	566	566	$3,960	$3,960	
5	4	13	$13	595	595	$7,735	$7,735	
23 (2003)	4	11	$11	590	590	$6,490	$6,490	
22	4	15	$15	1,838	1,838	$27,570	$27,570	
22 (2002)	11	26	$26	210	210	$5,460	$5,460	
23 (2002)	10	24	$24	177	177	$4,250	$4,250	
18	6	20	$20	234	234	$4,680	$4,680	
20	2	8	$8	11	11	$90	$90	
21	4	13	$13	491	491	$6,385	$6,385	Total
	62	174	$174	6,745	6,745	$104,195	$104,195	$208,390
Humboldt Yards								
8	12	23	$23	994	994	$22,860	$22,860	
7	11	19	$19	1,041	1,041	$19,780	$19,780	
12	7	18	$18	566	566	$10,190	$10,190	
5	8	22	$22	595	595	$13,090	$13,090	
23 (2003)	5	13	$13	590	590	$7,670	$7,670	
22	7	16	$16	1,838	1,838	$29,410	$29,410	
22 (2002)	13	24	$24	210	210	$5,040	$5,040	
23 (2002)	13	26	$26	177	177	$4,600	$4,600	
18	5	18	$18	234	234	$4,210	$4,210	
20	6	16	$16	11	11	$175	$175	
21	9	23	$23	491	491	$11,290	$11,290	Total
	96	218	$218	6,745	6,745	$128,315	$128,315	$256,630
Airport Site								
8	7	16	$16	994	994	$15,905	$15,905	
7	8	21	$21	1,041	1,041	$21,860	$21,860	
12	14	28	$28	566	566	$15,850	$15,850	
5	12	27	$27	595	595	$16,065	$16,065	
23 (2003)	12	29	$29	590	590	$17,110	$17,110	
22	11	25	$25	1,838	1,838	$45,950	$45,950	
22 (2002)	9	19	$19	210	210	$3,990	$3,990	
23 (2002)	6	13	$13	177	177	$2,300	$2,300	
18	14	29	$29	234	234	$6,785	$6,785	
20	13	28	$28	11	11	$310	$310	
21	13	27	$27	491	491	$13,260	$13,260	Total
	119	262	$262	6,745	6,745	$159,390	$159,390	$318,780

* Travel distance and travel time were calculated by averaging the distance and time estimates from three mapping applications

** The formula for this figure is based on trucking costs of $60/hour = $1/minute. For example, Nicollet Avenue South (Phase I and II) to the Semi Site = 13minutes travel time x 994 No. of trips x $1/minute = $12,920. Calculations were rounded to the nearest $5 increment

CIP Year 2003 - Table E-2 continued

Concrete Crushing Project: Analysis of Cost for Transporting Rubble

Public Works (P.W.) Project No.	Yr. Project Listed on P.W. Project Map	Year 2003	CIP Rubble Cu. Yd.	Water Cu. Yd.	Sewer Cu. Yd.	Other Sources Cu. Yd.	Total Rubble Cu. Yd.
8	2003	Nicollet Avenue South (Phase I and Phase II)	5933	771	771	475	7,950
7	2003	27th Avenue South	6,217	808	808	497	8,331
13	2003	Logan Park Industrial	3,378	439	439	270	4,527
5	2003	15th Avenue SE	3,550	462	462	284	4,757
23	2003	Oak Lake, 10th & 6th Avenue N	3,522	458	458	282	4,719
22	2003	North Loop Industrial	10,972	1,426	1,426	878	14,702
22	2002	Lynhurst	1,252	163	163	100	1,678
23	2002	Hale/Hale East	1,055	137	137	84	1,414
18	2003	Bryn Mawr	1,399	182	182	112	1,875
20	2003	8th Avenue NE	63	8	8	5	84
21	2003	Como South	2,930	381	381	234	3,926
		Total	40,271	5,235	5,235	3,222	53,963

	*Distance to Crushing Site (miles)	*Travel Time to Crushing Site (one-way, minutes)	Cost of Travel Time Cost: $1/Minute	No. of Trips From Rubble Site to Crushing Site (hauling 8 yds of rubble per trip)	No. of Trips From Crushing Site to Rubble Site (dead haul)	**Cost to Truck to Crushing Site	** Cost to Return to Rubble Site	
Fratzalone								
8	17	23	$23	994	994	$22,860	$22,860	
7	14	19	$19	1,041	1,041	$19,780	$19,780	
12	11	18	$18	566	566	$10,190	$10,190	
5	12	17	$17	595	595	$10,115	$10,115	
23 (2003)	12	23	$23	590	590	$13,570	$13,570	
22	14	22	$22	1,838	1,838	$40,435	$40,435	
22 (2002)	19	29	$29	210	210	$6,090	$6,090	
23 (2002)	18	26	$26	177	177	$4,600	$4,600	
18	18	24	$24	234	234	$5,615	$5,615	
20	11	20	$20	11	11	$220	$220	
21	10	16	$16	491	491	$7,855	$7,855	Total
	154	237	$237	6,745	6,745	$141,330	$141,330	$282,660
CAMAS/Aggregate Industries								
8	21	28	$28	994	994	$27,830	$27,830	
7	20	25	$25	1,041	1,041	$26,025	$26,025	
12	16	26	$26	566	566	$14,715	$14,715	
5	17	30	$30	595	595	$17,850	$17,850	
23 (2003)	14	20	$20	590	590	$11,800	$11,800	
22	16	25	$25	1,838	1,838	$45,950	$45,950	
22 (2002)	11	22	$22	210	210	$4,620	$4,620	
23 (2002)	22	31	$31	177	177	$5,485	$5,485	
18	16	24	$24	234	234	$5,615	$5,615	
20	15	23	$23	11	11	$255	$255	
21	18	30	$30	491	491	$14,730	$14,730	Total
	186	284	$284	6,745	6,745	$174,875	$174,875	$349,750
TA Schifsky								
8	18	22	$22	994	994	$21,870	$21,870	
7	15	20	$20	1,041	1,041	$20,820	$20,820	
12	12	17	$17	566	566	$9,620	$9,620	
5	13	17	$17	595	595	$10,115	$10,115	
23 (2003)	14	22	$22	590	590	$12,980	$12,980	
22	15	21	$21	1,838	1,838	$38,600	$38,600	
22 (2002)	20	28	$28	210	210	$5,880	$5,880	
23 (2002)	19	25	$25	177	177	$4,425	$4,425	
18	18	23	$23	234	234	$5,380	$5,380	
20	13	19	$19	11	11	$210	$210	
21	12	16	$16	491	491	$7,855	$7,855	Total
	169	230	$230	6,745	6,745	$137,755	$137,755	$275,510
Bury and Carlson								
8	11	16	$16	994	994	$15,905	$15,905	
7	16	21	$21	1,041	1,041	$21,860	$21,860	
12	18	24	$24	566	566	$13,585	$13,585	
5	17	22	$22	595	595	$13,090	$13,090	
23 (2003)	17	24	$24	590	590	$14,160	$14,160	
22	15	21	$21	1,838	1,838	$38,600	$38,600	
22 (2002)	10	18	$18	210	210	$3,780	$3,780	
23 (2002)	12	17	$17	177	177	$3,010	$3,010	
18	17	23	$23	234	234	$5,380	$5,380	
20	17	26	$26	11	11	$285	$285	
21	18	22	$22	491	491	$10,800	$10,800	Total
	168	234	$234	6,745	6,745	$140,455	$140,455	$280,910
Barton								
8	20	26	$26	994	994	$25,845	$25,845	
7	18	23	$23	1,041	1,041	$23,945	$23,945	
12	14	24	$24	566	566	$13,585	$13,585	
5	16	28	$28	595	595	$16,660	$16,660	
23 (2003)	13	18	$18	590	590	$10,620	$10,620	
22	14	23	$23	1,838	1,838	$42,275	$42,275	
22 (2002)	17	27	$27	210	210	$5,670	$5,670	
23 (2002)	21	29	$29	177	177	$5,130	$5,130	
18	13	20	$20	234	234	$4,680	$4,680	
20	14	21	$21	11	11	$230	$230	
21	16	28	$28	491	491	$13,750	$13,750	Total
	176	267	$267	6,745	6,745	$162,390	$162,390	$324,780

* Travel distance and travel time were calculated by averaging the distance and time estimates from three mapping applications.

** The formula for this figure is based on trucking costs of $60/hour = $1/minute. For example, Nicollet Avenue South (Phase I and II) to the Semi Site = 13minutes travel time x 994 No. of trips x $1/minute = $12,920. Calculations were rounded to the nearest $5 increment.

CIP Year 2003 - Table E-2 continued

Concrete Crushing Project: Analysis of Cost for Transporting Rubble with Increased Travel Time and Reduced Yds. Per Trip

Public Works (P.W.) Project No.	Yr. Project Listed on P.W. Project Map	Year 2003	CIP Rubble Cu. Yd.	Water Cu. Yd.	Sewer Cu. Yd.	Other Sources Cu. Yd.	Total Rubble Cu. Yd.
8	2003	Nicollet Avenue South (Phase I and Phase II)	5933	771	771	475	7,950
7	2003	27th Avenue South	6,217	808	808	497	8,331
13	2003	Logan Park Industrial	3,378	439	439	270	4,527
5	2003	15th Avenue SE	3,550	462	462	284	4,757
23	2003	Oak Lake, 10th & 6th Avenue N	3,522	458	458	282	4,719
22	2003	North Loop Industrial	10,972	1,426	1,426	878	14,702
22	2002	Lynhurst	1,252	163	163	100	1,678
23	2002	Hale/Hale East	1,055	137	137	84	1,414
18	2003	Bryn Mawr	1,399	182	182	112	1,875
20	2003	8th Avenue NE	63	8	8	5	84
21	2003	Como South	2,930	381	381	234	3,926
		Total	40,271	5,235	5,235	3,222	53,963

	*Distance to Crushing Site (miles)	*Travel Time to Aggregate Site (one-way, minutes)	Cost of Travel Time Cost: $1/Minute	No. of Trips From Rubble Site to Crushing Site (hauling 5.5 yds of rubble per trip)	No. of Trips From Crushing Site to Rubble Site (dead haul)	**Cost to Truck to Crushing Site	**Cost to Return to Rubble Site	
Semi Site								
8	7	20	$20	1,445	1,445	$28,900	$28,900	
7	2	9	$9	1,515	1,515	$13,635	$13,635	
12	4	17	$17	823	823	$13,990	$13,990	
5	1	8	$8	865	865	$6,920	$6,920	
23 (2003)	4	17	$17	858	858	$14,585	$14,585	
22	3	15	$15	2,673	2,673	$40,095	$40,095	
22 (2002)	8	29	$29	305	305	$8,845	$8,845	
23 (2002)	7	24	$24	257	257	$6,170	$6,170	
18	6	21	$21	341	341	$7,160	$7,160	
20	3	15	$15	15	15	$225	$225	
21	2	12	$12	714	714	$8,570	$8,570	Total
	47	187	$187	9,811	9,811	$149,095	$149,095	$298,190
Linden Yards								
8	6	23	$23	1,445	1,445	$33,235	$33,235	
7	4	17	$17	1,515	1,515	$25,755	$25,755	
12	4	20	$20	823	823	$16,460	$16,460	
5	4	23	$23	865	865	$19,895	$19,895	
23 (2003)	2	11	$11	858	858	$9,440	$9,440	
22	1	8	$8	2,673	2,673	$21,385	$21,385	
22 (2002)	7	29	$29	305	305	$8,845	$8,845	
23 (2002)	7	27	$27	257	257	$6,940	$6,940	
18	2	9	$9	341	341	$3,070	$3,070	
20	3	17	$17	15	15	$255	$255	
21	5	23	$23	714	714	$16,420	$16,420	Total
	45	207	$207	9,811	9,811	$161,700	$161,700	$323,400
Bolander Site								
8	9	26	$26	1,445	1,445	$37,570	$37,570	
7	4	15	$15	1,515	1,515	$22,725	$22,725	
12	6	21	$21	823	823	$17,285	$17,285	
5	3	15	$15	865	865	$12,975	$12,975	
23 (2003)	7	27	$27	858	858	$23,165	$23,165	
22	6	24	$24	2,673	2,673	$64,150	$64,150	
22 (2002)	11	35	$35	305	305	$10,675	$10,675	
23 (2002)	9	30	$30	257	257	$7,710	$7,710	
18	8	26	$26	341	341	$8,865	$8,865	
20	6	38	$38	15	15	$570	$570	
21	3	15	$15	714	714	$10,710	$10,710	Total
	72	272	$272	9,811	9,811	$216,400	$216,400	$432,800
Shorham Site								
8	9	30	$30	1,445	1,445	$43,350	$43,350	
7	6	26	$26	1,515	1,515	$39,390	$39,390	
12	2	11	$11	823	823	$9,050	$9,050	
5	4	20	$20	865	865	$17,300	$17,300	
23 (2003)	4	17	$17	858	858	$14,585	$14,585	
22	4	23	$23	2,673	2,673	$61,480	$61,480	
22 (2002)	11	39	$39	305	305	$11,895	$11,895	
23 (2002)	10	36	$36	257	257	$9,250	$9,250	
18	6	30	$30	341	341	$10,230	$10,230	
20	2	12	$12	15	15	$180	$180	
21	4	20	$20	714	714	$14,280	$14,280	Total
	62	264	$264	9,811	9,811	$230,990	$230,990	$461,980
Humboldt Yards								
8	12	35	$35	1,445	1,445	$50,575	$50,575	
7	11	29	$29	1,515	1,515	$43,935	$43,935	
12	7	27	$27	823	823	$22,220	$22,220	
5	8	34	$34	865	865	$29,410	$29,410	
23 (2003)	5	20	$20	858	858	$17,160	$17,160	
22	7	25	$25	2,673	2,673	$66,825	$66,825	
22 (2002)	13	36	$36	305	305	$10,980	$10,980	
23 (2002)	13	40	$40	257	257	$10,280	$10,280	
18	5	28	$28	341	341	$9,550	$9,550	
20	6	24	$24	15	15	$360	$360	
21	9	35	$35	714	714	$25,000	$25,000	Total
	96	333	$333	9,811	9,811	$286,295	$286,295	$572,590
Airport Site								
8	7	24	$24	1,445	1,445	$34,680	$34,680	
7	8	32	$32	1,515	1,515	$48,480	$48,480	
12	14	42	$42	823	823	$34,565	$34,565	
5	12	41	$41	865	865	$35,465	$35,465	
23 (2003)	12	44	$44	858	858	$37,750	$37,750	
22	11	38	$38	2,673	2,673	$101,575	$101,575	
22 (2002)	9	29	$29	305	305	$8,845	$8,845	
23 (2002)	6	20	$20	257	257	$5,140	$5,140	
18	14	44	$44	341	341	$15,005	$15,005	
20	13	42	$42	15	15	$630	$630	
21	13	41	$41	714	714	$29,275	$29,275	Total
	119	397	$397	9,811	9,811	$351,410	$351,410	$702,820

* Travel distance and travel time were calculated by averaging the distance and time estimates from three mapping applications.

** The formula for this figure is based on trucking costs of $60/hour = $1/minute. For example, Nicollet Avenue South (Phase I and II) to the Semi Site = 20 minutes travel time x 1,445 No. of trips x $1/minute = $28,900. Calculations were rounded to the nearest $5 increment.

CIP Year 2003 - Table E-2 continued

Concrete Crushing Project: Analysis of Cost for Transporting Rubble with Increased Travel Time and Reduced Yds. Per Trip

Public Works (P.W.) Project No.	Yr. Project Listed on P.W. Project Map	Year 2003	CIP Rubble Cu. Yd.	Water Cu. Yd.	Sewer Cu. Yd.	Other Sources Cu. Yd.	Total Rubble Cu. Yd.
8	2003	Nicollet Avenue South (Phase I and Phase II)	5933	771	771	475	7,950
7	2003	27th Avenue South	6,217	808	808	497	8,331
13	2003	Logan Park Industrial	3,378	439	439	270	4,527
5	2003	15th Avenue SE	3,550	462	462	284	4,757
23	2003	Oak Lake, 10th & 6th Avenue N	3,522	458	458	282	4,719
22	2003	North Loop Industrial	10,972	1,426	1,426	878	14,702
22	2002	Lynhurst	1,252	163	163	100	1,678
23	2002	Hale/Hale East	1,055	137	137	84	1,414
18	2003	Bryn Mawr	1,399	182	182	112	1,875
20	2003	8th Avenue NE	63	8	8	5	84
21	2003	Como South	2,930	381	381	234	3,926
		Total	40,271	5,235	5,235	3,222	53,963

	*Distance to Crushing Site (miles)	*Travel Time to Crushing Site (one-way, minutes)	Cost of Travel Time Cost: $1/Minute	No. of Trips From Rubble Site to Crushing Site (hauling 5.5 yds of rubble per trip)	No. of Trips From Crushing Site to Rubble Site (dead haul)	**Cost to Truck to Crushing Site	** Cost to Return to Rubble Site	
Frattalone								
8	17	35	$35	1,445	1,445	$50,575	$50,575	
7	14	29	$29	1,515	1,515	$43,935	$43,935	
12	11	27	$27	823	823	$22,220	$22,220	
5	12	26	$26	865	865	$22,490	$22,490	
23 (2003)	12	35	$35	858	858	$30,030	$30,030	
22	14	33	$33	2,673	2,673	$88,210	$88,210	
22 (2002)	19	44	$44	305	305	$13,420	$13,420	
23 (2002)	18	39	$39	257	257	$10,025	$10,025	
18	16	36	$36	341	341	$12,275	$12,275	
20	11	30	$30	15	15	$450	$450	
21	10	24	$24	714	714	$17,135	$17,135	Total
	154	358	$358	9,811	9,811	$310,765	$310,765	$621,530
CAMAS/Aggregate Industries								
8	21	42	$42	1,445	1,445	$60,690	$60,690	
7	20	38	$38	1,515	1,515	$57,570	$57,570	
12	16	39	$39	823	823	$32,095	$32,095	
5	17	45	$45	865	865	$38,925	$38,925	
23 (2003)	14	30	$30	858	858	$25,740	$25,740	
22	16	38	$38	2,673	2,673	$101,575	$101,575	
22 (2002)	11	33	$33	305	305	$10,065	$10,065	
23 (2002)	22	47	$47	257	257	$12,080	$12,080	
18	16	36	$36	341	341	$12,275	$12,275	
20	15	35	$35	15	15	$525	$525	
21	18	45	$45	714	714	$32,130	$32,130	Total
	186	428	$428	9,811	9,811	$383,670	$383,670	$767,340
TA Schifsky								
8	18	33	$33	1,445	1,445	$47,685	$47,685	
7	15	45	$45	1,515	1,515	$68,175	$68,175	
12	12	26	$26	823	823	$21,400	$21,400	
5	13	26	$26	865	865	$22,490	$22,490	
23 (2003)	14	33	$33	858	858	$28,315	$28,315	
22	15	32	$32	2,673	2,673	$85,535	$85,535	
22 (2002)	20	42	$42	305	305	$12,810	$12,810	
23 (2002)	19	38	$38	257	257	$9,765	$9,765	
18	18	35	$35	341	341	$11,935	$11,935	
20	13	28	$28	15	15	$420	$420	
21	12	24	$24	714	714	$17,135	$17,135	Total
	169	362	$362	9,811	9,811	$325,665	$325,665	$651,330
Bury and Carlson								
8	11	24	$24	1,445	1,445	$34,680	$34,680	
7	16	32	$32	1,515	1,515	$48,480	$48,480	
12	18	36	$36	823	823	$29,630	$29,630	
5	17	33	$33	865	865	$28,545	$28,545	
23 (2003)	17	36	$36	858	858	$30,890	$30,890	
22	15	32	$32	2,673	2,673	$85,535	$85,535	
22 (2002)	10	27	$27	305	305	$8,235	$8,235	
23 (2002)	12	26	$26	257	257	$6,680	$6,680	
18	17	35	$35	341	341	$11,935	$11,935	
20	17	39	$39	15	15	$585	$585	
21	18	33	$33	714	714	$23,560	$23,560	Total
	168	353	$353	9,811	9,811	$308,755	$308,755	$617,510
Barton								
8	20	39	$39	1,445	1,445	$56,355	$56,355	
7	18	35	$35	1,515	1,515	$53,025	$53,025	
12	14	36	$36	823	823	$29,630	$29,630	
5	16	42	$42	865	865	$36,330	$36,330	
23 (2003)	13	27	$27	858	858	$23,165	$23,165	
22	14	35	$35	2,673	2,673	$93,555	$93,555	
22 (2002)	17	41	$41	305	305	$12,505	$12,505	
23 (2002)	21	44	$44	257	257	$11,310	$11,310	
18	13	30	$30	341	341	$10,230	$10,230	
20	14	32	$32	15	15	$480	$480	
21	16	42	$42	714	714	$29,990	$29,990	Total
	176	403	$403	9,811	9,811	$356,575	$356,575	$713,150

* Travel distance and travel time were calculated by averaging the distance and time estimates from three mapping applications

** The formula for this figure is based on trucking costs of $60/hour = $1/minute. For example, Nicollet Avenue South (Phase I and II) to the Semi Site = 13minutes travel time x 994 No. of trips x $1/minute = $12,920. Calculations were rounded to the nearest $5 increment.

CIP Year 2003 - Table E-3

Concrete Crushing Project: Analysis of Cost for Transporting Aggregate

Public Works (P.W.) Project No.	Yr. Project Listed on P.W. Project Map	*Year 2003*	CIP Aggregate Cubic Yards	Total Aggregate Cubic Yards (2 x CIP per P.W.)
8	2003	Nicollet Avenue South (Phase I and Phase II)	1235	2,470
7	2003	27th Avenue South	1,290	2,580
12	2003	Logan Park Industrial	4,029	8,058
5	2003	15th Avenue SE	810	1,620
23	2003	Oak Lake, 10th & 6th Avenue N	672	1,344
22	2003	North Loop Industrial	2,159	4,318
22	2002	Lynhurst	1,169	2,338
23	2002	Hale/Hale East	984	1,968
18	2003	Bryn Mawr	1,306	2,612
20	2003	8th Avenue NE	38	76
21	2003	Como South	2,742	5,484
		Total	16,434	32,868

	*Distance to Aggregate Site (miles)	*Travel Time to Aggregate Site (one-way, minutes)	Cost of Travel Time Cost: $1/Minute	No. of Trips From Crushing Site to Aggregate Site (hauling 10 yds aggregate per trip)	No. of Trips From Aggregate Site to Crushing Site (dead haul)	**Cost to Truck to Aggregate Site	** Cost to Return to Crushing Site	
Semi Site								
8	7	13	$13	247	247	$3,210	$3,210	
7	2	6	$6	258	258	$1,550	$1,550	
12	4	11	$11	806	806	$8,865	$8,865	
5	1	5	$5	162	162	$810	$810	
23 (2003)	4	11	$11	134	134	$1,475	$1,475	
22	3	10	$10	432	432	$4,320	$4,320	
22 (2002)	8	19	$19	234	234	$4,445	$4,445	
23 (2002)	7	16	$16	197	197	$3,150	$3,150	
18	6	14	$14	261	261	$3,655	$3,655	
20	3	10	$10	8	8	$80	$80	
21	2	8	$8	548	548	$4,385	$4,385	Total
	47	123	$123	3,287	3,287	$35,945	$35,945	$71,890
Linden Yards								
8	6	15	$15	247	247	$3,705	$3,705	
7	4	11	$11	258	258	$2,840	$2,840	
12	4	13	$13	806	806	$10,480	$10,480	
5	4	15	$15	162	162	$2,430	$2,430	
23 (2003)	2	7	$7	134	134	$940	$940	
22	1	5	$5	432	432	$2,160	$2,160	
22 (2002)	7	19	$19	234	234	$4,445	$4,445	
23 (2002)	7	18	$18	197	197	$3,545	$3,545	
18	2	6	$6	261	261	$1,565	$1,565	
20	3	11	$11	8	8	$90	$90	
21	5	15	$15	548	548	$8,220	$8,220	Total
	45	135	$135	3,287	3,287	$40,420	$40,420	$80,840
Shoreham Site								
8	9	20	$20	247	247	$4,940	$4,940	
7	6	17	$17	258	258	$4,385	$4,385	
12	2	7	$7	806	806	$5,640	$5,640	
5	4	13	$13	162	162	$2,105	$2,105	
23 (2003)	4	11	$11	134	134	$1,475	$1,475	
22	4	15	$15	432	432	$6,480	$6,480	
22 (2002)	10	26	$26	234	234	$6,085	$6,085	
23 (2002)	10	24	$24	197	197	$4,730	$4,730	
18	6	20	$20	261	261	$5,220	$5,220	
20	2	8	$8	8	8	$65	$65	
21	4	13	$13	548	548	$7,125	$7,125	Total
	61	174	$174	3,287	3,287	$48,250	$48,250	$96,500
Bolander Site								
8	9	17	$17	247	247	$4,200	$4,200	
7	4	10	$10	258	258	$2,580	$2,580	
12	6	14	$14	806	806	$11,285	$11,285	
5	3	10	$10	162	162	$1,620	$1,620	
23 (2003)	7	18	$18	134	134	$2,410	$2,410	
22	6	16	$16	432	432	$6,910	$6,910	
22 (2002)	11	23	$23	234	234	$5,380	$5,380	
23 (2002)	9	20	$20	197	197	$3,940	$3,940	
18	8	17	$17	261	261	$4,435	$4,435	
20	6	15	$15	8	8	$120	$110	
21	3	10	$10	548	548	$5,480	$5,480	Total
	72	170	$170	3,287	3,287	$48,360	$48,360	$96,720
Humboldt Yards								
8	12	23	$23	247	247	$5,680	$5,680	
7	11	19	$19	258	258	$4,900	$4,900	
12	7	18	$18	806	806	$14,510	$14,510	
5	8	22	$22	162	162	$3,565	$3,565	
23 (2003)	5	13	$13	134	134	$1,740	$1,740	
22	7	16	$16	432	432	$6,910	$6,910	
22 (2002)	13	24	$24	234	234	$5,615	$5,615	
23 (2002)	13	26	$26	197	197	$5,120	$5,120	
18	5	18	$18	261	261	$4,700	$4,700	
20	6	16	$16	8	8	$130	$130	
21	9	23	$23	548	548	$12,605	$12,605	Total
	96	218	$218	3,287	3,287	$65,475	$65,475	$130,950
Airport Site								
8	7	16	$16	247	247	$3,950	$3,950	
7	8	21	$21	258	258	$5,420	$5,420	
12	14	28	$28	806	806	$22,570	$22,570	
5	12	27	$27	162	162	$4,375	$4,375	
23 (2003)	12	29	$29	134	134	$3,885	$3,885	
22	11	25	$25	432	432	$10,800	$10,800	
22 (2002)	9	19	$19	234	234	$4,445	$4,445	
23 (2002)	6	13	$13	197	197	$2,560	$2,560	
18	14	29	$29	261	261	$7,570	$7,570	
20	13	28	$28	8	8	$225	$225	
21	13	27	$27	548	548	$14,795	$14,795	Total
	119	262	$262	3,287	3,287	$80,595	$80,595	$161,190

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* Travel distance and travel time were calculated by averaging the distance and time esbmates from three mapping applications.

***The formula for this figure is based on trucking costs of $60/hour = $1/minute. For example, Nicollet Avenue South (Phase I and II) to the Semi Site = 13 minutes travel time x 247 No. of trips x $1/minute = $3,210. Calculations were rounded to the nearest $5 increment.

CIP Year 2003 - Table E-3 continued

Concrete Crushing Project: Analysis of Cost for Transporting Aggregate

Public Works (P.W.) Project No.	Yr. Project Listed on P.W. Project Map	*Year 2003*	CIP Aggregate Cubic Yards	Total Aggregate Cubic Yards (2 x CIP per P.W.)
8	2003	Nicollet Avenue South (Phase I and Phase II)	1235	2,470
7	2003	27th Avenue South	1,290	2,580
12	2003	Logan Park Industrial	4,029	8,058
5	2003	15th Avenue SE	810	1,620
23	2003	Oak Lake, 10th & 6th Avenue N	672	1,344
22	2003	North Loop Industrial	2,159	4,318
22	2002	Lynhurst	1,169	2,338
23	2002	Hale/Hale East	984	1,968
18	2003	Bryn Mawr	1,306	2,612
20	2003	8th Avenue NE	38	76
21	2003	Como South	2,742	5,484
		Total	16,434	32,868

	*Distance to Aggregate Site (miles)	*Travel Time to Aggregate Site (one-way, minutes)	Cost of Travel Time Cost: $1/Minute	No. of Trips From Crushing Site to Aggregate Site (hauling 10 yds aggregate per trip)	No. of Trips From Aggregate Site to Crushing Site (dead haul)	**Cost to Truck to Aggregate Site	** Cost to Return to Crushing Site	
Fratlmore								
8	17	23	$23	247	247	$5,680	$5,680	
7	14	19	$19	258	258	$4,900	$4,900	
12	11	18	$18	806	806	$14,510	$14,510	
5	12	17	$17	162	162	$2,755	$2,755	
23 (2003)	12	23	$23	134	134	$3,080	$3,080	
22	14	22	$22	432	432	$9,505	$9,505	
22 (2002)	19	29	$29	234	234	$6,785	$6,785	
23 (2002)	18	26	$26	197	197	$5,120	$5,120	
18	16	24	$24	261	261	$6,265	$6,265	
20	11	20	$20	8	8	$160	$160	
21	10	16	$16	548	548	$8,770	$8,770	Total
	154	237	$237	3,287	3,287	$67,530	$67,530	$135,060
CAMAS/Aggregate Industries								
8	21	28	$28	247	247	$6,915	$6,915	
7	20	25	$25	258	258	$6,450	$6,450	
12	18	26	$26	806	806	$20,955	$20,955	
5	17	30	$30	162	162	$4,860	$4,860	
23 (2003)	14	20	$20	134	134	$2,680	$2,680	
22	16	25	$25	432	432	$10,800	$10,800	
22 (2002)	11	22	$22	234	234	$5,150	$5,150	
23 (2002)	22	31	$31	197	197	$6,105	$6,105	
18	16	24	$24	261	261	$6,265	$6,265	
20	15	23	$23	8	8	$185	$185	
21	18	30	$30	548	548	$16,440	$16,440	Total
	186	284	$284	3,287	3,287	$86,805	$86,805	$173,610
TA Schiffsky								
8	18	22	$22	247	247	$5,435	$5,435	
7	15	20	$20	258	258	$5,160	$5,160	
12	12	17	$17	806	806	$13,700	$13,700	
5	13	17	$17	162	162	$2,755	$2,755	
23 (2003)	14	22	$22	134	134	$2,950	$2,950	
22	15	21	$21	432	432	$9,070	$9,070	
22 (2002)	20	28	$28	234	234	$6,550	$6,550	
23 (2002)	19	25	$25	197	197	$4,925	$4,925	
18	18	23	$23	261	261	$6,005	$6,005	
20	13	19	$19	8	8	$150	$150	
21	12	16	$16	548	548	$8,770	$8,770	Total
	169	230	$230	3,287	3,287	$65,470	$65,470	$130,940
Bury and Carlson								
8	11	16	$16	247	247	$3,950	$3,950	
7	16	21	$21	258	258	$5,420	$5,420	
12	18	24	$24	806	806	$19,345	$19,345	
5	17	22	$22	162	162	$3,565	$3,565	
23 (2003)	17	24	$24	134	134	$3,215	$3,215	
22	15	21	$21	432	432	$9,070	$9,070	
22 (2002)	10	18	$18	234	234	$4,210	$4,210	
23 (2002)	12	17	$17	197	197	$3,350	$3,350	
18	17	23	$23	261	261	$6,005	$6,005	
20	17	26	$26	8	8	$210	$210	
21	18	22	$22	548	548	$12,055	$12,055	Total
	168	234	$234	3,287	3,287	$70,395	$70,395	$140,790
Barton								
8	20	26	$26	247	247	$6,420	$6,420	
7	18	23	$23	258	258	$5,935	$5,935	
12	14	24	$24	806	806	$19,345	$19,345	
5	16	28	$28	162	162	$4,535	$4,535	
23 (2003)	13	18	$18	134	134	$2,410	$2,410	
22	14	23	$23	432	432	$9,935	$9,935	
22 (2002)	17	27	$27	234	234	$6,320	$6,320	
23 (2002)	21	29	$29	197	197	$5,715	$5,715	
18	13	20	$20	261	261	$5,220	$5,220	
20	14	21	$21	8	8	$170	$170	
21	16	28	$28	548	548	$15,345	$15,345	Total
	176	267	$267	3,287	3,287	$81,350	$81,350	$162,700

* Travel distance and travel time were calculated by averaging the distance and time estimates from three mapping applications

***The formula for this figure is based on trucking costs of $60/hour = $1/minute. For example, Nicollet Avenue South (Phase I and II) to the Semi Site = 13 minutes travel time x 247 No. of trips x $1/minute = $3,210. Calculations were rounded to the nearest $5 increment.

CIP Year 2003 - Table E-3 continued

Concrete Crushing Project: Analysis of Cost for Transporting Aggregate with Increased Travel Time and Reduced Yds. Per Trip

Public Works (P.W.) Project No.	Yr. Project Listed on P.W. Project Map	*Year 2003*	CIP Aggregate Cubic Yards	Total Aggregate Cubic Yards (2 x CIP per P.W.)
8	2003	Nicollet Avenue South (Phase I and Phase II)	1235	2,470
7	2003	27th Avenue South	1,290	2,580
12	2003	Logan Park Industrial	4,029	8,058
5	2003	15th Avenue SE	810	1,620
23	2003	Oak Lake, 10th & 6th Avenue N	672	1,344
22	2003	North Loop Industrial	2,159	4,318
22	2002	Lynhurst	1,169	2,338
23	2002	Hale/Hale East	984	1,968
18	2003	Bryn Mawr	1,306	2,612
20	2003	8th Avenue NE	38	76
21	2003	Como South	2,742	5,484
		Total	16,434	32,868

	*Distance to Aggregate Site (miles)	*Travel Time to Aggregate Site (one-way, minutes)	Cost of Travel Time Cost: $1/Minute	No. of Trips From Crushing Site to Aggregate Site (hauling 7.5 yds aggregate per trip)	No. of Trips From Aggregate Site to Crushing Site (dead haul)	**Cost to Truck to Aggregate Site	** Cost to Return to Crushing Site	
Semi Site								
8	7	20	$20	329	329	$6,580	$6,580	
7	2	9	$9	344	344	$3,095	$3,095	
12	4	17	$17	1,074	1,074	$18,270	$18,270	
5	1	8	$8	216	216	$1,730	$1,730	
23 (2003)	4	17	$17	179	179	$3,045	$3,045	
22	3	15	$15	576	576	$8,640	$8,640	
22 (2002)	8	29	$29	312	312	$9,050	$9,050	
23 (2002)	7	24	$24	262	262	$6,290	$6,290	
18	6	21	$21	348	348	$7,310	$7,310	
20	3	15	$15	10	10	$150	$150	
21	2	12	$12	731	731	$8,770	$8,770	Total
	47	187	$187	4,382	4,382	$72,930	$72,930	$145,860
Linden Yards								
8	6	23	$23	329	329	$7,565	$7,565	
7	4	17	$17	344	344	$5,850	$5,850	
12	4	20	$20	1,074	1,074	$21,480	$21,480	
5	4	23	$23	216	216	$4,970	$4,970	
23 (2003)	2	11	$11	179	179	$1,970	$1,970	
22	1	8	$8	576	576	$4,610	$4,610	
22 (2002)	7	29	$29	312	312	$9,050	$9,050	
23 (2002)	7	27	$27	262	262	$7,075	$7,075	
18	2	9	$9	348	348	$3,130	$3,130	
20	3	17	$17	10	10	$170	$170	
21	5	23	$23	731	731	$16,815	$16,815	Total
	45	207	$207	4,382	4,382	$82,685	$82,685	$165,370
Bolander Site								
8	9	26	$26	329	329	$8,555	$8,555	
7	4	15	$15	344	344	$5,160	$5,160	
12	6	21	$21	1,074	1,074	$22,565	$22,565	
5	3	15	$15	216	216	$3,240	$3,240	
23 (2003)	7	27	$27	179	179	$4,835	$4,835	
22	6	24	$24	576	576	$13,825	$13,825	
22 (2002)	11	35	$35	312	312	$10,920	$10,920	
23 (2002)	9	30	$30	262	262	$7,860	$7,860	
18	8	26	$26	348	348	$9,050	$9,050	
20	6	23	$23	10	10	$230	$230	
21	3	15	$15	731	731	$10,965	$10,965	Total
	72	257	$257	4,382	4,382	$97,205	$97,205	$194,410
Shoreham Yards								
8	9	30	$30	329	329	$9,870	$9,870	
7	6	26	$26	344	344	$8,945	$8,945	
12	2	11	$11	1,074	1,074	$11,815	$11,815	
5	4	20	$20	216	216	$4,320	$4,320	
23 (2003)	4	17	$17	179	179	$3,045	$3,045	
22	4	23	$23	576	576	$13,250	$13,250	
22 (2002)	10	39	$39	312	312	$12,170	$12,170	
23 (2002)	10	36	$36	262	262	$9,455	$9,455	
18	6	30	$30	348	348	$10,440	$10,440	
20	2	12	$12	10	10	$120	$120	
21	4	20	$20	731	731	$14,620	$14,620	Total
	61	264	$264	4,382	4,382	$98,050	$98,050	$196,100
Humboldt Yards								
8	12	35	$35	329	329	$11,515	$11,515	
7	11	29	$29	344	344	$9,975	$9,975	
12	7	27	$27	1,074	1,074	$29,000	$29,000	
5	8	34	$34	216	216	$7,345	$7,345	
23 (2003)	5	20	$20	179	179	$3,580	$3,580	
22	7	25	$25	576	576	$14,400	$14,400	
22 (2002)	13	36	$36	312	312	$11,230	$11,230	
23 (2002)	13	40	$40	262	262	$10,480	$10,480	
18	5	28	$28	348	348	$9,745	$9,745	
20	6	24	$24	10	10	$240	$240	
21	9	35	$35	731	731	$25,585	$25,585	Total
	96	333	$333	4,382	4,382	$133,095	$133,095	$266,190
Airport Site								
8	7	24	$24	329	329	$7,895	$7,895	
7	8	32	$32	344	344	$11,010	$11,010	
12	14	42	$42	1,074	1,074	$45,110	$45,110	
5	12	41	$41	216	216	$8,855	$8,855	
23 (2003)	12	44	$44	179	179	$7,875	$7,875	
22	11	38	$38	576	576	$21,890	$21,890	
22 (2002)	9	29	$29	312	312	$9,050	$9,050	
23 (2002)	6	20	$20	262	262	$5,240	$5,240	
18	14	44	$44	348	348	$15,310	$15,310	
20	13	42	$42	10	10	$420	$420	
21	13	41	$41	731	731	$29,970	$29,970	Total
	119	397	$397	4,382	4,382	$162,625	$162,625	$325,250

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* Travel distance and travel time were calculated by averaging the distance and time estimates from three mapping applications

**The formula for this figure is based on trucking costs of $60/hour = $1/minute. For example, Nicollet Avenue South (Phase I and II) to the Semi Site = 20 minutes travel time x 329 No. of trips x $1/minute = $6,580. Calculations were rounded to the nearest $5 increment

CIP Year 2003 - Table E-3 continued

Concrete Crushing Project: Analysis of Cost for Transporting Aggregate with Increased Travel Time and Reduced Yds. Per Trip

Public Works (P.W.) Project No.	Yr. Project Listed on P.W. Project Map	Year 2003	CIP Aggregate Cubic Yards	Total Aggregate Cubic Yards (2 x CIP per P.W.)
8	2003	Nicollet Avenue South (Phase I and Phase II)	1235	2,470
7	2003	27th Avenue South	1,290	2,580
12	2003	Logan Park Industrial	4,029	8,058
5	2003	15th Avenue SE	810	1,620
23	2003	Oak Lake, 10th & 6th Avenue N	672	1,344
22	2003	North Loop Industrial	2,159	4,318
22	2002	Lynhurst	1,169	2,338
23	2002	Hale/Hale East	984	1,968
18	2003	Bryn Mawr	1,306	2,612
20	2003	8th Avenue NE	38	76
21	2003	Como South	2,742	5,484
		Total	16,434	32,868

	*Distance to Aggregate Site (miles)	*Travel Time to Aggregate Site (one-way, minutes)	Cost of Travel Time Cost: $1/Minute	No. of Trips From Crushing Site to Aggregate Site (hauling 7.5 yds aggregate per trip)	No. of Trips From Aggregate Site to Crushing Site (dead haul)	**Cost to Truck to Aggregate Site	** Cost to Return to Crushing Site	
Frattalone								
8	17	35	$35	329	329	$11,515	$11,515	
7	14	29	$29	344	344	$9,975	$9,975	
12	11	27	$27	1,074	1,074	$29,000	$29,000	
5	12	26	$26	216	216	$5,615	$5,615	
23 (2003)	12	35	$35	179	179	$6,265	$6,265	
22	14	33	$33	576	576	$19,010	$19,010	
22 (2002)	19	44	$44	312	312	$13,730	$13,730	
23 (2002)	18	39	$39	262	262	$10,220	$10,220	
18	16	36	$36	348	348	$12,530	$12,530	
20	11	30	$30	10	10	$300	$300	
21	10	24	$24	731	731	$17,545	$17,545	Total
	154	358	$358	4,382	4,382	$135,705	$135,705	$271,410
CAMAS/Aggregate Industries								
8	21	42	$42	329	329	$13,820	$13,820	
7	20	38	$38	344	344	$13,070	$13,070	
12	16	39	$39	1,074	1,074	$41,885	$41,885	
5	17	45	$45	216	216	$9,720	$9,720	
23 (2003)	14	30	$30	179	179	$5,370	$5,370	
22	16	38	$38	576	576	$21,890	$21,890	
22 (2002)	11	33	$33	312	312	$10,295	$10,295	
23 (2002)	22	47	$47	262	262	$12,315	$12,315	
18	16	36	$36	348	348	$12,530	$12,530	
20	15	35	$35	10	10	$350	$350	
21	18	45	$45	731	731	$32,895	$32,895	Total
	186	428	$428	4,382	4,382	$174,140	$174,140	$348,280
TA Schilsky								
8	18	33	$33	329	329	$10,855	$10,855	
7	15	30	$30	344	344	$10,320	$10,320	
12	12	26	$26	1,074	1,074	$27,925	$27,925	
5	13	26	$26	216	216	$5,615	$5,615	
23 (2003)	14	33	$33	179	179	$5,905	$5,905	
22	15	32	$32	576	576	$18,430	$18,430	
22 (2002)	20	42	$42	312	312	$13,105	$13,105	
23 (2002)	19	38	$38	262	262	$9,955	$9,955	
18	18	35	$35	348	348	$12,180	$12,180	
20	13	29	$29	10	10	$290	$290	
21	12	24	$24	731	731	$17,545	$17,545	Total
	169	348	$348	4,382	4,382	$132,125	$132,125	$264,250
Bury and Carlson								
8	11	24	$24	329	329	$7,895	$7,895	
7	16	32	$32	344	344	$11,010	$11,010	
12	18	36	$36	1,074	1,074	$38,665	$38,665	
5	17	33	$33	216	216	$7,130	$7,130	
23 (2003)	17	36	$36	179	179	$6,445	$6,445	
22	15	32	$32	576	576	$18,430	$18,430	
22 (2002)	10	27	$27	312	312	$8,425	$8,425	
23 (2002)	12	26	$26	262	262	$6,810	$6,810	
18	17	35	$35	348	348	$12,180	$12,180	
20	17	39	$39	10	10	$390	$390	
21	18	33	$33	731	731	$24,125	$24,125	Total
	168	353	$353	4,382	4,382	$141,505	$141,505	$283,010
Berton								
8	20	39	$39	329	329	$12,830	$12,830	
7	18	35	$35	344	344	$12,040	$12,040	
12	14	36	$36	1,074	1,074	$38,665	$38,665	
5	16	42	$42	216	216	$9,070	$9,070	
23 (2003)	13	27	$27	179	179	$4,830	$4,830	
22	14	35	$35	576	576	$20,160	$20,160	
22 (2002)	17	41	$41	312	312	$12,790	$12,790	
23 (2002)	21	44	$44	262	262	$11,530	$11,530	
18	13	30	$30	348	348	$10,440	$10,440	
20	14	32	$32	10	10	$320	$320	
21	16	42	$42	731	731	$30,700	$30,700	Total
	176	403	$403	4,382	4,382	$163,375	$163,375	$326,750

* Travel distance and travel time were calculated by averaging the distance and time estimates from three mapping applications.

**The formula for this figure is based on trucking costs of $60/hour = $1/minute. For example, Nicollet Avenue South (Phase I and II) to the Semi Site = 13 minutes travel time x 247 No. of trips x $1/minute = $3,210. Calculations were rounded to the nearest $5 increment.

Table E-4
Concrete Crushing - Cost for Transporting Rubble

2000-2004 CIP Projects - Original Estimate

	Semi Site	Linden Yards	Bolander Site	Shoreham Site	Humboldt Yards	Midwest	Bury&Carlson	Frattalone	TA Schifsky	Barton	Kraemer	Airport	CAMAS
2000	$60,260	$61,700	$91,910	$99,280	$118,540	$122,160	$116,910	$122,730	$117,050	$146,970	$135,910	$136,220	$159,180
2001	$72,960	$71,260	$107,260	$110,870	$121,750	$144,550	$139,800	$154,130	$147,530	$160,030	$154,200	$153,170	$176,650
2002	$41,500	$38,760	$60,690	$66,080	$79,840	$84,980	$85,550	$83,340	$81,050	$101,330	$102,620	97,090	$110,490
2003	$134,740	$144,070	$197,280	$208,390	$256,630	$271,260	$280,910	$282,660	$275,510	$324,780	$326,560	$318,780	$349,750
2004	$35,590	$44,480	$49,680	$48,460	$60,260	$63,150	$81,770	$75,490	$73,640	$83,910	$95,490	$99,520	$91,450
ite total:	**$345,050**	**$360,270**	**$506,820**	**$533,080**	**$637,020**	**$686,100**	**$704,940**	**$718,350**	**$694,780**	**$817,020**	**$814,780**	**$804,780**	**$887,520**

2000-2004 CIP Projects - Estimate With Increased Travel Time and Reduced Yards Per Trip

	Semi Site	Linden Yards	Bolander Site	Shoreham Site	Humboldt Yards	Midwest	Bury&Carlson	Frattalone	TA Schifsky	Barton	Kraemer	Airport Site	CAMAS
2000	$135,380	$134,830	$204,600	$220,800	$265,430	$266,810	$256,110	$270,850	$256,580	$322,040	$298,250	$301,180	$348,860
2001	$162,120	$159,000	$236,200	$244,100	$267,500	$318,610	$309,340	$338,550	$324,240	$352,430	$249,155	$338,150	$364,550
2002	$91,400	$85,980	$124,880	$147,010	$175,520	$186,650	$187,550	$184,090	$179,060	$222,360	$225,070	$214,900	$242,810
2003	$298,190	$323,400	$432,800	$461,980	$572,590	$597,760	$617,510	$621,530	$651,330	$713,150	$730,810	$702,820	$767,340
2004	$99,270	$79,840	$108,680	$105,710	$134,310	$138,960	$178,340	$166,850	$162,230	$184,280	$208,610	$219,620	$200,470
ite total:	**$786,360**	**$783,050**	**$1,107,160**	**$1,179,600**	**$1,415,350**	**$1,508,790**	**$1,548,850**	**$1,581,870**	**$1,573,440**	**$1,794,260**	**$1,711,895**	**$1,776,670**	**$1,924,030**
Cost per Site (avg.)	**$565,705**	**$571,660**	**$806,990**	**$856,340**	**$1,026,185**	**$1,097,445**	**$1,121,815**	**$1,198,325**	**$1,230,480**	**$1,249,600**	**$1,263,338**	**$1,290,725**	**$1,321,190**
Rank	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**

Table E-5
Concrete Crushing - Cost for Transporting Aggregate

2000-2004 CIP Projects - Original Estimate

	Semi Site	Linden Yards	Shoreham Site	Bolander Site	Humboldt Yards	Midwest	TA Schifsky	Frattalone	Bury&Carlson	Barton	Airport Site	Kraemer	CAMAS
2000	$30,800	$31,640	$41,110	$48,080	$54,030	$55,930	$58,060	$58,650	$64,400	$69,620	$75,890	$74,810	$75,800
2001	$28,390	$27,870	$42,290	$39,790	$46,310	$53,090	$53,700	$55,390	$49,760	$58,750	$54,440	$55,440	$64,650
2002	$17,370	$24,120	$29,340	$27,650	$42,710	$38,760	$37,050	$38,810	$43,180	$56,200	$50,140	$51,530	$60,650
2003	$71,890	$80,840	$96,500	$96,720	$130,950	$131,300	$130,940	$135,060	$140,790	$162,700	$161,190	$163,420	$173,610
2004	$14,100	$13,450	$16,870	$18,550	$19,110	$22,820	$27,380	$28,220	$28,760	$27,880	$34,910	$33,140	$30,870
ite total:	**$162,550**	**$177,920**	**$226,110**	**$230,790**	**$293,110**	**$301,900**	**$307,130**	**$316,130**	**$326,890**	**$375,150**	**$376,570**	**$378,340**	**$405,580**

2000-2004 CIP Projects - Increased Travel Time and Reduced Yards Per Trip

	Semi Site	Linden Yards	Shoreham Site	Bolander Site	Humboldt Yards	Midwest	TA Schifsky	Frattalone	Bury&Carlson	Barton	Airport Site	Kraemer	CAMAS
2000	$63,100	$63,380	$84,050	$97,850	$111,150	$112,170	$116,440	$118,700	$129,950	$139,750	$153,190	$150,730	$152,300
2001	$57,770	$57,000	$85,410	$80,090	$93,890	$107,040	$108,240	$112,720	$100,800	$118,680	$109,890	$112,460	$130,160
2002	$35,040	$49,110	$59,910	$56,090	$85,510	$78,240	$75,170	$78,180	$86,730	$113,250	$100,410	$103,180	$122,060
2003	$145,860	$165,370	$196,100	$194,410	$266,190	$264,650	$264,250	$271,410	$283,010	$326,750	$325,250	$329,280	$348,280
2004	$28,690	$27,410	$33,760	$37,500	$39,140	$45,960	$55,440	$56,990	$57,580	$56,380	$70,720	$66,720	$62,020
ite total:	**$330,460**	**$362,270**	**$459,230**	**$465,940**	**$595,880**	**$608,060**	**$619,540**	**$638,000**	**$658,070**	**$754,810**	**$759,460**	**$762,370**	**$814,820**
Cost per Site (avg.)	**$246,505**	**$270,095**	**$342,670**	**$348,365**	**$444,495**	**$454,980**	**$463,335**	**$477,065**	**$492,480**	**$564,980**	**$568,015**	**$570,355**	**$610,200**
Rank	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**

Best Practices Summary

Few municipalities contacted engaged in concrete recycling operations. Several variables factored into this behavior. The most common reason for not recycling concrete is that many municipalities bid their street projects out to private vendors and leave the decision, of whether to recycle the concrete rubble generated, to the discretion of the contractor. Thus, the Public Works officials are not always informed as to whether or not the contractors chose to engage in concrete recycling efforts. The majority of these municipalities do not require a certain percentage of the rubble generated to be recycled.

In addition, some municipalities do not have enough concrete right-of-ways to justify a concrete recycling effort, as the majority of their streets are asphalt. Many of these municipalities do recycle the asphalt rubble they generate.

Portland, Oregon and the City of Chicago were two municipalities that did report concrete recycling operations. Portland's operation is entirely City-owned and operated and costs an estimated $152,000 per year, plus trucking costs. The City is preparing to move their operation to a site near their airport, on City-owned land.

The City of Chicago also reported recycling the concrete they generate in street projects. No formal contract exists for this process; the City transports the material to a private vendor who accepts the rubble free of charge, crushes it and then sells the aggregate back to the City for approximately $8 per ton.

APPRAISALS, RELOCATION AND OPERATIONS ANALYSIS
of the
IMPOUND LOT
CONCRETE CRUSHING
LINDEN YARDS OPERATIONS STORAGE

Executive Summary
(with amendments approved June 28, 2001)

This report has been prepared in response to a November, 1999, City Council and Mayor directive requesting the MCDA and City staff to conduct appraisals, site survey work, geotechnical and environmental analysis, and a parking and theater location analysis for the Parade Area; and to identify Impound Lot, Concrete Crushing, and Linden Yards Operations Storage relocation and operations alternatives.

The City-Owned Land Work Group was convened in November 1999, to conduct this analysis. The Work Group included representatives from MCDA, the Mayor's Office, the City Coordinator's Office, and the Planning, Public Works, Finance, and Police departments. The Work Group was led by Chuck Ballentine of the Planning Department.

The analysis was initiated to accommodate: 1) the possible Guthrie Theater expansion in the Parade Stadium Area, 2) the proposed North-South Boulevard Connector for the Near Northside Redevelopment, and 3) the Bassett Creek Valley Master Plan which includes the property of the Impound Lot, Concrete Crushing, and the Linden Yards Storage Area.

When the Guthrie Theater selected the Mississippi River site for expansion, the analysis was re-focused on the Impound Lot, Concrete Crushing, and the Linden Yards Operations Storage appraisals, relocation and operations alternatives.

Short-Term Strategies and Long-Term Options

The Impound Lot, Concrete Crushing, and the Linden Yards Operations Storage were analyzed as three separate operations and the recommended actions for each of the operations have been developed as short-term strategies and long-term options. It is recommended that the short-term strategies occur between the years 2001-2005. The selection and success of a long-term option will be dependent upon the successful implementation of the short-term strategies. It is recommended that the long-term options occur between the years 2006-2010.

The short-term strategies are highlighted in Table 1, Table 2, and Table 3, and the long-term options are shown in the attached flowcharts.

Table 1
Impound Lot - Short-Term Strategies (2001-2005)

Strategy	Responsible Departments	Additional Revenue /(Expense)	Completion and Reporting Schedule
Reduce Number of Vehicles on Police hold	Public Works and Police	Negligible	Annually report to T&PW and PS&RS
Utilize I-394 and I-94 ROW for Overflow Impounds	Public Works	Negligible	Fall 2001 report to T&PW
Develop Shared-Use Plan with Park and Recreation Board for West Overflow Lot	Public Works and Park and Recreation Board	To be determined	Spring 2002 report to T&PW
~~Create a feasibility plan for the NWIP site, and~~ investigate alternative sites for relocation – delete from further consideration the properties located near 58th St. and Cedar Ave S. and near 28th Ave S. and Hwy 62.	MCDA and Public Works	($100,000 – includes Concrete Crushing site investigation costs)	Spring 2002 report to CD & T&PW
Analyze Department procedures that create impounds; create a landscape plan for existing site; ~~investigate privatization~~	Public Works, Police, Operations and Regulatory Services	To be determined	Spring 2002 report to T&PW and PS&RS
Create Plan to Downsize to East Area and Redevelop West Area	Public Works, MCDA, Planning	To be determined	Spring 2002 report to T&PW and

The selection and success of any long-term option will be dependent upon the successful implementation of some or all of the short-term strategies. The long-term options are summarized in Flowchart 4, and are as follows:

- Maintain a Downsized Operation at Existing Site
- Relocate to a New Surface Lot ~~or a New Parking Facility~~
- Significantly Reduce the City's Role in Providing Impound Services

Table 2
Concrete Crushing – Short-Term Strategies (2001-2005)

Strategy	Responsible Departments	Additional Revenue /(Expense)	Completion and Reporting Schedule
Administer crushing operation at existing site	Public Works	negligible	Spring 2001 report to T&PW
Lease site to an operator which sells excess rubble and aggregate	Public Works	To be determined	Fall 2001 report to T&PW and W&M
Administer bids for crushing on an alternative City-owned site	Public Works	To be determined	Spring 2002 report to T&PW and W&M
Conduct bidding for a private operator to lease an alternative City-owned site	Public Works	To be determined	Spring 2002 report to T&PW and W&M
Investigate the purchase/lease of alternative sites and create a plan for redevelopment of existing site	Public Works, MCDA and Planning	Costs included in Impound Lot site investigation costs	Spring 2002 report to CD and T&PW
Investigate the City becoming a customer at a private vendor's site	Public Works	To be determined	Spring 2002 report to T&PW

The selection and success of any long-term option will be dependent upon the successful implementation of some or all of the short-term strategies. The long-term options are summarized in Flowchart 5, and are as follows:

- Relocate to one or more alternative sites and lease site to a private operator
- Relocate to one or more sites and use a vendor to crush only the quantities required for the City's needs
- City becomes a customer of a private operator's site

Table 3
Linden Yards Operations Storage
Short-Term Strategies (2001-2005)

Strategy	Responsible Departments	Revenue /(Expense)	Completion and Reporting Schedule
Relocate seasonally accessed equipment to other City-owned sites	Public Works	Negligible	Spring 2002 report to T&PW
Consolidate frequently accessed materials and equipment at existing site	Public Works	Negligible	Spring 2002 report to T&PW
Consolidate frequently accessed bulk storage/transfer operational materials at existing site	Public Works	Negligible	Spring 2002 report to T&PW
Investigate the purchase/lease of alternative sites and create a plan for redevelopment of existing site	Public Works, MCDA and Planning	Costs included in Impound Lot site investigation costs	Spring 2002 report to T&PW and CD

The selection and success of any long-term option will be dependent upon the successful implementation of some or all of the short-term strategies. The long-term options are summarized in Flowchart 6, and are as follows:

- Purchase/lease alternative sites for the remaining materials, equipment, and bulk storage/transfer operational materials

The Impound Lot, Concrete Crushing and Linden Yards Operations Storage Short Term Strategies and Long Term Options, with four amendments, were approved by the City Council on June 22. The Council Action was signed by the Mayor on June 28. The four amendments are as follows:

1. delete the option of "privatization" from the Impound Lot Options
2. delete the option of a "new parking facility ramp structure" from the Impound Lot Options
3. delete from further consideration the properties located near 58th St. and Cedar Ave S. and near 28th Ave S and Hwy 62.
4. refer the appropriation request for $100,000 to the budget process

The Short Term Strategies that were approved must be completed prior to the selection of a Long Term Option. It is now the responsibility of individual City Departments and teams of City Departments to complete these strategies and report back to the appropriate City Council Committees. The list of strategies and the responsible City Departments are shown in Table 1, Table 2, and Table 3 of the attached Executive Summary.

Please identify the strategies and the reporting schedule for which your department is reponsible. The City-Owned Land Work Group will be convened to discuss the tasks and the timetable.

Tim David and I would like to thank the members of the City-Owned Land Work Group for their participation in this process. The COLWG members are to be commended for creating strategies and options that will assist the City Council and the Mayor to make informed decisions for the Impound Lot, Concrete Crushing and Linden Yards Operations Storage.

If you should have any questions please email or call me at 2616.

Minneapolis Planning Department
350 South Fifth Street, Room 210
Minneapolis, MN 55415-1385
(612) 673-2597 Phone
(612) 673-2728 Fax
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MEMORANDUM

DATE: August 27, 2002

TO: David Sonnenberg – Public Works
Robert Olson – Police Department
Mary Merrill Anderson – Park Board
Chuck Lutz - MCDA
John Bergquist - Licenses

FROM: Chuck Ballentine

SUBJECT: Impound Lot, Concrete Crushing and Linden Yards

I am writing to ask for your updates on the Impound Lot, Concrete Crushing and Linden Yards short-term strategies adopted.

The attached executive summary and schedule of short-term strategies needs review at this point in time. Could you please look over the list and indicate progress.

If you could please get this material to me by the week of September 9, 2002, that would be great.

If you have any questions, please call me.

Copies to: Mayor R. T. Rybak
Deputy Mayor David Fey
Tom Leighton, Planning,
Darrell Washington, MCDA