



City of Milwaukee

City Hall
200 East Wells Street
Milwaukee, WI 53202

Meeting Agenda PUBLIC WORKS COMMITTEE

ALD. ROBERT BAUMAN, CHAIR

Ald. Joseph Dudzik, Vice-Chair

Ald. Willie Wade, Ald. Robert Donovan, and Ald. Robert Puente

Staff Assistant, Terry MacDonald, 286-2233

Fax: (414) 286-3456, E-mail: tmacdo@milwaukee.gov

Tuesday, March 9, 2010

9:00 AM

Room 301-B, City Hall

1. [091431](#) Resolution relative to approving the levying of assessments and construction of assessable public improvement projects at various locations and appropriating funds for these purposes.

Sponsors: THE CHAIR
Attachments: [Cover Letter](#)
[Official Notice Number 69](#)
[Hearing Notice List](#)

2. [091430](#) Substitute resolution determining it necessary to make various assessable public improvements at various locations and appropriating funds for these purposes with the City engineering cost estimated to be \$114,000 for a total estimated cost of these projects being \$1,678,000.

Sponsors: THE CHAIR
Attachments: [Fiscal Note](#)
[Cover Letter](#)
[Hearing Notice List](#)

3. [091432](#) Substitute resolution determining it necessary to make various nonassessable public improvements at various locations and appropriating funds for these purposes with the City engineering cost estimated to be \$2,180,000 for a total estimated cost of these projects being \$31,809,000.

Sponsors: THE CHAIR
Attachments: [Cover Letter](#)
[Fiscal Note](#)
[Hearing Notice List](#)

4. [091433](#) Substitute resolution approving construction of nonassessable public improvements at various locations and appropriating funds for these purposes with the City construction cost estimated to be \$3,341,000 for a total estimated cost of these projects being \$4,859,300.

Sponsors: THE CHAIR

Attachments: [Fiscal Note](#)
[Cover Letter](#)
[Hearing Notice List](#)

5. [091414](#) Resolution approving a Three-Year Harbor Statement of Intentions for the Port of Milwaukee.
- Sponsors:** THE CHAIR
- Attachments:** [Cover Letter](#)
 [Fiscal Note](#)
 [Statement of Intentions](#)
 [Hearing Notice List](#)
6. [091514](#) Resolution declaring the City-owned parking lot at 2353 North Farwell Avenue surplus to municipal needs and authorizing an Option to Purchase with Mercy Housing Lakefront, Inc. to purchase and develop the property with workforce housing, in the 3rd Aldermanic District.
- Sponsors:** Ald. Kovac
- Attachments:** [Fiscal Note.doc](#)
 [Land Disposition Report](#)
 [Hearing Notice List](#)
7. [091459](#) Resolution approving conveyance of the former Jackie Robinson Middle School at 3245 North 37th Street by the Milwaukee Board of School Directors, in the 7th Aldermanic District.
- Sponsors:** THE CHAIR
- Attachments:** [Proposed Substitute A.rtf](#)
 [Fiscal Note.doc](#)
 [Land Disposition Report.doc](#)
8. [091495](#) Resolution authorizing acceptance of quit claim deeds dedicating land for public alley purposes, in the 8th Aldermanic District.
- Sponsors:** Ald. Donovan
- Attachments:** [Fiscal Note.doc](#)
 [Exhibit A.pdf](#)
 [Hearing Notice List](#)
9. [091362](#) An ordinance relating to depositing construction waste at city area sanitation yards and the size of trailers used to transport such waste.
- Sponsors:** THE CHAIR
- Attachments:** [Fiscal note](#)
 [Hearing Notice List](#)
 [Proposed Substitute A](#)
 [Hearing Notice List](#)

10. [091528](#) An ordinance relating to commercial garbage receptacles.
- Sponsors:** Ald. Davis
- Attachments:** [Fiscal note](#)
 [Hearing Notice List](#)
11. [090072](#) Communication relating to the report and recommendations of the Recycling Task Force.
- Sponsors:** THE CHAIR
- Attachments:** [Final Report and Recommendations](#)
 [Digital recording of the April 6 2009 meeting](#)
 [April 6 2009 meeting minutes](#)
 [Digital recording of the April 27 2009 meeting](#)
 [April 27 2009 meeting minutes and exhibits](#)
 [Letter to City Attorney requesting legal opinion](#)
 [City Attorney's opinion](#)
 [Digital recording of the May 18, 2009 meeting](#)
 [May 18 2009 meeting minutes and exhibit](#)
 [Digital recording of the June 8 2009 meeting](#)
 [June 8 2009 meeting minutes and exhibit](#)
 [6-8-09 email re letter from Mr. Lindquist Waukesha](#)
 [June 29 2009 Notice of Recycling facility tours](#)
 [7-21-09 email and attachment from Lisa Schaal regarding article Tracking trash](#)
 [Digital recording of the July 27, 2009 meeting](#)
 [July 27 2009 meeting minutes and exhibits](#)
 [8-6-09 Email and attachment from Mike Daun regarding MRF of the Month article](#)
 [8-13-09 email and attachment from Lisa Schaal regarding Solar Powered Waste](#)
 [Digital recording of the September 14 2009 meeting](#)
 [September 14 2009 meeting minutes and exhibit](#)
 [Digital recording of the October 26, 2009 meeting](#)
 [October 26 2009 meeting minutes and exhibit](#)
 [Digital recording of the December 16 2009 meeting](#)
 [December 16 2009 meeting minutes and exhibits](#)
 [Letter from FCR Recycling to Mr. Cole](#)
 [Hearing Notice List](#)
12. [091357](#) Communication from the Department of Public Works relating to sanitary bypass pumps.
- Sponsors:** Ald. Murphy
- Attachments:** [Communication](#)
 [Hearing Notice List](#)
13. [091417](#) Communication from the Department of Public Works relating to moveable bridges.

Sponsors: THE CHAIR
Attachments: [Hearing Notice List](#)

14. [091438](#) Resolution authorizing the transfer of funds from the Street Improvement-State and/or Federal Aid Program to the Street Reconstruct or Resurface Program - Regular City Program for funding of local street improvements under the Local Roads Improvement Program, with the City cost of \$1,645,741.78, with a grantor cost of \$1,006,258.22, for a total estimated cost of \$2,652,000.

Sponsors: THE CHAIR
Attachments: [Cover Letter](#)
[Fiscal Note](#)
[Hearing Notice List](#)

15. [091457](#) Resolution authorizing the proper city officials to execute amended Utility Agreements with the State of Wisconsin, Department of Transportation (WISDOT) for work on City of Milwaukee facilities in conjunction with the North-South Mitchell Interchange and WISDOT Audit Agreement, with a total estimated cost of \$2,903,054.77 with an estimated Grantor's share of \$2,532,791.61 and an estimated City of Milwaukee share of \$370,263.16

Sponsors: THE CHAIR
Attachments: [Cover Letter](#)
[Fiscal Note](#)
[Comptroller's Certificate](#)
[Cost Analysis](#)
[Agreement Amendment 80](#)
[Agreement Amendment 79](#)
[Agreement Amendment 81](#)
[Hearing Notice List](#)

16. [091447](#) Resolution relative to the 2010 Capitol Improvement Program to provide funds for the maintenance of the underground conduit manholes at various locations.

Sponsors: THE CHAIR
Attachments: [Cover Letter](#)
[Fiscal Note](#)
[Hearing Notice List](#)

17. [091448](#) Resolution relative to the 2010 Capitol Improvement Program to provide funds for underground conduit work at various locations.

Sponsors: THE CHAIR
Attachments: [Cover Letter](#)
[Fiscal Note](#)
[Hearing Notice List](#)

18. [091415](#) Resolution authorizing the permanent removal of all traffic control signal equipment at the intersections of West Mineral Street and South 5th Street, and West Washington

Street and South 5th Street.

Sponsors: THE CHAIR

Attachments: [Cover Letter](#)

[Fiscal Note](#)

[Letters from Wisconsin Department of Transportation](#)

[Hearing Notice List](#)

19. [091425](#) Resolution rescinding various special privileges that are no longer necessary.

Sponsors: THE CHAIR

Attachments: [Cover Letter](#)

[Fiscal Note](#)

[Hearing Notice List](#)

20. [091463](#) Resolution authorizing the installation of a new traffic control signal at the intersection of West Bolivar Avenue and South 13th Street in the 13th Aldermanic District at a cost of \$61,000 for a total estimated cost of \$61,000, 100% of which will be reimbursable from the Wisconsin Department of Transportation.

Sponsors: Ald. Witkowski

Attachments: [Cover Letter](#)

[Fiscal Note](#)

[Hearing Notice List](#)

21. [091470](#) Resolution authorizing the proper City Officers to execute Conveyance of Rights in Land, which will convey to the State of Wisconsin that part of a 20 foot wide sewer easement located between the existing southerly right of way line of Interstate Highway 43/894 and the proposed southerly right of way line of Interstate Highway 43/894, located in the 13th Aldermanic District.

Sponsors: THE CHAIR

Attachments: [Cover Letter](#)

[Fiscal Note](#)

[Land Conveyance](#)

[Proper City Officers Signatures.doc](#)

[Map](#)

[Hearing Notice List](#)

22. [091471](#) Resolution authorizing the proper City Officers to execute Conveyance of Rights in Land, which will convey to the State of Wisconsin Easement WE 398 & SE 2110 located at West Mallory Avenue extended between South 15th Place extended and the existing easterly right of way line of Interstate Highway 94 in the 13th Aldermanic District.

Sponsors: THE CHAIR

Attachments: [Cover Letter](#)
[Fiscal Note](#)
[Land Conveyance](#)
[Proper City Officers Signatures.doc](#)
[Map](#)
[Hearing Notice List](#)

23. [091472](#) Resolution authorizing the proper City Officers to execute Conveyance of Rights in Land, which will convey to the State of Wisconsin that part of a 35 foot wide sewer easement located between the existing southerly right of way line of Interstate Highway 43/894 and the proposed southerly right of way line of Interstate Highway 43/894, located in the 13th Aldermanic District.

Sponsors: THE CHAIR

Attachments: [Cover letter](#)
[Fiscal Note](#)
[Land Conveyance](#)
[Proper City Officers Signatures.doc](#)
[Exhibit 5795885.PDF](#)

The following files may be placed on file as no longer needed:

24. [081637](#) Substitute resolution approving Lease Agreement between Waters' New Biotech Company and the Port of Milwaukee.

Sponsors: THE CHAIR

Attachments: [Cover Letter](#)
[Port cover letter](#)
[Fiscal note](#)
[Lease agreement](#)
[Fiscal Analysis](#)
[Hearing Notice List](#)

25. [090425](#) Resolution relative to the application, acceptance and funding of a 2009 Wisconsin Department of Natural Resources Aquatic Invasive Species Control Grant for the Port of Milwaukee and related work.

Sponsors: THE CHAIR

26. [090528](#) Resolution approving an amendment to the lease agreement with the North American Salt Company.

Sponsors: THE CHAIR

Attachments: [Cover Letter](#)
[Fiscal Note](#)
[Amendment to Lease Agreement](#)
[Fiscal Analysis](#)
[Hearing Notice List](#)

27. [090894](#) Resolution to grant a special privilege to PJ's Real Estate - Milwaukee LLC to construct and maintain a ramp for the premises at 3000 W. Lincoln Avenue, in the 8th Aldermanic District.

Sponsors: THE CHAIR

Attachments: [Special Privilege Petition and Drawings](#)

This meeting will be webcast live at www.milwaukee.gov/channel25.

Members of the Common Council and its standing committees who are not members of this committee may attend this meeting to participate or to gather information. Notice is given that this meeting may constitute a meeting of the Common Council or any of its standing committees, although they will not take any formal action at this meeting.

Upon reasonable notice, efforts will be made to accommodate the needs of persons with disabilities through sign language interpreters or auxiliary aids. For additional information or to request this service, contact the Council Services Division ADA Coordinator at 286-2998, (FAX)286-3456, (TDD)286-2025 or by writing to the Coordinator at Room 205, City Hall, 200 E. Wells Street, Milwaukee, WI 53202.

Limited parking for persons attending meetings in City Hall is available at reduced rates (5 hour limit) at the Milwaukee Center on the southwest corner of East Kilbourn and North Water Street. Parking tickets must be validated in Room 205, (City Clerk's Office) or the first floor Information Booth in City Hall.

Persons engaged in lobbying as defined in s. 305-43-4 of the Milwaukee Code of Ordinances are required to register with the City Clerk's Office License Division. Registered lobbyists appearing before a Common Council committee are required to identify themselves as such. More information is available at www.milwaukee.gov/lobby.



Legislation Details (With Text)

File #: 091431 **Version:** 0

Type: Resolution **Status:** In Committee

File created: 3/2/2010 **In control:** PUBLIC WORKS COMMITTEE

On agenda: **Final action:**

Effective date:

Title: Resolution relative to approving the levying of assessments and construction of assessable public improvement projects at various locations and appropriating funds for these purposes.

Sponsors: THE CHAIR

Indexes: PUBLIC IMPROVEMENTS

Attachments: Cover Letter, Official Notice Number 69, Hearing Notice List

Date	Ver.	Action By	Action	Result	Tally
3/2/2010	0	COMMON COUNCIL	ASSIGNED TO		
3/4/2010	0	PUBLIC WORKS COMMITTEE	HEARING NOTICES SENT		
3/4/2010	0	PUBLIC WORKS COMMITTEE	HEARING NOTICES SENT		

Number

091431

Version

ORIGINAL

Reference

Sponsor

THE CHAIR

Title

Resolution relative to approving the levying of assessments and construction of assessable public improvement projects at various locations and appropriating funds for these purposes.

Requestor

INFRASTRUCTURE SERVICES DEPARTMENT

Drafter

MLD:dr

Report 9

02/19/10

February 19, 2010

File Number

To the Honorable, the Common Council

Dear Council Members:

The Common Council has adopted preliminary resolutions which determined it necessary and in the public interest to make various public improvements and to make special assessments therefore.

The Commissioner of Public Works is filing this report consisting of a list of projects. This report is subject to amendment at the next Public Works Committee Hearing. The plans and specifications of said improvements are on file in the City Engineer's Office.

I am herewith submitting a report regarding the above matter and recommend adoption of the amended resolution approving same.

Respectfully submitted,

Special Deputy Commissioner
of Public Works

MLD:dr
Afr 9
Report Appended

**OFFICIAL NOTICE NUMBER 69
PUBLIC HEARING ON PROPOSED IMPROVEMENTS
AND SPECIAL ASSESSMENTS**

There will be a public hearing held by the Public Works Committee of the Common Council of the City of Milwaukee concerning the following improvements and special assessments. The Commissioner of Public Works has determined these improvements are necessary and in the public interest.

The hearing will be held at the date and time shown below:

<p>TUESDAY</p> <p>MARCH 9, 2010</p> <p>ROOM 301-B – CITY HALL</p> <p>9:00 A.M.</p>
--

8th Aldermanic District

W. Pierce St. – S. 38th St. to S. 39th St. (ST211110120):

Concrete pavement reconstruction, replace all curb and gutter, sidewalk and driveway approaches, sodding (4.0-foot width of tree border area), grading, and tree removal where necessary.

S. 32nd St. – W. Drury Ln. to W. Oklahoma Ave. (ST211050104):

Asphalt pavement resurfacing, replace all curb and gutter, replace sidewalk and driveway approaches where necessary, sodding (7.0-foot width of tree border area), and grading.

13th Aldermanic District

W. Kimberly Ave. – S. 18th St. to S. 20th St. (ST211090115):

Asphalt pavement resurfacing, replace curb and gutter, sidewalk and driveway approaches where necessary, sodding (7.0-foot width of tree border area), and grading.

W. Parnell Ave. – S. 27th St. to W. Ramsey Ave. (ST211090121):

Asphalt pavement resurfacing, replace curb and gutter, sidewalk and driveway approaches where necessary, sodding (12-15-foot width of tree border area), and grading.

S. 22nd St. – W. Bridge St. to W. Henry Ave. (ST211080107):

Asphalt pavement reconstruction, replace all curb and gutter, replace sidewalk and driveway approaches where necessary, sodding (7.0-foot width of tree border area), and grading.

You may examine a copy of the report recommending these projects in Room 908, 841 North Broadway, Milwaukee, Wisconsin during the hours of 8:30 A.M. and 4:30 P.M., Monday through Friday.

This notice is published by authority of the Common Council of the City of Milwaukee in accordance with Section 66.0703 and any other pertinent sections of the Wisconsin Statutes and in the manner directed by Section 115-42 of the Milwaukee Code of Ordinances.

Office of the City Clerk, Milwaukee

Ronald D. Leonhardt, City Clerk

February 22, 2010

PW FILE NUMBER: 091431

[illegible]



Legislation Details (With Text)

File #: 091430 **Version:** 1
Type: Resolution **Status:** In Committee
File created: 3/2/2010 **In control:** PUBLIC WORKS COMMITTEE
On agenda: **Final action:**
Effective date:

Title: Substitute resolution determining it necessary to make various assessable public improvements at various locations and appropriating funds for these purposes with the City engineering cost estimated to be \$114,000 for a total estimated cost of these projects being \$1,678,000.

Sponsors: THE CHAIR

Indexes: PUBLIC IMPROVEMENTS

Attachments: Fiscal Note, Cover Letter, earing Notice List

Date	Ver.	Action By	Action	Result	Tally
3/2/2010	0	COMMON COUNCIL	ASSIGNED TO		
3/4/2010	1	CITY CLERK	DRAFT SUBMITTED		
3/4/2010	0	PUBLIC WORKS COMMITTEE	HEARING NOTICES SENT		
3/4/2010	0	PUBLIC WORKS COMMITTEE	HEARING NOTICES SENT		
3/5/2010	0	PUBLIC WORKS COMMITTEE	HEARING NOTICES SENT		
3/5/2010	0	PUBLIC WORKS COMMITTEE	HEARING NOTICES SENT		
3/5/2010	0	PUBLIC WORKS COMMITTEE	HEARING NOTICES SENT		

Number

091430

Version

SUBSTITUTE 1

Sponsor

THE CHAIR

Title

Substitute resolution determining it necessary to make various assessable public improvements at various locations and appropriating funds for these purposes with the City engineering cost estimated to be \$114,000 for a total estimated cost of these projects being \$1,678,000.

Analysis

This resolution authorizes engineering studies and directs the Commissioner of Public Works to determine any benefits or damages which would result if the projects were to be constructed. After the Commissioner files his report, a Public Hearing will be held on those projects determined assessable. A resolution will be submitted after the Public Hearing authorizing construction. The City cost for engineering these projects is estimated to be \$114,000 with the total cost estimated to be \$1,678,000.

Body

Resolved, By the Common Council of the City of Milwaukee that it is necessary and in the public interest to do the following described work according to City specifications, and that such public improvements and resulting special assessments be made pursuant to Section 66.0703 and any other pertinent sections of the Wisconsin Statutes and in the manner directed by Section 115-42 of the Milwaukee Code of Ordinances:

1st Aldermanic District

N. 20th St. (east roadway) - W. Purdue St. to W. Hampton Ave. (ST211120104): Paving the roadway with asphalt. Laying a concrete curb and gutter. Laying concrete sidewalk. Doing all the necessary grading pertaining to said work. (Nonassessable Reconstruction Paving Fund -- \$13,000). The total estimated cost for this project including the requested amount is \$126,000. This project is anticipated to be completed during the 2012 construction season.

2nd Aldermanic District

W. Stark St. - N. 64th St. to N. 68th St. (ST211110142): Paving the roadway with asphalt. Laying a concrete curb and gutter. Laying concrete sidewalk. Doing all the necessary grading pertaining to said work. (Nonassessable Reconstruction Paving Fund -- \$16,000). The total estimated cost for this project including the requested amount is \$174,000. This project is anticipated to be completed during the 2011 construction season.

4th Aldermanic District

E. Erie St. - A point 600 feet east of N. Jackson St. to N. Jackson St. (ST211080128) File Number 090969: Paving the roadway with asphalt. Laying a concrete curb and gutter. Laying concrete sidewalk. Doing all the necessary grading pertaining to said work. (Nonassessable Reconstruction Paving Fund -- \$7,000, Additional Funds). The total estimated cost for this project including the requested amount is \$432,000. This project is anticipated to be completed during the 2010 construction season.

6th Aldermanic District

N. 6th St. - W. Fiebrantz Ave. to a point 250 feet m/l north of W. Fiebrantz Ave. (ST2111210101): Paving the roadway with asphalt. Laying a concrete curb and gutter. Laying concrete sidewalk. Doing all the necessary grading pertaining to said work. (Nonassessable Reconstruction Paving Fund -- \$6,000). The total estimated cost for this project including the requested amount is \$41,000. This project is anticipated to be completed during the 2012 construction season.

10th Aldermanic District

N. 72nd St. - W. Locust St. to W. Burleigh St. (ST211100107) File Number 081266: Paving the roadway with asphalt. Laying a concrete curb and gutter. Laying concrete sidewalk. Doing all the necessary grading pertaining to said work. (Nonassessable Reconstruction Paving Fund -- \$15,000, Additional Funds). The total estimated cost for this project including the requested amount is \$180,000. This project is anticipated to be completed during the 2011 construction season.

Alley between W. Adler St., W. Dixon St., S. 62nd St., and S. 63rd St. (ST212050114) File Number 050224: Paving the alley with concrete. Doing all the necessary grading pertaining to said work. (Nonassessable Alley Paving Fund -- \$8,000). The total estimated cost for this project including the requested amount is \$93,000. This project is anticipated to be completed during the 2010 construction season.

11th Aldermanic District

Alley between W. Leroy Ave., W. Plainfield Ave., S. 51st St., and S. 52nd St. (ST212030103): Paving the alley with concrete. Doing all the necessary grading pertaining to said work. (Nonassessable Alley Paving Fund -- \$5,000, Additional Funds). The total estimated cost for this project including the requested amount is \$121,000. This project is anticipated to be completed during the 2010 construction season.

13th Aldermanic District

S. 17th St. - W. Morgan Ave. to W. Ohio Ave. (ST211120102): Paving the roadway with asphalt. Laying a concrete curb and gutter. Laying concrete sidewalk. Doing all the necessary grading pertaining to said work. (Nonassessable Reconstruction Paving Fund -- \$20,000). The total estimated cost for this project including the requested amount is \$201,000. This project is anticipated to be completed during the 2012 construction season.

S. 18th St. - W. Morgan Ave. to W. Holt Ave. (ST211120103): Paving the roadway with asphalt. Laying a concrete curb and gutter. Laying concrete sidewalk. Doing all the necessary grading pertaining to said work. (Nonassessable Reconstruction Paving Fund -- \$9,000). The total estimated cost for this project including the requested amount is \$95,000. This project is anticipated to be completed during the 2012 construction season.

14th Aldermanic District

S. Herman St. - E. Euclid Ave. to E. Oklahoma Ave. (ST211100117): Paving the roadway with asphalt. Laying a concrete curb and gutter. Laying concrete sidewalk. Doing all the necessary grading pertaining to said work. (Nonassessable Reconstruction Paving Fund -- \$5,000, Additional

Funds). The total estimated cost for this project including the requested amount is \$115,000. This project is anticipated to be completed during the 2010 construction season.

Alley between E. Bennett Ave., S. Ellen St., S. Kinnickinnic Ave., and E. Oklahoma Ave. (ST212080110): Paving the alley with concrete. Doing all the necessary grading pertaining to said work. (Nonassessable Alley Paving Fund -- \$10,000). The total estimated cost for this project including the requested amount is \$100,000. This project is anticipated to be completed during the 2010 construction season.

; and, be it

Further Resolved, That the abutting and adjacent properties be assessed a portion of the cost, said assessment to be recommended by the Commissioner of Public Works in his report; and, be it

Further Resolved, That all assessments and payments be made in accordance with Section 115-42 of the Milwaukee Code of Ordinances; and, be it

Further Resolved, That all City departments are authorized to do engineering, surveying, preparing of plans, and estimates of cost thereof, to be utilized in the preparation of said report of the Commissioner of Public Works; and, be it

Further Resolved, That the Department of Public Works is authorized to use the funding as specified in the above description of work; and, be it

Further Resolved, That the City Comptroller is authorized and directed to transfer such funds which are available for this purpose to the appropriate capital Project/Grant accounts.

Requestor
Infrastructure Services Division
Drafter
MLD:dr
Apr 9
03/04/10

CITY OF MILWAUKEE FISCAL NOTE

CC-170 (REV. 6/86)

A) DATE: March 4, 2010

FILE NUMBER: 091430

Original Fiscal Note ☐ Substitute ☒

SUBJECT: Substitute resolution determining it necessary to make various assessable public improvements at various locations and appropriating funds for these purposes with the City engineering cost estimated to be \$114,000 for a total estimated cost of these projects being \$1,678,000.

B) SUBMITTED BY (name/title/dept./ext.): Mary Dziewiontkoski/Assessment Engineer/Public Works/X2460

C) CHECK ONE: ☒ ADOPTION OF THIS FILE AUTHORIZES EXPENDITURES.
☐ ADOPTION OF THIS FILE DOES NOT AUTHORIZE EXPENDITURES; FURTHER COMMON COUNCIL ACTION NEEDED.
 LIST ANTICIPATED COSTS IN SECTION G BELOW.
☐ NOT APPLICABLE/NO FISCAL IMPACT.

D) CHARGE TO: ☐ DEPARTMENTAL ACCOUNT (DA) ☐ CONTINGENT FUND (CF)
☐ CAPITAL PROJECTS FUND (CPF) ☐ SPECIAL PURPOSE ACCOUNTS (SPA)
☐ PERM. IMPROVEMENT FUNDS (PIF) ☐ GRANT & AID ACCOUNTS (G & AA)
☐ OTHER SPECIFY)

E) PURPOSE	SPECIFY TYPE/USE	ACCOUNT	EXPENDITURE	REVENUE	SAVINGS
SALARIES/WAGES:					
SUPPLIES:					
MATERIALS:					
NEW EQUIPMENT:					
EQUIPMENT REPAIR:					
OTHER Paving					
Street	ST211		\$91,000		
Alley	ST212		\$23,000		
TOTALS:			\$114,000		

F) FOR EXPENDITURES AND REVENUES WHICH WILL OCCUR ON AN ANNUAL BASIS OVER SEVERAL YEARS CHECK THE APPROPRIATE BOX BELOW AND THEN LIST EACH ITEM AND DOLLAR AMOUNT SEPARATELY.

<input type="checkbox"/> 1-3 YEARS	<input type="checkbox"/> 3-5 YEARS	
<input type="checkbox"/> 1-3 YEARS	<input type="checkbox"/> 3-5 YEARS	
<input type="checkbox"/> 1-3 YEARS	<input type="checkbox"/> 3-5 YEARS	

G) LIST ANY ANTICIPATED FUTURE COSTS THIS PROJECT WILL REQUIRE FOR COMPLETION:

H) LIST ANY ANTICIPATED FUTURE COSTS THIS PROJECT WILL REQUIRE FOR COMPLETION: *The total expenditure includes the cost of engineering, inspection, construction, and city forces. The total cost of this project is \$114,000.*

PLEASE LIST ANY COMMENTS ON REVERSE SIDE AND CHECK HERE ☐

February 19, 2010

File Number

To the Honorable, the Common Council

Dear Council Members:

Please find attached a "Title Only" resolution for determining it necessary to make various assessable public improvements to be introduced at the next Common Council Meeting. It is our intent to insert the body of the resolution in this jacket prior to the meeting of the Public Works Committee of March 9, 2010.

Respectfully submitted,

Special Deputy Commissioner
of Public Works

MLD:dr
Title only
Apr 9

PW FILE NUMBER: 091430

[illegible]



Legislation Details (With Text)

File #: 091432 **Version:** 1

Type: Resolution **Status:** In Committee

File created: 3/2/2010 **In control:** PUBLIC WORKS COMMITTEE

On agenda: **Final action:**

Effective date:

Title: Substitute resolution determining it necessary to make various nonassessable public improvements at various locations and appropriating funds for these purposes with the City engineering cost estimated to be \$2,180,000 for a total estimated cost of these projects being \$31,809,000.

Sponsors: THE CHAIR

Indexes: PUBLIC IMPROVEMENTS

Attachments: Cover Letter, Fiscal Note, Hearing Notice List

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3/2/2010	0	COMMON COUNCIL	ASSIGNED TO		
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3/4/2010	0	PUBLIC WORKS COMMITTEE	HEARING NOTICES SENT		
3/4/2010	0	PUBLIC WORKS COMMITTEE	HEARING NOTICES SENT		
3/5/2010	0	PUBLIC WORKS COMMITTEE	HEARING NOTICES SENT		
3/5/2010	0	PUBLIC WORKS COMMITTEE	HEARING NOTICES SENT		

Number

091432

Version

SUBSTITUTE 1

Sponsor

THE CHAIR

Title

Substitute resolution determining it necessary to make various nonassessable public improvements at various locations and appropriating funds for these purposes with the City engineering cost estimated to be \$2,180,000 for a total estimated cost of these projects being \$31,809,000.

Analysis

This resolution authorizes engineering studies on projects which by City Charter are nonassessable. After design plans and estimates of costs have been prepared, a resolution authorizing construction will be submitted to the Common Council. The City cost for engineering these projects is estimated to be \$2,180,000 with the total cost estimated to be \$31,809,000.

Body

Resolved, By the Common Council of the City of Milwaukee, that it is necessary and in the public interest to do the following described improvements according to City specifications:

1st Aldermanic District

W. Lawn Ave. - 500 feet west of N. 13th St. to 800 feet west of N. 13th St. (WT410100024): Relaying water main. (Nonassessable Water Fund Budget Line 5010 -- \$7,000; Nonassessable Water Fund Budget Line 6410 -- \$8,000). The total estimated cost for this project including the requested amount is \$60,000. This project is anticipated to be completed during the 2010 construction season.

N. 31st St. - W. Glendale Ave. to W. Courtland Ave. (SM495100046): Relaying sanitary sewer. (Nonassessable Sewer Maintenance Relay Fund -- \$12,000). The total estimated cost for this project including the requested amount is \$129,000. This project is anticipated to be completed during the 2011 construction season.

2nd and 10th Aldermanic Districts

W. Capitol Dr. (north side) - N. 70th St. to N. 71st St. (SM495100045): Relaying sanitary sewer. (Nonassessable Sewer Maintenance Relay Fund -- \$12,000). The total estimated cost for this project including the requested amount is \$65,000. This project is anticipated to be completed during the 2010 construction season.

3rd Aldermanic District

West bank of the Milwaukee River - 340 feet m/l south of E. Locust St. (Ext'd) to 275 feet m/l south of E. Chambers St. (Ext'd) (SM495100053): Combined sewer lining. (Nonassessable Sewer Maintenance Relay Fund -- \$15,000). The total estimated cost for this project including the requested amount is \$725,000. This project is anticipated to be completed during the 2011 construction season.

N. Riverboat Rd. - N. Humboldt Ave. to E. North Ave. (SM495100054): Combined sewer lining. (Nonassessable Sewer Maintenance Relay Fund -- \$15,000). The total estimated cost for this project including the requested amount is \$963,000. This project is anticipated to be completed

during the 2011 construction season.

3rd and 4th Aldermanic Districts

Juneau Avenue Bascul Bridge over the Milwaukee River (BR100100102): Design services for bridge replacement. (City Share Non-assessable Structure Fund -- \$1,500,000). The total estimated cost for this project including the requested amount is \$18,800,000. This project is anticipated to be completed during the 2011-2012 construction season.

4th Aldermanic District

Clybourn Street Vertical Lift Bridge over the Milwaukee River (BR100100103): Design services for mechanical, hydraulic, and electrical engineering. (City Share Non-assessable Structure Fund -- \$300,000). The total estimated cost for this project including the requested amount is \$8,450,000. This project is anticipated to be completed during the 2010-2011 construction season.

W. Vliet St. - N. 14th St. to 138 feet m/l east of N. 15th St. (SM495100047): Relaying combined sewer. (Nonassessable Sewer Maintenance Relay Fund -- \$12,000). The total estimated cost for this project including the requested amount is \$56,000. This project is anticipated to be completed during the 2011 construction season.

5th Aldermanic District

Area bounded by W. Center St., W. Burleigh St., N. 82nd St., and N. 92nd St. (SM494100104): Sanitary sewer lining. (Nonassessable Sewer Maintenance Relay Fund -- \$15,000). The total estimated cost for this project including the requested amount is \$777,000. This project is anticipated to be completed during the 2011 construction season.

N. 95th St. - W. Concordia Ave. to W. Auer Ave. (SM495100051): Sanitary sewer lining. (Nonassessable Sewer Maintenance Relay Fund -- \$12,000). The total estimated cost for this project including the requested amount is \$66,000. This project is anticipated to be completed during the 2010 construction season.

7th Aldermanic District

N. 37th St. - W. Keefe Ave. to W. Nash St. (SM495100052): Relaying sanitary sewer. (Nonassessable Sewer Maintenance Relay Fund -- \$15,000). The total estimated cost for this project including the requested amount is \$146,000. This project is anticipated to be completed during the 2011 construction season.

10th Aldermanic District

W. Stevenson St. - N. 74th St. to N. 76th St. (SM495100048): Relaying sanitary sewer. (Nonassessable Sewer Maintenance Relay Fund -- \$15,000). The total estimated cost for this project including the requested amount is \$148,000. This project is anticipated to be completed during the 2011 construction season.

11th Aldermanic District

W. Stevenson St. - N. 74th St. to N. 76th St. (SM495100048): Relaying sanitary sewer. (Nonassessable Sewer Maintenance Relay Fund -- \$15,000). The total estimated cost for this project including the requested amount is \$148,000. This project is anticipated to be completed during the 2011 construction season.

Area bounded by W. Beloit Rd., W. Oklahoma Ave., S. 99th St., and S. 95th St. (SM495100049): Sanitary sewer lining. (Nonassessable Sewer Maintenance Relay Fund -- \$15,000). The total estimated cost for this project including the requested amount is \$428,000. This project is anticipated to be completed during the 2011 construction season.

Area bounded by W. Dakota St., W. Ohio Ave., S. 74th St., and S. 68th St. (SM495100050): Sanitary sewer lining. (Nonassessable Sewer Maintenance Relay Fund -- \$15,000). The total estimated cost for this project including the requested amount is \$466,000. This project is anticipated to be completed during the 2011 construction season.

S. 63rd St. - 440 feet north of W. Harrison Ave. to W. Harrison Ave. (WT410101047): Relaying water main. (Nonassessable Water Fund Budget Line 5010 -- \$7,000; Nonassessable Water Fund Budget Line 6410 -- \$8,000). The total estimated cost for this project including the requested amount is \$80,000. This project is anticipated to be completed during the 2010 construction season.

13th Aldermanic District

W. Edgerton Ave. - S. 23rd St. to S. 14th St. (SM495100043): Storm drain/inlets. (Nonassessable Sewer Maintenance Relay Fund -- \$12,000). The total estimated cost for this project including the requested amount is \$100,000. This project is anticipated to be completed during the 2011 construction season.

Various Aldermanic Districts

Bridge Safety Inspection (BR100100101): (City Share Non-assessable Structure Fund -- \$175,000). The total estimated cost of this project is \$175,000. This project is anticipated to be completed in 2010.

City of Greenfield

S. 124th St. - W. Holmes Ave. to 175 feet north of W. Edgerton Ave. (WT410061125) File Number 041695: Water main extension. (Nonassessable Water Fund Budget Line 5010 -- \$3,000; Nonassessable Water Fund Budget Line 6410 -- \$7,000). The total estimated cost for this project including the requested amount is \$175,000. This project is anticipated to be completed during the 2010 construction season.

;and, be it

Further Resolved, That all City Departments are authorized to perform engineering, surveys, plan preparation, and determine an estimated cost thereof; and, be it

Further Resolved, That the Department of Public Works is authorized to use the funding as specified in the above description of work; and, be it

Further Resolved, That the City Comptroller is authorized and directed to transfer such funds which are available for this purpose to the appropriate capital Project/Grant accounts.

Requestor
Infrastructure Services Division

Drafter
MLD:dr
Npr 9
03/04/10

February 19, 2010

File Number

To the Honorable, the Common Council

Dear Council Members:

Please find attached a "Title Only" resolution for determining it necessary to make various nonassessable public improvements to be introduced at the next Common Council Meeting. It is our intent to insert the body of the resolution in this jacket prior to the meeting of the Public Works Committee of March 9, 2010.

Respectfully submitted,

Special Deputy Commissioner
of Public Works

MLD:dr
Title only
Npr 9

CITY OF MILWAUKEE FISCAL NOTE

A) DATE March 4, 2010FILE NUMBER: 091432Original Fiscal Note ☐ Substitute ☒

SUBJECT: Substitute resolution determining it necessary to make various nonassessable public improvements at various locations and appropriating funds for these purposes with the City engineering cost estimated to be \$2,180,000 for a total estimated cost of these projects being \$31,809,000.

B) SUBMITTED BY (Name/title/dept./ext.): Mary Dziewiontkoski/Assessment Engineer/Public Works/X2460

C) CHECK ONE: ☒ ADOPTION OF THIS FILE AUTHORIZES EXPENDITURES
☐ ADOPTION OF THIS FILE DOES NOT AUTHORIZE EXPENDITURES; FURTHER COMMON COUNCIL ACTION NEEDED. LIST ANTICIPATED COSTS IN SECTION G BELOW.
☐ NOT APPLICABLE/NO FISCAL IMPACT.

D) CHARGE TO: ☐ DEPARTMENT ACCOUNT(DA) ☐ CONTINGENT FUND (CF)
☐ CAPITAL PROJECTS FUND (CPF) ☐ SPECIAL PURPOSE ACCOUNTS (SPA)
☐ PERM. IMPROVEMENT FUNDS (PIF) ☐ GRANT & AID ACCOUNTS (G & AA)
☐ OTHER (SPECIFY)

E) PURPOSE	SPECIFY TYPE/USE	ACCOUNT	EXPENDITURE	REVENUE	SAVINGS
SALARIES/WAGES:					
SUPPLIES:					
MATERIALS:					
NEW EQUIPMENT:					
	Water WT410		\$40,000		
	Sewer SM494		\$15,000		
	Sewer SM495		\$150,000		
OTHER:	Bridges BR100		\$1,975,000		
TOTALS			\$2,180,000		

F) FOR EXPENDITURES AND REVENUES WHICH WILL OCCUR ON AN **ANNUAL** BASIS OVER SEVERAL YEARS CHECK THE APPROPRIATE BOX BELOW AND THEN LIST EACH ITEM AND DOLLAR AMOUNT **SEPARATELY**.

<input type="checkbox"/> 1-3 YEARS	<input type="checkbox"/> 3-5 YEARS	
<input type="checkbox"/> 1-3 YEARS	<input type="checkbox"/> 3-5 YEARS	
<input type="checkbox"/> 1-3 YEARS	<input type="checkbox"/> 3-5 YEARS	

G) LIST ANY ANTICIPATED FUTURE COSTS THIS PROJECT WILL REQUIRE FOR COMPLETION:

H) COMPUTATIONS USED IN ARRIVING AT FISCAL ESTIMATE: The total expenditure includes the cost of engineering, inspection, construction, and city forces. The total cost of these projects is estimated to be \$2,180,000.

PLEASE LIST ANY COMMENTS ON REVERSE SIDE AND CHECK HERE ☐

PW FILE NUMBER: 091432

[illegible]



Legislation Details (With Text)

File #: 091433 **Version:** 1

Type: Resolution **Status:** In Committee

File created: 3/2/2010 **In control:** PUBLIC WORKS COMMITTEE

On agenda: **Final action:**

Effective date:

Title: Substitute resolution approving construction of nonassessable public improvements at various locations and appropriating funds for these purposes with the City construction cost estimated to be \$3,341,000 for a total estimated cost of these projects being \$4,859,300.

Sponsors: THE CHAIR

Indexes: PUBLIC IMPROVEMENTS

Attachments: Fiscal Note, Cover Letter, Hearing Notice List

Date	Ver.	Action By	Action	Result	Tally
3/2/2010	0	COMMON COUNCIL	ASSIGNED TO		
3/4/2010	1	CITY CLERK	DRAFT SUBMITTED		
3/4/2010	0	PUBLIC WORKS COMMITTEE	HEARING NOTICES SENT		
3/4/2010	0	PUBLIC WORKS COMMITTEE	HEARING NOTICES SENT		
3/4/2010	0	PUBLIC WORKS COMMITTEE	HEARING NOTICES SENT		
3/5/2010	0	PUBLIC WORKS COMMITTEE	HEARING NOTICES SENT		

Number

091433

Version

SUBSTITUTE 1

Reference

090762

Sponsor

THE CHAIR

Title

Substitute resolution approving construction of nonassessable public improvements at various locations and appropriating funds for these purposes with the City construction cost estimated to be \$3,341,000 for a total estimated cost of these projects being \$4,859,300.

Analysis

This resolution directs the installation and construction of certain public improvements which have been determined to be nonassessable by the Commissioner of Public Works. The City cost of the projects approved by this resolution is estimated to be \$3,341,000. The total estimated cost of these projects is \$4,859,300.

Body

Whereas, The Common Council of the City of Milwaukee adopted preliminary resolutions determining it necessary and in the public interest to construct nonassessable improvements; and

Whereas, Plans, specifications and cost estimates have been prepared for the following described improvements:

3rd Aldermanic District

Riverside Backup Power Generation Project (WT450088100): (Nonassessable Water Fund Budget Line 6410 -- \$200,000, Additional Funds). The total estimated cost for this project including the requested amount is \$1,562,300. This project is anticipated to be completed during the 2010 construction season.

4th Aldermanic District

E. Buffalo St. - N. Water St. to N. Milwaukee St. (WT410081012) File Number 070266: Relaying water main. (Nonassessable Water Fund Budget Line 5010 -- \$29,000; Nonassessable Water Fund Budget Line 6410 -- \$406,000). The total estimated cost for this project including the requested amount is \$450,000. This project is anticipated to be completed during the 2010 construction season.

N. 25th St. - W. Wells St. to W. State St. (SM495090071) File Number 090762: Relay combined sewer. (Nonassessable Sewer Maintenance Relay Fund -- \$195,000). The total estimated cost for this project including the requested amount is \$210,000. This project is anticipated to be completed during the 2010 construction season.

6th and 15th Aldermanic Districts

N. 8th St. - W. Hadley St. to W. Burleigh St. (SM495080036) File Number 080237: Relay combined sewer. (Nonassessable Sewer Maintenance Relay Fund -- \$465,000). The total estimated cost for this project including the requested amount is \$477,000. This project is anticipated to be completed

during the 2010 construction season.

8th Aldermanic District

W. Montana St. - S. 29th St. to S. 33rd St. (SM495090096) File Number 090909: Relay sanitary sewer. (Nonassessable Sewer Maintenance Relay Fund -- \$345,000). The total estimated cost for this project including the requested amount is \$357,000. This project is anticipated to be completed during the 2010 construction season.

S. 38th St. - W. Branting Ln. to W. Mitchell St. (SM495090077) File Number 090762: Relay sanitary sewer. (Nonassessable Sewer Maintenance Relay Fund -- \$237,000). The total estimated cost for this project including the requested amount is \$249,000. This project is anticipated to be completed during the 2010 construction season.

8th and 11th Aldermanic Districts

S. 43rd St. - W. Cleveland Ave. to W. Forest Home Ave. (SM495090068) File Number 090762: Relay sanitary sewer. (Nonassessable Sewer Maintenance Relay Fund -- \$308,000). The total estimated cost for this project including the requested amount is \$323,000. This project is anticipated to be completed during the 2010 construction season.

11th Aldermanic District

W. Ohio Ave. - S. 25th St. to S. 27th St. (SM495090094) File Number 090762: Relay sanitary sewer. (Nonassessable Sewer Maintenance Relay Fund -- \$153,000). The total estimated cost for this project including the requested amount is \$165,000. This project is anticipated to be completed during the 2010 construction season.

12th Aldermanic District

S. 15th St. - W. Mitchell St. to W. Forest Home Ave. (SM495080032) File Number 080237: Relay combined sewer. (Nonassessable Sewer Maintenance Relay Fund -- \$109,000). The total estimated cost for this project including the requested amount is \$121,000. This project is anticipated to be completed during the 2010 construction season.

13th Aldermanic District

S. 17th St. - W. Ohio Ave. to W. Crawford Ave. (SM495090059) File Number 090194: Relay sanitary sewer. (Nonassessable Sewer Maintenance Relay Fund -- \$664,000). The total estimated cost for this project including the requested amount is \$679,000. This project is anticipated to be completed during the 2010 construction season.

S. 18th St. - W. Oklahoma Ave. to W. Euclid Ave. (SM495090057) File Number 090762: Relay sanitary sewer. (Nonassessable Sewer Maintenance Relay Fund -- \$128,000). The total estimated cost for this project including the requested amount is \$140,000. This project is anticipated to be completed during the 2010 construction season.

14th Aldermanic District

W. Chicago Ave. - W. Forest Home Ave. to S. 33rd St. (SM495090096) File Number 090909: Relay sanitary sewer. (Nonassessable Sewer Maintenance Relay Fund -- \$345,000). The total estimated cost for this project including the requested amount is \$357,000. This project is anticipated to be completed during the 2010 construction season.

W. Ohio Ave. - 165 feet m/l west of S. 6th St. to S. 6th St. (SM495090075) File Number 090762: Relay storm sewer. (Nonassessable Sewer Maintenance Relay Fund -- \$34,000). The total estimated cost for this project including the requested amount is \$46,000. This project is anticipated to be completed during the 2010 construction season.

S. 6th St. - W. Ohio Ave. to W. Euclid Ave. (SM495100008) File Number 090971: Storm sewer lining. (Nonassessable Sewer Maintenance Relay Fund -- \$68,000). The total estimated cost for this project including the requested amount is \$80,000. This project is anticipated to be completed during the 2010 construction season.

now, therefore, be it

Resolved, By the Common Council of the City of Milwaukee that the Commissioner of Public Works is authorized and directed to proceed with said work; and, be it

Further Resolved, That the Department of Public Works is authorized to use the funding as specified in the above description of work; and, be it

Further Resolved, That the City Comptroller is authorized and directed to transfer such funds which are available for this purpose to the appropriate capital Project/Grant accounts.

Requestor
Infrastructure Services Division
Drafter
MLD:dr
Nfr 9
03/04/10

CITY OF MILWAUKEE FISCAL NOTE

CC-170 (REV. 6/86)

A) DATE: March 4, 2010

FILE NUMBER: 091433

Original Fiscal Note ☐ **Substitute** ☒

SUBJECT: Substitute resolution approving construction of nonassessable public improvements at various locations and appropriating funds for these purposes with the City construction cost estimated to be \$3,341,000 for a total estimated cost of these projects being \$4,859,300.

B) SUBMITTED BY (name/title/dept./ext.) :Mary Dziewiontkoski/Assessment Engineer/Public Works/X2460

C) CHECK ONE: ☒ ADOPTION OF THIS FILE AUTHORIZES EXPENDITURES.
☐ ADOPTION OF THIS FILE DOES NOT AUTHORIZE EXPENDITURES; FURTHER COMMON COUNCIL ACTION NEEDED.
 LIST ANTICIPATED COSTS IN SECTION G BELOW.
☐ NOT APPLICABLE/NO FISCAL IMPACT.

D) CHARGE TO: ☐ DEPARTMENTAL ACCOUNT (DA) ☐ CONTINGENT FUND (CF)
☐ CAPITAL PROJECTS FUND (CPF) ☐ SPECIAL PURPOSE ACCOUNTS (SPA)
☒ PERM. IMPROVEMENT FUNDS (PIF) ☐ GRANT & AID ACCOUNTS (G & AA)
☐ OTHER SPECIFY)

E) PURPOSE	SPECIFY TYPE/USE	ACCOUNT	EXPENDITURE	REVENUE	SAVINGS
SALARIES/WAGES:					
SUPPLIES:					
MATERIALS:					
NEW EQUIPMENT:					
EQUIPMENT REPAIR:					
OTHER Structure					
Water	WT410		\$435,000		
Water	WT450		\$200,000		
Sewer	SM495		\$2,706,000		
TOTALS:			\$3,341,000		

F) FOR EXPENDITURES AND REVENUES WHICH WILL OCCUR ON AN ANNUAL BASIS OVER SEVERAL YEARS CHECK THE APPROPRIATE BOX BELOW AND THEN LIST EACH ITEM AND DOLLAR AMOUNT SEPARATELY.

<input type="checkbox"/> 1-3 YEARS	<input type="checkbox"/> 3-5 YEARS	
<input type="checkbox"/> 1-3 YEARS	<input type="checkbox"/> 3-5 YEARS	
<input type="checkbox"/> 1-3 YEARS	<input type="checkbox"/> 3-5 YEARS	

G) LIST ANY ANTICIPATED FUTURE COSTS THIS PROJECT WILL REQUIRE FOR COMPLETION:

H) LIST ANY ANTICIPATED FUTURE COSTS THIS PROJECT WILL REQUIRE FOR COMPLETION: *The total expenditure includes the cost of engineering, inspection, construction, and city forces.*

PLEASE LIST ANY COMMENTS ON REVERSE SIDE AND CHECK HERE ☐

February 19, 2010

File Number

To the Honorable, the Common Council

Dear Council Members:

Please find attached a "Title Only" resolution for approving construction of nonassessable public improvements to be introduced at the next Common Council Meeting. It is our intent to insert the body of the resolution in this jacket prior to the meeting of the Public Works Committee of March 9, 2010.

Respectfully submitted,

Special Deputy Commissioner
of Public Works

MLD:dr
Title only
Nfr 9

PW FILE NUMBER: 091433

[illegible]



Legislation Details (With Text)

File #: 091414 **Version:** 0

Type: Resolution **Status:** In Committee

File created: 3/2/2010 **In control:** PUBLIC WORKS COMMITTEE

On agenda: **Final action:**

Effective date:

Title: Resolution approving a Three-Year Harbor Statement of Intentions for the Port of Milwaukee.

Sponsors: THE CHAIR

Indexes: PORT OF MILWAUKEE, STATE GRANTS, WISCONSIN DEPARTMENT OF TRANSPORTATION

Attachments: Cover Letter, Fiscal Note, Statement of Intentions, Hearing Notice List

Date	Ver.	Action By	Action	Result	Tally
3/2/2010	0	COMMON COUNCIL	ASSIGNED TO		
3/4/2010	0	PUBLIC WORKS COMMITTEE	HEARING NOTICES SENT		

Number

091414

Version

Original

Reference

Sponsor

Chair

Title

Resolution approving a Three-Year Harbor Statement of Intentions for the Port of Milwaukee.

Analysis

The Wisconsin Dept. of Transportation, in accord with State Statute, requires a Statement of Project Intentions from Local units of government intending to apply for Federal and/or State aid for harbor-related work of benefit to commercial transportation within the next three years.

Body

Resolved, The Three-Year Harbor Statement of Intentions attached to this resolution describes proposed improvements which are in the best interest of the Port of Milwaukee, City of Milwaukee; and, be it

Further Resolved, The Port of Milwaukee has carefully reviewed the estimated project costs, funding sources, physical location and alternatives to the proposed projects; and, be it

Further Resolved, This Three-Year Harbor Statement of Intentions is used by the Wisconsin Department of Transportation for planning purposes only and is not a petition for Federal and/or State aid; and, be it

Further Resolved, The Board of Harbor Commissioners approved the Three-Year Harbor Statement of Intentions at its meeting on February 11, 2010; and, be it

Further Resolved, All projects included in the three-year program are contingent upon future Common Council approval of each project prior to proceeding with the project; and, be it

Further Resolved, By the Common Council of the City of Milwaukee that, the Three-Year Harbor Statement of Intentions attached to this file is approved.

Drafter

Lawrence E. Sullivan

Port of Milwaukee

2/7/2010

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LEGISLATIVE REFERENCE BUREAU FISCAL ANALYSIS

PUBLIC WORKS COMMITTEE

MARCH 9, 2010

Item 5, File #091414

File Number 091414 is a resolution approving a Three-Year Harbor Development Statement of Intentions for the Port of Milwaukee.

Background

1. Pursuant to Wisconsin Statutes, the Wisconsin Department of Transportation (WISDOT) requires each local unit of government that intends to apply, within the next 3 years, for State aid for harbor improvement projects under WISDOT's Harbor Assistance Program to submit a "Three-Year Harbor Development Statement of Intentions" by April 1 each year.
2. The Three-Year Harbor Development Statement of Intentions is used by WISDOT for planning purposes only and is not an application for Federal and/or State aid.
3. The Port of Milwaukee has prepared a Three-Year Harbor Development Statement of Intentions for 2010 to 2012 that includes a project description, anticipated construction year, State/City cost distribution and estimated project cost for each major capital improvement planned for Milwaukee's harbor during those years.

Discussion

1. The Three-Year Harbor Development Statement of Intentions for 2010 to 2012 is as follows:

Application Date	Construction Year	Project Description	Funding State-City	Estimated Cost
2010	2010 – 2011	Fender Improvements (various locations)	80% - 20%	\$ 100,000
2010	2010 – 2011	Terminal Paving Rehabilitation and Related Work (various locations)	80% - 20%	\$ 200,000
2010	2010 – 2011	Cargo Handling Equipment and Related Work	80% - 20%	\$5,000,000
2011	2011 – 2012	Pier/Berth Channel Improvements (dredging & related work, various locations)	80% - 20%	\$1,000,000
2011	2011 – 2012	Trans Load Terminal and Related Equipment	80% - 20%	\$1,750,000
2011	2011 – 2012	City Heavy Lift Dock Improvements	80% - 20%	\$2,600,000
2012	2012 – 2013	Relocate Container Yard	80% - 20%	\$1,200,000
2012	2012 – 2013	Fender Improvements (various locations)	80% - 20%	\$500,000
2012	2012 – 2013	Pier/Berth Channel Improvements (dredging & related work, various locations)	80% - 20%	\$1,000,000
2012	2012 – 2013	Cargo Handling Equipment & Related Work	80% - 20%	\$2,500,000

2. This Statement of Intentions is similar to the 2009-2011 Statement of Intentions approved and submitted last year.
3. The Board of Harbor Commissioners unanimously approved the Three-Year Harbor Development Statement of Intentions at its February 11, 2010 meeting.

Fiscal Impact

1. Adoption of this resolution has no fiscal impact on the City.
2. The Three-Year Harbor Development Statement of Intentions does not obligate the City to apply for or accept grant funds or to make any other financial commitment to harbor improvements. The Statement of Intentions is used by WISDOT for planning and budgetary purposes only.

Prepared by: Jeff Osterman, X2262
LRB-Research & Analysis Section
March 5, 2010

cc: Eric Reinelt
Lawrence Sullivan
Hattie Billingsley

February 7, 2010

Ref: HAP/3 year statement

To The Honorable
The Common Council
City of Milwaukee

Dear Council Members:

In order to be eligible for future grants under the State Department of Transportation Harbor Assistance Program, an annual update of the Port's Harbor Development Three Year Statement of Intentions is required to be submitted to the State Department of Transportation by April 1 each year.

The State Department of Transportation uses this listing of potential future projects for budgeting purposes. It is neither an application for funding, nor does it represent, in any way, a financial commitment by the City.

The Port's 2010 Harbor Development Three-Year Statement of Intentions was unanimously approved by the Board of Harbor Commissioners at its last meeting on February 11, 2010 and we, therefore, respectfully request that your Honorable Body approve such so that we may transmit it to the State Department of Transportation by April 1, 2010.

Respectfully submitted,

LAWRENCE E. SULLIVAN
Harbor Engineer

LES/dcl

md:3yrst10ccltr.doc

CITY OF MILWAUKEE FISCAL NOTE

A) DATE February 7, 2010

FILE NUMBER: _____

Original Fiscal Note ☒ Substitute ☐

SUBJECT: Resolution approving a 2010 Three-Year Harbor Statement of Intentions for the Port of Milwaukee

B) SUBMITTED BY (Name/title/dept./ext.): Eric C. Reinelt, Municipal Port Director, Port of Milwaukee, 8130

C) CHECK ONE: ☐ ADOPTION OF THIS FILE AUTHORIZES EXPENDITURES
☒ ADOPTION OF THIS FILE DOES NOT AUTHORIZE EXPENDITURES; FURTHER COMMON COUNCIL ACTION NEEDED. LIST ANTICIPATED COSTS IN SECTION G BELOW.
☐ NOT APPLICABLE/NO FISCAL IMPACT.

D) CHARGE TO: ☐ DEPARTMENT ACCOUNT(DA) ☐ CONTINGENT FUND (CF)
☐ CAPITAL PROJECTS FUND (CPF) ☐ SPECIAL PURPOSE ACCOUNTS (SPA)
☐ PERM. IMPROVEMENT FUNDS (PIF) ☐ GRANT & AID ACCOUNTS (G & AA)
☐ OTHER (SPECIFY)

E) PURPOSE	SPECIFY TYPE/USE	ACCOUNT	EXPENDITURE	REVENUE	SAVINGS
SALARIES/WAGES:	None				
SUPPLIES:	None				
MATERIALS:	None				
NEW EQUIPMENT:	None				
EQUIPMENT REPAIR:	None				
OTHER:	None				
TOTALS					

F) FOR EXPENDITURES AND REVENUES WHICH WILL OCCUR ON AN **ANNUAL** BASIS OVER SEVERAL YEARS CHECK THE APPROPRIATE BOX BELOW AND THEN LIST EACH ITEM AND DOLLAR AMOUNT **SEPARATELY**.

<input checked="" type="checkbox"/> 1-3 YEARS	<input type="checkbox"/> 3-5 YEARS	
<input type="checkbox"/> 1-3 YEARS	<input type="checkbox"/> 3-5 YEARS	
<input type="checkbox"/> 1-3 YEARS	<input type="checkbox"/> 3-5 YEARS	

G) LIST ANY ANTICIPATED FUTURE COSTS THIS PROJECT WILL REQUIRE FOR COMPLETION:

For State planning purposes only; not applicable.

H) COMPUTATIONS USED IN ARRIVING AT FISCAL ESTIMATE:

N/A

PLEASE LIST ANY COMMENTS ON REVERSE SIDE AND CHECK HERE ☐

PORT OF MILWAUKEE
WISCONSIN DEPARTMENT OF TRANSPORTATION
HARBOR ASSISTANCE PROGRAM
THREE-YEAR HARBOR DEVELOPMENT STATEMENT OF INTENTION
2010 TO 2012

Application Date	Project Description	Construction Year	Split State-City	Estimated Project Cost
2010	Fender Improvements (various locations)	2010/2011	80%-20%	\$ 100,000
2010	Terminal Paving Rehabilitation & Related work (various locations)	2010/2011	80%-20%	\$ 200,000
2010	Cargo Handling Equipment & Related work	2010/2011	80%-20%	\$ 5,000,000
2011	Pier /Berth Channel Improvements (dredging & related work various locations)	2011/2012	80%-20%	\$ 1,000,000
2011	Trans Load Terminal & Related Equipment	2011/2012	80%-20%	\$ 1,750,000
2011	City Heavy Lift Dock Improvements	2011/2012	80%-20%	\$ 2,600,000
2012	Relocate Container yard	2012/2013	80%-20%	\$ 1,200,000
2012	Fender Improvements (various locations)	2012/2013	80%-20%	\$ 500,000
2012	Pier /Berth Channel Improvements (dredging & related work various locations)	2012/2013	80%-20%	\$ 1,000,000
2012	Cargo Handling Equipment & Related work	2012/2013	80%-20%	\$ 2,500,000

File Excel 011510a.xls

ECR/HB/BN/JD/LES: 1-15-10

PW FILE NUMBER: 091414

[illegible]



Legislation Details (With Text)

File #: 091514 **Version:** 0
Type: Resolution **Status:** In Committee
File created: 3/2/2010 **In control:** PUBLIC WORKS COMMITTEE
On agenda: **Final action:**
Effective date:

Title: Resolution declaring the City-owned parking lot at 2353 North Farwell Avenue surplus to municipal needs and authorizing an Option to Purchase with Mercy Housing Lakefront, Inc. to purchase and develop the property with workforce housing, in the 3rd Aldermanic District.

Sponsors: ALD. KOVAC

Indexes: CITY PROPERTY, HOUSING, PARKING LOTS, PROPERTY SALES

Attachments: Fiscal Note.pdf, Land Disposition Report, Hearing Notice List

Date	Ver.	Action By	Action	Result	Tally
3/2/2010	0	COMMON COUNCIL	ASSIGNED TO		
3/4/2010	0	PUBLIC WORKS COMMITTEE	REFERRED TO		
3/4/2010	0	PUBLIC WORKS COMMITTEE	HEARING NOTICES SENT		
3/4/2010	0	PUBLIC WORKS COMMITTEE	HEARING NOTICES SENT		
3/4/2010	0	PUBLIC WORKS COMMITTEE	HEARING NOTICES SENT		

Number

091514

Version

ORIGINAL

Reference

Sponsor

ALD. KOVAC

Title

Resolution declaring the City-owned parking lot at 2353 North Farwell Avenue surplus to municipal needs and authorizing an Option to Purchase with Mercy Housing Lakefront, Inc. to purchase and develop the property with workforce housing, in the 3rd Aldermanic District.

Analysis

This resolution authorizes the sale of City-owned Development Property according to the conditions in a Land Disposition Report pursuant to Section 304-49-7, Milwaukee Code of Ordinances.

Body

Whereas, Mercy Housing Lakefront, Inc. desires to develop affordable workforce housing in the vicinity Columbia St. Mary's Hospital and has submitted an unsolicited offer to purchase for the City-owned parking lot at 2353 North Farwell Avenue for assemblage and development with the adjacent property; and

Whereas, Mercy Housing Lakefront, Inc. will create a limited liability company to take title to the properties and develop the project as summarized in a Land Disposition Report, a copy of which is attached to this Common Council File; and

Whereas, Development of workforce housing in the area will replace an underutilized City parking lot with a taxable investment that will complement recent neighborhood developments, including the new Columbia St. Mary's Hospital and Prospect Medical Commons; and

Whereas, Section 304-49-7 of the Milwaukee Code of Ordinances allows the City to accept unsolicited offers to purchase property when the City receives fair compensation, whether monetary or non-monetary; and

Whereas, The Department of City Development ("DCD") has reviewed the offer and the development proposal and has determined that the proposal represents fair compensation to the City in terms of the purchase price, investment in the neighborhood and provision of affordable housing; and

Whereas, The City Plan Commission has determined that said parking lot is surplus to municipal needs; now, therefore, be it

Resolved, By the Common Council of the City of Milwaukee, that the City-owned parking lot at 2353 North Farwell Avenue is declared surplus to municipal needs and that the development proposal of Mercy Housing Lakefront, Inc. is accepted; and, be it

Further Resolved, That the Commissioner of DCD, or designee, is authorized to close the transaction according to the terms of the Land Disposition Report and upon DCD approval of final construction plans and submission of firm financing; and, be it

Further Resolved, That Commissioner of DCD, or designee, is authorized to execute the offer, deed and all needed closing documents, including any needed easements and/or releases of deed restrictions; and, be it

Further Resolved, That the sale proceeds, less sale expenses and a 30 percent disposition cost reimbursement to the Redevelopment Authority of the City of Milwaukee, shall be

credited to the Parking Fund.

Drafter

DCD:EMM:bmm

03/02/10/A

CITY OF MILWAUKEE FISCAL NOTE

A) DATE March 2, 2010

FILE NUMBER: _____

Original Fiscal Note ☒ Substitute ☐

SUBJECT: Resolution declaring the City-owned parking lot at 2353 North Farwell Avenue surplus to municipal needs and authorizing an Option to Purchase with Mercy Housing Lakefront, Inc. to purchase and develop the property with workforce housing, in the 3rd Aldermanic District.

B) SUBMITTED BY (Name/title/dept./ext.): Rocky Marcoux, Commissioner

C) CHECK ONE: ☐ ADOPTION OF THIS FILE AUTHORIZES EXPENDITURES
☐ ADOPTION OF THIS FILE DOES NOT AUTHORIZE EXPENDITURES; FURTHER COMMON COUNCIL ACTION NEEDED. LIST ANTICIPATED COSTS IN SECTION G BELOW.
☐ NOT APPLICABLE/NO FISCAL IMPACT.

D) CHARGE TO: ☐ DEPARTMENT ACCOUNT(DA) ☐ CONTINGENT FUND (CF)
☐ CAPITAL PROJECTS FUND (CPF) ☐ SPECIAL PURPOSE ACCOUNTS (SPA)
☐ PERM. IMPROVEMENT FUNDS (PIF) ☐ GRANT & AID ACCOUNTS (G & AA)
☐ OTHER (SPECIFY)

E) PURPOSE	SPECIFY TYPE/USE	ACCOUNT	EXPENDITURE	REVENUE	SAVINGS
SALARIES/WAGES:					
SUPPLIES:					
MATERIALS:					
NEW EQUIPMENT:					
EQUIPMENT REPAIR:					
OTHER:	Option to Purchase	Parking Fund		\$425,000 (less sale expenses and a 30% disposition cost reimbursement to RACM)	
TOTALS				\$425,000	

F) FOR EXPENDITURES AND REVENUES WHICH WILL OCCUR ON AN **ANNUAL** BASIS OVER SEVERAL YEARS CHECK THE APPROPRIATE BOX BELOW AND THEN LIST EACH ITEM AND DOLLAR AMOUNT **SEPARATELY**.

<input type="checkbox"/> 1-3 YEARS	<input type="checkbox"/> 3-5 YEARS	
<input type="checkbox"/> 1-3 YEARS	<input type="checkbox"/> 3-5 YEARS	
<input type="checkbox"/> 1-3 YEARS	<input type="checkbox"/> 3-5 YEARS	

G) LIST ANY ANTICIPATED FUTURE COSTS THIS PROJECT WILL REQUIRE FOR COMPLETION:

H) COMPUTATIONS USED IN ARRIVING AT FISCAL ESTIMATE:

PLEASE LIST ANY COMMENTS ON REVERSE SIDE AND CHECK HERE ☐



Historic Water Tower Neighborhood

March 5, 2010

Re: Common Council File #091458 - Mercy Housing Detailed Plan Development Zoning Change
Common Council File #091514 - 2353 N. Farwell - Land Sale

Alderman Nik Kovac
200 E. Wells St.
Milwaukee, WI 53202

Dear Ald. Kovac:

We are writing to inform you that the Historic Water Tower Neighborhood (HWTN) unanimously passed, with one abstention (and as president, I also do not vote), a motion this week expressing our concerns regarding the speed and lack of public disclosure and input related to the proposed sale of public land and re-zoning for the Mercy Housing project (between Murray, Thomas and North Avenues).

HWTN shares other neighborhood groups' strong interest in having time to consider and have input into the mass, height and aesthetic of any structure on this site, and the impact that the increased traffic and loss of parking will have in our neighborhoods. Some also have questions about any city support for additional new housing on the East Side in light of rampant vacancies and foreclosures. We had hoped these issues might be addressed in public forums and discussions with the developers and city officials well before the City officially considered any sale of public land or rezoning.

Despite hearing at our February 3 meeting that this project was on hold, we learned this week that it has suddenly been scheduled for numerous votes, and that the City plans to formally consider selling public land, before it approves zoning changes. We are concerned that these actions are scheduled for Committee approval even before any public meetings, discussions and input occurs. We believe this process is contrary to established protocol and does not take into account the opinions and needs of property taxpayers in the area.

We respectfully request your assistance in assuring HWTN and our neighbors that this project will honor established procedure and allow the opportunity for significant public input before proceeding. If the process is allowed to move too quickly, the developers and the City will not have time to adjust the proposal to accommodate neighborhood ideas and needs.

HWTN Letter Regarding Mercy Housing Proposal
Page Two
March 5, 2010

Thank you for your assistance.

Sincerely,

Jeff Bentoff

Jeff Bentoff
President

c: Public Works Committee
 Zoning, Neighborhood & Development Committee
 City Plan Commission
 Rocky Marcoux, Commissioner, Department of City Development
 Vanessa Koster, City Planning Manager, Department of City Development
 Mayor Tom Barrett
 Greenwich Village Association

LAND DISPOSITION REPORT COMMON COUNCIL OF THE CITY OF MILWAUKEE

DATE

March 9, 2010

RESPONSIBLE STAFF

Elaine Miller, Real Estate Manager

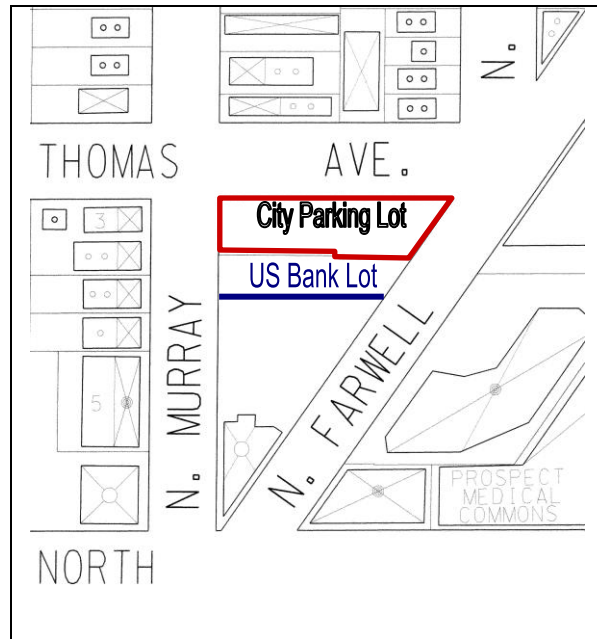
PARCEL ADDRESS & DESCRIPTION

2353 North Farwell Avenue:

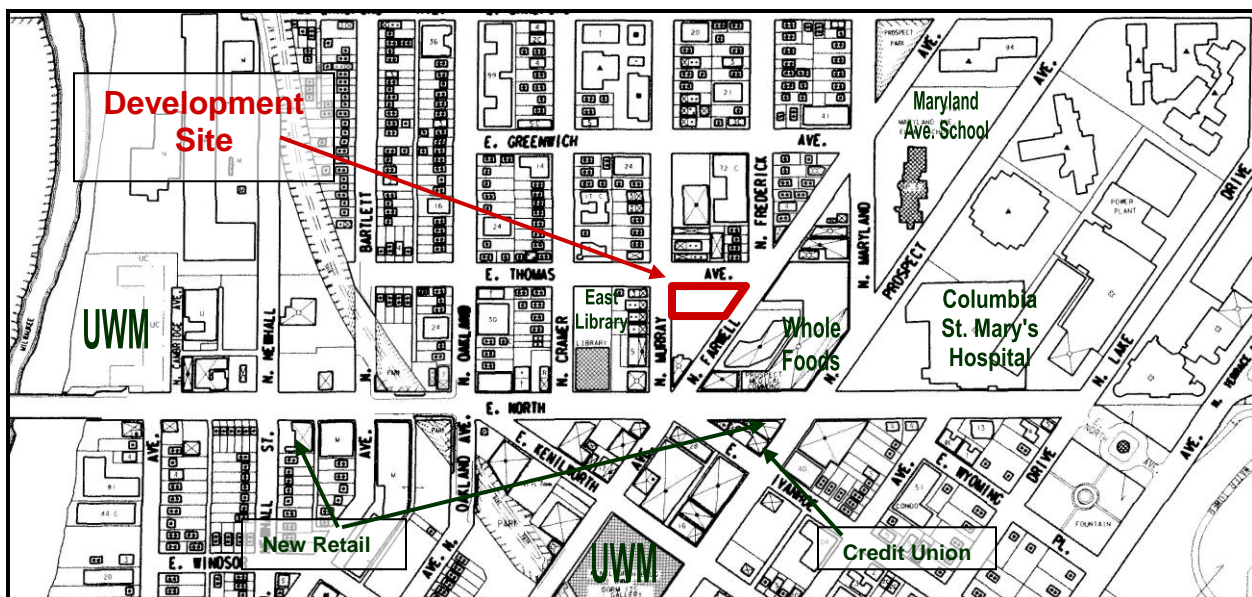
A City parking lot containing approximately 13,394 SF. The lot is slightly irregular with approximately 77 feet along Farwell, 60 feet on Murray and 247 feet on Thomas. The lot has 46 parking spaces of which 10 spaces are leased to US Bank.

The lot will be combined with a portion of the US Bank parking lot to create a development site containing approximately 25,200 SF. Because of the land assemblage, the site was not marketed. Certified survey maps may be required to divided and combine the property.

In July 2000, the Common Council authorized marketing of this parking lot along with a portion of the East Library lot. The action did not require replacement of the public parking. Although a Request for Proposal was published, DCD did not recommend proceeding with sale at that time.



The lot is in the East Side Business Improvement District and was identified for future development in the Near Area Plan. The North Avenue commercial corridor has seen several recent developments include construction of the new Columbia St. Mary's Hospital, Prospect Medical Commons/Whole Foods, Educators Credit Union, new retail shops and UWM dorms (Kenilworth Building and former Hometown Oil).



BUYER

Mercy Housing Lakefront, Inc., a non-profit corporation that develops affordable and supportive housing. Mercy's efforts were focused in Chicago until 2009 when it began development of Johnston Center Residences, a 92-unit supportive housing effort at the City's former Johnston Health Clinic at 1230 West Grant Street. Mercy's housing facilities often provide on-site supportive services, which include employment training programs, computer literacy classes, adult education, leadership development and children's after-school activities.

Mercy Housing Lakefront is affiliated with the nationwide Mercy Housing and the Daughters of Charity religious order that operates Columbia St. Mary's Hospital and the national. Overall, Mercy has developed over \$1.9 billion in real estate and currently has over 15,000 housing units in development or constructed. Cindy Holler is president Mercy Housing Lakefront.

PROJECT DESCRIPTION

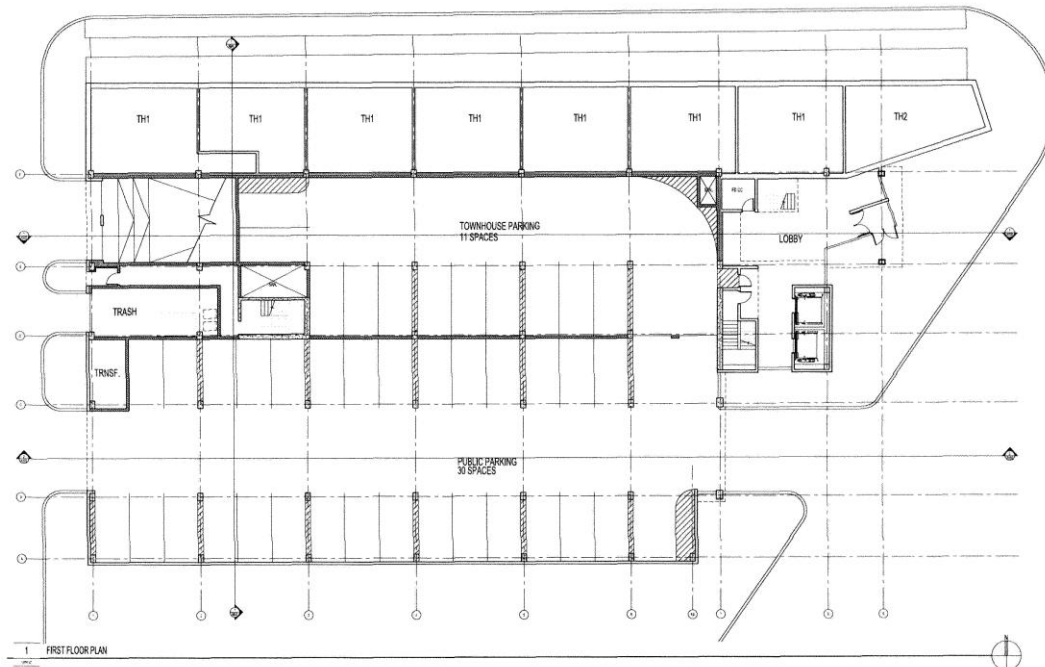
Construction of 83 units of affordable workforce housing. The building will contain 75 apartments, eight townhouse, 85 garage spaces for residents and 30 garage spaces for US Bank and public use. The units will be a mix of one, two and three-bedroom units. Estimated construction costs are approximately \$12.7 million with EBE participation projected to be 25%. The buyer expects to pursue LEED certification.



Conceptual rendering along Thomas



Conceptual rendering looking NW on Farwell



Preliminary Site Plan

The project will be financed in part through federal housing tax credits from the Wisconsin Housing and Economic Development Administration (WHEDA). Tax credit applications are due to WHEDA on March 26, 2010 and the buyer needs to demonstrate site control for its application. Additional funding will be provided through conventional financing.

OPTION TERMS AND CONDITIONS

The purchase price will be \$425,000 or slightly more than \$30/SF and conveyance will be on an "as is" basis. The City has provided the buyer with a Historic Land Use Investigation prepared by City staff and will provide an independent Phase I Environmental Site Assessment upon request. A \$4,500 Option Fee will be required upon Common Council approval and will be credited toward the purchase price if the sale closes on or before December 31, 2010. Sale proceeds, less sale expenses and a 30% fee to the Redevelopment Authority, will be deposited in the Parking Fund.

The total option period is two years so as to allow multiple applications for WHEDA tax credits. The initial term will extend until December 31, 2010. The Commissioner of DCD may extend the option for up to three six-month periods based upon Buyer submission of a \$500 non-refundable renewal fee and satisfactory progress report on Buyer's efforts to obtain financing and final building plans. If the Buyer fails to make any required submissions to WHEDA, the option may be cancelled immediately by the Commissioner.

City closing contingencies include DCD approval of final construction plans, evidence of firm financing, purchase of part of the US Bank lot as evidenced by a recorded deed, negotiation and execution of a Purchase and Sale Agreement that may contain reversion of title provisions for non performance, submission of a \$10,000 performance deposit to be held until satisfactory completion of the project. The final building plans must be consistent with preliminary plans the Buyer submitted to obtain the Option to Purchase and conform to Detailed Planned Development zoning.

PW FILE NUMBER: 091514

[illegible]



Legislation Details (With Text)

File #: 091459 **Version:** 0

Type: Resolution **Status:** In Committee

File created: 3/2/2010 **In control:** PUBLIC WORKS COMMITTEE

On agenda: **Final action:**

Effective date:

Title: Resolution approving conveyance of the former Jackie Robinson Middle School at 3245 North 37th Street by the Milwaukee Board of School Directors, in the 7th Aldermanic District.

Sponsors: THE CHAIR

Indexes: CITY PROPERTY, DEED RESTRICTIONS, MILWAUKEE PUBLIC SCHOOLS, PROPERTY SALES

Attachments: Proposed Substitute A.pdf, Fiscal Note.pdf, Land Disposition Report.pdf

Date	Ver.	Action By	Action	Result	Tally
3/2/2010	0	COMMON COUNCIL	ASSIGNED TO		
3/4/2010	0	PUBLIC WORKS COMMITTEE	REFERRED TO		
3/4/2010	0	PUBLIC WORKS COMMITTEE	HEARING NOTICES SENT		
3/4/2010	0	PUBLIC WORKS COMMITTEE	HEARING NOTICES SENT		

Number

091459

Version

ORIGINAL

Reference

Sponsor

THE CHAIR

Title

Resolution approving conveyance of the former Jackie Robinson Middle School at 3245 North 37th Street by the Milwaukee Board of School Directors, in the 7th Aldermanic District.

Analysis

This resolution authorizes the City, on behalf of the Milwaukee Board of School Directors, to convey real property formerly used for school purposes and located at 3245 North 37th Street, Jackie Robinson Middle School, Milwaukee, Wisconsin.

Body

Whereas, The Milwaukee Board of School Directors ("MBSD") has declared the former Jackie Robinson Middle School at 3245 North 37th Street to be surplus to its needs and requested the assistance of the Department of City Development ("DCD") to market the property; and

Whereas, The MBSD and DCD jointly prepared a request for proposal to solicit proposals for the purchase and redevelopment of the former school and specified that senior housing would be a preferred use for redevelopment; and

Whereas, Three proposals were received prior to the established deadline and after review by MBSD and DCD staff, Gorman and Company was recommended to redevelop the property as summarized in a Land Disposition Report, a copy of which is attached to this Common Council File; and

Whereas, The MBSD has authorized execution of a Purchase and Sale Agreement for the property with Gorman and Company for the proposed redevelopment; and

Whereas, Legal title to MBSD real property is held in the name of the City of Milwaukee, in trust for MBSD, and conveyance of surplus MBSD property requires adoption of a resolution by the Common Council approving such conveyance; now, therefore, be it

Resolved, By the Common Council of the City of Milwaukee, that the conveyance of the former Jackie Robinson Middle School at 3245 North 37th Street by MBSD is approved; and, be it

Further Resolved, That the proper City officials are authorized to execute all documents necessary to effect closure, including easements and releases of City deed restrictions that interfere with development or easements to the City for any public facilities; and, be it

Further Resolved, That the proper City officials are authorized to execute an Emerging Business Enterprise Agreement with the buyer.

Drafter

DCD:MFH:mfh

03/02/10/A

..Number
091459
..Version
PROPOSED SUBSTITUTE A
..Reference

..Sponsor
ALD. WADE

..Title
Substitute resolution declaring surplus and approving conveyance of the former Jackie Robinson Middle School at 3245 North 37th Street by the Milwaukee Board of School Directors, in the 7th Aldermanic District.

..Analysis
This substitute resolution authorizes the City, on behalf of the Milwaukee Board of School Directors, to convey real property formerly used for school purposes and located at 3245 North 37th Street, Jackie Robinson Middle School, Milwaukee, Wisconsin.

..Body
Whereas, The Milwaukee Board of School Directors ("MBSD") has declared the former Jackie Robinson Middle School at 3245 North 37th Street to be surplus to its needs and requested the assistance of the Department of City Development ("DCD") to market the property; and

Whereas, The MBSD and DCD jointly prepared a request for proposal to solicit proposals for the purchase and redevelopment of the former school and specified that senior housing would be a preferred use for redevelopment; and

Whereas, Three proposals were received prior to the established deadline and after review by MBSD and DCD staff, Gorman and Company was recommended to redevelop the property as summarized in a Land Disposition Report, a copy of which is attached to this Common Council File; and

Whereas, The MBSD has authorized execution of a Purchase and Sale Agreement for the property with Gorman and Company for the proposed redevelopment; and

Whereas, Legal title to MBSD real property is held in the name of the City of Milwaukee, in trust for MBSD, and conveyance of surplus MBSD property requires adoption of a resolution by the Common Council approving such conveyance; and

Whereas, The City Plan Commission has determined that said property is surplus to municipal needs; now, therefore, be it

Resolved, By the Common Council of the City of Milwaukee, that surplus declaration and conveyance of the former Jackie Robinson Middle School at 3245 North 37th Street by MBSD is approved; and, be it

Further Resolved, That the proper City officials are authorized to execute all documents necessary to effect closure, including easements and releases of City deed restrictions that interfere with development or easements to the City for any public facilities; and, be it

Further Resolved, That the proper City officials are authorized to execute an Emerging Business Enterprise Agreement with the buyer.

..Drafter
DCD:MFH:mfh
03/04/10

CITY OF MILWAUKEE FISCAL NOTE

A) DATE March 4, 2010FILE NUMBER: 091459Original Fiscal Note ☒ Substitute ☐SUBJECT: Substitute resolution declaring surplus and approving conveyance of the former Jackie Robinson Middle School at 3245 North 37th Street by the Milwaukee Board of School Directors, in the 7th Aldermanic District.B) SUBMITTED BY (Name/title/dept./ext.): Rocky Marcoux, Commissioner, Department of City Development

C) CHECK ONE: ☐ ADOPTION OF THIS FILE AUTHORIZES EXPENDITURES
☐ ADOPTION OF THIS FILE DOES NOT AUTHORIZE EXPENDITURES; FURTHER COMMON COUNCIL ACTION NEEDED. LIST ANTICIPATED COSTS IN SECTION G BELOW.
☒ NOT APPLICABLE/NO FISCAL IMPACT.

D) CHARGE TO: ☐ DEPARTMENT ACCOUNT(DA) ☐ CONTINGENT FUND (CF)
☐ CAPITAL PROJECTS FUND (CPF) ☐ SPECIAL PURPOSE ACCOUNTS (SPA)
☐ PERM. IMPROVEMENT FUNDS (PIF) ☐ GRANT & AID ACCOUNTS (G & AA)
☐ OTHER (SPECIFY)

E) PURPOSE	SPECIFY TYPE/USE	ACCOUNT	EXPENDITURE	REVENUE	SAVINGS
SALARIES/WAGES:					
SUPPLIES:					
MATERIALS:					
NEW EQUIPMENT:					
EQUIPMENT REPAIR:					
OTHER:					
TOTALS					

F) FOR EXPENDITURES AND REVENUES WHICH WILL OCCUR ON AN **ANNUAL** BASIS OVER SEVERAL YEARS CHECK THE APPROPRIATE BOX BELOW AND THEN LIST EACH ITEM AND DOLLAR AMOUNT **SEPARATELY**.

<input type="checkbox"/> 1-3 YEARS	<input type="checkbox"/> 3-5 YEARS	
<input type="checkbox"/> 1-3 YEARS	<input type="checkbox"/> 3-5 YEARS	
<input type="checkbox"/> 1-3 YEARS	<input type="checkbox"/> 3-5 YEARS	

G) LIST ANY ANTICIPATED FUTURE COSTS THIS PROJECT WILL REQUIRE FOR COMPLETION:

H) COMPUTATIONS USED IN ARRIVING AT FISCAL ESTIMATE:

PLEASE LIST ANY COMMENTS ON REVERSE SIDE AND CHECK HERE ☐

LAND DISPOSITION REPORT
CITY OF MILWAUKEE
COMMON COUNCIL OF THE CITY OF MILWAUKEE

DATE

March 2, 2010

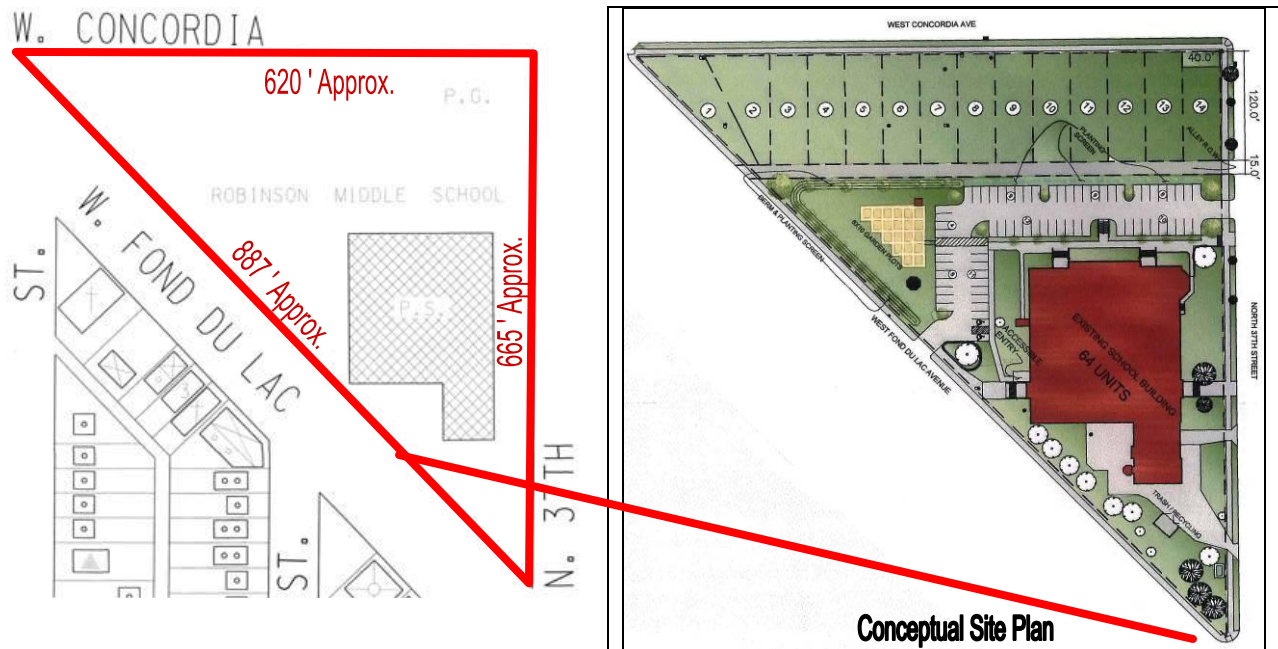
RESPONSIBLE STAFF

Matthew Haessly, Real Estate Section (286-5736)

PROPERTY

3245 North 37th Street: The former Jackie Robinson Middle School. Constructed in 1926, the building is three stories with approximately 118,754 SF and situated on a 4.56-acre parcel. The building has not been used by MPS since 2004.

MPS and DCD jointly marketed the property through a Request for Proposal. Affordable housing developers were targeted after MPS received a development inquiry from a tax-credit developer. Three proposals were received and reviewed by MPS and DCD staff. The proposals also were discussed with the Sherman Park Community Association. After community input, the proponents were asked for clarifications and/or revisions. Based on review of the additional submissions, the Gorman proposal was recommended for approval based on financial considerations.



BUYER

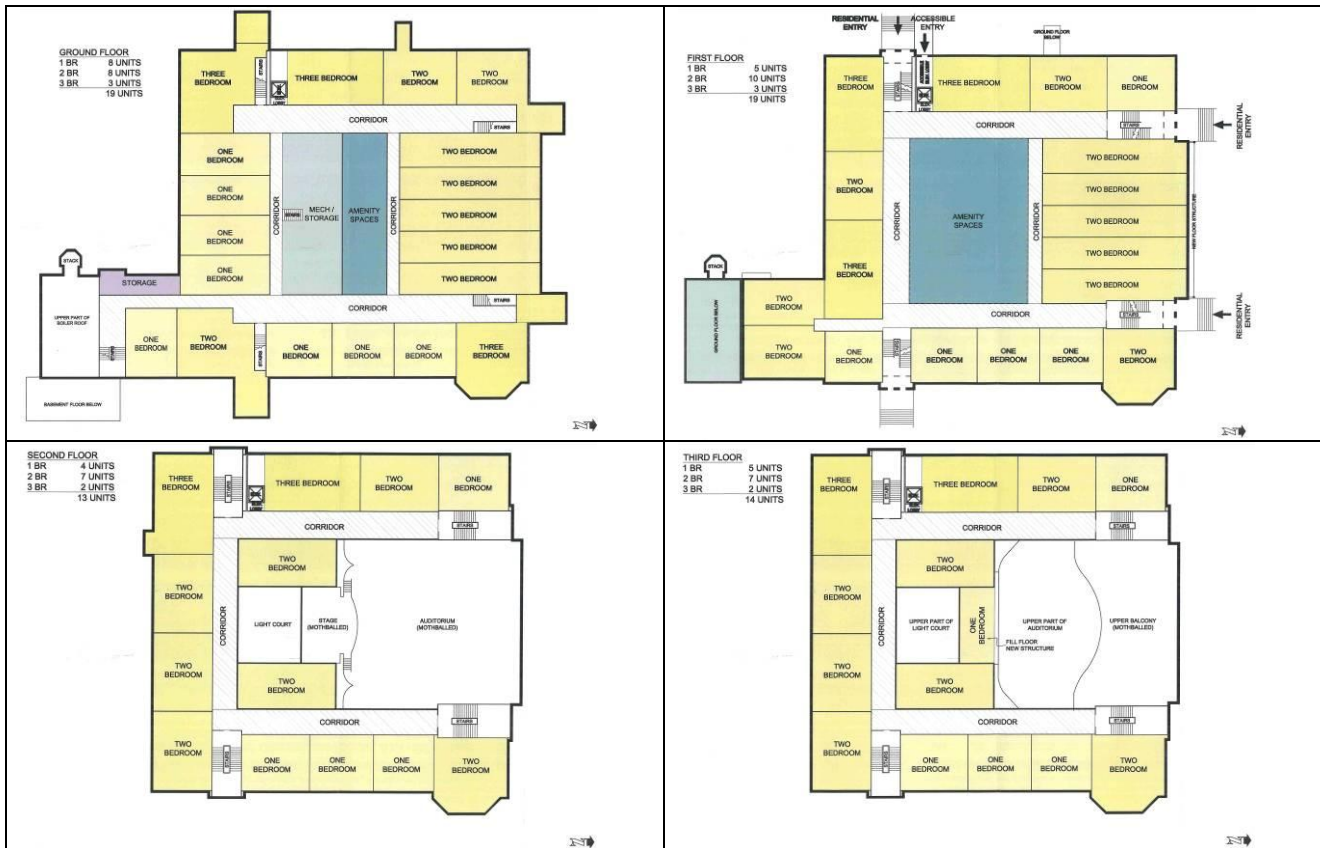
Gorman & Company, Inc., a firm founded by Gary J. Gorman in 1984 to develop, syndicate and manage multi-family housing properties throughout Wisconsin. Gorman has completed a variety of urban community developments in Milwaukee such as the Dr. Wesley L. Scott Living Facility, Metcalfe Park Homes Owner Initiative, Windsor Court, Lindsay Commons, Blue Ribbon Lofts, Majestic Loft Apartments, Kunzelmann-Esser Lofts, Historic Fifth Ward Lofts and the Park East Enterprise Lofts. Mr. Gorman also has expertise in sustainable architecture and development, finance, tax credit investments, historic preservation, construction and supporting emerging businesses.

PROPOSED DEVELOPMENT

Renovation and conversion of the existing school for 64-affordable senior living apartments. The project also will include approximately 14 single-family home sites along Concordia that will be rent-

to-own units or may be developed directly as owner-occupied housing. Portions of the existing asphalt parking lot and playground will be converted to gardens and green space. On-site parking will be provided for the apartments and single-family units.

The apartments will include a mix of one, two and three-bedroom units. Unit amenities include washer and dryers. Building amenities will include a community room, crafts area, exercise room, business center with computers, chapel, nurse's room, hair care facility and tenant storage areas. Gorman will partner with SET Ministry, Inc. to provide a variety of supportive services to eligible residents. SET associates are expected to be on-site regularly to help monitor residents for health changes.



The homes along Concordia are expect to range in size from 1,400 SF to 1,600 SF and will all have three bedrooms and two baths and a parking pad or garage. The homes will have fluorescent and/or CFL lighting, high-efficiency furnaces and water heaters, energy-star rated appliances, low flow showerheads and aerators on sinks and lavatories, and energy-star windows with lowE insulated glass. Gorman has agreed to work with the City's Planning staff to develop plans that are consistent with the context of the neighborhood and that have sustainable elements.

Total development costs are about \$16,500,000. The project will be financed in part through federal affordable housing tax credits allocated by WHEDA and historic tax credits. Additional funding will be provided through conventional financing. The Buyer is committed to a strong EBE involvement and is aiming for 40% EBE participation.

OPTION TERMS AND CONDITIONS

The purchase price is \$600,000. A \$6,000 non-refundable Option Fee is required within 10 days of Common Council approval and shall be credited toward the purchase price if the sale closes prior to December 31, 2010.

If the Buyer requires additional time to sell the tax credits or obtain firm financing or final plans, the Commissioner of the Department of City Development in consultation with MPS, may extend the option until June 30, 2011, upon submission of a \$500 non-refundable renewal fee and a progress report on the efforts to obtain financing and plans.

Closing contingencies include DCD-approval of final construction plans and firm financing. Prior to closing, an Agreement for Sale that may provide for reversion of title in the event of non-performance will be negotiated with the Buyer. A \$10,000 Performance Deposit must be submitted at closing and shall be held until satisfactory renovation of the building and completion of the single-family homes. MPS has provided copies of the Asbestos Management Plan and Site Assessment Underground Storage Tank Assessment report. The City will convey the property in "as is, where is" condition.

OTHER ACTIONS

The MPS Finance & Personnel Committee recommended approval of an Option to Purchase with Gorman & Company on February 23, 2010. The Milwaukee Board of School Directors approved the option on February 25, 2010, contingent on approval by the Common Council.

FUTURE ACTIONS

Upon Council approval, the Buyer will apply for affordable housing tax credits or other affordable housing financing mechanisms provided by WHEDA. Closing is contingent upon Buyer submission to DCD for review and approval of firm financing and equity and final construction/rehabilitation plans.



Legislation Details (With Text)

File #: 091495 **Version:** 0

Type: Resolution **Status:** In Committee

File created: 3/2/2010 **In control:** PUBLIC WORKS COMMITTEE

On agenda: **Final action:**

Effective date:

Title: Resolution authorizing acceptance of quit claim deeds dedicating land for public alley purposes, in the 8th Aldermanic District.

Sponsors: ALD. DONOVAN

Indexes: ALLEY IMPROVEMENTS, ALLEYS, QUIT CLAIM DEEDS

Attachments: Fiscal Note.pdf, Exhibit A.pdf, Hearing Notice List

Date	Ver.	Action By	Action	Result	Tally
3/2/2010	0	COMMON COUNCIL	ASSIGNED TO		
3/4/2010	0	PUBLIC WORKS COMMITTEE	HEARING NOTICES SENT		
3/4/2010	0	PUBLIC WORKS COMMITTEE	HEARING NOTICES SENT		

Number

091495

Version

ORIGINAL

Reference

010438

Sponsor

ALD. DONOVAN

Title

Resolution authorizing acceptance of quit claim deeds dedicating land for public alley purposes, in the 8th Aldermanic District.

Analysis

This resolution permits the City of Milwaukee to accept quit claim deeds to dedicate land for public alley purposes.

Body

Whereas, In 2002, the Prince of Peace-Principe de Pas Congregation petitioned the City of Milwaukee ("City") to vacate the northerly half of the alley in the block bounded by West Mineral Street, West Scott Street, North 24th Street and North 25th Street; and

Whereas, On December 20, 2002, the Common Council adopted File No. 010438 approving the alley vacation; and

Whereas, The Prince of Peace-Principe de Pas Congregation has changed its development plans and wishes to rededicate the previously vacated alley for public alley purposes; and

Whereas, Prince of Peace-Principe de Pas Congregation and Elida R. Wilbrandt have agreed to quit claim to the City of Milwaukee for no monetary consideration the land illustrated in Exhibit A, a copy of which is attached to this Common Council File, for public alley purposes; and

Whereas, The legal description of the property to be acquired and dedicated is as follows:

Parcel 1 - The west 10.00 feet of Lots 1 through 4 inclusive, the west 10.00 feet of the north 15.00 feet of Lot 5, the east 10.00 feet of Lots 8 through 10 inclusive, and the east 10.00 feet of the north 15.00 feet of Lot 11, all in Block 24 of Clark's Addition, a recorded subdivision, in the Southwest 1/4 of Section 31, Township 7 North, Range 22 East, City of Milwaukee, County of Milwaukee, State of Wisconsin

Parcel 2 - The east 10.00 feet of Lot 7 in Block 24 of Clark's Addition, a recorded subdivision, in the Southwest 1/4 of Section 31, Township 7 North, Range 22 East, City of Milwaukee, County of Milwaukee, State of Wisconsin

; now, therefore, be it

Resolved, That the Common Council of the City of Milwaukee, is authorized to accept the quit claim deeds from Prince of Peace-Principe de Pas Congregation and Elida R. Wilbrandt dedicating land for the opening of the northerly half of the alley in the block bounded by West Mineral Street, West Scott Street, North 24th Street and North 25th Street as illustrated in Exhibit A and as legally described above.

Drafter

DCD/Real Estate

YSL:ysl

03/02/10/C

CITY OF MILWAUKEE FISCAL NOTE

A) DATE 03/02/10

FILE NUMBER:

Original Fiscal Note ☒ Substitute ☐

SUBJECT: Resolution authorizing acceptance of quit claim deeds dedicating land for public alley purposes, in the 8th Aldermanic District.

B) SUBMITTED BY (Name/title/dept./ext.): Rocky Marcoux, Commissioner, DCD

C) CHECK ONE: ☐ ADOPTION OF THIS FILE AUTHORIZES EXPENDITURES
☐ ADOPTION OF THIS FILE DOES NOT AUTHORIZE EXPENDITURES; FURTHER COMMON COUNCIL ACTION NEEDED. LIST ANTICIPATED COSTS IN SECTION G BELOW.
☒ NOT APPLICABLE/NO FISCAL IMPACT.

D) CHARGE TO: ☐ DEPARTMENT ACCOUNT(DA) ☐ CONTINGENT FUND (CF)
☐ CAPITAL PROJECTS FUND (CPF) ☐ SPECIAL PURPOSE ACCOUNTS (SPA)
☐ PERM. IMPROVEMENT FUNDS (PIF) ☐ GRANT & AID ACCOUNTS (G & AA)
☐ OTHER (SPECIFY)

E) PURPOSE	SPECIFY TYPE/USE	ACCOUNT	EXPENDITURE	REVENUE	SAVINGS
SALARIES/WAGES:					
SUPPLIES:					
MATERIALS:					
NEW EQUIPMENT:					
EQUIPMENT REPAIR:					
OTHER:					
TOTALS					

F) FOR EXPENDITURES AND REVENUES WHICH WILL OCCUR ON AN **ANNUAL** BASIS OVER SEVERAL YEARS CHECK THE APPROPRIATE BOX BELOW AND THEN LIST EACH ITEM AND DOLLAR AMOUNT **SEPARATELY**.

<input type="checkbox"/> 1-3 YEARS	<input type="checkbox"/> 3-5 YEARS	
<input type="checkbox"/> 1-3 YEARS	<input type="checkbox"/> 3-5 YEARS	
<input type="checkbox"/> 1-3 YEARS	<input type="checkbox"/> 3-5 YEARS	

G) LIST ANY ANTICIPATED FUTURE COSTS THIS PROJECT WILL REQUIRE FOR COMPLETION:

H) COMPUTATIONS USED IN ARRIVING AT FISCAL ESTIMATE:

PLEASE LIST ANY COMMENTS ON REVERSE SIDE AND CHECK HERE ☐

PW FILE NUMBER: 091495

[illegible]



Legislation Details (With Text)

File #:	091362	Version:	0
Type:	Ordinance	Status:	In Committee
File created:	2/9/2010	In control:	PUBLIC WORKS COMMITTEE
On agenda:		Final action:	
Effective date:			
Title:	An ordinance relating to depositing construction waste at city area sanitation yards and the size of trailers used to transport such waste.		
Sponsors:	THE CHAIR		
Indexes:	RECYCLING, SOLID WASTE DISPOSAL		
Attachments:	Fiscal note, Hearing Notice List, Proposed Substitute A, Hearing Notice List		

Date	Ver.	Action By	Action	Result	Tally
2/9/2010	0	COMMON COUNCIL	ASSIGNED TO		
2/12/2010	0	PUBLIC WORKS COMMITTEE	HEARING NOTICES SENT		
2/12/2010	0	PUBLIC WORKS COMMITTEE	HEARING NOTICES SENT		
2/18/2010	0	PUBLIC WORKS COMMITTEE	HELD IN COMMITTEE	Pass	4:0
3/4/2010	0	PUBLIC WORKS COMMITTEE	HEARING NOTICES SENT		

Number

091362

Version

ORIGINAL

Reference

Sponsor

THE CHAIR

Title

An ordinance relating to depositing construction waste at city area sanitation yards and the size of trailers used to transport such waste.

Sections

79-1-12-c rc

79-14.5 rc

81-35.9-3 am

81-35.9-4 am

Analysis

Beginning in April 2010, the department of public works intends to charge for depositing construction waste at city area sanitation yards. This ordinance clarifies the definition of construction waste. The ordinance also limits the bed size of trailers transporting construction waste to no more than 4 feet by 8 feet, rather than a single-axle trailer specified in the current code provisions, and also limits the amount of construction waste being transported in a trailer to no more than 4 feet in height.

Body

The Mayor and Common Council of the City of Milwaukee do ordain as follows:

Part 1. Section 79-1-12-c of the code is repealed and recreated to read:

79-1. Definitions. 12. SOLID WASTE consists of the following categories:

c. Construction waste is waste resulting from construction or demolition, alteration or repair, including excavated material. This includes, but is not limited to, roofing material, brick, stones, concrete, lumber, drywall, paneling and other construction material and is exclusive of any waste resulting from a fire, any painted bricks, blocks or concrete, any asphalt, or any concrete containing iron rods.

Part 2. Section 79-14.5 of the code is repealed and recreated to read:

79-14.5 Depositing of Construction Waste in Area Sanitation Yards. Any person that deposits or causes to be deposited, dropped, dumped, discharged or left any construction waste, as defined in s. 79-1-12-c, in or about the area sanitation yards of the city shall be assessed a construction debris charge as provided in s. 81-35.9.

Part 3. Section 81-35.9-3 and 4 of the code is amended to read:

81- 35.9. Construction Debris Charges.

3. \$15 for a passenger car or sport utility vehicle with a ~~[[single-axle]]~~ trailer >> not exceeding 4 feet by 8 feet in bed size, with debris not exceeding 4 feet in height<<.

4. \$20 for a pickup truck or van (3/4 ton capacity or less) with a ~~[[single-axle]]~~ trailer >> not exceeding 4 feet by 8 feet in bed size, with debris not exceeding 4 feet in height<<.

LRB:

APPROVED AS TO FORM

Legislative Reference Bureau

Date: _____

ATTORNEY

IT IS OUR OPINION THAT THE ORDINANCE
IS LEGAL AND ENFORCEABLE

Office of the City Attorney

Date: _____

Department

Requestor

DPW-Operations Division

Drafter

LRB10054-2

JWC

2/3/10

CITY OF MILWAUKEE FISCAL NOTE

A) DATE 02/12/2010

FILE NUMBER: 091362

Original Fiscal Note ☒ Substitute ☐

SUBJECT: An ordinance relating to depositing construction waste at city area sanitation yards and the size of trailers used to transport such waste.

B) SUBMITTED BY (Name/title/dept./ext.): Wanda Booker, Sanitation Services Manager, DPW Operations, X2332

C) CHECK ONE: ☐ ADOPTION OF THIS FILE AUTHORIZES EXPENDITURES
☐ ADOPTION OF THIS FILE DOES NOT AUTHORIZE EXPENDITURES; FURTHER COMMON COUNCIL ACTION NEEDED. LIST ANTICIPATED COSTS IN SECTION G BELOW.
☒ NOT APPLICABLE/NO FISCAL IMPACT.

D) CHARGE TO: ☐ DEPARTMENT ACCOUNT(DA) ☐ CONTINGENT FUND (CF)
☐ CAPITAL PROJECTS FUND (CPF) ☐ SPECIAL PURPOSE ACCOUNTS (SPA)
☐ PERM. IMPROVEMENT FUNDS (PIF) ☐ GRANT & AID ACCOUNTS (G & AA)
☐ OTHER (SPECIFY)

E) PURPOSE	SPECIFY TYPE/USE	ACCOUNT	EXPENDITURE	REVENUE	SAVINGS
SALARIES/WAGES:					
SUPPLIES:					
MATERIALS:					
NEW EQUIPMENT:					
EQUIPMENT REPAIR:					
OTHER:					
TOTALS					

F) FOR EXPENDITURES AND REVENUES WHICH WILL OCCUR ON AN **ANNUAL** BASIS OVER SEVERAL YEARS CHECK THE APPROPRIATE BOX BELOW AND THEN LIST EACH ITEM AND DOLLAR AMOUNT **SEPARATELY**.

<input type="checkbox"/> 1-3 YEARS	<input type="checkbox"/> 3-5 YEARS	
<input type="checkbox"/> 1-3 YEARS	<input type="checkbox"/> 3-5 YEARS	
<input type="checkbox"/> 1-3 YEARS	<input type="checkbox"/> 3-5 YEARS	

G) LIST ANY ANTICIPATED FUTURE COSTS THIS PROJECT WILL REQUIRE FOR COMPLETION:

H) COMPUTATIONS USED IN ARRIVING AT FISCAL ESTIMATE:

PLEASE LIST ANY COMMENTS ON REVERSE SIDE AND CHECK HERE ☐

PW FILE NUMBER: 091362

[illegible]

..Number

091362

..Version

PROPOSED SUBSTITUTE A

..Reference

..Sponsor

THE CHAIR

..Title

A substitute ordinance relating to depositing construction waste at city area sanitation yards and the size of trailers used to transport such waste.

..Sections

79-1-12-c rc

79-14.5 rc

81-35.9 rc

..Analysis

Beginning in April 2010, the department of public works intends to charge for depositing construction waste at city area sanitation yards. Under the ordinance implementing various provisions for the 2010 city budget, construction waste charges range from \$10 to \$20, depending on the type of vehicle used for transporting the waste. This ordinance modifies these charges and establishes a standard charge of \$15 per load and limits the size of a construction waste load to more than 8 cubic yards. This ordinance also clarifies the definition of construction waste.

..Body

The Mayor and Common Council of the City of Milwaukee do ordain as follows:

Part 1. Section 79-1-12-c of the code is repealed and recreated to read:

79-1. Definitions. 12. SOLID WASTE consists of the following categories:

c. Construction waste is waste resulting from construction or demolition, alteration or repair, including excavated material. This includes, but is not limited to, roofing material, brick, stones, concrete, lumber, drywall, paneling and other construction material and is exclusive of any waste resulting from a fire, any painted bricks, blocks or concrete, any asphalt, or any concrete containing iron rods.

Part 2. Section 79-14.5 of the code is repealed and recreated to read:

79-14.5 Depositing of Construction Waste in Area Sanitation Yards.

Any person that deposits or causes to be deposited, dropped, dumped,

discharged or left any construction waste, as defined in s. 79-1-12-c, in or about the area sanitation yards of the city shall be assessed a construction waste charge as provided in s. 81-35.9.

Part 3. Section 81-35.9 of the code is repealed and recreated to read:

81- 35.9. Construction Waste Charge.

1. The construction waste charge charged under s. 79-14.5 shall be based on a load size not exceeding 8 cubic yards.
2. The construction waste charge shall be \$15 per load.

..LRB:

APPROVED AS TO FORM

Legislative Reference Bureau

Date: _____

..ATTORNEY

IT IS OUR OPINION THAT THE ORDINANCE
IS LEGAL AND ENFORCEABLE

Office of the City Attorney

Date: _____

..Department

.. Requestor

DPW-Operations Division

..Drafter

LRB10054-3

JWC

3/3/10

PW FILE NUMBER: 091362

[illegible]



Legislation Details (With Text)

File #: 091528 **Version:** 0

Type: Ordinance **Status:** In Committee

File created: 3/2/2010 **In control:** PUBLIC WORKS COMMITTEE

On agenda: **Final action:**

Effective date:

Title: An ordinance relating to commercial garbage receptacles.

Sponsors: ALD. DAVIS

Indexes: GARBAGE CARTS

Attachments: Fiscal note, Hearing Notice List

Date	Ver.	Action By	Action	Result	Tally
3/2/2010	0	COMMON COUNCIL	ASSIGNED TO		
3/4/2010	0	PUBLIC WORKS COMMITTEE	HEARING NOTICES SENT		

Number

091528

Version

ORIGINAL

Reference

Sponsor

ALD. DAVIS

Title

An ordinance relating to commercial garbage receptacles.

Sections

79-3-2 am

79-3-4-a rn

79-3-4-2-a-1 cr

Analysis

This ordinance requires commercial areas to provide waste receptacles. The containers shall be maintained in good repair and shall be free and fully accessible at all times for handling and collection. Sufficient containers for not less than 2 weeks' accumulation shall be required for the property or business, and collection shall be made at least weekly unless arrangements are made for more frequent collection as required by the department of public works. The property owner or operator shall ensure that the waste is removed by a private entity. The ordinance also clarifies that nuisance abatement procedure specified in s. 79-3-2 does not apply to commercial waste receptacles.

Body

The Mayor and Common Council of the City of Milwaukee do ordain as follows:

Part 1. Section 79-3-2 of the code is amended to read:

79-3. Waste Containers Required.

2. NUISANCE ABATEMENT. Where a nuisance is found to exist due to insufficient containers, an order shall be directed to the property owner, where practical, to furnish sufficient approved containers as required in this section. >>Except for receptacles required in sub. 4-a-1<< [[Where]] >>where<< the owner fails to provide such containers or where it is impractical to serve such an order, the city shall furnish the required containers and assess the cost thereof as a lien upon the lot or premises involved in the same manner as any tax on real estate.

Part 2. Section 79-3-4-a of the code is renumbered 79-3-4-a-2.

Part 3. Section 79-3-4-a-1 of the code is created to read:

4. FOR COMMERCIAL AREAS.

a-1. Receptacles Required. Containers as specified under s. 79-4 or as otherwise approved by the commissioner shall be provided by the property owner or operator. Containers shall be maintained in good repair and shall be free and fully accessible at all times for handling and collection. Sufficient containers for not less than 2 weeks' accumulation shall be required for the property or business, and collection shall be made at least weekly unless arrangements are made for more frequent collection as required by the department. The property owner or operator shall ensure the waste is removed by a private entity.

LRB

APPROVED AS TO FORM

Legislative Reference Bureau

Date: _____

Attorney

IT IS OUR OPINION THAT THE ORDINANCE
IS LEGAL AND ENFORCEABLE

Office of the City Attorney

Date: _____

Requestor

Drafter

MET

3/2/10

LRB10046-1

CITY OF MILWAUKEE FISCAL NOTE

A) DATE 3/4/10FILE NUMBER: 091528Original Fiscal Note ☒ Substitute ☐SUBJECT: An ordinance relating to commercial garbage receptacles.B) SUBMITTED BY (Name/title/dept./ext.): Don Schaewe/Environmental Code Enforcement Manger/DNS/5569

- C) CHECK ONE: ☐ ADOPTION OF THIS FILE AUTHORIZES EXPENDITURES
☐ ADOPTION OF THIS FILE DOES NOT AUTHORIZE EXPENDITURES; FURTHER COMMON COUNCIL ACTION NEEDED. LIST ANTICIPATED COSTS IN SECTION G BELOW.
☒ NOT APPLICABLE/NO FISCAL IMPACT.

- D) CHARGE TO: ☐ DEPARTMENT ACCOUNT(DA) ☐ CONTINGENT FUND (CF)
☐ CAPITAL PROJECTS FUND (CPF) ☐ SPECIAL PURPOSE ACCOUNTS (SPA)
☐ PERM. IMPROVEMENT FUNDS (PIF) ☐ GRANT & AID ACCOUNTS (G & AA)
☐ OTHER (SPECIFY)

E) PURPOSE	SPECIFY TYPE/USE	ACCOUNT	EXPENDITURE	REVENUE	SAVINGS
SALARIES/WAGES:					
SUPPLIES:					
MATERIALS:					
NEW EQUIPMENT:					
EQUIPMENT REPAIR:					
OTHER:					
TOTALS					

- F) FOR EXPENDITURES AND REVENUES WHICH WILL OCCUR ON AN **ANNUAL** BASIS OVER SEVERAL YEARS CHECK THE APPROPRIATE BOX BELOW AND THEN LIST EACH ITEM AND DOLLAR AMOUNT **SEPARATELY**.

<input type="checkbox"/> 1-3 YEARS	<input type="checkbox"/> 3-5 YEARS	
<input type="checkbox"/> 1-3 YEARS	<input type="checkbox"/> 3-5 YEARS	
<input type="checkbox"/> 1-3 YEARS	<input type="checkbox"/> 3-5 YEARS	

- G) LIST ANY ANTICIPATED FUTURE COSTS THIS PROJECT WILL REQUIRE FOR COMPLETION:

- H) COMPUTATIONS USED IN ARRIVING AT FISCAL ESTIMATE:

PLEASE LIST ANY COMMENTS ON REVERSE SIDE AND CHECK HERE ☐

PW FILE NUMBER: 091528

[illegible]



Legislation Details (With Text)

File #: 090072 **Version:** 0

Type: Communication **Status:** In Committee

File created: 5/5/2009 **In control:** PUBLIC WORKS COMMITTEE

On agenda: **Final action:**

Effective date:

Title: Communication relating to the report and recommendations of the Recycling Task Force.

Sponsors: THE CHAIR

Indexes: COMMITTEES, RECYCLING, REPORTS AND STUDIES

Attachments: Final Report and Recommendations, Digital recording of the April 6 2009 meeting, April 6 2009 meeting minutes, Digital recording of the April 27 2009 meeting, April 27 2009 meeting minutes and exhibits, Letter to City Attorney requesting legal opinion, City Attorney's opinion, Digital recording of the May 18, 2009 meeting, May 18 2009 meeting minutes and exhibit, Digital recording of the June 8 2009 meeting, June 8 2009 meeting minutes and exhibit, 6-8-09 email re letter from Mr. Lindquist Waukesha, June 29 2009 Notice of Recycling facility tours, 7-21-09 email and attachment from Lisa Schaal regarding article Tracking trash from MIT News Office, Digital recording of the July 27, 2009 meeting, July 27 2009 meeting minutes and exhibits, 8-6-09 Email and attachment from Mike Daun regarding MRF of the Month article, 8-13-09 email and attachment from Lisa Schaal regarding Solar Powered Waste Compactors, Digital recording of the September 14 2009 meeting, September 14 2009 meeting minutes and exhibit, Digital recording of the October 26, 2009 meeting, October 26 2009 meeting minutes and exhibit, Digital recording of the December 16 2009 meeting, December 16 2009 meeting minutes and exhibits, Letter from FCR Recycling to Mr Cole, Hearing Notice List

Date	Ver.	Action By	Action	Result	Tally
5/5/2009	0	COMMON COUNCIL	ASSIGNED TO		
2/12/2010	0	PUBLIC WORKS COMMITTEE	HEARING NOTICES SENT		
2/12/2010	0	PUBLIC WORKS COMMITTEE	HEARING NOTICES SENT		
2/12/2010	0	PUBLIC WORKS COMMITTEE	HEARING NOTICES SENT		
2/12/2010	0	PUBLIC WORKS COMMITTEE	HEARING NOTICES SENT		
2/18/2010	0	PUBLIC WORKS COMMITTEE	HELD IN COMMITTEE	Pass	4:0
3/4/2010	0	PUBLIC WORKS COMMITTEE	HEARING NOTICES SENT		

Number

090072

Version

ORIGINAL

Reference

Sponsor

THE CHAIR

Title

Communication relating to the report and recommendations of the Recycling Task Force.

Requestor

Drafter

CC

tjm

5/4/09

City of Milwaukee

Recycling Task Force

Final Report and Recommendations to the

Common Council

January 2010



INTRODUCTION

The City of Milwaukee Common Council established the Recycling Task Force (RTF) on January 16, 2009, with the adoption of Common Council File # 081212 and amended it with Common Council File 090233.

MISSION STATEMENT

This Task Force was charged with conducting a comprehensive study of the fiscal and operational impacts of a conversion to single-stream recycling in the City of Milwaukee. The task force was directed to submit those findings and recommendations to the Common Council by January 11, 2010.

MEMBERSHIP

The Recycling Task Force members consisted of five members:

Preston Cole, appointed by the Commissioner of Public Works as his designee and appointed as chair by the Common Council President

Ald. Joe Dudzik, appointed by the Common Council President

Lisa Schaal, citizen member appointed by the Common Council President with experience and knowledge of municipal public works operations

Michael Daun, appointed by the Milwaukee Comptroller as his designee

Erick Shambarger, appointed by the Budget and Management Director as his designee

MEETING DATES

The Task Force held the following public meetings in 2009:

April 6, 2009

April 27, 2009

May 18, 2009

June 8, 2009

June 29, 2009

July 27, 2009

September 14, 2009

October 26, 2009

December 16, 2009

SUMMARY

During the regular meetings of the task force, members discussed a series of issues, questions and recommendations by task force members, the Consultant Earth Tech/AECOM and others relating to:

- Recycling citation process;
- Single stream recycling;
- Recycling programs of other cities;
- The current recycling contract;
- The type of equipment required for the recycling program and its cost;
- The “Pay As You Throw” program;
- The cost of converting to a single-stream collection process;
- Feasibility and cost/benefit of depositing collected recyclables at the existing Germantown facility compared to the City upgrading and using its own facility;
- Continuation of contracting out recycling collection; and
- Impact of the weather on impact the recycling collection and processing.

The following individuals appeared at one or more of the task force meetings to answer questions, offer suggestions and to provide legal advice:

- Mr. Rick Meyers, Department of Public Works, Sanitation Division
- Ms. Wanda Booker, Department of Public Works, Sanitation Division
- Mr. Donald Stone with Department of Public Works, Sanitation Division
- Ald. Nik Kovac
- James Carroll, Legislative Reference Bureau
- Jim Michalski, Comptroller's Auditing Division
- Deputy City Attorney Linda Burke
- Assistant City Attorney Jay Unora with the ordinance Enforcement Division
- Mr. Donald F. Pirrung, PE and Mr. Paul Matz with Earth Tech/AECOM Consultant Firm
- Mr. Perry Lindquist, Land Resources Manager with Waukesha County

During the task force meetings the following presentations were made:

Mr. Rick Meyers, City of Milwaukee, Environmental Recycling Specialist, gave a PowerPoint presentation on the City of Milwaukee Department of Public Works' current recycling program (**APPENDIX A**).

Member Erick Shambarger gave a brief summary of the La Follette School of Public Affairs (Madison, WI) policy study on the Pay-As-You-Throw program, which was done at the request of the City of Milwaukee's Department of Administration, Budget & Management Division. The report is titled "Impacts of Pay-As-You-Throw Municipal Solid Waste Collection" and is attached to this report (**APPENDIX B**). A copy of the report can also be found at: <http://www.lafollette.wisc.edu/publications/workshops/2009/waste.pdf>

Mr. Perry Lindquist, Land Resources Manager with Waukesha County, gave a PowerPoint presentation on the Waukesha County Recycling System Study (**APPENDIX C**).

Mr. Donald F. Pirrung, PE and Mr. Paul Matz with Earth Tech/AECOM, gave a series of PowerPoint presentations relating to a “Recycling Facility Alternatives Study.” The “Recycling Facility Alternatives Study” is attached to this report (**APPENDIX D**).

The Recycling Task Force also attended tours of the City of Milwaukee Materials Recovery Facility (1313 W. Mount Vernon Ave) and the Waste Management Materials Recovery Facility (W132 N10487 Grant Dr., Germantown, WI) on June 29, 2009.

The minutes of all meetings of the Task Force are accessible on the Internet at <http://milwaukee.legistar.com/calendar.aspx> and in Common Council File #090072.

Given the breadth of recycling topics and areas of examination, the task force chose to focus its efforts on evaluating costs and benefits associated with single stream recycling and continuation/renegotiation of the existing recycling contract. The results of this focus are the four recommendations stated below and the material contained in the four appendixes, which support these recommendations.

RECOMMENDATIONS

The recommendations may require further refinement and review and may require ordinance amendments or contract negotiation to be implemented. Time has not allowed for a complete review of their legality and enforceability.

We, the members of the City of Milwaukee Recycling Task Force hereby recommend the following:

1. Implement single stream recycling within the next 1-4 years as the recycling collection and processing system to serve the City of Milwaukee.

According to the Recycling Facility Alternatives Study, prepared by AECOM (APPENDIX D, Page ES-2):

“A Single stream processing means all the recyclables are collected in a single undivided cart and then sorted at the Material Recycling Facility (MRF). This approach is more user friendly and collection friendly resulting in more recyclables being placed at the curb by the public and more efficient collection by the recycling truck operation. Single stream collection is more user friendly because the public can simply consolidate all recyclables in the home and place them all in one cart without further sorting. The recycling industry is moving toward single stream recycling nationwide. Single stream can accommodate fully automated collection, which improves efficiency by allowing carts to be serviced without the driver exiting the vehicle.”

2. Include internal and external stakeholders in a detailed investigation of the Recycling Facility Study’s top two options:
 - i. Alternative D – One Transfer Station at Existing City Facility
 - ii. Alternative F – Regional Single Stream MRF at Existing City Facility

According to the Recycling Facility Alternatives Study, prepared by AECOM (APPENDIX D, pages ES-2 and ES-3):

“Alternative D would consist of converting the existing City MRF into a recycling transfer station. A compactor and related improvements would be added to the MRF. The transfer station would be operated by a third party, which would transport the recyclables by semi truck to a processing facility. Transfer station capital equipment could be provided directly by the third party firm and are estimated for this study. For this evaluation, the Waste Management Recycle America (WMRA) MRF in Germantown was used for the cost evaluation.”

“Alternative F considers Waukesha County, City of Wauwatosa, and City of Milwaukee developing a MRF at the City’s existing MRF on Mount Vernon. The City’s current dual stream processing would be replaced with single stream processing equipment. The existing equipment would be replaced entirely due to its age, size, and condition. The structural aspects of the facility would remain basically the same. A cost allowance is included for some structural improvements to accommodate the new process equipment. Staffing is expected to increase from the current level based on additional recycling tonnage and is estimated based on the Waukesha County Report. The processing would be performed by a private firm as currently done.”

3. Immediately implement three-week recycling collection to increase recycling volumes and revenues. Schedule recycling collection and require the cart to be located at the curb or alley line to improve collection efficiency. End summer walk-up driveway service except for hardships.

According to the Recycling Facility Alternatives Study, prepared by AECOM (APPENDIX D, Page ES-4):

“The most cost-effective method was to collect the recyclables on a three-week frequency with placement of the cart at the curb by the resident. Three week frequency is estimated to increase recyclables volume by ten percent.”

4. Implement Pay-As-You-Throw features for garbage collection in conjunction with increased recycling collection service to optimize effectiveness of both programs.

According to the Recycling Facility Alternatives Study, prepared by AECOM (APPENDIX D, Page ES-4):

“There is increasing interest in managing municipal solid waste through "Pay-As-You-Throw" (PAYT) programs. The most common approach is for the user to pay for a certain size garbage container(s) and the recycling cart is free. The PAYT program results in a decrease in the trash tonnage and increase in recycling tonnage. A 16 to 17 percent diversion from residential trash is the average, which is generally divided equally among recycling, yard waste and source reduction.”

APPENDIX A

PowerPoint presentation on the City of Milwaukee Department of Public Works'
current recycling program

Recycling Task Force Meeting

April 27, 2009

Agenda Item 4:

Presentation by DPW Sanitation staff on the City's recycling program

Presented by Rick Meyers, Recycling Specialist



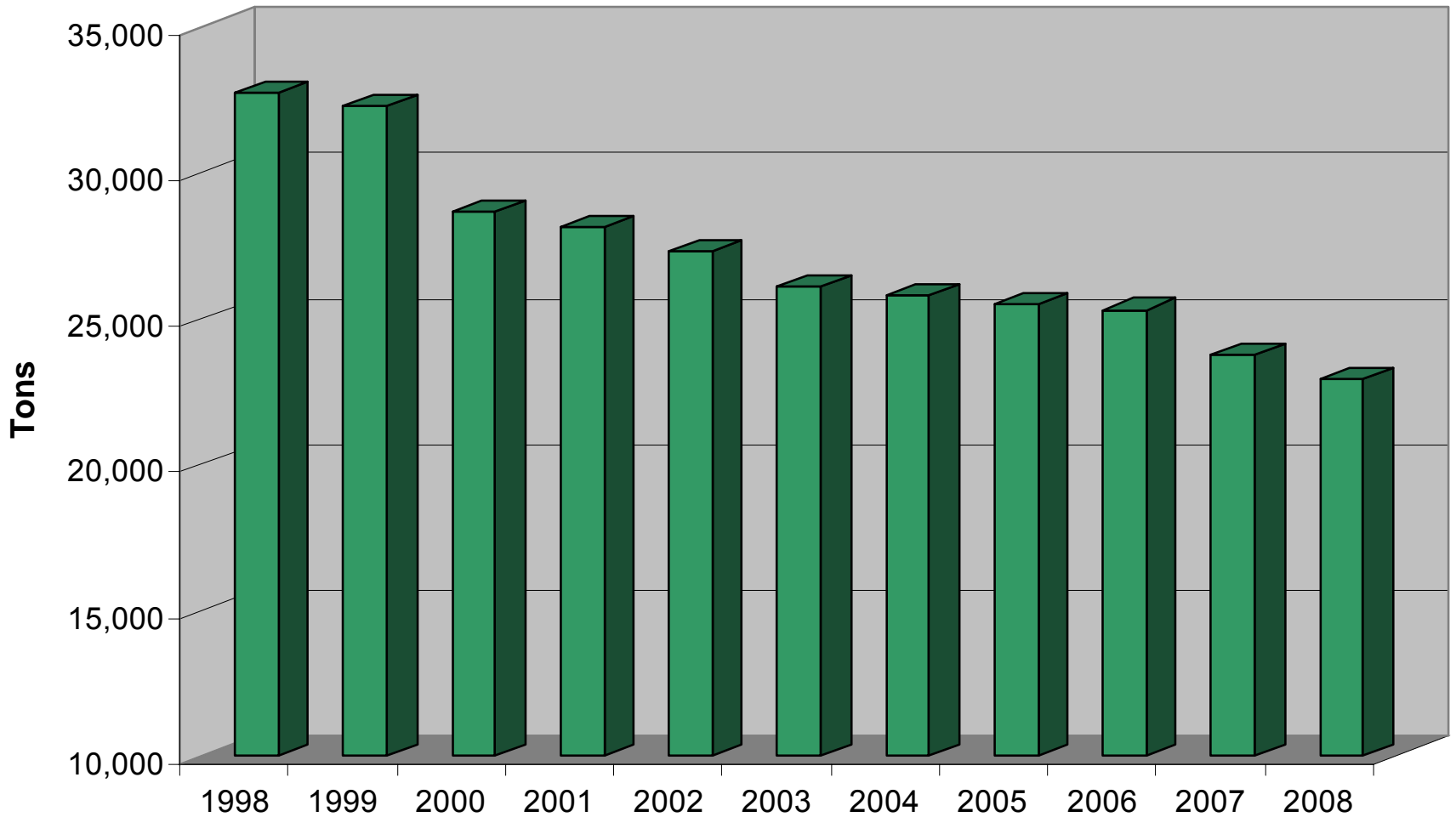
City of Milwaukee Residential Recycling

Program History:

- 1971: drop-off sites established for glass, tin-cans, and newspaper
- 1977: experiment with refuse-derived fuel plant
- 1989: curbside pilot program initiated
- **1995: city wide curbside program implemented**

City of Milwaukee Residential Recycling

1998 - 2008



City of Milwaukee Residential Recycling

Program Overview:

- 190,000 single family through 4-unit properties
- 34 recycling routes in winter, 31 in summer
- 85% of HH's serviced with 95-gallon carts picked up monthly (2 summer routes 2X/month)
- 15% of HH's serviced with 18-gallon bins picked up weekly



Recycling Collection Details

- Dual stream program, municipal collection
- Split carts and split recycling packers
- Semi-automated, single cart system
- Single person collection crew
- High material quality with dual stream collection



Recyclables Processing & Marketing

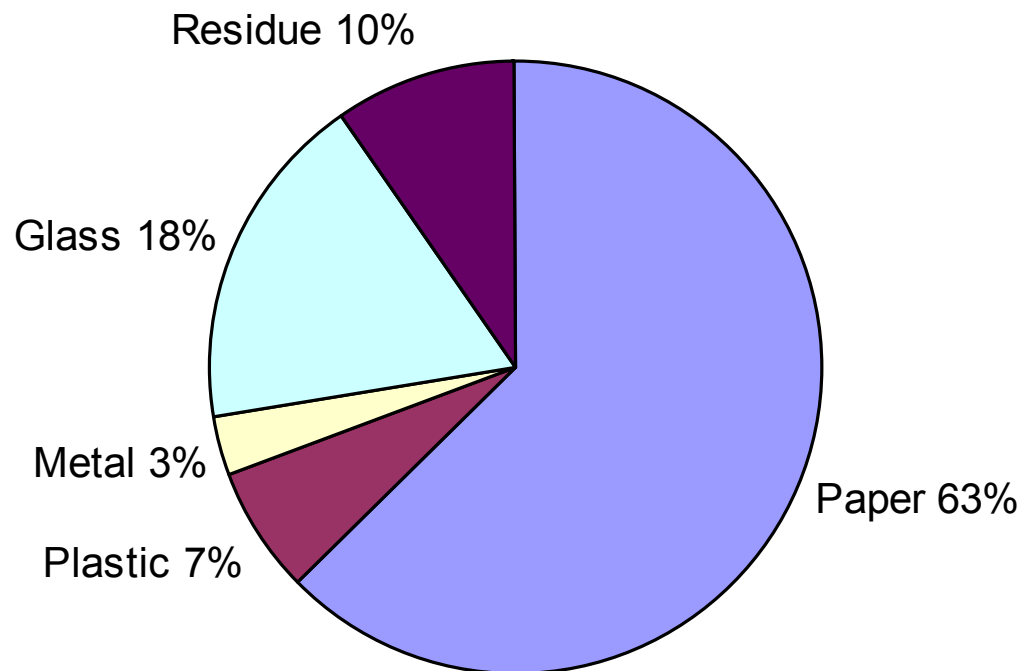
- City owns its Materials Recovery Facility (MRF)
- Contracts out its operation & marketing of recyclables
 - July 1, 2009 entering first of up to 5 optional extension years
 - Could continue contract through June 30, 2014
 - Contract basics:
 - Per ton processing fee, annually adjusted (CPI)
 - 50% revenue share from sale of processed recyclables

Milwaukee's Materials Recovery Facility

- Dual stream processing
 - Paper fibers
 - Commingled containers

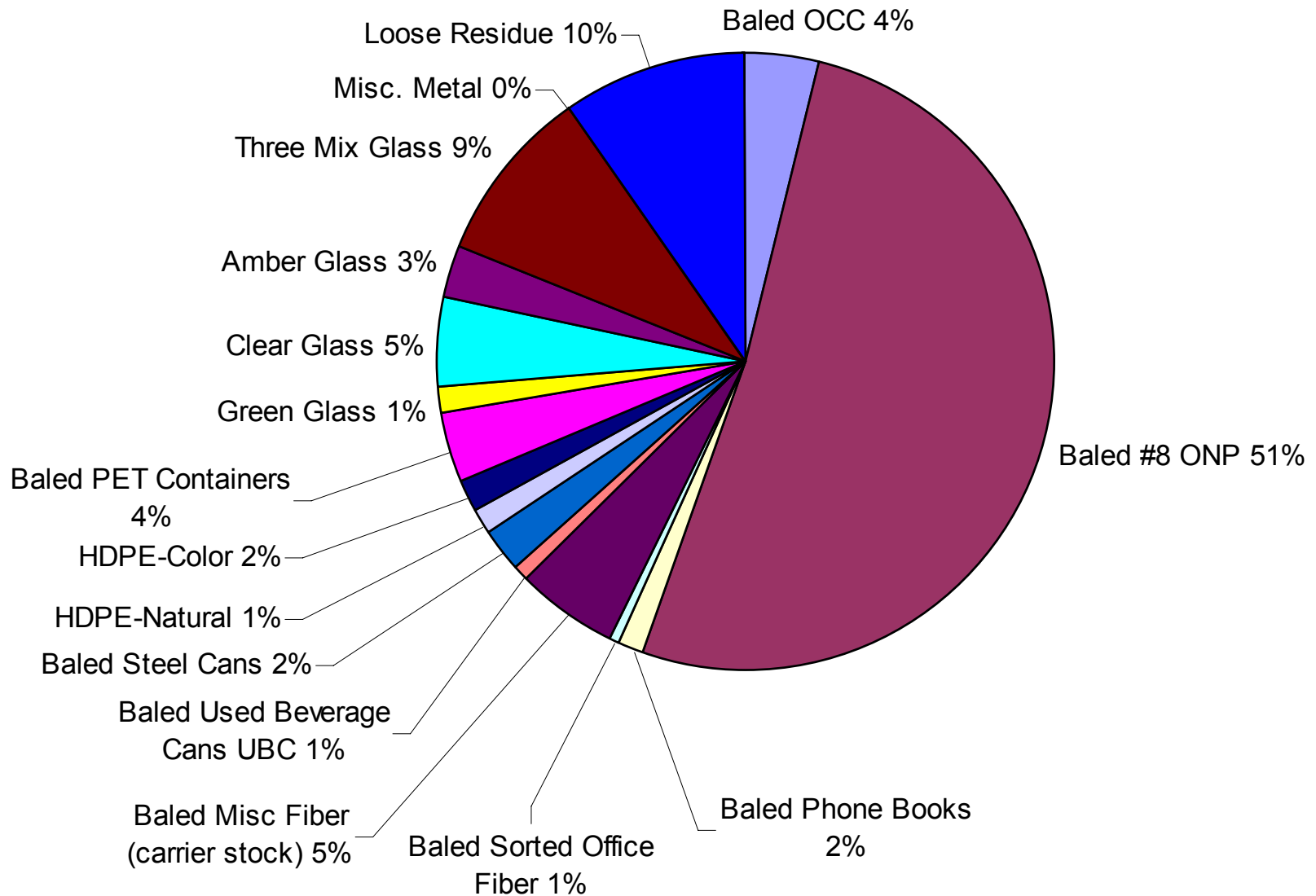


**City of Milwaukee MRF
Materials Processed by Weight
2007**



City of Milwaukee MRF

Materials Processed by Weight (2007)



Financial Data

Revenue to City: **\$7.4 mil.** to General Fund (2004-2008)

2008:

Net Revenue: \$376,395 (\$15.16/T)

Avoided disposal costs: \$725,896 (\$29.24/T)

Total net benefit: \$1,102,291 (\$44.40/T)

Education and Outreach

- UW Grant outreach
- EPA RCC Recycling With a Personal Touch
- Recycling DVD, 3 segments/age groups
- Recycle For Good
 - New advertisements
 - Website
 - Neighborhood campaigns
- Recycle More Wisconsin
- MRF tours & educational programs (Keep Greater Milwaukee Beautiful)

New promotional campaign launched
Sept 30, 2008



LET'S MAKE MILWAUKEE CLEAN & GREEN.



Looking forward

- Guaranteed schedule, biweekly
- Potential changeover of some bins to carts
- Single or dual stream collection?
- Public vs. private MRF?

Required components of an effective recycling program (NR 544.04)

- Public information and education program
- Ordinance reflecting State law
- System for collecting recyclables from single family and 2 to 4 unit residences
- Equipment and staff to implement the recycling program
- Require owners of multiple family dwellings and non-residential facilities and properties to provide recycling at their facilities and properties
- A means of adequately enforcing the requirements of the effective recycling program
- A compliance assurance plan
- Submittal of an annual program report

Compliance Assurance Plan

- City of Milwaukee's CAP Created in July of 2006
- The CAP, at a minimum, shall contain the procedure to follow when addressing at least one specific compliance issue

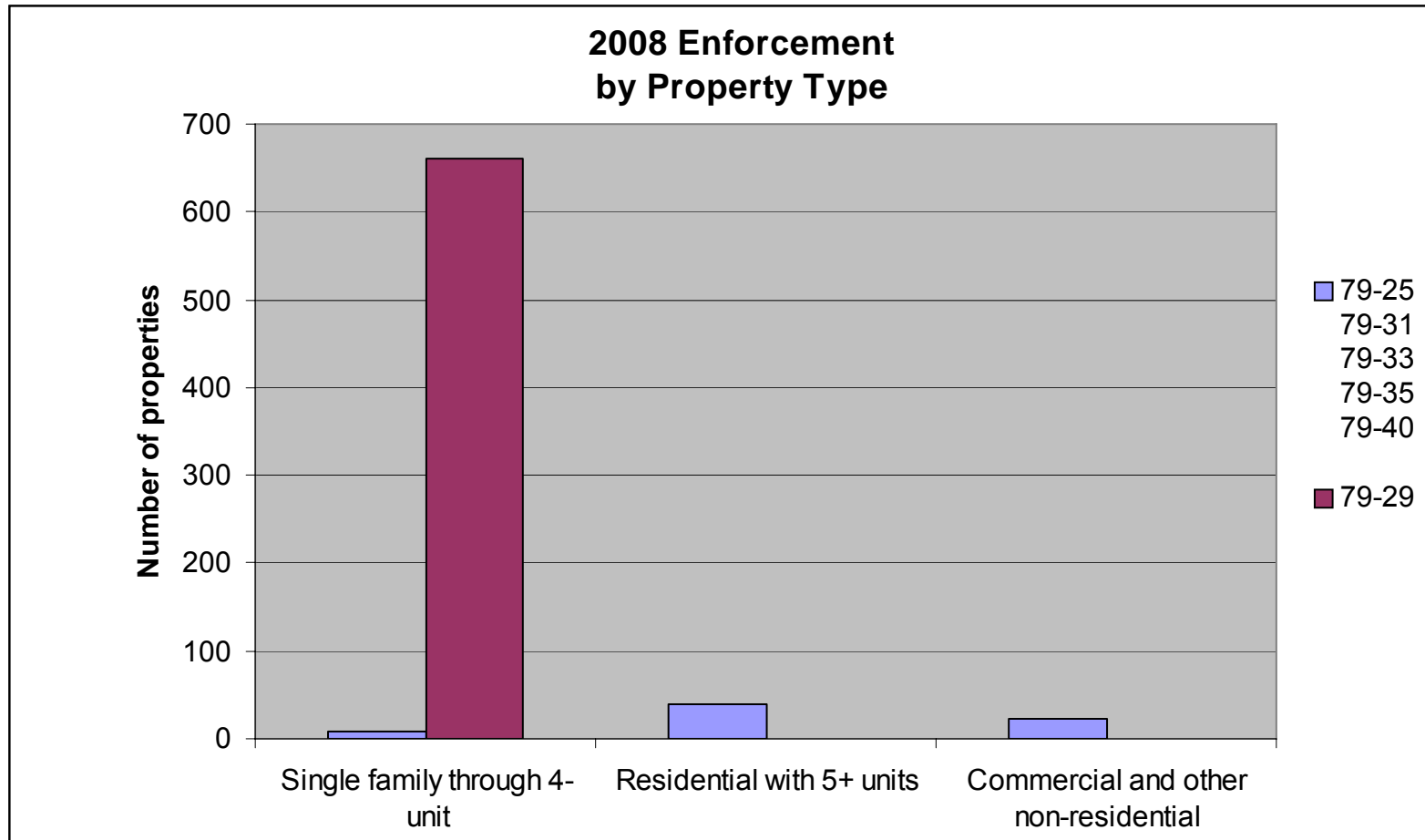
Ours: 3 scenarios

- Violations by Businesses / >4-Unit Multifamily Dwellings / Institutions
- Violations by Residents—Example of contamination of recycling cart
- Violations by Residents, Single Family through 4-plex – Example of Non-Participation

Recycling Violations and Penalties

Code	Violation	Violation Frequency (within 12 months)	Penalty
79-29	Improper Sorting and Storage of Recyclable Materials	1st	Written Notice
		2nd	\$20
		3rd or more	\$40
79-33, 79-35	Failure to provide containers for collection and provide removal of recyclable materials by Multi-Family Dwellings and Non-Residential Properties	1st & 2nd	\$50 - \$200
		3rd or more	\$100 - \$500
79-40	Removal of Recyclables or Recycling Containers	1st or more	\$25 - \$500
79-25	Non-compliance with separation of recycling materials	1st	\$10
		2nd or more	\$25

Properties Enforced in 2008



Enforcement

- Recycling assistance integrated into enforcement process
- Compliance Summary through 2008
 - 161 properties enforced (145 attained compliant status)
 - 30 special charges issued totaling \$3,850.64
- Compliance Summary 2008 alone
 - 65 properties enforced (50 attained compliant status)
 - 23 special charges issued totaling \$3,047.38
- Cart contamination
 - 2006: 315 notices issued resulting in 141 special charges totaling \$2,775
 - 2007: 667 notices issued resulting in 379 special charges totaling \$11,215
 - 2008: 661 notices issued resulting in 353 special charges totaling \$9,915

Recycling Tons, Wisconsin RUs

Top RUs by Population	Total Household Recyclables per Capita (lbs.)	Rank (out of 25 largest RUs)
Milwaukee	86.4	24
Waukesha, County	157.6	7
Madison	137.7	11
Outagamie, County	187	1
Green Bay	146.5	10
Eau Claire, County	123.3	17
Kenosha	123.8	16
Racine	107.3	20

Data taken from Appendix 3 “Recycling Tons in Wisconsin 25 Largest Responsible Units”, of the Audit of the City of Milwaukee Recycling Program, June 2008

Residential Recycling in the U.S.

City	Residential Recycling Rate	Frequency	How collected
Columbus	12%	Weekly	Commingled
Austin	28%	Weekly	Source-Separated
Memphis	27%	Weekly	Commingled
Baltimore	27%	Weekly	Source-Separated
MILWAUKEE	25%	Monthly	Source-Separated
Fort Worth	20.6%	Weekly	Commingled
Charlotte	11.5%	Weekly	Commingled
El Paso	2%	NA	NA
Boston	23%	Weekly	Source-Separated

Data taken from Appendix 5 “Municipal Recycling in the U.S.- 30 largest cities by population”, of the Audit of the City of Milwaukee Recycling Program, June 2008

Possible Incentive Programs

- **PAYT**
- **Recycle Bank**
 - Need at least 10,000 households on a set schedule to start a pilot program
 - Some communities that utilize Recycle Bank also have a PAYT system

APPENDIX B

Impacts of Pay-As-You-Throw Municipal Solid Waste Collection Study

City of Milwaukee:

Impacts of Pay-As-You-Throw Municipal Solid Waste Collection

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For the
City of Milwaukee, Department of Administration,
Budget and Management Division

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Foreword

Students in the master of public affairs program in the Robert M. La Follette School of Public Affairs at the University of Wisconsin–Madison produced this report for the City of Milwaukee’s Department of Administration’s Budget and Management Division. The opinions and judgments presented in the report do not represent the views, official or unofficial, of the La Follette School or of the clients for whom the students prepared the report.

The authors are enrolled in the Public Affairs Workshop, Domestic Issues, the capstone course in their graduate program. The La Follette School offers a two-year graduate program leading to a master of public affairs or a master of international public affairs degree. The workshop provides practical experience applying the tools of analysis acquired during three semesters of coursework to actual issues clients face in the public, non-governmental, and private sectors. Students work in teams to produce carefully crafted policy reports that meet high professional standards within the timeframe of a single academic semester. The reports are research-based, analytical, and when appropriate, evaluative.

This report would not have been possible without the encouragement and leadership of the City of Milwaukee’s dedicated employees. A University of Wisconsin–Madison Engage grant for collaborative work from the Division of Information Technology supported additional costs of this report, including travel costs of meeting with clients. The report also benefited greatly from the support of the staff of the La Follette School. Outreach Director Terry Shelton, along with Kari Reynolds, Mary Mead, and Gregory Lynch, contributed logistical and practical support. Karen Faster, La Follette Publications Director, edited the report and shouldered the task of producing the final bound document.

This report was generated primarily for the educational benefit of its student authors. The purpose of the project was to improve their analytical skills by applying them to an issue with a substantial policy or management component. This culminating experience is the ideal equivalent of the thesis for the La Follette School degrees in public affairs.

Dr. Susan Webb Yackee
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May 2009

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Executive Summary

This report analyzes the possible implementation of a pay-as-you-throw (PAYT) user fee system for municipal solid waste (MSW) collection in the City of Milwaukee. PAYT collection systems serve more than 25 percent of the U.S. population and more than half of Wisconsin communities. These programs replace flat fees with charges based on the quantity of MSW generated per household. PAYT systems may cause residents to recognize the cost of their individual disposal habits and reduce their waste. Pay-As-You-Throw can also promote behavioral change in the form of greater recycling. Municipalities and residents find these systems to be equitable, since those who generate more waste pay more for collection services. PAYT revenue may also provide financial benefits to the city by fully compensating program costs.

Milwaukee charges each household \$150 per year for MSW and recycling services. This flat rate creates insufficient revenue for complete program cost recovery. Milwaukee wishes to pursue a PAYT user fee system that fully pays for the MSW and recycling programs, particularly as landfill rates charged for waste disposal continue to rise.

Our analysis draws upon research from the U.S. Environmental Protection Agency (EPA), academic studies, City of Milwaukee MSW and recycling data, contacts with MSW equipment suppliers, and a survey of 10 comparable U.S. cities using PAYT systems. We assess three program options for Milwaukee: the status quo, a multiple cart system with pricing based on household waste cart size, and a weight-based program that charges per pound of refuse collected. We examine each alternative based on metrics of efficiency, effectiveness, equity, and ease of implementation to determine which MSW system best suits Milwaukee.

We recommend a weight-based PAYT system for Milwaukee. The weight-based model offers the greatest efficiency and creates the greatest incentive to reduce waste. This alternative also scores highest in equity measures. In contrast, the current system and multiple carts allow greater disparities between the price per unit paid by households with low levels of MSW disposal and the prices paid by those with high levels. The weight-based system also requires less capital investment than a multiple cart system.

We also recommend a series of implementation measures to ease the transition to a PAYT system. Recycling rates rise an average of 16–17 percent in PAYT communities. Increasing the frequency of recycling collection (as recommended in the 2008 Audit of the City of Milwaukee Recycling Program) before PAYT is instituted would prepare residents and city staff before the anticipated increase in recycling. In addition, Milwaukee should conduct a pilot program to review equipment performance, implement new billing software, and gauge program acceptance. Steps to enhance responsiveness to the PAYT program include education and outreach, billing comparisons to show customer savings for MSW reductions, and collection of program feedback from pilot households.

Introduction

This report examines the City of Milwaukee's solid waste and recycling collection structure and fees. Milwaukee charges each household an annual \$150 flat fee for municipal solid waste (MSW) and recycling collection. This fee does not fully cover Milwaukee's cost for providing the services and charges each household the same rate, regardless of the amount of solid waste it generates.

More than 7,000 U.S. communities operate pay-as-you-throw (PAYT) municipal solid waste collection systems as an alternative to traditional flat rates. This report includes a comparative analysis of PAYT implementation and impacts in U.S. cities similar to Milwaukee. The analysis also examines potential impacts of reduced solid waste generation should Milwaukee implement a variable price structure. To evaluate the policy alternatives, the report considers the efficiency, effectiveness, equity, and ease of implementation in the current program, a multiple cart PAYT alternative, and a weight-based PAYT alternative.

Research Question

Which PAYT garbage collection system, that can be practically implemented, most effectively covers Milwaukee's solid waste and recycling costs while equitably charging residents for their solid waste output?

Definitions

The following definitions are used in this report:

- **Bin:** A small container used for recycling collection, typically less than 20 gallons in size.
- **Cart:** A wheeled receptacle used for municipal solid waste, recycling, or yard waste collection. Typical cart sizes range from 30 to 128 gallons.
- **Municipal solid waste (MSW):** Household garbage that is taken to a landfill or incinerator.
- **Pay-as-you-throw (PAYT):** Any MSW collection system that charges users a variable price based on the amount of waste they dispose of. PAYT systems are typically volume-based, but some are weight-based.
- **Recycling:** Any goods accepted by the municipal recycling program. It is illegal to dispose of recyclables in a landfill, although this is rarely enforced (Prohibitions on Land Disposal and Incineration 2008).
- **Tipping fee:** The charge, typically in dollars per ton, for unloading solid waste at a landfill.

Background

Traditional municipal solid waste programs charge households a flat fee for MSW collection and/or include garbage collection fees as part of the property tax levy. The rate per household applies uniformly regardless of the amount of waste generated. PAYT solid waste programs utilize variable rates that charge households for collection based on the amount of MSW they generate. PAYT systems fall into volume-based and weight-based categories, described in the following section (U.S. EPA 2008b).

Volume-Based PAYT Systems

These systems charge variable rates based on the volume of municipal solid waste a household generates. Volume-based PAYT systems commonly take three implementation forms:

1. **Prepaid bags:** This system uses uniquely colored or marked trash bags for solid waste collection. Residents purchase the bags from the municipality or local retail outlets, and they must place all garbage in these bags. The cost per bag is set to cover all or part of the solid waste collection service plus a small fee for retail outlets distributing the bags.

Advantages: Prepaid bag systems are relatively easy to administer, simple for customers to understand, and provide a strong incentive for customers to reduce their MSW. Prepaid bag systems are compatible with existing billing systems and may allow for the elimination of billing for MSW collection all together.

Disadvantages: Prepaid bag systems are incompatible with the automated and semi-automated MSW collection trucks used by most mid-sized and large municipalities as they require collectors to manually check the bags and load them into the truck. Prepaid bag systems also result in unsteady revenue streams for the municipality since customers may purchase large numbers of bags at one time and then none for a number of months. Non-compliant bags are generally not collected, which can lead to solid waste accumulation for households.

2. **Prepaid tags:** This system functions similarly to prepaid bag systems, except residents purchase tags or stickers to attach to their own trash bags.

Advantages: Prepaid tag systems have the same advantages as prepaid bag systems with the additional advantage that tags are smaller than bags and easier for retailers to handle.

Disadvantages: Prepaid tags have the same disadvantages as prepaid bags.

3. **Multiple cart sizes:** This system uses different sized MSW carts and charges residents based on the size of their cart. Most municipalities using this system offer two or three cart sizes, although some offer as many as six. Many communities using multiple carts also utilize a prepaid bag or tag system for MSW items exceeding the cart size.

Advantages: Multiple cart programs are compatible with automated and semi-automated MSW collection vehicles used in many municipalities. In municipalities moving from a single cart program to a multiple cart program, customers are already familiar with how the cart and collection system works. Multiple cart programs are relatively easy to administer once the billing system is established.

Disadvantages: Multiple cart systems provide no economic incentive to customers to reduce their waste unless they can reduce it enough to move to a smaller cart size; this can be partially overcome by offering a large number of cart sizes. The purchase of a large number of carts to implement the program and billing administration can be costly for municipalities.

Weight-Based PAYT Systems

These systems weigh MSW during collection and bill residents per pound of MSW they generate.

1. **Truck-mounted scales:** Most weight-based systems utilize carts and a scale on the collection vehicle. The collection vehicle scans a bar code or radio frequency tag on the cart, weighs the cart as it is emptied, and records the cart number and weight in an on-board computer. This information is then uploaded into the billing system.

Advantages: Weight-based systems provide the greatest incentive for residents to reduce waste, as they can see a clear cost reduction with even small reductions in waste. Weight-based systems are compatible with automated and semi-automated collection vehicles when outfitted with the appropriate equipment. The systems are simple to understand and generally perceived as the most equitable form of PAYT (Skumatz 1995).

Disadvantages: The equipment needed to accurately weigh MSW and bill residents may be complicated and more expensive than other options (U.S. EPA 1994). Additionally, billing administration can be more complex. To date, weight-based PAYT programs in the United States have been limited to a number of pilot programs and a handful of municipalities.

Despite disadvantages in all PAYT systems, numerous communities nationwide have found it beneficial to adopt various forms of these systems to reduce solid waste output, promote greater equity, and increase recycling by residents (Miranda and Aldy 1996; Skumatz and Freeman 2006).

PAYT Links to Recycling

Successful PAYT programs operate in conjunction with comprehensive recycling programs. This allows residents to reduce much of their waste, and therefore their MSW bill, by increasing their recycling rates. The municipality benefits to the extent that recycling lowers landfill tipping fees and potentially increases revenue from the resale of recyclables.

Milwaukee operates a residential recycling program that collects recyclables monthly from the majority of households using 95-gallon carts, although a portion of the city uses 18-gallon bins and receives weekly collection. In 2008, the Milwaukee Comptroller conducted an audit of the city's recycling program at the request of the Common Council. The audit highlighted anecdotal evidence that many households completely fill their recycling carts in less than one month (Morics 2008). This implies that residents have little opportunity to increase their recycling rates under the monthly collection schedule and, as a result, residents may encounter difficulty reducing their MSW output. The audit recommended that Milwaukee conduct feasibility studies of moving to biweekly recycling collection throughout the city (Morics 2008). Biweekly collection allows households that fill their recycling carts before collection to increase their recycling rates. Increased residential recycling presumably results in less solid waste, which in turn results in smaller MSW bills for households under a PAYT program and lower tipping fees for the city.

To implement a successful PAYT program, the city must ensure that residents are able to recycle as much of their waste as possible. Monthly recycling collection provides inadequate opportunity for residents to increase recycling rates. Implementation of a PAYT system should be accompanied with an increase in residential recycling capacity, accomplished through increased collection frequency.

Rationale for PAYT

More than 7,000 American communities operate PAYT systems, covering 25 percent of the population and 30 percent of the nation's largest cities. This has led to the diversion of 6.5 million tons of MSW per year from landfills. Wisconsin ranks among the states with the most communities using PAYT systems, with more than 500 programs (Skumatz and Freeman 2006).

PAYT offers a market-based solution that encourages behavioral changes that serve the public welfare (Folz and Giles 2002). Economists often advocate unit-pricing approaches like PAYT because of their efficiency (Van Houtven and Morris 1999). Residents frequently overuse solid waste services in a flat fee system because local tax levies or flat fees for solid waste collection remain largely invisible to consumers (Van Houtven and Morris 1999). Essentially, flat fees and property-tax-based MSW systems break the link between the act of discarding waste and the payment for collection services. Households face the same cost regardless of how much MSW they generate, with little or no incentive to produce less waste. This can lead people to generate more MSW than they would if charged a variable rate.

In contrast, PAYT systems support efficiency and effectiveness goals by assigning proportional charges to various levels of service. A properly designed unit pricing system charges households based on the amount of waste management services they use (Van Houtven and Morris 1999). Many PAYT systems reduce overall MSW, allowing cities to extend collection routes, reduce the size and increase the automation of truck fleets, and reduce the number of collection crews or crew sizes. Less MSW may also reduce landfill tipping fees and the city's transportation costs and extend landfill life (Folz and Giles 2002). Additionally, PAYT systems promote equity because they reflect individual MSW service usage and enable residents to exercise some control over their solid waste collection costs (Skumatz and Freeman 2006; Folz and Giles 2002).

PAYT systems encourage recycling and composting. According to a Duke University study, communities experience a 20–35 percent increase in the weight of materials going through their recycling and composting programs after implementing PAYT (Miranda and Aldy 1996). Milwaukee's main recycling facility operates at only half capacity, ready to process additional recycling expected under a PAYT system (R. Meyers, personal communication February 26, 2009).

Overall, PAYT provides a link between behavior and bills. Research shows that the average tonnage of waste disposed is 16–17 percent less in PAYT communities than comparable non-PAYT communities, with approximately one-third of this reduction attributable to source reduction, one-third to increased recycling, and one-third to composting. PAYT proves to be one of the most cost-effective methods to promote waste reduction (Harrison 2000).

Methodology

This section describes the methods of our investigation of PAYT programs employed in United States cities comparable to Milwaukee. This section also describes the methods, data, assumptions, and limitations in developing our quantitative analysis of the policy alternatives.

Comparable City Selection

We investigated PAYT programs in American cities that are comparable to Milwaukee to better understand the potential costs, benefits, and other impacts of implementing PAYT in Milwaukee. Identification of eligible cities began with the U.S. Environmental Protection Agency's website, which provides extensive resources on PAYT communities and programs (U.S. EPA 2008a). Initial criteria for comparable cities included populations between approximately 250,000 and 750,000, although a few cities beyond this range were included to broaden the selection, including Eau Claire, the largest municipality in Wisconsin using PAYT.

We also considered racial and ethnic composition, income and poverty data, and the ratio of owner- versus renter-occupied housing when selecting the most comparable cities. Finally, we included climate, particularly annual snowfall, because municipal snow removal equipment and labor needs overlap with that of MSW collection in Milwaukee. The additional data came from the U.S. Census Bureau's American FactFinder webpage (<http://factfinder.census.gov>) and the National Oceanic and Atmospheric Administration Satellite and Information Service webpage (<http://cdo.ncdc.noaa.gov>). From this research, we established an initial sample of 14 comparative cities.

Comparable Cities Data Collection

We collected PAYT program information specific to each city in the sample from each city's official website. We eliminated Eau Claire from the comparison because the city uses a system of multiple private haulers, each offering slight variations of PAYT that would have little in common with a Milwaukee program.

Next, in March 2009, we telephoned individuals working for each of the remaining 13 municipalities. Initial contact targets included directors of public works or solid waste or recycling management departments. If our first contacts were unable to provide specific information regarding PAYT, we asked them to direct us to a source better able to do so. Upon reaching the appropriate contact, we confirmed the details of the city's PAYT program. At this point, we eliminated Albuquerque, New Mexico, because the city's program details did not represent full PAYT implementation, and Oakland, California, due to an inability to access data from the city's private contractor. San Francisco, California, gave no response after repeated contact attempts, resulting in a final pool of 10 comparative cities. Similarities to Milwaukee among the final sample of comparable cities are depicted in Table 1. Appendix A describes the criteria used to determine each city's comparability to Milwaukee in given categories.

Table 1: Responding City Comparison

City	Population	Racial Composition	Median Household Income	Families Below Poverty Level	Owner-Occupied Housing	Climate
Milwaukee, WI	602,782	45% white/ 55% non-white or mixed race	\$35,233	21%	49%	seasonal snow
Most Comparable to Milwaukee						
Fort Worth, TX	Yes	No	Yes	Yes	Yes	No
Lansing, MI	No	No	Yes	Yes	Yes	Yes
Minneapolis, MN	No	No	Yes	Yes	Yes	Yes
Sacramento, CA	Yes	Yes	No	Yes	Yes	No
Moderately Comparable to Milwaukee						
Austin, TX	Yes	No	No	Yes	Yes	No
Grand Rapids, MI	No	No	Yes	Yes	No	Yes
Portland, OR	Yes	No	No	Yes	Yes	No
Least Comparable to Milwaukee						
Plano, TX	No	No	No	No	No	No
San Jose, CA	No	Yes	No	No	No	No
Seattle, WA	Yes	No	No	No	Yes	No

Sources: Barrett (2007), National Oceanic and Atmospheric Administration Satellite and Information Service (2009), U.S. Census Bureau (2005-2007)

We asked our final contact within each city to complete a survey administered electronically using SurveyMonkey (<http://www.surveymonkey.com>). The survey questions were designed to obtain a more detailed understanding of PAYT implementation, effectiveness, and other issues specific to each city. When possible, we created multiple choice questions based on our research of typical PAYT programs in order to make the survey more user-friendly. We also provided opportunities for the respondent to expand on answers in narrative form. Seven contacts responded immediately. The remaining three cities were resent the survey after seven to 10 days passed without response and each city subsequently responded. In total, we received 100 percent survey response from our 10 comparative city sample. See Appendix B for the complete survey and responses.

Milwaukee MSW Generation Distribution

The City of Milwaukee does not collect household level data regarding the amount of MSW residents generate. The finest level of data available for this analysis lists the average weight of solid waste collected per route during an eight-month period in 2007 (City of Milwaukee 2007). These data allow for analysis of routes and provide an overall average MSW weight per household. However, without more specific data, the distribution of average MSW weight per household remains unknown. In other words, we cannot know exact amounts of solid waste each household generates.

The lack of household-level MSW data presents particular problems with regard to the multiple cart PAYT program alternative. Knowing household MSW output allows us to estimate the number of households that will choose each cart size and appropriately set pricing for the different sizes. The lack of data also creates problems in determining an equity index for this project. The equity index serves as a measure of price paid per unit of MSW by households. To overcome these data limitations we made certain assumptions and produced multiple scenarios about the distribution of MSW in Milwaukee (see Appendix C for full details).

Setting Prices for Each Alternative

A program's full cost recovery depends on accurate establishment of prices for MSW collection. Prices represent the total amount of money paid for collection services, whether as a flat fee, volumetric charge, bag or tag price, or a combination of these charges. Costs that need to be recovered include personnel expenses, administrative costs, capital costs, collection expenses, and tipping fees.

Of these expenses, only the tipping fee varies significantly with the amount of MSW collected. To illustrate this, consider two households. One household disposes of 1 pound of waste per week, while the other disposes of 100 pounds each week. Milwaukee's collection costs for both households are the same, but disposing of the waste from the one pound household costs much less than from the 100 pound household. However, Milwaukee's tipping fee constitutes only a fraction of the overall cost of the program.

Given this, we determined that the PAYT alternatives should have a flat base fee with a variable fee added to it. The base prices described in this section partially cover the fixed collection costs to Milwaukee, while the variable fee reflects the amount of MSW disposed as well as some of the fixed costs.

Pricing for the Status Quo was left at the 2009 rate of \$150 per year.

Pricing for Alternative I, Multiple Cart Sizes, was complex. For this alternative, we devised scenarios using the standard deviations described in Appendix C to find the maximum number of households that might change from their current 95-gallon cart to a 32- or 64-gallon cart. We set annual cart prices at \$48 for a 32-gallon cart, \$96 for a 64-gallon cart, and \$144 for a 95-gallon cart; this represents a \$4 difference per month between each cart size. The pricing differential of \$4 per month is low relative to comparative cities but large enough to remain visible on residents' bills. We placed these annual cart prices into a formula established to set the base price assuming full cost recovery. The base price plus the cart price equals the total cost for MSW collection per household.

Establishing pricing for Alternative II, the Weight-Based Program, was relatively straightforward: We placed the base price of \$50 per year into a formula specifying both full cost recovery for the program and the amount of MSW generated each year. The formula produced the price per ton of MSW that the City would charge to customers based on those factors. This price could then be converted into a price per pound that customers understand is more easily.

Sample budget and pricing tables for the status quo and each alternative are presented in Appendix D.

Comparative Cities Analysis

Our survey results from comparable cities show that Milwaukee would be a relative pioneer in choosing to implement PAYT. Few similarly sized American cities with PAYT programs exist. Moreover, we find no PAYT systems in Midwest cities with population, climate, and demographics similar to Milwaukee. Given this, we identified cities using PAYT programs with roughly the same profile as Milwaukee. Although Milwaukee remains distinct within the profile of PAYT communities, experiences with the impacts of other PAYT systems nationwide provide valuable information, as many cities resemble Milwaukee in one or more of the comparable criteria categories (see Table 1 and Appendix A).

Survey Responses

The complete survey and survey responses are provided in Appendix B.

Program Descriptions

The PAYT systems surveyed function under varying conditions. All comparable programs service residential homes. In addition, 90 percent of these municipalities collect MSW from two- to four-unit multifamily residences; 30 percent include PAYT in multifamily homes beyond five units. Approximately 44 percent of the cities have unionized municipal employees. Another 22 percent employ non-unionized municipal collectors, and one-third utilize contract labor.

Eight of the 10 survey cities operate with multiple cart systems. The remaining two cities use bag and tag systems only. Of the eight multiple cart communities, three cities use a three-cart system. Two additional cities began with three-cart systems, then later added 10–20 gallon “micro-can” sizes. Cities most comparable to Milwaukee, where at least four of the six criteria match “yes” in Table 1, include Fort Worth, Sacramento, and Minneapolis. Each uses multiple cart systems.

Many cities using multiple cart systems identified customer choice and a variety of household family sizes as reasons for their cart size offerings. Eighty percent of responding communities identified increasing recycling as a goal tied to their programs. Seventy percent also wanted to increase their municipality’s diversion rates, decrease trash output, and promote equity by charging unit rates with variable pricing systems.

Most comparable cities allow MSW in excess of the cart limit for an additional fee. Three cities require prepaid bags or tags for additional waste. These items are available for purchase at grocery stores or retail outlets. Three other cities collect MSW beyond the cart limit and bill the household for additional service. One city allows bulky waste set outs beyond the cart limit one time per month.

Program Implementations

Two-thirds of the PAYT communities surveyed conducted pilot programs in their implementation process. Examples include a one-year pilot of 3,000 households in Austin and pilots with 17 neighborhoods in San Jose. Full-scale implementation varied by municipality. While Austin used a three year phase-in process for PAYT, five other communities moved directly from pilot programs to full implementation, and three cities moved directly from flat rate systems to full implementation without a phase-in period.

Almost 90 percent of the comparable cities promoted their PAYT programs to residents through education and outreach efforts. Cities used a broad range of techniques, from information included with the utility bill to public service announcements on radio and television, press releases, advertising, and news articles.

Seven cities identified a need for program change in conjunction with or subsequent to implementation. These include the introduction of smaller can sizes and changes such as switching recycling to carts from bins that are unrelated to the institution of PAYT. Six cities required administrative or billing changes for their MSW program. Necessary investments included software purchases; system adjustments for each new can size; expanded customer data, including tracking carts by serial number; and, in some cases, entire billing system overhauls. Specific cost estimates for enacting such changes were not specified by survey respondents and follow-up calls to comparable cities yielded no specific investment amounts.

Program Results

Seven of the 10 cities surveyed report decreases in MSW tonnage under their PAYT systems. Reductions varied in terms of landfilled tonnage and actual MSW collected. For example, Fort Worth reports a 12.5 percent tonnage decline and 25 percent less in MSW collections. San Jose reports average weekly household MSW rates at approximately 96 gallons prior to PAYT and averages near 32 gallons per household after program implementation. Austin reports an initial decrease in tonnage that leveled off in subsequent years. Three respondent cities indicate tonnage rates similar or higher under a PAYT system to that under flat rates. Respondents report total landfill diversion rates from 22 percent in Fort Worth to 52 percent in Sacramento and 60 percent in San Jose.

These findings reinforce research that shows households alter disposal behaviors, purchasing habits, and recycling rates to reduce output with a PAYT system (Skumatz and Freeman 2006). The research and our comparable cities survey show no noticeable illegal dumping or additional littering as a method for residents to reduce the MSW in their carts (Van Houtven and Morris 1999; Skumatz 2008). Instead, the survey shows 80 percent of cities report recycling increases that complement MSW reduction. Fort Worth indicates an average weekly household increase in recycling from 3.92 pounds in 2002 before PAYT,

to 11.59 pounds the year after PAYT implementation, and 13.54 pounds in 2008. Other cities reflect similar results, with recycling tonnage rising from 12,000 tons per year to 40,000 tons per year in Sacramento and a 23 percent increase in Portland. The two municipalities without increases have recycling rates similar to those seen before PAYT.

Some limitations of PAYT systems are apparent in the survey results. Only two-thirds of responding municipalities achieve full cost recovery under their programs. Another 11 percent report higher revenues under PAYT, but fall short of cost recovery, and two cities, or 22 percent, indicate the same revenues now as they experienced prior to PAYT. However, these shortfalls represent a program design limitation and are not PAYT specific. Fort Worth initially experienced some difficulty with full implementation due to the large number of households served. Portland also notes the revenue difficulty for municipalities due to low recycling resale rates in current recessionary economic conditions. Austin finds inefficiency with the additional prepaid bags outside carts, due to incompatibility with a semi-automated collection system. Despite pricing structures to encourage the use of a larger bin size as opposed to extra bags, some residents continue to use additional bags.

Comparative Cities Summary

Overall, the majority of comparable cities with PAYT programs use multiple cart systems. These programs work with union and non-union labor hired by the municipality or a contractor. Sixty percent of municipalities reported a need to retrain collection employees on the new system, which generally included minor actions, not significant investments. Nearly all survey cities took steps to prepare, such as resident education efforts, pilot programs, or both, before introducing PAYT to their communities. Many cities also adjusted their billing systems to accommodate variable pricing, but respondents did not specify adjustments or associated costs.

Once implemented, the comparable cities generally experienced MSW tonnage declines paired with recycling increases. Two multiple cart cities added more cart sizes in later years in the form of 10-20 gallon “micro-cans” in response to MSW reduction trends. Other cities reported only modest gains in terms of revenue and MSW reductions under PAYT, and a few results could be considered neutral. Other limitations under PAYT include insufficient pricing gaps to create incentive for cart size changes and inconveniences from manual pickup of additional bags or tagged items.

Policy Options and Analysis

This section describes the three policy alternatives evaluated in this report: the status quo solid waste collection program, PAYT using multiple solid waste cart sizes, and PAYT using weight-based solid waste collection. The alternatives are analyzed in the context of the evaluative criteria of efficiency, effectiveness, equity, and ease of administration.

Selecting Viable Alternatives

The administrative and equipment capabilities of Milwaukee and information gathered from comparable cities narrow the list of appropriate PAYT policies for analysis. Among specific PAYT options, both weight-based and volume-based systems serve as feasible options.

Within volume-based options, bag and tag PAYT programs are widespread throughout Wisconsin and the United States (U.S. EPA 1999a). These programs offer relatively simple administration and eliminate the need for a billing system (Folz and Giles 2002). However, bag and tag programs require manual collection of MSW to ensure residents' proper use, along with a distribution system through local retailers or the municipality for selling the appropriate supplies. Manual collection aligns best with smaller communities. The largest bag or tag system in Wisconsin operates in Manitowoc, with a population of approximately 34,000; Milwaukee is approximately 18 times larger in population and faces significantly different logistical challenges relative to small communities (U.S. EPA 1999b). Many communities including Milwaukee have moved to automated or semi-automated collection systems to speed MSW collection and reduce potential workers' compensation claims stemming from lifting and moving trash bags into trucks. Bag and tag systems lack compatibility with automated or semi-automated collection vehicles, like those used in Milwaukee. Milwaukee's size and semi-automated collection system eliminate bag and tag programs from further consideration in our analysis.

The remainder of this section compares the City of Milwaukee's current MSW and recycling collection program with two alternatives: a weight-based program and a multiple cart system.

Policy Criteria for Evaluation

The following policy goals guide our evaluation of the alternatives. Appendix E provides a detailed description of the development of the criteria.

- **Efficiency:** An efficient PAYT system diverts the greatest amount of MSW, while charging the lowest possible fee for customers and using the fewest taxpayer dollars in the long run. To evaluate this, we consider capital investments relative to potential savings and new benefits of the PAYT alternatives. Full program cost recovery also serves as an efficiency metric for Milwaukee. We define cost recovery as the percentage of

program expenses paid by program income.

- **Effectiveness:** Guidelines for effectiveness include resident compliance with the collection program. Physical impacts, such as changes in MSW diversion and recycling rates, also measure effectiveness. A more effective program creates higher MSW diversion and recycling rates.
- **Equity:** Equity measures the ability of a program to charge residents based on the amount of service they consume, or, in other words, the amount of solid waste they generate. We defined an equity index to consistently measure the relative fairness of each policy alternative. This index shows the ratio of the prices paid between those that generate the most MSW and those that generate the least. An index of 1.0 indicates the most equitable system possible, where all residents pay the same price for each unit of MSW they generate. By comparison, an index of 2.0 indicates that households generating the least MSW pay twice as much per unit of MSW as those generating the most waste.
- **Ease of implementation:** This criterion examines the administrative requirements of the status quo and alternatives to compare the structural changes and information dissemination necessary for implementation.

We also consider political feasibility in our analysis. Because the City of Milwaukee has expressed interest in a PAYT program, we believe a full analysis of benefits and limitations under various alternatives will yield an acceptable result for the client. Therefore, feasibility discussion within each alternative occurs within the cost and administrative aspects listed in our policy goals, rather than as a stand-alone criterion for evaluation.

Status Quo: Current Milwaukee MSW and Recycling Collection Program

Milwaukee's solid waste program provides weekly collection of refuse from all single-family and multi-family homes with up to four units, totaling approximately 190,000 households. Recycling collection using 95-gallon carts occurs approximately once per month for most households, although 15 percent of households have weekly recycling collection using 18-gallon bins. Households pay a \$150 annual flat fee for MSW and recycling collection, which covers approximately 91 percent of the \$35.7 million combined program budgets for 2009. Milwaukee covers remaining costs through revenue from the resale of recyclables, state recycling grants, and the local property tax levy.

Households place their solid waste in 95-gallon carts, which two-person crews empty weekly using semi-automated collection trucks. The semi-automated system requires operators to connect the cart to the truck, which then automatically empties the cart. Households may request a second cart at no additional charge if they consistently produce more than 95 gallons of MSW per week. Residents may also place up to 4 cubic yards of additional solid waste out

with the cart for collection at no charge. More than 4 cubic yards of waste or large items require special pickup at a \$50 fee. Table 2 depicts the various services and charges under the status quo.

Table 2: Description of Status Quo: Current Milwaukee MSW Collection System

Type of System	Single cart size
Size of MSW Carts	95-gallons
Charge for Single-Cart Service	\$150/year (\$12.50/month)
Charge for Additional Carts	\$0
Charge for Additional MSW (Not in Cart)	\$0 (up to 4 cubic yards/week)
Charge for Special Pickup (Large Items)	\$50/pickup
Charge for Recycling Collection	\$0 (included in MSW collection fees)

Source: R. Meyers, personal communication January 30, 2009

Most Milwaukee households also use 95-gallon carts for recycling collection. These carts have a divided interior for separation of paper recyclables from glass, metal, and plastic recyclables. No set schedule exists, but Milwaukee collects recycling approximately once per month. Approximately 28,000 households use 18-gallon bins for their recycling collection. Bin use occurs in central city areas that have a majority of rental properties and alley pick-up service rather than curbside collection. Milwaukee collects bin recyclables weekly on set days.

Recycling markets continue to experience sharp variability with the recent economic downturn. Milwaukee contracts with Waste Management Recycle America to process and market recyclables at an annually adjusted fee of more than \$40 per ton. The proceeds from the resale of recyclables are split evenly between the city and Waste Management Recycle America. In 2008, the City received resale revenue of \$58 per ton, resulting in a net income of \$18 per ton after paying the processing fee. The 2009 budget figures in Table 3 rely on projected recycling resale revenues of \$40 per ton. Due to recycling resale declines, the City expects zero net revenue after paying for processing. Should recycling resale values drop below \$40 per ton, the total cost and cost per household figures may rise for collection services. However, overall cost savings can still be achieved relative to landfilling as the landfill tipping fee is avoided.

Table 3: Status Quo: Ongoing Income, Costs, and Cost Recovery

Total Income/Revenue	+\$33,165,000
Total Expenses/Costs	-\$36,325,385
Net Income/Loss	-\$3,160,385
Percentage Cost Recovery	91.30%

Source: E. Shambarger, personal communication February 16, 2009; authors' calculations

Note: Assumes standard deviation of 12.00 pounds, municipal tipping fee of \$30/ton, and 0% MSW reduction; see Appendix C for more details

Efficiency: Milwaukee's current system presents several opportunities to improve efficiency. The status quo provides little incentive, beyond offering recycling services without additional charge, for residents to divert more MSW. Households

pay the same flat rate regardless of their waste output. As Table 3 shows, the status quo does not achieve full cost recovery. In 2009, Milwaukee expects \$28.6 million in revenue from MSW user and special collection fees. State recycling grants and the resale of recyclables will generate an additional \$4.5 million. These revenue streams cover approximately 91 percent of the total cost for the MSW and recycling programs, leaving a \$3.1 million shortfall that must be covered by the local property tax levy.

The status quo provides efficiency benefits with respect to financial feasibility. The current MSW and recycling system requires little capital investment, limited to regular annual maintenance and adjustments for existing budgetary considerations.

The loss of value for recyclables due to economic recession and rising landfill fees are unfavorable economic trends that will make full cost recovery less attainable without increases in the flat fee. Continuing the current system rather than adopting PAYT maintains Milwaukee's reliance on property taxes to balance the MSW budget. Without change, the combination of these two trends may increase pressure on the budget.

Effectiveness: The status quo results in effective resident compliance. Milwaukee experiences no noticeable issues arising from illegal dumping (R. Meyers, personal communication February 26, 2009). However, this alternative shows less effectiveness due to a lack of incentive for households to divert MSW.

Equity: Flat fee MSW systems lack equity. Under the status quo, all Milwaukee households pay the same rate despite the amount of waste. As a result, residents who create little waste pay a higher rate per pound than residents who generate significantly more solid waste. Using the equity index described in Appendix E, City of Milwaukee households with the lowest disposal rates pay a range of 1.5 to 5.3 times as much per pound as households disposing the highest levels of MSW under the status quo. Appendix D provides detailed equity index calculations under different scenarios in the status quo.

Ease of implementation: Milwaukee's current system requires no implementation changes. Table 4 reflects the potential costs to implementing a different MSW program, but because the status quo is already in operation, there are no upfront costs to this program.

Table 4: Status Quo: Program Startup Costs

New Cart Purchases	\$0
Updated Billing System	\$0
Truck Modification	\$0
Education/Outreach	\$0
Total Startup Costs	\$0

Source: Authors' calculations

Alternative I: Multiple Cart Sizes

Introduction of additional cart sizes for MSW, with higher prices for larger carts, shifts toward a full cost recovery PAYT system by aligning user fees with the amount of MSW collected. Many possible permutations of numbers of carts, gallon capacity combinations, and fee differentials exist when designing an optimal multiple cart PAYT system. Our peer cities survey shows that eight of our 10 responding cities use a multiple cart PAYT system. Of these, three operate a three-cart model, including Fort Worth and Sacramento, two of the most comparable cities to Milwaukee demographically (See Table 1 and Appendix A). In a three-cart model, Milwaukee would maintain the current 95-gallon carts as the largest MSW size option and as the standard size for recycling at all non-bin residences. Two new cart options include 32- and 64-gallon sizes.

By analyzing average tonnage rates for 2007 summer routes, we estimate a range of multiple cart pricing options. To achieve full cost recovery, we consider several scenarios to reflect data variance and two landfill fee scenarios for Milwaukee. Depending on the variables used, each household choosing a 32-gallon cart pays in the range of \$116 to \$136 annually under the multiple cart system. A household with a 64-gallon cart pays \$164 to \$184 per year. A household with a 95-gallon cart pays \$212 to \$232. These rates consist of a base rate plus a variable rate dependent upon the cart size each household chooses (see Setting Prices on page 9 for base rate details and Appendix C for additional details). These charges are shown in Table 5.

Table 5: Description of Alternative I: Multiple Cart Size MSW Collection

Type of System	Multiple Cart
Size of MSW carts	32, 64, and 95-gallons
Base charge	\$68–\$88/year
Cart charge	32-gallon: \$48/year 64-gallon: \$96/year 95-gallon: \$144/year
Charge for additional carts	Same as cart charge for first cart
Charge for additional MSW (not in cart)	\$3/30-gallon bag
Charge for special pickup (large items)	\$50/pickup
Charge for recycling collection	\$0 (included in MSW collection fees)

Source: Authors' calculations

Beyond the regular cart fees, a multiple cart system commonly involves extra charges for excess waste beyond the cart size. Based on peer city responses and research, we find pricing for additional bags of MSW and special pickups to be critical. Per bag and special pickup pricing may influence the cart size a household selects, and reinforce diversion and recycling MSW behaviors. In this multiple cart model, residents pay a \$3 charge for each 30-gallon garbage bag left outside the cart. Only distinct bags, sold through local retailers, will be collected. We assume that \$1 of each bag's cost will be used to cover administrative costs as well as reimburse retailers for distributing the bags. In addition, excess waste outside the cart, up to 4 cubic yards, costs \$50 per pickup, the same as a special

pick-up request. A second cart costs each household the same amount (base fee not included) as the first cart of the same volume. As an example, a second 64-gallon cart costs \$96 per year in addition to the \$166–\$186 per year for the first 64-gallon cart. Table 6 outlines these charges.

Table 6: Alternative I: Ongoing Income, Costs, and Cost Recovery Projections

Total Income/Revenue	+\$36,386,737
Total Expenses/Costs	-\$36,386,737
Net Income/Loss	\$0
Percentage Cost Recovery	100.00%

Source: Authors' calculations

Note: Assumes standard deviation of 12.00 gallons, municipal landfill/tipping fee of \$30/ton, and 0% MSW reduction; see Appendix C for more details

Efficiency: The multiple carts alternative allows Milwaukee to introduce pricing incentives that influence household disposal behaviors. Using three set monthly rates achieves greater efficiency than the status quo. This alternative requires significant investment in new carts, however, which detracts from efficiency. Current average household MSW rates indicate that instituting a multiple cart system would result in the vast majority of households switching to 32-gallon or 64-gallon carts. This reduces efficiency of the multiple cart system, because significant cart investments will be necessary to meet actual household disposal rates. Most households generate far less than 95 gallons of MSW on a weekly basis (authors' calculations, see Appendix D).

Non-binding price estimates from cart manufacturers Schaefer Systems and Rehrig Pacific Company create the basis for cart investment estimates. Schaefer Systems provides the lower price estimate at \$35 per 32-gallon cart and \$45 per 64-gallon cart. Based on the assumption that households would select the least expensive cart option to meet their MSW needs, we estimate a need to purchase 24,759 to 67,228 of the 32-gallon carts and 107,507 to 165,239 of the 64-gallon carts (see Appendix C). Zero to 15,265 households would keep the current 95-gallon bin. This totals an estimated \$5.7 million to \$9.8 million in capital investment costs for carts alone, using the lowest estimated rates for carts. These costs are reflected in Table 7.

Table 7: Alternative I: Program Startup Costs

New Cart Purchases	\$5,700,000–\$9,800,000
Updated Billing System	\$0
Truck Modification	\$0
Education/Outreach	\$200,000
Total Startup Costs	~\$5,900,000–\$10,000,000

Source: Authors' calculations

Potential exists for modest cost recovery on carts. Milwaukee can eliminate recycling bin costs for several years by reserving the unused 95-gallon carts for this purpose. Milwaukee may also possibly sell any excess cart overstock

back to the product distributor for \$15–\$20 each (Schaefer Systems, personal communication April 3, 2009). Milwaukee could also consider a phase-in period to reduce the financial impact of cart investments in any single budget cycle or consider requiring residents to purchase smaller carts with the recognition that households would recover the cost during the first year of the program.

Effectiveness: A multiple cart system influences household disposal and MSW diversion rates more than the status quo. Multiple carts should garner effectiveness in terms of residential compliance and acceptance because the cart rate remains consistent from one collection period to the next.

Pricing drives diversion rates in this system. Austin uses a \$5 per month gap between cart sizes, which is too small to motivate residents to switch to smaller carts (see Appendix B). Pricing carts and additional MSW services requires balance between incentives and revenues to find the threshold in each community for cart rates.

Equity: Multiple cart options enhance the equity of MSW services. Variable pricing based on household waste output reflects Milwaukee's goal of equitably establishing an MSW user fee system to a greater degree than the status quo, using common guidelines found in other U.S. cities. This alternative enhances both the process and perception of equity in municipalities. The equity index for multiple carts ranges from 1.22 to 4.40. This ranks more equitably than the status quo under all household disposal scenarios.

Ease of implementation: Switching to a multiple cart system would require few changes in the physical collection process of MSW. This system would require notable changes elsewhere, however. For the multiple cart system to work effectively, Milwaukee would need to implement a bag or tag system for excess waste. This includes establishing a network of local grocers and retailers to sell the bags or tags. Billing administration requires investment for modifications as well, although changes would be minor and would primarily require data input time as opposed to actual software changes (E. Shambarger, personal communication April 13, 2009; D. Rasmussen, personal communication April 24, 2009). Billing needs to reflect extra cart charges and collection fees for up to 4 cubic yards of MSW. We anticipate a need for Milwaukee to hire one additional employee or to train a current employee to manage multiple cart billing. This cost is included in all budget scenarios depicted in Appendix D.

Alternative II: Weight-Based Program

Weight-based programs use technology to measure weekly household MSW disposal. Under this alternative, Milwaukee would contract with a company to install weight measuring scales in the lift mechanism of the current semi-automated MSW and recycling collection fleet. During collection, the truck calculates the MSW cart weight through the load cells outfitted in the lifting mechanism. Radio frequency identification transponder chips or bar code tags are attached to each customer's cart. As the lifting mechanism empties the cart, a receiver detects the cart's identification code and sends the registered weight information wirelessly to a computer in the truck. The computer decodes the identification number into a street address and records the average weight of several readings taken during the collection process (McLellan 1994). The data would be transmitted to Milwaukee's MSW billing system. Overall, this process adds less than 10 seconds to the collection (Luken and Smith 1994).

Unlike the multiple cart system, few examples of weight-based PAYT systems exist. In place of comparable cities data, we rely primarily on research and discussions with equipment vendors to evaluate this alternative. We find that Seattle and Minneapolis are among the most comparable communities with published results of weight-based pilot projects.

Seattle conducted the first weight-based pilot program in two phases during 1989 and 1990, with financing from a U.S. Environmental Protection Agency grant. The second phase of Seattle's pilot used semi-automated trucks, like those found in Milwaukee, and electronic identification tags comparable to technology available today. Weights recorded during collection were included in mock billing given to residents as a supplement to their regular, non-pilot MSW fees. Post-project analysis suggests that households accepted the system change and reduced their MSW rates by an average of 15 percent. This is significant because Seattle already operated under an established multiple cart PAYT system. The published case study identifies weight-based PAYT in Seattle's long-term MSW plans. However, more than a decade later, Seattle still uses multiple carts (Skumatz 1995; L. Skumatz, personal communication April 13, 2009).

Minneapolis conducted a pilot test for weight-based systems in the spring and summer of 1993. They installed weight-reading load cells in the lift mechanisms of their semi-automatic MSW collection trucks and recorded household information with electronic identification software. Minneapolis reported good accuracy and scale reliability in a post-pilot report, but ultimately decided against weight-based PAYT due to the short-term nature of their pilot and concerns about an unfamiliar system creating dissatisfaction for customers (Skumatz 1995).

Loadman On-Board Scales, a company based in Texas, specializes in weight-based equipment for MSW collection and recycling trucks. Their representatives contributed cost and accuracy information used in our considerations. Although the technology continues to develop, details for the weight-based alternative

require some speculation beyond our research and interviews. The basic features of the weight-based PAYT alternative are described in Table 8.

Table 8: Description of Alternative II: Weight-Based MSW Collection

Type of System	Weight-based
Size of MSW Carts	95 gallons
Base Charge	\$50/year
Charge per Pound of MSW	7.7–11.1 cents
Charge for Additional Carts	Charged at same rate per pound
Charge for Additional MSW (Not in Cart)	Charged at same rate per pound
Charge for Special Pickup (Large Items)	\$50/pickup
Charge for Recycling Collection	\$0 (included in MSW collection fees)

Source: Authors' calculations

In contrast with the current flat fee system, this alternative would include full cost recovery as a requirement when MSW collection charges are established. This results in income and revenue exactly equaling expenses and costs as shown in Table 9.

Table 9: Alternative II: Ongoing Income, Costs, and Cost Recovery

Total Income/Revenue	+\$36,448,089
Total Expenses/Costs	-\$36,448,089
Net Income/Loss	\$0
Percentage Cost Recovery	100.00%

Source: Authors' calculations

Note: Assumes standard deviation of 12.00 pounds, municipal tipping fee of \$30/ton, and 0% MSW reduction; see Appendix C for more details

Efficiency: Weight-based PAYT offers the highest incentive for efficiency by tying charges to the amount of household MSW. Charging by the pound provides clear incentives for residents to divert the greatest amount of MSW. We project full cost recovery as a result (see Table 9). Moreover, Milwaukee pays fees to the landfill by the ton. A weight-based system creates consistency between the unit of measure the City charges to residents and pays to the landfill.

Converting to a weight-based program would require capital investments in the loading equipment and software. This would include \$14,500 to retrofit each of Milwaukee's 173 rear-loading MSW and recycling fleet. An additional \$570,000–\$950,000 investment would cover electronic tag installation on Milwaukee's carts (D. Hoven, personal communication April 23, 2009). This totals \$3 million to \$3.5 million for fleet retrofitting, cart tags, and software investments. If Milwaukee refrained from retrofitting its 49 recycling trucks, capital investments would drop to \$2.2 million to \$2.6 million. However, retrofitting the recycling trucks might prove beneficial in the event that Milwaukee needed to deploy MSW trucks for other purposes.

This truck system also requires approximately \$36,000 in expenditures to make Milwaukee's billing system compatible with the weight-based equipment (D. Hoven, personal communication April 23, 2009; K. Klawitter, personal communication, April 24, 2009). In addition, two additional municipal staff positions may be required. These include one billing administrator for the weight-based system and a municipal technician for equipment service and maintenance. The price scenarios in Appendix C include two new employees, paid \$40,000 each annually and the associated fringe costs. Alternatively, Milwaukee may invest in training current employees to manage these functions. For the weight-based system, capital and additional staff investments total significantly less than the multiple cart alternative, although future maintenance costs remain unclear.

Effectiveness: Weight-based systems create little visible change in the physical process of collection services from residents' perspective. The primary concern arises in the need for Milwaukee to explain cost changes, the purpose behind them, and the new billing method to which residents must adapt. Otherwise, problems may surface with resident compliance. Residents may find a different monthly MSW bill unacceptable, compared to a consistent rate under the status quo or multiple cart system. With the proper outreach and education, opportunities under weight-based systems are extensive for diversion and recycling behavioral change. Milwaukee can charge a set rate per pound to achieve greater program cost recovery than under the status quo.

One concern with this alternative is that residents may subvert the weight system by, for example, disposing of MSW in a neighbor's cart. Research frequently examines this concern and consistently finds no evidence of this occurring (Folz and Giles 2002; Morris and Van Houtven 1999; Harrison 2000). Other concerns include "migrating" carts that do not remain with their assigned households. This may be best solved by stenciling the assigned address on each cart, although this complicates reuse of carts at other addresses. Electronic tagging can also tie each cart to a specific household, allowing Milwaukee to pinpoint carts that have been separated from their households. While using electronic tags without stenciling does not allow residents to know if they have their own carts, residents could label their own carts at their own expense.

Equity: In terms of paying for service use, weight-based PAYT programs promote the greatest equity of any alternative, outscoring the status quo and multiple cart system in all but one scenario. The equity index for Milwaukee in the weight-based model ranges from 1.09 to 1.80. In theory, weight-based systems could achieve an ideal 1.0 equity rating, where all households pay the same rate per pound of MSW. However, our pricing operates with a \$50 annual base fee, which makes a 1.0 equity rating unattainable.

Ease of implementation: A weight-based MSW collection system would function nearly identically to the current system in use in Milwaukee. In fact, residents would likely only notice changes in their bills. Under this alternative,

semi-automated trucks would collect MSW from 95-gallon carts. Loadman On-Board Scales sends technicians to install the weighing equipment between the city MSW truck bodies and the lifting mechanism. The trucks weigh the waste as it is emptied into the truck, and the weight is logged in the billing system. Because all MSW can be weighed, no additional fee would be charged for extra carts or for additional MSW outside the cart. Extra MSW would be placed into the household cart, weighed during a second emptying cycle, and included in the total weight billed for that week. Households that regularly generate excess MSW beyond 95-gallons would receive another RFID-tagged cart to save the manual labor of loading extra bags for a second weigh cycle. Single, odd-shaped items that do not fit in the cart, but are not considered laborious special pick-up items, may be collected free of charge once per month. These items constitute only a negligible percentage of MSW collection. Table 8 depicts the various services and charges under the weight-based alternative.

Equipment effectiveness relative to performance certification requirements is a concern with weight-based PAYT. A suburban Minnesota pilot encountered difficulties meeting state-mandated weight accuracy standards with its truck scales. When charging residents per pound of refuse, the scale needs to reflect the same accuracy as the fee structure. Streets on hills or sharply crowned roads may compromise some scale types when tilting more than 3 degrees (Luken and Smith 1994). Loadman On-Board Scales guarantees scale accuracy within a 1.5 percent margin of error. For a home disposing of 30 pounds of MSW per week, this means the scales and recording equipment will register a weight between 29.55 pounds and 30.45 pounds (K. Klawitter, personal communication April 3, 2009). The manufacturer claims that the scales maintain accuracy on uneven surfaces and guarantees the return of equipment failing to meet performance standards (K. Klawitter, personal communication April 3, 2009 and April 24, 2009).

Loadman runs full testing with Bayne MSW collection vehicles, including the TaskMaster and TaskMaster Hi-Lift models used in Milwaukee. With this partnership and equipment familiarity, Milwaukee may avoid some of the implementation challenges other pilot programs faced in the 1990s. Currently, the equipment meets Wisconsin Department of Agriculture, Trade, and Consumer Protection guidelines for commercial maintenance accuracy. The agency's initial equipment test uses more restrictive weight tolerances though, which may require the passage of legislation to allow the equipment's use in Milwaukee. Overriding the initial tolerance does not detract from the regular truck scale performance requirements. The legislative action does, however, create an additional political acceptability consideration for the weight-based alternative.

Weight-based systems also involve greater administrative complexity than the status quo or multiple carts. Weekly variability in billing rates per household requires more attention than a flat rate or established cart rate during the three-month billing accrual period. Milwaukee may choose to adapt the current billing system, similar to the way water meter reading occurs, to accommodate weight-

based billing (D. Rasmussen, personal communication April 24, 2009). This can be accomplished through the Loadman company's software writing capabilities for a onetime fee (K. Klawitter, personal communication April 24, 2009). Rehrig Pacific Company could also replace the current billing software with a web-based system for a \$36,000 annual fee (D. Hoven, personal communication April 23, 2009). Table 10 reflects this and other costs for the weight-based alternative.

Due to the relatively unprecedented use of weight-based PAYT systems, education and outreach efforts to explain the purpose and goals of this system could make implementation easier and enhance the program's effectiveness. Adoption of a weight-based system also would require corresponding changes to Milwaukee's recycling systems, such as increased collection frequency or larger bins, to handle expected increases in recycling volume (Skumatz and Freeman 2006).

Initial startup expenses are lower for this alternative than for the multiple cart alternative. An estimate of program startup costs is provided in Table 10.

Table 10: Alternative II: Program Startup Costs

New Cart Purchases	\$0
RFID Tags for Existing Carts	~\$570,000 - \$950,000
Updated Billing System	~\$36,000
Truck Modification	~\$2,500,000
Education/Outreach	\$200,000
Total Startup Costs	~\$3,306,000 - \$3,686,000

Source: Authors' calculations

Recommendation and Conclusion

Based on analysis of research, comparable cities, City of Milwaukee data, and various alternatives, we recommend the weight-based PAYT system. The weight-based system creates the greatest efficiency and effectiveness with the least equity disparity among our alternatives. While less empirical information exists about the use of weight-based systems relative to other PAYT programs, Milwaukee benefits financially from substantially lower capital investment in weight-based equipment. The weight-based system presents implementation concerns to the extent that it requires more investment in maintenance, in the form of a municipal employee and potential equipment repairs. However, our calculations project that intermittent maintenance, staffing, and billing under a weight-based system require substantially less investment, even over a 10-year time horizon, than the additional millions of dollars in upfront costs necessary to implement a multiple cart system.

To ease the implementation process, we recommend that Milwaukee conduct a one-year pilot program that encompasses approximately 10 percent of the city's collection routes. Pilot programs for various aspects of MSW collection have been used in Milwaukee in the past (R. Meyers, personal communication February 26, 2009). A comprehensive pilot program could verify efficiency and effectiveness of the equipment and billing systems prior to full-scale implementation. Additionally, a one-year pilot would ensure that the equipment functions properly under all weather conditions. The lack of weight-based models and historical PAYT funding opportunities through the U.S. EPA may create possibilities for federal funding to support such a program (See Appendix B, Question 11). In addition, scale manufacturers have an economic incentive to provide equipment on favorable terms or at reduced prices to the extent that successful demonstration may open up new markets for them. Throughout the pilot process, detailed data tracking for waste collected per household will help to inform effectiveness of weight-based PAYT and contribute to Milwaukee's knowledge of MSW and recycling trends in the current flat rate system.

The new and generally unfamiliar weight-based program requires extensive education and outreach to residents to explain the transition to PAYT. These efforts could include information dissemination through billing statements, media outlets, advertisements on buses, and online resources. During the pilot period, Milwaukee might wish to institute a "dual billing" system to show residents their current flat fee monthly rates in comparison to the rates they would pay under a weight-based system. Milwaukee might consider sharing data with residents to show how their amount of garbage compares with other households on their route. Evidence from utility companies shows that social factors, such as neighbor comparisons, can add effectiveness to rolling out new programs. Some systems use graphics included with municipal service bills to demonstrate collection rates compared to the average and to those who throw away the lowest weight of solid waste (Ceniceros 2008; Kaufman 2009).

In conjunction with broad and effective communication enhancing political support for PAYT, some administrative changes can boost public acceptance. Communities attribute actions such as visibly removing the trash fee from the tax levy before imposing PAYT as being key to their success. Other communities attribute their success to receiving input from haulers when designing the PAYT program or using a pilot program or a phase-in approach for the PAYT program (Skumatz 2008).

Implementation of a weight-based Pay-as-You-Throw system will allow Milwaukee to enhance the efficiency and cost effectiveness of its municipal solid waste collection. While the lack of a weight-based operation in the United States creates some concerns, this alternative promotes the greatest equity and requires the least upfront capital investment of the PAYT alternatives. This alternative also meets Milwaukee's needs while making the greatest use of existing equipment and carts. Experts identify weight-based PAYT as the ideal system to reduce MSW generation, increase recycling, and create a sense of personal responsibility for households with respect to their waste. Implementing weight-based PAYT provides a genuine opportunity for Milwaukee to lead comparable cities and the rest of the United States in municipal solid waste service design and delivery.

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Appendix A: Comparative City Selection Criteria

We administered a survey to a sample of 10 U.S. cities with PAYT programs. Within the final sample of responding cities, we denoted in Table 1 whether these cities were sufficiently comparable to Milwaukee based on specific criteria, including population, racial composition, median household income, families below poverty level, type of housing occupancy, and climate. Table 11 depicts the data on which we based our comparisons.

Table 11: Comparative Cities Data

City	Population	Racial Composition	Median Household Income	Families Below Poverty Level	Owner-Occupied Housing	Climate
Milwaukee, WI	602,782	45% white/ 55% non-white or mixed race	\$35,233	21%	49%	Seasonal snowfall
Austin, TX	725,306	64/36	\$48,227	13%	47%	No
Fort Worth, TX	635,612	62/38	\$44,804	14%	59%	No
Grand Rapids, MI	193,671	67/33	\$38,792	17%	62%	Yes
Lansing, MI	115,366	67/33	\$35,990	20%	59%	Yes
Minneapolis, MN	362,513	68/32	\$44,478	16%	54%	Yes
Plano, TX	255,591	76/24	\$79,687	4%	67%	No
Portland, OR	541,550	79/21	\$45,512	11%	57%	No
Sacramento, CA	446,721	50/50	\$48,584	12%	52%	No
San Jose, CA	898,901	49/51	\$76,354	7%	62%	No
Seattle, WA	565,809	71/30	\$56,319	7%	51%	No

Sources: Barrett (2007), National Oceanic and Atmospheric Administration Satellite and Information Service (2009), U.S. Census Bureau (2005-2007)

Cities in Table 1 received a ranking of “Yes” in each respective category if the following standards were met relative to Milwaukee:

- Population: Within 200,000 residents
- Racial Composition: Within 10 percent of white and 10 percent of non-white or mixed race residents
- Median Household Income: Within \$10,000 per household
- Families Below Poverty Level: Within 10 percent of families
- Owner-Occupied Housing: Within 10 percent of owner-occupied housing units
- Climate: Experiences regular seasonal snowfall

Cities that did not match the preceding standard received a “No” in the corresponding category.

Appendix B: Comparative City PAYT Survey Results

To better understand the potential costs, benefits, and impacts of pay-as-you-throw programs, we surveyed 10 U.S. cities that use them: Austin, TX; Fort Worth, TX; Grand Rapids, MI; Lansing, MI; Minneapolis, MN; Plano, TX; Portland, OR; Sacramento, CA; San Jose, CA; and Seattle, WA. They are comparable to Milwaukee in size, population, demographics, and climate. We asked a contact within each city's government to complete a survey using SurveyMonkey (<http://www.surveymonkey.com>). We designed the questions to obtain more detailed understanding of PAYT implementation, effectiveness, and other issues specific to each city. When possible, we created multiple choice questions based on our research of typical PAYT programs. We also provided opportunities for respondents to expand on some answers in narrative form. This appendix provides the full comparative survey and results.

Each respondent answered every question. The results below indicate the frequency that respondents chose an answer as well as the actual number of times the answer was chosen. The results also include verbatim text that were typed by respondents into "Other" or "Comments" text boxes as well as answers to open-ended questions.

Question 1: What type of Pay-As-You-Throw system is being utilized by your municipality?

Answer Options	Frequency	Count
Prepaid bags	0.0%	0
Prepaid tags	0.0%	0
Multiple cart sizes	80.0%	8
Other (please specify)	20.0%	2

Other:

- Prepaid bags and multiple cart sizes
- All above options are being used.

Question 2: What cart sizes are used in your system? Check all that apply.

Answer Options	Frequency	Count
10 gallon	12.5%	1
15 gallon	12.5%	1
30/32/35 gallon	87.5%	7
45 gallon	0.0%	0
60/65 gallon	87.5%	7
90/95 gallon	100.0%	8
Other (please specify):	37.5%	3

Other:

- 32, 64 & 96 gallon carts
- 20 gallon
- 20 gallon mini-cans. This size is not supplied by franchised haulers and must be purchased by the residential customer

Question 3: Why were these particular cart sizes chosen?

Answer Options	Count
Open ended question	7

Answers:

- Pilot study indicated need for 95 gallon for once/week collection. 60-68 gallon chosen as incentive for reducing waste. 32 gallons tested but we had problems with collection arm in servicing this size.
- 32 gal was std industry garbage can size. We pretty much worked off of multiples or fractions of that, although the Mini-can that was available is 20 gallon and the micro-can size available is 10 gallon
- Standard 32 gallon increments, Manufacturer Availability
- Based on historical volumes.
- Standard sizes used by cities in Bay Area (CA); also sufficient movement between sizes including the “mini” size of 22 gallons - also all still can receive automated collection
- To provide standardized choice along with two frequencies of service (monthly and weekly) to meet a variety of residential needs. Roll carts supplied by the hauler result in a slightly higher cost than containers supplied by the customer.
- It was a good range of sizes to accommodate all sizes of families.

Question 4: Why was the specific number of cart offerings chosen (two cart sizes vs. three sizes...)?

Answer Options	Count
Open ended question	7

Answers:

- Started with 32 gal, 64, 96 for customer choice. Then added mini (20 gal) and micro (10 gal) as folks recycled more
- 32 gallon carts for single person households 64 gallon carts for small families and 96 gallon carts for large families
- To offer a wider range of savings to fit the customers’ needs.
- Because we have found that there is a variety of needs throughout the community due to different family & household sizes, cultural practices, frequency of service, and other factors; and we wish to avoid the practice of extra set-outs when possible. Please note that recycling & yard debris containers are standardized to ONE size (65 gallon roll carts) and all are provided by the hauler.
- We have a variety of family sizes in Austin.

Question 5: Are residents allowed to place out solid waste that does not fit in their cart?

Answer Options	Frequency	Count
Yes, and there is no additional charge	12.5%	1
Yes, but waste must be in prepaid bags or have a prepaid tag on it	25.0%	2
Yes, and residents are billed separately for additional waste	37.5%	3
No, residents must take additional waste to the dump or hold it for later pickup	0.0%	0
No, residents must call for special pickup	0.0%	0
Other (please describe)	25.0%	2

Other:

- No. Residents have the option of placing items that cannot fit into the cart for once monthly bulky waste collection or taking the items to the transfer stations (limited to 2x per month). We do collect items outside of cart the week after holidays.
- Additional solid waste bags can be placed outside of the cart but each bag must have a \$4.00 sticker which can be purchased at area grocery stores. There is an \$8.00 per bag charge for each unstickered bag

Question 6: Why was this specific type of program selected over other Pay As You Throw programs or alternative options? Check all that apply.

Answer Options	Frequency	Count
Compatibility with existing collection equipment	60.0%	6
Ease of implementation	50.0%	5
Accurately charges users for their solid waste output	80.0%	8
Politically feasible	60.0%	6
Other (please specify)	30.0%	3

Other:

- We originally used prepaid stickers for “extra garbage” beyond the cart, but that proved to be a huge hassle.
- Encourage recycling/diversion
- Garbage collection & recycling service is not required for SFR homes unless they are a rental property (all rental property owners & managers are required to provide garbage & recycling to tenants).

Question 7: What were the goals of the municipality in changing to a Pay As You Throw program? Check all that apply.

Answer Options	Frequency	Count
Recovering a higher cost ratio for services provided	20.0%	2
Increasing the solid waste diversion rate	70.0%	7
Decreasing trash output	70.0%	7
Promoting equity for residents by charging per unit rather than a flat fee	70.0%	7
Increasing recycling rates	80.0%	8
Other (please specify)	0.0%	0

Question 8: Approximately how many households are served by the program?

Answer Options	Count
Open ended question	10

Answers:

- 14,750; 55,000; 68,000; 105,000; 130,000; 150,000; 150,000; 175,000; 195,000; 202,000

Question 9: What types of homes are served by the program? Check all that apply.

Answer Options	Frequency	Count
Single family homes	100.0%	10
Multifamily homes, 2-4 units	90.0%	9
Multifamily homes, 5+ units	30.0%	3
Other (please specify)	20.0%	2

Other:

- Multifamily complexes (regardless of the number of units) currently have an option to choose individual carts or common bins.
- Multi-family includes moorages, group homes, trailer parks, congregate care & retirement facilities, etc.

Question 10: What year was the Pay As You Throw program implemented in?

Answer Options	Count
Open ended question	10

Answers:

- 1968; 1973; 1989; 1993; 1995; 1996; 1997; 1998; 2000; 2003

Question 11: Were pilot programs conducted before full implementation of the program?

Answer Options	Frequency	Count
No	33.3%	3
Yes (describe the size and scope of the pilot program)	66.7%	6

Answers:

- 8,000 homes with 32 and 68 gallon containers
- Several thousand homes
- There was a pilot cart program but it was not PAYT. Areas were selected based on varying demographics but all waste was collected with no additional cost.
- From July 1991 thru July 1992 the Solid Waste Department conducted a one year PAYT pilot with 3000 households which tested all elements of the new approach, including different cart sizes and variable rates.

- The program began as part of a federal study to determine the feasibility of cost-per-unit collection systems as opposed to flat rate unlimited services in regard to their potential for limiting trash generation.

Question 12: Was the program rolled out to all participants at one time, or was it phased in?

Answer Options	Frequency	Count
All participants at one time	88.9%	8
Phased in (please describe)	11.1%	1

Answers:

- City Council approved a three year, phased in conversion, of the entire city to begin in 1993. Service implementation began with Phase I in Aug 1993, Phase II in June 1994, Phase III-A in Nov 1995, and Phase III-B in June 1996.
- City Council adopted variable rates in July 1997, and all customers citywide were converted to PAYT in 1997.

Question 13: Was there an education or outreach program targeted at citizens alerting them to the changes in solid waste collection and costs?

Answer Options	Frequency	Count
No	11.1%	1
Yes (describe education/outreach programs)	88.9%	8

Answers:

- Articles in citywide newsletter, press release, website
- Direct mail, print and electronic media advertising
- News articles, water bill inserts, mass mailing
- Bill stuffers and mailers.
- A comprehensive public outreach campaign aimed at single-family households explained the new variable rates being introduced, the new categories of recyclables being added to the services provided, and the benefits of participating. All materials were produced in three languages (English, Spanish, and Vietnamese). The campaign was guided by the information received during a series of focus groups in the three languages, baseline and follow-up telephone surveys, and shopping mall intercept surveys. More than 250 community meetings were held in 1993, and a block leader program and school education program were organized. See EPA case study at <http://www.epa.gov/epawaste/conservation/tools/payt/tools/ssanjose.htm>
- At the time of implementation, we were bringing several complementary programs on-line. We were adding materials to our curbside recycling program, and expanding our yard trimmings program. Educating the public about PAYT was a comprehensive, multi-media approach to information which included paid advertisement and inserts about program guidelines in the Austin American Statesman, 14 billboards around town

with program guidelines, utility bill inserts about the new extra garbage stickers, radio advertisements and press releases about the message “Recycle or PAYT, it’s your choice”, direct communication with neighborhoods and new neighborhoods as they were added to the program, door hangers with program guidelines, and bi-monthly newsletters to neighborhood associations, and presentations at neighborhood meetings. To keep awareness of the new program high, messages using the tagline “Recycling Right” and “Take the bin to the curb” were also run during the early stages of the implementation.

- Mailings and school students and advertisements.
- Media releases and mailings

Question 14: Have there been any significant changes to the program since its original implementation?

Answer Options	Frequency	Count
No	30.0%	3
Yes (please describe)	70.0%	7

Answers:

- Introduced mini can and micro can after initial rollout
- Changed from bi-weekly to weekly.
- No longer offer 128 gallon cart, now offer 22 gallon cart
- Residential solid waste collection has been a franchised service historically in Portland. With the mandate that recycling be available to all residents, there have been multiple changes to the Portland Recycles! program with pilot programs and ongoing training & educational outreach to residents and businesses.
- Garbage collection rates and extra garbage fees have gone up over the years, but recycling is still included in the base rate at no extra charge. Garbage collection is now fully automated. We have just over the last several months switched from the bin system for recycling to a 90 gallon cart based single stream recycling program. We accept more materials in the recycling program and materials can all be co-mingled in the recycling cart.
- The addition of various sized carts was implemented in 1997. 21/32/65/95 gallon carts.
- Added the refuse cart program (various sizes). Added appliance stickers and bulk sticker items.

Question 15: Were major changes to the solid waste billing or administration program required with implementation of the PAYT program?

Answer Options	Frequency	Count
No	40.0%	4
Yes (please describe)	60.0%	6

Answers:

- Each time we added a size of can, we needed to modify the billing system
- Varying pay rates had to be set up, cart tracking by serial number, new customer service tracking program implemented. The PAYT started at the same time the City of Fort Worth took control of customer service for solid waste collections; this was previously a function of the collections contractor.
- Setup billing system and expand data on customer base.
- Software required to bill residents appropriately
- Our rates are adjusted annually through review by independent economists, and the most recent (2008) change to the recycling program (mandating hauler-provided roll carts for recycling & yard debris collection) resulted in a significant increase in residential rates and tipping fees (commercial rates are determined by the hauler & business customer in a non-franchised system).
- Prior to implementing variable billing rates, the City of Austin had to update its entire billing system.

Question 16: Did implementation of the PAYT program require retraining of solid waste collectors?

Answer Options	Frequency	Count
Yes	60.0%	6
No	40.0%	4

Comments:

- A little bit when we introduced semi-automated carts
- All services are contracted
- City collects single family residential and some commercial customers.
- Likely to some degree but still mainly just emptying carts regardless of what's in them.

Question 17: Which statement best describes the status of solid waste collectors in your municipality?

Answer Options	Frequency	Count
Unionized municipal employees	44.4%	4
Non-unionized municipal employees	22.2%	2
Unionized contract employees	22.2%	2
Non-unionized contract employees	11.1%	1

Comments:

- Private franchised haulers
- They have the option to join the Municipal Employees Union which offers membership to all municipal, federal, state and county employees. Membership dues are deducted from employee paychecks.
- Private haulers are permitted to acquire as many customers as they would like, no franchise agreements and these are almost all non-union employees that the municipality competes against. There are also no requirements on the days that areas are served. As a result there are many trucks in many areas on different days. We are working toward improving that as we write.

Question 18: Per capita solid waste (garbage) tonnage collected has...

Answer Options	Frequency	Count
Increased	10.0%	1
stayed the same	20.0%	2
Decreased	70.0%	7

Please describe magnitude of change:

- Have relatively few residents that have elected to participate with smaller container and lower fee. 68 GAL CARTS - 3,612; 95 GAL CARTS - 65,349
- Overall recycling rate across all waste streams has gone from 24% to 48.4%. Increase is even greater for single family sector - now reaching near 60% recycling. This is due to introduction of curbside yard waste and curbside recycling collection as well as PAYT
- Based on the information available the total tonnage was reduced by about 12.5% & garbage collected was reduced by about 25%
- disposal has decreased with recycling increasing significantly, from 12,000 tons per year to over 40,000 tpy
- Prior to PAYT and the cart-based recycling program, residents set out an average of three 32-gallon garbage carts per week. Now approx. 80% have one, 32-gallon garbage carts.
- Unclear at this time - not enough data. Overall our recycling rates have increased from mid 40 percentile in mid-90s to 63% in 2007.
- Solid Waste Services tracks performance measures by residential customer account, or household, not per capita. Our per household garbage tonnage

decreased since the beginning of the program, and then has leveled off and stayed consistent since.

- For the city crews, we are not aware of the private sector experience. They own the landfill, we pay to tip there.

Question 19: Per capita recycling tonnage collected has...

Answer Options	Frequency	Count
Increased	80.0%	8
Stayed the same	20.0%	2
Decreased	0.0%	0

Please describe magnitude of change:

- .0194% increase
- City -wide all waste streams we are at 48+% recycling as of 2007
- 02-03 - 3.92 pounds per household per week 03-04 - 11.59 pounds per household per week Last year 13.54 pounds per household per week
- Increased from 12,000 tpy in 2000 to 36,000 tpy in 2004 to a little over 40,000 tpy in 2008.
- The volume of recyclables and yard trimmings being collected more than doubled the levels recorded prior to the cart-based recycling program and PAYT.
- Solid Waste Services tracks performance measures by residential customer account, or household, not per capita. Before PAYT implementation, tonnage was low but increasing. Since implementation, levels have been static

Question 20: Solid waste (garbage) diversion rates have...

Answer Options	Frequency	Count
Increased	77.8%	7
Stayed the same	22.2%	2
Decreased	0.0%	0

Please describe the magnitude of change:

- Residential diversion increased from 39.8% to 41.1%. This number includes yard trimmings composting, HHW recycling and reuse, electronic recycling and appliance recycling.
- up to 48+%
- 02-03 diversion rate was 5.48% 03-04 diversion rate was 19.3% The last couple of years we are running between 22 & 23%
- Currently at approximately 52%
- Diverted 60% in 2006 and 44% in 1995 according to the CIWMB (<http://www.ciwmb.ca.gov/LGTools/mars/JurDrSta.asp?VW=In>)
- Solid Waste Services defines diversion rate as the amount of yard trimmings and recyclables diverted as a percentage of the total amount of garbage, recyclables, and yard trimmings generated and collected through weekly curbside pickups. Through the PAYT program and enhancements

to the curbside recycling program, the diversion rate went up and has, with minor fluctuations, remained constant over the last twelve years or so.

Question 21: Has there been any noticeable increase in littering or illegal dumping since implementing the PAYT program?

Answer Options	Frequency	Count
Yes	0.0%	0
No	100.0%	10

Comments:

- Littering/illegal dumping is a chronic low-level problem, but has not gone up w/ PAYT
- We opened citizen drop off stations along with the start of the PAYT program and have actually had a decrease in illegal dumping.
- In the beginning we did have instances where extra bags came from neighbors, but that leveled off.

Question 22: How has PAYT impacted solid waste revenues? Check all that apply.

Answer Options	Frequency	Count
The program is at full cost recovery	66.7%	6
The program is at less than full cost recovery and revenues are higher under PAYT than previously	11.1%	1
The program is at less than full cost recovery and revenues are the same under PAYT as previously	22.2%	2
The program is at less than full cost recovery and revenues are lower under PAYT than previously	0.0%	0

Comments:

- We have a profit sharing contract for our recycle processing and the revenue generated depends on the market. The last two quarters have seen drastic drops in commodity prices and our share of the revenue.
- Recycling is subsidized by payment per ton by the processor.
- Check back later
- We are an enterprise fund and through the rates that we charge our customers, we generate excess money that goes to the general fund. Also, with PAYT we realize more money through charging for larger carts, extra carts and collection of extra garbage.
- Just barely coming out even.
- The refuse program is supplemented by a refuse millage

Question 23: Please describe any unanticipated problems or difficulties with the Pay As You Throw program.

Answer Options	Count
Open ended question	9

Answers:

- None (x4)
- Contamination in recycling is high. Full implementation at one time was difficult due to the number of households.
- The cost savings are not difficult for the customer to see.
- Sustained economic downturn has affected recycling markets - recycling subsidizes residential garbage rates in Portland, and this loss of income has negatively impacted haulers. Given that the changes to our recycling program were implemented less than a year ago, it's hard to quantify how the changes have impacted our recovery rates, etc - simply not enough data AND too many variables.
- Manual collection of extra garbage bags creates inefficiencies with a system designed to tip garbage carts with automated trucks. Also, there are households that regularly generate larger volumes of extra garbage, and it's more desirable to all parties concerned, if they properly size their garbage carts, ie, go to a larger sized garbage cart. Although it goes against the philosophy of PAYT, it's cheaper for these customers to upgrade to a larger sized cart, and more efficient for our collection. There are also administrative costs to tracking and billing for extra garbage.
- We have to drive every street looking for the bags, there is no subscription requirement!! More fuel, more time, more cost!

Question 24: Please describe any other major issues, benefits, or relevant points associated with the program.

Answer Options	Count
Open ended question	7

Answers:

- The citizens get it. It is logical and is perceived as equitable. We are applying PAYT to our curbside yard waste/food waste composting collection with 13 gal, 32 gal and 96 gal options.
- Increased diversion has resulted in decreased disposal, and therefore stabilized disposal rates.
- There is some concern (and some anecdotal evidence) that, in order to save money, people will choose a smaller sized garbage bin and put their garbage into the larger recyclables cart. Some people do seem to do this but it's not the majority of people and tagging carts for contamination rather than just picking them up.
- The City of Portland currently provides commercial food generators with food composting - we hope to site a local composting facility to offer this service to residents in the next 18 months to 2 years.

- We found that if you allow for extra garbage, you must have a large enough rate gap between garbage cart sizes to incentivize recycling.
- We hope with the upcoming conversion to single stream recycling, from sort separated at curb, that we begin to see volume of trash being landfilled decline.
- None

Appendix C: Constructing a Distribution of MSW Production

Milwaukee does not collect data on the amount of municipal solid waste each household in the city produces. The best data available show the average amount of MSW per collection route during an eight-month period in 2007 (City of Milwaukee 2007). This data can provide route-level information, but specific household data cannot be derived from it because the standard deviation of the data is unknown. The standard deviation describes how tightly all of the observations in a data set cluster around the mean (average) of the data. For example, if the mean of a data set is 40.00 and the standard deviation is 2, the majority of the data points fall between 38.00 and 42.00.

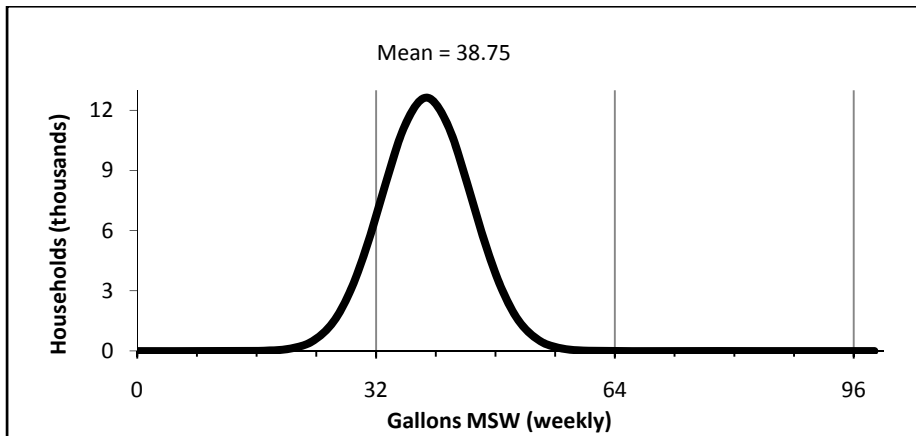
If the standard deviation and mean of a data set are known, the distribution of data points can be known. In this case, the mean of the MSW is known, but the standard deviation for Milwaukee's data is unknown. Therefore, the distribution of MSW generation by household cannot be generated from empirical records. The only relevant information that can be drawn from the available data is that the average household disposed of 43.16 pounds of MSW per week during this period. We converted this figure to an average weekly volume of 38.75 gallons using a standard conversion of 225 pounds per cubic yard of MSW.

The distribution of household MSW determines the pricing structure for a multiple cart PAYT system by determining the number of households that may subscribe to each cart size. To develop reasonable estimates of the unknown distribution of households, standard deviations from 1.00 to 38.00 (just less than the mean of 38.75 gallons per household) were considered. This range produced wide variation in the number of households potentially using each cart size. Using a more plausible range of standard deviations from 6.00 to 18.00 also produced widely varying estimates of the number of households using each cart size.

However, when these estimates were placed into the pricing formula, the range of prices for each cart size was fairly narrow and stable. In fact, the range of prices varied by only a few dollars for each cart size, even when the distribution of carts changed considerably. Given this, we examined the status quo and each alternative using theoretical distributions with standard deviations of 6.00, 12.00, and 18.00. The standard deviations were measured in either pounds or gallons depending on what was relevant for each alternative.

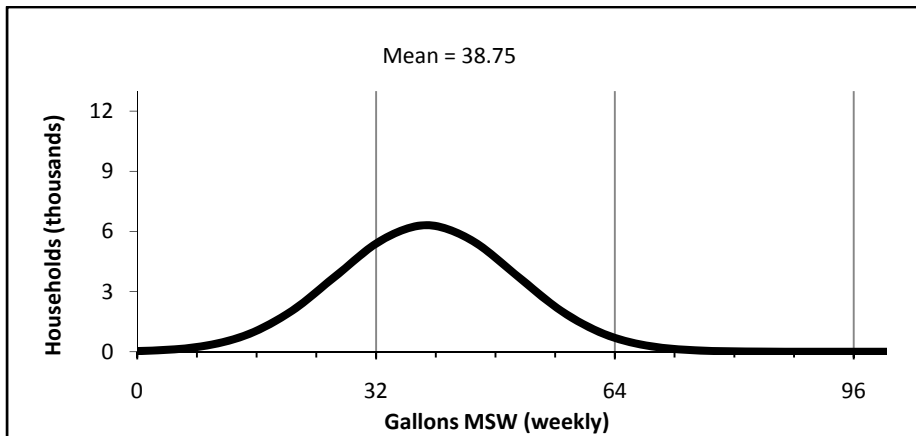
Figures 1, 2, and 3 graphically depict these standard deviations.

Figure 1: Normal MSW Distribution with Standard Deviation of 6.00



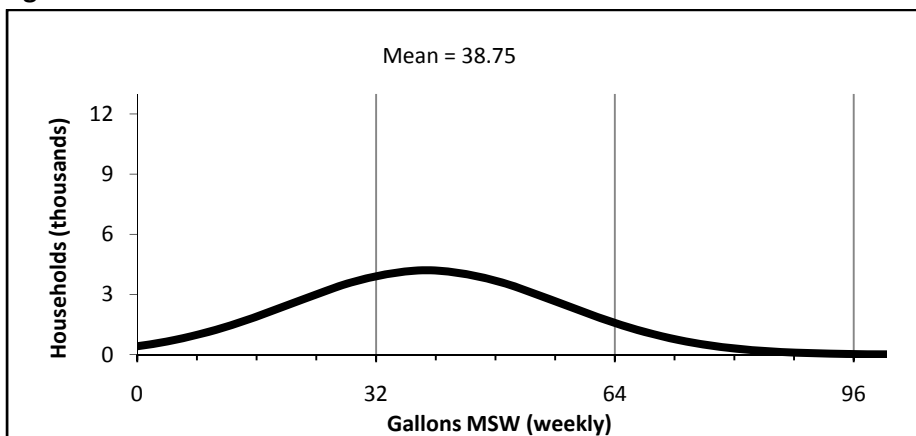
Source: Authors' calculations

Figure 2: Normal MSW Distribution with Standard Deviation of 12.0



Source: Authors' calculations

Figure 3: Normal MSW Distribution with Standard Deviation of 18.0



Source: Authors' calculations

Appendix D: Alternative Budget and Pricing Development

This section describes the method used to establish budgets and an equity index for the status quo and both alternatives. Because we did not know the standard deviation for household MSW distribution, we outlined scenarios using hypothetical standard deviations of 6.00, 12.00, and 18.00. We also hypothesized scenarios using a tipping fee of \$30 per ton, the approximate rate Milwaukee pays in 2009 to unload waste at the dump, and \$35 per ton, which the client asked us to include. Finally, we projected scenarios using current levels of MSW generated by the city, a 10 percent reduction in total waste, and a 20 percent reduction in total waste. These waste reduction figures fall within the reasonable range of waste reduction reported by the comparative cities we surveyed and literature on cities moving to PAYT systems from flat-rate MSW collection.

These considerations resulted in six status quo scenarios, where no waste reduction was analyzed; 18 Alternative I scenarios; and 18 Alternative II scenarios. For each alternative, only one budget scenario is presented in this appendix, demonstrating a standard deviation of 6.00, a tipping fee of \$30, and zero reduction in MSW.

We started with a budget for the status quo which was based on the 2009 Milwaukee Solid Waste Budget (City of Milwaukee). This base budget was used for all of the pricing and equity index scenarios, with changes that are described below for each alternative.

Tables 12, 14, and 16 show the prices and the equity index for each scenario of each alternative. These tables show the standard deviation, the tipping fee, the waste collection charge, the equity index, and the cost recovery percentage for each scenario. The tables also present the total annual price that would be paid by the median Milwaukee household under each scenario.

Status Quo Summary: Current MSW and Recycling Program

Six scenarios were constructed for the status quo. These used standard deviations of 6.00, 12.00, and 18.00, each with a landfill tipping fee of \$30 or \$35 per ton. Because no municipal solid waste reduction is assumed under the status quo, the scenarios do not reflect any reduction in MSW.

Under the status quo, the median household (in fact all households) pays \$150 per year for its MSW and recycling collection. This results in a program cost recovery of 88 to 91 percent depending on the tipping fee that is used. Table 12 displays these summary results as well as the equity index for each scenario.

Table 12: Status Quo Scenarios

Scenario	Std. Dev.	Tipping Fee	0% MSW Reduction Median Charge	% Cost Recovery
SQ1	6.00	\$30	\$150 Equity Index: 1.23	91.3%
SQ2	6.00	\$35	\$150 Equity Index: 1.23	88.7%
SQ3	12.00	\$30	\$150 Equity Index: 2.11	91.3%
SQ4	12.00	\$35	\$150 Equity Index: 2.11	88.7%
SQ5	18.00	\$30	\$150 Equity Index: 3.30	91.3%
SQ6	18.00	\$35	\$150 Equity Index: 3.30	88.7%

Source: Authors' calculations

A sample status quo budget scenario is presented in Table 13. A number of assumptions are contained in this budget:

- It is assumed that the long-run resale value of recyclables is \$80 per ton (R. Meyers, personal communication, March 24, 2009). Of this amount, Milwaukee receives \$40 in gross revenue. This amount is used in all budget scenarios.
- The state recycling grant is assumed to be the same as the FY2008 grant.
- "Overhead" excludes fringe benefits and depreciation expenses.
- Standard deviations of 6.00, 12.00, and 18.00 were used in calculating the equity index. The standard deviations were not relevant for price determination in the status quo.
- The tipping fee was set at \$30 and \$35 per ton as the client requested.

Table 13: Status Quo Sample Budget Scenario

Status Quo: Current Milwaukee System Estimated Budget				
Scenario 1: Standard Deviation = 6, MSW Tipping Fee = \$30				
INCOME/REVENUES				
MSW Program				
Number of Households	190,000	x Base Price	\$150	\$28,500,000
Extra Collection				
Large Pickups (>4 Yards ³)	2,500	x Charge per pickup	\$50	\$125,000
<i>Total MSW Income/Revenue</i>				<i>\$28,625,000</i>
Recycling Collection				
Tons Collected	26,000	x Resale value per ton	\$40	\$1,040,000
Recycling state grants				\$3,500,000
<i>Total Recycling Income/Revenue</i>				<i>\$4,540,000</i>
Total Income/Revenue				\$33,165,000
EXPENSES/COSTS				
MSW Program				
Labor				\$11,334,141
ODWs Salaries (77 routes)			\$9,507,027	
OT (driver only)			\$327,019	
Field Clerks/Cart Techs			\$208,934	
San Workers			\$493,630	
Supervisors			\$797,532	
Fringe Benefit				\$4,646,998
Trucks				\$3,779,577
Maint/Repair/Fuel			\$1,902,096	
Depreciation			\$1,877,481	
Tonnage	190,000	x Tipping fee per ton	\$30	\$5,700,000
Other operating expenses				\$475,000
Containers				\$645,000
Overhead (13.38%)				\$2,683,525
<i>MSW Total</i>				<i>\$29,264,241</i>
<i>Continued on following page</i>				

EXPENSES/COSTS *continued*

Recycling Program

Labor			\$2,306,512
ODWs Salaries (34 routes)		\$2,098,954	
OT		\$144,398	
Supervisors		\$265,884	
Recycling Manager		\$63,160	
Fringe Benefit			\$945,670
Trucks			\$1,471,882
Maint/Repair/Fuel		\$839,664	
Depreciation		\$632,218	
Tonnage	26,000	x Processing fee per ton	\$40 \$1,040,000
Other operating expenses			\$250,000
Containers			\$400,000
Overhead (13.38%)			\$647,080
<i>Recycling Total</i>			<i>\$7,061,144</i>
Total Expenses/Costs			\$36,325,385

COST RECOVERY

Total Income/Revenue	\$33,165,000
Total Expenses/Costs	\$36,325,385
Net Income/Loss	-\$3,160,385
Percentage Cost Recovery	91.3%

EQUITY MEASURE

Resident	Charge		Price/pound
10th Percentile Household	\$150 ÷ Annual MSW Pounds	1,735	\$0.086
Median Household	\$150 ÷ Annual MSW Pounds	2,158	\$0.070
90th Percentile Household	\$150 ÷ Annual MSW Pounds	2,543	\$0.059
Equity Index	1.47	Ratio of low-volume price to high-volume price	

Alternative I Summary: Multiple Cart Sizes

Alternative I required the construction of 18 scenarios. As in the status quo, the standard deviation was 6.00, 12.00, and 18.00, each with a landfill tipping fee of \$30 and \$35. We assumed that some level of MSW reduction will occur when customers are charged based on their MSW output. We constructed scenarios to reflect 10 percent or 20 percent total reductions in MSW in addition to the other variables.

Under Alternative I, the median household produces 38.75 gallons of MSW per week with no MSW reduction, 34.84 gallons with a 10 percent reduction, and 31 gallons with a 20 percent reduction. We assume that under all of these scenarios the median household will use a 64-gallon cart. In this case, the median household will pay between \$164 and \$184 per year for MSW and recycling collection depending on the variables. Table 14 displays these summary results as well as the equity index for each scenario.

Table 14: Alternative I: Multiple Carts Scenarios

Scenario	Std. Dev.	Tipping Fee	0% MSW Reduction Median Charge	10% MSW Reduction Median Charge	20% MSW Reduction Median Charge
MC1	6.00	\$30	\$171 Equity Index: 1.08	\$168 Equity Index: 1.07	\$164 Equity Index: 1.06
MC2	6.00	\$35	\$177 Equity Index: 1.09	\$173 Equity Index: 1.08	\$169 Equity Index: 1.07
MC3	12.00	\$30	\$178 Equity Index: 1.69	\$174 Equity Index: 1.68	\$171 Equity Index: 1.67
MC4	12.00	\$35	\$184 Equity Index: 1.71	\$180 Equity Index: 1.70	\$176 Equity Index: 1.68
MC5	18.00	\$30	\$178 Equity Index: 2.88	\$175 Equity Index: 2.86	\$171 Equity Index: 2.84
MC6	18.00	\$35	\$184 Equity Index: 2.91	\$180 Equity Index: 2.89	\$176 Equity Index: 2.87

Source: Authors' calculations

A sample multiple cart budget scenario is presented in Table 15. A number of assumptions are contained in this budget:

- This alternative will require one new employee for billing, technical support and maintenance of the weighing system. This employee is budgeted at \$40,000 annually, plus the associated fringe costs.
- Full price recovery was specified for the alternative.
- Cart charges were set at \$48 per year for a 32-gallon cart, \$96 per year for a 64-gallon cart, and \$144 per year for a 95-gallon cart. Once these prices were established, a base charge could be set.

Table 15: Alternative I Sample Budget Scenario

Alternative I: Multiple Cart System Estimated Budget				
Scenario 1: Standard Deviation = 6, MSW Tipping Fee = \$30, MSW Reduction = 0%				
INCOME/REVENUES				
MSW Program				
Number of Households	190,000	x Base Price	\$75	\$14,290,073
Cart Charge				
Number 32g Households	24,759	x Annual Charge	\$48	\$1,188,432
Number 64g Households	165,239	x Annual Charge	\$96	\$15,862,944
Number 95g Households	2	x Annual Charge	\$144	\$288
Number additional carts	0	x Annual Charge	\$0	\$0
Extra Collection				
Additional 30g Bags	190,000	x Charge per bag	\$2	\$380,000
Large Pickups (>4 Yards ³)	2,500	x Charge per pickup	\$50	\$125,000
<i>Total MSW Income/Revenue</i>				<i>\$31,846,737</i>
Recycling Collection				
Tons Collected	26,000	x Resale value per ton	\$40	\$1,040,000
Recycling state grants				\$3,500,000
<i>Total Recycling Income/Revenue</i>				<i>\$4,540,000</i>
Total Income/Revenue				\$36,386,737
EXPENSES/COSTS				
MSW Program				
Labor				\$11,374,141
ODWs Salaries (77 routes)			\$9,507,027	
OT (driver only)			\$327,019	
Field Clerks/Cart Techs			\$208,934	
San Workers			\$493,630	
Supervisors			\$837,532	
Fringe Benefit				\$4,662,998
Trucks				\$3,779,577
Maint/Repair/Fuel			\$1,902,096	
Depreciation			\$1,877,481	
Tonnage	190,000	x Tipping fee per ton	\$30	\$5,700,000
Other operating expenses				\$475,000
Containers				\$645,000
Overhead (13.38%)				\$2,688,877
<i>MSW Total</i>			<i>\$3,779,607</i>	<i>\$29,325,593</i>
<i>Continued on following page</i>				

EXPENSES/COSTS *continued*

Recycling Program

Labor			\$2,306,512
ODWs Salaries (34 routes)		\$2,098,954	
OT		\$144,398	
Supervisors		\$265,884	
Recycling Manager		\$63,160	
Fringe Benefit			\$945,670
Trucks			\$1,471,882
Maint/Repair/Fuel		\$839,664	
Depreciation		\$632,218	
Tonnage	26,000	x Processing fee per ton	\$40 \$1,040,000
Other operating expenses			\$250,000
Containers			\$400,000
Overhead (13.38%)			\$647,080
<i>Recycling Total</i>			<i>\$7,061,144</i>
Total Expenses/Costs			\$36,386,737

COST RECOVERY

Total Income/Revenue	\$36,386,737
Total Expenses/Costs	\$36,386,737
Net Income/Loss	\$0
Percentage Cost Recovery	100.0%

EQUITY MEASURE

Resident	Charge		Price/gallon
10th Percentile Household	\$123 ÷ Annual MSW Gallons	1,553	\$0.079
Median Household	\$171 ÷ Annual MSW Gallons	1,937	\$0.088
90th Percentile Household	\$171 ÷ Annual MSW Gallons	2,322	\$0.074
Equity Index	1.08 Ratio of low-volume price to high-volume price		

Alternative II Summary: Weight-Based Program

Alternative II included the same 18 scenarios used in Alternative I.

Under Alternative II, the median household produces 43.16 pounds of MSW per week with no MSW reduction, 39.29 pounds with a 10 percent reduction, and 35.41 pounds with a 20 percent reduction. Given this, the median household will pay between \$169 and \$182 per year for MSW and recycling collection depending on the variables chosen. It is notable that this range is nearly identical to the range paid by the median household under Alternative I. Table 16 displays these summary results as well as the equity index for each scenario.

Table 16: Alternative II: Weight-Based Scenarios

Scenario	Std. Dev.	Tipping Fee	0% MSW Reduction Median Charge	10% MSW Reduction Median Charge	20% MSW Reduction Median Charge
W1	6.00	\$30	\$176 Equity Index: 1.11	\$172 Equity Index: 1.10	\$169 Equity Index: 1.10
W2	6.00	\$35	\$182 Equity Index: 1.11	\$178 Equity Index: 1.10	\$174 Equity Index: 1.09
W3	12.00	\$30	\$177 Equity Index: 1.25	\$172 Equity Index: 1.24	\$169 Equity Index: 1.22
W4	12.00	\$35	\$182 Equity Index: 1.24	\$178 Equity Index: 1.23	\$174 Equity Index: 1.21
W5	18.00	\$30	\$177 Equity Index: 1.47	\$172 Equity Index: 1.44	\$169 Equity Index: 1.41
W6	18.00	\$35	\$182 Equity Index: 1.45	\$178 Equity Index: 1.43	\$174 Equity Index: 1.40

Source: Authors' calculations

A sample weight-based budget scenario is presented in Table 17. A number of assumptions are contained in this budget:

- This alternative will require two new employees for billing and technical support and maintenance of the weighing system. These employees are budgeted at \$40,000 each annually, plus the associated fringe costs.
- Full price recovery was specified for the alternative.
- All customers pay a base fee of \$50 per year, regardless of their actual MSW output. The base fee covers fixed costs borne by Milwaukee regardless of the amount of MSW generated by households for collection. Based on this base charge, the total amount of MSW generated and the expenses that had to be recovered, a charge per pound of MSW was established.

Table 17: Alternative II Sample Budget Scenario

Alternative II: Weight-Based System Estimated Budget				
Scenario 1: Standard Deviation = 6, MSW Tipping Fee = \$30, MSW Reduction = 0%				
INCOME/REVENUES				
MSW Program				
Collection Charge	190,000	x Base Price	\$50	\$9,500,000
Weight Charge	190,000	x Charge per ton	\$117	\$22,283,089
Extra Collection				
Large Pickups (>4 Yards ³)	2,500	x Charge per pickup	\$50	\$125,000
<i>Total MSW Income/Revenue</i>				<i>\$31,908,089</i>
Recycling Collection				
Tons Collected	26,000	x Resale value per ton	\$40	\$1,040,000
Recycling state grants				\$3,500,000
<i>Total Recycling Income/Revenue</i>				<i>\$4,540,000</i>
Total Income/Revenue				\$36,448,089
EXPENSES/COSTS				
MSW Program				
Labor				\$11,414,141
ODWs Salaries (77 routes)			\$9,507,027	
OT (driver only)			\$327,019	
Field Clerks/Cart Techs			\$208,934	
San Workers			\$493,630	
Supervisors			\$877,532	
Fringe Benefit				\$4,678,998
Trucks				\$3,779,577
Maint/Repair/Fuel			\$1,902,096	
Depreciation			\$1,877,481	
Tonnage	190,000	x Tipping fee per ton	\$30	\$5,700,000
Other operating expenses				\$475,000
Containers				\$645,000
Overhead (13.38%)				\$2,694,229
<i>MSW Total</i>			<i>\$3,779,607</i>	<i>\$29,386,945</i>
<i>Continued on following page</i>				

EXPENSES/COSTS *continued*

Recycling Program

Labor			\$2,306,512
ODWs Salaries (34 routes)		\$2,098,954	
OT		\$144,398	
Supervisors		\$265,884	
Recycling Manager		\$63,160	
Fringe Benefit			\$945,670
Trucks			\$1,471,882
Maint/Repair/Fuel		\$839,664	
Depreciation		\$632,218	
Tonnage	26,000	x Processing fee per ton	\$40 \$1,040,000
Other operating expenses			\$250,000
Containers			\$400,000
Overhead (13.38%)			\$647,080
<i>Recycling Total</i>			<i>\$7,061,144</i>
Total Expenses/Costs			\$36,448,089

COST RECOVERY

Total Income/Revenue	\$36,448,089
Total Expenses/Costs	\$36,448,089
Net Income/Loss	\$0
Percentage Cost Recovery	100.0%

EQUITY MEASURE

Resident	Charge		Price/pound
10th Percentile Household	\$154 ÷ Annual MSW Pounds	1,773	\$0.087
Median Household	\$177 ÷ Annual MSW Pounds	2,158	\$0.082
90th Percentile Household	\$199 ÷ Annual MSW Pounds	2,543	\$0.078
Equity Index	1.11	Ratio of low-volume price to high-volume price	

Appendix E: Development of Policy Analysis Criteria

We evaluated each policy option according to four criteria: efficiency, effectiveness, equity, and ease of implementation. These are summarized in the “Policy Criteria” section of this report. Our measurement and data collection methods for each are described here.

Efficiency

We measure efficiency through the percentage program cost recovery under each alternative. We calculate program using the following formula:

$$\% \text{ Cost Recovery} = \text{Program Income and Revenue} / \text{Program Expenses and Costs}$$

We used the spreadsheet template to total the income and expenses under a range of assumptions for six scenarios for each policy option. Additionally, each alternative scenario was run with 0 percent, 10 percent, and 20 percent MSW reductions, creating up to 18 scenarios for each alternative. Assumptions included the possibility of no reduction in the number of tons of MSW and, therefore, no expense reduction due to reduced tipping fees. To calculate the pricing structure needed for each scenario, we first determined the income needed to obtain full cost recovery. For PAYT options, this was weighted by the distribution of MSW per household given the base fees in each case.

In addition, we evaluate efficiency by the additional budget expenses each alternative requires. We calculated costs of new PAYT system inputs, public outreach and education expenses, and additional staffing expenses from the alternatives. We conducted telephone interviews with vendors and potential contractors, reviewed our comparable cities survey results and telephone contacts, and relied on estimates given by City of Milwaukee staff. Due to lack of detailed response, we must estimate some budget items such as education and outreach for the multiple cart and weight-based alternatives.

Effectiveness

Effectiveness is quantifiable by MSW tonnage reduction resulting from residents’ disposal behavior under each alternative. Data in this category come from research studies and our comparable city survey responses. We also make relative comparisons of effectiveness regarding household acceptance of and compliance with the programs.

The spreadsheet calculations were based on the approach and assumptions about pricing and distributions of waste per household described in the methodology section (see page 7 and Appendix C).

We based these estimated tonnage inputs on three sources. First, the ranges of variation in tonnage found over time in Milwaukee prior to consideration of PAYT provided a magnitude of changes due to all non-PAYT factors.

Varying percentage reductions in solid waste from comparably sized PAYT municipalities act as a second benchmark. We also took into account averages from government and industry sources showing diversion rates and other impacts during the years following the introduction of PAYT. As most reductions in MSW following the introduction of PAYT came in the first year or two and then leveled off, our quantitative evaluations covered an entire single year and should be considered the long-run average.

City of Milwaukee staff provided recycling revenues and landfill fees per ton for the current budget cycle. These are not modified to account for long-term forecasts of variations in recycling prices in our analysis.

Equity

We defined an equity index to consistently measure the relative fairness of each policy alternative. The index shows the ratio of the prices paid between those that generate the most MSW and those that generate the least. Specifically, the index compares the price paid per pound or gallon of MSW by the individual household 10 percent from the bottom and 10 percent from the top of the MSW distribution range. This approach provides a single number to compare the equity of different systems and different scenarios. A score of 2.0 on the index indicates those generating the least MSW pay twice as much as those generating the most. An index of 1.0 indicates residents pay the same amount for MSW collection per unit, which we consider to be the most equitable system possible. In our calculations, we found 1.08 as the most equitable score in our alternatives, occurring under the weight-based system. The status quo scores the highest equity disparity at 4.8. This means that under one possible status quo scenario, households with the lowest amount of MSW pay nearly five times the rate per pound of households generating the most waste.

Ease of Implementation

Assessment of ease of implementation was a relative comparison between alternatives and considered issues such as education and billing changes. We also considered availability of new equipment and maintenance services, and whether the alternative requires substantial re-training of collection workers. We obtained this information from interviews with City of Milwaukee employees, our comparable cities survey results, and telephone contacts with vendors. We also used research on published PAYT information.

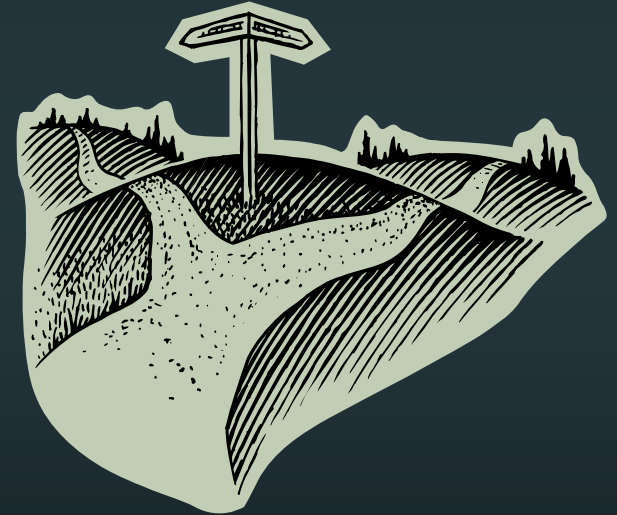
APPENDIX C

PowerPoint presentation on the Waukesha County Recycling System Study

Waukesha County Recycling

Looking Ahead

Perry Lindquist, Land Resources Manager
Waukesha County Dept. of Parks & Land Use



July 27, 2009
Milwaukee Recycling Task Force

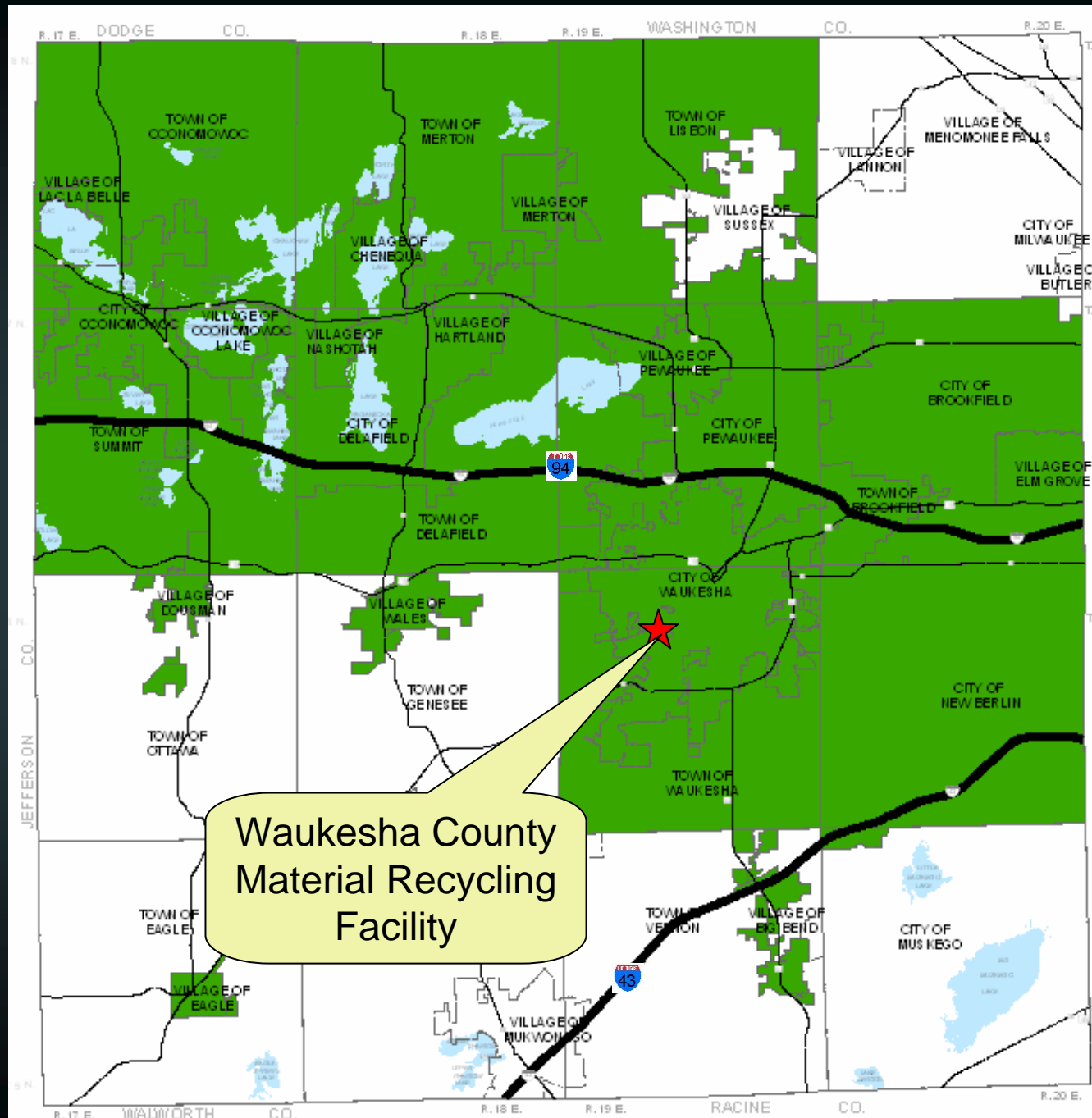
Presentation Outline

- Background on county recycling program
- County MRF - Options for the future
 - 2007 study findings/recommendations
- Similarities to City of Milwaukee
 - How can we work together/next steps

Background on County Program

- Waukesha County is “Responsible Unit” for 25 communities (since 1990)
 - Pool state grants (\$1 million/yr)
 - Coordinate education program
 - Pay for blue recycle bins
 - MRF investment/risk, oversight, maintenance
- County-owned/private operated MRF
 - Dual-stream system (paper & containers separate)
 - Average 23,000 tons/year of recyclables
 - Last expansion in 1995

Participating Municipalities



Waukesha County
Material Recycling
Facility

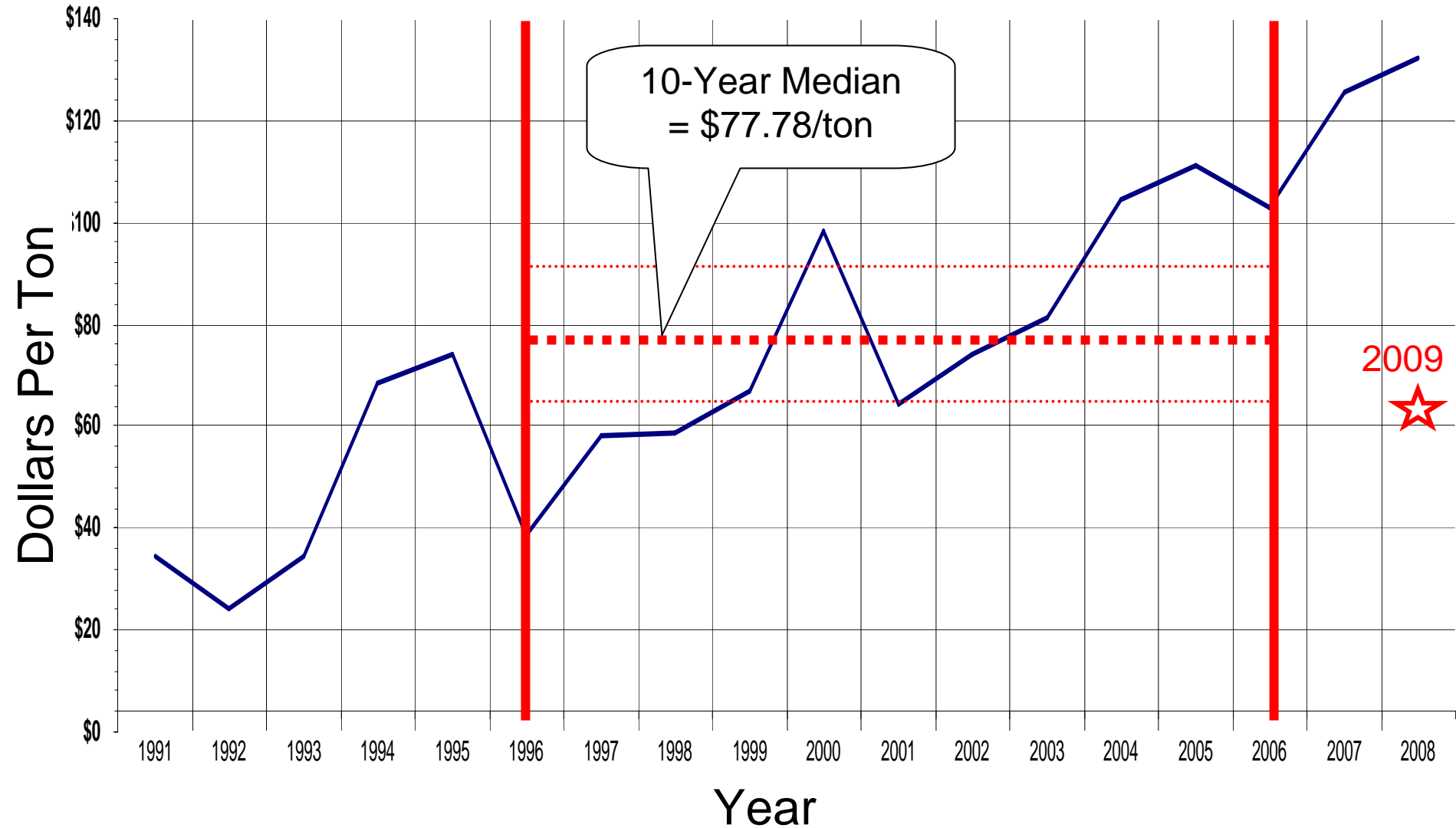
Background on County Program

(continued)

- 25 Participating Communities must:
 - Collect dual stream recyclables
 - 88,000 households (pop. 270,000)
 - \$12 million/yr. in private contracts (\$3.5 mil. recycle)
 - Deliver recyclables to county MRF
 - Report program costs to county/annual grants

Total Revenue Per Ton Shipped

Waukesha Co. MRF 1991-2008



County MRF: “Enterprise Fund”

- Self-sustaining – no tax levy or processing fees to communities (up front County loan paid off)
- Revenues: material sales (50%), state grants & operator processing fees (up to \$6.50/ton)
- Current fund balance = \$11 million:
 - Good markets and competitive operating contracts
 - Distributions to communities of \$6.2 million in the last 9 years + \$1 million for 2010 (proposed)
 - 2012 Projected Fund Balance: \$11-13 million
 - Assume continued state grants of \$1 million/yr., material sales of \$700K./yr. and community dividends of \$1 million/yr.
 - Use to pay for future MRF investments

Waukesha County Recycling System and Capacity Study Final Report



Presented to:
Waukesha County



Prepared by:
RRT Design & Construction



GERSHMAN, BRICKNER & BRATTON, INC.

September, 2007

2007 Study

Waukesha County Recycling System

Study: Existing Dual Stream MRF Capacity

- Can handle future dual stream program for the short term
- However, some major issues need to be addressed:
 - Sort line
 - Tipping floor
 - Bale storage



Plastic Containers Overwhelming Sort System



Tipping Floor Space is Limited

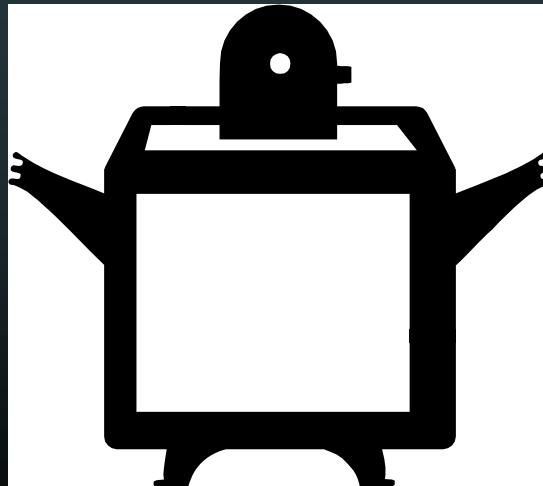


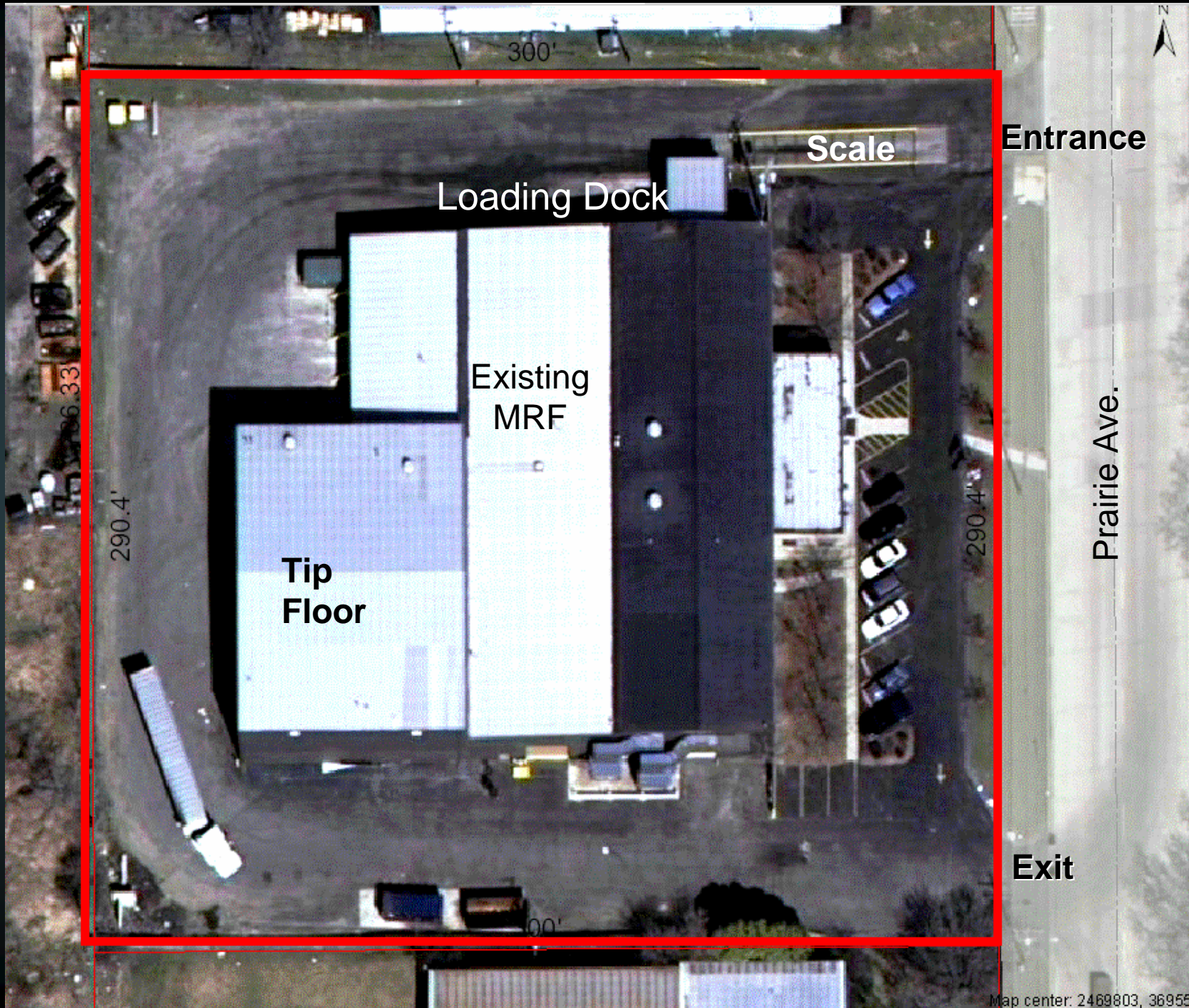
Bale Storage is Inadequate



Study: Existing Dual Stream MRF Capacity (cont.)

- Must expand MRF or build new in future
- Cannot expand MRF on current 2-acre site, because...





300'

Scale

Entrance

Loading Dock

Existing
MRF

Tip
Floor

290.4'

290.4'

Prairie Ave.

Exit

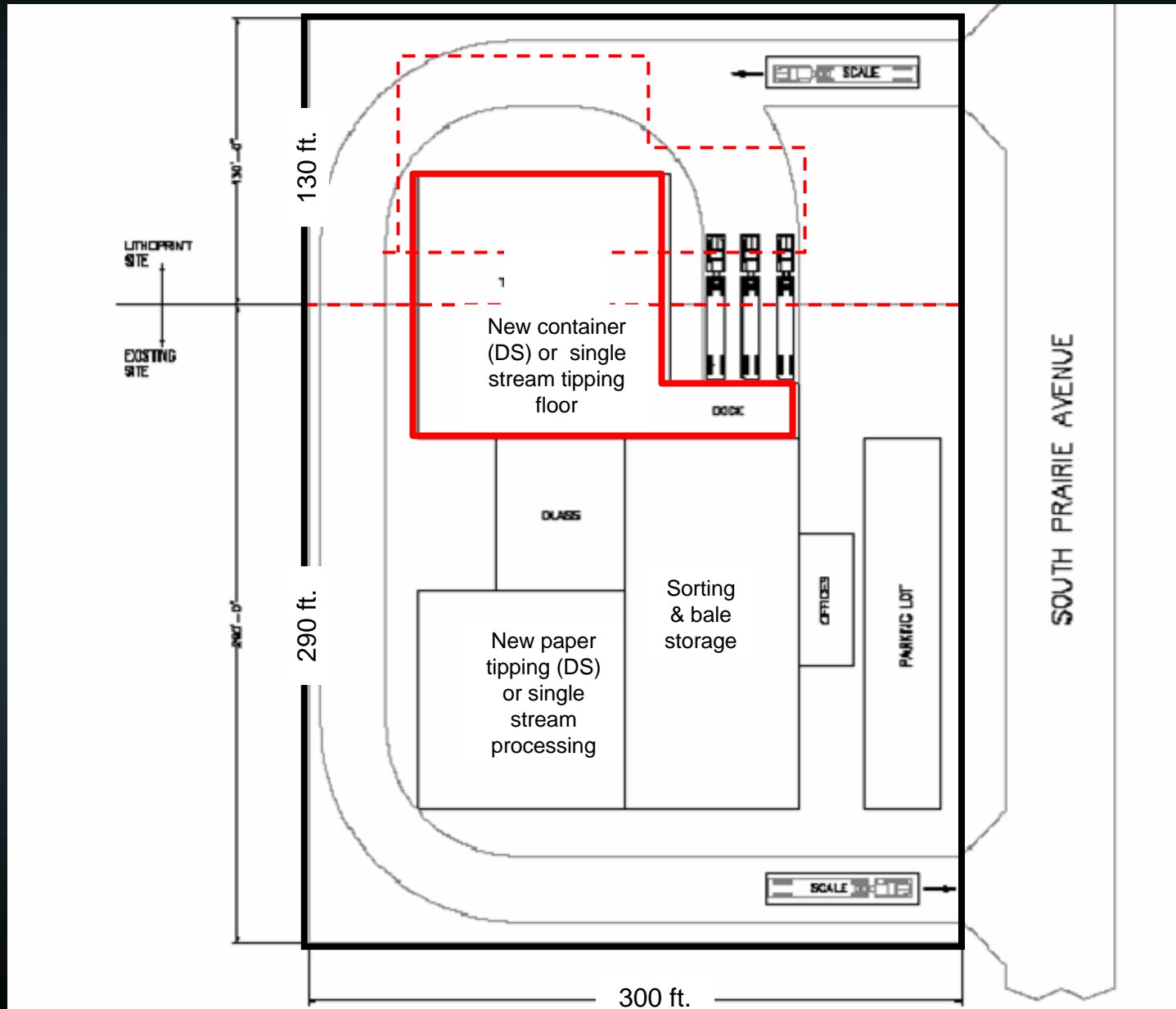


Possible MRF Expansion

- If 1 acre site to the north purchased, limited expansion is possible
 - Tipping/storage areas/new equipment
 - Could also convert to single stream
- Industry trends & community pressures to switch to Single Stream will influence future decisions

Concept Drawing – North Expansion

(single or dual stream)



Possible MRF Expansion (cont.)

- Estimated costs:
 - Dual stream: \$6.5 million + property/business
 - Single stream: \$7.0 million + property/business
- However, the expanded site could not handle a very large increase in tonnage

Recyclables Collection

Dual Stream vs. Single Stream



Existing program (blue bin)

(manual/paper & containers separated)



Industry trend (cart)

(automated/all recyclables mixed)

SS Pros (Collection) vs. Cons (MRF Impacts)

Single Stream Collection Cost Savings	Single Stream MRF Impacts

Collection Trends/Pressures

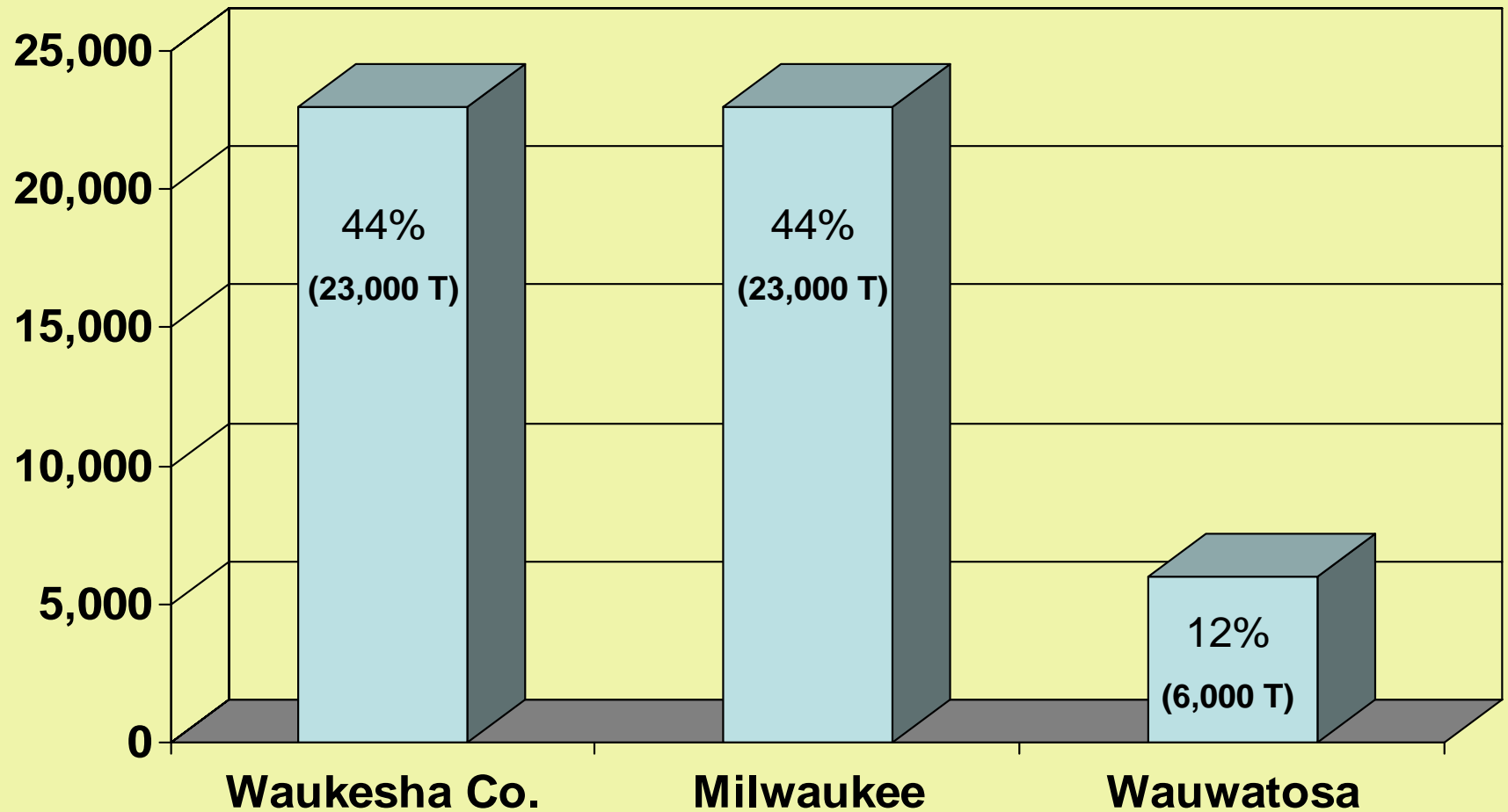
- Private haulers are pushing for Single Stream collection to save money
 - Trend is playing out nationwide
 - >100 SS MRFs (25% in 2008)
 - Locally, only 1 of 3 private haulers (Veolia) still offers dual stream collection
 - Waste Mgt. and Johns already switched to SS
 - 3 participating communities without hauling contracts already switched to SS (problem)
- More communities want to switch to SS

Scenarios for Future Projections:

- Tonnage
 - Participating county municipalities (25)
 - Adding non-participating communities (12)
 - Adding Milwaukee & Wauwatosa
- Single vs. Dual Stream



Annual Tons Recycled (52,000 Tons)*



*Rounded from 2008 data (no other communities included with City of Milwaukee data)

Key Study Findings & Recommendations

1. Switching to Single Stream is strongly recommended

- Pros far outweigh the cons
- Could save partic. communities >\$700,000/year in collection & disposal costs
 - 10% or \$12.36/HH/Year savings (minus cart \$)
- Needs all new MRF equipment/more space

2. Recycling tons increase considerably with a Single Stream system – assumed + 25%

- In-county data shows 45% increase/capita

Key Study Findings & Recommendations

(continued)

3. Doubling tonnage greatly improves the economics of a Single Stream MRF
 - 2 shifts = much faster return on investment
 - New site needed to double tonnage
4. National MRF data shows:
 - SS paper/fiber is equally marketable
 - Increased residue from SS depends on public education (projected increase from 3% to 10%)

Single Stream Options

(2007 Costs & 2010 Projected Tonnage)

1. **Expand/Convert Current MRF:**

- Participating Municipalities only (30,565 tons)
- Acquire/relocate Lithoprint
- Estimated bldg. costs = **\$7 million + Lithoprint costs**
- Projected annual net revenues = **\$0.12 million**

2. **Build New Regional MRF (publicly-owned/private operated):**

- Add tonnage for 2 shifts (76,066 tons - NP/Tosa/Milw)
- Estimated building costs = **\$8.25 million + land**
- Projected annual net revenues = **\$1.7 million**

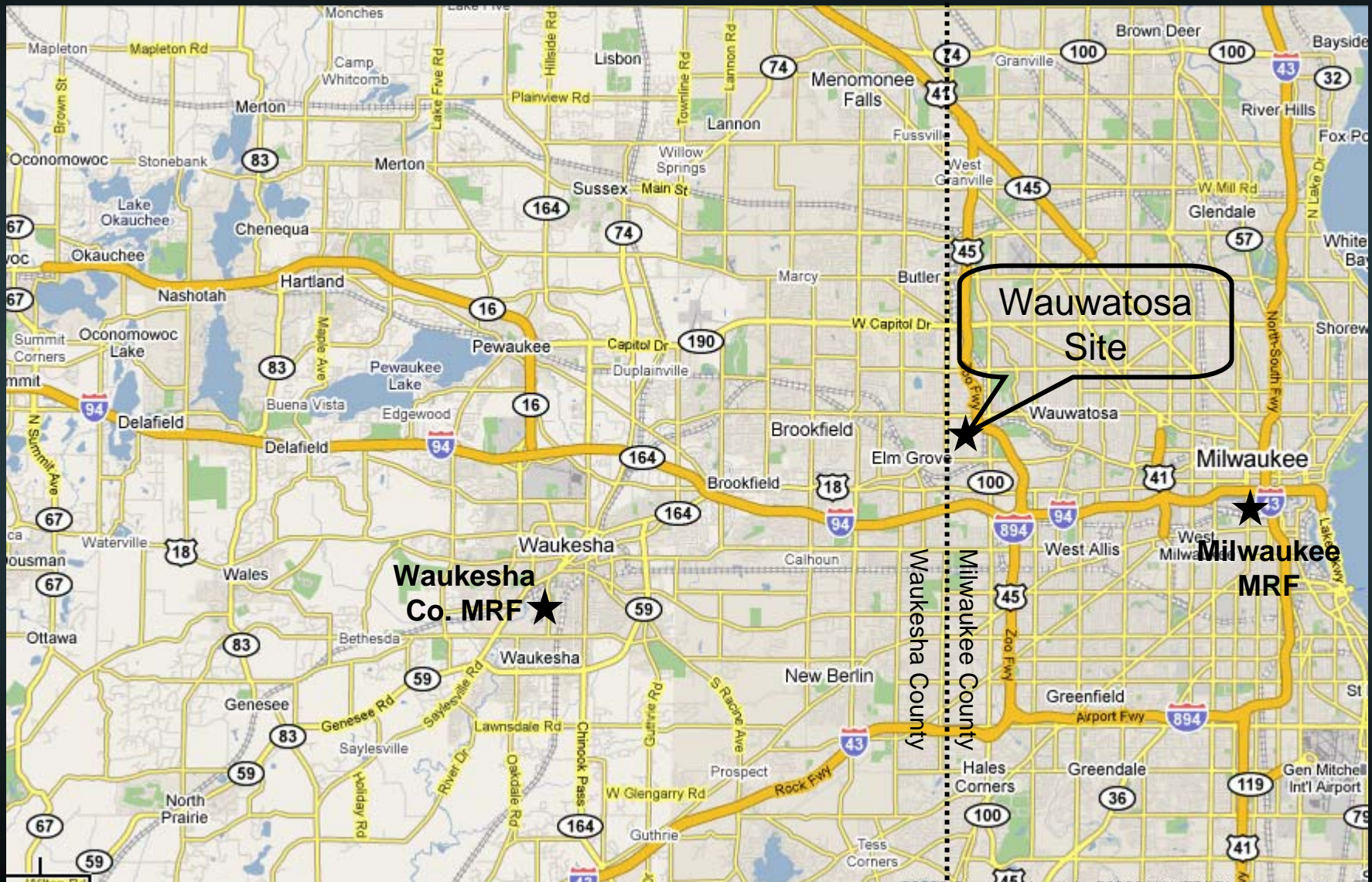
3. **Send recyclables to privately-owned MRF**

- Costs unknown (RFP process)

County Response to Private MRF Option

- Existing County MRF is already privatized
 - Public ownership of the facility (40% nationally)
 - Private operation & marketing/good competition
- Public/private partnership has been very successful
- **Privately-owned MRF does not ensure long-term competition/price stability for communities**
- Having a publicly-owned/privately operated MRF in SE helps keep costs down for all communities

Possible Regional MRF Location



Single Stream Economic Summary

(Revenues & expenses to be prorated to participating communities)

- Projected 2010 NET revenues from a Regional Single Stream MRF are 14.5 times larger than converting county MRF to single stream
 - \$1.7 million (regional/76,066 T) vs. \$0.12 million (county/30,565 T)
 - 6 times larger for Waukesha Co./Milwaukee (44%)
- Payoff of capital costs (\$8.25 million) for a new Regional Single Stream MRF = 5 years
- Payoff of capital costs (\$7 million) for converting county MRF to single stream = 58+ years

Summary Look at the SS System

- Collection: Savings in collection costs and landfill disposal costs (reduced trash)
 - >\$700,000 per year for partic. municipalities
- MRF: **It's all about the tons!**
 - 2.5 times tonnage = 10 times faster return on investment

Similarities:

Waukesha Co. & City of Milwaukee

- Publicly-owned dual stream MRFs
- Tonnage processed (23,000/yr.)
- Aging facilities facing costly updates
- Pressures to improve program efficiencies
- Pressures to switch to Single Stream:
 - Reduce collection & landfill disposal costs
 - + Increase recycling rate
- Concerns about future price stability
- 14-year history of coordinating education efforts

Why Work Together?

(Regional Single Stream MRF)

1. Lower costs/ton - capital and O & M
2. Better return on investments/reduced risk
3. Long-term price stability
4. Good example of regional cooperation
5. Both MRFs already publicly-owned and privately operated
 - no threat to private sector



Next Steps, Issues & Timelines

- Commit to joint study (ASAP):
 - Milwaukee, Waukesha Co. & Wauwatosa
- Establish scope of study/write RFP (fall 2009):
 - Refine & update economic analysis
 - I.D. financial options (sharing costs & revenues)
 - Technical investigation of Tosa site
 - Transportation issues
 - Concept plan/budget
 - Institutional options (ownership, contracting, etc.)
 - Collection or other issues?
- Release RFP & hire consultant – early 2010
- Complete study by end of 2010

Questions ?

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SS Pros (Collection) vs. Cons (MRF Impacts)

Single Stream Collection Cost Savings	Single Stream MRF Impacts
<ul style="list-style-type: none">• Automation decreases personnel costs (workers comp claims, etc.)	<ul style="list-style-type: none">• Increases MRF labor and capital costs
<ul style="list-style-type: none">• Large cart allows Every Other Week collection of recyclables	<ul style="list-style-type: none">• Increases residue level at MRF (non-recyclables)
<ul style="list-style-type: none">• Flexibility: <u>Can use compaction vehicles to reduce capital & trips to the MRF</u>, more households per route – faster collection	<ul style="list-style-type: none">• Potential for decreased quality of processed recyclables (glass/paper)
<ul style="list-style-type: none">• Higher rates of recycling & <u>reduced landfill disposal costs</u> – easier for the general public to implement (no sorting)	<ul style="list-style-type: none">• <u>Higher recyclable volumes to process</u>• Increased net cost per ton processing

All of these factors were built into the economic analysis

APPENDIX D

Recycling Facility Alternatives Study

Recycling Facility Alternatives Study City of Milwaukee, Wisconsin



Site:

Materials Recovery Facility
1313 West Mount Vernon Avenue
Milwaukee, WI 53233

Prepared for:

City of Milwaukee
Zeidler Municipal Building
841 North Broadway, Room 620
Milwaukee, WI 53202

Prepared by:

AECOM
4135 Technology Parkway
Sheboygan, WI 53083

November 2009

AECOM Project No. 114079

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Author: Donald F. Pirrung, P.E.

Title: Senior Engineer

Date: _____

Reviewer: Nancy K. Wright, P.E.

Title: Senior Engineer

Date: _____

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EXECUTIVE SUMMARY

The City of Milwaukee is under contract with Waste Management Recycle America (WMRA) to operate the City's recycling facilities. The City's contract extended to June 30, 2009, plus the City has the sole option to renew the contract for up to five 1-year periods. The existing dual stream processing equipment is at the end of its useful life at the City's Material Recycling Facility (MRF) and the City is interested in evaluating recycling alternatives.

The following recycling alternatives were evaluated:

- Alternative A – Dual Stream at Existing City Facility
- Alternative B – Single Stream at Existing City Facility
- Alternative C – Two Transfer Stations to Third Party
- Alternative D – One Transfer Station at Existing City Facility
- Alternative E – Regional MRF at Wauwatosa
- Alternative F – Regional MRF at Existing City Facility

Alternative A involves a continuation of the current dual stream collection program. Under all the other alternatives, recycling collection for the City of Milwaukee would be upgraded to reflect single stream operation. One-person or two-person collection crews are possible. The collection fleet can be upgraded over time to increase efficiency. The existing 95-gallon carts can be reused and modified easily by removal of the divider within the cart.

Under all the alternatives, the study addresses recycling collection for the City of Milwaukee under monthly, 3-week, and 2-week collection scenarios.

The regional MRF would include the City of Milwaukee, Waukesha County, and City of Wauwatosa. In 2007, Waukesha County commissioned a study which included evaluating a regional MRF and the conclusion was that a regional MRF showed promise and should be further explored.

Recycling collection for Waukesha County and City of Wauwatosa and transport to the City of Milwaukee MRF are not part of this study, but are recommended to be evaluated by Waukesha County and the City of Wauwatosa to develop the most cost-effective approach if this alternative is further considered.

The six recycling facility alternatives are described as follows:

Alternative A – Dual Stream at Existing City Facility

Alternative A would consist of continuing the City's current dual stream processing at the existing MRF. The existing equipment would be replaced entirely due to the age and condition of the processing equipment. The structural aspects of the facility would remain basically the same. A cost allowance is included for some structural improvements to accommodate the new process equipment. Staffing is projected to remain about the same and operation would continue by a private party. There are options regarding implementing this alternative which include the City purchasing and installing the equipment, or having a third party design, build and operate the system. If the City purchased and installed the equipment, a third party could operate it.

Recycling collection would remain the same as the existing program. Recycling trucks would be parked at the existing City MRF. Separate cost estimates are prepared for monthly, every 3-week, and every 2-week collection scenarios.

Alternative B – Single Stream at Existing City Facility (City Only)

Alternative B would consider single stream processing instead of the current dual stream. Single stream processing means all the recyclables are collected in a single undivided cart and then sorted at the MRF. This approach is more user friendly and collection friendly resulting in more recyclables being placed at the curb by the public and more efficient collection by the recycling truck operation. Single stream collection is more user friendly because the public can simply consolidate all recyclables in the home and place them all in one cart without further sorting. The recycling industry is moving toward single stream recycling nationwide. Single stream can accommodate fully automated collection which improves efficiency by allowing carts to be serviced without the driver exiting the vehicle.

The existing recycling equipment would be removed and replaced with the new equipment. A cost allowance is included for some structural improvements to accommodate the new process equipment. Staffing is projected to remain about the same or less depending on the extent of automation as compared to the existing staff. There are two options regarding implementing this alternative which include the City purchasing and installing the equipment and using a third party to operate, or having a third party design, build and operate the system.

Recycling trucks would be parked at the existing City MRF. Separate cost estimates are prepared for monthly, every 3-week, and every 2-week collection scenarios.

Alternative C – Two Transfer Stations to Third Party

Alternative C pertains to constructing two new transfer stations for recyclables. One station would be located at 3879 West Lincoln Avenue, which is the location of the current self-help center and solid waste transfer station. The second transfer station would be located on the northwest side of the City. Multiple locations are under consideration.

Collection of recyclables would be taken to one of the transfer stations. The recyclables would be placed in a compactor to crush the materials to increase the density, thereby allowing more recyclables to be placed in a semi tractor trailer. This approach saves on the transportation cost for trucking recyclables to the MRF. For this evaluation, the collection trucks are assumed to be located at the respective transfer station. If this alternative is selected, parking accommodations for the recycling trucks need to be further confirmed regarding available space.

Operation and maintenance costs for the transfer stations are estimated and based on a private firm performing the work. Operation and maintenance costs for the hauling to the MRF and MRF operation are based on services performed by a third party.

Recycling trucks would be parked at the transfer locations. Recycling collection costs are identified for monthly, 3-week, and 2-week collection for single stream processing.

Alternative D – One Transfer Station at Existing City Facility

Alternative D would consist of converting the existing City MRF into a recycling transfer station. This alternative was addressed in the October 2008 Draft No. 2 Recycling Facilities Study report prepared by Earth Tech AECOM.

A compactor and related improvements would be added to the MRF. The transfer station would be operated by a third party which would transport the recyclables by semi truck to a processing facility. Transfer station capital equipment could be provided directly by the third party firm and are estimated for this study. For this evaluation, the WMRA MRF in Germantown was used for the cost evaluation.

Recycling collection addresses monthly, 3-week, and 2-week collection scenarios based on single stream collection.

Alternative E – Regional MRF at Wauwatosa

Alternative E is based on Waukesha County, City of Wauwatosa, and City of Milwaukee developing a new MRF located at West 116th Street and Walnut in Wauwatosa. The Waukesha County Study will serve as the basis for this alternative with some additional input from vendors for updated equipment costs. A single stream MRF is evaluated. The operation would be by a third party.

Recycling collection would be based on the City of Milwaukee recycling trucks being parked at the regional MRF. This assumption needs to be further verified with the City of Wauwatosa and Waukesha County. Another option is to park the City of Milwaukee recycling trucks at the existing City MRF though the collection costs would be somewhat higher, as discussed in the Earth Tech AECOM October 2008 Draft No. 2 Report. Preliminary discussions between the City of Milwaukee and City of Wauwatosa indicate there would be room for the City of Milwaukee trucks to be parked at the Wauwatosa site.

Recycling collection addresses monthly, three-week, and two-week collection scenarios based on single stream collection.

Alternative F – Regional MRF at Existing City Facility

Alternative F considers Waukesha County, City of Wauwatosa, and City of Milwaukee developing a MRF at the City's existing MRF on Mount Vernon. The City's current dual stream processing would be replaced with single stream processing equipment. The existing equipment would be replaced entirely due to its age, size, and condition. The structural aspects of the facility would remain basically the same. A cost allowance is included for some structural improvements to accommodate the new process equipment. Staffing is expected to increase from the current level based on additional recycling tonnage and is estimated based on the Waukesha County Report. The processing would be performed by a private firm as currently done.

Cost Evaluation

A present worth cost analysis was prepared to evaluate recycling facility alternatives and recycling collection alternatives. The estimated capital, operation and maintenance costs were determined for each recycling facility alternative. The estimated revenue from the sale of recyclables was determined. Four scenarios were evaluated:

- Low Recyclables Price, Low Recyclable Volume
- Low Recyclables Price, High Recyclable Volume
- High Recyclables Price, Low Recyclable Volume
- High Recyclables Price, High Recyclable Volume

The revenue is based on a 50:50 share with the processing contractor, as currently done under the City's contract. The benefit of avoided landfill tipping fees through increased recycling was also estimated.

Increased frequency for collecting recyclables and single stream collection can improve the volumes of recyclables collected.

The present worth analysis is based on a 15-year period. The salvage value of new equipment is estimated at zero after 15 years. The salvage value of structural facilities is estimated to be worth 50 percent of its original value after 15 years.

Results of the Study

- Collection Alternatives

Collection of recyclables is currently performed on a monthly basis. Some areas of the City collect recyclables by having City personnel walk up the driveway to collect the 95 gallon cart and then return the cart. This service adds to the collection cost. A more efficient approach is to have the cart placed by the resident at the curb to more efficiently serve the public and save the City on collection costs.

The most cost-effective method was to collect the recyclables on a three-week frequency with placement of the cart at the curb by the resident. Single stream collection is proposed using existing carts and trucks. A partition in the cart will be removed. Three week frequency is estimated to increase recyclables volume by ten percent.

As the City implements this collection program, the goal will be to continually improve collection and eventually initiate collection on a two-week frequency in the future for added public convenience and increased recyclables volume.

The recyclables collection would be accomplished by trucks with one person. The City could employ some fully-automated trucks to improve collection time and also reduce manpower injuries. Two person collection was found to increase recyclables collected but was offset by substantially greater labor costs and therefore was not cost-effective.

- Recycling Facility Alternatives

The most cost-effective alternative based on a present worth analysis was Alternative D - One Transfer Station at Existing City Facility. This alternative provides the City with the least risk and lowest capital investment. The transfer station would be operated by a third party. The recycling processing also would be performed by a third party. For this evaluation, the WMRA recycling facility in Germantown was considered.

- Pay as You Throw

There is increasing interest in managing municipal solid waste through "pay as you throw" (PAYT) programs. The most common approach is for the user to pay for a certain size garbage container(s) and the recycling cart is free. The PAYT program results in a decrease in the trash tonnage and increase in recycling tonnage. A 16 to 17 percent diversion from residential trash is the average, which is generally divided equally among recycling, yard waste and source reduction.

Recommendations

The following recommendations are made:

1. Implement Alternative D – One Transfer Station at Existing City Facility, based on the economics. It presents the least investment and least risk to the City of Milwaukee. Single stream collection offers the benefit of more efficient collection. It maximizes the cart volume and improves convenience for residents.
2. Negotiate with WMRA to implement Alternative D.
3. Implement three-week recycling collection to increase recycling volumes and revenues. Schedule recycling collection for the cart to be located at the curb (no walk up driveway) to improve collection efficiency. Make improvements to the routes based on the new software for routing trucks.
4. Implement Pay As You Throw features for garbage collection in conjunction with increased recycling collection service to optimize effectiveness of both programs.

1.0 INTRODUCTION

This study was commissioned by the City of Milwaukee to compare capital, operation and maintenance, and collections costs for recycling facility alternatives to serve the City of Milwaukee. The alternatives include upgrading the process equipment at the City's existing recycling facility; developing one or two recycling transfer stations and transporting the materials to a third-party recycling center; and a regional recycling facility in Wauwatosa or at the City's existing facility.

2.0 BACKGROUND

2.1 City-Owned Recycling Facilities

The City of Milwaukee is under contract with Waste Management Recycle America LLC (WMRA) to operate the City's recycling facilities at South 13th Street and West Mount Vernon Avenue in the Menomonee River Valley. The City's contract was awarded in July 2004 and extends to June 30, 2009. The City has the sole option to renew the contract for up to five 1-year periods. This option shall be exercised by the City in writing and delivered to the Contractor a minimum of 6 months prior to the contract end date. If the City does not notify the Contractor during this notification period, the contract is automatically extended for 1 year. Currently, WMRA is operating the City's recycling facilities under the first 1-year renewal period.

The bidding of recycling services in January 2004 was a very competitive process. There were five bidders which included FCR, Allied Waste, Newark Group, Onyx now known as Veolia, and Recycle America Alliance, now known as WMRA. There were three bid options as follows:

- Bid Option 1: Operation of City-Owned Material Recovery Facility (MRF)
- Bid Option 2: Processing of Recyclables at an Alternate Location
- Bid Option 3: Processing of Recyclables at Two Alternate Locations

All the bidders submitted prices for Bid Option 1. Onyx and WMRA submitted on Bid Option 2, WMRA also submitted on Bid Option 3, and their pricing was the same for all three Bid Options. Their proposed approach for alternate MRF locations was to use the A-1 Recycling Center located at 2101 West Morgan Avenue for the southern sector and use a proposed Milwaukee North MRF located at 9601 North Wausaukee Road in Germantown for the northern sector. If these alternate MRF locations were selected, the bidder would have needed to submit an Operating Plan for the City review, input and approval within 10 days after the Bid date. The result was the City accepted Bid Option 1 and continued to use the City-owned MRF.

The bid provided by WMRA was a very competitive price resulting in long-term savings to the City for recycling. Cost sharing of the recycling revenue is at 50 percent for the City and the Contractor, and recycling revenues have been increasing over the years due to a global demand for recyclable materials.

Appendix A contains a draft letter to the bidders summarizing the MRF bid results. In addition, excerpts from WMRA's bid regarding potential use of alternate MRF locations is also included in this Appendix.

2.2 Existing and Proposed Regional Recycling Facilities

Waukesha County had a study conducted in 2007 which included evaluating the potential of a regional recycling facility to serve Waukesha County, City of Wauwatosa, and City of Milwaukee. The report entitled "Waukesha County Recycling System and Capacity Study, Final Report" was prepared by RRT Design and Construction and GBB (Waukesha County Study). The conclusion of the regional facility investigation was that the regional concept had merit and should be further explored. One of the main

advantages for this regional facility is to provide a long-term competitive situation for recycling services. The regional facility is based on the premise that it would be government-owned and operated by a private firm. After the Waukesha report, a preliminary MRF site was identified near West 116th Street and Walnut in Wauwatosa, and elected officials in Wauwatosa approved the site for consideration.

WMRA recently constructed a recycling facility in Germantown which has the capacity to handle the recyclables from the City of Milwaukee and provides the City with another option in the future. In this case, the City could convert the existing recycling facility into a transfer station or use other transfer sites.

The WMRA facility currently receives recyclables at their facility in Germantown from Waste Management customers as far away as Green Bay, Madison and Janesville in addition to southeastern Wisconsin.

3.0 EXISTING RECYCLING FACILITIES AND COLLECTION ROUTES

The City of Milwaukee has 34 recycling routes which are served by 34 trucks. In recent years, this number has been reduced to 31 crews during the seven months of the year from May through November, accomplished through eliminating up-the-driveway service in some routes. Each of the trucks has 1 driver on board who collects and dumps the recyclables as well as driving the truck. Most routes have carts to collect recyclables. Some routes have bins for recyclables. The recycling trucks are parked at the recycling facility, also referred to as the Materials Recovery Facility or MRF, and travel to the designated recycling route to collect recyclables. At the end of the day, the recycling truck brings the recyclables to the MRF for processing and the truck is parked.

Currently recyclables are picked-up from each household one time each month, with some exceptions. A pilot study by the City of Milwaukee and research from other cities has shown greater recycling rates when pick-up is more frequent than once per month. The following are believed to be some of the reasons why collection more frequent than once per month is preferred:

- The carts become full for many households before their next pickup, so they stop recycling until their cart is emptied, with overflow recyclables going in the garbage.
- The carts can become too heavy for some residents to safely move so they stop recycling for the month before their cart becomes too heavy.
- When collection is more frequent, it is more justifiable to require residents to roll out carts, allowing for considerable gains in collection efficiency versus up-the-drive service.

Data has shown more frequent collection of recyclables can increase recycling volumes by 10 to 20 percent. This study investigates the costs of increasing the frequency of collection based on efficient pilot studies conducted in Milwaukee and looks at the costs versus the benefits. It also looks at the costs of using two-person crews rather than one-person crews.

Currently, recycling in Milwaukee is dual stream, meaning that the paper products are separated from the cans and bottles by the consumer. The carts have a divider to keep the two streams separate. The carts are rolled to the rear of the split-body recycler truck where a lifting mechanism dumps the cart so that the two waste streams fall into their respective side of the truck. Although these split trucks are used today and are still being ordered, if single stream recycling is decided on for the future, the existing trucks and carts can still be utilized by removing the cart divider and tipping full carts into both sides of the truck. The tipping mechanism on the split packers allows for tipping carts on either side as well as in the middle as described above. Also, until single stream trucks and carts would be purchased in the future, the trucks could be modified to add another cart tipper arm if two-person crews are decided on.

The MRF's equipment is in poor condition due to many years of operation. Most of the equipment was installed in the early 1990s, and the manufacturer of the equipment is no longer in business. This

situation makes it difficult for the contractor to maintain the equipment and has resulted in the contractor needing to pay a premium for custom-made equipment parts to keep the equipment operating. WMRA recently shared a report with the City that was an assessment of the condition of the processing equipment in the existing City MRF. The report recommends no further investment in the existing equipment other than routine maintenance. This supports the conclusion that within the near future the City must either install a new system or have recyclables processed at another facility. Technology changes in recycling have been dramatic over the past 10 to 20 years, resulting in substantially more cost-effective and efficient processing equipment. For example, modern processing equipment accommodates the prevalence of single serve plastic bottles that generally were not part of the recycling stream fifteen years ago, and thus are not efficiently sorted with older equipment. The result is the existing processing equipment is both outdated and nearing the end of its useful life.

4.0 RECYCLING FACILITY ALTERNATIVES

The City of Milwaukee has several opportunities to continue to serve the city with recycling collection and processing. Now is the time to assess these recycling options because the City's existing MRF equipment is near the end of its life, and the City's contract with WMRA can be extended for five 1-year periods allowing the City to plan and implement another recycling program if desired during this period.

The recycling facility alternatives are as follows:

- Alternative A – Dual Stream at Existing City Facility
- Alternative B – Single Stream at Existing City Facility (City Only)
- Alternative C – Two Transfer Stations to Third Party
- Alternative D – One Transfer Station at Existing City Facility
- Alternative E – Regional MRF at Wauwatosa
- Alternative F – Regional MRF at Existing City Facility

The description of each alternative is presented herein. Estimated costs for each alternative are presented later in this report. The cost estimates in this report assume that the "third party" is WMRA in Germantown. For all alternatives, recycling collection costs are identified for monthly, 3-week, and 2-week collection scenarios. Only alternative A would continue the current dual stream collection program. Under all other alternatives, the City of Milwaukee would employ single stream collection.

4.1 Alternative A – Dual Stream at Existing City Facility

Alternative A would consist of continuing the City's current dual stream processing at the existing MRF. The existing equipment would be replaced entirely due to the age and condition of the processing equipment. The structural aspects of the facility would remain basically the same. A cost allowance is included for some structural improvements to accommodate the new process equipment. Staffing is projected to remain about the same and operation would continue by a private party. There are options regarding implementing this alternative which include the City purchasing and installing the equipment, or having a third party design, build and operate the system. If the City purchased and installed the equipment, a third party could operate it.

Recycling collection would remain the same as the existing program. Recycling trucks would be parked at the existing City MRF. Separate cost estimates are prepared for monthly, every 3-week, and every 2-week collection scenarios.

4.2 Alternative B – Single Stream at Existing City Facility (City Only)

Alternative B would consider single stream processing instead of the current dual stream. Single stream processing means all the recyclables are collected in a single undivided cart and then sorted at the MRF. This approach is more user friendly and collection friendly resulting in more recyclables being placed at the curb by the public and more efficient collection by the recycling truck operation. Single stream collection is more user friendly because the public can simply consolidate all recyclables in the home and place them all in one cart without further sorting. The recycling industry is moving toward single stream recycling nationwide. Single stream can accommodate fully automated collection, which improves efficiency by allowing carts to be serviced without the driver exiting the vehicle.

The existing recycling equipment would be removed and replaced with the new equipment. A cost allowance is included for some structural improvements to accommodate the new process equipment. Staffing is projected to remain about the same or less staff depending on the extent of automation as compared to the existing staff. There are two options regarding implementing this alternative which include the City purchasing and installing the equipment and using a third party to operate, or having a third party design, build and operate the system.

Recycling collection would be upgraded to reflect single stream operations, as it would under all the remaining alternatives as well. One-person or two-person collection crews are possible. The collection fleet can be upgraded over time to increase efficiency. The existing 95-gallon carts can be reused and modified easily by removal of the divider within the cart.

4.3 Alternative C – Two Transfer Stations to Third Party

Alternative C pertains to constructing two new transfer stations for recyclables. One station would be located at 3879 West Lincoln Avenue, which is the location of the current self-help center and solid waste transfer station. The second transfer station would be located on the northwest side of the City. Multiple locations are under consideration.

Collection of recyclables would be taken to one of the transfer stations. The recyclables would be placed in a compactor to crush the materials to increase the density, thereby allowing more recyclables to be placed in a semi tractor trailer. This approach saves on the transportation cost for trucking recyclables to the MRF. For this evaluation, the collection trucks are assumed to be located at the respective transfer station. If this alternative is selected, parking accommodations for the recycling trucks need to be further confirmed regarding available space.

Operation and maintenance costs for the transfer stations are estimated and based on a private firm performing the work. Operation and maintenance costs for the hauling to the MRF and MRF operation are based on services performed by a third party.

Recycling collection costs are identified for monthly, 3-week, and 2-week collection for single stream processing.

4.4 Alternative D – One Transfer Station at Existing City Facility

Alternative D would consist of converting the existing City MRF into a recycling transfer station. This alternative was addressed in the October 2008 Draft No. 2 Recycling Facilities Study report prepared by Earth Tech AECOM.

A compactor and related improvements would be added to the MRF. The transfer station would be operated by a third party which would transport the recyclables by semi truck to a processing facility.

Transfer station capital equipment could be provided directly by the third party firm and are estimated for this study.

Recycling collection addresses monthly, 3-week, and 2-week collection scenarios based on single stream collection.

4.5 Alternative E – Regional MRF at Wauwatosa

Alternative E is based on Waukesha County, City of Wauwatosa, and City of Milwaukee developing a new MRF located at West 116th Street and Walnut in Wauwatosa. The Waukesha County Study will serve as the basis for this alternative with some additional input from vendors for updated equipment costs. A single stream MRF is evaluated. The operation would be by a third party.

Recycling collection would be based on the City of Milwaukee recycling trucks being parked at the regional MRF. This assumption needs to be further verified with the City of Wauwatosa and Waukesha County. Another option is to park the City of Milwaukee recycling trucks at the existing City MRF though the collection costs would be somewhat higher, as discussed in the Earth Tech AECOM October 2008 Draft No. 2 Report. Preliminary discussions between the City of Milwaukee and City of Wauwatosa indicate there would be room for the City of Milwaukee trucks to be parked at the Wauwatosa site.

Recycling collection addresses monthly, three-week, and two-week collection scenarios based on single stream collection.

4.6 Alternative F – Regional MRF at Existing City Facility

Alternative F considers Waukesha County, City of Wauwatosa, and City of Milwaukee developing a MRF at the City's existing MRF on Mount Vernon. The City's current dual stream processing would be replaced with single stream processing equipment. The existing equipment would be replaced entirely due to its age, size, and condition. The structural aspects of the facility would remain basically the same. A cost allowance is included for some structural improvements to accommodate the new process equipment. Staffing is expected to increase from the current level based on additional recycling tonnage and is estimated based on the Waukesha County Report. The processing would be performed by a private firm as currently done.

Recycling collection for Waukesha County and City of Wauwatosa and transport to the City of Milwaukee MRF are not part of this study, but are recommended to be evaluated by Waukesha County and the City of Wauwatosa to develop the most cost-effective approach if this alternative is further considered.

Recycling collection for the City of Milwaukee addresses monthly, 3-week, and 2-week collection scenarios based on single stream collection.

5.0 COST ANALYSIS CONSIDERATIONS

5.1 Sources for Cost Information

AECOM attempted to obtain actual cost data when developing the budget costs. The source of the cost data is noted when a cost is used for the first time. When the data was well researched in a previous report and updating this data was not possible due to time constraints, or in the opinion of AECOM updating the data would not yield a different result, the previous report data was used. If information was not available from either of the previously discussed sources, AECOM estimated these costs using their experience with historical data for similar projects. A summary of references (footnotes) and additional detail about some of the cost data can be found in Appendix J.

In all cases it is important to note that these are budget costs. As budget costs they are based on many different assumptions. The basis of these costs and the key assumptions are documented in this section.

5.2 Common Assumptions and Cost Components

There are several global assumptions and costs that will be used when determining the particular cost of each alternative. This information is presented in this section.

5.2.1 Volume of Recyclables

The Waukesha County Study presented data which projected the volume of recyclable materials that would be generated by City of Milwaukee. The Waukesha County Study also presents data projecting the volume of recyclable materials that would be generated by various communities within Waukesha County that are likely to use the services of a new MRF.¹ In July of 2009, Perry Lindquist from Waukesha County updated these figures in his presentation to the City of Milwaukee.²

The volume of recyclables for these two scenarios is presented in the following table:

Scenario	Waukesha Study ¹ (tons/year)	Perry Lindquist Presentation ² (tons/year)	Projected Volumes (tons/year)*
City of Milwaukee only	28,354 – 29,015	23,000	23,000 - 27,000
City of Milwaukee, City of Wauwatosa, Waukesha County (County)	76,000 – 80,817	52,000	52,000 - 60,000
NOTES:			
* Projected volumes used in this report's cost analysis			

Mr. Lindquist explained during his presentation to the City of Milwaukee that some Waukesha County communities will probably not be part of a regional plan based on discussions with these parties. Therefore, Mr. Lindquist's tonnage estimates are viewed as more reasonable projections and therefore are incorporated into this report.

5.2.2 Collection Frequency and Projected Volumes

The Projected Volumes presented in the table above are based on the monthly collection schedule that the City is currently following.

If the City were to switch to single stream processing/collection a modest increase in the recycling volume will also be realized due simply to the fact that recycling is easier. For purposes of the cost analysis a 4% increase will be added to the Projected Volume for those scenarios that utilize single stream processing/collection.

As part of this report, AECOM will also evaluate the impact of increasing the collection to every three weeks, and every two weeks. The various collection schedules and all the impacts are discussed later in Section 5 in this report. The net result however is that increasing the frequency of the collection schedule should result in an increase in the Projected Volume of recyclable material.

For purposes of the cost analysis, AECOM increased the total Projected Volume by 10% (of the monthly collection volume) for a three week collection schedule, and by 20% (of the monthly collection volume) for a two week collection schedule.

5.2.3 Dual Stream Recycling

Current trends in the recycled waste industry continue to move away from Dual Stream Recycling. This is happening for a variety of reasons which have been well documented in previous reports.

The Waukesha County Study concludes that:

"The body of evidence indicates that single stream recycling is here to stay and should be considered the state of the art when properly designed and operated. This conclusion is reached because of its obvious advantages to the user, the increase in collected tons, and that collection cost savings can be significant."³

This conclusion is well supported in various studies and trade journals. As such, AECOM is using the cost information for Dual Stream Recycling and the associated equipment provided in the Waukesha Study, and applying an escalation factor.

Dual Stream Recycling Capital Equipment Costs

The Waukesha County Study estimates the cost of Dual Stream Equipment and Systems to be \$3,500,000.⁴

This cost is assumed to be for Dual Stream Equipment capable of processing 30,000 tons per year. These costs are presented in 2007 dollars. Adjusting these costs for inflation, the installed cost of Dual Stream Equipment and Systems in 2009 dollars is \$3,600,000.⁵

As stated above AECOM did not research the cost of Dual Stream processing equipment. The \$3,600,000 figure above is still suspected to be low. In order to come up with a more realistic number for the cost of dual stream equipment, AECOM estimated the cost using the following method:

The cost for Single Stream equipment was researched (see section 5.2.4). Using the Waukesha County Study, the ratio of dual stream equipment cost/single stream equipment cost was calculated to be 88% ($\$3,500,000/\$4,000,000$)⁴. This ratio was multiplied by the Single Stream Equipment Cost derived by AECOM ($88\% \times \$5,200,000$) which resulted in a cost of \$4,576,000. This is the figure that AECOM used for the Dual Stream Equipment cost.

The cost for equipment capable of processing 60,000 tons per year is not presented. It is assumed that if the City were to build a facility to process more than their own recyclables that they would install a single stream system.

The estimated costs for Dual Stream Equipment are presented in the following table.

Cost Item	Estimated Cost	Notes
Dual Stream Equipment (30,000 tons/year)	\$4,576,000	
Engineering/Design and Constructions Services	\$549,000	12% of cost*
Contingency	\$686,000	15% of cost
Subtotal	\$5,811,000	
City Administrative Costs	\$174,000	Estimated at 3% of Subtotal
Total	\$5,985,000	
NOTES:		
* This percentage is based on AECOM historical data for engineering, development of bid documentation, and construction/start-up oversight.		

5.2.4 Single Stream Recycling Capital Equipment Costs

In order to estimate the equipment cost of a single stream system, AECOM contacted several of the industry leading MRF equipment manufacturers for current budget numbers (see Appendix J for additional information). In addition to soliciting information from equipment manufacturers, AECOM also obtained information from the public records about two recently installed systems that are approximately the same size.

A brief summary of the information collected is presented in the table below:

Information Source	System Size	Cost
<u>RRT Design and Construction</u> Waukesha County Study Prices adjusted for inflation and presented in 2009 dollars. ^{5,6}	30,000 TPY	\$4,161,000
<u>Van Dyk Baler Corporation</u> Van Dyk Baler is the distributor for Bollegraff turnkey systems.	30,000 TPY 80,000 TPY*	did not respond
<u>Bulk Handling Systems</u> Bulk Handling Systems provides turnkey systems	30,000 TPY 80,000 TPY*	did not respond
<u>JWR Incorporated</u> JWR Inc. Jerry Flickinger Equipment Sales Manager	30,000 TPY 80,000 TPY*	\$6,000,000 – \$7,000,000
<u>Kent County, Michigan</u> Calvin Brinks Purchasing Supervisor Kent County Purchasing Division provided public information about their recently awarded contracts for construction. The facilities' equipment was designed and installed by RRT Design and Construction	15 -18 TPH or 30,000 - 36,000 TPY	\$5,205,000
<u>Outagamie County, Wisconsin</u> Jill Haygood Outagamie County provided public information	25 TPH or 50,000 TPY	\$7,700,000

Information Source	System Size	Cost
about their recently constructed facility. The facilities' equipment was designed and installed by Bulk Handling Systems		
NOTES:		
* At the time the information was solicited 80,000 tons per year was still being considered.		

For purposes of this report, AECOM will use the figures presented in the table below for estimating the cost of an installed single stream processing system:

Commodity	30,000 tons/year	80,000 tons/year
Process Equipment	\$5,200,000	\$7,700,000
Engineering Design and Construction Services (12%)	\$624,000	\$924,000
Contingency (15%)	\$780,000	\$1,155,000
Subtotal	\$6,604,000	\$9,799,000
City Administrative Costs (3%)	\$198,000	\$293,000
Total	\$6,802,000	\$10,092,000

An 80,000 ton per year system would not be required. If the City were to purchase equipment for processing their recyclables the 30,000 ton per year system would be selected. This system can be operated at a rate of 15 to 18 tons per hour therefore:

$$15 \text{ tons/hour} \times 40 \text{ hours/week} \times 52 \text{ weeks/year} = 31,200 \text{ tons per year}$$

$$18 \text{ tons/hour} \times 40 \text{ hours/week} \times 52 \text{ weeks/year} = 37,440 \text{ tons per year}$$

If the City were to partner with Waukesha County, a 30,000 ton per year system would also be selected and a second shift would be added to achieve the 60,000 TPY processing rate.

For purposes of the cost analysis, it is assumed that all costs and revenue related to operation of the MRF would be split on a percentage based on the total tonnage provided by each entity. The City's split percentage would be 44% of the cost and revenues. Waukesha County and City of Wauwatosa would be 44% and 12% respectively, for their share.

If the City were to partner with Waukesha County and build a MRF somewhere other than at the existing City MRF then the additional cost of a building and the cost of site improvements would be required. The cost of land is not considered because the Waukesha Study did not use a land cost in their analysis. The Waukesha County Study estimates the cost of the building to be \$3,500,000 and the cost of site improvements to be \$750,000.⁶ When these two numbers are added and adjusted for 2009 dollars the total cost for a facility's building and site improvements is \$4,427,000. As discussed in section 5.2.3, the Waukesha Study numbers are assumed to be on the low side. Using the same scale up factor as in section 5.2.3 (88%) a cost of \$5,000,000 is more realistic (\$4,427,000/0.88). As a final check this figure is compared to the building costs for the similarly sized facility that was constructed in Kent County Michigan that was discussed in the previous section. The costs for the building and site improvements for that Kent County Michigan facility were \$6,388,000 (see Appendix J).

Taking all of these different numbers into consideration, and factoring in their own historical data AECOM will use a cost of \$6,000,000 for the building and site improvements for the cost analysis. This is aside from the process equipment costs listed in the table above.

5.2.5 MRF Operation and Maintenance

Operation and Maintenance of a Dual Stream Recycling Facility

The Waukesha Study estimates the annual cost of operation and maintenance of a Dual Stream Facility to be \$42.96/ton⁷ (2010 dollars) for a 30,000 ton per year system.

Operation and Maintenance of a Single Stream Recycling Facility

The Waukesha County Study estimates the annual cost of operation and maintenance of a single stream facility to be \$44.02/ton (2010 dollars) for a 30,000 ton per year system and \$36.70 (2010 dollars) for an 80,000 ton per year system.⁷

There is limited detail in the Waukesha County Study as to what went into the development of these costs. General rules of thumb suggest that it costs approximately \$50.00/ton to operate a large volume single stream facility which is also in the same range of costs. A third party contract can be quite variable in its processing fee depending upon if they also receive a portion of the recyclables revenue.

City Operation and Maintenance Costs

The O&M cost is largely dependent on the system selected (the level of automation), the cost of local labor and a variety of other factors. The City has historically contracted all of the Operation and Maintenance of their existing MRF to a third party for a negotiated rate per ton. For purposes of the Cost analysis in this report, AECOM will assume that the City will continue to contract this service.

The O&M cost that AECOM used for each particular cost scenario is presented in the table below:

Cost Scenario	O&M Rate (\$/ton)	Source
Dual Stream Processing	\$43.00	Waukesha County Study
Single Stream Processing	\$46.00	AECOM scaled up factor from current City rate of \$41.94/ ton*
NOTES:		
* Phone conversation with Rick Meyers on 8-17-09. AECOM assumes more people/equipment are required to operate a Single Stream MRF resulting in a higher O&M cost per ton.		

AECOM's estimates for O&M are in line with data presented in the AECOM Recycling Facility Study that was presented in October of 2008. The Waukesha County Study and the City's own data confirm that these are reasonable estimates.

The O&M Data is used in Costs analysis as part of the Revenue calculation.

5.2.6 MRF Revenue

The City's contract with WMRA for processing recyclables is based on the current market rate for the processed material, and the current negotiated O&M cost. There is also an adjustment to deduct the volume of mixed residue waste but for purposes of this report the mixed residue waste is assumed to be factored out in the recovery rate.

The simplified formula for calculating the recycling revenue for MRF in the cost analysis is as follows:

$$[(\text{Recycled Material Market Price per ton}) / 2 - (\text{MRF O\&M Cost per ton})] \times (\text{Pick-Up Schedule Volume in tons})$$

The avoided disposal costs can be added in order to provide a total net benefit per ton. For scenarios that increase recovery of recyclables, this is used to calculate the full benefit of that scenario by applying the avoided disposal costs to any resulting additional recycling tons. The avoided disposal cost formula is calculated as follows:

$$(\text{Trash Reduction Volume in tons}) \times (\text{Trash Disposal Price per ton})$$

Where:

- Recycled Material Market Price = Current market price per ton for sellable materials recovered at the MRF
- Pick-Up Schedule Volume = Volume of Recyclables picked up and brought to the facility for each collection scenario
- MRF O&M Cost = Operation and Maintenance Cost of the MRF (see section 5.2.5)
- Trash Reduction Volume = the volume of recyclable material that would otherwise go in the trash for landfill disposal (used in two and three week collection schedules only)
- Trash Disposal Price = the City's cost to dispose of trash (\$35.00/ton)

A positive result in this revenue formula represents an income to the City and a negative result in this formula represents a cost to the City.

Recycled Material Market Price

The Waukesha County Study estimates median net revenue of \$77.78 per ton. This number is based on data compiled by the County over 10 years from 1991 to 2006.⁸ It should be noted that this data is several years old and market conditions are constantly changing.

In order to determine the Recycled Material Market Price, AECOM will use a figure that is based on revenues listed in the monthly contract reports from WMRA to the City. The determination of this figure is based on data presented in the table below:

Year	Revenue Per Ton ⁹ (\$/ton)	Average Revenue Per Ton* (\$/ton)
2003	\$74.97	\$74.97
2004	\$95.43	\$85.20
2005	\$96.80	\$89.07
2006	\$88.61	\$88.95
2007	\$108.56	\$92.87
2008	\$116.58	\$96.82
2009	\$46.69	\$89.66
NOTES:		
* Sum of the current + previous year(s) revenue / total number of years		

The recycling market is based on a global economy. The recent down turn in the economy directly impacts the recycling revenue. The long-term forecast is for an improved economy and a return to higher values for recyclables.

\$90.00 per ton will be used as the Recycled Material Market Price for the "LOW Cost" scenarios.

\$110.00 per ton will be used as the Recycled Material Market Price for the "HIGH Cost" scenarios.

5.2.7 Modifications to Existing MRF

Existing City MRF Demolition

The existing City MRF dual stream processing equipment would be removed if the existing MRF is used in a particular cost scenario. Some of the equipment may have some salvage value, and the equipment does have a scrap value, however the current price of scrap steel is relatively low. A cost of \$250,000 is included for the demolition of the equipment. This cost assumes that any salvage/scrap value for the equipment will go to the demolition contractor as part of the \$250,000 estimate. If there is salvageable equipment (with a salvage value associated with it) this could lower the \$250,000 cost estimate. A cost of \$100,000 is also included for some facility upgrades if the existing MRF structure is continued to be used. These are assumed to be the cost of some minor structural, floor, utility, and miscellaneous repairs following demolition.

Some alternatives consider no longer using the City MRF. In these cases the existing MRF may also be demolished. The demolition cost of the MRF is not included in any of the alternatives because the future use of the existing MRF in these scenarios has not been determined.

Using the existing MRF as a transfer station or as the location for the new recycling facility has several advantages:

- There is sufficient space at the existing facility for either application.
- The City currently owns this asset; new land acquisition is not an issue.
- The use of the facility essentially remains unchanged ("not in my back yard" issues are avoided).
- The City recently spent \$320,000 on roof repairs that will be taken advantage of and building/facility costs will be minimized.
- The haul routes to the facility are known and can be calculated.
- The geographic location is easily accessible to/from major highways.

AECOM estimates that it will cost \$250,000 to demolish the equipment at the existing City MRF. The estimated costs to modify the existing MRF are presented in the table below. The useful life of the new facility is estimated to be 15 years before major upgrades would need to be made (see section 5.2.11).

Although there are several advantages to utilizing the existing location, it is recognized that the existing MRF is located in an area where real estate values are on the rise, and as such this property is a valuable asset to the City for future planning.

5.2.8 Waste Transfer Station Equipment

For purposes of this report, AECOM will use the figures presented in the table below for estimating the cost of an installed/delivered piece of equipment.

Commodity*	Cost/unit	Source
Compactor	\$150,000	Stepp Equipment Corporation
Transfer Trailers	\$110,000	Stepp Equipment Corporation
Semi Tractor	\$100,000	AECOM Recycling Facility Study
Yard Truck	\$100,000	AECOM Recycling Facility Study
Front-End Loader	\$350,000	AECOM Recycling Facility Study
NOTES:		
* The City is not likely to purchase this equipment. There is the option that all of the equipment will be provided by a third party as part of a design/build/operate scenario.		

5.2.9 Transfer Facility Cost

In developing an estimate for the costs associated with constructing a new Transfer Facility (TF), three separate scenarios were considered:

- Constructing two new Transfer Facilities including the cost of two new buildings. This is referred to the New North TF Scenario, and New South TF Scenario.
- Constructing a new Transfer Facility at the existing MRF which includes the cost of modifying the existing building. This is referred to as the Existing MRF Transfer Facility Scenario.

The following assumptions were made about all three scenarios:

- The cost of land was not considered. All new Transfer Facilities are presumed to be located on property that the City already owns.
- Each facility will need to have the following features:
 - Site improvements (paving, drainage, fencing, etc.)
 - Building with tipping floor and 3 truck bays (80'x80'x30')
 - 1 compactor
 - 1 scale
 - 1 fuel station
 - Parking for a portion of the recycle truck fleet (including electrical stations for winter)
 - 1 yard truck
 - 1 end-loader
 - 1 semi tractor
 - Parking for 3 compacted waste hauling trailers and semi tractor

Some of these features already exist at the assumed locations. If this alternative is deemed feasible, additional evaluation should be performed to refine the costs such as relocating the scale to serve the New North TF, or use of the existing trash scale to serve the New South TF. The current cost estimate is meant to be on the conservative side. A cost for this feature will be included if the feature does not exist.

Neither the cost of relocation of the satellite recycle drop off centers (Self Help Center on the Northwest side), or the cost of relocation of any waste processing equipment/operations have been included in these cost scenarios.

AECOM will use the figures presented in the table below for estimating the construction costs of the New North Transfer Facility.

Commodity	Cost	Source
Site Improvements and new building	\$1,100,000	AECOM historical data (Fayette County Landfill – Iowa)
Scale	\$ 100,000	AECOM Estimate
Fuel Station (underground tank assumed)	\$ 100,000	AECOM Estimate
Parking for a portion of the recycle truck fleet (10,000 square feet for 12 trucks and electrical outlets)	\$ 75,000	AECOM Estimate
Subtotal	\$1,375,000	
Engineering/Design and Construction Services	\$ 165,000	12% of cost
Contingency	\$ 206,000	15%
Facility and Equipment Subtotal	\$1,746,000	
City Administrative Costs	\$ 52,000	Estimated at 3%

Commodity	Cost	Source
Total	\$1,798,000	

AECOM will use the figures presented in the table below for estimating the construction costs of the New South Transfer Facility.

Commodity	Cost	Source
Site Improvements and new building	\$1,100,000	AECOM historical data (Fayette County Landfill – Iowa)
Scale	\$ 100,000	AECOM Estimate
Fuel Station (underground tank assumed)	\$ 100,000	AECOM Estimate
Parking for a portion of the recycle truck fleet (20,000 square feet for 24 trucks and electrical outlets)	\$ 150,000	AECOM Estimate
Subtotal	\$1,450,000	
Engineering/Design and Construction Services	\$ 174,000	12% of cost
Contingency	\$ 218,000	15%
Facility and Equipment Subtotal	\$1,842,000	
City Administrative Costs	\$ 55,000	Estimated at 3%
Total	\$1,897,000	

AECOM will use the figures presented in the table below for estimating the construction costs of a new Transfer facility located at the existing City MRF location.

Commodity	Cost	Source
Site Improvements for compactor installation	\$100,000	AECOM Estimate
Engineering /Design and Construction Services	\$ 12,000	12% of cost
Contingency	\$ 15,000	15%
Subtotal	\$ 127,000	
City Administrative Costs	\$ 4,000	estimated at 3%
Total	\$ 131,000	

5.2.10 Recyclables Transfer Facility Operation and Maintenance

The City currently contracts the O&M of their waste transfer facilities to a third party, so it is assumed that they would do the same for a new Recyclables Transfer Facility. It is also assumed that the O&M cost would include the processing fee at a third party MRF, and the cost of transportation to the MRF.

The current industry trend is to include the non-subsidized processing cost in the fee along with some revenue sharing component. This allows the third party MRF to cover their operating costs no matter what the market for recyclables is doing.

The O&M cost that AECOM used for the Transfer Facility Scenarios are presented in the table below

Cost Scenario	O&M Rate (\$/ton)	Source
Two Transfer Facility Operations	\$60.00	\$42.00/ton for O&M + \$18.00/ton (\$9x2) for transportation to MRF
Single Transfer Facility Operations	\$52.00	\$42.00/ton for O&M + \$10.00/ton for transportation to MRF

AECOM's estimates for O&M are in line with data presented in the AECOM Recycling Facility Study that was presented in October of 2008.

The O&M Data is used in Costs analysis as part of the Revenue calculation.

5.2.11 Transfer Facility Net Revenue

The City currently does not have a contract for transferring Recyclables to a third party MRF for processing to use as a model. As stated above, the current trend is for the third party MRF to ensure that their processing costs are covered. It is also reasonable to assume that the third party fee would also have some element of revenue sharing to it. This provides financial incentive for the processor to try and obtain the best rate for the recyclables, and to operate as efficiently as possible.

The formula for calculating the Net Revenue in the cost analysis for the Transfer Facility is as follows:

$$[(\text{Recycled Material Market Price per ton}) / 2 - (\text{Third Party O\&M Cost per ton})] \times (\text{Pick-Up Schedule Product Volume in tons})$$

The avoided disposal costs can be added in order to provide a total net benefit per ton. For scenarios that increase recovery of recyclables, this is used to calculate the full benefit of that scenario by applying the avoided disposal costs to any resulting additional recycling tons. The avoided disposal cost formula is calculated as follows:

$$(\text{Trash Reduction Volume}) \times (\text{Trash Disposal Price})$$

Where:

- Recycled Material Market Price = Current market price per ton for sellable materials recovered at the Third Party MRF
- Pick-Up Schedule Volume = Volume of Recyclables picked up and brought to the Transfer Facility for each collection scenario
- Third Party O&M Cost = O&M Cost (see section 5.2.10)
- Trash Reduction Volume = the volume of recyclable material that would otherwise go in the trash (used in two and three week collection schedules only)
- Trash Disposal Price = the City's cost to dispose of trash (\$35.00/ton)

A positive result in this revenue formula represents an income to the City and a negative result in this formula represents a cost to the City.

5.2.12 Facility and Equipment Life Expectancy

Buildings and grounds are generally expected to last 40 to 50 years.⁹

Process equipment with routine maintenance and service can last for many years. The waste recycling industry relies heavily on material handling equipment. A reasonable estimate for the life expectancy of material handling equipment is 10 to 15 years. This is also true for motors, controls, starters, and most electrical equipment.^{9, 10}

Recycling commodities may change due to packaging, consumer trends, etc., it is reasonable to assume that in 15 years there will also be the need to change most of the equipment to adapt to the changing times. This assumption holds true when looking at the City's dual stream recycling equipment which is no longer considered optimal even though it was purchased and installed in the mid 1990's.

The equipment and building at the transfer facility is subjected to more severe service as such it has a shorter life expectancy.

AECOM will use the figures presented in the table below for estimating the useful life of a particular piece of equipment.

Commodity	Life Expectancy	Source
Buildings and Grounds	30 years	EPA publication EPA 816-R-03-016 September 2003
Single Stream Process Equipment	10 to 15 years	AECOM/ Waukesha Study/JWR Incorporated
Compactor	10 years	Stepp Equipment Corporation
Yard Truck	15 years	AECOM / Stepp Equipment Corporation
Front End Loader	15 years	AECOM / Stepp Equipment Corporation

Based on all of the information presented above, the life cycle of a transfer station or a MRF will be evaluated for no longer than 15 years. This coincides with the assumptions in the Waukesha County Study.¹¹ The salvage value of a new building (if required) will be assumed to be 50% of its original cost.

5.2.13 Transportation Cost Estimates

The transportation costs consist of collection and transport of recyclables. Transport costs are included for taking compacted loads of recyclables from the two new transfer stations or from the downtown transfer station to the WMRA Germantown (third party) recycling center. If the existing MRF is improved and used as a processing center or if the regional Wauwatosa recycling center is used there are no transport costs to the City because end-users pick up the sorted recyclables at the MRF.

Collection of recyclables is based on 34 dual stream recycling trucks, each with a one-man crew, collecting within the 34 collection routes, or sectors. In the summer there are typically 31 collection routes, and the City is considering going to 31 collection routes year round. For simplicity, this study assumes 31 collection routes for the monthly collection alternative and 34 collection routes for the three and two week alternatives. Costs associated with driving the collection trucks to the sectors in the morning from either of the MRFs or from the two Transfer Stations and back at the end of the day are included in the cost estimates. This drive is assumed to occur only once per day per sector. Driving within each of the 34 sectors is assumed to be common to all options so it is not evaluated as a separate cost item.

Additional costs will be added to the collection options if additional personnel and additional trucks are required to carry out the scenario described. For example, additional drivers and trucks are required to accomplish the scenario of one driver pickup up every 2 weeks (approximately 13 drivers and 13 trucks). Approximately 13 more employees are needed to staff the 2-person crew for pickup up every 3 weeks, while 2 trucks and 35 employees are needed for 2-person crew to pick up every 2 weeks. Costs for single compartment trucks are assumed to be capital expenditures of \$198,000. Costs for the additional employees are included at their full cost including benefits for the full, 52-week year (\$96,885). Costs for all scenarios are shown on Tables 1 through 4.

The City of Milwaukee performed a pilot study in which they collected data to determine what the crew requirements would be if they want to change from picking up recyclables once per month through up-the-drive service to once every 3 weeks or once every 2 weeks with carts placed at the collection location by the resident. They found that, on average, a typical one-person crew can service 350 households each day for dual stream recycling when the carts are set out at the collection location once per month. We assume the rate is the same for single stream, although it might be a little better. A summer 2009 analysis of the twice per month recycling pilot program showed that more frequent pickup results in more households per day served. The main reason for this is probably because not as many carts are out every time when pickup is more frequent. For twice per month pickup, on average, the 1-person crews pick up 372 households per day. By dividing the total number of households that need recycling pick-up

each month by the pickup rate (number of HH/day) and by the number of pick-up days in the cycle, the number of crews needed to pick-up on that cycle can be determined. This data and resultant information is shown on the spreadsheet included in Appendix K. The costs are included in Tables 1 through 4.

The City of Milwaukee collects recyclables from carts located either up the driveways, in alleys, or at the curb depending on the areas. Some areas are also served using bins. Retrieving carts up the driveway is time consuming. The current rate of collection is about 270 households per day. Based on a City of Milwaukee pilot study, the recycling collection rate was 350 households per day when the carts are placed at the curb, or are in the alley. It is in the City's best interest to avoid as much as possible walking up driveways to retrieve carts for collection. This time adds to the City's cost for recycling collection. Some cities charge a fee for those households that request the additional service of the City to going up the driveway to get the cart.

The City of Milwaukee is also interested in determining what effect single stream recycling and two-person crews would have on the recycling rates and collection costs. The data available for garbage collection crews can be used to estimate the crew requirements if two-person crews are used on cycles of once per month, once every 3 weeks, or once every 2 weeks. On average, a typical two-person crew can service 500 households each day. By dividing the total number of households that need recycling pick-up each month by 500 HH/day and by the number of pick-up days in the cycle, the number of crews needed to pick-up on that cycle can be determined. This data and resultant information is shown on the spreadsheet included in Appendix F. The costs are included in Tables 1 through 4.

Recyclable collection one time per month is not desirable for several reasons based on the City's survey of users. Many users collect more recyclables than the 95-gallon cart can handle in a one month period so the surplus recyclables end up in the trash thereby reducing the City's recycling revenue and increasing the solid waste cost to the City. Secondly, elderly people have complained about the weight of a filled cart after one month of collection. More frequent collection would reduce the content weight in the cart. Other users commented that monthly collection was too infrequent resulting in users forgetting to put out the cart and compounding the problem of an overfilled cart. Studies performed by others also indicate more frequent collection improves recycling participation and increases tonnage.

5.3 Present Worth Analysis

A present worth analysis was performed to determine the project costs for the recycling alternatives. The present worth is the theoretical amount of money needed to cover capital, operations and maintenance, and transportation costs over the term of the project. It is based on investing the money today at a certain interest rate to cover all costs over the project term.

For this project, a 15-year term is proposed to reflect the useful life of new processing equipment at the MRF. An annual interest of seven percent is used.

Present Worth Analysis:

- Capital cost will be figured at the beginning of the period.
- Annual costs will be calculated using uniform present worth calculation.
- The "Salvage Value Cost" portion of the equation will only be used in scenarios where a new facility is required

$$P = (\text{Capital Cost}) + \left[A \times \frac{(1+i)^n - 1}{i(1+i)^n} \right] + D(1+i)^{-n}$$

Where:

P = Present worth
Capital Cost = Sum of the capital cost

A	=	Sum of the annual Income and annual costs
D	=	Sum of the salvage values at the end of the period
i	=	Annual interest rate (7%) or (.07)
n	=	Period (15 years)

Therefore, for all equations, the uniform present worth factor for annual costs will be the same.

$$\frac{(1 + (.07))^{15} - 1}{(.07) (1 + (.07))^{15}} = 9.11$$

For those equations that use depreciation, the present worth factor for the depreciation will be the same.

$$(1 + (.07))^{-15} = 0.3624$$

6.0 COST ANALYSIS

The cost analysis for the respective alternatives is included in these Appendices:

<u>Alternative</u>	<u>Appendix</u>
A - Dual Stream at Existing City Facility (City Only)	D
B - Single Stream at Existing City Facility (City Only)	E
C - Two Transfer Stations to Third Party	F
D - One Transfer Station at Existing City Facility	G
E - Regional MRF at Wauwatosa	H
F - Regional MRF at City Facility	I

7.0 DISCUSSION OF RESULTS

7.1 Discussion of Recycling Facility Alternatives Cost Comparison

Tables 1 through 4 are a cost comparison of recycling facility alternatives addressing four scenarios of recycling tonnage and recycling revenue. The table includes capital, operation and maintenance, transportation, and total present worth costs. The following is a discussion of the alternatives addressing monetary and non-monetary considerations. A discussion on the transportation options is presented later in this section for all the alternatives.

As previously mentioned, City costs are shown as a negative number such as the annual O&M cost. Revenue to the City such as the revenue from recyclables is a positive number. Therefore, the alternative with the largest positive number or least negative number is the most-cost effective solution for the City. Alternative D - One Transfer Station at the Existing City Facility with single stream collection every three weeks using one person per truck is the most cost-effective solution and results in a total present worth revenue of approximately \$-3,546,000 based on Table 1 - Low Volume, Low Price scenario, and \$-892,000 based on Table 2 - Low Volume, High Price scenario. Salvage values of new

facilities were incorporated into the analysis for scenarios C and E. Salvage values are the worth of a structure or process equipment at the end of a cost analysis period and converted to a present worth. Based on a 15-year life processing equipment would have nearly zero salvage value. Structures would have about 50 percent value based on a 30-year life. Based on a general review of the alternatives, Alternative D is the most cost-effective because it has the least capital cost.

The analysis considers revenue sharing at 50:50 between the third party and the City based on the City's current agreement.

Alternative A – Dual Stream at Existing City Facility

Dual stream processing is currently being performed by the City. This alternative replaces the existing equipment with new equipment. The MRF would only serve the City. The industry trends are definitely moving away from dual stream processing because single stream collection of recyclables is more cost-effective, and recycling volumes are higher with single stream collection because it is easier for the public to place all recyclables in one cart without presorting of materials.

Alternative B – Single Stream at Existing City Facility (City Only)

Single stream processing at the existing City MRF was evaluated and would only serve the City. The existing equipment would be replaced with single stream equipment. Industry trends are toward single stream collection and processing. Based on the present worth analysis, Alternative B was not the most cost-effective alternative.

Alternative C – Two Transfer Stations to Third Party

Two transfer stations servicing the City of Milwaukee, one on the south side and one on the northwest side of the City would need to be constructed. Collection trucks would need to be parked at the transfer stations and parking space for these trucks may not be available. If parking space is not available at the transfer station(s), either one or more properties would need to be obtained or continue to park the trucks at the existing City MRF. The cost assessment considered parking at the two transfer stations.

Recyclables would be transported to a third party. For this evaluation, transport to WMRA's new MRF in Germantown was considered. The costs to construct two transfer stations are significant. These costs do not include the capital cost for the self-help center relocation for the northwest side of Milwaukee or the solid waste transfer station relocation. Based on the present worth analysis, Alternative C was not the most cost-effective alternative.

Alternative D – One Transfer Station at Existing City Facility

The alternative considers converting the City's MRF on Mount Vernon Avenue into a recycling transfer station. The improvements could be provided by WMRA or another third party in the future, who would operate the facility. Recyclables would be transported to a third party processor, such as WMRA's MRF in Germantown, for example.

This alternative was addressed in the Earth Tech AECOM October 2008 recycling report with input from WMRA. This approach would increase the City's cost due to transporting the recyclables to Germantown by about \$250 per semi truckload according to WMRA preliminary 2008 proposal. Closing the City's MRF and sending Milwaukee recyclables to the Germantown MRF would reduce WMRA labor costs associated with processing the City's recyclables. This situation may result in more savings passed on to the City, potentially offsetting the additional transportation costs. These matters can be further negotiated with WMRA in the future.

Based on the present worth analysis, Alternative D was the most cost-effective alternative. Alternative D results in the least capital investment to the City. It also is the least risk to the City. The City keeps the option available in the future, say 5 to 15 years from now, to relocate the transfer station if the City deems the property too valuable for operation as a transfer station. Alternatively, the City also would also retain the option under Alternative D to install new recycling processing equipment in the building in the future if development of a new MRF becomes advantageous. This study provides the City with estimated costs for transfer stations to better assess the economics of a new transfer station.

In the future, the key to the City's success is to have a strong, favorable, and fair contract with a third party to continue to meet the City's needs in the years ahead. Market volatility directly impacts the recycling pricing, and now is not a good time to obtain favorable rates for recycling. The City's current contract is very fair to all parties, but more recent contracts for other communities such as Waukesha County and City of Wauwatosa have been more favorable, but were developed when the value of recyclables was substantially better.

Alternative E – Regional MRF at Wauwatosa

This alternative was originally evaluated in the Waukesha County Study, though not specific to the Wauwatosa site later identified and then considered in this study. AECOM has since gathered additional capital cost information on similar single stream MRFs constructed in 2008-2009. The newly constructed MRFs tend to have higher construction costs than originally projected in the Waukesha County Study. For these reasons, AECOM's projected capital costs for a regional MRF at Wauwatosa are significantly higher than indicated in the Waukesha Study.

Implementing a regional MRF involving Waukesha County, City of Wauwatosa, and City of Milwaukee can be a political and administrative challenge. Winnebago, Outagamie, and Brown Counties successfully implemented joint landfill and single stream recycling MRF construction and operations.

A government owned MRF which is privately operated does provide the communities with additional control because the operating contract can be bid out every 5 to 10 years to maintain competition. On the other hand, Alternative D involving a transfer station and a third party for processing minimizes your capital investment. In the future, if the communities no longer feel the contract is fair, the matter of building a new MRF can be re-evaluated at that time. The business aspects of recycling are rapidly changing depending on the market for goods. If recycling prices improve, other private businesses may move into the area providing more competition. Secondly, recycling prices are dictated by a global economy. Therefore, the pricing of a third party business in Wisconsin is primarily influenced by the global market. The competitive nature of the recycling business should keep third party businesses providing fair, competitive services.

The current third party contracts with the City of Milwaukee, Waukesha County, City of Wauwatosa and other communities throughout southern Wisconsin present competitive fair rates for recycling services.

The regional MRF would require additional discussions and negotiations by the affected governments to determine the contract requirements and allocation of capital, operation and maintenance costs, as well as recycling revenues.

Alternative E Costs to the City are based on the City providing 44 percent of the recyclable tonnage. Capital costs likewise reflect the City's share. Based on the present worth analysis, Alternative E is not the most cost-effective option.

Alternate F – Regional MRF at Existing City Facility.

This alternative would replace the existing dual stream equipment with single stream equipment. For regional operation including Waukesha County, City of Wauwatosa, and City of Milwaukee, a two-shift operation is proposed to reduce the capital cost for the equipment.

The capital cost for this alternative is less than a regional MRF at Wauwatosa because the City of Milwaukee MRF already has the structure, scale, and parking facilities. Highway access off of Interstate I-94 is very good using the 13th Street exit.

The transportation costs from Waukesha County and City of Waukesha would need to be addressed. There may need to be a transfer station at Waukesha County, or possibly converting their existing MRF into a transfer station if feasible.

Governmental coordination, negotiations, and contracts would need to be resolved by the affected parties similar to Alternative E, Regional MRF at Wauwatosa.

The regional MRF would be operated by a third party such as WMRA. Alternative F costs to the City are based on the City providing 44 percent of the recyclable tonnage. Capital costs likewise reflect the City's share. Based on the present worth analysis, Alternative F is not the most cost-effective option.

7.2 Single Stream Recycling Benefits

Single stream recycling is recommended for the following reasons:

- Increased public participation is documented nationwide resulting in more recyclables processed.
- The estimated increase in recyclables for the City of Milwaukee, estimated at 4% in this study, could reach 10 percent based on the Waukesha County Study.
- Industry trends nationwide are toward single stream because of more efficient collection and improved public participation.
- Maximize full cart volume without divider restricting contents of each side's respective materials.
- Existing City carts can be reused with a minor modification, and purchasing undivided carts in the future saves approximately 15-20% compared to the cost of split carts.
- Existing packer trucks can be used, and purchasing single body recycling packers in the future saves approximately 15% compared to the cost of split-body trucks.

7.3 Labor Impacts

The most cost-effective alternative is Alternative D – One Transfer Station at Existing City Facility. There would be no change in travel time for City collection trucks, and only modest labor savings can be achieved by tipping at two transfer sites instead of one. A third party such as WMRA would operate the transfer station and transport the recyclables to Germantown where their MRF is a state-of-the-art single stream processing facility. WMRA has offered to employ the existing WMRA staff from the City MRF for positions at the Germantown MRF. The same labor contractor would be involved and the City's contractual requirements for employment would still be enforced. The proposed Alternative D would result in less WMRA employees than the current MRF. There is the possibility that WMRA could offer a bus service to take the current Milwaukee MRF staff to Germantown.

7.4 Transportation and Collection Alternatives

The collection of recyclables addressed one person and two person crews, and monthly, every three weeks, and every two weeks pick up. Monthly collection and every three week collection can be cost-effectively accomplished. Collection every three weeks has the potential for more recyclables being collected based on a City survey, a City pilot program, and similar studies by others. An estimated increase in recyclables of ten percent is projected with three week pickup as compared to monthly. For three week pickup to be cost effective, the carts need to be placed at the curb. The City would no longer provide walk up the driveway service, unless reimbursed by the customer for this extra effort. This is based on a one person crew. DPW research shows that Milwaukee residents would consider it a service improvement to have scheduled, more frequent, and guaranteed dates of collection requiring them to set out carts versus having driveway service on unknown dates about once per month.

Two week pickup was evaluated and an increase of about 20 percent in recyclables is estimated over monthly pickup. The two week frequency required additional personnel and trucks which cost more than the direct financial benefit of receiving more recyclables. Therefore, this approach does not appear cost-effective at this time.

Two-person crews were not cost-effective. The analysis showed that two-person crews collected from approximately 40 percent more households per day than one-person crews. This increase is not enough to justify the cost of additional personnel. Also, the trucks might fill up in less than one day, meaning they would travel more distance in order to empty the load during the day and return to collecting.

An expanded pilot program could be implemented for three week collection to further refine the collection program. The City also plans to either purchase or develop software to evaluate collection routes for potentially better collection efficiency.

However, every other week collection is a goal worth pursuing in future years because it provides a greater customer service level that is more comparable to that of other communities, both regionally and throughout the country. The increased recovery of recyclables that comes with more collection also provides the public with greater environmental benefits. Furthermore, anticipated City efforts to reduce residential garbage disposal will likely result in increased demand for more recycling collection capacity. While it may not be deemed cost-effective to move to every other week collection presently, it is clear that once per month collection will not be sufficient for a large percentage of households served. AECOM strongly recommends increasing recycling collection to at least every third week collection at this time.

8.0 OTHER RECYCLING CONSIDERATIONS

8.1 Measures to Reduce Tonnage to Landfill and Benefits

There are a number of measures the City can do to reduce tonnage to the landfill. These items include the following:

- Public Education

Public education in the form of news releases, media events, flyers and related information can inform the public regarding measures to be taken to reduce solid waste and increase recycling revenue. Waste diverted from landfills is equally beneficial to the user and City. DPW's *Recycle For Good* promotion campaign is a prudent investment in public outreach and education.

- Recycling Collection Frequency

The City's pilot study in addition to other studies throughout the nation show a positive trend toward increased recyclables when the collection frequency increases. For the City of Milwaukee, this study indicates three week frequency collection is possible with existing staff and

trucks if the carts are placed at the curb and staff no longer needs to walk up the driveway to obtain the cart. Some of the cities have added a surcharge to users where staff needs to walk up the driveway to obtain a cart.

- Pay as You Throw

There is increasing interest nationwide in a "pay as you throw" (PAYT) program. The most common approach is for the user to pay for a certain size garbage container(s) and the recycling cart is free. The more items recycled the less garbage which benefits the user as well as the City. Lisa Skumatz of Skumatz Economic Research Associates, Inc. (SERA) has studied PAYT and surveyed over 700 communities about recycling and PAYT. The results are very positive in favor of PAYT.

Appendix L of this report contains technical literature from SERA summarizing the results of their findings. About 25 percent of the communities nationwide have PAYT. The PAYT program results in a decrease in the trash tonnage and increase in the recycling tonnage. They found PAYT has the single biggest impact on diversion and can result in 16 to 17 percent diversion from residential trash which is generally divided equally among recycling, yard waste and source reduction. Additional information is contained in Appendix L.

9.0 SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

9.1 Summary

The City of Milwaukee is under contract with WMRA to operate the City's recycling facilities. The City's contract extended to June 30, 2009, plus the City has the sole option to renew the contract for up to five 1-year periods. The existing dual stream processing equipment is at the end of its useful life and the City is interested in evaluating recycling alternatives.

The following recycling alternatives were evaluated:

- Alternative A – Dual Stream at Existing City Facility
- Alternative B – Single Stream at Existing City Facility
- Alternative C – Two Transfer Stations to Third Party
- Alternative D – One Transfer Station at Existing City Facility
- Alternative E – Regional MRF at Wauwatosa
- Alternative F – Regional MRF at Existing City Facility

The regional MRF would include the City of Milwaukee, Waukesha County, and City of Wauwatosa. In 2007, Waukesha County commissioned a study which included evaluating a regional MRF and the conclusion was a regional MRF showed promise and should be further explored.

The following recycling collection options were evaluated for the City of Milwaukee:

- Dual Stream – one-person crew
- Single Stream
 - One-person operation
 - Two-person crew

Other recycling considerations addressed in the study included potential measures to reduce tonnage going to landfills. Single stream collection is viewed as one way to increase public participation in recycling programs. With single stream, it is easier to recycle because there is only one cart and no

required sorting between different types of recyclables. In the case of the City of Milwaukee, an estimated 4 percent increase in recyclables is expected and as high as a 10 percent increase may be possible using single stream collection. Pay as you throw is an approach which has increased recyclables and decreased waste tonnage based on results from other communities. PAYT has been shown to be the single most effective method of diverting materials from the waste stream.

Recycling collection frequency was evaluated to address the capital and operating expenses for the following:

- Monthly
- 3 Weeks
- 2 Weeks

9.2 Conclusions

Based on the findings in this study, the following conclusions are made:

1. Alternative D – One Transfer Station At Existing City Facility, is the most cost-effective approach. Processing would be performed by a third party such as WMRA at their new MRF in Germantown. For the sake of discussion, in the fall of 2008 WMRA suggested the same per ton billing rates as the current plus the additional cost to operate the transfer station and transport the recyclables. The additional cost is about \$250 per semi truckload. Less staff would be needed, but WMRA indicated they would offer jobs at the Germantown MRF to their employees currently working at the City's MRF.
2. Single stream collection offers the benefit of more efficient collection. It maximizes the cart volume and improves convenience for residents. One-person crews are more cost-effective at this time. While the City currently employs a semi-automated collection program with cart lifters on the back of trucks, single stream allows the possibility of using fully-automated vehicles where the driver does not have to exit the truck. A one person operation with a collection truck with arm attachments to pick up a cart results in an efficient operation and less workmen compensation claims because the heavy lifting is performed entirely with mechanical means.
3. Recycling collection frequency can have an effect on the amount of recyclables obtained. Two-week collection frequency is ideal as compared to the current monthly pick-up, but was not cost-effective. Three-week collection is the most cost-effective while also expected to increase recycling volume. Recycling collection scheduled with a set out date at the collection point (no driveway walk up) is the most cost-effective and efficient operation. Public information and refrigerator magnets with a calendar may help improve participation. Two-week collection results in higher collection costs due to more recycling trucks and more staff. The benefits of additional recycling revenue must be balanced against the added collection cost.
4. Pay As You Throw has been successfully implemented throughout the nation and has been proven to increase the recycling tonnage as well as to reduce waste.

9.3 Recommendations

The following recommendations are made:

1. Implement Alternative D – One Transfer Station at Existing City Facility, based on the economics. It presents the least investment and least risk to the City of Milwaukee.
2. Negotiate with WMRA to implement Alternative D.

3. Implement three-week recycling collection to increase recycling volumes and revenues. Schedule recycling collection for the cart to be located at the curb or alley line (no walk up driveway) to improve collection efficiency. Make improvements to the routes based on new software for routing trucks.
4. Implement Pay As You Throw features for garbage collection in conjunction with increased recycling collection service to optimize effectiveness of both programs.

TABLES

TABLE 1
COST COMPARISON OF RECYCLING ALTERNATIVES LOW VOLUME - LOW PRICE

LOW Volume (23,000 TPY) - LOW Recycled Material Price (\$90.00/Ton)				Processing					
Collection	System	Schedule	Cost / Income	Alternative A – Dual Stream at Existing City Facility	Alternative B – Single Stream at Existing City Facility (City Only)	Alternative C – Two Transfer Stations to Third Party	Alternative D – One Transfer Station at Existing City Facility	Alternative E – Regional MRF at Wauwatosa	Alternative F – Regional MRF at Existing City Facility
	Dual Stream	Monthly*	Capital (\$) Trash Reduction Income (\$/Yr) Recyclable Income (\$/Yr) Collection Costs (\$/Yr) Total Pres. Worth (\$)	-\$6,235,000 \$0 \$46,000 \$0 -\$5,816,037	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
		3 Weeks (1 person / truck)	Capital (\$) Trash Reduction Income (\$/Yr) Recyclable Income (\$/Yr) Collection Costs (\$/Yr) Total Pres. Worth (\$)	-\$6,235,000 \$80,500 \$50,600 -\$271,000 -\$7,509,195	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
		3 Weeks (2 persons / truck)	Capital (\$) Trash Reduction Income (\$/Yr) Recyclable Income (\$/Yr) Collection Costs (\$/Yr) Total Pres. Worth (\$)	Not Analyzed	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
		2 Weeks (1 person / truck)	Capital (\$) Trash Reduction Income (\$/Yr) Recyclable Income (\$/Yr) Collection Costs (\$/Yr) Total Pres. Worth (\$)	-\$9,141,000 \$161,000 \$55,200 -\$1,395,912 -\$19,885,699	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
		2 Weeks (2 persons / truck)	Capital (\$) Trash Reduction Income (\$/Yr) Recyclable Income (\$/Yr) Collection Costs (\$/Yr) Total Pres. Worth (\$)	Not Analyzed	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
	Single Stream	Monthly*	Capital (\$) Trash Reduction Income (\$/Yr) Recyclable Income (\$/Yr) Collection Costs (\$/Yr) Total Pres. Worth (\$)	Not Applicable	-\$7,052,000 \$0 -\$23,920 -\$247,088 -\$9,520,316	-\$3,695,000 \$0 -\$358,800 -\$188,735 -\$8,078,873	-\$381,000 \$0 -\$167,440 -\$247,088 -\$4,156,482	-\$5,632,880 \$0 -\$22,880 -\$306,353 -\$8,200,653	-\$3,242,880 \$0 -\$22,880 -\$247,088 -\$5,701,724
		3 Weeks (1 person / truck)	Capital (\$) Trash Reduction Income (\$/Yr) Recyclable Income (\$/Yr) Collection Costs (\$/Yr) Total Pres. Worth (\$)	Not Applicable	-\$7,052,000 \$83,720 -\$26,312 -\$271,000 -\$8,997,375	-\$3,695,000 \$83,720 -\$358,800 -\$207,000 -\$7,809,504	-\$381,000 \$83,720 -\$184,184 -\$271,000 -\$3,764,257	-\$5,632,880 \$80,080 -\$26,058 -\$336,000 -\$7,770,262	-\$3,242,880 \$80,080 -\$26,058 -\$271,000 -\$5,219,096
		3 Weeks (2 persons / truck)	Capital (\$) Trash Reduction Income (\$/Yr) Recyclable Income (\$/Yr) Collection Costs (\$/Yr) Total Pres. Worth (\$)	Not Applicable	-\$7,052,000 \$83,720 -\$26,312 -\$1,531,000 -\$20,473,329	-\$3,695,000 \$83,720 -\$394,680 -\$1,467,000 -\$19,285,458	-\$381,000 \$83,720 -\$184,184 -\$1,531,000 -\$15,240,211	-\$5,632,880 \$80,080 -\$26,058 -\$1,596,000 -\$19,246,216	-\$3,242,880 \$80,080 -\$26,058 -\$1,531,000 -\$16,695,050
		2 Weeks (1 person / truck)	Capital (\$) Trash Reduction Income (\$/Yr) Recyclable Income (\$/Yr) Collection Costs (\$/Yr) Total Pres. Worth (\$)	Not Applicable	-\$9,958,000 \$167,440 -\$28,704 -\$1,531,000 -\$22,638,601	-\$6,601,000 \$167,440 -\$430,560 -\$1,467,000 -\$21,755,736	-\$3,287,000 \$167,440 -\$200,928 -\$1,531,000 -\$17,536,200	-\$8,538,880 \$80,080 -\$29,420 -\$1,596,000 -\$21,453,469	-\$6,148,880 \$160,160 -\$29,420 -\$1,531,000 -\$18,902,304
		2 Weeks (2 persons / truck)	Capital (\$) Trash Reduction Income (\$/Yr) Recyclable Income (\$/Yr) Collection Costs (\$/Yr) Total Pres. Worth (\$)	Not Applicable	-\$7,499,000 \$167,440 -\$28,704 -\$3,662,000 -\$39,588,536	-\$4,142,000 \$167,440 -\$430,560 -\$3,598,000 -\$38,705,671	-\$828,000 \$167,440 -\$200,928 -\$3,662,000 -\$34,486,135	-\$6,079,880 \$160,160 -\$29,420 -\$3,727,000 -\$38,403,404	-\$3,689,880 \$160,160 -\$29,420 -\$3,662,000 -\$35,852,239

* Monthly refers to the schedule of the current program, mostly non-guaranteed with up-the-driveway service for households not on alleys.

TABLE 2
COST COMPARISON OF RECYCLING ALTERNATIVES HIGH VOLUME - LOW PRICE

HIGH Volume (27,000 TPY) - LOW Recycled Material Price (\$90.00/Ton)				Processing					
Collection	System	Schedule	Cost / Income	Alternative A – Dual Stream at Existing City Facility	Alternative B – Single Stream at Existing City Facility (City Only)	Alternative C – Two Transfer Stations to Third Party	Alternative D – One Transfer Station at Existing City Facility	Alternative E – Regional MRF at Wauwatosa	Alternative F – Regional MRF at Existing City Facility
	Dual Stream	Monthly*	Capital (\$) Trash Reduction Income (\$/Yr) Recyclable Income (\$/Yr) Collection Costs (\$/Yr) Total Pres. Worth (\$)	-\$6,235,000 \$0 \$54,000 \$0 -\$5,743,173	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
		3 Weeks (1 person / truck)	Capital (\$) Trash Reduction Income (\$/Yr) Recyclable Income (\$/Yr) Collection Costs (\$/Yr) Total Pres. Worth (\$)	-\$6,235,000 \$94,500 \$59,400 -\$271,000 -\$7,301,535	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
		3 Weeks (2 persons / truck)	Capital (\$) Trash Reduction Income (\$/Yr) Recyclable Income (\$/Yr) Collection Costs (\$/Yr) Total Pres. Worth (\$)	Not Analyzed	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
		2 Weeks (1 person / truck)	Capital (\$) Trash Reduction Income (\$/Yr) Recyclable Income (\$/Yr) Collection Costs (\$/Yr) Total Pres. Worth (\$)	-\$9,141,000 \$189,000 \$64,800 -\$1,395,912 -\$19,543,242	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
		2 Weeks (2 persons / truck)	Capital (\$) Trash Reduction Income (\$/Yr) Recyclable Income (\$/Yr) Collection Costs (\$/Yr) Total Pres. Worth (\$)	Not Analyzed	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
	Single Stream	Monthly*	Capital (\$) Trash Reduction Income (\$/Yr) Recyclable Income (\$/Yr) Collection Costs (\$/Yr) Total Pres. Worth (\$)	Not Applicable	-\$7,052,000 \$0 -\$28,080 -\$247,088 -\$9,558,205	-\$3,695,000 \$0 -\$421,200 -\$188,735 -\$8,647,206	-\$381,000 \$0 -\$196,560 -\$247,088 -\$4,421,704	-\$5,632,880 \$0 -\$2,640 -\$306,353 -\$8,016,309	-\$3,242,880 \$0 -\$2,640 -\$247,088 -\$5,517,380
		3 Weeks (1 person / truck)	Capital (\$) Trash Reduction Income (\$/Yr) Recyclable Income (\$/Yr) Collection Costs (\$/Yr) Total Pres. Worth (\$)	Not Applicable	-\$7,052,000 \$98,280 -\$30,888 -\$271,000 -\$8,906,441	-\$3,695,000 \$98,280 -\$421,200 -\$207,000 -\$8,302,059	-\$381,000 \$98,280 -\$216,216 -\$271,000 -\$3,923,390	-\$5,632,880 \$92,400 -\$30,067 -\$336,000 -\$7,694,565	-\$3,242,880 \$92,400 -\$30,067 -\$271,000 -\$5,143,400
		3 Weeks (2 persons / truck)	Capital (\$) Trash Reduction Income (\$/Yr) Recyclable Income (\$/Yr) Collection Costs (\$/Yr) Total Pres. Worth (\$)	Not Applicable	-\$7,052,000 \$98,280 -\$30,888 -\$1,531,000 -\$20,382,395	-\$3,695,000 \$98,280 -\$463,320 -\$1,467,000 -\$19,778,013	-\$381,000 \$98,280 -\$216,216 -\$1,531,000 -\$15,399,344	-\$5,632,880 \$92,400 -\$30,067 -\$1,596,000 -\$19,170,519	-\$3,242,880 \$92,400 -\$30,067 -\$1,531,000 -\$16,619,354
		2 Weeks (1 person / truck)	Capital (\$) Trash Reduction Income (\$/Yr) Recyclable Income (\$/Yr) Collection Costs (\$/Yr) Total Pres. Worth (\$)	Not Applicable	-\$9,958,000 \$196,560 -\$33,696 -\$1,531,000 -\$22,418,846	-\$6,601,000 \$196,560 -\$505,440 -\$1,467,000 -\$22,172,513	-\$3,287,000 \$196,560 -\$235,872 -\$1,531,000 -\$17,589,245	-\$8,538,880 \$92,400 -\$33,946 -\$1,596,000 -\$21,270,274	-\$6,148,880 \$184,800 -\$33,946 -\$1,531,000 -\$18,719,108
		2 Weeks (2 persons / truck)	Capital (\$) Trash Reduction Income (\$/Yr) Recyclable Income (\$/Yr) Collection Costs (\$/Yr) Total Pres. Worth (\$)	Not Applicable	-\$7,499,000 \$196,560 -\$33,696 -\$3,662,000 -\$39,368,781	-\$4,142,000 \$196,560 -\$505,440 -\$3,598,000 -\$39,122,448	-\$828,000 \$196,560 -\$235,872 -\$3,662,000 -\$34,539,180	-\$6,079,880 \$184,800 -\$33,946 -\$3,727,000 -\$38,220,209	-\$3,689,880 \$184,800 -\$33,946 -\$3,662,000 -\$35,669,043

* Monthly refers to the schedule of the current program, mostly non-guaranteed with up-the-driveway service for households not on alleys.

TABLE 3
COST COMPARISON OF RECYCLING ALTERNATIVES LOW VOLUME - HIGH PRICE

LOW Volume (23,000 TPY) - HIGH Recycled Material Price (\$110.00/Ton)				Processing					
Collection	System	Schedule	Cost / Income	Alternative A – Dual Stream at Existing City Facility	Alternative B – Single Stream at Existing City Facility (City Only)	Alternative C – Two Transfer Stations to Third Party	Alternative D – One Transfer Station at Existing City Facility	Alternative E – Regional MRF at Wauwatosa	Alternative F – Regional MRF at Existing City Facility
	Dual Stream	Monthly*	Capital (\$) Trash Reduction Income (\$/Yr) Recyclable Income (\$/Yr) Collection Costs (\$/Yr) Total Pres. Worth (\$)	-\$6,235,000 \$0 \$276,000 \$0 -\$3,721,220	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
		3 Weeks (1 person / truck)	Capital (\$) Trash Reduction Income (\$/Yr) Recyclable Income (\$/Yr) Collection Costs (\$/Yr) Total Pres. Worth (\$)	-\$6,235,000 \$80,500 \$303,600 -\$271,000 -\$5,204,897	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
		3 Weeks (2 persons / truck)	Capital (\$) Trash Reduction Income (\$/Yr) Recyclable Income (\$/Yr) Collection Costs (\$/Yr) Total Pres. Worth (\$)	Not Analyzed	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
		2 Weeks (1 person / truck)	Capital (\$) Trash Reduction Income (\$/Yr) Recyclable Income (\$/Yr) Collection Costs (\$/Yr) Total Pres. Worth (\$)	-\$9,141,000 \$161,000 \$331,200 -\$1,395,912 -\$17,371,919	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
		2 Weeks (2 persons / truck)	Capital (\$) Trash Reduction Income (\$/Yr) Recyclable Income (\$/Yr) Collection Costs (\$/Yr) Total Pres. Worth (\$)	Not Analyzed	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
	Single Stream	Monthly*	Capital (\$) Trash Reduction Income (\$/Yr) Recyclable Income (\$/Yr) Collection Costs (\$/Yr) Total Pres. Worth (\$)	Not Applicable	-\$7,052,000 \$0 \$215,280 -\$247,088 -\$7,341,706	-\$3,695,000 \$0 -\$119,600 -\$188,735 -\$5,900,263	-\$381,000 \$0 \$71,760 -\$247,088 -\$1,977,872	-\$5,632,880 \$0 \$205,920 -\$306,353 -\$6,116,765	-\$3,242,880 \$0 \$205,920 -\$247,088 -\$3,617,836
		3 Weeks (1 person / truck)	Capital (\$) Trash Reduction Income (\$/Yr) Recyclable Income (\$/Yr) Collection Costs (\$/Yr) Total Pres. Worth (\$)	Not Applicable	-\$7,052,000 \$83,720 \$236,808 -\$271,000 -\$6,600,904	-\$3,695,000 \$83,720 -\$131,560 -\$207,000 -\$5,413,033	-\$381,000 \$83,720 \$78,936 -\$271,000 -\$1,367,786	-\$5,632,880 \$80,080 \$234,524 -\$336,000 -\$5,396,903	-\$3,242,880 \$80,080 \$234,524 -\$271,000 -\$2,845,738
		3 Weeks (2 persons / truck)	Capital (\$) Trash Reduction Income (\$/Yr) Recyclable Income (\$/Yr) Collection Costs (\$/Yr) Total Pres. Worth (\$)	Not Applicable	-\$7,052,000 \$83,720 \$236,808 -\$1,531,000 -\$18,076,858	-\$3,695,000 \$83,720 -\$131,560 -\$1,467,000 -\$16,888,987	-\$381,000 \$83,720 \$78,936 -\$1,531,000 -\$12,843,740	-\$5,632,880 \$80,080 \$234,524 -\$1,596,000 -\$16,872,857	-\$3,242,880 \$80,080 \$234,524 -\$1,531,000 -\$14,321,692
		2 Weeks (1 person / truck)	Capital (\$) Trash Reduction Income (\$/Yr) Recyclable Income (\$/Yr) Collection Costs (\$/Yr) Total Pres. Worth (\$)	Not Applicable	-\$9,958,000 \$167,440 \$258,336 -\$1,531,000 -\$20,024,270	-\$6,601,000 \$167,440 -\$143,520 -\$1,467,000 -\$19,141,404	-\$3,287,000 \$167,440 \$86,112 -\$1,531,000 -\$14,921,869	-\$8,538,880 \$160,160 \$264,776 -\$1,596,000 -\$18,773,969	-\$6,148,880 \$160,160 \$264,776 -\$1,531,000 -\$16,222,803
		2 Weeks (2 persons / truck)	Capital (\$) Trash Reduction Income (\$/Yr) Recyclable Income (\$/Yr) Collection Costs (\$/Yr) Total Pres. Worth (\$)	Not Applicable	-\$7,499,000 \$167,440 \$258,336 -\$3,662,000 -\$36,974,205	-\$4,142,000 \$167,440 -\$143,520 -\$3,598,000 -\$36,091,339	-\$828,000 \$167,440 \$86,112 -\$3,662,000 -\$31,871,804	-\$6,079,880 \$160,160 \$264,776 -\$3,727,000 -\$35,723,904	-\$3,689,880 \$160,160 \$264,776 -\$3,662,000 -\$33,172,738

* Monthly refers to the schedule of the current program, mostly non-guaranteed with up-the-driveway service for households not on alleys.

TABLE 4
COST COMPARISON OF RECYCLING ALTERNATIVES HIGH VOLUME - HIGH PRICE

HIGH Volume (27,000 TPY) - HIGH Recycled Material Price (\$110.00/Ton)				Processing					
Collection	System	Schedule	Cost / Income	Alternative A – Dual Stream at Existing City Facility	Alternative B – Single Stream at Existing City Facility (City Only)	Alternative C – Two Transfer Stations to Third Party	Alternative D – One Transfer Station at Existing City Facility	Alternative E – Regional MRF at Wauwatosa	Alternative F – Regional MRF at Existing City Facility
	Dual Stream	Monthly*	Capital (\$) Trash Reduction Income (\$/Yr) Recyclable Income (\$/Yr) Collection Costs (\$/Yr) Total Pres. Worth (\$)	-\$6,235,000 \$0 \$324,000 \$0 -\$3,284,040	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
		3 Weeks (1 person / truck)	Capital (\$) Trash Reduction Income (\$/Yr) Recyclable Income (\$/Yr) Collection Costs (\$/Yr) Total Pres. Worth (\$)	-\$6,235,000 \$94,500 \$356,400 -\$271,000 -\$4,596,489	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
		3 Weeks (2 persons / truck)	Capital (\$) Trash Reduction Income (\$/Yr) Recyclable Income (\$/Yr) Collection Costs (\$/Yr) Total Pres. Worth (\$)	Not Analyzed	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
		2 Weeks (1 person / truck)	Capital (\$) Trash Reduction Income (\$/Yr) Recyclable Income (\$/Yr) Collection Costs (\$/Yr) Total Pres. Worth (\$)	-\$9,141,000 \$189,000 \$388,800 -\$1,395,912 -\$16,592,282	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
		2 Weeks (2 persons / truck)	Capital (\$) Trash Reduction Income (\$/Yr) Recyclable Income (\$/Yr) Collection Costs (\$/Yr) Total Pres. Worth (\$)	Not Analyzed	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
	Single Stream	Monthly*	Capital (\$) Trash Reduction Income (\$/Yr) Recyclable Income (\$/Yr) Collection Costs (\$/Yr) Total Pres. Worth (\$)	Not Applicable	-\$7,052,000 \$0 \$252,720 -\$247,088 -\$7,000,706	-\$3,695,000 \$0 -\$140,400 -\$188,735 -\$6,089,707	-\$381,000 \$0 \$84,240 -\$247,088 -\$1,864,205	-\$5,632,880 \$0 \$237,600 -\$306,353 -\$5,828,227	-\$3,242,880 \$0 \$237,600 -\$247,088 -\$3,329,298
		3 Weeks (1 person / truck)	Capital (\$) Trash Reduction Income (\$/Yr) Recyclable Income (\$/Yr) Collection Costs (\$/Yr) Total Pres. Worth (\$)	Not Applicable	-\$7,052,000 \$98,280 \$277,992 -\$271,000 -\$6,093,193	-\$3,695,000 \$98,280 -\$154,440 -\$207,000 -\$5,488,811	-\$381,000 \$98,280 \$92,664 -\$271,000 -\$1,110,142	-\$5,632,880 \$92,400 \$270,605 -\$336,000 -\$4,956,075	-\$3,242,880 \$92,400 \$270,605 -\$271,000 -\$2,404,909
		3 Weeks (2 persons / truck)	Capital (\$) Trash Reduction Income (\$/Yr) Recyclable Income (\$/Yr) Collection Costs (\$/Yr) Total Pres. Worth (\$)	Not Applicable	-\$7,052,000 \$98,280 \$277,992 -\$1,531,000 -\$17,569,147	-\$3,695,000 \$98,280 -\$154,440 -\$1,467,000 -\$16,964,765	-\$381,000 \$98,280 \$92,664 -\$1,531,000 -\$12,586,096	-\$5,632,880 \$92,400 \$270,605 -\$1,596,000 -\$16,432,029	-\$3,242,880 \$92,400 \$270,605 -\$1,531,000 -\$13,880,863
		2 Weeks (1 person / truck)	Capital (\$) Trash Reduction Income (\$/Yr) Recyclable Income (\$/Yr) Collection Costs (\$/Yr) Total Pres. Worth (\$)	Not Applicable	-\$9,958,000 \$196,560 \$303,264 -\$1,531,000 -\$19,349,848	-\$6,601,000 \$196,560 -\$168,480 -\$1,467,000 -\$19,103,515	-\$3,287,000 \$196,560 \$101,088 -\$1,531,000 -\$14,520,247	-\$8,538,880 \$184,800 \$305,510 -\$1,596,000 -\$18,178,542	-\$6,148,880 \$184,800 \$305,510 -\$1,531,000 -\$15,627,377
		2 Weeks (2 persons / truck)	Capital (\$) Trash Reduction Income (\$/Yr) Recyclable Income (\$/Yr) Collection Costs (\$/Yr) Total Pres. Worth (\$)	Not Applicable	-\$7,499,000 \$196,560 \$303,264 -\$3,662,000 -\$36,299,783	-\$4,142,000 \$196,560 -\$2,021,760 -\$3,598,000 -\$52,932,939	-\$828,000 \$196,560 -\$1,752,192 -\$3,662,000 -\$48,349,670	-\$6,079,880 \$184,800 \$305,510 -\$3,727,000 -\$35,128,477	-\$3,689,880 \$184,800 \$305,510 -\$3,662,000 -\$32,577,312

* Monthly refers to the schedule of the current program, mostly non-guaranteed with up-the-driveway service for households not on alleys.

APPENDICES

APPENDIX A

**2004 BID SUMMARY FOR RECYCLING AND
EXCERPTS FOR RECYCLE AMERICA ALLIANCE BID**

January 30, 2004

Mr. Chris Rooney
Onyx Waste Services Midwest, Inc.
W144 S6350 College Court
P.O. Box 456
Muskego, WI 53150

Mr. Ray Carter
Lee County Landfill
Allied Waste
1214 South Bataan Road
Dixon, IL 61021

Mr. William Theado
Recycled Fibers Division
Newark Group
2601 E. River Road
Moraine, OH 45439

Mr. Bill Leonidas
FCR, Inc.
809 W. Hill Street
Charlotte, NC 28208

Mr. Harry Peltz
Recycle America Alliance
4600 N. Port Washington Road
Milwaukee, WI 53212

Subject: **Bid Tabulation**
City of Milwaukee
MRF Services
Official Notice No. 166

Dear Bidders:

Pursuant to the Official Notice to Bidders, sealed bids for the above referenced project were received in Room 507, Municipal Building on January 22, 2004, until 10:30 a.m. and publicly opened and read aloud at 10:45 a.m. We have reviewed all of the bids received for the project. Enclosed is the Bid Tabulation. In addition, we have reviewed the Qualifications Statements of the Bidders for conformance to the Bid Specifications. The results are as follows.

Mr. Chris Rooney
Mr. Ray Carter
Mr. William Theado
Mr. Bill Leonidas
Mr. Harry Peltz
January 30, 2004
Page 2

**Provision of Materials Recovery Facility (MRF) and Recyclables Receiving, Processing, and Marketing
Official Notice No. 166**

Five sealed bids were received. The low bid was submitted by Recycle America Alliance LLC in the amount of \$ - 3,370,500. This amount is the Net Processing Fee for the first year and the negative value represents a revenue to the City. This bid amount was the same for Bid Options 1, 2, and 3. The second low bid was submitted by the Newark Group Recycled Fibers Division in the amount of \$ - 500,000 for Bid Option 1, Operation of City-Owned Material Recovery Facility.

The Qualifications Statement from Recycle America Alliance, LLC meets the Bid Specifications requirements. The forms accompanying their bid were complete.

The City has determined Recycle America Alliance LLC is the Apparent Low Bidder for this project. We wish to thank all the Bidders for their interest and for submitting a Bid.

If you have any questions regarding these matters, please contact Mike Engelbart of my staff at (414) 286-2355.

Very truly yours,

City of Milwaukee

Mariano A. Schifalacqua
Commissioner of Public Works

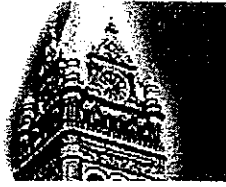
Enclosure: Bid Tabulation

Bid Tab Summary
Material Recovery Facility (MRF) and Recyclables Receiving, Processing, and Marketing
Official Notice Number: 166

Bidder		FCR	Allied	Newark	Onyx	Recycle America	Current Contract
Bid Option 1: Operation of City-Owned Material Recover Facility							
A.	Tipping Fee (per ton)	35	47	10		37.50	17
	Tipping Fee (per year)	1,750,000	2,350,000	500,000	0	1,875,000	850,000
B.	Guaranteed year 1 Recyclables Sale Revenue per ton	40	20	20		104.91	
	Guaranteed year 1 Recyclables Sale Revenue per year	2,000,000	1,000,000	1,000,000	0	5,245,500	0
C.	Net Processing Fee (A-B) per year	-250,000	1,350,000	-500,000	0	-3,370,500	850,000
Bid Option 2: Processing of Recyclables at an Alternate Location							
A.	Tipping Fee (per ton)				58	37.50	
	Tipping Fee (per year)	0	0	0	2,900,000	1,875,000	0
B.	Guaranteed year 1 Recyclables Sale Revenue per ton				2	104.91	
	Guaranteed year 1 Recyclables Sale Revenue per year	0	0	0	100,000	5,245,500	0
C.	Net Processing Fee (A-B) per year	0	0	0	2,800,000	-3,370,500	0
D.	Total Additional Cost to City due to alternate MRF						
	Total City Cost (C+D)						
Bid Option 3: Processing of Recyclables at Two Alternate Locations							
A.	Tipping Fee (per ton)					37.50	
	Tipping Fee (per year)	0	0	0	0	1,875,000	0
B.	Guaranteed year 1 Recyclables Sale Revenue per ton					104.91	
	Guaranteed year 1 Recyclables Sale Revenue per year	0	0	0	0	5,245,500	0
C.	Net Processing Fee (A-B) per year	0	0	0	0	-3,370,500	0
D.	Total Additional Cost to City due to alternate MRFs						
	Total City Cost (C+D)						
Required Forms (Indicate with Y/N if present)							
	Sworn Statement of Bidder	Y	Y	Y	Y	Y	
	Bid Bond Form and Affidavit	Y	Y	Y	Y	Y	
	Non-Collusion Affidavit	Y	Y	Y	Y	Y	
	Disclosure of Ownership ¹	Y, NA	Y, NA	Y	Y, NA	Y, NA	
	Designation of Confidential and Proprietary Information	Y	Y, NA	Y	Y	Y	
	Parental Guarantee- Material Recovery Facility ¹	Y, NA	Y, NA	Y	Y	Y, NA	
	Parental Guarantee- Financial Qualifications ¹	Y, NA	Y, NA	Y	Y	Y, NA	
	Acknowledgement of Addendums 1, 2, & 3	Y	Y	Y	Y	Y	

Notes:

1. Must be included but may be marked as not applicable.
2. NA means Not Applicable as noted by Bidder.



City of Milwaukee

Official Notice - #166

**Material Recovery Facility and Recyclables
Receiving, Processing, and Marketing**



Submitted By:

**Recycle America Alliance, L.L.C.
4600 N. Port Washington Road
Milwaukee, WI 53212**

Dated: January 22, 2004

Part II –Technical Proposal

II-3 Location and Description of Alternate MRF(s) (if applicable)

3.2.3 Location and Operating Plan of Alternate MRF(s) (if applicable)

The Bidder shall provide a map showing the location of the alternate MRF(s). The Apparent Low Bidder shall submit an Operating Plan for City review, input, and approval within 10 days after the Bid date. This information shall consist of a detailed description of the proposed operations to be employed at the MRF(s) in order to comply with the specifications. The description shall include the following:

- Anticipated traffic flow management procedures for City collection vehicles, including collection vehicle maneuvering, tipping, and weighing procedures.
- Procedures and preliminary schedule for maintaining MRF processing equipment, scales, and mobile equipment.
- Discussion of mobile equipment repair and replacement policies and protocols.
- Operating hours.
- Staffing (number of employees, job classifications, and job descriptions).
- Dust, litter, vector, odor control, and snow and ice control procedures.
- A facility layout that specifies traffic flow and materials receiving areas.

RAA Statement:

This response is in addition to the previous RAA statement as noted in the RFQ.

As another option, Recycle America Alliance is proposing two alternate processing and drop off locations located in the City of Milwaukee. The Recycle America Alliance location in the southern sector is the A-1 Recycling Center located at 2101 West Morgan Ave. and the Recycle America Alliance site in the northern sector is the Milwaukee North MRF located at 9601 N. Wasauke Road.

The trucks will enter the property at the identified entrance gate and proceed to the inbound scale to be weighed. Once the inbound gross weight has been recorded, the trucks will be directed to the tipping area for residential fiber. When the tipping floor is available, the driver will be directed to back into the building by the loader operator and drop off the residential fiber stream on his truck.

Once the fiber stream has been tipped and the fiber compartment on the truck is empty the driver will be directed to the drop off area for mixed rigid containers. When the tipping area for mixed containers is available the driver will be directed to the area to drop off the mixed rigid containers from the container compartment of the truck.

Part II –Technical Proposal

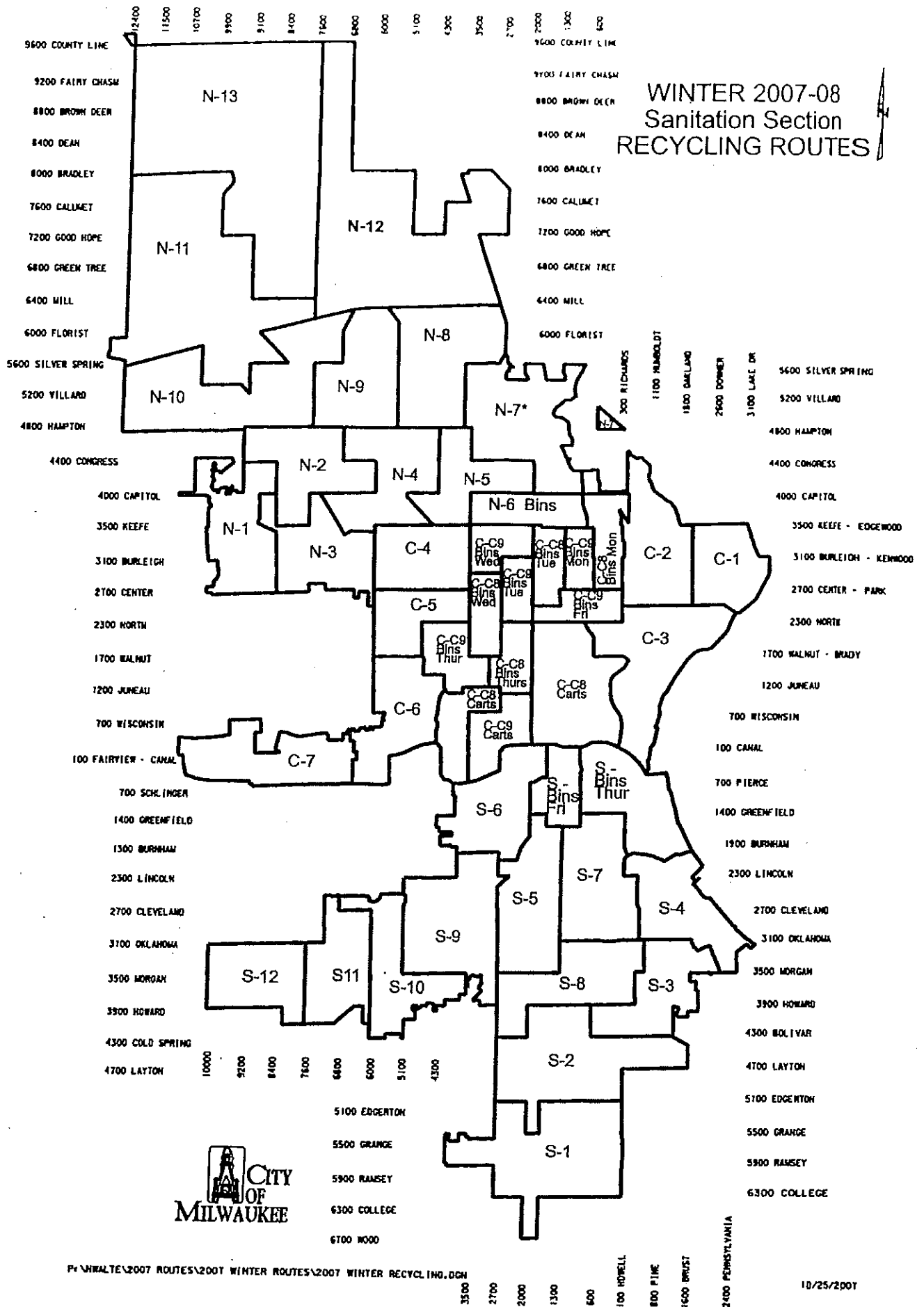
When the driver has completed dropping off the mixed containers the driver will proceed to the outbound scale to be weighed. Once the weighing process is complete, the driver will exit the property by the assigned exit gate.

The residential mixed fiber will be processed at either site and shipped to market. All mixed rigid mixed container will be loaded on company equipment and transferred to one of Recycle America Alliance processing locations in the greater Milwaukee Area for processing and marketing.

All scale information will be sent to the City as required by the contract. While on the Recycle America Alliance property all City of Milwaukee personnel will be required to follow the Recycle America Alliance safety plan and tipping floor policy including the wearing of high visibility PPE. The receiving hours at both Recycle America Alliance Milwaukee plants is 7:00am to 4:00pm M – F and 7am to 12 noon on Sat.

APPENDIX B

WINTER 2007-08 SANITATION SECTION RECYCLING ROUTES MAP



Pirrung, Don

From: Meyers, Rick [rick.meyers@milwaukee.gov]
Sent: Thursday, August 14, 2008 10:22 AM
To: Pirrung, Don
Cc: Booker, Wanda
Subject: RE: Recycling Proposal
Attachments: 2007-08 Recycling routes.pdf

Don,

Attached is our route map for winter recycling routes. We have 34 recycling routes. In 2006 and 2008 budget cuts reduced the summer route number to 31. Here is how the routes break down:

North: N-1 through N-5 and N-7 through N-13 = 12 cart routes, + 1/2 bin route (N-6) = 12.5 routes/trucks
Central: C-1 through C-7 = 7 cart routes, + 2 bin/cart combo routes* (C-8 and C-9) = 9 routes/trucks
South: S-1 through S12 = 12 cart routes, + 1/2 bin route (S bins Thurs & S bins Fri) = 12.5 routes/trucks
Total = 34 routes (31 cart routes and 3 bin routes)

*For C-8 and C-9 routes, after those trucks have collected their bin route area for the day they collect a portion of the areas on the map that are labeled "C-8 carts" and "C-9 carts," keeping those areas on roughly a once per month schedule.

In summer 2008 right now we have 31 total trucks each day, with 28 cart and 3 bin. The summer route map is basically the same except consolidating a couple of routes in each Sanitation area. I can provide that map as well if needed.

Winter routes are December through March each year and summer routes are April through November. We have the data on total tons collected in each route, households per route, lbs/HH, etc., that can be provided if/when needed. Let me know if you have any more questions or information needs at this point. We look forward to your proposal!

-Rick

APPENDIX C

LABOR AND MAINTENANCE/FUEL COSTS FROM THE CITY OF MILWAUKEE

Pirrung, Don

From: Booker, Wanda [Wanda.Booker@milwaukee.gov]
Sent: Wednesday, August 13, 2008 3:13 PM
To: Pirrung, Don
Cc: Meyers, Rick; Purko, James
Subject: FW: Recycling Proposal
Attachments: rates_recycling study_earthtech.xls

Don -

See rates you requested attached. I need a copy of your proposal to attach to the service order. Let me know what other information you need.

Booker, Wanda

Operations Driver Worker

hourly rate (adjusted to 2008)	22.90
Indirect Salary (2008)	6.86
Fringe Benefit (2008)	13.75
Overhead (2008)	3.06
Total Hourly Rate	46.58

Recycling Packer

annual maintenance	10,714.56
annual fuel (13 gal/day, \$4/gal)	12,896.00
hourly maint/fuel	11.20

purchase price	223,500.00
expected life (years)	11

APPENDIX D

ALTERNATIVE A – DUAL STREAM AT EXISTING CITY FACILITY

D - Cost Analysis Alternative A - Dual Stream at Existing City Facility (City Only)

Assumptions Common To Scenario A

Dual Stream Collection Volume of Recyclables (data - Section 5.2.1)

LOW Recyclable Volume (TPY) =	23,000
HIGH Recyclable Volume (TPY) =	27,000

Pick-Up Schedule Volume (Monthly Set-Out Collection*)

Assume a Dual Stream volume is starting basis	
LOW Product Volume (TPY) =	23,000
HIGH Product Volume (TPY) =	27,000

Pick-Up Schedule Volume (Three Week Collection)

Assume a 10% increase in volume over monthly volume	
LOW Recyclable Volume (TPY) =	25,300
HIGH Recyclable Volume (TPY) =	29,700

Volume of Recyclables not put in Trash (Three Week Collection)

Recyclable Volume (3 wk) - Recyclables Volume (monthly)	
LOW Trash Reduction Volume (TPY) =	2,300
HIGH Trash Reduction Volume (TPY) =	2,700

Pick-Up Schedule Volume (Two Week Collection)

Assume a 20% increase in volume over monthly volume	
LOW Recyclable Volume (TPY) =	27,600
HIGH Recyclable Volume (TPY) =	32,400

Volume of Recyclables not put in Trash (Two Week Collection)

Recyclables Volume (2 wk) - Recyclables Volume (monthly)	
LOW Trash Reduction Volume (TPY) =	4,600
HIGH Trash Reduction Volume (TPY) =	5,400

Capital Costs

Cost to demolish equipment and modify existing MRF =	\$250,000
Dual Stream Processing Equipment =	\$5,985,000

Annual Costs

MRF Operating and Maintenance Costs (\$/ton) =	\$43
Trash Disposal Price (\$/ton) =	\$35

Annual Recyclable Income

Income from Recyclables

LOW Volume Price Income =	$\frac{[(\text{LOW or HIGH Recycled Material Market Price}) / 2 - (\text{MRF O\&M Cost})]}{(\text{Pick-up Schedule LOW Recyclable Volume})}$
HIGH Volume Price Income =	$\frac{[(\text{LOW or HIGH Recycled Material Market Price}) / 2 - (\text{MRF O\&M Cost})]}{(\text{Pick-up Schedule HIGH Recyclable Volume})}$

* Monthly refers to the schedule of the current program, mostly non-guaranteed with up-the-driveway service for households not on alleys.

D - Cost Analysis Alternative A - Dual Stream at Existing City Facility (City Only)

Trash Reduction Income = (LOW or HIGH Trash Reduction Volume) x (Trash Disposal Price)

Present Worth Analysis

See Calculation Page for Uniform Present Worth Factor (UPWF)

UPWF = 9.1079

Present Worth = (Sum of Capital Costs) + [(UPWF) * (Sum of Annual Income + Annual Costs)]

Alternative A - Capital Costs

Cost to demolish equipment and modify existing MRF = -\$250,000

Dual Stream Processing Equipment = -\$5,985,000

Two Week Collection Additional Equipment = -\$2,906,000

Alternative A - Annual Costs

LOW Volume O&M Costs = In Annual Recyclable Income Formula

HIGH Volume O&M Costs = In Annual Recyclable Income Formula

Three Week Collection (1 person/truck) = -\$271,000

D - Cost Analysis Alternative A - Dual Stream at Existing City Facility (City Only)

Two Week Collection (1 person/truck)

-\$1,395,912

LOW Recycled Material Price

Variables for LOW Recycled Material Price	
LOW Recycled Material Price (\$/ton) =	\$90

Alternative A - Capital Costs

Schedule	Low Volume	High Volume
Monthly Collection (1 person/truck)	-\$6,235,000	-\$6,235,000
Three Week Collection (1 person/truck)	-\$6,235,000	-\$6,235,000
Two Week Collection (1 person/truck)	-\$9,141,000	-\$9,141,000

Alternative A - Annual Recycleable Income

Schedule	Low Volume	High Volume
Monthly Collection (1 person/truck)	\$46,000	\$54,000
Three Week Collection (1 person/truck)	\$50,600	\$59,400
Two Week Collection (1 person/truck)	\$55,200	\$64,800

Alternative A - Annual Trash Reduction Revenue

Schedule	Low Volume	High Volume
Monthly Collection (1 person/truck)	\$0	\$0
Three Week Collection (1 person/truck)	\$80,500	\$94,500
Two Week Collection (1 person/truck)	\$161,000	\$189,000

Alternative A - Annual Collection Costs

Schedule	Low Volume	High Volume
Monthly Collection (1 person/truck)	\$0	\$0
Three Week Collection (1 person/truck)	-\$271,000	-\$271,000
Two Week Collection (1 person/truck)	-\$1,395,912	-\$1,395,912

Alternative A - Present Worth Analysis

Schedule	Low Volume	High Volume
Monthly Collection (1 person/truck)	-\$5,816,037	-\$5,743,173
Three Week Collection (1 person/truck)	-\$7,509,195	-\$7,301,535

D - Cost Analysis Alternative A - Dual Stream at Existing City Facility (City Only)

Two Week Collection (1 person/truck)	-\$19,885,699	-\$19,543,242
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HIGH Recycled Material Price

Variables for HIGH Recycled Material Price		
HIGH Recycled Material Price (\$/ton) =		\$110

Alternative A - Capital Costs

Schedule	Low Volume	High Volume
Monthly Collection (1 person/truck)	-\$6,235,000	-\$6,235,000
Three Week Collection (1 person/truck)	-\$6,235,000	-\$6,235,000
Two Week Collection (1 person/truck)	-\$9,141,000	-\$9,141,000

Alternative A - Annual Recycleable Income

Schedule	Low Volume	High Volume
Monthly Collection (1 person/truck)	\$276,000	\$324,000
Three Week Collection (1 person/truck)	\$303,600	\$356,400
Two Week Collection (1 person/truck)	\$331,200	\$388,800

Alternative A - Annual Trash Reduction Revenue

Schedule	Low Volume	High Volume
Monthly Collection (1 person/truck)	\$0	\$0
Three Week Collection (1 person/truck)	\$80,500	\$94,500
Two Week Collection (1 person/truck)	\$161,000	\$189,000

Alternative A - Annual Collection Costs

Schedule	Low Volume	High Volume
Monthly Collection (1 person/truck)	\$0	\$0
Three Week Collection (1 person/truck)	-\$271,000	-\$271,000
Two Week Collection (1 person/truck)	-\$1,395,912	-\$1,395,912

Alternative A - Present Worth Analysis

Schedule	Low Volume	High Volume
Monthly Collection (1 person/truck)	-\$3,721,220	-\$3,284,040
Three Week Collection (1 person/truck)	-\$5,204,897	-\$4,596,489
Two Week Collection (1 person/truck)	-\$17,371,919	-\$16,592,282

APPENDIX E

ALTERNATIVE B – SINGLE STREAM AT EXISTING CITY FACILITY (CITY ONLY)

E - Cost Analysis Alternative B - Single Stream at Existing City Facility (City Only)

Assumptions Common To Scenario B

Dual Stream Collection Volume of Recyclables (data - Section 5.2.1)

LOW Recyclable Volume (TPY) =	23,000
HIGH Recyclable Volume (TPY) =	27,000

Pick-Up Schedule Volume (Monthly Set-Out Collection*)

Assume a 4% increase in Dual Stream volume	
LOW Product Volume (TPY) =	23,920
HIGH Product Volume (TPY) =	28,080

Pick-Up Schedule Volume (Three Week Collection)

Assume a 10% increase in volume over monthly volume	
LOW Recyclable Volume (TPY) =	26,312
HIGH Recyclable Volume (TPY) =	30,888

Volume of Recyclables not put in Trash (Three Week Collection)

Recyclable Volume (3 wk) - Recyclables Volume (monthly)	
LOW Trash Reduction Volume (TPY) =	2,392
HIGH Trash Reduction Volume (TPY) =	2,808

Pick-Up Schedule Volume (Two Week Collection)

Assume a 20% increase in volume over monthly volume	
LOW Recyclable Volume (TPY) =	28,704
HIGH Recyclable Volume (TPY) =	33,696

Volume of Recyclables not put in Trash (Two Week Collection)

Recyclables Volume (2 wk) - Recyclables Volume (monthly)	
LOW Trash Reduction Volume (TPY) =	4,784
HIGH Trash Reduction Volume (TPY) =	5,616

Capital Costs

Cost to demolish equipment and modify existing MRF =	\$250,000
Single Stream Processing Equipment	\$6,802,000

Annual Costs

MRF Operating and Maintenance Costs (\$/ton) =	200000 \$46
Trash Disposal Price (\$/ton) =	\$35

* Monthly refers to the schedule of the current program, mostly non-guaranteed with up-the-driveway service for households not on alleys.

E - Cost Analysis Alternative B - Single Stream at Existing City Facility (City Only)

Annual Recyclable Income

Income from Recyclables

LOW Volume Price Income = $[(\text{LOW or HIGH Recycled Material Market Price}) / 2 - (\text{MRF O\&M Cost})] \times (\text{Pick-up Schedule LOW Recyclable Volume})$

HIGH Volume Price Income = $[(\text{LOW or HIGH Recycled Material Market Price}) / 2 - (\text{MRF O\&M Cost})] \times (\text{Pick-up Schedule HIGH Recyclable Volume})$

Trash Reduction Income

Trash Reduction Income = $(\text{LOW or HIGH Trash Reduction Volume}) \times (\text{Trash Disposal Price})$

Present Worth Analysis

See Calculation Page for Uniform Present Worth Factor (UPWF)

UPWF = 9.1079

Present Worth = $(\text{Sum of Capital Costs}) + [(\text{UPWF}) \times (\text{Sum of Annual Income} + \text{Annual Costs})]$

Alternative B - Capital Costs

Cost to demolish equipment and modify existing MRF = -\$250,000

Single Stream Processing Equipment = -\$6,802,000

Two Week (1 person/truck) Equipment = -\$2,906,000

Two Week (2 people/truck) Equipment = -\$447,000

Alternative B - Annual Costs

LOW Volume O&M Costs = In Annual Recyclable Income Formula

HIGH Volume O&M Costs = In Annual Recyclable Income Formula

Monthly Collection (1 person/truck) = -\$247,088

Three Week Collection (1 person/truck) = -\$271,000

Three Week Collection (2 people/truck) = -\$1,531,000

Two Week Collection (1 person/truck) = -\$1,531,000

Two Week Collection (2 people/truck) = -\$3,662,000

E - Cost Analysis Alternative B - Single Stream at Existing City Facility (City Only)

LOW Recycled Material Price

Variables for LOW Recycled Material Price	
LOW Recycled Material Price (\$/ton) =	\$90

Alternative B - Capital Costs

Schedule	Low Volume	High Volume
Monthly Collection (1 person/truck)	-\$7,052,000	-\$7,052,000
Three Week Collection (1 person/truck)	-\$7,052,000	-\$7,052,000
Three Week Collection (2 people/truck)	-\$7,052,000	-\$7,052,000
Two Week Collection (1 person/truck)	-\$9,958,000	-\$9,958,000
Two Week Collection (2 people/truck)	-\$7,499,000	-\$7,499,000

Alternative B - Annual Recycleable Income

Schedule	Low Volume	High Volume
Monthly Collection (1 person/truck)	-\$23,920	-\$28,080
Three Week Collection (1 person/truck)	-\$26,312	-\$30,888
Three Week Collection (2 people/truck)	-\$26,312	-\$30,888
Two Week Collection (1 person/truck)	-\$28,704	-\$33,696
Two Week Collection (2 people/truck)	-\$28,704	-\$33,696

Alternative B - Annual Trash Reduction Income

Schedule	Low Volume	High Volume
Monthly Collection (1 person/truck)	\$0	\$0
Three Week Collection (1 person/truck)	\$83,720	\$98,280
Three Week Collection (2 people/truck)	\$83,720	\$98,280
Two Week Collection (1 person/truck)	\$167,440	\$196,560
Two Week Collection (2 people/truck)	\$167,440	\$196,560

Alternative B - Annual Collection Costs

Schedule	Low Volume	High Volume
Monthly Collection (1 person/truck)	-\$247,088	-\$247,088
Three Week Collection (1 person/truck)	-\$271,000	-\$271,000
Three Week Collection (2 people/truck)	-\$1,531,000	-\$1,531,000
Two Week Collection (1 person/truck)	-\$1,531,000	-\$1,531,000
Two Week Collection (2 people/truck)	-\$3,662,000	-\$3,662,000

Alternative B - Present Worth Analysis

Schedule	Low Volume	High Volume
Monthly Collection (1 person/truck)	-\$9,520,316	-\$9,558,205
Three Week Collection (1 person/truck)	-\$8,997,375	-\$8,906,441
Three Week Collection (2 people/truck)	-\$20,473,329	-\$20,382,395
Two Week Collection (1 person/truck)	-\$22,638,601	-\$22,418,846
Two Week Collection (2 people/truck)	-\$39,588,536	-\$39,368,781

E - Cost Analysis Alternative B - Single Stream at Existing City Facility (City Only)

HIGH Recycled Material Price

Variables for HIGH Recycled Material Price	
HIGH Recycled Material Price (\$/ton) =	\$110

Alternative B - Capital Costs

Schedule	Low Volume	High Volume
Monthly Collection (1 person/truck)	-\$7,052,000	-\$7,052,000
Three Week Collection (1 person/truck)	-\$7,052,000	-\$7,052,000
Three Week Collection (2 people/truck)	-\$7,052,000	-\$7,052,000
Two Week Collection (1 person/truck)	-\$9,958,000	-\$9,958,000
Two Week Collection (2 people/truck)	-\$7,499,000	-\$7,499,000

Alternative B - Annual Recycleable Income

Schedule	Low Volume	High Volume
Monthly Collection (1 person/truck)	\$215,280	\$252,720
Three Week Collection (1 person/truck)	\$236,808	\$277,992
Three Week Collection (2 people/truck)	\$236,808	\$277,992
Two Week Collection (1 person/truck)	\$258,336	\$303,264
Two Week Collection (2 people/truck)	\$258,336	\$303,264

Alternative B - Annual Trash Reduction Income

Schedule	Low Volume	High Volume
Monthly Collection (1 person/truck)	\$0	\$0
Three Week Collection (1 person/truck)	\$83,720	\$98,280
Three Week Collection (2 people/truck)	\$83,720	\$98,280
Two Week Collection (1 person/truck)	\$167,440	\$196,560
Two Week Collection (2 people/truck)	\$167,440	\$196,560

Alternative B - Annual Collection Costs

Schedule	Low Volume	High Volume
Monthly Collection (1 person/truck)	-\$247,088	-\$247,088
Three Week Collection (1 person/truck)	-\$271,000	-\$271,000
Three Week Collection (2 people/truck)	-\$1,531,000	-\$1,531,000
Two Week Collection (1 person/truck)	-\$1,531,000	-\$1,531,000
Two Week Collection (2 people/truck)	-\$3,662,000	-\$3,662,000

Alternative B - Present Worth Analysis

Schedule	Low Volume	High Volume
Monthly Collection (1 person/truck)	-\$7,341,706	-\$7,000,706
Three Week Collection (1 person/truck)	-\$6,600,904	-\$6,093,193
Three Week Collection (2 people/truck)	-\$18,076,858	-\$17,569,147
Two Week Collection (1 person/truck)	-\$20,024,270	-\$19,349,848
Two Week Collection (2 people/truck)	-\$36,974,205	-\$36,299,783

APPENDIX F

ALTERNATIVE C – TWO TRANSFER STATIONS TO THIRD PARTY

F - Cost Analysis Alternative C - Two New Transfer Stations Recyclables To Third Party

Assumptions Common To Scenarios C & D

Dual Stream Collection Volume of Recyclables (data - Section 5.2.1)

LOW Recyclable Volume (TPY) =	23,000
HIGH Recyclable Volume (TPY) =	27,000

Pick-Up Schedule Volume (Monthly Set-Out Collection*)

Assume a 4% increase in Dual Stream volume	
LOW Product Volume (TPY) =	23,920
HIGH Product Volume (TPY) =	28,080

Pick-Up Schedule Volume (Three Week Collection)

Assume a 10% increase in volume over monthly volume	
LOW Recyclable Volume (TPY) =	26,312
HIGH Recyclable Volume (TPY) =	30,888

Volume of Recyclables not put in Trash (Three Week Collection)

Recyclable Volume (3 wk) - Recyclables Volume (monthly)	
LOW Trash Reduction Volume (TPY) =	2,392
HIGH Trash Reduction Volume (TPY) =	2,808

Pick-Up Schedule Volume (Two Week Collection)

Assume a 20% increase in volume over monthly volume	
LOW Recyclable Volume (TPY) =	28,704
HIGH Recyclable Volume (TPY) =	33,696

Volume of Recyclables not put in Trash (Two Week Collection)

Recyclables Volume (2 wk) - Recyclables Volume (monthly)	
LOW Trash Reduction Volume (TPY) =	4,784
HIGH Trash Reduction Volume (TPY) =	5,616

Capital Costs

New North Transfer Facility =	\$1,798,000
New South Transfer Facility =	\$1,897,000

Annual Costs

Transfer Facility Operating and Maintenance Costs (\$/ton) =	100 \$60
Trash Disposal Price (\$/ton) =	\$35

* Monthly refers to the schedule of the current program, mostly non-guaranteed with up-the-driveway service for households not on allées.

F - Cost Analysis Alternative C - Two New Transfer Stations Recyclables To Third Party

Annual Recyclable Income

Income from Recyclables

LOW Volume Price Income = $[(\text{LOW or HIGH Recycled Material Market Price}) / 2 - (\text{TF O\&M Cost})] \times (\text{Pick-up Schedule LOW Recyclable Volume})$

HIGH Volume Price Income = $[(\text{LOW or HIGH Recycled Material Market Price}) / 2 - (\text{TF O\&M Cost})] \times (\text{Pick-up Schedule HIGH Recyclable Volume})$

Trash Reduction Income

Trash Reduction Income = $(\text{LOW or HIGH Trash Reduction Volume}) \times (\text{Trash Disposal Price})$

Present Worth Analysis

See Calculation Page for Uniform Present Worth Factor (UPWF) and Single Payment Present Worth Factor (SPPWF)

UPWF = 9.1079

SPPWF = 0.3264

Present Worth = $(\text{Sum of Capital Costs}) + [(\text{UPWF}) \times (\text{Sum of Annual Income} + \text{Annual Costs})] + [(\text{SPPWF}) \times (\text{Sum of the Salvage Values})]$

Alternative C - Capital Costs

New North Transfer Facility =	-\$1,798,000
Salvage Value of North Transfer Facility after 15 years	\$899,000
New South Transfer Facility =	-\$1,897,000
Salvage Value of South Transfer Facility after 15 years	\$948,500
Two Week (1 person/truck) Equipment =	-\$2,906,000
Two Week (2 people/truck) Equipment =	-\$447,000

Alternative C - Annual Costs

LOW Volume O&M Costs =	In Annual Recyclable Income Formula
HIGH Volume O&M Costs =	In Annual Recyclable Income Formula
Monthly Collection (1 person/truck)	-\$188,735
Three Week Collection (1 person/truck)	-\$207,000
Three Week Collection (2 people/truck)	-\$1,467,000
Two Week Collection (1 person/truck)	-\$1,467,000
Two Week Collection (2 people/truck)	-\$3,598,000

F - Cost Analysis Alternative C - Two New Transfer Stations Recyclables To Third Party

LOW Recycled Material Price

Variables for LOW Recycled Material Price	
LOW Recycled Material Price (\$/ton) =	\$90

Alternative C - Capital Costs

Schedule	Low Volume	High Volume
Monthly Collection (1 person/truck)	-\$3,695,000	-\$3,695,000
Three Week Collection (1 person/truck)	-\$3,695,000	-\$3,695,000
Three Week Collection (2 people/truck)	-\$3,695,000	-\$3,695,000
Two Week Collection (1 person/truck)	-\$6,601,000	-\$6,601,000
Two Week Collection (2 people/truck)	-\$4,142,000	-\$4,142,000

Alternative C - Annual Recyclable Income

Schedule	Low Volume	High Volume
Monthly Collection (1 person/truck)	-\$358,800	-\$421,200
Three Week Collection (1 person/truck)	-\$394,680	-\$463,320
Three Week Collection (2 people/truck)	-\$394,680	-\$463,320
Two Week Collection (1 person/truck)	-\$430,560	-\$505,440
Two Week Collection (2 people/truck)	-\$430,560	-\$505,440

Alternative C - Annual Trash Reduction Income

Schedule	Low Volume	High Volume
Monthly Collection (1 person/truck)	\$0	\$0
Three Week Collection (1 person/truck)	\$83,720	\$98,280
Three Week Collection (2 people/truck)	\$83,720	\$98,280
Two Week Collection (1 person/truck)	\$167,440	\$196,560
Two Week Collection (2 people/truck)	\$167,440	\$196,560

Alternative C - Annual Collection Costs

Schedule	Low Volume	High Volume
Monthly Collection (1 person/truck)	-\$188,735	-\$188,735
Three Week Collection (1 person/truck)	-\$207,000	-\$207,000
Three Week Collection (2 people/truck)	-\$1,467,000	-\$1,467,000
Two Week Collection (1 person/truck)	-\$1,467,000	-\$1,467,000
Two Week Collection (2 people/truck)	-\$3,598,000	-\$3,598,000

Alternative C - Present Worth Analysis

Schedule	Low Volume	High Volume
Monthly Collection (1 person/truck)	-\$8,078,873	-\$8,647,206
Three Week Collection (1 person/truck)	-\$7,809,504	-\$8,302,059
Three Week Collection (2 people/truck)	-\$19,285,458	-\$19,778,013
Two Week Collection (1 person/truck)	-\$21,755,736	-\$22,172,513
Two Week Collection (2 people/truck)	-\$38,705,671	-\$39,122,448

F - Cost Analysis Alternative C - Two New Transfer Stations Recyclables To Third Party

HIGH Recycled Material Price

Variables for HIGH Recycled Material Price	
HIGH Recycled Material Price (\$/ton) =	\$110

Alternative C - Capital Costs

Schedule	Low Volume	High Volume
Monthly Collection (1 person/truck)	-\$3,695,000	-\$3,695,000
Three Week Collection (1 person/truck)	-\$3,695,000	-\$3,695,000
Three Week Collection (2 people/truck)	-\$3,695,000	-\$3,695,000
Two Week Collection (1 person/truck)	-\$6,601,000	-\$6,601,000
Two Week Collection (2 people/truck)	-\$4,142,000	-\$4,142,000

Alternative C - Annual Recyclable Income

Schedule	Low Volume	High Volume
Monthly Collection (1 person/truck)	-\$119,600	-\$140,400
Three Week Collection (1 person/truck)	-\$131,560	-\$154,440
Three Week Collection (2 people/truck)	-\$131,560	-\$154,440
Two Week Collection (1 person/truck)	-\$143,520	-\$168,480
Two Week Collection (2 people/truck)	-\$143,520	-\$2,021,760

Alternative C - Annual Trash Reduction Income

Schedule	Low Volume	High Volume
Monthly Collection (1 person/truck)	\$0	\$0
Three Week Collection (1 person/truck)	\$83,720	\$98,280
Three Week Collection (2 people/truck)	\$83,720	\$98,280
Two Week Collection (1 person/truck)	\$167,440	\$196,560
Two Week Collection (2 people/truck)	\$167,440	\$196,560

Alternative C - Annual Collection Costs

Schedule	Low Volume	High Volume
Monthly Collection (1 person/truck)	-\$188,735	-\$188,735
Three Week Collection (1 person/truck)	-\$207,000	-\$207,000
Three Week Collection (2 people/truck)	-\$1,467,000	-\$1,467,000
Two Week Collection (1 person/truck)	-\$1,467,000	-\$1,467,000
Two Week Collection (2 people/truck)	-\$3,598,000	-\$3,598,000

Alternative C - Present Worth Analysis

Schedule	Low Volume	High Volume
Monthly Collection (1 person/truck)	-\$5,900,263	-\$6,089,707
Three Week Collection (1 person/truck)	-\$5,413,033	-\$5,488,811
Three Week Collection (2 people/truck)	-\$16,888,987	-\$16,964,765
Two Week Collection (1 person/truck)	-\$19,141,404	-\$19,103,515
Two Week Collection (2 people/truck)	-\$36,091,339	-\$52,932,939

APPENDIX G

ALTERNATIVE D – ONE TRANSFER STATION AT EXISTING FACILITY

G - Cost Analysis Alternative D - One Transfer Station At Existing City Facility

Assumptions Common To Scenarios C & D

Dual Stream Collection Volume of Recyclables (data - Section 5.2.1)

LOW Recyclable Volume (TPY) =	23,000
HIGH Recyclable Volume (TPY) =	27,000

Pick-Up Schedule Volume (Monthly Set-Out Collection*)

Assume a 4% increase in Dual Stream volume	
LOW Product Volume (TPY) =	23,920
HIGH Product Volume (TPY) =	28,080

Pick-Up Schedule Volume (Three Week Collection)

Assume a 10% increase in volume over monthly volume	
LOW Recyclable Volume (TPY) =	26,312
HIGH Recyclable Volume (TPY) =	30,888

Volume of Recyclables not put in Trash (Three Week Collection)

Recyclable Volume (3 wk) - Recyclables Volume (monthly)	
LOW Trash Reduction Volume (TPY) =	2,392
HIGH Trash Reduction Volume (TPY) =	2,808

Pick-Up Schedule Volume (Two Week Collection)

Assume a 20% increase in volume over monthly volume	
LOW Recyclable Volume (TPY) =	28,704
HIGH Recyclable Volume (TPY) =	33,696

Volume of Recyclables not put in Trash (Two Week Collection)

Recyclables Volume (2 wk) - Recyclables Volume (monthly)	
LOW Trash Reduction Volume (TPY) =	4,784
HIGH Trash Reduction Volume (TPY) =	5,616

Capital Costs

Cost to demolish equipment and modify existing MRF =	\$250,000
New Transfer Facility Equipment	\$131,000

Annual Costs

Transfer Facility Operating and Maintenance Costs (\$/ton) =	\$52
Trash Disposal Price (\$/ton) =	\$35

* Monthly refers to the schedule of the current program, mostly non-guaranteed with up-the-driveway service for households not on alleys.

G - Cost Analysis Alternative D - One Transfer Station At Existing City Facility

Annual Recyclable Income

Income from Recyclables

LOW Volume Price Income = $[(\text{LOW or HIGH Recycled Material Market Price}) / 2 - (\text{TF O\&M Cost})] \times (\text{Pick-up Schedule LOW Recyclable Volume})$

HIGH Volume Price Income = $[(\text{LOW or HIGH Recycled Material Market Price}) / 2 - (\text{TF O\&M Cost})] \times (\text{Pick-up Schedule HIGH Recyclable Volume})$

Trash Reduction Income

Trash Reduction Income = $(\text{LOW or HIGH Trash Reduction Volume}) \times (\text{Trash Disposal Price})$

Present Worth Analysis

See Calculation Page for Uniform Present Worth Factor (UPWF)

UPWF = 9.1079

Present Worth = $(\text{Sum of Capital Costs}) + [(\text{UPWF}) \times (\text{Sum of Annual Income} + \text{Annual Costs})]$

Alternative D - Capital Costs

Cost to demolish equipment and modify existing MRF = -\$250,000

New Transfer Facility Equipment = -\$131,000

Two Week (1 person/truck) Equipment = -\$2,906,000

Two Week (2 people/truck) Equipment = -\$447,000

Alternative D - Annual Costs

LOW Volume O&M Costs = In Annual Recyclable Income Formula

HIGH Volume O&M Costs = In Annual Recyclable Income Formula

Monthly Collection (1 person/truck) = -\$247,088

Three Week Collection (1 person/truck) = -\$271,000

Three Week Collection (2 people/truck) = -\$1,531,000

Two Week Collection (1 person/truck) = -\$1,531,000

Two Week Collection (2 people/truck) = -\$3,662,000

G - Cost Analysis Alternative D - One Transfer Station At Existing City Facility

LOW Recycled Material Price

Variables for LOW Recycled Material Price	
LOW Recycled Material Price (\$/ton) =	\$90

Alternative D - Capital Costs

Schedule	Low Volume	High Volume
Monthly Collection (1 person/truck)	-\$381,000	-\$381,000
Three Week Collection (1 person/truck)	-\$381,000	-\$381,000
Three Week Collection (2 people/truck)	-\$381,000	-\$381,000
Two Week Collection (1 person/truck)	-\$3,287,000	-\$3,287,000
Two Week Collection (2 people/truck)	-\$828,000	-\$828,000

Alternative D - Annual Recyclable Income

Schedule	Low Volume	High Volume
Monthly Collection (1 person/truck)	-\$167,440	-\$196,560
Three Week Collection (1 person/truck)	-\$184,184	-\$216,216
Three Week Collection (2 people/truck)	-\$184,184	-\$216,216
Two Week Collection (1 person/truck)	-\$200,928	-\$235,872
Two Week Collection (2 people/truck)	-\$200,928	-\$235,872

Alternative D - Annual Trash Reduction Income

Schedule	Low Volume	High Volume
Monthly Collection (1 person/truck)	\$0	\$0
Three Week Collection (1 person/truck)	\$83,720	\$98,280
Three Week Collection (2 people/truck)	\$83,720	\$98,280
Two Week Collection (1 person/truck)	\$167,440	\$196,560
Two Week Collection (2 people/truck)	\$167,440	\$196,560

Alternative D - Annual Collection Costs

Schedule	Low Volume	High Volume
Monthly Collection (1 person/truck)	-\$247,088	-\$247,088
Three Week Collection (1 person/truck)	-\$271,000	-\$271,000
Three Week Collection (2 people/truck)	-\$1,531,000	-\$1,531,000
Two Week Collection (1 person/truck)	-\$1,531,000	-\$1,531,000
Two Week Collection (2 people/truck)	-\$3,662,000	-\$3,662,000

Alternative D - Present Worth Analysis

Schedule	Low Volume	High Volume
Monthly Collection (1 person/truck)	-\$4,156,482	-\$4,421,704
Three Week Collection (1 person/truck)	-\$3,764,257	-\$3,923,390
Three Week Collection (2 people/truck)	-\$15,240,211	-\$15,399,344
Two Week Collection (1 person/truck)	-\$17,536,200	-\$17,589,245
Two Week Collection (2 people/truck)	-\$34,486,135	-\$34,539,180

G - Cost Analysis Alternative D - One Transfer Station At Existing City Facility

HIGH Recycled Material Price

Variables for HIGH Recycled Material Price	
HIGH Recycled Material Price (\$/ton) =	\$110

Alternative D - Capital Costs

Schedule	Low Volume	High Volume
Monthly Collection (1 person/truck)	-\$381,000	-\$381,000
Three Week Collection (1 person/truck)	-\$381,000	-\$381,000
Three Week Collection (2 people/truck)	-\$381,000	-\$381,000
Two Week Collection (1 person/truck)	-\$3,287,000	-\$3,287,000
Two Week Collection (2 people/truck)	-\$828,000	-\$828,000

Alternative D - Annual Recyclable Income

Schedule	Low Volume	High Volume
Monthly Collection (1 person/truck)	\$71,760	\$84,240
Three Week Collection (1 person/truck)	\$78,936	\$92,664
Three Week Collection (2 people/truck)	\$78,936	\$92,664
Two Week Collection (1 person/truck)	\$86,112	\$101,088
Two Week Collection (2 people/truck)	\$86,112	-\$1,752,192

Alternative D - Annual Trash Reduction Income

Schedule	Low Volume	High Volume
Monthly Collection (1 person/truck)	\$0	\$0
Three Week Collection (1 person/truck)	\$83,720	\$98,280
Three Week Collection (2 people/truck)	\$83,720	\$98,280
Two Week Collection (1 person/truck)	\$167,440	\$196,560
Two Week Collection (2 people/truck)	\$167,440	\$196,560

Alternative D - Annual Collection Costs

Schedule	Low Volume	High Volume
Monthly Collection (1 person/truck)	-\$247,088	-\$247,088
Three Week Collection (1 person/truck)	-\$271,000	-\$271,000
Three Week Collection (2 people/truck)	-\$1,531,000	-\$1,531,000
Two Week Collection (1 person/truck)	-\$1,531,000	-\$1,531,000
Two Week Collection (2 people/truck)	-\$3,662,000	-\$3,662,000

Alternative D - Present Worth Analysis

Schedule	Low Volume	High Volume
Monthly Collection (1 person/truck)	-\$1,977,872	-\$1,864,205
Three Week Collection (1 person/truck)	-\$1,367,786	-\$1,110,142
Three Week Collection (2 people/truck)	-\$12,843,740	-\$12,586,096
Two Week Collection (1 person/truck)	-\$14,921,869	-\$14,520,247
Two Week Collection (2 people/truck)	-\$31,871,804	-\$48,349,670

APPENDIX H

ALTERNATIVE E – REGIONAL MRF AT WAUWATOSA

H - Cost Analysis Alternative E - Single Stream at Wauwatosa Facility (Regional MRF)

Assumptions Common To Scenarios E & F

Pick-Up Schedule Volume (Monthly Set-Out Collection)

LOW Recyclable Volume (TPY) =	52,000
HIGH Recyclable Volume (TPY) =	60,000

Pick-Up Schedule Volume (3 Weeek Set-Out Collection*)

Assume a 10% increase in volume for Milwaukee's portion (44%)	
LOW Recyclable Volume (TPY) =	54,288
HIGH Recyclable Volume (TPY) =	62,640

Volume of Recyclables not put in City Trash (Three Week Collection)

Recyclables Volume (3 wk) - Recyclables Volume (monthly)*	
LOW City Trash Reduction Volume (TPY) =	2,288
HIGH City Trash Reduction Volume (TPY) =	2,640

Volume of Recyclables* (Two Week Collection)

Assume a 20% increase in volume for Milwaukee's portion (44%)	
LOW Recyclable Volume (TPY) =	56,576
HIGH Recyclable Volume (TPY) =	65,280

Volume of Recyclables not put in City Trash (Two Week Collection)

Recyclables Volume (2 wk) - Recyclables Volume (monthly)**	
LOW City Trash Reduction Volume (TPY) =	4,576
HIGH City Trash Reduction Volume (TPY) =	5,280

* The increase is all attributed to a change in Milwaukee collection changing percentage to 48%

** The increase is all attributed to a change in Milwaukee collection changing percentage to 52%

Capital Costs

Estimated City Share (44%) for Building and Property	\$2,640,000
Assume \$6,000,000 for building and site improvements	
City Share of Single Stream Processing Equipment =	\$2,992,880
Assume 44% of \$6,802,000 equipment	

Annual Costs

MRF Operating and Maintenance Costs (\$/ton) =	\$46
Trash Disposal Price (\$/ton) =	\$35

* Monthly refers to the schedule of the current program, mostly non-guaranteed with up-the-driveway service for households not on alleys.

H - Cost Analysis Alternative E - Single Stream at Wauwatosa Facility (Regional MRF)

Annual Recyclable Income

Income from Recyclables

LOW Volume Price Income = $\{[(\text{LOW or HIGH Recycled Material Market Price}) / 2 - (\text{MRF O\&M Cost})] \times (\text{Pick-up Schedule LOW Recyclable Volume})\} \times (\text{City Percentage})$

HIGH Volume Price Income = $\{[(\text{LOW or HIGH Recycled Material Market Price}) / 2 - (\text{MRF O\&M Cost})] \times (\text{Pick-up Schedule HIGH Recyclable Volume})\} \times (\text{City Percentage})$

Trash Reduction Income

Trash Reduction Income = $(\text{LOW or HIGH Trash Reduction Volume}) \times (\text{Trash Disposal Price})$

Present Worth Analysis

See Calculation Page for Uniform Present Worth Factor (UPWF) and Single Payment Present Worth Factor (SPPWF)

UPWF = 9.1079

SPPWF = 0.3264

Present Worth = $(\text{Sum of Capital Costs}) + [(UPWF) \times (\text{Sum of Annual Income} + \text{Annual Costs})] + [(SPPWF) \times (\text{Sum of the Salvage Values})]$

Alternative E - Capital Costs

Estimated City Share for Building and Property	-\$2,640,000
Salvage Value for City Share for Building and Property	\$1,320,000

City Share of Single Stream Processing Equipment =	-\$2,992,880
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Two Week (1 person/truck) Equipment =	-\$2,906,000
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Two Week (2 people/truck) Equipment =	-\$447,000
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Alternative E - Annual Costs

LOW Volume O&M Costs =	In Annual Recyclable Income Formula
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HIGH Volume O&M Costs =	In Annual Recyclable Income Formula
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Monthly Collection (1 person/truck)	-\$306,353
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Three Week Collection (1 person/truck)	-\$336,000
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Three Week Collection (2 people/truck)	-\$1,596,000
--	--------------

Two Week Collection (1 person/truck)	-\$1,596,000
--------------------------------------	--------------

Two Week Collection (2 people/truck)	-\$3,727,000
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H - Cost Analysis Alternative E - Single Stream at Wauwatosa Facility (Regional MRF)

LOW Recycled Material Price

Variables for LOW Recycled Material Price	
LOW Recycled Material Price (\$/ton) =	\$90

Alternative E - Capital Costs

Schedule	Low Volume	High Volume
Monthly Collection (1 person/truck)	-\$5,632,880	-\$5,632,880
Three Week Collection (1 person/truck)	-\$5,632,880	-\$5,632,880
Three Week Collection (2 people/truck)	-\$5,632,880	-\$5,632,880
Two Week Collection (1 person/truck)	-\$8,538,880	-\$8,538,880
Two Week Collection (2 people/truck)	-\$6,079,880	-\$6,079,880

Alternative E - Annual Recyclable Income

Schedule	Low Volume	High Volume
Monthly Collection (1 person/truck)	-\$22,880	-\$2,640
Three Week Collection (1 person/truck)	-\$26,058	-\$30,067
Three Week Collection (2 people/truck)	-\$26,058	-\$30,067
Two Week Collection (1 person/truck)	-\$29,420	-\$33,946
Two Week Collection (2 people/truck)	-\$29,420	-\$33,946

Alternative E - Annual Trash Reduction Income

Schedule	Low Volume	High Volume
Monthly Collection (1 person/truck)	\$0	\$0
Three Week Collection (1 person/truck)	\$80,080	\$92,400
Three Week Collection (2 people/truck)	\$80,080	\$92,400
Two Week Collection (1 person/truck)	\$160,160	\$184,800
Two Week Collection (2 people/truck)	\$160,160	\$184,800

Alternative E - Annual Collection Costs

Schedule	Low Volume	High Volume
Monthly Collection (1 person/truck)	-\$306,353	-\$306,353
Three Week Collection (1 person/truck)	-\$336,000	-\$336,000
Three Week Collection (2 people/truck)	-\$1,596,000	-\$1,596,000
Two Week Collection (1 person/truck)	-\$1,596,000	-\$1,596,000
Two Week Collection (2 people/truck)	-\$3,727,000	-\$3,727,000

Alternative E - Present Worth Analysis

Schedule	Low Volume	High Volume
Monthly Collection (1 person/truck)	-\$8,200,653	-\$8,016,309
Three Week Collection (1 person/truck)	-\$7,770,262	-\$7,694,565
Three Week Collection (2 people/truck)	-\$19,246,216	-\$19,170,519
Two Week Collection (1 person/truck)	-\$21,453,469	-\$21,270,274
Two Week Collection (2 people/truck)	-\$38,403,404	-\$38,220,209

H - Cost Analysis Alternative E - Single Stream at Wauwatosa Facility (Regional MRF)

HIGH Recycled Material Price

Variables for HIGH Recycled Material Price	
HIGH Recycled Material Price (\$/ton) =	\$110

Alternative E - Capital Costs

Schedule	Low Volume	High Volume
Monthly Collection (1 person/truck)	-\$5,632,880	-\$5,632,880
Three Week Collection (1 person/truck)	-\$5,632,880	-\$5,632,880
Three Week Collection (2 people/truck)	-\$5,632,880	-\$5,632,880
Two Week Collection (1 person/truck)	-\$8,538,880	-\$8,538,880
Two Week Collection (2 people/truck)	-\$6,079,880	-\$6,079,880

Alternative E - Annual Recyclable Income

Schedule	Low Volume	High Volume
Monthly Collection (1 person/truck)	\$205,920	\$237,600
Three Week Collection (1 person/truck)	\$234,524	\$270,605
Three Week Collection (2 people/truck)	\$234,524	\$270,605
Two Week Collection (1 person/truck)	\$264,776	\$305,510
Two Week Collection (2 people/truck)	\$264,776	\$305,510

Alternative E - Annual Trash Reduction Income

Schedule	Low Volume	High Volume
Monthly Collection (1 person/truck)	\$0	\$0
Three Week Collection (1 person/truck)	\$80,080	\$92,400
Three Week Collection (2 people/truck)	\$80,080	\$92,400
Two Week Collection (1 person/truck)	\$160,160	\$184,800
Two Week Collection (2 people/truck)	\$160,160	\$184,800

Alternative E - Annual Collection Costs

Schedule	Low Volume	High Volume
Monthly Collection (1 person/truck)	-\$306,353	-\$306,353
Three Week Collection (1 person/truck)	-\$336,000	-\$336,000
Three Week Collection (2 people/truck)	-\$1,596,000	-\$1,596,000
Two Week Collection (1 person/truck)	-\$1,596,000	-\$1,596,000
Two Week Collection (2 people/truck)	-\$3,727,000	-\$3,727,000

Alternative E - Present Worth Analysis

Schedule	Low Volume	High Volume
Monthly Collection (1 person/truck)	-\$6,116,765	-\$5,828,227
Three Week Collection (1 person/truck)	-\$5,396,903	-\$4,956,075
Three Week Collection (2 people/truck)	-\$16,872,857	-\$16,432,029
Two Week Collection (1 person/truck)	-\$18,773,969	-\$18,178,542
Two Week Collection (2 people/truck)	-\$35,723,904	-\$35,128,477

APPENDIX I

ALTERNATIVE F – REGIONAL MRF AT EXISTING FACILITY

I - Cost Analysis Alternative F - Regional MRF Existing City Facility

Assumptions Common To Scenarios E & F

Pick-Up Schedule Volume (Monthly Set-Out Collection*)

LOW Recyclable Volume (TPY) =	52,000
HIGH Recyclable Volume (TPY) =	60,000

Pick-Up Schedule Volume (3 Weeek Set-Out Collection)

Assume a 10% increase in volume for Milwaukee's portion (44%)	
LOW Recyclable Volume (TPY) =	54,288
HIGH Recyclable Volume (TPY) =	62,640

Volume of Recyclables not put in City Trash (Three Week Collection)

Recyclables Volume (3 wk) - Recyclables Volume (monthly)*	
LOW City Trash Reduction Volume (TPY) =	2,288
HIGH City Trash Reduction Volume (TPY) =	2,640

Volume of Recyclables* (Two Week Collection)

Assume a 20% increase in volume for Milwaukee's portion (44%)	
LOW Recyclable Volume (TPY) =	56,576
HIGH Recyclable Volume (TPY) =	65,280

Volume of Recyclables not put in City Trash (Two Week Collection)

Recyclables Volume (2 wk) - Recyclables Volume (monthly)**	
LOW City Trash Reduction Volume (TPY) =	4,576
HIGH City Trash Reduction Volume (TPY) =	5,280

* The increase is all attributed to a change in Milwaukee collection changing percentage to 48%

** The increase is all attributed to a change in Milwaukee collection changing percentage to 52%

Capital Costs

Cost to demolish equipment and modify existing MRF =	\$250,000
City Share of Single Stream Processing Equipment =	\$2,992,880
Assume 44% of \$6,802,000 equipment	

Annual Costs

MRF Operating and Maintenance Costs (\$/ton) =	\$46
Trash Disposal Price (\$/ton) =	\$35

* Monthly refers to the schedule of the current program, mostly non-guaranteed with up-the-driveway service for households not on alleys.

I - Cost Analysis Alternative F - Regional MRF Existing City Facility

Annual Recyclable Income

Income from Recyclables

LOW Volume Price Income = $\{[(\text{LOW or HIGH Recycled Material Market Price}) / 2 - (\text{MRF O\&M Cost})] \times (\text{Pick-up Schedule LOW Recyclable Volume})\} \times (\text{City Percentage})$

HIGH Volume Price Income = $\{[(\text{LOW or HIGH Recycled Material Market Price}) / 2 - (\text{MRF O\&M Cost})] \times (\text{Pick-up Schedule HIGH Recyclable Volume})\} \times (\text{City Percentage})$

Trash Reduction Income

Trash Reduction Income = $(\text{LOW or HIGH Trash Reduction Volume}) \times (\text{Trash Disposal Price})$

Present Worth Analysis

See Calculation Page for Uniform Present Worth Factor (UPWF)

UPWF = 9.1079

Present Worth = $(\text{Sum of Capital Costs}) + [(UPWF) \times (\text{Sum of Annual Income} + \text{Annual Costs})]$

Alternative F - Capital Costs

Estimated City Share for Building and Property	-\$250,000
City Share of Single Stream Processing Equipment =	-\$2,992,880
Two Week (1 person/truck) Equipment =	-\$2,906,000
Two Week (2 people/truck) Equipment =	-\$447,000

Alternative F - Annual Costs

LOW Volume O&M Costs =	In Annual Recyclable Income Formula
HIGH Volume O&M Costs =	In Annual Recyclable Income Formula
Monthly Collection (1 person/truck)	-\$247,088
Three Week Collection (1 person/truck)	-\$271,000
Three Week Collection (2 people/truck)	-\$1,531,000
Two Week Collection (1 person/truck)	-\$1,531,000
Two Week Collection (2 people/truck)	-\$3,662,000

I - Cost Analysis Alternative F - Regional MRF Existing City Facility

Variables for LOW Recycled Material Price

LOW Recycled Material Price (\$/ton) = \$90

Alternative F - Capital Costs

Schedule	Low Volume	High Volume
Monthly Collection (1 person/truck)	-\$3,242,880	-\$3,242,880
Three Week Collection (1 person/truck)	-\$3,242,880	-\$3,242,880
Three Week Collection (2 people/truck)	-\$3,242,880	-\$3,242,880
Two Week Collection (1 person/truck)	-\$6,148,880	-\$6,148,880
Two Week Collection (2 people/truck)	-\$3,689,880	-\$3,689,880

Alternative F - Annual Recyclable Income

Schedule	Low Volume	High Volume
Monthly Collection (1 person/truck)	-\$22,880	-\$2,640
Three Week Collection (1 person/truck)	-\$26,058	-\$30,067
Three Week Collection (2 people/truck)	-\$26,058	-\$30,067
Two Week Collection (1 person/truck)	-\$29,420	-\$33,946
Two Week Collection (2 people/truck)	-\$29,420	-\$33,946

Alternative F - Annual Trash Reduction Income

Schedule	Low Volume	High Volume
Monthly Collection (1 person/truck)	\$0	\$0
Three Week Collection (1 person/truck)	\$80,080	\$92,400
Three Week Collection (2 people/truck)	\$80,080	\$92,400
Two Week Collection (1 person/truck)	\$160,160	\$184,800
Two Week Collection (2 people/truck)	\$160,160	\$184,800

Alternative F - Annual Collection Costs

Schedule	Low Volume	High Volume
Monthly Collection (1 person/truck)	-\$247,088	-\$247,088
Three Week Collection (1 person/truck)	-\$271,000	-\$271,000
Three Week Collection (2 people/truck)	-\$1,531,000	-\$1,531,000
Two Week Collection (1 person/truck)	-\$1,531,000	-\$1,531,000
Two Week Collection (2 people/truck)	-\$3,662,000	-\$3,662,000

Alternative F - Present Worth Analysis

Schedule	Low Volume	High Volume
Monthly Collection (1 person/truck)	-\$5,701,724	-\$5,517,380
Three Week Collection (1 person/truck)	-\$5,219,096	-\$5,143,400
Three Week Collection (2 people/truck)	-\$16,695,050	-\$16,619,354
Two Week Collection (1 person/truck)	-\$18,902,304	-\$18,719,108
Two Week Collection (2 people/truck)	-\$35,852,239	-\$35,669,043

I - Cost Analysis Alternative F - Regional MRF Existing City Facility

HIGH Recycled Material Price

Variables for HIGH Recycled Material Price	
HIGH Recycled Material Price (\$/ton) =	\$110

Alternative F - Capital Costs

Schedule	Low Volume	High Volume
Monthly Collection (1 person/truck)	-\$3,242,880	-\$3,242,880
Three Week Collection (1 person/truck)	-\$3,242,880	-\$3,242,880
Three Week Collection (2 people/truck)	-\$3,242,880	-\$3,242,880
Two Week Collection (1 person/truck)	-\$6,148,880	-\$6,148,880
Two Week Collection (2 people/truck)	-\$3,689,880	-\$3,689,880

Alternative F - Annual Recyclable Income

Schedule	Low Volume	High Volume
Monthly Collection (1 person/truck)	\$205,920	\$237,600
Three Week Collection (1 person/truck)	\$234,524	\$270,605
Three Week Collection (2 people/truck)	\$234,524	\$270,605
Two Week Collection (1 person/truck)	\$264,776	\$305,510
Two Week Collection (2 people/truck)	\$264,776	\$305,510

Alternative F - Annual Trash Reduction Income

Schedule	Low Volume	High Volume
Monthly Collection (1 person/truck)	\$0	\$0
Three Week Collection (1 person/truck)	\$80,080	\$92,400
Three Week Collection (2 people/truck)	\$80,080	\$92,400
Two Week Collection (1 person/truck)	\$160,160	\$184,800
Two Week Collection (2 people/truck)	\$160,160	\$184,800

Alternative F - Annual Collection Costs

Schedule	Low Volume	High Volume
Monthly Collection (1 person/truck)	-\$247,088	-\$247,088
Three Week Collection (1 person/truck)	-\$271,000	-\$271,000
Three Week Collection (2 people/truck)	-\$1,531,000	-\$1,531,000
Two Week Collection (1 person/truck)	-\$1,531,000	-\$1,531,000
Two Week Collection (2 people/truck)	-\$3,662,000	-\$3,662,000

Alternative F - Present Worth Analysis

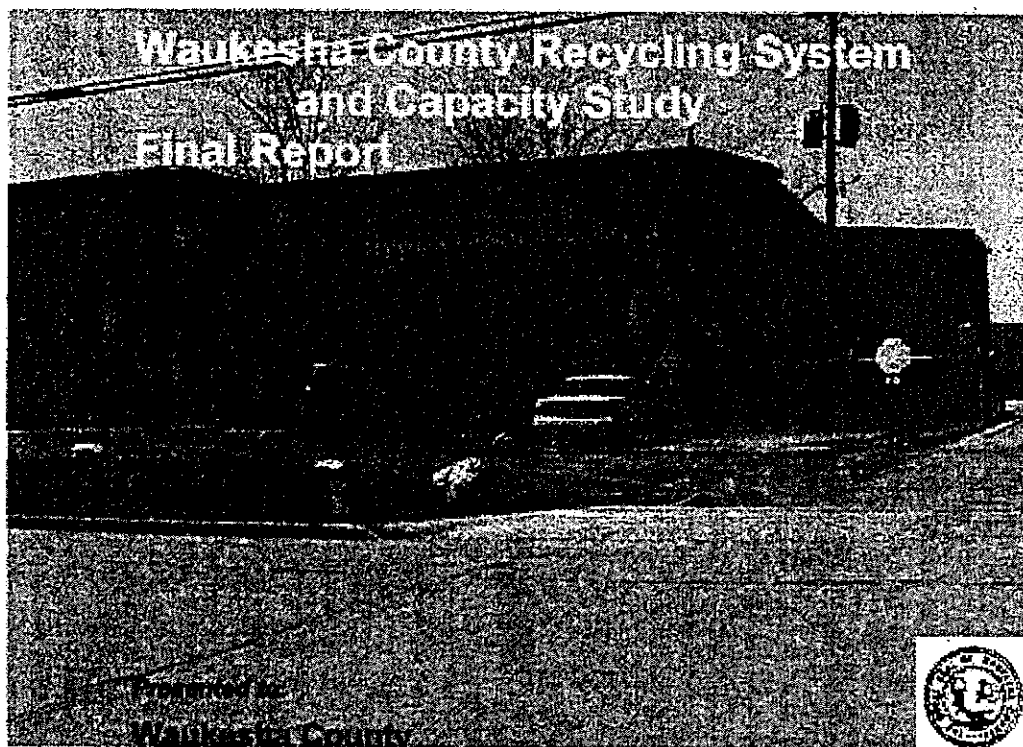
Schedule	Low Volume	High Volume
Monthly Collection (1 person/truck)	-\$3,617,836	-\$3,329,298
Three Week Collection (1 person/truck)	-\$2,845,738	-\$2,404,909
Three Week Collection (2 people/truck)	-\$14,321,692	-\$13,880,863
Two Week Collection (1 person/truck)	-\$16,222,803	-\$15,627,377
Two Week Collection (2 people/truck)	-\$33,172,738	-\$32,577,312

APPENDIX J

REFERENCES AND RELATED INFORMATION ON COST ESTIMATING

Waukesha Study

Waukesha Study = Waukesha County Recycling System and Capacity Study Final Report – September 2007



Prepared by:

RRT Design & Construction



GERSHMAN, BRICKNER & BRATTON, INC.

September, 2007

.....
Innovation

• **Performance**

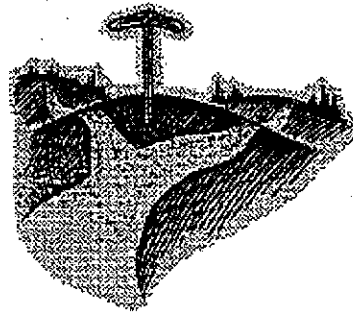
• **Leadership**

Waukesha Presentation

Waukesha County Recycling

Looking Ahead

Perry Lindquist, Land Resources Manager
Waukesha County Dept. of Parks & Land Use



July 27, 2009
Milwaukee Recycling Task Force

Recycling Facility Study City of Milwaukee, Wisconsin Draft No. 2



Site:
Materials Recovery Facility
1313 West Mount Vernon Avenue
Milwaukee, WI 53233

Prepared for:
City of Milwaukee
Zeidler Municipal Building
841 North Broadway, Room 620
Milwaukee, WI 53202

Prepared by:
Earth Tech AECOM
4135 Technology Parkway
Shenoygan, WI 53083

October 2008

Earth Tech AECOM Project No. 109140

Table 1-9: Summary of Projected Recyclables for Processing, 2010-2025

Municipal Group	Tonnages Projected for 2010 (tpy)	Tonnages Projected for 2015 (tpy)	Tonnages Projected for 2020 (tpy)	Tonnages Projected for 2025 (tpy)
Dual-Stream Project Requirements:				
Waukesha Co. Participating Municipalities(1)	24,452	25,080	25,724	26,575
Single-Stream Project Requirements:				
Waukesha Co. Participating Municipalities (2)	30,565	31,350	32,155	33,219
Waukesha Co. Non-Participating Municipalities (2)	12,197	12,642	13,089	13,638
City of Milwaukee (3)	28,354	28,723	29,056	29,015
City of Wauwatosa (3)	4,944	4,971	4,992	4,945
Total - All Entities as Regional Single-Stream MRF	76,060	77,686	79,292	80,817
Total w/o Non-Participating Municipalities	63,863	65,044	66,203	67,179

(1) From Table 1-5

(2) From Table 1-6

(3) From Table 1-8

SS Pros (Collection) vs. Cons (MRF Impacts)

Single Stream Collection Cost Savings	Single Stream MRF Impacts
• Automation decreases personnel costs (workers comp claims, etc.)	• Increases MRF labor and capital costs
• Large cart allows Every Other Week collection of recyclables	• Increases residue level at MRF (non-recyclables)
• Flexibility: Can use collection vehicles to reduce capital & trips to the MRF, more households per route - faster collection	• Potential for decreased quality of processed recyclables (glass/paper)
• Higher rates of recycling & reduced landfill disposal costs - easier for the general public to implement (no sorting)	• Higher recyclable volumes to process • Increased net cost per ton processing

All of these factors were built into the economic analysis

Collection Trends/Pressures

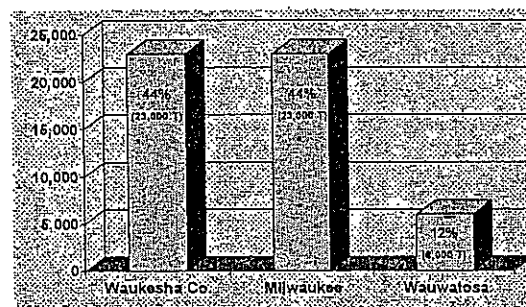
- Private haulers are pushing for Single Stream collection to save money
 - Trend is playing out nationwide
 - >100 SS MRFs (25% in 2008)
 - Locally, only 1 of 3 private haulers (Veolia) still offers dual stream collection
 - Waste Mgt. and Johns already switched to SS
 - 3 participating communities without hauling contracts already switched to SS (problem)
- More communities want to switch to SS

Scenarios for Future Projections:

- Tonnage
 - Participating county municipalities (25)
 - Adding non-participating communities (12)
 - Adding Milwaukee & Wauwatosa
- Single vs. Dual Stream



Annual Tons Recycled (52,000 Tons)*



*Assumes 2008 data (no other communities included with City of Milwaukee data)


Key Study Findings & Recommendations

1. Switching to Single Stream is strongly recommended
 - Pros far outweigh the cons
 - Could save partic. communities >\$700,000/year in collection & disposal costs
 - 10% or \$12.36/HH/Year savings (minus cart \$)
 - Needs all new MRF equipment/more space
2. Recycling tons increase considerably with a Single Stream system - assumed + 25%
 - In-county data shows 45% increase/capita

Key Study Findings & Recommendations (continued)


3. Doubling tonnage greatly Improves the economics of a Single Stream MRF
 - 2 shifts = much faster return on investment
 - New site needed to double tonnage
4. National MRF data shows:
 - SS paper/fiber is equally marketable
 - Increased residue from SS depends on public education (projected increase from 3% to 10%)

Mil. would see about 10% increase because

The body of evidence indicates that single stream recycling is here to stay and should be considered the state of the art when properly designed and operated. This conclusion is reached because of its obvious advantages to the user, the increase in collected tons, and that collection cost savings can be significant. 

Section 2.h - Basis for Future MRF Sizing

For purposes of modeling projections required in Section 3 of the Project Report the following assumptions will be used:

- 
- If municipalities switch to a single stream system, and institute state of the art collection systems along with appropriate public education, the amount of materials collected can increase by 20% to 30%. For purposes of modeling 25% will be used for Waukesha County participating municipalities and for the City of Wauwatosa. For the City of Milwaukee, 10% will be used as the city is already using a large cart for collection of dual stream recyclables (split cart) and therefore tonnages would not be expected to grow by 25%.
 - In recent years the Waukesha MRF has been generating between 3 and 3.5% residue. The evidence suggests that a state of the art well managed single stream collection and public education program can result in total residue levels of well under 10%. For purposes of modeling, 10% will be used.

Such an expansion would cost approximately \$3.0 million for the building and site work in both cases, not including cost of additional property. Adding higher capacity Dual Stream processing capability along with an OCC screen would cost approximately \$3.5 million, bringing the total cost to an estimated \$6.5 million. Adding Single Stream capability and reconfiguring the current process lines would cost approximately \$4.0 million, bringing the total to an estimated \$7.0 million. These options would serve the needs of the Participating Municipalities as well as, potentially, the Non-Participating Municipalities.

Due to space and site limitations, neither of these options could serve as a full regional MRF with the projected tonnages of all Participating and Non-Participating Municipalities, in addition to those from Wauwatosa and Milwaukee.

The following tables 3.a.3-1 and 3.a.3-2 present the capital costs and a cost benefit matrix for the expansion of the existing facility:

Table 3.a.3-1: Expansion of Existing Facility Estimated Capital Costs (2007 Dollars)

	Equipment and Systems	Building Costs	Total Costs
Dual Stream	\$3,500,000	\$3,000,000	\$6,500,000
Single Stream	\$4,000,000	\$3,000,000	\$7,000,000



Table 3.a.3-2 : Expanded MRF Cost Benefit Matrix-Median Revenues

Operating Scenario	Year	Annual Capital Cost (1)	Annual Operating Costs (2)	Net Materials Sales Revenue Projection (3)	Est. Yearly Income (Deficit)	Per Ton Income (Deficit) (4)
		Ref. A	Ref. B	Ref. C	Total C: (A+B)	
Dual Stream Participating Only	2010	\$626,225	\$1,050,351	\$1,806,783	\$130,207	\$5.32
Single Stream Participating Only	2010	\$674,396	\$1,345,614	\$2,139,611	\$119,601	\$3.91

(1) Based on a Table 3.a.3-1 with a 15 year financing @ 5% interest rate

(2) Based on Table 3-5

(3) Based on Table 3-8 Materials Net Revenue Projection

(4) Based on Est. Yearly Income divided by the MRF tonnage estimates presented in Table 3-3 and 3-4

US Inflation Calculator

FOOTNOTE #5

Easily find how the buying power of the US dollar has changed from 1913-2009; get inflation rates, charts and inflation news.

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The US Inflation Calculator measures the buying power of the dollar over time. To begin, just enter any two dates between 1913 and 2009, an amount, and click 'Calculate'.

Inflation Calculator

If in (enter year)

I purchased an item for \$

then in (enter year)

that same item would cost: **\$3,640,967.58**

Rate of inflation change: **4.0%**

How calculator works. Always uses latest available CPI data!

Consumer prices up 0.7% in June, inflation falls 1.4% in year

July 15, 2009 · Filed Under [Inflation](#), [Inflation Rates](#) · [Comment](#)

U.S. consumer prices jumped in June as higher energy costs — gasoline prices in particular — drove up the

3.b.3 New Facility Dual and Single Stream Capital Costs

For purposes of modeling and projections, Table 3-9 summarizes the estimated capital costs for the recommended dual and single stream facility.

Table 3-9: Estimated Capital Costs (2007 Dollars)

	Equipment and Systems	Building Costs	Site Improvement Costs	Total Costs
Dual Stream	\$3,500,000	\$3,500,000	\$750,000	\$7,750,000
Single Stream	\$4,000,000	\$3,500,000	\$750,000	\$8,250,000

Note: These costs include engineering on a green field site not requiring extensive site work or foundation piling, excluding land purchase.

3.b.4 New Facility Dual and Single Stream Cost Benefit Analysis

Tables 3-10 and 3-11 on the following page summarizes the economics of developing either a dual or single stream MRF in Waukesha County for the six different operating scenarios in years 2010, 2015, 2020 and 2025. Cases are presented for low, high, and median material revenues to illustrate the effect of material prices on the economics.

These numbers do not include any revenue share or service fee payments to or from a potential third party operator. They represent the projected costs and revenues associated with building, paying for and operating a dual or single stream MRF in Waukesha County at various tonnage levels over a 15-year period ending in 2025. Clearly, the assumption that all costs will escalate at an annual 3% rate combined with the further assumption that secondary materials revenues will, over time, have a non escalating average strongly affects the results of this analysis. It causes the MRF in lower tonnage operating scenarios to be in a net deficit operating mode during the later years of its life. Of course, higher tonnages, as expected, raise the overall return of any MRF. No profits for a third party operator are included in costs and payments to or from a potential operator and/or sharing of revenue is not calculated. The analysis above, however, provides the County a framework to evaluate its options and select the contract structure most in its advantage.

What is most important under any scenario of MRF development is for the County to determine what tonnages would be made available by local municipalities. The Project Team's recommendations are included in Section 5 of this Report.

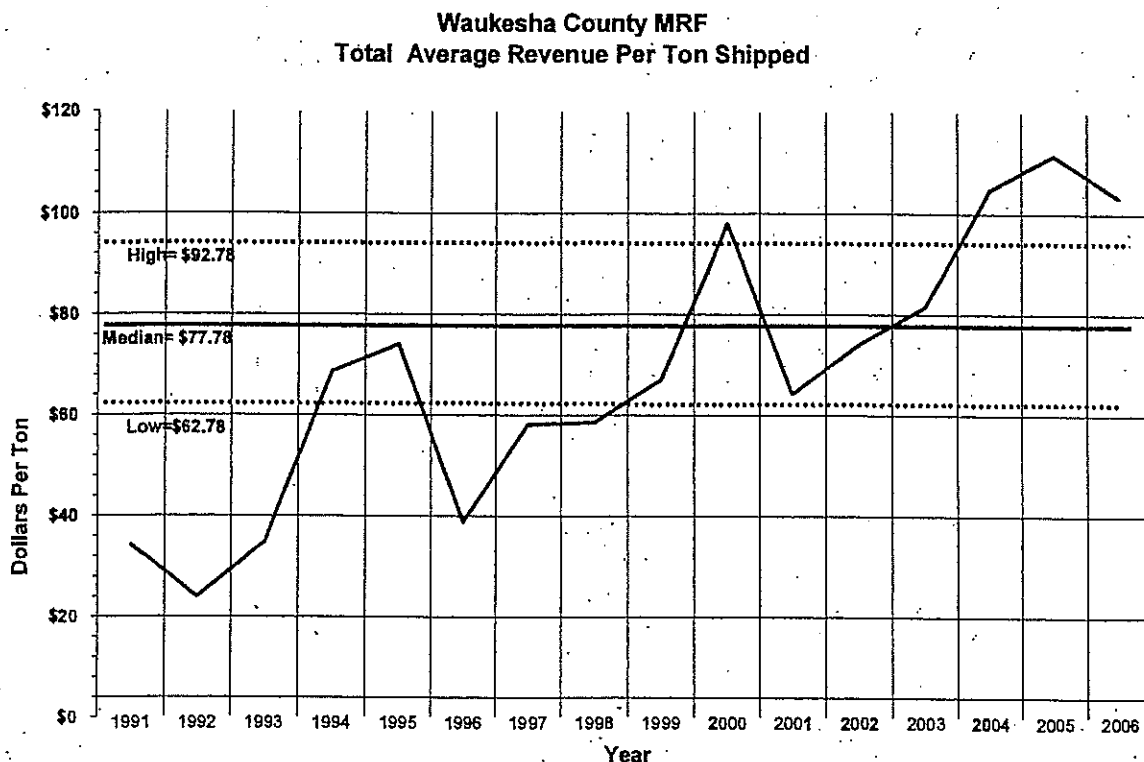
Table 3-5 : Projected MRF Operating Costs - Dual Stream vs. Single Stream

DUAL STREAM MRF				SINGLE STREAM MRF			
Operating Scenario	Year	Annual O&M Cost	Per Ton Operating Cost	Operating Scenario	Year	Annual O&M Cost	Per Ton Operating Cost
Participating	2010	\$ 1,050,351	\$ 42.96	Participating	2010	\$ 1,345,614	\$ 44.02
	2015	\$ 1,206,698	\$ 48.11		2015	\$ 1,539,199	\$ 49.10
	2020	\$ 1,396,262	\$ 54.28		2020	\$ 1,782,981	\$ 55.45
	2025	\$ 1,617,853	\$ 60.88		2025	\$ 2,068,875	\$ 62.28
Participating & Non-Participating	2010	\$ 1,272,078	\$ 34.71	Participating & Non-Participating	2010	\$ 1,620,057	\$ 37.89
	2015	\$ 1,462,762	\$ 38.78		2015	\$ 1,863,500	\$ 42.36
	2020	\$ 1,695,903	\$ 43.69		2020	\$ 2,162,426	\$ 47.79
	2025	\$ 1,969,541	\$ 48.98		2025	\$ 2,514,158	\$ 53.66
Participating, Non-Participating, Wauwatosa, Milwaukee	2010	\$ 2,140,086	\$ 32.24	Participating, Non-Participating, Wauwatosa, Milwaukee	2010	\$ 2,791,624	\$ 36.70
	2015	\$ 2,457,636	\$ 36.24		2015	\$ 3,206,164	\$ 41.27
	2020	\$ 2,850,166	\$ 41.17		2020	\$ 3,713,494	\$ 46.83
	2025	\$ 3,293,953	\$ 46.69		2025	\$ 4,300,199	\$ 53.21

3.b.2 New Facility Dual and Single Stream Expected Revenues

Figure 3-1 depicts the actual average dollars per ton received from the sale of all commodities from the Waukesha County MRF 1991-2006.

Figure 3-1



Over this period of time, 292,559 tons of various commodities have been sold resulting in total revenues of \$21,372,917. This equates to an average per ton value of \$73.06 and a median value of \$77.78 per ton. The high and low figures used in modeling potential revenue scenarios represent a generalized market range (+/- \$15/ton) for recyclable materials experienced by the county program during the past 10 years. The median, the high and low generalized market ranges are used to illustrate the effect of market prices upon facility operating parameters. The following table 3-6 summarizes these values.

Table 1: Typical Equipment Life Expectancy

Equipment	Life Expectancy in Years
Source of supply	
Intake Structures	35 – 45
Wells and Springs	25 – 35
Galleries and Tunnels	30 – 40
Transmission mains	35 – 40
Pumping Plants	
Structures	30 – 60
Pumping Equipment	10 – 15
Treatment Plants	
Structures	30 – 60
Equipment	10 – 15
Chlorination Equipment	10 – 15
Transmission/Distribution	
Structures	30 – 60
Reservoirs and Tanks	30 – 60
Mains & Distribution Pipes	35 – 40
Services	30 – 50
Valves	35 – 40
Backflow Prevention Valves	35 – 40
Blow-off valves	35 – 40
Meters	10 – 15
Hydants	40 – 60
General Plant	
Structures	30 – 40
Electrical Systems	7 – 10
Equipment	10 – 15
Transportation Equipment	10
Computers	5
Stores equipment	10
Lab/Monitoring Equipment	5 – 7
Tools and Shop Equipment	10 – 15
Landscaping/Grading	40 – 60
Power operated equipment	10 – 15
Communications equipment	10

FOOTNOTE #10

The highest tonnage scenarios modeled here for both a single and dual stream tonnage would be the participating plus the non-participating municipalities in a single shift. In the year 2025 the dual stream facility would need to be able to process, just over 14 tons per hour of fiber and just over 5 tons per hour of commingled containers. The Single Stream facility would need to process approximately 23 tons per hour of total material with almost 17 being fiber and almost 6 being commingled. Based upon these calculations, we recommend that the design basis for a Dual Stream MRF be 17.5 tons per hour of fiber and 7.5 tons per hour of commingled containers. The design basis for a Single Stream MRF should be 25 tons per hour total materials, with 17.5 tons being fiber and 7.5 tons being commingled. Note that "tons per hour" design is the same for both systems. It is assumed that additional materials captured by Single Stream collection would be processed during a second shift.

Because either of the Regional MRF scenarios requires two-shift processing, any design must provide a tipping floor capable of storing materials received during normal collection hours and processed during a second shift. If the County expects the facility to operate as a regional MRF, up to 500 tons of tipping floor storage could be required by the year 2025.

3.b.1 New Facility Dual and Single Stream Operating Costs

For each of the six operating scenarios, the primary factor to operating costs over time is inflation. All operating costs have been modeled using an inflation factor of 3% per year. Over the 15-year life of the projected new MRF, this has a very measurable effect. We believe this is probably the worst case. A secondary effect on operating costs is tonnage. Per Section 1, the tonnage levels of each operating scenario changes as a result of projected population changes over time.

Single Stream operating costs are higher than Dual Stream costs. This is primarily due to the increased levels of residue in the single stream material resulting in additional labor to pre-screen incoming recyclables. Also, additional quality control personnel are needed to sort any fiber or containers that the screens do not automatically sort into the proper screen. Because of the additional screening systems required to sort fiber from containers, Single Stream Systems are more costly resulting in higher amortization costs. Single Stream systems affect labor needs in different ways; they create the need for additional labor for quality control while reducing labor relative to a Dual Stream system by automating the removal of both mixed broken glass and residue. The net effect is generally that Single Stream systems require additional personnel when compared to technologically comparable Dual Stream Systems.

While the capital costs associated with various hourly throughputs within a fairly narrow range are mostly constant, operating costs are not. Per ton Operations and Maintenance costs vary substantially in the same facility at different throughput levels. Similarly, dual and single stream operating costs also vary. Attached to this report as Appendix F are the detailed operating cost worksheets for the proposed MRF for the six operating scenarios and years, 2010, 2015, 2020, and 2025. These costs are summarized in the attached table 3-5.

MRF Equipment Pricing Data

Pirrung, Don

From: Meyers, Rick [rick.meyers@milwaukee.gov]
Sent: Thursday, August 13, 2009 12:33 PM
To: Haygood, Jill E.
Cc: Pirrung, Don
Subject: RE: Single Stream equipment cost numbers

Thanks, Jill. I have copied Don on this.
Don, if you don't get what you need, let me or Jill know. Thanks.
-Rick

From: Haygood, Jill E. [mailto:HaygooJE@co.outagamie.wi.us]
Sent: Thursday, August 13, 2009 11:46 AM
To: Meyers, Rick
Subject: Single Stream equipment cost numbers

Rick

FYI—Phil Stecker my supervisor is working with Don Piurring, a consultant I assumed you hired to get info. on pricing of single stream equipment. I hope you get all the info. you need in a timely manner, if not give me a call.

The basics of our system

BHS (Bulk Handling Systems)
Equipment Cost approximately 7.7 Million
Building Expansion 2.2 Million
25 Tons/Hour System

Process 50,000 tons annually (Residential Material from Brown, Outagamie, Winnebago), one shift 7:00am-3:30pm.

Hope this helps.

Jill Haygood
Outagamie County Recycling Coordinator
(920) 832-4710
Haygooje@co.outagamie.wi.us
"Live simple so others may simply live"



Sei

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New BHS Single Stream System Installed at Wisconsin MRF

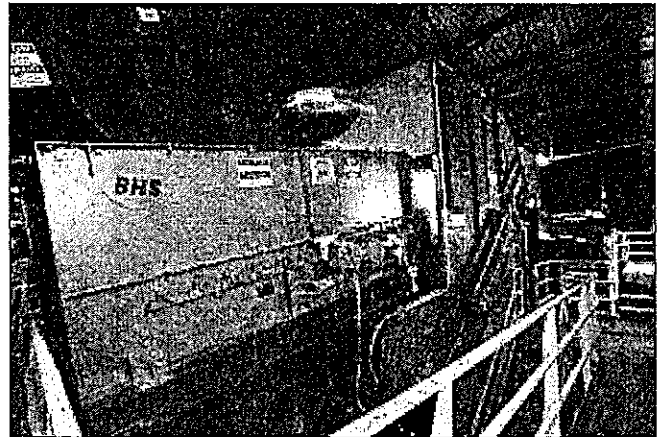
BHS has completed the installation of a state-of-the-art 25 tph single stream sorting system at the new Material Recovery Facility (MRF) in Outagamie County, Wisconsin. The MRF is a joint effort of three counties – Brown, Outagamie, and Winnebago – and was built to process material from the new single stream program developed by the three counties. The program is expected to generate greater volumes of recyclable materials and divert these materials from landfill.

The three county single stream program combines paper with plastic, glass and metal recyclables. Phil Stecker, Director of Solid Waste for Outagamie County, said the new MRF launches a new era of recycling for 500,000 people in more than 60 Brown-Outagamie-Winnebago communities. He hopes the new program will reduce complications for residents and encourage greater community participation in recycling.

The Outagamie County MRF sets the new standard for single stream processing, incorporating the latest in screening, optical, and air separation technologies. The BHS single stream system is designed to maximize the recovery of marketable commodities, yielding minimal residual material and reducing disposal costs. Designed, manufactured and installed by BHS, the system focuses on the reduction of operating costs by optimizing integrated processes to emphasize mechanization and the extraction of recoverable materials on the first "pass". As a result, the products produced by the system are high in quality, the cost to process material is low, and the capture rate of high value materials is virtually 100% with extremely low residue values.

As reported by the Appleton Post Crescent, the approval of the facility by the Outagamie County Board of Supervisors will allow the cost of the new facility to be shared between Brown, Outagamie and Winnebago Counties, all of which currently participate in a tri-county agreement for solid waste and recycling processing. Moving recycling from the dual stream system, in which paper is collected separately, to a single stream collection is another way the tri-county agreement best meets the needs of the region.

BHS designs, manufactures and installs processing systems to efficiently extract recoverable materials from waste streams, thus minimizing residual volumes sent to landfills and preserving precious natural resources through demonstrated carbon footprint reduction capabilities. The Eugene, Oregon USA based company is the leading supplier of processing systems for the solid waste, recycling, forest products and power generation industries and continues to develop new generation products and systems, while adding to an extensive list of patented technologies.



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1040 Arrowsml
Tel: 541.485.0999 866.688

Purchasing Division

County Administration Building
300 Monroe Avenue NW
Grand Rapids, MI 49503-2289, USA
Phone: (616) 632-7720
Fax: (616) 632-7715
e-mail: purchasing@kentcountymi.gov

Kent County Purchasing is a division of the Fiscal Services Department. The Purchasing Division's primary responsibility is to serve the departments of Kent County in a timely, efficient, and cost-effective manner while complying with the federal, state and local laws and regulations of the Board of Commissioners.

The Division operates with the best interest of the tax paying public in mind and is held to the highest professional standards. The National Association of Purchasing Managers (NAPM) lists 12 principles or standards that purchasing professionals should follow. The Kent County Purchasing Division follows these standards as well as the policies established by the Board of Commissioners.

The Division encourages broad-based participation through a fair and open competitive process.

From: Dennis Kmiecik
To: Brinks, Calvin
Date: 8/7/2009 11:54 AM
Subject: Cal,

Cal,

Here is the breakdown for the new MRF:

Building: \$6,388,296.50
Equipment: \$4,727,185.00
Baler: \$478,250.00
Construction Management: \$303,144.27
Land: (5 acres) na

Total\$11,896,875.77

Dennis

Dennis Kmiecik, P.E.
Dept. of Public Works - Kent County, MI
PH 616-336-4369 FX 616-336-3338

This message has been prepared on resources owned by Kent County, MI.
It is subject to the Acceptable Use Policy of Kent County.

MRF Equipment Vendor and Trade References

Jerry Flickinger
Equipment Sales Manager
JWR Inc.
PO box 356
Johnson Creek WI 53038
Cell Phone: 920-988-0538
Office Phone: 888-699-2848
Office Fax: 920-699-2847
Website: www.jwrinc.net

Jerry Flickinger provided cost information on Single Stream processing equipment.

Matz, Paul

From: Jerry Flickinger [jerry@jwrinc.net]
Sent: Friday, August 14, 2009 9:23 AM
To: Matz, Paul
Subject: RE: Automation Question

Hi Paul,

Sorry for the delay in getting back to you on this. Here is what I have.

Estimated cost for the following equipment that will process 20 tons per hour would be \$6,000,000 to \$7,000,000. This would require a second shift if they achieve the 80,000 ton level.

Infeed metering hopper for bulk loading of materials.

Main infeed conveyor.

Pre-sort station.

Trommell screen for glass and fines.

OCC screen.

Three Ballistic Separators. (These units are used to separate paper, containers, and fines.) Optical sort for both fiber and plastic.

Shaker conveyor for additional removal of fines and broken glass.

Magnet for removal of steel cans and other metals.

Eddy current separator for aluminum.

All related platforms, railings, stairs, and sorting station conveyors.

In addition to this, estimated mechanical installation costs will be right at 15% of the final total equipment cost. Estimated electrical installation costs will run right at 10% of the equipment total.

At this volume, I would recommend a 2 baler system, one for fiber, and one for containers. Both machines would be able to crossover and process the other materials in emergencies so this gives you a back up if one baler is down, and would not cost a lot more than the one huge baler it would take to handle this volume. The balers will add an additional \$800,000 including installation.

Estimated staffing for this system is 26 on the sorting stations, plus another 5 to 7 on rolling stock.

Estimated minimum building size to accommodate this equipment is 200' by 300'.

As for life span, that is a VERY tricky question. It is so dependent on the volume and cleanliness of the incoming material, and the quality of maintenance that is done that it's hard to estimate. IF it is maintained properly, 10 to 12 years is not out of the question, but in those 10 to 12 years you would need to figure on replacing some conveyor belts and drives, relining balers, and rebuilding cylinders.

I hope this gives you what you need. Call me if you have any questions.

-----Original Message-----

From: Matz, Paul [mailto:Paul.Matz@aecom.com]
Sent: Wednesday, August 12, 2009 1:23 PM
To: Jerry Flickinger
Subject: RE: Automation Question

Jerry,

Just checking in...Do you plan to send me any type of budget costs?

One additional question:

If you were to put a time estimate on the life span of the MRF equipment what would it be? If I had to make a educated guess I would say that it is 10-15 years.

Matz, Paul

From: Matz, Paul
Sent: Friday, August 07, 2009 9:35 AM
To: 'Jerry Flickinger'
Cc: Pirrung, Don
Subject: RE: Compactor Information

Jerry:

Thanks for the follow-up phone call.

As we discussed, I am currently working on a project for the City of Milwaukee.

The city is in the process of evaluating their current recycling capabilities and their future options. AECOM has been hired to develop a report that summarizes their options.

The report that we are writing is **not** intended to be a detailed cost study. The cost data that we will document in the report will provide the city with budget numbers, so that they can evaluate which options they should pursue in more detail. This is **not** a formal Request for Quote. Without going into great detail, their options are:

1. Build a new Single Stream MRF for their recyclables only
2. Partner with some of the surrounding communities and build a new Single Stream MRF for a larger volume of recyclables
3. Build a new Transfer Facility and continue to send their recyclables to a privately owned MRF

To that end I would like to request your assistance with "budget numbers" for the first two options. The figures presented should be for the installed cost of all of the "process equipment". These numbers can be presented in a range, a unit price, or whatever format makes you the most comfortable to convey this type of data. I recognize that there are a lot of variables so let me bracket your estimate with some assumptions.

Assumptions

- Assume current "state of the art" for a single stream system. This would include all of the latest optical sorting for plastics, material detection, etc.
- Assume that a new facility would be constructed in the existing facility but all the necessary modifications would be made so that necessary space, grading, building, utilities, etc. would be available, and your firm would participate in the design of the facility.
- Use current pricing. We reorganize that these prices are time, and material cost sensitive.
- The design capacity of the facility shall be as follows:

Option 1	30,000 tons/year
Option 2	81,000 tons/year

- The make up of the recyclable materials is:

<u>Commodity</u>	<u>Composition %</u>
Newspaper #8 (including phone books and magazines)	61.17
Corrugated	7.58
Office Mix Paper	0.59
FE / Tin	2.58
Aluminum	1.49
HDPE Natural	1.81
HDPE Colored	1.52
PET	4.70
Green Glass	2.13

8/25/2009

Amber Glass	0.78
Flint Glass	1.4
Mixed Glass	14.17
Scrap Metal	.04

- The recyclables will come in either compacted in transfer vehicles or in the collection trucks themselves.

Any additional information that you can provide like brochures, generic drawings, material lists, building/site layout requirements, operating cost data, etc. would be greatly appreciated. It is my intention to include this letter and a copy of all documentation that you provide in an Appendix to the report.

I will be compiling the data that over the next week so I would like to have you numbers no later the COB in Wednesday August 12.

Please feel free to contact me if you have any questions.

Thank you in advance for your assistance.

Paul Matz

Project Engineer

AECOM Environment

D: 920.451.2751 C: 920.698.2444

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 Please consider the environment before printing this e-mail

From: Jerry Flickinger [mailto:jerry@jwrinc.net]

Sent: Thursday, August 06, 2009 4:12 PM

To: Matz, Paul; Mike Shawgo

Cc: David Wolf

Subject: RE: Compactor Information

Hello Paul;

As Mike has mentioned, JWR offers service and sales of all types of recycling equipment including balers, conveyors, shredders, and sorting equipment. If the new project may involve any of these types of equipment, we would greatly appreciate the opportunity to speak with you. I have been selling recycling equipment for over 10 years and JWR has been servicing this kind of equipment for over 25 years.

Please let me know if there is anything we can help you with.

Jerry Flickinger
Sales Manager
JWR Inc.

You can visit us on the web at www.jwrinc.net

From: Matz, Paul [mailto:Paul.Matz@aecom.com]

Sent: Thursday, August 06, 2009 10:14 AM

To: Mike Shawgo

Cc: Jerry Flickinger; David Wolf

Subject: Compactor Information

Mike,
Got your e-mail.
Thanks for the information and the follow-up.
I will use \$150K as an installed budget price for a compactor.

8/25/2009

I look forward to receiving the Sebright information.


Paul Matz

Project Engineer

AECOM Environment

D: 920.451.2751 C: 920.698.2444

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From: Mike Shawgo [mailto:mishawgo@steppequipment.com]

Sent: Thursday, August 06, 2009 9:52 AM

To: Matz, Paul

Cc: Jerry Flickinger; David Wolf

Subject: City of Milwaukee

Paul...I will get you some info from Sebright, Jerry and Dave at JWR are my expert resources on the baler and conveyor end. Please stay in touch...Mike

Sincerely,

Mike Shawgo

General Manager

Stepp Equipment Company

N58 W14810 Shawn Circle

Menomonee Falls WI 53051

262-252-5500 p

262-252-5519 f

414-881-0336 c

Visit our recently updated website @ www.steppequipment.com!

8/25/2009

Transfer Facility Equipment Pricing Data

Transfer Facility Vendor and Trade References

Mike Shawgo
General Manager
Stepp Equipment Company
N58 W14810 Shawn Circle
Menomonee Falls WI 53051
Cell Phone: 414-881-0336
Office Phone: 262-252-5500
Office Fax: 262-252-5519
Website: milwaukee@steppequipment.com

Mike Shawgo provided cost information on Transfer Station equipment, and equipment life expectancies.

Matz, Paul

From: Mike Shawgo [mshawgo@steppequipment.com]
Sent: Wednesday, August 12, 2009 5:52 PM
To: Matz, Paul
Subject: RE: Compactor Information

Paul... These are hypothetical, but should give you a starting point ..Mike

From: Matz, Paul [mailto:Paul.Matz@aecom.com]
Sent: Wednesday, August 12, 2009 4:49 PM
To: Mike Shawgo
Subject: RE: Compactor Information

Good information Mike.


Thanks again!!

If you have some knowledge of a particular piece of equipment, please let me know your opinion where I have ??

Commodity	Life Expectancy
Buildings and Grounds	40 years
Single Stream Process Equipment	20 years
Compactor	10-15 years
Transfer Trailers	10-15
Semi Tractor	10 -15
Yard Truck	15 years
Front End Loader	15 years

Paul Matz
Project Engineer
AECOM Environment
D: 920.451.2751 C: 920.698.2444

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 Please consider the environment before printing this e-mail

From: Mike Shawgo [mailto:mshawgo@steppequipment.com]
Sent: Wednesday, August 12, 2009 4:42 PM
To: Matz, Paul
Subject: RE: Compactor Information

10-15 years, depending on tonnage processed and the type of material.

From: Matz, Paul [mailto:Paul.Matz@aecom.com]
Sent: Wednesday, August 12, 2009 4:29 PM
To: Mike Shawgo
Subject: RE: Compactor Information

Mike:

What is the life expectancy of a compactor assuming proper maintenance?

Same question for a trailer?


Paul Matz

Project Engineer

AECOM Environment

D: 920.451.2751 C: 920.698.2444

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 Please consider the environment before printing this e-mail

From: Mike Shawgo [mailto:mshawgo@steppequipment.com]

Sent: Friday, August 07, 2009 8:50 AM

To: Matz, Paul

Subject: RE: Compactor Information

Paul....Pricing on the transfer trailers, which must be steel and compactor compatible, will range from \$90,000-110,000. Also, there is a state law which allows more payload if the hauler is hauling compacted waste. That is the reason transfer compactors are so popular in Wisconsin. It is a permitted allowance, Wisconsin Statute 348.27, any Wisconsin DOT office can get you the info. ...Mike

From: Matz, Paul [mailto:Paul.Matz@aecom.com]

Sent: Thursday, August 06, 2009 3:09 PM

To: Mike Shawgo

Subject: RE: Compactor Information

Mike:

When we talked this morning you mentioned that you had some knowledge of the price of a trailer that would work with the compactor.

You and I both agree that it is probably best for the city contract this service, but they have requested that we estimate the cost of trailers, so if you can provide any insight to these costs it would also be appreciated.

Thanks,

Paul Matz

Project Engineer

AECOM Environment

D: 920.451.2751 C: 920.698.2444

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 Please consider the environment before printing this e-mail

From: Matz, Paul

Sent: Thursday, August 06, 2009 10:14 AM

To: 'Mike Shawgo'

Cc: Jerry Flickinger; David Wolf


Subject: Compactor Information

Mike,
Got your e-mail.
Thanks for the information and the follow-up.
I will use \$150K as an installed budget price for a compactor.
I look forward to receiving the Sebright information.

Paul Matz

Project Engineer
AECOM Environment
D: 920.451.2751 C: 920.698.2444

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From: Mike Shawgo [mailto:mshawgo@steppequipment.com]
Sent: Thursday, August 06, 2009 9:52 AM
To: Matz, Paul
Cc: Jerry Flickinger; David Wolf
Subject: City of Milwaukee

Paul...I will get you some info from Sebright, Jerry and Dave at JWR are my expert resources on the baler and conveyor end. Please stay in touch...Mike

Sincerely,

Mike Shawgo

General Manager
Stepp Equipment Company
N58 W14810 Shawn Circle
Menomonee Falls WI 53051
262-252-5500 p
262-252-5519 f
414-881-0336 c

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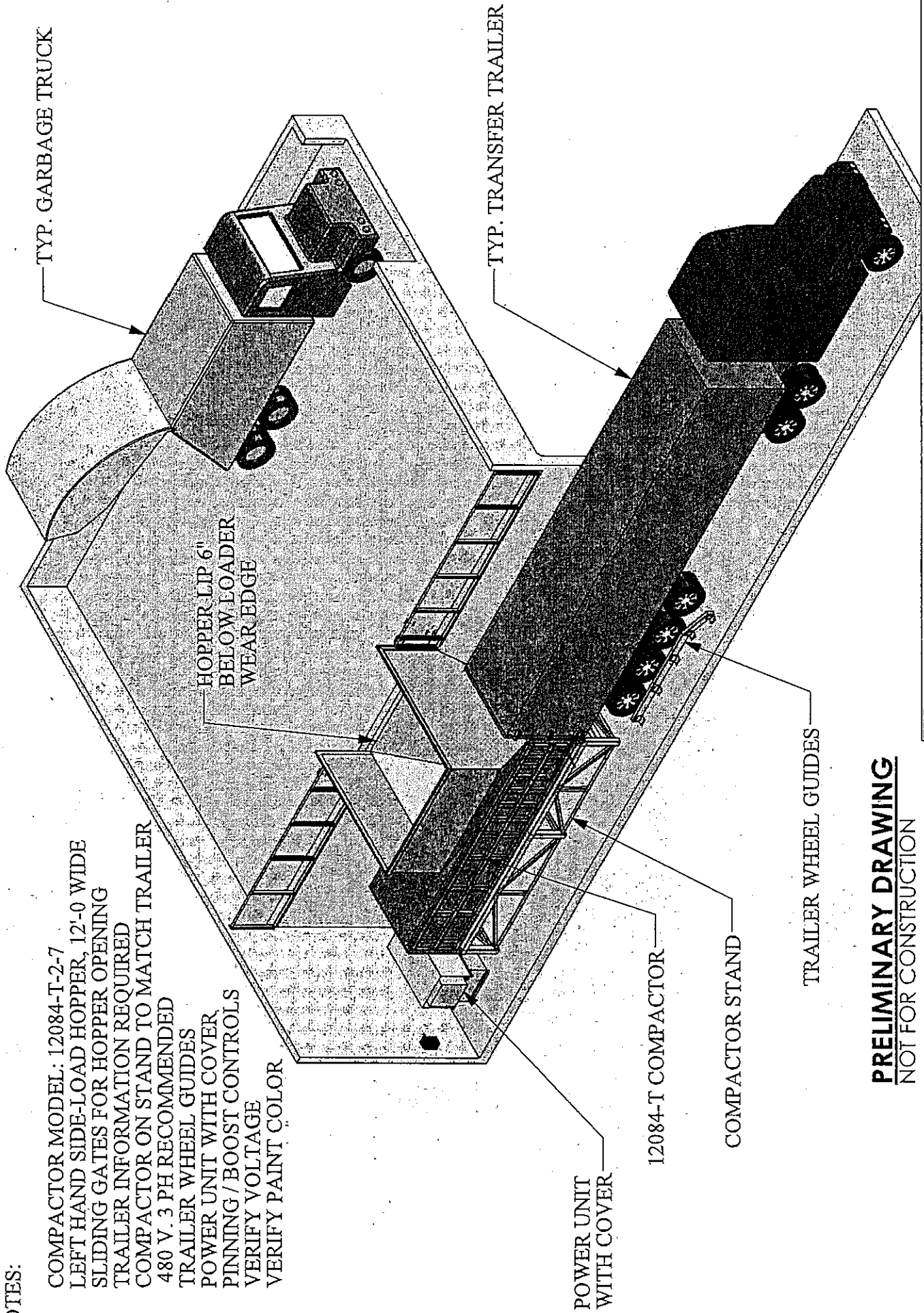
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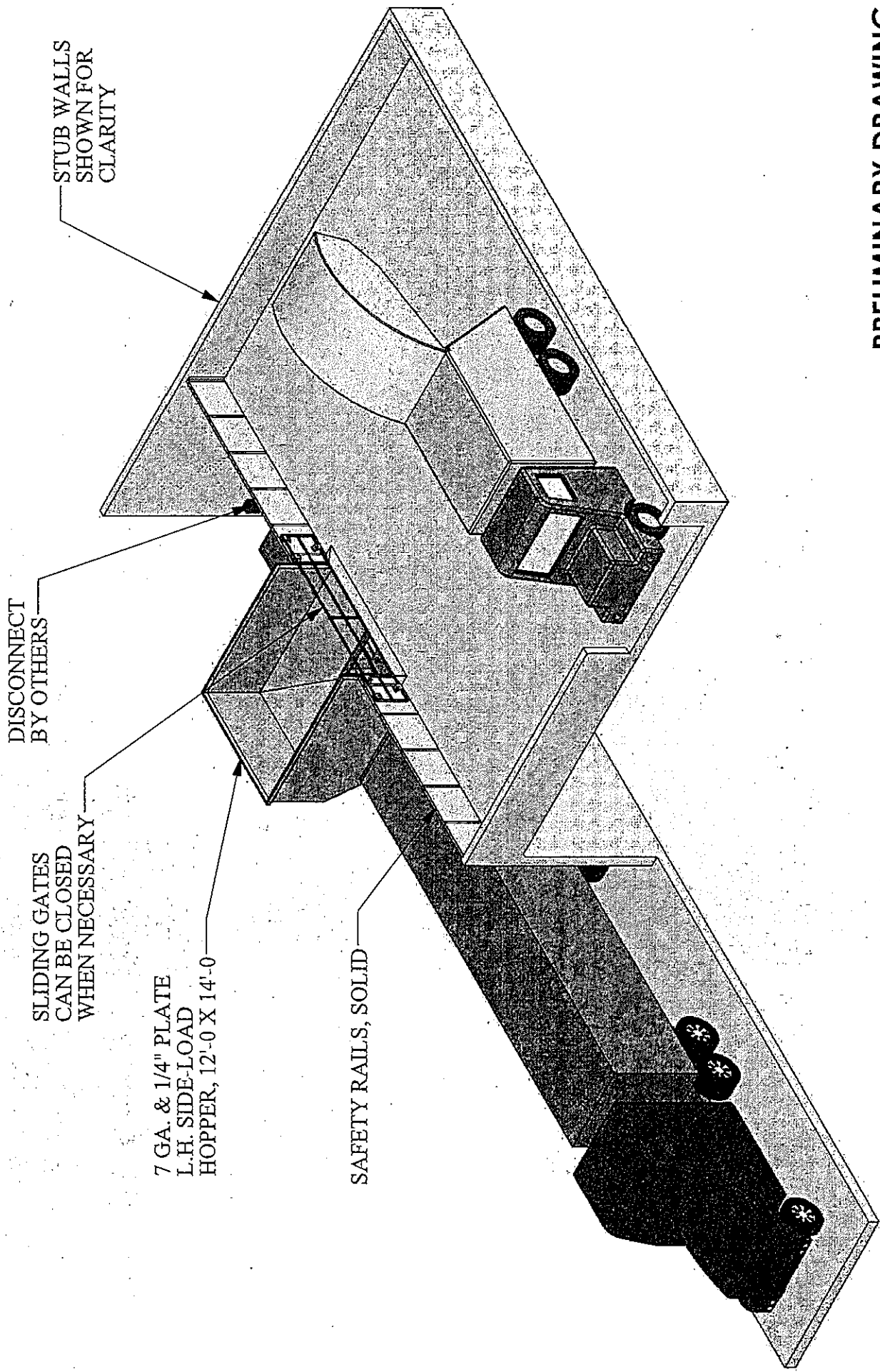
NOTES:

1. COMPACTOR MODEL: 12084-T-2-7
2. LEFT HAND SIDE-LOAD HOPPER, 12'-0" WIDE
3. SLIDING GATES FOR HOPPER OPENING
4. TRAILER INFORMATION REQUIRED
5. COMPACTOR ON STAND TO MATCH TRAILER
6. 480 V. 3 PH RECOMMENDED
7. TRAILER WHEEL GUIDES
8. POWER UNIT WITH COVER
9. PINNING / BOOST CONTROLS
10. VERIFY VOLTAGE
11. VERIFY PAINT COLOR



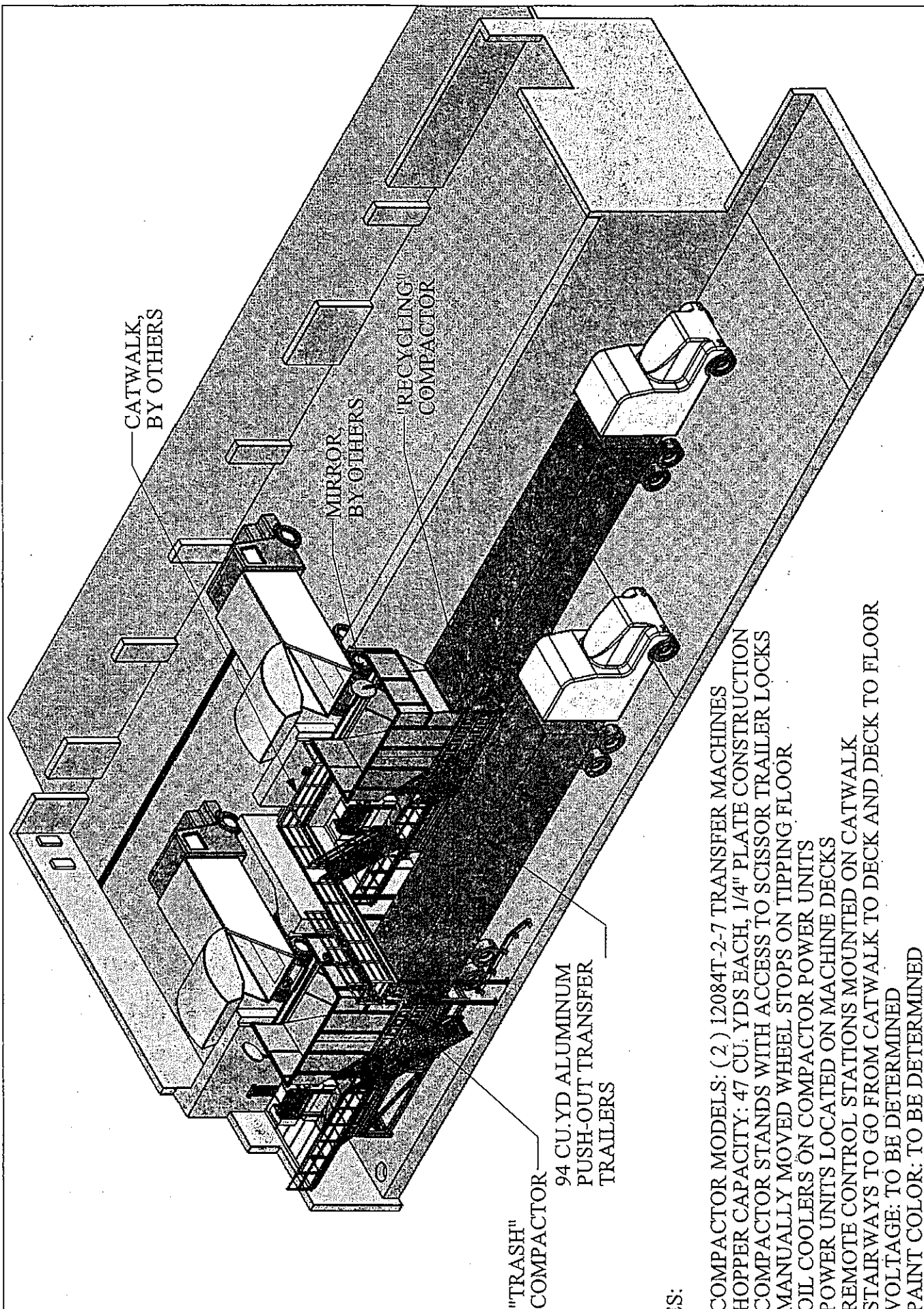
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DATE: 09-10-07 REVISION: DRAWN BY: BB SHEET 1 OF 5			
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TOLERANCE (UNLESS SPECIFIED) DIMENSIONS ±.016 FINISHES ±.0625 ANGLES ±0.75°		CUSTOMER NAME: DYNAMIC TRUCK & EQUIPMENT CO. WORK CODE: N/A SCALE: 1:128 SHEET NO.: A DWG NO.: 0561 MATERIAL: N/A STR. NO.: N/A	
TITLE: GENERIC TRANSFER STATION LAYOUT USING A 12084 COMPACTOR SEBRIGHT PRODUCTS INC. 127 N. WATER ST. HOPKINS, MI 49328 PH 269-793-7183 / www.sebrightproducts.com			



PRELIMINARY DRAWING
NOT FOR CONSTRUCTION

DATE: 9-10-07 DRAWN BY: BB REVISION:				SHEET 2 OF 5	
TOLERANCE (UNLESS SPECIFIED) FRACTIONS ± 1/16" ANGLES ± 30°					
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TITLE: GENERIC TRANSFER STATION LAYOUT USING A 12084 COMPACTOR					
CUSTOMER NAME: DYNAMIC TRUCK & EQUIPMENT CO.		PROJECT: 1:128 SHEET SIZE: A			
QUANTITY: 1		MATERIAL: 0561			
SEBRIGHT PRODUCTS INC. 127 N. WATER ST. HOPKINS, MI 49328 PH 269-793-7183 / WWW.SEBRIGHTPRODUCTS.COM					



NOTES:

1. COMPACTOR MODELS: (2) 12084T-2-7 TRANSFER MACHINES
2. HOPPER CAPACITY: 47 CU. YDS EACH, 1/4" PLATE CONSTRUCTION
3. COMPACTOR STANDS WITH ACCESS TO SCISSOR TRAILER LOCKS
4. MANUALLY MOVED WHEEL STOPS ON TIPPING FLOOR
5. OIL COOLERS ON COMPACTOR POWER UNITS
6. POWER UNITS LOCATED ON MACHINE DECKS
7. REMOTE CONTROL STATIONS MOUNTED ON CATWALK
8. STAIRWAYS TO GO FROM CATWALK TO DECK AND DECK TO FLOOR
9. VOLTAGE: TO BE DETERMINED
10. PAINT COLOR: TO BE DETERMINED

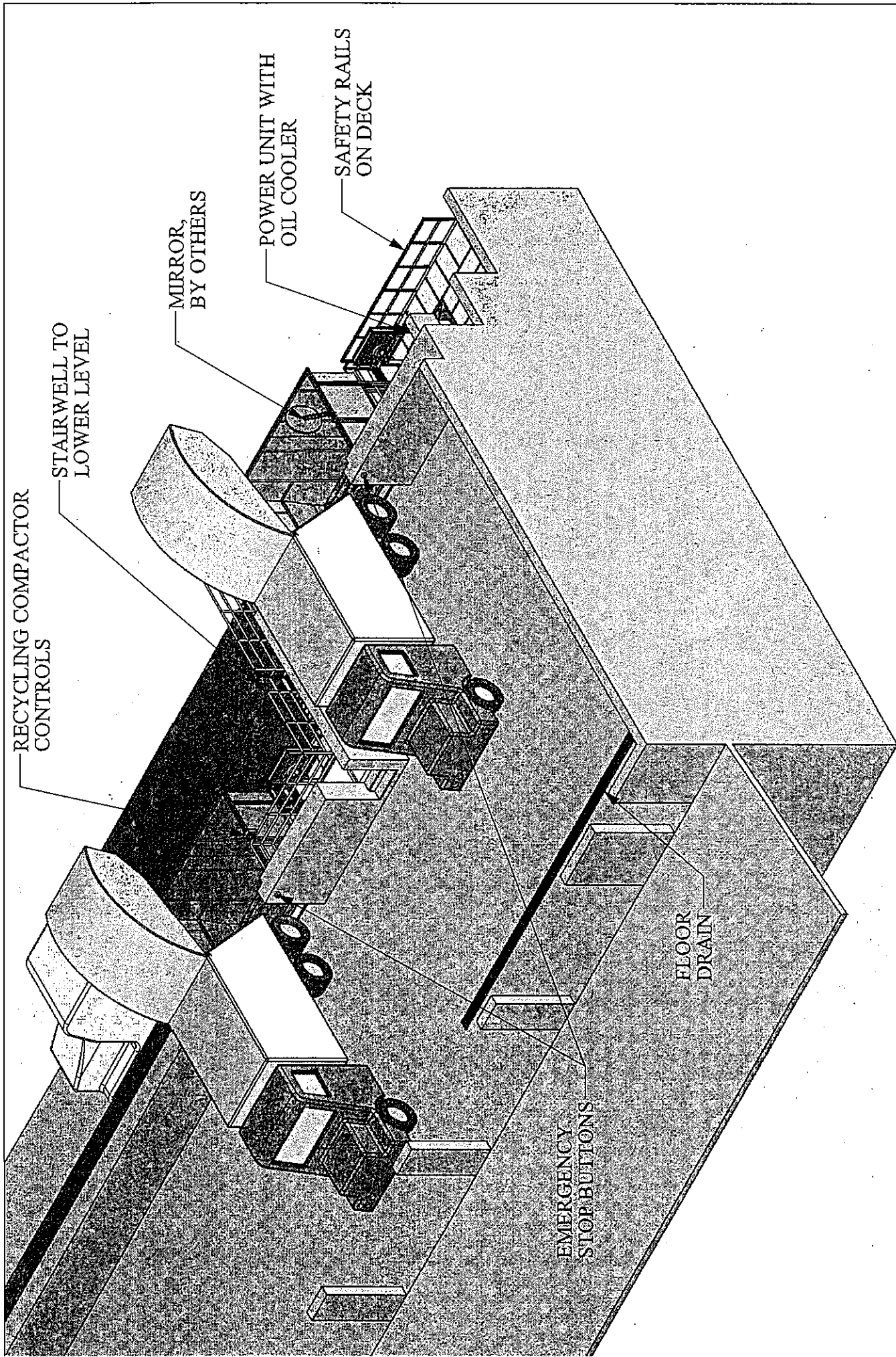
TITLE: GENERIC SALES LAYOUT

SEBRIGHT PRODUCTS INC.
127 N. WATERS ST. HOPKINS, MI 49328
PH 269-793-7183 / www.sebrightproducts.com

DATE: 8/7/2009
DRAWN BY: JL
REVIEWED: [blank]
SHEET 1 OF 13

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CUSTOMER NAME: [blank]
PROJECT: [blank]
SCALE: 1:192
SHEET NO.: 8497
SHEET TOTAL: A



TITLE: GENERIC SALES LAYOUT

SEBRIGHT PRODUCTS INC.
 127 N. WATER ST. HOPKINS, MI 49328
 PH 269-793-7183 / www.sebrightproducts.com



DATE: 8/7/2009	DESIGN: SEARBY, J.L.	SHEET 2 OF 13	TOLERANCE (UNLESS SPECIFIED) FRACTIONS 1/16" DECIMALS .005" ANGLES 30°/75°
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CUSTOMER NAME	SCALE: 1:128	SHEET SIZE	DWG. #
WORKIT (L&P)		A	8497
MATERIAL	REV. N/A		

APPENDIX K

TRANSPORTATION COST ESTIMATE

Detailed Cost Analysis

Sector	# of Trips per Month ¹	Sector Centroid Cross-Streets		To and From Proposed North Side Transfer Station (7301 W Mill Rd)									
				Distance (miles)		Time (minutes)			Cost				
		East-West	North-South	One-way	Roundtrip	One-way	Roundtrip	20% Inflated Truck Time	Labor per Trip: \$0.78/min	Maint/Fuel per Trip: \$0.19/min	Total Cost per Trip	Monthly Cost	Annual Cost ²
N-1	20	Keefe Avenue	95th Street	5.1	10.2	16	32	38.4	\$29.95	\$7.30	\$37.25	\$744.96	\$8,940
N-2	20	Lynmar Court	78th Street	4.4	8.8	12	24	28.8	\$22.46	\$5.47	\$27.94	\$558.72	\$6,705
N-3	20	Burleigh Street	75th Street	5.8	11.6	15	30	36	\$28.08	\$6.84	\$34.92	\$698.40	\$8,381
N-4	20	Capital Drive	56th Street	4.0	8.0	9	18	21.6	\$16.85	\$4.10	\$20.95	\$419.04	\$5,028
N-5	20	Hope Avenue	36th Street	5.1	10.2	11	22	26.4	\$20.59	\$5.02	\$25.61	\$512.16	\$6,146
N-6	12	Vienna Avenue	24th Street	6.4	12.8	13	26	31.2	\$24.34	\$5.93	\$30.26	\$363.17	\$4,358
N-7	20	Linwal Lane	24th Street	5.2	10.4	12	24	28.8	\$22.46	\$5.47	\$27.94	\$558.72	\$6,705
N-8	20	Custer Avenue	42nd Street	3.3	6.6	7	14	16.8	\$13.10	\$3.19	\$16.30	\$325.92	\$3,911
N-9	20	Custer Avenue	64th Street	1.8	3.6	5	10	12	\$9.36	\$2.28	\$11.64	\$232.80	\$2,794
N-10	20	Villard Avenue	84th Street	3.3	6.6	9	18	21.6	\$16.85	\$4.10	\$20.95	\$419.04	\$5,028
N-11	20	Daphne Street	106th Street	2.5	5.0	8	16	19.2	\$14.98	\$3.65	\$18.62	\$372.48	\$4,470
N-12	20	Hemlock Street	60th Street	2.1	4.2	6	12	14.4	\$11.23	\$2.74	\$13.97	\$279.36	\$3,352
N-13	20	Fairlane Court	93rd Street	4.6	9.2	14	28	33.6	\$26.21	\$6.38	\$32.59	\$651.84	\$7,822

¹ Assuming 1 Trip per Day

² Annual Cost rounded to the nearest dollar

Approximately \$73,639
\$73,700

Detailed Cost Analysis

Sector	# of Trips per Month ¹	Sector Centroid Cross-Streets		To and From Proposed South Side Transfer Station (3879 W Lincoln Av.)									
				Distance (miles)		Time (minutes)			Cost				
		East-West	North-South	One-way	Roundtrip	One-way	Roundtrip	20% Inflated Truck Time	Labor per Trip: \$0.78/min	Maint/Fuel per Trip: \$0.19/min	Total Cost per Trip	Monthly Cost	Annual Cost ²
C-1	20	Linnwood Avenue	Stowell Avenue	8.6	17.2	18	36	43.2	\$33.70	\$8.21	\$41.90	\$838.08	\$10,057
C-2	20	Auer Avenue	Pierce Street	7.6	15.2	16	32	38.4	\$29.95	\$7.30	\$37.25	\$744.96	\$8,940
C-3	20	Kewaunee Street	Marshall Street	6.6	13.2	16	32	38.4	\$29.95	\$7.30	\$37.25	\$744.96	\$8,940
C-4	20	Chambers Street	48th Street	5.3	10.6	12	24	28.8	\$22.46	\$5.47	\$27.94	\$558.72	\$6,705
C-5	20	Lisbon Avenue	49th Street	4.5	9.0	9	18	21.6	\$16.85	\$4.10	\$20.95	\$419.04	\$5,028
C-6	20	Woodlawn Court	50th Street	3.3	6.6	8	16	19.2	\$14.98	\$3.65	\$18.62	\$372.48	\$4,470
C-7	20	Fairview Avenue	80th Street	4.8	9.6	12	24	28.8	\$22.46	\$5.47	\$27.94	\$558.72	\$6,705
C-8	20	Hopkins Street	15th Street	7.1	14.2	14	28	33.6	\$26.21	\$6.38	\$32.59	\$651.84	\$7,822
C-9	20	Center Street	23rd Street	6.4	12.8	16	32	38.4	\$29.95	\$7.30	\$37.25	\$744.96	\$8,940
S-1	20	Goldcrest Avenue	18th Street	5.8	11.6	17	34	40.8	\$31.82	\$7.75	\$39.58	\$791.52	\$9,498
S-2	20	Bardhard Avenue	14th Street	4.9	9.8	15	30	36	\$28.08	\$6.84	\$34.92	\$698.40	\$8,381
S-3	20	Saveland Avenue	Herman Street	5.0	10.0	16	32	38.4	\$29.95	\$7.30	\$37.25	\$744.96	\$8,940
S-4	20	Pryor Avenue	Fulton Street	3.8	7.6	14	28	33.6	\$26.21	\$6.38	\$32.59	\$651.84	\$7,822
S-5	20	Arthur Avenue	19th Street	1.5	3.0	5	10	12	\$9.36	\$2.28	\$11.64	\$232.80	\$2,794
S-6	20	Greenfield Avenue	29th Street	1.5	3.0	4	8	9.6	\$7.49	\$1.82	\$9.31	\$186.24	\$2,235
S-7	20	Hayes Avenue	8th Street	2.2	4.4	7	14	16.8	\$13.10	\$3.19	\$16.30	\$325.92	\$3,911
S-8	20	Morgan Avenue	13th Street	3.2	6.4	9	18	21.6	\$16.85	\$4.10	\$20.95	\$419.04	\$5,028
S-9	20	Manitobu Street	39th Street	1.2	2.4	3	6	7.2	\$5.62	\$1.37	\$6.98	\$139.68	\$1,676
S-10	20	Nebraska Avenue	54th Street	2.2	4.4	5	10	12	\$9.36	\$2.28	\$11.64	\$232.80	\$2,794
S-11	20	Ohio Avenue	68th Street	3.1	6.2	8	16	19.2	\$14.98	\$3.65	\$18.62	\$372.48	\$4,470
S-12	20	Morgan Avenue	86th Street	4.2	8.4	9	18	21.6	\$16.85	\$4.10	\$20.95	\$419.04	\$5,028
S-13	8	Elgin Lane	14th Street	3.2	6.4	10.5	21	25.2	\$19.66	\$4.79	\$24.44	\$195.55	\$2,347

¹ Assuming 1 Trip per Day

² Annual Cost rounded to the nearest dollar

\$132,528
Approximately \$133,000

Detailed Cost Analysis

Sector	# of Trips per Month ¹	Sector Centroid Cross-Streets		Existing Milwaukee Facility									
				Distance (miles)		Time (minutes)			Cost				
		East-West	North-South	One-way	Roundtrip	One-way	Roundtrip	20% Inflated Truck Time	Labor per Trip: \$0.78/min	Maint/Fuel per Trip: \$0.19/min	Total Cost per Trip	Monthly Cost	Annual Cost ²
N-1	20	Keefe Avenue	95th Street	7.7	15.4	18	36	43.2	\$33.70	\$8.21	\$41.90	\$838.08	\$10,057
N-2	20	Lynmar Court	78th Street	7.3	14.6	17	34	40.8	\$31.82	\$7.75	\$39.58	\$791.52	\$9,498
N-3	20	Burleigh Street	75th Street	6.1	12.2	14	28	33.6	\$26.21	\$6.38	\$32.59	\$651.84	\$7,822
N-4	20	Capital Drive	56th Street	7.7	15.4	17	34	40.8	\$31.82	\$7.75	\$39.58	\$791.52	\$9,498
N-5	20	Hope Avenue	36th Street	8.0	16.0	15	30	36	\$28.08	\$6.84	\$34.92	\$698.40	\$8,381
N-6	12	Vienna Avenue	24th Street	6.4	12.8	14	28	33.6	\$26.21	\$6.38	\$32.59	\$391.10	\$4,693
N-7	20	Linwal Lane	24th Street	7.5	15.0	12	24	28.8	\$22.46	\$5.47	\$27.94	\$558.72	\$6,705
N-8	20	Custer Avenue	42nd Street	10.5	21.0	17	34	40.8	\$31.82	\$7.75	\$39.58	\$791.52	\$9,498
N-9	20	Custer Avenue	64th Street	11.8	23.6	20	40	48	\$37.44	\$9.12	\$46.56	\$931.20	\$11,174
N-10	20	Villard Avenue	84th Street	8.5	17.0	20	40	48	\$37.44	\$9.12	\$46.56	\$931.20	\$11,174
N-11	20	Daphne Street	106th Street	15.5	31.0	24	48	57.6	\$44.93	\$10.94	\$55.87	\$1,117.44	\$13,409
N-12	20	Hemlock Street	60th Street	13.5	27.0	22	44	52.8	\$41.18	\$10.03	\$51.22	\$1,024.32	\$12,292
N-13	20	Fairlane Court	93rd Street	17.2	34.4	28	56	67.2	\$52.42	\$12.77	\$65.18	\$1,303.68	\$15,644
C-1	20	Linnwood Avenue	Stowell Avenue	6.5	13.0	13	26	31.2	\$24.34	\$5.93	\$30.26	\$605.28	\$7,263
C-2	20	Auer Avenue	Pierce Street	5.5	11.0	11	22	26.4	\$20.59	\$5.02	\$25.61	\$512.16	\$6,146
C-3	20	Kewaunee Street	Marshall Street	2.8	5.6	11	22	26.4	\$20.59	\$5.02	\$25.61	\$512.16	\$6,146
C-4	20	Chambers Street	48th Street	5.0	10.0	12	24	28.8	\$22.46	\$5.47	\$27.94	\$558.72	\$6,705
C-5	20	Lisbon Avenue	49th Street	4.2	8.4	9	18	21.6	\$16.85	\$4.10	\$20.95	\$419.04	\$5,028
C-6	20	Woodlawn Court	50th Street	3.1	6.2	8	16	19.2	\$14.98	\$3.65	\$18.62	\$372.48	\$4,470
C-7	20	Fairview Avenue	80th Street	4.6	9.2	11	22	26.4	\$20.59	\$5.02	\$25.61	\$512.16	\$6,146
C-8	20	Hopkins Street	15th Street	4.9	9.8	9	18	21.6	\$16.85	\$4.10	\$20.95	\$419.04	\$5,028
C-9	20	Center Street	23rd Street	4.3	8.6	12	24	28.8	\$22.46	\$5.47	\$27.94	\$558.72	\$6,705
S-1	20	Goldcrest Avenue	18th Street	10.7	21.4	15	30	36	\$28.08	\$6.84	\$34.92	\$698.40	\$8,381
S-2	20	Bardnard Avenue	14th Street	8.8	17.6	13	26	31.2	\$24.34	\$5.93	\$30.26	\$605.28	\$7,263
S-3	20	Saveland Avenue	Herman Street	8.3	16.6	13	26	31.2	\$24.34	\$5.93	\$30.26	\$605.28	\$7,263
S-4	20	Pryor Avenue	Fulton Street	6.2	12.4	11	22	26.4	\$20.59	\$5.02	\$25.61	\$512.16	\$6,146
S-5	20	Arthur Avenue	19th Street	2.9	5.8	10	20	24	\$18.72	\$4.56	\$23.28	\$465.60	\$5,587
S-6	20	Greenfield Avenue	29th Street	2.3	4.6	7	14	16.8	\$13.10	\$3.19	\$16.30	\$325.92	\$3,911
S-7	20	Hayes Avenue	8th Street	3.1	6.2	10	20	24	\$18.72	\$4.56	\$23.28	\$465.60	\$5,587
S-8	20	Morgan Avenue	13th Street	6.2	12.4	9	18	21.6	\$16.85	\$4.10	\$20.95	\$419.04	\$5,028
S-9	20	Manitobu Street	39th Street	4.4	8.8	14	28	33.6	\$26.21	\$6.38	\$32.59	\$651.84	\$7,822
S-10	20	Nebraska Avenue	54th Street	5.4	10.8	15	30	36	\$28.08	\$6.84	\$34.92	\$698.40	\$8,381
S-11	20	Ohio Avenue	68th Street	6.3	12.6	17	34	40.8	\$31.82	\$7.75	\$39.58	\$791.52	\$9,498
S-12	20	Morgan Avenue	86th Street	7.4	14.8	19	38	45.6	\$35.57	\$8.66	\$44.23	\$884.64	\$10,616
S-13	8	Elgin Lane	14th Street	1.5	3.0	5	10	12	\$9.36	\$2.28	\$11.64	\$93.12	\$1,117

¹ Assuming 1 Trip per Day

² Annual Cost rounded to the nearest dollar

Approximately \$270,085
\$271,000

Whole City Recycling Setout Planning

August 4, 20009

Households	summer	winter
carts	163000	163000
bins	27000	27000
total	190000	190000

Cart costs per unit, 95-gal size	
regular -single stream	\$ 51.41
split - dual stream	\$ 63.41

Assumptions:

No change in weekly bin route service (disregard in calculations)

20 work days per month

Collection place	
fronts	alleys
43%	57%

Currently		summer	winter
Crew #	total	31	34
	carts	28	31
	bins	3	3

*Up the drive service for most summer and all winter routes

2009 summer setout averaging 350 HH/crew per day

How many cart crews needed if routes built on 350 HH per day?

setout	
once/mo.	23.3
every 3rd week	31.0
every 2nd week	46.6

2009 Twice per month summer setout is averaging 372 HH/day

(Greater frequency yields fewer setting out every time)

How many cart crews needed if all routes twice per month?

HH per day	crews needed
350	46.6
375	43.5
400	40.8

Two-person garbage crews average servicing 490 HH per day*

If single stream recycling with 2 person crews, 500 HH/day**

setout	crews needed
once/mo.	16.3
every 3rd week	21.7
every 2nd week	32.6

*Garbage routes designed for time to collect bulky items as well as tip carts.

**500 is conservative because of # of HH's with multiple garbage carts; few for recycling

If single stream recycling, 2 person crews, 500 HH/day, AND include current bin routes:

setout	total crews needed
once/mo.	19.0
every 3rd week	25.3
every 2nd week	38.0

Summer recycling fleet: 31 (28 cart & 3 bin)

	BINS	CARTS	TOTAL
C	18991	42397	61388
N	4218	58866	63084
S	3846	62187	66033
Total	27055	163450	190505
Percent	14.20%	85.80%	100%

Cart Setout Programs					
Monthiy	trucks	HH	HH/truck	HH/truck/mo	HH/day
C	1	6578	6578	6578	329
N	2	14073	7037	7037	352
S	1	7350	7350	7350	368
total	4	28001	7000	7000	350
Twice/Mo.	trucks	HH	HH/truck	HH/truck/mo	HH/day
C	1	3500	3500	7000	350
S	1	3933	3933	7866	393
total	2	7433	3717	7433	372

NON-Setout Program					
~monthly	trucks	HH	HH/truck	HH/truck/mo	HH/day
C*	4	28270	7068	7068	353
N*	9	44793	4977	4977	249
S	9	50904	5656	5656	283
total	22	123967	5635	5635	282
*excluding routes that pick up both bins and carts					

(lot of alleys in Central)

Garbage cart collection crews, summer 2009

77 garbage trucks operating as 2-person crews

Weekly garbage cart setout program

Area	# crews	HOUSEHOLDS SERVED			
		#	% of total	Per crew	Per crew/day
C	26	60577	32.11%	2330	466
N	25	62703	33.24%	2508	502
S	26	65355	34.65%	2514	503
TOTAL	77	188635	100.00%	2450	490

Garbage routes designed for time to pick up bulky items
outside of carts as well as dump the carts.

APPENDIX K

Recycling Collection Analysis

	Setout Schedule	Proposed Set-Out Households Per Day ¹	Crews Needed		Current Number of Crews/Trucks (Carts)	Additional Employees Needed	Additional Trucks Needed
			Employees	Trucks			
One Person Crews	1 time per month	350	23	23	31	0	0
	Every 3rd Week	350	31	31	31	0	0
	Every 2nd Week	375	44	44	31	13	13
Two Person Crews	1 time per month	500	32	16	31	1	0
	Every 3rd Week	500	44	22	31	13	0
	Every 2nd Week	500	66	33	31	35	2

Notes:

1. Proposed Setout Household's per day assumes curb-side pickup. Currently, the City provides up-the-drive service for all winter routes and most summer routes.

APPENDIX L

PAY AS YOU THROW LITERATURE

Summary of Key Results from SERA's 2008 Solid Waste and Recycling Survey

2008 REPORT

Prepared by:

*Lisa Skumatz and Juri Freeman
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Prepared for:

Communities that responded to the 2008 survey!

ORGANIZATION OF REPORT

1.0 Introduction	1
2.0 About the Communities	1
3.0 Collection Arrangements	2
4.0 Recycling Containers	3
5.0 Single Stream	4
6.0 Billing and PAYT	5
7.0 Facilities and Ownership	5
8.0 Funding Solid Waste Programs	6
9.0 Presence of Programs and Policies	6

Acknowledgements:

*Thank you to Jerry Powell, Resource Recycling Magazine,
and the communities that responded to the survey!!*

About the Authors:

DR. LISA SKUMATZ is a "hands-on" economist with the research and consulting firm Skumatz Economic Research Associates, Inc. (SERA) (www.serainc.com). For almost 20 years, Lisa has helped communities across the US analyze practical economic and policy issues in solid waste. Her work concentrates on integrated planning, program evaluation, benchmarking, cost-effectiveness and rates for the variety of solid waste programs. She has published extensively, and is best known for her work in incentive-based rates (Pay as you Throw and "Garbage by the Pound") and for her detailed analyses of single stream recycling, source reduction, education programs, and commercial diversion options

Lisa has a strong "numbers" orientation – focusing on "what do real-world, operating programs tell us". She maintains a database of recycling in more than 1,300 communities across North America, and has analyzed programmatic features that increase diversion and cost-effectiveness in different situations. SERA maintains databases on the 100 largest communities in the US, and all PAYT communities in North America.

In 2007, Dr. Skumatz received SWANA's Distinguished Service Lifetime Achievement Award. She was previously named "Recycler of the Year – Lifetime Achievement" in 2001 by the National Recycling Coalition, and in 2007 received the same award from the Colorado Association for Recycling (CAFR). She served as a board member of NRC for 10 years and a member of SWANA and numerous other state and regional recycling associations. Lisa attended the University of Wisconsin for her undergraduate economics degree and her Ph.D. in Economics is from The Johns Hopkins University.

DAVID "JURI" FREEMAN is an environmental analyst with SERA, Inc. He has collected data on the wide variety of recycling and solid waste programs across the US – including recycling, yard waste, source reduction, electronics, single stream recycling, education / outreach programs, and others – to provide information for benchmarking, program potential and performance, costs, and other planning and evaluation purposes. These data have been used to identify cutting edge programs and provide key data on the factors affecting program performance. His strengths include an understanding of how the information will be used, which helps make sure he conducts appropriate follow-up on complex analytical issues. He has conducted detailed analyses for solid waste clients in Colorado, California, Wyoming, Washington, North Carolina, British Columbia, and other locations.

Dr. Skumatz has published more than 75 articles and published (non-project) reports in solid waste and recycling planning, evaluation, measurement, and rates. The majority of journal articles are in Resource Recycling.

SERA, established in 1990, has offices in Boulder and Seattle. We have conducted projects for large and small clients in 35 states, 5 Canadian provinces, and 6 foreign countries.

Summary of Key Results from SERA's 2008 Solid Waste and Recycling Survey

1.0 Introduction

SERA sent a survey to counties and cities across the US and Canada. We received more than 700 responses to our survey. The following is a high-level summary of the survey results, prepared for those communities responding to the survey.

We provide a succinct summary of the responses received, which were not necessarily random and thus, not statistical. However, they do provide some information on what is going on in communities, and whether certain policies or arrangements are generally uncommon or not. The data also provide a valid resource for case studies and for multivariate statistical analysis, which can work without strictly random samples (that is the basis of most of our studies that you may have seen in the past).

2.0 About the Communities

Of the responses we received:

- 60% responded as a city, 40% as a county, and 2% as hauler (multiple responses were allowed).
- 18% urban, 21% suburban, 25% rural, 26% rural/suburban, and 11% urban/suburban.

The distribution of population for the respondents follows:

- Average city size was 158,000
- Median was 55,000 (half larger, half smaller than this population)
- Populations ranged from 378-8.5 million.
- 23% smaller than 20,000
- 23% between 20,000 and 50,000
- 19% between 50,000 and 100,000
- 11% between 100,000 and 150,000
- 10% between 150,000 and 250,000
- 8% between 250,000 and 500,000
- 4% between 500,000 and 1,000,000, and 2% over 1,000,000.

Again, the fact that the responses were not random is illustrated by the distribution across states. California represented 17% of the respondents, but about 4% of census places nationwide. Others are less disproportional. Similar comparisons have not been conducted based on population.

Table 2.1 Percent of respondents by state (or province)

State	Pct of Survey Responses	Pct Towns in US	State	Pct of Survey Responses	Pct Towns in US	State	Pct of Survey Responses	Pct Towns in US
AK	0.1%	1.3%	KS	0.6%	2.4%	OH	3.0%	3.9%
AL	0.3%	1.8%	KY	1.7%	1.7%	OK	0.3%	2.6%
AR	1.7%	1.9%	LA	0.0%	1.5%	OR	2.0%	1.3%
AZ	1.8%	0.9%	MA	3.7%	0.9%	PA	4.0%	5.2%
CA	17.0%	4.0%	MD	0.1%	1.4%	RI	0.1%	0.1%
CAN-BC	0.1%		ME	2.1%	0.1%	SC	1.7%	1.4%
CAN-ON	0.1%		MI	3.0%	2.3%	SD	0.3%	1.3%
CO	2.7%	1.3%	MN	4.1%	6.9%	TN	1.0%	1.4%
CT	1.8%	0.4%	MO	2.3%	3.6%	TX	5.8%	5.6%
DC	0.0%	0.0%	MS	0.4%	1.1%	US-VI	0.1%	
DE	0.0%	0.3%	MT	0.4%	1.0%	UT	0.3%	1.1%
FL	4.1%	3.3%	NC	2.7%	2.4%	VA	3.0%	1.4%
GA	1.1%	2.2%	ND	0.0%	1.4%	VT	1.0%	3.3%
GUAM	0.3%		NE	0.3%	2.0%	WA	3.8%	1.9%
HI	0.4%	0.3%	NH	1.8%	0.2%	WI	2.4%	2.3%
IA	1.7%	3.6%	NJ	3.6%	1.9%	WV	0.6%	1.1%
ID	0.6%	0.8%	NM	0.6%	0.9%	WY	0.4%	0.7%
IL	4.1%	4.9%	NV	0.0%	0.3%			
IN	2.6%	2.2%	NY	2.0%	3.9%			

3.0 Collection Arrangements

We asked about collection arrangements for trash, recycling, and yard waste (where curbside programs existed). The following summarizes the responses on who collects, containers used, collection method, and whether the (private) haulers are national or not. Each table addresses the three services – trash, recycling, and yard waste.

Table 3.1 Who collects (for those with curbside service for the program)?

Who Collects?	No program	Drop off program only	Municipality collect	One hauler via contract	Multiple haulers via contract	One hauler via franchise	Multiple haulers via franchise	One licensed/permitted hauler	Multiple licensed/permitted hauler	One private hauler	Multiple haulers with private competition
Garbage	2.1%	1.9%	28.6%	19.8%	6.1%	9.6%	4.6%	1.5%	8.2%	1.9%	15.0%
Recycling	13.6%	7.6%	21.5%	25.0%	4.9%	8.5%	3.8%	1.7%	4.7%	1.4%	6.9%
Yard waste	20.5%	9.0%	31.2%	16.1%	3.0%	8.4%	3.3%	0.9%	2.6%	0.5%	3.6%

**Table 3.2 What programs / container types are used? (for those with curbside service)
(Excludes don't know & other)**

Container Type?	No program	Drop off program only	Wheeled carts owned by city	Wheeled carts owned by the hauler	Wheeled carts owned by resident	Cars provided by residents	Bins/ Crates	Bins	Yard waste piles at curb	Bags	Multiple choice	Other
Garbage	1.1%	1.4%	20.0%	26.6%	0.9%	21.5%	0.3%	0.0%	0.3%	6.1%	19.4%	1.7%
Recycling	6.2%	5.5%	9.3%	20.0%	0.2%	2.7%	37.5%	0.3%	0.0%	4.0%	11.2%	2.7%
Yard waste	11.5%	5.6%	5.9%	18.2%	0.7%	3.6%	0.2%	2.3%	16.0%	13.2%	17.3%	3.6%

Table 3.3 Collection method?

Collection Method?	Don't know	Fully automated	Semi automated	Manual
Curbside Garbage	3.9%	32.2%	25.2%	38.6%
Curbside Recycling	3.3%	21.3%	14.7%	47.0%
Curbside Yard waste	4.7%	16.2%	15.6%	40.5%

If the hauler was reported as "private", the respondent was asked to characterize the hauler.

Table 3.4 Type of "private" hauler providing service

Type of Hauler?	National firm or affiliate	Regional firm	Small local independent	Other
Trash	42.0%	17.6%	28.4%	12.0%
Recycling	38.6%	17.7%	26.6%	17.1%

About 1/3 of the communities responding do not require households to contract for trash.

4.0 Recycling Containers

Two-thirds of households receive 1 container, a quarter get 2 containers, and 9% receive 3 containers. A number of communities stated they provided "as many as the households need / want".

The distribution of container sizes, and the volumes (computed as size times volume) are provided below. However, note, that this does NOT control for whether collection is weekly, every other week, or some other frequency.

Table 4.1 Size of containers and total volume of recycling service (not corrected for recycling collection frequency)

	Individual containers	Total volume (N times containers not including frequency)
20 gallons or less	49%	26%
33 gallons or less	12%	5%
66 gallons or less	17%	9%
99 gallons or less	20%	39%
100 gallons or more	1%	21%

Table 4.2 Collection frequency by service

Frequency	No collecti on	Drop off only	Weekly	Twice a week	Every other week	Twice a month	Monthly	Seasonally
Garbage	0.9%	3.3%	83.0%	11.9%	0.8%	0.2%	0.0%	0.0%
Curbside recycling	12.4%	4.0%	56.5%	0.5%	21.5%	2.7%	2.3%	0.2%
Curbside yardwaste	21.3%	5.6%	39.4%	1.5%	8.0%	1.3%	3.3%	19.6%

Most communities collect a large number of materials. They are summarized below.

Table 4.3 Percent of communities that collect various recyclable materials (for those with service)

Percent that collect the material	Materials List
90% or more	Aluminum, Newspaper
75%-89%	Green Glass, Brown glass, Clear glass, Cardboard, Steel/tin cans, #1 PET, #2 HDPE
50-75%	None
40-50%	Other plastics, Chipboard/paperboard
Low frequency	Oil (16%), Batteries (11%), Electronics (9%), Food (5%), Textiles (5%)

About two-thirds provide curbside recycling to complexes with up to 4 units. About 40% provide the service to small commercial establishments as well. Collection frequency statistics follow.

Table 4.4 Collection frequency by service type

Collection frequency by service type	Weekly	Twice weekly	Every other Week or twice a month	Monthly	Seasonally
Trash	83.0%	11.9%	1.05	0%	0%
Curbside recycling	56.5%	0.5%	24.2%	2.3%	0.2%
Curbside Yard waste	39.4%	1.5%	9.3%	3.3%	19.6%

5.0 Single Stream

Nearly half the respondents reported they have single stream collection – clearly not a random sample from all communities to which we sent surveys. About one-third were dual stream programs. When asked about the curbside recycling program prior to switching to single stream, we found more than one-third had no program previously, more than one-third switched from dual stream programs, and about one-quarter switched from programs collecting three or more streams. The majority did not switch collection frequencies with their move to single stream, about 40% added materials, and about 10% used the opportunity to add new yard waste collection. Fewer than 7% said they subtracted glass when they switched to single stream.

We asked about changes that resulted from the switch to single stream. We found:

- Almost three-quarters of the respondents with single stream said tonnage increased somewhat or a great deal compared to the program they had before.
- Most said they weren't sure if values for materials changed.
- The majority said costs to run the program increased somewhat or stayed the same.
- Almost 75% said recycling participation is somewhat or much better after single stream
- Half said illegal dumping was the same, and another 40% didn't know
- More than half said resident satisfaction was much better now

- Most said collection efficiencies were much better now.

In a separate effort, we conducted an inventory of single stream programs across the US. While an imperfect list (there are new programs all the time, and we were unable to contact every community), the results provide an indication of the prevalence of single stream recycling programs.

- We identified more than 340 single stream programs in the US, covering perhaps 12-15% of the US population;
- We were able to identify the leading states for single stream penetration, using a ranking that combines both number of single stream programs and population covered by single stream programs. The results are included in Table 5.1.

Table 5.1 Leading single stream states based on number of programs and population covered

1. California	4. Ohio	7. Arizona
2. Texas	5. Washington	8. Minnesota
3. Illinois	6. Pennsylvania	9. Oregon

6.0 Billing and PAYT

Trash, recycling, and yard waste are most commonly billed monthly; however, a substantial number were billed quarterly, every other month, or annually. In the sample that responded to our survey, about 30% had PAYT (which is slightly higher than our national statistics, which indicate 25% with PAYT¹). The overwhelming program is variable / subscribed can program, with more than 60% of PAYT communities reporting this program. The next most common was a bag program with a fixed fee or customer charge (about 30%). The rest were scattered among other PAYT systems, including 10% with drop-off programs (multiple responses were allowed).

7.0 Facilities and Ownership

Most communities do not have the following facilities available in the area:

- Compost area that accepts food waste
- Single stream MRF
- Low tech MRF
- "Dirty" MRF
- Hard to recycle materials facility
- Construction and demolition (C&D) sorting facility
- Construction and demolition landfill
- Landfill gas extraction infrastructure
- Reuse area
- Waste to energy facility
- Incinerator
- MSW composting facility

The two most common ownership and operation alternatives for each of the following facilities are listed below.

¹ Skumatz, Lisa A., and David J. Freeman, "Pay as You Throw (PAYT) in the US: 2006 Update and Analyses", Skumatz Economic Research Associates, Inc., Superior, CO, for EPA Headquarters, Washington DC., December 2006.

- Landfill: privately owned and operated; county owned and operated
- Compost area: city owned and operated; privately owned and operated,
- Single stream MRF: by far most commonly privately owned and operated
- Low tech MRF: by far most commonly privately owned and operated
- HHW facility: County owned and operated; city owned and operated
- C&D sorting facility: by far most commonly privately owned and operated
- C&D landfill, privately owned and operated; county owned and operated
- E-waste facility: privately owned and operated, county owned and operated
- Landfill gas extraction infrastructure: privately owned and operated, county owned and operated
- Transfer station: privately owned and operated, county owned and operated (city owned / operated close behind)

8.0 Funding Solid Waste Programs

The most common methods of funding residential programs are through user fees and property taxes (somewhat less than twice as many employ user fees). Tip fee surcharges are common sources of local funding for programs, and user fees are most common for local funding of local commercial programs. At the state level, tip fee surcharges were the most common source of funds.

9.0 Presence of Programs and Policies

Finally, we asked about the presence of an array of specific programs. The responses are summarized below.

Table 9.1 Percent of communities with various programs and policies

Which of the following programs/policies do you have?	Yes	No	Other
Disposal bans at the landfill (local only, exclude state bans)	34.3%	52.5%	13.2%
Disposal bans at the curb (local only, exclude state bans)	35.1%	54.6%	10.3%
Advance Disposal Fees (ADFs) or deposits	9.8%	77.6%	12.5%
Every-other-week garbage collection	7.5%	85.0%	7.5%
Residential food waste collection	8.0%	84.1%	8.0%
Innovative funding mechanisms	11.3%	77.6%	11.1%
Multi Family Unit recycling programs	47.3%	43.6%	9.1%
Single stream recycling	44.0%	47.7%	8.3%
Re-use area	24.8%	63.0%	12.2%
Materials exchange	27.3%	62.5%	10.2%
E-waste programs	75.3%	16.3%	8.4%
Mandatory recycled content standards	19.0%	72.7%	8.3%
Plastic bag bans or surcharges	3.9%	89.1%	7.0%
Multi Family recycling "champion" program	3.6%	87.8%	8.5%
Financial incentives for haulers who meet certain recycling goals	6.5%	87.5%	6.0%
Environmental purchasing procedures	39.3%	50.8%	9.9%
Mandatory residential recycling collection/participation	34.0%	61.9%	4.0%
Mandatory residential recycling/payment (separate fee)	10.7%	85.6%	3.7%

Which of the following programs/policies do you have?	Yes	No	Other
Mandatory residential recycling/payment (fees embedded)	29.9%	65.4%	4.7%
Residential source reduction/waste reduction	33.3%	58.6%	8.1%
PAYT residential (A.K.A. variable rates, user fees, etc.)	33.9%	58.4%	7.7%

Thank you very much for your response to the survey. As this brief summary attempts to show, your responses were extremely helpful. We hope this summary is useful to you. Please feel free to contact us if you have questions or need additional information.

Watch for upcoming analyses in Resource Recycling or other studies. These studies will use multivariate statistical analyses which are valid with samples of this kind.

PAY AS YOU THROW ON THE GO

PocketBook Incentives for Diversion and Recycling Success...



December 11, 2008

SERA **EI**

Assistance from ABA

skumatz@serainc.com

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Assistance to communities on PAYT

AGENDA

Introduction to PAYT □ Impacts, systems & prevalence □ Ordinances/contracts/legislation □ Pros/cons, summary	45 min.	Skumatz
Fort Collins, CO example □ PAYT via ordinance	20 min with quests	Gordon
Urban vs. Rural PAYT, Introduction for hauler issues	5 min	Skumatz
Hauler Perspective on PAYT □ Question driven	20 min with questions	Horton
□ Education / outreach on PAYT □ Implementation	5 min	Skumatz
Lafayette, CO example □ PAYT via contract	20 min + 10 min quests	Short
Wrap-up and Questions. □ 5 Key Steps to Diversion and PAYT	25 min	Skumatz

SERA

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WHAT IF SOMEONE TRIED TO SELL YOU A PROGRAM THAT...

- ☐ Almost doubles diversion?
- ☐ Leads to no increase in costs for 2/3 of towns?
- ☐ Significantly reduces greenhouse gas?
- ☐ Is demonstrated in thousands of towns nationwide in all types of communities?
- ☐ ... and is preferred after the fact by more than 90% of the residents where it is in place...?

➔ *This is Pay As You Throw (PAYT)...*

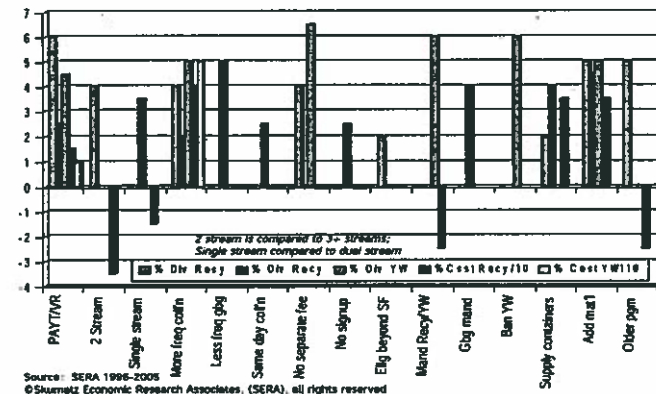
SERA

PAYT – IMPACTS ON DIVERSION & COST

- ☐ Impacts – SERA estimates based on data from more than 1,000 communities
 - Controlled for community demographics
- ☐ PAYT is single biggest impact on diversion – curbside and drop-off recycling

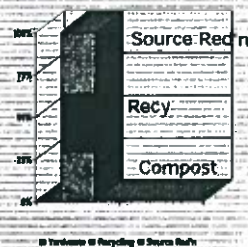
SERA

BEST PRACTICES RESEARCH DIVERSION & COST ANALYSIS – RECYCLING & YARD WASTE



PAYT – IMPACTS ON DIVERSION & COST: RESULTS

- ☐ PAYT diverts 16-17% from residential trash
 - “Triple” impact - 1/3 each to recycling, yard waste, and source reduction
 - More powerful than programs that only encourage recycling (recycling incentives)



SERA

PAYT AS STATE DIVERSION DRIVER

- ☐ Interviews with leading states (Source: SERA CDPHE study, 2007)
- ☐ Key diversion drivers mentioned include:
 - Legislation
 - Measurement/goal
 - Funding
 - PAYT
 - Other



SERA

COST, ACCEPTANCE OF PAYT

- ❑ Cost & workload impacts – 2/3 no increase (source: State surveys)
- ❑ Attitudes / Survey results

Communities that PAYT PARADE

- ❑ Strengths / weaknesses

Key Advantages	Disadvantages
<ul style="list-style-type: none"> Pay for what you throw away Encourages recycling and waste reduction Reduces litter and illegal dumping Increases revenue for waste management Encourages businesses to reduce waste Encourages households to reduce waste Encourages businesses to recycle Encourages households to recycle Encourages businesses to compost Encourages households to compost 	<ul style="list-style-type: none"> Initial costs can be high Requires public participation Requires public education Requires public support Requires public acceptance Requires public involvement Requires public consultation Requires public feedback Requires public monitoring Requires public evaluation

STRONG ENVIRONMENTAL IMPACTS

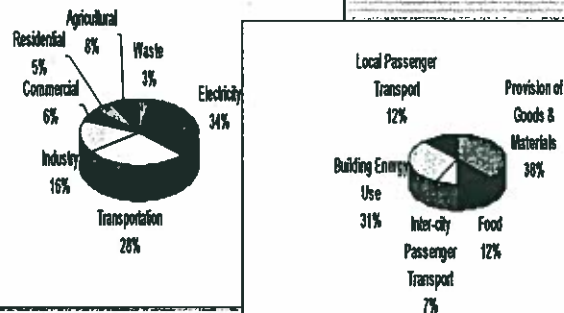
- ❑ Millions of tons diverted
- ❑ Millions of Metric Tons Carbon Equiv
- ❑ Economic development impacts
 - Jobs, income



Source: Skumatz, PAYT in US: 2008 Update & Analysis, 2008.
© SERA/EPA 2008 all rights reserved

SERA

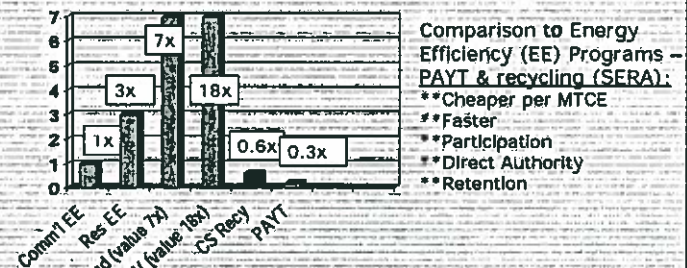
US GREENHOUSE GAS EMISSIONS (2005) – CONVENTIONAL vs. UPDATE (2008)



Source: USEPA

SERA

PAYT CHEAPEST WAY TO REDUCE GHG EMISSIONS



Results show MSW programs cheapest and fastest ways to reduce CO2 – better than energy programs! (Skumatz, Resource Recycling)

(Source: Skumatz Economics' SERA 2008 ©; see also Resource Recycling 10/08)

SERA

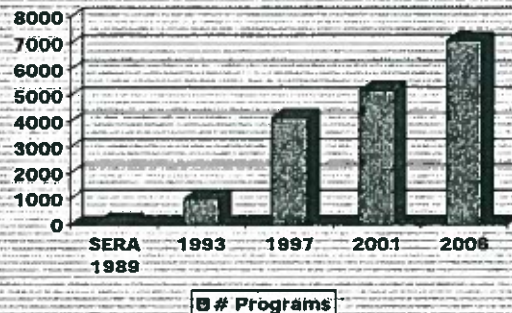
PAYT – HOW IT WORKS

PAYT – BIGGEST IMPACT – BASIC SYSTEM TYPES

- ☐ Variable cans/subscription
- ☐ Bags
- ☐ Tags/stickers
- ☐ Hybrid
- ☐ Weight-based
(GBTP – technology
adopted by RecycleBank™)
- ☐ Drop-off variations
- ☐ Pros and cons –
 - Variations by region
 - Historical recycling "rebates" –
less strong than PAYT / only recycling



COUNTS OF PROGRAMS NATIONWIDE – 7,100+ (SERA)



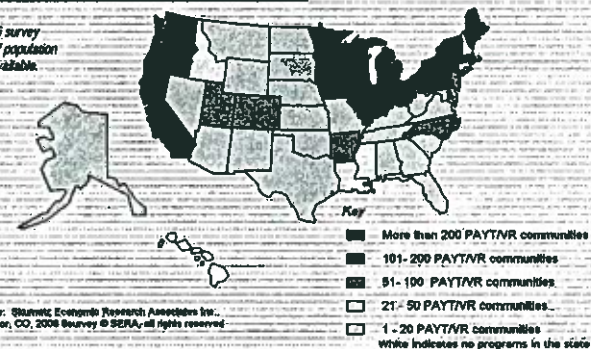
Source: All collected via SERA studies, © SERA all rights reserved

SERA

PAY-AS-YOU-THROW (PAYT)/ VARIABLE-RATES COMMUNITIES

SERA's 2006 survey found almost 7,100 PAYT/VR communities and only 3 states without programs

SERA's 2006 survey
found 25% of population
with PAYT available



SERA

PAYT WORKING ACROSS US IN ALL COMMUNITY SITUATIONS

- ☐ Large communities
 - 30 of largest-100
- ☐ Small, rural communities
 - WI, IA, other (thousands)
- ☐ Tourist / student / mountain
 - CO, CA, ON, FL, NW, MW
- ☐ Isolated / Island / self-haul
 - Island communities, MA, VT, WA
 - Isolated AK, CO
- ☐ Multiple Coll'n actors
 - Multi hauler: CO, NY, oth
 - Muni: CA, WA, oth
 - Contract, franchise
- ☐ Coll'n method
 - Automated: NW, CA
 - Manual: MW, NE
 - Hauler & munis
- ☐ Ethnic diversity
 - CA, FL, TX
- ☐ Climate extremes
 - TX, FL
 - Canada, MN, NY, CO
- ☐ Curbside and dropoff recycling
- ☐ All geographic regions of US
- ☐ SERA maintains inventory, detailed info, peer match capability

Source: "SERA Surveys" © all rights reserved.

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GETTING THE PROGRAMS IN PLACE



State, County, Local Level...
Legislation, ordinance, contract, muni...

COLORADO STUDY – DRIVERS FROM LEADING STATES

- ☐ What led to programs?
 - NOT natural flow, economics
 - Not market development efforts
- ☐ Consistent drivers / enablers → convenient programs
 - Legislation
 - Measurement
 - Funding
 - PAYT
 - Subtitle D, "Ethic", Bottle Bill

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KEY – GETTING PAYT IN PLACE → LOCAL ORDINANCE

- ☐ Ordinances at local or county level very do-able; other options include contracts – more political...
- ☐ Key elements of successful PAYT ordinance
 - Level playing field (haulers willing if...)
 - Recycling, service definition, embedded fee
 - PAYT with:
 - ☐ Small containers (32 gal) available
 - ☐ Significant variation in rates (80% for double)
 - Reporting, education, rights to audit
- ☐ → PAYT DO-ABLE AT LOCAL LEVEL
- ☐ Sample Ordinances & case studies on web site www.paytwest.org, paytinfo.org

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ANOTHER OPTION FOR LOCAL PAYT - CONTRACTING

- ☐ Request for proposals from haulers
 - Notice first, wide distribution, PAYT in conditions of service in RFP

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KEY - GETTING PAYT IN PLACE ORDINANCE VS. CONTRACT...

Ordinance Pros	Contract Pros (similar for muni)
<ul style="list-style-type: none"> <input type="checkbox"/> Fewer Hauler ("Taking") & Citizen Complaints ("Choice") <input type="checkbox"/> Maintains competition <input type="checkbox"/> No need for "notice" <input type="checkbox"/> Quick <input type="checkbox"/> Can specify rate "structure" <input type="checkbox"/> Minimal City effort (RFP, etc.) <input type="checkbox"/> Retains "level playing field" for haulers - each implements the program and provides services knowing others will be operating under same rules. 	<ul style="list-style-type: none"> <input type="checkbox"/> Lower Cost / bills <input type="checkbox"/> Fewer trucks, "cleaner" set outs, reduced wear/tear on streets <input type="checkbox"/> One hauler to contact if problems arise. <input type="checkbox"/> City "control" including control over rates/setting <input type="checkbox"/> Can "designate" facility destinations for materials.

Sample language available for State legislation, and County/local ordinances:

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STATE PAYT LEGISLATION OPTION

- ☐ Varies from mandates to encouragement - pros and cons
 - Viewed as key for diversion
 - Best: mandatory, mandatory IF, select from menu
- ☐ Essential elements same as ordinance (recycling, PAYT containers size, rate differences, etc.)
- ☐ Detailed analysis and sample language available...likelihood in your state?

PAYT/VARIABLE RATES LEGISLATION AT THE STATE LEVEL



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STREETS WEAR AND TEAR

- ☐ Streets: depends on weight, axles, type of road (argued starts / stops)
 - 1 trash truck = (250), 830, 857, 1000, 1125, 1500, 1650 cars
 - 1 recycling truck = 525 car trips
 - Some argue... extend street life 10 years; 5% of traffic but 95% of wear & tear; solid waste trucks responsible for 18% wear & tear; alley issues
 - Cost residents \$60-\$70/yr taxes; other: estimates vary
- ☐ Pollution impacts disproportionate (NY and other)

(Source: SERA research)

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PAYT - LARGEST SINGLE IMPACT...

- ☐ Diversion – 17% decrease
- ☐ Cost – no increase for majority
- ☐ Attitudes – favorable, overwhelming after the fact
- ☐ Environmental – Greenhouse gas (GHG) and job creation – and cost-effectiveness!
- ☐ Do-able...
- ☐ → Barriers?...

PAYT may not be right for community now, but almost ALWAYS worth investigating to see.

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NEGATIVE OUTCOMES & CONCERNS FROM PAYT?

ILLEGAL DUMPING



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ILLEGAL DUMPING - MAJORITY NOT RESIDENTIAL

- ☐ Exists in towns without PAYT
- ☐ SERA survey of 1,000
- ☐ Composition data
- ☐ Implications
 - Enforcement range
 - Burning ordinance
 - "Free/base unit"
 - Bulky / recycling MUST be available
 - Local consideration...



Source: SERA

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ILLEGAL DUMPING STRATEGIES

☐ Education

- Signs
- Stickers on dumpsters
- Community org
- Public humiliation

☐ Physical barriers

- Locks on dumpsters

☐ Ordinances

- Fines

☐ Enforcement

- Surveillance/stings
- Fines / search
- Bounty program
- Clean-ups
- Pay cleanup (owner/generator / dumper)



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EQUITY / COVERAGE CONCERNS

☐ Low Income

- PAYT workable, strategies available
- Control over bill, appreciated by fixed income
- Special rates (avoid identifying colors)
- Certification / recertification

☐ Large families

- Parallel to Utility - use more, pay more
- Options to recycle, reduce
- Non-PAYT unfair to small generators

☐ Compaction - weight limits

☐ Multifamily (MF)

- Anonymity / signal difficulty
- Building level strategies, technology solutions
- Conclusion NOT to hold back single-family PAYT for MF



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OTHER CONCERNS

☐ Confusion / resistance

- Education, re-education

☐ Hauler concerns - level playing field

☐ Billing systems

☐ Workload

☐ Contamination

☐ Fears greater than reality (SERA surveys)

☐ All can be / have been worked out...see FAQs (payt.org; paytwest.org)

☐ → Political will, acceptance, entrenchment the biggest barrier

ALUMINUM CANS



LATAS DE ALUMINO



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PROBLEMS: FEAR GREATER THAN REALITY

Solvable... see FAQs

Fear	Reality
Illegal dumping	Minimal / low, short-lived
Confusion, resistance to change	Continuing education (prior, free stickers)
Non-compliance	Minimal
Contamination	Minimal
Burning	Banned (60% illegal, seasonal, warn once then remove, charge more)
Self-haul and by-pass	Base fee, mandatory (impacts on rates and setouts)
Revenues (esp. haulers)	Less volatile systems, work with haulers in design; pilot
Private/multiple haulers	Multiple colors, work with haulers
Local and regional economics	Depends on markets, LF ownership, processing, cost structure, prices

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IMPLEMENTATION OPPORTUNITIES

- ☐ Contracts, franchises, rates or billing system being changed
- ☐ Landfill or disposal problems
- ☐ New or modified programs
- ☐ Existing system perceived as unfair
- ☐ Need to free up tax authority



PAYT may not be right for a community now, but almost ALWAYS worth investigating to see.

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PAYT CONCERNS & TIPS

- ☐ Technical issues rarely the problem
 - Pilot test / phase in
- ☐ Politics, political will is the stumbling block
 - Suggestions from communities; & champion
- ☐ Public process, public education. Good customer education / understanding crucial
 - Education / why, how it works, how to make it work for me, packages for move-ins



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SUMMARY

OVERALL PAYT SUMMARY

- ☐ Diversion
 - Low cost, speedy
 - ☐ Favorable attitudes
 - Environment
 - Retention
- ☐ Manageable "negatives" IF desire...
- ☐ Tested & Flexible:
 - 7100 towns, range of population, haulers & municipal, multiple types
- ☐ Encourages ALL types of diversion
 - 50%-doubling recycling: same tonnages for YW, SR
- ☐ Work with programs and education
- ☐ **DO-able at local level... NOW!**

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SUSIE GORDON

Environmental Planner,
City of Fort Collins, CO
sgordon@fcgov.com

RURAL VS. URBAN PAYT

PAYT IN RURAL AREAS

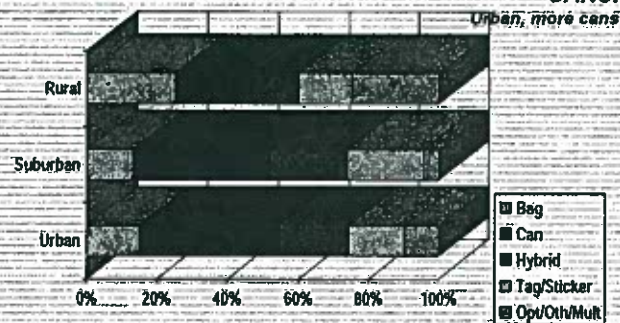
- ☐ In place in more than 1,200 rural locations in 32 states
 - 90% in NE/MW (NY, MN, VT, PA, IA, WI, IN and others)
 - 75% population less than 3,000
 - 1953 to present
- ☐ Designs include bag/tag for curb collection
- ☐ Drop-off options
 - Pay, punchcards, other
- ☐ Strong success in encouraging diversion



Source: All collected via SERA studies, © SERA all rights reserved SERA

URBAN VS. RURAL TYPES

RURAL; MORE BAGS/ DROPOFF, FEWER CANS.



Source: Skumatz Economic Research Associates, Inc.
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SELECTION OF PROGRAM TYPES

- ☐ Toward cans in urban
 - automated collection, containerization, billing
- ☐ Bags / hybrid in rural
 - Clean/fast collection, easy for customers, distribution, revenue options, billing, flexible /multiple haulers
- ☐ Some differences in impacts (bag vs. can)



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HAULER ISSUES / CONCERNS

HAULER ISSUES

- ☐ Revenues, uncertainty, cash flow
- ☐ Involving / incenting haulers
- ☐ Works with multiple haulers
- ☐ Hauler suggestions
- ☐ Level playing field



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GARY HORTON

President, Western Disposal

QUESTION-DRIVEN SESSION

EDUCATION STUDY

- ☐ Outreach expenditures research
 - Impacts / variations (after "controlling" for other program and demographic differences)
 - Impacts from dollars spent - \$1 / hh / year addition increases diversion
 - ☐ By 3 percentage point if currently spending \$0.30/hh/yr; by 1 percentage point if currently spending \$1.40/hh/yr; add 1 percentage point for "doubling" annual expenditures.
 - ☐ Most gain in "underspending" communities
 - Media suitability
 - ☐ Differences for urban/ rural

(Source: SERA / Iowa DNR 2002)

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EDUCATION / OUTREACH ISSUES

EDUCATION MATTERS!

- ☐ SERA research BEYOND dollars & demographics:
 - Attitudes / self-efficacy - deeply held beliefs / self-efficacy matters
 - Linked to 11% higher recycling

Source: © Skumatz Economic Research Associates, Inc., SERA 2001-2002

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PUBLIC PROCESS

☐ Public process

☐ Outreach

- Rural: Civic organizations, radio stations / talk shows, newspapers, face-to-face
- Urban / suburban: articles, staffers, brochures, etc.

☐ Education key...



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DISCUSSION OF IMPLEMENTATION ISSUES

Discussion...



STEPS TO IMPLEMENT PAY AS YOU THROW / VARIABLE RATES

- Political support
- Ordinances (fees, dumping, error tags, wgt limits)
- Make sure legal alternatives available / changes to other programs
- System configuration; planning/analysis
- Order equipment; adjust staffing, training, establish procedures
- Rate study/billing system
- Outreach / education (& ongoing political support)
- Implementation and enforcement
- Monitor and refine

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IMPLEMENTATION STEPS: CITY PERSPECTIVE (LAFAYETTE)

- | | |
|---|---|
| <input type="checkbox"/> Plant seed with citizen advisory & council 2005-6 | <input type="checkbox"/> Pick roll-out date based on containers / hauler ability to start (9/07) |
| <input type="checkbox"/> Council decisions spring 2006 | <input type="checkbox"/> May to Dec meetings with haulers to set up billing system and communication, software, reprogramming |
| <input type="checkbox"/> RFP elements / issuance | <input type="checkbox"/> 2 mailings to HH's - bilingual, 2 open houses including translator |
| <input type="checkbox"/> Pre-bid meeting with haulers; proposals due 7/06 | <input type="checkbox"/> Haulers told date to remove carts end of Sept. |
| <input type="checkbox"/> Public meeting presenting results of lowest responsible bidder 8/06 | <input type="checkbox"/> Cart delivery / rollout 10/1 |
| <input type="checkbox"/> Council vote 8/06 | <input type="checkbox"/> 2.5 months of calls |
| <input type="checkbox"/> Contract hammered out | <input type="checkbox"/> Died down mid-December |
| <input type="checkbox"/> Timing issues with BoCo facility going SS.5/07 | <input type="checkbox"/> TIPS: Need a champion (not reluctant / ownership pride), need a capable hauler |
| <input type="checkbox"/> Implementation with containers (owned), meetings with County Council | |

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IMPLEMENTATION STEPS (HAULER-PERSPECTIVE)

- ☐ Affected addresses...hard to get accurate list
- ☐ Examine type of HH
- ☐ Rate setting
- ☐ Notification to residents (Newspaper, mail, door-hangers, phone)
- ☐ Who will calculate bill & maintain customer records (& handle calls) - party with bill settles customer disputes
- ☐ Who will bill - interface? How bad debt handled?
- ☐ Who buys & delivers carts? How much choice for residents (not one size).
- ☐ Cart issues: ordering, receiving, staging for delivery, delivery of proper sizes, exchanging when HH changes mind, maintaining damaged carts, maintaining inventory
- ☐ Monitoring / reporting / recording of volumes, weights, set outs, tonnages
- ☐ TIPS:
 - Must order carts 3-4 months ahead (and can be backing if big city ahead of you). Can order 1000 or so quickly
 - Printed materials lead time 3 months or less.

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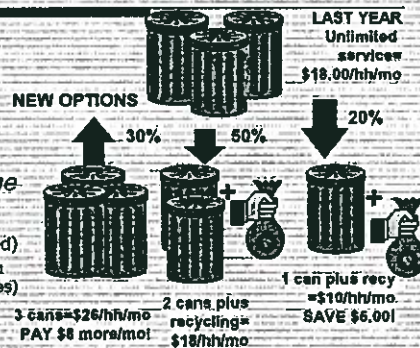
RATE DESIGN / POLICY CHOICES: EMBEDDED PROGRAM FEES & RATE DIFFERENTIALS

- ☐ Policy decision with impact on incentives - Recycling vs. yard waste programs
 - More participation if "free" / no additional cost / embedded; however
 - Making yard waste "free" discourages back yard composting, and may have inequities for large vs. small yards
 - Line iteming makes apparent rates lower
 - Embedding supports higher "differentials"
 - → We usually recommend recycling with no separate fee; yard waste paid
- ☐ Research on needed level of differential to balance incentive vs. revenue risk
 - 80% compromise... Balances large difference to provide incentive vs. small difference to minimize risk of not recovering needed revenues. FLAT (small difference) isn't worth administrative headache.

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RATES / ACCEPTABILITY

- ☐ In outreach, highlight winners (and losers) ---% and \$
- ☐ Rates vs. BILLS
For example:
"70% pay same or less!"
(vs. \$/can increased)
(outcomes depend on structure, changes)



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PLANNING NOT ALWAYS PERFECT

- ☐ Pilot test helpful
 - Example → phase in
- ☐ Ongoing monitoring, revision
- ☐ Frequently asked questions
- ☐ Peer Match at www.serainc.com
www.paytwest.org



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DOUG SHORT

Public Works Director,
City of Lafayette, CO

WRAP-UP AND QUESTIONS

FUNDING PROGRAMS...

- ☐ PAYT needs no separate funding...
 - Cost of curbside recycling program paid through PAYT
 - Recycling paid by all, so more cost-effective (fixed costs across more households)
 - Business opportunity for haulers
- ☐ Infrastructure and other programs
 - SERA study of 700 US communities and counties showed funding methods were: #1 user fees, #2 tip fee surcharge.

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"TOP 5" - WHAT A COMMUNITY OR COUNTY CAN DO TO INCREASE DIVERSION... NOW!

- ☐ #5 Citizen sustainability committee
- ☐ #4 Measurement and goal-setting
- ☐ #3 Basic programs & ordinances
- ☐ #2 Education
- ☐ #1 PAYT / Ordinance → Number 1 thing you can do!

(Source: SERA 2007; handout available on web)

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SUMMARY

- ❑ Strong positive impacts (tons, cost, equity, environment) with manageable negatives...
- ❑ Single biggest impact on recycling & diversion (50% to doubling)
 - Encourages all types of diversion/ stronger than "recycling only" programs
- ❑ Tested and flexible – 7,100 examples
- ❑ Do-able locally and state level – worth examining in all communities

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QUESTIONS

Thank you for attending!



Research support from ABA

QUESTIONS / ASSISTANCE:

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Website – www.serainc.com
Also: www.paywest.org, payinfo.org; payt.org

To help on statistical studies, consider filling out survey on:

www.serainc.com (national survey)

PAY AS YOU THROW! ON THE GO! SERA

BIOGRAPHY - SKUMATZ



- ☐ Principal, Skumatz Economic Research Associates
- ☐ Hands-on research & consulting firm with client communities / counties / states all across US & Canada
- ☐ Extensive database and research on PAYT. Real world data on program operation in all community types - database of 1,300 community programs and more than 7,000 PAYT programs
- ☐ National Award-winner (national lifetime achievement awards from SWANA, NRC)
- ☐ Economist, Mayor Pro-tem

skumatz@serainc.com; www.serainc.com;
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About Earth Tech

Earth Tech is a global provider of consulting, engineering, construction and operations services to the water/wastewater, environmental, transportation and facilities markets. Headquartered in Long Beach, CA, the company was acquired by AECOM Technology Corp. in July 2008. More information on Earth Tech can be found at www.earthtech.aecom.com.

About AECOM

AECOM is a global provider of professional technical and management support services to a broad range of markets, including transportation, facilities, environmental and energy. With more than 41,000 employees around the world, AECOM is a leader in all of the key markets that it serves. AECOM provides a blend of global reach, local knowledge, innovation, and technical excellence in delivering solutions that enhance and sustain the world's built, natural, and social environments. AECOM serves clients in more than 100 countries and had revenue of \$4.7 billion during the 12-month period ended June 30, 2008. More information on AECOM and its services can be found at www.aecom.com.

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City of Milwaukee

200 E. Wells Street
Milwaukee, Wisconsin
53202

Meeting Minutes RECYCLING TASK FORCE

PRESTON COLE, CHAIR

Ald. Joe Dudzik, Michael J. Daun, Lisa Schaal, and Erick Shambarger

Staff Assistant, Terry MacDonald

Phone: (414)-286-2233; Fax: (414) 286-3456, E-mail: tmacdo@milwaukee.gov

Monday, April 6, 2009

1:30 PM

Room 301-A, City Hall

Meeting convened: 1:31 P.M.

1. Introduction of Members

Members introduced themselves.

Present 5 - Cole, Daun, Dudzik, Shambarger and Schaal

Also present:

Rick Meyers, Environmental Recycling Specialist, James Carroll, Legislative Reference Bureau, Jim Michalski, Comptroller's Auditing Division

2. Presentation given by Jim Owczarski, Deputy City Clerk, relative to meeting rules, procedures and the open records laws

Deputy City Clerk Jim Owczarski appeared and discussed various aspects of the state Open Records and Open Meetings laws.

Mr. Cole asked if this body is required to use the Robert Rules of Order?

Mr. Owczarski replied in the affirmative.

3. Discussion of the purpose, responsibilities and goals of the Task Force

Mr. Cole said Common Council resolution File #081212 created this task force and directs it to do a number of things that were recommended in the recycling audit done by the City Comptroller's Office. It also directs the task force to submit its findings to the Common Council within six months and the six months began on January 16, 2009, and ends on July 16, 2009. He said, if needed, the time period to submit the findings can be extended.

Mr. Shambarger asked if there is any expectation as to the timeline for the submission of the recommendations as it relates to the 2010 Budget?

Mr. Cole replied that the resolution doesn't say anything related to that issue, but it would be up to this task force to determine if there are issues that could be considered and recommendations made that would affect the City's 2010 budget.

Mr. Daun said that the resolution lists a number of recommendations and asked which recommendations will this task force need to look at?

Mr. Cole replied that it is his understanding that this task force will need to review several of the audit recommendations, which will include the fiscal and operational impacts of a conversion to single stream recycling as well as an overview of the current recycling program. He said he will prepare a list of all the issues this task force will need to take a look at and have Ms. MacDonald forward it to all the members.

Mr. Cole said this task force could also do a review of the recycling audit.

Mr. Cole said he will have Mr. Rick Meyers, recycling specialist, appear before the task force to give an overview of the City's current recycling program.

Ald. Dudzik said the Council's main reason in creating this task force is to take a look at a single stream recycling program. He said the other recommendations listed in the resolution are to be addressed by the Department of Public Works.

Mr. Shambarger asked if the recycling enforcement is going to be considered by this task force?

Mr. Cole said he has had a number of conversations with the City Attorney's office regarding section 79 of the Milwaukee Code of Ordinances and feels that this task force should look at the enforcement process of the City's Recycling program.

Mr. Daun suggested that it may be useful, once DPW staff conduct a review of the enforcement process, for DPW to give this task force an overview of the recycling enforcement process and then the task force can determine if it needs to be dealt with further.

All the task force members confirmed that they know what a single stream recycling program is.

Mr. Cole said he will provide the task force with an overview of the City's current recycling waste hauler contract.

Mr. Shambarger asked if DPW can provide information on the staffing implications as it relates to dual stream system compare to a single stream recycling program?

Mr. Cole replied in the affirmative.

Mr. Daun asked if DPW could provided information on other cities recycling program?

Mr. Meyers appeared at the table and said that there are other large cities that use a single stream recycling program.

Ald. Dudzik asked if DPW could provide data on the volume of recyclables the city has collected per year?

Mr. Meyers replied in the affirmative.

Mr. Cole said that the task force members could also plan to take a tour of a single stream recycling program. He said Germantown has a single stream recycling program.

Mr. Meyers offered to provide a virtual tour.

Mr. Daun commented that the City of Milwaukee recycling educational brochure indicates that plastic containers with the numbers one or two are recyclable, but plastic containers that have the numbers three through seven are not and he was wondering if other Cities have that same requirement.

Ald. Dudzik said that he was at a recycling presentation in either another City in Wisconsin or Illinois and it was stated that if there is a question as to if an item is recyclable, just put it in the recyclable bin and the City will determine if it is recyclable.

Mr. Cole said that the question is, how can the City get the residents to recycle more, because the more recyclable collected the more money the City makes.

Ald. Dudzik asked when does the current recycling contract expire?

Mr. Meyers replied that the current contract expires in July 1, 2009 and there is extension of every two years thereafter.

Ald. Dudzik said there may be a gas savings in using a single steam recycling program.

Mr. Cole ask Mr. Meyers to bring pictures and any other information on what type of equipment the City uses in its dual-stream recycling program.

Ald. Nik Kovac appeared and suggested that this task force consider looking at incentives or reward system for recycling. He said the City could give a refund by weight for all recyclables picked up.

Mr. Cole asked the task force members if they would like to look at the "Pay As You Throw" program? All members replied in the affirmative.

Ms. Schaal asked how does MPS handling its recyclables?

Mr. Meyers replied that MPS has a private contract and it is a cost saving for MPS to do it that way.

4. Set next meeting agenda

Agenda items for future meetings:

- 1. Discussion relating to task force role*
- 2. Presentation given by Dept. of Public Works, Sanitation Division staff on the City's current recycling program*
- 3. Overview of the single stream recycling operation*
- 4. Overview of the "Pay As You Throw" program*
- 5. Report on how the City of Milwaukee recycling program compares to other Wisconsin cities*
- 6. Discussion on how the weather can impact the recycling program*

5. Set next meeting date(s)

Future meeting dates:

April 27, 2009

May 18, 2009

June 8, 2009

June 29, 2009, at this meeting it will be determined if an extension of time will be needed for the submission of the final recommendations to the Common Council.

All meetings will begin at 1:30 P.M.

Meeting adjourned: 2:24 P.M.

Terry J. MacDonald
Staff Assistant



City of Milwaukee

200 E. Wells Street
Milwaukee, Wisconsin 53202

Meeting Minutes RECYCLING TASK FORCE

PRESTON COLE, CHAIR

Ald. Joe Dudzik, Michael J. Daun, Lisa Schaal, and Erick Shambarger

Staff Assistant, Terry MacDonald

Phone: (414)-286-2233; Fax: (414) 286-3456, E-mail: tmacdo@milwaukee.gov

Monday, April 27, 2009

1:30 PM

Room 301-A, City Hall

Meeting convened: 1:40 P.M.

1. Roll call

Present 4 - Cole, Daun, Shambarger and Schaal

Excused 1 - Dudzik

*Also present: James Carroll, Legislative Reference Bureau and Jim Michalski,
Comptroller's Auditing Division*

2. Approval of the minutes of the April 6, 2009 meeting

Mr. Daun asked that the minutes be amended by rewording his comment on page three that says "Mr. Daun suggested that an educational brochure should be sent out that would provide information to city residents on what is considered recyclable and what isn't", to read as follows: "Mr. Daun commented that the City of Milwaukee recycling educational brochure indicates that plastic containers with the numbers one or two are recyclable, but plastic products that have the numbers three through seven are not and he was wondering if other cities have that same requirement."

Mr. Daun moved approval of the minutes as amended, seconded by Mr. Shambarger. There were no objections.

3. Discussion relating to the Task Force's responsibilities

Mr. Cole directed members to his hand out that was submitted prior to this meeting, that shows what this task force's responsibilities are and what the Department of Public Works' responsibilities are, as was stated in resolution file #081212 (Exhibit 1). He asked if members had any questions or comments on his hand out.

There were no questions or concerns relating to Mr. Cole's hand out.

Mr. Cole moved to take up agenda item #6 next.

4. Presentation given by Dept. of Public Works, Sanitation Division staff on the City's current recycling program

Mr. Rick Meyers, Environmental Recycling Specialist appeared and addressed the task force on this matter.

Mr. Meyers gave a PowerPoint presentation on the Department of Public Works' recycling program (Exhibit 4). He began by giving a brief history of the program. He showed a graph of the City's residential recycling tonnage collected from 1998 through 2008. He gave an overview of the current City of Milwaukee's recycling program and an overview of how the current program works using a dual stream program.

Mr. Shambarger asked if a two persons or a single person collection crew is more efficient?

Mr. Meyers replied that he doesn't know. He said the Department of Public Works (DPW) would have to do a time study to determine that.

Mr. Cole said this summer DPW will be doing a lot of data collection.

Mr. Meyers continued with his presentation by explaining the recycling processing and marketing. He said the recyclables are brought to a City-owned facility, but the processing work is contracted out to Waste Management Recycle America. He said the way the contract is structured, the City pays a set per-ton processing fee and the City receives a revenue share based on what is sold.

Mr. Cole asked Mr. Daun if he knows what the provision is if there is a negative per ton processing fee (CPI) number?

Mr. Daun replied that he doesn't know, but he will find out.

Mr. Meyers continued his presentation by explaining the dual-stream processing system. He showed two pie charts that broke down, by percentages, the materials processed by weight.

Mr. Daun asked Mr. Meyers, if he knows by experience, how efficient the current Milwaukee's materials Recovery Facility (MRF) dual-stream processing system would be compared to a single-stream processing system, as it relates to sorting and extracting paper from the other materials?

Mr. Meyers' replied that with more modern equipment a dual system could add \$10-15 per ton in processing cost.

Mr. Cole said that the capital cost of putting in single-stream processing equipment or whether the City will haul the materials or have them picked up is what this task force needs to consider.

Mr. Michalski said that during his interview with Waste Management officials at their single stream facility in Illinois, they said that a single-stream processing system does result in a higher residual (15%) and it also results in a higher volume overall.

Mr. Shambarger asked who owns the recycling equipment and building?

Mr. Meyers replied that the City owns the equipment and the facility, but the

contractor is responsible for the maintenance and up-keep of the equipment and facility and to keep the process going.

Mr. Meyers continued with his presentation and said the City's revenue data for recycling in 2004-2008 is \$7.4 million. He said in late 2008 and into 2009 the global melt-down caused commodity prices to go way down, therefore, the net revenue is down to \$6 per ton, but that will eventually go back up.

Mr. Meyers said that prior to the submittal of the final audit report in June of 2008, DPW had already implemented a lot of educational materials, activities and outreach initiatives.

Mr. Meyers said that the vision DPW has for future recycling is to guarantee a biweekly schedule, potential changeover of some bins to carts, investigate the use of a single vs. a dual stream collection process and investigate the use of public vs. private Material Recycling Facility (MRF).

Mr. Shambarger said that given the financial situation the City is in right now, he asked if there is any survey data on if the city could do less garbage collection and more recyclable collection?

Mr. Meyers replied in the negative. He said he could take the total tons picked up and divide it by the weekly carts picked up and that overall total would say the garbage carts are half full, but that still wouldn't give an actual picture, because some carts are filled to capacity each week and need weekly pick up.

Mr. Shambarger asked if this task force will include in its study of a conversion to a single-stream collection process whether the City would haul the recyclables to the Germantown facility or would it use its own facilities?

Mr. Cole replied that this task force will need to consider what the cost would be to the City to convert to a single-stream collection process and whether it would bring the collected recyclables to the Germantown facility or would the City purchase its own equipment and use its own facility and also would it contract out the work like it is doing now.

Mr. Cole said that the City has contracted with Earth Tech consulting in the past and they had worked on the 2004 City's recycling contract request for Proposal (RFP) and has also worked on some conversion to single-stream collection process issues and he would like to have them do a more comprehensive study on the financial scope of converting to a single-stream system. He said this task force would get that information a lot quicker than if he had his own staff do it.

Mr. Meyers said that a publicly-owned facility may be in the City's best interest. He urged the task force and the City of Milwaukee to consider using a publicly-owned regional facility. He said Waukesha is currently looking at a single-stream processing conversion and has outgrown its site and Wauwatosa has recently converted to a single-stream system and is currently hauling it to the Waste Management Germantown location. He said Waukesha County, Wauwatosa and Milwaukee contracts are also all in-line with its optional extension periods. He said there has been some meeting already with those entities on a publicly owned regional facility.

Mr. Cole said he will put together a draft of the frame work for a study that would be done by Earth Tech consulting on a conversion to a single-stream recycling collection process to be review and considered by this task force at its next meeting.

Mr. Shambarger asked how many vendors are out there that could run the MRF operation?

Mr. Meyers replied that there are several adequate companies out there that could operate the MRF, but if the City had it owns facility and if there is a long enough contract it could attract more competitive bids.

5. Discussion on how the weather can impact the recycling program

Mr. Meyers said that during the winter months, there is an impact on collection of recyclables and collections can fall behind during snow and ice removal.

Mr. Cole said that the single-stream operation was used this past winter when the city fell 45 days behind due to the winter weather. He said all the recyclables were collected and put together in a garbage truck and were hauled to the Waste Management's Germantown facility. He said they were surprised that it was a very cost effective and efficient alternative.

Mr. Daun said that during the difficult weather months, maybe DPW could hire temporary workers to keep the recycling on schedule. He said to cover the cost of the temporary workers the snow and ice fee charge could be increased.

Mr. Shambarger said the snow and ice fee is set by the Common Council based on historic averages and in certain cases an increase can be done once a year by resolution.

Mr. Shambarger asked if DPW can provide him with maps of the recycling routes? (Exhibit 6)

Mr. Meyers replied in the affirmative.

6. Discussion relating to City and State recycling enforcement laws

This matter was taken out of order, after item #3.

Deputy City Attorney Linda Burke and Assistant City Attorney Jay Unora with the ordinance enforcement division appeared to address the task force members on this matter.

Atty. Burke said the recycling enforcement provisions are laid out in Chapter 79, Sections 79-43 and onward of the Milwaukee Code of ordinances (Exhibit 2) and it has nothing in it that would require the Department of Neighborhood Services (DNS) or Department of Works (DPW) to actually look for violations or do inspections. She said Section 79-47 gives details on penalties, liens and citations for failure to comply. She said the penalties are either forfeiture by citation, which would be prosecuted in municipal court or by the issuance of an order. If the order isn't complied with the order would result in a special charge and if the special charge isn't paid in a timely matter, it will then be placed on the property tax bill.

Atty. Unora said that during his 12 years working in prosecution there have been very few recycling prosecutions that came through the municipal court and those few were for either unauthorized addition or unauthorized removal of recycling material violations.

Mr. Meyers referred members to the code violation section in his PowerPoint presentation (Exhibit 3). He said the information he is providing was taken from the Comptroller's recycling audit. He said that in the last couple years the DPW has increased enforcement on commercial and residential properties greater than 4 units. He said most violations that occurred were under Section 79-29, relating to cart contamination.

Atty. Burke said when using the word fine for a special charge or citation is confusing, because a special charge is not considered a fine and a citation is considered a fine or forfeiture. She said a citation can be issued for any recycling violation instead of a notice of special charge.

Atty. Unora said that violation of Section 79-40, unauthorized removal of recyclables, is the only one listed in Mr. Meyers' chart that is not a special charge and a citation would have to be issued because it is a municipal court offense. He said DNS, DPW or a police officer can issue a citation for any recycling violation.

Mr. Cole said that there is a noticeable difference between a special charges and a citation and the DPW will make note of that.

Mr. Meyers said that 79-25 is one violation that the audit report recommended that DPW needs to improve enforcement on. He said DPW doesn't actively enforce that section because of the many issues that would be involved when going through people's garbage. He said there may be some legality concerns.

Atty. Burke said that a request for a legal opinion should be made for searching of carts on private property. She said once the garbage container is at the curb it isn't considered private property any longer.

Mr. Shambarger asked if this task force could request a City Attorney opinion on the enforcement of recyclables?

Atty. Burke replied in the affirmative.

Mr. Cole asked Ms. MacDonald to prepare a letter to the City Attorney requesting a legal opinion on the enforcement of recyclables as it relates to searching of carts on private property versus curbside.

Atty. Burke said that the opinion would contain two parts, one on the searching for recyclables on private property and the second part would be on the searching of cart at the curbside.

Mr. Daun said Ald. Kovac suggested a recycling incentive program at the last task force meeting and that if the program is implemented the person would be rewarded for the number of pounds of recyclables. He said a search of the recyclables would need to be taken for such an incentive program and that search could also be used as an enforcement tool.

Mr. Cole asked Atty. Burke, if in fact, the cart was at the curbside could a search be used for both the incentive program and as an enforcement tool?

Atty. Burke said the City could get a waiver from the people. She said one of the things Atty. Unora brought up was how would City staff know whose garbage it is? She said when prosecuting somebody for a recycling citation, she would have to know it is in fact that person's garbage.

Atty. Unora said Municipal Courts' burden of proof is to provide a clearly satisfactory and convincing evidence and if it is a situation where the evidence is from a garbage cart sitting on the curb that is something that would be pretty difficult to prosecute.

7. Discussion on how the City of Milwaukee's recycling program compares to other cities

Mr. Meyers referred members to the section of his PowerPoint presentation that shows data taken from Appendix three and five of the Comptroller audit of the City of Milwaukee Recycling Program dated June 2008 (Exhibit 5).

Mr. Meyers said the data he is providing is for recycling tons per capita in eight of the 25 largest cities in Wisconsin (data taken from Appendix three) and is for the residential recycling collection program, it does not include yard waste or other dropped off recyclables. He said Milwaukee's recyclables per capita is 86.4, which is a bit lower than the other large cities and the reason for that is the fact that Milwaukee has a high percentage of greater than four unit residential buildings and the four units and up residential buildings are serviced by the private sector and is not included in the count.

Mr. Meyers said the data he is providing is for the residential recycling in the U.S. 30 largest cities by population (Data taken from Appendix five) takes a more broader look. He said Milwaukee is the only large City that collects monthly, whereas all of the other large cities collect on a weekly basis.

8. Discussion relating to a single stream recycling operation

This item was discussed under item #4.

9. Discussion relating to a "Pay As You Throw" program

Mr. Shambarger said the La Follette School of Public Affairs, Madison, WI will have a report available on Pay as You Throw program some time after May 8, 2009. He said when he obtains a copy of the report he will have it forward onto to the task force members and could be reviewed by the task force at its next meeting.

Meeting adjourned: 3:25 P.M.

Terry J. MacDonald
Staff Assistant

The Recycling Task Force created by the Milwaukee Common Council states;

The Recycling Committee Tasks Are:

To conduct a comprehensive study of the fiscal and operational impacts of a conversion to single stream recycling in the City of Milwaukee;

Provide a comparison of the costs and benefits from continuing a dual-stream recycling program, including the Materials Resource Facility repairs, with those from a conversion to a new single-stream program, including alternative Material Resource Facility options.

The Department of Public Works is to:

Evaluate its recycling routes to determine the amount of time reasonably required to complete each route and to ensure that each route is properly sized for the most efficient use of staff and equipment;

Consider implementing scheduled curbside set out of recycling carts in neighborhoods without alleys and analyze the feasibility of providing bi-weekly collection of recycling in neighborhoods with and without alleys;

Enhance recycling education by developing educational initiatives that are tailored to the needs of the individual neighborhoods and to make full use of the Milwaukee Recycles website;

Develop and implement a recycling enforcement policy that covers all major requirements of the Milwaukee's Code's recycling provisions for both residential and commercial properties and explore the possibility of having the Department of Neighborhood Services enforce s. 79-25, requiring the separation of recycling from refuse, during building code inspections;

Submit an annual report to the Common Council on the activities, effectiveness, cost and revenue of the recycling program, and the report shall include separate recycling rates for household recycling, yard waste recycling, and other recycling as well as other informative measures such as the amount of recycling and refuse collected per capita, per household, and by area of the City.

EXHIBIT

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constructed so that they shall provide a compatible and practical arrangement on the premises and surrounding area.

b. Large Appliances to be Enclosed. Owners or operators of business and commercial establishments storing large appliances such as refrigerators, stoves, washing machines and other similar items outside of the building structure, shall provide enclosures of the area wherein such items are stored in the same manner and as provided in par a.

c. Definitions. For the purpose of subs. 3 and 4, the following terms therein are defined as follows:

c-1. "Approved waste receptacles" shall mean those as provided and defined in s. 79-4.

c-2. "Secure" shall mean to be locked or closed in such a manner so as to prevent ready access to contents thereof.

c-3. "Shopping center" shall mean a group of commercial establishments planned and developed generally as a unit with off-street parking facilities provided on the property for patrons of said establishments.

79-4. Waste Container Regulations.

1. PORTABLE CONTAINERS.

a. Requirements. Portable containers for waste, except for containers for use in cart collection, shall be rodent resistant of substantial metal construction equipped with at least 2 handles and a tight fitting cover, shall have a capacity of not less than 20 nor more than 32 gallons and no single container when filled shall weigh more than 100 pounds. Waste not containing garbage may be stored in other approved ways as provided in this chapter, and in the rules of the commissioner.

am. Responsibility for Providing Portable Waste Containers. In areas of the city where the use of carts for the disposal of solid waste has been approved by the common council:

am-1. Owners of single, 2-, 3-, or 4-family dwelling units shall be provided carts by the city.

am-2. Owners of multi-unit dwellings of 5 or more units in the same structure shall provide, at their cost, containers of a type specified by the operations division.

as. Repair, Replacement or Sale. The operations division may:

as-1. Repair damaged portable containers or replace them if necessary and charge the

property owner accordingly in cases where damage or loss can be determined by resident's misuse of the container.

as-2. Sell portable containers, at cost, to those property owners or individuals who require them for the proper disposal of waste.

as-3. Make a special assessment against the property served by the portable container if any charge for repair, replacement or sale of a container is not paid for within 30 days from receipt of billing statement.

b. Plastic Bags, etc. Approved bags and boxes made of plastic or paper shall not be used outside of the portable containers, except for the sole purpose of storing grass clippings, leaves, branches and paper.

c. Posting of Signs. Retail stores selling approved plastic bags intended or generally used for the storage of garbage, rubbish and trash shall have posted, in the vicinity of said bags, in a prominent and conspicuous manner, using bold lettering at least one inch in height, a placard stating as follows: "Garbage stored in plastic bags must be placed in garbage cans." This section of the code shall also be cited on the placard.

* 1.5. PORTABLE CONTAINERS; PROHIBITED USES. a. No person shall use a city-owned portable waste container or a city-owned portable recyclable material container for any purpose except the storage of waste or recyclables for curbside or alley collection by the operations division. No person shall use a city-owned portable waste container or a city-owned portable recyclable material container to transport any material for any purpose other than to transport waste or recyclables from the premises to the curb or alley for collection.

b. No person who is the owner, occupant, manager or other responsible agent of any property from which the operations division does not collect waste or recyclables shall permit a city-owned portable waste container or a city-owned portable recyclable material container to be brought onto or remain on the property.

2. NONPORTABLE CONTAINERS. Owners, lessees or managing agents of multi-unit dwellings of 5 or more units in the same structure or condominium design shall provide, at their cost, containers of a type specified by the operations division where the use of portable waste containers is inappropriate. Nonportable containers shall be fully enclosed, rodent resistant and of substantial construction, and have a minimum capacity of one-half cubic yard per

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yard per dwelling unit or of sufficient capacity to hold 2 weeks of waste accumulation. All owners, lessees or managing agents providing nonportable containers as described in this subsection shall be required as a condition of collection to sign a written declaration, formulated by the city attorney, to the effect that the city shall be held harmless as against any claim, demand or cause of such action which may arise as a result of such collection in favor of any person or entity.

3. **NONPORTABLE CONTAINERS; CONSTRUCTION.** Nonportable, mechanical lift, tapered rear loading containers equipped with casters, wheels, or rollers shall be fully enclosed, rodent resistant, and of substantial construction. Containers shall be secured or modified in such a manner as to prevent accidental tipping or free-rolling.

4. **CONDOMINIUMS.** Where collection service is provided by the department to a condominium complex, the city shall provide containers of a type and quantity determined at the discretion of the operations division to the owners of such condominium units in the same structure or condominium design, regardless of the number of units in the complex.

79-5. Location of Containers. 1. ON PREMISES. All containers used for solid waste disposal shall be stored on the premises. Where containers are kept within any enclosure, the enclosure shall have a door of sufficient size to allow the containers to be removed by sliding or rolling forward without being lifted.

2. **NEAR ALLEY.** Containers shall be stored immediately adjacent to the alley except where a premises does not have an alley, in which case containers shall be stored in the rear yard. If the rear yard may not be utilized for this purpose, the side yard may be used providing the containers are sited as conveniently as possible for servicing, as specified by the commissioner of public works. If the property owner can prove to the satisfaction of the commissioner that the rear or side yard cannot be used, the commissioner shall approve an alternate location prior to its use.

3. **ACCESSIBILITY.** It shall be the responsibility of the owners and tenants of every premises where solid waste is collected to provide a clear and unhindered path to all containers. The path shall be a width specified

by the commissioner and shall be free of hindrances such as, but not limited to, large debris, vehicles, locked fences, animals, ice or 3 or more inches of snow. The surface of the path must be firm and nonhazardous.

4. **COLLECTION CHARGE.** If the location of the containers is more than 125 feet from the servicing vehicle or the containers are inconveniently located, the commissioner may charge for collection.

5. **RETURN TO STORAGE LOCATION.** Owners and tenants of those premises serviced by the cart collection system, where carts are left at the alley line or curb line after servicing, shall return the carts to their proper storage location before 10 p.m. on the day they are serviced.

6. **ADDRESSES POSTED.** To facilitate collection services, the addresses of all residences and buildings shall be conspicuously posted at the front and rear or side of all properties so as to be easily seen and read, according to s. 113-2-5.

79-5.5. Unauthorized Removal of Contents of Waste Containers. 1. No person shall remove any material from a waste container that has been furnished by the city for the collection of solid waste. This prohibition applies to portable and nonportable containers.

2. This section does not apply to employees and agents of the city in the performance of their duties or to materials that are removed by the person who deposited them.

✱ **79-5.7. Unauthorized Addition to Contents of Waste Containers. 1.** No person, except the owners or occupants serviced by a nonportable container, may place any hazardous substance, liquid waste, litter, recyclable material or solid waste into that container, without the owners' or occupants' permission.

2. This section does not apply to employees and agents of the city in performance of their duties.

79-6. Solid Waste Charge.

1. **PURPOSE.** The purpose of this section is to permit the city as authorized under ss. 66.0405 and 66.0627 Wis. Stats., to recover costs relating to collection of solid waste from one, 2-, 3- and 4- family dwelling units.

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23. **RECYCLABLE MATERIAL** includes lead acid batteries, major appliances, waste oil, yard waste, aluminum containers, bi-metal containers, corrugated paper or other container board, foam polystyrene packaging, glass containers, magazines, newspapers, office paper, steel containers, waste tires and rigid plastic containers, including those made of PETE, HDPE, PVC, LDPE, PP, PS and other resins or multiple resins.

24. **SOLID WASTE** has the meaning given in s. 289.01(33), Wis. Stats.

25. **SOLID WASTE DISPOSAL FACILITY** means a facility that discharges, deposits, injects, dumps or places any solid waste into or on any land or water. The term does not include a facility whose handling of solid waste is limited to the transportation, storage or treatment of solid waste.

26. **SOLID WASTE TREATMENT FACILITY** means a facility that handles solid waste by any method, technique or process that is designed to change the physical, chemical or biological character or composition of solid waste. The term includes a facility that incinerates solid waste.

27. **SPECIAL RECYCLABLE MATERIALS** means lead acid batteries, major appliances, waste oil and yard waste.

28. **STANDARD RECYCLABLE MATERIALS** means aluminum containers, bi-metal containers, corrugated paper or other container board, foam polystyrene packaging, glass containers, magazines, newspapers, office paper, steel containers, waste tires and rigid plastic containers made of PETE, HDPE, PVC, LDPE, PP, PS and other resins or multiple resins.

29. **WASTE TIRE** means a tire that is no longer suitable for its original purpose because of wear, damage or defect. The term includes an unserviceable tire as defined in s. 84-48.

30. **YARD WASTE** means yard and garden debris, leaves, grass clippings and brush, including clean woody vegetative material no greater than 6 inches in diameter. The term includes, but is not limited to, all components included in the definition specified in s. 79-1-12-i. The term does not include stumps, roots or shrubs with intact root balls.

79-25. Separation of Recyclable Materials Required. Except as provided in s. 79-27, occupants of single family residences, 2 to 4 unit residences, multiple-family dwellings and non-residential facilities and properties shall separate the following materials from postconsumer waste:

1. **SPECIAL RECYCLABLE MATERIALS.**
 - a. Lead acid batteries.
 - b. Major appliances.
 - c. Waste oil.
 - d. Yard waste.
2. **STANDARD RECYCLABLE MATERIALS.**
 - a. Aluminum containers.
 - b. Bi-metal containers.
 - c. Corrugated paper or other container board.
 - d. Foam polystyrene packaging.
 - e. Glass containers.
 - f. Magazines.
 - g. Newspapers.
 - h. Office paper.
 - i. Rigid plastic containers made of PETE, HDPE, PVC, LDPE, PP, PS and other resins or multiple resins.
 - j. Steel containers.
 - k. Waste tires.

79-27. Exemptions from Separation Requirements. The separation requirements of s. 79-25 do not apply to the following:

1. Occupants of single family residences, 2 to 4 unit residences, multiple-family dwellings and non-residential facilities and properties that send their postconsumer waste to a licensed solid waste processing facility that recovers the materials specified in s. 79-25 from solid waste in as pure a form as is technically feasible.
2. Solid waste that is burned as a supplemental fuel at a facility if less than 30% of the heat input to the facility is derived from the solid waste burned as supplemental fuel.
3. A standard recyclable material for which a variance has been granted by the Wisconsin department of natural resources under s. 287.11(2m), Wis. Stats., or s. NR 544.14, Wis. Adm. Code.

**SUBCHAPTER 2
RECYCLING**

79-21. Purpose. The purpose of this subchapter is to promote recycling, composting and resource recovery through the administration of an effective recycling program, as provided in s. 289.11, Wis. Stats., and ch. NR 544, Wis. Adm. Code.

79-23. Definitions. In this subchapter:

1. **BI-METAL CONTAINER** means a container for carbonated or malt beverages that is made primarily of a combination of steel and aluminum.

2. **COMMISSIONER** means the commissioner of public works or the commissioner's authorized representative.

3. **CONTAINER BOARD** means corrugated paperboard used in the manufacture of shipping containers and related products.

4. **DEPARTMENT** means the department of public works.

5. **FOAM POLYSTYRENE PACKAGING** means packaging made primarily from foam polystyrene that satisfies one of the following criteria:

a. Is designed for serving food or beverages.

b. Consists of loose particles intended to fill space and cushion the packaged article in a shipping container.

c. Consists of rigid materials shaped to hold and cushion the packaged article in a shipping container.

6. **HDPE** means high density polyethylene, labeled by the SPI code #2.

7. **LDPE** means low density polyethylene, labeled by the SPI code #4.

8. **LICENSED SOLID WASTE PROCESSING FACILITY** means a solid waste processing facility that is licensed by the Wisconsin department of natural resources.

9. **MAGAZINES** means magazines and other materials printed on similar paper.

10. **MAJOR APPLIANCE** means a residential or commercial air conditioner, clothes dryer, clothes washer, dishwasher, freezer, microwave oven, oven, refrigerator, furnace, boiler, dehumidifier, water heater or stove.

11. **MULTIPLE-FAMILY DWELLING** means a property containing 5 or more residential units, including those which are occupied seasonally.

12. **NEWSPAPERS** means newspapers and other materials printed on newsprint.

13. **NON-RESIDENTIAL FACILITIES AND PROPERTIES** means commercial, retail, industrial, institutional and governmental facilities and properties. The term does not include multiple-family dwellings.

14. **OFFICE PAPER** means high grade printing and writing papers from offices in non-residential facilities and properties. Printed white ledger paper and computer printout are examples of office paper generally accepted as high grade. The term does not include industrial process waste.

15. **OTHER RESINS OR MULTIPLE RESINS** means plastic resins labeled by the SPI code #7.

16. **PERSON** means any individual, corporation, partnership, association, local governmental unit as defined in s. 66.0131(1)(a), Wis. Stats., state agency or authority or federal agency.

17. **PETE** means polyethylene terephthalate, labeled by the SPI code #1.

18. **PLASTIC CONTAINER** means an individual, separate, rigid plastic bottle, can, jar or carton, except that the term does not include a blister pack that is originally used to contain a product that is the subject of a retail sale.

19. **POSTCONSUMER WASTE** means solid waste other than solid waste generated in the production of goods, hazardous waste as defined in s. 289.01(12), Wis. Stats., a hazardous substance as defined in s. 79-1-5, waste from construction and demolition of structures, scrap automobiles or high-volume industrial waste as defined in s. 289.01(17), Wis. Stats. The term includes domestic waste, garbage, tree waste and yard waste, as those terms are defined in s. 79-1-12-d, e, h and i. The term includes some components of commercial waste and rubbish, as those terms are defined in s. 79-1-12-d and g.

20. **PP** means polypropylene, labeled by the SPI code #5.

21. **PS** means polystyrene, labeled by the SPI code #6.

22. **PVC** means polyvinyl chloride, labeled by the SPI code #3.

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capacitor has been removed and disposed of in accordance with s. 299.45(7), Wis. Stats., if applicable.

79-40. Unauthorized Removal of Recyclables or Recycling Containers. 1. No person shall remove any material from a recycling cart, bin or other container that has been furnished by the city or by a private recyclable collector for the purpose of accumulating recyclable materials for collection by the city or the private collector. This prohibition applies to recycling containers located in or by residential and non-residential buildings, at self-help stations and in public places.

2. No person shall remove a recycling cart, bin or other container that has been furnished by the city or by a private recyclable collector.

3. This section does not apply to employees and agents of the city or of a private recyclable collector in the performance of their duties or to materials that are removed by the person who deposited them.

79-41. Administration and Confidentiality of Record. 1. The commissioner, the department and the operations division shall be responsible for administration of the provisions of this subchapter.

2. The commissioner is authorized to make reasonable rules for the regulation and administration of this subchapter, including charges for extraordinary, unusual or special services as may be necessary and exemptions for hardship cases, provided such rules do not contravene the specific provisions of this subchapter. Such rules shall be available at the office of the city clerk.

3. To the extent permitted by law, records relating to recycling activities shall be kept confidential when necessary to protect proprietary information.

79-43. Enforcement. For the purpose of ascertaining compliance with the provisions of this subchapter, any authorized officer, employee or representative of the commissioner, the department or the department of neighborhood services may use any lawful means to adequately enforce the requirements of this subchapter including, but not limited to, education and information programs and inspections to ascertain proper separation, preparation, collection and disposition of recyclable materials.

79-47. Penalties, Liens and Citations.

1. **PENALTIES.** a. A person who fails to comply with s. 79-29 shall receive a written notice with respect to the alleged violation of s. 79-29. Failure to comply with s. 79-29 following such

notification shall result in a special charge of \$20, and the second and each subsequent failure to comply with s. 79-29 within a calendar year shall result in a special charge of \$40.

b. A person who violates s. 79-33 or 79-35 shall forfeit as follows:

b-1. Not less than \$50 nor more than \$200 for a first or 2nd violation within a 12-month period, and the costs and disbursements of such action. Each day of violation shall be a separate offense.

b-2. Not less than \$100 nor more than \$500 for a 3rd or subsequent violation within a 12-month period, and the costs and disbursements of such action. Each day of violation shall be a separate offense.

c. A person who violates s. 79-37 shall forfeit as follows:

c-1. Not less than \$500 nor more than \$1,000 for a first violation within a 12-month period, and the costs and disbursements of such action. Each day of violation shall be a separate offense.

c-2. Not less than \$1,000 nor more than \$5,000 for a 2nd or subsequent violation within a 12-month period, and the costs and disbursements of such action. Each day of violation shall be a separate offense.

d. A person who violates s. 79-40 shall forfeit not less than \$25 nor more than \$500 for each violation, and the costs and disbursements of such action.

e. Any person who fails to comply with s. 79-32 shall be subject to a special charge of \$25 and shall receive a written notice with respect to the alleged violation of s. 79-32. Failure to comply following such notification shall result in a special charge of \$35, and each subsequent failure to comply within a calendar year shall result in a special charge of \$60.

2. **LIENS.** a. Whenever a person fails, omits, neglects or refuses to obey an order of a department or city officer that is made on account of noncompliance with any provision of this subchapter, pursuant to s. 66.0627, Wis. Stats., a special charge shall be made against the subject property.

b. A person who fails to comply with s. 79-25 shall receive a written notice with respect to

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79-29. Care of Separated Recyclable Materials.

To the greatest extent practicable, the recyclable materials separated in accordance with s. 79-25 shall be clean and kept free of contaminants such as food or product residue, oil, grease and other non-recyclable materials, including but not limited to household hazardous waste, medical waste, agricultural chemical containers and hazardous substances as defined in s. 79-1-5. Recyclable materials shall be stored in a manner that protects them from wind, rain and other inclement weather conditions.

79-31. Residences, Except Multiple-Family Dwellings. Occupants of single family residences, 2 to 4 unit residences and condominium complexes shall provide for the preparation and collection of separated standard recyclable materials in accordance with the rules of the commissioner.

79-32. Return to Storage Location. Owners and tenants of those properties serviced by the recycling collection system, where carts are left at the alley line or curb line after servicing, shall return the carts to their proper storage locations before 10 p.m. on the day they are serviced.

79-33. Multiple-Family Dwellings. 1. Except as provided under sub. 2, owners, lessees or designated agents of multiple-family dwellings, except condominium complexes, shall do all of the following to recycle standard recyclable materials:

a. Provide, at their own cost, adequate, separate containers for recyclable materials. Containers shall be stored on the premises in a location that is convenient for deposit and collection of recyclables.

b. Notify in writing, at the time of leasing and at least semi-annually thereafter, all tenants and occupants of the dwellings about the recycling program.

c. Provide for the collection of the materials separated from the solid waste by the users, tenants and occupants and for the delivery of those materials to a recycling facility by private collection.

2. The requirements specified in sub. 1 do not apply to the owner, lessee or designated agent of a multiple-family dwelling if the postconsumer

waste that is generated within the dwelling is treated at a licensed solid waste processing facility that recovers for recycling standard recyclable materials from solid waste in as pure a form as is technically feasible.

79-35. Non-Residential Facilities and Properties.

1. Except as provided under sub. 2, owners, lessees or designated agents of non-residential facilities and properties shall do all of the following to recycle standard recyclable materials:

a. Provide adequate, separate containers for the recyclable materials.

b. Notify in writing, at the time of leasing and at least semi-annually thereafter, all tenants and occupants of the facilities and properties about the recycling program.

c. Provide for the collection of the materials separated from the solid waste by the users, tenants and occupants and for the delivery of those materials to a recycling facility by private collection.

2. The requirements specified in sub. 1 do not apply to the owner, lessee or designated agent of a non-residential facility or property if the postconsumer waste that is generated within the facility or property is treated at a licensed solid waste processing facility that recovers for recycling standard recycling materials from solid waste in as pure a form as is technically feasible.

79-37. Disposal of Separated Standard Recyclable Materials Prohibited. No person shall dispose of in a solid waste disposal facility or burn in a solid waste treatment facility any standard recyclable materials which have been separated for recycling, except that waste tires may be burned with energy recovery in a solid waste treatment facility.

79-39. Management of Special Recyclable Materials. 1. Occupants of single family residences, 2 to 4 unit residences, multiple-family dwellings and non-residential facilities and properties shall manage lead acid batteries as provided in s. 79-2-9, and shall handle major appliances, waste oil and yard waste in accordance with this section and the rules of the commissioner.

2. A microwave oven may be disposed of in a solid waste disposal facility if the

Solid Waste Regulations 79-47-3

the alleged violation of s. 79-25. Failure to comply with s. 79-25 following such notification shall result in a special charge of \$10, and the second and each subsequent violation within a calendar year shall result in a special charge of \$25.

c. Special charges made under this subsection shall be due and payable 30 days after billing or if not paid within that time become a lien on the subject property as provided in s. 66.0627, Wis. Stats. The lien shall take effect on the date of the delinquency and shall include an administrative charge of \$10. The lien shall automatically be extended upon the current or next tax roll as a delinquent tax against the property and all proceedings in relation to the collection, return and sale of the property for delinquent real estate taxes shall apply to the special charge. The special charge shall not be payable in installments.

d. Whenever a special charge is made against property that is either a single family residence or a 2-family residence, the department assessing the special charge may bill both the occupant of the residence and the owner of the residence, if the department knows that the occupant and the owner are not the same and if the identity of the occupant is known to the department. If the department bills the occupant, the occupant of the residence shall be solely responsible for payment of the special charge within 30 days after billing. If the special charge is not paid within that time, the owner shall become responsible for payment of the special charge on the date of the delinquency. Whenever an occupant is billed for a special charge and the payment is not made within 30 days after billing, the department shall promptly give written notice of such nonpayment to the owner of the residence. Whenever an owner becomes responsible for payment of a special charge because of the delinquency of an occupant under this paragraph, the owner may recover the amount of that special charge under sub. e and s. 200-20.5.

e. Whenever a special charge is assessed under this subsection, a landlord may require a responsible tenant to pay the amount of the special charge under s. 200-20.5.

3. CITATIONS. In addition to other applicable enforcement procedures and

pursuant to the authority of s. 66.0113, Wis. Stats., the commissioners of public works and neighborhood services or their designees may issue citations pursuant to the citation procedure as set forth in s. 50-25 to any person who violates any provision of this subchapter.

79--Solid Waste Regulations

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Solid Waste Regulations 79-(HISTORY)

LEGISLATIVE HISTORY CHAPTER 79

Abbreviations:

am = amended
cr = created

ra = renumbered and amended
rc = repealed and recreated

rn = renumbered
rp = repealed

<u>Section</u>	<u>Action</u>	<u>File</u>	<u>Passed</u>	<u>Effective</u>
79-1-0	am	901347	5/14/91	5/18/91
79-1-2.5	cr	911889	3/3/92	3/20/92
79-1-2.5	rc	010404	8/2/2001	8/18/2001
79-1-11	rn to 79-1-12	912123	7/7/92	7/24/92
79-1-11	cr	912123	7/7/92	7/24/92
79-1-11-i	cr	911889	3/3/92	3/20/92
79-1-11	rc	912439	9/27/94	1/1/95
79-1-12-a	am	912439	9/27/94	1/1/95
79-1-12-a	am	010842	11/6/2001	11/22/2001
79-1-12-a	am	040491	11/12/2004	12/3/2004
79-1-12-a	am	060775	11/10/2006	4/1/2007
79-1-12-i	rc	010404	8/2/2001	8/18/2001
79-2-0	rp	970956	11/4/97	11/21/97
79-2-1	rn to 79-2-2	970956	11/4/97	11/21/97
79-2-1	cr	970956	11/4/97	11/21/97
79-2-1-b-0	am	000977	11/10/2000	1/1/2001
79-2-1-b-1	am	080486	9/12/2008	1/1/2009
79-2-1-b-2	am	000977	11/10/2000	1/1/2001
79-2-1-b-4	cr	990118	5/11/99	5/28/99
79-2-2	rn to 79-2-3	970956	11/4/97	11/21/97
79-2-3	rn to 79-2-4	970956	11/4/97	11/21/97
79-2-4	rn to 79-2-5	970956	11/4/97	11/21/97
79-2-5	rn to 79-2-6	970956	11/4/97	11/21/97
79-2-6	rn to 79-2-7	970956	11/4/97	11/21/97
79-2-6	am	980963	12/18/98	1/1/99
79-2-7	rn to 79-2-8	970956	11/4/97	11/21/97
79-2-7	am	980963	12/18/98	1/1/99
79-2-8	rn to 79-2-9	970956	11/4/97	11/21/97
79-2-8	am	980963	12/18/98	1/1/99
79-2-8	am	040491	11/12/2004	12/3/2004
79-2-8	rn to 79-2-8-a	060775	11/10/2006	4/1/2007
79-2-8-b	cr	060775	11/10/2006	4/1/2007
79-2-9	cr	890284	6/27/89	7/18/89
79-2-9	rn to 79-2-10	970956	11/4/97	11/21/97
79-2-9	am	980963	12/18/98	1/1/99
79-2-10	cr	911889	3/3/92	3/20/92
79-2-10	rn to 79-2-11	970956	11/4/97	11/21/97
79-2-10-0	am	951346	1/23/96	2/9/96
79-2-10-d	cr	920560	7/28/92	8/14/92
79-2-10-d	rp	951346	1/23/96	2/9/96
79-2-10-e	cr	920638	1/15/93	2/4/93
79-2-10-e	rp	951346	1/23/96	2/9/96
79-4-1-am-2	am	891613	12/19/89	1/13/90
79-4-1-am-2	am	010858	11/9/2001	1/1/2002
79-4-1-as	am	891613	12/19/89	1/13/90
79-4-1-as-0	am	010858	11/9/2001	1/1/2002
79-4-1.5	cr	940741	9/27/94	10/14/94

79--(HISTORY) Solid Waste Regulations

79-4-1.5-a	am	010858	11/9/2001	1/1/2002
79-4-1.5-b	am	010858	11/9/2001	1/1/2002
79-4-2	am	891613	12/19/89	1/13/90
79-4-2	am	010858	11/9/2001	1/1/2002
79-4-4	cr	921364	4/8/93	4/28/93
79-4-4	am	010858	11/9/2001	1/1/2002
79-4.5	cr	912123	7/7/92	7/24/92
79-4.5	rp	912439	9/27/94	1/1/95
79-5-2	am	011258	2/12/2002	3/1/2002
79-5-6	am	881465	11/18/88	12/9/88
79-5.5	cr	890283	11/28/95	12/15/95
79-5.5	am	971300	12/16/97	1/8/98
79-5.7	cr	000322	11/8/2000	11/29/2000
79-6	m to 79-6.5	000977	11/10/2000	1/1/2001
79-6	cr	000977	11/10/2000	1/1/2001
79-6-1	am	970956	11/4/97	11/21/97
79-6-1	am	010854	11/9/2001	1/1/2002
79-6-2-a	am	001305	2/27/2001	3/16/2001
79-6-4-b	am	010854	11/9/2001	1/1/2002
79-6-4-c	am	010854	11/9/2001	1/1/2002
79-6-5	rp	010854	11/9/2001	1/1/2002
79-6-6	m to 79-6-5	010854	11/9/2001	1/1/2002
79-6-7	rc	910396	6/25/91	7/13/93
79-6-7	am	970956	11/4/97	11/21/97
79-6-7	m to 79-6-6	010854	11/9/2001	1/1/2002
79-6-8	cr	970956	11/4/97	11/21/97
79-6-8	am	990118	5/11/99	5/28/99
79-6-8	m to 79-6-7	010854	11/9/2001	1/1/2002
79-6.5-0	am	000977	11/10/2000	1/1/2001
79-6.5-0	am	060775	11/10/2006	4/1/2007
79-6.5-3	rc	060665	11/10/2006	4/1/2007
79-6.5-3-c-2	am	070737	11/9/2007	11/30/2007
79-9-2	rc	990085	6/22/99	10/8/99
79-9-2-a	am	911243	11/5/91	2/1/93
79-9-2-a	am	951346	1/23/96	2/9/96
79-9-2-c	am	950100	5/16/95	6/3/95
79-9-3	cr	990085	6/22/99	10/8/99
79-9-4	cr	990085	6/22/99	10/8/99
79-11	am	990536	10/19/99	11/5/99
79-12	rc	941051	11/29/94	12/16/94
79-12-1	am	010842	11/6/2001	11/22/2001
79-12.5	cr	010404	8/2/2001	8/18/2001
79-12.5-1	rc	050888	11/15/2005	12/9/2005
79-12.5-2	am	050735	10/18/2005	11/4/2005
79-12.5-2	rp	050888	11/15/2005	12/9/2005
79-12.5-3	m to 79-12.5-2	050888	11/15/2005	12/9/2005
79-14	am	890689	7/25/89	8/15/89
79-14.5	am	891613	12/19/89	1/13/90
79-14.5	am	010858	11/9/2001	1/1/2002
79-15	am	891613	12/19/89	1/13/90
79-15	am	980963	12/18/98	1/1/99
79-15	am	010858	11/9/2001	1/1/2002
79-15	am	051655	5/9/2006	5/26/2006
79-16-1	rc	911889	3/3/92	3/20/92
79-16-1	am	912439	9/27/94	1/1/95
79-16-1	am	890283	11/28/95	12/15/95
79-16-1-a	am	971300	12/16/97	1/8/98

Solid Waste Regulations 79--(HISTORY)

79-16-1-a	am	031615	6/15/2004	7/2/2004
79-16-1-a	am	051298	3/23/2006	4/11/2006
79-16-1-b	am	971300	12/16/97	1/8/98
79-16-1-b	am	031615	6/15/2004	7/2/2004
79-16-1-c	rn to 79-16-1-d	051298	3/23/2006	4/11/2006
79-16-1-c	cr	051298	3/23/2006	4/11/2006
79-16-1-c	am	051702	7/12/2006	7/29/2006
79-16-2	am	891613	12/19/89	1/13/90
79-16-2	am	891826	1/16/90	2/3/90
79-16-2	am	980963	12/18/98	1/1/99
79-16-2	rn to 79-16-2-a	990118	5/11/99	5/28/99
79-16-2-a	am	000977	11/10/2000	1/1/2001
79-16-2-a	rc	010233	6/19/2001	6/30/2001
79-16-2-a	am	010858	11/9/2001	1/1/2002
79-16-2-a-1-b	rn to 79-16-2-a-1-c	011258	2/12/2002	3/1/2002
79-16-2-a-1-b	cr	011258	2/12/2002	3/1/2002
79-16-2-a-1-c	rn to 79-16-2-a-1-d	011258	2/12/2002	3/1/2002
79-16-2-a-1-d	am	050143	6/14/2005	7/1/2005
79-16-2-a-1-d	am	081369	3/3/2009	3/20/2009
79-16-2-a-2	rn to 79-16-2-a-3	060640	9/26/2006	11/11/2006
79-16-2-a-2	cr	060640	9/26/2006	11/11/2006
79-16-2-b	cr	990118	5/11/99	5/28/99
79-16-3	am	881930	3/7/89	3/25/89
79-16-3	am	890284	6/27/89	7/18/89
79-16-3	am	911889	3/3/92	3/20/92
79-16-3	am	940741	9/27/94	10/14/94
79-16-3	am	001458	2/27/2001	3/16/2001
79-17	rn to 79-19	051414	2/28/2006	3/17/2006
79-17	cr	051414	2/28/2006	3/17/2006
79-21	cr	912439	9/27/94	1/1/95
79-23	cr	912439	9/27/94	1/1/95
79-23-16	am	001458	2/27/2001	3/16/2001
79-25	cr	912439	9/27/94	1/1/95
79-27	cr	912439	9/27/94	1/1/95
79-29	cr	912439	9/27/94	1/1/95
79-31	cr	912439	9/27/94	1/1/95
79-32	cr	050883	11/11/2005	1/1/2006
79-33	cr	912439	9/27/94	1/1/95
79-35	cr	912439	9/27/94	1/1/95
79-37	cr	912439	9/27/94	1/1/95
79-39	cr	912439	9/27/94	1/1/95
79-40	cr	890283	11/28/95	12/15/95
79-40	am	971300	12/16/97	1/8/98
79-41	cr	912439	9/27/94	1/1/95
79-41-1	am	010858	11/9/2001	1/1/2002
79-43	cr	912439	9/27/94	1/1/95
79-43	am	980963	12/19/98	1/1/99
79-47	cr	912439	9/27/94	1/1/95
79-47-1-a	m to 79-47-1-b	010233	6/19/2001	6/30/2001
79-47-1-a	cr	010233	6/19/2001	6/30/2001
79-47-1-b	m to 79-47-1-c	010233	6/19/2001	6/30/2001
79-47-1-c	cr	890283	11/28/95	12/15/95
79-47-1-c	am	971300	12/16/97	1/8/98
79-47-1-c	m to 79-47-1-d	010233	6/19/2001	6/30/2001
79-47-1-e	cr	050883	11/11/2005	1/1/2006
79-47-1-e	am	081369	3/3/2009	3/20/2009
79-47-2-a	am	001458	2/27/2001	3/16/2001

79--(HISTORY) Solid Waste Regulations

79-47-2-c	am	001458	2/27/2001	3/16/2001
79-47-3	am	001458	2/27/2001	3/16/2001
79-47-3	am	051655	5/9/2006	5/26/2006
79-51	cr	901347	5/14/91	5/18/91
79-51	rp	031604	12/21/2004	7/1/2005
79-53	cr	901347	5/14/91	5/18/91
79-53	rp	031604	12/21/2004	7/1/2005
79-55	cr	901347	5/14/91	5/18/91
79-55	rp	031604	12/21/2004	7/1/2005
79-57	cr	901347	5/14/91	5/18/91
79-57	rp	031604	12/21/2004	7/1/2005
79-59	cr	901347	5/14/91	5/18/91
79-59	rp	031604	12/21/2004	7/1/2005
79-61	cr	901347	5/14/91	5/18/91
79-61	rp	031604	12/21/2004	7/1/2005
79-63	cr	901347	5/14/91	5/18/91
79-63	rp	031604	12/21/2004	7/1/2005
79-65-3	rc	060775	11/10/2006	4/1/2007

Recycling Task Force Meeting

April 27, 2009

Agenda Item 6:

Discussion relating to City and State recycling enforcement laws



Required components of an effective recycling program (NR 544.04)

- Public information and education program
- Ordinance reflecting State law
- System for collecting recyclables from single family and 2 to 4 unit residences
- Equipment and staff to implement the recycling program
- Require owners of multiple family dwellings and non-residential facilities and properties to provide recycling at their facilities and properties
- A means of adequately enforcing the requirements of the effective recycling program
- A compliance assurance plan
- Submittal of an annual program report

Compliance Assurance Plan

- City of Milwaukee's CAP Created in July of 2006
- The CAP, at a minimum, shall contain the procedure to follow when addressing at least one specific compliance issue

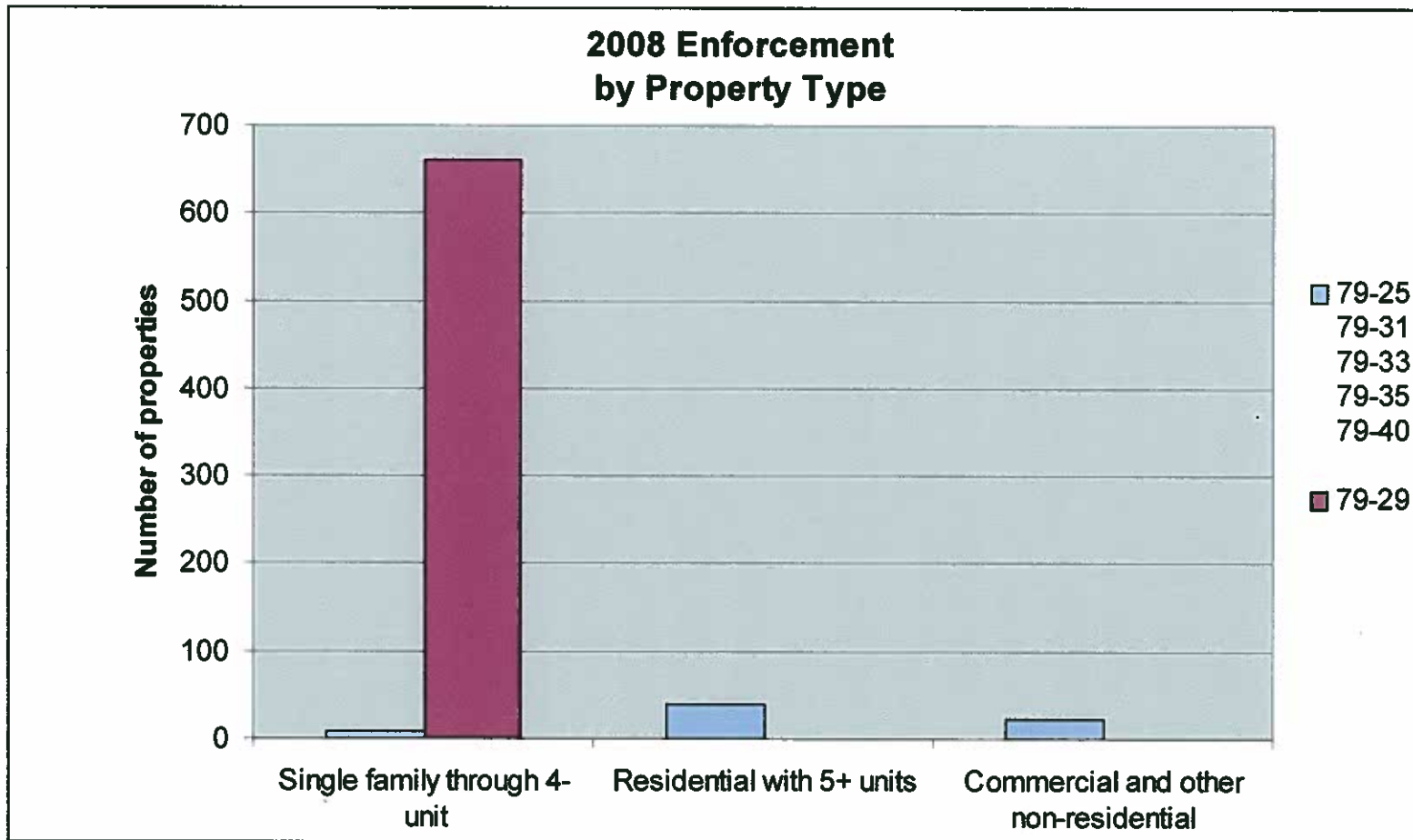
Ours: 3 scenarios

- Violations by Businesses / >4-Unit Multifamily Dwellings / Institutions
- Violations by Residents—Example of contamination of recycling cart
- Violations by Residents, Single Family through 4-plex – Example of Non-Participation

Recycling Violations and Penalties

Code	Violation	Violation Frequency (within 12 months)	Penalty
79-29	Improper Sorting and Storage of Recyclable Materials	1st	Written Notice
		2nd	\$20
		3rd or more	\$40
79-33, 79-35	Failure to provide containers for collection and provide removal of recyclable materials by Multi-Family Dwellings and Non-Residential Properties	1st & 2nd	\$50 - \$200
		3rd or more	\$100 - \$500
79-40	Removal of Recyclables or Recycling Containers	1st or more	\$25 - \$500
79-25	Non-compliance with separation of recycling materials	1st	\$10
		2nd or more	\$25

Properties Enforced in 2008



Enforcement

- Recycling assistance integrated into enforcement process
- Compliance Summary through 2008
 - 161 properties enforced (145 attained compliant status)
 - 30 special charges issued totaling \$3,850.64
- Compliance Summary 2008 alone
 - 65 properties enforced (50 attained compliant status)
 - 23 special charges issued totaling \$3,047.38
- Cart contamination
 - 2006: 315 notices issued resulting in 141 special charges totaling \$2,775
 - 2007: 667 notices issued resulting in 379 special charges totaling \$11,215
 - 2008: 661 notices issued resulting in 353 special charges totaling \$9,915

Recycling Task Force Meeting

April 27, 2009

Agenda Item 4:

Presentation by DPW Sanitation staff on the City's recycling program

Presented by Rick Meyers, Recycling Specialist

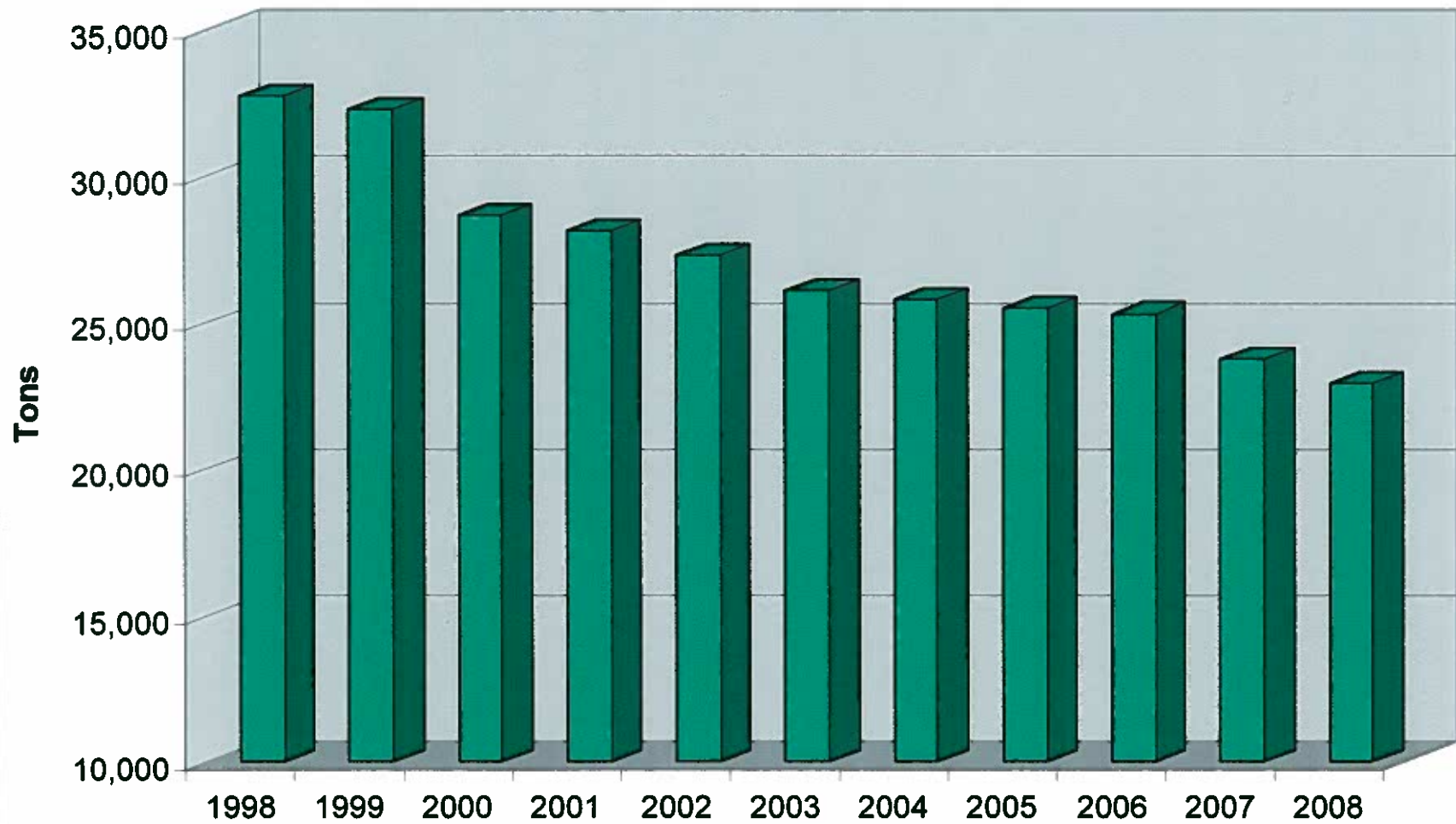


City of Milwaukee Residential Recycling

Program History:

- 1971: drop-off sites established for glass, tin-cans, and newspaper
- 1977: experiment with refuse-derived fuel plant
- 1989: curbside pilot program initiated
- **1995: city wide curbside program implemented**

City of Milwaukee Residential Recycling 1998 - 2008



City of Milwaukee Residential Recycling

Program Overview:

- 190,000 single family through 4-unit properties
- 34 recycling routes in winter, 31 in summer
- 85% of HH's serviced with 95-gallon carts picked up monthly (2 summer routes 2X/month)
- 15% of HH's serviced with 18-gallon bins picked up weekly



Recycling Collection Details

- Dual stream program, municipal collection
- Split carts and split recycling packers
- Semi-automated, single cart system
- Single person collection crew
- High material quality with dual stream collection



Recyclables Processing & Marketing

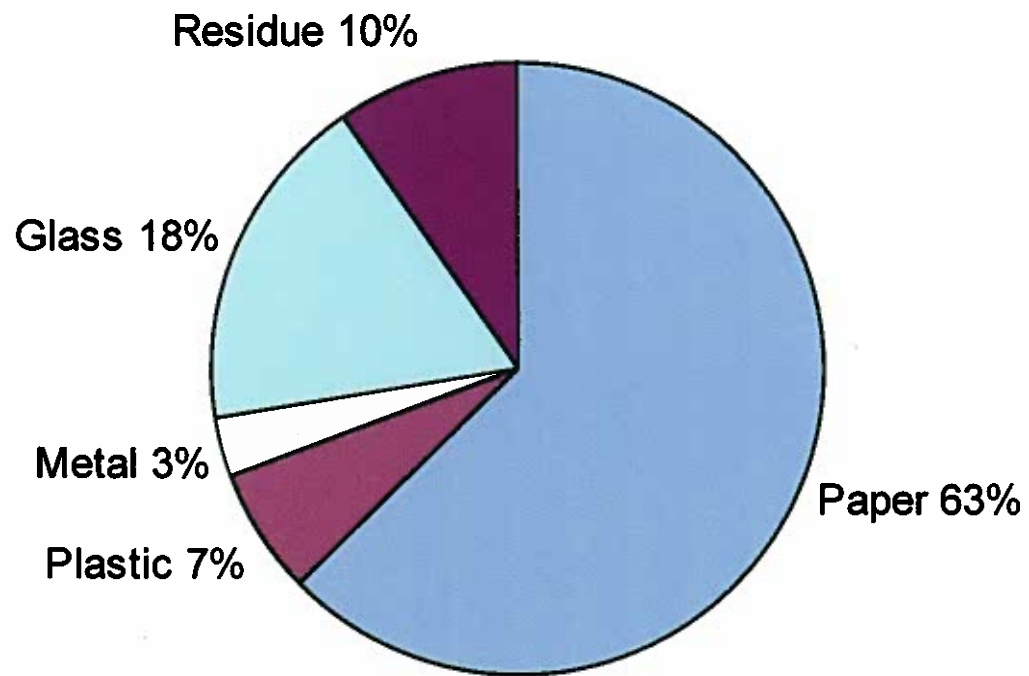
- City owns its Materials Recovery Facility (MRF)
- Contracts out its operation & marketing of recyclables
 - July 1, 2009 entering first of up to 5 optional extension years
 - Could continue contract through June 30, 2014
 - Contract basics:
 - Per ton processing fee, annually adjusted (CPI)
 - 50% revenue share from sale of processed recyclables

Milwaukee's Materials Recovery Facility

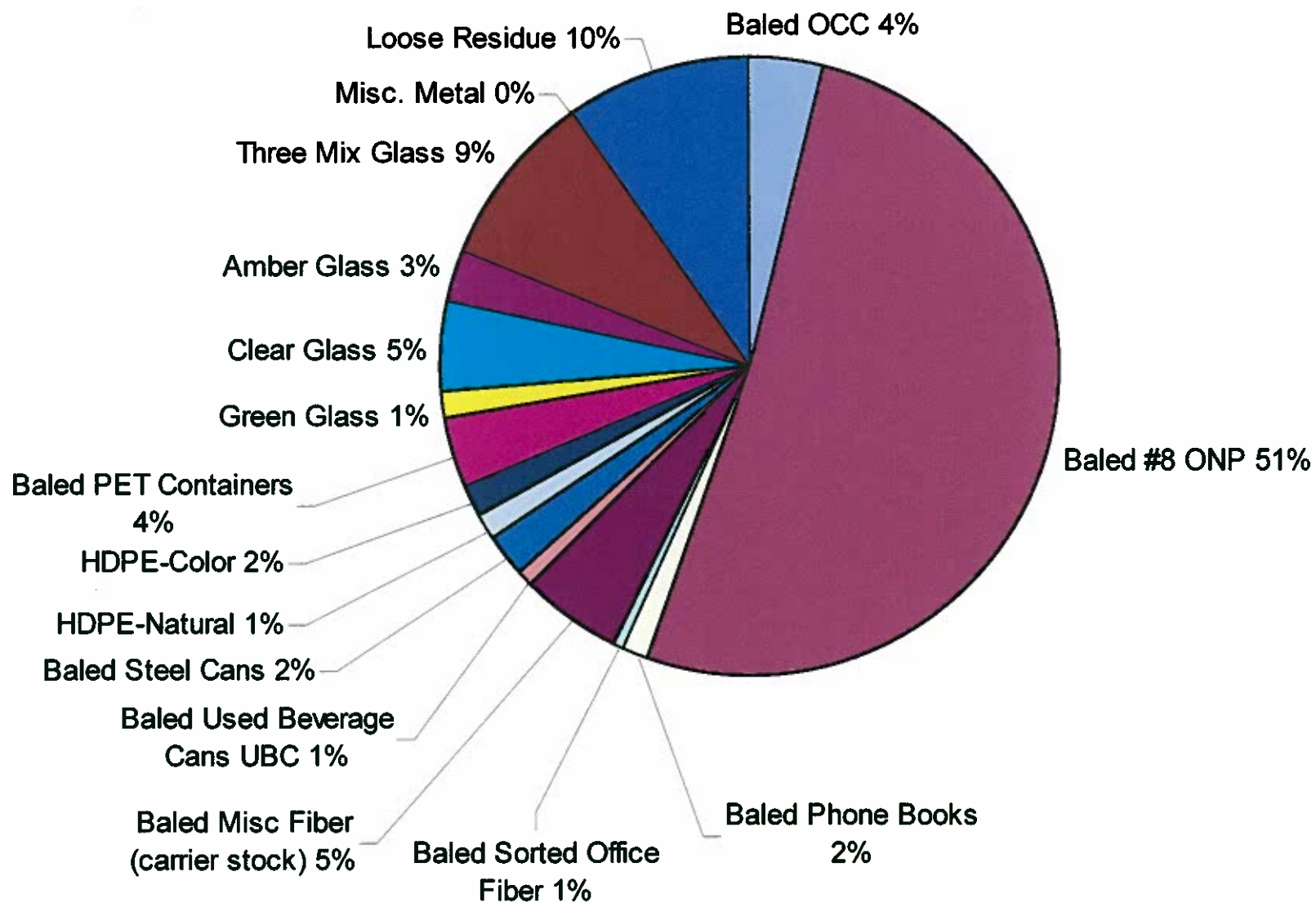
- Dual stream processing
 - Paper fibers
 - Commingled containers



**City of Milwaukee MRF
Materials Processed by Weight
2007**



City of Milwaukee MRF Materials Processed by Weight (2007)



Financial Data

Revenue to City: **\$7.4 mil.** to General Fund (2004-2008)

2008:

Net Revenue: \$376,395 (\$15.16/T)

Avoided disposal costs: \$725,896 (\$29.24/T)

Total net benefit: \$1,102,291 (\$44.40/T)

Education and Outreach

- UW Grant outreach
- EPA RCC Recycling With a Personal Touch
- Recycling DVD, 3 segments/age groups
- Recycle For Good
 - New advertisements
 - Website
 - Neighborhood campaigns
- Recycle More Wisconsin
- MRF tours & educational programs (Keep Greater Milwaukee Beautiful)

New promotional campaign launched
Sept 30, 2008



LET'S MAKE MILWAUKEE CLEAN & GREEN.



Looking forward

- Guaranteed schedule, biweekly
- Potential changeover of some bins to carts
- Single or dual stream collection?
- Public vs. private MRF?

Recycling Task Force Meeting

April 27, 2009

Agenda Item 7:

Discussion on how the city of Milwaukee's recycling program compares to other cities



Recycling Tons, Wisconsin RUs

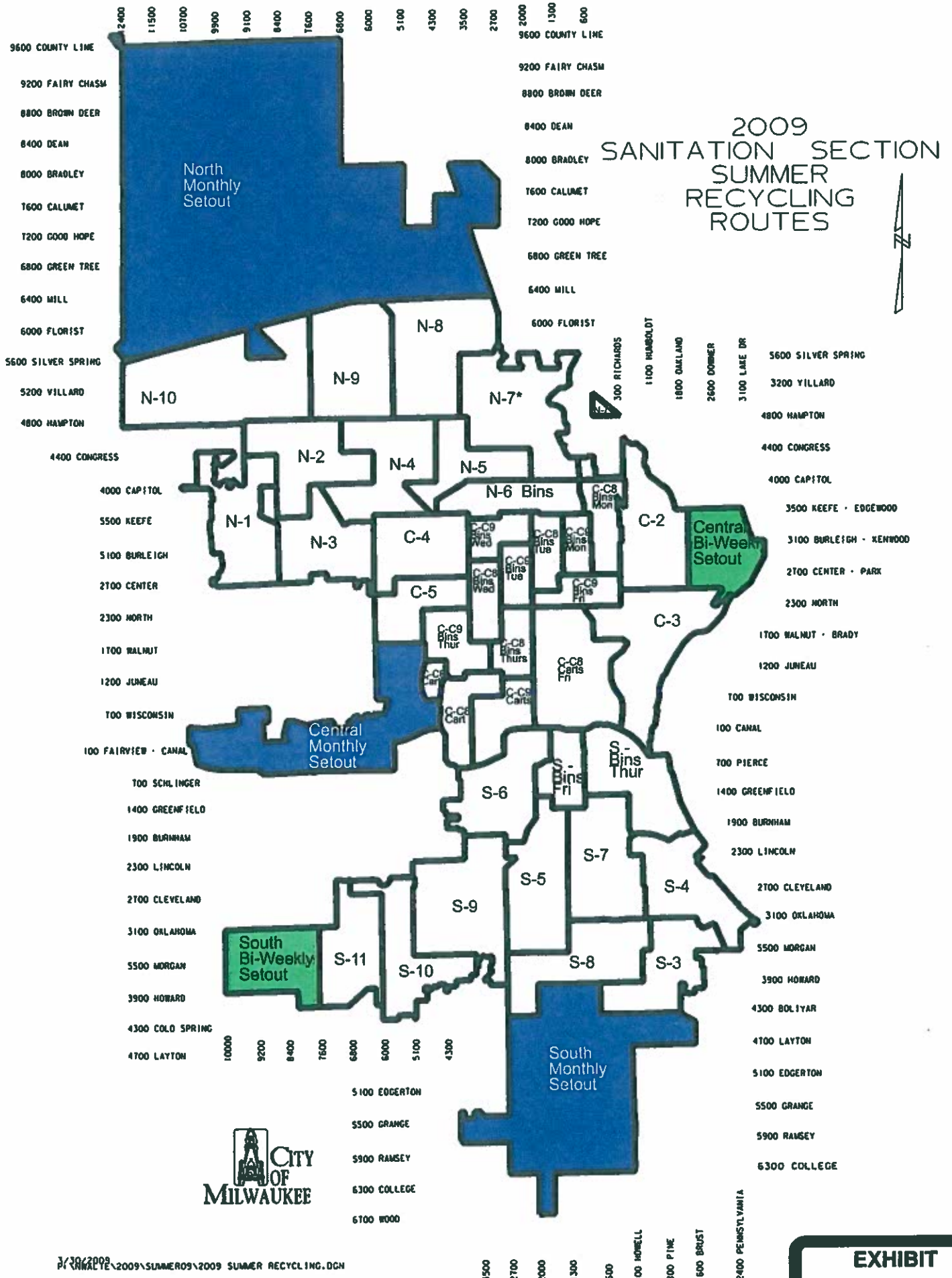
Top RUs by Population	Total Household Recyclables per Capita (lbs.)	Rank (out of 25 largest RUs)
Milwaukee	86.4	24
Waukesha, County	157.6	7
Madison	137.7	11
Outagamie, County	187	1
Green Bay	146.5	10
Eau Claire, County	123.3	17
Kenosha	123.8	16
Racine	107.3	20

Data taken from Appendix 3 "Recycling Tons in Wisconsin 25 Largest Responsible Units", of the Audit of the City of Milwaukee Recycling Program, June 2008

Residential Recycling in the U.S.

City	Residential Recycling Rate	Frequency	How collected
Columbus	12%	Weekly	Commingled
Austin	28%	Weekly	Source-Separated
Memphis	27%	Weekly	Commingled
Baltimore	27%	Weekly	Source-Separated
MILWAUKEE	25%	Monthly	Source-Separated
Fort Worth	20.6%	Weekly	Commingled
Charlotte	11.5%	Weekly	Commingled
El Paso	2%	NA	NA
Boston	23%	Weekly	Source-Separated

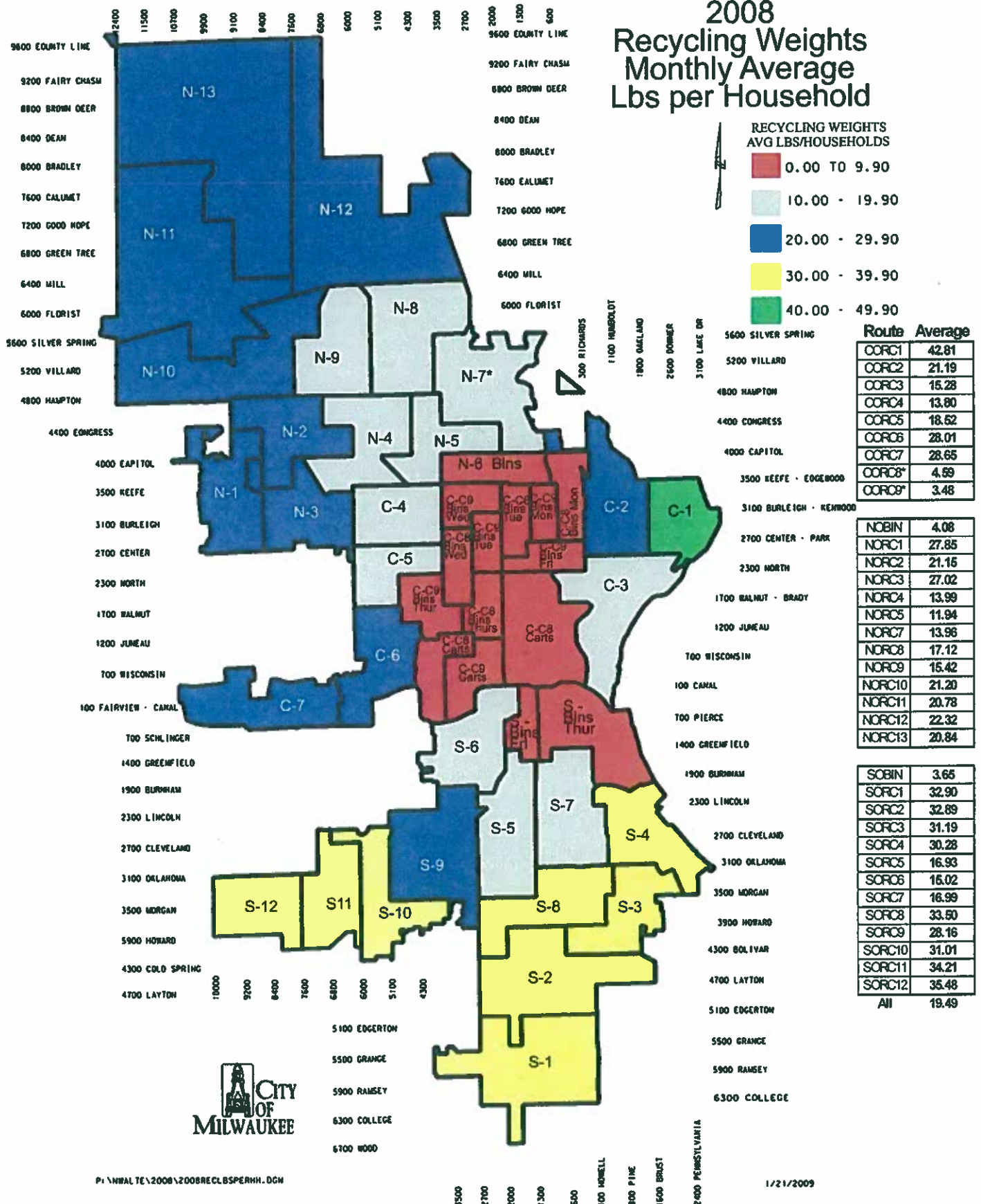
Data taken from Appendix 5 "Municipal Recycling in the U.S.- 30 largest cities by population", of the Audit of the City of Milwaukee Recycling Program, June 2008



EXHIBIT

60

2008 Recycling Weights Monthly Average Lbs per Household



EXHIBIT

6



Department of Public Works
Environmental Services
Sanitation & Forestry
"Clean & Green"

Jeffrey J. Mantes
Commissioner of Public Works

James P. Purko
Director of Operations

Preston D. Cole
Environmental Services Superintendent

May 6, 2009

Mr. Grant F. Langley
City Attorney
Zeidler Municipal Building, Rm 716

Re: Request for legal opinion relating to recycling enforcement

Dear Mr. Langley:

On April 27, 2009, the Recycling Task Force met and reviewed the recycling enforcement laws for the City of Milwaukee. During its review, members had expressed concerns relating to the legality of city staff searching garbage and recycling carts on private property, as well as, doing searches of the carts at the curbside.

As Chair of the Recycling Task Force, I would like to request a legal opinion on the legality of city staff doing searches of garbage and recycling carts on private property and at the curbside.

Thank you in advance.

Very truly yours,

Preston D. Cole, Chair
Recycling Task Force

PDC/TJM/ttj



GRANT F. LANGLEY
City Attorney

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July 13, 2009

Preston D. Cole, Chair
Recycling Task Force
Zeidler Municipal Building, Room 619

Re: Recycling Enforcement

Dear Mr. Cole:

By letter dated May 6, 2009, as Chair of the Recycling Task Force you requested an opinion regarding the legality of City of Milwaukee employees performing searches of garbage and recycling carts on private property and at the curbside. As discussed below, DPW and DNS employees may lawfully search garbage and recycling containers placed at the curb, containers located adjacent to the alley and accessible to the public, and containers placed for routine collection on the occupant's private property where collection occurs neither at the curb nor at the alley line. However, in many cases, there may be practical proof problems involved in prosecuting "failure to separate" or "failure to clean recyclable container" violations arising from searches in the absence of direct evidence of a violation.

To be designated as an "effective recycling program" and therefore qualify for financial assistance from the State of Wisconsin, the City's recycling program must meet certain requirements set forth in the State statutes and administrative regulations governing municipal recycling programs. Wis. Stat. § 287.11(g) requires that a municipal recycling ordinance provide for "[a]dequate enforcement." *See also* Wis. Admin. Code § NR 544.04(9) (requiring "[a] means of adequately enforcing" the ordinance). The DNR regulations issued pursuant to the statute require that a recycling ordinance include provisions for enforcement including "appropriate penalties,"...authorization for use of citations for ordinance violations, and "[a]dequate inspection authority to ascertain compliance with the ordinance." § NR 544.06(2)(e).

Pursuant to these requirements, Milwaukee Code of Ordinances (MCO) § 79-43 authorizes DPW and DNS employees to “use any lawful means to adequately enforce the requirements” of the recycling ordinance including “inspections to ascertain proper separation, preparation, collection and disposition of recyclable materials.” The City of Madison adopted this same language in its recycling ordinance. Madison Gen. Ord. § 10.18(7)(b)3.

Though each case is fact-specific, in general, DPW and DNS employees may not conduct a warrantless search of garbage and recycling carts located within the curtilage¹ of the home and not exposed or accessible to the public. *United States v. Redmon*, 138 F.3d 1109, 1111-1115 (7th Cir. 1998) (warrantless search of garbage placed for collection on common driveway in front of connected garages was lawful); *Ball v. State*, 57 Wis. 2d 653 (1973) (unlawful warrantless search of barrel used for burning trash where located in backyard and not placed in public view).

However, a person does not have a reasonable expectation of privacy with respect to trash left on the curb outside the curtilage of the home. *California v. Greenwood*, 486 U.S. 35 (1988). Accordingly, a warrantless search of garbage bags left at the curb for pick-up performed by a garbage collector at the request of the police did not violate the Fourth Amendment’s proscription against unreasonable search and seizure. *Id.* Similarly, a person has no reasonable expectation of privacy in the contents of garbage containers located adjacent to the alley and where the containers were readily accessible and visible from the alley. *United States v. Shanks*, 97 F.3d 977, 979-980 (7th Cir. 1996). Further, where routine collection occurs neither at the curb nor at the alley line but within the curtilage of the home, DPW or DNS employees may search containers placed for anticipated collection. *Redmon*, 138 F.3d 1109, 1113-1114.

Though it is lawful for DPW and DNS staff to search garbage and recycling carts left for collection or located adjacent to the alley and readily accessible to the public, in many cases, prosecuting “failure to separate” or “failure to clean recyclable container” violations on the basis of such searches raises practical proof problems. MCO § 79-25 requires “occupants” of residential and non-residential properties to separate recyclables from waste. MCO § 79-29 requires that the separated recyclable materials be clean and free of contaminants. The penalties

¹ Though a difficult concept for courts to apply, “curtilage” is defined in the cases as “the area outside the home itself but so close to and intimately connected with the home and the activities that normally go on there that it can reasonably be considered part of the home.” *United States v. Shanks*, 97 F.3d 977, 979 (7th Cir. 1996) (quoting *United States v. Pace*, 898 F.2d 1218, 1228 (7th Cir. 1990).

Preston D. Cole, Chair

July 13, 2009

Page 3

sections of the recycling ordinance, MCO § 79-47-1-a (failure to clean) and § 79-47-2-b (failure to separate), specifically describe the violations as "a person who fails to comply..."

To effectively prosecute a violation of these sections the City must prove, to a level of clear, satisfactory, and convincing evidence, that the person cited was the actual person who violated one of these sections of the ordinance. Because the containers would be accessible to the public, it would be very difficult to prove that the cited "occupant" committed the offense and to disprove the defense that someone else threw the material in the wrong container. However, this concern is lessened where DPW or DNS employees lawfully search a container after observing a person dispose of material in violation of the ordinance.

If you have any comments or concerns or require any additional information, please do not hesitate to contact the undersigned.

Very truly yours,



GRANT E. LANGLEY
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TDM:tdm

1047-2009-1348:147334



City of Milwaukee

200 E. Wells Street
Milwaukee, Wisconsin 53202

Meeting Minutes RECYCLING TASK FORCE

PRESTON COLE, CHAIR

Ald. Joe Dudzik, Michael J. Daun, Lisa Schaal, and Erick Shambarger

Staff Assistant, Terry MacDonald

Phone: (414)-286-2233; Fax: (414) 286-3456, E-mail: tmacdo@milwaukee.gov

Monday, May 18, 2009

1:30 PM

Room 303, City Hall

Meeting convened: 1:36 P.M.

1. Roll call

Present 5 - Cole, Daun, Dudzik, Shambarger and Schaal

Also present: James Carroll, Legislative Reference Bureau and Jim Michalski, Comptroller's Auditing Division, Wanda Booker, Dept. of Public Works and Rick Meyers, Dept. of Public Works, Recycling Specialist and Don Stone, Dept. of Public Works, Sanitation

2. Approval of the minutes of the April 27, 2009 meeting

Mr. Daun moved approval of the minutes, seconded by Mr. Shambarger. There were no objections.

3. Discussion relating to a consultant study on a single stream recycling operation vs. dual system recycling operation

Mr. Cole said this agenda item will not be considered today. It will be rescheduled to be heard at the next Recycling Task Force meeting, scheduled for June 8, 2009, and it will be discussed in closed session. He said the City's recycling and sanitation staff and the consultant who did the study will be available at that meeting to answer questions.

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4. Discussion relating to a "Pay As You Throw" program

Mr. Shambarger said the La Follette School of Public Affairs (Madison, WI) did a policy study on the Pay-As-You-Throw program, at the request of the City of Milwaukee's Department of Admin., Budget & Management Division. The report is complete and is titled, "Impacts of Pay-As-You-Throw Municipal Solid Waste Collection." A copy of the report can be found at the following website:

<http://www.lafollette.wisc.edu/publications/workshops/2009/waste.pdf>

Mr. Shambarger gave brief summary of the La Follette report (Exhibit 1). He said the report is well done and is worth consideration by this task force.

Mr. Rick Meyers, Ms. Wanda Booker and Mr. Donald Stone with Department of Public Works, Sanitation Division also appeared on this matter to answer questions by Task Force members.

Mr. Meyers said that one of the main selling point of the Pay-As-You-Throw program is the incentive to residents to recycle. He said other benefits of the program are the extra recycling that is being done by its residents, a reduction of yard waste found in the carts and the waste reduction by residents by re-using or donating items instead of just leaving them at the curb. He said the program would also lower landfill costs. He said there would also be a cost saving on the carts, because the carts would come in different sizes, each size would have a different cost, and each household would subscribe to the cart size that would hold the amount of recyclables that the household produces and that would help make the pricing more equitable.

Mr. Daun asked if any of the more advanced automated collections have ever been tested to any great degree?

Ms. Booker replied that a fully automated recycling collection pilot was done in the City of Milwaukee about seven to eight years ago. She said that it doesn't work where there is on-street parking, which is on the majority of the City streets, therefore, the trucks were ineffective and the City ended up selling them.

Ald. Dudzik said there would be some increase in cost and recycling if the Pay-As-You-Throw program was implemented by the City and asked what would that increase in cost be?

Mr. Meyers replied that the La Follette report recommended that some prerequisites be done by the City before implementing a Pay-As-You-Throw program. One is that the City should increase its collection frequencies and the other is that the City needs to get its solid waste fees up to the 100% mark, so that the cost of the solid waste collection is fully recovered.

Ms. Schaal asked if there are current pilot study data available, because La Follette report data is from the 1990's?

Mr. Shambarger replied in the negative.

Mr. Daun asked if the department has any thoughts on changes in its current solid waste collections?

Ms. Booker replied that the department has made some changes over the past few years, such as combined collections and it has done away with special collections.

1. Introduction

The purpose of this study is to investigate the effect of the proposed method on the performance of the system. The results show that the proposed method significantly improves the performance of the system compared to the baseline method.

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She said the department is currently exploring the idea of using one large cart for several residents, because carts are costly and in some areas the carts tend to disappear.

Ald. Dudzik asked in the current dual-stream system how much capacity, if any, is lost?

Mr. Meyers replied that each route is complete at one time so capacity is not an issue.

Ald. Dudzik asked if the City would go to a single-stream system could the current trucks be used?

Ms. Booker replied in the affirmative.

Ms. Schaal asked how many recycling collection trucks does the City have available for use right now?

Ms. Booker replied that the City has 32-33 operational trucks at any given time and one person per truck.

5. Set next meeting agenda

Mr. Cole asked the task force members if they would like to take the tour of the Germantown recycling facilities as individuals or as a group?

All task force members replied that either way would work for them.

Mr. Cole said that the task force already has June 29, 2009, meeting date set and said if all members are still available the tour would be scheduled for that date.

Mr. Daun replied that he will be out of town on June 29, 2009, but he will take the tour on his own.

The next meeting date is set for June 8, 2009, and the only item for discussion at that meeting will be on the Earth Tech/AECOM consultant study on a single stream recycling operation vs. dual system recycling operation and it will be in closed session.

Meeting adjourned: 2:22 P.M.

**Terry MacDonald
Staff Assistant**

City of Milwaukee:

Impacts of Pay-As-You-Throw Municipal Solid Waste Collection

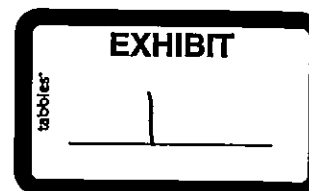
Prepared by
Catherine Hall
Gail Krumenauer
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For the
City of Milwaukee, Department of Administration,
Budget and Management Division

Workshop in Public Affairs, Domestic Issues
Public Affairs 869
Spring 2009



Robert M. La Follette School of Public Affairs
University of Wisconsin-Madison



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Foreword

Students in the master of public affairs program in the Robert M. La Follette School of Public Affairs at the University of Wisconsin–Madison produced this report for the City of Milwaukee’s Department of Administration’s Budget and Management Division. The opinions and judgments presented in the report do not represent the views, official or unofficial, of the La Follette School or of the clients for whom the students prepared the report.

The authors are enrolled in the Public Affairs Workshop, Domestic Issues, the capstone course in their graduate program. The La Follette School offers a two-year graduate program leading to a master of public affairs or a master of international public affairs degree. The workshop provides practical experience applying the tools of analysis acquired during three semesters of coursework to actual issues clients face in the public, non-governmental, and private sectors. Students work in teams to produce carefully crafted policy reports that meet high professional standards within the timeframe of a single academic semester. The reports are research-based, analytical, and when appropriate, evaluative.

This report would not have been possible without the encouragement and leadership of the City of Milwaukee’s dedicated employees. A University of Wisconsin–Madison Engage grant for collaborative work from the Division of Information Technology supported additional costs of this report, including travel costs of meeting with clients. The report also benefited greatly from the support of the staff of the La Follette School. Outreach Director Terry Shelton, along with Kari Reynolds, Mary Mead, and Gregory Lynch, contributed logistical and practical support. Karen FASTER, La Follette Publications Director, edited the report and shouldered the task of producing the final bound document.

This report was generated primarily for the educational benefit of its student authors. The purpose of the project was to improve their analytical skills by applying them to an issue with a substantial policy or management component. This culminating experience is the ideal equivalent of the thesis for the La Follette School degrees in public affairs.

Dr. Susan Webb Yackee
Assistant Professor of Public Affairs and Political Science
May 2009

Acknowledgments

We thank the following people for their guidance and assistance in preparing this report: Mark Nicolini, City of Milwaukee Budget Director, for commissioning the project; Erick Shambarger, City of Milwaukee Economist, for his feedback; Rick Meyers, City of Milwaukee Recycling Specialist, for his assistance; the various municipal employees who took the time to respond to our comparative cities survey; the vendors and manufacturers who provided pricing and equipment details; Karen Faster for her editing and comments; Professor Jack Huddleston for statistical guidance; and Professor Susan Yackee for her mentoring and guidance.

Executive Summary

This report analyzes the possible implementation of a pay-as-you-throw (PAYT) user fee system for municipal solid waste (MSW) collection in the City of Milwaukee. PAYT collection systems serve more than 25 percent of the U.S. population and more than half of Wisconsin communities. These programs replace flat fees with charges based on the quantity of MSW generated per household. PAYT systems may cause residents to recognize the cost of their individual disposal habits and reduce their waste. Pay-As-You-Throw can also promote behavioral change in the form of greater recycling. Municipalities and residents find these systems to be equitable, since those who generate more waste pay more for collection services. PAYT revenue may also provide financial benefits to the city by fully compensating program costs.

Milwaukee charges each household \$150 per year for MSW and recycling services. This flat rate creates insufficient revenue for complete program cost recovery. Milwaukee wishes to pursue a PAYT user fee system that fully pays for the MSW and recycling programs, particularly as landfill rates charged for waste disposal continue to rise.

Our analysis draws upon research from the U.S. Environmental Protection Agency (EPA), academic studies, City of Milwaukee MSW and recycling data, contacts with MSW equipment suppliers, and a survey of 10 comparable U.S. cities using PAYT systems. We assess three program options for Milwaukee: the status quo, a multiple cart system with pricing based on household waste cart size, and a weight-based program that charges per pound of refuse collected. We examine each alternative based on metrics of efficiency, effectiveness, equity, and ease of implementation to determine which MSW system best suits Milwaukee.

We recommend a weight-based PAYT system for Milwaukee.

The weight-based model offers the greatest efficiency and creates the greatest incentive to reduce waste. This alternative also scores highest in equity measures. In contrast, the current system and multiple carts allow greater disparities between the price per unit paid by households with low levels of MSW disposal and the prices paid by those with high levels. The weight-based system also requires less capital investment than a multiple cart system.

We also recommend a series of implementation measures to ease the transition to a PAYT system. Recycling rates rise an average of 16–17 percent in PAYT communities. Increasing the frequency of recycling collection (as recommended in the 2008 Audit of the City of Milwaukee Recycling Program) before PAYT is instituted would prepare residents and city staff before the anticipated increase in recycling. In addition, Milwaukee should conduct a pilot program to review equipment performance, implement new billing software, and gauge program acceptance. Steps to enhance responsiveness to the PAYT program include education and outreach, billing comparisons to show customer savings for MSW reductions, and collection of program feedback from pilot households.

Introduction

This report examines the City of Milwaukee's solid waste and recycling collection structure and fees. Milwaukee charges each household an annual \$150 flat fee for municipal solid waste (MSW) and recycling collection. This fee does not fully cover Milwaukee's cost for providing the services and charges each household the same rate, regardless of the amount of solid waste it generates.

More than 7,000 U.S. communities operate pay-as-you-throw (PAYT) municipal solid waste collection systems as an alternative to traditional flat rates. This report includes a comparative analysis of PAYT implementation and impacts in U.S. cities similar to Milwaukee. The analysis also examines potential impacts of reduced solid waste generation should Milwaukee implement a variable price structure. To evaluate the policy alternatives, the report considers the efficiency, effectiveness, equity, and ease of implementation in the current program, a multiple cart PAYT alternative, and a weight-based PAYT alternative.

Research Question

Which PAYT garbage collection system, that can be practically implemented, most effectively covers Milwaukee's solid waste and recycling costs while equitably charging residents for their solid waste output?

Definitions

The following definitions are used in this report:

- **Bin:** A small container used for recycling collection, typically less than 20 gallons in size.
- **Cart:** A wheeled receptacle used for municipal solid waste, recycling, or yard waste collection. Typical cart sizes range from 30 to 128 gallons.
- **Municipal solid waste (MSW):** Household garbage that is taken to a landfill or incinerator.
- **Pay-as-you-throw (PAYT):** Any MSW collection system that charges users a variable price based on the amount of waste they dispose of. PAYT systems are typically volume-based, but some are weight-based.
- **Recycling:** Any goods accepted by the municipal recycling program. It is illegal to dispose of recyclables in a landfill, although this is rarely enforced (Prohibitions on Land Disposal and Incineration 2008).
- **Tipping fee:** The charge, typically in dollars per ton, for unloading solid waste at a landfill.

Background

Traditional municipal solid waste programs charge households a flat fee for MSW collection and/or include garbage collection fees as part of the property tax levy. The rate per household applies uniformly regardless of the amount of waste generated. PAYT solid waste programs utilize variable rates that charge households for collection based on the amount of MSW they generate. PAYT systems fall into volume-based and weight-based categories, described in the following section (U.S. EPA 2008b).

Volume-Based PAYT Systems

These systems charge variable rates based on the volume of municipal solid waste a household generates. Volume-based PAYT systems commonly take three implementation forms:

- 1. Prepaid bags:** This system uses uniquely colored or marked trash bags for solid waste collection. Residents purchase the bags from the municipality or local retail outlets, and they must place all garbage in these bags. The cost per bag is set to cover all or part of the solid waste collection service plus a small fee for retail outlets distributing the bags.

Advantages: Prepaid bag systems are relatively easy to administer, simple for customers to understand, and provide a strong incentive for customers to reduce their MSW. Prepaid bag systems are compatible with existing billing systems and may allow for the elimination of billing for MSW collection all together.

Disadvantages: Prepaid bag systems are incompatible with the automated and semi-automated MSW collection trucks used by most mid-sized and large municipalities as they require collectors to manually check the bags and load them into the truck. Prepaid bag systems also result in unsteady revenue streams for the municipality since customers may purchase large numbers of bags at one time and then none for a number of months. Non-compliant bags are generally not collected, which can lead to solid waste accumulation for households.
- 2. Prepaid tags:** This system functions similarly to prepaid bag systems, except residents purchase tags or stickers to attach to their own trash bags.

Advantages: Prepaid tag systems have the same advantages as prepaid bag systems with the additional advantage that tags are smaller than bags and easier for retailers to handle.

Disadvantages: Prepaid tags have the same disadvantages as prepaid bags.
- 3. Multiple cart sizes:** This system uses different sized MSW carts and charges residents based on the size of their cart. Most municipalities using this system offer two or three cart sizes, although some offer as many as six. Many communities using multiple carts also utilize a prepaid bag or tag system for MSW items exceeding the cart size.

Advantages: Multiple cart programs are compatible with automated and semi-automated MSW collection vehicles used in many municipalities. In municipalities moving from a single cart program to a multiple cart program, customers are already familiar with how the cart and collection system works. Multiple cart programs are relatively easy to administer once the billing system is established.

Disadvantages: Multiple cart systems provide no economic incentive to customers to reduce their waste unless they can reduce it enough to move to a smaller cart size; this can be partially overcome by offering a large number of cart sizes. The purchase of a large number of carts to implement the program and billing administration can be costly for municipalities.

Weight-Based PAYT Systems

These systems weigh MSW during collection and bill residents per pound of MSW they generate.

1. **Truck-mounted scales:** Most weight-based systems utilize carts and a scale on the collection vehicle. The collection vehicle scans a bar code or radio frequency tag on the cart, weighs the cart as it is emptied, and records the cart number and weight in an on-board computer. This information is then uploaded into the billing system.

Advantages: Weight-based systems provide the greatest incentive for residents to reduce waste, as they can see a clear cost reduction with even small reductions in waste. Weight-based systems are compatible with automated and semi-automated collection vehicles when outfitted with the appropriate equipment. The systems are simple to understand and generally perceived as the most equitable form of PAYT (Skumatz 1995).

Disadvantages: The equipment needed to accurately weigh MSW and bill residents may be complicated and more expensive than other options (U.S. EPA 1994). Additionally, billing administration can be more complex. To date, weight-based PAYT programs in the United States have been limited to a number of pilot programs and a handful of municipalities.

Despite disadvantages in all PAYT systems, numerous communities nationwide have found it beneficial to adopt various forms of these systems to reduce solid waste output, promote greater equity, and increase recycling by residents (Miranda and Aldy 1996; Skumatz and Freeman 2006).

PAYT Links to Recycling

Successful PAYT programs operate in conjunction with comprehensive recycling programs. This allows residents to reduce much of their waste, and therefore their MSW bill, by increasing their recycling rates. The municipality benefits to the extent that recycling lowers landfill tipping fees and potentially increases revenue from the resale of recyclables.

Milwaukee operates a residential recycling program that collects recyclables monthly from the majority of households using 95-gallon carts, although a portion of the city uses 18-gallon bins and receives weekly collection. In 2008, the Milwaukee Comptroller conducted an audit of the city's recycling program at the request of the Common Council. The audit highlighted anecdotal evidence that many households completely fill their recycling carts in less than one month (Morics 2008). This implies that residents have little opportunity to increase their recycling rates under the monthly collection schedule and, as a result, residents may encounter difficulty reducing their MSW output. The audit recommended that Milwaukee conduct feasibility studies of moving to biweekly recycling collection throughout the city (Morics 2008). Biweekly collection allows households that fill their recycling carts before collection to increase their recycling rates. Increased residential recycling presumably results in less solid waste, which in turn results in smaller MSW bills for households under a PAYT program and lower tipping fees for the city.

To implement a successful PAYT program, the city must ensure that residents are able to recycle as much of their waste as possible. Monthly recycling collection provides inadequate opportunity for residents to increase recycling rates. Implementation of a PAYT system should be accompanied with an increase in residential recycling capacity, accomplished through increased collection frequency.

Rationale for PAYT

More than 7,000 American communities operate PAYT systems, covering 25 percent of the population and 30 percent of the nation's largest cities. This has led to the diversion of 6.5 million tons of MSW per year from landfills. Wisconsin ranks among the states with the most communities using PAYT systems, with more than 500 programs (Skumatz and Freeman 2006).

PAYT offers a market-based solution that encourages behavioral changes that serve the public welfare (Folz and Giles 2002). Economists often advocate unit-pricing approaches like PAYT because of their efficiency (Van Houtven and Morris 1999). Residents frequently overuse solid waste services in a flat fee system because local tax levies or flat fees for solid waste collection remain largely invisible to consumers (Van Houtven and Morris 1999). Essentially, flat fees and property-tax-based MSW systems break the link between the act of discarding waste and the payment for collection services. Households face the same cost regardless of how much MSW they generate, with little or no incentive to produce less waste. This can lead people to generate more MSW than they would if charged a variable rate.

In contrast, PAYT systems support efficiency and effectiveness goals by assigning proportional charges to various levels of service. A properly designed unit pricing system charges households based on the amount of waste management services they use (Van Houtven and Morris 1999). Many PAYT systems reduce overall MSW, allowing cities to extend collection routes, reduce the size and increase the automation of truck fleets, and reduce the number of collection crews or crew sizes. Less MSW may also reduce landfill tipping fees and the city's transportation costs and extend landfill life (Folz and Giles 2002). Additionally, PAYT systems promote equity because they reflect individual MSW service usage and enable residents to exercise some control over their solid waste collection costs (Skumatz and Freeman 2006; Folz and Giles 2002).

PAYT systems encourage recycling and composting. According to a Duke University study, communities experience a 20–35 percent increase in the weight of materials going through their recycling and composting programs after implementing PAYT (Miranda and Aldy 1996). Milwaukee's main recycling facility operates at only half capacity, ready to process additional recycling expected under a PAYT system (R. Meyers, personal communication February 26, 2009).

Overall, PAYT provides a link between behavior and bills. Research shows that the average tonnage of waste disposed is 16–17 percent less in PAYT communities than comparable non-PAYT communities, with approximately one-third of this reduction attributable to source reduction, one-third to increased recycling, and one-third to composting. PAYT proves to be one of the most cost-effective methods to promote waste reduction (Harrison 2000).

Methodology

This section describes the methods of our investigation of PAYT programs employed in United States cities comparable to Milwaukee. This section also describes the methods, data, assumptions, and limitations in developing our quantitative analysis of the policy alternatives.

Comparable City Selection

We investigated PAYT programs in American cities that are comparable to Milwaukee to better understand the potential costs, benefits, and other impacts of implementing PAYT in Milwaukee. Identification of eligible cities began with the U.S. Environmental Protection Agency's website, which provides extensive resources on PAYT communities and programs (U.S. EPA 2008a). Initial criteria for comparable cities included populations between approximately 250,000 and 750,000, although a few cities beyond this range were included to broaden the selection, including Eau Claire, the largest municipality in Wisconsin using PAYT.

We also considered racial and ethnic composition, income and poverty data, and the ratio of owner- versus renter-occupied housing when selecting the most comparable cities. Finally, we included climate, particularly annual snowfall, because municipal snow removal equipment and labor needs overlap with that of MSW collection in Milwaukee. The additional data came from the U.S. Census Bureau's American FactFinder webpage (<http://factfinder.census.gov>) and the National Oceanic and Atmospheric Administration Satellite and Information Service webpage (<http://cdo.ncdc.noaa.gov>). From this research, we established an initial sample of 14 comparative cities.

Comparable Cities Data Collection

We collected PAYT program information specific to each city in the sample from each city's official website. We eliminated Eau Claire from the comparison because the city uses a system of multiple private haulers, each offering slight variations of PAYT that would have little in common with a Milwaukee program.

Next, in March 2009, we telephoned individuals working for each of the remaining 13 municipalities. Initial contact targets included directors of public works or solid waste or recycling management departments. If our first contacts were unable to provide specific information regarding PAYT, we asked them to direct us to a source better able to do so. Upon reaching the appropriate contact, we confirmed the details of the city's PAYT program. At this point, we eliminated Albuquerque, New Mexico, because the city's program details did not represent full PAYT implementation, and Oakland, California, due to an inability to access data from the city's private contractor. San Francisco, California, gave no response after repeated contact attempts, resulting in a final pool of 10 comparative cities. Similarities to Milwaukee among the final sample of comparable cities are depicted in Table 1. Appendix A describes the criteria used to determine each city's comparability to Milwaukee in given categories.

Table 1: Responding City Comparison

City	Population	Racial Composition	Median Household Income	Families Below Poverty Level	Owner-Occupied Housing	Climate
Milwaukee, WI	602,782	45% white/ 55% non-white or mixed race	\$35,233	21%	49%	seasonal snow
Most Comparable to Milwaukee						
Fort Worth, TX	Yes	No	Yes	Yes	Yes	No
Lansing, MI	No	No	Yes	Yes	Yes	Yes
Minneapolis, MN	No	No	Yes	Yes	Yes	Yes
Sacramento, CA	Yes	Yes	No	Yes	Yes	No
Moderately Comparable to Milwaukee						
Austin, TX	Yes	No	No	Yes	Yes	No
Grand Rapids, MI	No	No	Yes	Yes	No	Yes
Portland, OR	Yes	No	No	Yes	Yes	No
Least Comparable to Milwaukee						
Plano, TX	No	No	No	No	No	No
San Jose, CA	No	Yes	No	No	No	No
Seattle, WA	Yes	No	No	No	Yes	No

Sources: Barrett (2007), National Oceanic and Atmospheric Administration Satellite and Information Service (2009), U.S. Census Bureau (2005-2007)

We asked our final contact within each city to complete a survey administered electronically using SurveyMonkey (<http://www.surveymonkey.com>). The survey questions were designed to obtain a more detailed understanding of PAYT implementation, effectiveness, and other issues specific to each city. When possible, we created multiple choice questions based on our research of typical PAYT programs in order to make the survey more user-friendly. We also provided opportunities for the respondent to expand on answers in narrative form. Seven contacts responded immediately. The remaining three cities were resent the survey after seven to 10 days passed without response and each city subsequently responded. In total, we received 100 percent survey response from our 10 comparative city sample. See Appendix B for the complete survey and responses.

Milwaukee MSW Generation Distribution

The City of Milwaukee does not collect household level data regarding the amount of MSW residents generate. The finest level of data available for this analysis lists the average weight of solid waste collected per route during an eight-month period in 2007 (City of Milwaukee 2007). These data allow for analysis of routes and provide an overall average MSW weight per household. However, without more specific data, the distribution of average MSW weight per household remains unknown. In other words, we cannot know exact amounts of solid waste each household generates.

The lack of household-level MSW data presents particular problems with regard to the multiple cart PAYT program alternative. Knowing household MSW output allows us to estimate the number of households that will choose each cart size and appropriately set pricing for the different sizes. The lack of data also creates problems in determining an equity index for this project. The equity index serves as a measure of price paid per unit of MSW by households. To overcome these data limitations we made certain assumptions and produced multiple scenarios about the distribution of MSW in Milwaukee (see Appendix C for full details).

Setting Prices for Each Alternative

A program's full cost recovery depends on accurate establishment of prices for MSW collection. Prices represent the total amount of money paid for collection services, whether as a flat fee, volumetric charge, bag or tag price, or a combination of these charges. Costs that need to be recovered include personnel expenses, administrative costs, capital costs, collection expenses, and tipping fees.

Of these expenses, only the tipping fee varies significantly with the amount of MSW collected. To illustrate this, consider two households. One household disposes of 1 pound of waste per week, while the other disposes of 100 pounds each week. Milwaukee's collection costs for both households are the same, but disposing of the waste from the one pound household costs much less than from the 100 pound household. However, Milwaukee's tipping fee constitutes only a fraction of the overall cost of the program.

Given this, we determined that the PAYT alternatives should have a flat base fee with a variable fee added to it. The base prices described in this section partially cover the fixed collection costs to Milwaukee, while the variable fee reflects the amount of MSW disposed as well as some of the fixed costs.

Pricing for the Status Quo was left at the 2009 rate of \$150 per year.

Pricing for Alternative I, Multiple Cart Sizes, was complex. For this alternative, we devised scenarios using the standard deviations described in Appendix C to find the maximum number of households that might change from their current 95-gallon cart to a 32- or 64-gallon cart. We set annual cart prices at \$48 for a 32-gallon cart, \$96 for a 64-gallon cart, and \$144 for a 95-gallon cart; this represents a \$4 difference per month between each cart size. The pricing differential of \$4 per month is low relative to comparative cities but large enough to remain visible on residents' bills. We placed these annual cart prices into a formula established to set the base price assuming full cost recovery. The base price plus the cart price equals the total cost for MSW collection per household.

Establishing pricing for Alternative II, the Weight-Based Program, was relatively straightforward: We placed the base price of \$50 per year into a formula specifying both full cost recovery for the program and the amount of MSW generated each year. The formula produced the price per ton of MSW that the City would charge to customers based on those factors. This price could then be converted into a price per pound that customers understand is more easily.

Sample budget and pricing tables for the status quo and each alternative are presented in Appendix D.

Comparative Cities Analysis

Our survey results from comparable cities show that Milwaukee would be a relative pioneer in choosing to implement PAYT. Few similarly sized American cities with PAYT programs exist. Moreover, we find no PAYT systems in Midwest cities with population, climate, and demographics similar to Milwaukee. Given this, we identified cities using PAYT programs with roughly the same profile as Milwaukee. Although Milwaukee remains distinct within the profile of PAYT communities, experiences with the impacts of other PAYT systems nationwide provide valuable information, as many cities resemble Milwaukee in one or more of the comparable criteria categories (see Table 1 and Appendix A).

Survey Responses

The complete survey and survey responses are provided in Appendix B.

Program Descriptions

The PAYT systems surveyed function under varying conditions. All comparable programs service residential homes. In addition, 90 percent of these municipalities collect MSW from two- to four-unit multifamily residences; 30 percent include PAYT in multifamily homes beyond five units. Approximately 44 percent of the cities have unionized municipal employees. Another 22 percent employ non-unionized municipal collectors, and one-third utilize contract labor.

Eight of the 10 survey cities operate with multiple cart systems. The remaining two cities use bag and tag systems only. Of the eight multiple cart communities, three cities use a three-cart system. Two additional cities began with three-cart systems, then later added 10–20 gallon “micro-can” sizes. Cities most comparable to Milwaukee, where at least four of the six criteria match “yes” in Table 1, include Fort Worth, Sacramento, and Minneapolis. Each uses multiple cart systems.

Many cities using multiple cart systems identified customer choice and a variety of household family sizes as reasons for their cart size offerings. Eighty percent of responding communities identified increasing recycling as a goal tied to their programs. Seventy percent also wanted to increase their municipality’s diversion rates, decrease trash output, and promote equity by charging unit rates with variable pricing systems.

Most comparable cities allow MSW in excess of the cart limit for an additional fee. Three cities require prepaid bags or tags for additional waste. These items are available for purchase at grocery stores or retail outlets. Three other cities collect MSW beyond the cart limit and bill the household for additional service. One city allows bulky waste set outs beyond the cart limit one time per month.

Program Implementations

Two-thirds of the PAYT communities surveyed conducted pilot programs in their implementation process. Examples include a one-year pilot of 3,000 households in Austin and pilots with 17 neighborhoods in San Jose. Full-scale implementation varied by municipality. While Austin used a three year phase-in process for PAYT, five other communities moved directly from pilot programs to full implementation, and three cities moved directly from flat rate systems to full implementation without a phase-in period.

Almost 90 percent of the comparable cities promoted their PAYT programs to residents through education and outreach efforts. Cities used a broad range of techniques, from information included with the utility bill to public service announcements on radio and television, press releases, advertising, and news articles.

Seven cities identified a need for program change in conjunction with or subsequent to implementation. These include the introduction of smaller can sizes and changes such as switching recycling to carts from bins that are unrelated to the institution of PAYT. Six cities required administrative or billing changes for their MSW program. Necessary investments included software purchases; system adjustments for each new can size; expanded customer data, including tracking carts by serial number; and, in some cases, entire billing system overhauls. Specific cost estimates for enacting such changes were not specified by survey respondents and follow-up calls to comparable cities yielded no specific investment amounts.

Program Results

Seven of the 10 cities surveyed report decreases in MSW tonnage under their PAYT systems. Reductions varied in terms of landfilled tonnage and actual MSW collected. For example, Fort Worth reports a 12.5 percent tonnage decline and 25 percent less in MSW collections. San Jose reports average weekly household MSW rates at approximately 96 gallons prior to PAYT and averages near 32 gallons per household after program implementation. Austin reports an initial decrease in tonnage that leveled off in subsequent years. Three respondent cities indicate tonnage rates similar or higher under a PAYT system to that under flat rates. Respondents report total landfill diversion rates from 22 percent in Fort Worth to 52 percent in Sacramento and 60 percent in San Jose.

These findings reinforce research that shows households alter disposal behaviors, purchasing habits, and recycling rates to reduce output with a PAYT system (Skumatz and Freeman 2006). The research and our comparable cities survey show no noticeable illegal dumping or additional littering as a method for residents to reduce the MSW in their carts (Van Houtven and Morris 1999; Skumatz 2008). Instead, the survey shows 80 percent of cities report recycling increases that complement MSW reduction. Fort Worth indicates an average weekly household increase in recycling from 3.92 pounds in 2002 before PAYT,

to 11.59 pounds the year after PAYT implementation, and 13.54 pounds in 2008. Other cities reflect similar results, with recycling tonnage rising from 12,000 tons per year to 40,000 tons per year in Sacramento and a 23 percent increase in Portland. The two municipalities without increases have recycling rates similar to those seen before PAYT.

Some limitations of PAYT systems are apparent in the survey results. Only two-thirds of responding municipalities achieve full cost recovery under their programs. Another 11 percent report higher revenues under PAYT, but fall short of cost recovery, and two cities, or 22 percent, indicate the same revenues now as they experienced prior to PAYT. However, these shortfalls represent a program design limitation and are not PAYT specific. Fort Worth initially experienced some difficulty with full implementation due to the large number of households served. Portland also notes the revenue difficulty for municipalities due to low recycling resale rates in current recessionary economic conditions. Austin finds inefficiency with the additional prepaid bags outside carts, due to incompatibility with a semi-automated collection system. Despite pricing structures to encourage the use of a larger bin size as opposed to extra bags, some residents continue to use additional bags.

Comparative Cities Summary

Overall, the majority of comparable cities with PAYT programs use multiple cart systems. These programs work with union and non-union labor hired by the municipality or a contractor. Sixty percent of municipalities reported a need to retrain collection employees on the new system, which generally included minor actions, not significant investments. Nearly all survey cities took steps to prepare, such as resident education efforts, pilot programs, or both, before introducing PAYT to their communities. Many cities also adjusted their billing systems to accommodate variable pricing, but respondents did not specify adjustments or associated costs.

Once implemented, the comparable cities generally experienced MSW tonnage declines paired with recycling increases. Two multiple cart cities added more cart sizes in later years in the form of 10-20 gallon “micro-cans” in response to MSW reduction trends. Other cities reported only modest gains in terms of revenue and MSW reductions under PAYT, and a few results could be considered neutral. Other limitations under PAYT include insufficient pricing gaps to create incentive for cart size changes and inconveniences from manual pickup of additional bags or tagged items.

Policy Options and Analysis

This section describes the three policy alternatives evaluated in this report: the status quo solid waste collection program, PAYT using multiple solid waste cart sizes, and PAYT using weight-based solid waste collection. The alternatives are analyzed in the context of the evaluative criteria of efficiency, effectiveness, equity, and ease of administration.

Selecting Viable Alternatives

The administrative and equipment capabilities of Milwaukee and information gathered from comparable cities narrow the list of appropriate PAYT policies for analysis. Among specific PAYT options, both weight-based and volume-based systems serve as feasible options.

Within volume-based options, bag and tag PAYT programs are widespread throughout Wisconsin and the United States (U.S. EPA 1999a). These programs offer relatively simple administration and eliminate the need for a billing system (Folz and Giles 2002). However, bag and tag programs require manual collection of MSW to ensure residents' proper use, along with a distribution system through local retailers or the municipality for selling the appropriate supplies. Manual collection aligns best with smaller communities. The largest bag or tag system in Wisconsin operates in Manitowoc, with a population of approximately 34,000; Milwaukee is approximately 18 times larger in population and faces significantly different logistical challenges relative to small communities (U.S. EPA 1999b). Many communities including Milwaukee have moved to automated or semi-automated collection systems to speed MSW collection and reduce potential workers' compensation claims stemming from lifting and moving trash bags into trucks. Bag and tag systems lack compatibility with automated or semi-automated collection vehicles, like those used in Milwaukee. Milwaukee's size and semi-automated collection system eliminate bag and tag programs from further consideration in our analysis.

The remainder of this section compares the City of Milwaukee's current MSW and recycling collection program with two alternatives: a weight-based program and a multiple cart system.

Policy Criteria for Evaluation

The following policy goals guide our evaluation of the alternatives. Appendix E provides a detailed description of the development of the criteria.

- **Efficiency:** An efficient PAYT system diverts the greatest amount of MSW, while charging the lowest possible fee for customers and using the fewest taxpayer dollars in the long run. To evaluate this, we consider capital investments relative to potential savings and new benefits of the PAYT alternatives. Full program cost recovery also serves as an efficiency metric for Milwaukee. We define cost recovery as the percentage of

program expenses paid by program income.

- **Effectiveness:** Guidelines for effectiveness include resident compliance with the collection program. Physical impacts, such as changes in MSW diversion and recycling rates, also measure effectiveness. A more effective program creates higher MSW diversion and recycling rates.
- **Equity:** Equity measures the ability of a program to charge residents based on the amount of service they consume, or, in other words, the amount of solid waste they generate. We defined an equity index to consistently measure the relative fairness of each policy alternative. This index shows the ratio of the prices paid between those that generate the most MSW and those that generate the least. An index of 1.0 indicates the most equitable system possible, where all residents pay the same price for each unit of MSW they generate. By comparison, an index of 2.0 indicates that households generating the least MSW pay twice as much per unit of MSW as those generating the most waste.
- **Ease of implementation:** This criterion examines the administrative requirements of the status quo and alternatives to compare the structural changes and information dissemination necessary for implementation.

We also consider political feasibility in our analysis. Because the City of Milwaukee has expressed interest in a PAYT program, we believe a full analysis of benefits and limitations under various alternatives will yield an acceptable result for the client. Therefore, feasibility discussion within each alternative occurs within the cost and administrative aspects listed in our policy goals, rather than as a stand-alone criterion for evaluation.

Status Quo: Current Milwaukee MSW and Recycling Collection Program

Milwaukee's solid waste program provides weekly collection of refuse from all single-family and multi-family homes with up to four units, totaling approximately 190,000 households. Recycling collection using 95-gallon carts occurs approximately once per month for most households, although 15 percent of households have weekly recycling collection using 18-gallon bins. Households pay a \$150 annual flat fee for MSW and recycling collection, which covers approximately 91 percent of the \$35.7 million combined program budgets for 2009. Milwaukee covers remaining costs through revenue from the resale of recyclables, state recycling grants, and the local property tax levy.

Households place their solid waste in 95-gallon carts, which two-person crews empty weekly using semi-automated collection trucks. The semi-automated system requires operators to connect the cart to the truck, which then automatically empties the cart. Households may request a second cart at no additional charge if they consistently produce more than 95 gallons of MSW per week. Residents may also place up to 4 cubic yards of additional solid waste out

with the cart for collection at no charge. More than 4 cubic yards of waste or large items require special pickup at a \$50 fee. Table 2 depicts the various services and charges under the status quo.

Table 2: Description of Status Quo: Current Milwaukee MSW Collection System

Type of System	Single cart size
Size of MSW Carts	95-gallons
Charge for Single-Cart Service	\$150/year (\$12.50/month)
Charge for Additional Carts	\$0
Charge for Additional MSW (Not in Cart)	\$0 (up to 4 cubic yards/week)
Charge for Special Pickup (Large Items)	\$50/pickup
Charge for Recycling Collection	\$0 (included in MSW collection fees)

Source: R. Meyers, personal communication January 30, 2009

Most Milwaukee households also use 95-gallon carts for recycling collection. These carts have a divided interior for separation of paper recyclables from glass, metal, and plastic recyclables. No set schedule exists, but Milwaukee collects recycling approximately once per month. Approximately 28,000 households use 18-gallon bins for their recycling collection. Bin use occurs in central city areas that have a majority of rental properties and alley pick-up service rather than curbside collection. Milwaukee collects bin recyclables weekly on set days.

Recycling markets continue to experience sharp variability with the recent economic downturn. Milwaukee contracts with Waste Management Recycle America to process and market recyclables at an annually adjusted fee of more than \$40 per ton. The proceeds from the resale of recyclables are split evenly between the city and Waste Management Recycle America. In 2008, the City received resale revenue of \$58 per ton, resulting in a net income of \$18 per ton after paying the processing fee. The 2009 budget figures in Table 3 rely on projected recycling resale revenues of \$40 per ton. Due to recycling resale declines, the City expects zero net revenue after paying for processing. Should recycling resale values drop below \$40 per ton, the total cost and cost per household figures may rise for collection services. However, overall cost savings can still be achieved relative to landfilling as the landfill tipping fee is avoided.

Table 3: Status Quo: Ongoing Income, Costs, and Cost Recovery

Total Income/Revenue	+\$33,165,000
Total Expenses/Costs	-\$36,325,385
Net Income/Loss	-\$3,160,385
Percentage Cost Recovery	91.30%

Source: E. Shambarger, personal communication February 16, 2009; authors' calculations

Note: Assumes standard deviation of 12.00 pounds, municipal tipping fee of \$30/ton, and 0% MSW reduction; see Appendix C for more details

Efficiency: Milwaukee's current system presents several opportunities to improve efficiency. The status quo provides little incentive, beyond offering recycling services without additional charge, for residents to divert more MSW. Households

pay the same flat rate regardless of their waste output. As Table 3 shows, the status quo does not achieve full cost recovery. In 2009, Milwaukee expects \$28.6 million in revenue from MSW user and special collection fees. State recycling grants and the resale of recyclables will generate an additional \$4.5 million. These revenue streams cover approximately 91 percent of the total cost for the MSW and recycling programs, leaving a \$3.1 million shortfall that must be covered by the local property tax levy.

The status quo provides efficiency benefits with respect to financial feasibility. The current MSW and recycling system requires little capital investment, limited to regular annual maintenance and adjustments for existing budgetary considerations.

The loss of value for recyclables due to economic recession and rising landfill fees are unfavorable economic trends that will make full cost recovery less attainable without increases in the flat fee. Continuing the current system rather than adopting PAYT maintains Milwaukee's reliance on property taxes to balance the MSW budget. Without change, the combination of these two trends may increase pressure on the budget.

Effectiveness: The status quo results in effective resident compliance. Milwaukee experiences no noticeable issues arising from illegal dumping (R. Meyers, personal communication February 26, 2009). However, this alternative shows less effectiveness due to a lack of incentive for households to divert MSW.

Equity: Flat fee MSW systems lack equity. Under the status quo, all Milwaukee households pay the same rate despite the amount of waste. As a result, residents who create little waste pay a higher rate per pound than residents who generate significantly more solid waste. Using the equity index described in Appendix E, City of Milwaukee households with the lowest disposal rates pay a range of 1.5 to 5.3 times as much per pound as households disposing the highest levels of MSW under the status quo. Appendix D provides detailed equity index calculations under different scenarios in the status quo.

Ease of implementation: Milwaukee's current system requires no implementation changes. Table 4 reflects the potential costs to implementing a different MSW program, but because the status quo is already in operation, there are no upfront costs to this program.

Table 4: Status Quo: Program Startup Costs

New Cart Purchases	\$0
Updated Billing System	\$0
Truck Modification	\$0
Education/Outreach	\$0
Total Startup Costs	\$0

Source: Authors' calculations

Alternative I: Multiple Cart Sizes

Introduction of additional cart sizes for MSW, with higher prices for larger carts, shifts toward a full cost recovery PAYT system by aligning user fees with the amount of MSW collected. Many possible permutations of numbers of carts, gallon capacity combinations, and fee differentials exist when designing an optimal multiple cart PAYT system. Our peer cities survey shows that eight of our 10 responding cities use a multiple cart PAYT system. Of these, three operate a three-cart model, including Fort Worth and Sacramento, two of the most comparable cities to Milwaukee demographically (See Table 1 and Appendix A). In a three-cart model, Milwaukee would maintain the current 95-gallon carts as the largest MSW size option and as the standard size for recycling at all non-bin residences. Two new cart options include 32- and 64-gallon sizes.

By analyzing average tonnage rates for 2007 summer routes, we estimate a range of multiple cart pricing options. To achieve full cost recovery, we consider several scenarios to reflect data variance and two landfill fee scenarios for Milwaukee. Depending on the variables used, each household choosing a 32-gallon cart pays in the range of \$116 to \$136 annually under the multiple cart system. A household with a 64-gallon cart pays \$164 to \$184 per year. A household with a 95-gallon cart pays \$212 to \$232. These rates consist of a base rate plus a variable rate dependent upon the cart size each household chooses (see Setting Prices on page 9 for base rate details and Appendix C for additional details). These charges are shown in Table 5.

Table 5: Description of Alternative I: Multiple Cart Size MSW Collection

Type of System	Multiple Cart
Size of MSW carts	32, 64, and 95-gallons
Base charge	\$68–\$88/year
Cart charge	32-gallon: \$48/year 64-gallon: \$96/year 95-gallon: \$144/year
Charge for additional carts	Same as cart charge for first cart
Charge for additional MSW (not in cart)	\$3/30-gallon bag
Charge for special pickup (large items)	\$50/pickup
Charge for recycling collection	\$0 (included in MSW collection fees)

Source: Authors' calculations

Beyond the regular cart fees, a multiple cart system commonly involves extra charges for excess waste beyond the cart size. Based on peer city responses and research, we find pricing for additional bags of MSW and special pickups to be critical. Per bag and special pickup pricing may influence the cart size a household selects, and reinforce diversion and recycling MSW behaviors. In this multiple cart model, residents pay a \$3 charge for each 30-gallon garbage bag left outside the cart. Only distinct bags, sold through local retailers, will be collected. We assume that \$1 of each bag's cost will be used to cover administrative costs as well as reimburse retailers for distributing the bags. In addition, excess waste outside the cart, up to 4 cubic yards, costs \$50 per pickup, the same as a special

pick-up request. A second cart costs each household the same amount (base fee not included) as the first cart of the same volume. As an example, a second 64-gallon cart costs \$96 per year in addition to the \$166–\$186 per year for the first 64-gallon cart. Table 6 outlines these charges.

Table 6: Alternative I: Ongoing Income, Costs, and Cost Recovery Projections

Total Income/Revenue	+\$36,386,737
Total Expenses/Costs	-\$36,386,737
Net Income/Loss	\$0
Percentage Cost Recovery	100.00%

Source: Authors' calculations

Note: Assumes standard deviation of 12.00 gallons, municipal landfill/tipping fee of \$30/ton, and 0% MSW reduction; see Appendix C for more details

Efficiency: The multiple carts alternative allows Milwaukee to introduce pricing incentives that influence household disposal behaviors. Using three set monthly rates achieves greater efficiency than the status quo. This alternative requires significant investment in new carts, however, which detracts from efficiency. Current average household MSW rates indicate that instituting a multiple cart system would result in the vast majority of households switching to 32-gallon or 64-gallon carts. This reduces efficiency of the multiple cart system, because significant cart investments will be necessary to meet actual household disposal rates. Most households generate far less than 95 gallons of MSW on a weekly basis (authors' calculations, see Appendix D).

Non-binding price estimates from cart manufacturers Schaefer Systems and Rehrig Pacific Company create the basis for cart investment estimates. Schaefer Systems provides the lower price estimate at \$35 per 32-gallon cart and \$45 per 64-gallon cart. Based on the assumption that households would select the least expensive cart option to meet their MSW needs, we estimate a need to purchase 24,759 to 67,228 of the 32-gallon carts and 107,507 to 165,239 of the 64-gallon carts (see Appendix C). Zero to 15,265 households would keep the current 95-gallon bin. This totals an estimated \$5.7 million to \$9.8 million in capital investment costs for carts alone, using the lowest estimated rates for carts. These costs are reflected in Table 7.

Table 7: Alternative I: Program Startup Costs

New Cart Purchases	\$5,700,000–\$9,800,000
Updated Billing System	\$0
Truck Modification	\$0
Education/Outreach	\$200,000
Total Startup Costs	~\$5,900,000–\$10,000,000

Source: Authors' calculations

Potential exists for modest cost recovery on carts. Milwaukee can eliminate recycling bin costs for several years by reserving the unused 95-gallon carts for this purpose. Milwaukee may also possibly sell any excess cart overstock

back to the product distributor for \$15–\$20 each (Schaefer Systems, personal communication April 3, 2009). Milwaukee could also consider a phase-in period to reduce the financial impact of cart investments in any single budget cycle or consider requiring residents to purchase smaller carts with the recognition that households would recover the cost during the first year of the program.

Effectiveness: A multiple cart system influences household disposal and MSW diversion rates more than the status quo. Multiple carts should garner effectiveness in terms of residential compliance and acceptance because the cart rate remains consistent from one collection period to the next.

Pricing drives diversion rates in this system. Austin uses a \$5 per month gap between cart sizes, which is too small to motivate residents to switch to smaller carts (see Appendix B). Pricing carts and additional MSW services requires balance between incentives and revenues to find the threshold in each community for cart rates.

Equity: Multiple cart options enhance the equity of MSW services. Variable pricing based on household waste output reflects Milwaukee's goal of equitably establishing an MSW user fee system to a greater degree than the status quo, using common guidelines found in other U.S. cities. This alternative enhances both the process and perception of equity in municipalities. The equity index for multiple carts ranges from 1.22 to 4.40. This ranks more equitably than the status quo under all household disposal scenarios.

Ease of implementation: Switching to a multiple cart system would require few changes in the physical collection process of MSW. This system would require notable changes elsewhere, however. For the multiple cart system to work effectively, Milwaukee would need to implement a bag or tag system for excess waste. This includes establishing a network of local grocers and retailers to sell the bags or tags. Billing administration requires investment for modifications as well, although changes would be minor and would primarily require data input time as opposed to actual software changes (E. Shambarger, personal communication April 13, 2009; D. Rasmussen, personal communication April 24, 2009). Billing needs to reflect extra cart charges and collection fees for up to 4 cubic yards of MSW. We anticipate a need for Milwaukee to hire one additional employee or to train a current employee to manage multiple cart billing. This cost is included in all budget scenarios depicted in Appendix D.

Alternative II: Weight-Based Program

Weight-based programs use technology to measure weekly household MSW disposal. Under this alternative, Milwaukee would contract with a company to install weight measuring scales in the lift mechanism of the current semi-automated MSW and recycling collection fleet. During collection, the truck calculates the MSW cart weight through the load cells outfitted in the lifting mechanism. Radio frequency identification transponder chips or bar code tags are attached to each customer's cart. As the lifting mechanism empties the cart, a receiver detects the cart's identification code and sends the registered weight information wirelessly to a computer in the truck. The computer decodes the identification number into a street address and records the average weight of several readings taken during the collection process (McLellan 1994). The data would be transmitted to Milwaukee's MSW billing system. Overall, this process adds less than 10 seconds to the collection (Luken and Smith 1994).

Unlike the multiple cart system, few examples of weight-based PAYT systems exist. In place of comparable cities data, we rely primarily on research and discussions with equipment vendors to evaluate this alternative. We find that Seattle and Minneapolis are among the most comparable communities with published results of weight-based pilot projects.

Seattle conducted the first weight-based pilot program in two phases during 1989 and 1990, with financing from a U.S. Environmental Protection Agency grant. The second phase of Seattle's pilot used semi-automated trucks, like those found in Milwaukee, and electronic identification tags comparable to technology available today. Weights recorded during collection were included in mock billing given to residents as a supplement to their regular, non-pilot MSW fees. Post-project analysis suggests that households accepted the system change and reduced their MSW rates by an average of 15 percent. This is significant because Seattle already operated under an established multiple cart PAYT system. The published case study identifies weight-based PAYT in Seattle's long-term MSW plans. However, more than a decade later, Seattle still uses multiple carts (Skumatz 1995; L. Skumatz, personal communication April 13, 2009).

Minneapolis conducted a pilot test for weight-based systems in the spring and summer of 1993. They installed weight-reading load cells in the lift mechanisms of their semi-automatic MSW collection trucks and recorded household information with electronic identification software. Minneapolis reported good accuracy and scale reliability in a post-pilot report, but ultimately decided against weight-based PAYT due to the short-term nature of their pilot and concerns about an unfamiliar system creating dissatisfaction for customers (Skumatz 1995).

Loadman On-Board Scales, a company based in Texas, specializes in weight-based equipment for MSW collection and recycling trucks. Their representatives contributed cost and accuracy information used in our considerations. Although the technology continues to develop, details for the weight-based alternative

require some speculation beyond our research and interviews. The basic features of the weight-based PAYT alternative are described in Table 8.

Table 8: Description of Alternative II: Weight-Based MSW Collection

Type of System	Weight-based
Size of MSW Carts	95 gallons
Base Charge	\$50/year
Charge per Pound of MSW	7.7–11.1 cents
Charge for Additional Carts	Charged at same rate per pound
Charge for Additional MSW (Not in Cart)	Charged at same rate per pound
Charge for Special Pickup (Large Items)	\$50/pickup
Charge for Recycling Collection	\$0 (included in MSW collection fees)

Source: Authors' calculations

In contrast with the current flat fee system, this alternative would include full cost recovery as a requirement when MSW collection charges are established. This results in income and revenue exactly equaling expenses and costs as shown in Table 9.

Table 9: Alternative II: Ongoing Income, Costs, and Cost Recovery

Total Income/Revenue	+\$36,448,089
Total Expenses/Costs	-\$36,448,089
Net Income/Loss	\$0
Percentage Cost Recovery	100.00%

Source: Authors' calculations

Note: Assumes standard deviation of 12.00 pounds, municipal tipping fee of \$30/ton, and 0% MSW reduction; see Appendix C for more details

Efficiency: Weight-based PAYT offers the highest incentive for efficiency by tying charges to the amount of household MSW. Charging by the pound provides clear incentives for residents to divert the greatest amount of MSW. We project full cost recovery as a result (see Table 9). Moreover, Milwaukee pays fees to the landfill by the ton. A weight-based system creates consistency between the unit of measure the City charges to residents and pays to the landfill.

Converting to a weight-based program would require capital investments in the loading equipment and software. This would include \$14,500 to retrofit each of Milwaukee's 173 rear-loading MSW and recycling fleet. An additional \$570,000–\$950,000 investment would cover electronic tag installation on Milwaukee's carts (D. Hoven, personal communication April 23, 2009). This totals \$3 million to \$3.5 million for fleet retrofitting, cart tags, and software investments. If Milwaukee refrained from retrofitting its 49 recycling trucks, capital investments would drop to \$2.2 million to \$2.6 million. However, retrofitting the recycling trucks might prove beneficial in the event that Milwaukee needed to deploy MSW trucks for other purposes.

This truck system also requires approximately \$36,000 in expenditures to make Milwaukee's billing system compatible with the weight-based equipment (D. Hoven, personal communication April 23, 2009; K. Klawitter, personal communication, April 24, 2009). In addition, two additional municipal staff positions may be required. These include one billing administrator for the weight-based system and a municipal technician for equipment service and maintenance. The price scenarios in Appendix C include two new employees, paid \$40,000 each annually and the associated fringe costs. Alternatively, Milwaukee may invest in training current employees to manage these functions. For the weight-based system, capital and additional staff investments total significantly less than the multiple cart alternative, although future maintenance costs remain unclear.

Effectiveness: Weight-based systems create little visible change in the physical process of collection services from residents' perspective. The primary concern arises in the need for Milwaukee to explain cost changes, the purpose behind them, and the new billing method to which residents must adapt. Otherwise, problems may surface with resident compliance. Residents may find a different monthly MSW bill unacceptable, compared to a consistent rate under the status quo or multiple cart system. With the proper outreach and education, opportunities under weight-based systems are extensive for diversion and recycling behavioral change. Milwaukee can charge a set rate per pound to achieve greater program cost recovery than under the status quo.

One concern with this alternative is that residents may subvert the weight system by, for example, disposing of MSW in a neighbor's cart. Research frequently examines this concern and consistently finds no evidence of this occurring (Folz and Giles 2002; Morris and Van Houtven 1999; Harrison 2000). Other concerns include "migrating" carts that do not remain with their assigned households. This may be best solved by stenciling the assigned address on each cart, although this complicates reuse of carts at other addresses. Electronic tagging can also tie each cart to a specific household, allowing Milwaukee to pinpoint carts that have been separated from their households. While using electronic tags without stenciling does not allow residents to know if they have their own carts, residents could label their own carts at their own expense.

Equity: In terms of paying for service use, weight-based PAYT programs promote the greatest equity of any alternative, outscoring the status quo and multiple cart system in all but one scenario. The equity index for Milwaukee in the weight-based model ranges from 1.09 to 1.80. In theory, weight-based systems could achieve an ideal 1.0 equity rating, where all households pay the same rate per pound of MSW. However, our pricing operates with a \$50 annual base fee, which makes a 1.0 equity rating unattainable.

Ease of implementation: A weight-based MSW collection system would function nearly identically to the current system in use in Milwaukee. In fact, residents would likely only notice changes in their bills. Under this alternative,

semi-automated trucks would collect MSW from 95-gallon carts. Loadman On-Board Scales sends technicians to install the weighing equipment between the city MSW truck bodies and the lifting mechanism. The trucks weigh the waste as it is emptied into the truck, and the weight is logged in the billing system. Because all MSW can be weighed, no additional fee would be charged for extra carts or for additional MSW outside the cart. Extra MSW would be placed into the household cart, weighed during a second emptying cycle, and included in the total weight billed for that week. Households that regularly generate excess MSW beyond 95-gallons would receive another RFID-tagged cart to save the manual labor of loading extra bags for a second weigh cycle. Single, odd-shaped items that do not fit in the cart, but are not considered laborious special pick-up items, may be collected free of charge once per month. These items constitute only a negligible percentage of MSW collection. Table 8 depicts the various services and charges under the weight-based alternative.

Equipment effectiveness relative to performance certification requirements is a concern with weight-based PAYT. A suburban Minnesota pilot encountered difficulties meeting state-mandated weight accuracy standards with its truck scales. When charging residents per pound of refuse, the scale needs to reflect the same accuracy as the fee structure. Streets on hills or sharply crowned roads may compromise some scale types when tilting more than 3 degrees (Luken and Smith 1994). Loadman On-Board Scales guarantees scale accuracy within a 1.5 percent margin of error. For a home disposing of 30 pounds of MSW per week, this means the scales and recording equipment will register a weight between 29.55 pounds and 30.45 pounds (K. Klawitter, personal communication April 3, 2009). The manufacturer claims that the scales maintain accuracy on uneven surfaces and guarantees the return of equipment failing to meet performance standards (K. Klawitter, personal communication April 3, 2009 and April 24, 2009).

Loadman runs full testing with Bayne MSW collection vehicles, including the TaskMaster and TaskMaster Hi-Lift models used in Milwaukee. With this partnership and equipment familiarity, Milwaukee may avoid some of the implementation challenges other pilot programs faced in the 1990s. Currently, the equipment meets Wisconsin Department of Agriculture, Trade, and Consumer Protection guidelines for commercial maintenance accuracy. The agency's initial equipment test uses more restrictive weight tolerances though, which may require the passage of legislation to allow the equipment's use in Milwaukee. Overriding the initial tolerance does not detract from the regular truck scale performance requirements. The legislative action does, however, create an additional political acceptability consideration for the weight-based alternative.

Weight-based systems also involve greater administrative complexity than the status quo or multiple carts. Weekly variability in billing rates per household requires more attention than a flat rate or established cart rate during the three-month billing accrual period. Milwaukee may choose to adapt the current billing system, similar to the way water meter reading occurs, to accommodate weight-

based billing (D. Rasmussen, personal communication April 24, 2009). This can be accomplished through the Loadman company's software writing capabilities for a onetime fee (K. Klawitter, personal communication April 24, 2009). Rehrig Pacific Company could also replace the current billing software with a web-based system for a \$36,000 annual fee (D. Hoven, personal communication April 23, 2009). Table 10 reflects this and other costs for the weight-based alternative.

Due to the relatively unprecedented use of weight-based PAYT systems, education and outreach efforts to explain the purpose and goals of this system could make implementation easier and enhance the program's effectiveness. Adoption of a weight-based system also would require corresponding changes to Milwaukee's recycling systems, such as increased collection frequency or larger bins, to handle expected increases in recycling volume (Skumatz and Freeman 2006).

Initial startup expenses are lower for this alternative than for the multiple cart alternative. An estimate of program startup costs is provided in Table 10.

Table 10: Alternative II: Program Startup Costs

New Cart Purchases	\$0
RFID Tags for Existing Carts	~\$570,000 - \$950,000
Updated Billing System	~\$36,000
Truck Modification	~\$2,500,000
Education/Outreach	\$200,000
Total Startup Costs	~\$3,306,000 - \$3,686,000

Source: Authors' calculations

Recommendation and Conclusion

Based on analysis of research, comparable cities, City of Milwaukee data, and various alternatives, we recommend the weight-based PAYT system. The weight-based system creates the greatest efficiency and effectiveness with the least equity disparity among our alternatives. While less empirical information exists about the use of weight-based systems relative to other PAYT programs, Milwaukee benefits financially from substantially lower capital investment in weight-based equipment. The weight-based system presents implementation concerns to the extent that it requires more investment in maintenance, in the form of a municipal employee and potential equipment repairs. However, our calculations project that intermittent maintenance, staffing, and billing under a weight-based system require substantially less investment, even over a 10-year time horizon, than the additional millions of dollars in upfront costs necessary to implement a multiple cart system.

To ease the implementation process, we recommend that Milwaukee conduct a one-year pilot program that encompasses approximately 10 percent of the city's collection routes. Pilot programs for various aspects of MSW collection have been used in Milwaukee in the past (R. Meyers, personal communication February 26, 2009). A comprehensive pilot program could verify efficiency and effectiveness of the equipment and billing systems prior to full-scale implementation. Additionally, a one-year pilot would ensure that the equipment functions properly under all weather conditions. The lack of weight-based models and historical PAYT funding opportunities through the U.S. EPA may create possibilities for federal funding to support such a program (See Appendix B, Question 11). In addition, scale manufacturers have an economic incentive to provide equipment on favorable terms or at reduced prices to the extent that successful demonstration may open up new markets for them. Throughout the pilot process, detailed data tracking for waste collected per household will help to inform effectiveness of weight-based PAYT and contribute to Milwaukee's knowledge of MSW and recycling trends in the current flat rate system.

The new and generally unfamiliar weight-based program requires extensive education and outreach to residents to explain the transition to PAYT. These efforts could include information dissemination through billing statements, media outlets, advertisements on buses, and online resources. During the pilot period, Milwaukee might wish to institute a "dual billing" system to show residents their current flat fee monthly rates in comparison to the rates they would pay under a weight-based system. Milwaukee might consider sharing data with residents to show how their amount of garbage compares with other households on their route. Evidence from utility companies shows that social factors, such as neighbor comparisons, can add effectiveness to rolling out new programs. Some systems use graphics included with municipal service bills to demonstrate collection rates compared to the average and to those who throw away the lowest weight of solid waste (Ceniceros 2008; Kaufman 2009).

In conjunction with broad and effective communication enhancing political support for PAYT, some administrative changes can boost public acceptance. Communities attribute actions such as visibly removing the trash fee from the tax levy before imposing PAYT as being key to their success. Other communities attribute their success to receiving input from haulers when designing the PAYT program or using a pilot program or a phase-in approach for the PAYT program (Skumatz 2008).

Implementation of a weight-based Pay-as-You-Throw system will allow Milwaukee to enhance the efficiency and cost effectiveness of its municipal solid waste collection. While the lack of a weight-based operation in the United States creates some concerns, this alternative promotes the greatest equity and requires the least upfront capital investment of the PAYT alternatives. This alternative also meets Milwaukee's needs while making the greatest use of existing equipment and carts. Experts identify weight-based PAYT as the ideal system to reduce MSW generation, increase recycling, and create a sense of personal responsibility for households with respect to their waste. Implementing weight-based PAYT provides a genuine opportunity for Milwaukee to lead comparable cities and the rest of the United States in municipal solid waste service design and delivery.

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Appendix A: Comparative City Selection Criteria

We administered a survey to a sample of 10 U.S. cities with PAYT programs. Within the final sample of responding cities, we denoted in Table 1 whether these cities were sufficiently comparable to Milwaukee based on specific criteria, including population, racial composition, median household income, families below poverty level, type of housing occupancy, and climate. Table 11 depicts the data on which we based our comparisons.

Table 11: Comparative Cities Data

City	Population	Racial Composition	Median Household Income	Families Below Poverty Level	Owner-Occupied Housing	Climate
Milwaukee, WI	602,782	45% white/ 55% non-white or mixed race	\$35,233	21%	49%	Seasonal snowfall
Austin, TX	725,306	64/36	\$48,227	13%	47%	No
Fort Worth, TX	635,612	62/38	\$44,804	14%	59%	No
Grand Rapids, MI	193,671	67/33	\$38,792	17%	62%	Yes
Lansing, MI	115,366	67/33	\$35,990	20%	59%	Yes
Minneapolis, MN	362,513	68/32	\$44,478	16%	54%	Yes
Plano, TX	255,591	76/24	\$79,687	4%	67%	No
Portland, OR	541,550	79/21	\$45,512	11%	57%	No
Sacramento, CA	446,721	50/50	\$48,584	12%	52%	No
San Jose, CA	898,901	49/51	\$76,354	7%	62%	No
Seattle, WA	565,809	71/30	\$56,319	7%	51%	No

Sources: Barrett (2007), National Oceanic and Atmospheric Administration Satellite and Information Service (2009), U.S. Census Bureau (2005-2007)

Cities in Table 1 received a ranking of “Yes” in each respective category if the following standards were met relative to Milwaukee:

- Population: Within 200,000 residents
- Racial Composition: Within 10 percent of white and 10 percent of non-white or mixed race residents
- Median Household Income: Within \$10,000 per household
- Families Below Poverty Level: Within 10 percent of families
- Owner-Occupied Housing: Within 10 percent of owner-occupied housing units
- Climate: Experiences regular seasonal snowfall

Cities that did not match the preceding standard received a “No” in the corresponding category.

Appendix B: Comparative City PAYT Survey Results

To better understand the potential costs, benefits, and impacts of pay-as-you-throw programs, we surveyed 10 U.S. cities that use them: Austin, TX; Fort Worth, TX; Grand Rapids, MI; Lansing, MI; Minneapolis, MN; Plano, TX; Portland, OR; Sacramento, CA; San Jose, CA; and Seattle, WA. They are comparable to Milwaukee in size, population, demographics, and climate. We asked a contact within each city's government to complete a survey using SurveyMonkey (<http://www.surveymonkey.com>). We designed the questions to obtain more detailed understanding of PAYT implementation, effectiveness, and other issues specific to each city. When possible, we created multiple choice questions based on our research of typical PAYT programs. We also provided opportunities for respondents to expand on some answers in narrative form. This appendix provides the full comparative survey and results.

Each respondent answered every question. The results below indicate the frequency that respondents chose an answer as well as the actual number of times the answer was chosen. The results also include verbatim text that were typed by respondents into "Other" or "Comments" text boxes as well as answers to open-ended questions.

Question 1: What type of Pay-As-You-Throw system is being utilized by your municipality?

Answer Options	Frequency	Count
Prepaid bags	0.0%	0
Prepaid tags	0.0%	0
Multiple cart sizes	80.0%	8
Other (please specify)	20.0%	2

Other:

- Prepaid bags and multiple cart sizes
- All above options are being used.

Question 2: What cart sizes are used in your system? Check all that apply.

Answer Options	Frequency	Count
10 gallon	12.5%	1
15 gallon	12.5%	1
30/32/35 gallon	87.5%	7
45 gallon	0.0%	0
60/65 gallon	87.5%	7
90/95 gallon	100.0%	8
Other (please specify):	37.5%	3

Other:

- 32, 64 & 96 gallon carts
- 20 gallon
- 20 gallon mini-cans. This size is not supplied by franchised haulers and must be purchased by the residential customer

Question 3: Why were these particular cart sizes chosen?

Answer Options	Count
Open ended question	7

Answers:

- Pilot study indicated need for 95 gallon for once/week collection. 60-68 gallon chosen as incentive for reducing waste. 32 gallons tested but we had problems with collection arm in servicing this size.
- 32 gal was std industry garbage can size. We pretty much worked off of multiples or fractions of that, although the Mini-can that was available is 20 gallon and the micro-can size available is 10 gallon
- Standard 32 gallon increments, Manufacturer Availability
- Based on historical volumes.
- Standard sizes used by cities in Bay Area (CA); also sufficient movement between sizes including the “mini” size of 22 gallons - also all still can receive automated collection
- To provide standardized choice along with two frequencies of service (monthly and weekly) to meet a variety of residential needs. Roll carts supplied by the hauler result in a slightly higher cost than containers supplied by the customer.
- It was a good range of sizes to accommodate all sizes of families.

Question 4: Why was the specific number of cart offerings chosen (two cart sizes vs. three sizes...)?

Answer Options	Count
Open ended question	7

Answers:

- Started with 32 gal, 64, 96 for customer choice. Then added mini (20 gal) and micro (10 gal) as folks recycled more
- 32 gallon carts for single person households 64 gallon carts for small families and 96 gallon carts for large families
- To offer a wider range of savings to fit the customers’ needs.
- Because we have found that there is a variety of needs throughout the community due to different family & household sizes, cultural practices, frequency of service, and other factors; and we wish to avoid the practice of extra set-outs when possible. Please note that recycling & yard debris containers are standardized to ONE size (65 gallon roll carts) and all are provided by the hauler.
- We have a variety of family sizes in Austin.

Question 5: Are residents allowed to place out solid waste that does not fit in their cart?

Answer Options	Frequency	Count
Yes, and there is no additional charge	12.5%	1
Yes, but waste must be in prepaid bags or have a prepaid tag on it	25.0%	2
Yes, and residents are billed separately for additional waste	37.5%	3
No, residents must take additional waste to the dump or hold it for later pickup	0.0%	0
No, residents must call for special pickup	0.0%	0
Other (please describe)	25.0%	2

Other:

- No. Residents have the option of placing items that cannot fit into the cart for once monthly bulky waste collection or taking the items to the transfer stations (limited to 2x per month). We do collect items outside of cart the week after holidays.
- Additional solid waste bags can be placed outside of the cart but each bag must have a \$4.00 sticker which can be purchased at area grocery stores. There is an \$8.00 per bag charge for each unstickered bag

Question 6: Why was this specific type of program selected over other Pay As You Throw programs or alternative options? Check all that apply.

Answer Options	Frequency	Count
Compatibility with existing collection equipment	60.0%	6
Ease of implementation	50.0%	5
Accurately charges users for their solid waste output	80.0%	8
Politically feasible	60.0%	6
Other (please specify)	30.0%	3

Other:

- We originally used prepaid stickers for “extra garbage” beyond the cart, but that proved to be a huge hassle.
- Encourage recycling/diversion
- Garbage collection & recycling service is not required for SFR homes unless they are a rental property (all rental property owners & managers are required to provide garbage & recycling to tenants).

Question 7: What were the goals of the municipality in changing to a Pay As You Throw program? Check all that apply.

Answer Options	Frequency	Count
Recovering a higher cost ratio for services provided	20.0%	2
Increasing the solid waste diversion rate	70.0%	7
Decreasing trash output	70.0%	7
Promoting equity for residents by charging per unit rather than a flat fee	70.0%	7
Increasing recycling rates	80.0%	8
Other (please specify)	0.0%	0

Question 8: Approximately how many households are served by the program?

Answer Options	Count
Open ended question	10

Answers:

- 14,750; 55,000; 68,000; 105,000; 130,000; 150,000; 150,000; 175,000; 195,000; 202,000

Question 9: What types of homes are served by the program? Check all that apply.

Answer Options	Frequency	Count
Single family homes	100.0%	10
Multifamily homes, 2-4 units	90.0%	9
Multifamily homes, 5+ units	30.0%	3
Other (please specify)	20.0%	2

Other:

- Multifamily complexes (regardless of the number of units) currently have an option to choose individual carts or common bins.
- Multi-family includes moorages, group homes, trailer parks, congregate care & retirement facilities, etc.

Question 10: What year was the Pay As You Throw program implemented in?

Answer Options	Count
Open ended question	10

Answers:

- 1968; 1973; 1989; 1993; 1995; 1996; 1997; 1998; 2000; 2003

Question 11: Were pilot programs conducted before full implementation of the program?

Answer Options	Frequency	Count
No	33.3%	3
Yes (describe the size and scope of the pilot program)	66.7%	6

Answers:

- 8,000 homes with 32 and 68 gallon containers
- Several thousand homes
- There was a pilot cart program but it was not PAYT. Areas were selected based on varying demographics but all waste was collected with no additional cost.
- From July 1991 thru July 1992 the Solid Waste Department conducted a one year PAYT pilot with 3000 households which tested all elements of the new approach, including different cart sizes and variable rates.

- The program began as part of a federal study to determine the feasibility of cost-per-unit collection systems as opposed to flat rate unlimited services in regard to their potential for limiting trash generation.

Question 12: Was the program rolled out to all participants at one time, or was it phased in?

Answer Options	Frequency	Count
All participants at one time	88.9%	8
Phased in (please describe)	11.1%	1

Answers:

- City Council approved a three year, phased in conversion, of the entire city to begin in 1993. Service implementation began with Phase I in Aug 1993, Phase II in June 1994, Phase III-A in Nov 1995, and Phase III-B in June 1996.
- City Council adopted variable rates in July 1997, and all customers citywide were converted to PAYT in 1997.

Question 13: Was there an education or outreach program targeted at citizens alerting them to the changes in solid waste collection and costs?

Answer Options	Frequency	Count
No	11.1%	1
Yes (describe education/outreach programs)	88.9%	8

Answers:

- Articles in citywide newsletter, press release, website
- Direct mail, print and electronic media advertising
- News articles, water bill inserts, mass mailing
- Bill stuffers and mailers.
- A comprehensive public outreach campaign aimed at single-family households explained the new variable rates being introduced, the new categories of recyclables being added to the services provided, and the benefits of participating. All materials were produced in three languages (English, Spanish, and Vietnamese). The campaign was guided by the information received during a series of focus groups in the three languages, baseline and follow-up telephone surveys, and shopping mall intercept surveys. More than 250 community meetings were held in 1993, and a block leader program and school education program were organized. See EPA case study at <http://www.epa.gov/epawaste/conservation/tools/payt/tools/ssanjose.htm>
- At the time of implementation, we were bringing several complementary programs on-line. We were adding materials to our curbside recycling program, and expanding our yard trimmings program. Educating the public about PAYT was a comprehensive, multi-media approach to information which included paid advertisement and inserts about program guidelines in the Austin American Statesman, 14 billboards around town

with program guidelines, utility bill inserts about the new extra garbage stickers, radio advertisements and press releases about the message “Recycle or PAYT, it’s your choice”, direct communication with neighborhoods and new neighborhoods as they were added to the program, door hangers with program guidelines, and bi-monthly newsletters to neighborhood associations, and presentations at neighborhood meetings. To keep awareness of the new program high, messages using the tagline “Recycling Right” and “Take the bin to the curb” were also run during the early stages of the implementation.

- Mailings and school students and advertisements.
- Media releases and mailings

Question 14: Have there been any significant changes to the program since its original implementation?

Answer Options	Frequency	Count
No	30.0%	3
Yes (please describe)	70.0%	7

Answers:

- Introduced mini can and micro can after initial rollout
- Changed from bi-weekly to weekly.
- No longer offer 128 gallon cart, now offer 22 gallon cart
- Residential solid waste collection has been a franchised service historically in Portland. With the mandate that recycling be available to all residents, there have been multiple changes to the Portland Recycles! program with pilot programs and ongoing training & educational outreach to residents and businesses.
- Garbage collection rates and extra garbage fees have gone up over the years, but recycling is still included in the base rate at no extra charge. Garbage collection is now fully automated. We have just over the last several months switched from the bin system for recycling to a 90 gallon cart based single stream recycling program. We accept more materials in the recycling program and materials can all be co-mingled in the recycling cart.
- The addition of various sized carts was implemented in 1997. 21/32/65/95 gallon carts.
- Added the refuse cart program (various sizes). Added appliance stickers and bulk sticker items.

Question 15: Were major changes to the solid waste billing or administration program required with implementation of the PAYT program?

Answer Options	Frequency	Count
No	40.0%	4
Yes (please describe)	60.0%	6

Answers:

- Each time we added a size of can, we needed to modify the billing system
- Varying pay rates had to be set up, cart tracking by serial number, new customer service tracking program implemented. The PAYT started at the same time the City of Fort Worth took control of customer service for solid waste collections; this was previously a function of the collections contractor.
- Setup billing system and expand data on customer base.
- Software required to bill residents appropriately
- Our rates are adjusted annually through review by independent economists, and the most recent (2008) change to the recycling program (mandating hauler-provided roll carts for recycling & yard debris collection) resulted in a significant increase in residential rates and tipping fees (commercial rates are determined by the hauler & business customer in a non-franchised system).
- Prior to implementing variable billing rates, the City of Austin had to update its entire billing system.

Question 16: Did implementation of the PAYT program require retraining of solid waste collectors?

Answer Options	Frequency	Count
Yes	60.0%	6
No	40.0%	4

Comments:

- A little bit when we introduced semi-automated carts
- All services are contracted
- City collects single family residential and some commercial customers.
- Likely to some degree but still mainly just emptying carts regardless of what's in them.

Question 17: Which statement best describes the status of solid waste collectors in your municipality?

Answer Options	Frequency	Count
Unionized municipal employees	44.4%	4
Non-unionized municipal employees	22.2%	2
Unionized contract employees	22.2%	2
Non-unionized contract employees	11.1%	1

Comments:

- Private franchised haulers
- They have the option to join the Municipal Employees Union which offers membership to all municipal, federal, state and county employees. Membership dues are deducted from employee paychecks.
- Private haulers are permitted to acquire as many customers as they would like, no franchise agreements and these are almost all non-union employees that the municipality competes against. There are also no requirements on the days that areas are served. As a result there are many trucks in many areas on different days. We are working toward improving that as we write.

Question 18: Per capita solid waste (garbage) tonnage collected has...

Answer Options	Frequency	Count
Increased	10.0%	1
stayed the same	20.0%	2
Decreased	70.0%	7

Please describe magnitude of change:

- Have relatively few residents that have elected to participate with smaller container and lower fee. 68 GAL CARTS - 3,612; 95 GAL CARTS - 65,349
- Overall recycling rate across all waste streams has gone from 24% to 48.4%. Increase is even greater for single family sector - now reaching near 60% recycling. This is due to introduction of curbside yard waste and curbside recycling collection as well as PAYT
- Based on the information available the total tonnage was reduced by about 12.5% & garbage collected was reduced by about 25%
- disposal has decreased with recycling increasing significantly, from 12,000 tons per year to over 40,000 tpy
- Prior to PAYT and the cart-based recycling program, residents set out an average of three 32-gallon garbage carts per week. Now approx. 80% have one, 32-gallon garbage carts.
- Unclear at this time - not enough data. Overall our recycling rates have increased from mid 40 percentile in mid-90s to 63% in 2007.
- Solid Waste Services tracks performance measures by residential customer account, or household, not per capita. Our per household garbage tonnage

decreased since the beginning of the program, and then has leveled off and stayed consistent since.

- For the city crews, we are not aware of the private sector experience. They own the landfill, we pay to tip there.

Question 19: Per capita recycling tonnage collected has...

Answer Options	Frequency	Count
Increased	80.0%	8
Stayed the same	20.0%	2
Decreased	0.0%	0

Please describe magnitude of change:

- .0194% increase
- City -wide all waste streams we are at 48+% recycling as of 2007
- 02-03 - 3.92 pounds per household per week 03-04 - 11.59 pounds per household per week Last year 13.54 pounds per household per week
- Increased from 12,000 tpy in 2000 to 36,000 tpy in 2004 to a little over 40,000 tpy in 2008.
- The volume of recyclables and yard trimmings being collected more than doubled the levels recorded prior to the cart-based recycling program and PAYT.
- Solid Waste Services tracks performance measures by residential customer account, or household, not per capita. Before PAYT implementation, tonnage was low but increasing. Since implementation, levels have been static

Question 20: Solid waste (garbage) diversion rates have...

Answer Options	Frequency	Count
Increased	77.8%	7
Stayed the same	22.2%	2
Decreased	0.0%	0

Please describe the magnitude of change:

- Residential diversion increased from 39.8% to 41.1%. This number includes yard trimmings composting, HHW recycling and reuse, electronic recycling and appliance recycling.
- up to 48+%
- 02-03 diversion rate was 5.48% 03-04 diversion rate was 19.3% The last couple of years we are running between 22 & 23%
- Currently at approximately 52%
- Diverted 60% in 2006 and 44% in 1995 according to the CIWMB (<http://www.ciwmb.ca.gov/LGTools/mars/JurDrSta.asp?VW=In>)
- Solid Waste Services defines diversion rate as the amount of yard trimmings and recyclables diverted as a percentage of the total amount of garbage, recyclables, and yard trimmings generated and collected through weekly curbside pickups. Through the PAYT program and enhancements

to the curbside recycling program, the diversion rate went up and has, with minor fluctuations, remained constant over the last twelve years or so.

Question 21: Has there been any noticeable increase in littering or illegal dumping since implementing the PAYT program?

Answer Options	Frequency	Count
Yes	0.0%	0
No	100.0%	10

Comments:

- Littering/illegal dumping is a chronic low-level problem, but has not gone up w/ PAYT
- We opened citizen drop off stations along with the start of the PAYT program and have actually had a decrease in illegal dumping.
- In the beginning we did have instances where extra bags came from neighbors, but that leveled off.

Question 22: How has PAYT impacted solid waste revenues? Check all that apply.

Answer Options	Frequency	Count
The program is at full cost recovery	66.7%	6
The program is at less than full cost recovery and revenues are higher under PAYT than previously	11.1%	1
The program is at less than full cost recovery and revenues are the same under PAYT as previously	22.2%	2
The program is at less than full cost recovery and revenues are lower under PAYT than previously	0.0%	0

Comments:

- We have a profit sharing contract for our recycle processing and the revenue generated depends on the market. The last two quarters have seen drastic drops in commodity prices and our share of the revenue.
- Recycling is subsidized by payment per ton by the processor.
- Check back later
- We are an enterprise fund and through the rates that we charge our customers, we generate excess money that goes to the general fund. Also, with PAYT we realize more money through charging for larger carts, extra carts and collection of extra garbage.
- Just barely coming out even.
- The refuse program is supplemented by a refuse millage

Question 23: Please describe any unanticipated problems or difficulties with the Pay As You Throw program.

Answer Options	Count
Open ended question	9

Answers:

- None (x4)
- Contamination in recycling is high. Full implementation at one time was difficult due to the number of households.
- The cost savings are not difficult for the customer to see.
- Sustained economic downturn has affected recycling markets - recycling subsidizes residential garbage rates in Portland, and this loss of income has negatively impacted haulers. Given that the changes to our recycling program were implemented less than a year ago, it's hard to quantify how the changes have impacted our recovery rates, etc - simply not enough data AND too many variables.
- Manual collection of extra garbage bags creates inefficiencies with a system designed to tip garbage carts with automated trucks. Also, there are households that regularly generate larger volumes of extra garbage, and its more desirable to all parties concerned, if they properly size their garbage carts, ie, go to a larger sized garbage cart. Although it goes against the philosophy of PAYT, its cheaper for these customers to upgrade to a larger sized cart, and more efficient for our collection. There are also administrative costs to tracking and billing for extra garbage.
- We have to drive every street looking for the bags, there is no subscription requirement!! More fuel, more time, more cost!

Question 24: Please describe any other major issues, benefits, or relevant points associated with the program.

Answer Options	Count
Open ended question	7

Answers:

- The citizens get it. It is logical and is perceived as equitable. We are applying PAYT to our curbside yard waste/food waste composting collection with 13 gal, 32 gal and 96 gal options.
- Increased diversion has resulted in decreased disposal, and therefore stabilized disposal rates.
- There is some concern (and some anecdotal evidence) that, in order to save money, people will choose a smaller sized garbage bin and put their garbage into the larger recyclables cart. Some people do seem to do this but it's not the majority of people and tagging carts for contamination rather than just picking them up.
- The City of Portland currently provides commercial food generators with food composting - we hope to site a local composting facility to offer this service to residents in the next 18 months to 2 years.

- We found that if you allow for extra garbage, you must have a large enough rate gap between garbage cart sizes to incentivize recycling.
- We hope with the upcoming conversion to single stream recycling, from sort separated at curbside, that we begin to see volume of trash being landfilled decline.
- None

Appendix C: Constructing a Distribution of MSW Production

Milwaukee does not collect data on the amount of municipal solid waste each household in the city produces. The best data available show the average amount of MSW per collection route during an eight-month period in 2007 (City of Milwaukee 2007). This data can provide route-level information, but specific household data cannot be derived from it because the standard deviation of the data is unknown. The standard deviation describes how tightly all of the observations in a data set cluster around the mean (average) of the data. For example, if the mean of a data set is 40.00 and the standard deviation is 2, the majority of the data points fall between 38.00 and 42.00.

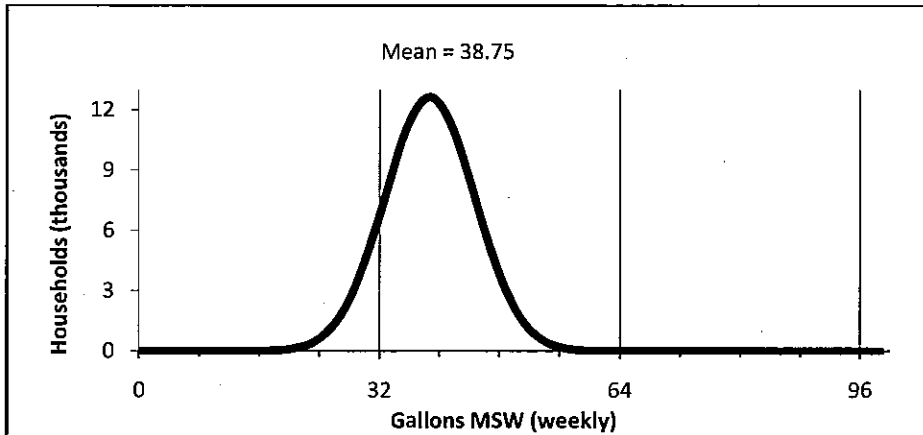
If the standard deviation and mean of a data set are known, the distribution of data points can be known. In this case, the mean of the MSW is known, but the standard deviation for Milwaukee's data is unknown. Therefore, the distribution of MSW generation by household cannot be generated from empirical records. The only relevant information that can be drawn from the available data is that the average household disposed of 43.16 pounds of MSW per week during this period. We converted this figure to an average weekly volume of 38.75 gallons using a standard conversion of 225 pounds per cubic yard of MSW.

The distribution of household MSW determines the pricing structure for a multiple cart PAYT system by determining the number of households that may subscribe to each cart size. To develop reasonable estimates of the unknown distribution of households, standard deviations from 1.00 to 38.00 (just less than the mean of 38.75 gallons per household) were considered. This range produced wide variation in the number of households potentially using each cart size. Using a more plausible range of standard deviations from 6.00 to 18.00 also produced widely varying estimates of the number of households using each cart size.

However, when these estimates were placed into the pricing formula, the range of prices for each cart size was fairly narrow and stable. In fact, the range of prices varied by only a few dollars for each cart size, even when the distribution of carts changed considerably. Given this, we examined the status quo and each alternative using theoretical distributions with standard deviations of 6.00, 12.00, and 18.00. The standard deviations were measured in either pounds or gallons depending on what was relevant for each alternative.

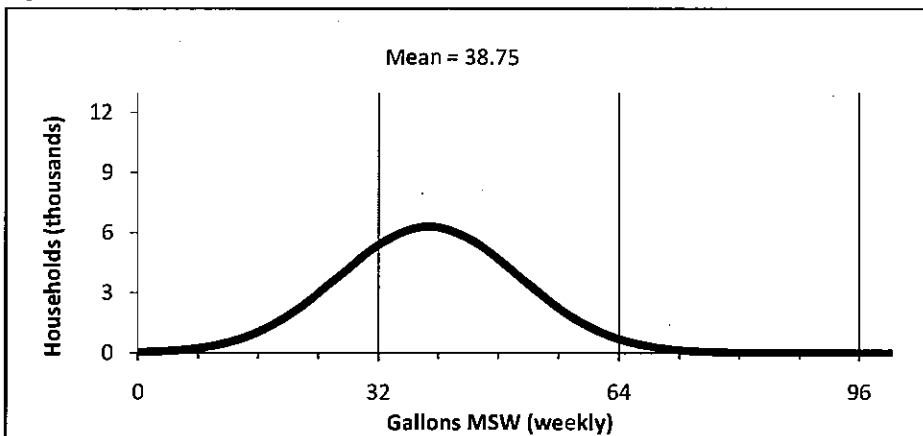
Figures 1, 2, and 3 graphically depict these standard deviations.

Figure 1: Normal MSW Distribution with Standard Deviation of 6.00



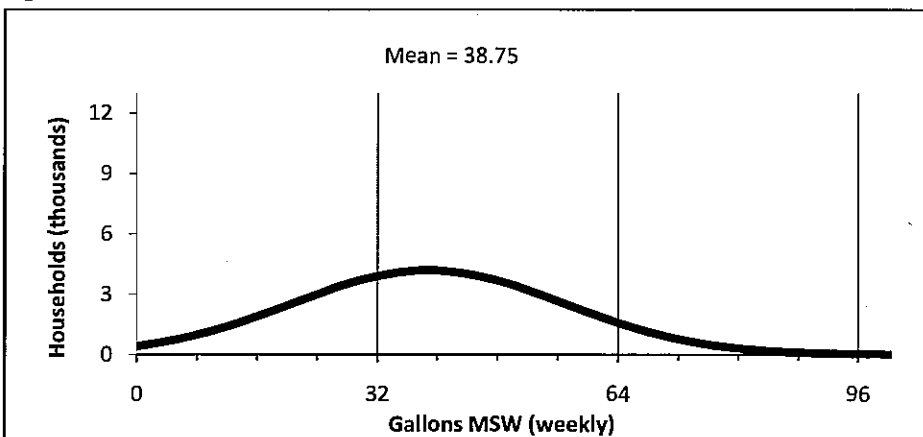
Source: Authors' calculations

Figure 2: Normal MSW Distribution with Standard Deviation of 12.0



Source: Authors' calculations

Figure 3: Normal MSW Distribution with Standard Deviation of 18.0



Source: Authors' calculations

Appendix D: Alternative Budget and Pricing Development

This section describes the method used to establish budgets and an equity index for the status quo and both alternatives. Because we did not know the standard deviation for household MSW distribution, we outlined scenarios using hypothetical standard deviations of 6.00, 12.00, and 18.00. We also hypothesized scenarios using a tipping fee of \$30 per ton, the approximate rate Milwaukee pays in 2009 to unload waste at the dump, and \$35 per ton, which the client asked us to include. Finally, we projected scenarios using current levels of MSW generated by the city, a 10 percent reduction in total waste, and a 20 percent reduction in total waste. These waste reduction figures fall within the reasonable range of waste reduction reported by the comparative cities we surveyed and literature on cities moving to PAYT systems from flat-rate MSW collection.

These considerations resulted in six status quo scenarios, where no waste reduction was analyzed; 18 Alternative I scenarios; and 18 Alternative II scenarios. For each alternative, only one budget scenario is presented in this appendix, demonstrating a standard deviation of 6.00, a tipping fee of \$30, and zero reduction in MSW.

We started with a budget for the status quo which was based on the 2009 Milwaukee Solid Waste Budget (City of Milwaukee). This base budget was used for all of the pricing and equity index scenarios, with changes that are described below for each alternative.

Tables 12, 14, and 16 show the prices and the equity index for each scenario of each alternative. These tables show the standard deviation, the tipping fee, the waste collection charge, the equity index, and the cost recovery percentage for each scenario. The tables also present the total annual price that would be paid by the median Milwaukee household under each scenario.

Status Quo Summary: Current MSW and Recycling Program

Six scenarios were constructed for the status quo. These used standard deviations of 6.00, 12.00, and 18.00, each with a landfill tipping fee of \$30 or \$35 per ton. Because no municipal solid waste reduction is assumed under the status quo, the scenarios do not reflect any reduction in MSW.

Under the status quo, the median household (in fact all households) pays \$150 per year for its MSW and recycling collection. This results in a program cost recovery of 88 to 91 percent depending on the tipping fee that is used. Table 12 displays these summary results as well as the equity index for each scenario.

Table 12: Status Quo Scenarios

Scenario	Std. Dev.	Tipping Fee	0% MSW Reduction Median Charge	% Cost Recovery
SQ1	6.00	\$30	\$150 Equity Index: 1.23	91.3%
SQ2	6.00	\$35	\$150 Equity Index: 1.23	88.7%
SQ3	12.00	\$30	\$150 Equity Index: 2.11	91.3%
SQ4	12.00	\$35	\$150 Equity Index: 2.11	88.7%
SQ5	18.00	\$30	\$150 Equity Index: 3.30	91.3%
SQ6	18.00	\$35	\$150 Equity Index: 3.30	88.7%

Source: Authors' calculations

A sample status quo budget scenario is presented in Table 13. A number of assumptions are contained in this budget:

- It is assumed that the long-run resale value of recyclables is \$80 per ton (R. Meyers, personal communication, March 24, 2009). Of this amount, Milwaukee receives \$40 in gross revenue. This amount is used in all budget scenarios.
- The state recycling grant is assumed to be the same as the FY2008 grant.
- "Overhead" excludes fringe benefits and depreciation expenses.
- Standard deviations of 6.00, 12.00, and 18.00 were used in calculating the equity index. The standard deviations were not relevant for price determination in the status quo.
- The tipping fee was set at \$30 and \$35 per ton as the client requested.

Table 13: Status Quo Sample Budget Scenario

Status Quo: Current Milwaukee System Estimated Budget				
Scenario 1: Standard Deviation = 6, MSW Tipping Fee = \$30				
INCOME/REVENUES				
MSW Program				
Number of Households	190,000	x Base Price	\$150	\$28,500,000
Extra Collection				
Large Pickups (>4 Yards ³)	2,500	x Charge per pickup	\$50	\$125,000
Total MSW Income/Revenue				\$28,625,000
Recycling Collection				
Tons Collected	26,000	x Resale value per ton	\$40	\$1,040,000
Recycling state grants				\$3,500,000
Total Recycling Income/Revenue				\$4,540,000
Total Income/Revenue				\$33,165,000
EXPENSES/COSTS				
MSW Program				
Labor				\$11,334,141
ODWs Salaries (77 routes)				\$9,507,027
OT (driver only)				\$327,019
Field Clerks/Cart Techs				\$208,934
San Workers				\$493,630
Supervisors				\$797,532
Fringe Benefit				\$4,646,998
Trucks				\$3,779,577
Maint/Repair/Fuel				\$1,902,096
Depreciation				\$1,877,481
Tonnage	190,000	x Tipping fee per ton	\$30	\$5,700,000
Other operating expenses				\$475,000
Containers				\$645,000
Overhead (13.38%)				\$2,683,525
MSW Total				\$29,264,241

Continued on following page

EXPENSES/COSTS *continued*

Recycling Program

Labor			\$2,306,512
ODWs Salaries (34 routes)		\$2,098,954	
OT		\$144,398	
Supervisors		\$265,884	
Recycling Manager		\$63,160	
Fringe Benefit			\$945,670
Trucks			\$1,471,882
Maint/Repair/Fuel		\$839,664	
Depreciation		\$632,218	
Tonnage	26,000	x Processing fee per ton	\$40 \$1,040,000
Other operating expenses			\$250,000
Containers			\$400,000
Overhead (13.38%)			\$647,080
Recycling Total			\$7,061,144
Total Expenses/Costs			\$36,325,385

COST RECOVERY

Total Income/Revenue	\$33,165,000
Total Expenses/Costs	\$36,325,385
Net Income/Loss	-\$3,160,385
Percentage Cost Recovery	91.3%

EQUITY MEASURE

Resident	Charge		Price/pound
10th Percentile Household	\$150 ÷ Annual MSW Pounds	1,735	\$0.086
Median Household	\$150 ÷ Annual MSW Pounds	2,158	\$0.070
90th Percentile Household	\$150 ÷ Annual MSW Pounds	2,543	\$0.059
Equity Index	1.47	Ratio of low-volume price to high-volume price	

Alternative I Summary: Multiple Cart Sizes

Alternative I required the construction of 18 scenarios. As in the status quo, the standard deviation was 6.00, 12.00, and 18.00, each with a landfill tipping fee of \$30 and \$35. We assumed that some level of MSW reduction will occur when customers are charged based on their MSW output. We constructed scenarios to reflect 10 percent or 20 percent total reductions in MSW in addition to the other variables.

Under Alternative I, the median household produces 38.75 gallons of MSW per week with no MSW reduction, 34.84 gallons with a 10 percent reduction, and 31 gallons with a 20 percent reduction. We assume that under all of these scenarios the median household will use a 64-gallon cart. In this case, the median household will pay between \$164 and \$184 per year for MSW and recycling collection depending on the variables. Table 14 displays these summary results as well as the equity index for each scenario.

Table 14: Alternative I: Multiple Carts Scenarios

Scenario	Std. Dev.	Tipping Fee	0% MSW Reduction Median Charge	10% MSW Reduction Median Charge	20% MSW Reduction Median Charge
MC1	6.00	\$30	\$171 Equity Index: 1.08	\$168 Equity Index: 1.07	\$164 Equity Index: 1.06
MC2	6.00	\$35	\$177 Equity Index: 1.09	\$173 Equity Index: 1.08	\$169 Equity Index: 1.07
MC3	12.00	\$30	\$178 Equity Index: 1.69	\$174 Equity Index: 1.68	\$171 Equity Index: 1.67
MC4	12.00	\$35	\$184 Equity Index: 1.71	\$180 Equity Index: 1.70	\$176 Equity Index: 1.68
MC5	18.00	\$30	\$178 Equity Index: 2.88	\$175 Equity Index: 2.86	\$171 Equity Index: 2.84
MC6	18.00	\$35	\$184 Equity Index: 2.91	\$180 Equity Index: 2.89	\$176 Equity Index: 2.87

Source: Authors' calculations

A sample multiple cart budget scenario is presented in Table 15. A number of assumptions are contained in this budget:

- This alternative will require one new employee for billing, technical support and maintenance of the weighing system. This employee is budgeted at \$40,000 annually, plus the associated fringe costs.
- Full price recovery was specified for the alternative.
- Cart charges were set at \$48 per year for a 32-gallon cart, \$96 per year for a 64-gallon cart, and \$144 per year for a 95-gallon cart. Once these prices were established, a base charge could be set.

Table 15: Alternative I Sample Budget Scenario

Alternative I: Multiple Cart System Estimated Budget				
Scenario 1: Standard Deviation = 6, MSW Tipping Fee = \$30, MSW Reduction = 0%				
INCOME/REVENUES				
MSW Program				
Number of Households	190,000	x Base Price	\$75	\$14,290,073
Cart Charge				
Number 32g Households	24,759	x Annual Charge	\$48	\$1,188,432
Number 64g Households	165,239	x Annual Charge	\$96	\$15,862,944
Number 95g Households	2	x Annual Charge	\$144	\$288
Number additional carts	0	x Annual Charge	\$0	\$0
Extra Collection				
Additional 30g Bags	190,000	x Charge per bag	\$2	\$380,000
Large Pickups (>4 Yards ³)	2,500	x Charge per pickup	\$50	\$125,000
Total MSW Income/Revenue				\$31,846,737
Recycling Collection				
Tons Collected	26,000	x Resale value per ton	\$40	\$1,040,000
Recycling state grants				\$3,500,000
Total Recycling Income/Revenue				\$4,540,000
Total Income/Revenue				\$36,386,737
EXPENSES/COSTS				
MSW Program				
Labor				\$11,374,141
ODWs Salaries (77 routes)			\$9,507,027	
OT (driver only)			\$327,019	
Field Clerks/Cart Techs			\$208,934	
San Workers			\$493,630	
Supervisors			\$837,532	
Fringe Benefit				\$4,662,998
Trucks				\$3,779,577
Maint/Repair/Fuel			\$1,902,096	
Depreciation			\$1,877,481	
Tonnage	190,000	x Tipping fee per ton	\$30	\$5,700,000
Other operating expenses				\$475,000
Containers				\$645,000
Overhead (13.38%)				\$2,688,877
MSW Total			\$3,779,607	\$29,325,593
<i>Continued on following page</i>				

EXPENSES/COSTS continued

Recycling Program

Labor			\$2,306,512
ODWs Salaries (34 routes)		\$2,098,954	
OT		\$144,398	
Supervisors		\$265,884	
Recycling Manager		\$63,160	
Fringe Benefit			\$945,670
Trucks			\$1,471,882
Maint/Repair/Fuel		\$839,664	
Depreciation		\$632,218	
Tonnage	26,000	x Processing fee per ton	\$40 \$1,040,000
Other operating expenses			\$250,000
Containers			\$400,000
Overhead (13.38%)			\$647,080
Recycling Total			\$7,061,144
Total Expenses/Costs			\$36,386,737

COST RECOVERY

Total Income/Revenue	\$36,386,737
Total Expenses/Costs	\$36,386,737
Net Income/Loss	\$0
Percentage Cost Recovery	100.0%

EQUITY MEASURE

Resident	Charge		Price/gallon
10th Percentile Household	\$123 ÷ Annual MSW Gallons	1,553	\$0.079
Median Household	\$171 ÷ Annual MSW Gallons	1,937	\$0.088
90th Percentile Household	\$171 ÷ Annual MSW Gallons	2,322	\$0.074
Equity Index	1.08	Ratio of low-volume price to high-volume price	

Alternative II Summary: Weight-Based Program

Alternative II included the same 18 scenarios used in Alternative I.

Under Alternative II, the median household produces 43.16 pounds of MSW per week with no MSW reduction, 39.29 pounds with a 10 percent reduction, and 35.41 pounds with a 20 percent reduction. Given this, the median household will pay between \$169 and \$182 per year for MSW and recycling collection depending on the variables chosen. It is notable that this range is nearly identical to the range paid by the median household under Alternative I. Table 16 displays these summary results as well as the equity index for each scenario.

Table 16: Alternative II: Weight-Based Scenarios

Scenario	Std. Dev.	Tipping Fee	0% MSW Reduction Median Charge	10% MSW Reduction Median Charge	20% MSW Reduction Median Charge
W1	6.00	\$30	\$176 Equity Index: 1.11	\$172 Equity Index: 1.10	\$169 Equity Index: 1.10
W2	6.00	\$35	\$182 Equity Index: 1.11	\$178 Equity Index: 1.10	\$174 Equity Index: 1.09
W3	12.00	\$30	\$177 Equity Index: 1.25	\$172 Equity Index: 1.24	\$169 Equity Index: 1.22
W4	12.00	\$35	\$182 Equity Index: 1.24	\$178 Equity Index: 1.23	\$174 Equity Index: 1.21
W5	18.00	\$30	\$177 Equity Index: 1.47	\$172 Equity Index: 1.44	\$169 Equity Index: 1.41
W6	18.00	\$35	\$182 Equity Index: 1.45	\$178 Equity Index: 1.43	\$174 Equity Index: 1.40

Source: Authors' calculations

A sample weight-based budget scenario is presented in Table 17. A number of assumptions are contained in this budget:

- This alternative will require two new employees for billing and technical support and maintenance of the weighing system. These employees are budgeted at \$40,000 each annually, plus the associated fringe costs.
- Full price recovery was specified for the alternative.
- All customers pay a base fee of \$50 per year, regardless of their actual MSW output. The base fee covers fixed costs borne by Milwaukee regardless of the amount of MSW generated by households for collection. Based on this base charge, the total amount of MSW generated and the expenses that had to be recovered, a charge per pound of MSW was established.

Table 17: Alternative II Sample Budget Scenario

Alternative II: Weight-Based System Estimated Budget				
Scenario 1: Standard Deviation = 6, MSW Tipping Fee = \$30, MSW Reduction = 0%				
INCOME/REVENUES				
MSW Program				
Collection Charge	190,000	x Base Price	\$50	\$9,500,000
Weight Charge	190,000	x Charge per ton	\$117	\$22,283,089
Extra Collection				
Large Pickups (>4 Yards ³)	2,500	x Charge per pickup	\$50	\$125,000
Total MSW Income/Revenue				\$31,908,089
Recycling Collection				
Tons Collected	26,000	x Resale value per ton	\$40	\$1,040,000
Recycling state grants				\$3,500,000
Total Recycling Income/Revenue				\$4,540,000
Total Income/Revenue				\$36,448,089
EXPENSES/COSTS				
MSW Program				
Labor				\$11,414,141
ODWs Salaries (77 routes)				\$9,507,027
OT (driver only)				\$327,019
Field Clerks/Cart Techs				\$208,934
San Workers				\$493,630
Supervisors				\$877,532
Fringe Benefit				\$4,678,998
Trucks				\$3,779,577
Maint/Repair/Fuel				\$1,902,096
Depreciation				\$1,877,481
Tonnage	190,000	x Tipping fee per ton	\$30	\$5,700,000
Other operating expenses				\$475,000
Containers				\$645,000
Overhead (13.38%)				\$2,694,229
MSW Total				\$3,779,607 \$29,386,945
<i>Continued on following page</i>				

EXPENSES/COSTS continued

Recycling Program

Labor				\$2,306,512
ODWs Salaries (34 routes)			\$2,098,954	
OT			\$144,398	
Supervisors			\$265,884	
Recycling Manager			\$63,160	
Fringe Benefit				\$945,670
Trucks				\$1,471,882
Maint/Repair/Fuel			\$839,664	
Depreciation			\$632,218	
Tonnage	26,000	x Processing fee per ton	\$40	\$1,040,000
Other operating expenses				\$250,000
Containers				\$400,000
Overhead (13.38%)				\$647,080
Recycling Total				\$7,061,144
Total Expenses/Costs				\$36,448,089

COST RECOVERY

Total Income/Revenue		\$36,448,089
Total Expenses/Costs		\$36,448,089
Net Income/Loss		\$0
Percentage Cost Recovery		100.0%

EQUITY MEASURE

Resident	Charge		Price/pound
10th Percentile Household	\$154 ÷ Annual MSW Pounds	1,773	\$0.087
Median Household	\$177 ÷ Annual MSW Pounds	2,158	\$0.082
90th Percentile Household	\$199 ÷ Annual MSW Pounds	2,543	\$0.078
Equity Index	1.11	Ratio of low-volume price to high-volume price	

Appendix E: Development of Policy Analysis Criteria

We evaluated each policy option according to four criteria: efficiency, effectiveness, equity, and ease of implementation. These are summarized in the “Policy Criteria” section of this report. Our measurement and data collection methods for each are described here.

Efficiency

We measure efficiency through the percentage program cost recovery under each alternative. We calculate program using the following formula:

$$\% \text{ Cost Recovery} = \text{Program Income and Revenue} / \text{Program Expenses and Costs}$$

We used the spreadsheet template to total the income and expenses under a range of assumptions for six scenarios for each policy option. Additionally, each alternative scenario was run with 0 percent, 10 percent, and 20 percent MSW reductions, creating up to 18 scenarios for each alternative. Assumptions included the possibility of no reduction in the number of tons of MSW and, therefore, no expense reduction due to reduced tipping fees. To calculate the pricing structure needed for each scenario, we first determined the income needed to obtain full cost recovery. For PAYT options, this was weighted by the distribution of MSW per household given the base fees in each case.

In addition, we evaluate efficiency by the additional budget expenses each alternative requires. We calculated costs of new PAYT system inputs, public outreach and education expenses, and additional staffing expenses from the alternatives. We conducted telephone interviews with vendors and potential contractors, reviewed our comparable cities survey results and telephone contacts, and relied on estimates given by City of Milwaukee staff. Due to lack of detailed response, we must estimate some budget items such as education and outreach for the multiple cart and weight-based alternatives.

Effectiveness

Effectiveness is quantifiable by MSW tonnage reduction resulting from residents’ disposal behavior under each alternative. Data in this category come from research studies and our comparable city survey responses. We also make relative comparisons of effectiveness regarding household acceptance of and compliance with the programs.

The spreadsheet calculations were based on the approach and assumptions about pricing and distributions of waste per household described in the methodology section (see page 7 and Appendix C).

We based these estimated tonnage inputs on three sources. First, the ranges of variation in tonnage found over time in Milwaukee prior to consideration of PAYT provided a magnitude of changes due to all non-PAYT factors.

Varying percentage reductions in solid waste from comparably sized PAYT municipalities act as a second benchmark. We also took into account averages from government and industry sources showing diversion rates and other impacts during the years following the introduction of PAYT. As most reductions in MSW following the introduction of PAYT came in the first year or two and then leveled off, our quantitative evaluations covered an entire single year and should be considered the long-run average.

City of Milwaukee staff provided recycling revenues and landfill fees per ton for the current budget cycle. These are not modified to account for long-term forecasts of variations in recycling prices in our analysis.

Equity

We defined an equity index to consistently measure the relative fairness of each policy alternative. The index shows the ratio of the prices paid between those that generate the most MSW and those that generate the least. Specifically, the index compares the price paid per pound or gallon of MSW by the individual household 10 percent from the bottom and 10 percent from the top of the MSW distribution range. This approach provides a single number to compare the equity of different systems and different scenarios. A score of 2.0 on the index indicates those generating the least MSW pay twice as much as those generating the most. An index of 1.0 indicates residents pay the same amount for MSW collection per unit, which we consider to be the most equitable system possible. In our calculations, we found 1.08 as the most equitable score in our alternatives, occurring under the weight-based system. The status quo scores the highest equity disparity at 4.8. This means that under one possible status quo scenario, households with the lowest amount of MSW pay nearly five times the rate per pound of households generating the most waste.

Ease of Implementation

Assessment of ease of implementation was a relative comparison between alternatives and considered issues such as education and billing changes. We also considered availability of new equipment and maintenance services, and whether the alternative requires substantial re-training of collection workers. We obtained this information from interviews with City of Milwaukee employees, our comparable cities survey results, and telephone contacts with vendors. We also used research on published PAYT information.

MacDonald, Terry

From: Shambarger, Erick
Sent: Friday, May 29, 2009 4:09 PM
To: MacDonald, Terry
Subject: FW: Pay as You Throw Report

Hi, Terry. It sounds like July 15th would work for a Pay As You Throw communication file, based on the LaFollette student availability.

-----Original Message-----

From: Yackee, Susan [mailto:syackee@lafollette.wisc.edu]
Sent: Friday, May 29, 2009 3:40 PM
To: Shambarger, Erick
Subject: Re: Pay as You Throw Report

Hi Erick,
Two key members of the team can present on July 15th but not June 24th. A third member may also be available on July 15th. Might this work? Please let me know. Best, Susan

On 5/29/09 2:47 PM, "Shambarger, Erick" <Eshamb@milwaukee.gov> wrote:

Great. The likely dates would be June 24th or July 15th. I'll then need to get a Council member to introduce the file.

From: Yackee, Susan [mailto:syackee@lafollette.wisc.edu]
Sent: Friday, May 29, 2009 11:00 AM
To: Shambarger, Erick
Subject: RE: Pay as You Throw Report

Hi Erick,
At least two of the team members are still around Madison and would be thrilled to present their findings before the Council. Both are traveling some over the next two months, and one may be leaving Madison as of August 1st. Let me know when you have some possible dates. Best, Susan

Susan Webb Yackee, Ph.D.
Assistant Professor of Public Affairs and Political Science The University of Wisconsin at Madison
syackee@lafollette.wisc.edu

From: Shambarger, Erick [mailto:Eshamb@milwaukee.gov]
Sent: Thursday, May 28, 2009 3:32 PM
To: Yackee, Susan
Cc: Russell, Mary
Subject: Pay as You Throw Report

Hi Dr. Yackee,

We are interested in following-up on the fine work your students did on the Pay As You Throw project for the City. The Mayor asked that we inform the City Council on this issue and he thought having the students give their presentation to the Council was a good idea. Please let me know if any of the students from that group are still in town this summer and would be willing to come to Milwaukee to present their findings.

Erick Shambarger
City of Milwaukee
414-286-8556



City of Milwaukee

200 E. Wells Street
Milwaukee, Wisconsin 53202

Meeting Minutes RECYCLING TASK FORCE

PRESTON COLE, CHAIR

Ald. Joe Dudzik, Michael J. Daun, Lisa Schaal, and Erick Shambarger

Staff Assistant, Terry MacDonald

Phone: (414)-286-2233; Fax: (414) 286-3456, E-mail: tmacdo@milwaukee.gov

Monday, June 8, 2009

1:30 PM

Room 301-A, City Hall

Meeting convened: 1:38 P.M.

Present 5 - Cole, Daun, Dudzik, Shambarger and Schaal

1. Roll call

Also present: James Carroll, Legislative Reference Bureau, Wanda Booker, Dept. of Public Works, Sanitation Manager and Rick Meyers, Dept. of Public Works, Recycling Specialist

2. Approval of the minutes of the May 18, 2009 meeting

Ald. Dudzik moved approval of the minutes, Mr. Shambarger seconded. There were no objections.

3. Discussion relating to a consultant study on a single stream recycling operation vs. dual system recycling operation

Mr. Donald F. Pirrung, P.E., Senior Engineer and Consultant for Earth Tech/AECOM appeared on this matter.

Mr. Daun moved that the RECYCLING TASK FORCE convene into closed session, pursuant to s. 19.85(1)(e), Wis. Stats., for the purpose of formulating competitive bargaining strategies in respect to item #3: discussion relating to a consultant study on a single stream recycling operation vs. dual system recycling operation.

Roll call taken at 1:40 P.M.:

Present: 5 - Mr. Cole, Ms. Schaal, Mr. Daun, Ald. Dudzik and Mr. Shambarger

Excused: 0

Also present: James Carroll, Legislative Reference Bureau, Wanda Booker, Dept. of Public Works, Sanitation Manager and Rick Meyers, Dept. of Public Works, Recycling Specialist

Roll call taken at 2:33 P.M.:

Present: 4 - Mr. Cole, Ms. Schaal, Mr. Daun and Ald. Dudzik

Excused: 1 - Mr. Shambarger

Mr. Daun moved that the committee reconvene in open session.

Roll call taken at 2:50 P.M.

Present: 4 - Mr. Cole, Ms. Schaal, Mr. Daun and Ald. Dudzik

Excused: 1 - Mr. Shambarger

4. Set next meeting date and agenda

Mr. Cole said Ms. MacDonald talked to Ald. Dudzik regarding extending the deadline for the submission of recommendations by this task force to the Common Council for six months.

Mr. Cole said that the tour of the recycling facilities will take place on June 29, 2009 from 1:00 P.M. to 5:00 P.M.

Mr. Daun referred to the letter from Mr. Perry Lindquist with Waukesha County regarding a joint recycling study (Exhibit 1) that Mr. Shambarger sent to all the task force members by e-mail and asked Mr. Cole if Mr. Lindquist will be invite to appeared before this task force?

Mr. Cole replied in the affirmative.

Mr. Cole said the next two meeting dates will be July 27, 2009 and August 17, 2009 at 1:30 P.M.

Meeting adjourned: 3:00 P.M.

Terry J. MacDonald
Staff Assistant

Waukesha COUNTY

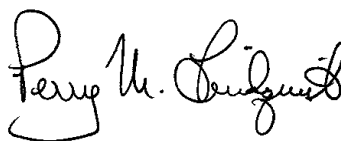
DEPARTMENT OF
PARKS AND LAND USE

Via e-mail

Date: June 5, 2009

To: Eric Shambarger
Mayor's Office
City of Milwaukee

From: Perry Lindquist
Dept. of Parks and Land Use
Waukesha County



RE: Joint Recycling Study

Dear Mr. Shambarger,

Waukesha County completed a recycling system study in September 2007, which strongly recommended that we switch to a single stream recycling system. It is my understanding that the Milwaukee Recycling Task Force, of which you are a member, is also considering this type of recycling system. I would appreciate the opportunity to present the results of our study to your Task Force. I believe they will find the information valuable, especially as it relates to the economics of a single stream system based on the tonnage processed. The study demonstrated a much better return on investment if we pursued additional community partnerships.

During and after the completion of the 2007 study, we have been gathering input from the 25 participating communities in Waukesha County, as well as from staff of the Milwaukee Public Works Department. Our participating communities are asking that we make a decision soon on the future direction of our recycling program so that proper planning can be completed, including a revision to private collection contracts in each community. However, to make this decision, additional analysis is needed on new community partnerships, transportation issues and the potential location offered by the City of Wauwatosa for a regional recycling facility. We encourage the City of Milwaukee to join us in studying these issues, and any others that may be involved. We would appreciate a commitment to such a joint study by August 1.

I could explain the above noted issues in more detail at a future Task Force meeting if there is interest. If so, please contact me directly at 262-548-7867 to make arrangements. Thank you for your consideration of my request.

cc: Rick Meyers, Milwaukee Public Works Dept.
Bill Kappel, Wauwatosa Public Works Dept.

From: Shambarger, Erick
Sent: Monday, June 08, 2009 8:54 AM
To: MacDonald, Terry
Subject: Recycling Task Force
[Hi Terry,](#)

[I received the following email from Mr. Lindquist. He had originally made contact with Ann Beier, who referred him to me. Please circulate this through the Task Force under the appropriate procedure.](#)

From: Lindquist, Perry [mailto:PLindquist@waukeshacounty.gov]
Sent: Monday, June 08, 2009 8:43 AM
To: Shambarger, Erick
Cc: Bill Kappel (bkappel@wauwatosa.net); Meyers, Rick
Subject: Joint Recycling Study

Mr. Shambarger,
Attached is a memo regarding a request to join Waukesha County in a joint recycling study. Please confirm that you received this in time for today's Task Force meeting. Thank you.
Perry

Perry Lindquist
Land Resources Manager
Waukesha County Dept. of Parks & Land Use
515 W. Moreland Blvd.
Room 260 - Administration Center
Waukesha WI 53188
262-548-7867
www.waukeshacounty.gov/landandparks

Waukesha COUNTY

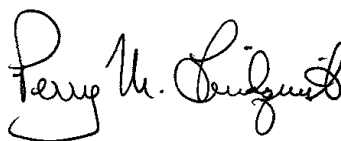
DEPARTMENT OF
PARKS AND LAND USE

Via e-mail

Date: June 5, 2009

To: Eric Shambarger
Mayor's Office
City of Milwaukee

From: Perry Lindquist
Dept. of Parks and Land Use
Waukesha County



RE: Joint Recycling Study

Dear Mr. Shambarger,

Waukesha County completed a recycling system study in September 2007, which strongly recommended that we switch to a single stream recycling system. It is my understanding that the Milwaukee Recycling Task Force, of which you are a member, is also considering this type of recycling system. I would appreciate the opportunity to present the results of our study to your Task Force. I believe they will find the information valuable, especially as it relates to the economics of a single stream system based on the tonnage processed. The study demonstrated a much better return on investment if we pursued additional community partnerships.

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I could explain the above noted issues in more detail at a future Task Force meeting if there is interest. If so, please contact me directly at 262-548-7867 to make arrangements. Thank you for your consideration of my request.

cc: Rick Meyers, Milwaukee Public Works Dept.
Bill Kappel, Wauwatosa Public Works Dept.

OFFICE OF THE CITY CLERK
Milwaukee, Wisconsin

June 12, 2009

You are hereby notified that the Recycling Task Force will attend Tours of the Milwaukee Recycling Facility (1313 W. Mount Vernon Ave) and Waste Management Regional Recycling Facility (W132 N10487 Grant Dr., Germantown, WI) on June 29, 2009 from 1:00 P.M. – 5:00 P.M.

A majority of the Recycling Task Force members may be present for the tours. However, no formal action will be taken relating to the tours or any other matters pending before the Recycling Task Force.

Respectfully,

Ronald D. Leonhardt
City Clerk

JRO:RDL:dkf

c.c. Press
 Posting
 Ronald Leonhardt

From: lschaal@sbcglobal.net
Sent: Tuesday, July 21, 2009 6:00 PM
To: MacDonald, Terry
Subject: Tracking trash - MIT News Office

<http://web.mit.edu/newsoffice/2009/trash-0715.html>

Hi Terri,
Can you send this to the members of the Recycling Task Force Please?
Interesting article out of MIT.
Thanks,

UrbanRe Vitalization Group LLC
3260 N Humboldt Blvd
Milwaukee WI 53212
414-231-3291
414-364-5422(cell)
www.urbanrevitalizationgroupllc.com
info@urevitalize.org

Lisa Schaal
President

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Tracking trash

Project aims to raise awareness of how garbage impacts the environment

July 15, 2009

What if we knew exactly where our trash was going and how much energy it took to make it disappear? Would it make us think twice about buying bottled water or "disposable" razors?

A team of MIT researchers today announced a major project called Trash Track, which aims to get people thinking about what they throw away. Trash Track relies on the development of special electronic tags that will track different types of waste on their journey through the disposal systems of New York and Seattle. The project will monitor the patterns and costs of urban disposal and create awareness of the impact of trash on our environment - revealing the last journey of our everyday objects.

"Trash is one of today's most pressing issues - both directly and as a reflection of our attitudes and behaviors," says Professor Carlo Ratti, head of the MIT SENSEable City lab. "Our project aims to reveal the disposal process of our everyday objects, as well as to highlight potential inefficiencies in today's recycling and sanitation systems. The project could be considered the urban equivalent of nuclear medicine - when a tracer is injected and followed through the human body.

"The study of what we could call the 'removal chain' is becoming as important as that of the supply chain," the lab's associate director, Assaf Biderman, explains. "Trash Track aims to make the removal chain more transparent. We hope that the project will promote behavioral change and encourage people to make more sustainable decisions about what they consume and how it affects the world around them."

Trash Track will enlist volunteers in two target cities - New York and Seattle - who will allow pieces of their trash to be electronically tagged with special wireless location markers, or "trash tags." Thousands of these markers, attached to a waste sample representative of the city's overall consumption, will calculate their location through triangulation and report it to a central server, where the data will be analyzed and processed in real time. The public will be able to view the migration patterns of the trash online, as well as in an exhibit at the Architectural League in New York City and in the Seattle Public Library, starting in September 2009.

Trash Track was initially inspired by the Green NYC Initiative, the goal of



Photo / E Roon Kang at SENSEable City Lab

2nd Prototype of the trash tag.

[Enlarge image](#)



Photo / Musstanser Tinauli at SENSEable City Lab

First test deployment of a coffee cup in Seattle. [Enlarge image](#)



Photo / E Roon Kang at SENSEable City Lab

Visualization mock-up (simulated). [Enlarge image](#)

TOOLS

[Print version](#)

[Share](#)

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CONTACT

Patti Richards

which is to increase the rate of waste recycling in New York to almost 100 percent by 2030. Currently, only about 30 percent of the city's waste is diverted from landfills for recycling. "We hope that Trash Track will also point the way to a possible urban future: that of a system where, thanks to the pervasive usage of smart tags, 100 percent recycling could become a reality," says project leader, Musstanser Tinauli.

"Carlo Ratti and his team have come up with a visionary project to help people take ownership of their pollution," says Roger Highfield, editor of New Scientist magazine, which will be helping to deploy a third batch of tags in London, U.K. "It's all too easy to throw something in the garbage and wash your hands of it if you don't know what effect you are directly having on the environment."

With this project, the MIT SENSEable City Laboratory seeks to couple high-tech, rapidly evolving technology with an everyday human activity: trash disposal. Trash Track builds on some of the lab's previous projects - including Real Time Rome and the New York Talk Exchange - gathering, assessing and analyzing real-time data to improve urban functionality.

The Trash Track team at the SENSEable City Lab is composed of Carlo Ratti, Assaf Biderman, Rex Britter, Stephen Miles, Musstanser Tinauli, E. Roon Kang, Alan Anderson, Avid Boustani, Natalia Duque Ciceri, Lorenzo Davolli, Jennifer Dunnam, Samantha Earl, Lewis Girod, Srabjit Kaur, Armin Linke, Eugenio Morello, Sarah Neilson, Giovanni de Niederhausern, Jill Passano, Renato Rinaldi, Francisca Rojas, Louis Sirota and Malima Wolf.

MIT News Office
Phone: 617-253-2700
E-mail: prichards@mit.edu

RELATED

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[Making of 150 Trash Tags](#)

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Friday, August 14, 2009

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City of Milwaukee

200 E. Wells Street
Milwaukee, Wisconsin
53202

Meeting Minutes RECYCLING TASK FORCE

PRESTON COLE, CHAIR

Ald. Joe Dudzik, Michael J. Daun, Lisa Schaal, and Erick Shambarger

Staff Assistant, Terry MacDonald

Phone: (414)-286-2233; Fax: (414) 286-3456, E-mail: tmacdo@milwaukee.gov

Monday, July 27, 2009

1:30 PM

Room 301-A, City Hall

Meeting convened: 1:32 P.M.

1. Roll call

Present 5 - Cole, Daun, Dudzik, Shambarger and Schaal

Also present: James Carroll, Legislative Reference Bureau, Jim Michalski, Comptroller's Auditing Division, Wanda Booker, Dept. of Public Works and Rick Meyers, Dept. of Public Works

2. Approval of the minutes of the June 8, 2009 meeting

Ald. Dudzik moved approval of the minutes, Mr. Daun seconded. There were no objections.

3. Presentation give by Mr. Perry Lindquist, Waukesha, County, Dept. of Parks and Land Use relating to a Waukesha County Recycling System Study

Mr. Cole introduced Mr. Perry Lindquist, Land Resources Manager with Waukesha County.

Mr. Lindquist gave a PowerPoint presentation titled: Waukesha County Recycling, Looking Ahead (Exhibit 1). The presentation consisted of Background on Waukesha County's recycling program; Waukesha County's MRF - Options for the future (2007 study findings/recommendations) and on the similarities between Waukesha County and the City of Milwaukee's recycling programs.

Mr. Daun asked what Mr. Lindquist thinks the timeframe would be to design a recycling facility?

Mr. Lindquist replied that realistically it could take until the year 2012 to get something up and running.

Mr. Shambarger asked how did Mr. Lindquist decide on the Wauwatosa site as a potential site for the consolidation?

Mr. Lindquist replied that the Wauwatosa site that is available seems like a good site because it was conveniently located, but once the study takes place the researchers may find another site that may work better.

Mr. Daun asked if Mr. Lindquist has an idea what the cost of the study would be?

Mr. Lindquist replied in the negative.

Mr. Shambarger asked Mr. Lindquist if he knows what the distances are from the Waukesha's current site to the site located in Wauwatosa and to the Germantown facility?

Mr. Lindquist replied in the negative.

Mr. Cole asked Mr. Lindquist what are the problems that Waukesha has with hauling to a privately run recycling facility?

Mr. Lindquist replied that the cost for Waukesha to a haul to a private facility would be high. He said if a partnership doesn't happen between Waukesha, Milwaukee, etc. Waukesha would probably have to go with hauling to a private recycling facility.

Mr. Meyers appeared and asked Mr. Lindquist if the existing Waukesha recycling facility would become a transport facility?

Mr. Cole thanked Mr. Lindquist for coming and said that it isn't in the purview of this task force to approve entering into a partnership contract. He said it may be a recommendation by this task force to the City of Milwaukee Common Council.

Roll call taken at 2:45 P.M.

Present 4 - Cole, Daun, Shambarger and Schaal

Excused 1 - Dudzik

4. Discussion relating to the Milwaukee and Waste Management Regional Recycling facilities

Mr. Cole asked the task force members if there are any questions or comments regarding the recycling facilities tours.

There were none.

5. Discussion relating to the scope of work for the consultant study on a single stream recycling operation vs. dual system recycling operation

Mr. Cole called Mr. Donald F. Pirrung, P.E., Senior Engineer and Consultant for Earth Tech/AECOM to come to the table to give an overview of the scope work for a recycling study.

Mr. Pirrung handed out an overview of the scope of work that he prepared for a City of Milwaukee Recycling Facility Study (Exhibit 2).

Mr. Pirrung explained each of the following recycling alternatives: A. Evaluate Dual Stream Recycling at City's Milwaukee Recycling Facility (MRF); B. Evaluate Single Stream Recycling at the City's MRF; C. Evaluate Two City Transfer Stations with direct hauling to Germantown and No City-owned processing facility and D. Evaluation regional MRF in Wauwatosa to Serve Waukesha County, City of Wauwatosa and City of Milwaukee.

Mr. Pirrung said the study would also review the impacts that implementing the measures to reduce landfill tonnage will have on a residential recycling program.

And, lastly, Mr. Pirrung explained the time schedule of a study.

Mr. Cole said that if there is no substantive changes or objections, he and the Comptroller's Office will pursue entering into a service order agreement with Earth Tech/AECOM to begin doing a City of Milwaukee Recycling Facility Study. There were no changes offered. There were no objections by task force members.

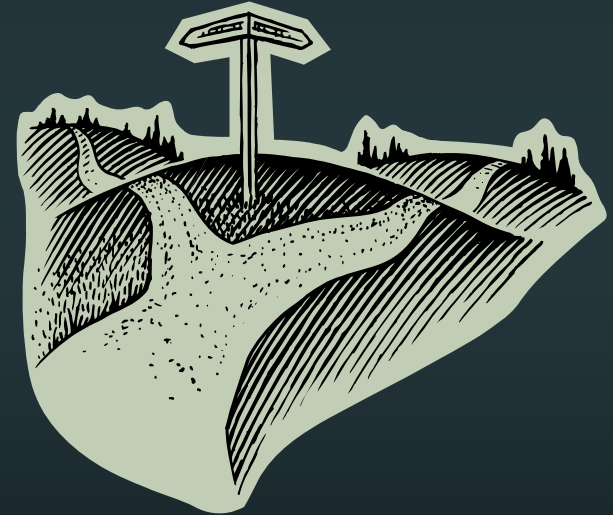
Meeting adjourned: 2:51 P.M.

Terry J. MacDonald
Staff Assistant

Waukesha County Recycling

Looking Ahead

Perry Lindquist, Land Resources Manager
Waukesha County Dept. of Parks & Land Use



July 27, 2009
Milwaukee Recycling Task Force

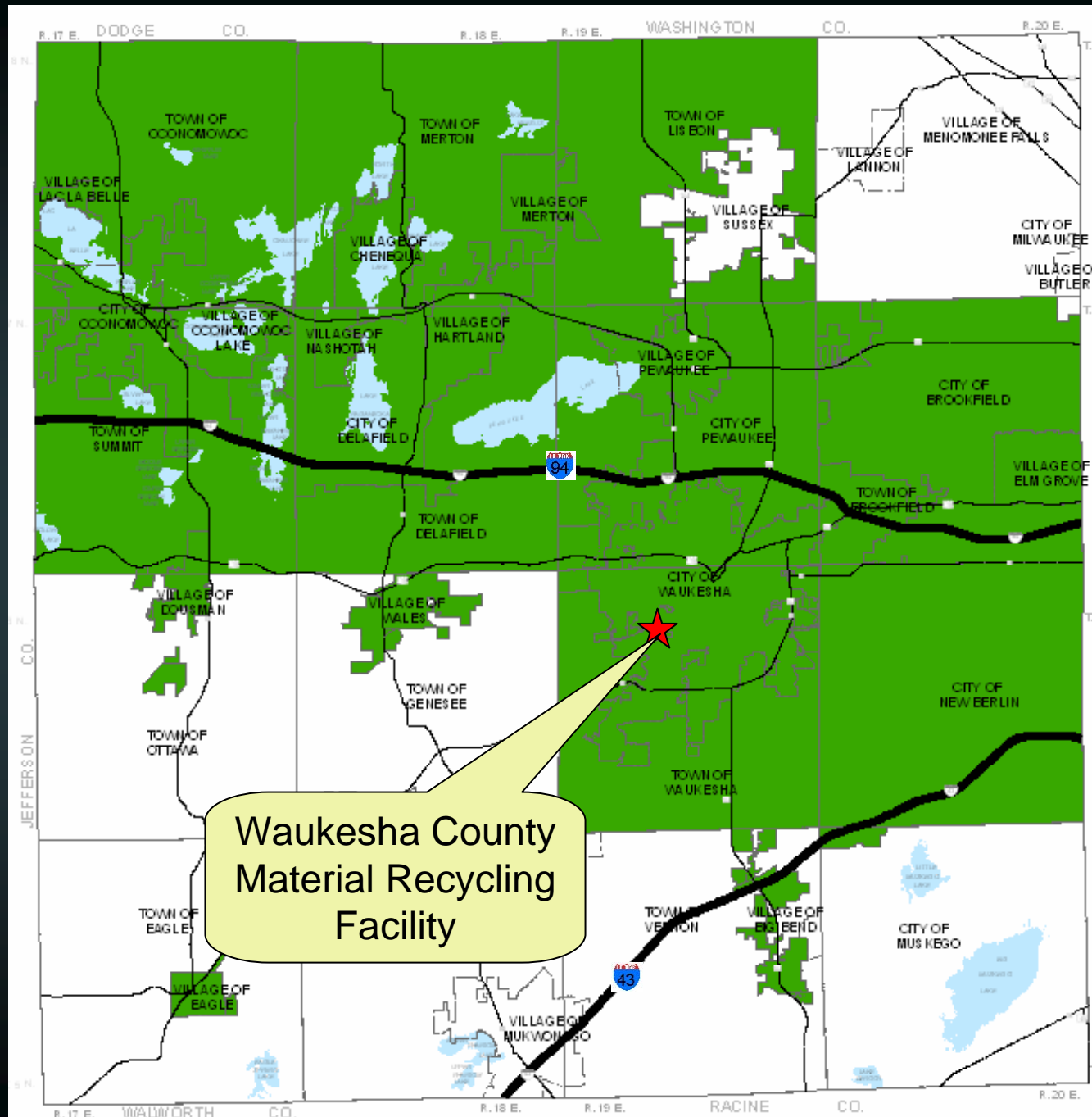
Presentation Outline

- Background on county recycling program
- County MRF - Options for the future
 - 2007 study findings/recommendations
- Similarities to City of Milwaukee
 - How can we work together/next steps

Background on County Program

- Waukesha County is “Responsible Unit” for 25 communities (since 1990)
 - Pool state grants (\$1 million/yr)
 - Coordinate education program
 - Pay for blue recycle bins
 - MRF investment/risk, oversight, maintenance
- County-owned/private operated MRF
 - Dual-stream system (paper & containers separate)
 - Average 23,000 tons/year of recyclables
 - Last expansion in 1995

Participating Municipalities



Waukesha County
Material Recycling
Facility

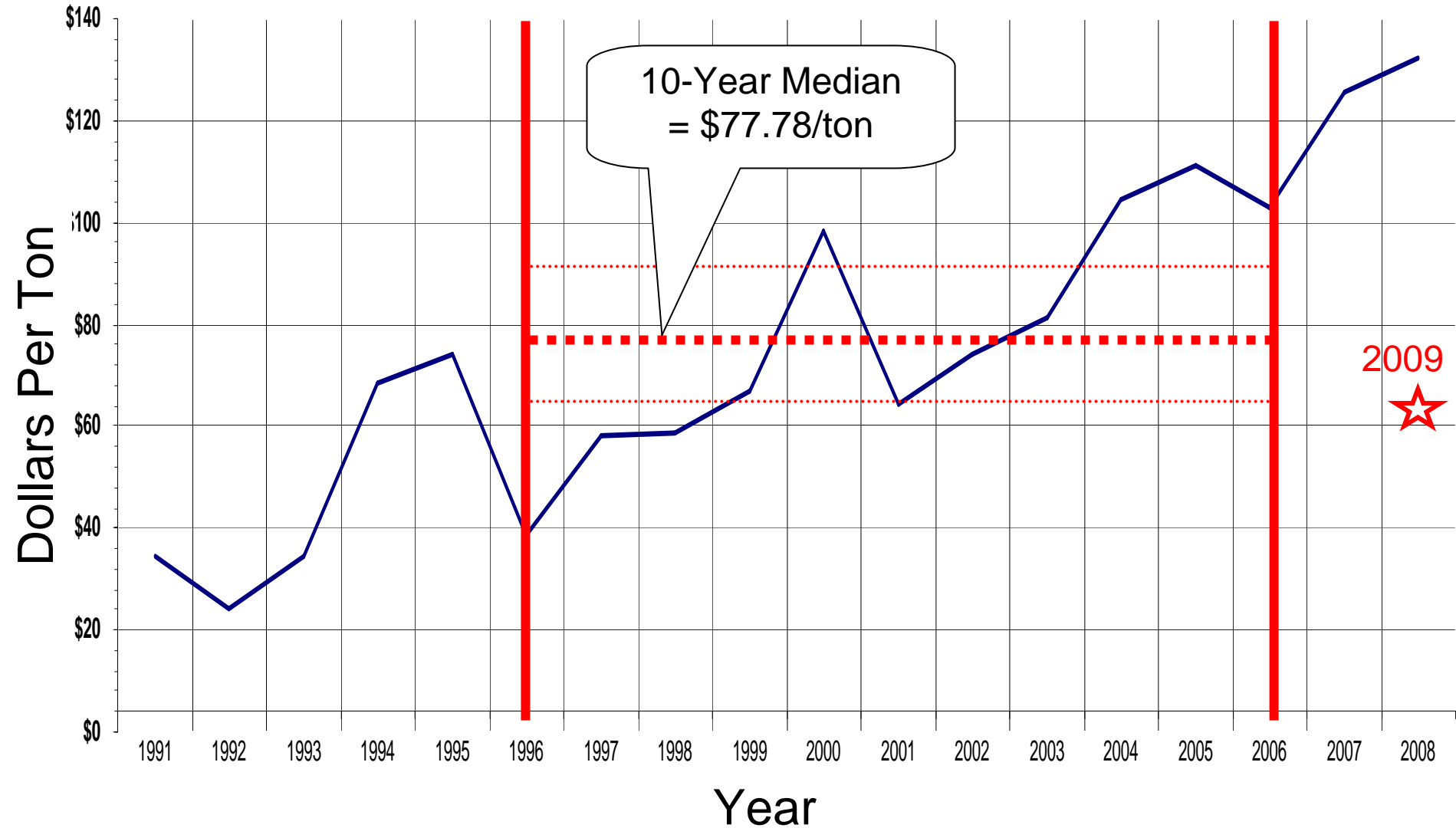
Background on County Program

(continued)

- 25 Participating Communities must:
 - Collect dual stream recyclables
 - 88,000 households (pop. 270,000)
 - \$12 million/yr. in private contracts (\$3.5 mil. recycle)
 - Deliver recyclables to county MRF
 - Report program costs to county/annual grants

Total Revenue Per Ton Shipped

Waukesha Co. MRF 1991-2008



County MRF: “Enterprise Fund”

- Self-sustaining – no tax levy or processing fees to communities (up front County loan paid off)
- Revenues: material sales (50%), state grants & operator processing fees (up to \$6.50/ton)
- Current fund balance = \$11 million:
 - Good markets and competitive operating contracts
 - Distributions to communities of \$6.2 million in the last 9 years + \$1 million for 2010 (proposed)
 - 2012 Projected Fund Balance: \$11-13 million
 - Assume continued state grants of \$1 million/yr., material sales of \$700K./yr. and community dividends of \$1 million/yr.
 - Use to pay for future MRF investments

Waukesha County Recycling System and Capacity Study Final Report



Presented to:
Waukesha County



Prepared by:
RRT Design & Construction



GERSHMAN, BRICKNER & BRATTON, INC.

September, 2007

2007 Study

Waukesha County Recycling System

Study: Existing Dual Stream MRF Capacity

- Can handle future dual stream program for the short term
- However, some major issues need to be addressed:
 - Sort line
 - Tipping floor
 - Bale storage



Plastic Containers Overwhelming Sort System



Tipping Floor Space is Limited

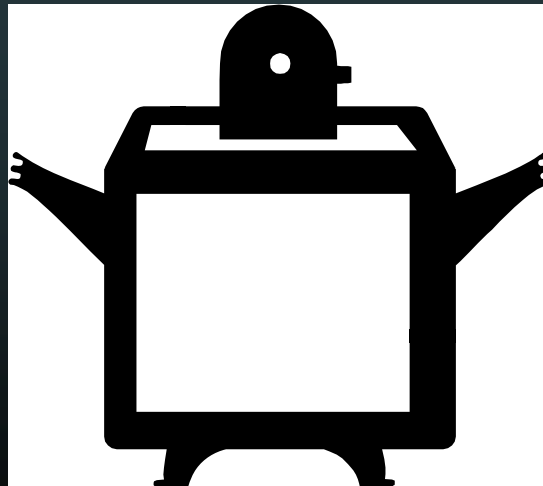


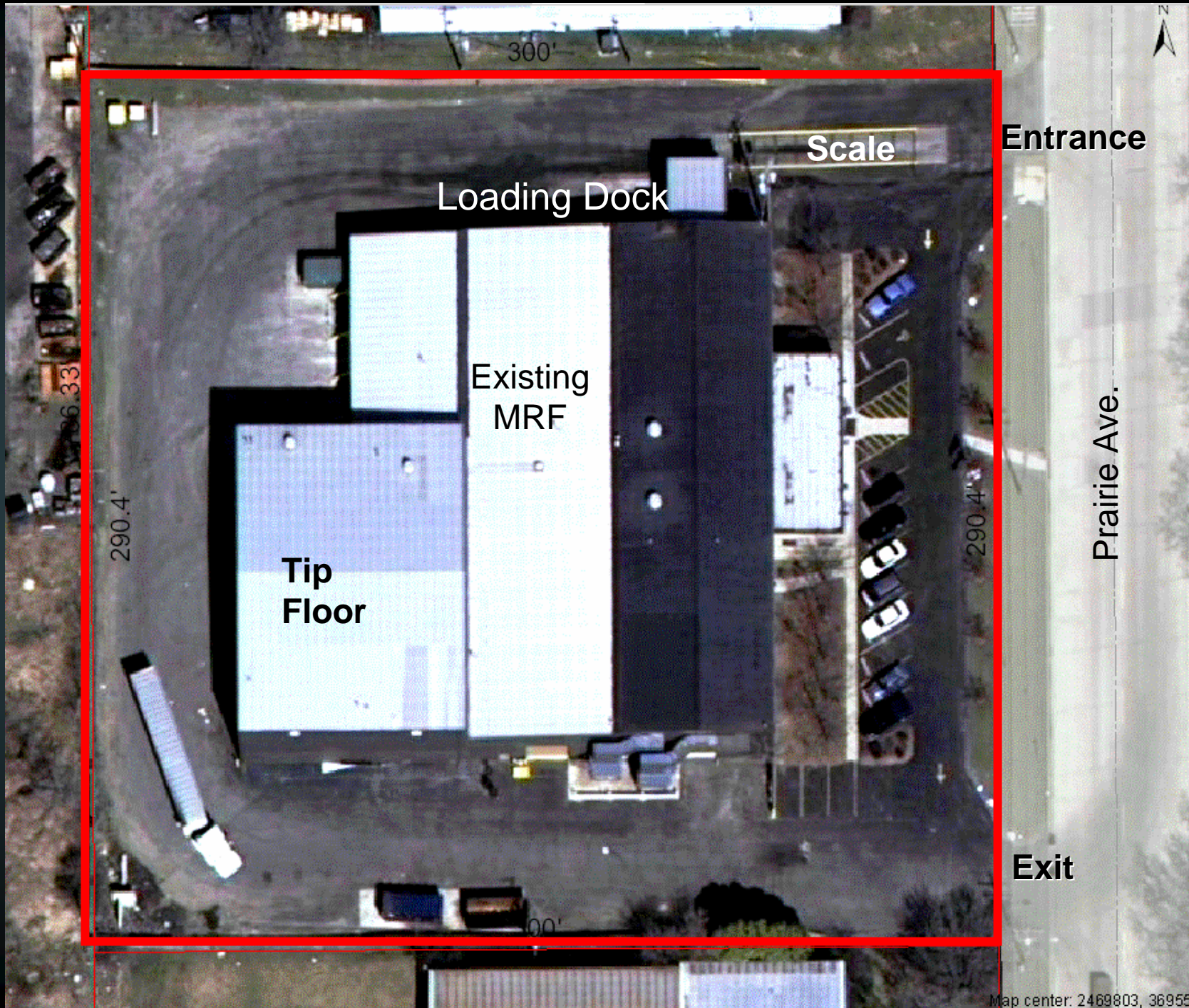
Bale Storage is Inadequate



Study: Existing Dual Stream MRF Capacity (cont.)

- Must expand MRF or build new in future
- Cannot expand MRF on current 2-acre site, because...





300'

Scale

Entrance

Loading Dock

Existing
MRF

Tip
Floor

290.4'

290.4'

Prairie Ave.

Exit

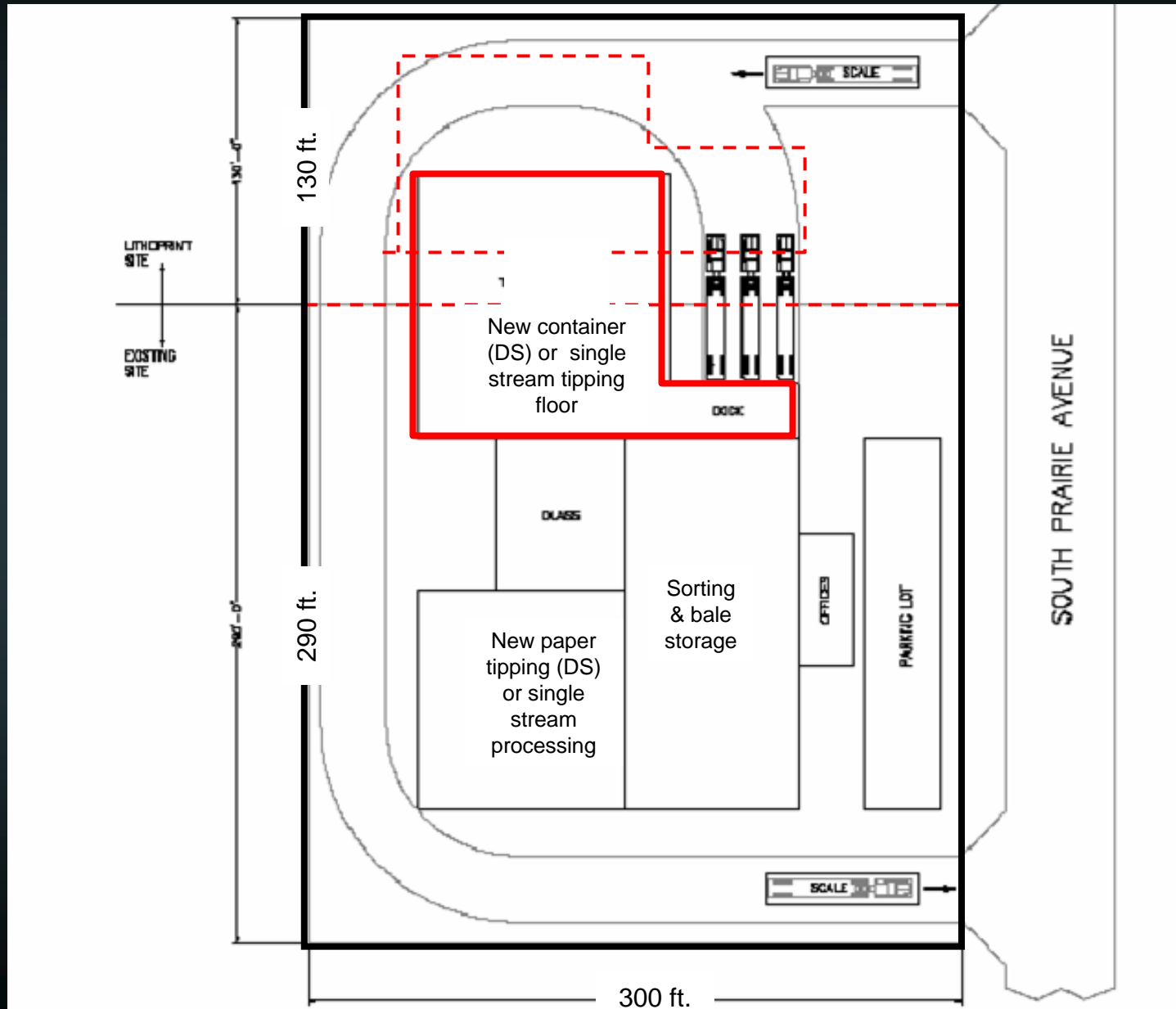


Possible MRF Expansion

- If 1 acre site to the north purchased, limited expansion is possible
 - Tipping/storage areas/new equipment
 - Could also convert to single stream
- Industry trends & community pressures to switch to Single Stream will influence future decisions

Concept Drawing – North Expansion

(single or dual stream)



Possible MRF Expansion (cont.)

- Estimated costs:
 - Dual stream: \$6.5 million + property/business
 - Single stream: \$7.0 million + property/business
- However, the expanded site could not handle a very large increase in tonnage

Recyclables Collection

Dual Stream vs. Single Stream



Existing program (blue bin)

(manual/paper & containers separated)



Industry trend (cart)

(automated/all recyclables mixed)

SS Pros (Collection) vs. Cons (MRF Impacts)

Single Stream Collection Cost Savings	Single Stream MRF Impacts

Collection Trends/Pressures

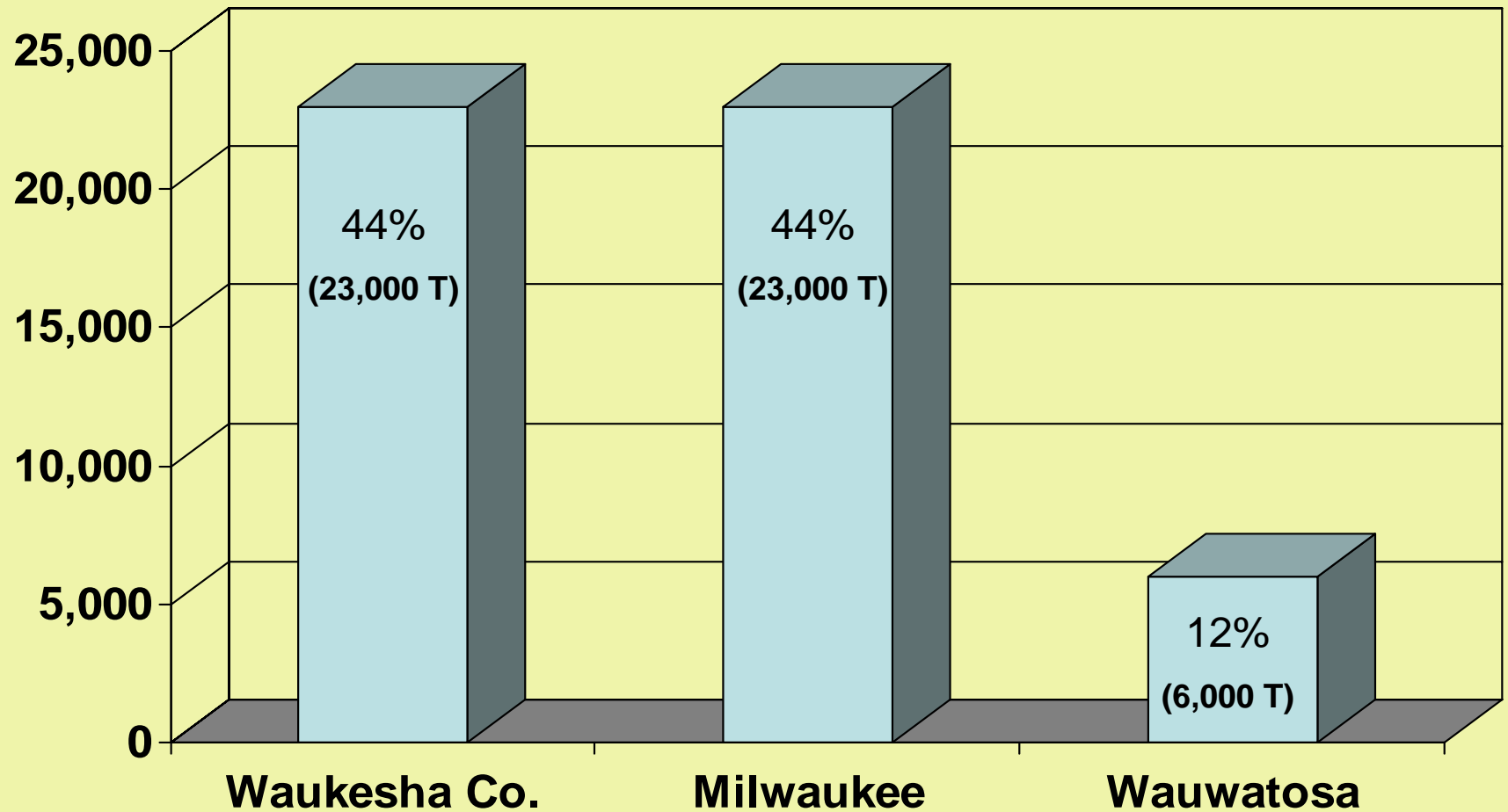
- Private haulers are pushing for Single Stream collection to save money
 - Trend is playing out nationwide
 - >100 SS MRFs (25% in 2008)
 - Locally, only 1 of 3 private haulers (Veolia) still offers dual stream collection
 - Waste Mgt. and Johns already switched to SS
 - 3 participating communities without hauling contracts already switched to SS (problem)
- More communities want to switch to SS

Scenarios for Future Projections:

- Tonnage
 - Participating county municipalities (25)
 - Adding non-participating communities (12)
 - Adding Milwaukee & Wauwatosa
- Single vs. Dual Stream



Annual Tons Recycled (52,000 Tons)*



*Rounded from 2008 data (no other communities included with City of Milwaukee data)

Key Study Findings & Recommendations

1. Switching to Single Stream is strongly recommended

- Pros far outweigh the cons
- Could save partic. communities >\$700,000/year in collection & disposal costs
 - 10% or \$12.36/HH/Year savings (minus cart \$)
- Needs all new MRF equipment/more space

2. Recycling tons increase considerably with a Single Stream system – assumed + 25%

- In-county data shows 45% increase/capita

Key Study Findings & Recommendations

(continued)

3. Doubling tonnage greatly improves the economics of a Single Stream MRF
 - 2 shifts = much faster return on investment
 - New site needed to double tonnage
4. National MRF data shows:
 - SS paper/fiber is equally marketable
 - Increased residue from SS depends on public education (projected increase from 3% to 10%)

Single Stream Options

(2007 Costs & 2010 Projected Tonnage)

1. **Expand/Convert Current MRF:**

- Participating Municipalities only (30,565 tons)
- Acquire/relocate Lithoprint
- Estimated bldg. costs = **\$7 million + Lithoprint costs**
- Projected annual net revenues = **\$0.12 million**

2. **Build New Regional MRF (publicly-owned/privately operated):**

- Add tonnage for 2 shifts (76,066 tons - NP/Tosa/Milw)
- Estimated building costs = **\$8.25 million + land**
- Projected annual net revenues = **\$1.7 million**

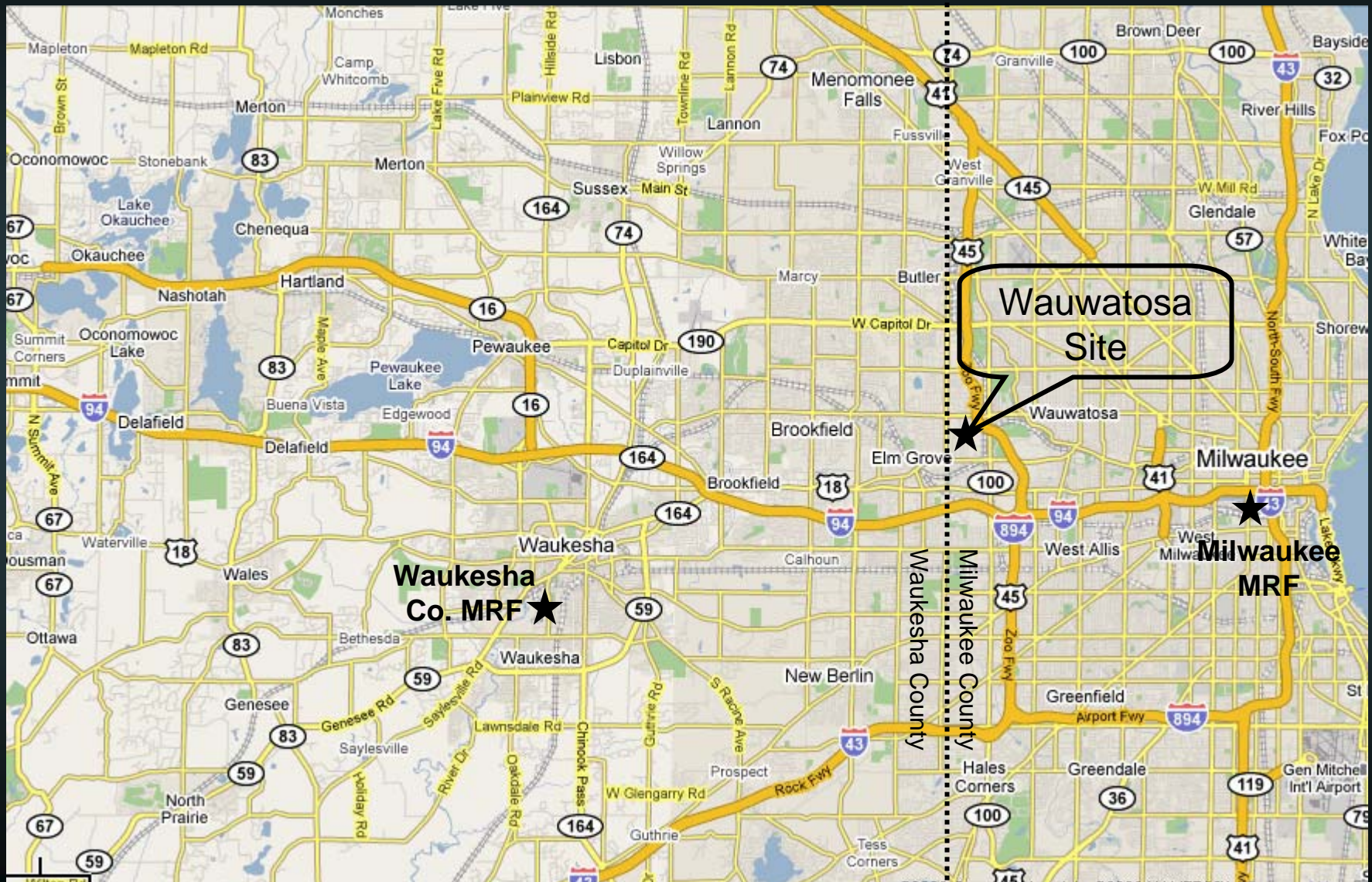
3. **Send recyclables to privately-owned MRF**

- Costs unknown (RFP process)

County Response to Private MRF Option

- Existing County MRF is already privatized
 - Public ownership of the facility (40% nationally)
 - Private operation & marketing/good competition
- Public/private partnership has been very successful
- **Privately-owned MRF does not ensure long-term competition/price stability for communities**
- Having a publicly-owned/privately operated MRF in SE helps keep costs down for all communities

Possible Regional MRF Location



Single Stream Economic Summary

(Revenues & expenses to be prorated to participating communities)

- Projected 2010 NET revenues from a Regional Single Stream MRF are 14.5 times larger than converting county MRF to single stream
 - \$1.7 million (regional/76,066 T) vs. \$0.12 million (county/30,565 T)
 - 6 times larger for Waukesha Co./Milwaukee (44%)
- Payoff of capital costs (\$8.25 million) for a new Regional Single Stream MRF = 5 years
- Payoff of capital costs (\$7 million) for converting county MRF to single stream = 58+ years

Summary Look at the SS System

- Collection: Savings in collection costs and landfill disposal costs (reduced trash)
 - >\$700,000 per year for partic. municipalities
- MRF: **It's all about the tons!**
 - 2.5 times tonnage = 10 times faster return on investment

Similarities:

Waukesha Co. & City of Milwaukee

- Publicly-owned dual stream MRFs
- Tonnage processed (23,000/yr.)
- Aging facilities facing costly updates
- Pressures to improve program efficiencies
- Pressures to switch to Single Stream:
 - Reduce collection & landfill disposal costs
 - + Increase recycling rate
- Concerns about future price stability
- 14-year history of coordinating education efforts

Why Work Together?

(Regional Single Stream MRF)

1. Lower costs/ton - capital and O & M
2. Better return on investments/reduced risk
3. Long-term price stability
4. Good example of regional cooperation
5. Both MRFs already publicly-owned and privately operated
 - no threat to private sector



Next Steps, Issues & Timelines

- Commit to joint study (ASAP):
 - Milwaukee, Waukesha Co. & Wauwatosa
- Establish scope of study/write RFP (fall 2009):
 - Refine & update economic analysis
 - I.D. financial options (sharing costs & revenues)
 - Technical investigation of Tosa site
 - Transportation issues
 - Concept plan/budget
 - Institutional options (ownership, contracting, etc.)
 - Collection or other issues?
- Release RFP & hire consultant – early 2010
- Complete study by end of 2010

Questions ?

Perry Lindquist, Land Resources Manager
Waukesha County - Dept. of Parks and Land Use
Room 260 Administration Center
515 W. Moreland Blvd., Waukesha WI 53188
plindquist@waukeshacounty.gov
262-548-7867

SS Pros (Collection) vs. Cons (MRF Impacts)

Single Stream Collection Cost Savings	Single Stream MRF Impacts
<ul style="list-style-type: none">• Automation decreases personnel costs (workers comp claims, etc.)	<ul style="list-style-type: none">• Increases MRF labor and capital costs
<ul style="list-style-type: none">• Large cart allows Every Other Week collection of recyclables	<ul style="list-style-type: none">• Increases residue level at MRF (non-recyclables)
<ul style="list-style-type: none">• Flexibility: <u>Can use compaction vehicles to reduce capital & trips to the MRF</u>, more households per route – faster collection	<ul style="list-style-type: none">• Potential for decreased quality of processed recyclables (glass/paper)
<ul style="list-style-type: none">• Higher rates of recycling & <u>reduced landfill disposal costs</u> – easier for the general public to implement (no sorting)	<ul style="list-style-type: none">• <u>Higher recyclable volumes to process</u>• Increased net cost per ton processing

All of these factors were built into the economic analysis

City of Milwaukee Recycling Facility Study
Prepared by: Donald F. Pirrung, P.E.
AECOM
July 27, 2009

A. Recycling Alternatives

◆ **Alternate A: Evaluate Dual Stream Recycling at City's MRF**

- Estimate Equipment and Installation Costs
- Evaluate Collection of Recyclables
- Estimate Equipment (Trucks, Carts), Facility Repair, Maintenance, Labor and Fuel Costs for Three Options
 - Monthly Collection as Currently Practices
 - Three-Week Collection
 - Two Week Collection
- Address Costs, Pros/Cons

◆ **Alternate B: Evaluate Single Stream Recycling at the City's MRF**

- Evaluate Using Same Approach as Alternative A

◆ **Alternate C: Evaluate Two City Transfer Stations with Direct Haul to Germantown and No City-Owned Processing Facility**

- Consider use City's MRF as Transfer Station
- Consider Using Existing Lincoln Avenue Transfer Station for Recyclables Receiving and Transfer
- Develop Costs Including Capital, Operation and Maintenance for a New Transfer Station serving the North Side
- Address Costs, Implementation Aspects, Pro/Cons

◆ **Alternate D: Evaluation Regional MRF in Wauwatosa to Serve Waukesha County, City of Wauwatosa and City of Milwaukee**

- Use Waukesha County 2007 Report for Cost Information
- Address Costs, Implementation Aspects, Pros/Cons

B. Other Considerations

- ◆ Discuss impacts that implementing measures to reduce landfill tonnage will have on residential recycling program:
 - "Pay as you throw" Program
 - Offsets Higher Solid Waste Fees
 - Encourages Recycling
 - Reduces Solid Waste Tonnage

◆ **Summarize Results of Alternatives**

C. Schedule

- | | |
|-------------------------------|-----------------|
| • City Notice to Proceed | July 27, 2009 |
| • Submit Draft Report to City | August 14, 2009 |
| • Meet with City | August 21, 2009 |
| • Submit Final Report to City | August 28, 2009 |

Proposed Matrix of Consultant Scope of Work Related to the City's Residential Recycling Program

14-Jul-09

			Processing		
Collection	system	schedule	Current Site (City's MRF on Mt. Vernon Ave)	Transfer Stations (haul to 3rd party)	Publicly Owned Regional Facility (Wauwatosa)
	Dual Stream	monthly			
		3 weeks			
		2 weeks			
	Single Stream	monthly			
		3 weeks			
		2 weeks			

*Each box is to include analysis of that particular scenario's related capital, labor, and transportation costs.

From: Daun, Michael
Sent: Thursday, August 06, 2009 10:23 AM
To: MacDonald, Terry
Cc: 'Steve Brachman'; Daun, Michael
Subject: FW: MRF of the Month

Terry,
I received the attached from Steve Brachman, who currently works at the UW (and formerly City of Milwaukee). Would you please forward to the members of the Recycling Task Force? It's an interesting piece on what some Wisconsin counties have done with a regional Recycling facility.
thx,
Mike Daun

Michael Daun
Deputy Comptroller
City of Milwaukee
414-286-2302
mdaun@milwaukee.gov

From: Steve Brachman [mailto:steve.brachman@ces.uwex.edu]
Sent: Wednesday, August 05, 2009 4:27 PM
To: Resick, Jim H.
Cc: Daun, Michael; Murphy, Michael (Alderman); Morics, Wally
Subject: Re: MRF of the Month

Our pleasure and great work, Jim! The tri-counties is the WI model for integrated solid waste management and collaboration, particularly important since we have so few others doing it! Wouldn't it be swell if Milwaukee and Waukesha could do the same??? I bet there is big money to be saved...

On 8/5/09 4:04 PM, "Resick, Jim H." <ResickJH@co.outagamie.wi.us> wrote:

Steve, Joe and Mary,

Hey, the OC and its partner counties (Brown and Winnebago) have hit the big time with their new single-stream facility! Local Extension's contribution was to facilitate a series of group discussions between the county SW Departments and their stakeholder groups in 2007-08, to make sure everyone was on board. You were each called at various points for consultation, as well. Thanks to you all for helping make this a successful launch!

Jim

From: Bocik, Barbara A. **On Behalf Of** Paltzer, Toby N.

Sent: Wednesday, August 05, 2009 9:00 AM

To: ALL COUNTY USERS

Subject: MRF of the Month

Good Morning:

Attached please find an article regarding our Single Stream Recycling facility being named MRF of the Month. We are very proud of this facility. Congratulations to all those involved in the project!

Toby

Toby Paltzer
Outagamie County Executive
410 S. Walnut Street
Appleton, WI 54911
Phone: 920-832-1684
Fax: 920-832-1534

Steve Brachman, Waste Reduction Specialist
UW-Extension Solid & Hazardous Waste Education Center
161 W. Wisconsin Ave., Suite 6000
Milwaukee, Wisconsin 53203
414-227-3160
steve.brachman@ces.uwex.edu
<http://shwec.uwm.edu>

MRF of the Month

Tri-County Single-Stream Recycling Facility



The brand spanking new Tri-County Single-Stream Recycling (TCSSR) facility, located in Appleton, Wisconsin, is a byproduct of the newly-combined recycling programs of Brown, Outagamie and Winnebago counties. The largest public-sector single-stream MRF in the Badger State and one of the larger publicly owned and operated single-stream plants in the U.S., the TCSSR presently serves some 60 communities (over 200,000 households) within the three counties, handling both residential and commercial recyclables.

"We have brought a new era of recycling to Wisconsin," says Philip Stecker, Outagamie County's director of solid waste. "This facility allows us to serve some 500,000 residents in Northeastern Wisconsin; that's 10 percent of the state's total population."

Operated by Outagamie County, the \$9.9 million regional facility includes a state-of-the-art single-stream processing system designed, engineered, manufactured and installed by Bulk Handling Systems. Outfitted with the latest in screening, optical and air-separation technologies, the system was created by BHS to process an average of 25 tons per hour, all while generating minimal residual material.

According to company representatives, the single-stream system employs the use of integrated processes that emphasize mechanization, and the extraction of recoverable materials, all on the first pass. As a result, this technology allows the TCSSR to experience a high-value material capture rate of nearly 100 percent, and produce an end-product with extremely low residue values (projected to be less than three percent). In addition to including a large old corrugated cardboard separator and steel disc debris roll screen, in order to remove virtually all glass at the front end (currently, glass content is approximately 25 percent of the overall material flow), the processing system also includes a unique filtration system that provides a cleaner, dust-free working environment for the plant's 20 total employees.

The system's main sorting stations include presort, paper post-sort and container sort, with three other smaller sorting stations located

Technical Specifications*

Tri-County Single-Stream Recycling Facility

Location:

Appleton, Wisconsin

Start-up date:

July 2009

Number of processing lines:

One (single-stream)

Throughput:

Single-stream:
25 tons per hour

Estimated tons of material to be processed:

Designed with an 80,000-ton capacity, MRF will initially process 50,000 tons annually

Residue rate:

Projected to be less than three percent

2007-2008 Materials Processing and Recycling in the United States: Yearbook and Directory

5th Edition — Print or CD-ROM

The 1,300 page Yearbook is the only comprehensive guide to Materials Recovery Facilities (MRFs) in the United States, providing information on 583 operating, planned and shut projects. A nationally recognized resource, it provides a strategic analysis of the post-consumer recycling industry and a database of U.S. Material Recovery Facilities. It is an invaluable reference tool for solid waste decision makers, planners, consultants, and organizations interested in the present and future of recycling.

Governmental Advisory Associates, Inc.

203.226.3238 • 203.226.3239 (fax) • gaa@governmentaladvisory.com • www.governmentaladvisory.com

GAA, Inc.

along the processing line. Altogether, 17 sorters work under one shift to handle material coming into the facility.

And, though the TCCSR is projected to process 50,000 tons per year, initially, BHS actually designed the system to handle up to 80,000 tons annually, thus allowing the MRF to serve larger portions of Wisconsin as more single-stream programs come on-line. "There are no firm plans yet, but we are talking with several other municipalities and counties," says Stecker.

"For our grand opening and open house, we had between 700 and 800 community and business officials, as well as members of the public, visit and tour the facility," says Stecker. "The level of interest for this facility has far exceeded our expectations."



*Know of a North American-based materials recovery facility that you feel *Resource Recycling* readers should know about? If so, e-mail your recommendation, with hi-resolution pictures, to justin@resource-recycling.com, and your facility may just be highlighted in a future "MRF of the Month" column.

From: lschaal@sbcglobal.net
Sent: Thursday, August 13, 2009 2:36 PM
To: MacDonald, Terry
Cc: lschaal@sbcglobal.net
Subject: FW: [focus_solar] Solar-Powered Waste Compactors [2 Attachments]
Terry,
Please forward to Recycling Task Force members- thanks hope all is well.

Hmmm interesting- now were talking business! Solar, recycling and waste management all rolled into one and they are eligible for Cash Back Rewards by Focus on Energy!! Right up my alley...
J
Not to mention they are a WI owned company- Milwaukee Shines maybe interested in this also.

UrbanRe Vitalization Group LLC
3260 N Humboldt Blvd
Milwaukee WI 53212
414-231-3291
414-364-5422(cell)
www.urbanrevitalizationgroupllc.com
info@urevitalize.org

Lisa Schaal
President

See attached for some solar powered waste compactors.

They, like off grid lighting systems, would be eligible for a Focus on Energy Cash Back reward if:

- there is an electric meter paying into the Focus Program at the installation site
- the total module capacity installed at one site is more than 500 watts
- all our other normal requirements

The compactors are sold by at least one company in WI, J-MEC Equipment, which is located in Lake Mills.

They contacted us.

Contact information for them:

Ryan Simmons

Sales Manager

J-Mec Inc.

Cell: (920) 605-0061 | Fax: (920) 648-6649

Web site: www.jmecinc.com

2 of 2 File(s)

 [GreenBuilt-Full_Product_Line.pdf](#)  [WM Solar Trash Compactor Sales Sheet 4-29-09.pdf](#)

No virus found in this incoming message.

Checked by AVG - www.avg.com

Version: 8.5.392 / Virus Database: 270.13.45/2286 - Release Date: 08/06/09 18:17:00

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*with environmentally friendly options, our
solution for reducing energy consumption
and noise pollution*



GreenBuilt®
for our environment.

- ▼ Solar Power Units
- ▼ 5 HP High Efficiency Submerged Power Unit
- ▼ Cushioned Ground Rollers
- ▼ Biodegradable Hydraulic Fluid



GreenBuilt...

by Marathon Equipment

"Marathon makes exceptional compactors, and our solar powered power units exceed our expectations. They allow us to reduce our utility costs, reduce the number and frequency of pickups and provide flexibility in how we use the compactors and where we place them."

– Dave Miller, Illinois National Guard, Environmental Branch



Cushioned ground rollers for reduced noise.



GreenBuilt Self-Contained Compactors

- ▼ 5 HP High Efficiency Submerged Power Unit or Solar Power Unit
- ▼ Biodegradable hydraulic fluid
- ▼ Cushioned ground rollers
- ▼ **Other features:** Universal 37" Double-End Pick-Up Understructure; Programmable PLC; Push Button Controls mounted in Panel Box Face; CYCON Life-Xtender® System; Quick Disconnects; Full Door Seal; Qwik Clean® Tank flushes area behind ram; 12" deep sump area for liquid retention.

*Except HT models

GreenBuilt Stationary Compactors

- ▼ 5 HP High Efficiency Submerged Power Unit or Solar Power Unit
- ▼ Biodegradable hydraulic fluid
- ▼ **Other features:** Push Button Control Station mounted on 13' Sealtite; Ratchets with Grab Claws; and External Reset Button in Panel Box Face.

Environmentally Friendly Products

Marathon Equipment is aware of global sustainability and environmental impact with regard to our products. With each new product we have made measurable strides in reducing energy and fuel consumption while continuing to offer superior compaction for maximum payloads. Marathon sets the standard with **GreenBuilt®** product options.



Motor compartment
of a GreenBuilt VIP

GreenBuilt Vert-I-Pack®

- ▼ Solar Power Unit
- ▼ Biodegradable hydraulic fluid
- ▼ **Other features:** Reversible Compactor Assembly with Interchangeable Leg/Platform Assembly*; Full Container Light; and Container.

*4-, 6-, & 8 - cubic yard FL only

GreenBuilt PAK'NTAINER®

- ▼ Solar Power Unit
- ▼ Biodegradable hydraulic fluid

GreenBuilt Vertical Baler

- ▼ 5 HP High Efficiency Submerged Power Unit
- ▼ Biodegradable hydraulic fluid
- ▼ **Other features:** Automatic Feed Door for hands-free loading; Side-mounted Power Unit for easy access and maintenance; Redundant Interlock System; Programmable PLC; Front Facing Push Button Control Panel; Conventional Bale Tie-Off System; and Heavy-Duty Structure. Available optional wire guides for front tie-off and automatic bale ejector.



GreenBuilt Dual Recycling Compactor

- ▼ 5 HP High Efficiency Submerged Power Unit or Solar Power Unit
- ▼ Biodegradable hydraulic fluid
- ▼ Cushioned ground rollers
- ▼ **Other features:** Multi-purpose compactor with two variable capacity compartments for two types of waste/recyclables; Patented **Flex-D-Vider®**, a pivoting steel wall that automatically adjusts the compartments' capacity during loading; Four individual doors for controlled discharge of compacted material.

Solar Power Unit

- ▼ Solar panels for up to 100% of power requirements*
- ▼ DC powered hydraulics
- ▼ Performance is comparable to comparable 10 HP power units
- ▼ No three phase power required
- ▼ Environmentally friendly biodegradable hydraulic fluid

* 120 VAC backup charger used to charge batteries when needed



5 HP High Efficiency - Variable Displacement Power Unit

- ▼ 5 HP energy efficient unit with submerged variable displacement pump
- ▼ Environmentally friendly biodegradable hydraulic fluid
- ▼ Offers speed and performance comparable to 10 HP units while using 50% less power



GreenBuilt Specifications

GreenBuilt 5 HP Power Unit Specs

Electric Motor 3/60/208-230/460 – 5 HP (3.7 kW)
Electric Control Voltage – 120 VAC
Key Operated Control Station – All Circuits Fused
Hydraulic Pump – 11 GPM HiLo (41.6 L/min)
Pressures & Forces – same as standard units
Hydraulic Fluid – Biodegradable

GreenBuilt Solar Power Unit Specs

Electric Motor – 24 Volt DC
 (2 for SC's and 1 for VIP and PAK'NTAINER)
Batteries – Powered stored in 4 premium deep cycle batteries (2 for VIP)
Charger – 120 VAC backup charger used to charge batteries when needed
Key Operated Control Station – All Circuits Fused
Hydraulic Pump(s) – 4 GPM Each Motor
 (Variable)(15.2 L/min)
 (2 for SC's and 1 for VIP)
Pressures & Forces – same as standard units
Hydraulic Fluid – Biodegradable

GreenBuilt Self-Contained Compactor Specifications

Model	Container Capacities*	*Charge Box Capacity	Feed Opening	System Pres-Norm.	System Pres-Max.	Force Rate-Norm	Force Rate-Max	5 HP Cycle Time	Solar Cycle Time**
RJ-88 SC	15, 20, & 24 cy.	0.7 cy.	30 1/2" x 48"	1,700 psi	2,000 psi	36,600 lbs.	43,100 lbs.	25 sec.	34 sec.
RJ-88 HT	16, 20, & 24 cy.	0.7 cy.	30 1/2" x 48"	1,700 psi	2,000 psi	36,600 lbs.	43,100 lbs.	25 sec.	34 sec.
RJ-100 SC	30, & 34 cy.	1.32 cy.	35" x 60"	1,850 psi	2,300 psi	36,300 lbs.	45,200 lbs.	36 sec.	50 sec.
RJ-250 SC	15, 20, 25, 30, 34, & 39 cy.	1.31 cy.	41" x 58"	1,850 psi	2,300 psi	39,900 lbs.	49,500 lbs.	32 sec.	43 sec.
RJ-250 HT	25, & 29 cy.	1.31 cy.	41" x 58"	1,850 psi	2,300 psi	39,900 lbs.	49,500 lbs.	32 sec.	43 sec.
DRC II	8.4 – 19.6 cy. per compart.	1.79 cy.	34 1/2" x 48"		2,000 psi		31,800 lbs.	36 sec.	49 sec.

GreenBuilt Stationary Compactor Specifications

Model	*Charge Box Capacity	Feed Opening	System Pres-Norm.	System Pres-Max.	Force Rate-Norm	Force Rate-Max	5 HP Cycle Time	Solar Cycle Time**
RJ-225	1.55 cy.	40 1/2" x 60"	1,650 psi	1,950 psi	46,700 lbs.	55,100 lbs.	69 sec.	95 sec.
TC-220T TANK	1.44 cy.	42" x 58"	2,000 psi	2,000 psi	54,500 lbs.	54,500 lbs.	49 sec.	67 sec.
TC-225T TANK	1.82 cy.	53 1/2" x 58"	2,000 psi	2,000 psi	54,500 lbs.	54,500 lbs.	59 sec.	81 sec.

GreenBuilt Vert-I-Pack® & PAK'NTAINER® Specifications

Model	Collection Vehicle Type	Container Capacities	Charge Box Capacity*	Feed Opening	System Pres-Norm.	System Pres-Max.	Force Rate-Norm	Force Rate-Max	Solar Cycle Time**
Front Feed VIP	FL	3, 4, 6 & 8 cy.	0.54 cy.	23 1/2" x 46"	2,100 psi	2,400 psi	26,400 lbs.	30,200 lbs.	24 sec.
Rear Feed VIP	FL	4, 6 & 8 cy.	0.54 cy.	23 1/2" x 46"	2,100 psi	2,400 psi	26,400 lbs.	30,200 lbs.	24 sec.
Side Feed VIP	FL	3, 6 & 8 cy.	0.54 cy.	23 1/2" x 46"	2,100 psi	2,400 psi	26,400 lbs.	30,200 lbs.	24 sec.
Front Feed VIP	RL	4 cy.	0.54 cy.	23 1/2" x 46"	2,100 psi	2,400 psi	26,400 lbs.	30,200 lbs.	24 sec.
Rear Feed VIP	RL	4 cy.	0.54 cy.	23 1/2" x 46"	2,100 psi	2,400 psi	26,400 lbs.	30,200 lbs.	24 sec.
Untouchable VIP	FL	2.5 cy.	0.54 cy.	23 1/2" x 46"	2,100 psi	2,400 psi	26,400 lbs.	30,200 lbs.	24 sec.
VIP FL/3	FL	3 cy.	0.54 cy.	23 1/2" x 46"	2,100 psi	2,400 psi	26,400 lbs.	30,200 lbs.	24 sec.
PAK'NTAINER	FL/RL	4 & 6 cy.	0.5 cy.	22 1/2" x 46"	2,100 psi	2,400 psi	19,800 lbs.	19,800 lbs.	22 sec.

FL = Front Loader collection trucks

RL = Rear Loader collection trucks

GreenBuilt Vertical Baler Specifications

Model	Bale Size	Bale Weight (OCC)	Feed Opening	System Pressure	System Pres-Max.	Platen Force	Platen Pressure	5 HP Cycle Time
V-6030HD	60"W x 30"D x 48"H	Up to 1,100 lbs.	60" x 25"	2,000 psi	2,200 psi	56,550 lbs.	34 psi	54 sec.
V-7230HD	72"W x 30"D x 48"H	Up to 1400 lbs.	72" x 25"	2,000 psi	2,200 psi	56,550 lbs.	29 psi	54 sec.

* WASTEC Rating

** Cycle time may vary because of battery charge level.



This major retailer is one of the first to adopt a "green" policy that included compaction equipment. This installation features a RJ-100 SC with a Solar Power Unit and Cushioned Ground Rollers.

The solar panels for this GreenBuilt RJ-250SC is mounted on the roof. Solar panels can be placed as much as 100 feet from the power unit.



This **GreenBuilt**® 5 HP high efficiency submerged power unit runs a RAMJET 3 cubic yard **TANK**® located at a manufacturing facility. It provides the same speed and performance as its 10 HP predecessor.



This solar powered power unit runs a Vert-I-Pack (VIP) at a national fast food restaurant. The solar energy is used to recharge two premium deep cycle batteries.

This GreenBuilt RJ-250SC has a 5 HP high efficiency power unit and is located inside. Pulling the compactor is made easy with the double-end pickup feature.



MarathonEquipment.com



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City of Milwaukee

200 E. Wells Street
Milwaukee, Wisconsin
53202

Meeting Minutes RECYCLING TASK FORCE

PRESTON COLE, CHAIR

Ald. Joe Dudzik, Michael J. Daun, Lisa Schaal, and Erick Shambarger

Staff Assistant, Terry MacDonald

Phone: (414)-286-2233; Fax: (414) 286-3456, E-mail: tmacdo@milwaukee.gov

Monday, September 14, 2009

1:30 PM

Room 301-A, City Hall

Meeting convened: 1:36 P.M.

Present 4 - Cole, Dudzik, Shambarger and Schaal

Excused 1 - Daun

1. Roll call

Also present: James Carroll, Legislative Reference Bureau, Jim Michalski, Comptroller's Auditing Division, Wanda Booker, Dept. of Public Works, Rick Meyers, Dept. of Public Works and Craig Kammholz, Comptroller's Office

2. Approval of the minutes of the July 27, 2009 meeting

Ald. Dudzik moved approval of the minutes, Ms. Schaal seconded. There were no objections.

3. Presentation given by Mr. Donald F. Pirrung, P.E., Consultant for Earth Tech/AECOM relating to a Recycling Facility Study for the City of Milwaukee

Mr. Donald F. Pirrung, PE and Mr. Paul Matz with Earth Tech/AECOM appeared to give the presentation.

Mr. Pirrung handed out a copy of his presentation. (Exhibit 1)

Ald. Dudzik moved and seconded by Ms. Schaal that the RECYCLING TASK FORCE convene into closed session, pursuant to s. 19.85(1)(e), Wis. Stats., for the purpose of formulating competitive bargaining strategies relating to recycling facility contracts in respect to item #3...Presentation given by Mr. Donald F. Pirrung, P.E., Consultant for Earth Tech/AECOM relating to a Recycling Facility Study for the City of Milwaukee.

Roll call taken at 1:44 P.M.:

Present: 4 - Erick Shambarger, Lisa Schaal, Ald. Dudzik and Preston Cole

Excused: 1 - Michael Daun

Mr. Shambarger moved and seconded by Ms. Schaal that the committee reconvene in open session.

Roll call taken at 2:44 P.M.

Present: 4 - Erick Shambarger, Lisa Schaal, Ald. Dudzik and Preston Cole

Excused: 1 - Michael Daun

4. Set next meeting date, time and agenda

Mr. Cole recommended that the next Recycling Task Force meeting take place on October 26, 2009 at 1:30 P.M. There were no objections.

Mr. Cole suggested that the following item be discussed by the task force at its next meeting:

Discussion relating to the changes in the Department of Public Works, Operations Division 2010 proposed budget that may impact the City of Milwaukee's recycling operations

Meeting adjourned: 2:46 P.M.

Terry J. MacDonald
Staff Assistant



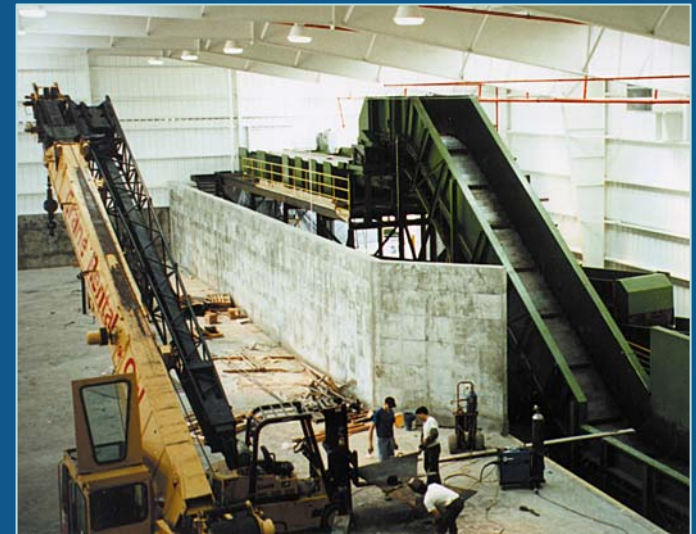
Recycling Facility Alternatives Study
City of Milwaukee
September 14, 2009

Prepared by:
Don Pirrung, PE
Paul Matz
AECOM

Exhibit 1

Project Background

- City owns recycling facilities
- Under contract with Recycle America (Waste Management)
- City shares in recycling revenue, 50:50 split
- Contract period
 - ❖ July 2004 through June 30, 2009
 - ❖ City has sole option to extend contract for up to five one-year periods



Existing and Proposed Regional Recycling Facilities

- City's facility: South 13th Street and Mount Vernon
- Waste Management (Recycle America)
 - ❖ New facility in Germantown
- Proposed facility in Wauwatosa
 - ❖ Would serve Waukesha County, City of Wauwatosa, and City of Milwaukee



Executive Summary

Processing Alternatives

- A. Dual stream at existing City facility
- B. Single stream at existing City facility (City only)
- C. Two transfer stations to third party
- D. One transfer station at existing facility
- E. Regional MRF at Wauwatosa
- F. Regional MRF at existing City facility



Collection Alternatives

- Monthly – current practice
- 3 weeks (1 person/truck)
- 3 weeks (2 persons/truck)
- 2 weeks (1 person/truck)
- 2 weeks (2 person/truck)



Evaluation Based on:

- Total present worth over 15 years
- State of practice
 - ❖ Dual stream
 - ❖ Single stream



Findings

– Processing

- ❖ First: Alternative D – one transfer station at existing facility
- ❖ Second: Alternative C – two transfer stations to third party

– Collection

- ❖ First: - 3 week – 1 person/truck
- ❖ Potential in future for 2 week – 1 person/truck as City fine tunes the program



Recommendations

1. Implement single stream processing
2. Implement Alternative D – one transfer station at existing facility
3. Potential to implement Alternative C – two transfer stations to third party in future if recycling compaction is done during second shift, thereby avoiding capital costs
4. Consider “pay as you throw” to improve recycling and reduce solid waste
5. Implement collection 3 week 1 person/truck, fine tune thereafter



Alternative A – Dual Stream at Existing City Facility

- Continue same processing
- Replaces old equipment
- Serve only the City
- Industry trend is single stream because collection is more cost-effective, increased recyclables, more user friendly
- Not most cost-effective



Alternative B – Single Stream at Existing City Facility (City only)

- Single stream processing
- Industry trend is toward single stream
- Not most cost-effective



Alternative C – Two Transfer Stations to Third Party

- Lincoln Avenue site
- New northwest site
- Two new transfer stations – higher capital cost than Alternative D
- Need room to park recycling trucks
- Potential solution in future if recyclables compacted during second shift to reduce capital cost and use solid waste transfer station
- Second lowest cost alternative



Alternative D – One Transfer Station at Existing Facility

- Lowest cost alternative
- Converts City MRF into transfer station
- Smallest City investment, lowest risk
- Single stream processing at third party



Alternative E – Regional MRF at Wauwatosa

- Regional MRF for Waukesha County, City of Wauwatosa and City of Milwaukee
- Highest cost alternative
- Recent MRF construction projects indicate higher costs than Waukesha County study
- More costs, more risks
- More challenges to implement with more government bodies involved



Alternative F – Regional MRF at Existing City Facility

- Regional MRF for Waukesha County, City of Wauwatosa, and City of Milwaukee
- Third most cost-effective alternative
- More costs, more risks than transfer station alternatives
- More challenges to implement with more government bodies involved



Collection Alternatives



- Monthly – 1 person/truck
 - ❖ Continues existing program
 - ❖ City survey and literature indicates more frequent collection is desirable
- 3 weeks – 1 person/truck
 - ❖ Most cost effective and efficient if cart is at curb or alley on a set pick up schedule
 - ❖ No more up the driveway service
 - ❖ 10% increase in recyclables expected over monthly
 - ❖ Requires public information
 - ❖ View as next step in continuing improvement process

Collection Alternatives

- 3 weeks – 2 persons/truck
 - ❖ Not cost-effective
 - ❖ Increased labor cost is not offset by increased recyclables volume
 - ❖ 10% increase in recyclables over monthly
- 2 weeks – 1 person/truck
 - ❖ Not cost-effective yet, but may be in future as City fine tunes program
 - ❖ Best approach, user friendly
 - ❖ Increases recyclables by 20 percent over monthly
- 2 weeks – 2 persons/truck
 - ❖ Increased labor cost is not offset by increased recyclables volume



Total Present Worth Analysis Summary

- Capital cost: processing, structures
- Operation & maintenance cost: processing
- Recycling revenue
- Transportation cost: trucks and labor
- Avoided cost (revenue) for recyclables formerly sent to landfill



Alternatives and Total Present Worth

A. Dual stream at existing City facility	\$-5,559,000
B. Single stream at existing City facility (City only)	\$-9,536,000
C. Two transfer stations to third party	\$-2,428,000
D. One transfer station at existing facility	\$1,225,000
E. Regional MRF at Wauwatosa	\$-10,985,000
F. Regional MRF at existing City facility	\$-6,242,000
❖ Based on low volume, low recycling price	
❖ Negative is a cost, a plus is a revenue	
❖ Alternative D is always profitable (4 cases)	

Cost Analysis

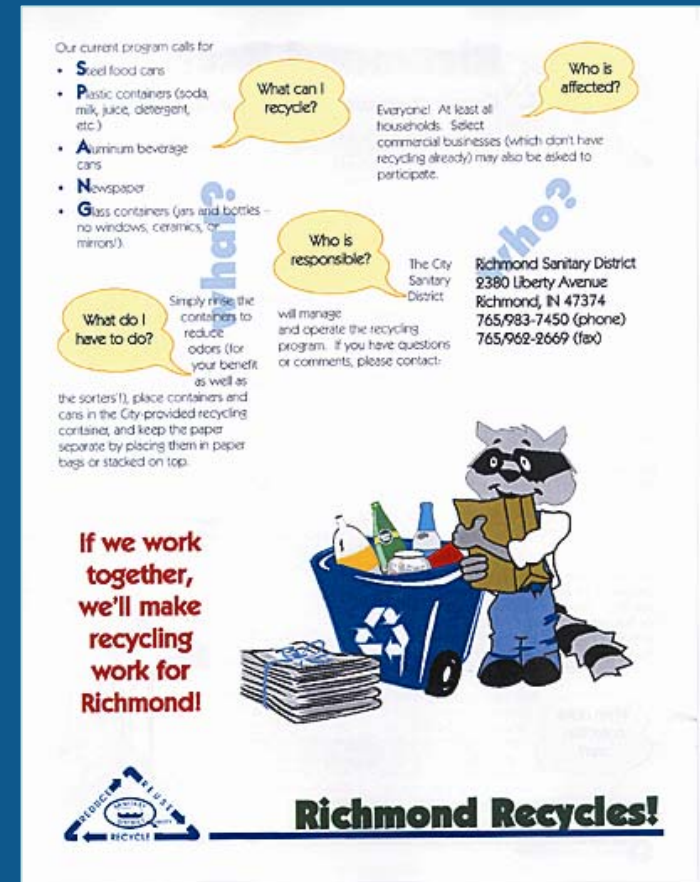
- Bracketed recycling material price and recycling volume
- 4 scenarios
- Low volume, low recycling material price
- Low volume, high recycling material price
- High volume, low recycling material price
- High volume, high recycling material price

Results: most cost-effective alternative was consistent throughout



Other Recycling Considerations

- Public education
- Recycling collection frequency
- Pay as you throw program
 - ❖ 16 to 17% diversion from trash among recycling, yard waste and source reduction



Richmond, IN sample public informational flyer

Summary

- Recycling program is a continuing improvement process
- Collection will evolve from monthly to 3 weeks to possibly 2 weeks in future
- Processing becomes more efficient over time
- Recycling markets are global and improved markets are expected
- Contract negotiations are key to success
- Single transfer station is cost effective. Potential for two transfer stations, with innovative operations





City of Milwaukee

200 E. Wells Street
Milwaukee, Wisconsin
53202

Meeting Minutes RECYCLING TASK FORCE

PRESTON COLE, CHAIR

Ald. Joe Dudzik, Michael J. Daun, Lisa Schaal, and Erick Shambarger

Staff Assistant, Terry MacDonald

Phone: (414)-286-2233; Fax: (414) 286-3456, E-mail: tmacdo@milwaukee.gov

Monday, October 26, 2009

1:30 PM

Room 301-A, City Hall

Meeting convened: 1:34 P.M.

1. Roll call

Present 4 - Cole, Daun, Dudzik and Schaal

Excused 1 - Shambarger

Also present: James Carroll, Legislative Reference Bureau, Jim Michalski, Comptroller's Auditing Division, Wanda Booker, Dept. of Public Works and Rick Meyers, Dept. of Public Works

2. Approval of the minutes of the September 14, 2009 meeting

Ald. Dudzik moved approval of the minutes, Ms. Schaal seconded. There were no objections.

Roll call taken at 2:08 P.M.

Present 4 - Cole, Dudzik, Shambarger and Schaal

Excused 1 - Daun

3. Discussion and crafting of the recommendations of the Task Force

Mr. Cole said today's discussion will revolve around the fine-tuning of the recommendations that the consultant Earth Tech/AECOM is recommending as a result of its study. He said he will then convene one more task force meeting, within the next two weeks, to review and vote on the final recommendations.

Mr. Donald F. Pirrung, PE and Mr. Paul Matz with Earth Tech/AECOM and Mr. Meyers, City's Recycling Specialist appeared to give an update on the study titled "Recycling Facility Alternatives Study."

Mr. Meyers said the report is not final yet. He said the consultants and City staff have been working together to revisit some of the assumptions to make the numbers more realistic.

Mr. Pirrung gave an update on the Recycling Facility Alternatives Study, by PowerPoint presentation (Exhibit 1).

Ald. Dudzik said that he thought the ordinance directed this task force to consider a bi-weekly pick-up.

Mr. Meyers replied that bi-weekly pick-up was considered in the study.

Ms. Schaal asked what are the reasons that make Alternative D the lowest risk?

Mr. Pirrung replied that Alternate D requires the least amount of capital investment, it can be implemented relatively easily by using the existing facility, parking lot and scale; and the City would only be required to obtain a compactor and it would be ready to go.

Mr. Daun asked if the alternatives that dealt with purchasing a new facility include the cost of the land?

Mr. Pirrung replied that the land improvement costs were included, but not the cost of the land itself. He said in the alternatives that dealt with purchasing a new facility the City and Wauwatosa already own the land on which the facility would be located.

Mr. Daun asked if there is any certainty on what the level of cost the City will be facing when it's time to enter into it new recycling agreements?

Mr. Cole replied that he feels that there will not be any more long-term recycling agreements in the future. He said future agreements will probably be no more than 3-5 years in length.

Ald. Dudzik asked when looking at the cost effectiveness in using a transfer station does the cost include the fuel?

Mr. Pirrung replied in the affirmative.

Ald. Dudzik referred to Alternative C where it refers to "Potential solution in future to have the recyclables compacting done during a second shift at a transfer station" and asked if this is saying this will be done at only one of the transfer station?

Mr. Pirrung replied that there would be two transfer stations, there is one on the southside already and the other the location needs to be determined and there would

be a second shift at both locations.

Mr. Michalski said the cost noted in the study for switching from a monthly pickup to every three weeks is inaccurate.

Mr. Meyers replied that the study used 34 routes when figuring the cost for a three week pickup. He said due to budget cuts, etc., those numbers will need to be revisited. He asked Mr. Cole if the study should use 31 routes for the basis to figure the cost?

Mr. Cole replied in the affirmative.

Ald. Kovac appeared to question the task force on its finding relating to a three week recycling pick-up cycle, because he would like to offer a couple of amendments to the Mayor's 2010 proposed budget.

Mr. Cole advised Ald. Kovac to work with budget office staff and Dept. of Public Works recycling staff to come up with a more accurate cost for the number of routes that would be needed for a three week pick-up cycle.

Ald. Dudzik asked if the tipping fee is applied to recyclables or just garbage?

Mr. Cole replied that the tipping fee is applied to just garbage, but it is considered a part of the savings for recyclables.

Mr. Carroll said that he has been working with the Budget Office in creating the amendment for the three week recycling pick-up cycle for Ald. Kovac and there are also additional costs for HMO and pension benefits for each additional full-time employee (FTE) needed for the additional routes.

Mr. Pirrung continued his presentation by explaining the collection alternatives.

Mr. Meyers said that newer recycling collection equipment can be used for certain routes and would allow for more frequent collection with fewer resources in the future.

Mr. Pirrung said that alternative D, using one transfer station at the existing facility, would be the most cost effective.

Mr. Pirrung said some of the other recycling issues the study considered were: Public education, recycling collection frequency and Pay-As-You-Throw program.

Lastly, Mr. Pirrung gave a summary of his study's findings.

Mr. Shambarger asked Mr. Pirrung if he can provide a spreadsheet with all the scenarios so that the City can review and use when negotiating contracts.

Mr. Pirrung replied in the affirmative. He said that the tables with all the scenarios will be included in the final copy of the study.

Ald. Dudzik asked if this task force is charged with the developing recycling enforcement policy?

Mr. Cole replied in the negative. He said the legislation directs the Dept. of Public Works to develop and implement a recycling enforcement policy.

4. Next meeting date, time and agenda

Mr. Cole recommended that the next Recycling Task Force meeting take place on November 16, 2009 at 1:30 P.M. There were no objections.

Mr. Cole said that at the next meeting the task force will discussion and approve the final recommendations.

Meeting adjourned: 2:50 P.M.

Terry J. MacDonald
Staff Assistant



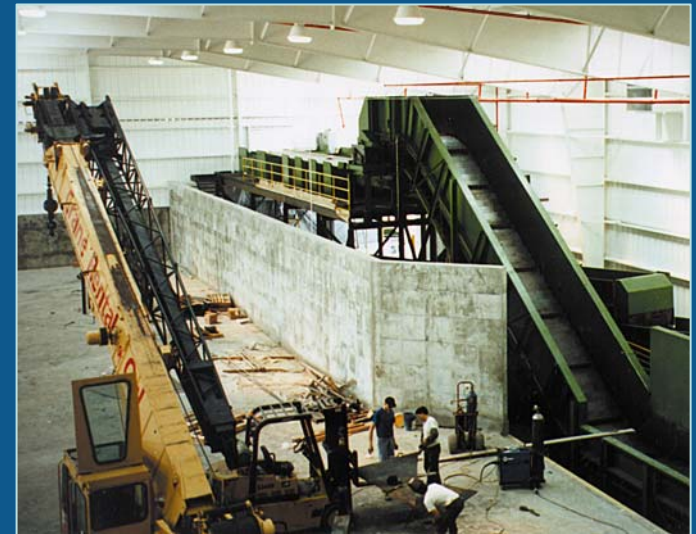
Recycling Facility Alternatives Study
City of Milwaukee
October 26, 2009

Prepared by:
Don Pirrung, PE
Paul Matz
AECOM

EXHIBIT 1

Project Background

- City owns recycling facilities
- Under contract with Recycle America (Waste Management)
- City shares in recycling revenue, 50:50 split
- Contract period
 - ❖ July 2004 through June 30, 2009
 - ❖ City has sole option to extend contract for up to five one-year periods



Existing and Proposed Regional Recycling Facilities

- City's facility: South 13th Street and Mount Vernon
- Waste Management (Recycle America)
 - ❖ New facility in Germantown
- Proposed facility in Wauwatosa
 - ❖ Would serve Waukesha County, City of Wauwatosa, and City of Milwaukee



Executive Summary

Processing Alternatives

- A. Dual stream at existing City facility
- B. Single stream at existing City facility (City only)
- C. Two transfer stations to third party
- D. One transfer station at existing facility
- E. Regional MRF at Wauwatosa
- F. Regional MRF at existing City facility



Collection Alternatives

- Monthly – current practice
- 3 weeks (1 person/truck)
- 3 weeks (2 persons/truck)
- 2 weeks (1 person/truck)
- 2 weeks (2 person/truck)



Evaluation Based on:

- Total present worth over 15 years
- State of practice
 - ❖ Dual stream
 - ❖ Single stream



Findings

– Processing

- ❖ First: Alternative D – one transfer station at existing facility
- ❖ Second: Alternative C – two transfer stations to third party

– Collection

- ❖ First: - 3 week – 1 person/truck
- ❖ Potential in future for 2 week – 1 person/truck as City fine tunes the program



Recommendations

1. Implement single stream processing
2. Implement Alternative D – one transfer station at existing facility
3. Potential to implement Alternative C – two transfer stations to third party in future if recycling compaction is done during second shift, thereby avoiding capital costs
4. Consider “pay as you throw” to improve recycling and reduce solid waste
5. Implement collection 3 week 1 person/truck, fine tune thereafter



Alternative A – Dual Stream at Existing City Facility

- Continue same processing
- Replaces old equipment
- Serve only the City
- Industry trend is single stream because collection is more cost-effective, increased recyclables, more user friendly
- Not most cost-effective



Alternative B – Single Stream at Existing City Facility (City only)

- Single stream processing
- Industry trend is toward single stream
- Not most cost-effective



Alternative C – Two Transfer Stations to Third Party

- Lincoln Avenue site
- New northwest site
- Two new transfer stations – higher capital cost than Alternative D
- Need room to park recycling trucks
- Potential solution in future if recyclables compacted during second shift to reduce capital cost and use solid waste transfer station
- Second lowest cost alternative



Alternative D – One Transfer Station at Existing Facility

- Lowest cost alternative
- Converts City MRF into transfer station
- Smallest City investment, lowest risk
- Single stream processing at third party



Alternative E – Regional MRF at Wauwatosa

- Regional MRF for Waukesha County, City of Wauwatosa and City of Milwaukee
- Highest cost alternative
- Recent MRF construction projects indicate higher costs than Waukesha County study
- More costs, more risks
- More challenges to implement with more government bodies involved



Alternative F – Regional MRF at Existing City Facility

- Regional MRF for Waukesha County, City of Wauwatosa, and City of Milwaukee
- Third most cost-effective alternative
- More costs, more risks than transfer station alternatives
- More challenges to implement with more government bodies involved



Collection Alternatives



- Monthly – 1 person/truck
 - ❖ Continues existing program
 - ❖ City survey and literature indicates more frequent collection is desirable
- 3 weeks – 1 person/truck
 - ❖ Most cost effective and efficient if cart is at curb or alley on a set pick up schedule
 - ❖ No more up the driveway service
 - ❖ 10% increase in recyclables expected over monthly
 - ❖ Requires public information
 - ❖ View as next step in continuing improvement process

Collection Alternatives

- 3 weeks – 2 persons/truck
 - ❖ Not cost-effective
 - ❖ Increased labor cost is not offset by increased recyclables volume
 - ❖ 10% increase in recyclables over monthly
- 2 weeks – 1 person/truck
 - ❖ Not cost-effective yet, but may be in future as City fine tunes program
 - ❖ Best approach, user friendly
 - ❖ Increases recyclables by 20 percent over monthly
- 2 weeks – 2 persons/truck
 - ❖ Increased labor cost is not offset by increased recyclables volume



Total Present Worth Analysis Summary

- Capital cost: processing, structures
- Operation & maintenance cost: processing
- Recycling revenue
- Transportation cost: trucks and labor
- Avoided cost (revenue) for recyclables formerly sent to landfill



Alternatives and Total Present Worth

A. Dual stream at existing City facility	\$-5,559,000
B. Single stream at existing City facility (City only)	\$-9,536,000
C. Two transfer stations to third party	\$-2,428,000
D. One transfer station at existing facility	\$1,225,000
E. Regional MRF at Wauwatosa	\$-10,985,000
F. Regional MRF at existing City facility	\$-6,242,000
❖ Based on low volume, low recycling price	
❖ Negative is a cost, a plus is a revenue	
❖ Alternative D is always profitable (4 cases)	

Cost Analysis

- Bracketed recycling material price and recycling volume
- 4 scenarios
- Low volume, low recycling material price
- Low volume, high recycling material price
- High volume, low recycling material price
- High volume, high recycling material price

Results: most cost-effective alternative was consistent throughout



Other Recycling Considerations

- Public education
- Recycling collection frequency
- Pay as you throw program
 - ❖ 16 to 17% diversion from trash among recycling, yard waste and source reduction



Richmond, IN sample public informational flyer

Summary

- Recycling program is a continuing improvement process
- Collection will evolve from monthly to 3 weeks to possibly 2 weeks in future
- Processing becomes more efficient over time
- Recycling markets are global and improved markets are expected
- Contract negotiations are key to success
- Single transfer station is cost effective. Potential for two transfer stations, with innovative operations





City of Milwaukee

200 E. Wells Street
Milwaukee, Wisconsin
53202

Meeting Minutes RECYCLING TASK FORCE

PRESTON COLE, CHAIR

**Ald. Joe Dudzik, Michael J. Daun, Lisa Schaal, and Erick
Shambarger**

Staff Assistant, Terry MacDonald

**Phone: (414)-286-2233; Fax: (414) 286-3456, E-mail:
tmacdo@milwaukee.gov**

Wednesday, December 16, 2009

3:00 PM

Room 301-A, City Hall

Meeting convened: 3:02 P.M.

1. Roll call

Present 5 - Cole, Daun, Dudzik, Shambarger and Schaal

**Also present: Ted Medhin, Legislative Reference Bureau, Jim Michalski,
Comptroller's Auditing Division, Wanda Booker and Rick Meyers, Dept. of
Public Works, Environmental Services Section**

2. Review and Approval of the minutes of the October 26, 2009 meeting

*Mr. Shambarger moved approval of the minutes, Ms. Schaal seconded. There were
no objections.*

3. Review and approval of the recommendations

Mr. Donald F. Pirrung, PE and Mr. Paul Matz with Earth Tech/AECOM gave an update on the Recycling Facility Alternatives Study (Exhibit 1). He said there has been some changes to the study since the final draft was given to each of the members. He said the changes that were made are to the income from recyclables, salvage value, and to the collections cost.

Ald. Dudzik said the study recommends using a a three week collection cycle and asked if it is cost effective regardless of where the transfer station is located?

Mr. Pirrung replied that the report assumes the use of the existing station.

A motion was made by Ald. Dudzik and seconded by Mr. Daun that the City recommends implementation of a single stream recycling collection and processing system. There were no objections.

Mr. Daun referred to his memo, dated December 14, 2009 (Exhibit 2) and said the memo was put together in response to the draft recommendations by the Dept. of Public Works and its consultant AECOM. He asked the Task Force to consider modifying the recommendations to include the examination of both Alternatives D and F simultaneously.

Ms. Schaal asked what would be the difference between Alternative D and Alternative F as far as how the current jobs would be affected at the recycling facilities?

Mr. Meyers replied that there would be job losses if the City's MRF becomes a transfer station instead of continuing as a processing facility.

Mr. Michalski said he reviewed the letter from Waukesha County, dated December 8, 2009 (Exhibit 3), and he got the sense that there was an urgency on their behalf to move to a regional single stream process, because their recycling contracts are going to expire at the same time as the City of Milwaukee's recycling contract.

Mr. Daun referred to Mr. Meyers' modified recommendations (Exhibit 4) and asked if recommendation #4 - implement a bi-weekly recycling collection within 1-4 years will involve a pilot program or is there enough data to go ahead with it citywide?

Mr. Cole replied that the department still needs to look at the cost of the fully automated truck that is needed and to also complete a survey of the City to find out what areas could be done with that type equipment. He thinks the bi-weekly with a fully automated truck could be done for about 1/2 of the City.

A motion was made by Mr. Daun to approve the following recommendations as suggested by the Department of Public works:

- 1. Implement single stream recycling within the next 1-4 years as the recycling collection and processing system to serve the City of Milwaukee.*
- 2. Include internal and external stakeholders in a deeper investigation of the Recycling Facility Study's top two options:*
 - i. Alternative D – One Transfer Station at Existing City Facility*
 - ii. Alternative F – Regional Single Stream MRF at Existing City Facility*

3. *Immediately implement three-week recycling collection to increase recycling volumes and revenues. Schedule recycling collection and require the cart to be located at the curb or alley line to improve collection efficiency. End summer walk up driveway service except for hardships.*

4. *Implement bi-weekly recycling collection within 1-4 years as greater collection efficiencies are achieved through improved routing methods and prescriptive use of fully-automated collection vehicles.*

5. *Implement Pay-As-You-Throw features for garbage collection in conjunction with increased recycling collection service to optimize effectiveness of both programs.*

Mr. Shambarger said he is opposed to recommendation 4 - Implement bi-weekly recycling collection within 1-4 years.

Mr. Daun moved to amend his motion by removing recommendation #4.

A motion was made by Mr. Daun and seconded by Ald. Dudzik to approve recommendations 1, 2, 3 and 5 as listed above. There were no objections.

4. Review and approval of the Recycling Task Force report

A motion was made by Mr. Daun and seconded by Ms. Schaal to approve the draft Recycling Task Force Report (Exhibit 5). There were no objections.

Meeting adjourned: 3:50 P.M.

Terry J. MacDonald
Staff Assistant



Recycling Facility Alternatives Study
City of Milwaukee
December 16, 2009

Prepared by:
Don Pirrung, PE
Paul Matz
AECOM
EXHIBIT 1

Changes to Study between Draft and Final

- The formula for “Income from Recyclables” was modified to better reflect how the City’s contract is currently structured.
- A figure for the “Salvage Value” of a facility was used in the Present Worth calculation for the two alternatives (C and E) that require construction of new facilities.
- The “Collection Costs” were revised to reflect 31 routes versus 34 routes for monthly pick-up.



Executive Summary

Processing Alternatives

- A. Dual stream at existing City facility
- B. Single stream at existing City facility (City only)
- C. Two transfer stations to third party
- D. One transfer station at existing facility
- E. Regional MRF at Wauwatosa
- F. Regional MRF at existing City facility



Collection Alternatives

- Monthly – current practice
- 3 weeks (1 person/truck)
- 3 weeks (2 persons/truck)
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Cost Analysis

- Bracketed recycling material price and recycling volume
- 4 scenarios
- Low volume, low recycling material price
- Low volume, high recycling material price
- High volume, low recycling material price
- High volume, high recycling material price

Results: most cost-effective alternative was consistent throughout



Total Present Worth Analysis Summary

- 15 year analysis
- Capital cost: equipment, structures
- Annual Recycling Income (includes O&M/Processing Costs)
- Annual Collection cost: trucks and labor
- Annual Avoided cost (income) for recyclables formerly sent to landfill
- Facility Salvage Value (only for Alternatives needing new facility)



Alternatives and Total Present Worth

Example

Based on 3 Weeks (1 person / truck)

Low volume - Low recycling price

Negative is a cost, a plus is a revenue

A. Dual stream at existing City facility	\$-7,509,000
B. Single stream at existing City facility (City only)	\$-8,997,000
C. Two transfer stations to third party	\$-7,810,000
D. One transfer station at existing facility	\$-3,764,000
E. Regional MRF at Wauwatosa	\$-7,700,000
F. Regional MRF at existing City facility	\$-5,219,000

In all comparisons “Alternative D” is always has the best Present Worth

Alternative D – One Transfer Station at Existing Facility

- Lowest cost alternative
- Converts City MRF into transfer station
- Smallest City investment, lowest risk
- Single stream processing at third party



Findings

– Processing

- ❖ First: Alternative D – one transfer station at existing facility

– Collection

- ❖ First: - 3 week – 1 person/truck
- ❖ Potential in future for 2 week – 1 person/truck as City fine tunes the program



Recommendations

1. Implement single stream processing
2. Implement Alternative D – one transfer station at existing facility
3. Consider “pay as you throw” to improve recycling and reduce solid waste
4. Implement collection 3 week 1 person/truck, fine tune thereafter



Summary

- Recycling program is a continuing improvement process
- Collection will evolve from monthly to 3 weeks to possibly 2 weeks in future
- Processing becomes more efficient over time
- Recycling markets are global and improved markets are expected
- Contract negotiations are key to success
- Single transfer station is cost effective



MEMORANDUM FOR MEMBERS OF THE RECYCLING TASK FORCE

FROM: Michael Daun *MJD*

SUBJECT: Task Force Draft Recommendations

DATE: December 14, 2009

The Office of the Comptroller has carefully reviewed the Recycling Facility Alternatives Study and the proposed Recycling Task Force Draft Recommendations by the Department of Public Works and its consultant AECOM. We commend both on the thoroughness of the study and view the draft recommendations to implement single stream recycling as a major step to increase City of Milwaukee recycling while controlling the associated costs. Our Office supports these draft recommendations with one suggested modification. Regarding Recommendation #2, we would ask Task Force consideration of a modification to allow simultaneous consideration of Alternative F – Regional (publicly owned) Single Stream Recycling Facility at the Existing City Facility - along with Alternative D. With Task Force approval of the recommendations, we suggest that DPW and its consultant actively pursue both alternatives to determine the most cost effective direction for the City.

Given the uncertainty associated with a future recycling processing vendor contract, we believe Alternative F is worthy of further consideration. Alternative F would likely provide additional long term control over recycling costs than would the vendor dependent alternatives. Also, the recycling study did not consider that the City of Milwaukee can borrow funds at a significant "discount" (eg, tax exempt borrowing) compared to the private sector, which effectively lowers the capital cost portion of all alternatives, thus favoring Alternative F. While Alternative D remains the lowest projected cost alternative after this adjustment, the City's discounted cost of capital narrows the Present Value cost difference between Alternatives D and F. Under the low volume-low commodity price scenario, this cost difference is reduced from \$1.5 million (39% higher) to \$0.7 million (19.8% higher). Under all other scenarios, the cost difference between Alternatives D and F narrows even further.

Moreover, it is generally thought that future recycling contracts with a private vendor would have to be negotiated for a significantly shorter term. If the City was dependent on only one or two private vendors for its recycling processing at the time of contract renewal, the cost of these future contract renewals could come at a premium.

On December 8th Task Force members received a letter from the Waukesha County Department of Parks and Land Use which encourages further review of the regional MRF concept. DPW's study indicates that Alternative F would be the lowest cost regional publicly owned MRF alternative. We are not advocating Alternative F (publicly owned MRF at the City's existing site) over Alternative D. We are simply requesting that both alternatives be simultaneously explored as the City moves toward implementation.

NOTE: With regard to Recommendation #3 - Alternative C for two transfer stations to a third party recycling processor - the final AECOM report (page 24) did not include it in the study recommendations. Therefore, we assume that this recommendation is withdrawn.

Mjd/Jtm/12-14-09

EXHIBIT

tabbies

2

Daniel P. Vrakas
County Executive

Dale R. Shaver
Director

Waukesha COUNTY

DEPARTMENT OF
PARKS AND LAND USE

December 8, 2009

Milwaukee Recycling Task Force Members:

Preston Cole, Chair

Michael Daun

Alderman Dudzik

Lisa Schaal

Erik Shambarger

RE: Recycling Facility Alternatives Study and Recommendations (November 2009)

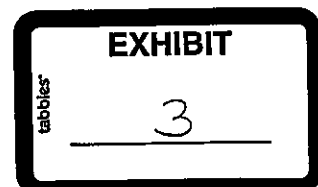
Dear Recycling Task Force members,

Thank you for the opportunity to review your Recycling Facility Alternatives Study. This correspondence is submitted to offer a few comments on behalf of Waukesha County. Many of these comments were previously made by Perry Lindquist, of my Land Resources Division at your July Task Force meeting.

The primary driving factor for changing the Waukesha County Material Recycling Facility (MRF) is pressure from 25 Waukesha County communities that participate in our coordinated recycling effort, to reduce their private hauling costs by switching to every-other-week single stream recycling collection. Our existing weekly recycling collection using blue bins, can no longer be sustained given current local budget pressures. However, a study we completed in 2007 shows that switching our MRF to single stream, with the current amount of tonnage being processed is not economical. The study did go on to show that the return on investment would be vastly improved by doubling our tonnage. The increased tonnage could be achieved through a cooperative venture with the City of Milwaukee.

Your report states that the most cost-effective solution for the City of Milwaukee's recycling program is to switch to single stream and negotiate with WMRA to process your materials at their MRF in Germantown. It further states that if the City is not happy with the costs of this option in the future, they could reconsider processing at a publicly-owned MRF. We are concerned that processing recyclables at a privately-owned MRF may only provide short term cost relief and that once the public MRF is shut down, it would be politically and fiscally impossible to start it back up again in the future. This is because re-starting a publicly-owned MRF would require taking the materials away from the private sector, representing a direct threat to private enterprise. We would like to remind you that processing recyclables at the Milwaukee

Administration
515 W. Moreland Blvd • Room AC260
Waukesha, Wisconsin 53188-3878
Phone: (262) 896-8300 • Fax: (262) 896-8298
www.waukeshacounty.gov/landandparks



and Waukesha County facilities is already privatized. The current public/private partnerships have worked very well, and competition to operate the MRFs has led to very favorable pricing for the communities we serve. An RFP process would be required if we were to send materials to a private MRF, and based on our recent experience with coordinated hauling contracts, may not give us the results we are looking for.

Having two existing publicly-owned MRF operations work together on a new facility provides not only an opportunity to greatly improve the return on our investments, but is also a great way to demonstrate how regional cooperation can work. The cooperative MRF approach continues to take advantage of a competitively bid private operator.

Now that the City of Milwaukee has completed its draft Recycling Facility Alternative Study, I would like to encourage Milwaukee to take the next step in the analysis process. That next step involves taking the data from your analysis along with the data from the Waukesha County 2007 analysis and enter into a joint study with the City of Wauwatosa to further analyze the cooperative regional MRF approach. The scope of the study should include:

- 1) Refining and updating economic analysis from previous studies
- 2) A technical investigation of possible sites for a regional single stream MRF
- 3) A review of transportation issues related to each site option
- 4) Developing a building concept plan and budget for the best option
- 5) Identifying financial options for sharing costs and revenues
- 6) A review of institutional options for facility ownership, contracting, oversight, etc.
- 7) Recycling collection or any other issues that may arise.

This next step in the process will provide the opportunity to fully examine the details associated with a regional approach to recyclable material processing. Not only has the cooperative municipal approach been financially beneficial to Waukesha County for many years, but the same model has now been demonstrated to be very effective in Wisconsin's Fox Valley. I encourage you to make the joint study a part of your recommendation to the Common Council.

We would appreciate the opportunity to discuss these issues at the next Recycling Task Force meeting. Should you have any questions, or need further information, please do not hesitate to contact me.

Sincerely,



Dale R. Shaver
Director

Recycling Recommendations:

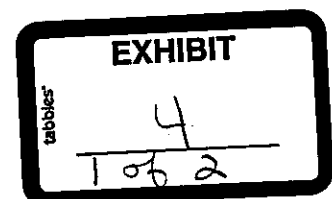
❖ **Recommendations by AECOM in their Recycling Facility Alternatives Study final report to DPW are listed below.**

The following recommendations are made:

1. Implement Alternative D – One Transfer Station at Existing City Facility, based on the economics. It presents the least investment and least risk to the City of Milwaukee. Single stream collection offers the benefit of more efficient collection. It maximizes the cart volume and improves convenience for residents.
 2. Negotiate with WMRA to implement Alternative D.
 3. Implement three-week recycling collection to increase recycling volumes and revenues. Schedule recycling collection for the cart to be located at the curb or alley line (no walk up driveway) to improve collection efficiency. Make improvements to the routes based on new software for routing trucks.
 4. Implement Pay As You Throw features for garbage collection in conjunction with increased recycling collection service to optimize effectiveness of both programs.
-

❖ **Modified recommendations below by DPW Recycling Specialist, Rick Meyers, are suggested alternatives for Recycling Task Force consideration**

1. Implement single stream recycling within the next 1-4 years as the recycling collection and processing system to serve the City of Milwaukee.
2. Include internal and external stakeholders in a deeper investigation of the Recycling Facility Study's top two options:
 - i. Alternative D – One Transfer Station at Existing City Facility
 - ii. Alternative F – Regional Single Stream MRF at Existing City Facility
3. Immediately implement three-week recycling collection to increase recycling volumes and revenues. Schedule recycling collection and require the cart to be located at the curb or alley line to improve collection efficiency. End summer walk up driveway service except for hardships.
4. Implement bi-weekly recycling collection within 1-4 years as greater collection efficiencies are achieved through improved routing methods and prescriptive use of fully-automated collection vehicles.
5. Implement Pay As You Throw features for garbage collection in conjunction with increased recycling collection service to optimize effectiveness of both programs.



City of Milwaukee Recycling Facilities Study: Top Two Options

Alternative D: One Transfer Station to Third Party at Existing City Facility

Pros:

- Most cost-effective based on Present Worth analysis (over a 15-yr period)
- Lowest capital cost
- Least complicated to implement
- Most flexible option; retaining use of building allows option of installing new processing equipment in the future
- Contracts can be short term if fair prices will come from existing area processors or long term if desired to potentially attract new processors to the market area
- Ample private processing capacity exists within reasonable transfer distance
- Least risk

Cons:

- Loss of public infrastructure with discontinuation of processing in public facility
- Gives recycling processors with existing area facilities a leg up on competition
- May expect fewer companies to bid on recycling processing services since they would have to capitalize their own building and equipment
- Less competition could lead to higher processing costs, particularly in the long term
- Potentially lose unique opportunity to partner with nearby communities on public processing site
- Eliminates ability to maintain Milwaukee residency requirements in processing contracts

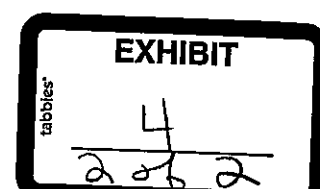
Alternative F: Regional Single Stream MRF at Existing City Facility

Pros:

- Existing building is adequate size and condition to house new processing equipment serving the region
- Maintain public ownership of public works infrastructure
- Competitive bidding on recyclables processing due to level playing field created by public ownership of capital assets
- Long term cost-containment for recyclables processing services by preventing private monopoly
- Maintains ability to have Milwaukee residency requirements in processing contracts

Cons:

- Greater risk due to uncertainty of Return On Investment caused by unpredictable commodity market prices
- Considerable staff time and consulting work required to develop and implement
- Implementation contingent upon successful cooperation of multiple government entities



DRAFT

**City of Milwaukee
Recycling Task Force
Final Report and Recommendations to the
Common Council
January 2010**



INTRODUCTION

The City of Milwaukee Common Council established the Recycling Task Force (RTF) on January 16, 2009, with the adoption of Common Council File # 081212 and amended it with Common Council File 090233.

MISSION STATEMENT

This Task Force was charged with conducting a comprehensive study of the fiscal and operational impacts of a conversion to single-stream recycling in the City of Milwaukee. The task force was directed to submit those findings and recommendations to the Common Council by January 11, 2010.

MEMBERSHIP

The Recycling Task Force members consisted of five members:

Preston Cole, appointed by the Commissioner of Public Works as his designee and appointed as chair by the Common Council President

Ald. Joe Dudzik, appointed by the Common Council President

Lisa Schaal, citizen member appointed by the Common Council President with experience and knowledge of municipal public works operations

Michael Daun, appointed by the Milwaukee Comptroller as his designee

Erick Shambarger, appointed by the Budget and Management Director as his designee

MEETING DATES

The Task Force held the following public meetings in 2009:

April 6, 2009

April 27, 2009

May 18, 2009

June 8, 2009

June 29, 2009

July 27, 2009

September 14, 2009

October 26, 2009

December 16, 2009

SUMMARY

During the regular meetings of the task force, members discussed a series of issues, questions and recommendations by task force members, the Consultant Earth Tech/AECOM and others relating to:

- Recycling citation process
- What is a single stream recycling program
- What kind of recycling program other cities are using
- The current recycling contract
- What type of equipment is required and what is the cost for such equipment
- “Pay As You Throw” program
- What the cost would be to the City to convert to a single-stream collection process
- Determine whether the City would bring the collected recyclables to the Germantown facility or would the City purchase its own equipment and use its own facility
- Will the City contract out the recyclables processing like it is doing now
- How the weather can impact the recycling program

The following individuals appeared at one or more of the task force meetings to answer questions, offer suggestions and to provide legal advice:

- Mr. Rick Meyers, Department of Public Works, Sanitation Division
- Ms. Wanda Booker, Department of Public Works, Sanitation Division
- Mr. Donald Stone with Department of Public Works, Sanitation Division
- Ald. Nik Kovac
- James Carroll, Legislative Reference Bureau
- Jim Michalski, Comptroller's Auditing Division
- Deputy City Attorney Linda Burke
- Assistant City Attorney Jay Unora with the ordinance Enforcement Division
- Mr. Donald F. Pirrung, PE and Mr. Paul Matz with Earth Tech/AECOM Consultant Firm
- Mr. Perry Lindquist, Land Resources Manager with Waukesha County

During the task force meetings the following presentations were made:

Mr. Rick Meyers, City of Milwaukee, Environmental Recycling Specialist, gave a PowerPoint presentation on the City of Milwaukee Department of Public Works' current recycling program (**APPENDIX A**).

Member Erick Shambarger gave a brief summary of the La Follette School of Public Affairs (Madison, WI) policy study on the Pay-As-You-Throw program, which was done at the request of the City of Milwaukee's Department of Administration, Budget & Management Division. The report is titled "Impacts of Pay-As-You-Throw Municipal Solid Waste Collection" (**APPENDIX B**). A copy of the report can also be found at:

<http://www.lafollette.wisc.edu/publications/workshops/2009/waste.pdf>

Mr. Perry Lindquist, Land Resources Manager with Waukesha County, gave a PowerPoint presentation relating to a Waukesha County Recycling System Study (**APPENDIX C**).

Mr. Donald F. Pirrung, PE and Mr. Paul Matz with Earth Tech/AECOM, gave a series of PowerPoint presentations relating to a "Recycling Facility Alternatives Study" (**APPENDIX D**).

The Recycling Task Force also attended tours of the City of Milwaukee Materials Recovery Facility (1313 W. Mount Vernon Ave) and the Waste Management Materials Recovery Facility (W132 N10487 Grant Dr., Germantown, WI) on June 29, 2009.

The minutes of all meetings of the Task Force are accessible on the Internet at <http://milwaukee.legistar.com/calendar.aspx> and in Common Council File #090072.

RECOMMENDATIONS

The recommendations may require further refinement and review and may require ordinance amendments or contract negotiation to be implemented. Time has not allowed for a complete review of their legality and enforceability.

We, the members of the City of Milwaukee Recycling Task Force hereby recommend the following:

1. Implement single stream recycling within the next 1-4 years as the recycling collection and processing system to serve the City of Milwaukee.
2. Include internal and external stakeholders in a deeper investigation of the Recycling Facility Study's top two options:
 - i. Alternative D – One Transfer Station at Existing City Facility
 - ii. Alternative F – Regional Single Stream MRF at Existing City Facility
3. Immediately implement three-week recycling collection to increase recycling volumes and revenues. Schedule recycling collection and require the cart to be located at the curb or alley line to improve collection efficiency. End summer walk-up driveway service except for hardships.
4. Implement Pay-As-You-Throw features for garbage collection in conjunction with increased recycling collection service to optimize effectiveness of both programs.

APPENDICES

APPENDIX A

APPENDIX B

APPENDIX C

APPENDIX D



January 15, 2010

Preston Cole
Chair, Recycling Task Force
City of Milwaukee Dept of Public Works
841 N Broadway, Rm 501
Milwaukee, WI 53202
preston.cole@milwaukee.gov

Re: Letter of Interest in the design, build, retrofit, and/or operation of a recycling facility for the City of Milwaukee

Dear Mr. Cole:

FCR, LLC is pleased to submit this Letter of Interest to you and the City of Milwaukee's Recycling Advisory Board. We understand that the City is in the process of investigating the next step in developing the future of recycling for Milwaukee and its residents. We understand that your task force has been working on options for the City's future in recycling, and that several scenarios have been discussed. We are very interested in the opportunity of submitting proposals detailing plans to operate your existing MRF, to retrofit the current MRF with new Single Stream equipment, or develop a regional municipal processing facility with the City and surrounding communities. There may be other initiatives that we may explore together to further expand and improve the recycling initiatives currently in place. We would like the opportunity to offer our expertise and experience to the City as it takes the next step in its efforts to create a world class recycling program. We take great pride in our track record of building mutually beneficial partnerships with municipalities throughout the country.

By way of introduction, FCR is a wholly owned subsidiary of Casella Waste Systems, Inc., a publicly held company listed on the NASDAQ stock exchange, "CWST". Casella's substantial operational and MIS systems, as well as financial resources, support all of FCR's endeavors. As the "recycling arm" of Casella, FCR brings a wealth of design, project management, and operational experience to projects. Our parent company brings the same level of expertise in solid waste management services and business development.

- Experience - FCR has been in the recycling business since 1981. We currently operate 24 Materials Recovery Facilities (MRFs) which are processing over 1,400,000 tons per year of mixed curbside-collected recyclables including glass bottles, metal cans, plastic containers, aseptic containers, corrugated cardboard, magazines, junk mail, phone books and newspaper. We are proud of our record and we encourage you to contact any and all of the contract/project managers who are our major customers. We are confident that our customer references will establish our industry leading credibility.
- Processing - FCR operates 7 single stream MRFs. Within the year, two more of our facilities will be converted to single stream, and there are current plans to convert three others. Our approach to single stream has been deliberate; concentrating on product quality and maximum recovery, and responding to our customers' needs. We have listened carefully to the paper mills and have taken careful steps toward single stream processing because of their concerns. We have identified challenges in glass markets as more facilities convert to single stream collection and processing and continue to pursue glass recycling initiatives. We have

nurtured partnerships and developed our own capacity to make furnace-ready cullet for the bottle makers to improve the value we can gain from recyclable glass. We have responsibly expanded our recyclable material specifications to include more plastic items- all without losing our focus on our core priorities:

- 1. Safety**
- 2. Product Quality**
- 3. Productivity**

- Design – Half of the facilities that FCR operates required furnishing a new facility. FCR was responsible for the design and construction of the original MRF from the ground up. The other half existed when FCR took the operation over. In these cases, FCR was responsible for the extensive retrofit of equipment and buildings so that the facilities would meet our needs and the demands of our municipal customers. We are fully prepared to offer you design recommendations, procure the equipment system, manage the building expansion project, and oversee the construction and installation of the processing equipment.
- Project Approach – We would like the opportunity to sit down, meet with you and walk through in more detail our accomplishments, current municipal deal structures and the mutually beneficial partnerships which make us the premier municipal recycling partner in the United States.
- Operations Management – FCR's organizational structure has been developed carefully to provide all the oversight and support from corporate management to make the local facility manager successful. Plant Managers report to Area Managers, who report directly to FCR's Vice-President of Operations. Corporate functions that support the facility include commodity marketing, safety policy and training, environmental compliance and permitting, accounting, human resources, and equipment maintenance. Detailed, professional maintenance procedures, including planned maintenance schedules and reporting requirements, are an integral part of operations.

Operations are scrutinized on a daily, weekly, and monthly basis through a series of management reports that are systematically generated by our Controllers. Area Managers routinely review these reports so that Plant Managers are never without a support system to keep plants running the way they were intended. These, and other strategic policies, are why FCR has earned such an excellent reputation for residential MRF operations throughout the eastern and central U.S.

- Commodity Marketing - FCR markets over one million tons per year of recyclable commodities to export and domestic markets. FCR's marketing knowledge and clout provides our customers with two assurances: they will earn the maximum value for their recyclables and they will be assured of product movement, even in the worst of market conditions.

Because the operation of MRFs is essentially FCR's only business, our success depends on the satisfaction of our municipal customers. The City can be assured that FCR will apply the highest standards of design, project management, and operations management to your facility. We want to continue to earn your business for the long-term; and, the best way to do that is to be the best partner we can be on your recycling team.

Sincerely,

Stephen Klemann
Area Manager Business Development
FCR Recycling
Casella Waste Systems

Daniel Kurtz
Area Manager
FCR Recycling
Casella Waste Systems

PW FILE NUMBER: 090072

[illegible]



Legislation Details (With Text)

File #: 091357 **Version:** 0

Type: Communication-Report **Status:** In Committee

File created: 2/9/2010 **In control:** PUBLIC WORKS COMMITTEE

On agenda: **Final action:**

Effective date:

Title: Communication from the Department of Public Works relating to sanitary bypass pumps.

Sponsors: ALD. MURPHY

Indexes: DEPARTMENT OF PUBLIC WORKS, REPORTS AND STUDIES, SANITARY SEWERS

Attachments: Communication, Hearing Notice List

Date	Ver.	Action By	Action	Result	Tally
2/9/2010	0	COMMON COUNCIL	ASSIGNED TO		
2/12/2010	0	PUBLIC WORKS COMMITTEE	HEARING NOTICES SENT		
2/12/2010	0	PUBLIC WORKS COMMITTEE	HEARING NOTICES SENT		
2/18/2010	0	PUBLIC WORKS COMMITTEE	HELD IN COMMITTEE	Pass	4:0
3/4/2010	0	PUBLIC WORKS COMMITTEE	HEARING NOTICES SENT		
3/4/2010	0	PUBLIC WORKS COMMITTEE	HEARING NOTICES SENT		

Number
091357
Version
ORIGINAL
Reference

Sponsor
ALD. MURPHY
Title
Communication from the Department of Public Works relating to sanitary bypass pumps.
Requestor

Drafter
2/2/10
lme



Department of Public Works
Infrastructure Services Division

1-3
mar

Jeffrey J. Mantes
Commissioner of Public Works

Preston D. Cole
Director of Operations

Jeffrey S. Polenske
City Engineer

October 19, 2009

Honorable Michael J. Murphy
Alderman, 10th Aldermanic District
Room 205, City Hall

Subject: Sanitary Bypass Pumps in the
10th Aldermanic District

Dear Alderman Murphy:

This is in response to your request during the September 17, 2009 Finance and Personnel meeting for additional information about City of Milwaukee sanitary bypass pumps.

The City of Milwaukee has 83 permitted sanitary bypass pumps, located throughout the City. These are broken down by aldermanic district in the enclosed table. Bypass pumps are located in the sanitary sewer and are designed to protect property owners adjacent to the pumps from basement backwaters during large rain events by pumping excess sanitary flow to the storm sewer.

Bypass pumps are individually programmed to engage at predetermined elevations based on surveys of low basements in the vicinity of the pump. Generally they are set to turn on approximately two to four feet below the low basement. Setting this elevation too low (further below the low-basement elevation) increases the likelihood that the pump will run more frequently. While pumps are in place to protect property owners, their operation becomes a Sanitary Sewer Overflow (SSO), which is a violation of the City's Water Pollution Discharge Elimination System (WPDES) permit with the Department of Natural Resources (DNR). These violations can also result in financial penalties to the City if the DNR determines the overflows are occurring in storm events that are not considered extreme.

As stated above, the pumps are designed to engage at predetermined levels that are programmed into each pump station. This means that the pumps respond only to the actual water level in the pump manhole, and not to the specific rain event recurrence intervals (10-year, 100-year, 500-year event). Sanitary systems in the City have different levels of inflow and infiltration (I/I), and therefore do not react the same way during the same event, or even from rain event to rain event. Large rain events will impact each

Michael J. Murphy
October 19, 2009
Page 2

sanitary system differently, which results in water levels in individual pump manholes to vary.

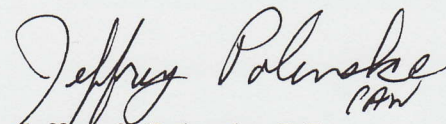
The specific pump at West Potomac Avenue and North Chapman Place utilizes an electronic level sensing device. This device did not function properly and has since been replaced. There is also a mechanical float located in this manhole (and many others) that is not part of the pump control system, but is an additional tool we use to monitor how sanitary systems perform during rain events.


The City has contracted with ASC Pumping Equipment to perform monthly checks of all bypass pumps. They submit to us a report each month noting 15 electrical readings and observations at each site, along with recommendations (see enclosed summary and detailed reports). We use this information to prioritize work for City forces to investigate and troubleshoot the pumps. We also selectively perform a more comprehensive evaluation of the pumps by simulating a high water condition in the pump manhole. This form of investigation consumes significant time and man power and is only done as needed. We are in the process of working with the DNR to prepare a more comprehensive testing procedure that can be done more efficiently. While we are confident in the results provided by ASC, they only provide a preliminary electrical evaluation of the pumps, and are not able to perform the more comprehensive testing.

If you would like to discuss any of this further, please contact my office.

If you have any questions please contact Mr. Martín A. Aquino at (414) 286-2462.

Very truly yours,


Jeffrey S. Polenske, P.E.
City Engineer

 TJT: krs

Enclosures

KRS: 1-3

City of Milwaukee
By-Pass Sewer Pump Station Inspection Report
June 2009

Permit No.	Site Location	Alm. Circ.	Entered By	Inspection Personal	Review Date	San Manhole Condition	Discharge Pipe	Pump	Power Cable	Wiring	Float	Level Transmitter	Shear Gates	Pump Control Cabinet	Voltage	Phase Voltage	Amperage	Thermal Protection	Meg Readings	Pump Operation	Work Requirements	Comments
214	N 072nd St & W Hope Ave	01		Tom & Kyle	12-Jun-09	Good	good	good	good	good	none		None	good	241/243/241	3-Phase	12.3/13.2/13.6	.1/.1/.1	550/550/550	good	none	None
215	N 072nd St & W Capitol Dr	01		Tom & Kyle	12-Jun-09	Good	good	good	good	good	none		good	needs paint	245/245/243	3-Phase	14.5/13.8/14.1	.1/.1/.1	550/550/550	good	none	multi ranger
216	W Potomac Ave & W Chapman Pl	01		Tom & Kyle	12-Jun-09	some loose brick	good	good	good	good	none		good	good	243/243/242	3-Phase	12.5/13.5/12.3	.1/.1/.1	39.8/40.0/40.3	good	none	bricks loose in manway
220	N 049th St & W Luscher Ave	01		skip	skip	skip	skip	skip	skip	skip	skip	skip	skip	skip	skip	skip	skip	skip	skip	skip	skip	no panel
223	N 066th St & W Ruby Ave	01		Tom & Kyle	15-Jun-09	Good	good	good	good	good	none	skip	None	good	241/239/239	3 Phase	7/6.2/6.5	.1/.1/.1	237/246/255	good	none	pump noise on shut down
041	N 037th St & W Kiley Ave	02		Tom & Kyle	15-Jun-09	Good	good	good	good	good	none		good	good	243/242/242	3 Phase	11.9/13/13.5	.1/.1/.1	44.2/44.2/44.0	good	none	mini ranger reads short
042	N 053rd St & W Silver Spring Dr	02		Tom & Kyle	15-Jun-09	Good	good	good	good	good	none		good	good	238/236/236	3 Phase	20.6/19.7/19.5	.2/.2/.2	354/360/326	good	none	None
069	N 061st St & W Sheridan Ave	02		Tom & Kyle	16-Jun-09	good	good	good	good	good	none		gppd	good	242/242/242		14/16.5/13.6	.1/.1/.1	10.8/10.4/11.0	good	none	gates multi ranger
																				do not		
072	N 055th St & W Custer Ave	02		Tom & Kyle	16-Jun-09	does not operate	do no operate	does not operate	does not operate	does not operate	does not operate		none	does not operate	does not operate	does not operate	does not operate	does not operate	does not operate	operate	none	line loss, panel smells burnt
200	N 035th St & W Oriole Dr (40' n/o)	02		skip	skip	skip	skip	skip	skip	skip	skip	skip	skip	skip	skip	skip	skip	skip	skip	skip	skip	skip
040	S Burrell St & W Van Norman Ave	03		skip	skip	skip	skip	skip	skip	skip	skip	skip	skip	skip	skip	skip	skip	skip	skip	skip	skip	skip
048	W Green Ave & W Ramsey Ave	03		Tom & Kyle	12-Jun-09	Good	good	good	good	good	none		None	good	241/241/240	3-Phase	13.2/13.6/12.7	.1/.1/.1	.57/.57/.57	good	none	mini ranger/cabinets leaning
050	S Pine Ave & E Cudahy Ave	03		Tom & Kyle	12-Jun-09	Good	good	good	good	good	none		None	good	245/245/245	1-Phase	10.7/11.1	.1/.1/.1	1.64/1.61	good	none	no gates
077	S Whitnall Ave (400' w/o) & E Waterford Ave	03		skip	skip	skip	skip	skip	skip	skip	skip	skip	skip	skip	skip	skip	skip	skip	skip	skip	skip	skip
205	S Quincy Ave & E Ohio St	03		Tom & Kyle	12-Jun-09	Good	good	good	good	good	none	skip	None	good	485/485/486	3-Phase	21.6/22.3/22.3	.1/.1/.1	.9/.9/.9	good	none	no gates/mini-ranger/test@1000v
211	S 001st Pl & W Bolivar Ave (S/S)	03		Tom & Kyle	12-Jun-09	Good	good	good	good	good	none		None	good	244/246/246	3-Phase	13.6/13.3/15	.1/.1/.1	550/550/550	good	none	mini ranger/no gates
032	S 046th St & W Cleveland Ave	04		Tom & Kyle	12-Jun-09	excellent	good	good	good	good	none		None	good	244/244/244	3-Phase	7.5/7.2/7.2	.1/.1/.1	550/550/550	good	none	mini ranger
033	S 036th St (170' w/o) & W Lincoln Ave	04		Tom & Kyle	12-Jun-09	Good	good	good	good	good	none		None	good	240/240/240	3-Phase	6.4/6.8/7.0	.1/.1/.1	282/296/302	good	none	called in to r. c. talley
037	S 077th St & W Oklahoma Ave	04		Tom & Kyle	12-Jun-09	Good	good	good	good	good	none		None	good	242/243/242	3-Phase	18.2/16.8/17.8	.1/.1/.1	550/550/550	good	none	mini ranger/no gates
038	S 054th St & W Midland Dr	04		Tom & Kyle	12-Jun-09	very good	good	good	good	good	none		None	good	240/239/239	3-Phase	20.6/19.7/19.2	.1/.1/.1	4.38/4.48/4.44	good	none	no gates
039	S 092nd St & W Howard Ave	04		Tom & Kyle	12-Jun-09	Good	good	good	good	good	none		None	good	241/242/242	3-Phase	26.3/23.7/25.8	.1/.1/.1	6.37/6.42/6.46	good	none	mini ranger/no gates
045	S 086th St & W Ohio Ave	04		Tom & Kyle	12-Jun-09	Good	good	good	good	good	none		None	good	246/248/247	3-Phase	13.3/12.9/13.3	.1/.1/.1	no reading	good	Possible bad ground	Possible bad ground
074	S 099th St & W Oklahoma Ave	04		Tom & Kyle	12-Jun-09	Good	good	good	good	good	none		None	good	247/247/248	3-Phase	27.7/29.4/27.6	.1/.1/.1	no reading	good	Possible bad ground	Possible bad ground
209	S 057th St & W Euclid Ave	04		Tom & Kyle	12-Jun-09	some loose brick	good	good	good	good	none		None	good	236/237/237	3-Phase	20.7/20.3/20.6	.1/.1/.1	184/183/186	good	none	some loose and cracked bricks
225	S 072nd St & W Honey Creek Dr (N/E)	04		Tom & Kyle	12-Jun-09	Good	good	good	good	good	none		None	very good	246/245/246	3-Phase	12/13.2/12.4	.1/.1/.1	68.2/66.5/65.6	good	none	None
230	S Honey Creek Dr & W Riverbend Dr (S/W)	04		Tom & Kyle	12-Jun-09	some loose brick	good	good	good	good	none		None	very good	246/245/245	3-Phase	12.3/13.8/12.5	.1/.1/.1	55.8/56.1/56.4	good	none	loose bricks
240	S 094th St & W Howard Ave	04		Tom & Kyle	12-Jun-09	very good	good	good	good	good	none		None	very good	242/242/242	3-Phase	9.5/9.4/9.4	.1/.1/.1	94/95/97	good	none	no gates
241	W KK River Pkwy & W Cleveland Ave	04		Tom & Kyle	12-Jun-09	cover tarred shut	good	good	good	good	none		None	good	243/243/243	3-Phase	23.4/25.5/24.0	.1/.1/.1	296/316/320	good	none	manhole shut could not open
025	N 060th St (W/S) & W Custer Ave	05		Tom & Kyle	16-Jun-09	good	good	good	good	good	none		None	good	241/241/241		9.6/9.4/9.6	.1/.1/.1	16.3/17.3/18.4	good	none	noise on shut down
026	N 060th St (E/S) & W Custer Ave	05		Tom & Kyle	16-Jun-09	Good	good	good	good	good	none		None	good	242/242/242		10.4/7.5/10.1	.1/.1/.1	11.8/11.7/12.0	good	none	None
027	N 061st St & W Lawn Ave	05		Tom & Kyle	12-Jun-09	Good	good	good	good	good	none		good	good	246/245/245	3-Phase	28.3/28.4/27	.1/.1/.1	no reading	good	Possible bad ground	Possible bad ground
028	N 060th St (W/S) & W Custer Ave (150' s/o)	05		Tom & Kyle	16-Jun-09	Good	good	good	good	good	none		good	good	241/241/242		5.9/6.1/5.6	.1/.1/.1	550/550/550	good	none	none
029	N 060th St (Center) & W Custer Ave (320' s/o)	05		Tom & Kyle	16-Jun-09	Good	good	good	good	good	none		good	good	242/242/242		15.2/16.5/18.2	.1/.1/.1	550/550/550	good	none	none
030	N 063rd St & W Fairmount Ave (95' w/o)	05		skip	skip	skip	skip	skip	skip	skip	skip	skip	skip	skip	skip	skip	skip	skip	skip	skip	skip	skip
073	N 056th St & W Villard Ave	05		Tom & Kyle	12-Jun-09	Good	good	good	good	good	none		None	good	241/239/239	3 Phase	15/15.6/16.0	.1/.1/.1	118/121/126	good	none	echo multi ranger / no gates
232	N 062nd St & W Fairmount Ave	05		Tom & Kyle	12-Jun-09	skip	skip	pump locked-up	skip	smells burned	none	unknown	None	skip	242/239/240	skip	8.5/7.7/7.8	.1/.1/.1	24.3/24.3/23.7	None	electrical	burned smell in control cabinet
238	N 049th St & W Rohr Ave	05		Tom & Kyle	12-Jun-09	Good	good	good	good	good	none		None	good	240/240/240	3-Phase	21.6/19.3/19.3	.3/.3/2	550/550/550	good	none	echo multi ranger/hang elect.box
046	N 107th St & W Lawn Ave	06		Tom & Kyle	16-Jun-09	Good	good	good	good	good	none		None	good	243/243/243		16.4/16.9/16.6	.1/.1/.2	530/530/530	good	none	None
047	N 107th St & W Silver Spring Dr (100' s/o)	06		Tom & Kyle	16-Jun-09	Good	good	good	good	good	none		good	very good	239/239/239	3-Phase	10.7/16.3/12.9	.1/.1/.1	550/550/550	good	none	None
075	N 110th St & W Harvest Ln	06		Tom & Kyle	16-Jun-09	Good	good	good	good	good	none		good	good	241/241/241	3-Phase	32.6/28.6/28	.1/.1/.1	48/.53/.55	good	None	no gates
226	W Crossfield Ave & W Monrovia Ave	06		Tom & Kyle	16-Jun-09	seal rough	good	good	good	good	none		good	good	236/236	1-Phase	2.9/2.8	.2/.2	4.57/4.55	good	None	manhole seal rough
008	N 089th St & W Townsend St	07		Tom & Kyle	12-Jun-09	excellent	excellent	good	good	good	none		None	excellent	245/243/245	3-Phase	16.3/17.4/17.8	.1/.1/.1	550/550/550	excellent	none	None
009	N 090th St & W Townsend St	07		Tom & Kyle	12-Jun-09	Good	good	good	good	good	none		None	excellent	244/244/245	3-Phase	13.3/12.8/12.5	.1/.1/.1	550/550/500	good	none	none
016	N 095th St & W Metcalf Pl	07		skip	skip	skip	skip	skip	skip	skip	skip	skip	skip	skip	skip	skip	skip	skip	skip	skip	skip	skip
031	N 096th St & W Auer Ave	07		Tom & Kyle	12-Jun-09	Good	good	good	good	good	none	skip	None	good	238/238/238	3-Phase	9.1/8.6/9.4	.1/.1/.1	442/426/436	good	none	None
060	N 088th St & W Concordia Ave	07		Tom & Kyle	12-Jun-09	Good	good	good	good	good	none		good	leaning	244/245/244	3-Phase	12.2/11.8/12.1	.1/.1/.1	550/550/550	good	none	cabinet still leaning
061	N 080th St & W Townsend Ave	07		Tom & Kyle	12-Jun-09	excellent	excellent	good	excellent	good	none		None	excellent	243/242/243	3-Phase	11.1/11.4/10.7	.1/.3/.1	550/550/550	excellent	none	None
062	N 075th St & W Hadley St	07		skip	skip	skip	skip	skip	skip	skip	skip	skip	skip	skip	skip	skip	skip	skip	skip	skip	skip	skip
199	N 086th St & W Center St	07		Tom & Kyle	12-Jun-09	Good	good	good	good	good	none	skip	None	good	239/240/240	3-Phase	19.2/19.4/19.2	.1/.1/.1	550/550/550	good	none	None
201	N 088th St & W Center St	07		Tom & Kyle	12-Jun-09	Good	good	good	good	good	none		None	good	237/238/238	3-Phase	17.4/16.4/16.7	.1/.1/.1	502/535/544	good	none	None
203	N 089th St & W Center St (N/S)	07		Tom & Kyle	12-Jun-09	Good	good	good	good	good	none		None	good	238/237/237	3-Phase	15.6/15.9/16.2	.1/.1/.1	550/550/550	good	none	None
204	N 087th St & W Center St	07		Tom & Kyle	12-Jun-09	Good	good	good	good	good	none		None	Fair	242/243/243	3-Phase	11.2/13.8/14.1	.1/.1/.1	550/550/550	good	none	None
210	N 089th St & W Center St (S/S)	07		Tom & Kyle	12-Jun-09	Good	good	good	good	good	none		None	leaning	239/239/239	3-Phase	10.9/11.1/10.7	.1/.1/.1	60/60/60	good	none	No display on mini-ranger
237	N 067th St & W Center St	07		Tom & Kyle	12-Jun-09	loose brick	good	good	good	good	none		good	good	242/242/241	3-Phase	28.9/28.9/27.9	.1/.1/.1	508/528/550	good	none	pump noise on shut down
002	N 020th St & W Fairmount Ave	09		Tom & Kyle	12-Jun-09	good	good	good	good	good	none		good	good	240/239/239	3-Phase	5.2/5.8/5.6	.5/.5/.5	550/550/550	good	none	mini ranger gates
034	N Milwaukee River Pkwy & W Lawn Ave	09		Tom & Kyle	12-Jun-09	excellent	good	good	good	good	none		None	good	240/240/241	3-Phase	13.2/13.1/12.9	.1/.1/.1	124/125/128	good	none	mini ranger no gates
035	N Milwaukee River Pkwy & W Lawn Ave (340' ne/o)	09		Tom & Kyle	12-Jun-09	Good	good	good	good	good	none		good	good	248/249/248	3-Phase	9.4/8.8/9.0	.1/.1/.1	72.4/73.5/74	good	none	mini ranger gates
055	N 023rd St & W Villard Ave	09		Tom & Kyle	12-Jun-09	Good	good	good	good	good	none		None	good	236/238/239	no-power	14.5/16.1/15.6	.1/.1/.1	550/550/550	None	unknown	mini ranger gates
056	N 024th St & W Villard Ave	09		Tom & Kyle	15-Jun-09	Good	good	good	good	good	none		None	good	no reading	no reading	no reading	no reading	no reading	good	good	tripped breaker/ elec. Problem
057	N 024th Pl & W Villard Ave	09		Tom & Kyle	12-Jun-09	good	excellent	good	good	good	none		None	good	240/237/237	3-Phase	20.0/19.9/23.0	.7/.7/.7	550/550/550	good	none	mini ranger
063	N 027th St & W Villard Ave	09		skip	skip	skip	skip	skip	skip	skip	skip	skip	skip	skip	skip	skip	skip	skip	skip	skip	skip	Station turned off
064	N 028th St & W Villard Ave	09		Tom & Kyle	12-Jun-09																	

PW FILE NUMBER: 091357

[illegible]



Legislation Details (With Text)

File #: 091417 **Version:** 0

Type: Communication-Report **Status:** In Committee

File created: 2/9/2010 **In control:** PUBLIC WORKS COMMITTEE

On agenda: **Final action:**

Effective date:

Title: Communication from the Department of Public Works relating to moveable bridges.

Sponsors: THE CHAIR

Indexes: BRIDGES, DEPARTMENT OF PUBLIC WORKS

Attachments: Hearing Notice List

Date	Ver.	Action By	Action	Result	Tally
2/9/2010	0	COMMON COUNCIL	ASSIGNED TO		
2/15/2010	0	PUBLIC WORKS COMMITTEE	HEARING NOTICES SENT		
2/18/2010	0	PUBLIC WORKS COMMITTEE	HELD IN COMMITTEE	Pass	4:0
3/4/2010	0	PUBLIC WORKS COMMITTEE	HEARING NOTICES SENT		

Number

091417

Version

ORIGINAL

Reference

Sponsor

THE CHAIR

Title

Communication from the Department of Public Works relating to moveable bridges.

Requestor

Drafter

CC-CC

tjm

2/15/10

PW FILE NUMBER: 091417

[illegible]



Legislation Details (With Text)

File #: 091438 **Version:** 0

Type: Resolution **Status:** In Committee

File created: 3/2/2010 **In control:** PUBLIC WORKS COMMITTEE

On agenda: **Final action:**

Effective date:

Title: Resolution authorizing the transfer of funds from the Street Improvement-State and/or Federal Aid Program to the Street Reconstruct or Resurface Program - Regular City Program for funding of local street improvements under the Local Roads Improvement Program, with the City cost of \$1,645,741.78, with a grantor cost of \$1,006,258.22, for a total estimated cost of \$2,652,000.

Sponsors: THE CHAIR

Indexes: STREET IMPROVEMENTS

Attachments: Cover Letter, Fiscal Note, Hearing Notice List

Date	Ver.	Action By	Action	Result	Tally
3/2/2010	0	COMMON COUNCIL	ASSIGNED TO		
3/4/2010	0	PUBLIC WORKS COMMITTEE	HEARING NOTICES SENT		

Number

091438

Version

ORIGINAL

Reference

090815

Sponsor

THE CHAIR

Title

Resolution authorizing the transfer of funds from the Street Improvement-State and/or Federal Aid Program to the Street Reconstruct or Resurface Program - Regular City Program for funding of local street improvements under the Local Roads Improvement Program, with the City cost of \$1,645,741.78, with a grantor cost of \$1,006,258.22, for a total estimated cost of \$2,652,000.

Analysis

This resolution directs the transfer of \$1,645,741.78 of City funds and \$1,006,258.22 of grantor funds to the Street Reconstruct or Resurface Program. The total cost of the program is estimated to be \$2,652,000.

Body

Whereas, State Statute 86.31 established a Local Roads Improvement Program (LRIP) to provide up to 50% reimbursement by the State of eligible costs for local street improvements; and

Whereas, In 2010-2011, under the LRIP Program, the City of Milwaukee is entitled to receive reimbursement up to a maximum amount of \$1,006,258.22 for local street improvements; and

Whereas, Resolution 090815 authorized the agreement, but did not set up the funding; and

Whereas, Funds for projects to be undertaken under the LRIP Program are budgeted in the Street Improvement - State and/or Federal Aid Program Fund in the 2010 Capital Improvement Program (Fund 0333); and

Whereas, It is advantageous and necessary that these funds be transferred to the Street Reconstruct or Resurface Program - Regular City Program (Fund 0333); and

Whereas, The projects funded with this program area anticipated to be constructed in the 2010 construction season; and

Whereas, The Street Reconstruct or Resurface - Regular City Program (Fund 0330) has sufficient funds to cover the assessable portion of these projects; now, therefore, be it

Resolved, By the Common Council of the City of Milwaukee, that the City Comptroller is hereby authorized to transfer appropriations to Infrastructure Services Division Account No. 0333-ST211100000; Street Reconstruct or Resurface Program - Regular City Program from the accounts as follows for the LRIP Program;

Infrastructure Services Division Account

Grantor's Share

Account No. 0306-SP032100100

Cost - \$1,006,258.22

Major Streets Improvement -
Authorized Borrowing
Account No. 0333-ST320100000
Cost - \$1,645,741.78

; and, be it

Further Resolved, That only project contractual expenditures are to be billed toward the LRIP program grant amount; and, be it

Further Resolved, That the City Comptroller will make a memorandum entry at the completion of the LRIP program projects to record the transaction back to the Street Improvement - State and/or Federal Aid Program for grant audit purposes; and, be it

Further Resolved, That the Commissioner of Public Works has the authority to apply for LRIP Discretionary Funds for projects which meet the program criteria as he deems appropriate.

Requestor
Infrastructure Services Division
Drafter
MLD:dr
LRIP 2010
Cycle 9
02/23/10

February 23, 2010

File Number

To the Honorable, the Common Council

Subject: Local Roads Improvement Program
Funding and Application

Dear Council Members:

Resolution Number 090815 authorized and directed the Commissioner of Public Works to submit a project application and to execute the agreement with the WISDOT for funding for local street improvements under the LRIP Program.

The executed agreement has been received from the Wisconsin Department of Transportation. We have prepared and recommend adoption of the attached resolution which authorizes the transfer of funds from the Street Improvement – State and/or Federal Aid Program accounts in the proposed Capital Improvement Program for 2010 to the Street Reconstruct or Resurface Program – Regular City Program.

Respectfully submitted,

Special Deputy Commissioner
of Public Works

MLD:dr
LRIP Transfer of Funds

CITY OF MILWAUKEE FISCAL NOTE

A) DATE February 23, 2010

FILE NUMBER: _____

Original Fiscal Note ☐ Substitute ☒

SUBJECT: Resolution authorizing the transfer of funds from the Street Improvement-State and/or Federal Aid Program to the Street Reconstruct or Resurface Program – Regular City Program for funding of local street improvements under the Local Roads Improvement Program, with the City cost of \$1,645,741.78 for a total estimated cost of \$2,652,000.

B) SUBMITTED BY (Name/title/dept./ext.): Mary Dziewiontkoski/Assessment Engineer/Public Works/X2460

C) CHECK ONE: ☐ ADOPTION OF THIS FILE AUTHORIZES EXPENDITURES
☐ ADOPTION OF THIS FILE DOES NOT AUTHORIZE EXPENDITURES; FURTHER COMMON COUNCIL ACTION NEEDED. LIST ANTICIPATED COSTS IN SECTION G BELOW.
☐ NOT APPLICABLE/NO FISCAL IMPACT.

D) CHARGE TO: ☐ DEPARTMENT ACCOUNT(DA) ☐ CONTINGENT FUND (CF)
☐ CAPITAL PROJECTS FUND (CPF) ☐ SPECIAL PURPOSE ACCOUNTS (SPA)
☐ PERM. IMPROVEMENT FUNDS (PIF) ☐ GRANT & AID ACCOUNTS (G & AA)
☐ OTHER (SPECIFY)

E) PURPOSE	SPECIFY TYPE/USE	ACCOUNT	EXPENDITURE	REVENUE	SAVINGS
SALARIES/WAGES:					
SUPPLIES:					
MATERIALS:					
NEW EQUIPMENT:					
EQUIPMENT REPAIR:					
OTHER:	Grantor Reimbursable Paving	SP032100100	\$1,006,258.22	\$1,006,258.22	
	City Non-Assessable Paving	ST320100000	\$1,645,741.78		
TOTALS			\$2,652,000.00	\$1,006,258.22	

F) FOR EXPENDITURES AND REVENUES WHICH WILL OCCUR ON AN **ANNUAL** BASIS OVER SEVERAL YEARS CHECK THE APPROPRIATE BOX BELOW AND THEN LIST EACH ITEM AND DOLLAR AMOUNT **SEPARATELY**.

<input type="checkbox"/> 1-3 YEARS	<input type="checkbox"/> 3-5 YEARS	Expenditures - \$2,652,000
<input type="checkbox"/> 1-3 YEARS	<input type="checkbox"/> 3-5 YEARS	Revenue – \$1,006,258.22
<input type="checkbox"/> 1-3 YEARS	<input type="checkbox"/> 3-5 YEARS	

G) LIST ANY ANTICIPATED FUTURE COSTS THIS PROJECT WILL REQUIRE FOR COMPLETION:

H) COMPUTATIONS USED IN ARRIVING AT FISCAL ESTIMATE:

PLEASE LIST ANY COMMENTS ON REVERSE SIDE AND CHECK HERE ☐

PW FILE NUMBER: 091438

[illegible]



Legislation Details (With Text)

File #:	091457	Version:	0
Type:	Resolution	Status:	In Committee
File created:	3/2/2010	In control:	PUBLIC WORKS COMMITTEE
On agenda:		Final action:	
Effective date:			
Title:	Resolution authorizing the proper city officials to execute amended Utility Agreements with the State of Wisconsin, Department of Transportation (WISDOT) for work on City of Milwaukee facilities in conjunction with the North-South Mitchell Interchange and WISDOT Audit Agreement, with a total estimated cost of \$2,903,054.77 with an estimated Grantor's share of \$2,532,791.61 and an estimated City of Milwaukee share of \$370,263.16		
Sponsors:	THE CHAIR		
Indexes:	AGREEMENTS, EXPRESSWAY, SANITARY SEWERS, UTILITIES, WISCONSIN DEPARTMENT OF TRANSPORTATION		
Attachments:	Cover Letter, Fiscal Note, Comptroller's Certificate, Cost Analysis, Agreement Amendment 80, Agreement Amendment 79, Agreement Amendment 81, Hearing Notice List		

Date	Ver.	Action By	Action	Result	Tally
3/2/2010	0	COMMON COUNCIL	ASSIGNED TO		
3/4/2010	0	PUBLIC WORKS COMMITTEE	HEARING NOTICES SENT		

Number

091457

Version

ORIGINAL

Reference

Sponsor

THE CHAIR

Title

Resolution authorizing the proper city officials to execute amended Utility Agreements with the State of Wisconsin, Department of Transportation (WISDOT) for work on City of Milwaukee facilities in conjunction with the North-South Mitchell Interchange and WISDOT Audit Agreement, with a total estimated cost of \$2,903,054.77 with an estimated Grantor's share of \$2,532,791.61 and an estimated City of Milwaukee share of \$370,263.16

Analysis

This resolution authorizes the Commissioner of Public Works and the Comptroller to execute the amended Utility Agreement Nos. 79, 80, 81 and the WISDOT Audit Agreement for Milwaukee Water Works, Environmental Engineering, City of Milwaukee cable and City of Milwaukee conduit, for the utility work in conjunction with the North-South Mitchell Interchange (NSMI), with a total estimated cost of \$2,903,054.77 with an estimated Grantor's share of \$2,532,791.61 and an estimated City of Milwaukee share of \$370,263.16.

Body

Whereas, The State of Wisconsin, Department of Transportation (WISDOT) scheduled the rehabilitation of the North-South Mitchell Interchange (NSMI) in the City of Milwaukee; and

Whereas, The Department of Public Works (DPW) has worked with the WISDOT over the past year in planning the design and construction phasing of the project to best meet the needs of the citizens of the City of Milwaukee (CITY) and of the region as a whole; and

Whereas, Work on the NSMI has been phased in four major phases, being Phase I (South 27th Street; Airport Spur I; West Grange Avenue; West College Avenue) scheduled for 2009, Phase II (North Leg; West Layton Avenue; Airport Spur II) scheduled for 2010, and Phases III & IV (Mitchell Interchange) scheduled for 2011 and 2012; and

Whereas, There will be substantial work required on CITY utilities as a result of the design and construction associated with these NSMI contracts; and

Whereas, Wisconsin Statute 84.295(4m) indicates that the WISDOT will pay 90 percent of the cost alteration, rehabilitation and relocation of municipal utilities with the responsible jurisdiction liable for the remaining 10 percent of the cost and WISDOT will pay 100 percent of compensable costs to the responsible jurisdiction; and

Whereas, It has been estimated that for the NSMI project, scheduled for 2010 within the CITY a total of approximately \$2,903,054.77 in CITY utility alterations will be necessary; and

Whereas, Utility Agreements were executed by the WISDOT and the CITY for work on City of Milwaukee facilities in conjunction with NSMI (South 27th Street; West Grange Avenue; West College Avenue; Bolivar Avenue realignment and collector distributor roads/West Layton Avenue; 2009 Advanced Utilities) in accordance with Common Council Resolution File Numbers 080400, 081307, 081420 and 090892, adopted on August 14, 2008, February 10, 2009, March 11, 2009 and December 10, 2009, respectively; and

Whereas, It has been estimated that for the relocation of the South 21st Street and Louisiana Avenue sewers crossing I-894 and relocating, reconstructing and adjusting of CITY OF MILWAUKEE water facilities and cable facilities of South 20th Street contract amendments for Environmental Engineering will be \$1,415,806.17 with a Grantor share of \$1,274,225.55 and a CITY OF MILWAUKEE share of \$141,580.62; Water will be \$120,000.00 with Grantor share of

\$1,080,000.00 and CITY OF MILWAUKEE share of \$120,000.00; City of Milwaukee cable will be \$80,000.00; City of Milwaukee Conduit will be \$100,682.54 with a Grantor share of \$0 and a City of Milwaukee share of \$100,682.54; and

Whereas, It has been estimated that for relocation of an existing sanitary sewer, a portion of which is on private land, west of 23rd Street and south of North-South Freeway is a compensable cost for Environmental Engineering, which will be at 100% State cost of \$106,566.86; and

Whereas, In order for the CITY to be reimbursed for the 90 percent share of the utility alteration cost and 100 percent of compensable costs on the NSMI contract, the WISDOT requires the entering into the Amended Utility Agreements and the WISDOT Audit Agreement in accord with relocation assistance policy; and

Whereas, The WISDOT has provided the CITY with the necessary Amended Utility Agreements and an Audit Agreement to facilitate reimbursement of the CITY costs in the alteration of CITY water, environmental engineering, cable and conduit facilities for the relocation of the South 21st Street and Louisiana Avenue sewers crossing I-894, relocating, reconstruction and adjusting of CITY OF MILWAUKEE water and cable facilities and for relocation of existing sanitary sewer, a portion of which is on private land, west of South 23rd Street and south of North-South Freeway, which is 100 percent compensable; now, therefore, be it

Resolved, By the Common Council of the City of Milwaukee, that the Commissioner of Public Works is hereby authorized and directed to execute the "Amended Agreements" Nos. 71, 80, 81 and the WISDOT Audit Agreement for Milwaukee Water Works, Environmental Engineering, Cable and Conduit, all attached to this resolution by reference as though set forth in full; and, be it

Further Resolved, That the Commissioner of Public Works is hereby authorized and directed to review and/or prepare plans as necessary to accomplish the required utility alterations associated with the NSMI relocation of the South 21st Street and Louisiana Avenue sewers, crossing I-894, relocating, reconstructing and adjusting of CITY OF MILWAUKEE water and cable facilities and for relocation of existing sanitary sewer, a portion of which is on private land, west of South 23rd Street and south of North-South Freeway, which is 100 percent compensable, and is authorized to allow the WISDOT to include CITY utility work in the 2010 award contracts for CITY utility work and/or have the necessary utility work associated with the 2010 contracts accomplished by CITY forces, whichever is deemed to be in the best interest of the city and NSMI project; and, be it

Further Resolved, That the funding to cover the 10 percent CITY cost of the NSMI contract utility alterations for water, environmental engineering, conduit, and cable facilities estimated to be \$120,000.00, \$141,580.62, \$8,000.00, and \$100,682.54, respectively, are and/or will be placed in Department of Public Works Departmental Accounts as part of the CITY budget process in budget years as necessary to accommodate the projects scheduling and the WISDOT invoicing system; and, be it

Further Resolved, That the CITY Comptroller is hereby authorized and directed to create within the Capital Improvement Fund, Grant and Aid projects, the necessary Project/Grant Chartfield Values for engineering and construction for the projects (expenditure) and transfer to any of these accounts the amounts required under the grant agreement and City Accounting Policy but not to exceed a 10 percent increase of the total amounts reserved for the Grantor's share and local share or \$5,000.00, whichever is greater, as follows:

Water Works Department Account Numbers

North-South/I-94 - Mitchell Interchange (College Avenue to Howard Avenue) (1030-20-72)
ID 1030-21-46

City Share
WT410100501
.....

Fund 0420 (department 6410)
\$110,000
Fund 0420 (department 5010)
\$10,000

Grantor Reimbursable Share
SP032100100 (ST320083446)
Fund 0333
\$88,073.31

Grantor Reimbursable Share
\$991,926.69

Previously authorized for Water Utility: \$6,135,000.00
Current estimated Water Utility, including this resolution: \$7,335,000.00
Original estimated Water Utility: \$2,175,000.00

Environmental Engineering Account Number

North-South/I-94 - Airport Freeway Sanitary Sewer (1030-10-73)
ID 1030-21-47

City Share
SM495100099
Fund 0491
\$141,580.62

Grantor Reimbursable Share
SP032100100 (ST320083447)
Fund 0333
\$161,670.11

Grantor Non-Reimbursable Share
\$1,112,555.44

North-South - Airport Freeway Sanitary Sewer (Audit Agreement) (1030-10-73)
ID 1030-21-44

Grantor Reimbursable Share
SP032100100 (ST320083447)
Fund 0333
\$13,520.80

Grantor Non-Reimbursable Share
\$93,045.26

Previously authorized for Sewer Utility: \$889,877.21
Current estimated Sewer Utility, including this resolution: \$2,412,249.45
Original estimated Sewer Utility: \$1,233,000.00

Cable Account Numbers

North-South/I-94 Mitchell Interchange (College Avenue to Howard Avenue) (1030-20-72)
ID 1030-21-48

City Share
ST270080799
Fund 0333
\$8,000.00

Grantor Reimbursable Share
SP032100100 (ST320083448)
Fund 0333
\$5,023.26

Grantor Non-Reimbursable Share
\$66,976.74

Previously authorized for Cable Utility: \$ 672,000.00
Current estimated Cable Utility, including this resolution: \$752,000.00
Original estimated Cable Utility: \$300,000.00

Conduit Account Numbers

North-South Bolivar Avenue Realignment (Betterment) (1030-21-74)
ID 1030-21-49

City Share
ST280080210
Fund 0333
\$18,837.00

North-south/I-94 Mitchell Interchange (Betterment) (College Avenue to Howard Avenue) (1030-20-72)
ID 1030-21-49

City Share
ST280080213
Fund 0333
\$56,230.00

North-South/I-94 Layton Collector Distributor (Betterment) (1030-20-71)
ID 1030-21-49

City Share
ST280080212
Fund 0333
\$25,615.54

Previously authorized for Conduit Utility: \$962,100.00
Current estimated Conduit Utility, including this resolution: \$1,062,782.54
Original estimated Conduit Utility: \$735,000.00

Previously authorized for Utility Agreements: \$8,658,977.21
Current estimated Utility Agreements: \$11,562,301.99
Original estimated Utility Agreements: \$4,443,000.00

; and, be it

Further Resolved, That the City Engineer is hereby authorized and directed to make periodic payments as necessary to accommodate the work requested for the NSMI Contract utility alterations as required under the aforementioned Amended Utility Agreements and WISDOT Audit Agreement.

Requestor

Department of Public Works

Drafter

Infrastructure Services Division

AYH:amh

February 23, 2010

Reso N-S Mitch Ichang Amen Utils Agree & Audt 021110.rtf



February 23, 2010

To the Honorable, the Common Council

Subject: North-South Mitchell Interchange (IH-94)
Municipal Utility Agreements

Dear Council Members:

The Wisconsin Department of Transportation (WISDOT) is currently reconstructing the North-South Mitchell Interchange (NSMI) within the City of Milwaukee for the period from spring 2009 through 2012. The project is to be accomplished in four major phases, being the (South 27th Street; West Grange Avenue; West College Avenue) scheduled for 2009, (North Leg; West Layton Avenue) scheduled for 2010, and Mitchell Interchange scheduled for 2011 and 2012. The Department of Public Works has assisted the WISDOT in the design and construction phasing of the contracts to best meet the needs of the citizens of the City of Milwaukee and the region as a whole and has worked diligently to minimize costs.

Common council resolution file numbers 080400, 081307, 081420 and 090892 adopted August 14, 2008, February 10, 2009, March 11, 2009 and December 10, 2009, respectively, approved and authorized the execution of utility agreements with WISDOT for work on City of Milwaukee facilities in conjunction with the NSMI (South 27th Street; West Grange Avenue; West College Avenue; Bolivar Avenue Realignment and collector distributor roads West Layton Avenue and 2009 Advanced Utilities) contracts. The utility agreements provided funding participation of 90 percent federal/state with 10 percent City of Milwaukee share.

The WISDOT is requesting amendments to the original utility agreements previously executed by the City of Milwaukee to include the utility work for the relocation of the South 21st Street and Louisiana Avenue sewers crossing I-894 and relocation, reconstruction and adjustments of City of Milwaukee water facilities and cable facilities at South 20th Street. The amendments include necessary alterations to city water, sewer, cable and conduit facilities. State statute § 84.294(4m) requires that the City of Milwaukee accommodate these types of freeway projects and that WISDOT pay 90 percent of the cost for alterations to municipal facilities with remaining 10 percent being the responsibility of the affected municipal jurisdiction. In addition WISDOT is requesting a WISDOT Audit Agreement to pay for relocation of an existing sanitary sewer, a portion of which is on private land, west of South 23rd Street and south of the North-South Freeway, which is necessary for reconstruction of the North-South Mitchell Interchange at 100% State compensable cost.

The Honorable, the Common Council
February 23, 2010
Page 2

In order to be reimbursed for the WISDOT share of the work, it is necessary for the City of Milwaukee to enter into amended utility agreements and the Audit Agreement, which define the work and the process for cost sharing on the project. The WISDOT has provided the City of Milwaukee with the necessary agreements and estimates.

The Department of Public Works has reviewed the estimates and find them to accurately reflect the required utility alterations in conjunction with the 2010 portion of the contracts. As such we have prepared the attached resolution which if adopted will approve the utility agreements associated with Amendment Nos. 79, 80, 81 and the WISDOT Audit Agreement and will allow for the City of Milwaukee's participation in the alteration of Water, Environmental Engineering, City of Milwaukee Cable, and City of Milwaukee Conduit facilities as necessary and will provide for 90 percent cost share and 100% as applicable by the WISDOT. Said resolution will also authorize the Commissioner of Public Works to execute the various agreements as well as take actions as necessary to accomplish the work and will authorize the City Engineer and the Comptroller to make periodic payments and billings in accord with established procedures to properly account for the costs associated with said work. We respectfully recommend adoption of the resolution.

Very truly yours,

Jeffrey S. Polenske, P.E.
City Engineer

Jeffrey J. Mantes
Commissioner of Public Works

AYH:amh

Attachments

c: Mr. W. Martin Morics (with attachments)
Ms. Lila Gorney (with attachments)
Ms. Cynthia Wisneski (with attachments)

CITY OF MILWAUKEE FISCAL NOTE

A) DATE February 23, 2010

FILE NUMBER: _____

Original Fiscal Note ☒ Substitute ☐

SUBJECT: Resolution authorizing the proper city officials to execute amended Utility Agreements with the State of Wisconsin, Department of Transportation for work on City of Milwaukee facilities in conjunction with the North-South Mitchell Interchange and WISDOT Audit Agreement, with a total estimated cost of \$2,903,054.77 with an estimated Grantor's share of \$2,532,791.61 and an estimated City of Milwaukee share of \$370,263.16

B) SUBMITTED BY (Name/title/dept./ext.): Jeffrey S. Polenske, PE/City Engineer/Infrastructure Services Division/extension 2400

C) CHECK ONE: ☒ ADOPTION OF THIS FILE AUTHORIZES EXPENDITURES
☐ ADOPTION OF THIS FILE DOES NOT AUTHORIZE EXPENDITURES; FURTHER COMMON COUNCIL ACTION NEEDED. LIST ANTICIPATED COSTS IN SECTION G BELOW.
☐ NOT APPLICABLE/NO FISCAL IMPACT.

D) CHARGE TO: ☐ DEPARTMENT ACCOUNT(DA) ☐ CONTINGENT FUND (CF)
☐ CAPITAL PROJECTS FUND (CPF) ☐ SPECIAL PURPOSE ACCOUNTS (SPA)
☒ PERM. IMPROVEMENT FUNDS (PIF) ☒ GRANT & AID ACCOUNTS (G & AA)
☐ OTHER (SPECIFY)

E) PURPOSE	SPECIFY TYPE/USE	ACCOUNT	EXPENDITURE	REVENUE	SAVINGS
OTHER:	Water Main Project (Fund 0420)	WT410090000	\$120,000.00		
	Grantor Reimbursable Water (Fund 0306)	SP032090100	88,073.31	\$88,073.31	
	Grantor Non-Reimbursable Water		991,926.69	991,926.69	
	Relief & Relay Sewers (Fund 0491)	SM495090000	141,580.62		
	Grantor Reimbursable Sewers (Fund 0306)	SP032090100	175,190.91	175,190.91	
	Grantor Non-Reimbursable Sewers		1,205,600.70	1,205,600.70	
	Public Safety Committee (Fund 0333)	ST270080000	8,000.00		
	Grantor Reimbursable Cable (Fund 0306)	SP032090100	5,023.26	5,023.26	
	Grantor Non-Reimbursable Cable		66,976.74	66,976.74	
	Underground Conduit (Fund 0333)	ST280080000	100,682.54		
TOTALS			\$2,903,054.77	\$2,532,791.61	

F) FOR EXPENDITURES AND REVENUES WHICH WILL OCCUR ON AN **ANNUAL** BASIS OVER SEVERAL YEARS CHECK THE APPROPRIATE BOX BELOW AND THEN LIST EACH ITEM AND DOLLAR AMOUNT **SEPARATELY**.

<input checked="" type="checkbox"/> 1-3 YEARS	<input type="checkbox"/> 3-5 YEARS	Expenditure = \$2,903,054.77
<input checked="" type="checkbox"/> 1-3 YEARS	<input type="checkbox"/> 3-5 YEARS	Revenue = \$2,532,791.61
<input type="checkbox"/> 1-3 YEARS	<input type="checkbox"/> 3-5 YEARS	

G) LIST ANY ANTICIPATED FUTURE COSTS THIS PROJECT WILL REQUIRE FOR COMPLETION:

H) COMPUTATIONS USED IN ARRIVING AT FISCAL ESTIMATE:

The total expenditure includes the cost of engineering, inspection, construction and city forces.

PLEASE LIST ANY COMMENTS ON REVERSE SIDE AND CHECK HERE ☐

Capital Grant Resolution Certification from the
Comptroller's Office

The Comptroller's Office has reviewed Common Council Resolution File No. 091487 for the North/South I94 Freeway Utility Agreements and WISDOT Audit Agreement (City Share \$370,263.16 Grantor Share \$2,532,791.61) and approved the resolution as to:

- x Sufficiency of funds
- x Funding sources (per estimated **grant funding agreement**)
- x Sufficiency of reporting for purposes of internal auditing

The following deficiencies were noted:

The resolution should be corrected and returned to the Comptroller's Office for review.

Signature: C Wisniewski

Date: 2-23-10



Division of Transportation
System Development
Southeast Regional Office
141 N.W. Barstow Street
P.O. Box 798
Waukesha, WI 53187-0798



Jim Doyle, Governor
Frank J. Busalacchi, Secretary
Internet: www.dot.wisconsin.gov

Telephone: (262) 548-5903
Facsimile (FAX): (262) 548-5662
E-Mail: waukesha.dtd@dot.state.wi.us

February 5, 2010

North-South Freeway Reconstruction

Airport Freeway
City of Milwaukee Sanitary Sewer
IH 43 / 894
Milwaukee County
Design Project ID 1030-20-00
Construction Project ID 1030-10-73

MUNICIPAL AGREEMENT AMENDMENT VS. AUDIT AGREEMENT COSTS:

Relocation Percentage Calculation:

Length of existing sewer to be relocated - in R/W	1017 LF	93%
Length of existing sewer to be relocated - outside R/W	77 LF	7%
Total length of existing sewer to be relocated	1094 LF	100%

Cost Calculation:

Total Relocation Cost \$1,522,372.23

Municipal Agreement #79

90% State Share, 10% City Share
1030-21-47, UA 517

$$\$1,522,372.23 \times (0.93) = \$1,415,806.17$$

Audit Agreement

100% State Share, 0% City Share
1030-21-44, Parcel 527

$$\$1,522,372.23 \times (0.07) = \$106,566.06$$

N-S FREEWAY
 Airport Freeway
 City of Milwaukee Sanitary Sewer
 IH 43 / 894
 Milwaukee County

Utility ID's 1030-21-44 / 1030-21-47
 RW Project ID 1030-20-20
 Parcel 527 / UA517
 Construction Project ID 1030-10-73

Item	Unit	Price ¹	Quantity	Cost
Shaft Excavation	CY	\$75.60	562	\$42,487.20
Trench Excavation	CY	\$13.30	893	\$11,876.90
Temporary excavation support (shaft)	SF	\$51.90	6819	\$353,906.10
Temporary excavation support (trench)	SF	\$3.70	11558	\$42,764.60
Dewatering	day	\$790.00	25	\$19,750.00
15" (jacked)	LF	\$250.00	288	\$72,000.00
18" (jacked)	LF	\$300.00	1311	\$393,300.00
18" (intrench)	LF	\$64.90	287	\$18,626.30
4' ID Precast MH (8' deep)	ea	\$2,357.00	6	\$14,142.00
Addl MH Depth	VF	\$316.00	82	\$25,912.00
4' ID Precast MH w/shaft lid (14' deep)	ea	\$4,253.00	1	\$4,253.00
Addl 3' ID Riser Depth	VF	\$300.00	7	\$2,100.00
Mobilization	LS	\$25,000.00	1	\$25,000.00
Granular Backfill	CY	\$10.10	603	\$6,090.30
Slurry Backfill	CY	\$41.00	500	\$20,500.00
Abandon 10" sewer	LF	\$4.50	610	\$2,745.00
Abandon 15" sewer	LF	\$9.50	439	\$4,170.50
Abandon MH	VF	\$95.50	15	\$1,432.50
CCTV Inspection	LF	\$5.00	2235	\$11,175.00
Subtotal				\$1,072,231.40
Contingency	20%			\$214,446.28
Total Construction Cost				\$1,286,677.68

Equivalent Unit Cost \$682/LF

(1) Cost as of July 2010; Est. ENR CCI = 8840

COST ESTIMATE

BID ITEMS

City Precast Concrete Manhole	Ea	\$8,000.00	6	\$48,000.00
City Precast Concrete Manhole with Shaft Fram And Lid	Ea	\$8,300.00	1	\$8,300.00
Jacking Sanitary Sewer, 15-inch	LF	\$600.00	288	\$172,800.00
Sanitary Sewer, 18-inch	LF	\$400.00	287	\$114,800.00
Jacking Sanitary Sewer, 18-inch	LF	\$700.00	1311	\$917,700.00
Abandoning Existing 10-inch Sanitary Sewer	LF	\$10.00	610	\$6,100.00
Abandoning Existing 15-inch Sanitary Sewer	LF	\$15.00	439	\$6,585.00
Sanitary Sewer Examination CCTV	LF	\$6.00	2235	\$13,410.00
SUBTOTAL				\$1,287,695.00

DESIGN & INSPECTION

Design - City of Milwaukee	\$128,769.50
Design - Milwaukee Transportation Partners	\$41,522.98
Inspection - City of Milwaukee	\$64,384.75
Field Services - City of Milwaukee	\$0.00
SUBTOTAL	\$234,677.23

TOTAL \$1,522,372.23

MUNICIPAL AGREEMENT AMENDMENT NO. 80

2008 S.84.09(1) Wis. Stats.

Wisconsin Department of Transportation

Utility Project ID Number 1030-21-46	County Milwaukee	UA Number 516
Road Name N/S Freeway College Ave. to Howard Ave.— Mitchell Interchange (1030-20-72)		Highway IH 43/ 94 / 894
Utility name City of Milwaukee – Department of Public Works – Milwaukee Water Works (Water)		

The agreement in effect between the above named Utility and the State of Wisconsin, Department of Transportation, Division of Transportation Infrastructure Development for the performance of certain work on the above project shall be changed in the following particulars. The acceptance of this amendment by the Utility and its approval by the Wisconsin Department of Transportation shall constitute a mutual agreement as part of the original agreement binding upon both parties in the same manner as though the essence of the amendment had originally been in the agreement.

Reason for Amendment:

This Municipal Agreement Amendment No. 80 is to add the Mitchell Interchange contract (1030-20-72) for the reconstruction of the I-94 North-South Freeway. The original Municipal Agreement for this Parcel was executed under the contract for Grange Avenue Water Main Relocation (1030-21-71).

Change to Current Agreement

ITEM	EXPLANATION	COST (+/-)
City Water facilities.	Addition of relocations, reconstructions and adjustments of City Water facilities at South 20 th Street as necessary for the reconstruction of the Mitchell Interchange area of the I-94 North-South Freeway.	+ \$ 1,200,000.00

Net increase/decrease in agreement: \$ 1,200,000.00 increase.

The parties have caused this Agreement to be executed by their proper officers and representatives on the date shown.

Wisconsin Department of Transportation
Division of Transportation Infrastructure Development

(Municipal Utility) (Date)

X _____
(Signature) (Date)

(Title) (Date)

X _____
(Signature) (Date)

(Title) (Date)

X _____
(Signature) (Date)

(Title) (Date)

X _____
(Administrator) (Date)

X _____
(Governor of Wisconsin) (Date)

**CAPITAL IMPROVEMENT PROGRAM
PROJECT COST ESTIMATE
FOR WATER MAIN**

A-50-1

TYPE OF IMPROVEMENT 16" RELAY

W.E.D. NO(S) 2010-501

LOCATION

In: S. 20th St. (Phase II)
From: W. Van Norman Av.
To: 600 ft S/O W. Van Norman Av

W.O. NO(S) WT410100501
Aldermanic District 13
Final Res. Intro Date January 0, 1900

Preliminary Res Dat January 0, 1900
Preliminary Res No. 0

ITEMS

GROUP I - DIRECT COST ORIG. BY M.W.W.

	DIRECT COST	COST FACTOR	ITEM COST
1. CONTRACT (BID ESTIMATE)	\$1,053,000.00	1.00	\$1,053,000.00
2. MATERIAL (M.W.W.)	\$2,000.00	1.30	\$2,600.00
3. WATER DISTR. DIV. - LABOR (M.W.W.)	\$1,500.00	1.69	\$2,535.00
4. WATER DIST. DIV. - EQUIP. (M.W.W.)	\$150.00	1.00	\$150.00
5. PIPE YARD HAULING - LABOR (D.P.W.)	\$140.00	1.56	\$218.40
6. PIPE YARD HAULING - EQUIP. (D.P.W.)	\$14.00	1.00	\$14.00
7. ENGINEERING (M.W.W.)	\$5,265.00	1.58	\$8,318.70
8. MATERIAL INSPECTION (M.W.W.)	\$5,000.00	1.58	\$7,900.00
9. FIELD INSPECTION (D.P.W.)	\$5,265.00	1.56	\$8,213.40
10. WATER SAMPLES (D.P.W.)	\$2,000.00	1.00	\$2,000.00

GROUP II - (ITEM CHARGES BILLED TO M.W.W.)

11. SURVEY INFORMATION (D.P.W.)	\$0.00
12. WHITE PRINTS (D.P.W.)	\$500.00
13. ADVERTISING FOR BIDS (D.P.W.)	\$0.00
14. OTHER	\$0.00
15. OTHER	\$0.00
16. OTHER	\$0.00

TOTAL (COSTS FOR ITEMS 1 THRU 16) \$1,085,449.50

GROUP III. - CONTINGENCIES \$114,550.50

TOTAL PROJECT COST ESTIMATE \$1,200,000.00

PRELIMINARY RESOLUTION AMOUNT \$0.00

FINAL RESOLUTION AMOUNT 90% State Share \$1,080,000.00
FINAL RESOLUTION AMOUNT 10% City Share \$120,000.00

PREPARED KSR
CHECKED _____

DATE 01/29/10

UTILITY WORKSHEET

DT2236 6/2008 s.84.063 Wis. Stats.

Wisconsin Department of Transportation

Utility Company Name Milwaukee Water Works	"REVISED"	PLEASE RETURN THIS WORKSHEET BY July 9th, 2009
Project Description -- Include Project ID, Title, Limits, Highway, County North-South Freeway Reconstruction IH 94 / IH 43 / IH 894 Mitchell Interchange - College Ave. to Howard Ave. Milwaukee County Design Project ID 1030-20-00 Construction Project ID 1030-20-72		RETURN TO Mr. Kevin Cornnell, PE, RLS Milwaukee Transportation Partners, LLC 141 NW Barstow Street PO Box 798 Waukesha, WI 53187-0798

- Describe your proposed relocation plan for the above project, as requested in the enclosed letter, using highway stationing whenever possible. Attach extra sheets if needed.

Relocations designed and/or under construction (in WISDOT contract) :

S 27th St - 12" Relay
W Grange Ave - 54" Relay
W Layton Ave - 16" Relay and Hydrant Alteration
W Bolivar Ave - 16" Alteration
W Mallory Ave - 8" Relay
W Whitaker Ave (West) - Hydrant Alteration and service
W Whitaker Ave (East) - 8" Relay S 14th St to S 15th St
S 20th St (Phase I) Alterations, S 15th Pl (Hydrant alteration), W Halsey Ave (Alterations)

Relocations yet to be designed/constructed by WISDOT's Consultant to be included in future WISDOT contracts as 90/10 water relocation projects:
S 20th St - 16" relay

- Conflicting utility facilities will need to be relocated prior to construction. If this is not feasible, provide an explanation and an indication of what work will require coordination with the highway contractor during construction.

The above work is in various stages of coordination with the state highway project and to be designed by WISDOT consultant and to be included in WISDOT contracts.

3.	Anticipated Start Date
	Will coincide with WISDOT project start dates
4.	Estimated construction time required (In working days)
	NA

- List the approvals required and the expected time schedule to obtain those approvals.

WISDOT permits and DNR water main extension submitted by the WISDOT consultant

- Include a list of the real estate parcels that the Wisconsin Department of Transportation (DOT) must have acquired to enable your company to complete the necessary facility installations and relocations prior to construction.

None

7. Review the enclosed plans for the above project. Are your facilities correct as shown? If not, list the errors. In some cases, it may be easier to return a marked up copy of the plan. **It is very important that your facilities are shown correctly because all construction field personnel will use this information. Uncorrected location errors could create construction delays or damage to utility facilities.**

Plans appear correct with the exception of S 15th St and W Whitaker Ave.(East) In 2006 MWW installed a new 8" water main in S 15th St slightly changing the configuration in the intersection see attached plan 2006112.

8. Is this work dependent on work by other utilities? If so, which other utilities, and what time schedule has been coordinated with them?

No

9. Please provide the name, address, and telephone number of the field contact person for this project, so that we may place this information on the highway plan.

Name

Mr. Dave Goldapp

Address

841 N Broadway, Room 409

City, State, ZIP Code

Milwaukee, WI 53202

Area Code - Telephone Number

414-286-6301

Area Code - Telephone Number (Mobile)

414-708-2695

10. List any other relevant information that may impact the ultimate goal of preventing construction delay due to uncertain scheduling of utility facility relocations.

None

11. Yes ☐ No ☒ Do you have any facilities that are no longer in use but have been left in place in the project area? If "Yes", approximately where are the facilities located and what type and size of facility is involved?

☐

☒

Does the line have any remaining product?

☐

☒

Does the line have any asbestos wrap or any other hazardous materials associated with it?

☐

☒

Does any part of the line conflict directly with the proposed highway project? If so, what arrangements have been made to remove those portions? This should be mentioned as part of your work plan in question number 1 on this form.

☐

☒

Is there any reason the highway contractor cannot remove portions of the line left in place?

If you answered "Yes" to any of the questions above, please attach additional pages.

Preparer Area Code - Telephone #, Ext.

414-286-8148

Preparer E-Mail Address

karl.rohrbach@milwaukee.gov

Karl Rohrbach, P.E.

(Name of Person Who Prepared this Worksheet)
(If completed electronically, Brush Script Font)

"REVISED"

2/2/2009

(Date)

NOTE: DOT will be sending to you a Trans 220 Work Plan Approval letter and a Start Work Notice after we complete the review of your Work Plan.

ESTIMATE OF QUANTITIES

(NOT FOR BIDDING)

FURNISH PIPE AND INSTALL
193 LF - 30" STEEL CASING

DUCTILE IRON PIPE, PUSH-ON
RUBBER GASKET JOINT
305 LF - 16" WATER MAIN
16 LF - 6" HYDRANT BRANCH

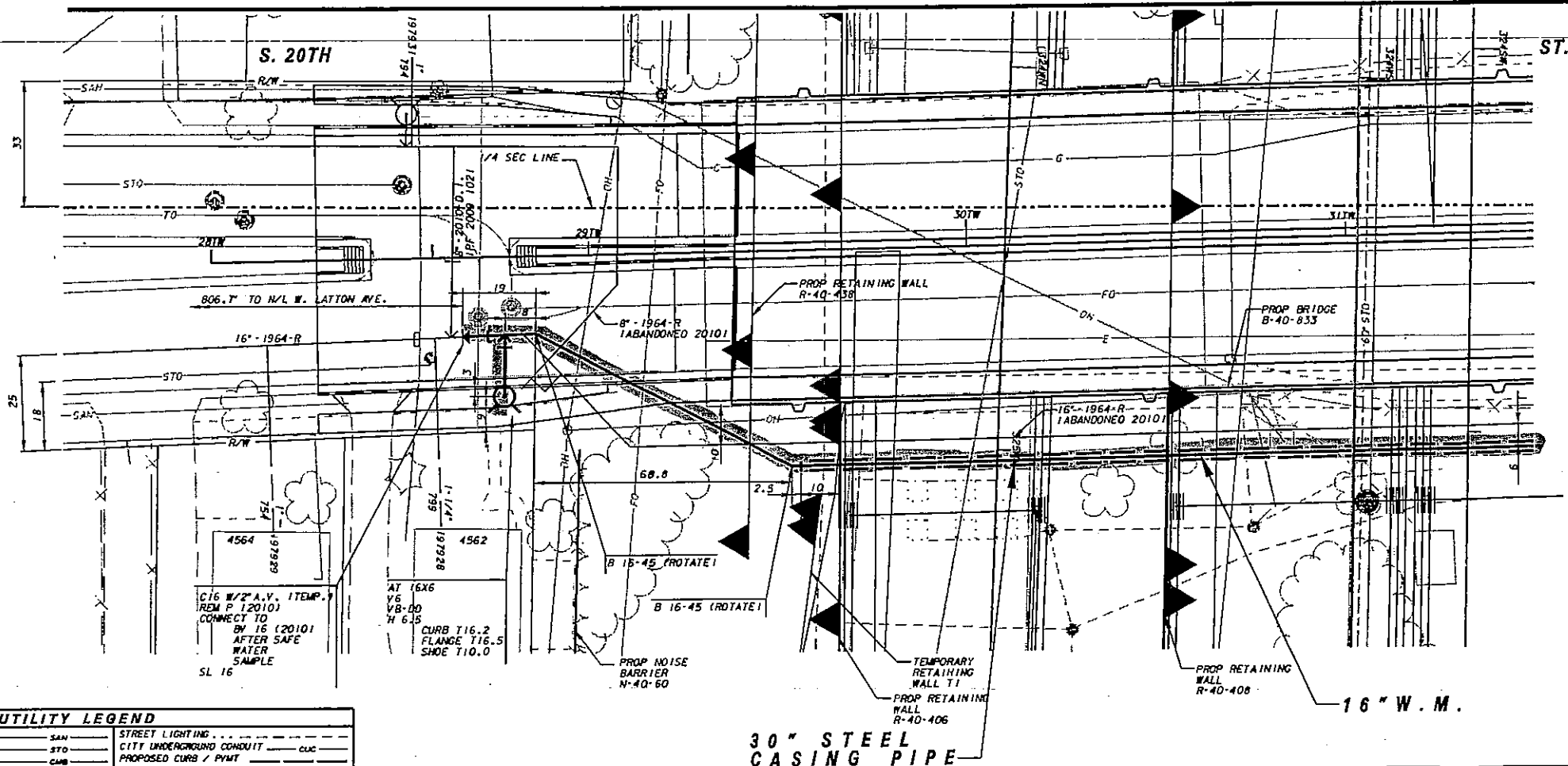
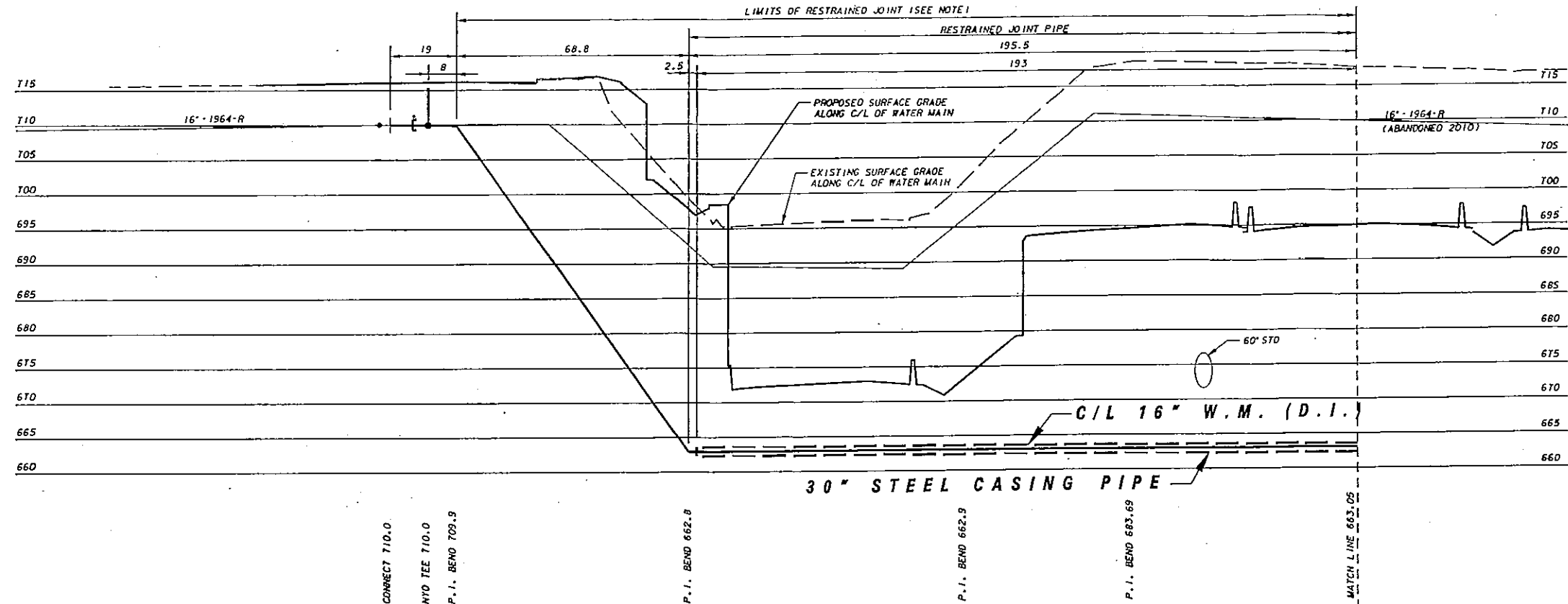
MATERIALS ON THIS
CONSTRUCTION PLAN TO BE
FURNISHED BY THE CITY.
1-H 16.5)

SEE GENERAL NOTES ON SHEET 1 OF 2
1 PLAN FILE NO. 2011XXX

RESTRAINT - 16" WATER MAIN
SEE NOTE ON PLAN
FILE NO. 2011XXX
1 SHEET 1 OF 2

ELEVATIONS SHOWN ON THIS PLAN ARE
REFERENCED TO MVD 29. TO CONVERT
TO CITY OF MILWAUKEE DATUM,
SUBTRACT 580.603 FROM ELEVATIONS
SHOWN.

STATE PROJECT NUMBER
1030-20-72



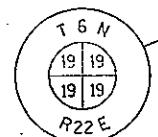
PLAN LINE & UTILITY LEGEND			
GAS	—	SANITARY SEWER	—
ELECTRIC	—	STORM SEWER	—
TELEPHONE	—	COMBINED SEWER	—
CABLE TELEVISION	—	WATER MAIN	—
FIBER OPTICS	—	WATER SERVICE	—
PROPOSED UTILITY	—	PRESSURE DISTRICT	—
POWER POLES	—	WATER MAIN VALVES	—
UTILITIES	—	HYDRANTS	—

CALL DIGGERS HOTLINE
1-800-242-8511
TOLL FREE TO OBTAIN LOCATION OF UNDERGROUND
UTILITY LINES. (SEE CITY OF MILWAUKEE PLANS)
NOTE: IF 3" HOSE IS NOT USED, 1" HOSE IS REQUIRED.

Norris & Associates, Inc.
8001 N. 78th St., Suite 300
Milwaukee, WI 53223
Phone: 414-362-0003 / Fax: 414-362-0000

K.S.R. MILWAUKEE WATER WORKS REVIEW
NO. BY REVISION

Milwaukee Water Works		Water Engineering	
Department of Public Works		Department of Public Works	
WATER MAIN			
IN S. 20TH ST. (PHASE II)			
FROM W. VAN NORMAN AVE.			
TO 600 FT. S/O W. VAN NORMAN AVE.			
SCALE	HORIZONTAL 1" = 20'	VERTICAL 1" = 10'	DATE
IN USE, IN. 507	WATER MAIN EXAMINER		
PLAN DATE	CHIEF ENGINEER		
DRAWN BY T. WEICK	SPECIAL ASSISTANT ENGINEER OF PUBLIC UTILITIES		
CHECKED BY R. BLANKEN	DATE		
PROJECT NO. 2011-305	CONTRACT NO.	STATE	C.C. FILE NO.
BY PLAN NO. 10100501	A.E. & PROJECT NO.	STATE	DATE ADJUSTED
SHEET NO. 2 - OF 2 PLAN FILE NO. 2011XXX			



MONUMENT W/
BRASS CAP
Y=273326.50
X=598093.05

STA 324WS+29.12
STA 341W+50.44

SEE SHEET 4.31

CITY OF MILWAUKEE

NW-SE

1/16TH LINE

PL

H.E.

WISCONSIN ELECTRIC POWER COMPANY

SEE SHEET 4.32

HWY	BASIS OF EXISTING R/W	YEAR	WIDTH
I-94, I-43	I-94-S131314	1962	VARIES
I-94, I-43	I-94-S141310	1962	VARIES
I-94, I-43	I-94-S141314	1962	VARIES
I-94, I-43	I-94-S141310	1963	VARIES
W. ARMOUR AVENUE	LAYTON HILLS S/O	1956	60'
W. CUDAHY AVENUE	LAYTON HILLS S/O	1956	50'
W. CUDAHY AVENUE	SCHOOL VIEW S/O	1958	10'
S. 14TH STREET	SCHOOL VIEW S/O	1958	VARIES
LAYTON AVENUE	S. 0830 131	1951	60'

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 (TYPICAL 3/4" REBAR) AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT BY WISCONSIN DOT SOUTHEAST REGION SURVEY.

RIGHT-OF-WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY SYSTEM OR OTHER "SURVEYS OF PUBLIC RECORD".

COORDINATES AND BEARINGS ON THE PLAT ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM, MILWAUKEE COUNTY, NAD 1983 (1997) ADJUSTMENT. ALL DISTANCES ARE GROUND LENGTH AND ARE REFERENCED TO GPS HARN POINTS GREENDALE GPS AND FRANKLIN S, GPS

I-94 REFERENCE LINE IS CENTERLINE OF MEDIAN.

UA516 CITY OF MILWAUKEE/WATER
UA518 CITY OF MILWAUKEE/CABLE
UA519 CITY OF MILWAUKEE/CONDUIT

500 WE ENERGIES - ELECTRIC
503 AT&T WISCONSIN
505 AMERICAN TRANSMISSION COMPANY

CURVE 14 W-5	CURVE 15 I-94	CURVE 16 I-94
P.L. = 337+21.20 Y = 271758.18 X = 599375.27 A = 94°27'23" O = 4107' R = 1000.00' T = 1189.06' L = 1813.43'	P.L. = 567+57.63 Y = 270940.37 X = 599368.66 A = 10°15'43" O = 4163.33' R = 3400.00' T = 305.30' L = 608.14'	P.L. = 587+19.47 Y = 272896.65 X = 599200.72 A = 88°11'55" O = 4163.33' R = 1340.00' T = 1300.79' L = 2065.08'

CITY OF MILWAUKEE

SE-SE



4

MATCHLINE SEE SHEET 4.30 799.72' STA 324WS+33.34

MATCHLINE SEE SHEET 4.23 174.94' STA 564+80.07

MONUMENT W/
BRASS CAP
Y=270675.62
X=598083.66

T 6 N
19 19
30 30
R22 E

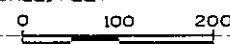
MONUMENT W/
BRASS CAP
Y=270651.62
X=600692.79

T 6 N
19 20
30 29
R22 E

REVISION DATE
OCTOBER 28, 2008 AUGUST 17, 2009
FEBRUARY 26, 2009 JANUARY XX, 2009
JUNE 22, 2009

DATE SEPTEMBER 25, 2008

SCALE, FEET



HWY: I-94

COUNTY: MILWAUKEE

STATE R/W PROJECT NUMBER 1030-20-20

CONSTRUCTION PROJECT NUMBER 1030-20-70

PLAT SHEET 4.24

E

FILE NAME : S:\proj\impmwork\15.ProjBase\RW\MIL\cads\10302020_424.dgn

PLOT DATE : 01-FEB-2010 15:29

PLOT BY : MSCBXD

PLOT NAME :

PLOT DATE : 200:1

WISDOT/CADDs SHEET 70

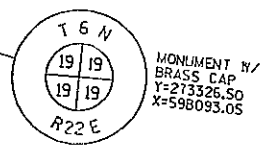
HTY	BASIS OF EXISTING R/W	YEAR	WIDTH
I-94, I-43	I-94-S13314	1962	VARIES
I-94, I-43	I-94-S141310	1962	VARIES
I-94, I-43	I-94-S141314	1962	VARIES
I-94, I-43	I-94-S151310	1963	VARIES
BOTTSFORD AVE.	BOLIVAR MANOR ADDN. NO. 3	1951	60'
S. 16TH STREET	BOLIVAR MANOR ADDN. NO. 3	1957	30'
S. 16TH STREET	BOLIVAR MANOR ADDN. NO. 2	1956	30'
S. 20TH STREET	FONS & CO'S SUBO. NO. 20	1956	45'
S. 20TH STREET	VILLA MANN NO. 3	1955	45'

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 (TYPICAL 3/4" REBAR) AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT BY WISCONSIN DOT SOUTHEAST REGION SURVEY.

RIGHT-OF-WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY SYSTEM OR OTHER "SURVEYS OF PUBLIC RECORD".

COORDINATES AND BEARINGS ON THE PLAT ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM, MILWAUKEE COUNTY, NAD 1983 (1997) ADJUSTMENT. ALL DISTANCES ARE GROUND LENGTH AND ARE REFERENCED TO GPS HARN POINTS GREENDALE GPS AND FRANKLIN 5 GPS.

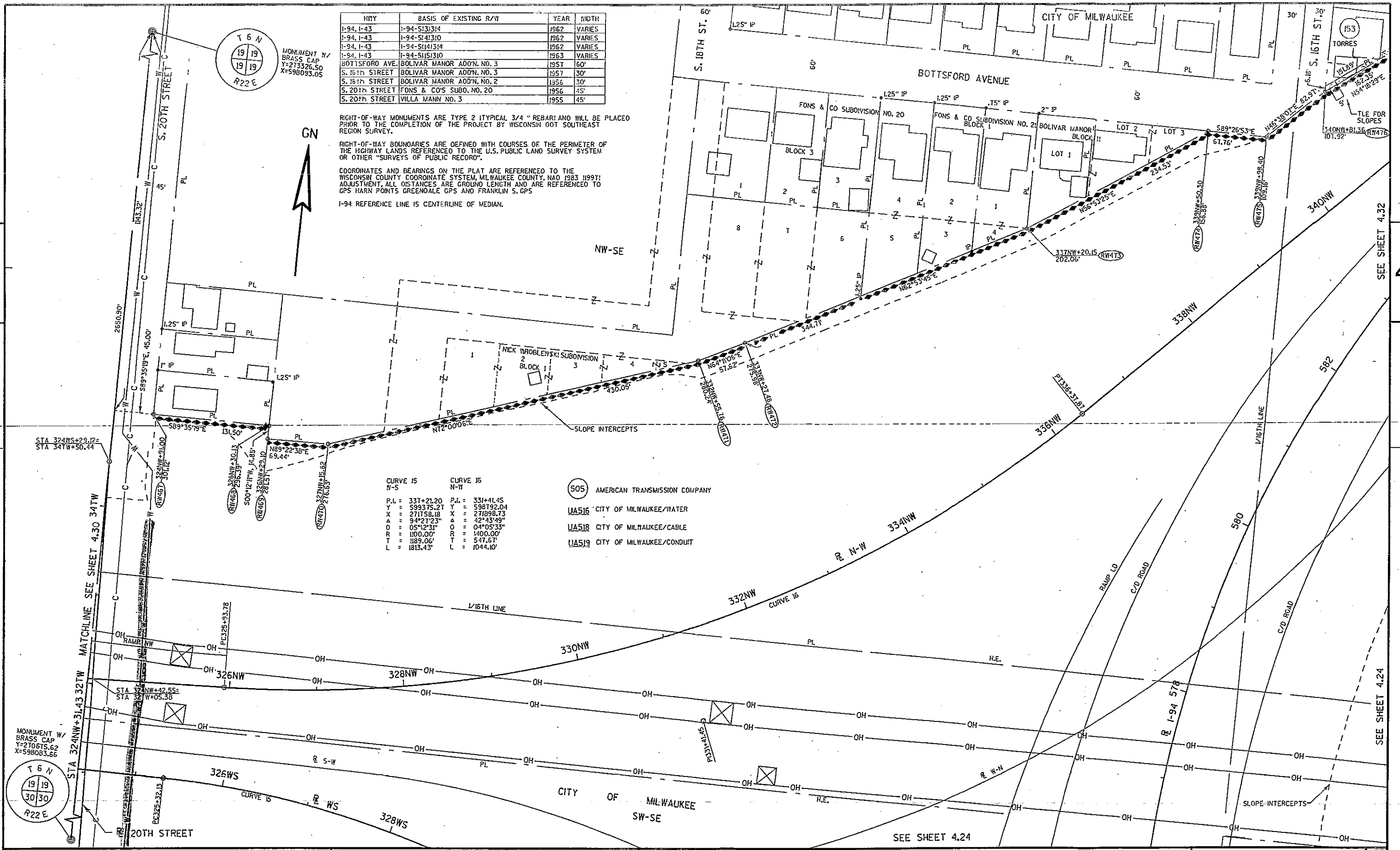
I-94 REFERENCE LINE IS CENTERLINE OF MEDIAN.



MONUMENT W/
BRASS CAP
Y=273326.50
X=598093.05

CURVE 15	CURVE 16
N-S	N-W
P.L. = 337+21.20	P.L. = 331+41.45
Y = 599375.27	Y = 598792.04
X = 271758.18	X = 271898.73
A = 94°21'23"	A = 42°43'49"
O = 05°12'31"	O = 04°05'33"
R = 1100.00'	R = 1400.00'
T = 1189.06'	T = 547.61'
L = 1813.43'	L = 1044.10'

- (505) AMERICAN TRANSMISSION COMPANY
- UA516 CITY OF MILWAUKEE/WATER
- UA518 CITY OF MILWAUKEE/CABLE
- UA519 CITY OF MILWAUKEE/CONDUIT



REVISION DATE JUNE 22, 2009 AUGUST 17, 2009 JANUARY XX, 2009	DATE FEB. 26, 2009	SCALE, FEET 0 50 100	HWY: I-94 COUNTY: MILWAUKEE	STATE R/W PROJECT NUMBER 1030-20-20 CONSTRUCTION PROJECT NUMBER 1030-20-70	PLAT SHEET 4.31 PS&E SHEET E
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MUNICIPAL AGREEMENT AMENDMENT NO. 79

Wisconsin Department of Transportation

2008 S.84.09(1) Wis. Stats.

Utility Project ID Number	County	UA Number
1030-21-47	Milwaukee	517
Road Name	Highway	
Airport Freeway	IH 43 / 894	
Utility name		
City of Milwaukee – Sewer		

The agreement in effect between the above named Utility and the State of Wisconsin, Department of Transportation, Division of Transportation Infrastructure Development for the performance of certain work on the above project shall be changed in the following particulars. The acceptance of this amendment by the Utility and its approval by the Wisconsin Department of Transportation shall constitute a mutual agreement as part of the original agreement binding upon both parties in the same manner as though the essence of the amendment had originally been in the agreement.

Reason for Amendment:

This Municipal Agreement Amendment No. 79 is to add the cost of sewer relocations at the Airport Freeway project (1030-10-73) for the reconstruction of the I-94 North-South Freeway. The original Municipal Agreement for this Parcel was executed under the contract for the Grange Avenue Overpass (1030-20-77).

Change to Current Agreement

ITEM	EXPLANATION	COST (+/-)
City Sewer facilities.	Addition of relocations, reconstructions and adjustments of City Sewer facilities as necessary for the relocation of the S. 21 st Street and Louisiana Avenue Sewers crossing I-894, as necessary for the I-94 North-South Freeway.	+ \$1,415,806.17

Net increase/decrease in agreement: \$1,415,806.17 increase.

The parties have caused this Agreement to be executed by their proper officers and representatives on the date shown.

Wisconsin Department of Transportation
Division of Transportation Infrastructure Development

X
(Administrator) (Date)

X
(Governor of Wisconsin) (Date)

(Municipal Utility) (Date)

X
(Signature) (Date)

(Title) (Date)

X
(Signature) (Date)

(Title) (Date)

X
(Signature) (Date)

(Title) (Date)

N-S FREEWAY
Airport Freeway
IH 43 / 894
Milwaukee County

Utility Project ID: 1030-21-47 / 1030-21-44
RW Project ID: 1030-20-20
UA517 / Parcel 527
Construction Project ID: 1030-10-73

SOUTH 21ST STREET/LOUISIANA AVENUE/SEWER RELOCATION

Calculation of Compensable Cost

• Total Length Existing Sewer	1094 LF	100%
• Length of Sewer in R/W	1017 LF	93%
• Length of Sewer outside of R/W	77 LF	7%

Municipal Agreement vs. Audit Cost

Total Relocation Cost	\$1,522,372.23
• Municipal Agreement Cost	$(1,522,372.23 \times 0.93) = \$1,415,806.17$
• Audit Agreement Cost	$(1,522,372.23 \times 0.07) = \$106,566.06$

N-S FREEWAY
 Airport Freeway
 IH-94
 Milwaukee County

Utility Project ID: 1030-21-47
 RW Project ID: 1030-20-20
 Parcel: UA517
 Construction Project ID: 1030-10-73
 City of Milwaukee Sewer

Item	Unit	Price ¹	Quantity	Cost
Shaft Excavation	CY	\$75.60	562	\$42,487.20
Trench Excavation	CY	\$13.30	893	\$11,876.90
Temporary excavation support (shaft)	SF	\$51.90	6819	\$353,906.10
Temporary excavation support (trench)	SF	\$3.70	11558	\$42,764.60
Dewatering	day	\$790.00	25	\$19,750.00
15" (jacked)	LF	\$250.00	288	\$72,000.00
18" (jacked)	LF	\$300.00	1311	\$393,300.00
18" (intrench)	LF	\$64.90	287	\$18,626.30
4' ID Precast MH (8' deep)	ea	\$2,357.00	6	\$14,142.00
Addl MH Depth	VF	\$316.00	82	\$25,912.00
4' ID Precast MH w/shaft lid (14' deep)	ea	\$4,253.00	1	\$4,253.00
Addl 3' ID Riser Depth	VF	\$300.00	7	\$2,100.00
Mobilization	LS	\$25,000.00	1	\$25,000.00
Granular Backfill	CY	\$10.10	603	\$6,090.30
Slurry Backfill	CY	\$41.00	500	\$20,500.00
Abandon 10" sewer	LF	\$4.50	610	\$2,745.00
Abandon 15" sewer	LF	\$9.50	439	\$4,170.50
Abandon MH	VF	\$95.50	15	\$1,432.50
CCTV Inspection	LF	\$5.00	2235	\$11,175.00
Subtotal				\$1,072,231.40
Contingency	20%			\$214,446.28
Total Construction Cost				\$1,286,677.68

Equivalent Unit Cost \$682/LF

(1) Cost as of July 2010; Est. ENR CCI = 8840

COST ESTIMATE

BID ITEMS

City Precast Concrete Manhole	Ea	\$8,000.00	6	\$48,000.00
City Precast Concrete Manhole with Shaft Fram And Lid	Ea	\$8,300.00	1	\$8,300.00
Jacking Sanitary Sewer, 15-inch	LF	\$600.00	288	\$172,800.00
Sanitary Sewer, 18-inch	LF	\$400.00	287	\$114,800.00
Jacking Sanitary Sewer, 18-inch	LF	\$700.00	1311	\$917,700.00
Abandoning Existing 10-inch Sanitary Sewer	LF	\$10.00	610	\$6,100.00
Abandoning Existing 15-inch Sanitary Sewer	LF	\$15.00	439	\$6,585.00
Sanitary Sewer Examination CCTV	LF	\$6.00	2235	\$13,410.00
SUBTOTAL				\$1,287,695.00

DESIGN & INSPECTION

Design - City of Milwaukee				\$128,769.50
Design - Milwaukee Transportation Partners				\$41,522.98
Inspection - City of Milwaukee				\$64,384.75
Field Services - City of Milwaukee				\$0.00
SUBTOTAL				\$234,677.23

TOTAL

\$1,522,372.23

UTILITY WORKSHEET

DT 2236 10/2006 s.84.063 Wis. Stats.

Wisconsin Department of Transportation

Utility Company Name City of Milwaukee - Sewer	PLEASE RETURN THIS WORKSHEET BY July 9th, 2009
Project Description - Include Project ID, Title, Subtitle, Highway, County North-South Freeway Reconstruction IH 94 / IH 43 / IH 894 Mitchell Interchange - College Ave. to Howard Ave. Milwaukee County Design Project ID 1030-20-00 Construction Project ID 1030-20-72	RETURN TO Mr. Kevin Cornnell, PE, RLS Milwaukee Transportation Partners, LLC 141 NW Barstow Street PO Box 798 Waukesha, WI 53187-0798

1. Describe your proposed relocation plan for the above project, as requested in the enclosed letter, using highway stationing whenever possible. Attach extra sheets if needed.

The following relocations and/or modifications are the result of preliminary engineering review and may be modified or expanded as the North-South Freeway-Mitchell Interchange project progresses.

- **Station 485+50; IH 94 NB & SB.** An 18-inch diameter storm sewer in W. Ramsey Avenue is deteriorating. Relay this sewer prior to or during construction of Bridge Structures B-40-812 and B-40-813 at this location.
 - **Station 518+50; IH 94 NB & SB.** An 8-inch diameter sanitary sewer in W. Mallory Avenue (Extended) under the Freeway in encroached upon by the proposed Freeway subgrade. Relay this sewer to a lower elevation prior to Freeway reconstruction.
-
- **Station 347+60; Ramp WN (a.k.a. Station 50WE+85; S. 15th Street).** A sanitary sewer manhole becomes located next to a curb face when the intersection with W. Whitaker Avenue is modified. Reposition the top of this manhole to avoid the manhole lid becoming located in a roadway gutter.
 - **Station 309+00; Ramp WN.** A 10-inch diameter sanitary sewer under the Freeway in S. Louisiana Avenue (Extended) (1050-feet East of S. 27th Street) is proposed to have approximately one-half of its cover removed. Reinforce sewer with a cured-in-place lining prior to Freeway reconstruction.
 - **Station 320+90; Ramp WN.** The finished grade of the proposed ramp is approximately five (5) feet UNDER an existing 15-inch diameter sanitary sewer in S. 21st Street (Extended). Reroute this sewer prior to Freeway reconstruction. The City will work with WisDOT to determine a new route for this sewer.
2. Conflicting utility facilities will need to be relocated prior to construction. If this is not feasible, I need an explanation and an indication of what work will require coordination with the highway contractor during construction.

The above work will require coordination with the highway project. The work required at Station 485+50; IH 94 NB & SB and at Station 309+00; Ramp WN will be done by a City contractor prior to the start of Freeway reconstruction.

At Station 518+50; IH 94 NB & SB, Station 347+60; Ramp WN, and at Station 320+90; Ramp WN, the Department of Public Works will be entering into a Municipal Agreement with WisDOT, where the City will review the design, engineering, and preparation of construction plans for all sewer alterations required of facilities owned by the department of Public Works. Further, all sanitary sewer alterations will be let as participating 90/10 projects within a State contract to be constructed by a State contractor.

3.	Anticipated Start Date: Will be coordinated with WisDOT project start dates.
4.	Estimated construction time required (in working days) Not available at this time.

5. List the approvals required and the expected time schedule to obtain those approvals.

Milwaukee Metropolitan Sewerage District (MMSD) approval and WisDOT permits will be obtained prior to start dates.

6. Include a list of the real estate parcels that the Wisconsin Department of Transportation (DOT) must have acquired to enable your company to complete the necessary facility installations and relocations prior to construction.

Partial property acquisitions and/or easements along the south line of the Freeway west of S. 21st Street (Extended).

7. Review the enclosed plans for the above project. Are your facilities correct as shown? If not, list the errors. In some cases, it may be easier to return a marked up copy of the plan. **It's very important that your facilities are shown correctly because all construction field personnel will use this information. Uncorrected location errors could create construction delays or damage to utility facilities.**

The plans appear correct.

8. ~~Is this work dependent on work by other utilities? If so, which other utilities, and what time schedule has been coordinated with them?~~

Water main relocation at W. Mallory Avenue (Extended) to be done simultaneously with the sewer relocation.

9. Please provide the name, address, and telephone number of the field contact person for this project, so that we may place this information on the highway plan.

Name

Mr. Zafar Yousuf

Address

841 N. Broadway, Room 821

City, State, ZIP Code

Milwaukee, Wisconsin 53202

Area Code -- Telephone Number

(414)286-2467

Area Code -- Telephone Number (Mobile)

10. List any other relevant information that may impact the ultimate goal of preventing construction delay due to uncertain scheduling of utility facility relocations.

None at this time.

11. Yes ☐ No ☒

Do you have any facilities that are no longer in use but have been left in place in the project area? If "Yes", approximately where are the facilities located and what type and size of facility is involved?

<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>

Does the line have any remaining product?

Does the line have any asbestos wrap or any other hazardous materials associated with it?

Does any part of the line conflict directly with the proposed highway project? If so, what

arrangements have you made to remove those portions? This should be mentioned as part of your work plan in question number 1 on this form.

☐☒

Is there any reason the highway contractor cannot remove portions of the line left in place?

If you answered "Yes" to any of the questions above, please provide us with additional information. Attach additional pages if necessary.

(414)286-0501

(Area Code - Telephone #, Ext. Preparer)

Paul J. Eggers

(Name of Person Who Prepared this Worksheet)

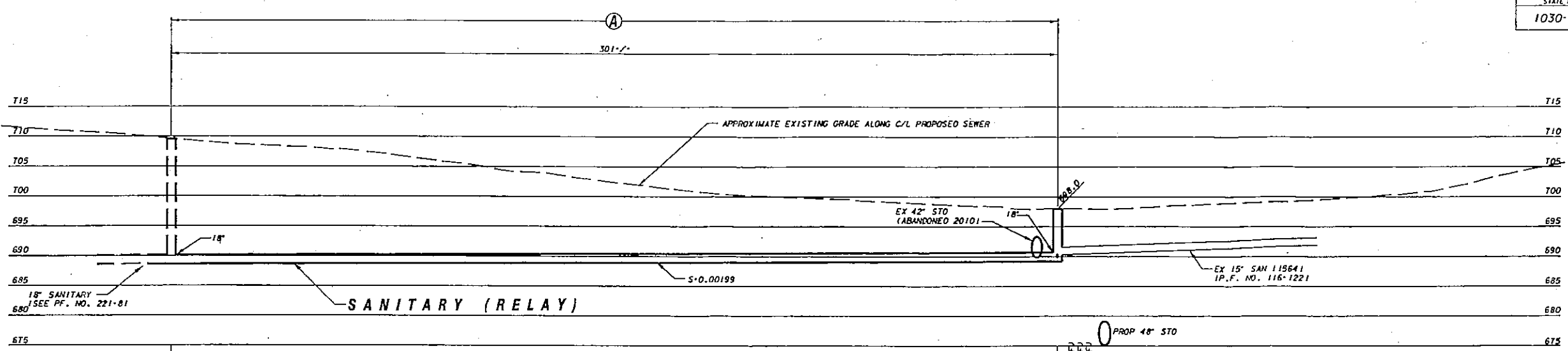
April 7, 2009

(Date)

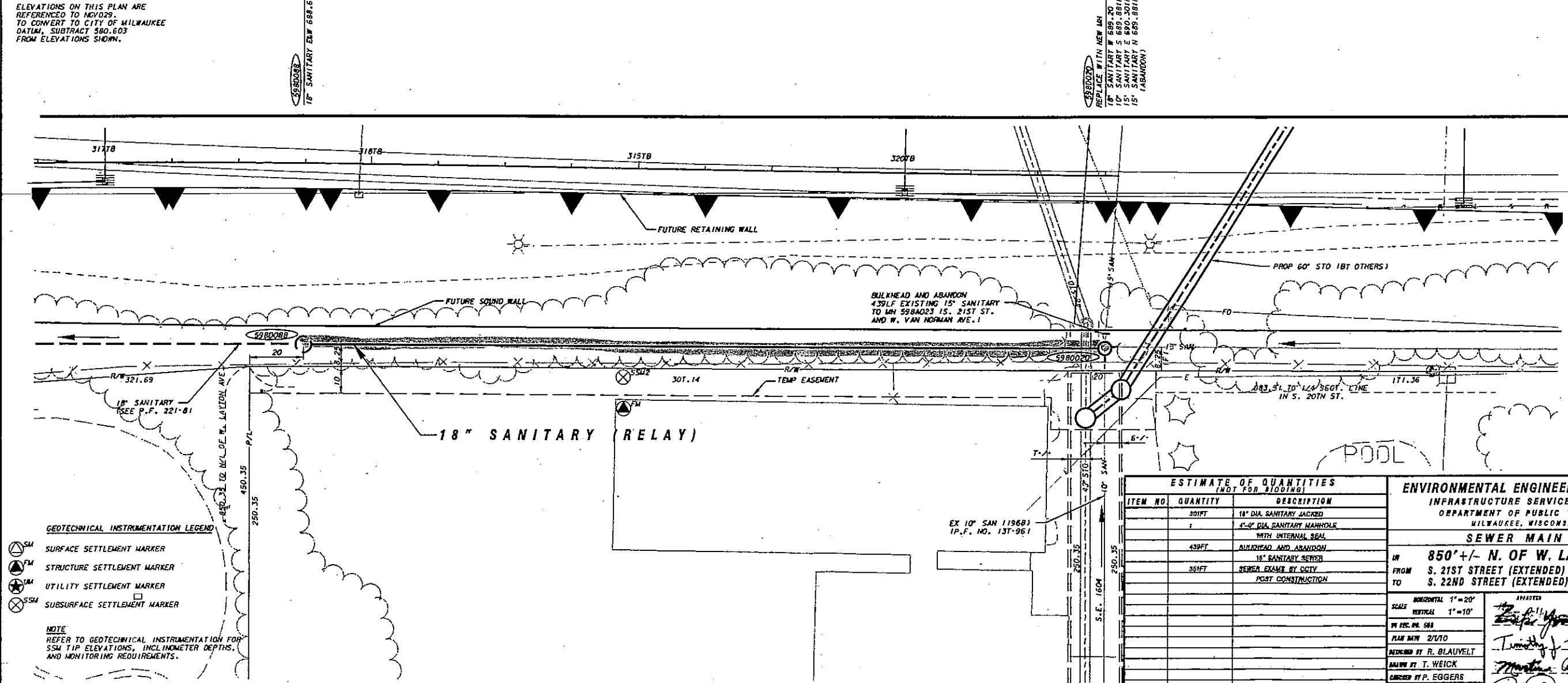
NOTE:

DOT will be sending you a Trans 220 Work Plan Approval letter and a Start Work Notice after we complete the review of your Work Plan.

A
18" SANITARY JACKED PIPE
CLAY PIPE, ASTM C1208
OR F.R.P.M.P.



ELEVATIONS ON THIS PLAN ARE
REFERENCED TO NGVD29.
TO CONVERT TO CITY OF MILWAUKEE
DATUM, SUBTRACT 580.603
FROM ELEVATIONS SHOWN.



GEOTECHNICAL INSTRUMENTATION LEGEND

- SM SURFACE SETTLEMENT MARKER
- PM STRUCTURE SETTLEMENT MARKER
- UM UTILITY SETTLEMENT MARKER
- SSM SUBSURFACE SETTLEMENT MARKER

NOTE
REFER TO GEOTECHNICAL INSTRUMENTATION FOR
SSM TIP ELEVATIONS, INCLINOMETER DEPTHS,
AND MONITORING REQUIREMENTS.

LINE CODE LEGEND			
18" SANITARY	18" DIA. SANITARY JACKED	18" DIA. SANITARY	18" DIA. SANITARY
42" STD	42" DIA. SANITARY	42" DIA. SANITARY	42" DIA. SANITARY
15" SAN	15" DIA. SANITARY	15" DIA. SANITARY	15" DIA. SANITARY
10" SAN	10" DIA. SANITARY	10" DIA. SANITARY	10" DIA. SANITARY
6" SAN	6" DIA. SANITARY	6" DIA. SANITARY	6" DIA. SANITARY
4" SAN	4" DIA. SANITARY	4" DIA. SANITARY	4" DIA. SANITARY
3" SAN	3" DIA. SANITARY	3" DIA. SANITARY	3" DIA. SANITARY
2" SAN	2" DIA. SANITARY	2" DIA. SANITARY	2" DIA. SANITARY
1" SAN	1" DIA. SANITARY	1" DIA. SANITARY	1" DIA. SANITARY
18" DIA. SANITARY	18" DIA. SANITARY	18" DIA. SANITARY	18" DIA. SANITARY
42" DIA. SANITARY	42" DIA. SANITARY	42" DIA. SANITARY	42" DIA. SANITARY
15" DIA. SANITARY	15" DIA. SANITARY	15" DIA. SANITARY	15" DIA. SANITARY
10" DIA. SANITARY	10" DIA. SANITARY	10" DIA. SANITARY	10" DIA. SANITARY
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4" DIA. SANITARY	4" DIA. SANITARY	4" DIA. SANITARY	4" DIA. SANITARY
3" DIA. SANITARY	3" DIA. SANITARY	3" DIA. SANITARY	3" DIA. SANITARY
2" DIA. SANITARY	2" DIA. SANITARY	2" DIA. SANITARY	2" DIA. SANITARY
1" DIA. SANITARY	1" DIA. SANITARY	1" DIA. SANITARY	1" DIA. SANITARY

CALL DIGGERS HOTLINE
1-800-242-8511
TOLL FREE TO OBTAIN LOCATION OF UNDERGROUND
UTILITY. SEE PLAN. IF LOCATIONS OR DEPTHS ARE NOT
KNOWN, A TANK DOES NOT EXIST. IF YOU DO NOT
KNOW, CALL 1-800-242-8511.

Norris & Associates, Inc.
2001 N. 78th St., Suite 505
Milwaukee, WI 53223
Phone: 414.224.0000 / Fax: 414.224.0000

NO.	BY	REVISION	DATE
1	ENT'D.	RT	

ESTIMATE OF QUANTITIES (NOT FOR BIDDING)		
ITEM NO.	QUANTITY	DESCRIPTION
1	301FT	18" DIA. SANITARY JACKED
2	1	42" DIA. SANITARY MANHOLE WITH INTERNAL SEAL
3	439FT	BULKHEAD AND ABANDON 15" SANITARY SEWER
4	351FT	SEWER EXCAVE BY CITY POST CONSTRUCTION

ENVIRONMENTAL ENGINEERING SECTION
INFRASTRUCTURE SERVICES DIVISION
DEPARTMENT OF PUBLIC WORKS
MILWAUKEE, WISCONSIN

SEWER MAIN PLAN

IN 850' +/- N. OF W. LAYTON AVE.
FROM S. 21ST STREET (EXTENDED)
TO S. 22ND STREET (EXTENDED)

SCALE: HORIZONTAL 1"=20'
VERTICAL 1"=10'

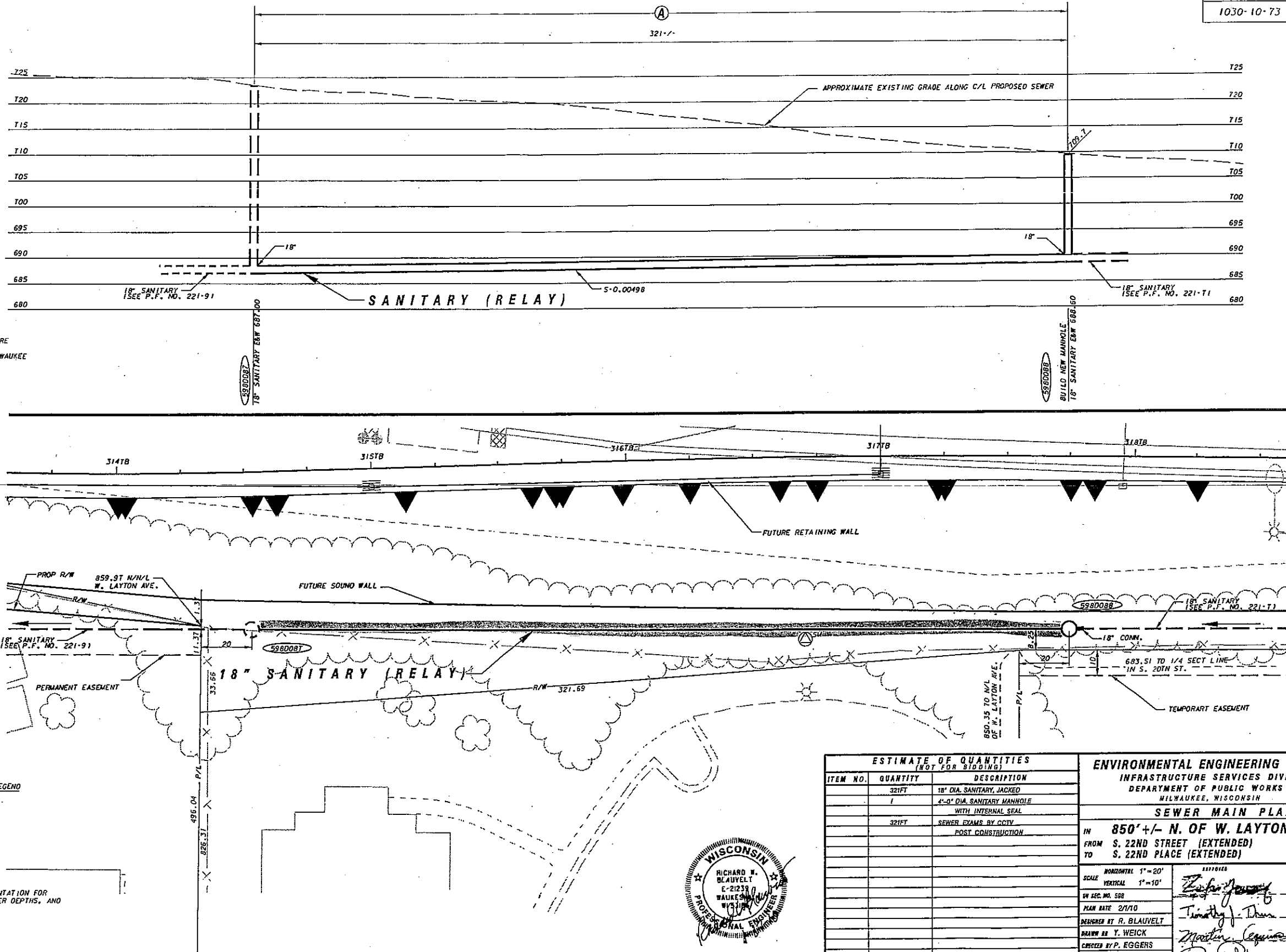
DATE: 1/15/10
DESIGNED BY: R. BLAUVELT
CHECKED BY: T. WEICK
APPROVED BY: P. EGGERS

SYSTEM NO. 1684
EASEMENT NO. 1004
CONTRACT NO. 1030-10-73
SHEET NO. 1 OF 6 PLAN FILE NO. 221-7

A
18" SANITARY JACKED PIPE
CLAY PIPE, ASTM C1208
OR F.R.P.M.P.

STATE PROJECT NUMBER
1030-10-73
SHEET NO.

ELEVATIONS ON THIS PLAN ARE
REFERENCED TO NGVD29.
TO CONVERT TO CITY OF MILWAUKEE
DATUM, SUBTRACT 580.603
FROM ELEVATIONS SHOWN.



GEOTECHNICAL INSTRUMENTATION LEGEND

- SM SURFACE SETTLEMENT MARKER
- FM STRUCTURE SETTLEMENT MARKER
- UM UTILITY SETTLEMENT MARKER
- SSM SUBSURFACE SETTLEMENT MARKER

NOTE
REFER TO GEOTECHNICAL INSTRUMENTATION FOR
SSM TIP ELEVATIONS, INCLINOMETER DEPTHS, AND
MONITORING REQUIREMENTS.

LINE CODE LEGEND

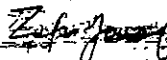
GAS	C	SANITARY SEWER	SAW	STREET LIGHTING	X	X	X	X
ELECTRIC	E	STORM SEWER	STD	PAVING LIMITS	X	X	X	X
TELEPHONE	T	COMBINED SEWER	CMB	STRUCTURE / BUILDING	/	/	/	/
CABLE TELEVISION	TV	SEW. DISTRICT SEWER	MSD	FENCE				X
FIBER OPTICS	FO	WATER MAIN	W					
CITY UNDERGROUND CONDUIT	CK	SEWER/WATER 24" & OVER						

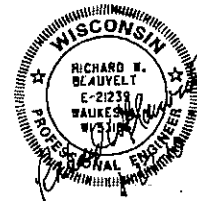
CALL DIGGERS HOTLINE
1-800-242-8511
HOLD LINE IN NORTH LOCATION OF UNDERGROUND
BEFORE YOU DIG. EISCONSIN SANITARY 182,815 REQUIRES
MIN. OF 1 WORK DAYS NOTICE BEFORE YOU EXCAVATE

Norris & Associates, Inc.
9001 N. 78th St., Suite 308
Milwaukee, WI 53223
Phone: 414.362.0063 / Fax: 414.362.0068

NO.	BY	REVISION	DATE
1	AS BUILT	CONTRACT NO.	DATE ENT'D.
2	ENT'D.	BY	

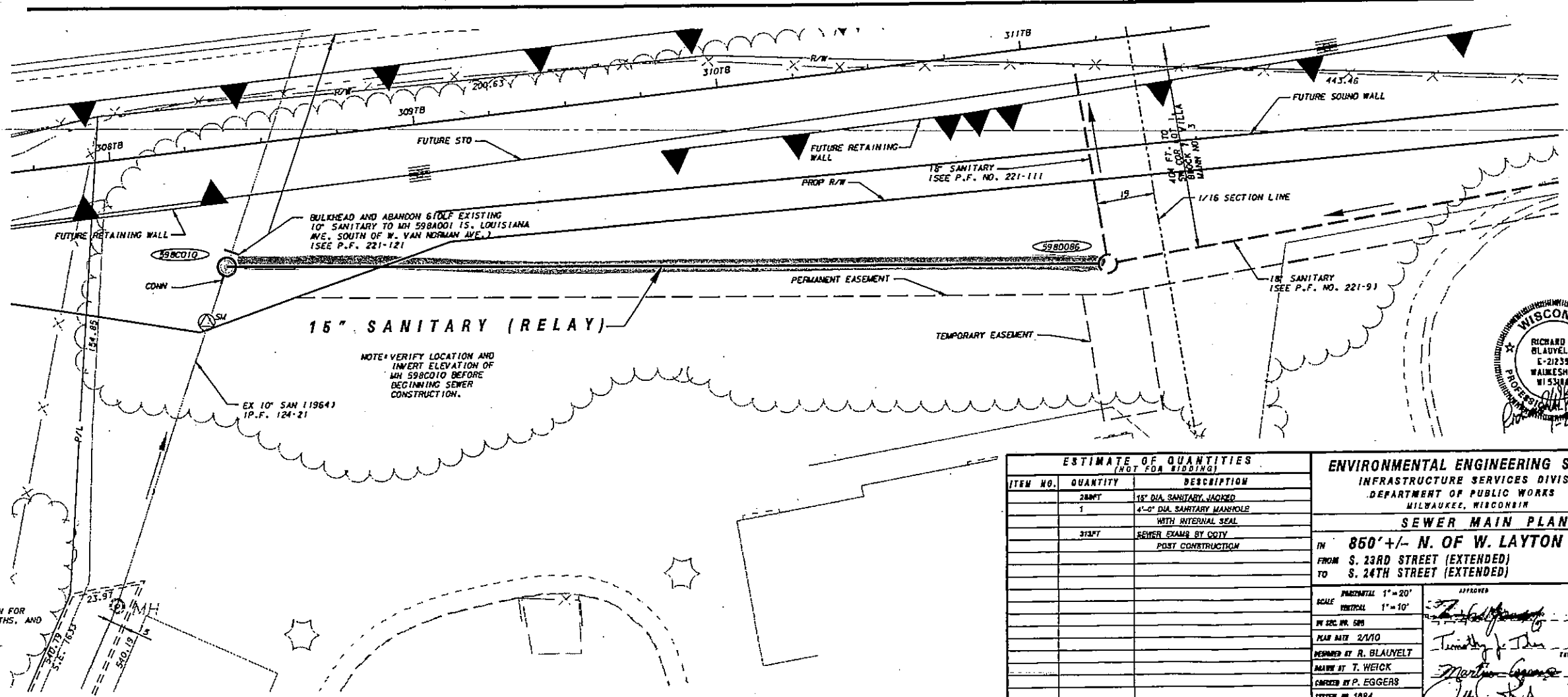
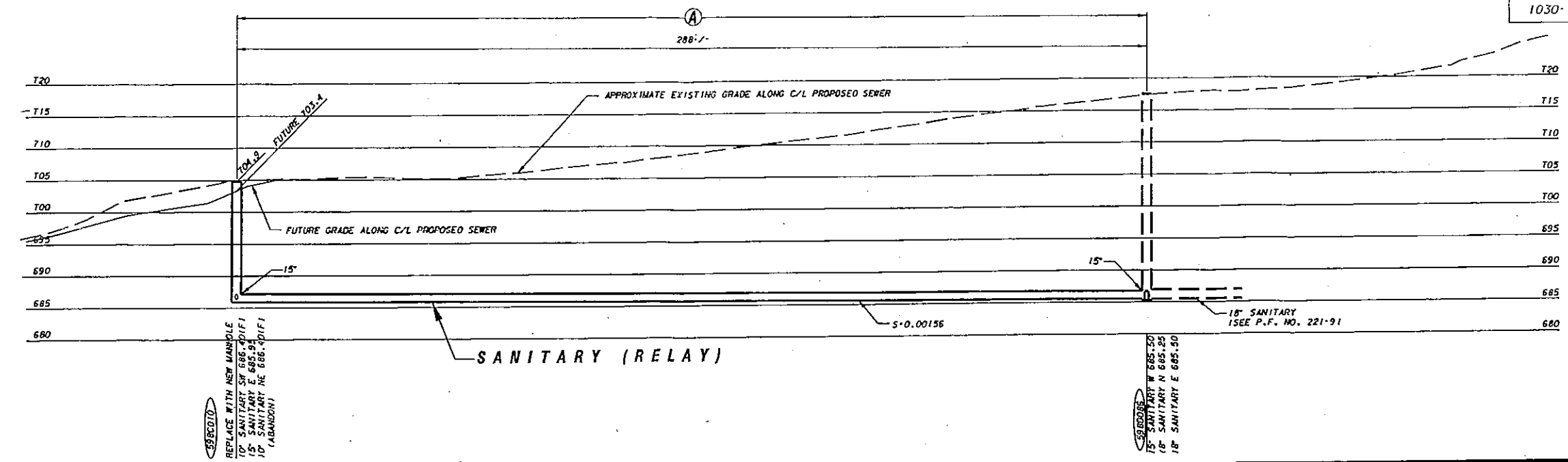
ESTIMATE OF QUANTITIES (NOT FOR BIDDING)		
ITEM NO.	QUANTITY	DESCRIPTION
	321FT	18" DIA. SANITARY, JACKED
	1	4'-0" DIA. SANITARY MANHOLE WITH INTERNAL SEAL
	321FT	SEWER EXAMS BY CCTV POST CONSTRUCTION

ENVIRONMENTAL ENGINEERING SECTION INFRASTRUCTURE SERVICES DIVISION DEPARTMENT OF PUBLIC WORKS MILWAUKEE, WISCONSIN		
SEWER MAIN PLAN		
IN 850' +/- N. OF W. LAYTON AVE. FROM S. 22ND STREET (EXTENDED) TO S. 22ND PLACE (EXTENDED)		
SCALE HORIZONTAL 1"=20' VERTICAL 1"=10'	APPROVED  Timothy J. Dunn Chief Civil Engineer	
BY SEC. NO. 588 PLAN DATE 2/10/10	DATE 1/28/10 CIVIL ENGINEER	
DESIGNED BY R. BLAUVELT DRAWN BY Y. WEICK CHECKED BY P. EGGERS	DATE 1/28/10 ESTIMATE IN CHARGE	
SYSTEM NO. 1884 EASEMENT NO.	CITY, TOWNSHIP & SPECIAL DISTRICT COMMISSIONERS OF PUBLIC WORKS 1/28/10	
CONTRACT NO. PROJ. NO. 1030-10-T3	PROJECT NO. OFF. NOTICE NO.	C.C. FILE NO. DATE ADOPED
SHEET NO. 2 OF 6 PLAN FILE NO. 221-8		



A
15" SANITARY
CLAY PIPE, ASTM C1208 JACKED PIPE

ELEVATIONS ON THIS PLAN ARE
REFERENCED TO HDY029.
TO CONVERT TO CITY OF MILWAUKEE
DATUM, SUBTRACT 580.603
FROM ELEVATIONS SHOWN.



GEOTECHNICAL INSTRUMENTATION LEGEND

- SM SURFACE SETTLEMENT MARKER
- FM STRUCTURE SETTLEMENT MARKER
- UM UTILITY SETTLEMENT MARKER
- SSM SUBSURFACE SETTLEMENT MARKER

NOTE
REFER TO GEOTECHNICAL INSTRUMENTATION FOR
SSM TIP ELEVATIONS, INCLINOMETER DEPTHS, AND
MONITORING REQUIREMENTS.

LINE CODE LEGEND

GAS	0	SANITARY SEWER	SAK	STREET LIGHTING
ELECTRIC	1	STORM SEWER	SKS	PAVING LIMITS
TELEPHONE	2	COMBINED SEWER	CUR	STRUCTURE/BUILDING
CABLE TELEVISION	3	SEWAGE TREATMENT	WMB	FENCE
POWER OPTICS	4	WATER MAIN	W	
CITY UNDERGROUND CONDUIT	CUC	SEWERWATER 24" & OVER		

CALL DIGGERS HOTLINE
1-800-242-8511

CALL FIRST TO DETERMINE LOCATION OF UNDERGROUND
UTILITY AND DEPT. TO DISCLOSE DEPT. RESPONSIBILITIES
BEFORE YOU DIG. NO WORK SHALL BE DONE WITHOUT
THESE PRECAUTIONS.

Norris & Associates, Inc.
8001 N. 78th St., Suite 308
Milwaukee, WI 53223
Phone: 414.962.0008 / Fax: 414.962.0008

NO.	BY	REVISION	DATE
1	ENT	1	10/10/03

ESTIMATE OF QUANTITIES
(NOT FOR BIDDING)

ITEM NO.	QUANTITY	DESCRIPTION
28MFT	1	15" DIA. SANITARY JACKED
1		4'-0" DIA. SANITARY MANHOLE
		WITH INTERNAL SEAL
31MFT		SEWER EXAMS BY CITY
		POST CONSTRUCTION

ENVIRONMENTAL ENGINEERING SECTION
INFRASTRUCTURE SERVICES DIVISION
DEPARTMENT OF PUBLIC WORKS
MILWAUKEE, WISCONSIN

SEWER MAIN PLAN

IN 850' +/- N. OF W. LAYTON AVE.
FROM S. 23RD STREET (EXTENDED)
TO S. 24TH STREET (EXTENDED)

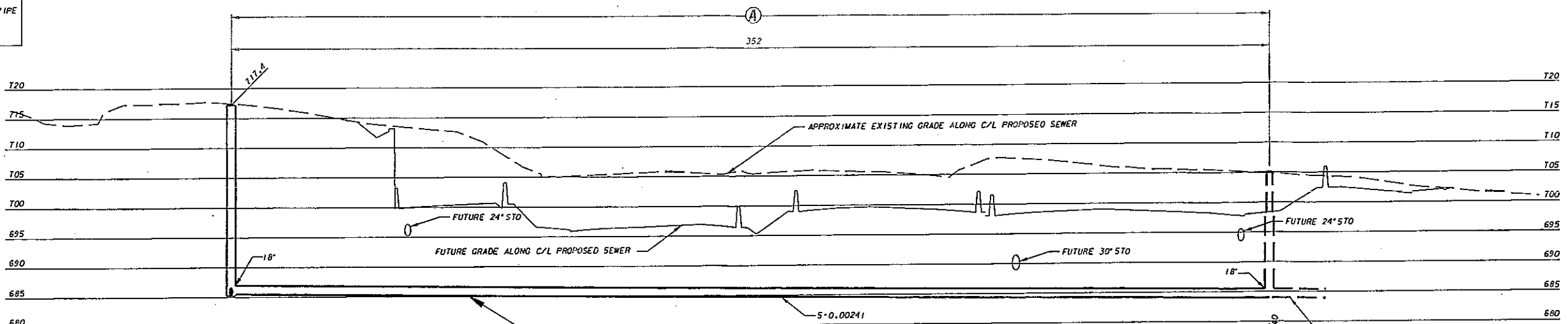
SCALE: HORIZONTAL 1"=20'
VERTICAL 1"=10'

IN DEC. BY: [Signature]
PLAN DATE: 2/1/03
DESIGNED BY: R. BLAUVELT
DRAWN BY: T. WEICK
CHECKED BY: P. EGGER
SYSTEM NO. 1884
EASEMENT NO. 1833
CONTRACT NO.
FILE NO. 1030-10-73

APPROVED: [Signature]
DATE: 10/10/03
CITY ENGINEER
CITY CLERK: [Signature]
CITY CLERK: [Signature]
CITY CLERK: [Signature]

SHEET NO. 4 OF 6 PLAN FILE NO. 221-10

A
18" SANITARY
CLAY PIPE, ASTM C1208
OR F.R.P.M.P. JACKED PIPE

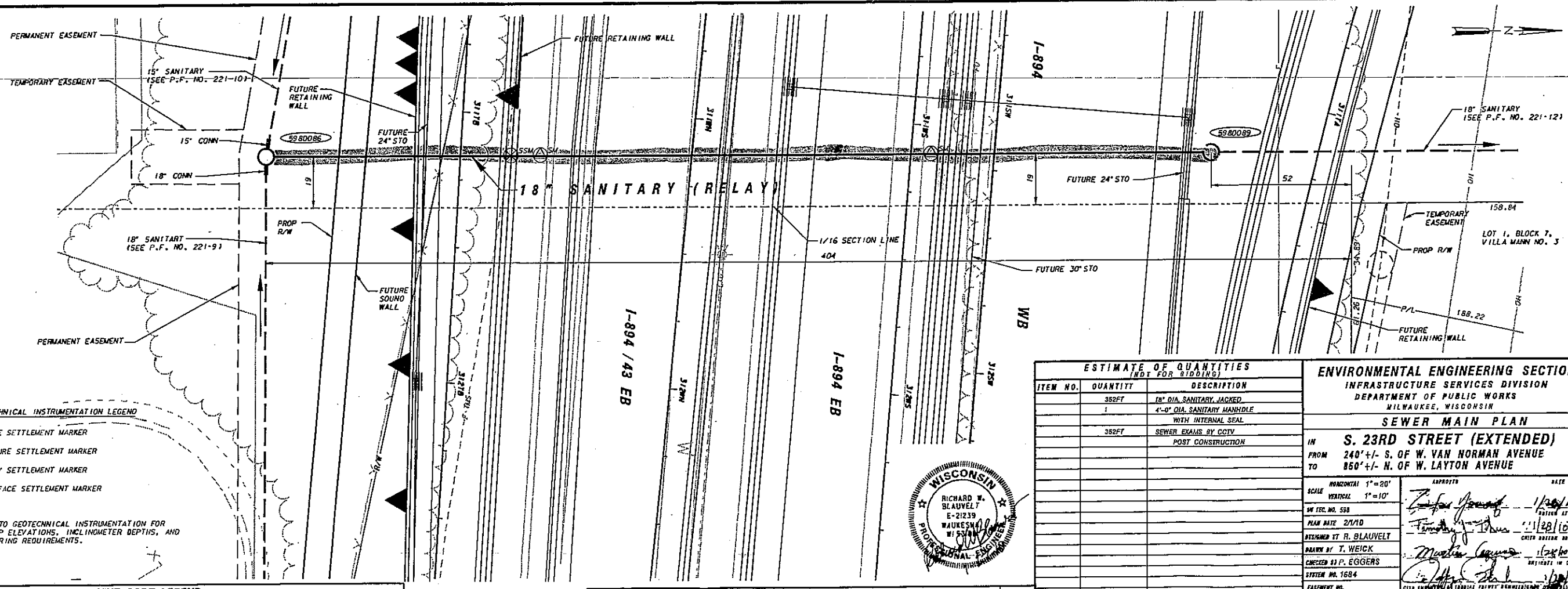


ELEVATIONS ON THIS PLAN ARE
REFERENCED TO NGVD29.
TO CONVERT TO CITY OF MILWAUKEE
DATUM, SUBTRACT 580.603
FROM ELEVATIONS SHOWN.

5800085
BUILD NEW MANHOLE
15" SANITARY W 685.50
15" SANITARY E 682.50
18" SANITARY E 685.50

5800086
18" SANITARY N 684.40
18" SANITARY S 684.40

SANITARY (RELAY)



GEOTECHNICAL INSTRUMENTATION LEGEND

- SM SURFACE SETTLEMENT MARKER
- FM STRUCTURE SETTLEMENT MARKER
- UM UTILITY SETTLEMENT MARKER
- SSM SUBSURFACE SETTLEMENT MARKER

NOTE
REFER TO GEOTECHNICAL INSTRUMENTATION FOR
SSM TIP ELEVATIONS, INCLINOMETER DEPTHS, AND
MONITORING REQUIREMENTS.

LINE CODE LEGEND

GAS	SAW	STREET LIGHTING
ELECTRIC	STO	PAVING LIMITS
TELEPHONE	COMBINED SEWER	STRUCTURE/BUILDING
CABLE TELEVISION	REINFORCED CONCRETE	FENCE
FIBER OPTICS	WATER MAIN	
CITY UNDERGROUND CONDUIT	SEWER/STORM 24" & OVER	

CALL DIGGERS HOTLINE
1-800-242-8511
THIS SHEET IS A PRELIMINARY DESIGN. NO FIELD SURVEY REQUIRED.
FOR A FINAL DESIGN, A FIELD SURVEY IS REQUIRED.

Norris & Associates, Inc.
9001 N. 78th St., Suite 306
Milwaukee, WI 53223
Phone: 414.962.0063 / Fax: 414.962.0066



ESTIMATE OF QUANTITIES
(NOT FOR BIDDING)

ITEM NO.	QUANTITY	DESCRIPTION
1	352FT	18" DIA. SANITARY, JACKED
2	1	4'-0" DIA. SANITARY MANHOLE WITH INTERNAL SEAL
3	352FT	SEWER EXHAUST BY CCTV POST CONSTRUCTION

ENVIRONMENTAL ENGINEERING SECTION
INFRASTRUCTURE SERVICES DIVISION
DEPARTMENT OF PUBLIC WORKS
MILWAUKEE, WISCONSIN

SEWER MAIN PLAN

IN S. 23RD STREET (EXTENDED)
FROM 240' +/- S. OF W. VAN NORMAN AVENUE
TO 850' +/- N. OF W. LAYTON AVENUE

SCALE: HORIZONTAL 1"=20', VERTICAL 1"=10'

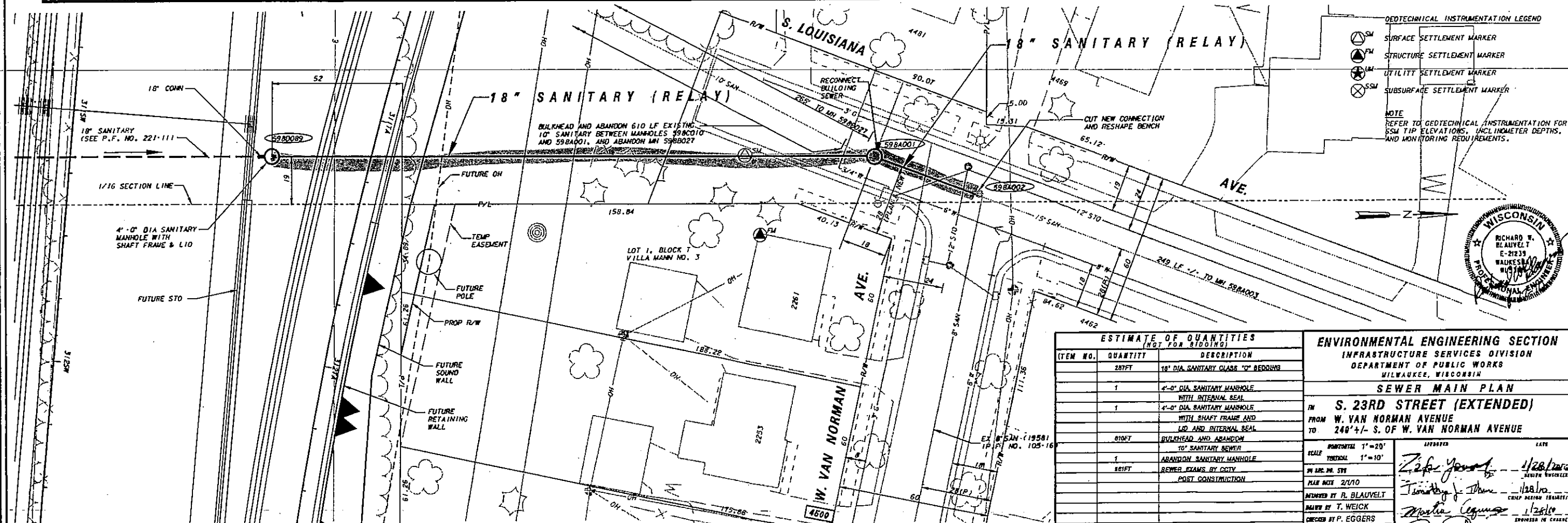
DATE: 1/28/10

DESIGNED BY: R. BLAUVELT
CHECKED BY: P. EGGER
SYSTEM NO. 1684

CONTRACT NO. 1030-10-73
PROJECT NO. 1030-10-73
DATE ADDED

SHEET NO. 5 OF 6 PLAN FILE NO. 221-11

Sanitary sewer line plan view showing a 24-inch diameter main line with a 30-inch diameter manhole chimney. The plan includes stationing from 680 to 710, elevations, and labels for "SANITARY (RELAY)" and "FUTURE GRADE ALONG C/L PROPOSED SEWER". It also shows existing and proposed structures, including a 12-inch storm sewer and a 6-inch water line.




ESTIMATE OF QUANTITIES (NOT FOR BIDDING)		
ITEM NO.	QUANTITY	DESCRIPTION
	287FT	18" DIA. SANITARY CLASS "C" BEDDING
1		4'-0" DIA. SANITARY MANHOLE WITH INTERNAL SEAL
1		4'-0" DIA. SANITARY MANHOLE WITH SHAFT FRAME AND LID AND INTERNAL SEAL
	810FT	BULKHEAD AND ARABDOW TO SANITARY SEWER
	1	ARABDOW SANITARY MANHOLE
	861FT	SEWER EXAMS. BY CITY POST CONSTRUCTION

MAILED BY T. WEICK Maria Legum 1/28/60

SHEET NO. 1 OF 1 PLAN FILE NO. 231 12

SHEET NO. 6 OF 6 PLAN FILE NO. 221-12

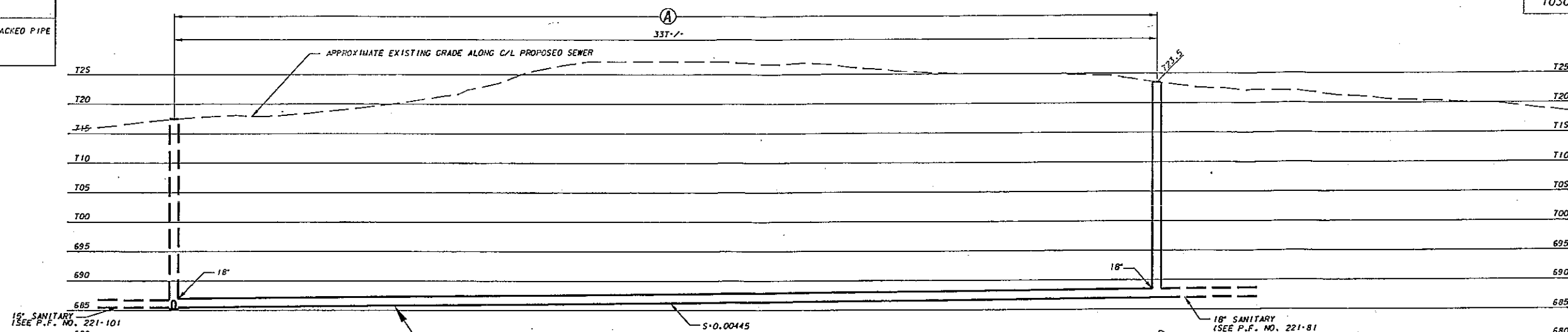
LINE CODE LEGEND				
GAS	6	SANITARY SEWER	5AN	STREET LIGHTING
ELECTRIC	6	STORM SEWER	STD	PAVING LIMITS
TELEPHONE	7	COMBINED SEWER	QAS	STRUCTURE / BUILDING
CABLE TELEVISION	7T	SEW. DISTRICT SEWER	WUSD	FENCE
FIRE OPTICS	7D	WATER MAIN	W	
CITY UNDERGROUND CONDUIT	CK	SEWER/WATER 24" & OVER		

 **CALL DIGGERS HOTLINE**
1-800-242-8511
CALL FREE TO OBTAIN LOCATION OF UNDERGROUNDS
BEFORE YOU DIG. 1200 HOURS TUESDAY 1200 HOURS MONDAY
THRU. 1 HOUR DAILY BEFORE YOU EXCAVATE

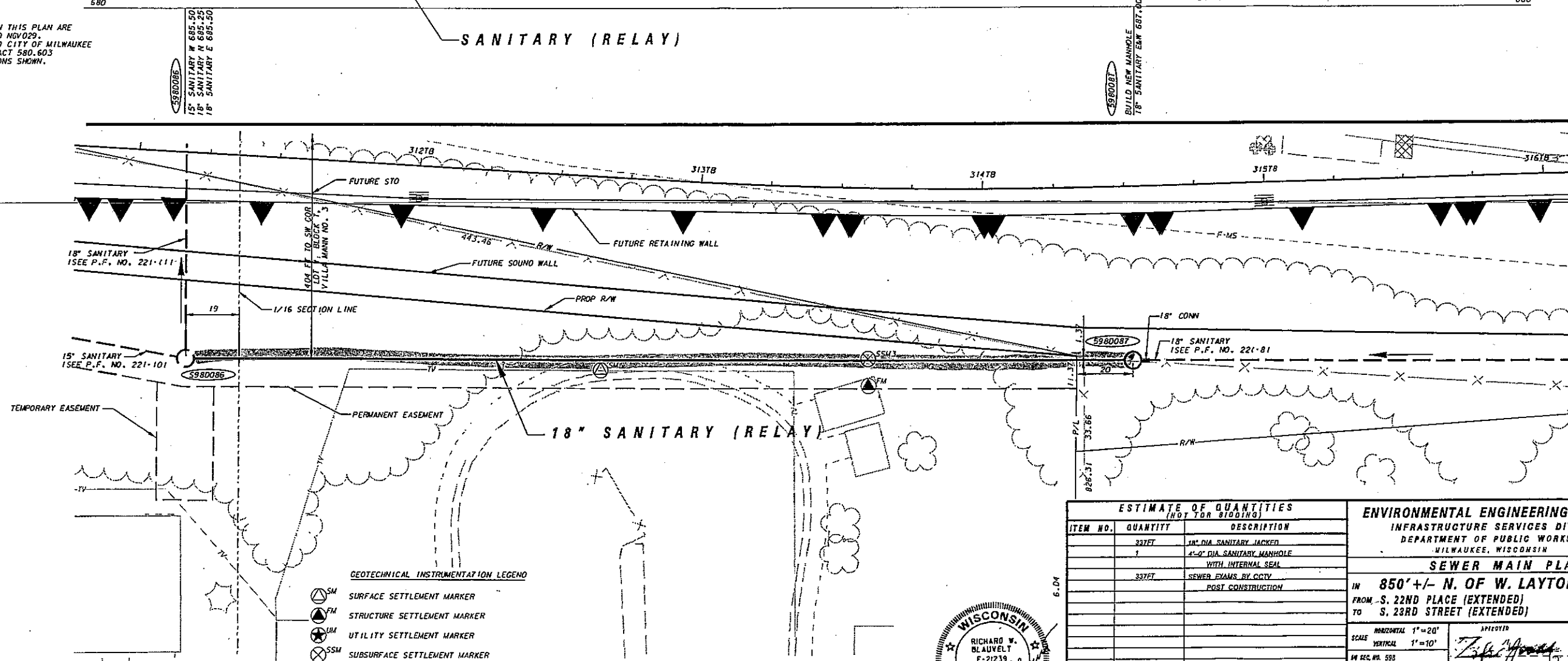
Norris & Associates, Inc.
9001 N. 70th St., Suite 308
Milwaukee, WI 53228
Phone: 414.382.8063 / Fax: 414.382.0066

NO.	NY	REVISION	RAY
AS BUILT CONTRACT NO.		ENT'G. NY	
DATE ENT'D.		ENT'G. NY	

A
18" SANITARY JACKED PIPE
CLAY PIPE, ASTM C1208
OR F.R.P.M.P.



ELEVATIONS ON THIS PLAN ARE
REFERENCED TO NGVD29.
TO CONVERT TO CITY OF MILWAUKEE
DATUM, SUBTRACT 580.603
FROM ELEVATIONS SHOWN.



GEOTECHNICAL INSTRUMENTATION LEGEND
SM SURFACE SETTLEMENT MARKER
FM STRUCTURE SETTLEMENT MARKER
UM UTILITY SETTLEMENT MARKER
SSM SUBSURFACE SETTLEMENT MARKER

NOTE
REFER TO GEOTECHNICAL INSTRUMENTATION FOR
SSM TIP ELEVATIONS, INCLINOMETER DEPTHS, AND
MONITORING REQUIREMENTS.

LINE CODE LEGEND			
SANITARY SEWER	SAW	STREET LIGHTING	SL
STORM SEWER	STO	PAVING LIMITS	PL
COMBINED SEWER	CWO	STRUCTURE/BUILDING	SB
SEW/DISTRICT SEWER	SDS	FENCE	F
WATER MAIN	WM		
SEWER/WATER 14" & OVER	SWO		
ELECTRIC	E		
TELEPHONE	T		
CABLE TELEVISION	TV		
FIBER OPTIC	FO		
CITY UNDERGROUND CONDUIT	CUC		



CALL DIGGERS HOTLINE
1-800-242-8511
TOLL FREE TO OBTAIN LOCATION OF UNDERGROUND
BEFORE YOU DIG. ALSO SEE CITY OF MILWAUKEE
REQ. OF 3 WORK DAYS NOTICE BEFORE YOU DIG.

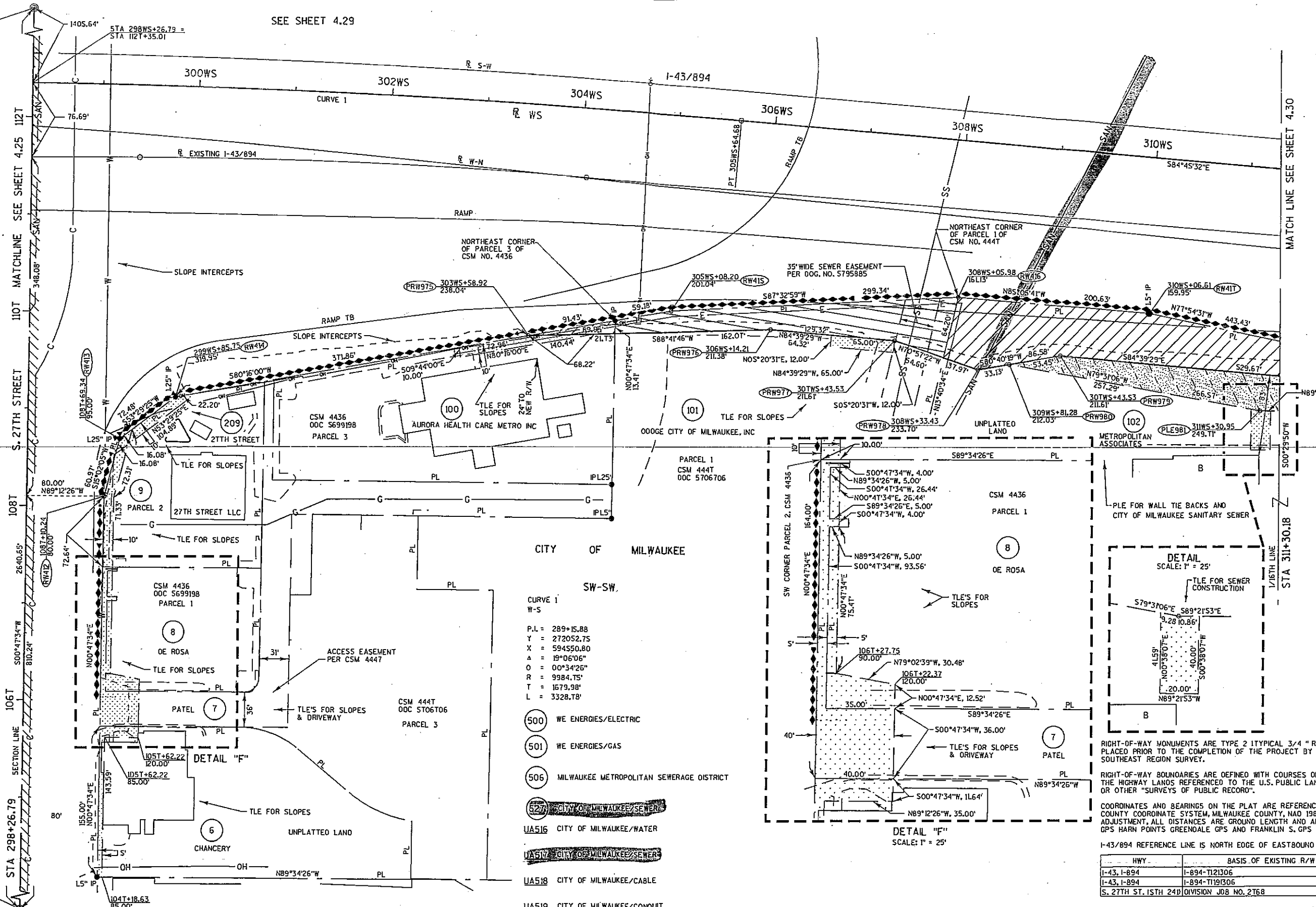
Norris & Associates, Inc.
3001 N. 78th St., Suite 306
Milwaukee, WI 53228
Phone: 414.952.0063 / Fax: 414.952.0066

NO.	BY	REVISION	DATE
1	AS-BUILT	CONTRACT NO.	DATE ENT'D.
2	ENT'D.	BY	

ESTIMATE OF QUANTITIES (NOT FOR BIDDING)		
ITEM NO.	QUANTITY	DESCRIPTION
337FT	1	18" DIA SANITARY JACKED
1		4'-0" DIA SANITARY MANHOLE WITH INTERNAL SEAL
337FT		SEWER EXAMS BY CCTV POST CONSTRUCTION

ENVIRONMENTAL ENGINEERING SECTION INFRASTRUCTURE SERVICES DIVISION DEPARTMENT OF PUBLIC WORKS MILWAUKEE, WISCONSIN		
SEWER MAIN PLAN		
IN 850' +/- N. OF W. LAYTON AVE. FROM S. 22ND PLACE (EXTENDED) TO S. 23RD STREET (EXTENDED)		
SCALE HORIZONTAL 1"=20' VERTICAL 1"=10'	APPROVED <i>[Signature]</i> DATE 2/10/10	DATE 2/28/10
IN SEC. NO. 585 PLAN DATE 2/10/10 DESIGNED BY R. BLAUVELT DRAWN BY T. WEICK CHECKED BY P. EGGERS SYSTEM NO. 1684 EASEMENT NO. CONTRACT NO. PROJ. NO. 1030-10-73	DATE 2/10/10 ENGINEER IN CHARGE CITY ENGINEER OFF. NOTICE NO.	DATE 2/28/10 DATE ADJUSTED
SHEET NO. 3 OF 6 PLAN FILE NO. 221-9		

T 6 N
24 19
24 19
R 21 E R 22 E
MONUMENT W/
BRASS CAP
Y=273345.00
X=595506.58



T 6 N
24 19
25 30
R 21 E R 22 E
MONUMENT W/
BRASS CAP
Y=270704.60
X=595470.04

- CURVE 1
W-S
P.L. = 289+15.88
Y = 272052.75
X = 594550.80
A = 19°06'06"
O = 00°34'26"
R = 9984.75'
T = 1679.98'
L = 3328.78'
- (500) WE ENERGIES/ELECTRIC
 - (501) WE ENERGIES/GAS
 - (506) MILWAUKEE METROPOLITAN SEWERAGE DISTRICT
 - (527) CITY OF MILWAUKEE/SEWER
 - UA516 CITY OF MILWAUKEE/WATER
 - UA517 CITY OF MILWAUKEE/SEWER
 - UA518 CITY OF MILWAUKEE/CABLE
 - UA519 CITY OF MILWAUKEE/CONDUIT

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 TYPICAL 3/4" REBAR AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT BY WISCONSIN DOT SOUTHEAST REGION SURVEY.

RIGHT-OF-WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY SYSTEM OR OTHER "SURVEYS OF PUBLIC RECORD".

COORDINATES AND BEARINGS ON THE PLAT ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM, MILWAUKEE COUNTY, NAD 1983 119971 ADJUSTMENT. ALL DISTANCES ARE GROUND LENGTH AND ARE REFERENCED TO GPS BARN POINTS GREENDALE GPS AND FRANKLIN S. GPS

I-43/894 REFERENCE LINE IS NORTH EDGE OF EASTBOUND MEDIAN LANE.

HWY	BASIS OF EXISTING R/W	YEAR	WIDTH
I-43, I-894	I-894-T121306	1957	VARIES
I-43, I-894	I-894-T1191306	1953	VARIES
S. 27TH ST. 15TH 24TH	DIVISION JOB NO. 2168	1930	80'

REVISION DATE SEPTEMBER 25, 2008 JUNE 22, 2009 OCTOBER 28, 2008 AUGUST 17, 2009 FEBRUARY 26, 2009 JANUARY XX, 2009	DATE JUNE 10, 2008	SCALE, FEET 0 50 100	HWY: IH-94	STATE R/W PROJECT NUMBER 1030-20-20	PLAT SHEET 4.28
			COUNTY: MILWAUKEE	CONSTRUCTION PROJECT NUMBER 1030-20-70	PS&E SHEET E

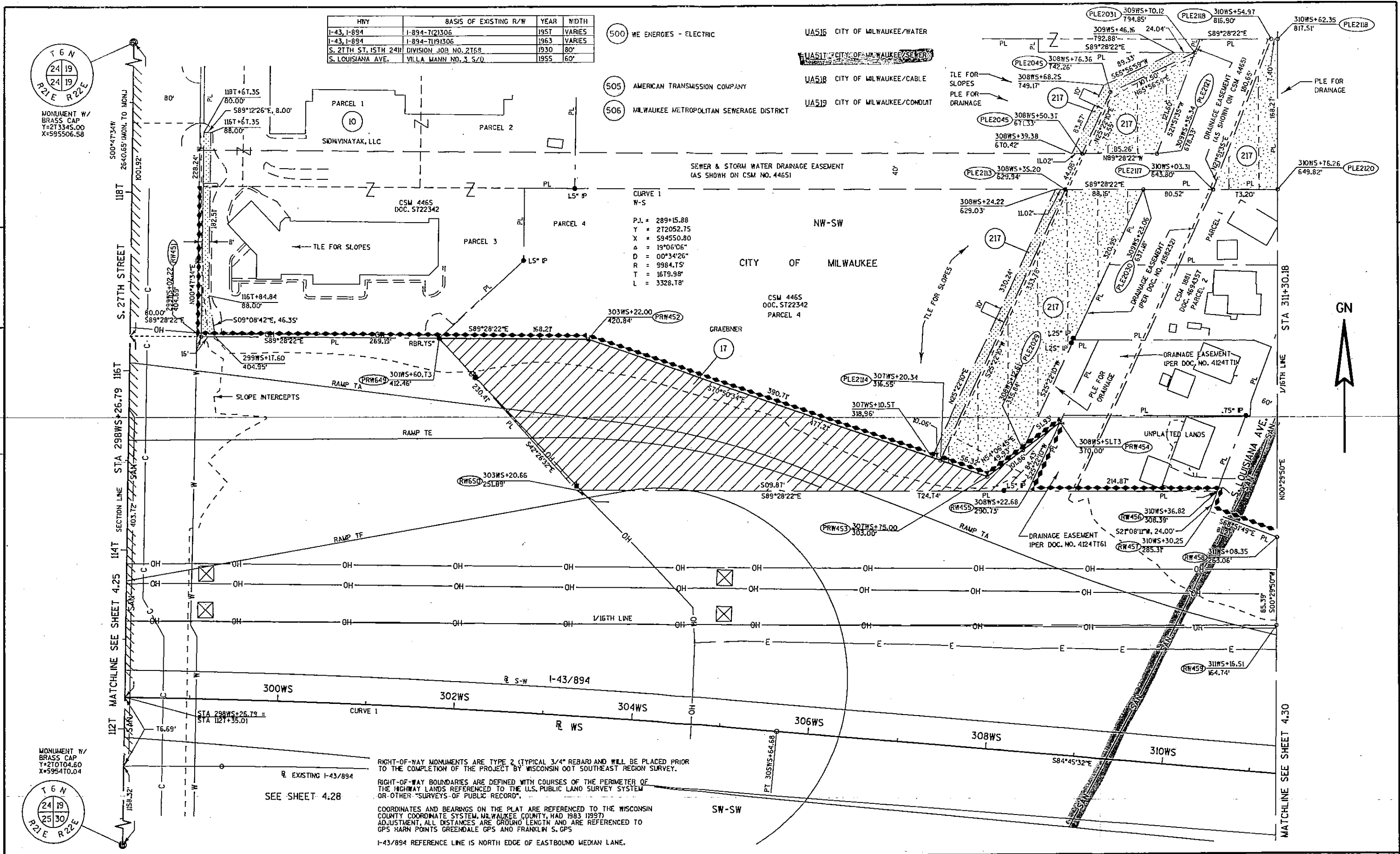
HWY	BASIS OF EXISTING R/W	YEAR	WIDTH
I-43, I-894	I-894-7(21306	1957	VARIES
I-43, I-894	I-894-7(191306	1963	VARIES
S. 27TH ST. 15TH 24TH	DIVISION JOB NO. 2168	1930	80'
S. LOUISIANA AVE.	VILLA MANN NO. 3 S/O	1955	60'

- (500) WE ENERGIES - ELECTRIC
- (505) AMERICAN TRANSMISSION COMPANY
- (506) MILWAUKEE METROPOLITAN SEWERAGE DISTRICT

- UA516 CITY OF MILWAUKEE/WATER
- UA517 CITY OF MILWAUKEE/SEWER
- UA518 CITY OF MILWAUKEE/CABLE
- UA519 CITY OF MILWAUKEE/CONDUIT

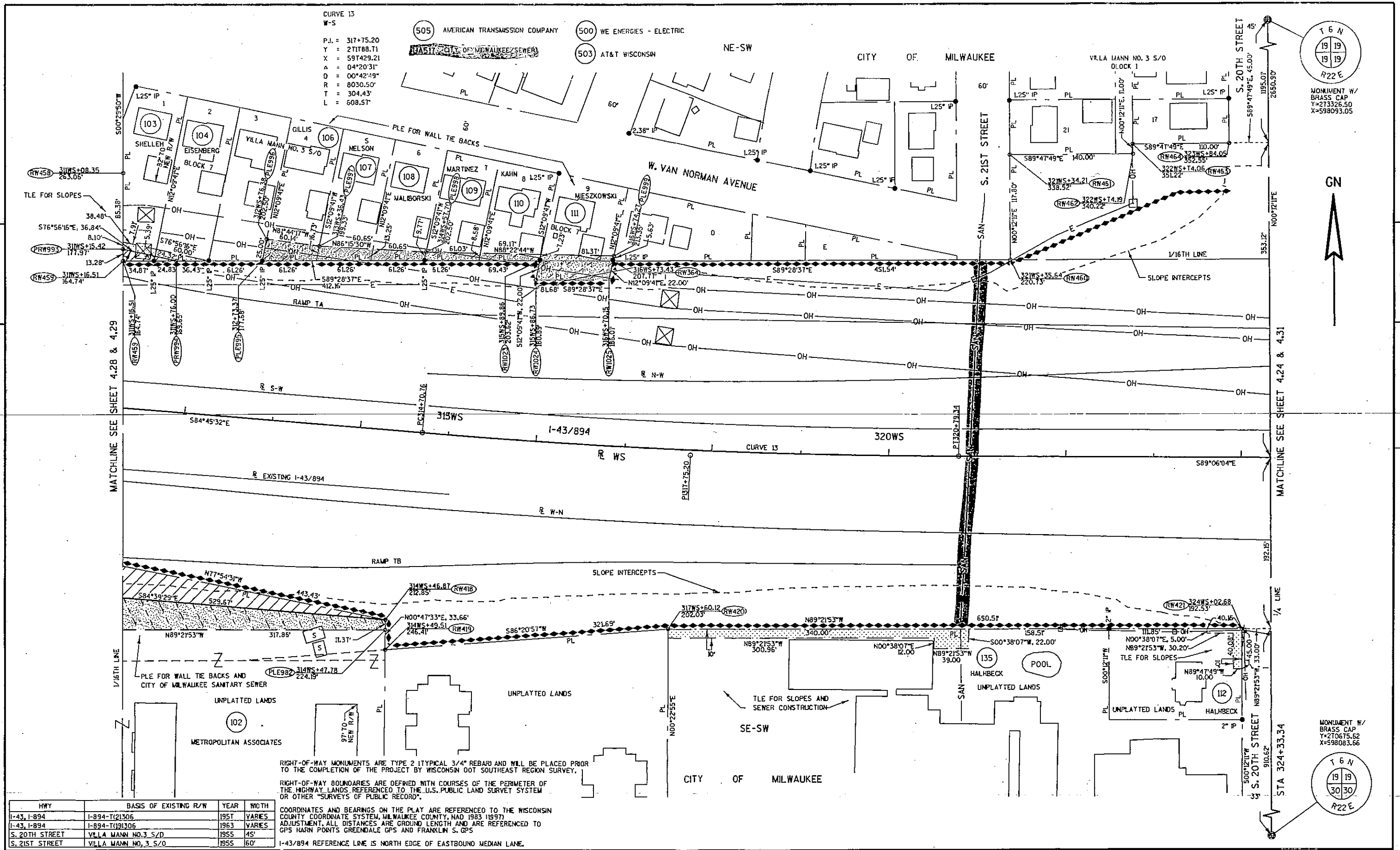
4

4



RIGHT-OF-WAY MONUMENTS ARE TYPE 2 (TYPICAL 3/4\"

REVISION DATE SEPTEMBER 25, 2008 JUNE 22, 2009 OCTOBER 28, 2008 AUGUST 17, 2009 FEBRUARY 26, 2009 JANUARY XX, 2009	DATE JUNE 10, 2008	SCALE, FEET 0 50 100	HWY: IH-94	STATE R/W PROJECT NUMBER 1030-20-20	PLAT SHEET 4.29
			COUNTY: MILWAUKEE	CONSTRUCTION PROJECT NUMBER 1030-20-70	PS&E SHEET E



HWY	BASIS OF EXISTING R/W	YEAR	WIDTH
I-43, I-894	I-894-T121306	1951	VARIABLE
I-43, I-894	I-894-T121306	1963	VARIABLE
S. 20TH STREET	VILLA MANN NO. 3 S/D	1955	45'
S. 21ST STREET	VILLA MANN NO. 3 S/D	1955	60'

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 (TYPICAL 3/4" REBAR) AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT BY WISCONSIN DOT SOUTHEAST REGION SURVEY.

RIGHT-OF-WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY SYSTEM OR OTHER "SURVEYS OF PUBLIC RECORD".

COORDINATES AND BEARINGS ON THE PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM, MILWAUKEE COUNTY, HAD 1983 118970 ADJUSTMENT. ALL DISTANCES ARE GROUND LENGTH AND ARE REFERENCED TO GPS HARN POINTS GREENDALE GPS AND FRANKLIN S. GPS

I-43/894 REFERENCE LINE IS NORTH EDGE OF EASTBOUND MEDIAN LANE.

REVISION DATE OCTOBER 28, 2008 FEBRUARY 26, 2009 JUNE 22, 2009	AUGUST 17, 2009 JANUARY XX, 2009	DATE SEPTEMBER 25, 2008	SCALE, FEET 0 50 100	HWY: I-94 COUNTY: MILWAUKEE	STATE R/W PROJECT NUMBER 1030-20-20 CONSTRUCTION PROJECT NUMBER 1030-20-70	PLAT SHEET 4.30 PS&E SHEET E
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UTILITY RELOCATIONS
I-94 NORTH-SOUTH FREEWAY
CITY OF MILWAUKEE UTILITY RELOCATIONS
OCTOBER 16, 2009

1030-21-48 - CITY OF MILWAUKEE WATER

Project	Const. Year	Design - City	Design - MTP	Construction	Inspection	Field Services	Change Orders	Total	Funding	City Share	State Share	Required Relocation	Agreement / Amendment Amount	Amendment Number	Remarks
1030-21-71 Grange Avenue Water Main Relocation	2008	\$94,694.41	\$20,847.69	\$1,955,643.00	\$99,130.00	\$4,685.00		\$2,175,000.00	90/10	\$217,500.00	\$1,957,500.00	477 LF 54" WM @ Grange & I-94	\$2,175,000.00	Original Agreement	
1030-20-70 South 27th Street, Barnard to Bottsford	2009	\$218,804.75	\$18,380.25	\$938,000.00	\$99,130.00	\$4,685.00		\$1,275,000.00	80/10	\$127,500.00	\$1,147,500.00	528 LF 12" WM @ 27th Street & I-94	\$1,275,000.00	65	
1030-20-75 WB STH 119 (Airport Spur)	2009			\$0.00				\$0.00	90/10	\$0.00	\$0.00	N/A	\$0.00		
1030-20-77 Grange Avenue Overpass	2009			\$0.00				\$0.00	90/10	\$0.00	\$0.00	N/A	\$0.00		
1030-20-80 College Avenue Interchange	2009			\$0.00				\$0.00	90/10	\$0.00	\$0.00	N/A	\$0.00		
1030-21-74 Bolivar Avenue Realignment	2009	\$59,772.09	\$11,912.91	\$107,500.00	\$21,130.00	\$4,685.00		\$205,000.00	90/10	\$20,500.00	\$184,500.00	202 LF 16" WM @ Bolivar & 8th	\$205,000.00	68	
1030-21-78 2009 Advanced Utilities Contract	2009	\$448,752.62	\$34,249.62	\$1,801,000.00	\$114,830.00	\$16,187.76		\$2,415,000.00	90/10	\$241,500.00	\$2,173,500.00	726 LF 16" WM @ Layton & I-94; 368 LF 8" WM @ Malory & I-94	\$2,415,000.00	67	
1030-20-78 2009 Advanced Utilities Contract	2009	\$145,824.42	\$14,691.42	\$501,000.00	\$46,900.00	\$6,384.44		\$745,000.00	90/10	\$74,500.00	\$643,500.00	Remove Malory water main from AUC	\$745,000.00	73	
1030-20-71 Layton / NB Ramps / Collector Distributor / Walls	2010	\$75,242.73	\$40,950.63	\$601,600.00	\$31,400.00	\$30,806.64		\$780,000.00	90/10	\$78,000.00	\$702,000.00	Malory, Whitaker, N & S; Layton Hyd; 20th Phase 1; 15th Place Hyd; Halsey (all per ee) in contract & MTP design & City CIP costs	\$780,000.00	75	
1030-10-73 Storm and Sanitary Sewer	2010			\$0.00				\$0.00	90/10	\$0.00	\$0.00	N/A	\$0.00		
1030-20-72 Mitchell Interchange / NB & SB Mainline	2011	\$74,228.49	\$49,140.77	\$1,053,000.00	\$18,113.40	\$7,517.40		\$1,200,000.00	90/10	\$120,000.00	\$1,080,000.00	16" WM relocation @ 20th St & I-94; tunnel hydrants	\$1,200,000.00	80	
Subtotal		\$823,870.81	\$158,590.63	\$5,955,743.00	\$334,833.40	\$82,162.38	\$0.00	\$7,335,000.00		\$733,500.00	\$6,601,500.00		\$7,335,000.00		

1030-21-47 - CITY OF MILWAUKEE SEWER

Project	Const. Year	Design - City	Design - MTP	Construction	Inspection	Field Services	Change Orders	Total	Funding	City Share	State Share	Required Relocation	Agreement / Amendment Amount	Amendment Number	Remarks
1030-21-71 Grange Avenue Water Main Relocation	2008							\$0.00	90/10	\$0.00	\$0.00	N/A	\$0.00		
1030-20-70 South 27th Street, Barnard to Bottsford	2009							\$0.00	90/10	\$0.00	\$0.00	N/A	\$0.00		
1030-20-75 WB STH 119 (Airport Spur)	2009							\$0.00	90/10	\$0.00	\$0.00	N/A	\$0.00		
1030-20-77 Grange Avenue Overpass	2009	\$34,578.20	\$30,595.89	\$345,762.00	\$17,288.10	\$0.00		\$428,224.19	90/10	\$42,822.22	\$385,399.97	646 LF 8" SAN @ Grange & I-94 (agreement as sent to C.O.)	\$428,224.19	Original Agreement	
1030-20-80 College Avenue Interchange	2009			\$0.00				\$0.00	90/10	\$0.00	\$0.00	N/A	\$0.00		
1030-21-74 Bolivar Avenue Realignment	2009	\$11,687.90	\$16,754.69	\$116,979.00	\$5,849.95	\$0.00		\$151,280.74	90/10	\$15,128.07	\$136,152.67	179 LF 21" SAN @ Bolivar & 8th	\$151,280.74	69	
1030-21-78 2009 Advanced Utilities Contract	2009	\$28,497.20	\$28,953.53	\$284,972.00	\$14,248.60	\$0.00		\$354,671.33	90/10	\$35,467.13	\$319,204.20	363 LF 10" SAN @ Malory & I-94	\$354,671.33	70	
1030-21-78 2009 Advanced Utilities Contract	2009	\$28,487.20	\$28,953.53	\$284,972.00	\$14,248.60	\$0.00		\$354,671.33	90/10	\$35,467.13	\$319,204.20	Remove Malory sewer from AUC	\$354,671.33	74	
1030-20-71 Layton / NB Ramps / Collector Distributor / Walls	2010	\$26,868.50	\$26,953.53	\$268,685.00	\$13,434.25	\$0.00		\$335,941.28	80/10	\$33,594.13	\$302,347.15	Malory sewer; Whitaker & 15th BL MH adjustments in contract (all per ee) & (15%) city design and inspect & MTP design	\$335,941.28	76	
1030-10-73 Airport Freeway Sanitary Sewer	2010	\$128,769.50	\$41,522.98	\$1,287,695.00	\$64,384.75	\$0.00		\$1,522,372.23	90/10	\$152,237.22	\$1,370,135.01	Relocation of 15" sanitary sewer at 21st Street; 1883 LF new sewer crossing at Louisiana in contract (per ee) & (15%) city design & MTP design	\$1,522,372.23	79	
1030-20-72 Mitchell Interchange / NB & SB Mainline	2011			\$0.00				\$0.00	90/10	\$0.00	\$0.00	N/A	\$0.00		
Subtotal		\$201,912.10	\$115,827.28	\$2,018,121.00	\$100,956.05	\$0.00	\$0.00	\$2,437,818.44		\$243,781.64	\$2,194,034.80		\$2,437,818.44		
1030-20-77 Grange Avenue Overpass	2009	\$31,918.20	\$30,595.89	\$318,182.00	\$15,958.10	\$0.00		\$387,855.18	90/10	\$38,785.52	\$357,889.67	Cost estimate used to develop Amendment 88	\$397,655.19		

1030-21-48 - CITY OF MILWAUKEE CABLE

Project	Const. Year	Design - City	Design - MTP	Construction	Inspection	Field Services	Change Orders	Total	Funding	City Share	State Share	Required Relocation	Agreement / Amendment Amount	Amendment Number	Remarks
1030-21-71 Grange Avenue Water Main Relocation	2008							\$0.00	90/10	\$0.00	\$0.00	N/A	\$0.00		
1030-20-70 South 27th Street, Barnard to Bottsford	2009	\$19,000.00	\$0.00	\$380,000.00	\$9,500.00	\$0.00		\$408,500.00	90/10	\$40,850.00	\$367,650.00	20th St. to 27th St. fiber & copper temp install; 20th St. reinstall; remove 20th to 27th temp; winter construction	\$408,500.00	Original Agreement	
1030-20-75 WB STH 119 (Airport Spur)	2009							\$0.00	90/10	\$0.00	\$0.00	N/A	\$0.00		
1030-20-77 Grange Avenue Overpass	2009							\$0.00	90/10	\$0.00	\$0.00	No re-installation at this time	\$0.00		
1030-20-80 College Avenue Interchange	2009	\$9,000.00	\$0.00	\$180,000.00	\$4,500.00	\$0.00		\$193,500.00	90/10	\$19,350.00	\$174,150.00	College to Ramsey fiber & copper temp install; reinstall College; remove College to Ramsey temp; winter construction	\$193,500.00	Original Agreement	
1030-21-74 Bolivar Avenue Realignment	2009							\$0.00	90/10	\$0.00	\$0.00	N/A	\$0.00		
1030-21-78 2009 Advanced Utilities Contract	2009							\$0.00	90/10	\$0.00	\$0.00	N/A	\$0.00		
1030-20-71 Layton / NB Ramps / Collector Distributor / Walls	2010	\$8,088.98	\$0.00	\$80,888.58	\$3,043.48	\$0.00		\$70,000.00	90/10	\$7,000.00	\$63,000.00	Removal & reinstallation of copper & fiber at Layton and College per Layton workplan; assumed non-winter work	\$70,000.00	77	
1030-10-73 Storm and Sanitary Sewer	2010							\$0.00	90/10	\$0.00	\$0.00	N/A	\$0.00		
1030-20-72 Mitchell Interchange / NB & SB Mainline	2011	\$3,720.93	\$0.00	\$74,418.60	\$1,860.47	\$0.00		\$80,000.00	90/10	\$8,000.00	\$72,000.00	Removal & reinstallation of copper & fiber at 20th Street CD Road workplan; assumed non-winter work	\$80,000.00		
Subtotal		\$37,807.89	\$0.00	\$895,288.18	\$18,903.95	\$0.00	\$0.00	\$752,000.00		\$75,200.00	\$678,800.00		\$752,000.00		

MUNICIPAL AGREEMENT AMENDMENT NO. 81

Wisconsin Department of Transportation

2008 S.84.09(1) Wis. Stats.

Utility Project ID Number 1030-21-48	County Milwaukee	UA Number 518
Road Name I-94 N/S Freeway – College Av to Howard Av – Collector Distributor Rds / Layton IC (1030-20-72)		Highway IH 43/94/894
Utility name City of Milwaukee – Cable		

The agreement in effect between the above named Utility and the State of Wisconsin, Department of Transportation, Division of Transportation Infrastructure Development for the performance of certain work on the above project shall be changed in the following particulars. The acceptance of this amendment by the Utility and its approval by the Wisconsin Department of Transportation shall constitute a mutual agreement as part of the original agreement binding upon both parties in the same manner as though the essence of the amendment had originally been in the agreement.

Reason for Amendment:

This Municipal Agreement Amendment No. 81 is to add the cost of removal and reinstallation of City cable facilities at S. 20th Street as necessary for the reconstruction of the I-94 North-South Freeway. The original Municipal Agreement for this Parcel was executed under the contract for South 27th Street (1030-20-70).

Change to Current Agreement

ITEM	EXPLANATION	COST (+/-)
City Cable facilities.	Addition of relocations, reconstructions and adjustments of City Cable facilities as necessary for the reconstruction of South 20 th Street area of the I-94 North-South Freeway.	+ \$ 80,000.00

Net increase/decrease in agreement: \$ 80,000.00 increase.

The parties have caused this Agreement to be executed by their proper officers and representatives on the date shown.

Wisconsin Department of Transportation
Division of Transportation Infrastructure Development

(Municipal Utility) (Date)

X _____
(Signature) (Date)

(Title) (Date)

X _____
(Signature) (Date)

(Title) (Date)

X _____
(Signature) (Date)

(Title) (Date)

X _____
(Administrator) (Date)

X _____
(Governor of Wisconsin) (Date)

UTILITY WORKSHEET

DT2236 6/2008 s.84.063 Wis. Stats.

Wisconsin Department of Transportation

Utility Company Name City of Milwaukee - Cable	PLEASE RETURN THIS WORKSHEET BY July 9th, 2009
Project Description - Include Project ID, Title, Limits, Highway, County North-South Freeway Reconstruction IH 94 / IH 43 / IH 894 Mitchell Interchange - College Ave. to Howard Ave. Milwaukee County Design Project ID 1030-20-00 Construction Project ID 1030-20-72	RETURN TO Mr. Kevin Cornnell, PE, RLS Milwaukee Transportation Partners, LLC 141 NW Barstow Street PO Box 798 Waukesha, WI 53187-0798

1.	<p>Describe your proposed relocation plan for the above project, as requested in the enclosed letter, using highway stationing whenever possible. Attach extra sheets if needed.</p> <p>College Avenue Overpass - Cabling through conduit attached to the College Avenue overpass will be relocated to new conduit to be installed in the Ramsey Avenue underpass from 20th St to 13th St. The cost of relocating approximately 0.5 miles of fiber will be \$20,000. The cost of relocating approximately 0.5 miles copper will be \$10,000.</p> <p>20th Street Overpass - Cabling through conduit attached to the 20th Street overpass will be relocated through existing conduit on Layton Avenue from 20th Street to 27th Street and Bolivar Avenue from 20th Street to 27th Street, as well as new conduit to be installed on the 27th Street overpass from Layton Avenue to Bolivar Avenue. The cost of relocating approximately 1.5 miles of fiber will be \$60,000. The cost of relocating approximately 1.0 miles copper will be \$20,000.</p> <p>Layton Avenue Overpass - Cabling through conduit attached to the Layton Avenue overpass will be relocated to through existing conduit on 20th Street from Layton Avenue to Ramsey Avenue and 13th Street Bolivar Avenue from Layton Avenue to Ramsey Avenue, as well as new conduit to be installed in the Ramsey Avenue underpass from 20th St to 13th St. The cost of relocating approximately 2.0 miles copper will be \$40,000.</p> <p>The total cost of the relocation plan is \$150,000. This is assuming work during summer months. Work during winter (when frost is still in the ground) will double the cost to \$300,000.</p>
2.	<p>Conflicting utility facilities will need to be relocated prior to construction. If this is not feasible, provide an explanation and an indication of what work will require coordination with the highway contractor during construction.</p> <p>It is feasible to relocate all facilities prior to construction.</p>
3.	<p>Anticipated Start Date Spring 2010</p>
4.	<p>Estimated construction time required (In working days) Relocations are estimated at 10 days per cable. Restoration is estimated at 10 days per cable. With 5 cables being relocated and restored, estimated construction time required is about 100 working days.</p>
5.	<p>List the approvals required and the expected time schedule to obtain those approvals.</p> <p>City of Milwaukee, Department of Public Works, Infrastructure Division, Central Drafting, Underground Conduits Engineering will coordinate any approvals required. Following completed conduit installation, cable reroutes will be performed prior to bridge takeouts or conduit realignments and subsequent restoration after bridge rebuilds.</p>

11.	Yes	No	
		X	Do you have any facilities that are no longer in use but have been left in place in the project area? If "Yes", approximately where are the facilities located and what type and size of facility is involved?
		X	Does the line have any remaining product?
		x	Does the line have any asbestos wrap or any other hazardous materials associated with it?
		x	Does any part of the line conflict directly with the proposed highway project? If so, what arrangements have been made to remove those portions? This should be mentioned as part of your work plan in question number 1 on this form.
		X	Is there any reason the highway contractor cannot remove portions of the line left in place?

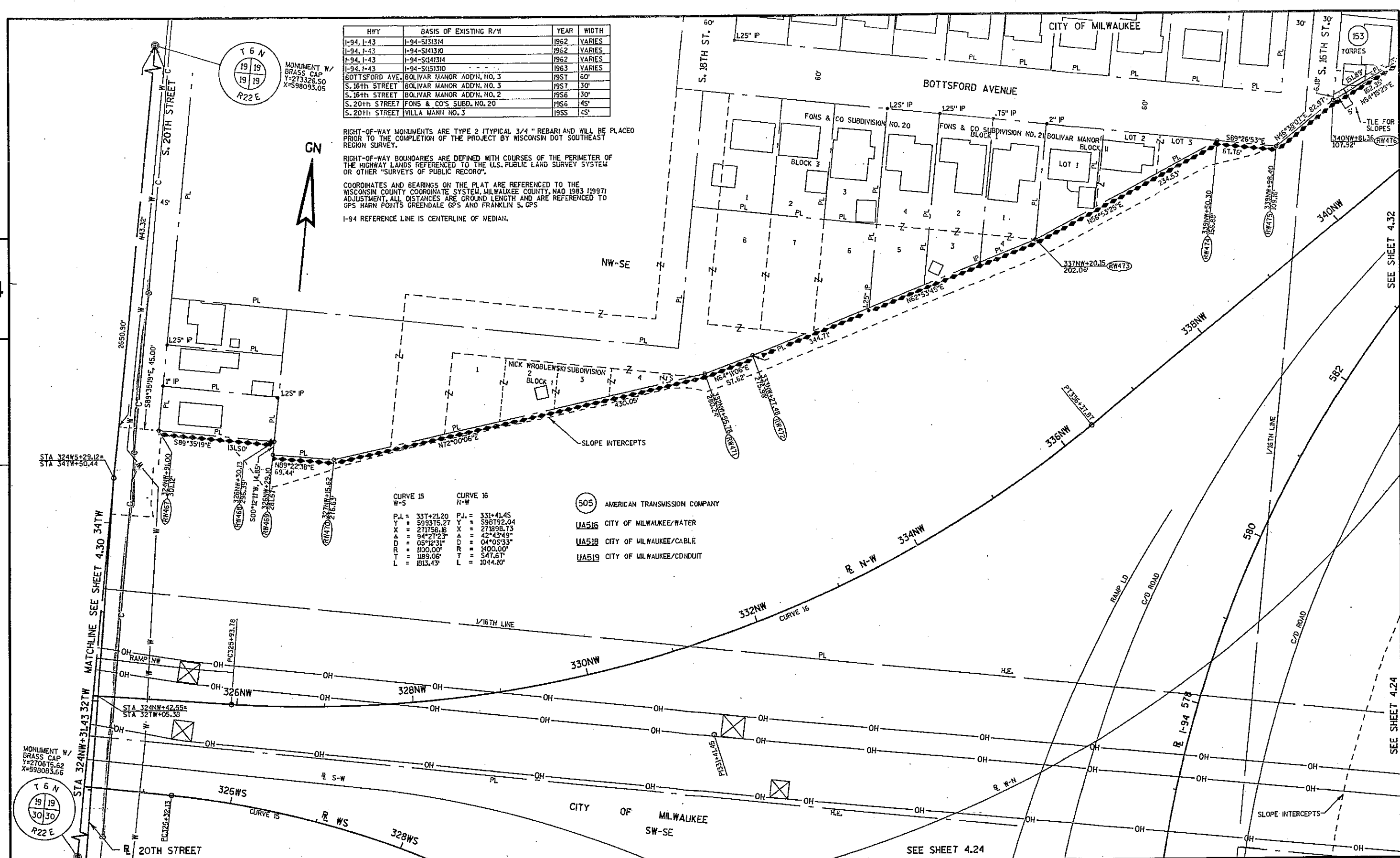
If you answered "Yes" to any of the questions above, please attach additional pages.

Preparer Area Code – Telephone #, Ext. (414)286-3248	Preparer E-Mail Address david.henke@milwaukee.gov
	<div>David Henke</div> <div>(Name of Person Who Prepared this Worksheet) (If completed electronically, Brush Script Font)</div>
	<div>7/8/09</div> <div>(Date)</div>

NOTE: DOT will be sending to you a Trans 220 Work Plan Approval letter and a Start Work Notice after we complete the review of your Work Plan.

4

4



REVISION DATE JUNE 22, 2009 AUGUST 17, 2009 JANUARY XX, 2009	DATE FEB. 26, 2009	SCALE: FEET 0 50 100	HWY: I-94 COUNTY: MILWAUKEE	STATE R/W PROJECT NUMBER 1030-20-20 CONSTRUCTION PROJECT NUMBER 1030-20-70	PLAT SHEET 4.31 PS&E SHEET E
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FILE NAME : S:\prelim\PMwork\15.ProjBase\RW\MIL\cads\10302020_431.dgn PLOT DATE : 25-JAN-2010 10:37 PLOT BY : MSCBXD PLOT NAME : PLOT SCALE : 100.000083:1 WISDOT/CADDS SHEET 70

UTILITY RELOCATIONS
I-94 NORTH-SOUTH FREEWAY
CITY OF MILWAUKEE UTILITY RELOCATIONS
OCTOBER 16, 2009

1030-21-46 - CITY OF MILWAUKEE WATER

Project	Const. Year	Design - City	Design - MTP	Construction	Inspection	Field Services	Change Orders	Total	Funding	City Share	State Share	Required Relocation	Agreement / Amendment Amount	Amendment Number	Remarks
1030-21-71 Grange Avenue Water Main Relocation	2008	\$94,694.41	\$20,847.59	\$1,956,643.00	\$99,130.00	\$4,685.00		\$2,175,000.00	90/10	\$217,500.00	\$1,957,500.00	477 LF 54" WM @ Grange & I-94	\$2,175,000.00		Original Agreement
1030-20-70 South 27th Street, Barnard to Bottsford	2009	\$216,804.75	\$16,380.25	\$938,000.00	\$99,130.00	\$4,685.00		\$1,275,000.00	90/10	\$127,500.00	\$1,147,500.00	526 LF 12" WM @ 27th Street & I-894	\$1,275,000.00	65	
1030-20-75 WB STH 119 (Airport Spur)	2009							\$0.00	90/10	\$0.00	\$0.00	N/A	\$0.00		
1030-20-77 Grange Avenue Overpass	2009							\$0.00	90/10	\$0.00	\$0.00	N/A	\$0.00		
1030-20-80 College Avenue Interchange	2009							\$0.00	90/10	\$0.00	\$0.00	N/A	\$0.00		
1030-21-74 Bolivar Avenue Realignment	2009	\$59,772.09	\$11,912.91	\$107,500.00	\$21,130.00	\$4,685.00		\$205,000.00	90/10	\$20,500.00	\$184,500.00	202 LF 16" WM @ Bolivar & 6th	\$205,000.00	66	
1030-21-78 2009 Advanced Utilities Contract	2009	\$448,752.62	\$34,249.62	\$1,801,000.00	\$114,830.00	\$16,167.76		\$2,415,000.00	90/10	\$241,500.00	\$2,173,500.00	726 LF 16" WM @ Layton & I-94, 368 LF 8" WM @ Mallory & I-94	\$2,415,000.00	67	
1030-20-78 2009 Advanced Utilities Contract	2009	\$145,824.42	\$14,891.14	\$501,000.00	\$46,900.00	\$6,384.44		\$715,000.00	90/10	\$71,500.00	\$643,500.00	Remove Mallory water main from AUC	\$715,000.00	73	
1030-20-71 Layton / NB Ramps / Collector Distributor / Walls	2010	\$75,242.73	\$40,950.63	\$601,600.00	\$31,400.00	\$30,806.64		\$780,000.00	90/10	\$78,000.00	\$702,000.00	Mallory Whitaker N. & S. Layton Hyd. 20th Phase 1 - 15th Place Hyd. Halsey (all per ee) in contract + MTP design + City CIP costs	\$780,000.00	75	
1030-10-73 Storm and Sanitary Sewer	2010							\$0.00	90/10	\$0.00	\$0.00	N/A	\$0.00		
1030-20-72 Mitchell Interchange / NB & SB Mainline	2011	\$74,228.43	\$49,140.77	\$1,053,000.00	\$16,113.40	\$7,517.40		\$1,200,000.00	90/10	\$120,000.00	\$1,080,000.00	16" WM relocation @ 20th St. & I-94; tunnel hydrants	\$1,200,000.00	80	
Subtotal		\$823,870.61	\$158,590.63	\$5,955,743.00	\$334,833.40	\$62,162.36	\$0.00	\$7,335,000.00		\$733,500.00	\$6,601,500.00		\$7,335,000.00		

1030-21-47 - CITY OF MILWAUKEE SEWER

Project	Const. Year	Design - City	Design - MTP	Construction	Inspection	Field Services	Change Orders	Total	Funding	City Share	State Share	Required Relocation	Agreement / Amendment Amount	Amendment Number	Remarks
1030-21-71 Grange Avenue Water Main Relocation	2008							\$0.00	90/10	\$0.00	\$0.00	N/A	\$0.00		
1030-20-70 South 27th Street, Barnard to Bottsford	2009							\$0.00	90/10	\$0.00	\$0.00	N/A	\$0.00		
1030-20-75 WB STH 119 (Airport Spur)	2009							\$0.00	90/10	\$0.00	\$0.00	N/A	\$0.00		
1030-20-77 Grange Avenue Overpass	2009	\$34,576.20	\$30,595.89	\$345,762.00	\$17,268.10	\$0.00		\$428,222.19	90/10	\$42,822.22	\$385,399.97	646 LF 8" SAN @ Grange & I-94 (agreement as sent to C.O.)	\$428,222.19		Original Agreement
1030-20-80 College Avenue Interchange	2009							\$0.00	90/10	\$0.00	\$0.00	N/A	\$0.00		
1030-21-74 Bolivar Avenue Realignment	2009	\$11,697.80	\$16,754.89	\$116,979.00	\$5,848.95	\$0.00		\$151,280.74	90/10	\$15,128.07	\$136,152.67	179 LF 21" SAN @ Bolivar & 6th	\$151,280.74	69	
1030-21-78 2009 Advanced Utilities Contract	2009	\$28,497.20	\$26,953.53	\$284,972.00	\$14,248.60	\$0.00		\$354,671.33	90/10	\$35,467.13	\$319,204.20	363 LF 10" SAN @ Mallory & I-94	\$354,671.33	70	
1030-21-78 2009 Advanced Utilities Contract	2009	\$28,497.20	\$26,953.53	\$284,972.00	\$14,248.60	\$0.00		\$354,671.33	90/10	\$35,467.13	\$319,204.20	Remove Mallory sewer from AUC	\$354,671.33	74	
1030-20-71 Layton / NB Ramps / Collector Distributor / Walls	2010	\$26,868.50	\$26,953.53	\$268,685.00	\$13,434.25	\$0.00		\$335,941.28	90/10	\$33,594.13	\$302,347.15	Mallory sewer Whitaker & 15th Pl. MH adjustments in contract (all per ee) + (15%) city design and inspect + MTP design	\$335,941.28	78	
1030-10-73 Airport Freeway Sanitary Sewer	2010	\$128,789.50	\$41,522.98	\$1,287,695.00	\$64,384.75	\$0.00		\$1,522,372.23	90/10	\$152,237.22	\$1,370,135.01	Relocation of 15" sanitary sewer at 21st Street, 1883 LF new sewer crossing at Louisiana in contract (per ee) + (15%) city design + MTP design	\$1,522,372.23	79	
1030-20-72 Mitchell Interchange / NB & SB Mainline	2011							\$0.00	90/10	\$0.00	\$0.00	N/A	\$0.00		
Subtotal		\$201,912.10	\$115,827.28	\$2,019,121.00	\$100,958.05	\$0.00	\$0.00	\$2,437,818.44		\$243,781.64	\$2,194,036.80		\$2,437,818.44		
1030-20-77 Grange Avenue Overpass	2009	\$31,918.20	\$30,595.89	\$319,182.00	\$15,959.10	\$0.00		\$397,655.18	90/10	\$39,785.52	\$357,869.67	Cost estimate used to develop Amendment 88	\$397,655.18		

1030-21-48 - CITY OF MILWAUKEE CABLE

Project	Const. Year	Design - City	Design - MTP	Construction	Inspection	Field Services	Change Orders	Total	Funding	City Share	State Share	Required Relocation	Agreement / Amendment Amount	Amendment Number	Remarks
1030-21-71 Grange Avenue Water Main Relocation	2008							\$0.00	90/10	\$0.00	\$0.00	N/A	\$0.00		
1030-20-70 South 27th Street, Barnard to Bottsford	2009	\$19,000.00	\$0.00	\$380,000.00	\$9,500.00	\$0.00		\$408,500.00	90/10	\$40,850.00	\$367,650.00	20th St. to 27th St. fiber & copper temp install; 20th St. reinstall; remove 20th to 27th temp; winter construction	\$408,500.00		Original Agreement
1030-20-75 WB STH 119 (Airport Spur)	2009							\$0.00	90/10	\$0.00	\$0.00	N/A	\$0.00		
1030-20-77 Grange Avenue Overpass	2009							\$0.00	90/10	\$0.00	\$0.00	No re-installation at this time	\$0.00		
1030-20-80 College Avenue Interchange	2009	\$9,000.00	\$0.00	\$180,000.00	\$4,500.00	\$0.00		\$193,500.00	90/10	\$19,350.00	\$174,150.00	College to Ramsey fiber & copper temp install; reinstall College; remove College to Ramsey temp; winter construction	\$193,500.00		Original Agreement
1030-21-74 Bolivar Avenue Realignment	2009							\$0.00	90/10	\$0.00	\$0.00	N/A	\$0.00		
1030-21-78 2009 Advanced Utilities Contract	2009							\$0.00	90/10	\$0.00	\$0.00	N/A	\$0.00		
1030-20-71 Layton / NB Ramps / Collector Distributor / Walls	2010	\$6,086.96	\$0.00	\$60,889.56	\$3,043.48	\$0.00		\$70,000.00	90/10	\$7,000.00	\$63,000.00	Removal & reinstallation of copper & fiber at Layton and College per Layton workplan; assumed non-winter work	\$70,000.00	77	
1030-10-73 Storm and Sanitary Sewer	2010							\$0.00	90/10	\$0.00	\$0.00	N/A	\$0.00		
1030-20-72 Mitchell Interchange / NB & SB Mainline	2011	\$3,720.93	\$0.00	\$74,418.80	\$1,860.47	\$0.00		\$80,000.00	90/10	\$8,000.00	\$72,000.00	Removal & reinstallation of copper & fiber at 20th Street CD Road workplan; assumed non-winter work	\$80,000.00	81	
Subtotal		\$37,807.89	\$0.00	\$695,288.18	\$18,903.95	\$0.00	\$0.00	\$752,000.00		\$76,200.00	\$675,800.00		\$752,000.00		

UTILITY RELOCATIONS
I-94 NORTH-SOUTH FREEWAY
CITY OF MILWAUKEE UTILITY RELOCATIONS
OCTOBER 16, 2009

Project	Const. Year	Design - City	Design - MTP	Construction	Inspection	Field Services	Change Orders	Total	Funding	City Share	State Share	Required Relocation	Agreement/ Amendment Amount	Amendment Number	Remarks
1030-21-71 Grange Avenue Water Main Relocation	2008							\$0.00	90/10	\$0.00	\$0.00	N/A	\$0.00		
1030-20-70 South 27th Street/Barnardillo Bottsford	2009	\$25,450.00	\$0.00	\$216,325.00	\$12,725.00	\$0.00		\$254,500.00	90/10	\$25,450.00	\$229,050.00	\$38,500 in contract on bridge	\$254,500.00	Original Agreement	
1030-20-75 WB/STH 119 (Airport Spur)	2009							\$0.00	90/10	\$0.00	\$0.00	N/A	\$0.00		
1030-20-77 Grange Avenue Overpass	2009	\$67,500.00	\$0.00	\$57,375.00	\$3,375.00			\$67,500.00	0/100	\$67,500.00	\$0.00	Non-participating conduit \$67,500 conduit relocation @ Grange 21st St considered as betterment includes \$20,250 in contract on bridge	\$67,500.00		
1030-20-77 Grange Avenue Overpass	2009	\$67,500.00	\$0.00	\$57,375.00	\$3,375.00			\$67,500.00	0/100	\$67,500.00	\$0.00	Participating conduit \$67,500 conduit relocation @ Grange 21st St considered as betterment includes \$20,250 in contract on bridge	\$67,500.00	7/2	
1030-20-77 Grange Avenue Overpass	2009	\$67,500.00	\$0.00	\$57,375.00	\$3,375.00			\$67,500.00	0/100	\$67,500.00	\$0.00	W College & Ramsey 15th to 20th includes \$15,000 in contract on bridge	\$67,500.00	Original Agreement	
1030-20-80 College Avenue Interchange	2009	\$41,350.00	\$0.00	\$351,475.00	\$20,875.00	\$0.00		\$413,500.00	90/10	\$41,350.00	\$372,150.00	1030-21-74 Bolivar Avenue Realignment (2009)	\$413,500.00		
1030-21-74 Bolivar Avenue Realignment	2009	\$0.00	\$1,560.00	\$15,600.00	\$780.00	\$0.00		\$17,940.00	0/100	\$17,940.00	\$0.00	Deduction for non-participating conduit New installation for water connection Howell Avenue to water tower includes \$16,600 in contract	\$17,940.00		
1030-21-74 Bolivar Avenue Realignment	2009	\$0.00	\$1,560.00	\$15,600.00	\$780.00	\$0.00		\$17,940.00	0/100	\$0.00	\$0.00		\$0.00		
1030-21-78/2009 Advanced Utilities Contract	2009							\$0.00	90/10	\$0.00	\$0.00	N/A	\$0.00		
1030-20-71 Layton/NB Ramps / Collector Distributor Walls	2010	\$197,478.83	\$0.00	\$197,478.26	\$9,873.91			\$227,100.00	90/10	\$22,710.00	\$204,390.00	Layton conduit 87,100.00 (ee) in contract 140,000.00 city force work per Layton workplan	\$227,100.00	78	
1030-10-73 Storm and Sanitary Sewer	2010							\$0.00	90/10	\$0.00	\$0.00	N/A	\$0.00		
1030-20-72 Mitchell Interchange / NB & SB Mainline	2011	\$9,486.95	\$0.00	\$94,869.57	\$4,743.48	\$0.00		\$109,100.00	0/100	\$109,100.00	\$0.00	Non-participating 20th Street conduit 87,100.00 (ee) in contract 22,000.00 city force work per Layton workplan	\$109,100.00		
1030-20-72 Mitchell Interchange / NB & SB Mainline	2011	\$9,486.95	\$0.00	\$94,869.57	\$4,743.48	\$0.00		\$109,100.00	0/100	\$0.00	\$0.00	Deduction for non-participating 20th Street conduit 87,100.00 (ee) in contract 22,000.00 city force work per Layton workplan	\$109,100.00		
Subtotal		\$88,547.83	\$0.00	\$765,278.26	\$43,273.91	\$0.00	\$0.00	\$895,100.00		\$284,050.00	\$805,590.00		\$895,100.00		

PW FILE NUMBER: 091457

[illegible]



Legislation Details (With Text)

File #: 091447 **Version:** 0

Type: Resolution **Status:** In Committee

File created: 3/2/2010 **In control:** PUBLIC WORKS COMMITTEE

On agenda: **Final action:**

Effective date:

Title: Resolution relative to the 2010 Capitol Improvement Program to provide funds for the maintenance of the underground conduit manholes at various locations.

Sponsors: THE CHAIR

Indexes: CAPITAL IMPROVEMENTS, COMMUNICATIONS SYSTEMS, SEWERS

Attachments: Cover Letter, Fiscal Note, Hearing Notice List

Date	Ver.	Action By	Action	Result	Tally
3/2/2010	0	COMMON COUNCIL	ASSIGNED TO		
3/4/2010	0	PUBLIC WORKS COMMITTEE	HEARING NOTICES SENT		

Number

091447

Version

ORIGINAL

Reference

Sponsor

THE CHAIR

Title

Resolution relative to the 2010 Capitol Improvement Program to provide funds for the maintenance of the underground conduit manholes at various locations.

Analysis

This resolution provides funds for the repair and/or the replacement of underground conduit manholes at various locations due to the age and condition of the manholes, and it authorizes the transfer of the remaining 2009 funds for the general purposes indicated:

Body

Resolved, By the Common Council of the City of Milwaukee, that the Department of Public Works is hereby authorized and directed to repair and/or replace underground conduit manholes at various locations; and, be it

Further Resolved, That the Comptroller's office is authorized and directed to transfer \$200,000 from the Underground Conduit Manhole Reconstruction budget, Account Number ST285100000 to the general purpose sub-account indicated below:

Manhole Maintenance

Account Number: ST285100100

Total 2010 Funds Authorized: \$200,000

Requestor

Department of Public Works

Drafter

Infrastructure Services

MGL:slm

February 23, 2010

February 23, 2010

To the Honorable, the Common Council

Subject: Underground Conduit Manhole Reconstruction
2010 Capitol Improvements Program

Dear Council Members:

Please find attached a resolution for introduction at the next Common Council meeting. We have prepared and recommend the adoption of the attached resolution pertaining to the 2010 Capitol Improvements Program. This resolution provides funding for underground conduit manhole maintenance at various locations throughout the City. It also authorizes and directs the City Comptroller to transfer funds into the general purpose sub-account for this initiative.

Very truly yours,

Jeffrey Polenske, P.E.
City Engineer

Jeffrey J. Mantes
Commissioner of Public Works

MGL:slm

Attachment

CITY OF MILWAUKEE FISCAL NOTE

CC-170 (REV. 6/86)

A) DATE: February 23, 2010

FILE NUMBER _____

Original Fiscal Note ☒ Substitute ☐

SUBJECT: Resolution relative to the 2010 Capitol Improvement Program to provide \$200,000
in funds for the maintenance of the underground conduit manholes at various
Locations.

B) SUBMITTED BY (Name/Title/Dept/Ext.): Jeffrey S. Polenske, P.E./City Engineer/Infrastructure Services Division/2400

C) CHECK ONE: ☒ ADOPTION OF THIS FILE AUTHORIZES EXPENDITURES.
☐ ADOPTION OF THIS FILE DOES NOT AUTHORIZE EXPENDITURES; FURTHER COMMON COUNCIL ACTION NEEDED.
☐ LIST ANTICIPATED COSTS IN SECTION G BELOW.
☐ NOT APPLICABLE/NO FISCAL IMPACT.

D) CHARGE TO: ☐ DEPARTMENTAL ACCOUNT (DA) ☐ CONTINGENT FUND (CF)
☒ CAPITAL PROJECTS FUND (CPF) ☐ SPECIAL PURPOSE ACCOUNTS (SPA)
☐ PERM. IMPROVEMENT FUNDS (PIF) ☐ GRANT & AID ACCOUNTS (G & AA)
☐ OTHER (SPECIFY)

E) PURPOSE	SPECIFY TYPE/USE	ACCOUNT	EXPENDITURE	REVENUE	SAVINGS
SALARIES/WAGES:					
SUPPLIES:					
MATERIALS:					
NEW EQUIPMENT:					
EQUIPMENT REPAIR:					
OTHER:	Underground Conduit Manhole Reconstruction Funds	ST285100000	\$200,000		
TOTALS:			\$200,000		

F) FOR EXPENDITURES AND REVENUES WHICH WILL OCCUR ON AN ANNUAL BASIS OVER SEVERAL YEARS CHECK THE APPROPRIATE BOX
 BELOW AND THEN LIST EACH ITEM AND DOLLAR AMOUNT SEPARATELY.

<input type="checkbox"/> 1-3 YEARS	<input type="checkbox"/> 3-5 YEARS	
<input type="checkbox"/> 1-3 YEARS	<input type="checkbox"/> 3-5 YEARS	
<input type="checkbox"/> 1-3 YEARS	<input type="checkbox"/> 3-5 YEARS	

G) LIST ANY ANTICIPATED FUTURE COSTS THIS PROJECT WILL REQUIRE FOR COMPLETION:

H COMPUTATIONS USED IN ARRIVING AT FISCAL ESTIMATE:

PLEASE LIST ANY COMMENTS ON REVERSE SIDE AND CHECK HERE ☐

PW FILE NUMBER: 091447

[illegible]



Legislation Details (With Text)

File #: 091448 **Version:** 0

Type: Resolution **Status:** In Committee

File created: 3/2/2010 **In control:** PUBLIC WORKS COMMITTEE

On agenda: **Final action:**

Effective date:

Title: Resolution relative to the 2010 Capitol Improvement Program to provide funds for underground conduit work at various locations.

Sponsors: THE CHAIR

Indexes: CAPITAL IMPROVEMENTS, COMMUNICATIONS SYSTEMS, PUBLIC IMPROVEMENTS

Attachments: Cover Letter, Fiscal Note, Hearing Notice List

Date	Ver.	Action By	Action	Result	Tally
3/2/2010	0	COMMON COUNCIL	ASSIGNED TO		
3/4/2010	0	PUBLIC WORKS COMMITTEE	HEARING NOTICES SENT		

Number

091448

Version

ORIGINAL

Reference

Sponsor

THE CHAIR

Title

Resolution relative to the 2010 Capitol Improvement Program to provide funds for underground conduit work at various locations.

Analysis

This resolution provides funds for Underground Conduit installations and alterations at various locations in response to communication needs and paving projects, and it authorizes additional 2009 fund transfers for the general purposes indicated:

Body

Resolved, By the Common Council of the City of Milwaukee, that the Department of Public Works is hereby authorized and directed to modify and/or install underground conduit at various locations; and, be it

Further Resolved, That the Comptroller's office is authorized and directed to transfer \$1,000,000 from the Underground Conduit budget, Account Number ST280100000 to the general purpose sub-accounts indicated below:

General Engineering

Account Number: ST280100100

Major Conduit Installations

Account Number: ST280100200

Conduit Alterations and Adjustments

Account Number: ST280100300

Manhole Maintenance Required for Paving Projects

Account Number: ST280100400

Total 2010 Funds Authorized: \$1,000,000

Requestor

Department of Public Works

Drafter

Infrastructure Services

MGL:slm

February 23, 2010

February 23, 2010

To the Honorable, the Common Council

Subject: Underground Conduit Installations and Alterations
2010 Capitol Improvements Program

Dear Council Members:

Please find attached a resolution for introduction at the next Common Council meeting. We have prepared and recommend the adoption of the attached resolution pertaining to the 2010 Capitol Improvements Program. This resolution provides funding for underground conduit improvements, modifications and facility installation at various locations throughout the City in conjunction with paving and other facility improvement initiatives. It also authorizes and directs the City Comptroller to transfer funds into the appropriate general purpose sub-accounts for these initiatives.

Very truly yours,

Jeffrey Polenske, P.E.
City Engineer

Jeffrey J. Mantes
Commissioner of Public Works

MGL:slm

Attachment

CITY OF MILWAUKEE FISCAL NOTE

CC-170 (REV. 6/86)

A) DATE: February 23, 2010

FILE NUMBER _____

Original Fiscal Note ☒ Substitute ☐

SUBJECT: Resolution relative to the 2010 Capitol Improvement Program to provide \$1,000,000
in funds for underground conduit work at various locations.

B) SUBMITTED BY (Name/Title/Dept/Ext.): Jeffrey S. Polenske, P.E./City Engineer/Infrastructure Services Division/2400

C) CHECK ONE: ☒ ADOPTION OF THIS FILE AUTHORIZES EXPENDITURES.
☐ ADOPTION OF THIS FILE DOES NOT AUTHORIZE EXPENDITURES; FURTHER COMMON COUNCIL ACTION NEEDED.
☐ LIST ANTICIPATED COSTS IN SECTION G BELOW.
☐ NOT APPLICABLE/NO FISCAL IMPACT.

D) CHARGE TO: ☐ DEPARTMENTAL ACCOUNT (DA) ☐ CONTINGENT FUND (CF)
☒ CAPITAL PROJECTS FUND (CPF) ☐ SPECIAL PURPOSE ACCOUNTS (SPA)
☐ PERM. IMPROVEMENT FUNDS (PIF) ☐ GRANT & AID ACCOUNTS (G & AA)
☐ OTHER (SPECIFY)

E) PURPOSE	SPECIFY TYPE/USE	ACCOUNT	EXPENDITURE	REVENUE	SAVINGS
SALARIES/WAGES:					
SUPPLIES:					
MATERIALS:					
NEW EQUIPMENT:					
EQUIPMENT REPAIR:					
OTHER:	Underground Conduit Capitol Products Funds	ST280100000	\$1,000,000		
TOTALS:			\$1,000,000		

F) FOR EXPENDITURES AND REVENUES WHICH WILL OCCUR ON AN ANNUAL BASIS OVER SEVERAL YEARS CHECK THE APPROPRIATE BOX
 BELOW AND THEN LIST EACH ITEM AND DOLLAR AMOUNT SEPARATELY.

<input type="checkbox"/> 1-3 YEARS	<input type="checkbox"/> 3-5 YEARS	
<input type="checkbox"/> 1-3 YEARS	<input type="checkbox"/> 3-5 YEARS	
<input type="checkbox"/> 1-3 YEARS	<input type="checkbox"/> 3-5 YEARS	

G) LIST ANY ANTICIPATED FUTURE COSTS THIS PROJECT WILL REQUIRE FOR COMPLETION:

H COMPUTATIONS USED IN ARRIVING AT FISCAL ESTIMATE:

PLEASE LIST ANY COMMENTS ON REVERSE SIDE AND CHECK HERE ☐

PW FILE NUMBER: 091448

[illegible]



Legislation Details (With Text)

File #: 091415 **Version:** 0

Type: Resolution **Status:** In Committee

File created: 3/2/2010 **In control:** PUBLIC WORKS COMMITTEE

On agenda: **Final action:**

Effective date:

Title: Resolution authorizing the permanent removal of all traffic control signal equipment at the intersections of West Mineral Street and South 5th Street, and West Washington Street and South 5th Street.

Sponsors: THE CHAIR

Indexes: TRAFFIC CONTROL SIGNALS

Attachments: Cover Letter, Letters from Wisconsin Department of Transportation, Hearing Notice List

Date	Ver.	Action By	Action	Result	Tally
3/2/2010	0	COMMON COUNCIL	ASSIGNED TO		
3/4/2010	0	PUBLIC WORKS COMMITTEE	HEARING NOTICES SENT		
3/4/2010	0	PUBLIC WORKS COMMITTEE	HEARING NOTICES SENT		

Number

091415

Version

ORIGINAL

Reference

Sponsor

THE CHAIR

Title

Resolution authorizing the permanent removal of all traffic control signal equipment at the intersections of West Mineral Street and South 5th Street, and West Washington Street and South 5th Street.

Analysis

This resolution authorizes the permanent removal of all traffic control signal equipment at the intersections of West Mineral Street and South 5th Street, and West Washington Street and South 5th Street.

Body

Whereas, The traffic signals at the intersections of West Mineral Street and South 5th Street, and West Washington Street and South 5th Street are no longer warranted following the two-way conversion of South 5th and South 6th Streets from West Washington to West Florida Streets; and

Whereas, The Common Council authorized the Commissioner of Public Works to shut down and cover the traffic control signal at West Mineral Street and South 5th Street under Common Council File Number 080729; and

Whereas, The Common Council authorized the Commissioner of Public Works to shut down and cover the traffic control signal at West Washington Street and South 5th Street under Common Council File Number 080730; and

Whereas, Affected portions of South 5th Street and West Washington Street are currently on the State Connecting Highway System; and

Whereas, The Wisconsin Department of Transportation (WISDOT) has granted approval for removal of both signals; and

Whereas, The traffic control signals at the intersections of West Mineral Street and South 5th Street, and West Washington Street and South 5th Street have been shut down and covered since November 10, 2008; and

Whereas, Sufficient time has passed for an engineering evaluation and safety study to be performed following the shut down and covering of the traffic control signals at the intersections of West Mineral Street and South 5th Street, and West Washington Street and South 5th Street; and

Whereas, The results of the engineering evaluation and safety study indicate that the shut down and covering of the traffic control signals at the intersections of West Mineral Street and South 5th Street, and West Washington Street and South 5th Street have not adversely affected safety, and has resulted in improved traffic flow and reduced traffic congestion; and

Whereas, Permanent removal of all traffic control equipment is recommended; now, therefore, be it

Resolved, By the Common Council of the City of Milwaukee, That the Commissioner of Public Works is authorized to permanently remove traffic control signal equipment at the intersections of West Mineral Street

and South 5th Street, and West Washington Street and South 5th Street.

Requestor

Department of Public Works

Drafter

Infrastructure Services Division

RWB: ns

February 3, 2010



February 3, 2010

To the Honorable, the Common Council

Subject: Permanent Removal of Traffic Control Signal Equipment
West Mineral Street and South 5th Street and
West Washington Street and South 5th Street

Dear Council Members:

The Commissioner of Public Works was authorized to shut down and cover the traffic control signals at the subject intersections under Council Files 080729 and 080730. On November 10, 2008, the traffic control signals at the subject intersections were shut down and covered and sufficient time has passed for an engineering evaluation and safety study to be performed. The results of the engineering evaluation and safety study indicate that permanent removal of the traffic control signals at the subject intersections will not result in reduced safety and will improve traffic flow and reduce congestion.

We have, therefore, prepared the attached resolution authorizing the Commissioner of Public Works to permanently remove traffic control signal equipment at the intersections of West Mineral Street and South 5th Street and West Washington Street and South 5th Street in the 12th Aldermanic District.

Very truly yours,

Jeffrey S. Polenske, P.E.
City Engineer

Jeffrey J. Mantes
Commissioner of Public Works

RWB: ns

Attachment
c: Honorable James N. Witkowiak, Alderman 12th District



Division of Transportation
System Development
Southeast Regional Office
141 N.W. Barstow Street
P.O. Box 798
Waukesha, WI 53187-0798

Jim Doyle, Governor
Frank J. Busalacchi, Secretary
Internet: www.dot.wisconsin.gov

Telephone: (262) 548-5903
Facsimile (FAX): (262) 548-5662
E-Mail: waukesha.dtd@dot.state.wi.us

NOVEMBER 18, 2009

CITY OF MILWAUKEE
ATTN: ROBERT BRYSON, PE
841 NORTH BROADWAY, ROOM 919
MILWAUKEE, WISCONSIN 53202

Dear Bob:

This purpose of this letter is to grant approval for the removal of the traffic signal at the intersection of 5th Street and Mineral Street in the City of Milwaukee. We understand that the traffic conditions have changed, and that a traffic signal is no longer needed.

Thank you for your continued cooperation with these processes.

Sincerely,

A handwritten signature in cursive script that reads "Stacey L. Pierce".

Stacey L. Pierce, PE, PTOE
Traffic Operations Engineer



Division of Transportation
System Development
Southeast Regional Office
141 N.W. Barstow Street
P.O. Box 798
Waukesha, WI 53187-0798

KAL/fel

cc: CE/CAW

Jim Doyle, Governor
Frank J. Busalacchi, Secretary
Internet: www.dot.wisconsin.gov

Telephone: (262) 548-5903
Facsimile (FAX): (262) 548-5662
E-Mail: waukesha.dtd@dot.state.wi.us

January 19, 2010

CITY OF MILWAUKEE
ATTN: ROBERT BRYSON, PE
841 NORTH BROADWAY, ROOM 919
MILWAUKEE, WISCONSIN 53202

Dear Bob:

This purpose of this letter is to grant approval for the removal of the traffic signal at the intersection of 5th Street and Washington Street in the City of Milwaukee. We understand that the traffic conditions have changed, and that a traffic signal is no longer needed.

Thank you for your continued cooperation with these processes.

Sincerely,

A handwritten signature in cursive script that reads "Morgan Petersen".

Morgan Petersen, EIT
WisDOT Regulation Engineer
262-548-6412

PW FILE NUMBER: 091415

[illegible]



Legislation Details (With Text)

File #: 091425 **Version:** 0

Type: Resolution **Status:** In Committee

File created: 3/2/2010 **In control:** PUBLIC WORKS COMMITTEE

On agenda: **Final action:**

Effective date:

Title: Resolution rescinding various special privileges that are no longer necessary.

Sponsors: THE CHAIR

Indexes: SPECIAL PRIVILEGE PERMITS

Attachments: Cover Letter, Fiscal Note, Hearing Notice List

Date	Ver.	Action By	Action	Result	Tally
3/2/2010	0	COMMON COUNCIL	ASSIGNED TO		
3/4/2010	0	PUBLIC WORKS COMMITTEE	HEARING NOTICES SENT		

Number

091425

Version

ORIGINAL

Reference

Sponsor

THE CHAIR

Title

Resolution rescinding various special privileges that are no longer necessary.

Analysis

This resolution rescinds various special privileges granting permission for items to encroach into the public right-of-way because said items have been removed from the public right-of-way.

Body

Whereas, Said special privileges granted permission for various encroachments in the public right-of-way; and

Whereas, The special privileges listed below are no longer necessary because the subject items have been removed from the public right-of-way by the owner; and

Whereas, Property owners notified the Department of Public Works that they no longer need the special privilege granted them because the items had been removed from the public right-of-way; and

Whereas, In order to release property owners from the insurance and annual special privilege fee requirements placed on the property owner as part of the granting of a special privilege, the Common Council needs to pass a resolution rescinding special privileges which are no longer needed; now, therefore, be it

Resolved, By the Common Council of the City of Milwaukee that the following special privilege resolutions are hereby rescinded:

1. Common Council Resolution File Number 75-1807 granted to Pizza Man Inc for an excess door swing for the premises at 1800-1814 East North Avenue.
2. Common Council Resolution File Number 83-1570 granted to Pabst Brewing Company for two pipelines, underground conduit and an additional pipeline system for the premises at 917 West Juneau Avenue.
3. Common Council Resolution File Number 890469 granted to Pabst Brewing Company for an underground steam pipe for the premises at 901 West Juneau Avenue.
4. Common Council Resolution File Number 951219 granted to KPH Investments LLC for a fence for the premises at 1214 South 6th Street.
5. Common Council Resolution File Number 981123 granted to Bulk Petroleum Corporation for four monitoring wells for the premises at 2306 West Fond du Lac Avenue.
6. Common Council Resolution File Number 040926 granted to Pyramax Bank F.S.B. for an excess mansard structure projection for the premises at 1605 West Mitchell Street.

Requestor

Department of Public Works

Drafter

Infrastructure Services Division

MDL:ns

January 29, 2010



January 29, 2010

To the Honorable, the Common Council

Dear Council Members:

Attached please find a resolution which rescinds special privileges that are no longer necessary because the items have been removed from the public right-of-way.

The Department of Public Works has received notification that special privilege items have been removed from the public right-of-way. Field visits have been made to confirm that all special privilege items have been removed or abandoned to the satisfaction of the Commission of Public Works.

Only the Common Council can rescind its resolutions. Thus, in order to release the special privilege grantees from the annual fee and insurance requirements of their special privileges, which are no longer needed, the attached resolution has been drafted. Additionally, the attached resolution, if passed, will allow for efficient management of special privileges.

Very truly yours,

Jeffrey S. Polenske, P.E.
City Engineer

Jeffrey J. Mantes
Commissioner of Public Works

Art Dahlberg, Commissioner
Department of Neighborhood Services

MDL:ns

Attachment
c: City Clerk, License Division



CITY OF MILWAUKEE FISCAL NOTE

A) DATE January 29, 2010

FILE NUMBER: _____

Original Fiscal Note ☒ Substitute ☐

SUBJECT: Resolution rescinding various special privileges that are no longer necessary.

B) SUBMITTED BY (Name/title/dept./ext.): **JEFFREY S. POLENSKE, P.E./CITY ENGINEER/INFRASTRUCTURE SERVICES DIVISION/2400**

C) CHECK ONE: ☐ ADOPTION OF THIS FILE AUTHORIZES EXPENDITURES
☐ ADOPTION OF THIS FILE DOES NOT AUTHORIZE EXPENDITURES; FURTHER COMMON COUNCIL ACTION NEEDED. LIST ANTICIPATED COSTS IN SECTION G BELOW.
☒ NOT APPLICABLE/NO FISCAL IMPACT.

D) CHARGE TO: ☐ DEPARTMENT ACCOUNT(DA) ☐ CONTINGENT FUND (CF)
☐ CAPITAL PROJECTS FUND (CPF) ☐ SPECIAL PURPOSE ACCOUNTS (SPA)
☐ PERM. IMPROVEMENT FUNDS (PIF) ☐ GRANT & AID ACCOUNTS (G & AA)
☐ OTHER (SPECIFY)

E) PURPOSE	SPECIFY TYPE/USE	ACCOUNT	EXPENDITURE	REVENUE	SAVINGS
SALARIES/WAGES:					
SUPPLIES:					
MATERIALS:					
NEW EQUIPMENT:					
EQUIPMENT REPAIR:					
OTHER:					
TOTALS					

F) FOR EXPENDITURES AND REVENUES WHICH WILL OCCUR ON AN **ANNUAL** BASIS OVER SEVERAL YEARS CHECK THE APPROPRIATE BOX BELOW AND THEN LIST EACH ITEM AND DOLLAR AMOUNT **SEPARATELY**.

<input type="checkbox"/> 1-3 YEARS	<input type="checkbox"/> 3-5 YEARS	
<input type="checkbox"/> 1-3 YEARS	<input type="checkbox"/> 3-5 YEARS	
<input type="checkbox"/> 1-3 YEARS	<input type="checkbox"/> 3-5 YEARS	

G) LIST ANY ANTICIPATED FUTURE COSTS THIS PROJECT WILL REQUIRE FOR COMPLETION:

--

H) COMPUTATIONS USED IN ARRIVING AT FISCAL ESTIMATE:

--

PLEASE LIST ANY COMMENTS ON REVERSE SIDE AND CHECK HERE ☐

PW FILE NUMBER: 091425

[illegible]



Legislation Details (With Text)

File #: 091463 **Version:** 0

Type: Resolution **Status:** In Committee

File created: 3/2/2010 **In control:** PUBLIC WORKS COMMITTEE

On agenda: **Final action:**

Effective date:

Title: Resolution authorizing the installation of a new traffic control signal at the intersection of West Bolivar Avenue and South 13th Street in the 13th Aldermanic District at a cost of \$61,000 for a total estimated cost of \$61,000, 100% of which will be reimbursable from the Wisconsin Department of Transportation.

Sponsors: ALD. WITKOWSKI

Indexes: TRAFFIC CONTROL SIGNALS, WISCONSIN DEPARTMENT OF TRANSPORTATION

Attachments: Cover Letter, Fiscal Note, Hearing Notice List

Date	Ver.	Action By	Action	Result	Tally
3/2/2010	0	COMMON COUNCIL	ASSIGNED TO		
3/4/2010	0	PUBLIC WORKS COMMITTEE	HEARING NOTICES SENT		
3/4/2010	0	PUBLIC WORKS COMMITTEE	HEARING NOTICES SENT		

Number

091463

Version

Original

Reference

Sponsor

Ald. Witkowski

Title

Resolution authorizing the installation of a new traffic control signal at the intersection of West Bolivar Avenue and South 13th Street in the 13th Aldermanic District at a cost of \$61,000 for a total estimated cost of \$61,000, 100% of which will be reimbursable from the Wisconsin Department of Transportation.

Analysis

This resolution authorizes the Commissioner of Public Works to install a new traffic control signal at the intersection of West Bolivar Avenue and South 13th Street at a total estimated cost of \$61,000, with 100% of those funds to be reimbursable from the Wisconsin Department of Transportation. This resolution also authorizes the Comptroller to transfer the funds to the appropriate accounts for the project. The total estimated cost of the entire project is \$61,000.

Body

Whereas, The Wisconsin Department of Transportation, in reconstructing the I-94 North-South Freeway, will be closing the Layton Avenue bridge over I-94 for at least 6 months; and

Whereas, The bridge closure will cause an increase in traffic on South 13th Street and the intersection of West Bolivar Avenue and South 13th Street will likely warrant the installation of a traffic signal; and

Whereas, The total estimated cost of installing a traffic signal at the intersection is \$61,000; and

Whereas, One hundred percent of the total cost of the traffic signal is reimbursable from the Wisconsin Department of Transportation and should be earmarked for this project in the 2010 Capital Grant and Aid Projects Account, Project/Grant Number SP032100100; now, therefore, be it

Resolved, By the Common Council of the City of Milwaukee that the Commissioner of Public Works is authorized to install a new traffic control signal at the intersection of West Bolivar Avenue and South 13th Street; and, be it

Further Resolved, That the City Comptroller is authorized to create within the Capital Grant and Aid Projects Fund the appropriate Project/Grant Chartfield Value for this project; and transfer to these accounts the amount required under the agreement and City accounting policy, but not to exceed a ten percent increase of the total amounts reserved for the grantor's share and local share or \$5,000, whichever is greater as follows:

Location:

West Bolivar Avenue and South 13th Street

Grantor Reimbursable Cash - Traffic Control

Fund Number-0306

Project/Grant Number-SP032100100

\$61,000

Total \$61,000

Previously Authorized for Improvements-\$0.

Current Estimated Cost of the Total Project Including this Resolution-\$61,000.

Original Estimated Cost of the Total Project-\$61,000.

Requestor

Department of Public Works

Drafter

Infrastructure Services Division

RWB: ns

February 23, 2010

New Traffic Control Signal at West Bolivar Ave and South 13th St



February 23, 2010

To the Honorable, the Common Council

Subject: New Traffic Signal Installation at
West Bolivar Avenue and South 13th Street
Infrastructure Services Division

Dear Council Members:

Attached is a resolution pertaining to the installation of a new traffic control signal at the intersection of West Bolivar Avenue and South 13th Street in conjunction with the I-94 North-South Freeway Project in the 13th Aldermanic District.

This resolution authorizes the installation of these traffic signals with a cost of \$61,000, 100% of which is reimbursable from the Wisconsin Department of Transportation.

Very truly yours,

Jeffrey S. Polenske, P.E.
City Engineer

Jeffrey J. Mantes
Commissioner of Public Works

RWB: ns

Attachment

c: Alderman Terry L. Witkowski

CITY OF MILWAUKEE FISCAL NOTE

CC-170 (REV. 6/86)
Ref: GEN\FISCALNT.MST

A) DATE: February 23, 2010

FILE NUMBER:

Original Fiscal Note ☒ Substitute ☐

SUBJECT: Resolution authorizing the installation of a new traffic control signal at the intersection of West Bolivar Avenue and South 13th Street in the 13th Aldermanic District at a cost of \$61,000 for a total estimated cost of \$61,000, 100% of which will be reimbursable from the Wisconsin Department of Transportation.

B) SUBMITTED BY (NAME/TITLE/DEPT./EXT.): Jeffrey S. Polenske, City Engineer, DPW, ext. 2400

C) CHECK ONE: ☒ ADOPTION OF THIS FILE AUTHORIZES EXPENDITURES.
☐ ADOPTION OF THIS FILE DOES NOT AUTHORIZE EXPENDITURES; FURTHER COMMON COUNCIL ACTION NEEDED.
☐ LIST ANTICIPATED COSTS IN SECTION G BELOW.
☐ NOT APPLICABLE/NO FISCAL IMPACT.

D) CHARGE TO: ☐ DEPARTMENTAL ACCOUNT (DA) ☐ CONTINGENT FUND (CF)
☐ CAPITAL PROJECTS FUND (CPF) ☐ SPECIAL PURPOSE ACCOUNTS (SPA)
☐ PERM. IMPROVEMENT FUNDS (PIF) ☒ GRANT & AID ACCOUNTS (G & AA)
☐ OTHER (SPECIFY)

E) PURPOSE	SPECIFY TYPE/USE	ACCOUNT	EXPENDITURE	REVENUE	SAVINGS
SALARIES/WAGES:					
SUPPLIES:					
MATERIALS:					
NEW EQUIPMENT:					
EQUIPMENT REPAIR:					
OTHER:	Grantor Reimbursable Cash Traffic Control	SP032100100	\$61,000	\$61,000	
TOTALS:			\$61,000	\$61,000	

F) FOR EXPENDITURES AND REVENUES WHICH WILL OCCUR ON AN ANNUAL BASIS OVER SEVERAL YEARS CHECK THE APPROPRIATE BOX BELOW AND THEN LIST EACH ITEM AND DOLLAR AMOUNT SEPARATELY.

<input checked="" type="checkbox"/> 1-3 YEARS	<input type="checkbox"/> 3-5 YEARS	Expenditures \$61,000	Revenue \$61,000
<input type="checkbox"/> 1-3 YEARS	<input type="checkbox"/> 3-5 YEARS		
<input type="checkbox"/> 1-3 YEARS	<input type="checkbox"/> 3-5 YEARS		

G) LIST ANY ANTICIPATED FUTURE COSTS THIS PROJECT WILL REQUIRE FOR COMPLETION:

None

H) COMPUTATIONS USED IN ARRIVING AT FISCAL ESTIMATE:

Unit Prices

PLEASE LIST ANY COMMENTS ON REVERSE SIDE AND CHECK HERE ☐

PW FILE NUMBER: 091463

[illegible]



Legislation Details (With Text)

File #: 091470 **Version:** 0

Type: Resolution **Status:** In Committee

File created: 3/2/2010 **In control:** PUBLIC WORKS COMMITTEE

On agenda: **Final action:**

Effective date:

Title: Resolution authorizing the proper City Officers to execute Conveyance of Rights in Land, which will convey to the State of Wisconsin that part of a 20 foot wide sewer easement located between the existing southerly right of way line of Interstate Highway 43/894 and the proposed southerly right of way line of Interstate Highway 43/894, located in the 13th Aldermanic District.

Sponsors: THE CHAIR

Indexes: CITY PROPERTY, SEWER EASEMENTS

Attachments: Cover Letter, Fiscal Note, Land Conveyance, Proper City Officers Signatures.pdf, Map, Hearing Notice List

Date	Ver.	Action By	Action	Result	Tally
3/2/2010	0	COMMON COUNCIL	ASSIGNED TO		
3/4/2010	0	PUBLIC WORKS COMMITTEE	HEARING NOTICES SENT		
3/4/2010	0	PUBLIC WORKS COMMITTEE	HEARING NOTICES SENT		

Number

091470

Version

Original

Reference

Sponsor

The Chair

Title

Resolution authorizing the proper City Officers to execute Conveyance of Rights in Land, which will convey to the State of Wisconsin that part of a 20 foot wide sewer easement located between the existing southerly right of way line of Interstate Highway 43/894 and the proposed southerly right of way line of Interstate Highway 43/894, located in the 13th Aldermanic District.

Analysis

This resolution authorizes the proper City Officers to execute a Conveyance of Rights in Land, which will convey to the State of Wisconsin that part of a 20 foot wide sewer easement located between the existing southerly right of way line of Interstate Highway 43/894 and the proposed southerly right of way line of Interstate Highway 43/894, located in the 13th Aldermanic District.

Body

Whereas, On February 21, 1966, an easement 20 feet in width centered on an existing sanitary sewer was reserved to the City of Milwaukee in a Quit Claim Deed recorded as document number 4245766 at the Milwaukee County Register of Deeds; and

Whereas, The rights to be conveyed are located between the proposed southerly right of way line of Interstate Highway 43/894 and the existing southerly right of way line of Interstate Highway 43/894, between South 23rd Street extended and South 27th Street; and

Whereas, The right to use, maintain and repair the sewer located within the easement area to be conveyed will be retained as long as the use, maintenance or repair is not in conflict with the use of the area for highway purposes; and

Whereas, The rights to be conveyed will no longer be necessary for sewer purposes; now, therefore, be it

Resolved, By the Common Council of the City of Milwaukee that the proper City Officers are hereby authorized and directed to execute Conveyance of Rights in Land, a draft copy of said Conveyance of Rights in Land is attached to this Common Council Resolution File Number 091470, said Conveyance of Rights in Land document being incorporated in this resolution by reference as though set forth in full; and, be it

Further Resolved, That after said Conveyance of Rights in Land has been executed by the proper City Officers, it shall be forwarded to the office of the City Attorney for approval as to form and execution and then to the Department of Public Works for recording and proper distribution.

Drafter

Department of Public Works

Environmental Engineering Section

TJT/rtp

February 22, 2010



Department of Public Works
Infrastructure Services Division

Jeffrey J. Mantes
Commissioner of Public Works

Preston D. Cole
Director of Operations

Jeffrey S. Polenske
City Engineer

February 23, 2010

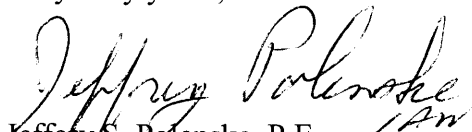
To the Honorable, the Common Council


Dear Council Members:

Attached is a resolution authorizing and directing the proper City officers to execute a Conveyance of Rights in Land document which will convey to the State of Wisconsin sewer easement rights reserved to the City in a Quit Claim Deed recorded as document number 4245766 at the Milwaukee County Register of Deeds. The City will retain rights to use, maintain and repair the existing sewer in the Conveyance of Rights in Land document, therefore, the easement to be conveyed is no longer necessary for City purposes.

We recommend adoption of the resolution.

Very truly yours,


Jeffrey S. Polenske, P.E.
City Engineer


Jeffrey J. Mantes
Commissioner of Public Works

JT TJT:rtp
Attachment

RTP: 3-5

Transmittal letter Conveyance of Rights in Land 27th east.3-5

CITY OF MILWAUKEE FISCAL NOTE

CC-170 (REV. 6/86)
Ref: GEN\FISCALNT.MSTA) DATE: February 23, 2010
NUMBER:

FILE

Original Fiscal Note ☒ Substitute ☐

SUBJECT: Resolution authorizing the proper City Officers to execute Conveyance of Rights in Land, which will convey to the State of Wisconsin that part of a 20 foot wide sewer easement located between the existing southerly right of way line of Interstate Highway 43/894 and the proposed southerly right of way line of Interstate Highway 43/894, located in the 13th Aldermanic District.

B) SUBMITTED BY (NAME/TITLE/DEPT./EXT.): Jeffrey S. Polenske, P.E./City Engineer/Public Works/2400

C) CHECK ONE: ☐ ADOPTION OF THIS FILE AUTHORIZES EXPENDITURES.
☐ ADOPTION OF THIS FILE DOES NOT AUTHORIZE EXPENDITURES; FURTHER COMMON COUNCIL ACTION NEEDED.
☐ LIST ANTICIPATED COSTS IN SECTION G BELOW.
☒ NOT APPLICABLE/NO FISCAL IMPACT.

D) CHARGE TO: ☐ DEPARTMENTAL ACCOUNT (DA) ☐ CONTINGENT FUND (CF)
☐ CAPITAL PROJECTS FUND (CPF) ☐ SPECIAL PURPOSE ACCOUNTS (SPA)
☐ PERM. IMPROVEMENT FUNDS (PIF) ☐ GRANT & AID ACCOUNTS (G & AA)
☐ OTHER (SPECIFY)

E) PURPOSE	SPECIFY TYPE/USE	ACCOUNT	EXPENDITURE	REVENUE	SAVINGS
SALARIES/WAGES:	N/A				
SUPPLIES:					
MATERIALS:					
NEW EQUIPMENT:					
EQUIPMENT REPAIR:					
OTHER:			\$		
TOTALS:			\$		

F) FOR EXPENDITURES AND REVENUES WHICH WILL OCCUR ON AN ANNUAL BASIS OVER SEVERAL YEARS CHECK THE APPROPRIATE BOX

N/A		
<input type="checkbox"/> 1-3 YEARS	<input type="checkbox"/> 3-5 YEARS	
<input type="checkbox"/> 1-3 YEARS	<input type="checkbox"/> 3-5 YEARS	
<input type="checkbox"/> 1-3 YEARS	<input type="checkbox"/> 3-5 YEARS	

G) LIST ANY ANTICIPATED FUTURE COSTS THIS PROJECT WILL REQUIRE FOR COMPLETION:

N/A

H) LIST ANY ANTICIPATED FUTURE COSTS THIS PROJECT WILL REQUIRE FOR COMPLETION:

N/A

PLEASE LIST ANY COMMENTS ON REVERSE SIDE AND CHECK HERE ☐

Document Number
CONVEYANCE OF RIGHTS IN LAND

Wisconsin Department of Transportation
Exempt from fee s.77.25(2r) Wis. Stats.
DT1660 12/2005 (Replaces ED660) s.84.09(1) Wis. Stats.

City of Milwaukee GRANTOR, for and in consideration of the sum of One (\$1.00) and other good and valuable consideration, grants and conveys any and all rights and interest which, by virtue of prior title, easement, license, or other legal devices, GRANTOR holds in the land described below to the State of Wisconsin, Department of Transportation, GRANTEE, for the purposes of constructing, operating, and maintaining a public highway and appurtenant facilities on, over, under, or across the said land; provided, however that GRANTOR reserves to itself the subordinate right to cross, traverse, or otherwise occupy said land with its present and future overhead or underground transmission lines, appurtenant facilities, and supporting structures in a manner consistent with the purposes of this conveyance and in a manner which will not interfere with normal highway maintenance and operation; provided, further, that the costs of any relocation or alteration, now or in the future, of the transmission lines, appurtenant facilities, or supporting structures when required by the GRANTEE for any reason, including accommodating future expanded or additional highway facilities on, over, under or across said land, will be paid by the GRANTEE; provided, however, that the costs of such relocation or alteration, or of the installation of new or additional facilities when done at the instance of and for the purposes of the GRANTOR, will be defrayed by the GRANTOR.

This conveyance shall be binding on the GRANTOR, GRANTEE, and their respective successors and assigns.

Any person named in this conveyance may make an appeal from the amount of compensation within six months after the date of recording of this conveyance as set forth in s.32.05(2a) Wisconsin Statutes. For the purpose of any such appeal, the amount of compensation stated on the conveyance shall be treated as the award, and the date the conveyance is recorded shall be treated as the date of taking and the date of evaluation.

Other persons having an interest in record in the property: **None**

Legal Description

Those portions of the Grantor's easements for sanitary sewer facilities that lie within the highway right-of-way limits as shown on the plat of RW Project Number 1030-20-20, sheet 4.28, prepared by Milwaukee Transportation Partners, labeled "I-94, including I-43 & I-894, College Ave. to Howard Ave., S. 35th Street to S. 3rd Street", dated 5/15/08, and all subsequent revisions thereto, as filed with the Milwaukee County Office of the Register of Deeds, as follows:

Easement interest in lands located in parts of the Southwest Quarter (SW 1/4) of Section 19, in Township 6 North, Range 22 East, in the City of Milwaukee, Milwaukee County, Wisconsin. Said easement interests being further described as follows:

- Easement recorded in the Office of the Register of Deeds for Milwaukee County, Wisconsin in Reel 300 of Deeds on Pages 1575 to 1576 as Document No. 4245766

The undersigned certify that this instrument is executed pursuant to a resolution of the Board of Directors (or shareholders, stockholders, or members, if authorized by law) of GRANTOR corporation or cooperative.

Acknowledgement

SEE SIGNATURE PAGES ATTACHED

(Grantor Name)

(Signature)

(Title)

(Print Name)

(Signature)

(Title)

(Print Name)

(Date)

State of _____)
) ss.
_____ County)

On the above date, this instrument was acknowledged before me by the named person(s).

(Signature, Notary Public)

(Print or Type Name, Notary Public)

(Date Commission Expires)

This space is reserved for recording data

Return to

Sandy Ratz

SE Freeways Utility Coordinator

WisDOT SE Region

Waukesha, WI. 53187-0798

Parcel Identification Number/Tax Key Number

5989980211

Conveyance of Rights in Land for Easement Document No. 4245766

City of Milwaukee's release and conveyance of rights in land are to the State of Wisconsin only. In addition to City's reserved rights hereunder, City retains all right, title, and interest it had vis-a vis parties other than the State of Wisconsin.

CITY OF MILWAUKEE

By: _____
Thomas M. Barrett, Mayor

By: _____
Ronald D. Leonhardt, City Clerk

COUNTERSIGNED

By: _____
W. Martin Morics, Comptroller

STATE OF WISCONSIN)
) SS
MILWAUKEE COUNTY)

Personally came before me this _____ day of _____ A.D., 20____, Thomas M. Barrett, Mayor, of the above-named municipal corporation, to me known to be the person who executed the foregoing instrument and to me known to be such Mayor of said municipal corporation and acknowledged that he executed the foregoing instrument as such officer as the deed of said municipal corporation, by its authority, and pursuant to Resolution File Number _____ adopted by its Common Council on _____.

Notary Public, State of Wisconsin
My Commission Expires _____

STATE OF WISCONSIN)
) SS
MILWAUKEE COUNTY)

Personally came before me this _____ day of _____, A.D., 20____, Ronald D. Leonhardt, City Clerk, of above-named municipal corporation, to me known to be the person who executed the foregoing instrument and to me known to be such City Clerk of said municipal corporation and acknowledged that he executed the foregoing instrument as such officer as the deed of said municipal corporation, by its authority, and pursuant to Resolution File Number _____ adopted by its Common Council on _____.

Notary Public, State of Wisconsin
My Commission Expires _____

STATE OF WISCONSIN)
) SS
MILWAUKEE COUNTY)

Personally came before me this _____ day of _____ A.D., 20_____, W. Martin Morics, Comptroller, of the above-named municipal corporation, to me known to be the person who executed the foregoing instrument and to me known to be such Comptroller of said municipal corporation and acknowledged that he executed the foregoing instrument as such officer as the deed of said municipal corporation, by its authority, and pursuant to Resolution File Number _____ adopted by its Common Council on _____.

Notary Public, State of Wisconsin
My Commission Expires _____

This instrument was drafted by the City of Milwaukee.

Approved as to contents

CITY ENGINEER, Jeffrey S. Polenske, P.E.

Date

Approved as to form and execution

ASSISTANT CITY ATTORNEY, Gregg C. Hagopian

Date

EXHIBIT

I-43/894

EXISTING R/W LINE

PL

PROPOSED R/W LINE

NE CORNER OF
PARCEL 1 IN
C.S.M. NO. 4447

51.04'

S85°05'41"E

43.84'

36.43'

18.89'

57.25'

35.15'

77.54'

75.38'

75.38'

N28°54'40"E

S28°54'40"W

7.76'

15.73'

DODGE CITY OF MILWAUKEE, INC.

CSM NO. 4447
PARCEL 1
(DOC. NO. 5706706)

METROPOLITAN ASSOCIATES

UNPLATTED LANDS

20' WIDE SANITARY SEWER
EASEMENT PER DOC. NO. 4245766

⊙ MH

SS
35' WIDE SEWER EASEMENT
PER DOC. NO. 5795885

CN

PLOT SCALE :30:1

PLOT DATE : 18-FEB-2010 14:20

PW FILE NUMBER: 091470

[illegible]



Legislation Details (With Text)

File #: 091471 **Version:** 0
Type: Resolution **Status:** In Committee
File created: 3/2/2010 **In control:** PUBLIC WORKS COMMITTEE
On agenda: **Final action:**
Effective date:

Title: Resolution authorizing the proper City Officers to execute Conveyance of Rights in Land, which will convey to the State of Wisconsin Easement WE 398 & SE 2110 located at West Mallory Avenue extended between South 15th Place extended and the existing easterly right of way line of Interstate Highway 94 in the 13th Aldermanic District.

Sponsors: THE CHAIR

Indexes: CITY PROPERTY, SEWER EASEMENTS, WATER EASEMENTS

Attachments: Cover Letter, Fiscal Note, Land Conveyance, Proper City Officers Signatures.pdf, Map, Hearing Notice List

Date	Ver.	Action By	Action	Result	Tally
3/2/2010	0	COMMON COUNCIL	ASSIGNED TO		
3/4/2010	0	PUBLIC WORKS COMMITTEE	HEARING NOTICES SENT		
3/4/2010	0	PUBLIC WORKS COMMITTEE	HEARING NOTICES SENT		

Number

091471

Version

Original

Reference

Sponsor

The Chair

Title

Resolution authorizing the proper City Officers to execute Conveyance of Rights in Land, which will convey to the State of Wisconsin Easement WE 398 & SE 2110 located at West Mallory Avenue extended between South 15th Place extended and the existing easterly right of way line of Interstate Highway 94 in the 13th Aldermanic District.

Analysis

This resolution authorizes the proper City Officers to execute a Conveyance of Rights in Land, which will convey to the State of Wisconsin Easement WE 398 & SE 2110 located between at West Mallory Avenue extended between South 15th Place extended and the existing easterly right of way line of Interstate Highway 94 in the 13th Aldermanic District.

Body

Whereas, On February 14, 1975, the City of Milwaukee was granted an easement for a sewer and water main located at West Mallory Avenue extended between South 15th Place extended and the existing easterly right of way line of Interstate Highway 94; and

Whereas, The easement to be conveyed is located between the centerline of West Mallory Avenue extended and the north line of West Mallory extended, said easement is 20 feet wide and extends from 118± feet West of South 15th Place to 163± feet West of South 15th Place; and

Whereas, The portions of the sanitary sewer and water main located within the easement to be conveyed will be re-routed out of the existing easement; and

Whereas, The sewer and water easement to be conveyed will no longer be required for sewer or water facilities; now, therefore, be it

Resolved, By the Common Council of the City of Milwaukee that the proper City Officers are hereby authorized and directed to execute Conveyance of Rights in Land, a draft copy of which is attached to this Common Council Resolution File Number 091471, said Conveyance of Rights in Land being incorporated in this resolution by reference as though set forth in full; and, be it

Further Resolved, That after said Conveyance of Rights in Land has been executed by the proper City Officers, it shall be forwarded to the office of the City Attorney for approval as to form and execution and then to the Department of Public Works for recording and proper distribution.

Drafter

Department of Public Works

Environmental Engineering Section

TJT/rtp

February 22, 2010



Department of Public Works
Infrastructure Services Division

Jeffrey J. Mantes
Commissioner of Public Works

Preston D. Cole
Director of Operations

Jeffrey S. Polenske
City Engineer

February 23, 2010

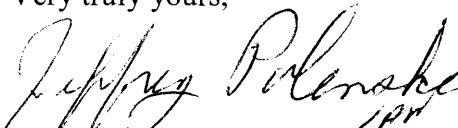
To the Honorable, the Common Council


Dear Council Members:

Attached is a resolution authorizing and directing the proper City officers to execute a Conveyance of Rights in Land document which will convey to the State of Wisconsin Sewer and Water Easement WE 398 & SE 2110 located at West Mallory Drive extended between South 15th Place extended and Interstate Highway 94. The sewer and water mains will be re-routed and the easement to be conveyed is no longer required for City purposes.

We recommend adoption of the resolution.

Very truly yours,


Jeffery S. Polenske, P.E.
City Engineer


Jeffery J. Mantes
Commissioner of Public Works

TJT:rtp

Attachment

RTP: 3-5

Transmittal letter Conveyance of Rights in Land Mallory

CITY OF MILWAUKEE FISCAL NOTE

CC-170 (REV. 6/86)
Ref: GEN\FISCALNT.MSTA) DATE: February 23, 2010
NUMBER:

FILE

Original Fiscal Note ☒ Substitute ☐

SUBJECT: Resolution authorizing the proper City Officers to execute Conveyance of Rights in Land, which will convey to the State of Wisconsin Easement WE 398 & SE 2110 located at West Mallory Avenue extended between South 15th Place extended and the existing easterly right of way line of Interstate Highway 94 in the 13th Aldermanic District.

B) SUBMITTED BY (NAME/TITLE/DEPT./EXT.): Jeffrey S. Polenske, P.E./City Engineer/Public Works/2400

C) CHECK ONE: ☐ ADOPTION OF THIS FILE AUTHORIZES EXPENDITURES.
☐ ADOPTION OF THIS FILE DOES NOT AUTHORIZE EXPENDITURES; FURTHER COMMON COUNCIL ACTION NEEDED.
☐ LIST ANTICIPATED COSTS IN SECTION G BELOW.
☒ NOT APPLICABLE/NO FISCAL IMPACT.

D) CHARGE TO: ☐ DEPARTMENTAL ACCOUNT (DA) ☐ CONTINGENT FUND (CF)
☐ CAPITAL PROJECTS FUND (CPF) ☐ SPECIAL PURPOSE ACCOUNTS (SPA)
☐ PERM. IMPROVEMENT FUNDS (PIF) ☐ GRANT & AID ACCOUNTS (G & AA)
☐ OTHER (SPECIFY)

E) PURPOSE	SPECIFY TYPE/USE	ACCOUNT	EXPENDITURE	REVENUE	SAVINGS
SALARIES/WAGES:	N/A				
SUPPLIES:					
MATERIALS:					
NEW EQUIPMENT:					
EQUIPMENT REPAIR:					
OTHER:			\$		
TOTALS:			\$		

F) FOR EXPENDITURES AND REVENUES WHICH WILL OCCUR ON AN ANNUAL BASIS OVER SEVERAL YEARS CHECK THE APPROPRIATE BOX

N/A		
<input type="checkbox"/> 1-3 YEARS	<input type="checkbox"/> 3-5 YEARS	
<input type="checkbox"/> 1-3 YEARS	<input type="checkbox"/> 3-5 YEARS	
<input type="checkbox"/> 1-3 YEARS	<input type="checkbox"/> 3-5 YEARS	

G) LIST ANY ANTICIPATED FUTURE COSTS THIS PROJECT WILL REQUIRE FOR COMPLETION:

N/A

H) LIST ANY ANTICIPATED FUTURE COSTS THIS PROJECT WILL REQUIRE FOR COMPLETION:

N/A

PLEASE LIST ANY COMMENTS ON REVERSE SIDE AND CHECK HERE ☐

Document Number
CONVEYANCE OF RIGHTS IN LAND

Wisconsin Department of Transportation
Exempt from fee s.77.25(2r) Wis. Stats.
DT1660 12/2005 (Replaces ED660) s.84.09(1) Wis. Stats.

City of Milwaukee GRANTOR, for and in consideration of the sum of One (\$1.00) and other good and valuable consideration, grants and conveys any and all rights and interest which, by virtue of prior title, easement, license, or other legal devices, GRANTOR holds in the land described below to the State of Wisconsin, Department of Transportation, GRANTEE, for the purposes of constructing, operating, and maintaining a public highway and appurtenant facilities on, over, under, or across the said land; provided, however that GRANTOR reserves to itself the subordinate right to cross, traverse, or otherwise occupy said land with its present and future overhead or underground transmission lines, appurtenant facilities, and supporting structures in a manner consistent with the purposes of this conveyance and in a manner which will not interfere with normal highway maintenance and operation; provided, further, that the costs of any relocation or alteration, now or in the future, of the transmission lines, appurtenant facilities, or supporting structures when required by the GRANTEE for any reason, including accommodating future expanded or additional highway facilities on, over, under or across said land, will be paid by the GRANTEE; provided, however, that the costs of such relocation or alteration, or of the installation of new or additional facilities when done at the instance of and for the purposes of the GRANTOR, will be defrayed by the GRANTOR.

This conveyance shall be binding on the GRANTOR, GRANTEE, and their respective successors and assigns.

Any person named in this conveyance may make an appeal from the amount of compensation within six months after the date of recording of this conveyance as set forth in s.32.05(2a) Wisconsin Statutes. For the purpose of any such appeal, the amount of compensation stated on the conveyance shall be treated as the award, and the date the conveyance is recorded shall be treated as the date of taking and the date of evaluation.

Other persons having an interest in record in the property: **None**

Legal Description

Those portions of the Grantor's easements for sewer and water main facilities that lie within the highway right-of-way limits as shown on the plat of RW Project Number 1030-20-20, prepared by Milwaukee Transportation Partners, labeled "I-94, including I-43 & I-894, College Ave. to Howard Ave., S. 35th Street to S. 3rd Street", dated 5/15/08, and all subsequent revisions thereto, as filed with the Milwaukee County Office of the Register of Deeds, as follows:

Easement interest in lands located in parts of the Southeast Quarter (SE 1/4) of Section 30, in Township 6 North, Range 22 East, in the City of Milwaukee, Milwaukee County, Wisconsin. Said easement interests being further described as follows:

- Easement recorded in the Office of the Register of Deeds for Milwaukee County, Wisconsin in Reel 854 of Deeds on Pages 672 to 677 as Document No. 4918291.

The undersigned certify that this instrument is executed pursuant to a resolution of the Board of Directors (or shareholders, stockholders, or members, if authorized by law) of GRANTOR corporation or cooperative.

Acknowledgement

SEE SIGNATURE PAGES ATTACHED

(Grantor Name)

(Signature)

(Title)

(Print Name)

(Signature)

(Title)

(Print Name)

(Date)

State of _____)
) ss.
_____ County)

On the above date, this instrument was acknowledged before me by the named person(s).

(Signature, Notary Public)

(Print or Type Name, Notary Public)

(Date Commission Expires)

This space is reserved for recording data

Return to

Sandy Ratz

SE Freeways Utility Coordinator

WisDOT SE Region

Waukesha, WI. 53187-0798

Parcel Identification Number/Tax Key Number

64319511006

Conveyance of Rights in Land for Easement Document No. 4918291

City of Milwaukee's release and conveyance of rights in land are to the State of Wisconsin only. In addition to City's reserved rights hereunder, City retains all right, title, and interest it had vis-a vis parties other than the State of Wisconsin.

CITY OF MILWAUKEE

By: _____
Thomas M. Barrett, Mayor

By: _____
Ronald D. Leonhardt, City Clerk

COUNTERSIGNED

By: _____
W. Martin Morics, Comptroller

STATE OF WISCONSIN)
) SS
MILWAUKEE COUNTY)

Personally came before me this _____ day of _____ A.D., 20____, Thomas M. Barrett, Mayor, of the above-named municipal corporation, to me known to be the person who executed the foregoing instrument and to me known to be such Mayor of said municipal corporation and acknowledged that he executed the foregoing instrument as such officer as the deed of said municipal corporation, by its authority, and pursuant to Resolution File Number _____ adopted by its Common Council on _____.

Notary Public, State of Wisconsin
My Commission Expires _____

STATE OF WISCONSIN)
) SS
MILWAUKEE COUNTY)

Personally came before me this _____ day of _____, A.D., 20____, Ronald D. Leonhardt, City Clerk, of above-named municipal corporation, to me known to be the person who executed the foregoing instrument and to me known to be such City Clerk of said municipal corporation and acknowledged that he executed the foregoing instrument as such officer as the deed of said municipal corporation, by its authority, and pursuant to Resolution File Number _____ adopted by its Common Council on _____.

Notary Public, State of Wisconsin
My Commission Expires _____

STATE OF WISCONSIN)
) SS
MILWAUKEE COUNTY)

Personally came before me this _____ day of _____ A.D., 20_____, W. Martin Morics, Comptroller, of the above-named municipal corporation, to me known to be the person who executed the foregoing instrument and to me known to be such Comptroller of said municipal corporation and acknowledged that he executed the foregoing instrument as such officer as the deed of said municipal corporation, by its authority, and pursuant to Resolution File Number _____ adopted by its Common Council on _____.

Notary Public, State of Wisconsin
My Commission Expires _____

This instrument was drafted by the City of Milwaukee.

Approved as to contents

CITY ENGINEER, Jeffrey S. Polenske, P.E.

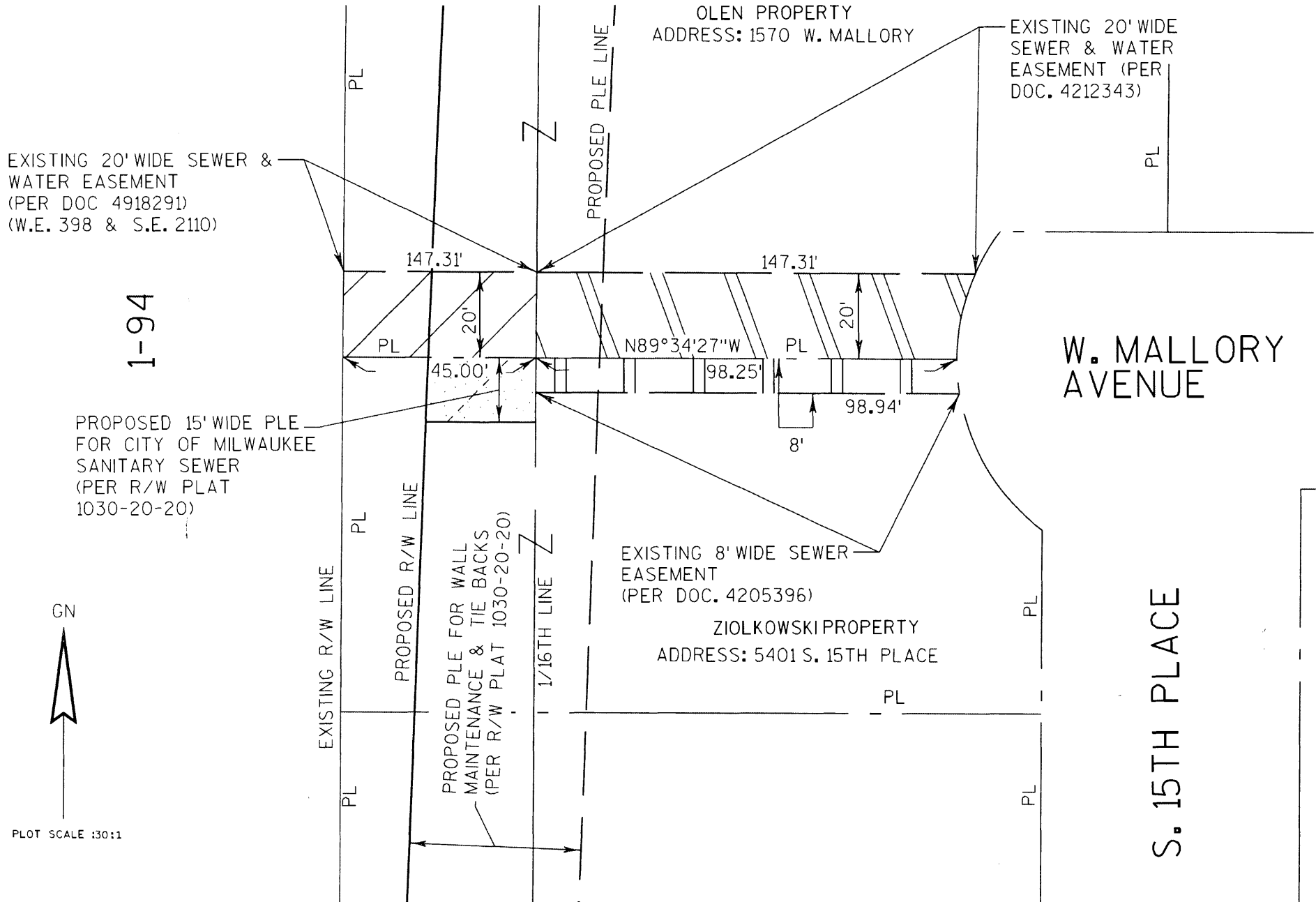
Date _____

Approved as to form and execution

ASSISTANT CITY ATTORNEY, Gregg C. Hagopian

Date _____

1-94 NORTH-SOUTH CORRIDOR EXISTING & PROPOSED EASEMENT EXHIBIT



PW FILE NUMBER: 091471

[illegible]



Legislation Details (With Text)

File #: 091472 **Version:** 0
Type: Resolution **Status:** In Committee
File created: 3/2/2010 **In control:** PUBLIC WORKS COMMITTEE
On agenda: **Final action:**
Effective date:

Title: Resolution authorizing the proper City Officers to execute Conveyance of Rights in Land, which will convey to the State of Wisconsin that part of a 35 foot wide sewer easement located between the existing southerly right of way line of Interstate Highway 43/894 and the proposed southerly right of way line of Interstate Highway 43/894, located in the 13th Aldermanic District.

Sponsors: THE CHAIR

Indexes: CITY PROPERTY, SEWER EASEMENTS

Attachments: Cover letter, Fiscal Note, Land Conveyance, Proper City Officers Signatures.pdf, Exhibit 5795885.PDF

Date	Ver.	Action By	Action	Result	Tally
3/2/2010	0	COMMON COUNCIL	ASSIGNED TO		
3/4/2010	0	PUBLIC WORKS COMMITTEE	HEARING NOTICES SENT		
3/4/2010	0	PUBLIC WORKS COMMITTEE	HEARING NOTICES SENT		

Number

091472

Version

Original

Reference

Sponsor

The Chair

Title

Resolution authorizing the proper City Officers to execute Conveyance of Rights in Land, which will convey to the State of Wisconsin that part of a 35 foot wide sewer easement located between the existing southerly right of way line of Interstate Highway 43/894 and the proposed southerly right of way line of Interstate Highway 43/894, located in the 13th Aldermanic District.

Analysis

This resolution authorizes the proper City Officers to execute a Conveyance of Rights in Land, which will convey to the State of Wisconsin that part of a 35 foot wide sewer easement located between the existing southerly right of way line of Interstate Highway 43/894 and the proposed southerly right of way line of Interstate Highway 43/894, located in the 13th Aldermanic District.

Body

Whereas, On September 30, 1984, an easement 35 feet in width was granted to the City of Milwaukee in an easement document recorded as document number 5795885 at the Milwaukee County Register of Deeds; and

Whereas, The part of the easement to be conveyed is located between the proposed southerly right of way line of Interstate Highway 43/894 and the existing southerly right of way line of Interstate Highway 43/894, between South 23rd Street extended and South 27th Street; and

Whereas, The right to use, maintain and repair the sewer located within the easement area to be conveyed will be retained as long as the use, maintenance or repair is not in conflict with the use of the area for highway purposes; and

Whereas, The rights to be conveyed will no longer be necessary for sewer purposes; now, therefore, be it

Resolved, By the Common Council of the City of Milwaukee that the proper City Officers are hereby authorized and directed to execute Conveyance of Rights in Land, a draft copy of said Conveyance of Rights in Land is attached to this Common Council Resolution File Number 091472, said Conveyance of Rights in Land document being incorporated in this resolution by reference as though set forth in full; and, be it

Further Resolved, That after said Conveyance of Rights in Land has been executed by the proper City Officers, it shall be forwarded to the office of the City Attorney for approval as to form and execution and then to the Department of Public Works for recording and proper distribution.

Drafter

Department of Public Works

Environmental Engineering Section

TJT/rtp

February 22, 2010



Department of Public Works
Infrastructure Services Division

Jeffrey J. Mantes
Commissioner of Public Works

Preston D. Cole
Director of Operations

Jeffrey S. Polenske
City Engineer

February 23, 2010

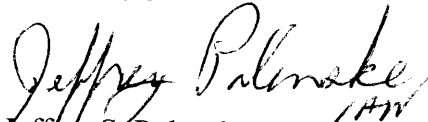
To the Honorable, the Common Council


Dear Council Members:

Attached is a resolution authorizing and directing the proper City officers to execute a Conveyance of Rights in Land document which will convey sewer easement rights granted to the City in an easement recorded as document number 5795885 at the Milwaukee County Register of Deeds. The City will retain rights to use, maintain and repair the existing sewer in the Conveyance of Rights in Land document, therefore, the easement rights to be conveyed are no longer necessary for City purposes.

We recommend adoption of the resolution.

Very truly yours,


Jeffery S. Polenske, P.E.
City Engineer


Jeffery J. Mantes
Commissioner of Public Works

JTJTJ:rt

Attachment

RTP: 3-5

Transmittal letter Conveyance of Rights in Land 27th west 3-5

CITY OF MILWAUKEE FISCAL NOTE

CC-170 (REV. 6/86)
Ref: GEN\FISCALNT.MSTA) DATE: February 23, 2010
NUMBER:

FILE

Original Fiscal Note ☒ Substitute ☐

SUBJECT: Resolution authorizing the proper City Officers to execute Conveyance of Rights in Land, which will convey to the State of Wisconsin that part of a 35 foot wide sewer easement located between the existing southerly right of way line of Interstate Highway 43/894 and the proposed southerly right of way line of Interstate Highway 43/894, located in the 13th Aldermanic District.

B) SUBMITTED BY (NAME/TITLE/DEPT./EXT.): Jeffrey S. Polenske, P.E./City Engineer/Public Works/2400

C) CHECK ONE: ☐ ADOPTION OF THIS FILE AUTHORIZES EXPENDITURES.
☐ ADOPTION OF THIS FILE DOES NOT AUTHORIZE EXPENDITURES; FURTHER COMMON COUNCIL ACTION NEEDED.
☐ LIST ANTICIPATED COSTS IN SECTION G BELOW.
☒ NOT APPLICABLE/NO FISCAL IMPACT.

D) CHARGE TO: ☐ DEPARTMENTAL ACCOUNT (DA) ☐ CONTINGENT FUND (CF)
☐ CAPITAL PROJECTS FUND (CPF) ☐ SPECIAL PURPOSE ACCOUNTS (SPA)
☐ PERM. IMPROVEMENT FUNDS (PIF) ☐ GRANT & AID ACCOUNTS (G & AA)
☐ OTHER (SPECIFY)

E) PURPOSE	SPECIFY TYPE/USE	ACCOUNT	EXPENDITURE	REVENUE	SAVINGS
SALARIES/WAGES:	N/A				
SUPPLIES:					
MATERIALS:					
NEW EQUIPMENT:					
EQUIPMENT REPAIR:					
OTHER:			\$		
TOTALS:			\$		

F) FOR EXPENDITURES AND REVENUES WHICH WILL OCCUR ON AN ANNUAL BASIS OVER SEVERAL YEARS CHECK THE APPROPRIATE BOX

N/A		
<input type="checkbox"/> 1-3 YEARS	<input type="checkbox"/> 3-5 YEARS	
<input type="checkbox"/> 1-3 YEARS	<input type="checkbox"/> 3-5 YEARS	
<input type="checkbox"/> 1-3 YEARS	<input type="checkbox"/> 3-5 YEARS	

G) LIST ANY ANTICIPATED FUTURE COSTS THIS PROJECT WILL REQUIRE FOR COMPLETION:

N/A

H) LIST ANY ANTICIPATED FUTURE COSTS THIS PROJECT WILL REQUIRE FOR COMPLETION:

N/A

PLEASE LIST ANY COMMENTS ON REVERSE SIDE AND CHECK HERE ☐

Document Number
CONVEYANCE OF RIGHTS IN LAND

Wisconsin Department of Transportation
Exempt from fee s.77.25(2r) Wis. Stats.
DT1660 12/2005 (Replaces ED660) s.84.09(1) Wis. Stats.

City of Milwaukee GRANTOR, for and in consideration of the sum of One (\$1.00) and other good and valuable consideration, grants and conveys any and all rights and interest which, by virtue of prior title, easement, license, or other legal devices, GRANTOR holds in the land described below to the State of Wisconsin, Department of Transportation, GRANTEE, for the purposes of constructing, operating, and maintaining a public highway and appurtenant facilities on, over, under, or across the said land; provided, however that GRANTOR reserves to itself the subordinate right to cross, traverse, or otherwise occupy said land with its present and future overhead or underground transmission lines, appurtenant facilities, and supporting structures in a manner consistent with the purposes of this conveyance and in a manner which will not interfere with normal highway maintenance and operation; provided, further, that the costs of any relocation or alteration, now or in the future, of the transmission lines, appurtenant facilities, or supporting structures when required by the GRANTEE for any reason, including accommodating future expanded or additional highway facilities on, over, under or across said land, will be paid by the GRANTEE; provided, however, that the costs of such relocation or alteration, or of the installation of new or additional facilities when done at the instance of and for the purposes of the GRANTOR, will be defrayed by the GRANTOR.

This conveyance shall be binding on the GRANTOR, GRANTEE, and their respective successors and assigns.

Any person named in this conveyance may make an appeal from the amount of compensation within six months after the date of recording of this conveyance as set forth in s.32.05(2a) Wisconsin Statutes. For the purpose of any such appeal, the amount of compensation stated on the conveyance shall be treated as the award, and the date the conveyance is recorded shall be treated as the date of taking and the date of evaluation.

Other persons having an interest in record in the property: **None**

Legal Description

Those portions of the Grantor's easements for storm sewer facilities that lie within the highway right-of-way limits as shown on the plat of RW Project Number 1030-20-20, sheet 4.28, prepared by Milwaukee Transportation Partners, labeled "I-94, including I-43 & I-894, College Ave. to Howard Ave., S. 35th Street to S. 3rd Street", dated 5/15/08, and all subsequent revisions thereto, as filed with the Milwaukee County Office of the Register of Deeds, as follows:

Easement interest in lands located in parts of the Southwest Quarter (SW 1/4) of Section 19, in Township 6 North, Range 22 East, in the City of Milwaukee, Milwaukee County, Wisconsin. Said easement interests being further described as follows:

- Easement recorded in the Office of the Register of Deeds for Milwaukee County, Wisconsin in Reel 1735 of Deeds on Pages 852 as Document No. 5795885

The undersigned certify that this instrument is executed pursuant to a resolution of the Board of Directors (or shareholders, stockholders, or members, if authorized by law) of GRANTOR corporation or cooperative.

Acknowledgement

SEE SIGNATURE PAGES ATTACHED

(Grantor Name)

(Signature)

(Title)

(Print Name)

(Signature)

(Title)

(Print Name)

(Date)

State of _____)
) ss.
_____ County)

On the above date, this instrument was acknowledged before me by the named person(s).

(Signature, Notary Public)

(Print or Type Name, Notary Public)

(Date Commission Expires)

This space is reserved for recording data

Return to

Sandy Ratz

SE Freeways Utility Coordinator

WisDOT SE Region

Waukesha, WI. 53187-0798

Parcel Identification Number/Tax Key Number

5980471000

Conveyance of Rights in Land for Easement Document No. 5795885

City of Milwaukee's release and conveyance of rights in land are to the State of Wisconsin only. In addition to City's reserved rights hereunder, City retains all right, title, and interest it had vis-a vis parties other than the State of Wisconsin.

CITY OF MILWAUKEE

By: _____
Thomas M. Barrett, Mayor

By: _____
Ronald D. Leonhardt, City Clerk

COUNTERSIGNED

By: _____
W. Martin Morics, Comptroller

STATE OF WISCONSIN)
) SS
MILWAUKEE COUNTY)

Personally came before me this _____ day of _____ A.D., 20____, Thomas M. Barrett, Mayor, of the above-named municipal corporation, to me known to be the person who executed the foregoing instrument and to me known to be such Mayor of said municipal corporation and acknowledged that he executed the foregoing instrument as such officer as the deed of said municipal corporation, by its authority, and pursuant to Resolution File Number _____ adopted by its Common Council on _____.

Notary Public, State of Wisconsin
My Commission Expires

STATE OF WISCONSIN)
) SS
MILWAUKEE COUNTY)

Personally came before me this _____ day of _____ A.D., 20____, Ronald D. Leonhardt, City Clerk, of above-named municipal corporation, to me known to be the person who executed the foregoing instrument and to me known to be such City Clerk of said municipal corporation and acknowledged that he executed the foregoing instrument as such officer as the deed of said municipal corporation, by its authority, and pursuant to Resolution File Number _____ adopted by its Common Council on _____.

Notary Public, State of Wisconsin
My Commission Expires

STATE OF WISCONSIN)
) SS
MILWAUKEE COUNTY)

Personally came before me this _____ day of _____ A.D., 20_____, W. Martin Morics, Comptroller, of the above-named municipal corporation, to me known to be the person who executed the foregoing instrument and to me known to be such Comptroller of said municipal corporation and acknowledged that he executed the foregoing instrument as such officer as the deed of said municipal corporation, by its authority, and pursuant to Resolution File Number _____ adopted by its Common Council on _____.

Notary Public, State of Wisconsin
My Commission Expires _____

This instrument was drafted by the City of Milwaukee.

Approved as to contents

CITY ENGINEER, Jeffrey S. Polenske, P.E.

Date

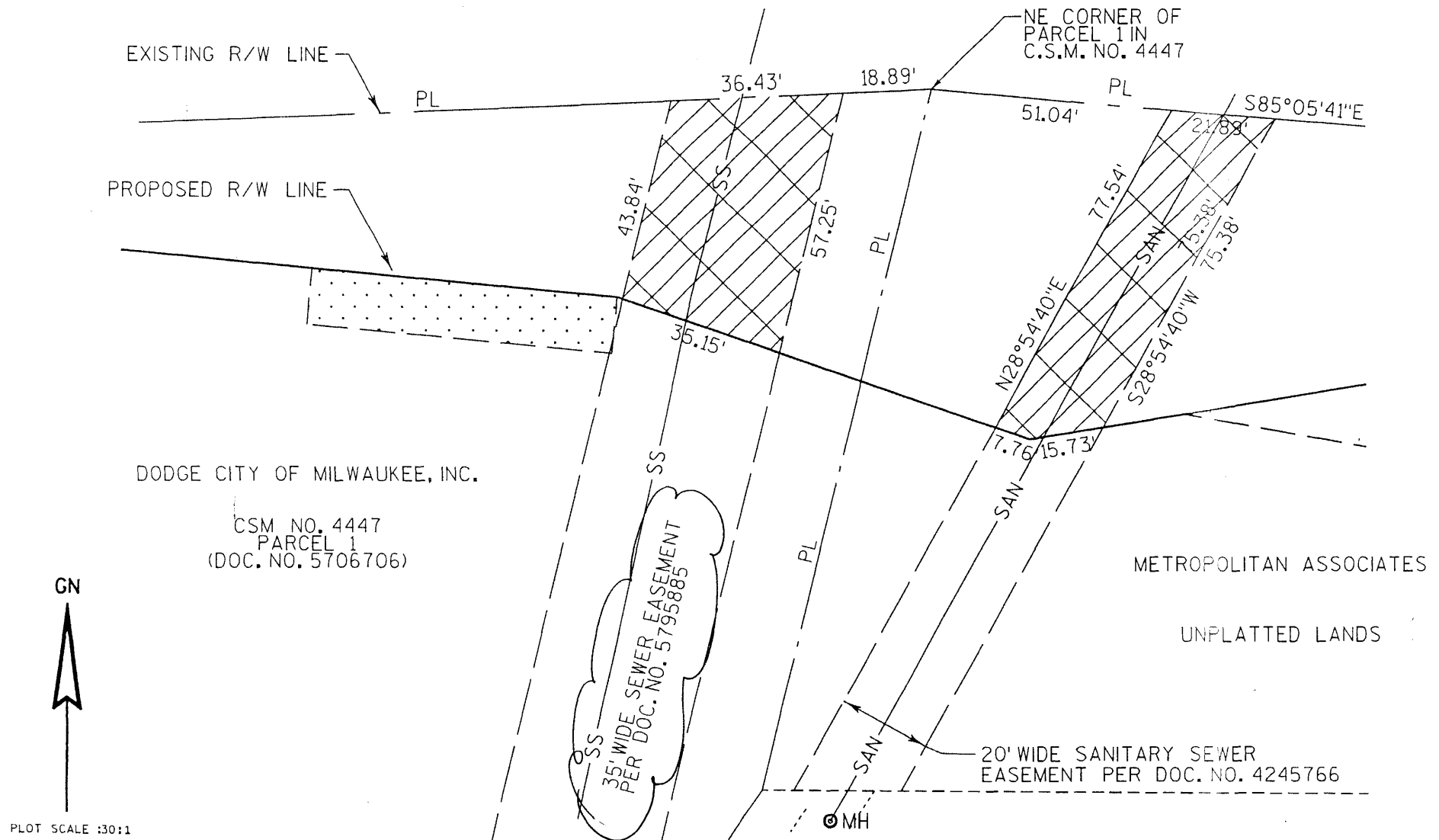
Approved as to form and execution

ASSISTANT CITY ATTORNEY, Gregg C. Hagopian

Date

EXHIBIT

I-43/894





Legislation Details (With Text)

File #: 081637 **Version:** 1

Type: Resolution **Status:** In Committee

File created: 3/25/2009 **In control:** PUBLIC WORKS COMMITTEE

On agenda: **Final action:**

Effective date:

Title: Substitute resolution approving Lease Agreement between Waters' New Biotech Company and the Port of Milwaukee.

Sponsors: THE CHAIR

Indexes: AGREEMENTS, LEASES, PORT OF MILWAUKEE

Attachments: Cover Letter, Port cover letter, Fiscal note, Lease agreement, Fiscal Analysis, Hearing Notice List

Date	Ver.	Action By	Action	Result	Tally
3/23/2009	0	COMMON COUNCIL	ASSIGNED TO		
4/16/2009	1	CITY CLERK	DRAFT SUBMITTED		
4/16/2009	0	PUBLIC WORKS COMMITTEE	HEARING NOTICES SENT		
4/22/2009	1	PUBLIC WORKS COMMITTEE	RECOMMENDED FOR ADOPTION	Pass	5:0
5/5/2009	1	COMMON COUNCIL	REFERRED TO	Pass	14:0
9/24/2009	1	PUBLIC WORKS COMMITTEE	HEARING NOTICES SENT		
3/4/2010	1	PUBLIC WORKS COMMITTEE	HEARING NOTICES SENT		

Number

081637

Version

Substitute 1

Reference

Sponsor

The Chair

Title:

Substitute resolution approving Lease Agreement between Waters' New Biotech Company and the Port of Milwaukee.

Analysis

This resolution would approve lease agreement with Waters' New Biotech for 3.7 acres of real property located on the South Harbor Tract of the Port of Milwaukee. The term of the lease is for 15 years commencing May 1, 2009 and terminating April 30, 2024; and

Body

Whereas, Waters' New Biotech is an operating and manufacturing entity for the production, storage, and distribution of wood pellet products, an alternative biomass fuel source; and

Whereas, Waters' New Biotech desires a waterfront location to construct and operate wood pellet manufacturing and export facility at the Port of Milwaukee; and

Whereas, The Board of Harbor Commissioners at their meeting of April 9, 2009 acted by vote of the Board to approve this lease agreement; now, therefore, be it

Resolved, By the Common Council of the City of Milwaukee, that said Common Council hereby ratifies and approves the Lease Agreement between Waters' New Biotech and the City of Milwaukee, by and through its Board of Harbor Commissioners for the period of May 1, 2009 through April 30, 2024; and, be it

Further Resolved, That the designated officers of said government and of said Board of Harbor Commissioners are hereby authorized and directed to execute an agreement to carry out this purpose.

Drafter:

Port of Milwaukee

ECR

i:watersbiotechlsecres.doc

4/15/09



THE PORT OF MILWAUKEE

March 19, 2009

To the Honorable
Common Council
City of Milwaukee

Subject: Requests to introduce two Common Council Files by title

Attention: Mr. James Owczarski
Ms. Debra Fowler

Dear Common Council Members:

The Port of Milwaukee respectfully request that the following two resolutions be introduced by title at the next Common Council Meeting:

- "Resolution approving a lease between Waters' New BioTech Company and the Port of Milwaukee".
- "Resolution approving a 2009 Three-Year Harbor Statement of Intentions for the Port of Milwaukee".

The Port of Milwaukee will work with the Legislative Reference Staff and the City Attorneys to prepare the final resolution wording and submit them as soon as possible and before the committee meetings. Please contact us if you need additional information or if you have any questions.

Sincerely,



Lawrence E. Sullivan
Harbor Engineer
Port of Milwaukee



April 15, 2009

Ref: Waters Biotech/Lease

To The Honorable
The Common Council
City of Milwaukee

Dear Council Members:

The Port of Milwaukee is requesting approval for a lease agreement with Waters' New Biotech for certain real property on the Port's South Harbor Tract.

The property consists of 3.7 acres with a Lease term of May 1, 2009 through April 30, 2024.

The lease agreement was approved by the Board of Harbor Commissioners at its meeting on April 9, 2009. It is therefore, placed before your Honorable Body for its ratification of the Board's action. We respectfully request that your Honorable Body approve this Agreement and authorize its execution by adopting the attached resolution.

Respectfully submitted,

ERIC C. REINELT
Municipal Port Director

ECR/dcl

i:watersbiotechlseccltr.doc

CITY OF MILWAUKEE FISCAL NOTE

A) DATE April 15, 2009

FILE NUMBER: _____

Original Fiscal Note ☒ Substitute ☐SUBJECT: Approve lease agreement with Waters' New Biotech for 3.7 acres of landB) SUBMITTED BY (Name/title/dept./ext.): Eric C. Reinelt, Municipal Port Director, Port of Milwaukee, 8130 xt.

- C) CHECK ONE: ☐ ADOPTION OF THIS FILE AUTHORIZES EXPENDITURES
☐ ADOPTION OF THIS FILE DOES NOT AUTHORIZE EXPENDITURES: FURTHER COMMON COUNCIL ACTION NEEDED. LIST ANTICIPATED COSTS IN SECTION G BELOW.
☒ NOT APPLICABLE/NO FISCAL IMPACT.

- D) CHARGE TO: ☐ DEPARTMENT ACCOUNT (DA) ☐ CONTINGENT FUND (CF)
☐ CAPITAL PROJECTS FUND (CPF) ☐ SPECIAL PURPOSE ACCOUNTS (SPA)
☐ PERM. IMPROVEMENT FUNDS (PIF) ☐ GRANT & AID ACCOUNTS (G & AA)
☐ OTHER (SPECIFY)

E) PURPOSE	SPECIFY TYPE/USE	ACCOUNT	EXPENDITURE	REVENUE	SAVINGS
SALARIES/WAGES:	None				
SUPPLIES:	"				
MATERIALS:	"				
NEW EQUIPMENT:	"				
EQUIPMENT REPAIR:	"				
OTHER:	"				
TOTALS	None				

- F) FOR EXPENDITURES AND REVENUES WHICH WILL OCCUR ON AN **ANNUAL** BASIS OVER SEVERAL YEARS CHECK THE APPROPRIATE BOX BELOW AND THEN LIST EACH ITEM AND DOLLAR AMOUNT **SEPARATELY**.

<input checked="" type="checkbox"/> 1-3 YEARS	<input type="checkbox"/> 3-5 YEARS	See attached sheet
<input type="checkbox"/> 1-3 YEARS	<input type="checkbox"/> 3-5 YEARS	
<input type="checkbox"/> 1-3 YEARS	<input type="checkbox"/> 3-5 YEARS	

- G) LIST ANY ANTICIPATED FUTURE COSTS THIS PROJECT WILL REQUIRE FOR COMPLETION:

None

- H) COMPUTATIONS USED IN ARRIVING AT FISCAL ESTIMATE:

Wharfage is set by Port tariff at \$.54/ton with a 100,000 ton minimum. Dockage is set by tariff @ \$1,000 per day for 5 ships per year with estimated 2 days each in port.

PLEASE LIST ANY COMMENTS ON REVERSE SIDE AND CHECK HERE

☐

(F) Rent during first 3 years is set at a reduced rate of \$46,433.36 annually to compensate Tenant for their demolition costs of City-owned building. Thereafter, annual base rent returns to \$85,100.

Dockage at \$10,000

Wharfage at \$54,000

LEASE AGREEMENT

Between

WATERS' NEW BIOTECH

and the

BOARD OF HARBOR COMMISSONERS

CITY OF MILWAUKEE

For lease of 3.7 acres located on the Ports South Harbor Tract

Initial Term: May 1, 2009 through April 30, 2024
(See Section 1B for further extension terms)

LEASE AGREEMENT

Lease Agreement made as of the ____ day of ____, 2009, by and between WATERS' NEW BIOTECH INC., a Wisconsin corporation, (hereinafter referred to as "Tenant"), and the CITY OF MILWAUKEE, a Wisconsin corporation, by and through its Board of Harbor Commissioners (hereinafter collectively referred to as the "City").

W I T N E S S E T H :

City hereby leases, demises and lets unto Tenant the real property comprised of approximately 3.7 acres (hereinafter referred to as the "Property"), located on the South Harbor Tract of the City of Milwaukee. The Property is more particularly described in Exhibit A, which is affixed hereto and incorporated into this document by this reference. This Lease is to be considered a bare ground lease. The building and other improvements upon the Property left by the previous tenant belong to City. These are to be removed by Tenant on or before September 1, 2009 and City will reimburse Tenant for the cost of this removal as described in Section 2(B), below.

This Lease is entered into by the parties under the following terms and conditions:

1. **Term.**

(A) **Initial Term.** The Initial Term of this Lease shall be for a period of fifteen (15) years (the "Initial Term") commencing 12:00 a.m. May 1, 2009 and terminating at 11:59 p.m. April 30, 2024, subject to the City's right to terminate earlier pursuant to Sections 5(D) and 8, below.

(B) **Extension Terms.** Provided that no event of default then exists, Tenant shall have the right to extend the term of this Lease for two (2) successive periods of five (5) years each (the "First Extension Term" 12:00 a.m. May 1, 2024 to 11:59 p.m. April 30, 2029 and the "Second Extension Term" 12:00 a.m. May 1, 2029 to 11:59 p.m. April 30, 2034). In order to exercise each option, Tenant shall provide City with written notice of its intent to do so no less than twelve (12) months prior to the expiration of the Initial Term or of the First Extended Term. After the conclusion of the Second Extension Term and upon mutual written agreement between City and Tenant, this Lease may be amended and extended for additional extension terms. Should Tenant wish to extend this Lease after the conclusion of the Second Extension Term and subsequent extension terms, Tenant shall provide written notice of such intent to City at least twenty-four (24) months prior to the expiration date of the Second Extension Term and subsequent extension terms.

2. **Rent.**

(A) **Base Rent.** The base rental rate for the Property (3.7 acres) shall be \$23,000 per acre per year or Eighty Five Thousand One Hundred Dollars (\$85,100) per year (the “Base Rent”) for the total Property payable monthly in advance on the first day of each month in the amount of \$7,091.67.

(B) **Demolition Credit.** In consideration of Tenant’s commitment to remove at its sole cost and expense all existing City-owned improvements now located on the Property, the annual Base Rent during the years 2009, 2010, and 2011 shall be reduced to \$46,433.36, payable monthly at \$3,869.45 to compensate Tenant for those demolition costs (estimated at \$116,000). Tenant shall provide the City with true and complete copies of all invoices evidencing its complete actual demolition costs, within thirty days after completing the demolition. If actual demolition costs differ more or less by more than 20% from the above estimate of \$116,000, Base Rent for the years 2009, 2010, and 2011 will be adjusted accordingly to reflect the difference by a written amendment to this Lease.

(C) **Base Rent Increases.** Beginning on January 1, 2012 and continuing on each second January 1 thereafter (in 2014, 2016, etc.) for the term of this Lease and any extensions thereto, the Base Rent for the Property shall be adjusted to the amount determined by applying the percentage increase, if any, in the “All Commodities line (Code 2500) of the “Producer Price Indexes” published by the United States Bureau of Statistics (or its successor organization) (1982=100) for the two-year period prior to the beginning of the new 2-year rental period to the annual rent payable during the previous 2-year period of this Lease; provided, however, that in no event shall the new Base Rent, as adjusted by the foregoing method, be decreased to an amount below that for the Base Rent during the preceding year.

(E) **Wharfage.** In addition to the Base Rent, Tenant shall also pay City wharfage according to the current Municipal Port Tariff, Item 215 “Bulk Commodities – Dry” during the terms of this Lease for cargo, product, or ingredients shipped from the Property by vessels, barges, rail cars, trucks or other conveyances, wharfage will be charged quarterly in arrears on January 1, April 1, July 1, and October 1 each year. Each wharfage payment shall be for the immediately preceding quarter. Minimum billable wharfage (except during 2009, 2010 and 2011) shall be 100,000 metric tons on product shipped out of the facility. If any quarter during the Initial Term or any extension thereto tonnage shipped from the Property exceeds 50,000 metric tons wharfage shall be charged at 80% of current Port tariff rate.

(F) Upon mutual consent and agreement between City and Tenant the rental terms of this lease may be renegotiated in the future.

3. **Records.** Tenant shall maintain completed, accurate and verifiable books and records of its business conducted on the property relative thereto, the form of such books and records to be subject to

the approval of the Board of Harbor Commissioners and the City Comptroller and to be made available to properly accredited representatives of the Board of Harbor Commissioners and of the City of Milwaukee, at any reasonable time after request at Tenant's office, for audit or for such other inspection as may be deemed desirable by the City. Tenant shall maintain adequate books and records for determination of all amounts due City under this Lease; such books and records shall be kept in accordance with generally-accepted accounting principles. Tenant's books and records are its private property, and City shall endeavor to keep confidential all information which it derives therefrom to the fullest extent allowed by law.

4. **Financial Guarantees.**

(A) Performance Guaranty. Upon the commencement of the term of this Lease, Tenant shall furnish either a bond or a standby bank letter of credit or an equivalent financial guarantee instrument in a form approved by the City, in the amount of \$100,000, which shall be sufficient to fully cover one year's total Base Rent (before demolition credit), estimated wharfage fees, and other financial obligations of the Tenant payable to the City (the "Performance Guaranty"). In the event Tenant is unable, after exercising every reasonable effort, to procure the Performance Guaranty, Tenant, at the sole option of the City, may furnish to City written personal guarantees of its shareholders in a form and amount approved by the City. In the event that the Performance Guaranty expires under its terms or in the event that City ever draws upon the Performance Guaranty furnished under this Section, Tenant shall immediately post a new or equivalent Performance Guaranty in the form and amount specified by this Section.

(B) Removal Guaranty. In addition to the Performance Guaranty, upon receiving construction permits from permitting authorities, Tenant shall also furnish another bond or a standby bank letter of credit or an equivalent financial guarantee instrument in a form approved by the City, in the amount of \$200,000, which amount the parties agree shall be sufficient at the commencement date of this Lease, to guaranty the removal of all improvements constructed on the Property by Tenant upon termination or expiration of this Lease (the "Removal Guaranty"). In the event that the Removal Guaranty expires under its terms or in the event that City reasonably determines (not more than once in any five year period) that the amount of the Removal Guaranty is insufficient to pay for the removal of all improvements constructed on the Property by Tenant, Tenant shall immediately post a new or equivalent Performance Guaranty in the amount required by City and in the form and specified by this Section.

5. Use of the Property.

(A) Permitted Use. Tenant shall use the Property for the construction and operation of a wood pelleting and gasification facility including related fixtures necessary for the receiving of raw materials, and handling, storage and delivery of final precuts.

(B) Protection of City Infrastructure. Tenant agrees that storage of piled materials shall be restricted to locations at a distance from the edge of the dock (dock setback) designated by the City Harbor Engineer in order to assure dockwall stability and as depicted in Exhibit A. Tenant further agrees to provide suitable protection to any existing water lines, power lines or other underground installations that are now in place to protect them from damage. The kind and quality of said installations are subject to the approval of City. Tenant will take all necessary precautions to prevent the spillage of products on both land and water surfaces.

(C) Other Uses. Additional uses of the Property are not permitted without the prior written approval of the Municipal Port Director. Tenant acknowledges the suitability of the Property for its intended uses and bears sole responsibility for making any determination with respect thereto.

(D) Construction of New Facilities and Operation of Business. To facilitate Tenant's permitted use of the Property, Tenant, at its sole cost and expense, shall demolish all existing improvements on the Property, construct one or more new buildings on the Property, install bulk loading/unloading systems and conveyors intended to handle cargo from rail cars and/or trucks to or from vessels and/or trucks to the new building and construct such other improvements as may be necessary for Tenant's permitted use (collectively the "Project"). Tenant acknowledges and agrees that its timely completion of the entire Project in a good and workmanlike manner is an essential condition to its on-going right to occupy the Property under the terms of this Lease. Accordingly, regardless of Tenant's timely payment of Base Rent and full compliance with all other terms and conditions of this Lease, Tenant acknowledges and agrees that, in the event that Tenant fails to timely complete any of the following benchmarks, at any time thereafter (but prior to Tenant's achievement of such benchmark), City may terminate this Lease by giving written notice to Tenant, without providing Tenant with any right to cure:

- (i) on or before September 1, 2009, completion of the demolition of all existing improvements now located on the Property and removal of all debris from the Property following demolition;
- (ii) on or before September 1, 2009, submission to and approval by City, which shall not be unreasonably withheld, conditioned or delayed, of detailed architectural plans and

specifications, prepared by a Wisconsin licensed architect using generally accepted trade practices, which are complete in all respects and contain all details requisite for completion of the Project in a form sufficient to allow Tenant to operate the Project for the permitted use thereof;

- (iii) on or before September 1, 2009, submission to and approval by City, which shall not be unreasonably withheld, conditioned or delayed, of fully executed fixed price contract(s) with a reputable general contractor(s) and equipment supplier(s) for all labor, materials and equipment required by the plans and specifications for completion and operation of the entire Project;
- (iv) on or before December 1, 2009, completion of all foundation work for the Project;
- (v) on or before March 1, 2010, completion of all framing and roof work for the Project;
- (vi) on or before June 1, 2010, completion of all bulk loading/unloading systems and conveyors and all other improvements necessary for the Project and Tenant's permitted use of the Property;
- (vii) on or before September 1, 2010, installation of all equipment necessary for the Project and Tenant's permitted use of the Property; and
- (vii) on or before November 1, 2010, commencement of Tenant's business operations.

(E) Vessel Berthing. Tenant shall have preferential, but not exclusive use of berthing space in the inner harbor alongside Tenant's leasehold. Tenant recognizes that this space is a shared docking area with other Port tenants. Tenant will give City a forty-eight (48) hour prior notice Monday through Friday during normal business hours of vessel arrivals. Tenant shall provide access to vessels, which may moor along such harbor dock whenever such access is required in the judgment of the City upon request by City. It is understood and agreed that City regularly uses the Municipal Mooring Basin adjoining and adjacent to the Property as a vessel berth and for incidental dock and navigation uses. Tenant agrees to conduct its operations in such manner as to not interfere with such mooring operations, dock operations or storage operations of City. In case of conflict over docking space, the City's Harbor Master authority for assigning berths will apply.

6. Occupancy Subject to Existing Easements and Restrictions. Tenant's occupancy of the Property is subject to any recorded easements and restrictions of record.

7. Termination and Vacation.

(A) Termination and Vacation Date. Tenant shall vacate the Property on or before the expiration of this Lease. The Property shall be returned to City by Tenant in substantially the same condition in which it was received, except for the existing improvements, which Tenant shall demolish on or before September 1, 2009 in accordance with Section 5 (D) (i) above, and the new Project, which Tenant shall construct in accordance with Section 5(D), (ii through vii) above, and which Tenant shall either demolish or leave intact on the Property in accordance with Section 7(C), below. In the event that Tenant fails to vacate the Property in a timely fashion, City shall have the option to do any or all of the following: (1) cause the Property to be vacated; (2) charge Tenant twice (2x) the Base Rent set forth in Section 2 of this Lease for all periods subsequent to the date of expiration of this Lease or of any agreed extension thereof; and (3) to assess and recover against the Tenant the actual costs of such vacation and any damages sustained by the City as a consequence of the Tenant's failure to timely vacate the Property.

(B) Optional Month-to-Month Extensions. City may at its sole option extend the Lease term on a month-to-month basis and on the same terms and conditions in the event additional time is required for Tenant to vacate Property under this section.

(C) Surrender or Removal of Improvements. As City shall elect and direct in writing, within ninety (90) days prior to the expiration date of this Lease or within ninety (90) days after the earlier termination date of this Lease, Tenant shall either leave intact or demolish and vacate the Property free and clear of all of the Project and all of related materials, equipment, improvements, and installations in place or constructed upon the Property, in accordance with Sections 5 and 15, and shall return the Property to City as bare ground. In the event that Tenant fails to vacate the Property in the prescribed state of clearance, as determined by City, after ten (10) days' written notice to Tenant, City shall have the option to have such clearance and clean-up conducted as in its reasonable judgment is necessary in order to bring the Property to the prescribed state of clearance and to assess the costs of such action against Tenant. In no event shall City have any right to any of Tenant's trade fixtures; and, except as otherwise set forth in this Lease, Tenant may remove such trade fixtures upon the termination of this Lease, provided Tenant repairs any damage caused by such removal.

8. Default. The occurrence of one or more of the following events shall be considered events of default under the terms of this Lease:

(A) Tenant shall be adjudged a bankrupt, or a decree or order, approving as properly filed, a petition or answer asking reorganization of Tenant under Federal Bankruptcy Laws as now or hereafter

amended, or under the laws of this State, shall be entered, and any such decree, judgment or order shall not have been vacated, stayed or set aside within sixty (60) days from the date of the entry or granting thereof; City may at its sole option extend the Lease term on a month-to-month basis in the event additional time is required for Tenant to vacate Property under this Section; or

(B) Tenant shall file or admit the jurisdiction of the court and the material allegations contained in any petition in bankruptcy or any petition pursuant or purporting to be pursuant to the Federal Bankruptcy Laws as now or hereafter amended, or Tenant shall institute any proceedings or shall give its consent to the institution of any proceedings for any relief of Tenant under any bankruptcy or insolvency laws or any laws relating to the relief of debtors, readjustment of indebtedness, or reorganization; or

(C) Tenant shall make an assignment for the benefit of creditors or shall apply for or consent to the appointment of a receiver for Tenant; or

(D) Tenant shall abandon the Property for a period of thirty (30) days.

(E) Tenant shall be delinquent in any rental or other payments due under this Lease and such delinquency shall continue for five (5) days after notice thereof in writing to Tenant; or

(F) Tenant shall default in any of the other covenants or agreements herein contained to be kept, observed and performed by Tenant, and such default shall continue for ten (10) days after notice thereof in writing to Tenant; or

(G) Tenant shall make any assignment, sublease, transfer, conveyance or other disposition of its interest in the Property without the express written consent of City; or

(H) Tenant shall fail to timely meet any of the benchmarks set forth in Section 5(D), above. Upon occurrence of any one or more of such events of default, it shall be lawful for City, at its election in the manner and terms herein provided, to declare this Lease ended, and to recover possession of the Property, either with or without process of law, to enter and to expel, and remove Tenant and all agents, employees and representatives of Tenant engaged in operating the Property or occupying the Property, using such force as may be necessary in so doing. If default shall be made in any covenants, agreements, conditions or undertakings herein contained, to be observed and performed by Tenant, which cannot with due diligence be cured within a period of ten (10) days, and if notice thereof in writing shall have been given to Tenant, and if Tenant prior to the expiration of said ten (10) days from and after the giving of such notice, commences to eliminate the cause of such default and proceeds diligently and with dispatch to take all steps and do all work required to cure such default and thereafter does so cure such default, then City shall not have the right to declare the term of the Lease as ended;

however, that the curing of any default in such manner shall not be construed to limit or restrict the right of City to declare this Lease ended and terminated, and to enforce all of City's rights and remedies hereunder for any other default not so cured.

9. Maintenance and Housekeeping.

(A) Routine maintenance, housekeeping and cleanliness shall be the responsibility of Tenant. City retains the right to have any of its officers, agents or employees inspect the Property at all reasonable time and Tenant shall be required to grant full access to the Property at such times.

(B) Since the Property is vacant at the inception of this Lease, any and all buildings, fixtures or other improvements thereon that may be constructed or placed upon Property shall be constructed or placed at the Tenant's sole cost and expense. Except for damage caused by fire or other casualty, as specified in Section 16 of this Lease, Tenant, at Tenant's sole cost and expense, shall have the affirmative duty to periodically inspect, maintain, service, repair and replace, if necessary, all portions of the Property including all buildings and improvements thereon, and including, but not limited to, all building elements, branch plumbing and fixtures, pest extermination, fences and rail track up to and including the railroad switch leading onto Tenant's spur. In addition thereto, Tenant shall keep the Property and any dock area servicing the Property in a clean and sanitary condition shall take all necessary measures to prevent pollutants and hazardous wastes from being discharged onto or beneath the Property or into navigable waterways, shall keep the common parking areas, driveways and loading docks free of Tenant's debris, and shall control weeds and maintain landscaping. Tenant shall not store materials, waste or pallets outside of the Property, and shall timely arrange for the removal and/or disposal of all pallets, crates and refuse owned by Tenant which cannot be disposed of in the dumpster(s) servicing the Property.

(C) Tenant shall perform all repairs and maintenance in a good and workmanlike manner, using materials and labor of the same character, kind and quality as originally employed within the Property; and all such repairs and maintenance shall be in compliance with all governmental and quasi-governmental laws, ordinances and regulations, as well as all requirements of City's insurance carrier. In the event Tenant fails to properly perform any such repairs or maintenance within a reasonable period of time, City shall have the option to perform any such repairs on behalf of Tenant, in which event Tenant shall reimburse to City, as Additional Rent, the costs thereof within thirty (30) days after receipt of City's invoice for same.

10. Utilities. Tenant shall be solely responsible for the installation and purchase of all utility services required by Tenant during the term of this Lease.

11. **Assignment and Subleasing.** Tenant shall not assign or sublet the Property or any portion thereof, nor allow the same to be used or occupied by any other person or for any other use than herein specified, without the prior written consent of City. For purposes of this Section, the transfer of any majority interest in any corporation or partnership shall be deemed to be an assignment of this Lease. In the event City consents to any sublease or assignment, the same shall not constitute a release of Tenant from the full performance of Tenant's obligations under this Lease. Further, in the event of any such sublease or assignment, Tenant shall reimburse City for all reasonable attorneys' fees in connection with reviewing and/or drafting any appropriate documents to affect such transfer of Tenant's interests. Further, Tenant shall pay to City as Additional Rent under this Lease, 50% of any profit, rental or other compensation received in excess of the rental specified in Section 2 of this Lease by Tenant as a consequence of any assignment or sublease hereunder.

12. **Indemnification.** Tenant hereby agrees to indemnify and save harmless City from and against all liabilities, claims, demands, judgments, losses and all suits at law or in equity, costs and expenses, including reasonable attorney's fees, for injury to and/or death of any person or persons and/or loss and/or damage to the property of any person, firm or corporation whomsoever, including both parties hereto and their employees, arising from the construction, maintenance or operation of Tenant's improvements and equipment, or in the carrying on of its business as hereinbefore set forth, except when such liability, claim, demand, judgment or loss arises solely from a negligent act of the City, its agents, contractors or employees.

13. **Insurance.** Tenant shall maintain in full force and effect throughout the currency of this Lease, the following insurance covering any and all liability or obligations which may result from operations by Tenant, Tenant's employees, agents, contractors or subcontractors as aforesaid in this Lease:

(A) Property insurance coverage protecting against physical damage (including but not limited to fire, lightning, extended coverage perils, vandalism, sprinkler leakage, water damage, collapse and other special extended perils) to the extent of the replacement cost of Tenant's personal property and improvements as well as goods or property in Tenant's care, custody and/or control.

(B) Comprehensive General Liability Insurance (including but not limited to Products and Completed Operations and Contractual Liability, as applicable to Tenant's obligations under this Lease) with limits not less than:

Each Occurrence Limit:	\$2,000,000
Products/Completed Operations Aggregate:	\$2,000,000
General Policy Aggregate:	\$2,000,000

- (C) Automotive Liability Insurance with Limits not less than:
 Bodily Injury and Property Damage
 Combined Single Limit: \$1,000,000 per occurrence
- (D) Worker's Compensation Insurance in accordance with Chapter 102, Wisconsin Statutes and any applicable Federal law.
- (E) Umbrella Coverage: \$10,000,000 in aggregate
- (F) Environmental Impairment Liability Coverage to be continued for a period of 4 years after Lease expiration.
- | | |
|-----------------------|-------------|
| Each Occurrence Limit | \$2,000,000 |
| Aggregate Coverage | \$4,000,000 |

(G) The requirements of Subsection (C) and (D) above will be met once Tenant obtains one or more motor vehicles and once Tenant acquires one or more employees. Both acquisitions must be reported to City immediately in writing. Failure to comply with this requirement will result in the termination of this Lease.

(H) All such policies shall be of a form and content satisfactory to City. In addition, the Board of Harbor Commissioners of the City of Milwaukee and the City of Milwaukee will be designated on the General Liability, Property Insurance, Automobile and Umbrella policies as Additional Named Insureds. All policies shall be with companies licensed to do business in the State of Wisconsin and rated A or better in the most current issue of Best's Key Rating Guide. Tenant shall furnish City with certificates of insurance for all policies showing that insurance has been written as required. Such evidence shall be provided by Tenant at least thirty (30) days prior to occupancy; and further, such policies shall provide that no less than thirty (30) days written notice be given to City before any such policies are cancelled or substantially changed to reduce the insurance provided thereby. Said certificates of insurance shall remain in effect for the duration of this. Tenant shall not act in any manner that may make void or voidable any insurance required herein. Upon written demand, Tenant shall provide City full, complete and accurate copies of the insurance policies required by this Lease. Once in every three (3)-year period during the term of this Lease, City shall review the extent and limits of the insurance coverage required herein. After said review, should City determine an increase in the extent and/or limits of insurance coverage is required, Tenant shall be so notified in writing and Tenant shall cause such increases to be placed in effect within thirty (30) days of receiving such notice. In no event shall the extent and limits of insurance coverage be reduced from the amounts shown herein.

(I) The attorney in fact or agent of any insurance company furnishing any policy of insurance shall sign and furnish an affidavit setting forth that no City official or employee has any interest, direct or indirect, or has received any premium, commission, fee or other thing of value on account of furnishing said policy of insurance.

14. **Taxes.** Tenant shall pay and discharge when due all taxes, if any, assessments, levies and other charges, general and special, that are or may be during the term hereof levied, assessed, imposed or charged on the Property or the improvements thereon or hereafter placed thereon.

15. **Alterations & Improvements.** Tenant shall not make any alterations, additions, buildings or improvements to the Property without the prior written consent of City except as specified in this Lease. Improvements shall be constructed in a good and workmanlike manner, and in compliance with all applicable governmental and quasi-governmental laws, ordinances and regulations, Tenant shall furnish, upon City's request, plans, specifications, drawings and/or renderings of any proposed alterations, additions, buildings or improvements. Tenant or its contractors agree to properly secure all necessary permits and licenses required by any state, federal or local departments or agencies for the construction and operation of Tenant's business and improvements. A copy of each such permit or license shall be sent to the Port of Milwaukee for its record file.

16. **Destruction.** If the project or other improvements upon the Property are damaged in whole or in part by casualty, Tenant shall be solely responsible for the repair or replacement of the same within one hundred eighty (180) days from the date of said casualty. There shall be no rent abatement during such period. If Tenant does not rebuild in 180 days or such other period of time as Tenant and City mutually agree upon in writing, City may immediately terminate this Lease.

17. **Compliance with Laws and Orders.**

(A) **Laws.** Tenant agrees to observe fully and to comply with any laws, statutes, regulations, ordinances, rules, requirements or directives now in force or which shall emanate from any state, federal or local departments or agencies having jurisdiction. Tenant also agrees to be fully bound and to observe the provisions of the Municipal Port Tariff in effect as of the date of commencement of this Lease and of any successor or equivalent document issued by the Board of Harbor Commissioners of the City of Milwaukee during the term of this Lease.

(B) **Licenses and Permits.** Tenant or its contractors agree to properly secure all necessary permits and licenses required by any state, federal or local departments or agencies for the construction and operation of Tenant's business and improvements. A copy of each such permit or license shall be sent to the Port of Milwaukee for its record file.

18. Security Compliance.

(A) Homeland Security. Tenant agrees to conform to all national security requirements imposed by the U.S. Department of Homeland Security, the Marine Transportation Security Act and its implementing regulations, as well as any applicable state and local security rules and regulations.

(B) Port Consortium. Tenant also agrees to comply with any measures and obligations imposed by a Port of Milwaukee tenant consortium formed to administer security requirements. Tenant will become a member of any such consortium and pay any fees or levies imposed by that consortium or by the Port of Milwaukee to cover security costs.

(C) Definition. "Security," as that term is used herein shall mean "Measures designed to safeguard personnel; to prevent unauthorized access to equipment, property, buildings, harbor facilities, installations, materials, and documents; and to safeguard against espionage, sabotage, damage, and theft, or to prevent persons or organizations from engaging in any activity or using Port properties, equipment and material in a manner that would aid an effort to harm vital interests of the City of Milwaukee, the State of Wisconsin or the United States of America."

19. Environmental Compliance and Obligations.

(A) Compliance with Environmental Regulations. Tenant shall fully comply with all statutes, regulations, or other applicable requirements imposed by any federal, state, or municipal agency with respect to the environmental condition of the Property and/or with respect to any activities or operations that Tenant may conduct upon the Property (hereinafter referred to as "Environmental Requirements"). Tenant shall not cause, permit or suffer the existence or commission by Tenant, its agents, employees, contractors or invitees, or by any other person of any violation of any Environmental Requirements upon, about or beneath the Property or any portion thereof.

(B) Hazardous Material; Environmental Liens. Except to the extent commonly used in the day-to-day operation of the Property, and in strict compliance with all Environmental Requirements (including those relating to storage, use and disposal), Tenant shall not cause, permit or suffer any "hazardous material" or "hazardous substance" (as defined by applicable Federal or State statutes or regulations) to be brought upon, treated, kept, stored, disposed of, discharged, released, produced, manufactured, generated, refined, or used upon, about, or beneath the Property or any portion thereof by Tenant, its agents, employees, contractors, tenants or invitees, or any other person without the prior written consent of the City. Any request by Tenant for such consent by the City shall be in writing and shall demonstrate to the reasonable satisfaction of the City that such "hazardous material" or "hazardous substances" is necessary to the conduct of the business of Tenant and will be stored, used, and disposed

of in a manner that complies with all applicable Environmental Requirements. Tenant shall not create or suffer to exist with respect to the Property any lien, security interest, or other charge or encumbrance of any kind relating to the environmental condition of the Property, including (without limitation) any lien imposed pursuant to Sec. 107(f) of the Superfund Amendments and Reauthorization Act 1986 (42 U.S.C. § 9607(L)) or any similar State Statute.

(C) Obligation to Investigate and/or Remediate. Tenant shall, upon demand of the City, and at its sole cost and expense, promptly take all actions to investigate and/or remediate the environmental condition of the Property which may be required by any federal, state or local governmental agency or political subdivision which remediation is necessitated from, or attributable to, the presence upon, about, or beneath the Property of any "hazardous material" or "hazardous substances" or any violation of Environmental Requirements caused by the Presence of and/or activities or operations conducted by the Tenant upon the Property. Any such investigation and/or remediation shall be performed by and under the direction of a qualified environmental consulting or engineering firm approved by City in advance of the commencement of the work. Tenant agrees to allow entry upon the Property by the City, or agents, contractors or employees of the City for purposes of conducting environmental audits and/or other tests for the purpose of determining the impact of Tenant's presence and/or activities or operations upon or with respect to the Property upon the environmental condition thereof. In the event that Tenant performs any such environmental audit and/or test on its own behalf, it shall promptly provide to the City full and complete copies of any results and/or reports that are generated in connection with the above activities.

(D) Survival of Obligations. Tenant's obligations with respect to the environmental condition of the Property (as more fully set forth in Subsections (A) through (C) above) shall survive the expiration or termination of this Lease.

(E) "Baseline Environmental Survey." Tenant and City will equally share the cost to conduct a Phase I comprehensive environmental survey of the Property ("Baseline Environmental Survey"), which shall describe in detail the environmental condition of the Property existing as of the commencement date of this Lease. Tenant acknowledges that any environmental issues, conditions or problems not specifically identified and described in the Baseline Environmental Survey would be attributable to the activities and/or operations of the Tenant and, therefore, within the scope of the Tenant's obligations under this Section.

20. **Liens.** Tenant shall not mortgage or otherwise encumber or allow to be encumbered its interest herein without obtaining the prior written consent of City. Should Tenant cause any mortgage, lien or other encumbrance (hereinafter singularly or collectively referred to as “Encumbrance”) to be filed, against the Premises or the Property, Tenant shall dismiss or bond against same within fifteen (15) days after the filing thereof. If Tenant fails to remove said Encumbrance within said fifteen (15) days, City shall have the absolute right to remove said Encumbrance by whatever measures City shall deem convenient including, without limitation, payment of such Encumbrance, in which event Tenant shall reimburse City, as Additional Rent, all costs expended by City, including reasonable attorney’s fees, in removing said Encumbrance. All of the aforesaid rights of City shall be in addition to any remedies which either City or Tenant may have available to them at law or in equity.

21. **Time of the Essence.** It is expressly understood and agreed to by the parties hereto that time is of the essence for each term and provision of this Lease.

22. **Waiver.** One or more waivers by any party of any covenant or condition of this Lease shall not be construed as a waiver of a subsequent breach of the same or of any other covenant or condition. The consent or approval given by any party with respect to any act by the other party requiring such consent or approval shall not be deemed to waive or render unnecessary further consent or approval of any subsequent similar act by such party.

23. **Sole Agreement and Amendment.** This shall be binding upon the parties hereto and their respective successors and assigns, and may not be modified orally or in any other manner other than by agreement, in writing, signed by each of the parties to this Lease. Each person signing this Lease warrants that this is the full, entire and complete Lease between the parties; that the terms of this Lease supersede and nullify any and all prior discussion, negotiations or agreements between the parties and/or any of the parties’ respective officers, employees or agents relating in any manner to the subject matter of this Lease; and that no promise or inducement not expressed in this Lease has been made or exists to cause or influence each such person to execute this Lease. Each person signing this Lease warrants their ability to bind the party on whose behalf each signs.

24. **Notice.** Any notice provided for herein or given pursuant to this Lease, shall be deemed in compliance herewith if in writing and sent by United States certified or registered mail, postage prepaid, return receipt requested, or by receipted personal delivery to the parties as follows:

To the City:

BOARD OF HARBOR COMMISSIONERS
2323 S. Lincoln Memorial Drive
Milwaukee, WI 53207
Attention: Municipal Port Director

To The Tenant:

Edward L. Waters
Waters' New Biotech, Inc.
1393 Meadowcreek Dr. #8
Pewaukee, WI 53072

25. **Governing Law.** This Lease shall be governed by the internal laws of the State of Wisconsin. If any term or provision of this Lease or any exhibits hereto, or the application thereof to any person or circumstance, shall to any extent be declared invalid or unenforceable, then the remainder of this Lease and exhibits, or the application of such term or provision to persons or circumstances other than those as to which it is invalid or unenforceable, shall not be affected thereby, and each term and provision of this Lease shall be valid and be enforced to the fullest extent permitted by applicable law.

26. **Public Records Law.** Both parties understand that the City is bound by the Wisconsin Public Records Law, and as such, all of the terms of this Lease are subject to and conditioned on the provisions of Wis. Stat. §19.21, et seq. Tenant acknowledges that it is obligated to assist the City in retaining and producing records that are subject to Wisconsin Public Records Law, and that the failure to do so shall constitute a material breach of this Lease, and that the Tenant must defend and hold the City harmless from liability under that laws. Except as otherwise authorized, those records shall be maintained for a period of seven years after receipt of final payment under this Lease.

27. **Nondiscrimination.** Tenant hereby agrees that in its use of the Property and in its activities undertaken pursuant hereto it shall not discriminate, permit discrimination or restriction on the basis of race, sexual orientation, creed, ethnic origin or identity, color, gender, religion, marital status, age, handicap or national origin.

28. **Counterparts.** This Lease may be executed in any number of counterparts, each of which shall constitute an original and all of which shall constitute one and the same Lease. The terms "Board of Harbor Commissioner" and "City" whenever used herein shall mean and include the Board of Harbor Commissioners of the City of Milwaukee and/or its successors and assigns in authority, as the context may require.

29. **Approval.** IT IS FURTHER AGREED AND UNDERSTOOD that this Lease must be submitted to the Common Council of the City of Milwaukee and that the same must be approved by the Common Council and its execution authorized.

IN WITNESS WHEREOF, the parties hereto have by their duly authorized officers executed this Lease under seal as of the day and year first above written.

CITY OF MILWAUKEE

Thomas A. Barrett , Mayor

Ronald D. Leonhardt, City Clerk

COUNTERSIGNED:

W. Martin Morics, City Comptroller

BOARD OF HARBOR COMMISSIONERS

Timothy K. Hoelter, President

Donna Luty, Secretary

WATERS' NEW BIOTECH INC.

Edward L. Waters, CEO & President

STATE OF _____
_____ **COUNTY**

Personally came before me this _____ day of _____, 20____, Edward L. Waters, CEO & President, and _____ the _____, of Waters New Biotech Inc., who by its authority and on its behalf executed the foregoing instrument and acknowledged the same.

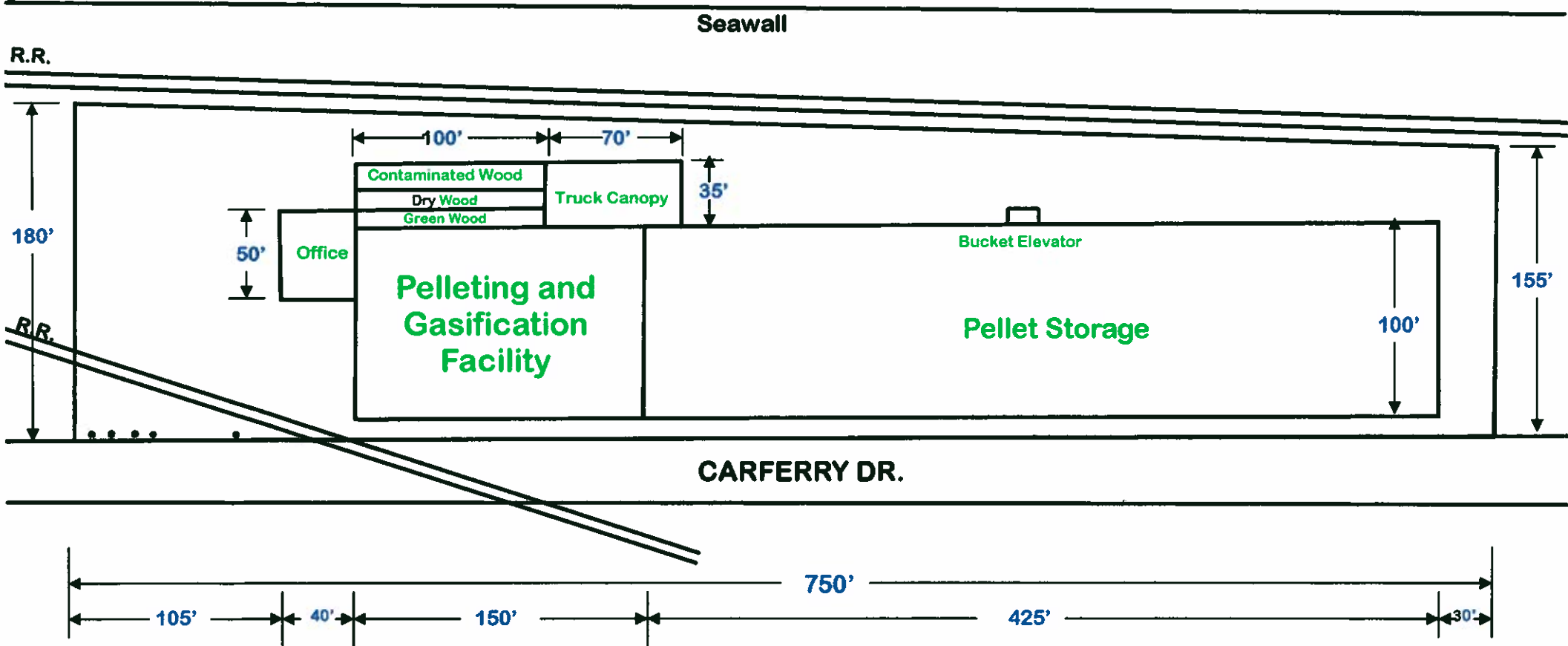
NOTARY PUBLIC, State of Wisconsin
My Commission Expires _____

APPROVED as to Form and Execution this
_____ day of _____, 20____

Assistant City Attorney

i:watersbiotechlse09.doc

MUNICIPAL MOORING BASIN



$1/10'' = 7.5'$

LEGISLATIVE REFERENCE BUREAU FISCAL ANALYSIS

PUBLIC WORKS COMMITTEE

APRIL 22, 2009

Item 5, File #081637

File Number 081637 is a resolution approving a Lease Agreement between the City of Milwaukee (Board of Harbor Commissioners) and Waters' New Biotech, Inc. for 3.7 acres on the Port of Milwaukee's South Harbor Tract.

Background

1. The Port of Milwaukee has negotiated a Lease Agreement with Waters' New Biotech, Inc. for 3.7 acres of unused Port property on the Port's South Harbor Tract, adjacent to the Inner Harbor. This is a "bare ground" lease; the buildings and other improvements left on the property by the previous tenant belong to the City.
2. Waters' New Biotech intends to use this property for construction and operation of a wood pelleting and gasification facility, including fixtures and equipment necessary for receiving raw materials and for handling, storage and delivery of finished products.
3. The Board of Harbor Commissioners approved this Lease Agreement at its meeting of April 9, 2009.

Discussion

1. This resolution approves the Lease Agreement, which is for a 15-year term (May 1, 2009 through April 30, 2024). The tenant, Waters' New Biotech, has the right to extend the lease for 2 additional 5-year terms.
2. The Lease Agreement requires the tenant to remove the building and other improvements currently located on the site by September 1, 2009. The estimated total cost of removing these City-owned improvements is \$116,000.
3. As part of the lease, Waters' New Biotech agrees to construct or install all improvements necessary for its use of the property as a wood pelleting and gasification facility, including one or more buildings and bulk loading/unloading systems and conveyors to transfer cargo to and from rail cars, vessels, trucks and the new building(s).
4. The Lease agreement sets forth a timeline for construction of the tenant's facility and requires the business to be operational by November 1, 2010.
5. The wood pelleting and gasification facility is the only permitted use of the leased property. Additional uses require the prior written approval of the Municipal Port Director.
6. The Lease Agreement gives Waters' New Biotech preferential, but not exclusive, use of the vessel berthing space adjacent to the leased property.

Fiscal Impact

1. Under the Lease Agreement, Waters' New Biotech will pay the City a base annual rent of \$85,100 (\$23,000 per acre). Rent is payable monthly and in advance.
2. In consideration of the tenant's commitment to remove, at its own expense, all City improvements located on the property, the annual rental rate for 2009, 2010 and 2011 will be reduced to \$46,433.
3. Beginning January 1, 2012, and continuing on January 1 of subsequent even-numbered years, the annual base rent will be adjusted for inflation.
4. Waters' New Biotech will also pay the City a wharfage fee based on the current Municipal Port Tariff for cargo, products or ingredients shipped from the leased property by ship, barge, railcar or truck. Annual wharfage fee revenues are estimated at \$54,000.
5. Because the Port of Milwaukee operates as an enterprise fund, approval of this Lease Agreement has no direct or immediate fiscal impact on the City. However, given that this lease will increase the Port's revenues and that the Port's surplus revenues are transferred to the City's General Fund, approval of this resolution will likely have a positive fiscal impact on the City.

Prepared by: Jeff Osterman, X2262
LRB-Research & Analysis Section
April 20, 2009

cc: Eric Reinelt
Lawrence Sullivan
Hattie Billingsley
Marianne Walsh

PW FILE NUMBER: 081637

[illegible]



Legislation Details (With Text)

File #: 090425 **Version:** 0

Type: Resolution **Status:** In Committee

File created: 7/28/2009 **In control:** PUBLIC WORKS COMMITTEE

On agenda: **Final action:**

Effective date:

Title: Resolution relative to the application, acceptance and funding of a 2009 Wisconsin Department of Natural Resources Aquatic Invasive Species Control Grant for the Port of Milwaukee and related work.

Sponsors: THE CHAIR

Indexes: LAKES, PORT OF MILWAUKEE, STATE GRANTS, WISCONSIN DEPARTMENT OF NATURAL RESOURCES

Attachments:

Date	Ver.	Action By	Action	Result	Tally
7/28/2009	0	COMMON COUNCIL	ASSIGNED TO		
3/4/2010	0	PUBLIC WORKS COMMITTEE	HEARING NOTICES SENT		

Number

090425

Version

ORIGINAL

Sponsor

THE CHAIR

Title

Resolution relative to the application, acceptance and funding of a 2009 Wisconsin Department of Natural Resources Aquatic Invasive Species Control Grant for the Port of Milwaukee and related work.

Drafter

Port

Is

7/23/09



Legislation Details (With Text)

File #: 090528 **Version:** 0

Type: Resolution **Status:** In Committee

File created: 9/1/2009 **In control:** PUBLIC WORKS COMMITTEE

On agenda: **Final action:**

Effective date:

Title: Resolution approving an amendment to the lease agreement with the North American Salt Company.

Sponsors: THE CHAIR

Indexes: AGREEMENTS, LEASES, PORT OF MILWAUKEE

Attachments: Cover Letter, Fiscal Note, Amendment to Lease Agreement, Fiscal Analysis, Hearing Notice List

Date	Ver.	Action By	Action	Result	Tally
9/1/2009	0	COMMON COUNCIL	ASSIGNED TO		
9/4/2009	0	PUBLIC WORKS COMMITTEE	HEARING NOTICES SENT		
9/4/2009	0	PUBLIC WORKS COMMITTEE	HEARING NOTICES SENT		
9/10/2009	0	PUBLIC WORKS COMMITTEE	HELD TO CALL OF THE CHAIR	Pass	4:0
9/24/2009	0	PUBLIC WORKS COMMITTEE	HEARING NOTICES SENT		
9/30/2009	0	PUBLIC WORKS COMMITTEE	HELD TO CALL OF THE CHAIR	Pass	5:0
3/4/2010	0	PUBLIC WORKS COMMITTEE	HEARING NOTICES SENT		

Number

090528

Version

Original

Reference

Sponsor

The Chair

Title

Resolution approving an amendment to the lease agreement with the North American Salt Company.

...Analysis

This resolution would approve Amendment to Lease Agreement with North American Salt Company for approximately 2 acres of bare ground located on the Port's South Harbor Tract.

BODY

Whereas, The City and the Tenant have entered into a Lease Agreement on October 3, 2005 for the lease of seven (7) parcels of real property totaling approximately 10.214 acres and a building located on the Port's South Harbor Tract in the City of Milwaukee; and

Whereas, The Lease is amended to include 2.313 acres of bare ground located at the southwest corner of the intersection of E. Bay Street and S. Lincoln Memorial Drive. Said bare ground will be added to the Lease Agreement as "Parcel 8," thus constituting a Parcel and a portion of the Property; and

Whereas, The initial term will begin October 1, 2009 and end on March 31, 2025 with an automatic extension for two successive periods of five (5) years; and

Whereas, The Board of Harbor Commissioners at their meeting of August 13, 2009 acted by vote of the Board to grant such Amendment to Lease Agreement; now, therefore, be it

Resolved, By the Common Council of the City of Milwaukee, that said Common Council hereby ratifies and approves the Amendment to Lease Agreement between North American Salt Company and the City of Milwaukee, by and through its Board of Harbor Commissioners for the period of October 1, 2009 through March 31, 2025; and, be it

Further Resolved, That the designated officers of said government and of said Board of Harbor Commissioners are hereby authorized and directed to execute an agreement to carry out this purpose, as prepared by the City Attorney's office.

Drafter:

Port of Milwaukee

ECR

8/24/09

i:na1seamendp8ccres.doc

August 24, 2009

Ref: NAS/Lease

To The Honorable
The Common Council
City of Milwaukee

Dear Council Members:

The Port of Milwaukee is requesting approval of Amendment to Lease Agreement with North American Salt Company which will add approximately 2 acres of bare ground at the Port's South Harbor Tract to their lease dated April 1, 2005 and terminating March 31, 2025.

At its meeting of August 13, 2009, the Board of Harbor Commissioners approved the Amendment to Lease Agreement and authorized Port staff to notify the Common Council. We therefore, respectfully request that your Honorable Body approve this Amendment to Lease Agreement and authorize its execution by adopting the attached resolution.

Respectfully submitted,

ERIC C. REINELT
Municipal Port Director

ECR/dcl

mw/i:NASlseamendP8ccltr.doc

CITY OF MILWAUKEE FISCAL NOTE

A) DATE August 24, 2009

FILE NUMBER:

Original Fiscal Note ☒ Substitute ☐

SUBJECT: Approve Amendment to Lease Agreement with North American Salt Company for approximately 2 acres

B) SUBMITTED BY (Name/title/dept./ext.): Eric Reinelt, Municipal Port Director, Port of Milwaukee, 8130 xt.

C) CHECK ONE: ☐ ADOPTION OF THIS FILE AUTHORIZES EXPENDITURES
☐ ADOPTION OF THIS FILE DOES NOT AUTHORIZE EXPENDITURES; FURTHER COMMON COUNCIL ACTION NEEDED. LIST ANTICIPATED COSTS IN SECTION G BELOW.
☒ NOT APPLICABLE/NO FISCAL IMPACT.

D) CHARGE TO: ☐ DEPARTMENT ACCOUNT (DA) ☐ CONTINGENT FUND (CF)
☐ CAPITAL PROJECTS FUND (CPF) ☐ SPECIAL PURPOSE ACCOUNTS (SPA)
☐ PERM. IMPROVEMENT FUNDS (PIF) ☐ GRANT & AID ACCOUNTS (G & AA)
☐ OTHER (SPECIFY)

E) PURPOSE	SPECIFY TYPE/USE	ACCOUNT	EXPENDITURE	REVENUE	SAVINGS
SALARIES/WAGES:	N/A				
SUPPLIES:	N/A				
MATERIALS:	N/A				
NEW EQUIPMENT:	N/A				
EQUIPMENT REPAIR:	N/A				
OTHER:	N/A				
TOTALS	N/A				

F) FOR EXPENDITURES AND REVENUES WHICH WILL OCCUR ON AN **ANNUAL** BASIS OVER SEVERAL YEARS CHECK THE APPROPRIATE BOX BELOW AND THEN LIST EACH ITEM AND DOLLAR AMOUNT **SEPARATELY**.

<input checked="" type="checkbox"/> 1-3 YEARS	<input type="checkbox"/> 3-5 YEARS	\$39,321 rent. \$11,250 w harfaae. \$2,000 dockage
<input type="checkbox"/> 1-3 YEARS	<input type="checkbox"/> 3-5 YEARS	Total annual revenue: \$52,571
<input type="checkbox"/> 1-3 YEARS	<input type="checkbox"/> 3-5 YEARS	

G) LIST ANY ANTICIPATED FUTURE COSTS THIS PROJECT WILL REQUIRE FOR COMPLETION:

N/A

H) COMPUTATIONS USED IN ARRIVING AT FISCAL ESTIMATE:

Annual rent is set in the Lease Amendment

Wharfage at \$.45/ton for estimated 25,000 tons/year
Dockage estimated at \$1,000 for 2 ships per year

PLEASE LIST ANY COMMENTS ON REVERSE SIDE AND CHECK HERE ☐

AMENDMENT TO LEASE AGREEMENT

Between

NORTH AMERICAN SALT COMPANY

And the

BOARD OF HARBOR COMMISSIONERS

City of Milwaukee

Parcel 8 consisting of approximately 2.3 acres is to be added to the existing 7 parcels for Lease dated October 3, 2005.

Term: October 1, 2009 through March 31, 2025

AMENDMENT TO LEASE AGREEMENT

This Amendment to Lease Agreement (hereinafter referred to as the "Amendment"), is made and entered into at Milwaukee, Wisconsin as of this ____ day of _____, 20__ by and between NORTH AMERICAN SALT COMPANY, a Delaware corporation and a Compass Minerals company (hereinafter referred to as the "Tenant"), and the CITY OF MILWAUKEE, a Wisconsin municipal corporation, by and through its Board of Harbor Commissioners (hereinafter collectively referred to as the "City").

WITNESSETH

WHEREAS the City and the Tenant have entered into a Lease Agreement (hereinafter referred to as the "Lease Agreement") for the lease of seven (7) parcels of real property totaling approximately 10.214 acres and a building located on the Port's South Harbor Tract in the City of Milwaukee, executed by Tenant on October 3, 2005; and

WHEREAS neither the Tenant nor the City has at any time elected to terminate the Lease Agreement and consequently, the Lease Agreement has continued to be, and remains, in full force and effect; and

WHEREAS the City and the Tenant have agreed to amend the terms of the Lease Agreement as further specified in this Amendment of the Lease Agreement.

NOW, THEREFORE, in consideration of the mutual covenants and conditions set forth herein, the City and the Tenant agree to amend the Lease Agreement as follows:

1. Purpose of Amendment. Permitted Use; Improvements. City hereby leases, demises, and lets unto Tenant the real property comprised of one parcel of bare ground as more particularly described in Section 2 below ("Parcel 8"). The "Permitted Use" for Parcel 8 is the receiving, handling, storage, processing and delivery of rock salt and a low temperature deicing agent to be blended with the rock salt, including tarping and loading/unloading trucks. Tenant may construct an asphalt pad over the entire Parcel 8 or a portion thereof and erect a fabric building of approximately 20,000 square feet in which Tenant will conduct its Permitted Use operations. All such improvements shall be the sole property of Tenant. Other operations may be performed and other improvements may be constructed with the written consent of the Port Director.

2. Property. The Lease is hereby amended to include approximately 2.313 acres of bare ground located at the southwest corner of the intersection of E. Bay Street and S. Lincoln Memorial Drive in Milwaukee, Wisconsin. Said real property is hereby added to the Lease Agreement as "Parcel 8," thus constituting a Parcel and a portion of the Property (all capitalized terms used herein but not defined shall have the meanings given them in the Lease Agreement). A diagram depicting the location of Parcel 8 is affixed hereto as Exhibit A and is incorporated into this Amendment by reference. Parcel 8 is subject to certain load limitations set forth on the attached Exhibit A.

Tenant warrants that Parcel 8 in its present condition is suitable for Tenant's intended use. Tenant's occupancy of the Property is subject to the easements and restrictions of record as shown on the depiction of Parcel in Exhibit A attached hereto. City represents and warrants that should additional easements and restrictions be placed upon the Property, City will provide Tenant with advance notice thereof.

3. Term. The term of this Amendment in reference to Parcel 8 shall be as follows, subject to Tenant's right to terminate the Lease Agreement as provided in the Lease Agreement or in this Amendment:

A) Initial Term. An initial term beginning October 1, 2009 commencing at 12:00 A.M. and ending at 11:59 P.M. on March 31, 2025 (the "Initial Term").

B) Extension of Term. The term of this Amendment shall be extended automatically for two successive periods of five (5) years each unless Tenant or City delivers written notice to the other of the termination of this Amendment at least 360 days prior to the expiration of the Initial Term, or in the case of the second period, at least 360 days prior to the expiration of the first successive period. If this Amendment extends beyond the Initial Term, the terms and provisions of the Lease Agreement shall automatically extend with respect to Parcel 8.

C) No Early Termination. Notwithstanding anything to the contrary contained in the Lease Agreement, City may not exercise its right to terminate the Lease Agreement with respect to Parcel 8 on any Early Termination Dates (as such term is defined in the Lease Agreement) or otherwise as contemplated by Section 2 of the Lease Agreement.

4. Rent.

A) Tenant shall pay, as base rental, for Parcel 8 a rental rate of \$17,000 per acre per annum, for a total sum of \$39,321 per annum (\$3,276.75 per month). Rent shall commence on October 1, 2009.

B) Rent for Parcel 8 shall be subject to the escalation provisions of Section 3. Rent of the Lease Agreement, except that such rent shall not be subject to escalation until April 1, 2015 and each fifth anniversary thereafter.

5. Permits. Tenant may terminate this Amendment on or before Jun 1, 2010 upon sixty (60) days advance written notice to the City if Tenant does not receive all construction permits and approvals it requests from time to time from any state, federal or local departments or agencies having jurisdiction for purposes of operating Parcel 8 in accordance with its Permitted Use.

6. Termination and Vacation. Except as provided below, Tenant shall vacate Parcel 8 in accordance with the terms and conditions of the Lease Agreement Section 9. Termination and Vacation with the land being returned to the City in essentially the same condition in which it was received, free and clear of all Tenant's improvements; provided, however, at City's sole election in lieu of removal, such improvements or portions of them may be turned over to the City in an "as is" condition without any warranty whatsoever, Tenant shall remove all improvements within 30 days following its receipt of the City's notice that the City desires that Tenant remove such improvements.

7. Condemnation. In the event that the Federal or State government condemns all or part of the property subject to the Lease Agreement (i.e. Parcels 1 through 8), the Tenant may terminate the Lease Agreement with respect to those Parcels upon Ninety (90) days advance written notice to the City subject to total or partial condemnation. In that event, rent (including escalations) shall cease with respect to those Parcel(s) no longer subject to the Lease Agreement.

8. Parcel 8 Amendment. With the exception of Sections 7 and 11 hereof (which shall apply to the Lease Agreement as a whole), this Amendment shall apply only to Parcel 8 and it shall not apply to Parcels 1 through 7 as they are identified in the Lease Agreement.

9. Ratification. Except as otherwise expressly provided for in this Amendment, all other terms and conditions of the Lease Agreement shall remain unchanged and continue in full force and effect and apply to Parcel 8.

10. Approval. IT IS FURTHER AGREED AND UNDERSTOOD that this Amendment must be submitted to the Common Council of the City of Milwaukee and that the same must be approved by the Common Council and its execution authorized. If the City does not obtain approval before October 1, 2009, then Tenant shall have the right to terminate this Amendment upon notice to the City.

11. Notice. The address for notices to Tenant pursuant to Section 28 of the Lease Agreement is hereby amended to read:

NORTH AMERICAN SALT COMPANY
9900 West 109th Street, Ste, 600
Overland Park, KS 66210
ATTN: Director of Logistics - Highway

IN WITNESS WHEREOF, the parties hereto have by their duly authorized officers executed this Lease Amendment as of the day and year first above written.

In the Presence of:

CITY OF MILWAUKEE

Tom Barrett, Mayor

Ronald D. Leonhardt, City Clerk

COUNTERSIGNED:

W. Martin Morics, City Comptroller

BOARD OF HARBOR COMMISSIONERS

Timothy K. Hoelter, President

Donna Luty, Secretary

NORTH AMERICAN SALT COMPANY

By: _____
Print Name: _____
Title: _____

**STATE OF KANSAS
JOHNSON COUNTY**

Personally came before me this ____ day of _____, 20____, Michael E. Ducey, the President, of North American Salt Company., who by its authority and on its behalf executed the foregoing instrument and acknowledged the same.

NOTARY PUBLIC, State of Wisconsin
My Commission Expires: _____

PLEASE NOTE: TENANT MUST COMPLETE THE FOLLOWING:

(Note: Someone other than the individual who executed this Lease must certify the following):

CERTIFICATE RE: CORPORATION

I, _____ certify that I am the _____ of the
(print name) (print title)

above TENANT named herein; that _____, who executed this
(print signator of tenant)

Lease on behalf of the TENANT was then _____ of said
(official capacity of signator)

corporation, and in said capacity, duly signed said Lease for and on behalf of said corporation, being duly authorized so to do under its bylaws or is authorized so to do by action of its duly constituted board, all of which is within the scope of its corporate powers.

Dated at _____ this _____ day of _____ 20 ____
(location)

(signature)

APPROVED as to Form and Execution this
_____ day of _____, 20____

Assistant City Attorney

i:naslseamendp8.doc

LEGISLATIVE REFERENCE BUREAU FISCAL ANALYSIS

PUBLIC WORKS COMMITTEE

SEPTEMBER 10, 2009

Item 4, File #090528

File Number 090528 is a resolution approving an amendment to the City of Milwaukee's lease agreement with North American Salt Company. for real property located on the South Harbor Tract of the Port of Milwaukee.

Background

1. On October 3, 2005, North American Salt Company ("NASC") and the City of Milwaukee entered into a Lease Agreement under which NASC leases 7 parcels totaling 10.2 acres, and including one building, located on the Port of Milwaukee's South Harbor Tract.
2. NASC uses the leased property to load, unload and store road salt.
3. NASC desires additional space to store a new salt product that is capable of melting ice at lower temperatures than conventional road salt. The Port of Milwaukee has available for lease a 2.3-acre bare-ground parcel in close proximity to NASC's existing parcels.

Discussion

1. This resolution approves an amendment to the existing North American Salt Company's existing lease agreement with the City of Milwaukee for land on the Port of Milwaukee's South Harbor Tract. The amendment would add an 8th, 2.3-acre parcel to the lands leased by NASC from the City.
2. The Board of Harbor Commissioners recommended approval of this amendment at its meeting of August 13, 2009.
3. The 2.3-acre parcel has not been used in approximately 15 years.
4. The amendment to the lease agreement states that the tenant's permitted use of this property is "the receiving, handling, storage, processing and delivery of rock salt and a low-temperature deicing agent to be blended with the rock salt, including tarping and loading/unloading trucks." The amendment also allows NASC to install an asphalt pad over part or all of the parcel and to erect a fabric building of approximately 20,000 square feet for its operations.
5. The initial term of this lease amendment is October 1, 2009, through March 31, 2025. The lease document provides for automatic extension of the lease for 2 additional, successive 5-year periods.

Fiscal Impact

1. The amendment to lease agreement stipulates that NASC shall pay a base rent of \$17,000 per acre per year (for a total of \$39,321). This rental rate may be subject to escalation on April 1, 2015 and each 5th anniversary thereafter.
2. In addition to these rental revenues, the Port projects that NASC's use of the leased property will generate \$11,250 in wharfage revenues and \$2,000 in dockage revenues per year, for total annual revenues of \$52,571.
3. Since the Port of Milwaukee operates as a self-supporting "enterprise fund," these revenues are used to cover the Port's operating expenditures; when the Port's revenues exceed its expenditures, the surplus revenue is transferred to the City's General Fund.

Prepared by: Jeff Osterman, X2262
LRB-Research & Analysis Section
September 4, 2009

c: Eric Reinelt
Lawrence Sullivan
Hattie Billingsley
Marianne Walsh

PW FILE NUMBER: 090528

[illegible]



Legislation Details (With Text)

File #: 090894 **Version:** 0

Type: Resolution **Status:** In Committee

File created: 11/3/2009 **In control:** PUBLIC WORKS COMMITTEE

On agenda: **Final action:**

Effective date:

Title: Resolution to grant a special privilege to PJ's Real Estate - Milwaukee LLC to construct and maintain a ramp for the premises at 3000 W. Lincoln Avenue, in the 8th Aldermanic District.

Sponsors: THE CHAIR

Indexes: SPECIAL PRIVILEGE PERMITS

Attachments: Special Privilege Petition and Drawings

Date	Ver.	Action By	Action	Result	Tally
11/3/2009	0	COMMON COUNCIL	ASSIGNED TO		
11/4/2009	0	PUBLIC WORKS COMMITTEE	REFERRED TO		
3/4/2010	0	PUBLIC WORKS COMMITTEE	HEARING NOTICES SENT		

Number

090894

Version

ORIGINAL

Reference

Sponsor

THE CHAIR

Title

Resolution to grant a special privilege to PJ's Real Estate - Milwaukee LLC to construct and maintain a ramp for the premises at 3000 W. Lincoln Avenue, in the 8th Aldermanic District.

Drafter

CC-CC

dkf

10/29/09

spec-priv



PETITION FOR A SPECIAL PRIVILEGE

ccl-246 (6/09)

SP 2487

☒ New application \$250.00 Fee

☐ Amendment to add items to Special Privilege # _____ (\$125.00 Fee)

☐ Amendment to remove items from Special Privilege # _____ (No fee)

☐ Amendment for change of ownership for Special Privilege # _____ (No fee)

- File petition with the City Clerk License Division, City Hall, 200 E. Wells Street, Room 105, Milwaukee, WI 53202, telephone (414) 286-2238. www.milwaukee.gov/license
- Fee must be submitted with petition. Checks should be made payable to the City of Milwaukee.
- Petition must be submitted in duplicate.

To the Honorable, The Common Council of the City of Milwaukee:

The Licensee PT's Real Estate - milw LLC
(Name of Individual, Partners, Corporation or LLC)

being the owners of the following property known by street address as 3000 W. Lincoln Ave milw, WI 53215
(Street Address and Zip Code)

in the 8 Aldermanic District respectfully petition the Common Council of the City of Milwaukee according to the provisions of Section 66.0425 of the Wisconsin Statutes, that the following privilege be granted:

Description of Special Privilege: Ramp on East side of Building to comply with ADA Regulations

Of which a plan or sketch is herewith submitted. Petitioner agrees to comply with all laws and all ordinances of the City of Milwaukee, to abide by any order or resolution of the Common Council affecting this privilege, to be primarily liable for damages to person or property by reason of the granting of such privilege, pay annual compensation as provided by law in the sum to be fixed by the proper city officers, and to file and keep current throughout the existence of the privilege, a certificate of insurance indicating applicant holds a public liability policy in at least the sums of \$25,000.00/\$50,000.00 bodily injury, and \$10,000.00 property damage, insuring the city against any liability that might arise by reason of the privilege.

Petitioner further agrees to remove said privilege whenever public necessity so requires when so ordered upon resolution adopted by the Common Council or other legislative body.

Should this special privilege be discontinued for any reason whatsoever, petitioner agrees to remove all construction work executed pursuant to this special privilege, to restore to its former condition and to the approval of the Commissioner of Public Works, any curb, pavement, or other public improvement which was removed, changed or disturbed by reason of the granting of this special privilege. Petitioner further agrees not to contest the validity of Section 66.0425 of the Wisconsin Statutes, or the legality of this special privilege in any way.

Name (Please Print): John Luse
(Individual, Partner, or Agent if corporation or LLC as shown above)

Signature: [Signature]
(Individual, Partner, or Agent if corporation or LLC)

Corporation or LLC Name: _____
(If applicable, as shown above)

(OVER)

ABBREVIATIONS

ACAD	Architectural	AD	Architectural Detail	AE	Architectural Element	AF	Architectural Finish	AG	Architectural Group	AH	Architectural Hardware	AI	Architectural Information	AJ	Architectural Joinery	AK	Architectural Kitchens	AL	Architectural Lighting	AM	Architectural Materials	AN	Architectural Notes	AO	Architectural Ornamentation	AP	Architectural Plans	AQ	Architectural Quality	AR	Architectural Repairs	AS	Architectural Structures	AT	Architectural Textiles	AV	Architectural Veneers	AW	Architectural Windows	AX	Architectural X-ray	AY	Architectural Yards	AZ	Architectural Zones	BA	Building Area	BB	Building Base	BC	Building Code	BD	Building Design	BE	Building Element	BF	Building Finish	BG	Building Group	BH	Building Hardware	BI	Building Information	BJ	Building Joinery	BK	Building Kitchens	BL	Building Lighting	BM	Building Materials	BN	Building Notes	BO	Building Ornamentation	BP	Building Plans	BQ	Building Quality	BR	Building Repairs	BS	Building Structures	BT	Building Textiles	BV	Building Veneers	BW	Building Windows	BX	Building X-ray	BY	Building Yards	BZ	Building Zones	CA	Construction Area	CB	Construction Base	CC	Construction Code	CD	Construction Design	CE	Construction Element	CF	Construction Finish	CG	Construction Group	CH	Construction Hardware	CI	Construction Information	CJ	Construction Joinery	CK	Construction Kitchens	CL	Construction Lighting	CM	Construction Materials	CN	Construction Notes	CO	Construction Ornamentation	CP	Construction Plans	CQ	Construction Quality	CR	Construction Repairs	CS	Construction Structures	CT	Construction Textiles	CV	Construction Veneers	CW	Construction Windows	CX	Construction X-ray	CY	Construction Yards	CZ	Construction Zones	DA	Design Area	DB	Design Base	DC	Design Code	DD	Design Design	DE	Design Element	DF	Design Finish	DG	Design Group	DH	Design Hardware	DI	Design Information	DJ	Design Joinery	DK	Design Kitchens	DL	Design Lighting	DM	Design Materials	DN	Design Notes	DO	Design Ornamentation	DP	Design Plans	DQ	Design Quality	DR	Design Repairs	DS	Design Structures	DT	Design Textiles	DV	Design Veneers	DW	Design Windows	DX	Design X-ray	DY	Design Yards	DZ	Design Zones	EA	Engineering Area	EB	Engineering Base	EC	Engineering Code	ED	Engineering Design	EE	Engineering Element	EF	Engineering Finish	EG	Engineering Group	EH	Engineering Hardware	EI	Engineering Information	EJ	Engineering Joinery	EK	Engineering Kitchens	EL	Engineering Lighting	EM	Engineering Materials	EN	Engineering Notes	EO	Engineering Ornamentation	EP	Engineering Plans	EQ	Engineering Quality	ER	Engineering Repairs	ES	Engineering Structures	ET	Engineering Textiles	EV	Engineering Veneers	EW	Engineering Windows	EX	Engineering X-ray	EY	Engineering Yards	EZ	Engineering Zones	FA	Financial Area	FB	Financial Base	FC	Financial Code	FD	Financial Design	FE	Financial Element	FF	Financial Finish	FG	Financial Group	FH	Financial Hardware	FI	Financial Information	FJ	Financial Joinery	FK	Financial Kitchens	FL	Financial Lighting	FM	Financial Materials	FN	Financial Notes	FO	Financial Ornamentation	FP	Financial Plans	FQ	Financial Quality	FR	Financial Repairs	FS	Financial Structures	FT	Financial Textiles	FV	Financial Veneers	FW	Financial Windows	FX	Financial X-ray	FY	Financial Yards	FZ	Financial Zones	GA	General Area	GB	General Base	GC	General Code	GD	General Design	GE	General Element	GF	General Finish	GG	General Group	GH	General Hardware	GI	General Information	GJ	General Joinery	GK	General Kitchens	GL	General Lighting	GM	General Materials	GN	General Notes	GO	General Ornamentation	GP	General Plans	GQ	General Quality	GR	General Repairs	GS	General Structures	GT	General Textiles	GV	General Veneers	GW	General Windows	GX	General X-ray	GY	General Yards	GZ	General Zones	HA	Health Area	HB	Health Base	HC	Health Code	HD	Health Design	HE	Health Element	HF	Health Finish	HG	Health Group	HH	Health Hardware	HI	Health Information	HJ	Health Joinery	HK	Health Kitchens	HL	Health Lighting	HM	Health Materials	HN	Health Notes	HO	Health Ornamentation	HP	Health Plans	HQ	Health Quality	HR	Health Repairs	HS	Health Structures	HT	Health Textiles	HV	Health Veneers	HW	Health Windows	HX	Health X-ray	HY	Health Yards	HZ	Health Zones	IA	Information Area	IB	Information Base	IC	Information Code	ID	Information Design	IE	Information Element	IF	Information Finish	IG	Information Group	IH	Information Hardware	II	Information Information	IJ	Information Joinery	IK	Information Kitchens	IL	Information Lighting	IM	Information Materials	IN	Information Notes	IO	Information Ornamentation	IP	Information Plans	IQ	Information Quality	IR	Information Repairs	IS	Information Structures	IT	Information Textiles	IV	Information Veneers	IW	Information Windows	IX	Information X-ray	IY	Information Yards	IZ	Information Zones	JA	Joint Area	JB	Joint Base	JC	Joint Code	JD	Joint Design	JE	Joint Element	JF	Joint Finish	JG	Joint Group	JH	Joint Hardware	JI	Joint Information	IJ	Joint Joinery	JK	Joint Kitchens	JL	Joint Lighting	JM	Joint Materials	JN	Joint Notes	JO	Joint Ornamentation	JP	Joint Plans	JQ	Joint Quality	JR	Joint Repairs	JS	Joint Structures	JT	Joint Textiles	JV	Joint Veneers	JW	Joint Windows	JX	Joint X-ray	JY	Joint Yards	JZ	Joint Zones	KA	Kitchen Area	KB	Kitchen Base	KC	Kitchen Code	KD	Kitchen Design	KE	Kitchen Element	KF	Kitchen Finish	KG	Kitchen Group	KH	Kitchen Hardware	KI	Kitchen Information	KJ	Kitchen Joinery	KK	Kitchen Kitchens	KL	Kitchen Lighting	KM	Kitchen Materials	KN	Kitchen Notes	KO	Kitchen Ornamentation	KP	Kitchen Plans	KQ	Kitchen Quality	KR	Kitchen Repairs	KS	Kitchen Structures	KT	Kitchen Textiles	KV	Kitchen Veneers	KW	Kitchen Windows	KX	Kitchen X-ray	KY	Kitchen Yards	KZ	Kitchen Zones	LA	Land Area	LB	Land Base	LC	Land Code	LD	Land Design	LE	Land Element	LF	Land Finish	LG	Land Group	LH	Land Hardware	LI	Land Information	LJ	Land Joinery	LK	Land Kitchens	LL	Land Lighting	LM	Land Materials	LN	Land Notes	LO	Land Ornamentation	LP	Land Plans	LQ	Land Quality	LR	Land Repairs	LS	Land Structures	LT	Land Textiles	LV	Land Veneers	LW	Land Windows	LX	Land X-ray	LY	Land Yards	LZ	Land Zones	MA	Material Area	MB	Material Base	MC	Material Code	MD	Material Design	ME	Material Element	MF	Material Finish	MG	Material Group	MH	Material Hardware	MI	Material Information	MJ	Material Joinery	MK	Material Kitchens	ML	Material Lighting	MM	Material Materials	MN	Material Notes	MO	Material Ornamentation	MP	Material Plans	MQ	Material Quality	MR	Material Repairs	MS	Material Structures	MT	Material Textiles	MV	Material Veneers	MW	Material Windows	MX	Material X-ray	MY	Material Yards	MZ	Material Zones	NA	Name Area	NB	Name Base	NC	Name Code	ND	Name Design	NE	Name Element	NF	Name Finish	NG	Name Group	NH	Name Hardware	NI	Name Information	NJ	Name Joinery	NK	Name Kitchens	NL	Name Lighting	NM	Name Materials	NN	Name Notes	NO	Name Ornamentation	NP	Name Plans	NQ	Name Quality	NR	Name Repairs	NS	Name Structures	NT	Name Textiles	NV	Name Veneers	NW	Name Windows	NX	Name X-ray	NY	Name Yards	NZ	Name Zones	OA	Object Area	OB	Object Base	OC	Object Code	OD	Object Design	OE	Object Element	OF	Object Finish	OG	Object Group	OH	Object Hardware	OI	Object Information	OJ	Object Joinery	OK	Object Kitchens	OL	Object Lighting	OM	Object Materials	ON	Object Notes	OO	Object Ornamentation	OP	Object Plans	OQ	Object Quality	OR	Object Repairs	OS	Object Structures	OT	Object Textiles	OV	Object Veneers	OW	Object Windows	OX	Object X-ray	OY	Object Yards	OZ	Object Zones	PA	Part Area
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GENERAL NOTES

1. All work shall be in accordance with the latest edition of the International Building Code (IBC) and the International Residential Code (IRC) as adopted by the State of Maryland.	2. All work shall be in accordance with the latest edition of the Maryland Building and Safety Code (MBC) as adopted by the State of Maryland.	3. All work shall be in accordance with the latest edition of the National Fire Protection Association (NFPA) Code as adopted by the State of Maryland.	4. All work shall be in accordance with the latest edition of the American Institute of Architects (AIA) Code as adopted by the State of Maryland.	5. All work shall be in accordance with the latest edition of the American Society of Mechanical Engineers (ASME) Code as adopted by the State of Maryland.	6. All work shall be in accordance with the latest edition of the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) Code as adopted by the State of Maryland.	7. All work shall be in accordance with the latest edition of the American Society of Civil Engineers (ASCE) Code as adopted by the State of Maryland.	8. All work shall be in accordance with the latest edition of the American Society of Environmental Engineers and Scientists (ASEES) Code as adopted by the State of Maryland.	9. All work shall be in accordance with the latest edition of the American Society of Professional Engineers (ASPE) Code as adopted by the State of Maryland.	10. All work shall be in accordance with the latest edition of the American Society of Professional Engineers (ASPE) Code as adopted by the State of Maryland.	11. All work shall be in accordance with the latest edition of the American Society of Professional Engineers (ASPE) Code as adopted by the State of Maryland.	12. All work shall be in accordance with the latest edition of the American Society of Professional Engineers (ASPE) Code as adopted by the State of Maryland.	13. 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DATE [REDACTED] 2016

PRELIMINARY
 NOT FOR CONSTRUCTION
 SCALE: AS SHOWN
 COMPUTER FILE:

DOWNTOWN
 PROJECT DATE: 10 SEP 2009
 JOB NUMBER
 TITLE:

PROJECT
 DATA &
 SYMBOLS

SHEET NUMBER
G1.1

LUSZ SPACE
3000 W LINDSEY AVENUE
MILWAUKEE, WI 53215

DESIGNER:
STRUCTURAL ENGINEERING
ARCHITECTURAL ENGINEERING
MECHANICAL ENGINEERING
ELECTRICAL ENGINEERING
PLUMBING ENGINEERING
HEATING, VENTILATION & AIR CONDITIONING ENGINEERING
ENVIRONMENTAL ENGINEERING
LANDSCAPE ARCHITECTURE
INTERIOR DESIGN
EXTERIOR ARCHITECTURE
PARKS & RECREATION
TRANSPORTATION
WATER RESOURCES
WASTE MANAGEMENT
ZONING & LAND USE
GENERAL ENGINEERING
CONSULTING ENGINEERS
1000 WEST WISCONSIN AVENUE
SUITE 200
MILWAUKEE, WI 53233
TEL: 414.221.7700

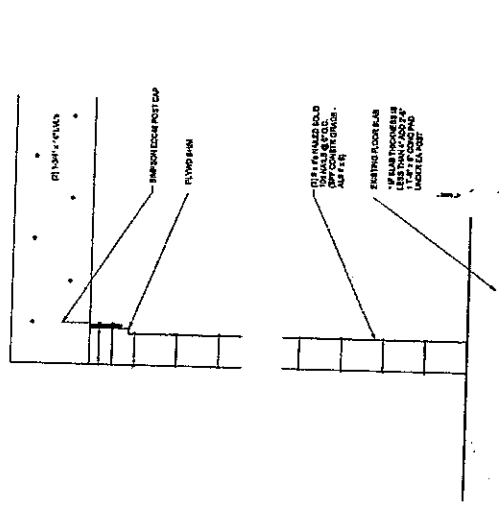
DATE: 07/15/2010
PROJECT: KITCHEN PASS THRU
SHEET: 10/10

REVISIONS:
1. 07/15/2010
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3. 07/15/2010
4. 07/15/2010
5. 07/15/2010
6. 07/15/2010
7. 07/15/2010
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9. 07/15/2010
10. 07/15/2010

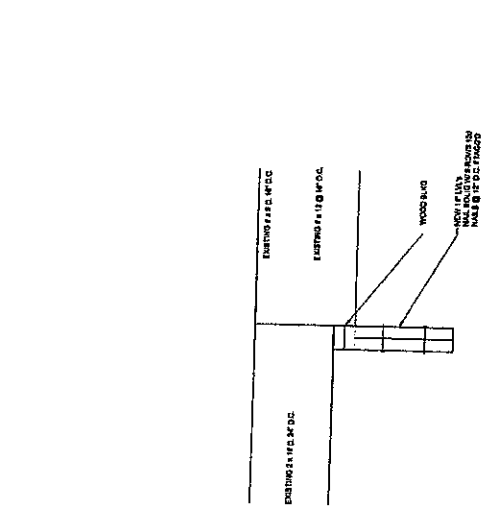
SCALE: 1/4" = 1'-0"
COMPUTER AID
DRAWN BY: J. L. LUSZ
CHECKED BY: J. L. LUSZ
DATE: 07/15/2010
PROJECT: KITCHEN PASS THRU
SHEET: 10/10

PROJECT: KITCHEN PASS THRU
SHEET: 10/10

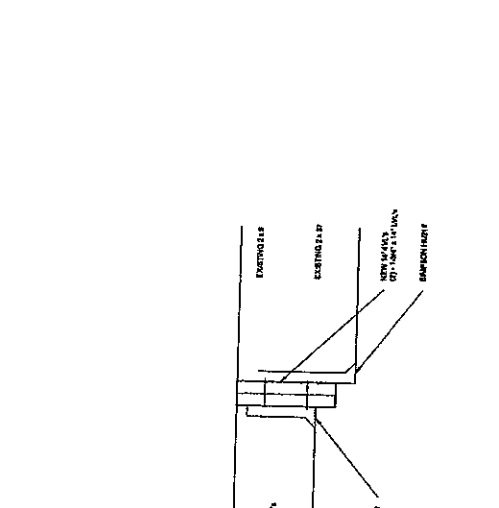
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A2.2



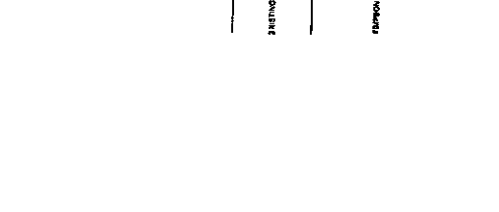
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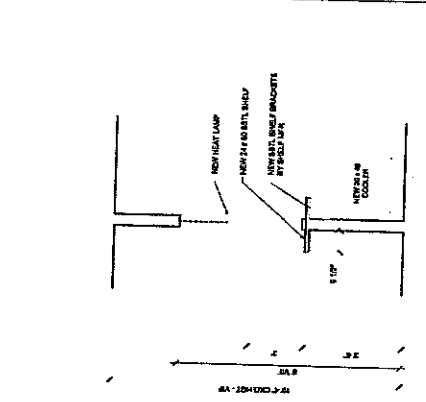
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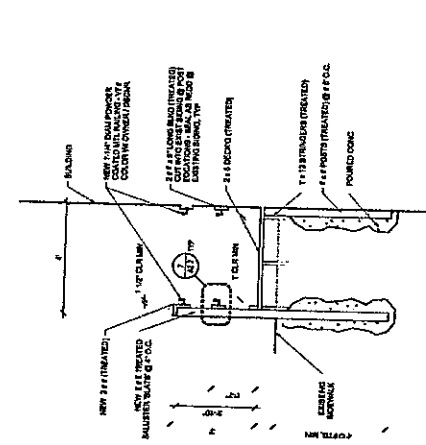
SECTION 6
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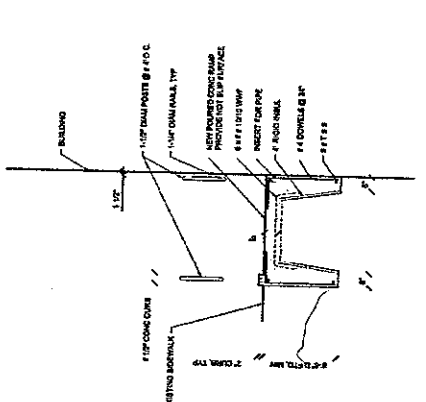
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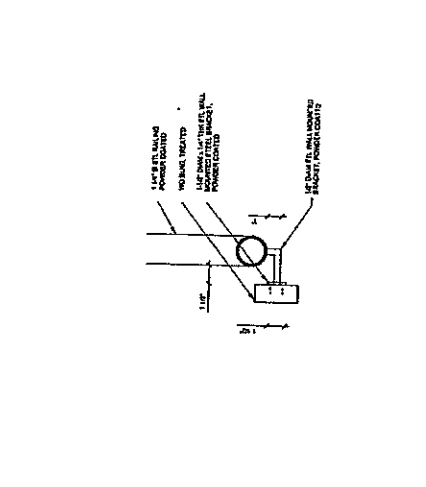
SECTION @ KITCHEN PASS THRU
1/2" = 1'-0"



WOOD RAMP SECTION
1/2" = 1'-0"



CONCRETE RAMP SECTION
1/2" = 1'-0"



TYP HANDRAIL DETAIL
1/2" = 1'-0"