

**CITY OF CHIPPEWA FALLS
BOARD OF PUBLIC WORKS
MEETING MINUTES
MONDAY, FEBRUARY 11, 2013 – 5:30 PM**

The Board of Public Works met in City Hall on Monday, February 11, 2013 at 5:30 PM. Present were Mayor Greg Hoffman, Director of Public Works Rick Rubenzer, Finance Manager Lynne Bauer and Alderperson George Adrian. Absent was Darrin Senn. Also, present at the meeting: Alderperson Jane Lardahl, Assistant City Engineer Rob Krejci, Elmer & Darlene Roshell, (410 E. Columbia St.), Debbie Roshell, Mike Horan, Tom Stary, Troy Terhark, (13042 78th Ave.), Alicia Yeager and Pete Gartmann, (RLS from REAL Land Surveying).

1. **Motion** by Bauer, seconded by Adrian to approve the minutes of the January 21, 2013 Board of Public Works meeting. **All present voting aye. MOTION CARRIED.**

2. The Board discussed existing and proposed street widths for the segment of Willow Street between Island Street and Rushman Drive/STH #124. Mike Horan voiced a concern of “narrowing” street widths in the downtown area. Assistant City Engineer Krejci explained that the segment of Willow Street next to Horan Funeral Home, (Island St. to Bay St.), would remain at 40 feet face of curb to face of curb and that 38 feet face of curb to face of curb widths were more than adequate for transition type applications. **Motion** by Rubenzer, seconded by Hoffman to recommend the Common Council set a width of 40 feet face of curb to face of curb, (existing width is 40’ f/c to f/c between Island St. and Bay St. and 42’ f/c to f/c between Bay St. and Bridge St.), on Willow Street between Island St. and Bridge St. and a width of 38 feet face of curb to face of curb, (existing width is 38’ f/c to f/c between Bridge St. and Rushman Dr.), on Willow Street between Island St. and Rushman Dr./STH #124. In addition to functionally classify Willow Street as a minor arterial between Island Street and Rushman Drive/STH #124. **All present voting aye. MOTION CARRIED.**

3. The Board discussed existing and proposed street widths for the segment of Columbia Street between Duncan Creek and State Street. **Motion** by Adrian, seconded by Rubenzer to recommend the Common Council set a width of 38 feet face of curb to face of curb, (existing width is 38’ f/c to f/c), on Columbia Street from Duncan Creek to State Street. In addition that Columbia Street between Duncan Creek and State Street be functionally classified as a minor arterial. **All present voting aye. MOTION CARRIED.**

4. The Board considered the attached special assessment rates for 2013. Director Rubenzer explained that an eight year rate history, recent bid prices and anticipated fuel prices went into the proposed rates. Assistant City Engineer Krejci added that rates are based on a minimum level of service and are uniform city-wide. **Motion** by Hoffman, seconded by Bauer to recommend that Common Council set the proposed special assessment rates for 2013 as listed on the attached sheet and approve the corresponding resolution. **All present voting aye. MOTION CARRIED.**

5. Assistant City Engineer Krejci explained the attached aerial photo design for the intersection of Columbia Street and State Street. The proposal is to remove paving from the “cut off section” and make it green space as shown on the attachment. Mr. Krejci stated there had been three accidents over the past three years and that it wasn’t a large number of accidents considering the large traffic volume

accessing the intersection. He did say the proposed "T" intersection would eliminate potential conflict areas and make the intersection safer. He noted the sidewalk would be moved adjacent to the curb and gutter and that he had designed in "flat" spots at the Columbia St./State St. intersection and State St./Grand Ave. intersection to increase visibility and allow a slowing-stopping queuing area. Mike Horan was concerned about left turns onto State St. from Columbia St. during funeral processions. Mayor Hoffman asked for comments for or against the proposal from the neighbors in attendance. Board member Adrian listed a concern about plowing at the top of the "cut off" due to the existing steep slope. Assistant City Engineer Krejci stated the design would address the concern.

Motion by Hoffman, seconded by Rubenzer that the Common Council approve the design concepts of making the State Street/Columbia Street intersection a "T" design and greening up the "cut off" section as shown on the attachment. **All present voting aye. MOTION CARRIED.**

6. The Board considered the attached Street Privilege Permit request from Tschopp Durch Camastral Co., Inc. to place an off-premise sign in public street right-of-way on the Southeast corner of County Trunk I and Scheidler Road. Rubenzer explained that the request had been considered at the November 12, 2012 Board of Public Works meeting and then the request to locate the sign in County Trunk I right-of-way had been denied by Chippewa County. The request was then brought before the January 21, 2013 Board of Public Works meeting. Rubenzer stated that the Board had set a maximum sign size of 30 square foot for this application and that using the state statutory process of 66.0425 would be a uniform treatment for all sign requests in public right-of-ways.

Motion by Adrian, seconded by Bauer to recommend the Common Council approve Resolution #2013-04 granting a Street Privilege Permit to Tschopp Durch Camastral Co., Inc. to place a maximum 30 square foot, not-illuminated off-premise sign, (attached), in the Southeast right-of-way at the intersection of County Trunk I and Scheidler Road. **All present voting aye. MOTION CARRIED.**

7. The Board considered a request to discontinue and re-plat Coventry Lane in the Wissota Green Development. After discussion:

Motion by Adrian, seconded by Hoffman to recommend the Common Council discontinue Coventry Lane from Parkland Drive to the North. **All present voting aye. MOTION CARRIED.**


8. The Board considered the attached proposal to crush material and produce base course at the City garage yard and at Tilton Pit. The terms would be to crush all materials at one time/visit and that the City would receive \$0.40 - \$0.50 per ton for half the amount of the piles, (estimated at 76,700 tons).

Motion by Hoffman, seconded by Rubenzer to proceed with getting existing piles of concrete, sand and other materials at the City garage yard and Tilton Pit crushed into base course under the terms proposed on the attachment and:

- 1) All crushing to occur at one time/visit.
- 2) Have a term of five years to dispose of or sell the base course.

All present voting aye. MOTION CARRIED.

9. **Motion** by Bauer, seconded by Adrian to adjourn. **All present voting aye. MOTION CARRIED.**
The Board of Public Works meeting adjourned at 6:25 P.M.


Richard J. Rubenzer, PE
Secretary, Board of Public Works

**CITY OF CHIPPEWA FALLS
BOARD OF PUBLIC WORKS
MEETING MINUTES
MONDAY, JANUARY 21, 2013 – 5:30 PM**

The Board of Public Works met in City Hall on Monday, January 21, 2013 at 5:30 PM. Present were Director of Public Works Rick Rubenzer, Finance Manager Lynne Bauer and Alderperson George Adrian. Absent were Mayor Greg Hoffman and Darrin Senn. Also, present at the meeting: Tom Stary.

1. **Motion** by Adrian, seconded by Rubenzer to approve the minutes of the December 10, 2012 Board of Public Works meeting. **All present voting aye. MOTION CARRIED.**

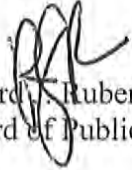
2. Tom Stary appeared to request placing an off-premise sign in the east boulevard of Scheidler Road right-of-way south of County Trunk I. The Board previously recommended making the request of Chippewa County for placement in County Trunk I right-of-way. Inspector Lasiewicz previously stated that Chapter 19 Sign Code Regulations did not apply to public right-of-ways. Director of Public Works Rubenzer learned that Chippewa County has a sign “trail blazing” program but that it is meant for rural signs rather than signs within the corporate limits. The Board wants to establish guidelines for sign requests in public right-of-ways. Each request will be considered on a case by case basis but criterion to consider are as follows:
 - 1) Sign size limit similar to less than adjacent zoning districts, (30 for this request).
 - 2) Existing signs and sign owners are included in the request and process.
 - 3) Sign details including specific locations, illumination, pictures of the sign and specific location should be included with the request.
 - 4) The street privilege permit process shown in state statute 66.0425 should be used for implementation. This process is for objects and structures encumbering the public right-of-way. The Board considered two examples, (attached) from 2000 and 2012.

After further discussion, **Motion** by Adrian, seconded by Rubenzer that:

- 1) Rubenzer once again confirm with Chippewa County that there are no possibilities for the requested sign being placed in County Trunk I right-of-way.
- 2) The street privilege permit process outlined in state statute 66.0425 be used for sign requests in public right-of-ways.
- 3) Existing signs and adjacent property owners be included in the process.
- 4) Sign sizes and regulations for adjacent zoning districts be considered in the request.
- 5) Department of Public Works Rubenzer bring a draft street privilege permit to the next, (February 11, 2013), Board of Public Works meeting for review and recommendation.

All present voting aye. MOTION CARRIED.

3. **Motion** by Rubenzer, seconded by Adrian to adjourn. **All present voting aye. MOTION CARRIED.** The Board of Public Works meeting adjourned at 5:45 P.M.


Richard J. Rubenzer, PE
Secretary, Board of Public Works

**Classification and Width Determination for Willow Street
(Island Street – Rushman Drive)
BPW 1/21/12**

Considerations:

The following traffic counts were completed on Willow Street. The information presented reflects a 24-hour average count.

Traffic Counts (24 - hour period, three day average)

Willow Street - (Island St – Bay St)	2130 vpd
Willow Street – (Bay St – Bridge St)	2354 vpd
Willow Street – (Bridge St – Rushman Dr)	1154 vpd

Other Considerations:

- This street lies within the Chippewa Falls Downtown Business District.
- Existing Widths
 - Willow Street – (Island St – Bay St) – 40' F-F
 - Columbia Street – (Bay St – STH 124) – 42' F-F
- Similar streets nearby range in width from 38' – 44' F-F.
- Parking is a concern on this section of street.
- If the current width were maintained a minimal amount of trees other than those that represent a utility conflict, pose a safety concern, or affect boulevard drainage would be affected in the improvement project.

Conclusions:

Due to the traffic count and the location of Willow Street (Island Street – Rushman Drive) the street would fall into the category of a minor arterial. The recommendations for a minor arterial are listed below. **The Engineering Department is recommending a width of 40 feet along Willow Street from Island Street to Bridge Street and 38 feet along Willow Street from Bridge Street to Rushman Drive Face of Curb to Face of Curb.**

Functional Classification of Streets	Number of Traffic Lanes	Curb to Curb Width			
		No Parking		With Parking	
		Range of Normal Widths	Desirable	Range of Normal Widths	Desirable
Local	2	28'-32'	30'	30'-38'	36'
Collector	2	30'-34'	32'	36'-40'	38'
Minor Arterial	2	34'-36'	36'	40'-52'	42'
Principal Arterial - Other than freeways and expressways	2-4	36'-52'	2 in - 36'	---	---
			4 in - 52'		

**Classification and Width Determination for Columbia Street
(Duncan Creek – State Street)
BPW 1/21/12**

Considerations:

The following traffic counts were completed on Columbia Street. The information presented reflects a 24-hour average count.

Traffic Counts (24 - hour period, three day average)

Columbia Street - (Prairie St. – Grove St.)	2041 vpd
Columbia Street – (Int. of State Street)	1169 vpd

Other Considerations:

- This street is adjacent to the Chippewa Falls Downtown Business District.
- Existing Widths
 - Columbia Street – (Island St – Bay St) – 38’ F-F
 - Columbia Street – (Bay St – STH 124) – 42’ F-F
- Similar streets nearby range in width from 38’ – 44’ F-F.
- Parking is a concern on this section of street.
- If the current width were maintained a minimal amount of trees other than those that represent a utility conflict, pose a safety concern, or affect boulevard drainage would be affected in the improvement project.

Conclusions:

Due to the traffic count and the location of Columbia Street (Duncan Creek –State Street) the street would fall into the category of a minor arterial. The recommendations for a minor arterial are listed below. **The Engineering Department is recommending a width of 38 feet from Face of Curb to Face of Curb from Duncan Creek to Island Street (Current Width – 38 feet) with parking allowed on both sides.**

Functional Classification of Streets	Number of Traffic Lanes	Curb to Curb Width			
		No Parking		With Parking	
		Range of Normal Widths	Desirable	Range of Normal Widths	Desirable
Local	2	28’-32’	30’	30’-38’	36’
Collector	2	30’-34’	32’	36’-40’	38’
Minor Arterial	2	34’-36’	36’	40’-52’	42’
Principal Arterial - Other than freeways and expressways	2-4	36’-52’	2 ln - 36’ 4 ln - 52’	-----	-----

2013 Special Assessment Rate Computations

Completed By: RFK 1/15/2013

A. Grade, Gravel, Open

Street Parameters: 34' F-F, 3" HMA Pavement, 9" Base Aggregate Dense 1 1/4"

Items:	Width ft	Depth ft	CF/CY	CY/FT
Common Excavation	37	1	0.04	1.37
Base Aggregate Dense 1-1/4-Inch	37	0.75	0.04	1.03

Costs:	Unit CY/FT	Unit Price CY	Price/FT
Common Excavation	1.37	\$7.50	\$10.28
Base Aggregate Dense 1-1/4-Inch	1.03	\$17.00	\$17.51
Total			\$27.79
Total W/10% for Intersections			\$30.56
Total per Side of Frontage			\$15.28

Recommend \$15.25 FT/ of Frontage

B. HMA Pavement

Items:	Width ft	Depth ft	CF/CY	Ton/CY	Tons/FT
HMA Pavement	30	0.25	0.04	2.05	0.57

Costs:	Unit Tons/FT	Unit Price Ton	Price/FT
HMA Pavement	0.57	\$62.00	\$35.34 FT/of Street
Total			\$35.34
Total W/10% for Intersections			\$38.87
Total per Side of Frontage			\$19.44

Recommend \$19.50 FT/ of Frontage

C. Water main

Items/Cost:	Unit	Quantity	Unit Price	Total
Water main, 6-8-Inch	LF	312	\$25.00	\$7,800.00
Fire Hydrant	Each	1	\$3,000.00	\$3,000.00
Gate Valve, 6-8-Inch	Each	1	\$1,150.00	\$1,150.00
Connect to Existing Water main	Each	1	\$700.00	\$700.00
Total				\$12,650
Total per FT (312 FT Calculated)				\$40.54
Total per Side of Frontage				\$20.27

Recommend \$20.25 FT/ of Frontage

D. Sanitary Sewer

Items/Cost:	Unit	Quantity	Unit Price	Total
Sanitary Sewer Main, 8-Inch	LF	312	\$26.00	\$8,112.00
Sanitary Manhole w/Cover	Each	1	\$2,100.00	\$2,100.00
Connect to Existing Sanitary Sewer	Each	1	\$600.00	\$600.00
Total				\$10,812
Total per FT (232 FT Calculated)				\$46.60
Total per Side of Frontage				\$23.30

Recommend \$23.25 FT/ of Frontage

E. Sanitary Service

Items/Cost:	Unit	Quantity	Unit Price	Total
Sanitary Service Pipe, 4-6-Inch	LF	33	\$20.00	\$660.00
Sanitary Main Connection	Each	1	\$100.00	\$100.00
Reconnect Sanitary Service	Each	1	\$100.00	\$100.00
Total				\$860.00

Recommend \$875.00 Each

F. Alley Sufacing

Items:	Width ft	Depth ft	CF/CY	Ton/CY	Tons/FT
HMA Pavement	12	0.25	0.04	2.05	0.23

Costs:	Tons/FT	Unit Price Ton	Price/FT	
HMA Pavement	0.23	\$65.00	\$14.81	FT/of Street
Total			\$14.81	
Total per Side of Frontage			\$7.40	

Recommend \$7.50 FT/ of Frontage

2013 Special Assessment Rate Recommendations

BPW 2/11/2012

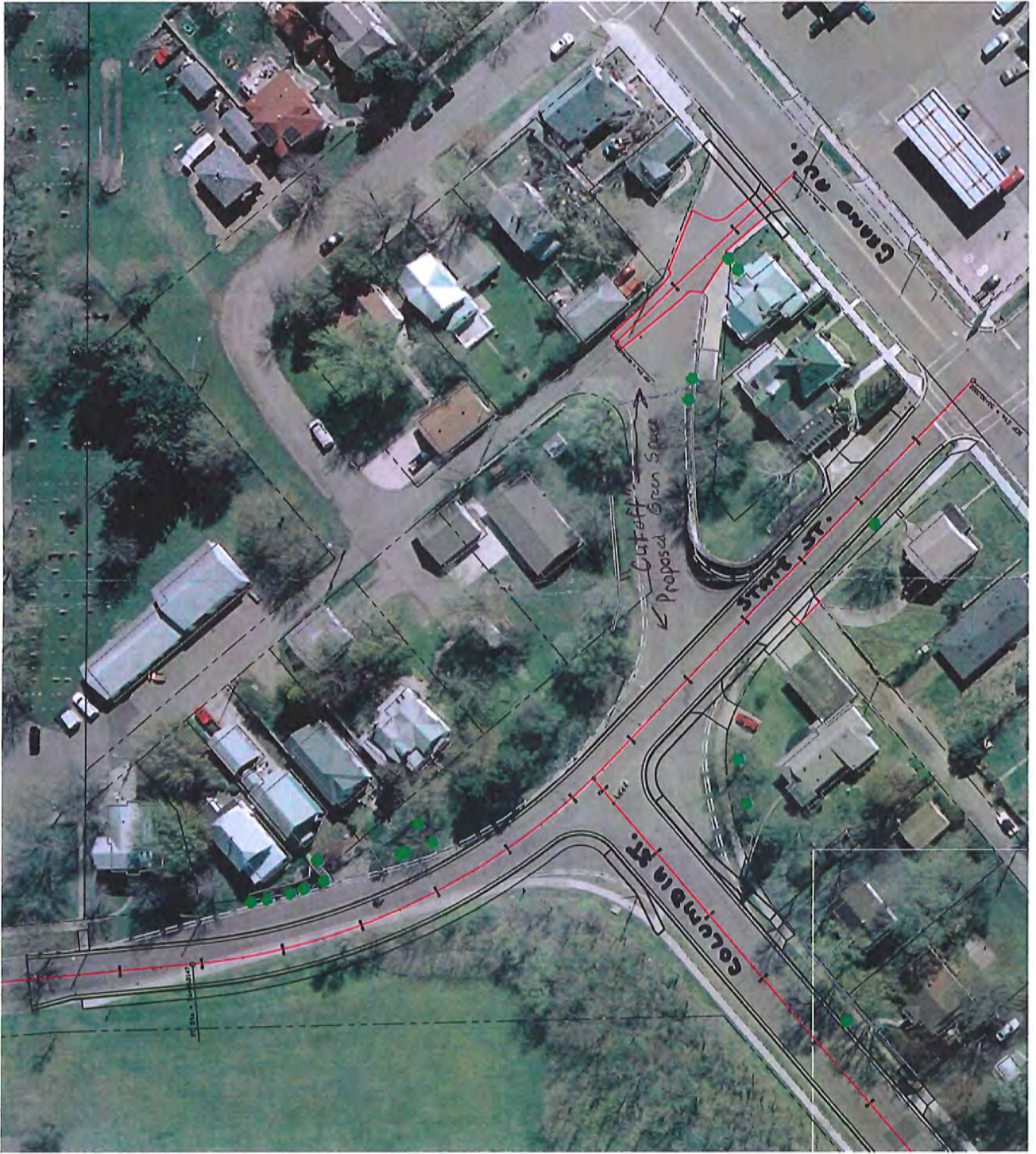
Special Assessment Item	2005	2006	2007	2008	2009	2010	2011	2012	2013
Grade, Gravel, and Open	\$17.00	\$18.00	\$18.00	\$12.50	\$13.50	\$14.00	\$16.25	\$15.00	\$15.25
8" Sanitary Main	\$15.00	\$15.00	\$15.50	\$15.50	\$16.25	\$16.50	\$20.00	\$21.50	\$23.25
Sanitary Services	\$675.00	\$725.00	\$750.00	\$750.00	\$775.00	\$775.00	\$875.00	\$875.00	\$875.00
Watermain (6" or 8")	\$18.25	\$18.25	**\$13.50	\$15.50	\$22.00	\$22.00	\$20.00	\$19.00	\$20.25
Water Services	\$600 PSC	\$600 PSC	\$600 PSC	Actual Cost	Actual Cost	Actual Cost	Actual Cost	Actual Cost	Actual Cost
Street Surfacing (3" Thick Bituminous) (1999 - 2002, 4" Thick)	\$12.00	\$12.00	\$15.25	\$15.75	\$18.75	\$18.75	\$18.75	\$18.75	\$19.50
Alley Paving	\$4.25	\$4.25	\$5.50	\$5.75	\$7.00	\$7.00	\$7.00	\$7.50	\$7.50
Curb and Gutter (Newly opened street)	BID	BID	BID	BID	BID	BID	BID	BID	BID
Curb and Gutter (Replacement Greater than 100')	BID (\$8.00)	BID (\$8.25)	BID (\$8.00)	BID (\$7.00)	BID (\$8.50)	BID	BID	BID	BID
Curb and Gutter (Replacement Less than 20')	BID (\$25.00)	BID (\$24.00)	BID (\$22.00)	BID (\$20.00)	BID	BID	BID	BID	BID
Curb and Gutter (Replacement 20' - 100')	BID (\$23.00)	BID (\$23.00)	BID (\$21.00)	BID (\$18.00)	BID	BID	BID	BID	BID
Prepare for Curb and Gutter	\$3.00	\$3.00	\$3.00	\$3.00	\$3.00	\$3.00	\$3.00	\$3.00	\$3.00
7" Thick Driveways (Newly opened streets)	BID	BID	BID	BID	BID (4.50)	BID	BID	BID	BID
7" Thick Driveways (Remove and Replace)	BID (\$4.30)	BID (\$4.35)	BID (\$4.00)	BID (\$3.90)	BID \$4.50)	BID	BID	BID	BID

* Notes that rate was lowered to reflect a reduced cost to the city through lower bid prices.

** Rate change reflects a material change from ductile water main to PVC water main.

*** Rate change reflects a change in the proposed typical section.

BPW
Feb. 11, 2013



**RESOLUTION GRANTING A STREET PRIVILEGE PERMIT TO PLACE AN
OFF-PREMISE SIGN IN SCHEIDLER ROAD RIGHT-OF-WAY SOUTH OF
COUNTY TRUNK I IN THE CITY OF CHIPPEWA FALLS
UNDER CHAPTER 66.0425 WISCONSIN STATUTES**

WHEREAS, at the November 12, 2012 Board of Public Works meeting, the owner, Tschopp-Durch-Camastral Company Inc. of Parcel #4113 and tenant Tommy Tomatto's Pizzeria made initial application for a Street Privilege Permit to construct and maintain an off premise sign (attached) advertizing their business in the Scheidler Road Right of Way south of County Road I in the City of Chippewa Falls, Wisconsin; and

WHEREAS, Chippewa County does not permit signs in public road right-of-ways except for the Trailblazing TODS program; and

WHEREAS, the requested sign does not meet criteria for Chippewa County's TODS program; and

WHEREAS, the said tenant, Tommy Tomatto's Pizzeria appeared at the January 21, 2013 Board of Public Works meeting to again request the off-premise sign permit; and

WHEREAS, the Board of Public Works discussed the application, setting precedence, setting maximum sign sizes and the required using statutory procedures outlined in Wisconsin Statutes 66.0425 for each individual off-premise sign request. The board then set a maximum sign size of 30sf for this request; and

WHEREAS, adjacent property owners will be invited into the process.

NOW, THEREFORE, BE IT RESOLVED BY THE COMMON COUNCIL OF THE CITY OF CHIPPEWA FALLS, WISCONSIN that a Street Privilege Permit be and is hereby granted under Chapter 66.0425, Wisconsin Statutes to the owner of Parcel #4113 for a Street Privilege Permit to construct and maintain an off-premise sign (attached) advertizing their business in the Scheidler Road Right of Way south of County Road I in the City of Chippewa Falls, Wisconsin under the following conditions:

1. That the maximum size of the sign is 30sf.
2. That the sign not be illuminated and be constructed according to the attached sign detail and whose exact location be approved by the City Engineering Department.
3. That the permit is issued to the owner of Parcel #4113.

4. Tschopp Durch and Camastral or any future owner of Parcel #4113 shall be primarily liable for damages to person or property by reason of the granting of this privilege as provided in Wisconsin Statutes and shall maintain liability insurance on the facilities covered by this permit as approved by the City Attorney.
5. That the permitted is responsible for removal of any and all improvements made in the street right-of-way and will restore the area to its existing condition upon due notice as required by Wisconsin Statutes.
6. That the permitted shall be responsible for restoring any part of these facilities in the event that the City must disturb or remove said improvements for construction, replacement or maintenance of City-owned facilities within the effected right-of-way.
7. That the term of the permit is 10 years, which term may be extended as the City Council sees fit. However, the City retains all its rights in Section 66.0425 Wisconsin Statutes regarding removal of improvements upon a 10 day notice.
8. That to the extent reasonably possible, the City will endeavor to give the permittee one year notice in the event that the City will not renew or extend the terms of the permit beyond the initial 10 year term. However, the City will retain all its rights as provided in Section 66.0425 Wisconsin Statute regarding removal of improvements upon a 10 day notice.
9. That this permit is not transferrable or assignable without the approval of the City of Chippewa Falls Common Council.
10. That the permittee by accepting this permit, waives the right to contest in any manner the validity of the Chapter 66.0425 or the conditions of this permit.

Dated this 19th day of February, 2013.

ADOPTED: _____

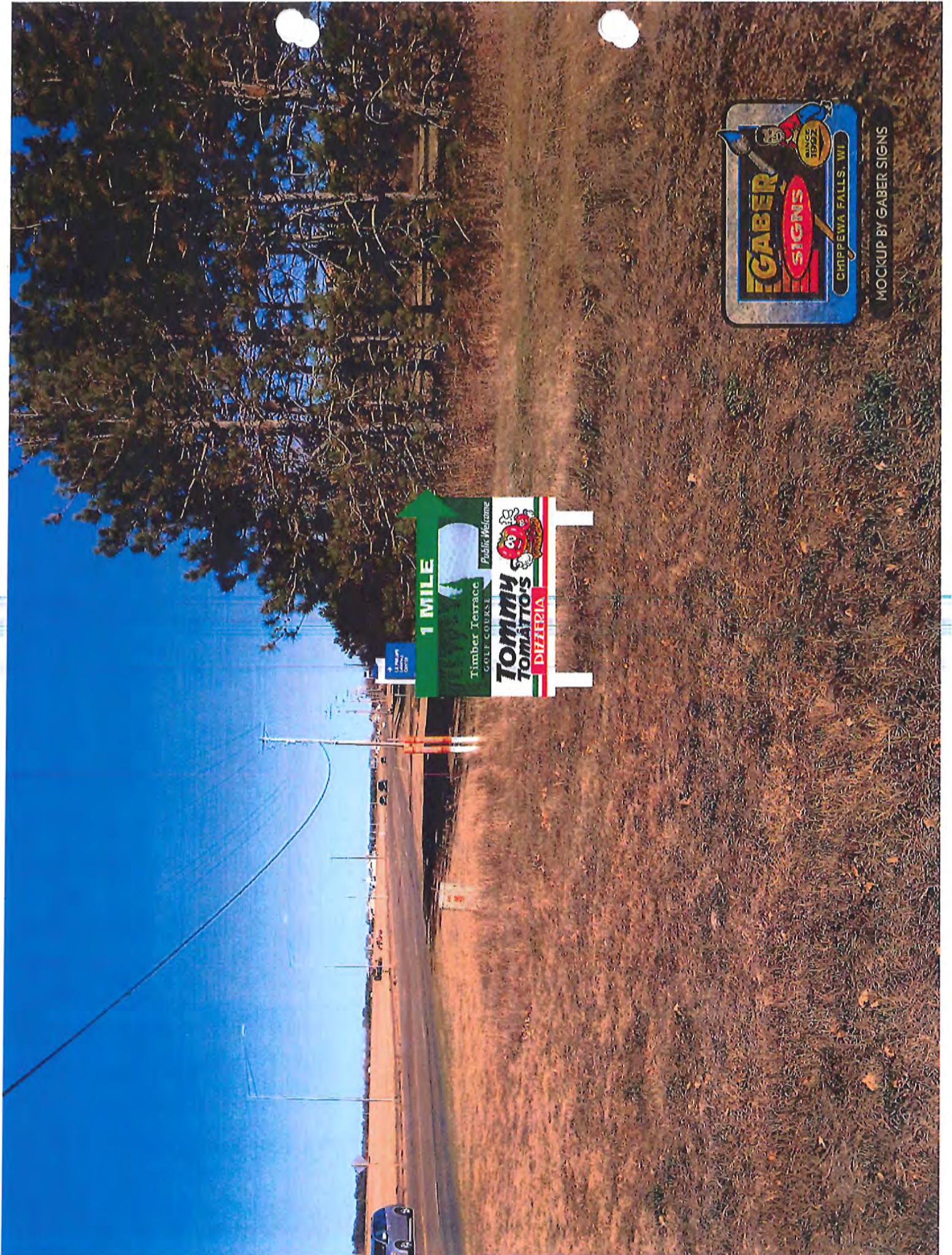
Alderman

APPROVED: _____

Mayor

ATTEST: _____

City Clerk



1 MILE

Timber Terrace
GOLF COURSE

Public Welcome

Tommy
Tomatto's
PIZZERIA

GABER
SIGNS

CHASE
1992

CHIPPEWA FALLS, WI

MOCKUP BY GABER SIGNS

→ LE PHILLIPS
LIBERTAS
CENTER

1 MILE

Timber Terrace
GOLF COURSE

Public Welcome

TOMMY
TOMATTO'S



PIZZERIA

A logo for Gaber Signs. It features a cartoon man with a beard, wearing a red shirt and blue pants, holding a paintbrush. He is painting a sign that says "GABER SIGNS". The sign is yellow with red and blue text. To the right of the man is a yellow circle with the text "SINCE 1992". Below the sign is a blue banner with the text "CHIPPEWA FALLS, WI".

GABER
SIGNS

SINCE 1992

CHIPPEWA FALLS, WI

MOCKUP BY GABER SIGNS

N ↑

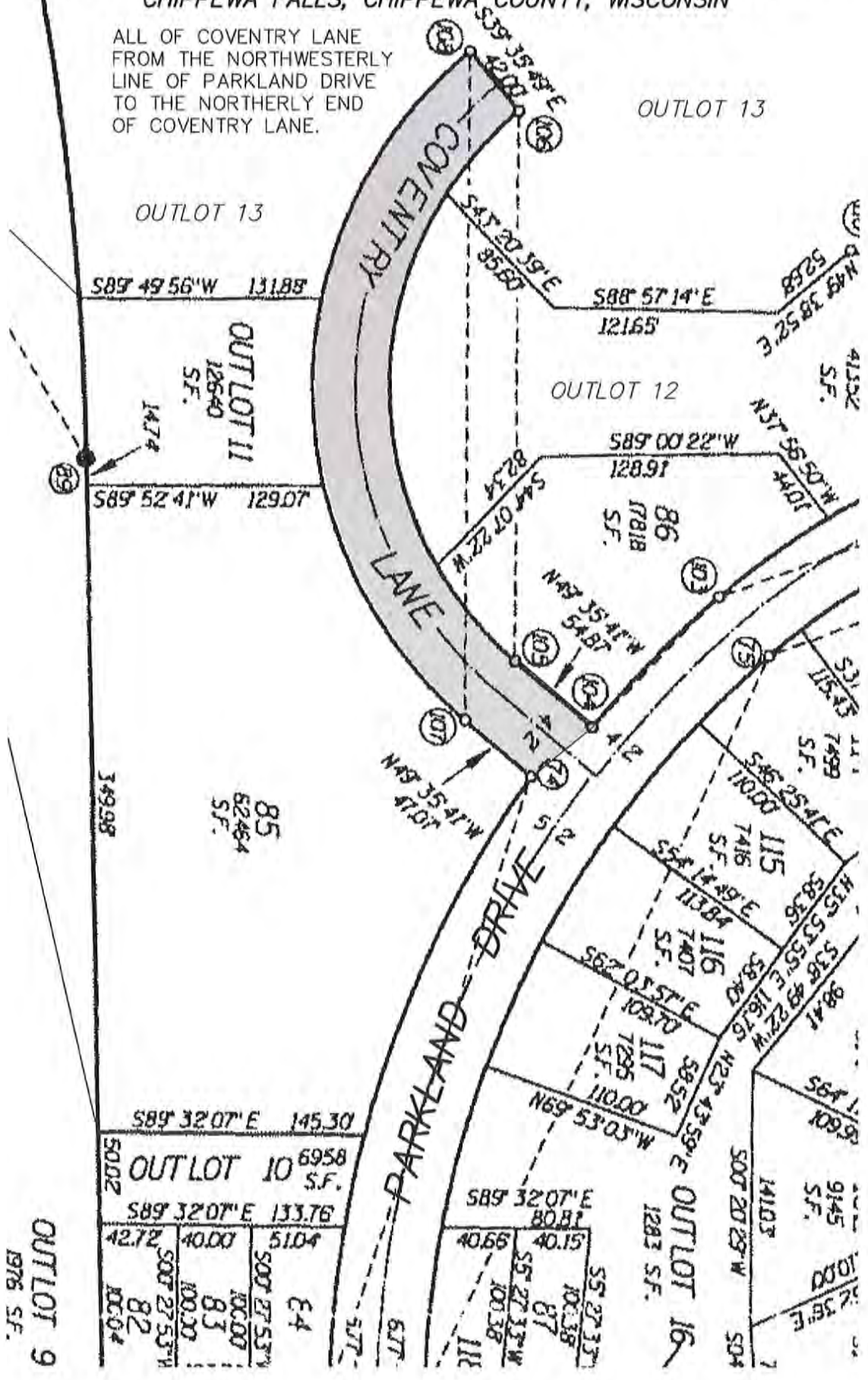
Scale: 1" = 50'



VACATION OF COVENTRY LANE

IN THE PLAT OF WISSOTA GREEN, SEC. 33, T29N, R8W, CITY OF
CHIPPEWA FALLS, CHIPPEWA COUNTY, WISCONSIN

ALL OF COVENTRY LANE
FROM THE NORTHWESTERLY
LINE OF PARKLAND DRIVE
TO THE NORTHERLY END
OF COVENTRY LANE.





Memo

To: BPW – 2/11/13
From: Chippewa Falls Engineering Department
CC: Rick Rubenzer
Date: 9/21/2012
Re: Crushing Materials – Tilton Pit/City Shop

The City of Chippewa Falls has been stockpiling construction debris (i.e. sand, recycled base course, concrete debris, etc.) from the years in which City crews handled the yearly reconstruction. At times throughout the years the City would then seek a contractor to crush the construction debris for recycled base course that could then be used again on construction projects. The City currently has two large debris piles, one located at the City shop and the other located in the Tilton pit.

The City stopped reconstructing streets with City-personnel and began letting the projects to local constructors in 2009, this has greatly reduced the need for a City pile of base aggregate. Maintenance crews continue to utilize the remaining piles of recycled aggregate for alley shaping, HMA patches, shouldering, and other miscellaneous maintenance activities. The average yearly usage of base aggregate for maintenance activities is approximately 200-400 tons.

The remaining debris piles are quite large and contain a large volume of good crushing material and the remainder would be reject material. In past crushing activities the reject volume has been approximately 40-50%. A local contractor has approached the City with interest in purchasing the debris piles and crushing the piles in place. The contractor has offered a per ton price for usable material that is crushed, with the reject material to be placed in a separate pile. Estimated value of the crushed material would be approximately \$0.40 - \$0.50/Ton. It is estimated the raw material piles volume is 76,200 Tons.

As part of the crushing a ten-year supply of base aggregate could be crushed and reserved for City use. The remaining material can be sold for crushing and stockpiling. The stockpiled material would then be removed by the contractor (Requested 5-Year Time-line) and then the Tilton pit restored utilizing the reject material.

Crushing the remaining piles would allow the City to properly restore and close the Tilton pit and eliminate debris piles within the Chippewa Falls Street Maintenance Yard. It is recommended at that time the City stops accepting construction debris of any kind to the limit debris in the future.