

ISSUE STATEMENT

North Hudson Public Works Committee

June 21, 2016

Submitted by Mark Ekblad, Public Works Director

Issue

Watermain connection at 719 Sixth St. N.

Background/Current Information

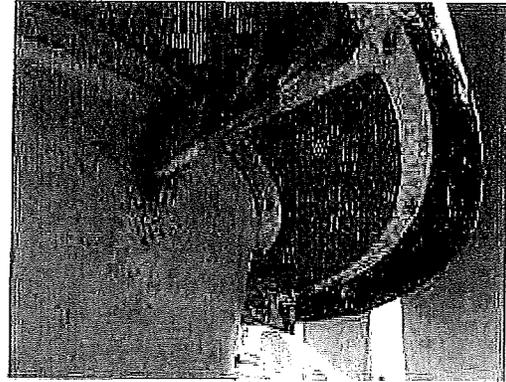
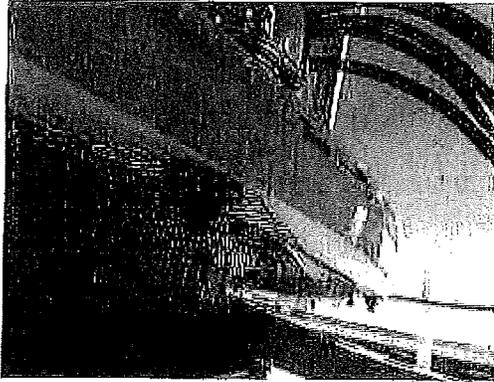
- Under SURVEY FINDINGS - Deficiencies in the Department Of Natural Resources 2015 Sanitary Survey Report of Hudson Waterworks. The Village of North Hudson had two dead-end watermains needing flushing devices (See attached).
 1. The 300' of 8" main in Eastbank Ct. that was corrected when a fire hydrant was set at the end of the main during the 2015 project.
 2. Second, is the 500' of 2" main on the west side of Sixth St. N. running from Sommers St. N. to the Village Inn. This can be corrected by connecting the 2" main to the 8" main running west from the east side of Sixth St. N. to the fire hydrant at 719 Sixth St. N. (Public Works Garage).
See attached Cedar Corporation drawing and Project cost estimate and the Bid Specifications Sheet.
- I did request bids from both Total Excavating, LLC. and Zappa Brothers Inc. and received bids at the price indicated:
Total Excavating, LLC. = declined to bid.
Zappa Brothers Inc. = \$6,950.00 (See attached bid).

Recommendation:

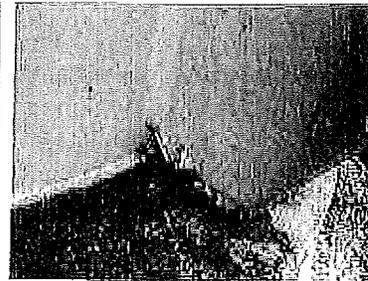
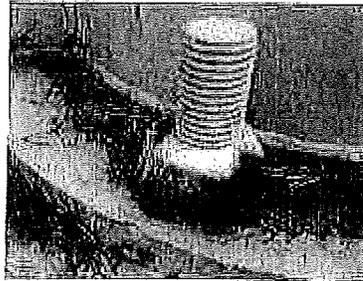
To have Zappa Brothers make the watermain connections at 719 Sixth St. N. at a cost not to exceed \$6,950.00 with the cost coming out of the 220 Water Maintenance Fund.

Suggested Motion:

Recommend having Zappa Brothers Inc. make the watermain connections at 719 Sixth St. N. at a cost not to exceed \$6,950.00 with cost coming from the 220 Water Maintenance Fund.



7. **Significant Deficiency:** several foundation bolts on the Lemon Street reservoir's legs are severely corroded and need to be replaced. This needs to be resolved by December 31, 2015. The welds on some of the support ties show severe corrosion as well. (ch. NR 810.14 Wis. Adm. Code)



Distribution System

1. **Significant Deficiency:** the Utility has a water main running through a stormsewer manhole at 4th and Locust Street. There is also a water main valve in the manhole. This was pointed out as a deficiency in the 1994 sanitary survey but never corrected. This needs to be resolved by December 31, 2016. Plans and specifications shall be submitted to the Department for review and approval by December 31, 2015 and bids awarded by July 1, 2016. (ch. NR811.74(6) Wis. Adm. Code)
2. The 4" cast iron water main, that connects Hudson and North Hudson, was said to have exposed pipe on the bottom of the channel. Apparently erosion has exposed the line in some locations. Code requires at least 2 feet of cover. The Utility will need to correct the deficiency by December 31, 2020. It is recommended that you complete the project when HWY35 is redone in 2019. Plans and specifications shall be submitted to the Department for review and approval by December 31, 2018. (ch. 811.76(2) Wis. Adm. Code)

It is pointed out here that if this line were to fail, you would not be able to move water between the north and south service areas. The implications are negative given capacity limitations during various hydraulic and water use situations.

3. NCF: eliminate undersized water main (<6") where practical. You can coordinate with other utility projects. (ch. NR 811.70(5) Wis. Adm. Code)
4. NCF: continue to eliminate dead end water mains by looping water mains where practical. These can be addressed during other utility projects. (ch. NR 811.70(8) Wis. Adm. Code)

5. The North Hudson service area is not being flushed out on a regular basis. It is recommended that the system be flushed at least annually. Please submit your flushing schedule. (ch. NR 810.13(2d) Wis. Adm. Code) *Flushing Completed Nov. 2015*
6. The Utility is not flushing some of the dead-end water mains to remove sediment or water of poor quality (s. NR810.13(2d) and NR811.71(7) Wis. Adm. Code). Flushing devices are required and need to be able to achieve 2.5ft/sec of flushing velocity.
7. There appear to be 16 dead-ends shown on the distribution system map that do not terminate with a fire hydrant or flushing device (downstream of the service connections) as required under (s. NR811.70(8) and 811.71(7) Wis. Adm. Code). The deadends are longer than 20'. While it would be nice to resolve all these at the same time, the Department expects that you correct at least 5 a year, beginning next year, until all of them are resolved. You may want to coordinate with other projects. By December 31, 2015, submit a list of dead-ends without flushing capability and a schedule for their correction (either looping or installing hydrants/flushing devices to obtain the 2.5 ft/sec of flushing velocity required by code). Then submit plans and specifications for eliminating 5 at the end of this year (December 31, 2015), another 5 at the end of next year (December 31, 2016), and the remaining 5 by December 31, 2017. All of them must be resolved by December 31, 2018 unless the Department agrees to an alternative schedule that coincides with another scheduled utility project.

Records show flushing devices are needed on the following dead-end main:

- Eastbank*
- ✓ 300' of 8" main along Galahad Road from Wisconsin Street (North Hudson)
 - ✓ 500' of 2" main on 6th Street North (HWY35) running from Sommers Street to Village Inn (North Hudson)
 - 500' of 1½" main in the yard off of 2nd Street that dead-ends at Bridge Street
 - 300' of 1¼" main on 2nd Street that starts at Division and goes north
 - 200' of 1¼" main off of River Street that runs north
 - 200' of 1¼" main off of 4th Street, north of Vine, running east
 - 200' of 2" main off of 8th Street in Bates and Day's Addition
 - 200' of 8" main off of 7th Street of Earles Addition
 - 200' of 1¼" main off of 4th Street in Ferriday's Addition
 - 200' of 1¼" main off of Walnut to Allen's Addition
 - 550' of 4" main on Coulee Road from HWY 35
 - 200' of 2" main on 10th Street running south from Vine
 - 200' of 1¼" main on 10th Street running south from Fox
 - 300' of 6" on 6th Street from Locust
 - 200' of 2" on Commercial running from 6th Street

The 800' of isolated (valved off) 4" dead-end main on Coulee Road from Blakeman will need to be severed and capped at the water main, or looped, during your next utility project in this area. This unit is currently shut off with a valve and capped at the end.

8. Please submit documentation that the 1" bleeder valve at the end of 300' of main on 5th Street from Locust can generate the required 2.5ft/second of flushing velocity to clean the line. If it is unable to meet the requirement, you will either need to loop it or install a larger flushing device. This will need to be completed by December 31, 2018. (s. NR811.70(8) and 811.71(7) Wis. Adm. Code)

*Mal. Apts
Private Main*

*Fire hydrant
Installed 2015*

*Turned
2015* 36

9. There are 265 City water main valves and 30 Village water main valves that have not been exercised within the last 5 years. Valves are used to minimize the extent of a service outage during main breaks or equipment repair. This minimizes the area of pressure loss which thereby prevents contamination from entering your distribution system or property water damage. Valves that are not exercised may not work properly when expected during emergencies. The Utility should clean the valve boxes out and exercise the valves by the end of this year. (s. NR810.13(2a) Wis. Adm. Code)
10. There were over a dozen valves, possibly more, that are reported to not function or function improperly. Please submit a list of these valves and a schedule for their repair or replacement. (s. NR810.13 Wis. Adm. Code)
11. Please submit an updated copy of your distribution system map after this year's construction season but no later than December 31, 2015. Include the well IDs, reservoir (size and overflow elevations), pressure sustaining valves, pressure zones, and remove private main on the map. Also, please show the flushing devices on the following dead-end water main: 1½" main running to Bridge Street along North Street, 4" main running west from Spruce Drive, 4" main off of Locust and running south. Also, label the closed valve leading to the 800' of isolated 4" dead-end main on Coulee Road from Blakeman. Also note bleeder valves on the following deadends: on the 300' of 6" main on 6th Street, running south from Locust; on North Street at Staples Addition; hydrant on deadend just north of Riverside Drive North off of 7th Street; on deadend off of Locust Street in the same block as Gibson & Hennings Addition, on deadend off of Spruce Drive. Finally, remove the pipe at the northeast corner of Partridge Lane since it does not exist. (ch. NR810.26(2) Wis. Adm. Code)
12. Please verify that your low suction pressure shutoff is working properly at your 10th Street booster station. The booster pumps should shut down automatically at 20psi. (s. NR811.81(4) Wis. Adm. Code)
13. Verify that all your bleeder lines, for flushing purposes, are capped when not in use. (ch. NR811.71(7) Wis. Adm. Code)
14. Please update your DBP monitoring plan. It appears that SEH did some modeling (temperature and chlorine residual) in 2008 but not water age. The results should show locations of maximum residence times for each of your service areas including the zone where MW8/9 are not mixed with the other zones. (s. NR809.565 Wis. Adm. Code)
15. Please submit distribution system pressure and flow test data. This should include static pressure and residual pressure at fire flow rates above 500 gpm. (s. NR810.10 and .11 Wis. Adm. Code)

Monitoring, Reporting, and Data Verification

1. The auto chlorine analyzer at MW7 does not function and needs to be fixed. If you decide to replace this unit, you may want to install an auto analyzer that connects to the SCADA system. This would allow you to use the alarm capability for over-feed situations. (ch. NR810.13 Wis. Adm. Code)
2. Some of the treatment plants were designed to remove manganese; however, raw and finished manganese test results are not being reported in the monthly operating reports. The Department added additional columns for reporting these test results. Please begin reporting them starting with the July report. (ch. NR809.73(2) and NR810.07 Wis. Adm. Code)

VILLAGE OF NORTH HUDSON
S.T.H. 35 WATERMAIN CONNECTIONS

NORTH END ROAD

S.T.H. 35

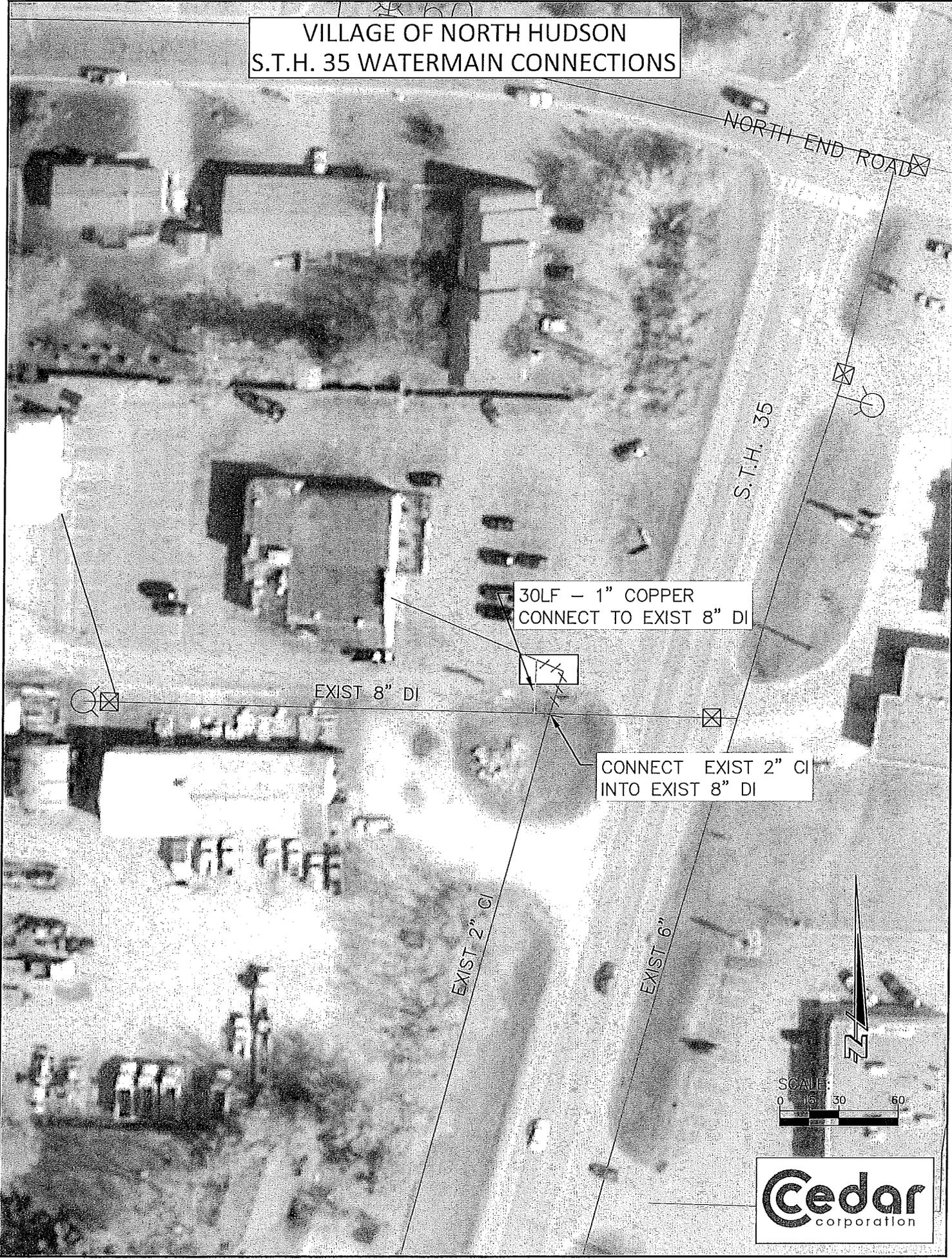
30LF - 1" COPPER
CONNECT TO EXIST 8" DI

EXIST 8" DI

CONNECT EXIST 2" CI
INTO EXIST 8" DI

EXIST 2" CI

EXIST 6"



**STH 35 Watermain Connections
Village of North Hudson, WI**

Cedar Corporation Opinion of Probable Costs
Date: 5-13-16
Estimate Prepared By: KRO



WATERMAIN

Assumptions: No Rock or Water

ITEM	UNIT	QUANTITY	UNIT PRICE	COST
Connect to Existing	EA.	2	\$1,000.00	\$2,000.00
1" Copper Service	L.F.	30	\$30.00	\$900.00
1" Corporation	V.F.	1	\$200.00	\$200.00
1" Curb Stop	EA.	1	\$300.00	\$300.00
2" Corporation	EA.	1	\$300.00	\$300.00
2" Curb Stop	EA.	1	\$400.00	\$400.00
Restoration	S.Y.	300	\$3.00	\$900.00
Subtotal				\$5,000.00
Contingency - 10%				\$500.00
TOTAL ESTIMATED WATERMAIN CONSTRUCTION COST				\$5,500.00

DRIVEWAY REPAIR

Assumptions: *Approximately 30' x 30' of driveway repair
2" asphalt and 6" aggregate base course*

ITEM	UNIT	QUANTITY	UNIT PRICE	COST
Remove Existing Asphalt	S.Y.	100	\$2.00	\$200.00
Common Excavation	C.Y.	25	\$10.00	\$250.00
Crushed Aggregate Base Course	C.Y.	20	\$22.00	\$440.00
2" HMA Pavement, Driveway	S.Y.	100	\$35.00	\$3,500.00
Sawcut	L.F.	100	\$3.00	\$300.00
Subtotal				\$4,690.00
Contingency - 10%				\$470.00
TOTAL ESTIMATED DRIVEWAY REPAIR CONSTRUCTION COST				\$5,160.00

TOTAL ESTIMATED PROJECT COST	\$10,660.00
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Watermain Connection at 719 Sixth St. N.

Bid Specifications Sheet:

- The existing 2 inch watermain is to be connected to the existing 8 inch watermain.
- Locate the existing 1 inch water service for the Village Inn at the existing curb stop and run new copper with new curb stop and stand and connect to the existing 8 inch main.
- Abandon remaining 2 inch main running north of the 8 inch watermain in place.
- Restore the disturbed area of the parking lot with gravel base and new asphalt.
- Restore the ditch with black dirt.

All bids must be received at the North Hudson Village Hall by 4:00 PM on Thursday June 6, 2016

Mark Ekblad, Public Works Director
Village of North Hudson
400 7th Street N.
Hudson, WI 54016
715-386-1730

ZB Proposal

ZAPPA BROTHERS, INC.

715 Sixth St. N., Hudson, WI. 54016-1074

715-386-2850 Office / 715-386-0323 Fax

Email: zappabrothers@sbcglobal.net

PROPOSAL SUBMITTED TO: Village of North Hudson, Attn: Mark E.		PHONE: 715-386-1730	Fax: 715-386-6770	DATE: 06/16/16
ADDRESS: 400 Seventh Street N., Hudson, WI 54016		JOB NAME: VNH. St. H. 35 Watermain Connections		
ARCHITECT / ENGINEER: Cedar Corporation	PLAN DATE: N/A	JOB PHONE: N/A	LOCATION: 723 Sixth Street N., Hudson, WI 54016	

We hereby submit specifications and estimates for:

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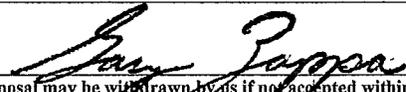
Watermain and service improvements as per Cedar Corporation plan, includes a maximum 400 S.F. of 3" thick bituminous asphalt restoration.

We Propose hereby to furnish material and labor – complete in accordance with above specifications, for the sum of: (\$ 6,950.00)
DOLLARS

Payment to be made as follows: IN FULL UPON COMPLETION OF EACH PHASE OF CONSTRUCTION

All material is guaranteed to be as specified. All work to be completed in a workmanlike manner according to standard practices. Any alteration or deviation from above specifications involving extra costs will be executed only upon written orders, and will become an extra charge over and above the estimate. All agreements contingent upon strikes, accidents or delays beyond our control. Owner to carry fire, tornado and other necessary insurance. Our workers are fully covered by Workmen's Compensation Insurance.

Authorized
Signature



*Note: This proposal may be withdrawn by us if not accepted within 30 days.

The following notice is hereby given as required by Wisconsin Statutes Section 779.02(2)(a):

"As required by the Wisconsin construction lien law, builder hereby notifies owner that persons or companies furnishing labor or materials for the construction on owner's land may have lien rights on owner's land and buildings if not paid. Those entitled to lien rights, in addition to the undersigned builder, are those who contract directly with the owner or those who give the owner notice within 60 days after they first furnish labor or materials for the construction. Accordingly, owner probably will receive notices from those who furnish labor or materials for the construction, and should give a copy of each notice received to the mortgage lender, if any. Builder agrees to cooperate with the owner and the owner's lender, if any, to see that all potential lien claimants are duly paid".
Please return SIGNED COPY back to Zappa Brothers Inc.

Acceptance of Proposal – The above prices, specifications and conditions are satisfactory and are hereby accepted. You are authorized to do the work as specified. Payment will be made as outlined above with Terms of: Net 30 days following date of invoice. Unpaid balance will be subject to Finance Charge of 1.83% per month (22% annual rate).

Signature: _____ Date: _____ Signature: _____ Date: _____