

VILLAGE OF BARRINGTON HILLS

Roads & Bridges Committee

NOTICE OF MEETING



Tuesday, February 17, 2015 ~ 3:00 pm
112 Algonquin Road

AGENDA

1. Organizational
 - 1.1 Call to Order
 - 1.2 Roll Call
2. [Approve] Minutes January 20, 2015
3. Public Comments
4. Discussion Items
 - 4.1 Local Functional Classification System Map
 - 4.2 2015-2019 Road Program Recommendation
 - 4.3 2015 Road Program Scope & Preliminary Estimate
 - 4.4 2015 Drainage Program
 - 4.4.1 Merri Oaks Road – Construction Update
 - 4.4.2 Steeplechase Road Drainage Report
 - 4.4.3 Paganica Drainage Project
 - 4.5 Seasonal Posting of Roads – Preview
 - 4.6 Cuba Township Snow Plowing- Salt Usage
 - 4.7 Spring Creek Road- Village of Algonquin PDR Review
5. Adjournment

Chairman: Patty Meroni

NOTICE AS POSTED

112 Algonquin Road ~ Barrington Hills, IL 60010-5199 ~ 847.551.3000

VILLAGE OF BARRINGTON HILLS

Roads & Bridges Committee

Meeting Minutes

January 20, 2015



Committee Members Present: Trustee Patty Meroni, Chair
President Martin McLaughlin
Robert Kosin, Director of Administration
Dan Strahan, Village Engineer

Others Present: Mary Naumann, Resident
Jim Naumann, Resident
Laurie Abboud, Resident
Bonnie Duresa, Resident

1. ORGANIZATIONAL: The meeting of the Village of Barrington Hills Roads & Bridges Committee was called to order at 3:00 p.m. by Chairman Meroni.

2.1 APPROVAL OF MINUTES: The minutes of the Roads & Bridges Committee Meeting of December 16, 2014 were approved as written.

3. PUBLIC COMMENTS: Ms. Abboud noted that at the McHenry County Council of Mayors meeting on January 15, 2015, the Council had acknowledged that Barrington Hills is a Home Rule community and that the Village has jurisdiction over the public roads in Barrington Hills. She also noted that the Council had acknowledged that the Village was not required to use federal funding. She requested the Village follow through on the resolution passed concerning functional classification and that locally the designation of "Local Service Road" be reflected on Village mapping.

Ms. Duresa said she had seen discussion of temporary easements on Haeger's Bend Road and referred to the results of the Open House and public comment which indicated that residents did not want any permanent or temporary easements.

Ms. Noumann reiterated Ms. Duresa's remarks concerning the potential for temporary easements on Haegers Bend Road.

4.1 2015-2019 ROAD PROGRAM RECOMMENDATION: Mr. Strahan noted that GHA had prepared and presented the 2014 Pavement Condition Study at the board meeting in August of 2014, but the study was not formally approved or adopted. Subsequent comments from the Board indicate a desire to insure that the 2015 Road Program is planned within the context of a multi-year plan that is agreed to by the Board.

Mr. Strahan noted his recommendation that the Village adopt a five-year plan due to the uncertainty of projecting roadway conditions beyond that point. Past experience with a ten-year road program has resulted in frequent adjustments in the final years of the program. Mr. Strahan noted that two five-year options were presented. The first option presented was intended to maintain current pavement conditions by averaging 3.2 miles of resurfacing per year. The second option presented an accelerated approach to eliminate a backlog of approximately 4.8 miles of deferred maintenance within the next five years.

President McLaughlin asked if the Village could potentially benefit from low oil prices by reaching a long-term asphalt pricing agreement with a local paving company. Mr. Strahan noted that dropping oil prices do not always result in a commensurate drop in asphalt prices but that that option could be considered once asphalt prices begin to be released in the coming months.

4.2 2015 ROAD PROGRAM SCOPE: Mr. Strahan presented the preliminary estimate for the 2015 Road Program, which included the remainder of Meadow Hill Road, Haegers Bend Road from County Line Road to Chapel, and Plum Tree Road from Ridge Road west to the Village Limits. Patching and resurfacing the roadways listed was estimated at \$1.2 million. Mr. Strahan noted that this number was preliminary and based on an assumed amount of patching; however, a more detailed estimate would be developed based on the actual patching requirement and compared to the cost of full depth reclamation. Mr. Strahan stated that updated estimates would be completed for the February meeting.

Trustee Meroni noted that she had received a message from Cuba Township stating that patching on Ridge Road was underway.

4.3 CUBA ROAD BRIDGE REPLACEMENT - UPDATE: Mr. Strahan summarized the scheduling updates included in his memo, which noted that based on feedback from IDOT regarding the land acquisition process the likely bid date for the project was June 12th, 2015, which would result in a construction start date on or around August 1.

Trustee Meroni requested that GHA contact Barrington Transportation Company to confirm the schedule of the closure.

President McLaughlin asked if the final bridge design plans could be posted on the Roads & Bridges website. Mr. Strahan confirmed that the plans would be posted to the website.

4.4 2015 DRAINAGE PROGRAM – SCHEDULE UPDATE: Mr. Strahan noted that a preconstruction meeting had been held with Copenhaver Construction and the work would proceed as weather conditions allow. Trustee Meroni asked if we had heard anything further regarding the easement. Mr. Strahan noted that Mary Dickson had replied to acknowledge receipt of the document and that she would review and contact the resident.

Mr. Strahan reviewed a proposed development in the Paganica Subdivision. Village staff has met with a developer regarding the potential development of three currently vacant lots at the north end of Rub of the Green Lane. The project would result in fill within the floodplain, which would require that the developer provide compensatory storage. Village staff has inquired with

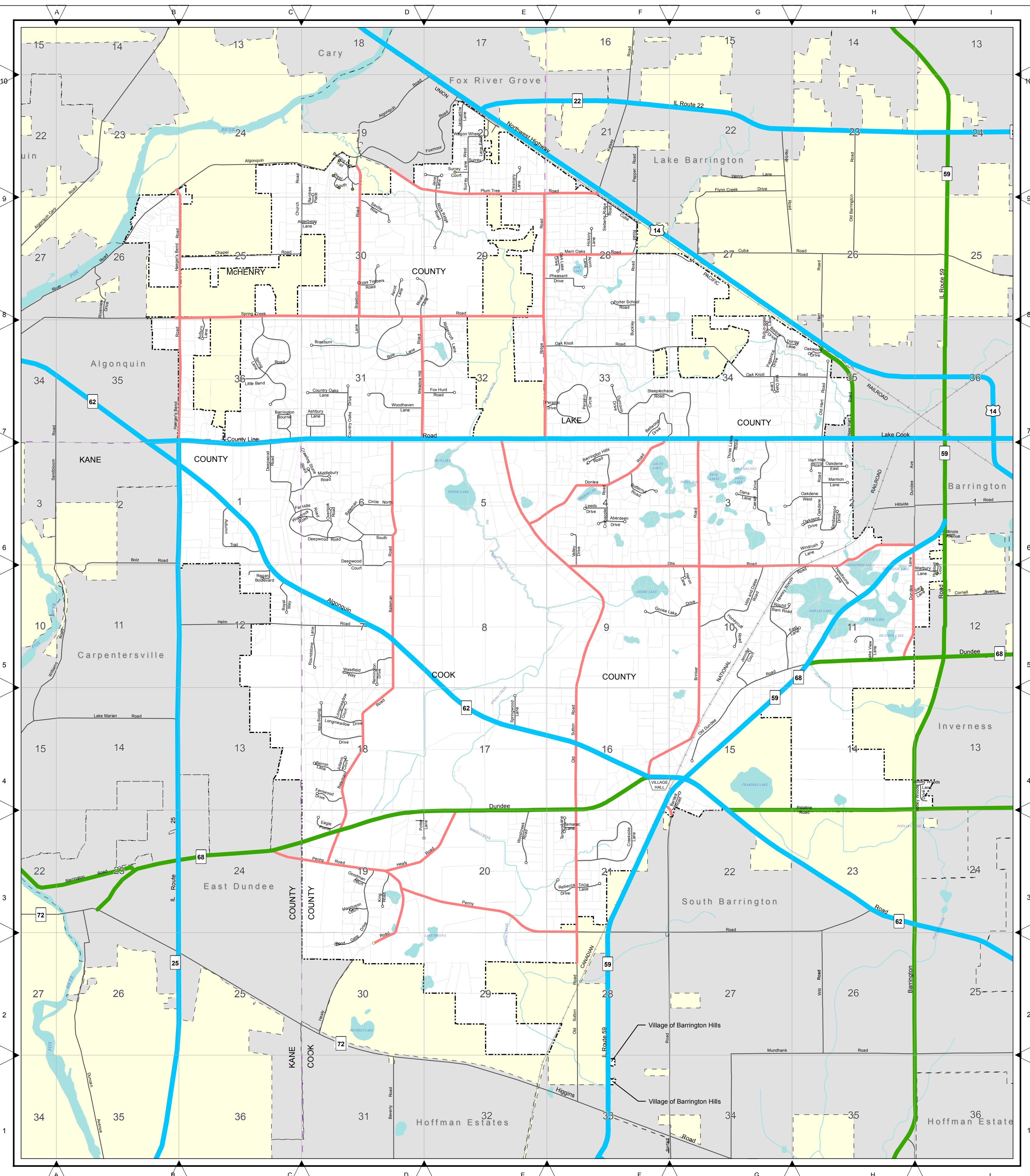
the developer to determine the potential to include additional compensatory storage to meet a requirement imposed by the Lake County Stormwater Management Commission as a condition to the Village's certification. Based on preliminary estimates, the Village share of the compensatory storage would be approximately 28% of an estimated \$50,000 project, or approximately \$14,000. Trustee Meroni noted that this could be accommodated within the Drainage Management line item of the budget based on the low bid prices received for the project on Merri-Oaks. Mr. Strahan noted that he would review the concept of the project with Lake County SMC to confirm they would approve the project prior to making any commitments to the developer.

4.5 FAU CLASSIFICATION STATUS UPDATE: Mr. Strahan noted that the McHenry County Council of Mayors met on Thursday January 15th and denied the Village's request to reclassify Helm Road, Plum Tree Road, and Algonquin/River Road as local streets. The four other roads that were recommended for approval by the Council in November of 2014 are currently under review by IDOT. Trustee Meroni noted that internally the Village can classify Village maintained roads as it sees fit and is not bound by the federal classification if no federal funding is to be requested for Village roads.

5. ADJOURNMENT: The meeting was adjourned at 3:55.

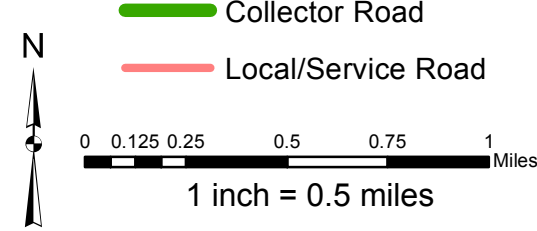
VILLAGE OF BARRINGTON HILLS

ROADWAY CLASSIFICATION MAP



Roadway Classifications

- Arterial Road
- Collector Road
- Local/Service Road



VILLAGE OF BARRINGTON HILLS
112 ALGONQUIN ROAD
BARRINGTON HILLS, ILLINOIS 60010-5199
(847)551-3000

Created: February 02, 2015

*Note: Roadway Classifications shown are as listed in the Village of Barrington Hills Comprehensive Plan

Proposed 2015-2019 Road Program Executive Summary

Option 1A – Maintain Current Pavement Condition (2015-2019)

Year	Preliminary Budget (2015 dollars)*	Adjusted Preliminary Budget
2015	\$1,064,000	\$1,064,000
	Meadow Hill Road Haegers Bend Road Plum Tree Road Cuba Road Cuba Road Bridge (Local Share)	(Fox Hunt to Spring Creek Road) (County Line Road to Chapel Road) (Ridge Road to Village Limits) (Buckley Road to Merri Oaks Road)
2016	\$1,123,000	\$1,179,000
	Woodcreek Road Rebecca Drive Helm Road Healy Road Tamarack Lane Lakeview Lane Hawthorne Lane Tricia Lane VH Asphalt Parking Lots Spring Creek Road (Local Share)	(Dundee Road to End) (Old Sutton to End) (Algonquin Road to Village Limits) (Dundee Road to Penny Road) (Old Sutton Road to End) (Dundee Road to End) (Route 59 to Otis Road) (Old Sutton Road to End)
2017	\$1,162,000	\$1,281,000
	Chapel Road Church Road Haegers Bend Road River Road River/Algonquin Road	(Church Road to Haegers Bend) (Chapel Road to Algonquin Road) (Chapel Road to Algonquin Road) (W. of Haegers Bend to Village Limits) (E. of Braeburn to W. of Church)
2018	\$956,000	\$1,106,000
	Hickory Lane Ridge Road Merri Oaks Road Old Hart Road	(Merri Oaks Road to End) (County Line Road to Merri Oaks Road) (Ridge Road to Cuba Road) (County Line Road to End)
2019	\$998,000	\$1,213,000
	Spring Lane Little Bend Road Creekside Lane Springwood Lane	(Spring Creek Road to End) (Spring Lane to End) (Old Sutton Road to End) (Algonquin Road to End)
Total Expenditure (2015 dollars)- \$5.3 million 2015-2019 Mileage Resurfaced- 16.99 Miles (3.40 Miles/Year) Backlog Reduction- 0.99 Miles		

**Option 2A – Maintain Current Pavement Condition &
Eliminate Backlog in 5 Years (2015-2019)**

Year	Preliminary Budget (2015 dollars)*	Adjusted Preliminary Budget
2015	\$1,064,000	\$1,064,000
	Meadow Hill Road Haegers Bend Road Plum Tree Road Cuba Road Cuba Road Bridge (Local Share)	(Fox Hunt to Spring Creek Road) (County Line Road to Chapel Road) (Ridge Road to Village Limits) (Buckley Road to Merri Oaks Road)
2016	\$1,325,000	\$1,392,000
	Woodcreek Road Rebecca Drive Helm Road Healy Road Tamarack Lane Church Road Lakeview Lane Hawthorne Lane Tricia Lane VH Asphalt Parking Lots Spring Creek Road (Local Share)	(Dundee Road to End) (Old Sutton to End) (Algonquin Road to Village Limits) (Dundee Road to Penny Road) (Old Sutton Road to End) (Chapel Road to Algonquin Road) (Dundee Road to End) (Route 59 to Otis Road) (Old Sutton Road to End) W. of Haegers Bend
2017	\$1,525,000	\$1,681,000
	Chapel Road Hickory Lane Haegers Bend Road Ridge Road River/Algonquin Road River Road	(Church Road to Haegers Bend) (Merri Oaks Road to End) (Chapel Road to Village Limits) (County Line Road to Merri Oaks Road) (E. of Braeburn to W. of Church) (W. of Haegers Bend to Village Limits)
2018	\$1,126,000	\$1,303,000
	Spring Lane Little Bend Road Merri Oaks Road Old Hart Road Springwood Lane Healy Road	(Spring Creek Road to End) (Spring Lane to End) (Cuba Road to Ridge Road) (County Line Road to End) (Algonquin Road to End) (Penny Road to End)
2019	\$1,163,000	\$1,413,000
	Creekside Lane Butternut Road Hills & Dales Road Cuba Road Honeycutt Road Country Oaks Lane Country Oaks Drive	(Algonquin Road to End) (Donlea Road to End) (Brinker Road to Otis Road) (Merri Oaks Road to Plum Tree Road) (Hills & Dales Road to End) (Country Oaks Drive to End) (County Line Road to End)
Total Expenditure (2015 dollars)- \$6.2 million 2015-2019 Mileage Resurfaced- 20.36 Miles (4.07 Miles/Year) Backlog Reduction- 4.36 Miles		

Proposed 2015-2021 Road Program Executive Summary

Option 1B – Maintain Current Pavement Condition (2015-2021)

Year	Preliminary Budget (2015 dollars)*	Adjusted Preliminary Budget
2015	\$1,072,000	\$1,072,000
	<i>Meadow Hill Road Haegers Bend Road Plum Tree Road</i>	<i>Cuba Road Cuba Road Bridge (Local Share)</i>
2016	\$1,123,000	\$1,179,000
	<i>Woodcreek Road Rebecca Drive Helm Road Healy Road Tamarack Lane</i>	<i>Lakeview Lane Hawthorne Lane Tricia Lane VH Asphalt Parking Lots Spring Creek Road (Local Share)</i>
2017	\$1,162,000	\$1,281,000
	<i>Chapel Road Church Road Haegers Bend Road</i>	<i>River Road River/Algonquin Road</i>
2018	\$956,000	\$1,106,000
	<i>Hickory Lane Ridge Road</i>	<i>Merri Oaks Road Old Hart Road</i>
2019	\$998,000	\$1,213,000
	<i>Spring Lane Little Bend Road</i>	<i>Creekside Lane Springwood Lane</i>
2020	\$975,000	\$1,244,000
	<i>Butternut Road Hills & Dales Road Cuba Road Healy Road</i>	<i>Honeycutt Road Rolling Hills Drive Longmeadow Drive Longmeadow Court</i>
2021	\$962,000	\$1,290,000
	<i>Oak Knoll Road Country Oaks Lane Country Oaks Drive</i>	
Total Expenditure (2015 dollars)- \$7.2 million 2015-2021 Mileage Resurfaced- 23.72 Miles (3.39 Miles/Year) Backlog Reduction- 1.32 Miles		

**Option 2B – Maintain Current Pavement Condition &
Eliminate Backlog in 5 Years (2015-2021)**

Year	Preliminary Budget (2015 dollars)*	Adjusted Preliminary Budget
2015	\$1,064,000	\$1,064,000
	<i>Meadow Hill Road Haegers Bend Road Plum Tree Road</i>	<i>Cuba Road Cuba Road Bridge (Local Share)</i>
2016	\$1,325,000	\$1,392,000
	<i>Woodcreek Road Rebecca Drive Helm Road Healy Road Tamarack Lane Church Road Lakeview Lane</i>	<i>Hawthorne Lane Tricia Lane Church Road VH Asphalt Parking Lots Spring Creek Road (Local Share)- West of Haegers Bend</i>
2017	\$1,525,000	\$1,681,000
	<i>Chapel Road Hickory Lane Haegers Bend Road</i>	<i>Ridge Road River/Algonquin Road River Road</i>
2018	\$1,126,000	\$1,303,000
	<i>Spring Lane Little Bend Road Merri Oaks Road</i>	<i>Old Hart Road Springwood Lane Healy Road</i>
2019	\$1,163,000	\$1,413,000
	<i>Creekside Lane Butternut Road Hills & Dales Road Cuba Road</i>	<i>Honeycutt Road Country Oaks Lane Country Oaks Drive</i>
2020	\$1,037,000	\$1,324,000
	<i>Rolling Hills Drive Longmeadow Court</i>	<i>Longmeadow Drive Oak Knoll Drive</i>
2021	\$951,000	\$1,275,000
	<i>Surrey Lane East Surrey Lane West Surrey Court Wagon Wheel Lane</i>	<i>Rock Ridge Road Hawley Woods Road Round Barn Road Old Bartlett Road</i>
Total Expenditure (2015 dollars)- \$8.19 Million 2015-2021 Mileage Resurfaced- 27.05 Miles (3.86 Miles/Year) Backlog Reduction- 4.65 Miles		

Proposed 2015-2024 Road Program Executive Summary

Option 1C – Maintain Current Pavement Condition (2015-2024)

Year	Preliminary Budget (2015 dollars)*	Adjusted Preliminary Budget
2015	\$1,072,000	\$1,072,000
	Meadow Hill Road Haegers Bend Road Plum Tree Road	Cuba Road Cuba Road Bridge (Local Share)
2016	\$1,123,000	\$1,179,000
	Woodcreek Road Rebecca Drive Helm Road Healy Road Tamarack Lane	Lakeview Lane Hawthorne Lane Tricia Lane VH Asphalt Parking Lots Spring Creek Road (Local Share)
2017	\$1,162,000	\$1,281,000
	Chapel Road Church Road Haegers Bend Road	River Road River/Algonquin Road
2018	\$956,000	\$1,106,000
	Hickory Lane Ridge Road	Merri Oaks Road Old Hart Road
2019	\$998,000	\$1,213,000
	Spring Lane Little Bend Road	Creekside Lane Springwood Lane
2020	\$975,000	\$1,244,000
	Butternut Road Hills & Dales Road Cuba Road Healy Road	Honeycutt Road Rolling Hills Drive Longmeadow Drive Longmeadow Court
2021	\$962,000	\$1,290,000
	Oak Knoll Road Country Oaks Lane	Country Oaks Drive
2022	\$851,000	\$1,197,000
	Surrey Lane East Surrey Lane West Surrey Court Wagon Wheel Lane	Rock Ridge Road Hawley Woods Road Round Barn Road
2023	\$1,021,000	\$1,508,000
	Old Dundee Road Village Hall Concrete Parking Lot	Braeburn Road Cross Timbers Road
2024	\$962,000	\$1,493,000
	Buckley Road Leeds Drive Crabapple Road Aberdeen Drive	Dundee Lane Caesar Drive Dana Lane
Total Expenditure (2015 dollars)- \$10.1 million 2015-2024 Mileage Resurfaced- 32.99 Miles (3.29 Miles/Year) Backlog Reduction- 0.99 Miles		

**Option 2C – Maintain Current Pavement Condition &
Eliminate Backlog in 5 Years (2015-2024)**

Year	Preliminary Budget (2015 dollars)*	Adjusted Preliminary Budget
2015	\$1,064,000	\$1,064,000
	<i>Meadow Hill Road Haegers Bend Road Plum Tree Road</i>	<i>Cuba Road Cuba Road Bridge (Local Share)</i>
2016	\$1,325,000	\$1,392,000
	<i>Woodcreek Road Rebecca Drive Helm Road Healy Road Tamarack Lane Church Road Lakeview Lane</i>	<i>Hawthorne Lane Tricia Lane Church Road VH Asphalt Parking Lots Spring Creek Road (Local Share)- West of Haegers Bend</i>
2017	\$1,525,000	\$1,681,000
	<i>Chapel Road Hickory Lane Haegers Bend Road</i>	<i>Ridge Road River/Algonquin Road River Road</i>
2018	\$1,126,000	\$1,303,000
	<i>Spring Lane Little Bend Road Merri Oaks Road</i>	<i>Old Hart Road Springwood Lane Healy Road</i>
2019	\$1,163,000	\$1,413,000
	<i>Creekside Lane Butternut Road Hills & Dales Road Cuba Road</i>	<i>Honeycutt Road Country Oaks Lane Country Oaks Drive</i>
2020	\$1,037,000	\$1,324,000
	<i>Rolling Hills Drive Longmeadow Court</i>	<i>Longmeadow Drive Oak Knoll Drive</i>
2021	\$951,000	\$1,275,000
	<i>Surrey Lane East Surrey Lane West Surrey Court Wagon Wheel Lane</i>	<i>Rock Ridge Road Hawley Woods Road Round Barn Road Old Bartlett Road</i>
2022	\$927,000	\$1,304,000
	<i>Old Dundee Road Village Hall Concrete Parking Lot Buckley Road</i>	<i>Leeds Drive Crabapple Road Aberdeen Road</i>
2023	\$1,056,000	\$1,560,000
	<i>Braeburn Road Cross Timbers Road Dundee Lane</i>	<i>Caesar Drive Dana Lane</i>
2024	\$1,035,000	\$1,606,000
	<i>Barrington Hills Road Spring Creek Road</i>	
Total Expenditure (2015 dollars)- \$11.2 Million 2015-2024 Mileage Resurfaced- 36.55 Miles (3.66 Miles/Year) Backlog Reduction- 4.55 Miles		

MEMORANDUM

625 Forest Edge Drive, Vernon Hills, IL 60061

TEL 847.478.9700 ■ FAX 847.478.9701

www.gha-engineers.com

To: Robert Kosin, VBH Director of Administration
Patty Meroni, VBH Chairman Roads & Bridges

From: Daniel J. Strahan, P.E., CFM
Gewalt Hamilton Associates

Date: February 12, 2015

Re: 2015 Road Program - Status

Road Program Scope

At the January Roads & Bridges Committee meeting, preliminary cost estimates were presented for the 2015 Road Program for a scope of work that included Meadow Hill Road, Haegers Bend Road, and Plum Tree Road. It was noted that two options were under consideration for Haegers Bend Road due to the condition of the pavement. Detailed patching estimates were to be prepared to enable a more realistic comparison between a patch and resurface approach and a full-depth reclamation scope of work.

Based on measurements taken in February, approximately 4460 square yards of patching would be required to resurface Haegers Bend Road, roughly 20% of the area of the road. Assuming a patching unit price of \$25.30 (a 15% increase over 2014 patching costs), the cost to patch and resurface Haegers Bend Road from County Line Road to Chapel Road is estimated at \$670,000. Preliminary estimates indicate a construction cost of approximately \$690,000 to complete full depth reclamation on Haegers Bend Road from County Line Road to Chapel Road.

Provided patching costs are reasonably close to last year's contract prices, there will be a substantial savings to the Village to patch and resurface the existing roadway.

Asphalt Prices

As crude oil prices have dropped steadily and substantially since the fall, questions were raised regarding whether asphalt prices would reflect this decline as well. Generally speaking these two prices are not closely linked; as crude oil prices drop, often suppliers redirect supplies to other areas, reducing the supply available for bituminous materials and reducing or eliminating any decrease in price that may result. Asphalt prices are also affected by sand and gravel costs.

To date we have not seen any asphalt plants release pricing for the 2015 construction season, though that information should be released in the near future. IDOT maintains a bituminous price index which is intended to allow for cost adjustments based on the fluctuation in costs which can be an indicator of asphalt prices. The index for the past 24 months is shown below:

Posting Date	Bituminous \$/TN	Posting Date	Bituminous \$/TN
3/1/13	\$528.60	3/1/14	\$537.78
4/1/13	\$530.20	4/1/14	\$548.33
5/1/13	\$535.00	5/1/14	\$558.78
6/1/13	\$537.33	6/1/14	\$569.44
7/1/13	\$528.60	7/1/14	\$578.11
8/1/13	\$533.80	8/1/14	\$595.33
9/1/13	\$536.80	9/1/14	\$601.67
10/1/13	\$530.90	10/1/14	\$602.78
11/1/13	\$526.40	11/1/14	\$594.78
12/1/13	\$528.50	12/1/14	\$586.67
1/1/14	\$527.50	1/1/15	\$565.67
2/1/14	\$530.80	2/1/15	\$509.22

Based on this index, throughout the second half of 2014 asphalt prices had been trending approximately 10-13% higher than the previous year, which held true until the latest index figure in February which represented a three-year low. The February pricing makes it difficult to estimate what to expect for asphalt pricing without further news from the asphalt plants.

Road Program Schedule

The intent of the 2015 Road Program is to substantially conclude construction operations prior to August 1, when construction of the Cuba Road Bridge is anticipated to begin. Below is the recommended schedule in order to meet this goal:

- VBH Board of Trustees- MFT Resolution – March 30, 2015
- IDOT Review & Approval of Plans & Specifications – April 2015
- Bid Advertisement – Tuesday, May 5, 2015
- Bid Opening – Thursday, May 21, 2015
- VBH Board of Trustees Contract Approval – May 27, 2015
- Construction- June 15-July 31, 2015 (Dates approximate)



Dan Strahan <dstrahan@gha-engineers.com>

Steeplechase standing water

Dan Strahan <dstrahan@gha-engineers.com>
To: Robert Kosin <rkosin@barringtonhills-il.gov>
Cc: Village Email <pmeroni@barringtonhills-il.gov>

Thu, Jan 29, 2015 at 8:52 AM

Bob,

After you and I met to take a look at this in December we completed a limited topographic survey to determine what could be done with this ditch drainage. A copy of the survey is attached. The culvert on the west half of the survey area running from northwest to southeast is the culvert immediately in front of the King pond.

Water was observed standing in the ditchline on the south side of the road. From the survey it is clear why. The culverts themselves are clear, but there is a high point in the ditch of 790.01 to the east of the roadway culvert, which is at 789.86. The culvert coming out of the King Pond is 789.42. The downstream culvert that should be receiving the runoff from this area (which connects to the Kennedy property storm sewer) is at an elevation of 789.42, the same elevation as the culvert at the King pond. As a result, there is likely to be a persistent depth of standing water of up to 7" in this area until it dries out by evaporation or infiltration.

So we have a few options we could consider to address this situation:

1. Regrade and clean up the ditch line to an elevation of 789.42. The ditch itself would be flat so wouldn't drain well and would be wet as it is now, but there would be less standing water next to the culverts. This may be sufficient since most of the ditchline is in a heavily brushed area; of course the brush would get torn up to some extent through the regrading of the ditch.
2. Replace and lower the 15" RCP culvert that connects to the Kennedy storm sewer. We could get this down to an elevation of 788.5 or so, which would provide a minimal amount of positive drainage from the King pond culvert to the Kennedy storm sewer system. However, the ditch slope would still be less than 0.4%; typically anything under 1% will likely stay pretty wet.

We can discuss further details as needed at the February R&B Committee meeting.

Dan

On Sun, Nov 30, 2014 at 5:00 PM, Village Email <pmeroni@barringtonhills-il.gov> wrote:

Bob and Dan,

I hope you had a nice Thanksgiving and a restful break which we all needed.

I drove around this afternoon because I heard the generator running when I went out and there is still area of standing water in the ditch in front of 241(King) and across the street in front of Kainse. The culvert must be clogged since nothing has moved since Bob and I drove around there. Can someone take a look before everything freezes?

Thanks,

Patty

Sent from my iPad

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To ensure compliance with the Open Meetings Act, elected or appointed members of the public body may reply to this message, but they should not forward it or send a copy of the reply to other members of the public body.

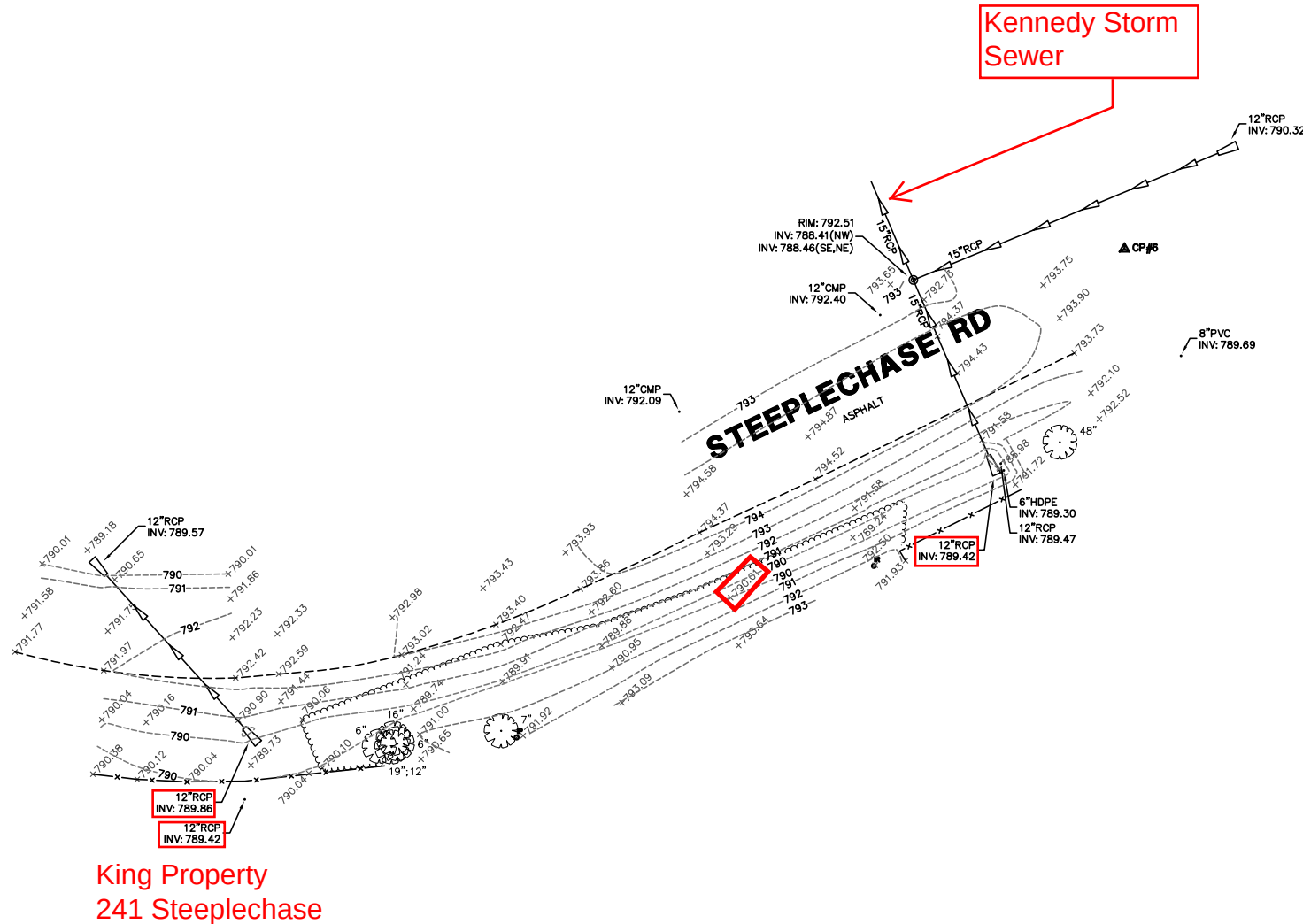
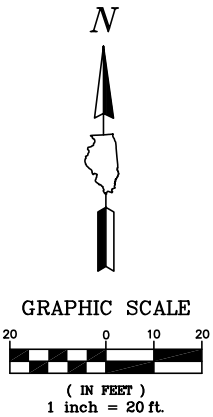
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Dan Strahan, P.E., CFM
Gewalt Hamilton Associates, Inc.
625 Forest Edge Drive
Vernon Hills, IL 60061
[\(847\)-478-9700](tel:(847)478-9700) (Main)
[\(847\)-821-6233](tel:(847)821-6233) (Direct)



9355.140 Steeplechase Drainage Exhibit Mark-Up.pdf
168K

- LEGEND**
- AIR CONDITIONER
 - BOLLARD/POST
 - BUFFALO BOX
 - BUSH/SHRUB
 - BUSH LINE/BRUSH LINE
 - CATCH BASIN
 - CLEANOUT
 - CONTOUR
 - CONTROL POINT
 - CONTROL VALVE
 - CROSS/NOTCH
 - CULVERT
 - DISK
 - DITCH/SWALE
 - DOWNSPOUT
 - DRAIN
 - ELECTRIC BOX
 - ELECTRIC LINE
 - ELECTRIC MANHOLE
 - ELECTRIC METER
 - FENCE
 - FIBER OPTIC LINE
 - FIBER OPTIC MANHOLE
 - FIRE HYDRANT
 - FLAG POLE
 - FLARED END SECTION
 - GAS LINE
 - GAS MANHOLE
 - GAS METER
 - GAS VALVE
 - GREASE TRAP
 - GROUND LIGHT FIXTURE
 - GUARDRAIL
 - GUY WIRE
 - HANDHOLE
 - HANDHOLE (HEAVY DUTY)
 - INLET
 - IRON PIPE
 - IRON ROD
 - LIGHT POLE
 - MAG NAIL/P.K. NAIL
 - MAILBOX
 - OVERHEAD ELECTRIC LINE
 - POWER POLE
 - ROCK
 - RIP RAP
 - R.O.W MARKER
 - SANITARY FORCEMAIN LINE
 - SANITARY SEWER LINE
 - SANITARY SEWER MANHOLE
 - SIGN
 - SOIL BORING
 - SPOT ELEVATION
 - SPRINKLER HEAD
 - STORM SEWER LINE
 - STORM SEWER MANHOLE
 - TELEPHONE LINE
 - TELEPHONE MANHOLE
 - TELEPHONE BOX/PEDESTAL
 - TELEVISION LINE
 - TELEVISION MANHOLE
 - TELEVISION BOX/PEDESTAL
 - TRAFFIC SIGNAL
 - TRAFFIC SIGNAL CONTROL BOX
 - TREE--CONIFEROUS (SIZE/TAG#)
 - TREE--DECIDUOUS (SIZE/TAG#)
 - TREE STUMP
 - VALVE BOX
 - VALVE VAULT
 - VRAD BOX
 - WATER FOUNTAIN
 - WATER VALVE
 - WATERLINE EDGE
 - WATERMAIN LINE
 - WATER METER
 - WATER METER PIT
 - WELL HEAD
 - WETLAND
 - WETLAND FLAG



Point Table				
Point #	Northing	Easting	Elevation	Description
6	2000739.85	1026188.73	793.21	CP6-MN
7	2000830.47	1026510.26	796.90	CP7-MN

GHA **GEWALT HAMILTON**
ASSOCIATES, INC.
625 Forest Edge Drive ■ Vernon Hills, IL. 60061
TEL 847.478.9700 ■ FAX 847.478.9701

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EXISTING CONDITONS
STEEPLECHASE ROAD
BARRINGTON HILLS, ILLINOIS

NO.	BY	DATE	REVISION	NO.	BY	DATE	REVISION

FILE 9355.140-EX.dwg		SHEET NUMBER:	
DRAWN BY: MAG	GHA PROJECT #	1	
DATE 1/21/15	9355.140		
CHECKED BY: CCF	SCALE	OF 1 SHEETS	
DATE	1"=20'		

MEMORANDUM

To: Robert Kosin, VBH Director of Administration
Patty Meroni, VBH Chairman Roads & Bridges

From: Daniel J. Strahan, P.E., CFM
Gewalt Hamilton Associates

Date: February 12, 2015

Re: Paganica Drainage Project

At the January Roads & Bridges Committee meeting a report was provided regarding a potential joint project in Paganica Subdivision between the Village and a developer. The developer was contemplating the purchase of three lots at the end of Rub of the Green Lane that would require fill within the regulatory floodplain, which would require compensatory storage be created nearby. The Village expressed interest in working jointly with this developer to provide additional compensatory storage to address a standing condition of the Village's certification with Lake County SMC.

Preliminary details of the project were provided to Lake County SMC staff, who expressed concerns primarily with regard to uncertainty over the regulatory floodplain elevation in this area. The Village, the Paganica Homeowners' Association, and the developer may have a mutual interest in providing greater definition to the floodplain elevation of Flint Creek as it moves through this area. The developer has asked the Village to arrange a meeting with Lake County SMC to further discuss what will be required. Concurrently, the Village has requested a meeting with the HOA president to discuss what interests the HOA may have in further study of the Flint Creek floodplain and also discuss details for the proposed compensatory storage project.

MEMORANDUM

To: Robert Kosin, VBH Director of Administration
Patty Meroni, VBH Chairman Roads & Bridges

From: Daniel J. Strahan, P.E., CFM
Gewalt Hamilton Associates

Date: February 12, 2015

Re: 2015 Seasonal Load Limits

Each spring our office monitors the pavement conditions on Village roadways as well as observed and forecast temperatures in anticipation of establishing a seasonal reduction in the weight limits on local roads down to 10 tons. The purpose of the reduced load limit is to protect the roadways during the spring thaw, during which subsurface conditions result in a reduced capacity for the road base to support overweight loads. The restrictions are put in place pursuant to 625 ILCS 5/15-316, which allow local agencies to impose such a restriction when roads are likely to be seriously damaged or destroyed by overweight vehicles for reasons of "deterioration, rain, snow, or other climate conditions".

Quantitatively this analysis is completed by measurement of Cumulative Freezing Degree Days (CFDD), a statistical measure established by the Federal Highway Administration. A typical threshold for imposing a seasonal weight restriction due to frost is 400 CFDD. Through February 10th, we have calculated this value is 458 CFDD based on temperature values gathered at the Village Hall weather station and is likely to continue to climb in the coming weeks based on current forecasts. For comparison, this value stood at 1049 CFDD through February 10th last year.

We anticipate a recommendation will be issued to post reduced load limits on Village Roads in early to mid-March. The timeframe for this reduction will be based upon weather conditions and observed pavement conditions. Past dates for this closure are attached for reference.

Village of Barrington Hills
Seasonal Posting of Roads
Historical Schedule

Year	Weight Limits Posted	Weight Limits Lifted
1986	March 10, 1986	May 12, 1986
1987	February 18, 1987	April 13, 1987
1988	March 7, 1988	May 3, 1988
1989	March 15, 1989	May 3, 1989
1990	February 12, 1990	April 30, 1990
1991	March 1, 1991	May 13, 1991
1992	March 4, 1992	May 4, 1992
1993	March 10, 1993	June 2, 1993
1994	March 14, 1994	May 9, 1994
1995	March 20, 1995	May 26, 1995
1996	March 4, 1996	May 20, 1996
1997	March 10, 1997	May 19, 1997
1998	None	None
1999	February 22, 1999	May 3, 1999
2000	March 6, 2000	May 8, 2000
2001	March 12, 2001	May 7, 2001
2002	March 25, 2002	May 6, 2002
2003	March 24, 2003	May 1, 2003
2004	March 8, 2004	May 3, 2004
2005	March 21, 2005	May 2, 2005
2006	March 13, 2006	May 1, 2006
2007	March 19, 2007	April 30, 2007
2008	March 17, 2008	May 5, 2008
2009	March 16, 2009	May 11, 2009
2010	March 8, 2010	April 26, 2010
2011	March 14, 2011	May 9, 2011
2012	None	None
2013	March 14, 2013	May 6, 2013
2014	March 17, 2014	May 5, 2014

Cuba Township Road District

INVOICE

28160 W. Cuba Road
Barrington, Illinois 60010
Phone 847-381-7793 Fax 847-382-1210

INVOICE #:BHSR0115
DATE: FEBRUARY 3RD, 2015

TO:

Village of Barrington Hills
112 Algonquin Road
Barrington Hills, IL 60010

FOR:

Material bill from January 2015

CONSTANTS:

Salt price delivered is \$54.65/ ton

Liquid price is \$0.57/Gallon

Village has 41 road miles or 82 lane miles

DATE	NUMBER OF PASSES ON VILLAGE ROADS DURING EVENT	TOTAL TONNAGE USED	TOTAL GALLONS USED
January 3 rd , 2015	2 passes @ 350 lbs/lane mile W/ Liquid	28.70 Tons	574 Gallons
January 4 th , 2015	1 pass @ 350 lbs/lane mile W/ Liquid 3 passes @ 400 lbs/lane mile W/ Liquid	14.35 Tons 49.20 Tons	287 Gallons 984 Gallons
January 5 th , 2015	2 passes @ 350 lbs/lane mile W/ Liquid	28.70 Tons	574 Gallons
January 7 th , 2015	Cleanup 1 Pass @ 200 lbs/lane mile W/ Liquid	8.20 Tons	164 Gallons
January 8 th , 2015	1 pass @ 350 lbs/lane mile W/ Liquid 1 pass @ 400 lbs/lane mile W/ Liquid	14.35 Tons 16.40 Tons	287 Gallons 328 Gallons
January 11 th , 2015	1 pass @ 350 lbs/lane mile W/ Liquid	14.35 Tons	287 Gallons
January 20 th , 2015	1 pass @ 300 lbs/lane mile W/ Liquid	12.30 Tons	246 Gallons
January 25 th , 2015	1 pass @ 350 lbs/lane mile W/ Liquid	14.35 Tons	287 Gallons
January 26 th , 2015	1 pass @ 300 lbs/lane mile W/ Liquid 1 pass @ 250 lbs/lane mile W/ Liquid	12.30 Tons 10.25 Tons	246 Gallons 205 Gallons
			Sub Total:
TOTAL TONS USED		223.45 tons @\$54.65/Ton	\$12,211.54
TOTAL GALLONS USED		4,469 Gallons @ \$0.57/Gallon	\$2,547.33
Special Call-out/Pre-treatment Labor/Truck Cost	January 3 rd , 2015	4 Hours @ \$125.00/Hour	\$500.00
TOTAL DUE:			\$15,258.87

Make all checks payable to Cuba Township Road District
Total due in 30 days unless other payment options have been arranged.

Thank you for your business!



Significant Weather Events/Climate info for January, 2015

Weather by Request

Volume 11, Issue 03

(Top Highlights of the month include):

- 1.) Some snow late on the 3rd/More Numerous on the 4th**
- 2.) Potent Clipper Storm (Late 5th/early 6th)**
- 3.) Another Potent Clipper Event (Jan 8th/early 9th)**
- 4.) A Band of Snow (Jan 11th/early 12th)**
- 5.) Warmer temps and several precipitation/Clipper events**
- 6.) Climatic Weather Summary for O'Hare Airport (January, 2015)**
- 7.) Weather Trends for February 2015**

Top Weather Events of the month (January, 2015)

Some snow late on the 3rd/More numerous on the 4th: Arctic high pressure brought below average temps and dry weather during the first few days of the month with plentiful amounts of sun. Wintry Mix (Saturday morning, 01-03-15): Wintry weather arrived over all of northern Illinois with a mix of snow, sleet and freezing rain, which developed around 1am or 2am on the 3rd and continued through mid to late morning. Temperatures and ground temperatures were between 32 and 35; however, slippery conditions were reported across a good portion of the area during the morning. The onset began as snow for a few hours with a change over to freezing rain and sleet and eventually to rain. Some wet snow continued across the far northern

suburbs through late morning though at times. Snow amounts ranged from a dusting to a little greater than a half inch with rain amounts around a quarter to a third of an inch. There were several icy spots and while ground temps were slow to rise above freezing, icy conditions continued over some of the far north/northwest suburbs even into Saturday evening. Any rain tapered off to drizzle by mid to late afternoon with temps steady in the low and mid 30s. Again, there were some reports of freezing drizzle across the far north/northwest suburbs at times. More Wintry Weather-Snow on the 4th: The second half of the storm approached from the southwest with a mix of rain/snow/freezing drizzle (12am to 2am) changing over to numerous snow showers from 2am to 6am (4th) with 0.50 to 2.0 inches accumulating during this time. Snow was slushy with temperatures between 30 and 33 and ground temps a little below freezing. A cold front approached early in the morning and with the approach of a secondary disturbance, snow showers redeveloped and deposited another half inch to a little greater than one inch between 7am and 4pm. Much of the disturbance shifted to the east by mid/late afternoon and temperatures continued to fall through the 20s and into the teens. Northwest winds increased with several gusts 25 to nearly 30 mph resulting in areas of blowing snow. 1.25 to 3.0 inch totals were common during the day for the Jan. 4th totals.

Potent Clipper Storm (Jan 5th/6th): A vigorous but fast moving clipper passed through the entire region with the heaviest snow passing across the far south and southwest suburbs. Snow developed between 6:30pm and 8pm on the 5th with the steadiest snow falling through about midnight or 1am on the 6th. Occasional light snow and flurries lingered through 5am or 6am in some areas with little additional accumulation during this time. Total snowfall amounts ranged from 1.5 to 3.5 inches with even higher amounts across central Illinois where 5 to 6 inches fell. Snow ratios were approximately 15 to 1, supporting a very dry, powdery snow. Snow fell over a 5 to 7 hour window with a few lingering flurries for an additional 1 to 2 hours. A Winter Weather Advisory was up for the entire area with A Winter Storm Warning across central and eastern Illinois. Temperatures were in the single digits and fell several degrees toward the tail end of the event as skies cleared. Winds were relatively light through much of the event, generally less than 10 mph.

Another Potent Clipper Event (Jan 8th/early 9th): A vigorous but fast moving clipper once again passed through northern Illinois depositing a few inches of snow along with gusty winds, which caused considerable problems with blowing and drifting snow. Snow moved into our area between 12pm and 1pm and continued through about 3pm or 3:30pm. There were bursts of moderate to heavy snow with most areas picking up 0.5 to 1.5 in. of accumulation. There was a brief lull and then snow showers moved back in from the northwest with several snow showers persisting through at least 1am (on the 9th) with flurries continuing through 5am. This produced an additional 0.5 to 1.5 inches across the region. Snow totals ranged from 1.5 to 3.0 with highly variable totals over short distances due to narrow but intense bands of snow that set up. Temperatures, which were well below zero before the event steadily went up, reaching the single digits at start time and mid teens during the evening and then falling again into the single digits on the morning of the 9th. Winds were quite strong with several gusts between 30 and 35 mph which continued at times into the 9th.

A Band of Snow (Jan 11th/early 12th): A cold front coming down from the north and a upper-level disturbance linked up with a potent jet-stream aloft to produce a band of fairly heavy snow over parts of the metro area on the 11th. Snow formed first across the southern suburbs around 3pm and shifted north across the rest of the area between 4pm and 5:30pm. A band of snow became focused from near the I-88 corridor to a little north of Lake Cook Road for several hours. Through about 9pm or 10pm, moderate snow fell resulting in a few inches of snow over the 30 to 40 mile wide band. As the band of snow reorganized and shifted south, snow moved back into the southern suburbs (after a gap for several hours) and continued through about 3am. Snow amounts ranged from nothing near the IL/WI border to 1-3 inches across the rest of the area. The higher totals, closer to 3 inches, were near O'Hare, Arlington Heights, Streamwood, Des Plaines and Evanston Corridor. Temps were between 27 and 30, so the snow was light and fluffy (about a 10 to 1 ratio). Temps the next morning (12th) fell into the teens to low 20s with increasing winds behind the front with several gusts to 25 mph. Lake effect flurries and snow showers formed during the afternoon hours and became more organized late in the day and at night as winds shifted to the

north/northeast. Lake effect flurries and snow showers were rather insignificant but continued during the morning of the 13th and extended well inland even into portions of the Fox Valley. Snow amounts ranged between a dusting to a half inch, highest amounts across eastern and southeast Cook County. As winds shifted east (on the morning of the 13th), the lake effect set shifted north and west through the metro area and up across southern and southeast Wisconsin.

Warmer Temperatures and Several Precipitation Events:
Southwest winds and an increased amount of sun brought warmer temperatures between the 15th and 26th with just a few minor precipitation events. A warm front retreating north through Wisconsin brought temps in the 40's on the 17th and 18th. While much of the precip stayed to our north, a few sprinkles and flurries passed through for a few hours on Sunday, the 18th. Overall, the week of the 19th through 24th average several degrees above normal due to snow melt and a decent amount of sunshine. A few clippers passed through the Upper Midwest, however, these systems were not major. Some freezing drizzle formed on the evening of the 20th with temps falling below freezing. This produced several slick spots across the area. Bands of light snow fell on the morning of the 21st with most areas picking up a dusting to a few tenths of an inch. A heavier band of snow set up for several hours across the far southwest sections (especially south and west of Joliet) and produced 1 to 1.5 inches of wet snow. Areas of flurries/mist continued through the rest of the day on the 21st with temps between 31 and 34, falling again into the upper 20s toward evening. A few residual flurries and areas of mist continued for some areas into the afternoon and evening hours with generally trace amounts. A clipper, which tracked well to our south and west brought a minimal amount of snow to the area on the 25th with most areas picking up between a 0.30 to 1.25 inches. A wintry mix of precip developed toward the predawn hours and changed over to wet snow between 7am and 9:30am. Generally just light amounts of snow fell through early afternoon and tapered off from north to south between 12pm and 3:30pm. Strong gusty winds off the lake resulted in areas of blowing and drifting snow with gusty winds diminishing during the evening. Other than a small amount of lake enhancement for a brief period of time, the lake contributed very little and most of the upper level dynamics ended up passing us by to the south. Dry air

rushing in from the north was another limiting factor for lake effect despite the strong fetch off the lake. Temperatures during the event ranged from 28 to 33 and slowly fell behind a strong cold front which moved from north to south during the morning hours. By evening, temps fell into the mid 20s as skies cleared. Overall, the higher totals favored some of the northern suburbs with an inch near Libertyville, Vernon Hills and Deerfield. On Monday, the 26th, another weak clipper moved into the Midwest with light amounts of precipitation returning to much of northern Illinois and southern Wisconsin. Periods of light snow and flurries developed early in the afternoon and continued off and on into the evening hours, increasing some in coverage and intensity during the evening and nighttime hours. A wintry mix of freezing rain, snow, ice pellets and freezing drizzle fell during the evening (26th) and continued very early into the 27th creating several icy spots. A warm front and trough axis was responsible for the persistence of precipitation and with temps from the mid and upper 20s, freezing rain advisories were posted for the entire metro area. Total snowfall accumulation was between a few tenths of an inch to a good inch. The next weak system moved in late on the 28th and early on the 29th with some light precip in the form of freezing drizzle, light rain/drizzle and a few snow showers. No accumulation and no issues on any treated surface. Average temperatures during the event were between 32 and 36. Weak low pressure moved across with much of the precipitation occurring to the east of the low so just minimal amounts for our region as a result. The very end of the month ended on a quiet note (30th and most of the 31st) with warmer temps and a mix of clouds and sun. The next snow event approached late on the 31st and especially into February 1st bringing many inches of snow and blizzard conditions to the entire area with some lake enhancement. This turned into the seasons biggest winter storm and was a long duration event as the track of the system shifted farther north. This resulted in the heavier band of snow moving across much of northern Illinois as two systems phased over the region. This turned out to be a very impressed winter storm and covered a lot of real estate.

Climatic Weather Summary(O'Hare Airport)-January, 2015

Weather by Request

Average High Temperature: 29.0
Average Low Temperature: 15.5
Average Monthly Temperature: 22.25
Departure From Normal: -1.5 Below Normal
Highest Temperature: 43 on the 24th
Lowest Temperature: -8 on the 8th

Average Precipitation: 1.73 In.
Monthly Precipitation: 1.41 In.
Departure From Normal: -0.32 In. Below Normal
Average Snowfall: 10.8 in.
Monthly Snowfall: 13.9 in.
Departure From Normal: 3.1 In. Above Normal
Greatest 24 hour snowfall: 3.0 in. on the 8th
Top three maximum wind Gusts:
1.) 39 mph on the 8th
2.) 38 mph on the 9th
3.) 37 on the 17th

Days with snow/amounts (January, 2015)

Days with a trace of snow: 9th, 14th, 18th, 19th, 27th, 29th,
30th

<u>3rd:</u> 0.4 in.	<u>21st:</u> 0.1 in.
<u>4th:</u> 2.2 in.	<u>25th:</u> 0.6 in.
<u>5th:</u> 1.8 in.	<u>26th:</u> 1.0 in.
<u>6th:</u> 0.2 in.	<u>29th:</u> 0.1 in.
<u>8th:</u> 3.0 in.	<u>31st:</u> 1.3 in.
<u>11th:</u> 2.6 in.	
<u>12th:</u> 0.4 in.	
<u>13th:</u> 0.2 in.	

Seasonal Total so far: 16.8 in. (O'Hare-As of 01-31-15)

February, 2015 Weather Trends

- Temperatures will average 2.5 to 4.5 in. below normal.
 - In a typical February, the average mean temperature is 27.7
 - In a typical February, 9.1 inches of snow normally falls. Above Normal Snow is expected
 - Forecasted snow in February: 20 to 25 inches.
 - Average Precipitation in a typical February: 1.79 in.
 - Precipitation will average above normal.
 - Probably a similar upper-air pattern to what we experienced in January. This means that the main storm track (after the 1st and 2nd of the month) for major storm systems will mainly move through the Ohio & Tennessee valley and up across the East Coast and New England. For us, a bunch of northwest flow disturbances and one significant storm (Feb 1st of course) will result in 20 to 25 inches during the month. While it will trend colder through a good portion of February, there will also be some mild days, mainly toward the third week of the month. Overall, the pattern looks active with a parade of clippers passing through our region, sometimes at 2 day or three day intervals.
-

Official High and Low Temperatures

(O'Hare Airport)/January, 2015

Village Weather Station in Red

<u>1st:</u>	32/14	(31/14)	<u>16th:</u>	34/23	(35/25)
<u>2nd:</u>	34/15	(34/18)	<u>17th:</u>	42/26	(43/27)
<u>3rd:</u>	34/29	(34/29)	<u>18th:</u>	40/27	(40/29)
<u>4th:</u>	33/02	(33/1)	<u>19th:</u>	41/25	(42/25)
<u>5th:</u>	06/-3	(8/-4)	<u>20th:</u>	36/29	(35/30)
<u>6th:</u>	10/-5	(10/0)	<u>21st:</u>	33/29	(43/27)
<u>7th:</u>	06/-6	(5/-7)	<u>22nd:</u>	31/28	(31/28)
<u>8th:</u>	18/-8	(17/-8)	<u>23rd:</u>	31/29	(31/28)
<u>9th:</u>	11/0	(10/0)	<u>24th:</u>	43/29	(41/29)
<u>10th:</u>	24/-2	(22/-5)	<u>25th:</u>	34/24	(33/27)
<u>11th:</u>	32/22	(32/20)	<u>26th:</u>	26/15	(27/14)
<u>12th:</u>	28/15	(28/12)	<u>27th:</u>	32/20	(32/20)
<u>13th:</u>	19/03	(21/4)	<u>28th:</u>	34/19	(35/21)
<u>14th:</u>	19/01	(19/-1)	<u>29th:</u>	35/28	(36/28)
<u>15th:</u>	34/17	(33/17)	<u>30th:</u>	30/18	(29/17)
			<u>31st:</u>	36/19	(36/18)

MEMORANDUM

To: Robert Kosin, VBH Director of Administration
Patty Meroni, VBH Chairman Roads & Bridges

From: Daniel J. Strahan, P.E., CFM
Gewalt Hamilton Associates

Date: February 12, 2015

Re: Village of Algonquin
Highland Avenue/Spring Creek Road PDR

We have received from the Village of Algonquin revised copies of the draft Project Development Report (PDR) for the Highland Avenue/Spring Creek Road Improvements. In 2012 the Village of Algonquin applied for and was awarded STP funding for roadway improvements on Highland Avenue (Spring Creek within Barrington Hills) from Tanglewood Drive to Hager's Bend Road. The project is currently scheduled for construction in 2016. Within Algonquin, Highland Avenue is proposed to be widened and reconstructed. The scope of work within Barrington Hills includes resurfacing to the existing width of the pavement.

The revised PDR submittal reflects comments provided to the Village of Algonquin on December 17, 2014; our original comments are included for reference. It is noted that the estimate of cost provided by the Village of Algonquin increased from \$1.8 million in the preliminary submittal to \$2.7 million as shown in the attached spreadsheet. The updated cost is still conceptual in nature. It was noted in the submittal that during Phase II engineering a more detailed estimate will be developed that breaks out the costs for each Village. The increase in price is noteworthy since the McHenry County Council of Mayors policy caps the federally funded portion of the project (normally 80%) at \$1.5 million.

**Engineer's Estimate of Probable Costs
Highland Avenue Improvement
Tanglewood Drive/Tanglewood Court
to South of Haegers Bend Road**

Earthwork Items	Unit	Unit Cost	Quantity	Cost
Earth Excavation	CU YD	\$40.00	5,000	\$220,000
Restoration	SQ YD	\$15.00	9,100	\$136,500
Earthwork Subtotal =				\$356,500

Removal Items	Unit	Unit Cost	Quantity	Cost
Pavement Removal - Pavement Reconstruction	SQ YD	\$15.00	10,500	\$157,500
HMA Surface Removal - Pavement Resurfacing	SQ YD	\$5.00	3,400	\$17,000
Driveway Removal	SQ YD	\$10.00	250	\$2,500
Removal Subtotal =				\$177,000

Roadway and Bike Path Items	Unit	Unit Cost	Quantity	Cost
Pavement Patching - Pavement Resurfacing	SQ YD	\$70.00	450	\$31,500
Surface, 2" - Pavement Reconstruction and Resurfacing	TON	\$90.00	1,600	\$144,000
Binder, 4" - Pavement Reconstruction	TON	\$90.00	2,400	\$216,000
Binder 1" - Pavement Resurfacing	TON	\$90.00	200	\$18,000
Agg Subgrade 12" - Pavement Reconstruction	SQ YD	\$17.50	12,600	\$220,500
Type B-6.12 CC&G - Pavement Reconstruction	FOOT	\$25.00	7,000	\$175,000
Agg Shoulders - Pavement Resurfacing	SQ YD	\$12.00	800	\$9,600
HMA Driveway, 5"	SQ YD	\$45.00	300	\$13,500
HMA 3" - Shared Use Path	TON	\$100.00	650	\$65,000
Agg 6" - Shared Use Path	SQ YD	\$10.00	3,800	\$38,000
Roadway and Bike Path Subtotal =				\$931,100

Drainage Items	Unit	Unit Cost	Quantity	Cost
Mainline Sewer - 36"	FOOT	\$90.00	3,250	\$292,500
Laterals 12"	FOOT	\$60.00	800	\$48,000
Catch Basins	EACH	\$4,500.00	32	\$144,000
Manholes	EACH	\$6,000.00	13	\$78,000
Trench Backfill	CU YD	\$45.00	975	\$43,875
Drainage Subtotal =				\$606,375

Lump Sum Items	Unit	Unit Cost	Quantity	Cost
Traffic Control and Protection	L. SUM	\$75,000.00	1	\$75,000
Mobilization	L. SUM	\$90,000.00	1	\$90,000
Construction Layout	L. SUM	\$40,000.00	1	\$40,000

Lump Sum Subtotal = \$205,000

Construction Subtotal = \$2,275,975

Contingency (20%) = \$455,195

Construction Total = \$2,731,170

Design Engineering (8%) = \$218,494

Construction Engineering (10%) = \$273,117

Project Total = \$3,222,781