

Taft Library Building Committee

MEMO

To: Taft Library Building Committee

From: Joe Cronin

Subject: Rain Water Infiltration at 29 North Avenue

Date: June 17, 2013

During the course of our meetings, the subject has come up regarding rain water infiltration in the basement of 29 North Avenue, when the property was still serving as Saint Michael's church. Some committee members had noted that during periods of heavy rain, there was a problem with rain water infiltration, and there were mixed discussions regarding whether or not the problem had been adequately addressed.

Starting on Friday June 7, 2013 through Friday June 14th, the Mendon area received several significant rainstorms; totaling 7.34 inches of rain, per the National Weather Service (please refer to the attached daily weather reports from the NWS). During this eight day period of heavy rainfall, I and other committee members checked the basement of 29 North Avenue several times to determine if there was any infiltration into the basement from these unusually heavy amounts of rain.

On Saturday June 8, 2013, I visited the address to check to see if there was any rain water infiltration from the previous rain. The area had received 2.68 inches of rain on Friday June 7, and .59 inches of rain on June 8, 2013. Upon checking the basement, I found that the perimeter of the basement level did not show any signs of any rain infiltration, however there were two locations that showed signs of water. The mechanical room showed some seepage from underneath the exterior door, and also from the fresh air intake ductwork for the heating systems (see photo below), and there was evidence of rain water coming from the roof, thru interior partitions in the basement (see photo below).



Rain water infiltration under door



Rain infiltration through interior partition

On Tuesday June 11, 2013 I visited the site again with Moritz Schmidt. On Monday and Tuesday, we had received an additional 1.87 inches of rain. As with the previous time, Moritz and I checked the basement, and the only sign of rain water infiltration was at the rear door in the mechanical room. The perimeter of the basement did not show any signs of rain water infiltration.

On Thursday June 13 and Friday June 14, 2013 we again received heavy rain, totaling 2.20 inches of rain. Again, I checked the basement areas, and found that the only sign of any rain water infiltration was again in the mechanical room, again coming in under the rear door. As with Tuesday, the fresh air ductwork had not carried in any noticeable rain water, as the insulation on the duct was not showing any signs of moisture.

It should be noted that the basement walls have been "built out" from the original CMU walls, and the possibility exists that there may be some seepage of water thru the CMU that isn't making it past the additional interior framing and drywall.

CLIMATE REPORT
 NATIONAL WEATHER SERVICE TAUNTON MA
 135 AM EDT SAT JUN 8 2013

.....
 ...THE WORCESTER MA CLIMATE SUMMARY FOR JUNE 7 2013...

CLIMATE NORMAL PERIOD 1981 TO 2010
CLIMATE RECORD PERIOD 1892 TO 2013

WEATHER ITEM	OBSERVED VALUE	TIME (LST)	RECORD VALUE	YEAR	<u>NORMAL</u> VALUE	DEPARTURE FROM <u>NORMAL</u>	LAST YEAR
.....							
TEMPERATURE (F)							
YESTERDAY							
MAXIMUM	56	219 PM	94	1925	72	-16	69
MINIMUM	50	1159 PM	40	1958	54	-4	48
AVERAGE	53				63	-10	59
PRECIPITATION (IN)							
YESTERDAY	2.68R			1.75	2006	0.15	2.53
MONTH TO DATE	3.58					1.09	2.49
SINCE JUN 1	3.58					1.09	2.49
SINCE JAN 1	20.39					20.32	0.07

CLIMATE REPORT
 NATIONAL WEATHER SERVICE TAUNTON MA
 141 AM EDT SUN JUN 9 2013

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 ...THE WORCESTER MA CLIMATE SUMMARY FOR JUNE 8 2013...

CLIMATE NORMAL PERIOD 1981 TO 2010
CLIMATE RECORD PERIOD 1892 TO 2013

WEATHER ITEM	OBSERVED VALUE	TIME (LST)	RECORD VALUE	YEAR	<u>NORMAL</u> VALUE	DEPARTURE FROM <u>NORMAL</u>	LAST YEAR
.....							
TEMPERATURE (F)							
YESTERDAY							
MAXIMUM	73	315 PM	91	1984	72	1	76
				1933			
MINIMUM	49	236 AM	38	1934	54	-5	53
				1932			
AVERAGE	61				63	-2	65
PRECIPITATION (IN)							
YESTERDAY	0.59			1.12	0.15	0.44	0.03
MONTH TO DATE	4.17				1.24	2.93	3.43
SINCE JUN 1	4.17				1.24	2.93	3.43
SINCE JAN 1	20.98				20.47	0.51	16.66

CLIMATE REPORT
 NATIONAL WEATHER SERVICE TAUNTON MA
 556 PM EDT SUN JUN 9 2013

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 ...THE WORCESTER MA CLIMATE SUMMARY FOR JUNE 9 2013...
 VALID TODAY AS OF 0500 PM LOCAL TIME.

CLIMATE NORMAL PERIOD 1981 TO 2010
CLIMATE RECORD PERIOD 1892 TO 2013

WEATHER ITEM	OBSERVED VALUE	TIME (LST)	RECORD YEAR	YEAR	<u>NORMAL</u> VALUE	DEPARTURE FROM <u>NORMAL</u>	LAST YEAR	
.....								
TEMPERATURE (F)								
TODAY								
MAXIMUM	75	352 PM	92	2008	73	2	72	
MINIMUM	55	518 AM	38	1980	54	1	56	
AVERAGE	65				63	2	64	
PRECIPITATION (IN)								
TODAY	0.00			2.35	1931	0.16	-0.16	0.01
MONTH TO DATE	4.17					1.40	2.77	3.44
SINCE JUN 1	4.17					1.40	2.77	3.44
SINCE JAN 1	20.98					20.63	0.35	16.67

CLIMATE REPORT
 NATIONAL WEATHER SERVICE TAUNTON MA
 135 AM EDT TUE JUN 11 2013

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 ...THE WORCESTER MA CLIMATE SUMMARY FOR JUNE 10 2013...

CLIMATE NORMAL PERIOD 1981 TO 2010
CLIMATE RECORD PERIOD 1892 TO 2013

WEATHER ITEM	OBSERVED VALUE	TIME (LST)	RECORD VALUE	YEAR	<u>NORMAL</u> VALUE	DEPARTURE FROM <u>NORMAL</u>	LAST YEAR
.....							
TEMPERATURE (F)							
YESTERDAY							
MAXIMUM	68	730 AM	94	2008	73	-5	79
MINIMUM	55	1159 PM	40	1975	55	0	58
AVERAGE	62				64	-2	69
.....							
PRECIPITATION (IN)							
YESTERDAY	0.97						
MONTH TO DATE	5.14		2.00	1931	0.15	0.82	0.00
SINCE JUN 1	5.14				1.55	3.59	3.44
SINCE JAN 1	21.95				20.78	1.17	16.67

CLIMATE REPORT
 NATIONAL WEATHER SERVICE TAUNTON MA
 129 AM EDT WED JUN 12 2013

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 ...THE WORCESTER MA CLIMATE SUMMARY FOR JUNE 11 2013,...

CLIMATE NORMAL PERIOD 1981 TO 2010
 CLIMATE RECORD PERIOD 1892 TO 2013

WEATHER ITEM	OBSERVED VALUE	TIME (LST)	RECORD VALUE	YEAR	NORMAL VALUE	DEPARTURE FROM NORMAL	LAST YEAR
.....							
TEMPERATURE (F)							
YESTERDAY							
MAXIMUM	61	126 PM	91	1984	73	-12	73
MINIMUM	53	703 AM	37	1980	55	-2	56
AVERAGE	57				64	-7	65
PRECIPITATION (IN)							
YESTERDAY	0.90			1.42	1922	0.15	0.75
MONTH TO DATE	6.04					1.70	4.34
SINCE JUN 1	6.04					1.70	4.34
SINCE JAN 1	22.85					20.93	16.67

CLIMATE REPORT
 NATIONAL WEATHER SERVICE TAUNTON MA
 128 AM EDT THU JUN 13 2013

...THE WORCESTER MA CLIMATE SUMMARY FOR JUNE 12 2013...

CLIMATE NORMAL PERIOD 1981 TO 2010
 CLIMATE RECORD PERIOD 1892 TO 2013

WEATHER ITEM	OBSERVED VALUE	TIME (LST)	RECORD VALUE	YEAR	NORMAL VALUE	DEPARTURE FROM NORMAL	LAST YEAR
TEMPERATURE (F)							
YESTERDAY							
MAXIMUM	66	410 PM	90	1973	73	-7	73
				1949			
				1892			
MINIMUM	55	1138 PM	39	1980	55	0	55
AVERAGE	61				64	-3	64
PRECIPITATION (IN)							
YESTERDAY	T			1.46	1.903	0.15	-0.17
MONTH TO DATE	6.04					1.85	4.19
SINCE JUN 1	6.04					1.85	4.19
SINCE JAN 1	22.85					21.08	1.77
							16.84

CLIMATE REPORT
 NATIONAL WEATHER SERVICE TAUNTON MA
 135 AM EDT FRI JUN 14 2013

.....
 ...THE WORCESTER MA CLIMATE SUMMARY FOR JUNE 13 2013...

CLIMATE NORMAL PERIOD 1981 TO 2010
 CLIMATE RECORD PERIOD 1892 TO 2013

WEATHER ITEM	OBSERVED VALUE	TIME (LST)	RECORD YEAR	YEAR	NORMAL VALUE	DEPARTURE FROM NORMAL	LAST YEAR
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 TEMPERATURE (F)

YESTERDAY

MAXIMUM	62	740 AM	92	1984	74	-12	60
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				1892			
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MINIMUM	49	1159 PM	41	1979	55	-6	61
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				1925			
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AVERAGE	56				64	-8	65
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PRECIPITATION (IN)

YESTERDAY	1.32		2.83	1998	0.14	1.18	0.45
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MONTH TO DATE	7.36				1.99	5.37	4.06
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SINCE JUN 1	7.36				1.99	5.37	4.06
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SINCE JAN 1	24.17				21.22	2.95	17.29
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CLIMATE REPORT
 NATIONAL WEATHER SERVICE TAUNTON MA
 136 AM EDT SAT JUN 15 2013

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 ...THE WORCESTER MA CLIMATE SUMMARY FOR JUNE 14 2013...

CLIMATE NORMAL PERIOD 1981 TO 2010
CLIMATE RECORD PERIOD 1892 TO 2013

WEATHER ITEM	OBSERVED VALUE	TIME (LST)	RECORD VALUE	YEAR	<u>NORMAL</u> VALUE	DEPARTURE FROM <u>NORMAL</u>	LAST YEAR
.....							
TEMPERATURE (F)							
YESTERDAY							
MAXIMUM	71	603 PM	93	1956	74	-3	72
				1892			
MINIMUM	49	314 AM	41	1946	56	-7	57
AVERAGE	60				65	-5	65
PRECIPITATION (IN)							
YESTERDAY	0.88		1.85	1899	0.15	0.73	0.00
MONTH TO DATE	8.24				2.14	6.10	4.06
SINCE JUN 1	8.24				2.14	6.10	4.06
SINCE JAN 1	25.05				21.37	3.68	17.29