December 16, 2015

Report To: Mayor & Council

From: Doug Brown, Manager Operations & Facilities

SUBJECT: Fifield Petition in regards to the Storm Sewer System – 800 Block of Nelson Street- from Butler Avenue to Wood yard.

Please find attached the letter and the petition from Keith & Kenton Fifield dated October 29, 2015. Basically the Fifield brothers are of the opinion that the underground storm sewer system along the 800 block of Nelson Street should not be eliminated and that the large ditch at the end of the block should not be utilized as an alternative storm sewer system for the storm runoff water from the 800 Block of Nelson Street.

The reason why the existing underground storm sewer piping along the 800 block of Nelson Street was eliminated is simply pipe interference. The newly placed sanitary sewer service lines for 210 Butler Avenue, 814 & 816 Front Street properties interfered with the existing PVC storm sewer pipe (which was not scheduled to be replaced). The sanitary sewer service lines take priority over the storm sewer mains. The new sanitary sewer service lines were installed at a positive grade of 0.17% or at the same grade (slope) as the Nelson street new sanitary sewer main. As a result these new sanitary sewer service lines interfered with the existing storm sewer piping thus causing the storm sewer system to become non-functional.

Instead of relying the underground storm sewer piping, the Town in discussions with Hatch-Mott-MacDonald (design Engineers) elected to drain the entire 800 block of Nelson Street into a set of catch basins at the east limits of this block and discharge the storm runoff water into the large drainage ditch located between Nelson Street and the Wood yard. The length of this block of Nelson Street is 100 meters long.

Reviewing of the storm runoff calculations utilizing the rational method, for the proposed storm system, the additional flowrate from the 800 block of Nelson Street and portions of the surrounding properties on this block of Nelson under a 25 year return scenario is 67.23 litres/sec where the maximum capacity of the ditch is 5351 litres/sec. Thus adding or using up approximately 1.26% of the existing ditch capacity. Thus the new loading is considered to be insignificant. If the ditch reaches maximum capacity runoff water will discharge onto the Front Street first instead of surcharge the surrounding properties on the 800 block of Nelson Street or Nelson Street itself. See attached drawing showing the area which contributed to the storm runoff loading.

The Operations & Facilities Executive committee recommends the following;

1) The Fifield petition was reviewed where the Town will reconstruct the 800 block of Nelson Street as planned.

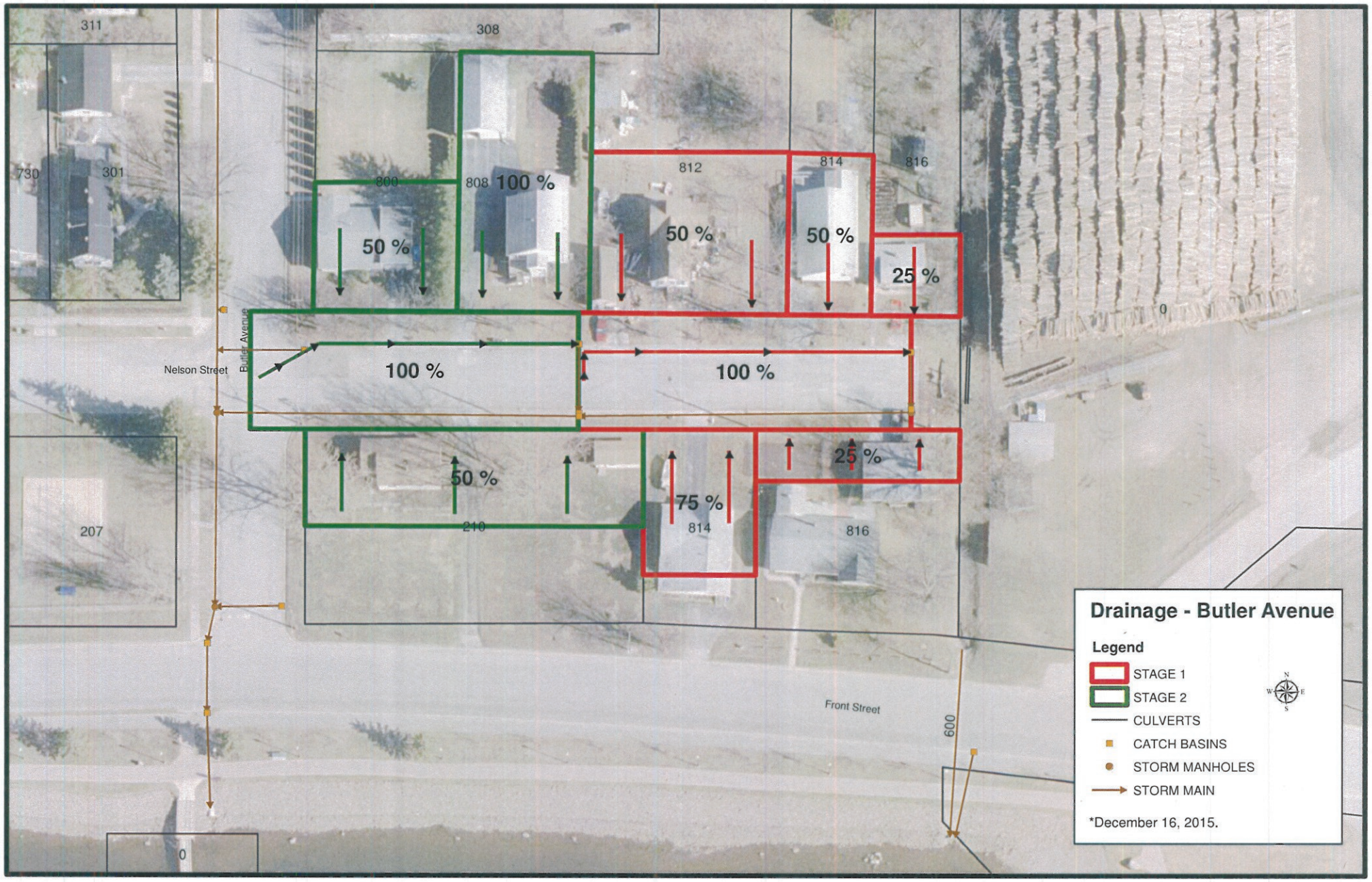
Respectfully submitted

Doug Brown

Doug Brown, P. Eng.
Operations and Facilities Manager

Council approval of this report will ensure the following;

1) The Fifield petition was reviewed where the Town will reconstruct the 800 Block of Nelson Street as planned.


Drainage - Butler Avenue
Legend
STAGE 1
STAGE 2
CULVERTS
CATCH BASINS
STORM MANHOLES
STORM MAIN
*December 16, 2015.
311
308
730
301
800
808
100 %
812
814
816
50 %
50 %
50 %
25 %
0
Butler Avenue
Nelson Street
100 %
100 %
50 %
210
75 %
814
25 %
816
207
Front Street
600
0

This is a petition to have the existing storm sewer in the 800 block of Nelson Street replaced

Doug Brown informed us on October 20th that he will not replace the existing storm sewer during the current road construction. The existing storm sewer system takes water from the 800 block of Nelson Street to the Butler Avenue system. His plan is to run all of the water from the 800 block of Nelson Street in to the big ditch at the end of the block.

Doug's plan will be catastrophic to homes near the big ditch due to flooding and will cause the street to flood.

The previous storm sewer worked fine. The problem was that over the years the road sank below the level of the catch basin grids, so the water would get to quite a high level before it would go down the drain.
The big ditch receives water from a large area. The ditch gets to very high levels of water at times. With a 3-inch rainfall in a 24-hour period the water level reaches right up to the brim of the ditch. This is normal to be expected at the best of times, and not even under winter conditions which are far worse when it comes to spring runoff conditions.
In the springtime the ditch water level constantly threatens to overflow the banks for weeks on end.

When it comes to the spring thaw the whole big ditch is piled high with snow, not to mention the 15to20 foot-high bank which is formed from the snow plow and loader pushing all the snow from the 800 block of Nelson St. to the dead end right up against the big ditch. On top of all this snow which the big ditch has a tough struggle to handle, it now has to contend with all the run off from the snow banks of 4 feet high or more from the street that occur from the snow plow, which builds up over the winter.
At least before this latest venture of removing the storm sewer, the water had a chance to go through the storm sewer tying in at Butler Avenue, and through to the river.

A major hurdle to overcome as far as bypassing the storm water flow into the big ditch is that it is flowing into an open ditch instead of a sealed storm water system where the water can flow unobstructed out to the river.
In the spring it can be warm in the daytime and be melting, and then at night it can all freeze over and mix with fresh or existing snow causing slush to freeze, and impede any water flow movement.
All this slush and snow causes a real issue when trying to flow through the culvert under Front Street to the river and especially with the culvert grate in place all this wet freezing snow makes like a dam. Even throughout the summer and fall this grate creates issues with buildup of grass, twigs, leaves and other debris.

At one time the town thought they owned the big ditch. The town would send out the fire department in the springtime to burn the grass in the ditch. The town would also send out a crew from time to time to dredge out the ditch. This all stopped in the early 1980's when it was discovered that the big ditch was on mill property.
When the town thought they owned the ditch property, the water from the curbs on both the north and south side of Nelson Street was directed through two above ground trenches to the ditch. This always caused a flooding problem as the ditch could not handle the extra volume of water.
The town eventually added the current storm sewer system which stopped the flooding problem from street water entering the ditch.

We find that it is very counterproductive to go back to conditions that were very detrimental in the past when lessons had to be learned the hard way.

It would be very beneficial for all parties including the residents affected on the 800 block of Nelson Street and as well benefit the town in a less hardship and cost effective manner to make the storm sewer functional as it had been and especially to save money while the road is presently under construction, instead of looking at eliminating the storm sewer as a cost saving venture in the short term.

Keith Fifield Kenton Fifield

We the residents of the 800 block of Nelson Street have signed this Petition to ask the Town of Fort Frances to replace the existing storm sewer along the 800 Block for the reasons described in the accompanying letter.

Contrary to this, the Town's plan is to eliminate the existing storm sewer and divert the water in to the big ditch.

Name	Address	Phone	Signature
Vivian Callaghan	812 Nelson Street	275-5145	Vivian Callaghan
Gemma Lamonato	814 Nelson	294-9592	G. Lamonato
Gladys Martin	816 Front St	274 3954	Gladys Martin
LORETTA BRUNETTA	800 NELSON ST	274-9475	Loretta Brunetta
Keith Fifield	912 5th St. East	274-5295	Keith Fifield
Paul Radbourne	808 Nelson St	274 5852	Paul Radbourne
Kenton Fifield	816 Nelson St.	274 6492	Kenton Fifield