



January 14, 2016

**ENGINEER'S REPORT**

**3<sup>rd</sup> Ave & 5<sup>th</sup> Ave Reconstruction**

At the January 4<sup>th</sup> meeting, Council requested information on a few items included in the street project. The first request was for information on the cost to install the sidewalk ramp at the intersection of 3<sup>rd</sup> Avenue NW and 2<sup>nd</sup> Street NW. The bid submitted by the contractor included a lump sum cost of \$33,000 to construct the ramp at this location. The intersection also requires installation of a retaining wall along the 2<sup>nd</sup> Street NW section behind the ramp due to the steep grade of the front yard. The wall is estimated at \$4,900 based on the bid price of \$28/square foot of retaining wall.

For comparison, the east side of this intersection contains steps which were bid at a lump sum cost of \$10,000. The existing retaining wall was able to be salvaged on the interior of the steps, so the cost was lower than if we were required to install a new wall to make the grades work.

The second request was for some background information on erosion control on 5<sup>th</sup> Avenue NW. The contractor finished backfilling and topsoil placement in December. The material was not workable due to being wet and resulted in large clods of material that were not able to be fine graded. The area was not seeded due to the rough grading, so erosion control was not placed. There was discussion about placing straw mulch over the area to help with erosion control, however, before the cost estimate was able to be prepared, the area was covered by snow. V&K discussed this with Public Works and agreed to monitor the area for signs of erosion. If erosion is witnessed, the plan that was discussed included placing filter socks around intakes and an on-site meeting to review and discuss appropriate measures.

The third request regarding the street project was for a summary of changes to the project along with the cost impact of those changes. A summary is as follows:

The first change that occurred was to consider a proposal from the contractor to construct all paving improvements of concrete in lieu of the combination of concrete and asphalt that was in the original project scope. The proposal would provide a more consistent and durable product at a slightly increased cost. The proposal was discussed with Council and approved. This added approximately \$10,000 to the project based on pavement quantity adjustment alone. There were additional impacts that resulted from this decision due to the uncertainty of the base material beneath the pavement that was removed under the revised scope of work. Several areas were found to be in very poor condition once the surfacing was removed. A large portion of the subgrade was able to be scarified and dried to resolve the issue, however, there were areas where unsuitable material had to be removed and stabilizing material and geogrid were required to provide a firm base for the pavement. The additional geogrid cost was approximately \$9,380 and the additional stabilizing material cost was approximately \$31,680 including removal of the unsuitable material and

placement of the stabilizing rock and granular subbase. The approximate cost impact of the change to all concrete paving including subgrade treatments was \$51,060.

Three additional changes were discussed during the course of construction that were considered minor.

The first change was installation of drain tile to address concerns of water accumulating in the granular material used to stabilize the base on 3<sup>rd</sup> Ave NW. Since there were no storm drains along this section, there was no place to drain the water from the granular material used this base repair area. A section of drain tile was installed to direct the water further down the street where it can discharge. The cost to install the drain tile was \$2,994.

The second change was to install a drain tile to direct stormwater accumulated in the Presbyterian Church parking lot. When the roadway was changed to full concrete reconstruction, the existing drain line was removed and required replacement. This was an unintended consequence of changing the paving material that was not factored into the original change. The cost for this drain line was \$2,980.

The third change was to replace two sanitary sewer manholes that were not considered to be in need of replacement during the design phase. The manholes appeared to be of sound concrete, however, when the contractor attempted to modify them for the required grade adjustment, they were brittle and cracked. Following discussion, it was decided to replace both structures since we were constructing new street over them. The cost to replace the two manholes was \$12,950.

The project is now nearly complete with the exception of the retaining wall and steps at the intersection of 3<sup>rd</sup> Avenue NW and 2<sup>nd</sup> Street NW. We have estimated the final project cost will be around \$980,000. This is approximately \$78,000 over the bid price of \$902,281.35 for the original project scope. We had discussed a 10 % contingency with the original project estimate. The estimate final cost would be approximately 8.6% above the original bid which is within the estimated contingency. The project was estimated to cost \$1,106,000 prior to the bid. The low bid was approximately 18.4% below the estimate for the project.

### ***Wagon Pass***

V&K previously inspected the wagon pass on 1<sup>st</sup> Street NW just south of Scobey Rd. The structure is in failing condition with spalling concrete and deteriorating reinforcing steel. The structure was evaluated to determine the proper load rating and new signage was installed to post the load limits. The structure will be evaluated annually to determine if the limits should be adjusted, or if the road should be closed. The City Attorney has drafted an agreement with the property owners to outline the risk associated with continued use. To date, the agreement has not been signed.

VEENSTRA & KIMM, INC.  
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