

REPORT / RECOMMENDATION



To: MAYOR AND CITY COUNCIL

Agenda Item #: IV. G.

From: Laura Adler, Water Resources Coordinator

Action

Discussion

Date: October 1, 2013

Information

Subject: Engineering Services – Appeal of FEMA Proposed Flood Hazard Determinations

Action Requested:

Authorize City Manager to approve attached proposal for Engineering Services.

Information / Background:

The Federal Emergency Management Agency (FEMA) has been revising the flood plain maps throughout Hennepin County since 2004. They issued a set of Preliminary Flood Insurance Rate Maps (FIRMs) and the accompanying Flood Insurance Study (FIS) for Hennepin County and started a 90-day review period on April 5, 2013. FEMA and its contractors developed the proposed flood plain map using hydrologic models and more accurate elevation information than was available in the at the last map revision in 2004.

During the official 90-day appeal period, City staff notified over 800 residents of the proposed changes and identified three areas where an appeal appeared to be justified. On June 4, 2013, Council approved a proposal for Barr Engineering to perform a technical evaluation of the three areas to determine if they warrant appeal. Barr's evaluation identified issues significant enough to warrant appeals in each of the three areas. City staff worked with Barr to prepare the appeals and submitted them to FEMA on July 3, 2013. The technical evaluation, preparation of appeals, and subsequent correspondence with FEMA has concluded the work included in the prior contract with Barr Engineer.

This request for purchase will provide a continuation of the technical work required to pursue the appeals. It is possible for the appeals process to progress through a number of stages, and the proposal includes cost estimates for each potential stage. The work provided by Barr Engineering under the original proposal was instrumental in getting FEMA to become aware of and take seriously the issues that warranted the appeals. Barr provided thorough evaluations of each study area and compelling arguments regarding the errors in the flood maps. The issues identified, particularly in the Rolling Green area, are complex and require additional technical support as City staff pursues the appeals.

Status of Appeals

Nine Mile Village

The preliminary flood maps include a large area near Bredesen Park that has not previously been in the flood plain. Barr determined that this was due to an incorrectly placed flood elevation and imprecise

topographical data in the ditch along Highway 62. City staff surveyed the ditch area, and Barr Engineering clarified with Atkins the correct placement of the elevation. The result is the removal of the large area included in the preliminary flood plain. This affects 24 homeowners in Nine Mile Village, preventing FEMA from erroneously placing them within the floodplain. In communications with Atkins and FEMA, they have agreed to make the changes included in the appeal. There will be no additional cost to the City for this appeal.

Morningside

This area is currently a Zone A flood plain, which means that there is no flood elevation associated with the shape on the map. The City has additional data from its Comprehensive Water Resources Management Plan that show a flood elevation for the area. The appeal submitted by the City would use that elevation along with existing topographical data to redraw the flood plain. FEMA has determined that since this area was not changed in the preliminary flood maps issued in 2012 (the area has been on the maps without change since at least 1982) that they could not accept an appeal for the area. FEMA has advised the City to submit a Letter of Map Revision (LOMR) to incorporate the data into the maps. There will be no fee charged for the LOMR, but there will be some work involved in preparing the existing materials for submission. Staff has agreed with this direction, with the understanding that the changes shall be included on the issued maps, not as a change after the publication of the new maps. The changes remove three properties and an additional seven homes from the floodplain. The changes also make it significantly easier for homeowners to show FEMA when they have a portion of their property, but not their home, within the floodplain and eliminate the requirement for flood insurance. The anticipated cost for completing the LOMR for the Morningside Area is \$3,765. The proposal includes an additional \$1,020 to address any follow-up with FEMA that may be necessary.

Rolling Green

The preliminary flood maps include a large change in Rolling Green neighborhood that was not in the most recently issued flood maps. Barr Engineering reviewed the model used to determine the flood elevations along Minnehaha Creek and found some issues. The biggest concern was an error that incorrectly added a significant amount of water that does not exist, which raises the flood elevation.

In order to fix this error, the model would need analysis and modification. FEMA typically would like the requester (the City of Edina) to make these changes, along with recreating the map that shows the flood plain. The model covers the entire length of Minnehaha Creek from Lake Minnetonka to the Mississippi River, far beyond Edina's boundaries. It is not an option to change only the portion of the flood plain within Edina because the flood elevations along the creek cannot have significant decreases or increases. The flood elevations must come together within a reasonable difference of elevation, generally six inches.

City staff and Barr Engineering believe that due to the creek-wide scope of this error, it is unreasonable to expect a single city to take responsibility for all of the necessary changes to the model and map, and that FEMA should make those changes. During a conference call on September 5, 2013, including City staff, Barr Engineering, Atkins, FEMA, Department of Natural Resources (DNR), and the Minnehaha Creek Watershed District (MCWD), Atkins and FEMA stated that they would further discuss the appeal and the issue of who may be responsible for the changes to the model and map. MCWD, the original creator of the model, will

also consider its possible involvement. City staff have made it clear to all involved that although Edina will not take on the responsibility of revising the model and remapping the flood plain, the City will continue to pursue the appeal through all available avenues. If FEMA does not grant this appeal, there will be a significant effect on over 40 homeowners in the Rolling Green area. The maps will place many new properties within the floodplain, which, in addition to triggering a requirement for flood insurance, significantly limits the ability to add-on or rebuild on some properties, thereby negatively affecting property values.

Although City staff and Barr do not believe that the responsibility for modifying the model lies with the City, there is a benefit to identifying the precise issues that cause the model errors. Armed with this information, City staff will be in a better position to argue that FEMA can and should revise the model to predict flood elevations correctly along Minnehaha Creek. The attached proposal includes this additional technical work. If FEMA is unwilling to make changes at this collaborative stage of the appeal, the information will be also useful in the potential future stages (review by an independent, third-party Scientific Resolution Panel, FEMA administrative hearing, and appeal to the United States District Court).

Current Request

The attached proposal outlines the appeal process and potential associated costs. The goal of these additional services is to resolve the appeals favorably and as expediently as possible, but if FEMA's determination is not acceptable to the City, the proposal includes the costs to pursue the appeals further. The total potential cost included in the proposal is \$29,865 and is broken down as follows:

Morningside

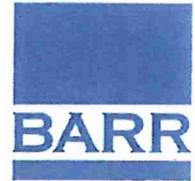
Preparation and submittal of LOMR:	\$3,765
Potential follow-up with FEMA:	\$1,020

Rolling Green

Troubleshooting the current model:	\$6,200
Additional communications during the current collaborative stage:	\$6,145
Potential Scientific Resolution Panel review process:	\$5,015
Potential FEMA Administrative Hearing process:	\$7,630
Total:	\$29,865

Attachments:

BARR Engineering Co. Proposal



Memorandum

To: Laura Adler, City of Edina
From: Janna Kieffer
Subject: Scope of services: Continued technical support for City of Edina's appeal of FEMA proposed flood hazard determinations
Date: September 23, 2013
c: Ross Bintner, City of Edina
Sarah Stratton, Barr Engineering Co.

Barr has been assisting the City of Edina with review and appeal of the proposed Federal Emergency Management Agency (FEMA) flood hazard determinations for three areas within the city: Morningside, Nine Mile Village, and Rolling Green. Per your request we have developed a scope of services for additional technical support related to follow-up tasks for the Morningside area and continuation of the FEMA appeal process in the Rolling Green area. The primary tasks and estimated costs are summarized briefly below, with more detailed information provided in Table 1. Completion of the work tasks and tracking of associated costs will be completed in close coordination with City staff.

Task 1. LOMR Submittal for Morningside Area

Background: FEMA's contractor has indicated that they are unable to update the floodplain mapping and 100-year flood elevation in the Morningside area as requested in the City's July 3, 2013 appeal. However, FEMA's contractor has indicated that the City could submit the revised floodplain mapping and supporting hydrologic and hydraulic modeling as part of a Letter of Map Revision (LOMR), which would likely result in the revised floodplain in the Morningside area being included on the new Hennepin County flood insurance rate maps.

Subtask 1A. Morningside Limited Detail LOMR Submittal

Barr will prepare the necessary supporting information and documentation for LOMR submittal and associated coordination with City staff. Note that this task assumes electronic submittal of a limited detail LOMR.

Subtask 1A. Estimated cost: \$3,765

Subtask 1B. Potential Follow-up with FEMA

If necessary, Barr will work with FEMA (and their contractor) to address any follow-up questions and/or provide any additional information needed for acceptance of the limited detail LOMR.

Subtask 1B. Estimated cost: \$1,020

Task 2. Rolling Green Appeal Process

Background: FEMA's contractor has indicated that the City of Edina has a basis for their appeal due to mathematical error in the Minnehaha Creek Watershed District (MCWD) XP-SWMM hydrologic and hydraulic modeling. However, they have additional concerns about the reliability of the results using a more up-to-date version of the XP-SWMM software. Discussions between FEMA and their contractor are still underway regarding acceptance of the City's appeal and steps for proceeding.

Subtask 2A. Consultation with Local Government

As identified in 44 CFR Part 67, the first step in resolving a community appeal is through consultation with officials of a community. Subtask 2A includes work tasks for continued support of discussions with FEMA and their contractor, with a goal of resolving the appeal at this level. The work tasks generally include:

- Further evaluation of the MCWD XP-SWMM model and communication with XP-SWMM software company experts to address remaining model concerns identified by FEMA's contractor
- Communication and coordination w/FEMA and their contractors regarding follow-up questions

Subtask 2A. Estimated cost: \$12,435

Subtask 2B. Independent Review

Another potential means to resolve a community appeal, as identified in 44 CFR Part 67, is through submittal of conflicting data to an independent scientific body or appropriate Federal agency for advice. As part of Subtask 2B, Barr will assist City staff by gathering and submitting necessary information in support of an independent review. Barr will also coordinate with FEMA, FEMA's contractor, and the review agency, as requested by City staff.

Subtask 2B. Estimated cost: \$5,015

Subtask 2C. Administrative Hearing

As identified in 44 CFR Part 67, if the community appeal cannot be resolved by consultation with officials of the community or by submitting the conflicting data to an independent scientific body or appropriate Federal agency for advice, then FEMA shall hold an administrative hearing to resolve the appeal. As part of Subtask 2C, Barr will provide requested assistance to City staff to help prepare for a hearing, including participation in the hearing if so requested.

Subtask 3A. Estimated cost: \$7,630

Cost Summary

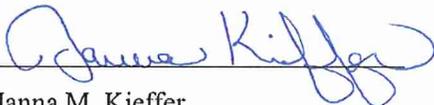
Table 2 summarizes the estimated costs identified above in Tasks 1 and 2. Barr will perform the described scope of services on a time and expense basis.

Task	Task Description	Estimated Cost
1A	Morningside- Limited Detail Letter of Map Revision (LOMR) Submittal	\$3,765
1B	Morningside- Potential Follow-up with FEMA	\$1,020
2A	Rolling Green Appeal Process- Consultation with Local Government	\$12,435
2B	Rolling Green Appeal Process- Independent Review	\$5,015
2C	Rolling Green Appeal Process- Administrative Hearing	\$7,630
	Total	\$29,865

We appreciate the opportunity to continue providing engineering services to the City of Edina and look forward to working with you on this project. If the proposed scope of services and associated fees are satisfactory, please sign a copy of this letter in the space provided, and return it to us at your earliest convenience.

Sincerely,

BARR ENGINEERING CO.

By 
Janna M. Kieffer

Its Vice President

Accepted this ___ day of _____, 20__

CITY OF EDINA

By _____

Its _____

Table 1. Summary of Work Tasks and Estimated Costs

Work Tasks	Total Hours	Total Cost
Subtask 1A: Morningside Limited Detail LOMR Submittal		
Review of requirements for MT-2 form, Communications w/DNR regarding Limited Detail versus Detail LOMR submittal, identification of tasks	9	\$1,160
Checking XP-SWMM model - open in new version, make sure runs to completion and closes properly, document version	3	\$210
Gathering and/or developing supporting data for MT-2 forms - Acquiring certified topo documentation from both Edina and SLP	3	\$345
Gathering and/or developing supporting data for MT-2 forms - pulling together hydrology information - info from the City's plan should be fine for Limited Detail - text, watershed map, soils map, land use map, TOCs (if applicable) - no need to create new figures	1	\$130
Gathering and/or developing supporting data for MT-2 forms - pulling together any supporting hydraulic information - e.g., storm sewer /GIS/CAD data or map; SWMM node figure; storage information; etc. Use existing data from the City's plan, where possible	2	\$255
Gathering and/or developing supporting data for MT-2 forms - acquiring signatures from the (1) requester, (2) community official ("CEO") - mayor/City manager, and (3) engineer (Barr)	1	\$125
Gathering and/or developing supporting data for MT-2 forms -create annotated FIRM figure - use the figure Barr already created, just need to change the title; create separate topo map showing floodplain polygons; make sure shapefiles are cleaned up	4	\$385
Filling out MT-2 Forms - Form 1 - Overview & Concurrence Form and Form 2 - Riverine H & H Form (attaching supporting documentation described above)	4	\$430
Navigating the online submittal process (filling out all online information)	5	\$470
Final review of submittal package (Barr engineer will need to sign)	2	\$255
Subtotal	34	\$3,765
Subtask 1B: Potential Follow-up with FEMA		
Coordinate w/ FEMA (answer follow-up questions, if necessary)	8	\$1,020
Subtotal	8	\$1,020
Subtask 2A: Rolling Green - Appeals Process - Consultation with local government		
Communications w/ DNR, City, FEMA, and Atkins (FEMA contractor) regarding status of City's appeal and next steps (includes preparation for, participation in, and follow-up tasks from August 14, 2013 call with Atkins and Sept. 5, 2013 call with DNR, City, FEMA, and Atkins)	15	\$1,945
Receive correct "final" XP-SWMM model from Atkins, run model and cursory assessment of differences from model provided by DNR	2	\$195
Review of formal appeal process (CFR Part 67 and 68), communications w/City staff regarding process and options for path forward, documentation of next steps	13	\$1,630
Troubleshooting Atkins remaining issues w/XP-SWMM model (non-convergences and making sure the model completes and closes without errors so that the results can be reviewed using the XP tables & summary memo), including communication w/XP-SWMM and applicable documentation	60	\$6,200
Additional communications w/ City, DNR, FEMA, and Atkins regarding appeal, including discussions on mapping and tie-ins outside of Edina (time estimate assumes two additional rounds of discussion)	20	\$2,465
Subtotal	110	\$12,435
Subtask 2B: Rolling Green - Appeals Process - Independent Review		
Gathering and submitting any additional data that may be required	10	\$1,190
Communications w/ DNR, FEMA, Atkins and independent reviewer and necessary follow-up	20	\$2,550
Coordination/meetings with City	10	\$1,275
Subtotal	40	\$5,015
Subtask 2C: Rolling Green - Appeals Process - Administrative Hearing		
Pre-hearing prep work - meeting(s) with Barr and/or City attorneys	4	\$510
Pre-hearing prep work - review of all materials	24	\$3,060
Coordination/meetings with City	24	\$3,060
Attendance/participation at Administrative Hearing	8	\$1,000
Subtotal	60	\$7,630
Total	252	\$29,865