FLATHEAD COUNTY PLANNING & ZONING OFFICE
FLOODPLAIN DEVELOPMENT VARIANCE: #FDV-14-01
NICHOLAS AND DIANE HANSEN: RESIDENTIAL FILL EXTENT
DECEMBER 23, 2014

This report to the Flathead County Board of Adjustment regarding a request for a variance from the requirements of Section 5.03(L)(2) of the Flathead County Floodplain and Floodway Management Regulations (FCFR). Section 5.03(L)(2) FCFR requires fill installed for the purpose of elevating a residential structure to extend at an elevation no lower than the Base Flood Elevation (BFE) for at least 15 feet beyond the structure in all directions. The Flathead County Planning & Zoning Office is reviewing the request under the provisions of the Flathead County Floodplain and Floodway Management Regulations, effective June 18, 2013.

BACKGROUND

A. Project Personnel

i. Applicant/Owner
Nicholas and Diane Hansen
P.O. Box 262
Dayton, MT 59914

ii. Technical Representative/Contractor
APEC Engineering c/o Joe Matulevich
111 Legend Trail
Kalispell, MT 59901

B. Location and Legal Description:

The proposed project would occur in an area mapped as Flood Zone AE, according to FIRM Panel 30029C1810H. The subject property is located at 523 East Cottonwood Drive approximately 2.5 miles east of Kalispell and can legally be described as Tracts 3M and 3HB in Section 3, Township 28 North, Range 21 West, P.M.M., Flathead County, Montana.

Figure 1- Project location circled blue

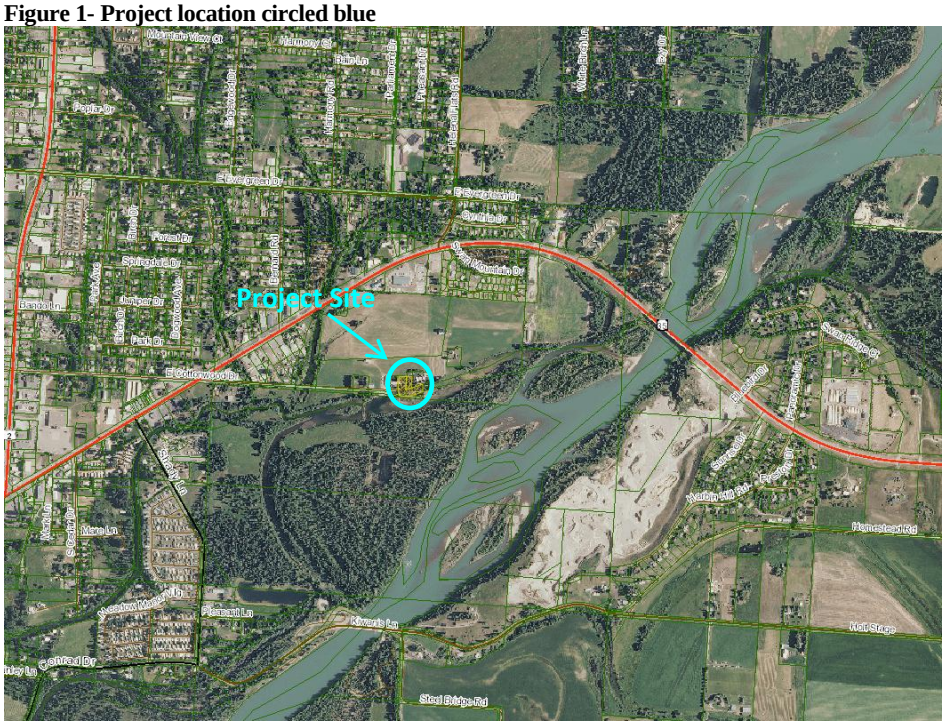

Figure 2- Project location circled blue

C. Existing Land Use:

The subject property includes two adjacent tracts (Tracts 3M and 3HB which convey together as a single tract according the Flathead County Plat Room records) which have been used for residential and sanitation purposes since Tract 3M was originally developed with a dwelling in 1970. As a 2014 fire destroyed the residence on Tract 3M, existing land use on that tract is presently limited to a detached garage which is situated along the western boundary. Tract 3B is developed with a septic drainfield which was installed to serve the original home on Tract 3M. The requested variance relates to the applicant's interest in reconstructing a residence on Tract 3M between the existing garage on the west and the existing drainfield on the east in compliance with currently applicable provisions related to fill the regulatory floodplain.

D. Applicable Zoning:

The proposal site occurs in an area zoned 'R-1 Suburban Residential' which is defined as "*A district to provide estate-type development. These areas would normally be located in rural areas away from concentrated urban development, typically not served by water or sewer services, or in areas where it is desirable to permit only low-density development (e.g., extreme topography, areas adjacent to floodplains, airport runway alignment extensions)*." The applicant has proposed to install fill for the purpose of appropriately elevating a residential structure in the floodplain, and the proposal is supported by the zoning applicable at the site as the zone includes single-family dwelling as a permitted use.

E. Nature of Request:

A fire destroyed the previously existing residence and the applicant is proposing to install fill for a new residence less than 15 feet in all directions beyond the structure due to constraints posed by the building location in relation to the existing garage and drainfield. The variance application has been submitted in conjunction with a requested Floodplain Development Permit application (FDP-14-16). Site plans associated with the applications demonstrate the proposal to place approximately 490 cubic yards of fill at the homesite location on Tract 3M in order to elevate an approximate 55' X 65'area to

a compacted elevation of 2920.2' NAVD '88 which is 0.1 foot above the Base Flood Elevation (BFE) calculated to be 2920.1' NAVD '88 at the project location. The crowned fill area would vary between 1 and 2 feet in depth and would be contained on the west side with a 50 foot long retaining wall with a top elevation of 2919.0', and the eastern terminus of the fill area would taper across the property boundary onto Tract 3HB to the adjacent lowest grade without encroaching onto the drainfield area. Based on the submitted site plan the fill would be installed at an elevation no lower than the BFE for only approximately 5-feet beyond the western side and 2 feet beyond the eastern side of the footprint of a future residential structure, and beyond those distances the fill would extend lower than the BFE for an additional 3-feet to both the west and east.

Based on the dimensions of the fill as described above, the applicant is requesting a variance from Section 5.03(L)(2) of the Flathead County Floodplain and Floodway Management Regulations (FCFR) which for new construction, alteration and substantial improvement of residential structures, including manufactured homes requires "*suitable fill shall be at an elevation no lower than the BFE and shall extend for at least fifteen feet, at that elevation, beyond the structure in all directions*."

F. Procedure for Consideration of the Variance:

Variance application procedure, requirements, and evaluation criteria are established in Section 1.11 FCFR which indicates an approved variance would permit construction in a manner otherwise as required or prohibited by the regulations. In the event the requested variance is granted, the requested Floodplain Development Permit FDP-14-16 would be capable of being permitted.

EVALUATION OF VARIANCE APPLICATION

1. A variance shall only be issued upon a determination that the variance is the minimum allowance necessary, considering the flood hazard, to afford relief from these regulations and provided all of the findings are met:

   a. There is a good and sufficient cause;

   The application indicates the previously existing residence was destroyed by fire in 2014, and the owner is seeking to prepare the site in order that a new home may be re-established on site. The previously existing residence appears to have been built in 1970 prior to adoption of the Flathead County Floodplain and Floodway Management Regulations, and the regulations require that new structures located in the flood fringe be elevated in a manner that the lowest floor is at least 2-feet above the BFE. The applicant is therefore seeking to place fill for the purpose of elevating the new future structure but the site is constrained on each side by an existing garage and septic drainfield which inhibit the ability to have fill placed to the width required under Section 5.03(L)(2).

   b. Failure to grant the variance would result in exceptional hardship to the applicant;

   The application indicates the property has been used for a residential purpose since approximately 1970, and the previously existing residence was destroyed by fire in 2014. The applicant is aiming to obtain necessary currently applicable floodplain permitting in order to enable legal re-construction of a residence in the location the prior home occupied. It appears failure to grant the variance would result in exceptional hardship because without the variance a new residence would need to be substantially smaller and offer less utility to the owners and occupants than the prior residence than the previous structure provided.

   c. There are no basements nor residential dwelling that has the lowest floor elevation below the Base Flood Elevation;

   The intent of the submitted variance request and associated application for a Floodplain Development Permit is specifically to prepare the subject property for development with an elevated residence which would comply with the applicable requirements of the Flathead County

Floodplain and Floodway Management Regulations and the National Flood Insurance Program (NFIP). As proposed, the application is for the proposed pad of fill and sheet C101 of the submitted variance application demonstrates how a future home could be built on a future foundation within the fill in a manner in which the lowest floor would be above the Base Flood Elevation. While the proposal does not include a basement it is noted that a crawlspace such as depicted on sheet C101 of the submitted variance application would not be permitted with the issuance of a Floodplain Development Permit as it exceeds the maximum interior dimension of 4-feet measured from the interior ground surface to the top of the stem wall.

d. Crawl spaces are no more than two (2) feet below the exterior lowest adjacent grade and must have an inside dimension from interior ground to the bottom of the living floor of less than five (5) feet. The crawl spaces must meet the dry flood proofing requirements in Section 5.03(M)(3);

As proposed, the application is intended specifically for the proposed pad of fill and sheet C101 of the submitted variance application is not a comprehensive foundation design plan but a general schematic demonstrating how a future home could be built on a future foundation within the fill in a manner in which the lowest floor would be above the Base Flood Elevation. That said, sheet C101 of the submitted variance application includes notes stating the crawlspace would not be more than 2-feet below the exterior lowest adjacent grade and would have an inside dimension not to exceed 5-feet.

As stated above, the submitted variance and floodplain development permit applications are intended specifically for the proposed pad of fill, and design details pertaining to a specific future residential structure (such as crawlspace height, venting, flood-proofing, and lowest floor elevation) would be evaluated and appropriately conditioned as applicable in the review of a future floodplain development permit application which would be necessary in order to build a home on the site as long as the site is still located within the regulatory flood fringe.

e. Granting of a variance will not result in increased flood heights to existing insurable buildings, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on or victimization of the public, or conflict with other existing local laws or ordinances;

The application indicates the proposed project would not increase flood heights to existing insurable buildings, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on or victimization of the public, or conflict with other existing local laws or ordinances as the proposal is simply to allow restoration of residential use of the property which would be consistent with its use for approximately four decades prior to the 2014 fire which destroyed the previous residential structure.

f. The proposed use is adequately flood proofed;

Pursuant to Chapter 8 FCFR 'Flood Proofing' is defined as "*any combination of structural and non-structural additions, changes, or adjustments to structures which reduce or eliminate flood damage to real estate or improved real property, water and sanitary facilities, structures and their contents.*" It appears reasonable to consider the proposed fill to be adequately flood proofed due to its engineer certified design which is intended to withstand forces exerted by a flood event of a 100-year magnitude. As shown on the site plan an existing septic tank in the fill area would be equipped with a riser and locking lid established at the finished grade of the compacted fill which would be at or slightly above the Base Flood Elevation and would therefore meet the applicable flood proofing standards outlined in Chapter 7 FCFR.

g. The variance is the minimum necessary, considering the flood hazard, to afford relief;

The application indicates the proposed variance is the minimum needed to protect the existing drainfield and preserve use and access to the existing garage.

h. Reasonable alternative locations are not available;
The application indicates there are no reasonable alternative locations due to the constraints associated with the existing improvements on each side of the building envelope including location of garage and driveway, and the existing permitted wastewater treatment utilities.

i. There is no danger to life and property by water that may be backed up or diverted by the obstruction or use;
The re-development of a residence at the site is not anticipated to be an obstruction which would back up or divert flood waters, and the new residence would be elevated to a greater degree than the residence which was previously established on site, thereby improving safety to life and property.

j. There is no danger that the obstruction or use will be swept downstream to the injury of others;
The proposed pad of fill has been designed by a registered professional engineer to withstand forces exerted by a flood event of a 100-year magnitude, and the fill would elevate a future residence above the Base Flood Elevation which would minimize risk and potential for it to be swept downstream in the event of flooding.

k. Incorporates measures in the construction or alteration of the obstruction or use that lessens the danger;
The application indicates the proposed pad of fill has been designed to lessen danger by exceeding elevation requirements and adhering to applicable compaction and stabilization standards.

l. The permanence of the obstruction or use;
The application indicates the proposed pad of fill is intended for permanency through its engineered design which will make the site capable for legal residential use as has been its function since original development.

m. There is no adverse effect to anticipated development in the foreseeable future of the area that may be affected by the obstruction or use;
The proposed work is not anticipated to adversely affect any future plans for area properties and the nature of the project is compatible with the character of the surrounding area as it will restore ability for residential use of the property instead of the property falling into blight after the 2014 fire which destroyed the previous residence. Implementation of the proposed work would not affect the ability of neighboring properties to undergo development or re-development.

n. There is no adverse effect to existing properties or structures;
The application indicates restored residential value and aesthetic appeal would be beneficial to neighboring and vicinity properties and there would be no adverse hydraulic effects to existing properties or structures as the BFE would not be increased by the project.

o. Any increase to the Base Flood Elevation in a Floodway has been approved by FEMA for flood insurance purposes and any increase to the Base Flood Elevation in the Floodway or Flood Fringe of more than 0.5 feet is an alteration of the Regulated Flood Hazard Area has been duly amended pursuant to Section 1.13;
This criterion is not specifically applicable to the proposed project as the project site is located in the flood fringe and is not located in the regulatory floodway, and impact to the Base Flood Elevation from the volume of the proposed fill within the flood fringe would be negligible.

p. That the Montana Department of Natural Resources and Conservation (DNRC) has considered and provided comments, based on technical review.

The Montana DNRC has provided written comment on the proposed project in a December 18, 2014 letter indicating "the application appears to meet the requirements of the Flathead County Floodplain Regulations if the variance is granted."

2. Special considerations for variance approval:

   a. If the new construction or substantial improvements on a lot of one-half acres or less is contiguous to and surrounded by lots of existing structures constructed below the Base Flood Elevation, a variance may be approved. However, as lot sizes increase beyond one-half acre additional technical justification may be required;

   Tract 3M of the subject property is approximately 1.1 acres in size and adjacent properties range in size from ½ acre to 31 acres in size. It does not appear that additional technical justification is required.

   b. Historic Structures – variances may be issued for the repair or rehabilitation of historic structures upon a determination that the proposed repair or rehabilitation will not preclude the structure's continued designation as a historic structure and the variance is the minimum relief necessary to preserve the historic character and design of the structure.

   The previously existing residence was not designated a 'historic structure' and neither will the future residence to be developed at the site.

FINDINGS OF FACT

Finding #1
Failure to grant the variance would result in exceptional hardship to the applicant because without the variance a new residence would need to be substantially smaller and offer less utility to the owners and occupants than the prior residence provided before it was destroyed by fire.

Finding #2
The request substantially complies with the established variance criteria a-f because the requested variance has a good and sufficient cause, the hardship is based on a combination of constraints which the applicant has little or no control over, and literal compliance with the width requirement for the elevating fill would necessitate a less preferable and adversely compromised configuration of the future residence, and as proposed the fill is sufficiently designed to withstand a 100-year flood event and effectively elevate a future residence to minimize risk of flood damage.

Finding #3
The requested variance is the minimum necessary to afford relief from strict compliance with the applicable regulations because the application indicates the proposed variance is the minimum needed to protect the existing drainfield and preserve use and access to the existing garage.

Finding #4
The request substantially complies with the established variance criteria g-l because the requested variance is the minimum necessary to develop a reasonable residence within the physical constraints presented at the location where the homesite is located between an existing garage and an existing permitted septic drainfield, the proposed design would not serve to back up or divert water, the proposed fill would serve to elevate the future structure above the Base Flood Elevation thus minimizing risk of the home being swept downstream to the injury of others, and the proposed elevated pad would promote long term permanent residential use of the property.

Finding #5
The request substantially complies with the established variance criteria m-p because the proposed project is compatible with the character of the surrounding area as it would promote residential use of the property and would not affect the ability of neighboring properties to undergo development or re-development, would not adversely affect existing properties or structures because the BFE would not be increased, and the Montana DNRC commented that the proposal complies with the Flathead County Floodplain Regulations.

CONCLUSION
Section 1.1(C)(1) of the Flathead County Floodplain and Floodway Management Regulations (FCFR) indicates a variance shall only be issued upon a determination that the variance is the minimum allowance necessary, considering the flood hazard, to afford relief from these regulations and provided all applicable criteria are met.

Based upon the five findings of fact resulting from evaluation of the application, the variance request appears to meet all applicable criteria for review. Should the Flathead County Board of Adjustment determine to approve the requested variance the Board should adopt staff report #FDV-14-01 as findings of fact and approve the variance to Section 5.03(L)(2) FCFR to permit the proposed fill to be installed for the purpose of elevating a residential structure to extend at an elevation no lower than the Base Flood Elevation (BFE) for less than 15 feet beyond the structure in all directions, subject to the following conditions:

1. **The proposed project shall not commence unless and until the associated requested Floodplain Development Permit under review as FDP-14-16 is granted.**
2. **The proposed project shall conform to the drawings and specifications submitted in the associated Floodplain Development Permit application (FDP-14-16), except as specifically modified and/or conditioned by the permit, if granted.**
3. **All fill material must be compacted, well graded, pervious, generally unaffected by water and frost, and appropriate for the purpose of supporting the intended use.**
4. **All fill material placed for this project shall be free of organic materials such as tree limbs, sawdust, grass, garbage, and trash. Acceptable fill material may include clean rock. The use of broken asphalt and or concrete for fill is prohibited.**
5. **All excess material shall be located outside of the 100-year floodplain.**
6. **All disturbed areas shall be re-vegetated/reseeded with vegetation species similar to existing species. This is to minimize erosion and soil loss in the event of flooding/high water.**
7. **This permit is issued under the authority of the Flathead County Floodplain & Floodway Regulations.**
8. **This permit is valid for one year from date of issuance unless an extension is requested and granted pursuant to the provisions outlined in Section 3.02(D) FCFR . Notification of completion shall be submitted to the Flathead County Planning & Zoning Office (751-8200) when the work is completed.**
9. **A Floodplain Permit Compliance Certification shall be submitted to the Flathead County Planning and Zoning Office within 10 days of project completion.**