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Memorandum

To: Elko City Council
From: Scott A. Wilkinson – Assistant City Manager *SAW*
RE: Western Nevada Flood Plain Variance Request
Date: February 12, 2019
Cc: Thomas Ballew, P.E. High Desert Engineering

The existing building was certified as an elevated structure in 1999. The findings were developed in conjunction with input from Mr. Thomas Ballew, P.E., High Desert Engineering. Refer to Mr. Thomas Ballew's submittal dated January 24, 2019 for additional information. Findings are presented below and identified with bold font.

Section 3-8-6 Variance Procedures - In passing upon requests for variances, the city council shall consider all technical evaluations, all relevant factors, standards specified in other sections of this chapter, and:

- 1. Alterations of Watercourses are not proposed.**
- 2. FIRM revision April 3, 2017 shows the existing structure removed from the prior AH Zone and mapped within an X zone.**
- 3. Only a small portion of the property near the ingress/egress off Water Street remains in the AH Zone. As such, elevation certificates are required for development or substantial improvements for the property.**
- 4. AH Zone is described as a ponding type flood condition.**
- 5. The applicant is addressing the flood proofing requirements under section 3-8-5(5) by proposing A concrete foundation wall will be constructed along the perimeter of the new portion of the building which will meet the flood proofing requirement up to the elevation of the lowest floor.**
- 6. The existing structure, and the proposed building expansion, are actually located in zone "X" which is not a special flood hazard zone. According to the FEMA mapping, only a portion of the property is located in a Special Flood Hazard zone, shown as zone AH on the FEMA mapping.**
- 7. The base flood elevation at the property, based on zone AH as shown on the FEMA mapping, is 5064.00 feet above mean sea level. The City code requires that the proposed lowest floor elevation be constructed 2.0' higher than the base flood elevation which would place the lowest floor elevation at 5066.00 feet above mean**

sea level. FEMA requires that the proposed lowest floor elevation be constructed at or above the base flood elevation which would require that the lowest floor elevation be constructed at or above 5064.00 feet above mean sea level. Western Nevada Supply requests that the lowest floor be constructed at an elevation of 5065.87 feet above mean sea level which is 1.87' higher than the base flood elevation. This would place the lowest floor elevation 1.87' higher than that required by FEMA and only 0.13' lower than that required by City of Elko codes.

3-8-6(a) - The danger of materials being swept onto other lands and injuring others;

- 1. The proposed lowest floor elevation height elevation is 0.13 feet lower than the minimum lowest floor elevation required under city code.**
- 2. All materials stored within the building will be protected from being swept away due to the fact that the materials will be stored a minimum of 1.87 feet higher than the base flood elevation.**
- 3. An examination of the proposed grading plan shows that a small portion of the property is below the base flood elevation. There is no danger that materials stored in this area would be swept away as the flooding potential in this area is a ponding condition and not a flowing condition.**

3-8-6 (b) - The danger to life and property due to flooding or erosion damage;

- 1. FIRM revision April 3, 2017 shows the existing structure removed from the prior AH Zone to an X zone. Only a small portion of the property near the ingress/egress off Water Street remains in the AH Zone. AH Zone is described as a ponding type flood condition. Considering the structure and proposed expansion are located in the X Zone there is no increased risk to increased velocities of flood waters or increased ponding of flood waters.**

3-8-6 (c) - The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the existing individual owner and future owners of the property;

- 1. FIRM revision April 3, 2017 shows the existing structure removed from the prior AH Zone to an X zone. Only a small portion of the property near the ingress/egress off Water Street remains in the AH Zone. AH Zone is described as a ponding type flood condition. Considering the structure and proposed expansion are located in the X Zone there is no increased risk to increased velocities of flood waters or increased ponding of flood waters.**

3-8-6(d) -The importance of the services provided by the proposed facility to the community;

- 1. The company is a major supplier to the construction and mining industries in the area.**

3-8-6(e) - The necessity to the facility of a waterfront location, where applicable;

- 1. NA**

3-8-6(f) - The availability of alternative locations for the proposed use which are not subject to flooding or erosion damage;

1. **Alternative locations for an expansion of the business have been discounted as impractical for the following reasons:**
 - **The risk to the existing structure and proposed expansion has been reduced as shown on the April 3, 2017 FIRM revision.**
 - **A separate location would require additional staffing making the expansion impractical**

3-8-6(g) - The compatibility of the proposed use with existing and anticipated development;

1. **The proposed use of the building expansion will be identical to the existing use of the existing building.**

3-8-6(h) - The relationship of the proposed use to the comprehensive plan and floodplain management program for that area;

1. **The proposed use of the building is not changing with the building expansion.**

3-8-6(i) - The safety of access to the property in time of flood for ordinary and emergency vehicles;

1. **The proposed variance will not result in increased flood elevations and therefore does not compromise access to the property.**

3-8-6(j) - The expected heights, velocity, duration, rate of rise, and sediment transport of the floodwaters expected at the site;

1. **The proposed variance will not result in increased flood elevations, velocities, duration rate or raise or transport of sediment.**

3-8-6(k) -The cost of providing governmental services during and after flood conditions, including maintenance and repair of public utilities and facilities such as sewer, gas, electrical, and water system, and streets and bridges.

1. **The proposed variance has no bearing or relationship to public utilities or public infrastructure.**

2. Any applicant to whom a variance is granted shall be given written notice over the signature of a community official that:

- a. The issuance of a variance to construct a structure below the base flood level will result in increased premium rates for flood insurance up to amounts as high as twenty-five dollars (\$25.00) for one hundred dollars (\$100.00) of insurance coverage;

b. Such construction below the base flood level increases risks to life and property. It is recommended that a copy of the notice shall be recorded by the floodplain administrator in the office of the Elko County recorder and shall be recorded in a manner so that it appears as an exception on the title of the affected parcel of land.

3. The floodplain administrator will maintain a record of all variance actions, including justification for their issuance, and report such variances issued in its biennial report submitted to the federal insurance administration, federal emergency management agency.

C. Conditions For Variances:

1. Generally, variances may be issued for new construction, substantial improvements, and other proposed new development to be erected on a lot of one-half ($1/2$) acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood level, providing that the procedures of sections [3-8-4](#), "Administration", and [3-8-5](#), "Provisions For Flood Hazard Reduction", of this chapter have been fully considered. As the lot size increases beyond one-half ($1/2$) acre, the technical justification required for issuing the variance increases.

The lot size is 4.574 acres. The technical justification presented by the developer's engineer relates to matching the proposed top of floor elevation to the existing top of floor elevation.

2. Variances may be issued for the repair or rehabilitation of "historic structures", as defined in section [3-8-2](#), "Definitions", of this chapter, 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 necessary to preserve the historic character and design of the structure.

The structure is not a historical structure.

3. Variances shall not be issued within any mapped regulatory floodway if any increase in flood levels during the base flood discharge would result.

The property is not located in the floodway.

4. Variances shall only be issued upon a determination that the variance is the "minimum necessary" considering the flood hazard, to afford relief. "Minimum necessary" means to afford relief with a minimum of deviation from the requirements of this chapter. For example, in the case of variances to an elevation requirement, this means the city council need not grant permission for the applicant to build at grade, or even to whatever elevation the applicant proposed, but only to that elevation which the city council believes will both provide relief and preserve the integrity of the local ordinance.

The variance request meets "minimum necessary" standard.

5. Variances shall only be issued upon a:

- a. Showing of good and sufficient cause such as renovation, rehabilitation, or reconstruction. Variances issued for economic considerations, aesthetics, or because variances have been used in the past are not good and sufficient cause.

This project is an addition to an existing Warehouse. The added warehouse space will join the existing warehouse space without any separating walls or barriers. The floor elevations of the new and existing warehouse need to match to avoid operational and safety concerns related to arrangement and placement of product storage racks, movement of fork lift and pallet jack traffic, and the movement of warehousemen with hand-held loads or hand carts.

- b. A determination that failure to grant the variance would result in exceptional "hardship", as defined in section [3-8-2](#), "Definitions", of this chapter, to the applicant.

Failure to grant this variance would force the Owner to abandon this site and building, or to build an addition that creates safety concerns. This project is an addition to an existing building in a previously developed industrial area. In addition to the extreme financial hardship that would occur if the Owner were not allowed to expand, joining new warehouse space at a slightly different floor elevation than the existing warehouse space would have the effect of creating an unsafe workplace. Failure to grant this variance of 0.15 inches would result an exceptional hardship to the Owner.

- c. A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, or extraordinary public expense, create a nuisance, as defined in section [3-8-2](#) of this chapter, cause fraud or victimization, as defined in section [3-8-2](#) of this chapter, of the public, or conflict with existing local laws or ordinances.

FIRM revision April 3, 2017 shows the existing structure removed from the prior AH Zone to an X zone. Only a small portion of the property near the ingress/egress off Water Street remains in the AH Zone. AH Zone is described as a ponding type flood condition. Considering the structure and proposed expansion are located in the X Zone there is no increased risk to increased velocities of flood waters or increased ponding of flood waters.

6. Variances may be issued for new construction, substantial improvement, and other proposed new development necessary for the conduct of a functionally dependent use provided that the provisions of subsections C1 through C5 of this section are satisfied and that the structure or other development is protected by methods that minimize flood damages during the base flood and does not result in additional threats to public safety and does not create a public nuisance.

Provisions C1 through C5 are satisfied as documented.

7. Upon consideration of all the factors of subsection B, "Appeal Board", of this section and the purposes of this chapter, the city council may attach such conditions to the granting of variances as it deems necessary to further the purposes of this chapter.

8. The city council shall maintain the records of all appeal actions and report any variance to the federal emergency management agency upon request.

It is important to note that granting the variance will NOT violate the requirements of FEMA. FEMA requires that the lowest floor elevation be at or above the base flood elevation.

The variance is needed in order to satisfy the Elko City Code which requires that the lowest floor elevation be 2.0 feet above the base flood elevation. The variance will allow the lowest floor elevation to be 1.87 feet above the base flood elevation.

9. Any applicant to whom a variance is granted shall be given written notice that the structure will be permitted to be built with a lowest flood elevation below the base flood elevation and that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced lowest floor elevation. (Ord. 736, 6-14-2011)

The elevation of the lowest floor will not be below the base flood, but 1.87 feet above it.