

City of Sikeston

TENTATIVE AGENDA

JOINT CITY COUNCIL MEETING  
WITH PLANNING & ZONING COMMISSION AND  
BOARD OF ADJUSTMENTS  
CLINTON BUILDING  
Thursday, August 20, 2015  
6:00 P.M.

- I. CALL TO ORDER
- II. RECORD OF ATTENDANCE
- III. OPENING PRAYER
- IV. ITEMS OF BUSINESS
  - A. Discussion: Granting of Flood Plain Free-Board Variances
  - B. Council Consideration of Allgeier-Martin Flood Plain Study Proposal
  - C. Council September Meeting Schedule
  - D. Other Items As May Be Determined During the Course of the Meeting
- V. ADJOURNMENT

Dated this 18<sup>th</sup> day of August 2015

A handwritten signature in cursive script, appearing to read "Carroll Couch", written over a horizontal line.

Carroll Couch, City Clerk

The City of Sikeston complies with ADA guidelines. Notify Linda Lowes at 471-2512 (TDD Available) to notify the City of any reasonable accommodation needed to participate in the City Council's Meeting.



## Council Letter

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Date of Meeting: 15-08-17

Originating Department: Public Works Department

To the Mayor and City Council:

Subject: Discussion on One Foot Freeboard Requirement

Attachments:

1. Freeboard Analysis from neighboring communities (Floodplain Regulations Summary) (2 Pages)
2. Applicable Excerpts from Municipal Code (33 Pages)

Action Options:

1. Allow One Foot Freeboard Requirement to Remain As Currently Specified, but Empower the Board of Adjustments to allow for exceptions if and when appropriate.
2. Revise the Municipal Code from a one foot freeboard requirement above the Base Flood Elevation to just using the Base Flood Elevation.
3. Other action Council may deem appropriate

Background:

In 2009 the Sikeston City Council amended the section of the Municipal Code pertaining to Flood Plain regulations.

At the State Emergency Management Agency's (SEMA) request, the City incorporated freeboard into the Flood Plain regulations.

The current Municipal Code requires one (1) foot of freeboard. Freeboard is defined by the Flood Plain regulations as follows; *A factor of safety usually expressed in feet above a flood level for purposes of floodplain management. Freeboard tends to compensate for the many unknown factors that could contribute to flood heights greater than the height calculated for a selected size flood and floodway conditions, such as wave action, clogged bridge openings and the hydrological effect of urbanization of the watershed.*

We have been approached by a local developer/contractor, Dickie Dockins Construction, and a request has been made to remove the one foot freeboard requirement. This proposal was discussed during the July Planning and Zoning meeting at length. The Council has the ability to remove the one foot requirement, however there are concerns with this direction.

**It is the recommendation of staff, and the Planning and Zoning commission for the one foot freeboard requirement to remain, but for the City Council to empower the Board of Adjustments to make exceptions to this rule when it may be applicable.**

## Floodplain Regulations Summary

**Sikeston, MO:** *"Residential Construction. New construction or substantial improvement of any residential structure shall have the lowest floor, including basement, elevated one (1) foot above the base flood elevation."*

**Arnold, MO:** "elevated at least three (3) feet above the base flood elevation"

**Cape Girardeau, MO:** "elevated to one (1) foot above base flood elevation"

**Chaffee, MO:** "elevated to one (1) foot above base flood elevation"

**Dexter, MO:** "elevated to one (1) foot above base flood elevation"

**Festus, MO:** "elevated to base flood elevation"

\*In all unnumbered and numbered A Zones and AE Zones, the FEMA Region VII Office recommends elevating to one (1) foot above base flood elevation to accommodate floodway conditions when the flood plain is fully developed."

**Hannibal, MO:** "elevated to or above two (2) feet above base flood elevation"

**Jackson, MO:** "elevated to one (1) foot above base flood elevation"

**New Madrid, MO:** "elevated to the base flood elevation"

**Park Hills, MO:** "elevated to one (1) foot above base flood elevation"

**Perryville, MO:** "elevated to one (1) foot above base flood elevation"

**Poplar Bluff, MO:** "elevated to one (1) foot above base flood elevation"

**Scott City, MO:** "elevated to one (1) foot above base flood elevation"

**West Plains, MO:** "elevated to one (1) foot above base flood elevation"

## **Floodplain Regulations Summary**

### **Cities "elevated to one (1) foot above base flood elevation":**

Sikeston  
Cape Girardeau  
Chaffee  
Dexter  
Festus\*  
Jackson  
Park Hills  
Perryville  
Poplar Bluff  
Scott City  
West Plains

### **Cities "elevated to or above two (2) feet above base flood elevation":**

Hannibal

### **Cities "elevated at least three (3) feet above the base flood elevation":**

Arnold

### **Cities "elevated to the base flood elevation":**

Festus\*  
New Madrid

City of Sikeston, MO  
Tuesday, April 28, 2015

## Chapter 410. Floodplain Regulations

### Article V. Provisions For Flood Hazard Reduction

#### Section 410.180. Specific Standards.

[R.O. 2009 S17.44.180]

A. in all areas of the special flood hazards where base flood elevation data has been provided as set forth in Article IV, Section 410.140 (Zones AI-30, AE and AH), the following provisions are required:

1. *Residential construction.* New construction or substantial improvement of any residential structure shall have the lowest floor including basement, elevated one (1) foot above the base flood elevation.
2. *Non-residential construction.* New construction or substantial improvement of any commercial, industrial or other non-residential structure shall either have the lowest floor, including basement, elevated to at least one (1) foot above the level of the base flood elevation or, together with attendant utility and sanitary facilities, be floodproofed so that below such a level the structure is water-tight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. A registered professional engineer or architect shall certify that the standards of this Subsection are satisfied. Such certification shall be provided to the official as set forth in Article IV, Section 410.140(6).
3. Require for all new construction and substantial improvement that fully enclosed areas below the lowest floor that are usable solely for parking of vehicles, building access or storage in an area other than a basement and which are subject to flooding shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or meet or exceed the following minimum criteria: A minimum of two (2) openings having a total net area of not less than one (1) square inch for every square foot of enclosed area subject to flooding shall be provided. The bottom of all openings shall be no higher than one (1) foot above grade. Openings may be equipped with screens, louvers, valves or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.

## Sec. 5-92. - Specific standards for flood hazard reduction.

In all areas of special flood hazards where base flood elevation data has been provided as set forth in section 5-81 or subsection (i) of section 5-88, the following provisions are required:

- (a) *Residential construction.* New construction or substantial improvement of any residential structure shall have the lowest floor, including basement, elevated at least three (3) feet above the base flood elevation.
- (b) *Nonresidential construction.* New construction or substantial improvement of any commercial, industrial or other nonresidential structure shall either have the lowest [floor], including basement, elevated to three (3) feet above the level of the base flood elevation or, together with attendant utility and sanitary facilities, be floodproofed so that below such a level the structure is watertight with walls substantially impermeable to the passage of water and with structural components having the capacity of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. A registered professional engineer or architect shall certify that the standards of this subsection are satisfied. Such certification shall be provided to the official as set forth in section 5-89(g).
- (c) *Manufactured homes.*
  - (1) No manufactured home shall be placed in a special flood hazard area except in an existing manufactured home park;
  - (2) All manufactured homes to be placed within Zone A in the City of Arnold's FIRM shall be installed using methods and practices which minimize flood damage. For the purposes of this requirement, manufactured homes must be elevated and anchored to resist flotation, collapse, or lateral movement. Methods of anchoring may include, but are not limited to, use of over-the-top or frame ties to ground anchors. This requirement is in addition to applicable state and city anchoring requirements for resisting wind forces:
    - a. Over-the-top ties shall be provided at each of the four (4) corners of the manufactured home, with two (2) additional ties per side at intermediate locations and manufactured homes less than fifty (50) feet long requiring one (1) additional tie per side;
    - b. Frame ties shall be provided at each corner of the home with five (5) additional ties per side at intermediate points and manufactured homes less than fifty (50) feet long requiring four (4) additional ties per side;
    - c. All components of the anchoring system shall be capable of a carrying force of four thousand eight hundred (4,800) pounds; and
    - d. Any additions to the manufactured home shall be anchored in accordance with this subsection (c).
  - (3) All manufactured homes to be placed, replaced or substantially improved within Zones A1-30, AH, and AE shall be elevated on a permanent foundation such that the lowest floor of the manufactured home is at least three (3) feet above the base flood elevation and shall be securely anchored to an adequately anchored foundation system in accordance with the provisions of the above subsection (c).

(d) *Floodways.* Located within areas of special flood hazard established in section 5-81 are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of floodwaters which carry debris, potential projectiles and erosion potential, the following provisions shall apply:

- (1) Encroachments, including fill, new construction, substantial improvements and other developments shall be prohibited unless certification by a professional registered engineer or architect is provided demonstrating that encroachments shall not result in any increase in flood levels during occurrence of the base flood discharge.
- (2) If the provisions of subpart (1) above are met, all new construction shall comply with all applicable flood hazard reduction provisions of section 5-91 and section 5-92

(e) *Accessory structures.* Notwithstanding other provisions of this code to the contrary, all accessory structures shall meet the following criteria:

- (1) All accessory structures shall be constructed to resist collapse, flotation, and lateral movement;
- (2) Utility sheds shall not exceed one hundred (100) square feet in area;
- (3) Garages shall not exceed three hundred (300) square feet in area;
- (4) Any accessory structure that meets the criteria for floodproofing elevation including utility sheds and garages, shall not have a floor space limitation except as may be required or limited by other regulations.

(f) *Recreational vehicle.* Notwithstanding other provisions of this code to the contrary, all recreational vehicles shall meet the following criteria:

- (1) All recreational vehicles placed in an "A" or "AE" flood zone, shall not be located on said property for any period of time greater than six (6) months in a one-year period.

(Ord. No. 14-28 (Bill No. 520), § 17, 1-3-80; (Bill No. 933), § 2, 3-19-87; (Bill No. 1347), §§ 1-3, 10-15-92; (Bill No. 1470), §§ 3-5, 4-20-95; (Bill No. 1619), § 2, 9-18-97)

## Sec. 11-515. - Specific standards.

- (a) In all areas identified as numbered and unnumbered A zones and AE zones, where base flood elevation data have been provided, as set forth in subsection 11-514(b), the following provisions are required:
- (1) *Residential construction.* New construction or substantial improvement of any residential structures, including manufactured homes, shall have the lowest floor, including basement, elevated one (1) foot above base flood elevation.
  - (2) *Nonresidential construction.* New construction or substantial improvement of any commercial, industrial, or other nonresidential structures, including manufactured homes, shall have the lowest floor, including basement, elevated one (1) foot above the base flood elevation or, together with attendant utility and sanitary facilities, be floodproofed so that below the required elevation the structure is watertight with walls substantially impermeable to the passage of water and with structural components having the capacity of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. A registered professional engineer or architect shall certify that the standards of this subsection are satisfied. Such certification shall be provided to the floodplain administrator as set forth in subsection 11-512(9).
  - (3) Require, for all new construction and substantial improvements, that fully enclosed areas below lowest floor used solely for parking of vehicles, building access, or storage in an area other than a basement and that are subject to flooding shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or meet or exceed the following minimum criteria:
    - a. A minimum of two (2) openings having a total net area of not less than one (1) square inch for every square foot of enclosed area subject to flooding shall be provided.
    - b. The bottom of all openings shall be no higher than one (1) foot above grade. Openings may be equipped with screens, louvers, valves, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.

(Ord. No. 3832, § 1, 4-5-99)



## Sec. 20-79. - Specific standards.

In all areas identified as unnumbered and numbered A, AE, and AH zones, where base flood elevation data have been provided as set forth in section 20-78(b), the following provisions are required:

- (1) *Residential construction.* New construction or substantial improvement of any residential structures, including manufactured homes, shall have the lowest floor, including basement, elevated to the base flood level.
- (2) *Nonresidential construction.* New construction or substantial improvement of any commercial, industrial, or other nonresidential structures, including manufactured homes, shall have the lowest floor, including basement, elevated to base flood level or, together with attendant utility and sanitary facilities, be floodproofed so that below the base flood elevation the structure is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. A registered professional engineer or architect shall certify that the standards of this subsection are satisfied. Such certification shall be provided to the floodplain administrator as set forth in section 20-50(9).
- (3) *New construction and substantial improvements.* All new construction and substantial improvements having fully enclosed areas below the lowest floor, used solely for parking of vehicles, building access, or storage in an area other than a basement and that are subject to flooding, shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or meet or exceed the following minimum criteria:
  - a. A minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided; and
  - b. The bottom of all openings shall be no higher than one foot above grade. Openings may be equipped with screens, louvers, valves, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.

(Ord. No. 1080, art. 4, § B, 6-5-2006)

## Sec. 12-16. - Specific standards.

(1) In all areas identified as numbered and unnumbered A zones and AE zones, where base flood elevation data have been provided, as set forth in article IV, section 12-15(2), the following provisions are required:

- (a) Residential construction. New construction or substantial improvement of any residential structure, including manufactured homes, shall have the lowest floor, including basement, elevated to one (1) foot above base flood elevation.
- (b) Nonresidential construction. New construction or substantial improvement of any commercial, industrial, or other nonresidential structure, including manufactured homes, shall have the lowest floor, including basement, elevated to one (1) foot above the base flood elevation or, together with attendant utility and sanitary facilities, be floodproofed so that below the base flood elevation the structure is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. A registered professional engineer or architect shall certify that the standards of this subsection are satisfied. Such certification shall be provided to the floodplain administrator as set forth in article III, section 12-13(9).
- (c) Require, for all new construction and substantial improvements, that fully enclosed areas below lowest floor used solely for parking of vehicles, building access, or storage in an area other than a basement and that are subject to flooding shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or meet or exceed the following minimum criteria:
  - 1. A minimum of two (2) openings having a total net area of not less than one (1) square inch for every square foot of enclosed area subject to flooding shall be provided; and
  - 2. The bottom of all openings shall be no higher than one (1) foot above grade. Openings may be equipped with screens, louvers, valves, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.

(Ord. No. 4254, art. 1, 8-15-11)

City of Dexter, MO  
Tuesday, April 28, 2015

## Chapter 415. Flood Damage Prevention

### Section 415.060. Provisions For Flood Hazard Reduction.

[Ord. No. 3327 555 — 7, 3-2-1987; Ord. No. 4353 §1, 8-1-2005]

#### A. General Standards.

1. No permit for floodplain development shall be granted for new construction, substantial improvements and other improvements, including the placement of manufactured homes within any numbered and unnumbered A Zones, AE, AO and AH Zones, unless the conditions of this Section are satisfied.
2. All areas identified as unnumbered A Zones on the FIRM are subject to inundation of the 100-year flood; however, the base flood elevation is not provided. Development within unnumbered A Zones is subject to all provisions of this Chapter. If Flood Insurance Study data is not available, the community shall obtain, review and reasonably utilize any base flood elevation or floodway data currently available from Federal, State or other sources.
3. Until a floodway is designated, no new construction, substantial improvements or other development, including fill, shall be permitted within any numbered A Zone or AE Zone on the FIRM, unless it is combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one (1) foot at any point within the community.
4. All new construction, subdivision proposals, substantial improvements, prefabricated buildings, placement of manufactured homes and other developments shall require:
  - a. Design or adequate anchorage to prevent flotation, collapse or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy.
  - b. New or replacement water supply systems and/or sanitary sewage systems be designed to minimize or eliminate infiltration of floodwaters into the systems and discharges from the systems into floodwaters, and on-site waste disposal systems be located so as to avoid impairment or contamination.
  - c. Construction with materials resistant to flood damage.
  - d. Utilization of methods and practices that minimize flood damages.
  - e. All electrical, heating, ventilation, plumbing, air-conditioning equipment and other service facilities be designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding.
5. Storage, material and equipment.
  - a.

The storage or processing of materials within the special flood hazard area that are in time of flooding buoyant, flammable, explosive or could be injurious to human, animal or plant life is prohibited.

- b. Storage of other material or equipment may be allowed if not subject to major damage by floods, if firmly anchored to prevent floatation or if readily removable from the area within the time available after flood warning.
6. Subdivision proposals and other proposed new development, including manufactured home parks or subdivisions, located within special flood hazard areas are required to assure that:
  - a. All such proposals are consistent with the need to minimize flood damage;
  - b. All public utilities and facilities, such as sewer, gas, electrical and water systems, are located, elevated and constructed to minimize or eliminate flood damage;
  - c. Adequate drainage is provided so as to reduce exposure to flood hazards; and
  - d. All proposals for development, including proposals for manufactured home parks and subdivisions of five (5) acres or fifty (50) lots, whichever is lesser, include within such proposals base flood elevation data.
7. *Accessory structures:* Structures used solely for parking and limited storage purposes, not attached to any other structure on the site, of limited investment value and not larger than four hundred (400) square feet may be constructed at grade and wet floodproofed provided there is no human habitation or occupancy of the structure; the structure is of single-wall design; a variance has been granted from the standard floodplain management requirements of this Chapter, and a floodplain development permit has been issued.
8. *Specific Standards.* In all areas identified as numbered and unnumbered A Zones, AE and AH Zones, where base flood elevation data has been provided, as set forth in Section 415.030(A), the following provisions are required:
  1. *Residential construction.* New construction or substantial improvement of any residential structures, including manufactured homes, shall have the lowest floor, including basement, elevated to one (1) foot above base flood elevation.
  2. *Non-residential construction.* New construction or substantial improvement of any commercial, industrial or other non-residential structures, including manufactured homes, shall have the lowest floor, including basement, elevated to one (1) foot above the base flood elevation or, together with attendant utility and sanitary facilities, be floodproofed so that below the base flood elevation the structure is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. A registered professional engineer or architect shall certify that the standards of this Subsection are satisfied. Such certification shall be provided to the Floodplain Administrator as set forth in Section 415.040(C)(7).
  3. Require for all new construction and substantial improvements that fully enclosed areas below the lowest floor used solely for parking of vehicles, building access, or storage in an area other than a basement and that are subject to flooding shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or meet or exceed the following minimum criteria:
    - a. A minimum of two (2) openings having a total net area of not less than one (1) square inch for every square foot of enclosed area subject to flooding shall be provided; and

- b. The bottom of all openings shall be no higher than one (1) foot above grade. Openings may be equipped with screens, louvers, valves or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.

C. *Manufactured Homes.*

1. All manufactured homes to be placed within all unnumbered and numbered A Zones, AE and AH Zones on the community's FIRM shall be required to be installed using methods and practices that minimize flood damage. For the purposes of this requirement, manufactured homes must be elevated and anchored to resist flotation, collapse or lateral movement. Methods of anchoring may include, but are not limited to, use of over-the-top or frame ties to ground anchors.
2. Require manufactured homes that are placed or substantially improved within unnumbered A Zones, AE and AH Zones on the community's FIRM on sites:
  - a. Outside of manufactured home park or subdivision;
  - b. In a new manufactured home park or subdivision;
  - c. In an expansion to an existing manufactured home park or subdivision; or
  - d. In an existing manufactured home park or subdivision on which a manufactured home has incurred substantial damage as the result of a flood, be elevated on a permanent foundation such that the lowest floor of the manufactured home is elevated to or one (1) foot above the base flood elevation and be securely attached to an adequately anchored foundation system to resist flotation, collapse and lateral movement.
3. Require that manufactured homes be placed or substantially improved on sites in an existing manufactured home park or subdivision within all unnumbered and numbered A Zones, AE and AH Zones on the community's FIRM, that are not subject to the provisions of Section 415.060(C)(2) of this Chapter, be elevated so that either:
  - a. The lowest floor of the manufactured home is at or one (1) foot above the base flood elevation; or
  - b. The manufactured home chassis is supported by reinforced piers or other foundation elements of at least equivalent strength that are no less than thirty-six (36) inches in height above grade and be securely attached to an adequately anchored foundation system to resist flotation, collapse and lateral movement.

D. *Areas Of Shallow Flooding (AO And AH Zones).*

1. *AO Zones.*
  - a. All new construction and substantial improvements of residential structures, including manufactured homes, shall have the lowest floor, including basement, elevated above the highest adjacent grade at least as high as the depth number specified on the community's FIRM (at least two (2) feet if no depth number is specified).
  - b. All new construction and substantial improvements of any commercial, industrial or other non-residential structures, including manufactured homes, shall have the lowest floor, including basement, elevated above the highest adjacent grade at least as high as the depth number specified in feet on the community's FIRM (at least two (2) feet if no depth number is specified) or, together with attendant utilities and sanitary facilities, be completely floodproofed so that the structure is watertight with walls substantially

impermeable to the passage of water and with structural components having the capacity of resisting hydrostatic and hydrodynamic loads and effects of buoyancy.

- c. Adequate drainage paths shall be required around structures on slopes in order to guide floodwaters around and away from proposed structures.

2. *AH Zones.*

- a. The specific standards for all areas of special flood hazard where base flood elevation has been provided shall be required as set forth in Section 415.060(B).
- b. Adequate drainage paths shall be required around structures on slopes in order to guide floodwaters around and away from proposed structures.

E. *Floodway.* Located within areas of special flood hazard established in Section 415.030(A) are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of floodwaters that carry debris and potential projectiles, the following provisions shall apply:

1. The community shall select and adopt a regulatory floodway based on the principle that the area chosen for the regulatory floodway must be designed to carry the waters of the base flood without increasing the water surface elevation of that flood more than one (1) foot at any point.
2. The community shall prohibit any encroachments, including fill, new construction, substantial improvements and other development, within the adopted regulatory floodway unless it has been demonstrated through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that the proposed encroachment would not result in any increase in flood levels within the community during the occurrence of the base flood discharge.
3. If Section 415.060(e)(2) is satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of Section 415.060.
4. In unnumbered A Zones the community shall obtain, review and reasonably utilize any base flood elevation or floodway data currently available from Federal, State or other sources as set forth in Section 415.060(A)(2).

F. *Recreational Vehicles.* Require that recreational vehicles placed on sites within all unnumbered and numbered A Zones, AO, AE and AH Zones on the community's FIRM either:

1. Be on the site for fewer than one hundred eighty (180) consecutive days, or
2. Be fully licensed and ready for highway use.
  - a. For the purposes of this Section, a recreational vehicle is considered ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick-disconnect type utilities and security devices and has no permanently attached additions.
3. Meet the permitting, evaluation and the anchoring requirements for manufactured homes of this Chapter.

City of Park Hills, MO

Tuesday, April 28, 2015

## Chapter 415. Floodplain Regulations

### Article IV. Provisions for Flood Hazard Reduction

#### Section 415.160. Specific Standards.

[Ord. No. 175-98 §1.1-13-1998]

- A. In all areas identified as numbered and unnumbered A Zones and AE Zones, where base flood elevation data has been provided, as set forth in Article IV, Section 415.150(B), the following provisions are required:
1. **Residential construction.** New construction or substantial improvement of any residential structures, including manufactured homes, shall have the lowest floor, including basement, elevated to one (1) foot above base flood elevation.
  2. **Non-residential construction.** New construction or substantial improvement of any commercial, industrial, or other non-residential structures, including manufactured homes, shall have the lowest floor, including basement, elevated to one (1) foot above the base flood elevation or, together with attendant utility and sanitary facilities, be floodproofed so that below the base flood elevation the structure is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. A registered professional engineer or architect shall certify that the standards of this Subsection are satisfied. Such certification shall be provided to the Floodplain Administrator as set forth in Article III, Section 415.130(9).
  3. Require, for all new construction and substantial improvements, that fully enclosed areas below the lowest floor used solely for parking of vehicles, building access, or storage in an area other than a basement and that are subject to flooding shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or meet or exceed the following minimum criteria:
    - a. A minimum of two (2) openings having a total net area of not less than one (1) square inch for every square foot of enclosed area subject to flooding shall be provided; and
    - b. The bottom of all openings shall be no higher than one (1) foot above grade. Openings may be equipped with screens, louvers, valves or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.

## 15.17.410 - Specific standards.

- A. In all areas of special flood hazard, once base flood elevation data is obtained as set forth in Section 15.17.400 of this code, the following provisions are required:
1. Residential Construction. New construction or substantial improvement of any residential structure, including manufactured homes, shall have the lowest floor, including basement, elevated to one foot above base flood level.
  2. Non-Residential Construction. New construction or substantial improvement of any commercial, industrial, or other non-residential structure, including manufactured homes, shall have the lowest floor, including basement, elevated to one foot above the base flood level or, together with attendant utility and sanitary facilities, be floodproofed so that below the base flood level the structure is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. A registered professional engineer or architect shall certify that the standards of this subsection are satisfied. Such certification shall be provided to the floodplain administrator as set forth in Section 15.17.320 of this code.
  3. Requirement. Require, for all new construction and substantial improvements, that fully enclosed areas below lowest floor used solely for parking of vehicles, building access, or storage in an area other than a basement and that are subject to flooding shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or meet or exceed the following minimum criteria:
    - a. A minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided; and
    - b. The bottom of all openings shall be no higher than one foot above grade. Openings may be equipped with screens, louvers, valves, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.
- B. In all areas of special flood hazard, once floodway data is obtained, as set forth in Section 15.17.400 of this code, the following provisions are required:
1. The designated floodway shall be based on the standard that the area chosen for the floodway must be designed to carry the waters of the base flood, without increasing the water surface elevation more than one foot at any point; and
  2. The community shall prohibit any encroachments, including fill, new construction, substantial improvements, and other development within the designated regulatory floodway unless it has been demonstrated through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that the proposed encroachment would not result in any increase in flood levels within the community during the occurrence of the base flood discharge.

(Ord. No. 5238, § 1, 7-19-11)



City of Festus, MO  
Tuesday, April 28, 2015

## Chapter 415. Flood Plain Management

### Article IV. Provisions For Flood Hazard Reduction

#### Section 415.160. Specific Standards.

[R.O. 2009 S-1-17; Ord. No. 2878, 5-26-1999]

- A. In all areas identified as numbered and unnumbered A Zones and AE Zones, where base flood elevation data have been provided as set forth in Section 415.150(B), the following provisions are required:

1. **Residential construction.** New construction or substantial improvement of any residential structures, including manufactured homes, shall have the lowest floor, including basement, elevated to base flood elevation.\*  
In all unnumbered and numbered A Zones and AE Zones, the FEMA Region VII office recommends elevating to one (1) foot above the base flood elevation to accommodate floodway conditions when the flood plain is fully developed.
2. **Non-residential construction.** New construction or substantial improvement of any commercial, industrial or other non-residential structures, including manufactured homes, shall have the lowest floor, including basement, elevated to base flood elevation\* or, together with attendant utility and sanitary facilities, be floodproofed so that below the base flood elevation the structure is water-tight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. A registered professional engineer or architect shall certify that the standards of this Subsection are satisfied. Such certification shall be provided to the Flood Plain Administrator as set forth in Section 415.130(9).  
\* The FEMA Region VII office recommends elevating to one (1) foot above the base flood elevation to qualify for flood insurance rates based upon floodproofing.
3. Require, for all new construction and substantial improvements, that fully enclosed areas below lowest floor used solely for parking of vehicles, building access or storage in an area other than a basement and that are subject to flooding shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or meet or exceed the following minimum criteria:
  - a. A minimum of two (2) openings having a total net area of not less than one (1) square inch for every square foot of enclosed area subject to flooding shall be provided; and
  - b. The bottom of all openings shall be no higher than one (1) foot above grade. Openings may be equipped with screens, louvers, valves or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.

## Sec. 9-130. - Specific standards.

In all areas identified as numbered and unnumbered A zones, AE, and AH zones, where base flood elevation data have been provided, as set forth in section 9-129(b), the following provisions are required:

- (1) *Residential construction.* New construction or substantial improvement of any residential structures, including manufactured homes, shall have the lowest floor, including the basement, elevated to or above two feet above base flood elevation.
- (2) *Nonresidential construction.* New construction or substantial improvement of any commercial, industrial, or other nonresidential structures, including manufactured homes, shall have the lowest floor, including the basement, elevated to or above two feet above the base flood elevation or, together with attendant utility and sanitary facilities, be floodproofed so that below the base flood elevation the structure is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. A registered professional engineer or architect shall certify that the standards of this subsection are satisfied. Such certification shall be provided to the floodplain administrator as set forth in section 9-99(9).
- (3) *Fully enclosed areas used for parking, etc.* For all new construction and substantial improvements, fully enclosed areas below the lowest floor used solely for parking of vehicles, building access, or storage in an area other than a basement and that are subject to flooding shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or meet or exceed the following minimum criteria:
  - a. A minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided; and
  - b. The bottom of all openings shall be no higher than one foot above grade. Openings may be equipped with screens, louvers, valves, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.

(Code 1988, § 9-82; Ord. No. 4291, § 1, 7-6-2004)

City of Chaffee, MO  
Tuesday, April 28, 2015

## Chapter 415. Floodplain Management

### Article IV. Provisions For Flood Hazard Reduction

#### Section 415.160. Specific Standards.

[Ord. No. 100.1203 §§1—2, 6-4-2012]

- A. In all areas of special flood hazard, once base flood elevation data is obtained as set forth in Section 415.150(B), the following provisions are required:
1. ~~Residential construction.~~ New construction or substantial improvement of any residential structure, including manufactured homes, shall have the lowest floor, including basement, elevated to one (1) foot above base flood level.
  2. ~~Non-residential construction.~~ New construction or substantial improvement of any commercial, industrial, or other non-residential structure, including manufactured homes, shall have the lowest floor, including basement, elevated to one (1) foot above the base flood level or, together with attendant utility and sanitary facilities, be floodproofed so that below the base flood level the structure is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. A registered professional engineer or architect shall certify that the standards of this Subsection are satisfied. Such certification shall be provided to the Floodplain Administrator as set forth in Section 415.130 (7)(c).
  3. Require, for all new construction and substantial improvements, that fully enclosed areas below lowest floor used solely for parking of vehicles, building access, or storage in an area other than a basement and that are subject to flooding shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or meet or exceed the following minimum criteria:
    - a. A minimum of two (2) openings having a total net area of not less than one (1) square inch for every square foot of enclosed area subject to flooding shall be provided; and
    - b. The bottom of all opening shall be no higher than one (1) foot above grade. Openings may be equipped with screens, louvers, valves, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.
- B. In all areas of special flood hazard, once floodway data is obtained as set forth in Section 415.150 (B), the following provisions are required:
1. The designated floodway shall be based on the standard that the area chosen for the floodway must be designed to carry the waters of the base flood without increasing the water surface elevation more than one (1) foot at any point; and

- z. The community shall prohibit any encroachments, including fill, new construction, substantial improvements, and other development, within the designated regulatory floodway unless it has been demonstrated through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that the proposed encroachment would not result in any increase in flood levels within the community during the occurrence of the base flood discharge.

City of Poplar Bluff, MO

Tuesday, April 28, 2015

## Chapter 415. Flood Damage Prevention

### Article IV. Provisions for Flood Hazard Reduction

#### Section 415.150. Specific Standards.

[Ord. No. 7215 §§1 — 3, 11-1-2010]

- A. In all areas identified as numbered and unnumbered A Zones, AE and AH Zones, where base flood elevation data have been provided as set forth in Article IV, Section 415.140(B), the following provisions are required:
1. *Residential construction.* New construction or substantial improvement of any residential structures, including manufactured homes, shall have the lowest floor, including basement, elevated to one (1) foot above base flood elevation.
  2. *Non-residential construction.* New construction or substantial improvement of any commercial, industrial or other non-residential structures, including manufactured homes, shall have the lowest floor, including basement, elevated to one (1) foot above the base flood elevation or, together with attendant utility and sanitary facilities, be floodproofed so that below the base flood elevation the structure is water-tight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. A registered professional engineer or architect shall certify that the standards of this subsection are satisfied. Such certification shall be provided to the Flood Plain Administrator as set forth in Article III, Section 415.120(9).
  3. *Enclosed areas.* For all new construction and substantial improvements, fully enclosed areas below the lowest floor used solely for parking of vehicles, building access, or storage in an area other than a basement and that are subject to flooding shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or meet or exceed the following minimum criteria:
    - a. A minimum of two (2) openings having a total net area of not less than one (1) square inch for every square foot of enclosed area subject to flooding shall be provided; and
    - b. The bottom of all opening shall be no higher than one (1) foot above grade. Openings may be equipped with screens, louvers, valves or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.

Scott City, MO  
Tuesday, April 28, 2015

## Chapter 535. Floodplain Management

### Article IV. Provisions for Flood Hazard Reduction

#### Section 535.160. Specific Standards.

[Ord. No. 712, 12-2-2002]

- A. In all areas identified as unnumbered and numbered A Zones, AE and AH Zones, where base flood elevation data have been provided as set forth in Article IV, Section 535.150(B), the following provisions are required:
1. ~~Residential construction.~~ New construction or substantial improvement of any residential structures, including manufactured homes, shall have the lowest floor, including basement, elevated to one (1) foot above base flood level.
  2. ~~Non-residential construction.~~ New construction or substantial improvement of any commercial, industrial or other non-residential structures, including manufactured homes, shall have the lowest floor, including basement, elevated to one (1) foot above the base flood level or, together with attendant utility and sanitary facilities, be floodproofed so that below the base flood elevation the structure is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. A registered professional engineer or architect shall certify that the standards of this Subsection are satisfied. Such certification shall be provided to the Floodplain Administrator as set forth in Article III, Section 535.130(9).
  3. Require, for all new construction and substantial improvements, that fully enclosed areas below lowest floor used solely for parking of vehicles, building access, or storage in an area other than a basement and that are subject to flooding shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or meet or exceed the following minimum criteria:
    - a. A minimum of two (2) openings having a total net area of not less than one (1) square inch for every square foot of enclosed area subject to flooding shall be provided; and
    - b. The bottom of all openings shall be no higher than one (1) foot above grade. Openings may be equipped with screens, louvers, valves or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.

## Sec. 94-722. - Specific standards.

- (a) In all areas identified as numbered and unnumbered A zones and AE zones, where base flood elevation data have been provided, as set forth in subsection 94-721(b), the following provisions are required:
- (1) Residential construction. New construction or substantial improvement of any residential structures, including manufactured homes, shall have the lowest floor, including basement, elevated to one foot above base flood elevation.
  - (2) Nonresidential construction. New construction or substantial improvement of any commercial, industrial, or other nonresidential structures, including manufactured homes, shall have the lowest floor, including basement, elevated to one foot above the base flood elevation or, together with attendant utility and sanitary facilities, be floodproofed so that below the base flood elevation the structure is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. A registered professional engineer or architect shall certify that the standards of this subsection are satisfied. Such certification shall be provided to the floodplain administrator as set forth in subsection 94-709(9).
  - (3) Require, for all new construction and substantial improvements, that fully enclosed areas below lowest floor used solely for parking of vehicles, building access, or storage in an area other than a basement and that are subject to flooding, shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or meet or exceed the following minimum criteria:
    - a. A minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided; and
    - b. The bottom of all opening shall be no higher than one foot above grade. Openings may be equipped with screens, louvers, valves, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.

(Ord. No. 3781, § 2, 12-16-2002; Ord. No. 4092, § 2, 11-17-2008)

City of Sikeston, MO  
Thursday, July 2, 2015

## **Chapter 410. Floodplain Regulations**

### **Article I. Statutory Authorization, Finding of Fact, Purpose and Objectives**

#### **Section 410.010. Statutory Authorization.**

[R.O. 2009 §17.44.010]

The legislature of the State of Missouri has in Section 77.260, RSMo., delegated the responsibility to local units to adopt regulations designed to promote the public health, safety and general welfare of its citizenry. Therefore, the City Council of Sikeston, Missouri, does ordain as follows.

#### **Section 410.020. Finding of Fact.**

[R.O. 2009 §17.44.020]

- A. The flood hazard areas of Sikeston, Missouri, are subject to periodic inundation which results in loss of life and property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief and impairment of the tax base, all of which adversely affect the public health, safety and general welfare.
- B. These flood losses are caused by the cumulative effect of obstructions in floodplains causing increases in flood heights and velocities and by the occupancy in flood hazard areas by uses vulnerable to floods or hazards to other lands which are inadequately elevated, floodproofed or otherwise unprotected from flood damages.

#### **Section 410.030. Statement of Purpose.**

[R.O. 2009 §17.44.030]

- A. It is the purpose of this Chapter to promote the public health, safety and general welfare and to minimize public and private losses due to flood conditions in specific areas by provisions designed:
  - 1. To protect human life and health;
  - 2. To minimize expenditures of public money for costly control projects;
  - 3. To minimize the need of rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
  - 4. To minimize prolonged business interruptions;
  - 5.



To minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets and bridges located in floodplains;

6. To help maintain a stable tax base by providing for the sound use and development of flood-prone areas in such a manner as to minimize future flood blight areas;
7. To insure that potential home buyers are notified that property is in a flood area; and
8. To insure that those who occupy the areas of special hazard assume responsibilities for their actions.

## Section 410.040. Methods of Reducing Flood Losses.

[R.O. 2009 §17.44.040]

A. In order to accomplish its purposes, this Chapter includes methods and provisions for:

1. Restricting or prohibiting uses which are dangerous to health, safety and property due to water or erosion or to flood heights or velocities.
2. Requiring that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction.
3. Controlling the alteration of natural floodplains, stream channels and natural protective barriers which are involved in the accommodation of floodwaters.
4. Controlling filling, grading, dredging and other development which may increase erosion or flood damage.
5. Preventing or regulating the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards in other areas.

## Article II. Definitions

### Section 410.050. Definitions.

[R.O. 2009 §17.44.050]

Unless specifically defined below, words or phrases used in this Chapter shall be interpreted so as to give them the meaning they have in common usage and to give this Chapter its most reasonable application.

#### **ACTUARIAL RATES OR RISK PREMIUM RATES**

Those rates established by the Federal Insurance Administrator pursuant to individual community studies and investigations which are undertaken to provide flood insurance in accordance with Section 1307 of the Act and accepted actuarial principles. *"Risk premium rates"* include provisions for operating cost and allowances.

#### **APPEAL**

A request for a review of the City Administrator's interpretation of any provision of this Chapter or a request for a variance.

#### **AREA OF SPECIAL FLOOD HAZARD**

The land in the floodplain within a community subject to a one percent (1%) or greater chance of flooding in any given year.

**BASE FLOOD**

The flood having a one percent (1%) chance of being equaled or exceeded in any given year.

**BASEMENT**

Any area of the building having its floor subgrade (below ground level) on all sides.

**CHANNEL**

A natural or artificial watercourse of perceptible extent, with a definite bed and banks to confine and conduct continuously or periodically flowing water. Channel flow, thus, is that water which is flowing within the limits of a defined channel.

**DEVELOPMENT**

Any manmade change to improved or unimproved real estate including, but not limited to, buildings or other structures, levees, levee systems, mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials.

**EXISTING CONSTRUCTION**

For the purposes of determining rates, structures for which the "start of construction" commenced before the effective date of the FIRM or before January 1, 1975, for FIRMs effective before this date. "Existing construction" may also be referred to as "existing structures".

**FLOOD OR FLOODING**

1. General and temporary condition of partial or complete inundation of normally dry land areas from (1) The overflow of inland; and/or (2) The unusual and rapid accumulation or runoff of surface waters from any source.
2. The collapse or subsidence of land along the shore of a lake or other body of water as a result of erosion or undermining caused by waves or currents of water exceeding anticipated cyclical levels or suddenly caused by an unusually high water level in a natural body of water, accompanied by a severe storm or by an unanticipated force of nature, such as flash flood or an abnormal tidal surge or by some similarly unusual and unforeseeable event which results in flooding as defined in Subsection (1) of this definition.

**FLOOD INSURANCE RATE MAP (FIRM)**

An official map of a community on which the Federal Insurance Administrator has delineated both the special hazard areas and the risk premium zones applicable to the community.

**FLOOD INSURANCE STUDY OR FLOOD ELEVATION STUDY**

An examination, evaluation and determination of flood hazards and, if appropriate, corresponding water surface elevations or an examination, evaluation and determination of mudslides (i.e., mudflow) and/or flood-related erosion hazards.

**FLOOD PROTECTION SYSTEM**

Those physical structural works for which funds have been authorized, appropriated and expended and which have been constructed specifically to modify flooding in order to reduce the extent of the area within a community subject to a "special flood hazard" and the extent of the depths of associated flooding. Such system typically includes dams, reservoirs, levees or dikes. These specialized flood-modifying works are those constructed in conformance with sound engineering standards.

**FLOODPLAIN MANAGEMENT**

The operation of an overall program of corrective and preventive measures for reducing flood damage including, but not limited to, emergency preparedness plans, flood control works and floodplain management regulations.

**FLOODPROOFING**

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.

**FLOODWAY OR REGULATORY FLOODWAY**

The channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height.

**FLOODWAY FRINGE**

That area of the floodplain, outside of the floodway, that on the average is likely to be flooded once every one hundred (100) years (i.e., that has a one percent (1%) chance of flood occurrence in any one (1) year).

**FREEBOARD**

A factor of safety usually expressed in feet above a flood level for purposes of floodplain management. Freeboard tends to compensate for the many unknown factors that could contribute to flood heights greater than the height calculated for a selected size flood and floodway conditions, such as wave action, clogged bridge openings and the hydrological effect of urbanization of the watershed.

**HIGHEST ADJACENT GRADE**

The highest natural elevation of the ground surface prior to construction next to the proposed walls of a structure.

**HISTORIC STRUCTURE**

Any structure that is:

1. Listed individually in the National Register of Historic Places (a listing maintained by the Department of the Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;
2. Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district;
3. Individually listed on a State Inventory of Historic Places in States with historic preservation programs which have been approved by the Secretary of the Interior; or
4. Individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified either:
  - a. By an approved State program as determined by the Secretary of the Interior; or
  - b. Directly by the Secretary of the Interior in States without approved programs.

**LOWEST FLOOR**

The lowest floor of the lowest enclosed area (including basement). An unfinished or flood-resistant enclosure, usable solely for parking vehicles, building access or storage in an area other than a basement area is not considered a building's lowest floor; provided that such enclosure is not built so as to render the structure in violation of the applicable non-elevation design requirements.

**MANUFACTURED HOME**

A structure transportable in one (1) or more sections that is built on a permanent chassis and is designed for use with or without a permanent foundation when attached to the required utilities. The term "manufactured home" does not include a "recreational vehicle".

#### **MANUFACTURED HOME PARK OR SUBDIVISION**

A parcel (or contiguous parcels) of land divided into two (2) or more manufactured home lots for rent or sale.

#### **START OF CONSTRUCTION**

For other than new construction or substantial improvement under Coastal Barrier Resources Act Pub. L. 97-348, includes substantial improvement and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition, placement or other improvement was within one hundred eighty (180) days of permit date. The "actual start" means either the first (1st) placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns or any work beyond the stage of excavation; or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation such as clearing, grading and filling; nor does it include the installation of street and/or walkways; nor does it include excavation for a basement, footings, piers or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure. For a substantial improvement, the "actual start of the construction" means the first (1st) alteration of any wall, ceiling, floor or other structural part of building, whether or not that alteration affects the external dimensions of the building.

#### **STRUCTURE**

For floodplain management purposes, a walled and roofed building, including a gas or liquid storage tank, that is principally above ground, as well as a manufactured home. "Structure", for insurance purposes, means a walled and roofed building, other than gas or liquid storage tank, that is principally above ground and affixed to a permanent site, as well as a manufactured home on a permanent foundation. For the latter purpose, the term includes a building while in the course of construction, alteration or repair, but does not include building materials or supplies intended for use in such construction, alteration or repair, unless such materials or supplies are within an enclosed building on the premises.

#### **SUBSTANTIAL DAMAGE**

Damage of any origin sustained by a structure whereby the cost of restoring the structure to its before-damaged condition would equal or exceed fifty percent (50%) of the market value of the structure before the damage occurred.

#### **SUBSTANTIAL IMPROVEMENT**

Any reconstruction, rehabilitation, addition or other improvement of a structure, the cost of which equals or exceeds fifty percent (50%) of the market value of the structure before the "start of construction" or the improvement. This term includes structures which have incurred "substantial damage", regardless of the actual repair work performed. The term does not, however, include either:

1. Any project for improvement of a structure to correct existing violations of State or local health, sanitary or safety code specifications which have been identified by the local Code Enforcement Official and which are the minimum necessary to assure safe living conditions, or
2. Any alteration of a "historic structure", provided that the alteration will not preclude the structure's continued designation as a "historic structure".

**VARIANCE**

A grant of relief to a person from the requirements of this Chapter, which permits construction in manner otherwise prohibited by this Chapter, where specific enforcement would result in unnecessary hardship.

**Article III. General Provisions****Section 410.060. Lands To Which This Chapter Applies.**

[R.O. 2009 §17.44.060; Ord. No. 5875 §§III—IV, 6-5-2012]

This Chapter shall apply to all lands within the jurisdiction of the City of Sikeston identified as numbered and unnumbered A Zones, AE, AO, and AH Zones on the Flood Insurance Rate Map (FIRM) for Scott County, Missouri on map panels 29201Co295D, 29201Co300D, 29201Co305D, 29201Co314D, 29201Co315D, 29201Co316D, 29201Co318D, 29201Co319D, 29201Co402D, 29201Co406D, 29201Co407D, and 29201Co425D dated June 5, 2012, as amended, and any future revisions thereto. In all areas covered by this Chapter, no development shall be permitted except through the issuance of a floodplain development permit granted by the Sikeston City Council or its duly designated representative under such safeguards and restrictions as the Sikeston City Council or the designated representative may reasonably impose for the promotion and maintenance of the general welfare, health of the inhabitants of the community, and as specifically noted in Article IV.

**Section 410.070. Basis For Establishing The Areas of Special Flood Hazard.**

[R.O. 2009 §17.44.070; Ord. No. 5875 §§V—VI, 6-5-2012]

- A. Selection of a base flood that is based upon engineering calculations which permit a consideration of such flood factors as its expected frequency of occurrence, the area inundated, and the depth of inundation. The base flood selected for this Chapter is representative of large floods which are characteristic of what can be expected to occur on the particular streams subject to this Chapter. It is in the general order of a flood which could be expected to have a one percent (1%) chance of occurrence in any one (1) year as delineated on the Federal Insurance Administrator's FIS and illustrative materials for Scott County dated June 5, 2012 as amended, and any future revisions thereto.
- B. Calculation of water surface profiles are based on a standard hydraulic engineering analysis of the capacity of the stream channel and overbank areas to convey the regulatory flood.

**Section 410.080. Penalties For Non-Compliance.**

[R.O. 2009 §17.44.080]

- A. No structure or land shall hereafter be constructed, located, extended, converted or altered without full compliance with the terms of this Chapter and other applicable regulations.
- B. Violation of the provisions of this Chapter or failure to comply with any of its requirements (including violations of conditions and safeguards established in connection with grants of variances or special exceptions) shall constitute a misdemeanor.
- C. Any person who violates this Chapter or fails to comply with any of its requirements shall upon conviction thereof be fined not more than five hundred dollars (\$500.00) or imprisoned for not

D. Nothing herein contained shall prevent the City of Sikeston or other appropriate authority from taking such other lawful action as is necessary to prevent or remedy any violation.

[R.O. 2009 \$17.44.090]

**Section 410.100. Interpretation.**

[R.O. 2009 §17.44.100]

1. Considered as minimum requirements;
2. Liberally construed in favor of the Governing Body; and
3. Deemed neither to limit nor repeal any other powers granted under State Statutes.

[R.O. 2009 §17.44.110]

## Article IV. Administration

[R.O. 2009 §17.44.120]

[illegible]

structures, fill, storage of materials, drainage facilities; and the location of the foregoing. Specifically, the following information is required:

1. Elevation, in relation to mean sea level, of the lowest floor (including basement) of all structures.
2. Elevation, in relation to mean sea level, to which any non-residential structure is to be floodproofed.
3. Certification from a registered professional engineer or architect that non-residential floodproofed structure will meet the floodproofing criteria in Article V, Section 410.130.
4. Description of the extent to which any watercourse will be altered or relocated as a result of proposed development.

### **Section 410.130. Designation of The Local Administrator.**

[R.O. 2009 §17.44.130]

The Planning Coordinator is hereby appointed to administer and implement the provisions of this Chapter by granting or denying development permit applications in accordance with its provisions.

### **Section 410.140. Duties and Responsibilities of The Planning Coordinator.**

[R.O. 2009 §17.44.140]

A. Duties of the Planning Coordinator shall include, but not be limited to:

1. Review all development permits to assure that sites are reasonably safe from flooding and that the permit requirements of this Chapter have been satisfied.
2. Review permits for proposed development to assure that all necessary permits have been obtained from those Federal, State or local governmental agencies from which prior approval is required.
3. When base flood elevation data have not been provided, then the Planning Coordinator shall obtain, review and reasonably utilize any base flood elevation or floodway data available from a Federal, State or other source in order to administer the provision of Article V.
4. Verify, record and maintain a record of the actual elevation (in relation to mean sea level) of the lowest floor (including basement) of all new or substantially improved structures.
5. Verify, record and maintain a record of the actual elevation (in relation to mean sea level) to which the new or substantially improved structures have been floodproofed.
6. When floodproofing is utilized for a particular structure, the Planning Coordinator shall obtain certification from the permittee's registered professional engineer or architect that floodproofing standards have been met.
7. Notify adjacent communities and the Missouri State Emergency Management Agency prior to any alteration or relocation of a watercourse and shall submit evidence of such notification to the Federal Emergency Management Agency.
8. Assure that maintenance is provided within the altered or relocated portion of said watercourse so that the flood-carrying capacity is not diminished.

- ### **Section 410.150. Variance Procedures.**

- A. The Board of Adjustment as established by the City of Sikeston, Missouri, shall hear and decide appeals and requests for variances from the requirements of this Chapter.
- B. The Board of Adjustment shall hear and decide appeals when it is alleged that there is an error in any requirement, decision or determination made by the Planning Coordinator in the enforcement or administration of this Chapter.
- C. Any person aggrieved by the decision of the Board of Adjustment or any taxpayer may appeal such decision to the Circuit Court as provided in Chapter 89, RSMo.
- D. In passing upon such applications, the Board of Adjustment shall consider all technical evaluations, all relevant factors, standards specified in other Sections of this Chapter and:
  1. The danger that materials may be swept onto other lands causing injury to persons or property;
  2. The danger to life and property due to flooding or erosion damage;
  3. The susceptibility of proposed facility and its contents to flood damage and the effect of such damage on the individual owner;
  4. The importance of the services provided by the proposed facility to the community;
  5. The necessity to the facility of a waterfront location, where applicable;
  6. The availability of alternative locations, not subject to flooding or erosion damage, for the proposed use;
  7. The compatibility of the proposed use with existing and anticipated development;
  8. The relationship of the proposed use to the Comprehensive Plan and Floodplain Management Program for that area;
  9. The safety of access to the property in times of flood for ordinary and emergency vehicles;
  10. The expected heights, velocity, duration, rate of rise and sediment transport of the floodwaters and the effects of wave action, if applicable, expected at the site; and
  11. The cost of providing governmental services during and after flood conditions including maintenance and repair of public utilities and facilities such as sewer, gas, electric and water systems and streets and bridges.

1. Generally, variances may be issued for new construction and substantial improvements to be erected on a lot 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 items (2—6) below have



been fully considered. As the lot size increases beyond the one-half (1/2) acre, the technical justification required for issuing the variance increases.

2. Variances may be issued for the repair or rehabilitation of historic structures upon determination 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.
3. Variances shall not be granted within any designated floodway unless an engineer has submitted an evaluation of the hydraulic impact of the proposed development as well as signed, sealed and dated "no rise" certification.
4. Variances shall only be issued upon determination that the variance is the minimum necessary, considering the flood hazard, to avoid relief.
5. Variances shall only be issued upon:
  - a. A showing of good and sufficient cause,
  - b. A determination that failure to grant the variance would result in exceptional hardship to the applicant, and
  - c. A determination that granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, increase nuisances, cause fraud on or victimization of the public or conflict with existing local laws or ordinances.
6. Any applicant to whom a variance is granted shall be given a written notice that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced lowest floor elevation.

## Article V. Provisions For Flood Hazard Reduction

### Section 410.160. General Standards.

[R.O. 2009 §17.44.160]

- A. In all areas of special flood hazards (Zones A, AE, A1-30, AO, AH), the following provisions are required:
  1. All new construction, including manufactured homes and substantial improvements, shall be designed (or modified) and adequately anchored to prevent flotation, collapse or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy.
  2. All new construction and substantial improvements shall be constructed with materials resistant to flood damage.
  3. All new construction and substantial improvements shall be constructed by methods and practices that minimize flood damages.
  4. All new construction and substantial improvements shall be constructed with electrical, heating, ventilating, plumbing and air-conditioning equipment and other service facilities that are designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding.

5. All new and replacement water supply systems be designed to minimize or eliminate infiltration of floodwaters into the system.
6. New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of floodwaters into the systems and discharges from the systems into floodwaters. On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.
7. The storage or processing of materials that are in time of flooding, buoyant, flammable, explosive or could be injurious to human, animal or plant life is prohibited. Storage of other material or equipment may be allowed if not subject to major damage by floods and firmly anchored to prevent flotation or if readily removable from the area within the time available after flood warning.
8. Until a floodway has been designated, no development, including landfill, may be permitted within Zones A1-30 and AE on the City's FIRM unless the applicant for the land use has demonstrated that the proposed use, when combined with all other existing and reasonably anticipated uses, will not increase the water surface elevation of the 100-year flood more than (1) foot on the average cross section of the reach in which the development or landfill is located as shown on the Flood Insurance Rate Study.

## Section 410.170. Standards For Subdivision Proposals.

[R.O. 2009 §17.44.170]

- A. All subdivision proposals and other proposed new developments, including manufactured home parks or subdivisions, shall be consistent with the need to minimize flood damage.
- B. All subdivision proposals shall have public utilities and facilities such as sewer, gas, electrical and water systems located and constructed to minimize flood damage.
- C. All subdivision proposals shall have adequate drainage provided to reduce exposure to flood hazards.
- D. Base flood elevation data shall be provided for subdivision proposals and other development (including proposals for manufactured home park and subdivisions) which is greater than either five (5) lots or five (5) acres.

## Section 410.180. Specific Standards.

[R.O. 2009 §17.44.180]

- A. In all areas of the special flood hazards where base flood elevation data has been provided as set forth in Article IV, Section **410.140** (Zones A1-30, AE and AH), the following provisions are required:
  1. *Residential construction.* New construction or substantial improvement of any residential structure shall have the lowest floor, including basement, elevated one (1) foot above the base flood elevation.
  2. *Non-residential construction.* New construction or substantial improvement of any commercial, industrial or other non-residential structure shall either have the lowest floor, including basement, elevated to at least one (1) foot above the level of the base flood elevation or, together with attendant utility and sanitary facilities, be floodproofed so that

below such a level the structure is water-tight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. A registered professional engineer or architect shall certify that the standards of this Subsection are satisfied. Such certification shall be provided to the official as set forth in Article IV, Section 410.140(6).

3. Require for all new construction and substantial improvement that fully enclosed areas below the lowest floor that are usable solely for parking of vehicles, building access or storage in an area other than a basement and which are subject to flooding shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or meet or exceed the following minimum criteria: A minimum of two (2) openings having a total net area of not less than one (1) square inch for every square foot of enclosed area subject to flooding shall be provided. The bottom of all openings shall be no higher than one (1) foot above grade. Openings may be equipped with screens, louvers, valves or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.

## Section 410.190. Manufactured Homes.

[R.O. 2009 §17.44.190]

- A. All manufactured homes shall be anchored to resist flotation, collapse or lateral movement. Manufactured homes must be anchored in accordance with State and local building codes and FEMA guidelines. In the event that over-the-top frame ties to ground anchors are used, the following specific requirements (or their equivalent) shall be met:
  1. Over-the-top ties shall be provided at each of the four (4) corners of the manufactured home with two (2) additional ties per side at intermediate locations and manufactured homes less than fifty (50) feet long requiring only one (1) additional tie per side;
  2. Frame ties shall be provided at each corner of the manufactured home with five (5) additional ties per side at intermediate points and manufactured homes less than fifty (50) feet long requiring only four (4) additional ties per side;
  3. All components of the anchoring system be capable of carrying a force of four thousand eight hundred (4,800) pounds; and
  4. Any additions to the manufactured home be similarly anchored.
- B. Require that all manufactured homes to be placed within Zones A1-30, AH and AE on the community's FIRM be elevated on a permanent foundation such that the lowest floor of the manufactured home is one (1) foot above the base flood elevations and be securely anchored to an adequately anchored foundation system in accordance with the provisions of this Section.
- C. Require that recreational vehicles placed on sites within all unnumbered and numbered A Zones, AO, AE and AH Zones on the community's FIRM either:
  1. Be on a site for fewer than one hundred eighty (180) consecutive days, or
  2. Be fully licensed and ready for highway use,\*or
  3. Meet the permitting, elevation and anchoring requirements for manufactured homes of this Chapter.

- A. A structure or the use of a structure or premises which was lawful before the passage or amendment of the original floodplain ordinance, but which is not in conformity with the provisions of this Chapter, may be continued subject to the following conditions:
1. If such use is discontinued for twelve (12) consecutive months, any future use of the building premises shall conform to this Chapter. The Board of Municipal Utilities (Utility Department) shall notify the Planning Coordinator in writing of any location that has had utility services disconnected for a period of twelve (12) months.
  2. Uses of adjuncts thereof, which are or become nuisances, shall not be entitled to continue as non-conforming uses.
- B. If any non-conforming use structure is destroyed by any means, including flood, it shall not be reconstructed if the cost is more than fifty percent (50%) of the market value of the structure before the damage occurred, except that if it is reconstructed in conformity with the provisions of this Chapter.
- This limitation does not include the cost of any alteration to comply with existing State or local health, sanitary, building or safety codes or regulations or the cost of any alteration of a structure listed on the National Register of Historic Places or a State Inventory of Historic Places.

## Article VII. Amendments

### Section 410.220. Amendments.

[R.O. 2009 §17.44.220; Ord. No. 5640, 7-2005]

- A. The regulations, restrictions, boundaries set forth in this Chapter may from time to time be amended, supplemented, changed or repealed to reflect any and all changes in the National Flood Disaster Protection Act of 1973, provided however, that no such action may be taken until after a public hearing in relation thereto, at which parties in interest and citizens shall have an opportunity to be heard. Notice of the time and place of such hearing shall be published in a newspaper of general circulation in the City of Sikeston.
- B. At least twenty (20) days shall elapse between the date of this publication and the public hearing. A copy of such amendments will be provided to the Federal Emergency Management Agency. The regulations of this Chapter are in compliance with the National Flood Insurance Program Regulations as published in Title 44 of the Code of Federal Regulations.

# **Council Letter**

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Date of Meeting: 15-08-17

Originating Department: Public Works Department

To the Mayor and City Council:

Subject: Authorization to Accept Proposal with Allgeier Martin to Prepare LOMR

Attachment: Proposal from Allgeier, Martin and Associates, Inc.

Action Options:

1. Award Contract to Allgeier, Martin and Associates for the preparation of a Letter of Map Revision for a not-to-exceed amount of \$95,300.
2. Other action Council may deem appropriate

Background:

On 7/27/2015, the City Council authorized staff to seek a proposal from Allgeier Martin to prepare a new Letter of Map Amendment along with a revised flood plain map to address the many concerns regarding the current FEMA flood map.

Allgeier Martin has submitted a proposal for the preparation of the new map revision which includes topographic surveying, all pertinent calculations and presentation/communication with FEMA. They anticipate the process taking approximately 180 days until the LOMR is ready for submission to FEMA.

The fees for this proposal are based on an hourly fee arrangement that is not-to-exceed \$95,300. Therefore, that is the maximum amount, but it is possible that it could be less, if less hours are required.

The city has been working with Allgeier Martin for several months on this issue. Because of their background on this project, should the Council wish to proceed, it is the recommendation of staff to waive purchasing policy, and award a contract to Allgeier Martin without seeking proposals from other firms.

# ALLGEIER, MARTIN and ASSOCIATES, INC.

*Consulting Engineers • Hydrologists • Surveyors*

HYDRO DIVISION - ROLLA OFFICE

112 West 8<sup>th</sup> Street  
Rolla, Missouri 65401

Phone: (573) 341-9487  
FAX: (417) 680-7300

August 13, 2015

Mr. Jay Lancaster, PE  
Director of Public Works  
City of Sikeston  
105 E. Center Street  
Sikeston, MO 63801

Re: Proposal for professional engineering services  
St. John's Ditch Tributary 1.1 FEMA

Dear Mr. Lancaster:

Thank you for the opportunity to submit our proposal for professional engineering services for the St. John's Ditch Tributary 1.1 FEMA project. This letter proposal outlines our scope of work, schedule and payment terms.

## **1 Project Description**

The project area is the watershed for St. John's Ditch Tributary 1.1. It is primarily located in Sections 12 and 13, Township 26 North, Range 13 East and Sections 7, 18, and 19, Township 26 North, Range 14 East.

Scott County and the City of Sikeston have recently received revised floodplain mapping from FEMA. The accuracy of the revised mapping has been called into question by members of the community. This proposal is presented to evaluate the watershed hydrology and hydraulics and prepare a Letter of Map Revision application to more accurately establish the regulatory flood boundaries for Tributary 1.1.

## **2 Scope of Services**

The following items are considered part of the basic scope of services:

- 2.1 Meet with the City to verify the project scope, mapping extents, schedule and objectives.
- 2.2 Collect and review available existing data, including but not limited to survey data, topographic mapping, prior studies, existing hydrologic and hydraulic models, etc.
- 2.3 Conduct field visits as needed to verify drainage basin boundaries, land use, soil types and other parameters needed for analysis.
- 2.4 Prepare a hydrologic model for the watershed to establish flowrates for the hydraulic analysis.
- 2.5 Prepare a hydraulic model for the Tributary 1.1 to determine the limits of the floodplain boundary and the associated water-surface elevations.

- 2.6 Perform miscellaneous field surveying, cross sections, verify elevations, etc., for analysis and mapping up to 50 hours of two-man crew time or equivalent cost.
- 2.7 Map the 1% annual chance floodplain boundary.
- 2.8 Map the 0.2% annual chance floodplain boundary.
- 2.9 Map the regulatory floodway (based upon mapping limits determined in conjunction with the City).
- 2.10 Meet with the City to review the proposed mapping changes.
- 2.11 Meet with the public to review the proposed mapping changes.
- 2.12 Based on City and Public comments, prepare and submit a Letter of Map Revision application.
- 2.13 Respond to FEMA comments during the review process.
- 2.14 Prepare a written report documenting the hydrologic analysis, hydraulic analysis and mapping process. Supporting mapping and computations will be included in the report.
- 2.15 Present the final mapping and report to the City and public.

### **3 Deliverables**

- 3.1 Preliminary floodplain mapping for review by the City.
- 3.2 Draft report for review by the City.
- 3.3 Letter of Map Revision application including the required letter of public notice.
- 3.4 Final report, one hard copy and a digital copy in pdf format.
- 3.5 Digital copies of the final hydrologic model, hydraulic model, and floodplain mapping.

### **4 Items Provided by the Owner**

- 4.1 Arrange for safe access to and make all provisions for Allgeier, Martin and Associates, Inc., (AMA) personnel to enter upon public and private property as required to perform services under this agreement.
- 4.2 Review proposed site location and key design elements with AMA personnel.
- 4.3 Topographic mapping of the watershed (two-foot contours or better).
- 4.4 Digital copies of the current hydrologic and hydraulic models and mapping (as available).
- 4.5 Field survey data in excess of 50 hours of two-man crew time as needed to supplement the existing data/mapping.
- 4.6 Distribute public notices as required by the Letter of Map Revision process.

### **5 Additional Services**

Additional services will be billed hourly in accordance with the attached rate schedule. Written authorization will be obtained prior to performing additional services. The following items are considered additional services:

- 5.1 Design of improvements.
- 5.2 Preparation of a 404 permit application or coordination with permitting officials.
- 5.3 Preparation of an NPDES permit application.
- 5.4 Construction observation, review of pay requests or shop drawing review.
- 5.5 Geotechnical investigations.

Mr. Jay Lancaster, PE  
Page 3  
August 13, 2015

5.6 Field surveys other than those listed in item 2.6.

## **6 Schedule**

The Letter of Map Revision application will be completed within approximately 180 days. Review time by FEMA widely varies and will control the time frame for adoption of the new mapping. The Final Report will be completed within 30 days of receipt of comments from the City and FEMA.

## **7 Fees**

Our fee for the scope of services listed above is hourly with a not-to-exceed amount of \$95,300.00. Work in progress will be invoiced monthly based on estimated percent complete. Payment is due within 30 days of receipt of the invoice.

## **8 Limitation of Liability**

Allgeier Martin and Associates, Inc.'s maximum aggregate liability for all damages connected with its services for the project is limited to the compensation paid for services.

## **9 Termination**

Either party may terminate this agreement with 10 days advanced written notice. The engineer shall be paid for all work completed prior to the date of termination. In the event of a dispute between the parties to this contract as to services provided or payment therefore, either party shall have the right to collect from the other its reasonable costs of collection including a reasonable attorney's fee to be determined by a court of competent jurisdiction, mediator or arbitrator.

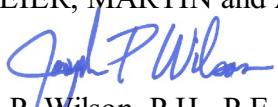
## **10 Notices**

The map revision process will be performed in accordance with FEMA standards. The resulting mapping may not show a reduction in flood risk for impacted properties.

## **11 Signatures**

This proposal is valid until December 31, 2015. If this proposal is acceptable to you, please sign the attached Work Authorization Agreement and return a copy to our office and we will begin work immediately. We appreciate the opportunity to work with you. Please call if you have any questions.

Sincerely,  
ALLGEIER, MARTIN and ASSOCIATES, INC.

  
Joseph P. Wilson, P.H., P.E.  
Vice President, Hydro Division



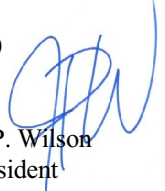
## **ENGINEERING SERVICES WORK AUTHORIZATION AGREEMENT**

Allgeier, Martin & Associates, Inc., (hereinafter called the Engineer) is pleased to provide the engineering services described herein. This Agreement provides authorization to proceed with the work and confirms the terms and conditions under which the services are provided.

Compensation will be based on an hourly not-to-exceed fee. If it is necessary to modify the scope of the project during the execution of the work, we will promptly seek a mutually agreeable revision of the scope of work and the associated fees.

Basic Scope Fee: \$95,300.00

By:

  
Joseph P. Wilson  
Vice President

Date:

August 13, 2015

**ALLGEIER, MARTIN and ASSOCIATES, INC.  
Hydro Division  
ROLLA, MISSOURI**

PROJECT NAME: **St. John's Ditch Tributary 1.1 Map Revision**

PROJECT LOCATION: **Sikeston, Missouri**

FOR PAYMENT OF CHARGES: Invoice to the Account of:

Mr. Jay Lancaster, PE  
Director of Public Works  
City of Sikeston  
105 E. Center Street  
Sikeston, MO 63801

WORK AUTHORIZED BY:

\_\_\_\_\_  
Date

\_\_\_\_\_  
Name and Title

\_\_\_\_\_  
Signature

### **SCOPE OF WORK:**

See attached letter dated August 13, 2015 from Joseph Wilson to Mr. Jay Lancaster, PE, for project description, scope of services, items to be provided by Client, additional services, schedule, etc.

P:\Sikeston\2015 Floodplain Mapping\Sikeston 2015 mapping WAA.wpd

EXHIBIT A  
ALLGEIER, MARTIN and ASSOCIATES, INC.  
Consulting Engineers and Surveyors

**RATE SCHEDULE  
2015**

LABOR RATES

<u>Position</u>	<u>Hourly Billing Rate</u> 01/01/2015 thru 12/31/2015
Principal/Engineer IV	\$180
Principal/Engineer III	\$165
Project Manager/Engineer II	\$145
Project Manager/Engineer I	\$130
Designer/Technician III	\$100
Designer/Technician II	\$87
Designer/Technician I	\$81
Two-Man GPS Survey Crew	\$170
One-Man GPS Survey Crew	\$130
Three-Man Survey Crew	\$187
Two-Man Survey Crew	\$145
Registered Land Surveyor II	\$155
Registered Land Surveyor I	\$135
Survey Party Chief	\$81
Survey Crew Member	\$66
Right of Way Specialist	\$104
Construction Inspector III	\$100
Construction Inspector II	\$87
Construction Inspector I	\$81
Secretary/Word Processor	\$66
Print Specialist	\$66

Note: All pre-approved overtime hours shall be invoiced at 1½ times the hourly billing rate shown above.

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<u>Item</u>	<u>NON-LABOR RATES</u>	<u>Rate</u>
Travel		\$0.56 per mile (or IRS rate)
Subsistence		Actual cost
Lodging		Actual cost
Special Postage or Shipping		Actual cost
Printing		Actual cost
Surveying Materials		Actual cost
Subcontract Specialty Services		Cost + 10%

# **Council Letter**

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Date of Meeting: 15-08-20

Originating Department: City Manager

To the Mayor and City Council:

Subject: City Council Meeting Calendar

Attachment(s):

1. Revised City Council Meeting Calendar

Action Options:

1. For Council information
2. Other action Council may deem necessary

Background:

Attached is the revised meeting schedule for the period August 20 through December 28, 2015. The 11:30 AM, August work session has been moved to August 24. Also, due to the upcoming Labor Day holiday, Council set the September regular monthly meeting for 6 PM, Tuesday, September 8.

Please advise if Council wishes to make further changes to this schedule.

**Sikeston City Council Revised Meeting Schedule  
For the Period August 20 through December 31, 2015**

Meeting Date	Meeting Time	Meeting Type	Meeting Location
August 20	6:00 PM	Community Outreach	Clinton Building
August 24	11:30 AM	Special	Council Chambers
September 8	6:00 PM	Regular Monthly	Council Chambers
September 17	6:00 PM	Community Outreach	Clinton Building
September 28	11:30 AM	Special	Council Chambers
October 5	6:00 PM	Regular Monthly	Council Chambers
October 15	6:00 PM	Community Outreach	Clinton Building
October 26	11:30 AM	Special	Council Chambers
November 2	6:00 PM	Regular Monthly	Council Chambers
November 19	6:00 PM	Study Session	Council Chambers
November 30	11:30 AM	Special	Council Chambers
December 7	6:00 PM	Regular Monthly	Council Chambers
December 17	6:00 PM	Study Session	Council Chambers
December 28	11:30 AM	Special	Council Chambers