

# Waterloo Levee Improvements and Elkhorn River Flood Study

## Waterloo, Nebraska



### VILLAGE OF WATERLOO GOALS



### PROJECT BACKGROUND

The Waterloo levee, which surrounds the Village of Waterloo, was constructed by the U.S. Army Corps of Engineers (USACE) in 1967. Recently, the Village was notified that the Federal Emergency Management Agency (FEMA) requirements for levee accreditation must be met in order for the levee to continue to be shown on floodplain maps for the Village as providing protection from the 100-year, or 1% annual chance, flood. Through an evaluation of these criteria it was found that the levee does not meet all current FEMA accreditation requirements, including one that relates to freeboard, which is the height of the levee above the flood height. A map showing how the current freeboard for the Waterloo levee compares to what FEMA requires is on the back of this fact sheet.

### PROJECT DESCRIPTION

Due to the freeboard deficiency identified, the Waterloo levee must undergo improvements to increase the height of the levee. In order to complete these upgrades, two components are being completed – a floodplain study and design of levee improvements. The floodplain study has been completed along the Elkhorn River adjacent to Waterloo in order to accurately identify flood heights and to help ensure the levee is built to the correct height. Design of improvements to the Waterloo levee are being completed in order to upgrade the levee to meet FEMA's requirements and to provide additional flood protection for Waterloo.

### PROJECT BENEFITS

If the levee is upgraded to meet FEMA's requirements, then the levee will be accredited by FEMA and the Elkhorn River floodplain maps will remain the same for Waterloo. Village residents will not be subject to mandatory purchase of flood insurance requirements or construction and development restrictions.

### RESIDUAL RISK

While levee upgrades will provide additional protection from flooding to the Village, they will only be designed for certain flood levels. If those flood levels are exceeded by catastrophic flooding, the levee is still at risk of overtopping or failure due to these conditions.

### WHAT TO EXPECT

**Field Work:** Geotechnical investigations consisting of soil boring and testing will be undertaken at various times during the course of the project. Various field visits by the design engineering team will be completed over the course of the project.

**Public Information:** Preliminary and final design documents and related background information will be discussed at three public open houses over the course of the project.

### SCHEDULE

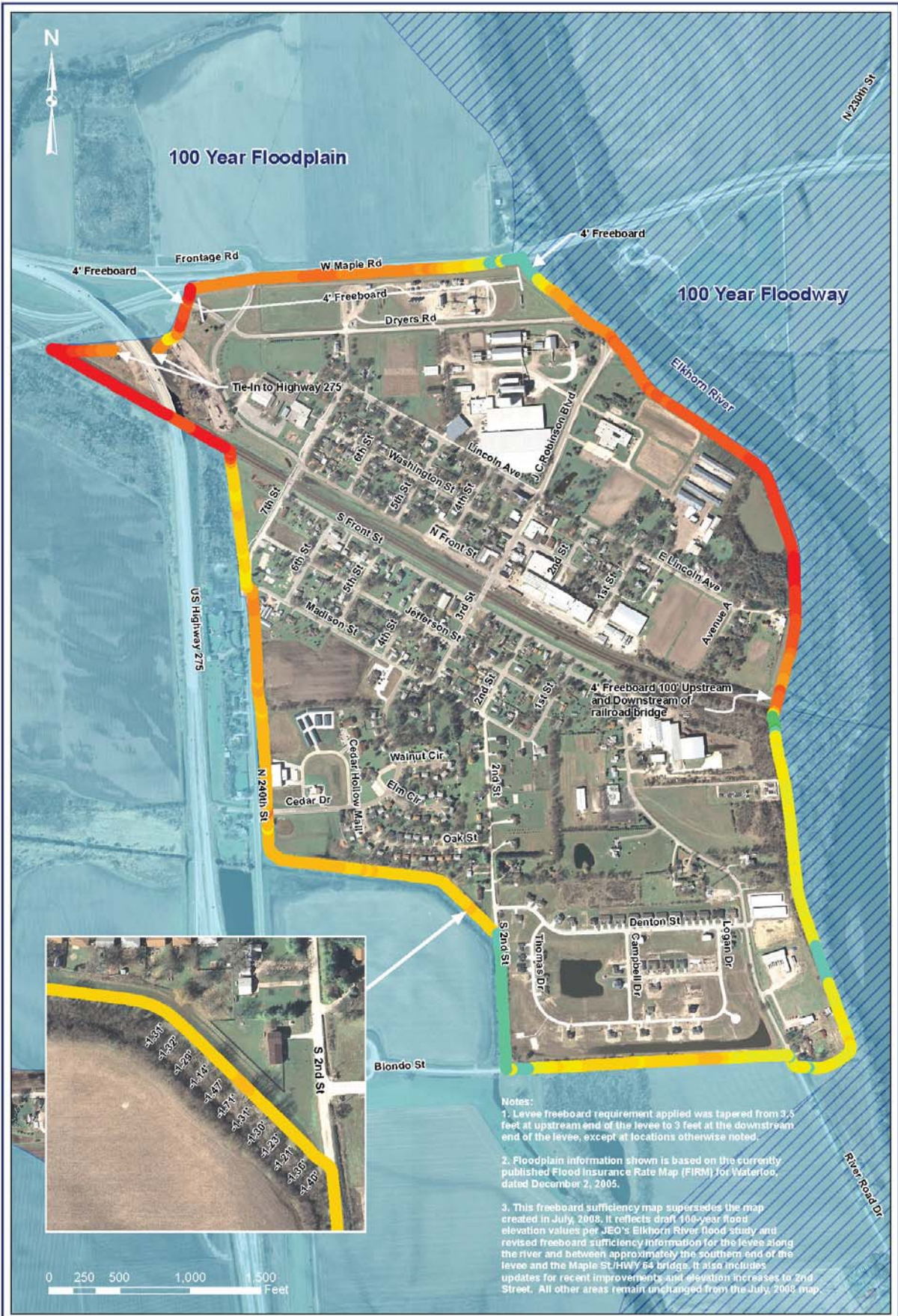
- Flood Study
  - July 2008 - September 2008
- Preliminary and Final Design of Improvements
  - July 2008 - Late Spring 2009
- Public Information Meetings
  - October 2008
  - February 2009
  - Late Spring 2009\*

*\*Note - 3<sup>rd</sup> Public Informational Meeting Date is Tentative at this Time*

### CONTACT US

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- Notes:
1. Levee freeboard requirement applied was tapered from 3.5 feet at upstream end of the levee to 3 feet at the downstream end of the levee, except at locations otherwise noted.
  2. Floodplain information shown is based on the currently published Flood Insurance Rate Map (FIRM) for Waterloo, dated December 2, 2005.
  3. This freeboard sufficiency map supersedes the map created in July, 2008. It reflects draft 100-year flood elevation values per JEO's Elkhorn River flood study and revised freeboard sufficiency information for the levee along the river and between approximately the southern end of the levee and the Maple St/HWY 64 bridge. It also includes updates for recent improvements and elevation increases to 2nd Street. All other areas remain unchanged from the July, 2008 map.

JEO Project # - 613D5  
November, 2008



### Freeboard Sufficiency

Village of Waterloo, NE

