Iowa City Gateway

Dubuque Street elevation and Park Road Bridge replacement project

July, 2011

Iowa City Gateway

Dubuque Street serves as Iowa City's main entrance and key gateway into the community for residents and visitors. It parallels the Iowa River and carries more than 25,000 vehicles a day between Interstate 80, the downtown business district and the University of Iowa campus. Park Road Bridge also serves as a critical transportation link for Iowa City. Together, these corridors provide vital connections for the community's safety, commerce, neighborhoods and recreation.

To address these problems, work is underway on the Iowa City Gateway project. The project will create a long-term solution to reduce flood-related impacts to the Dubuque Street and Park Road Bridge corridors.

Iowa City Gateway Study Area, highlighted in green

Improvements will be planned and constructed in three phases:

- **Phase 1 - Plan** The federally required planning process, called the National Environmental Policy Act (NEPA) is expected to be completed in mid 2012.
- **Phase 2 - Design** After the NEPA process is completed and approved, final design work will begin. Detailed design and engineering will take approximately 18 to 20 months.
- **Phase 3 - Build** Construction could begin as early as the spring of 2014. At this time, the team estimates that work will take approximately two construction seasons.

Completed Phase 1 Steps

- Establish Purpose and Need
- Establish screening criteria
- Identify initial alternative solutions
- Evaluate initial alternatives

Upcoming Phase 1 Work

- Further develop reasonable alternative solutions
- Refine screening criteria
- Evaluate alternative solutions
- Recommend a preferred alternative (Spring 2012)

Purpose and Need and Primary Selection Criteria

One of NEPA's requirements is to establish a formal project "Purpose and Need." The Purpose and Need serves as the primary criteria for evaluating alternatives. Following input from the March, 2011 public meeting, the project Purpose and Need is:

Purpose of the Proposed Action

- Provide a reliable multimodal transportation corridor that reduces the impact of flooding on the local transportation system and the Iowa River corridor.

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Need for the Proposed Action

- Maximize the reliability of the Dubuque Street Corridor by reducing the frequency and duration of Dubuque Street closures due to flooding;
- Maximize the reliability of the Park Road Bridge Corridor by reducing Park Road Bridge closures due to flooding and minimizing flood backwater rise created by flow impedance from the existing Park Road Bridge; and
- Address Roadway deficiencies on Dubuque Street and Park Road. These corridors have existing or potential roadway deficiencies related to the existing pavement and areas where crash rates are higher than the statewide average. These deficiencies should be addressed by the proposed alternative improvements.

Initial Alternatives

The process started with a wide range of alternatives that might improve the reliability of transportation in the corridor.

- Change how, where and when people travel (Travel Demand Management/Travel System Management).
- Create new alternate routes connecting to Park Road via Foster, Taft Speedway or through City Park.
- Improve alternate routes, for example via 1st Avenue in Coralville or via Dodge/Governor Streets.
- No Build - Maintain the road and bridge as they are today; no additional flood protection. This includes significant repair due to age and code issues that is needed in the next five years.
- Raise Dubuque Street and Park Road Bridge:
  - One foot above 2008 flood;
  - One foot above 500 year flood level; or a
  - Combination of one foot above 500 and 100 year flood levels.

Several of the options include building a new bridge, so the evaluation process also started with a range of bridge type options.

- Arch
  - Above deck/below deck/other variations
- Cable stayed
- Extradosed
- Girder
  - Steel /concrete/haunched/ constant depth
- Suspension
- Segmental

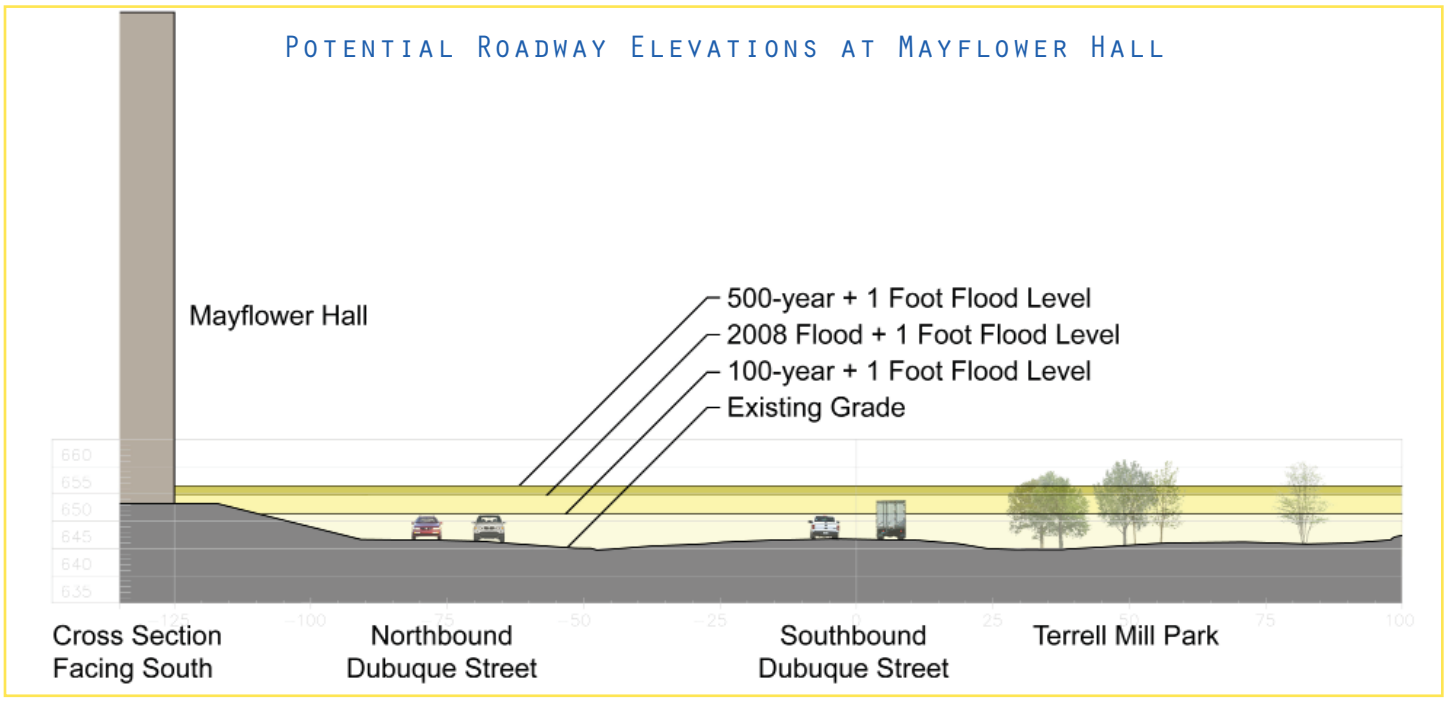
Reasonable Alternatives

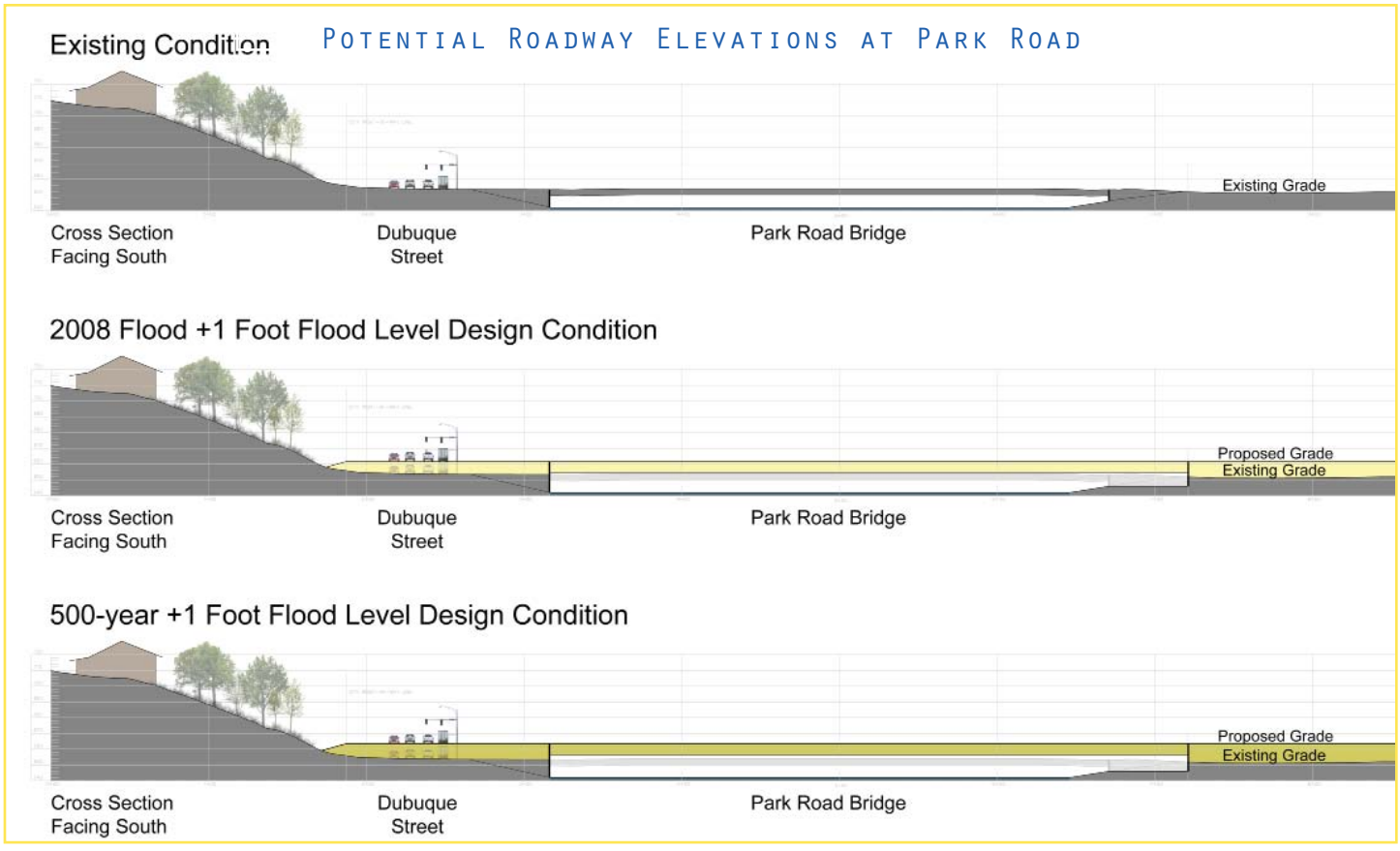
Based on the project purpose and need and a high-level review of feasibility and costs, raising Dubuque Street and the Park Road Bridge seems to be the best option. The critical question is how much should they be raised?

As the technical team works to make a recommendation, they will be looking at these screening criteria and answering these questions. Your input will help Iowa City make choices about priorities and trade-offs.

- ***Bicycles and Pedestrians*** - Does it support current and planned bike and pedestrian connections, including the Iowa River Corridor Trail?
- ***Constructability*** - How will traffic move through the corridor during construction? How hard or easy is it to build?
- ***Cost*** - How much does it cost?
- ***Emergency Access*** - Does it maintain acceptable emergency access and response times along the corridor?
- ***Flood Impacts*** - Does it avoid or reduce the impacts of flooding to the corridor and the surrounding area?

- ***Gateway*** - Does it allow visual and physical improvements that highlight the corridor as the City's gateway?
- ***Green Options*** - Does it promote the reuse of materials, conserve natural resources or otherwise support sustainability?
- ***Park Road/Dubuque Street Intersection*** - Does it allow for additional turn lanes as warranted to reduce congestion?
- ***Parks, Historic Structures and Sites*** - Does it avoid or accommodate those sites as much as possible?
- ***Transit*** - Does it support current and planned transit systems and stops?





Park Road Bridge

A new Park Road Bridge would need to be raised to avoid creating backwater in future floods. That means that the intersection at Park Road and Dubuque Street will also need to be raised. How much depends on the type of bridge and its elevation above the river. No matter what kind of bridge is built, a key requirement will be keeping the existing bridge open during construction.

Three bridge types are currently under consideration. In making a recommendation on a bridge type, the technical team will consider the following criteria and answer these questions. Your input on which criteria is important and will help the City in the decision-making process.

- ***Construction Closures*** - Does it minimize necessary closures of Park Road and/or Dubuque Street?
- ***Construction Location*** - Can it be assembled off site, minimizing local impacts?
- ***Cost/Complexity*** - How much does it cost? How complex is it to build?
- ***Dubuque Street Elevation*** - How much does raising the bridge impact the Dubuque Street/Park Road intersection?
- ***Footprint*** - Can it fit within the existing site constraints?
- ***Maintenance*** - How much will the bridge cost to maintain? Can it be easily expanded or rehabilitated?
- ***River Impacts*** - How will construction impact the river?
- ***Traffic Flow*** - How well does it allow the existing bridge to stay open during construction?
- ***Speed of Construction*** - How quickly can it be built?
- ***Vandalism*** - How well does it minimize opportunities for vandalism to the bridge?
- ***Viewshed*** - How well does it compliment the surrounding area?

Cable Stayed

Girder

Open Spandrel Arch

The Iowa City Gateway Project is led by Iowa City in coordination with the U.S. Economic Development Administration, the Iowa Department of Transportation and the Federal Highway Administration and in cooperation with the University of Iowa.

More information about Iowa City Gateway can be found at: iowacitygateway.org or by phoning 319-356-5140.

City of Iowa City

Iowa Department of Transportation

U.S. Department of Transportation Federal Highway Administration