



## Sustainable and Green Initiatives

The collaboration, investment, and green initiatives on the Jane Byrne (Circle) Interchange (JBI) has set the stage for a brighter future not only for the motoring public, but for the multimodal access and local cross road connections throughout the corridor. To keep pace with developing needs and expectations of the public to produce sustainable outcomes, the planning, design and construction of the JBI reconstruction and local cross roads included sustainable and green initiatives.

## Drive for Vision

October 2009 marked the completion of the Circle Interchange Master Plan study. One component of the Master Study was the Circle Interchange – I-290 and I-90/94 system interchange. Through a series of workshops, vision statements were developed included strong views toward:

- Create a strong feeling that you are in a globally significant place
- Art and aesthetics that announce your arrival into Downtown Chicago
- Planned maintenance resulting in clean, well-lit and well-maintained environment
- “This gateway says Chicago”
- Progressive in sustainability and greening of urban highway environments
- For all that move through the space, they should feel (and be) calm and safe
- Improve signage, wayfinding and connectivity
- Explore and utilize new technology where intelligent and appropriate

Specific elements that were explored as part of the Master Plan included a landscape plan, hardscape concepts, edge treatments, decorative concrete barrier wall, gore treatments, vines on existing retaining walls, knee walls, trellised screens, decorative fencing, architectural panels and lighting.

## Project Development

In May 2012, the Illinois Department of Transportation (IDOT) began engineering studies for the future rehabilitation of JBI. The study was a two-year planning and design project that took a comprehensive look at the transportation needs within the Kennedy/Dan Ryan Expressway (I-90/94) and Eisenhower (I-290) interchange with a focus on safety and operation of the JBI.

The JBI is critical to the nation’s transportation system, particularly for freight movement on our Interstate and arterial roadways. The JBI serves as a vital hub for local, regional, and national freight traffic. Built more than 50 years ago, the JBI has not had a major rehabilitation since its initial construction. High traffic volumes, single lane ramps and tight curves make the JBI prone to congestion which causes it to operate under breakdown conditions for most of the day. Throughout this study the vision created from the Master Plan was the guiding light for community cohesion, community context, safety, maintenance and sustainability.

## Balancing Needs

The purpose of the project is to provide an improved transportation facility at the interchange of Interstate 90/94 and Interstate 290/Congress Parkway by addressing the existing and 2040 transportation needs. This will be accomplished by improving safety, mobility, and facility condition and deficiencies of the mainline and interchange, while minimizing social, economic and environmental impacts.



While the JBI itself addresses the movement of vehicles on the expressway system, this project also improves the other modes of transportation's sharing the same space, such as transit, pedestrians and bicyclists.

## Community Input Was Valued

IDOT understood from the beginning that community input was important to ensuring that viable sustainable alternatives were consistent with community goals and objectives. To provide a forum for discussion and information exchange about the planning and design of the JBI, IDOT established a Project Working Group (PWG).

The PWG's purpose was to provide input throughout the project development process. In addition, the PWG played a key role in developing a unified sustainable vision for the communities, and a timeless look and feel for the motoring public travelling through the JBI.

Goal of the overall project was to address transportation system deficiencies, address safety, and increase mobility, but to also create a safe environment for all users that is consistent with surrounding community elements and is cohesive with the overall vision of the interchange area.

## Project Benefits

- Improved safety features reducing crash potential
- Additional roadway capacity
- Improved roadway geometrics to current standards
- Congestion relief thus reducing emissions and improved air quality
- Improved bicycle safety
- Bicycle lanes in accordance with the City's master bikeway plan
- Wider sidewalks (typically 10') to improve pedestrian movements
- Redesigned ramp entrances that are friendlier to pedestrians
- Generated 5,000 jobs for the community
- Spur further development in the project area
- Created area-wide and region-wide economic benefits
- Improved multimodal access and connections throughout the corridor

## Green Initiative Items

- Construction of noise abatement walls
- Re-use of suitable topsoil and embankment excavated on-site
- Installation of interchange signage utilizing retro-reflective sheeting (thus eliminating need for separate under-sign lighting)
- Use of recycled materials including specifying percentage of materials such as fly-ash and demolished pavements.
- Protection of natural habitats using sediment control and prevention plan
- The use of erosion control measures to reduce and collect soil run-off



- The use of durable/salt-tolerant/winter-hardy plants and hardscape materials near and under roadways and bridges
- Using no-mow/low mow/low maintenance grasses and plantings at landscaped areas
- Use of erosion control measures to reduce and collect soil run-off
- Use of swales to utilize existing flows for landscaping maintenance
- Potential use of Stormwater Best Management Practices (BMP's) including the use of rain barrels, rain cisterns, landscaped rain gardens, and/or shallow detention beds.