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Tech Brief

Economic & Quality of Life Impacts of Route 21 Freeway Construction

FHWA-NJ-2007-024

October 2009

SUMMARY

Opened to traffic in December 2000, the "missing section" of the Route 21 Freeway in Clifton and Passaic (Hope Ave. to the Route 46 Interchange – see Figure 1) was designed utilizing the "equivalent" to the Context Sensitive Solutions (CSS) approach at that time and will be used herein for the evaluation of the success of the project in fulfilling its goals. A great deal of planning and design work was done to enhance the quality and appearance of this roadway and to maximize positive impacts on and for the surrounding communities.

Context Sensitive Solutions (CSS) is a collaborative, interdisciplinary approach to identifying and solving transportation problems, in which consensus building extends from defining the project need and purpose, concept evolution, design and construction through maintenance and operation. CSS maximizes the integration of the roadway into the surrounding environment/community while providing for the road user's needs in a manner which is fiscally feasible. CSS is an attitude and a process, not an outcome.

This research project evaluated over a five year period how effective the CSS approach was in the design of the Route 21 Freeway. The evaluation focused on economic and quality of life issues. The type of economic issues that were reviewed include impacts on neighborhoods, residential and commercial real estate values, the success of commercial enterprises in the area, and traffic and safety in the local area. The type of quality of life issues that were reviewed include: aesthetics and viewscape, traffic flow, noise impacts and other factors of concern to the local population.

Public perception initially and over the five year period was measured by surveys taken regularly for the duration of the project. This is a most critical element in the study because success ultimately must be "seen" by the impacted public, literally and figuratively. In addition, traffic counts were taken to determine changes from pre-

construction to post-construction conditions and variations over the five years of the study. Other published data was utilized to measure changes in economic and quality of life impacts.

This type of post-construction review is unique. Typically, once a project is completed, there is no requirement to measure the success of achieving the original goals and projections made for the project. The post-construction review benefits the design-construction process used by the NJDOT in the following ways:

- It assesses if the project achieved its intended goals both from the NJDOT's perspective as well as that of the local community.
- It investigates areas where the project could have been improved upon..
- It builds support and confidence in the community by interfacing with them after the project is completed.
- Based on the experience of this project, an optimal time frame and methodology for future NJDOT project reviews can be established.

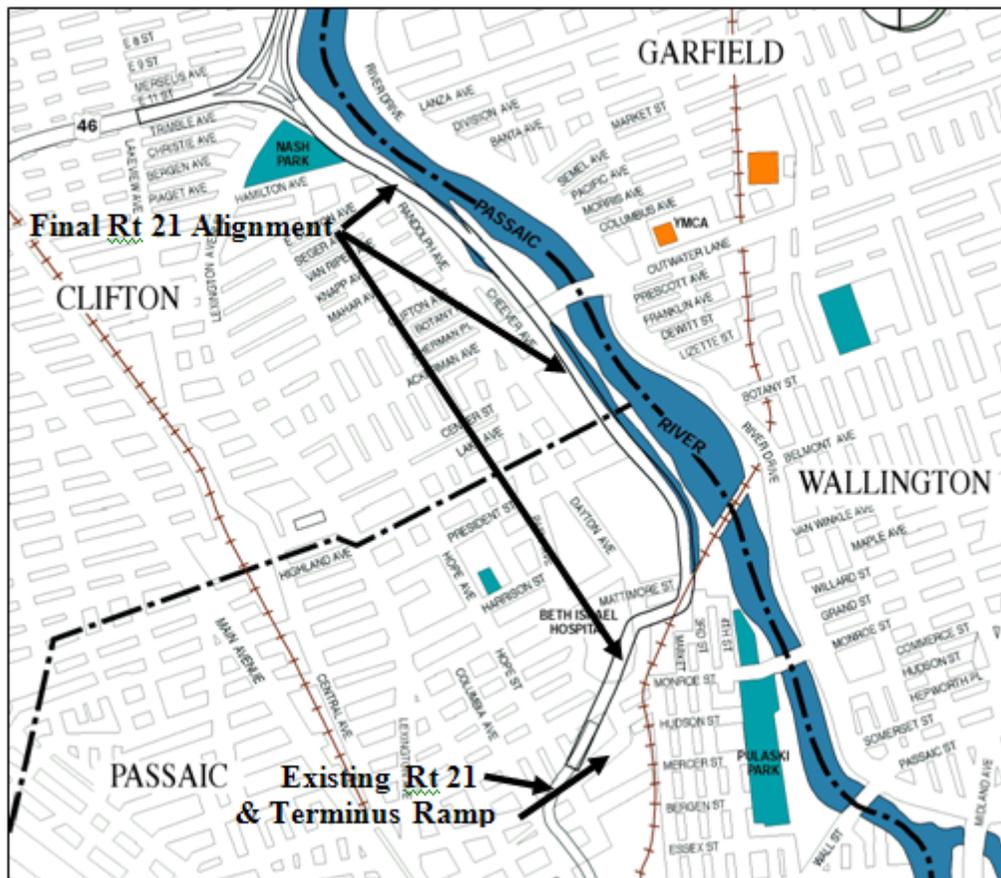


Figure 1: Final Alignment of the Route 21 Extension

FINDINGS

The main purpose of this study was to assess the impacts of the Route 21 Project after construction was complete and the roadway was operational. The conclusions drawn by the study team are as follows:

- The findings in this study indicate that members of the DOT project team who prepared the assessment accurately predicted the outcomes of the project to elected and appointed officials.
- The accessibility of NJDOT personnel during the entire process was noted and appreciated by the local officials.
- The Route 21 Project was built because the NJDOT made necessary design changes to gain support from the impacted communities. An example was the redesign of the Route 46 interchange which eliminated the takings of many homes which would have been necessary with a full interchange design. This redesign was performed at the behest of the elected officials of the City of Clifton. This change became a point of contention by the Botany Village merchants.
- The traffic assessment in this report demonstrates that the projected reduction in truck traffic on local streets has occurred since regional truck traffic is now utilizing the Route 21 Freeway.
- Noise projections made in the EIS for this project were found to be quite accurate.
- It has been documented in the noise analysis section of this report that the noise barriers are effectively attenuating on neighboring streets the sound generated by traffic on Routes 21 and 46. Noise levels are less than those projected in the NJDOT's Environmental Impact Statement prepared for the Route 21 project.
- Viewscapes prepared by the NJDOT of projections at key locations presented in the EIS proved to be accurate based on observations and photographs taken in this study (see Figures 2 & 3). Figures 4 & 5 illustrate further streetscape photography.
- Real estate assessments in the subject area during a period of local, regional and national trends of increased real estate values indicated similar results. The only exception was in the Botany Village commercial district in which real estate values showed no increase from 1996 to 2003.
- Political, commercial and residential surveys taken in this study provided anecdotal information and generally indicated positive acceptance of the project and the related amenities provided to the cities of Clifton and Passaic. The sole major complaint was registered in Clifton by both public officials and the merchants in Botany Village regarding perceived economic losses to the merchants due to the loss of an exit from Route 46 resulting from the new construction.

- In all NJDOT projects, responsibility for maintenance should be clearly articulated between the Department and the local communities so that the responsible parties meet their commitments to same.

CONCLUSIONS

The project became in effect, a post project assessment (PPA). This has been shown to be a valuable tool for the NJDOT and should be considered for future projects.

Post assessment review would be a reminder to the NJDOT that an EIS is a document whose words remain for all to see long after a project is completed. As such, the EIS should be factual, accurate, and projections made therein should be realistic and well documented.

If this particular project represents a typical approach by NJDOT to communicate and work with local communities during the planning, design, and construction process, then the NJDOT should be confident and comfortable with their efforts, and see post assessment review as a positive approach to enhancing their existing competencies. For future projects, such reviews will help to build confidence in the impacted communities.

RECOMMENDATIONS

A post project assessment, as performed for the Route 21 study, should be considered by the NJDOT for all its projects. The duration of the review required should be of the order of one to two years depending on the scope and extent of the project.

For major projects, a final assessment of impacts should be undertaken one or two years after the project is operational. These studies should be performed by outside consultants. Small projects can be performed by NJDOT personnel soon after project completion.

Although surveys and interviews are useful tools in measuring public perception, the interviews proved to be the more effective tool in this study.

Future studies should be implemented by the DOT to flesh out a process for conducting PPA's. Some important lessons learned from this project include:

- The PPA should initiate before the completion of construction.
- Although it is recognized that the success of a project is linked to the project team and its leadership, the focus of the PPA process is to learn and improve on the methods used. Using the PPA as an evaluative instrument for the personnel is unnecessary since if the judgment of the PPA is either good or bad, the credit/blame accrues to the team.
- The database needed for the PPA should be accumulated at the start of the study as required by the PPA.
- The EIS for the project should reflect all changes in the project in the design-construction phase.



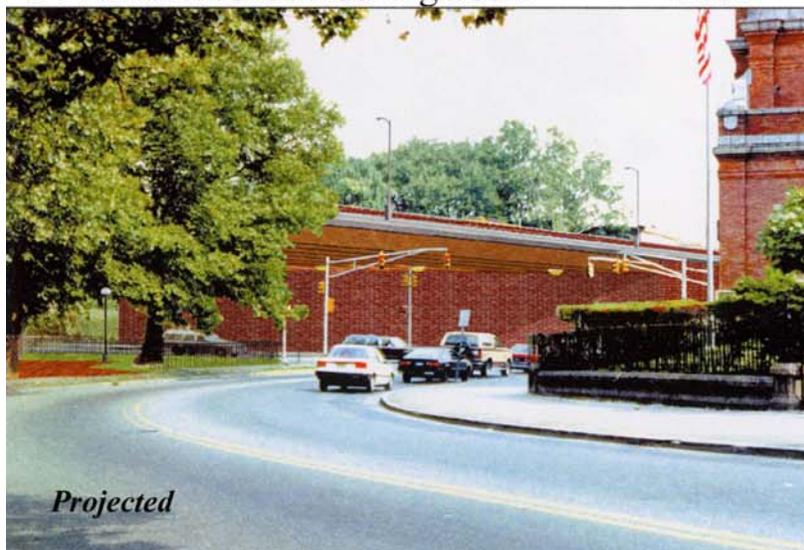
Pre Rt21



Post Rt21

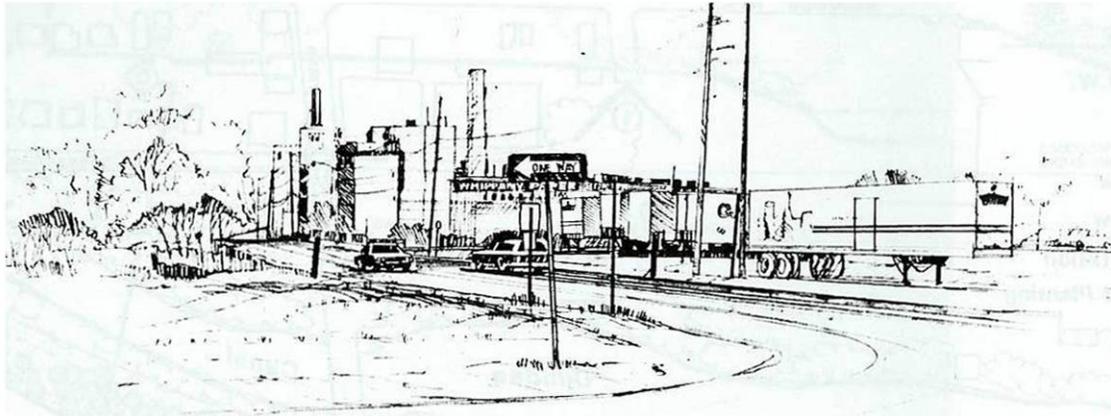
34 Parker Avenue Looking South

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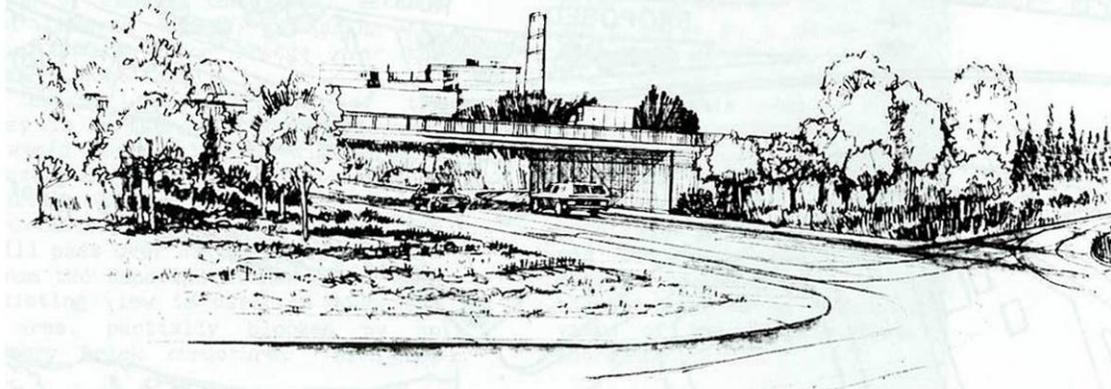


Projected

Figure 2: Pre/Post/Projected Views



Existing View From Cheever Ave. Towards Ackerman Bridge



Recommended View From Cheever Ave. Towards Ackerman Bridge



Post- Construction View from Cheever Ave. Towards Ackerman Bridge

Figure 3: Pre/Projected/Post Views



Figure 4: Panorama at Parker and President Street



Figure 5: Streetscape Example

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A final report is available online at <http://www.state.nj.us/transportation/refdata/research/>

If you would like a copy of the full report, please FAX the NJDOT, Bureau of Research, Technology Transfer Group at (609) 530-3722 or send an e-mail to Research.Bureau@dot.state.nj.us and ask for:

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