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## **Environmental justice and tolling: Successfully navigating a complex issue**

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## **A successful approach to environmental justice**

Environmental justice is often a fundamental issue that must be addressed as transportation agencies develop tolling programs and projects. A successful environmental justice approach generally employs the following steps:

- Assemble a multi-disciplinary team as early as possible.
- Identify environmental justice communities affected by a tolling program or project.
- Develop an effective and proactive outreach plan.
- Assess the effects.
  - Consider whether there are disproportionately high and adverse impacts to environmental justice communities.
  - Also consider whether there is an equitable distribution of benefits among environmental justice and other communities.
- Develop mitigation measures for unavoidable impacts.
  - At the program level, identify a tool box of strategies that can be supported by the state's policies, objectives and infrastructure.
  - At the project level, implement specific strategies that best address the needs of the affected communities.
  - Use traditional and emerging technologies and resources to guide mitigation efforts.

The remainder of this white paper expands on this approach by providing a broad overview of environmental justice as it relates to tolling programs and projects, including strategies that transportation agencies can employ to effectively address environmental justice issues.

### **Defining Environmental Justice and applying to tolling**

Environmental justice is a directive to federal agencies to consider the consequences of their policies, projects and programs on low-income and/or minority populations. The basic premise of environmental justice is to achieve an equitable, or fair, share of benefits (positive effects) and burdens (negative effects) for low-income and/or minority populations (FHWA, 2015). To accomplish this, federal agencies must carefully review their actions to consider the following:

1. Will the burdens be predominantly borne – or experienced mostly – by low-income and/or minority populations?
2. Are those burdens greater or more severe than those experienced by the non-low-income and/or non-minority populations?
3. Will low-income and/or minority populations receive the same benefits?

4. Will there be denied, reduced or significantly delayed benefits for low-income and/or minority populations?
5. Have affected low-income and minority communities been provided the opportunity for full and fair participation in decision-making?

For a tolling program or project, the Federal Highway Administration is typically responsible for confirming that environmental justice is incorporated into the decision-making process. For projects involving major federal actions (i.e., funding or approval), this task primarily occurs during the National Environmental Policy Act process. A program or project that does not require a major federal action may not be specifically mandated to address environmental justice. However, a prudent approach to the program or project development process may consider environmental justice principles for other reasons, as described below:

- Following federal-aid procedures, including NEPA and the environmental justice directive, maximizes funding options by preserving the ability to use federal funds in the future.
- State environmental laws could have similar or related requirements for considering socioeconomic effects.
- State funding has historically been used for smaller, less complex projects. As a result, state laws may be relatively untested when it comes to major tolling programs or projects. Considering environmental justice principles can minimize risk exposure for these types of actions.
- Programs and projects can be affected by environmental justice considerations in the later phases of development. For example, the Elizabeth River Tunnels toll relief program (<http://www.vdottollrelief.com>) was implemented by the Virginia DOT primarily because of the controversy that surfaced after procurement and execution of the public-private partnership agreement with a selected concessionaire.
- The construction of the national highway system was a transformative event; however, in some local communities, the transformation was linked to negative community effects. The use of tolling to deliver vital roadway projects could be a similarly transformative event. Environmental justice concepts – whether mandated or not – can be used as best practices that transportation agencies can use to protect vulnerable communities and avoid repeating negative historic trends.

### **Key environmental justice points to consider when developing tolling projects/programs**

An agency's first course of action in addressing environmental justice involves avoiding, minimizing,

and mitigating issues that have been identified during the development of its program or project.

Tolling programs and projects can have both economic and quality of life effects for environmental justice populations. The introduction of tolling changes the transaction cost for roadway users. The change in user cost is primarily experienced through paying the toll. It can also be experienced through increased costs associated with changes in travel patterns to avoid paying the toll. For low-income populations, any change in the transaction cost could be considered a more severe economic burden, because it constitutes a greater proportion of their income. Furthermore, if drivers divert to alternate routes to avoid paying a toll, additional traffic may travel through low-income and/or minority communities. This diversion can result in congestion, increased noise, community disruption, and diminished air quality. Depending on their context and intensity, these effects could be considered severe burdens for some low-income and minority communities.

It is important to also remember that denial of a benefit can be an environmental justice issue. For example, tolling as part of a managed lanes scenario can provide greater reliability for roadway users with respect to reduced congestion and improved travel times. On the other hand, those who cannot afford to pay the toll could be forced to sit in traffic in the non-managed lanes. Likewise, those who cannot afford the toll on a traditional tolled roadway could be forced to divert to alternate routes with longer distances and/or travel times. In these cases, tolling can result in the denial of a benefit (i.e., the ability to experience reduced travel times and increased reliability), which is also an environmental justice issue.

Even for experienced NEPA practitioners, the following environmental justice issues can be challenging:

- **Communities of concern can be hard to reach:** Low-income and/or minority populations often face unique challenges to participating in the transportation project development process due to reliance on public transit, non-traditional work schedules, and childcare issues, among others. In many cases, creative thinking and targeted efforts are needed to effectively and meaningfully reach out to and engage these stakeholders in the decision-making process.
- **Data and tools are not yet perfected:** Demographic data can help with identification of low-income and/or minority communities of concern, but the data sets are not always conclusive. Pockets of cohesive communities can still exist within the smallest geographies

for which data is available. Traffic models are useful tools; however, human behavior is not always predictable. Additional research is needed for toll programs and projects that have been in operation for several years to understand actual behaviors associated with tolling. Limitations of available data and methods for closing the identified gaps must be considered in environmental justice analyses.

- **Mitigation can feel subjective:** Unlike other resources, such as wetlands, there is no clearly established threshold or formula for addressing identified environmental justice issues. Because each community is different, a mitigation strategy that is effective in one community may have limited success in another. Minimization and mitigation strategies must be tailored to fit the geographic and community context.

Given these considerations, it's critical that any environmental justice strategy include a carefully structured outreach and engagement program. The input and feedback obtained can be invaluable to assist with identifying low-income and/or minority communities of concern, "ground truthing" potential effects (both positive and negative), as well as understanding which minimization and mitigation strategies will be most effective. Direct community feedback from the affected communities of concern is the "gold standard" for environmental justice analysis and decision-making.



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### Strategies to mitigate adverse effects that can occur with tolling projects/programs

There are several measures available to reduce the financial burdens associated with tolling. These measures, which have become more common among toll programs and projects, include (NCHRP, 2018):

- Providing free or reduced-cost toll transponders
- Establishing low start-up and account replenishment thresholds

- Waiving or reducing account management fees
- Providing the ability to set-up and replenish toll accounts with cash
- Providing easy-to-use tools and convenient locations to allow for account set-up and maintenance activities
- Providing tolling exemptions for transit vehicles (and, in some cases, vanpools and carpools)

As tolling becomes more common, minimization and mitigation strategies continue to evolve, including identifying measures that can be tailored to the local community and program/project context. Advances in technology are greatly influencing and supporting this evolution. Emerging measures that are at various states of implementation and acceptance include (NCHRP, 2018):

- Using credits to encourage participation and reduce up-front account set-up costs
- Using toll revenues to subsidize or improve public transit access and functionality
- Using toll credits as incentives to change behavior
- Providing discounts or credits to low-income users
- Capping the total potential costs associated with toll violations
- Free toll facility access for local trips

By addressing the fundamental equity issue, these measures can encourage greater use of the toll facilities, as well as viable transit alternatives. This, in turn, could help address related concerns such as traffic diversion through communities of concern.

### **Important considerations for transportation agencies moving forward**

More recently, transportation agencies have shifted toward consideration of large-scale tolling programs to build infrastructure faster or to provide more sustainable funding. In many cases, environmental justice is likely to become a fundamental issue. Given these considerations, transportation agencies can benefit from prioritizing the establishment of a multidisciplinary team that includes subject matter experts in NEPA, environmental justice, public and stakeholder engagement, tolling and technology to achieve successful outcomes for its programs and projects. The multidisciplinary team should be assembled at the earliest possible time to address environmental justice from the outset. This can have clear benefits, including:

- A better understanding of traffic and revenue implications of potential mitigation measures that can affect financial feasibility.
- Agencies can avoid duplicative analyses by conducting environmental justice analysis at the program-level and establishing a “toolbox” of strategies or measures that can be considered at the project-level. Program-level analyses can also help equip agencies to proactively address questions of feasibility and practicability for individual projects.
- Realization of potential efficiencies and greater flexibilities in tolling system design, including user interfaces, databases, business rules, and administrative processes. This can also help make it easier to adapt as additional tolling programs/projects are built and begin to operate.

### **References**

- Federal Highway Administration. 2012. Environmental Justice Reference Guide.
- National Cooperative Highway Research Program. 2018. Assessing the Environmental Justice Effects of Toll Implementation or Rate Changes, Report 860.

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