

Chapter 19  
SOCIAL IMPACTS

**MDT ENVIRONMENTAL MANUAL**

*October 2010*



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# Chapter 19

## SOCIAL IMPACTS

### 19.1 OVERVIEW

The following Sections provide guidance for analyzing the impacts a project may have on the social aspects of the environment and measures to mitigate adverse social impacts of the project. Some of the social aspects that may be analyzed include:

- the way people cope with life through their economy, social systems and cultural values;
- the way people use the environment for subsistence, recreation, spiritual activities, cultural activities, etc.;
- the way people use their man-made environment (e.g., shelter, making a living, industry, worship, recreation, gathering together);
- the way communities are organized and held together by their social and cultural institutions and beliefs;
- the way of life that communities value as expressions of their identity (e.g., art, music, dance, language arts, crafts); and
- the aesthetic and cultural character of a community or neighborhood (i.e., its ambience).

The purpose of social impact analysis is to ensure that impacts to people and communities are included in the decision-making process for transportation projects.

The social impact analysis is coordinated as a part of the process for compliance with the *National Environmental Policy Act* (NEPA) (42 USC 4321, et seq.) and the *Montana Environmental Policy Act* (MEPA) (MCA 75-1-101, et seq.). The results of the analysis are reflected in the environmental documentation prepared for NEPA/MEPA. See [Chapters 11 “Preparing Environmental Documentation,” 12 “Categorical Exclusion,” 13 “Environmental Assessment/FONSI,” and 14 “Environmental Impact Statement/ROD.”](#)

## 19.2 LAWS, REGULATIONS AND GUIDANCE

### 19.2.1 42 USC 4601 through 4655 “Uniform Relocation Assistance and Real Property Acquisition Policies for Federal and Federally Assisted Programs”

These Parts of the *United States Code* (USC) codify the provisions of the *Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970*. They establish a uniform policy for the fair and equitable treatment of persons displaced as a direct result of programs or projects undertaken by a Federal agency or with Federal financial assistance. The primary purpose of these parts is to ensure that these people do not suffer disproportionate injuries as a result of programs and projects designed for the benefit of the public as a whole and to minimize the hardship of displacement on them.

### 19.2.2 49 USC 303 “Policy on Lands, Wildlife and Waterfowl Refuges and Historic Sites” and 23 USC 138 “Preservation of Parklands”

These sections of the USC contain the declaration of policy that allows the Secretary of USDOT to approve a program or project (other than any project for a park road or parkway under 23 USC 204 “Federal Lands Highways Program”) requiring the use of publicly owned land of a public park, recreation area or wildlife and waterfowl refuge of national, State or local significance or land of an historic site of national, State or local significance (as determined by the officials having jurisdiction over the park, area, refuge or site) only if:

- there is no prudent and feasible alternative to using that land; and
- the program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge or historic site resulting from the use.

These sections also contain provisions addressing “*De minimis* Impacts” and include clarification regarding the *de minimis* impact requirements as they apply to historic sites and parks, recreation areas and wildlife or waterfowl refuges.

### 19.2.3 23 USC 139 “Efficient Environmental Reviews for Project Decision-Making”

For projects involving preparation of an environmental impact statement and for environmental assessments being prepared in accordance with the FHWA “SAFETEA-LU Environmental Review Process Final Guidance,” this part of the USC requires that at appropriate times during the study process, the lead agency or agencies for the project collaborate with agencies serving as participating agencies to determine the methodologies to be used and the level of detail required for assessing impacts, including social impacts. See [Chapters 11 “Preparing Environmental Documentation,” 13 “Environmental Assessment/FONSI” and 14 “Environmental Impact Statement/ROD”](#) for further guidance on this requirement.

### 19.2.4 Executive Order 12898 “Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations”

Executive Order 12898 reinforces the inclusion of social impact analysis in NEPA documentation because it requires special attention be given to disproportionately high and

adverse human health or environmental effects on low-income populations and minority populations. For more information on Executive Order 12898 and Environmental Justice, see [Chapter 24 “Environmental Justice.”](#)

### **19.2.5 DOT Order 6640.23 “FHWA Actions to Address Environmental Justice in Minority Populations and Low-Income Populations”**

This Department of Transportation Order provides the framework for the Federal Highway Administration (FHWA) to use in complying with Executive Order 12898; see [Chapter 24 “Environmental Justice.”](#) It is FHWA’s policy to ensure that social impacts to communities and people are recognized early and continually throughout the transportation decision-making process, from early planning through implementation.

### **19.2.6 49 CFR 24 “Uniform Relocation Assistance and Real Property Acquisition for Federal and Federally-Assisted Programs”**

This Part of the *Code of Federal Regulations* (CFR) implements the provisions of 42 USC 4601 through 4655, including the following:

- ensuring that owners of real property to be acquired for Federal and Federally-assisted projects are treated fairly and consistently;
- encouraging and expediting acquisition by agreements with owners, to minimize litigation and relieve congestion in the courts and promote public confidence in Federal and Federally-assisted land acquisition programs;
- ensuring that persons displaced as a direct result of Federal or Federally-assisted projects are treated fairly, consistently and equitably so that individuals will not suffer disproportionate injuries as a result of projects designed for the benefit of the public as a whole; and
- ensuring that agencies implement these regulations in a manner that is efficient and cost effective.

### **19.2.7 23 CFR 774 “Parks, Recreation Areas, Wildlife and Waterfowl Refuges and Historic Sites”**

This Part of the CFR contains revised Section 4(f) regulations that USDOT issued in response to a requirement contained in Section 6009(b) of the *Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users* (SAFETEA-LU). Section 6009(b) requires promulgation of new regulations to clarify the factors to be considered and the standards to be applied in determining the prudence and feasibility of alternatives under 23 USC 138 and 49 USC 303.

Section 6009(b) also requires the regulations to clarify the application of Section 4(f) legal standards to a variety of different types of transportation programs and projects depending on the circumstances of each case. The section also provides that the revised regulations could

include, as appropriate, examples to facilitate clear and consistent interpretation by agency decision-makers.

The revised regulations in 23 CFR 774 replace the provisions that were contained in 23 CFR 771.135 "Section 4(f) (49 USC 303)."

### **19.2.8 FHWA Technical Advisory T 6640.8A**

The FHWA Technical Advisory T 6640.8A, dated October 30, 1987, provides guidance for social impact analysis. According to the guidance, where there are foreseeable social impacts, the analysis should consider the following items for each alternative, commensurate with the level of impacts and to the extent they are distinguishable:

- changes in the neighborhoods or community cohesion for the various social groups as a result of the proposed action. These changes may be beneficial or adverse and may include splitting neighborhoods, isolating a portion of a neighborhood or an ethnic group, generating new development, changing property values, separating residents from community facilities, etc.;
- changes in travel patterns and accessibility (e.g., vehicular, commuter, bicycle, or pedestrian);
- impacts on school districts, recreation areas, churches, businesses, police and fire protection, etc. This should include both the direct impacts to these entities and the indirect impacts resulting from the displacement of households and businesses;
- impacts of alternatives on highway and traffic safety as well as on overall public safety; and
- general social groups specifically benefited or harmed by the proposed project. The effects of a project on the elderly, individuals with disabilities, non-drivers, transit-dependent, minorities and ethnic groups are of particular concern and should be described to the extent these effects can be reasonably predicted. Where impacts on a minority or ethnic population are likely to be an important issue, the environmental documentation should contain the following information broken down by race, color and national origin:
  - + population of the study area,
  - + number of displaced residents,
  - + type and number of displaced businesses, and
  - + estimate of the number of displaced employees in each business sector.

Changes in ethnic or minority employment opportunities should be discussed and the relationship of the project to other Federal actions, which may serve or adversely affect the ethnic or minority population should be identified.

The discussion should address whether any social group is disproportionately impacted and identify possible mitigation measures to avoid or minimize any adverse impacts. Secondary sources of information such as census and personal contact with community

leaders supplemented by visual inspections normally should be used to obtain the data for this analysis. However, for projects with major community impacts, a survey of the affected area may be needed to identify the extent and severity of impacts on these social groups.

### **19.2.9 FHWA Community Impact Assessment Guide**

The FHWA publication, *Community Impact Assessment: A Quick Reference for Transportation*, (FHWA-PD-96-036), provides guidance on how to complete a social impact analysis. This document is available on the FHWA website.

### **19.2.10 NCHRP Report 456 Guidebook for Assessing the Social and Economic Effects of Transportation Projects**

This *Guidebook* defines 11 general types of social and economic effects (e.g., safety, accessibility, community cohesion) and provides insights into, and evaluations of, the methods, tools and techniques available to assess them.

### **19.2.11 Manual on Uniform Traffic Control Devices (MUTCD)**

The *MUTCD* contains the national standards governing all traffic control devices. It provides key guidance for temporary traffic control during construction to provide for the safety of motorists, bicyclists, pedestrians, workers, enforcement/emergency officials, etc. It also provides guidance for advance warning and detour signing that can be used to minimize potential traffic congestion and maintain safe access to businesses, etc., using detours and alternative routes.

## 19.3 PROCEDURES

### 19.3.1 Information Gathering

The Preliminary Field Review (PFR) is the initial step in the analysis of social impacts for a proposed project. The Design Team (DT) notifies and invites appropriate MDT personnel, including the Project Development Engineer (PDE) within the MDT Environmental Services Bureau (ESB), to the field review. The PDE reviews the list of ESB attendees and includes others as necessary to ensure appropriate ESB personnel are in attendance. The PDE participates in the PFR to make a preliminary evaluation of available information on the project scope and the potential for social impacts. Following the field review, the DT prepares a PFR Report summarizing the issues discussed during the PFR, including social impact issues. The DT distributes the final PFR Report for review and comment. Within ESB, the PDE serves as the document champion to collect and coordinate comments from the other Sections. The PDE compiles the comments into a PFR review memorandum for signature by the Environmental Services Bureau Chief.

For projects subject to the requirements of 23 USC 139 “Efficient Environmental Reviews for Project Decision-Making,” the PDE, in cooperation with FHWA, collaborates with participating agencies in determining the appropriate methodologies to be used and the level of detail required in the analysis of social impacts of project alternatives.

Following the PFR, the PDE gathers information for performing a detailed assessment of the project’s potential for social impacts. The information gathering may involve a variety of methods and sources, including:

- researching on-line sources (e.g., US Census Bureau) and/or paper documentation in libraries or available through historical societies (i.e., to obtain information on population trends; demographic, social and housing characteristics; community historical background; important structures, landmarks and districts; and general information for the project area);
- requesting information from State and local government planning and social service agencies (e.g., area planning history, land-use and zoning plans, building permits, social programs, current demographic, social and housing characteristics);
- requesting information from social service agencies, religious institutions, etc. (e.g., to identify special populations, needs and community issues);
- conducting field or windshield surveys and reviews (e.g., to identify activity patterns, locations, numbers of structures); and
- obtaining information through project scoping, public involvement, interagency coordination and contacts with other sources (e.g., city and/or county professional staff, civic groups in the area, representatives of any facility or service that may be affected such as day care providers).

Public involvement can be a key component because citizens can provide information for:

- identifying community needs;
- refining the community profile;
- recognizing less obvious areas of neighborhood importance; and
- avoiding, minimizing and mitigating adverse social impacts and identifying opportunities for community enhancement.

The PDE initiates the gathering of information from the public as early as practical in the project development process and continues coordination with the public on through the social impact analysis process. This may be accomplished through common public involvement methods including public meetings, focus groups, workshops, surveys, personal interviews, etc.; see [Chapter 16 “Public Involvement.”](#)

### **19.3.2 Documentation of Social Environment Profile**

The PDE uses the information gathered to develop and document a profile of the social environment. The PDE may incorporate changes in the profile as additional information is obtained through ongoing coordination and public involvement. The profile addresses the following items, commensurate with the level of anticipated impact from the project:

1. Community/Neighborhood Characteristics. Consider the following:
  - community boundaries and neighborhood or subdivision boundaries (e.g., based on physical barriers, land-use patterns, political or area of responsibility divisions (school districts, police precincts), selected demographic characteristics, resident perceptions);
  - existing demographics (e.g., number of existing households, average household size, age distribution, median income level, presence and distribution of low-income, minority and/or ethnic populations/individuals);
  - presence and distribution of persons with low-mobility status (e.g., elderly, disabled, non-drivers, transit-dependent);
  - growth policies for the study area (e.g., adopted growth targets, growth management policies or other policies relating to the location or rate of population growth);
  - trends in population growth and demographics for the project area;
  - property values;
  - housing (e.g., availability, age, type);

- location of community centers/activity centers, community focal points or informal meeting places (e.g., places of worship, playgrounds, hair salons, laundromats);
  - community values and issues (e.g., security, solitude);
  - planned and approved future development;
  - businesses in the area; and
  - presence and jurisdictional areas of Tribal governments.
2. Public Services and Facilities. Consider the following:
- type, size and location of public services and facilities (e.g., schools, police and fire protection, libraries, hospitals, daycare centers, religious institutions, counseling facilities, alcohol and drug rehabilitation facilities, elder-care centers, community centers, postal facilities);
  - infrastructure (e.g., roads, bicycle paths, transit, water and sewage systems); and
  - special areas (e.g., historic districts, parklands).
3. Circulation/Access. Consider the following:
- existing highways, streets, transit systems, bicycle and pedestrian facilities;
  - type, size and location of businesses, community centers/activity centers, community focal points or informal meeting places (e.g., places of worship, playgrounds, hair salons, laundromats), special areas, historic districts and parklands; and
  - current travel patterns and accessibility (e.g., vehicular, commuter, bicycle, pedestrian).
4. Safety. Consider the following:
- public safety issues (e.g., police and fire services, emergency medical services, bicycle/pedestrian safety); and
  - crash history for the existing transportation system in the project area and the locations affected.

### 19.3.3 Analysis and Findings

The PDE uses the profile of the potentially affected social environment and the results of public involvement and ongoing coordination with the DT to begin the identification and evaluation of the project's potential social impacts. The analysis involves characterizing the existing state of the social environment, forecasting how it may change if a given action or alternative is

implemented and developing means of mitigating changes that are likely to be adverse from the point of view of an affected population.

### 19.3.3.1 Analysis Tools

As necessary, the PDE may conduct additional research and/or apply a variety of analysis tools to forecast/analyze potential effects and evaluate possible mitigation measures. Examples of potential analysis tools include the following:

- statistical analysis (e.g., forecasting, trend-line projections, correlation);
- comparisons (e.g., case studies of similar transportation actions in other locations, using analogies and examining similarities and differences over time or across areas);
- visual imaging (e.g., computer simulations, development of physical models);
- mapping overlays (e.g., plotting various maps showing physical characteristics, demographics, project alternatives and superimposing them to create a composite image);
- expert consultation (e.g., roundtable discussions, reports);
- peer review (e.g., consultation with professionals within the transportation field);
- brainstorming (e.g., generating ideas through quick-response reactions);
- Delphi Technique (i.e., a structured form of reaching consensus among experts for problem solving);
- market research (e.g., focus groups, targeted surveys, interviews, questionnaires); and
- public involvement (e.g., public meetings, workshops, citizen advisory groups).

### 19.3.3.2 Approach

The following are approaches the PDE may use in applying the analysis tools:

1. Comprehensive Approach. In this approach, the PDE gathers as much relevant information as possible, examines the information and then reaches a conclusion.
2. Incremental Approach. In this approach, the PDE builds on information a bit at a time until a conclusion is reached.
3. Comparative Approach. In this approach, the PDE identifies similarities and differences from past experience.

Regardless of the approach or combination of approaches used, the process involves making projections about the future of the affected communities “with the project” as compared to the future “without the project.”

### 19.3.3.3 Identification and Evaluation

In conducting the social impact analysis, the PDE considers both negative and positive effects, and impacts that are short-term (e.g., associated with project construction activities) and long-term (e.g., associated with the permanent features implemented by the project). The PDE also considers potential indirect (secondary) and cumulative social impacts; see [Chapter 25 "Indirect \(Secondary\) and Cumulative Impacts."](#)

The PDE evaluates the likelihood of social impacts, their scale, severity and extent, and their reversibility. The PDE also considers the goals of the affected communities and the public's perception of impacts in accomplishing the analysis.

Listed below are questions the PDE considers in identifying and evaluating potential social impacts for a specific project or alternative. The questions are grouped according to the areas addressed in the social environment profile. For questions determined applicable for a project/alternative, the PDE coordinates with the DT, conducts additional research, and applies the analysis tools and approaches discussed above, as necessary to answer the question.

#### 1. Community/Neighborhood Characteristics.

- How will the project affect neighborhoods and/or community cohesion?
  - + Will it split neighborhoods or isolate portions of a neighborhood or an ethnic group?
  - + Will it change property values?
  - + Will it separate residents from community facilities?
  - + Will it create a barrier effect (e.g., from a noise wall or fencing)?
  - + Will noise, vibration, dust and/or odor increase?
  - + Will there be a shadowing effect on adjacent property?
  - + Will it cause redistribution of the population or an influx or loss of population?
- What are the numbers and types (e.g., single family, multi-unit, rural residential) of residences that the project will displace? Is there suitable replacement housing available for relocation?
- Will the project affect residents with special needs (e.g., disabled, minority, elderly)? Will the project involve disproportionately high and adverse impacts to minority or low-income populations? See [Chapter 24 "Environmental Justice."](#)
- Is the project likely to generate new development/open new areas to development?
- Will the project change the community's aesthetic character?

- Is the project compatible with community goals and consistent with community land-use plans and zoning?
- How will the project affect the perceived quality of life?

## 2. Public Services and Facilities.

- Will the project result in relocation or displacement of public facilities or community centers?
- Will the project lead to or help alleviate overcrowding of public facilities (e.g., schools, recreation facilities)?
- Will the project take part of a public property, cause loss of parking, or introduce construction noise, vibration and dust or operational noise and vibration affecting a public facility or special area (e.g., historic district)?
- Will the project disrupt aspects of the existing public service infrastructure (e.g., water and sewage systems)?

## 3. Circulation/Access.

- How will the project alter current travel patterns and accessibility?
- Will the project restrict or prohibit access to businesses, community centers/activity centers, community focal points or informal meeting places, historic districts, parklands, or public services/facilities (including roads, transit facilities, bicycle and/or pedestrian facilities)?
- Will the project cause longer commute times (e.g., as the result of detours)?

## 4. Safety.

- How will the project improve highway and traffic safety?
- Will the project cause changes in emergency response times (e.g., police, fire, emergency medical)?
- Will the project increase or decrease the likelihood of crashes involving pedestrians and/or bicyclists?
- How will the project affect overall public safety (e.g., will the project increase or decrease the crime rate)?

### **19.3.4 Mitigation and Commitments**

When adverse social impacts are identified, the PDE and DT coordinate to evaluate measures to avoid, minimize or reduce the impacts. The nature and extent of impact mitigation measures

are commensurate with the level of the anticipated impacts. Examples of potential mitigation measures for adverse social impacts include the following:

- rerouting or shifting the alignment to avoid or minimize social impacts;
- phasing construction;
- implementing design amenities; and
- setting aside land in the project area to replace impacted parkland, etc.

For each project alternative, the PDE documents the answers to the applicable questions in [Section 19.3.3.3](#) and the results of coordination with the DT on measures for avoiding, minimizing or reducing identified adverse impacts. This documentation provides the social impact/mitigation findings for each pertinent area of the social environment profile (i.e., community/neighborhood characteristics, public services and facilities, circulation/access, and safety).

The PDE ensures the findings from the social impact analysis, including mitigation measures, are appropriately reflected in the environmental documentation for the project. See [Chapters 11 “Preparing Environmental Documentation,” 12 “Categorical Exclusion,” 13 “Environmental Assessment/FONSI” and 14 “Environmental Impact Statement/ROD.”](#)

The PDE and DT ensure the project plans accurately reflect the measures for avoiding, minimizing or reducing adverse social impacts. To the extent possible, the PDE and design team should prepare the contract documents using the *MDT Standard Specifications* to minimize the need for special provisions to address social impacts or other commitments.

The District Environmental Engineering Specialist monitors project construction to ensure that measures to avoid, minimize or reduce adverse social impacts are implemented in accordance with the approved project plans.

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This Part of the CFR contains revised Section 4(f) regulations that USDOT issued in response to a requirement contained in Section 6009(b) of the *Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users* (SAFETEA-LU). Section 6009(b) requires promulgation of new regulations to clarify the factors to be considered and the standards to be applied in determining the prudence and feasibility of alternatives under 23 USC 138 and 49 USC 303.

Section 6009(b) also requires the regulations to clarify the application of Section 4(f) legal standards to a variety of different types of transportation programs and projects depending on the circumstances of each case. The section also provides that the revised regulations could

include, as appropriate, examples to facilitate clear and consistent interpretation by agency decision-makers.

The revised regulations in 23 CFR 774 replace the provisions that were contained in 23 CFR 771.135 “Section 4(f) (49 USC 303).”

### **19.2.8 FHWA Technical Advisory T 6640.8A**

The FHWA Technical Advisory T 6640.8A, dated October 30, 1987, provides guidance for social impact analysis. According to the guidance, where there are foreseeable social impacts, the analysis should consider the following items for each alternative, commensurate with the level of impacts and to the extent they are distinguishable:

- changes in the neighborhoods or community cohesion for the various social groups as a result of the proposed action. These changes may be beneficial or adverse and may include splitting neighborhoods, isolating a portion of a neighborhood or an ethnic group, generating new development, changing property values, separating residents from community facilities, etc.;
- changes in travel patterns and accessibility (e.g., vehicular, commuter, bicycle, or pedestrian);
- impacts on school districts, recreation areas, churches, businesses, police and fire protection, etc. This should include both the direct impacts to these entities and the indirect impacts resulting from the displacement of households and businesses;
- impacts of alternatives on highway and traffic safety as well as on overall public safety; and
- general social groups specifically benefited or harmed by the proposed project. The effects of a project on the elderly, individuals with disabilities, non-drivers, transit-dependent, minorities and ethnic groups are of particular concern and should be described to the extent these effects can be reasonably predicted. Where impacts on a minority or ethnic population are likely to be an important issue, the environmental documentation should contain the following information broken down by race, color and national origin:
  - + population of the study area,
  - + number of displaced residents,
  - + type and number of displaced businesses, and
  - + estimate of the number of displaced employees in each business sector.

Changes in ethnic or minority employment opportunities should be discussed and the relationship of the project to other Federal actions, which may serve or adversely affect the ethnic or minority population should be identified.

The discussion should address whether any social group is disproportionately impacted and identify possible mitigation measures to avoid or minimize any adverse impacts. Secondary sources of information such as census and personal contact with community

leaders supplemented by visual inspections normally should be used to obtain the data for this analysis. However, for projects with major community impacts, a survey of the affected area may be needed to identify the extent and severity of impacts on these social groups.

### **19.2.9 FHWA Community Impact Assessment Guide**

The FHWA publication, *Community Impact Assessment: A Quick Reference for Transportation*, (FHWA-PD-96-036), provides guidance on how to complete a social impact analysis. This document is available on the FHWA website.

### **19.2.10 NCHRP Report 456 Guidebook for Assessing the Social and Economic Effects of Transportation Projects**

This *Guidebook* defines 11 general types of social and economic effects (e.g., safety, accessibility, community cohesion) and provides insights into, and evaluations of, the methods, tools and techniques available to assess them.

### **19.2.11 Manual on Uniform Traffic Control Devices (MUTCD)**

The *MUTCD* contains the national standards governing all traffic control devices. It provides key guidance for temporary traffic control during construction to provide for the safety of motorists, bicyclists, pedestrians, workers, enforcement/emergency officials, etc. It also provides guidance for advance warning and detour signing that can be used to minimize potential traffic congestion and maintain safe access to businesses, etc., using detours and alternative routes.

## 19.3 PROCEDURES

### 19.3.1 Information Gathering

The Preliminary Field Review (PFR) is the initial step in the analysis of social impacts for a proposed project. The Design Team (DT) notifies and invites appropriate MDT personnel, including the Project Development Engineer (PDE) within the MDT Environmental Services Bureau (ESB), to the field review. The PDE reviews the list of ESB attendees and includes others as necessary to ensure appropriate ESB personnel are in attendance. The PDE participates in the PFR to make a preliminary evaluation of available information on the project scope and the potential for social impacts. Following the field review, the DT prepares a PFR Report summarizing the issues discussed during the PFR, including social impact issues. The DT distributes the final PFR Report for review and comment. Within ESB, the PDE serves as the document champion to collect and coordinate comments from the other Sections. The PDE compiles the comments into a PFR review memorandum for signature by the Environmental Services Bureau Chief.

For projects subject to the requirements of 23 USC 139 “Efficient Environmental Reviews for Project Decision-Making,” the PDE, in cooperation with FHWA, collaborates with participating agencies in determining the appropriate methodologies to be used and the level of detail required in the analysis of social impacts of project alternatives.

Following the PFR, the PDE gathers information for performing a detailed assessment of the project’s potential for social impacts. The information gathering may involve a variety of methods and sources, including:

- researching on-line sources (e.g., US Census Bureau) and/or paper documentation in libraries or available through historical societies (i.e., to obtain information on population trends; demographic, social and housing characteristics; community historical background; important structures, landmarks and districts; and general information for the project area);
- requesting information from State and local government planning and social service agencies (e.g., area planning history, land-use and zoning plans, building permits, social programs, current demographic, social and housing characteristics);
- requesting information from social service agencies, religious institutions, etc. (e.g., to identify special populations, needs and community issues);
- conducting field or windshield surveys and reviews (e.g., to identify activity patterns, locations, numbers of structures); and
- obtaining information through project scoping, public involvement, interagency coordination and contacts with other sources (e.g., city and/or county professional staff, civic groups in the area, representatives of any facility or service that may be affected such as day care providers).

Public involvement can be a key component because citizens can provide information for:

- identifying community needs;
- refining the community profile;
- recognizing less obvious areas of neighborhood importance; and
- avoiding, minimizing and mitigating adverse social impacts and identifying opportunities for community enhancement.

The PDE initiates the gathering of information from the public as early as practical in the project development process and continues coordination with the public on through the social impact analysis process. This may be accomplished through common public involvement methods including public meetings, focus groups, workshops, surveys, personal interviews, etc.; see [Chapter 16 “Public Involvement.”](#)

### **19.3.2 Documentation of Social Environment Profile**

The PDE uses the information gathered to develop and document a profile of the social environment. The PDE may incorporate changes in the profile as additional information is obtained through ongoing coordination and public involvement. The profile addresses the following items, commensurate with the level of anticipated impact from the project:

1. Community/Neighborhood Characteristics. Consider the following:
  - community boundaries and neighborhood or subdivision boundaries (e.g., based on physical barriers, land-use patterns, political or area of responsibility divisions (school districts, police precincts), selected demographic characteristics, resident perceptions);
  - existing demographics (e.g., number of existing households, average household size, age distribution, median income level, presence and distribution of low-income, minority and/or ethnic populations/individuals);
  - presence and distribution of persons with low-mobility status (e.g., elderly, disabled, non-drivers, transit-dependent);
  - growth policies for the study area (e.g., adopted growth targets, growth management policies or other policies relating to the location or rate of population growth);
  - trends in population growth and demographics for the project area;
  - property values;
  - housing (e.g., availability, age, type);

- location of community centers/activity centers, community focal points or informal meeting places (e.g., places of worship, playgrounds, hair salons, laundromats);
  - community values and issues (e.g., security, solitude);
  - planned and approved future development;
  - businesses in the area; and
  - presence and jurisdictional areas of Tribal governments.
2. Public Services and Facilities. Consider the following:
- type, size and location of public services and facilities (e.g., schools, police and fire protection, libraries, hospitals, daycare centers, religious institutions, counseling facilities, alcohol and drug rehabilitation facilities, elder-care centers, community centers, postal facilities);
  - infrastructure (e.g., roads, bicycle paths, transit, water and sewage systems); and
  - special areas (e.g., historic districts, parklands).
3. Circulation/Access. Consider the following:
- existing highways, streets, transit systems, bicycle and pedestrian facilities;
  - type, size and location of businesses, community centers/activity centers, community focal points or informal meeting places (e.g., places of worship, playgrounds, hair salons, laundromats), special areas, historic districts and parklands; and
  - current travel patterns and accessibility (e.g., vehicular, commuter, bicycle, pedestrian).
4. Safety. Consider the following:
- public safety issues (e.g., police and fire services, emergency medical services, bicycle/pedestrian safety); and
  - crash history for the existing transportation system in the project area and the locations affected.

### 19.3.3 Analysis and Findings

The PDE uses the profile of the potentially affected social environment and the results of public involvement and ongoing coordination with the DT to begin the identification and evaluation of the project's potential social impacts. The analysis involves characterizing the existing state of the social environment, forecasting how it may change if a given action or alternative is

implemented and developing means of mitigating changes that are likely to be adverse from the point of view of an affected population.

### 19.3.3.1 Analysis Tools

As necessary, the PDE may conduct additional research and/or apply a variety of analysis tools to forecast/analyze potential effects and evaluate possible mitigation measures. Examples of potential analysis tools include the following:

- statistical analysis (e.g., forecasting, trend-line projections, correlation);
- comparisons (e.g., case studies of similar transportation actions in other locations, using analogies and examining similarities and differences over time or across areas);
- visual imaging (e.g., computer simulations, development of physical models);
- mapping overlays (e.g., plotting various maps showing physical characteristics, demographics, project alternatives and superimposing them to create a composite image);
- expert consultation (e.g., roundtable discussions, reports);
- peer review (e.g., consultation with professionals within the transportation field);
- brainstorming (e.g., generating ideas through quick-response reactions);
- Delphi Technique (i.e., a structured form of reaching consensus among experts for problem solving);
- market research (e.g., focus groups, targeted surveys, interviews, questionnaires); and
- public involvement (e.g., public meetings, workshops, citizen advisory groups).

### 19.3.3.2 Approach

The following are approaches the PDE may use in applying the analysis tools:

1. Comprehensive Approach. In this approach, the PDE gathers as much relevant information as possible, examines the information and then reaches a conclusion.
2. Incremental Approach. In this approach, the PDE builds on information a bit at a time until a conclusion is reached.
3. Comparative Approach. In this approach, the PDE identifies similarities and differences from past experience.

Regardless of the approach or combination of approaches used, the process involves making projections about the future of the affected communities “with the project” as compared to the future “without the project.”

### 19.3.3.3 Identification and Evaluation

In conducting the social impact analysis, the PDE considers both negative and positive effects, and impacts that are short-term (e.g., associated with project construction activities) and long-term (e.g., associated with the permanent features implemented by the project). The PDE also considers potential indirect (secondary) and cumulative social impacts; see Chapter 25 “Indirect (Secondary) and Cumulative Impacts.”

The PDE evaluates the likelihood of social impacts, their scale, severity and extent, and their reversibility. The PDE also considers the goals of the affected communities and the public’s perception of impacts in accomplishing the analysis.

Listed below are questions the PDE considers in identifying and evaluating potential social impacts for a specific project or alternative. The questions are grouped according to the areas addressed in the social environment profile. For questions determined applicable for a project/alternative, the PDE coordinates with the DT, conducts additional research, and applies the analysis tools and approaches discussed above, as necessary to answer the question.

#### 1. Community/Neighborhood Characteristics.

- How will the project affect neighborhoods and/or community cohesion?
  - + Will it split neighborhoods or isolate portions of a neighborhood or an ethnic group?
  - + Will it change property values?
  - + Will it separate residents from community facilities?
  - + Will it create a barrier effect (e.g., from a noise wall or fencing)?
  - + Will noise, vibration, dust and/or odor increase?
  - + Will there be a shadowing effect on adjacent property?
  - + Will it cause redistribution of the population or an influx or loss of population?
- What are the numbers and types (e.g., single family, multi-unit, rural residential) of residences that the project will displace? Is there suitable replacement housing available for relocation?
- Will the project affect residents with special needs (e.g., disabled, minority, elderly)? Will the project involve disproportionately high and adverse impacts to minority or low-income populations? See [Chapter 24 “Environmental Justice.](#)
- Is the project likely to generate new development/open new areas to development?
- Will the project change the community’s aesthetic character?

- Is the project compatible with community goals and consistent with community land-use plans and zoning?
- How will the project affect the perceived quality of life?

## 2. Public Services and Facilities.

- Will the project result in relocation or displacement of public facilities or community centers?
- Will the project lead to or help alleviate overcrowding of public facilities (e.g., schools, recreation facilities)?
- Will the project take part of a public property, cause loss of parking, or introduce construction noise, vibration and dust or operational noise and vibration affecting a public facility or special area (e.g., historic district)?
- Will the project disrupt aspects of the existing public service infrastructure (e.g., water and sewage systems)?

## 3. Circulation/Access.

- How will the project alter current travel patterns and accessibility?
- Will the project restrict or prohibit access to businesses, community centers/activity centers, community focal points or informal meeting places, historic districts, parklands, or public services/facilities (including roads, transit facilities, bicycle and/or pedestrian facilities)?
- Will the project cause longer commute times (e.g., as the result of detours)?

## 4. Safety.

- How will the project improve highway and traffic safety?
- Will the project cause changes in emergency response times (e.g., police, fire, emergency medical)?
- Will the project increase or decrease the likelihood of crashes involving pedestrians and/or bicyclists?
- How will the project affect overall public safety (e.g., will the project increase or decrease the crime rate)?

### **19.3.4 Mitigation and Commitments**

When adverse social impacts are identified, the PDE and DT coordinate to evaluate measures to avoid, minimize or reduce the impacts. The nature and extent of impact mitigation measures

are commensurate with the level of the anticipated impacts. Examples of potential mitigation measures for adverse social impacts include the following:

- rerouting or shifting the alignment to avoid or minimize social impacts;
- phasing construction;
- implementing design amenities; and
- setting aside land in the project area to replace impacted parkland, etc.

For each project alternative, the PDE documents the answers to the applicable questions in [Section 19.3.3.3](#) and the results of coordination with the DT on measures for avoiding, minimizing or reducing identified adverse impacts. This documentation provides the social impact/mitigation findings for each pertinent area of the social environment profile (i.e., community/neighborhood characteristics, public services and facilities, circulation/access, and safety).

The PDE ensures the findings from the social impact analysis, including mitigation measures, are appropriately reflected in the environmental documentation for the project. See [Chapters 11 “Preparing Environmental Documentation,” 12 “Categorical Exclusion,” 13 “Environmental Assessment/FONSI” and 14 “Environmental Impact Statement/ROD.”](#)

The PDE and DT ensure the project plans accurately reflect the measures for avoiding, minimizing or reducing adverse social impacts. To the extent possible, the PDE and design team should prepare the contract documents using the *MDT Standard Specifications* to minimize the need for special provisions to address social impacts or other commitments.

The District Environmental Engineering Specialist monitors project construction to ensure that measures to avoid, minimize or reduce adverse social impacts are implemented in accordance with the approved project plans.