

## 1.0 Introduction

This *Conceptual Alternatives Study* for the *Cleveland Innerbelt* refines and analyzes a series of transportation projects that evolved from the Strategic Plan for transportation improvements (see Chapter 2) developed during the Major Investment Study (MIS) Planning Phase. This document outlines the development, analysis, and decisions of the process to identify a broad range of Conceptual Alternatives. From the Conceptual Alternatives the report then names a range of Feasible Alternatives to be further studied in more detail. The use of this process is directed by the Ohio Department of Transportation (ODOT) and is documented in its Project Development Process (PDP), discussed below.

Regarding this document, the Cleveland Innerbelt *Study* (Study) designation refers to Steps 1-4 of the PDP, also known as the Planning Phase. The Cleveland Innerbelt *Plan* (Plan) designation refers to the current phase of development, Step 5 of the PDP. The Cleveland Innerbelt *Project* (Project) designation is the overall, inclusive nomenclature that encompasses the Study, the Plan, and all future Steps of the PDP for the Cleveland Innerbelt.

### 1.1 ODOT Project Development Process

The Ohio Department of Transportation developed a Project Development Process (PDP) for Major Projects that was released in November of 2004. The PDP is a transportation decision-making approach for the progression of a project from planning through construction. Major transportation projects go through a 14-Step PDP as shown in Figure 1-1. The purpose of this section is to explain how ODOT's PDP is applied to the Cleveland Innerbelt.

The Cleveland Innerbelt Study began in August of 2000, prior to the adoption of the current PDP. However, it utilized ODOT's Planning Study Process which is very similar to the first four steps of the PDP. This constituted the planning phase for the project and resulted in a Strategic Plan at the conclusion of Step 4 in the summer of 2004. The discussion that follows will focus on the implementation of the PDP for Step 5, the results of which are presented in this document, and on Step 6, which is the next phase of development.

When considering the application of the PDP to the Cleveland Innerbelt Project, several points are important to remember:

#### ***The PDP is a Framework, not a Checklist***

The PDP describes a framework for decision making, where the decisions become more specific as greater levels of detail are available. Broad ranges of options are gradually narrowed down to the eventual preferred alternative over the course of several steps. However, no one process can fit every type of project exactly. For example, the type of information used to make project decisions is different for an upgrade of an existing interstate in the city than for a new rural freeway through the mountains. The PDP is specifically envisioned as flexible, allowing for all types of major projects. It was designed with the intent that the project team customizes the process to the project type and setting, using the tasks listed in the PDP as a guideline for the type of information used to make each subsequent decision.

#### ***The Steps of the PDP are not Sequential***

It is critical to understand that the steps are not perfectly sequential. Beginning subsequent steps while certain tasks on one step are still in progress is permissible. In order to expedite project completion, ODOT will typically allow a task to begin when enough information is available in the current step to anticipate that the task is needed. Tasks are begun on likely alternatives to keep the project moving ahead while documentation of the current step is prepared, reviewed, and accepted. If the documentation and public involvement tasks reveal that consideration for additional options are necessary, those alternatives are added to the step in progress. In general, the studies in the current step are not finalized until the documentation of the preceding step is available. In other words, the documentation for Step 4 is completed before Step 5 studies are *finished*, not before they begin. Step 5 documentation is completed before related Step 6 studies are finalized.

#### ***The Ultimate Goal is Good Decision Making***

While the PDP is a useful tool, the ultimate goal is sound project decision making. ODOT is charged with making decisions that achieve the Department's mission of improving safety and mobility while preserving economic vitality, effectively using tax payer dollars, and protecting and enhancing the community and natural environment. Major transportation projects are extremely complex, with numerous local stakeholders, dozens of subject matter experts, several state and federal agencies, and a large project team. Intelligent, well intentioned individuals can review the same information and come to completely different conclusions. ODOT collects these opinions and considers them along with the technical results.

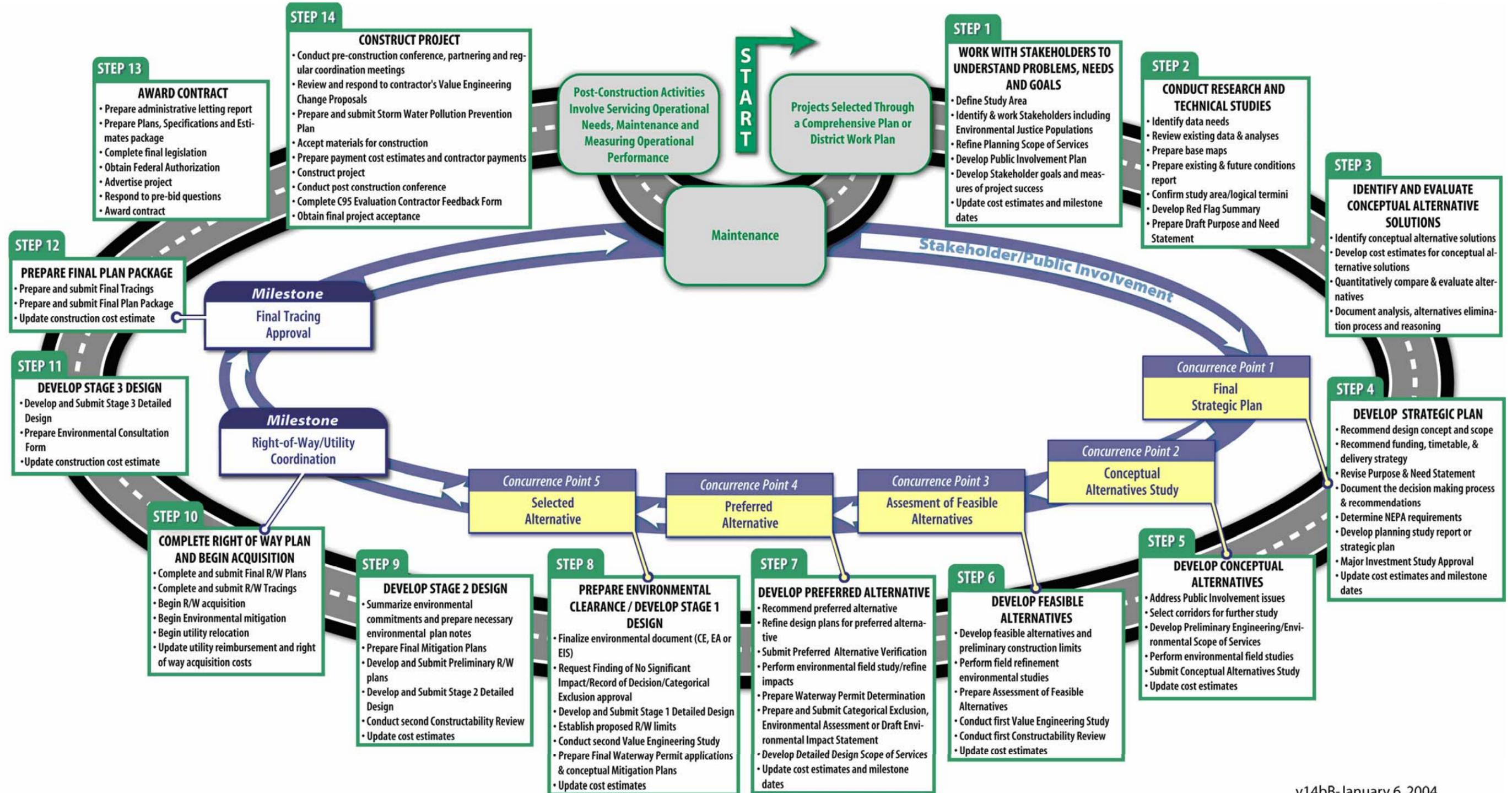
At times, ODOT will inform the public of a preliminary project decision earlier than the designated decision point in the process to address questions and ensure constant communication with the public. This occurs when the input and the technical data appear to point in a particular direction. Subsequent studies will confirm these decisions or they will be revisited.

When the environmental document is prepared for a major project – whether it is a Categorical Exclusion Level 4, an Environmental Assessment or an Environmental Impact Statement – a federal action is required. At that point, the decisions become official.

#### ***Concurrence Points Represent Major Decision Points***

A Concurrence Point is not one specific moment in time nor is agreement necessarily achieved among all parties involved. The process requires the project team to use technical studies and public input to develop and then narrow down a range of alternatives to be considered. Each concurrence point represents a major decision point where input is sought. For some projects, this is one specific point when one meeting is held or one document is reviewed. For complex projects, the input process may take the form of multiple meetings over many months during the course of the work. The key is that public input is obtained and considered prior to making the decision required at that concurrence point. For Step 5, the decision being made is the narrowing down of a broad collection of Conceptual Alternatives to a few Feasible Alternatives for more detailed study in Step 6.

Figure 1-1: Ohio Department of Transportation Project Development Process for Major Projects



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## Step 5 Conceptual Alternatives

The results of Step 5 are described in this report. A general overview of the Step 5 tasks in the PDP for the Cleveland Innerbelt is provided below.

### *Environmental*

During Step 5, the development of the conceptual alternatives began with an environmental context based upon information on known historic, natural and community resources. During Step 5, additional detailed environmental studies were initiated to obtain more information to inform decision making and advance the project towards environmental clearance. In Step 5, these included a Phase I History/Architecture Survey, Ecological Survey, and Phase I Environmental Site Assessment.

From inventories of existing properties (literature search) and public feedback, the project team was aware at the start of Step 5 of several buildings that are listed on the National Register of Historic Places, along with other properties of concern that required evaluation to determine their historic status. Public input during Step 5 suggested avoidance of impacts to the Greek Orthodox Church (Central Viaduct Bridge section) as well as the Mather Mansion (Innerbelt Trench section). Both properties are currently listed on the National Register of Historic Places. Other properties of potential historical significance were identified on the opposite side of the freeway from these known resources. In June of 2005, the Phase I History/Architecture survey began evaluating these properties based upon the anticipated impact limits as the Area of Potential Effect (APE). By the fall of 2005, the Phase I work was complete and the preliminary results were available for properties recommended for further study. This input was available for Step 5 decision-making. However, in February 2006, ODOT expanded the APE to consider properties further from the existing freeway. The revised Phase I History/Architecture report findings will be included in future steps.

The Ecological Survey was conducted in order to supply information to the project team on resources within the project area for Step 5 decision making. There is no specific ecological product in Step 5. The Ecological Survey Report (ESR) is finalized in Step 6 when the impacts of the Feasible Alternatives are incorporated into the report for coordination with required state and federal agencies.

The Phase I Environmental Site Assessment (ESA) evaluates properties that are potentially contaminated with regulated substances. The results of the Phase I ESA provide input to the project team regarding handling of property acquisition and contaminated materials during construction. For those properties requiring a more intensive evaluation before such recommendations are made, a Phase II ESA is recommended for completion in later steps.

Community issues were also considered in Step 5. Neighborhood information, community resources, and property information were available to the project team. In addition, extensive public involvement raised awareness of issues of greatest concern to the community, such as potential changes in access. These issues are primarily documented through public involvement activities. No formal written evaluation of these issues is prepared until Step 6. Noise issues in Step 5 involved identification of sensitive receptors for analysis in Step 6.

Typically, a Relocation Assistance Program (RAP) Conceptual Survey is prepared in Step 5. The RAP survey discusses the proposed relocations required by the project and analyzes the availability of replacement properties. For this project, only the number, type, and location of relocations were identified for the Step 5 report. Due to the multiple design iterations and evolving work limits of the concepts in development, the formal RAP survey for this project was delayed until Step 6 when better information on the proposed impact limits for the alternatives will be better defined.

### *Engineering*

For a project that is an upgrade of the existing route, engineering studies in Step 5 identify potential alignment options. These are developed to a conceptual level of design detail and screened to identify a smaller range of options for comparison. This process is documented in the Conceptual Alternatives Study document prepared at the end of Step 5. For most major projects, this process to develop the Conceptual Alternatives is internal to the project team. However, as befits a project of its cost, complexity, and public interest, the development of the Conceptual Alternatives for the Cleveland Innerbelt utilized extensive public involvement activities along with a series of workshops with technical experts.

The project was broken into manageable sections with alternatives developed for each section: the Southern Innerbelt, Central Viaduct Bridge, Central Interchange, Innerbelt Trench, Innerbelt Curve, West 7<sup>th</sup> Street, C-D Roadways and I-77. In most instances, the options selected in one section will not impact the choices available in the adjacent sections. In a few cases, the characteristics of alternatives in one section impact the options in another section. These exceptions are noted in relevant sections of this document.

Work began in the summer of 2004 to advance Step 5 design activities. The development of the options for each section progressed somewhat independently, depending upon the input received between workshops. Some sections generated more choices and more issues, with additional public and stakeholder meetings required to obtain input on these sections. The evolution of the Conceptual Alternatives is explained in great detail within this report.

### *Conceptual Alternatives Study*

Step 5 concludes with the identification of alternatives for further development in Step 6 as Feasible Alternatives. The Conceptual Alternatives Study (CAS) documents the story of how the earliest alternatives were developed, how they were evaluated, and which options are recommended for further consideration. It is important to note that the extensive series of workshops and public involvement used to arrive at the alternatives were informed by engineering and environmental studies in progress, as described above. Those studies are currently being finalized to confirm that the conclusions remain valid.

Within the CAS document, the alternatives for each section are discussed along with the reasons for advancing or eliminating each option. In general, screening factors for this project included Purpose and Need, the ability to maintain traffic during construction, cost, property impacts (including known historic buildings), and public input. For any project, a critical screening tool is the ability to meet the projects' purpose and need. In this case, the solutions need to meet standards, function operationally, and reduce conflicts to improve safety. A second critical screening factor was the ability to maintain traffic during construction. Options that require closures of short durations (a few months or less) are considered more viable than options that require closure of the freeway for periods of a year or more. Cost is also a critical

factor. More expensive options were discarded if they did not offer other clear benefits in terms of operations or reduction of impacts. More discussion of evaluation factors is provided in the relevant sections of this document.

For this project, the public involvement program focused on involving the community and technical experts during the development of the alternatives through a series of community meetings and technical workshops. Therefore, there is no singular concurrence point in Step 5 for the Cleveland Innerbelt project. Instead, community input was considered and used during the progress of the work. A summary of these meetings and workshops is included within the discussions in Chapters 4-11. Feedback will continue to be solicited and reviewed throughout the course of the work.

### **Next Steps – Step 6 Feasible Alternatives**

Step 6 activities began in late 2005, beginning first in the areas where current information had already indicated the need for further studies. Step 6 tasks are currently on-going. The studies in progress are summarized below, along with a discussion of the documents to be prepared at the end of Step 6.

#### ***Engineering***

During Step 6, the Feasible Alternatives from Step 5 are being refined. The mainline alignments are well established by the end of Step 5, so Step 6 is focusing on improving upon additional details, such as the evaluation of auxiliary lanes, refining interchange concepts, and evaluating needed improvements to the local street system as a result of access changes. Additional evaluation is being conducted regarding major structures to determine the probable bridge type, which assists in evaluating the potential impacts from pier placement. The need for and location of retaining walls also is being verified. Each design activity in Step 6 is intended to better establish the potential impact limits and refine the cost estimates for each Feasible Alternative.

In addition, the planning-level traffic volumes are being updated. Typically, this involves obtaining Certified Traffic through ODOT's Office of Technical Services. For this project, the planning-level studies used 2025 traffic volumes. By the beginning of Step 6, the likely construction timetable indicates that an opening year of at least 2015 is appropriate, so a design year of 2035 is being used. Updated traffic volumes are being prepared and evaluated to confirm that the proposed Feasible Alternatives function appropriately with 2035 traffic volumes.

#### ***Environmental***

In Step 6, environmental analyses are conducted using the preliminary work limits for the Feasible Alternatives. These studies typically include the Phase II History/Architecture Survey, Ecological Survey Report, Environmental Site Assessment Phase II, community impact assessment, and noise analyses. For this project, there are several buildings close to large bridge structures, so a vibration analysis is also being included in Step 6. Additional coordination on historic properties will be conducted as necessary based upon the results of the Phase II History/Architecture Survey.

Public input in earlier phases indicated concern over the potential economic impacts of proposed access changes in the Innerbelt Trench section of the project. Step 6 reports will include an economic study of this area.

### ***Assessment of Feasible Alternatives/Draft Environmental Impact Statement***

Under ODOT's PDP, Step 6 concludes with an Assessment of Feasible Alternatives (AFA) document. The AFA provides information on how the Feasible Alternatives are refined during Step 6. It also summarizes the results of the environmental studies and discusses the impacts of each of the Feasible Alternatives. The intent is to provide a comparison of the options, such that public input is obtained and a preferred alternative chosen for further development in Step 7.

ODOT has decided to prepare a Draft Environmental Impact Statement (DEIS) in lieu of an AFA at the end of Step 6, rather than waiting to issue the DEIS in Step 7. Based upon the information that is available at the end of Step 6, a DEIS will be prepared to compare the Feasible Alternatives. Based upon this comparison, ODOT's preferred alternative will be identified in the document. Following the public hearing on the DEIS, the selection of the preferred alternative will be formalized.

## **1.2 Organization of the Report**

This *Conceptual Alternatives Study* for the *Cleveland Innerbelt* covers Step 5. It is divided into two major parts and an appendix:

- **Part I** contains background material on the Project that informs the reader of what occurred to arrive at the Conceptual Alternatives discussed in Part II. Part I consists of:
  - Chapter 1. Introduction to the report.
  - Chapter 2. History of the Project.
- **Part II** details the Conceptual Alternative Study (Step 5 of the PDP). The Innerbelt Corridor extends from the I-90/SR 2 interchange (Innerbelt Curve) on the north to the I-71/ Fulton Road interchange on the south including the I-490/West 7<sup>th</sup> Street interchange as shown in Figure 2-2. To aid in the analysis and presentation of the findings, the Innerbelt Corridor is subdivided into eight logical geographical sections (Figure 3-1); therefore, eight chapters (Chapters 4 through 11) are used to outline the conceptual alternatives for each respective section. Part II consists of:
  - Chapter 3. Conceptual Alternative Analysis Framework
  - Chapter 4. Innerbelt Curve.
  - Chapter 5. Innerbelt Trench.
  - Chapter 6. Central Interchange.
  - Chapter 7 Central Viaduct Bridge.
  - Chapter 8. Southern Innerbelt.
  - Chapter 9. C-D Roadways.
  - Chapter 10. I-77 Access.
  - Chapter 11. West 7<sup>th</sup> Street Interchange.
  - Chapter 12. Summary of Feasible Alternatives.

- **Appendix.** Contains figures of the development of conceptual alternatives and typical sections.
  - Appendix A. Innerbelt Curve.
  - Appendix B. Innerbelt Trench.
  - Appendix C. Central Interchange.
  - Appendix D. Central Viaduct Bridge.
  - Appendix E. I-77 Access.
  - Appendix F. West 7<sup>th</sup> Street Interchange.
  - Appendix G. Typical Sections.