

CHAPTER 3

ALTERNATIVES

3.0 ALTERNATIVES ANALYSIS

The alternatives section is divided into sections for clarity. Section 3.1 provides a brief introduction. Section 3.2 provides a comparative analysis of the freeway and tollroad options. Section 3.3 focuses on the alternatives retained for detailed study. Section 3.4 provides for a description of the No-Build Alternative. Section 3.5 provides additional information by comparing the Build and No-Build Alternatives. Section 3.6 of the Alternatives Analysis chapter provides additional information on other proposed transportation actions planned in the PSC.

3.1. Introduction

A range of alternatives was developed for the recommended project. Each of these alternatives was evaluated for its ability to meet the purpose and need of this project. In accordance with the Council on Environmental Quality (CEQ) guidelines, 23 CFR 771 and FHWA Technical Advisory 6640.8A, all reasonable alternatives were evaluated.

A means for direct access between the CBD of Fort Worth and Southwest Tarrant County has been studied over an extended period of time. The proposed facility has been identified, revised and supported throughout the history of the project. Proposed alignments for the recommended Build Alternatives are the product of numerous route location studies in which various functional and/or location alternatives were identified to meet a growing transportation need. Over the project's approximately 40-year history, the City's emerging development patterns have refined many of the early alternatives. The various agencies responsible for the development of this project have incorporated and included public input in the development of the alternatives.

Previous studies have analyzed different alternatives including a freeway facility at differing locations, several tollroad alternatives, a rail alternative and other strategic initiatives aimed at reducing congestion and optimizing the existing transportation network. Therefore, both modal and Build Alternatives have been considered. These studies have culminated with the recommendation of an alignment capable of meeting the purpose and need and obtaining public support for the

project. To offer a historical perspective of the recommended project, early alternatives that were considered for this project are described in Chapter 1.0, Project History.

3.2. Freeway and Tollroad Options

Details of development of the project including freeway and tollroad options are described in Chapter 1.0, Project History.

3.2.1. Freeway Option

The project has been postponed on several occasions due to changes in funding availability, alignment and the City's development of the Cultural District. However, the overriding reason for the continued postponement of the SH 121 project as a freeway has been the lack of funding. Therefore, this alternative was eliminated from further study.

3.2.2. Tollroad Option

At the request of the City, the NTTA has taken the project under consideration as a tollroad. NTTA's participation creates a funding option to offset the lack of public funds and the estimated construction costs. The Build alternatives involve the construction of a multi-lane controlled access tollroad, with plans for phased construction as traffic demand and demographic trends dictate.

3.3. Description of the Build Alternatives Retained for Detailed Study

In addition to a No-Build alternative, four build alternatives were carried forward for detailed study in the DEIS. Combinations of these build alternatives evolved as a result of public participation and extensive City involvement. The City presented the combination alternative (Alternative C/A) on April 22, 2003 during the comment phase of the DEIS Public Hearing as detailed in a City Council resolution. The Alternative C/A is carried forward and incorporates much of the City's suggestions in so far as is feasible and practicable. This combination alternative is discussed in detail in Section 3.3.1, The Combination Alternative.

Because of changes in land use development patterns that have evolved over time, the proposed Build alternatives are essentially confined to the same horizontal alignment with the vertical profile varying among the alternatives. In addition to vertical profile modification there are various locations where different plan concepts have been proposed depending on the alternative. These plan concepts, for the most part, are limited to variances in the typical section and variances in the plan of several of the proposed interchanges located along the project. These plan concepts were proposed by different agencies or studies.

Five build alternatives included in this FEIS have been identified based on an agency or study recommendations: Alternative A resulted from the City's PRT and PDT; Alternative B resulted from the City's CAC; Alternative C was developed from Alternative A to respond to safety and established design concerns; and Alternative D was brought forward from studies and public input. Alternative C/A is a combination of Alternatives A and C. Thus, although the proposed alternatives share the same or similar alignments, the varying preliminary design concepts have established independent alternatives identified by the planning team and have been presented to the public as Alternatives A, B, C, C/A and D. Each of the five detailed study alternatives evaluated consist of a facility that would ultimately provide a six-lane section from IH 30 to just south of IH 20 and a four-lane section from south of IH 20 to the project's terminus at FM 1187; and would include frontage roads only in those locations where they would be essential to maintain local street circulation and continuity.

Initially the facility is proposed to be constructed as a four-lane urban tollroad from IH 30 to just south of IH 20 (near Altamesa/Dirks Road) and a two-lane rural highway section to the southern terminus, FM 1187. This initial phase of construction would include the acquisition of the ultimate ROW to allow for future widening to the ultimate six/four-lane section as warranted. South of IH 20 the two-lane rural highway section would serve as the interim facility until such time that funding becomes available to construct the ultimate four-lane tollroad section.

Federal guidelines have been put in place to discourage the selection of an alternative based on preservation of land (whether dedicated by local government, donated by individuals or acquired

through advanced or hardship acquisition) in an effort to maintain a sense of equal and non-biased representation for all citizens. In the Report of the Secretary of Transportation to the U.S. Congress on Preservation of Transportation Corridors, Issued pursuant to Section 1017(c), Public Law 101-240 submitted November 3, 1994 it states, “Any preservation initiative, either by police power or acquisition, must supplement or enhance the options available for providing an environmentally benign transportation facility.” The report also makes clear that, “Not every area or project is a candidate for such a program. Effort would have to be made to ensure that NEPA concerns are appropriately addressed during the systems planning effort and maintained throughout the alignment selection process. Greater coordination with the public, the development community and the environmental interest groups would be encouraged. Protection of environmentally sensitive resources would be maintained.”

Within this understanding, developers, city planners and transportation officials have continued to work cooperatively to preserve a corridor for the proposed facility in order to minimize, as much as possible, future relocations and/or neighborhood fragmentation. The recommended project has been included in various Fort Worth sector plans and land use maps since the City’s endorsement of the route location in 1985. As early as July 1983, several development plats in the southern section of the project corridor (IH 20 to Altamesa/Dirks Road) were approved on the basis of the proposed alignments for extension of Bryant Irvin Road and SH 121.

The current alignment was developed in close cooperation with the City’s planning department, resulting in a fairly restrictive undeveloped corridor suitable for tollroad use. The proximity of two major arterials, i.e., Hulen Street and Bryant Irvin Road, on either side of the study corridor, placed constraints on establishing alignment alternatives. South of Altamesa/Dirks Road, the alignment was located within the limited corridor available with the planned extensions of Bryant Irvin Road to the west and Granbury Road to the east.

The alternatives share a similar horizontal alignment and, therefore, the following alignment description is applicable to all five alternatives: The proposed SH 121 project would begin west of Summit Avenue at IH 30 with a tie-in to Forest Park Boulevard. It would proceed west between

Vickery Boulevard and the UPRR, crossing over the railroad near Hulen Street and over the Trinity River before proceeding south to the SH 183/IH 20 interchange. From this point the alignment would proceed south to its terminus in the vicinity of the intersection of FM 1187 and FM 1902. Exhibit 3.1 depicts the various alternatives on one map for comparison.

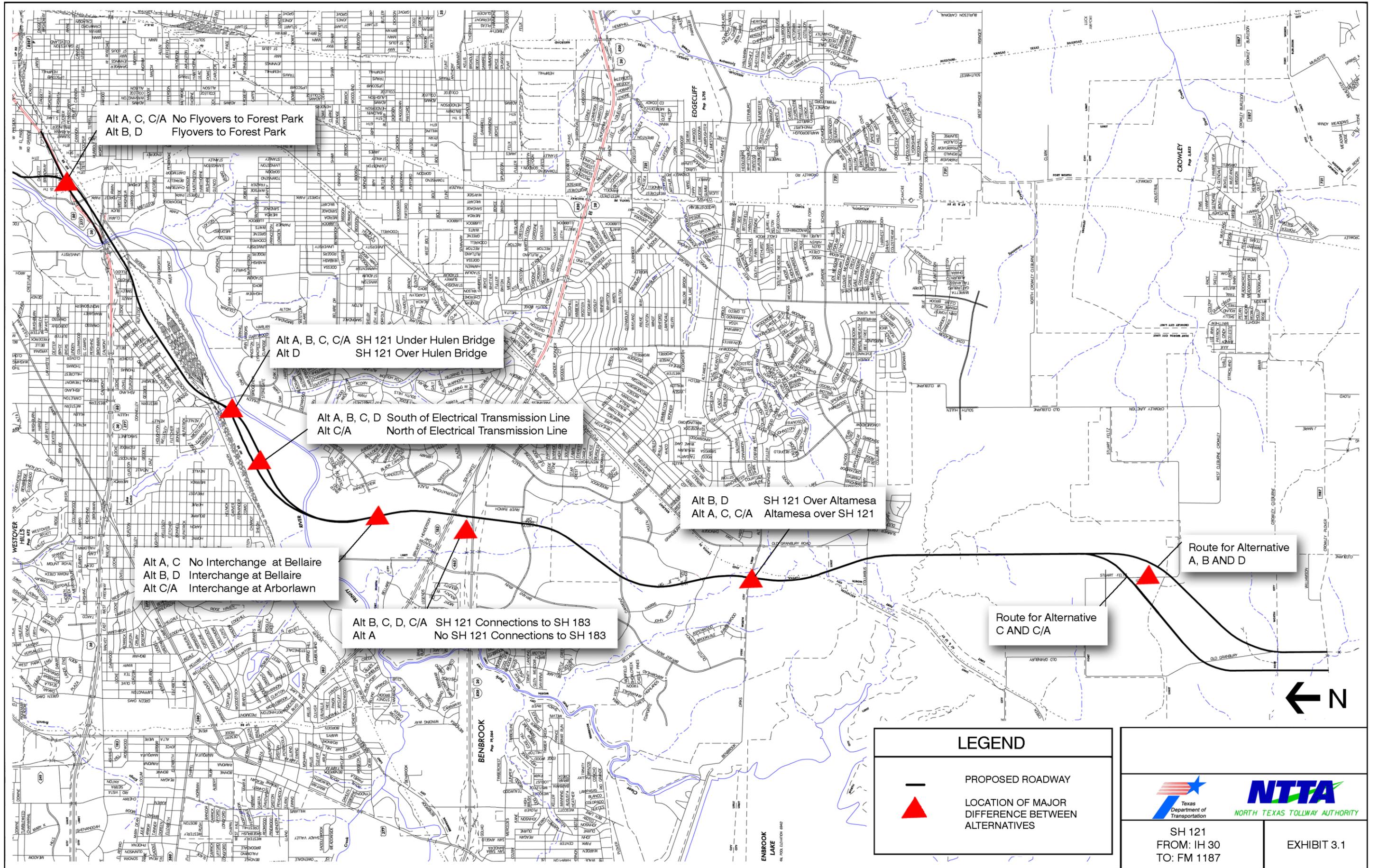
Although the Build alternatives generally share a similar horizontal alignment, plan concepts particular to each Build alternative determine the width of the typical sections as well as interchanges and grade separations between the SH 121 facility and the various existing roadways along the project corridor. As such, the following is a discussion of the five Build alternatives in terms of their typical sections and the interchanges that occur along the proposed alignment.

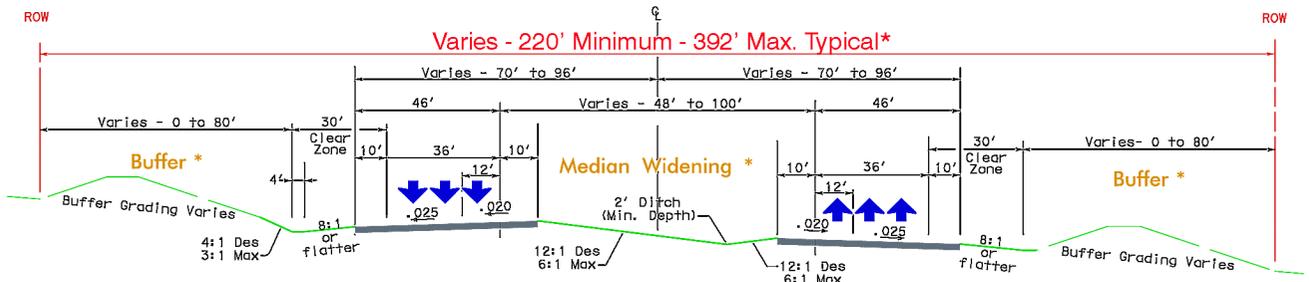
3.3.1. The Combination Alternative, Alternative C/A

Alternative C/A evolved from the City's desire to include the intent of the Alternative A interchange design at IH 30, to move the mainlanes and Stonegate Boulevard interchange north of the electrical transmission line and to maintain the PDT efforts where possible while avoiding ROW impacts to existing and ongoing development south of IH 20.

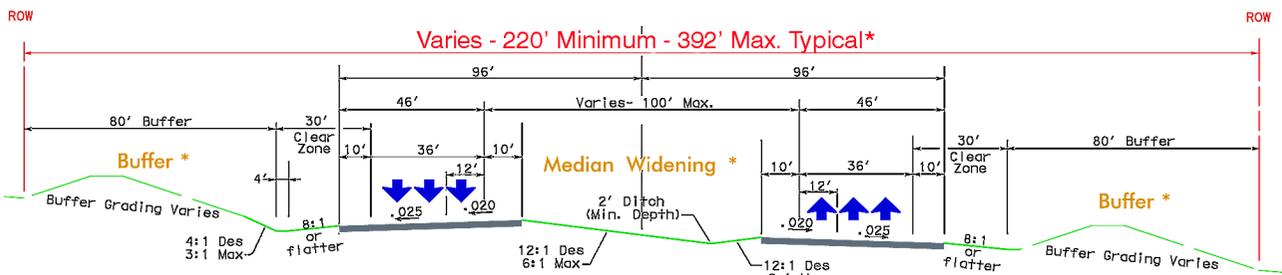
The typical section for the Alternative C/A would consist of two to three travel lanes in each direction divided by a median. The median would vary from 48 to 100 ft in width. The alternative would have ten-foot inside and outside shoulders. The minimum ROW for this alternative would be 220 ft with additional ROW needed at the interchanges to widen medians and buffers.

Typical Sections are depicted in Exhibit 3.2. Exhibit 3.3 through Exhibit 3.6 depicts the alignment of the alternative through the corridor.

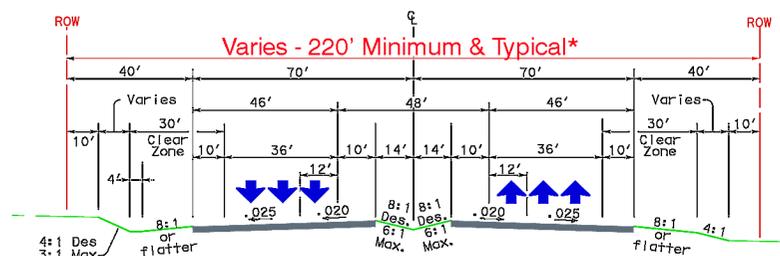




Alternative C/A
Typical Section
 (Includes Median Widening and Buffers in Certain Locations
 as prescribed by the City of Fort Worth's Preferred Alternative)



Alternatives A and C
Typical Section
 (Includes Median Widening and Buffers in Certain Locations)



Alternatives B and D
Typical Section

*Note that maximum ROW dimensions given are for "typical" sections and do not reflect interchange effects.

Frontage Roads are included in some sections, mainly in the IH20 and IH30 interchanges. However, frontage roads are not "typical" on this project thus are not reflected in these typical sections.

TYPICAL SECTIONS	
 Texas Department of Transportation	 NTTA NORTH TEXAS TOLLWAY AUTHORITY
SH 121 FROM: IH30 TO: FM 1187	EXHIBIT 3.2

Legend

- Mainlanes
- Approximate Structure Locations
- Frontage Roads /Surface Streets
- Ramps
- Future Roadway (by others)
- Preliminary Toll Plaza Locations



INTERSTATE 30

INTERSTATE 30



0 1000 2000 3000
GRAPHIC SCALE IN FEET

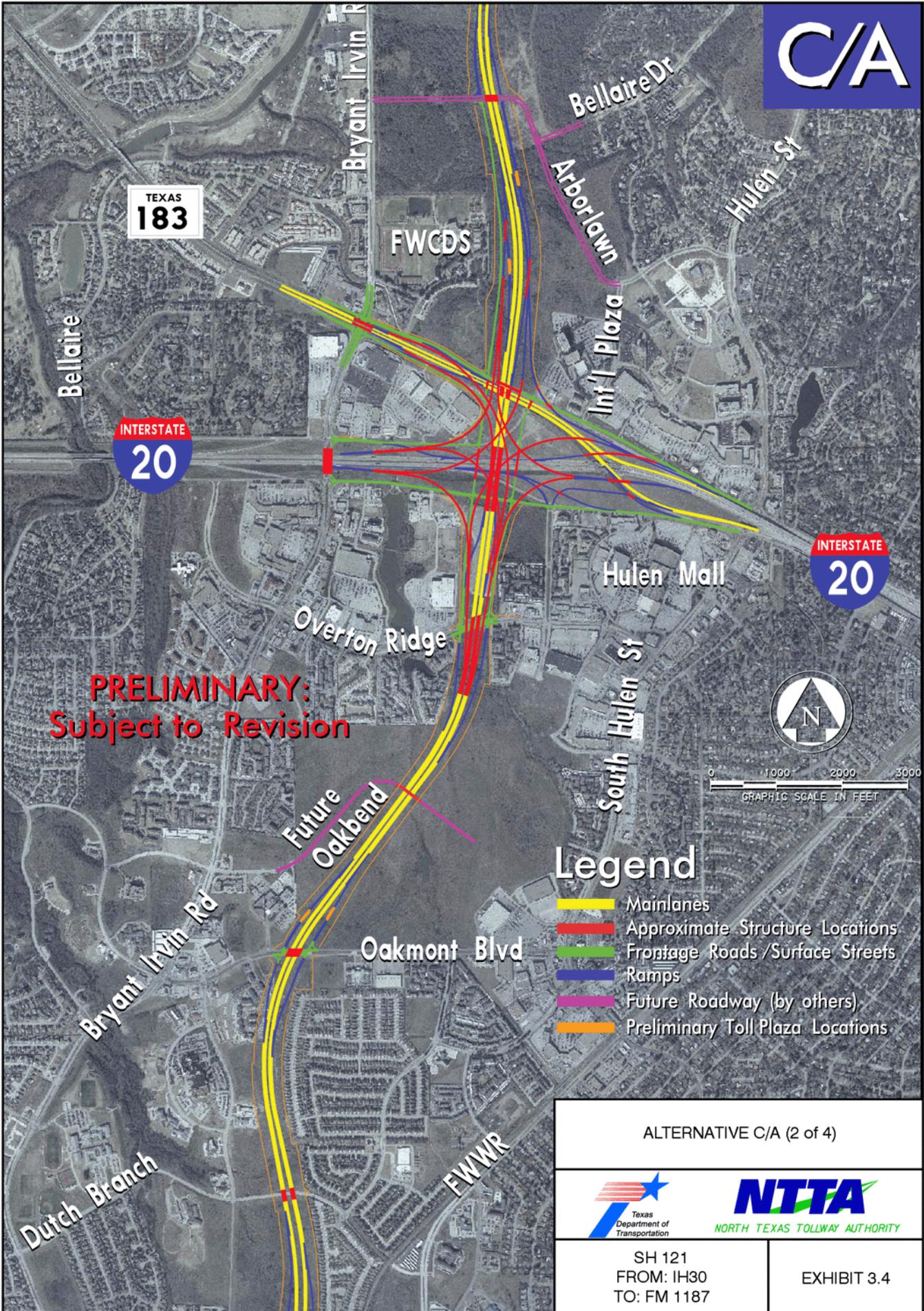
ALTERNATIVE C/A (1 of 4)



SH 121
FROM: IH 30
TO: FM 1187

EXHIBIT 3.3

**PRELIMINARY:
Subject to Revision**



**PRELIMINARY:
Subject to Revision**



Legend

- █ Mainlanes
- █ Approximate Structure Locations
- █ Frontage Roads /Surface Streets
- █ Ramps
- █ Future Roadway (by others)
- █ Preliminary Toll Plaza Locations

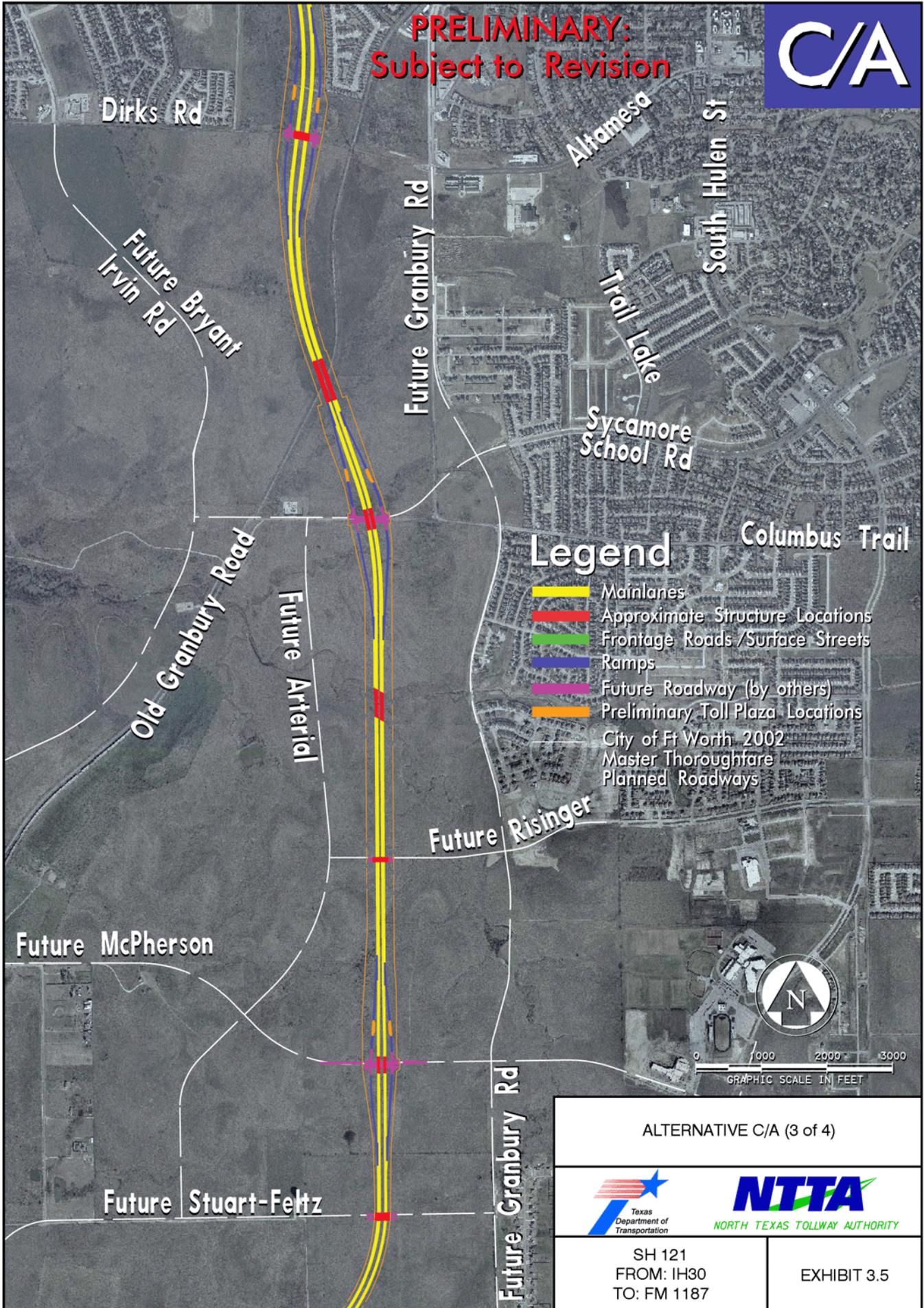
ALTERNATIVE C/A (2 of 4)



SH 121
FROM: IH30
TO: FM 1187

EXHIBIT 3.4

**PRELIMINARY:
Subject to Revision**



ALTERNATIVE C/A (3 of 4)



SH 121
FROM: IH30
TO: FM 1187

EXHIBIT 3.5

**PRELIMINARY:
Subject to Revision**



Mainlane
Toll Plaza

Future

Cleburne-Crowley Rd

Future Granbury Rd

Legend

-  Mainlanes
-  Approximate Structure Locations
-  Frontage Roads /Surface Streets
-  Ramps
-  Future Roadway (by others)
-  Preliminary Toll Plaza Locations
-  City of Ft Worth 2002 Master Thoroughfare Planned Roadways

Future SH 121
(FM 1187 to US 67)



0 1000 2000 3000
GRAPHIC SCALE IN FEET

ALTERNATIVE C/A (4 of 4)



SH 121
FROM: IH30
TO: FM 1187

EXHIBIT 3.6