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North Carolina Deparment of Transportation
Planning and Research Branch
Statewide Planning Group
Thoroughfare Planning Unit

FEASIBILITY STUDY

US 29/70 Improvement and Jamestown Bypass From Deep River Road (High Point) to Hilltop Road (Greensboro) Guilford County

November, 1988

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US 29/70 IMPROVEMENT AND JAMESTOWN BYPASS
FROM DEEP RIVER ROAD (HIGH POINT) TO HIILTOP ROAD (GREENSBORO)
GUILFORD COUNTY

PREPARED BY
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SUMMARY

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2. DESCRIPTION OF THE PROPOSED ACTION

This is a NCDOT Statewide Planning Group preliminary feasibility study report on the proposed alternate High Point/Greensboro Road bypass of the town of Jamestown, and the improvement of the existing facility. It is prepared at the request of the High Point, Greensboro, Jamestown and the Guilford County's Multi-jurisdictional Planning Committee.

The proposed bypass will be a multi-lane facility on new location and will begin at a point northeast of Deep River Road on the existing Greensboro Road, and end at a point on existing High Point Road, southwest of Hilltop Drive in Greensboro. The total length of the project is 7.83 miles. The proposed action is included in the High Point Area Thoroughfare Plan re-evaluation and the idea has been brainstormed by the multi-jurisdictional planning committee members for some time. The proposed action will provide a

needed bypass for the town of Jamestown, while also providing capacity and congestion relief for the existing High Point-Jamestown-Greensboro corridor travel.

Section I of the proposed action is six-lane urban type facility and extends from Deep River Road on the existing roadway, northeast of High Point to the vicinity of Manor Drive. Section I has a total length of 1.13 miles. Approximately 60% of the required right-of-way has been acquired.

Section II of the proposed action is a four-lane divided (grass median) urban boulevard. It diverges north and east from the existing facility in the vicinity of Manor Drive and transverses North Scientific Street and aligns with Pump Station Road across the Southern Railroad tracks, through Dillon Road and the Deep River. It continues across Oakdale Road and Harvey Road respectively, and proceeds northeasterly across Vickery Chapel Road to the existing High Point Road southwest of Greensboro. Section II has a total length of 3.8 miles.

The northeastern portion of the corridor (Section III) is six-lane urban type facility, and extends to Hilltop Drive in Greensboro.

3. ACTION REQUIRED BY FEDERAL AGENCIES

It is anticipated that a section 404 permit may be required from the U.S Army Corps of Engineers.

4. MAJOR ALTERNATIVES CONSIDERED

The major alternatives considered in this study include:

* Construction of a new roadway facility that will bypass the Central Business District of Jamestown along the corridor shown on the High Point Area Thoroughfare Plan. Only one alternative was evaluated between Deep River Road, on the existing Greensboro Road and Manor Drive (Section I). Three alternatives were evaluated on the northeast portion of Section II. The three alternatives of Section II vary in length from 2.8 miles to 3.8 miles. Only one alternative was evaluated between the northeast terminal of Section II, on the existing facility and Hilltop Drive in Greensboro. The total length of the alternatives studied varied from 7.73 to 7.83 miles.

* A "do nothing" and "improve existing facility" alternatives were considered and discussed, but were not selected for detailed evaluation.

5. SUMMARY OF IMPACTS

The following is a summary of impacts anticipated from the proposed action.

There will be a few residential relocatees required to construct the project. Section I, the 1.13 mile segment of the corridor will have no dwelling units relocated. Section II segment of the corridor will have five dwelling units relocated. No problem is anticipated finding suitable replacement housing for the better single family homes. There are also ample, safe and sanitary replacement housing for the older and substandard homes.

Given the number of relocatees, the proposed action will not have adverse impact on neighborhood stability. The general corridor for the proposed project has been established for a long time, and subdivisions have developed respecting the facility corridor.

No community facilities will experience long-term adverse effects by the proposed action. There may be travel inconvenience and minor disruption in utility service during construction.

The impact the proposed action will have on energy conservation will vary over the life of the planning period. Energy consumption will increase early in the planning period, due to greater travel distance for some travelers using the existing segments of the proposed bypass. As traffic volumes increase and congestion increases on the existing system, the proposed action upon implementation, will provide an energy savings.

The proposed action should not have any effect on the High Point area's existing compliance with national ambient air quality standards.

There will be an increase in noise level along the proposed corridor due to the proposed action. Several residential communities are expected to receive noise level increases from the current level. However, such increase from the existing level will be too insignificant to warrant abatement measures such as the construction of noise barriers.

The proposed action may have short-term adverse impacts on water quality downstream of the corridor if silt is allowed to enter streams during construction. Erosion control measures and construction monitoring will be followed to minimize long-term impacts on water quality.

The proposed action will have potential adverse impacts on the public water supply. The project corridor transverses the Deep River which feeds into High Point's two main water supply

sources: the High Point City lake, and the Oak Hollow lake. Impacts will occur if silt and pollutants associated with heavy equipment and building materials are allowed to enter the streams and the lake reservoirs during construction. Good construction practices including the use of erosion control measures, and construction monitoring will mitigate these impacts.

Long-term adverse impact may occur if traffic-generated pollutants and hazardous materials are allowed to enter the water supply from facility runoff. The close proximity of the proposed project to the urban water supply sources reduces the opportunity for natural filtering or cleanup of possible spills by emergency personnel before pollutants reach the water supply. Mitigating measures such as routing roadway facility and bridge storm water runoff through containment basins, providing positive barrier rails on structures and fills over water supplies, and using dense grass cover from the pavement edge to the water source should be utilized to reduce the risks of long-term impacts.

The proposed action will remove approximately 44 acres of woodland. Areas of mature forestland will experience a decline in wildlife populations as a result of being bisected by the roadway facility. Those portions of the facility right-of-way which are not paved will be seeded and/or sodded for erosion control purposes. Natural reforestation will occur in these areas, providing a good habitat for many birds and small mammals. The use of this land for roadway purposes is compatible with future land use plans. No threatened or endangered species of plant or other wildlife has been located in the study area.

The proposed action will involve less than three acres of jurisdictional wetlands. These wetlands will be formerly evaluated and mitigative measures will be proposed in accordance with FHWA Policy and Procedure 23 CFR 777.

No adverse impacts on groundwater resources are expected as a result of the proposed action.

No historic or archaeological site on, or eligible for nomination to the National Register of Historic Properties will be affected by the proposed project.

Potential visual impacts can be mitigated with the use of reforestation and landscaping. The requirements of Section 4(f) for parks and recreation areas are not applicable in this instance.

Listed below are the estimated right-of-way and construction costs in 1987 dollars. The estimate is broken into sections I, II, and III.

	Length (miles)	ROW	Bridge (x$1000)	Int/chge	Const.	Total (million $)
Section I	1.13	149725	-	3.00	2.9945	6.14423
Section II	3.8	474528	477.0	3.00	7.6000	11.5515
Section III	2.9	384250	-	3.00	7.6850	11.0693
TOTAL	7.83	1,008,503	477.0	9.00	18.2795	28.7650

CHAPTER I

PURPOSE AND NEED FOR THE ACTION

1.1 Description of the Proposed Action

The proposed action involves the construction of a major roadway improvement on a new location to provide a bypass of the Jamestown central business district. The proposed improvement begins approximately 0.5 mile northeast of the US 29A and US 70A confluence on the existing Greensboro Road in High Point for about 1.13 miles.

The improvement then veers in south-easterly direction in the vicinity of Manor Drive, crossing North Scientific Road and further aligns with Pump Station Road. The improvement continues across the southern railroad tracks, Dillon Road, Deep River, Oakdale Road, and Harvey Road respectively. The proposed facility continues across Vickery Chapel Road in a northeasterly direction, connecting with the existing High Point Road (29A/70A), southwest of Greensboro Road for a total 3.8 miles.

The third section of the improvement project continues from the bypass interchange on the existing High Point Road to Hilltop Road in Greensboro for a total of approximately 2.9 miles.

The proposed action is needed to provide an urban type six-lane divided facility with raised median from Deep River Road to the vicinity of Manor Drive (Section I).

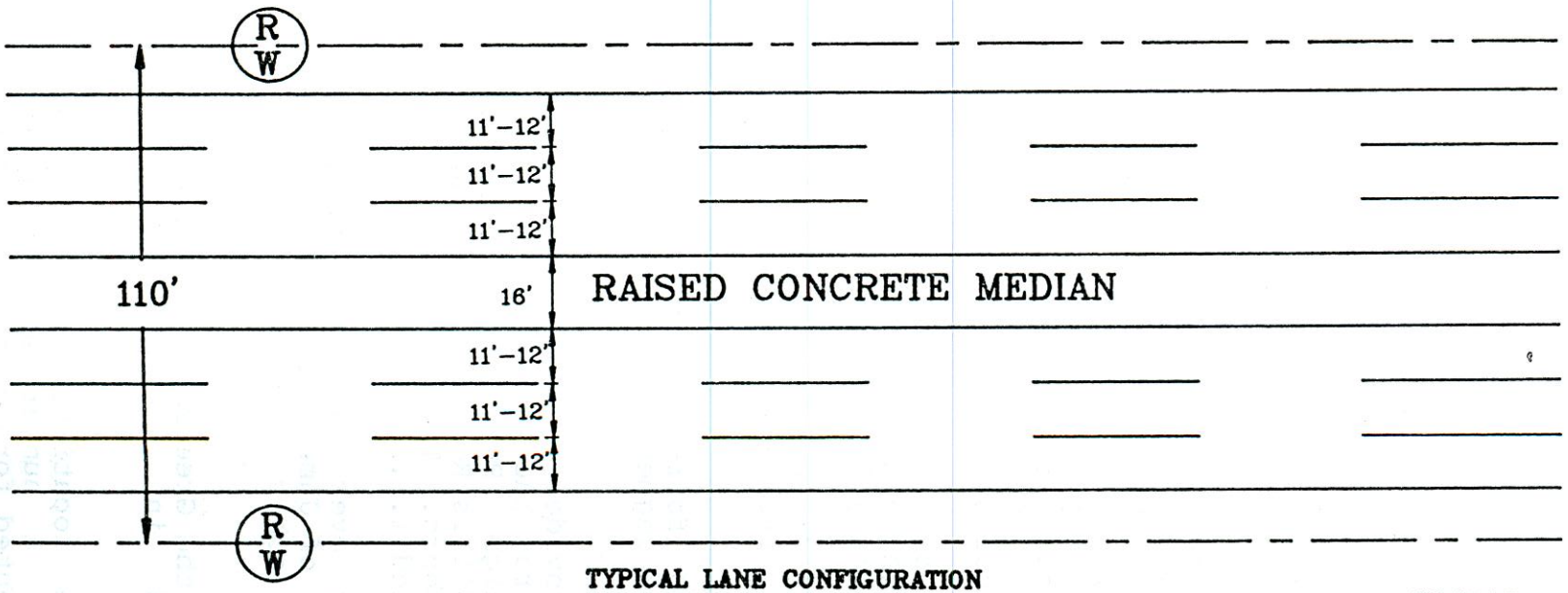
The project then provides a continuous four-lane divided facility with grass median on the entire bypass segment (Section II) from the vicinity of Manor Drive.

The third section is needed to provide an urban type six-lane divided facility with raised median from the northeastern terminal of the bypass, on the existing High Point Road (29A/70A), approximately 0.5 mile northeast of Millis Road in Jamestown, to Hilltop Road, southwest of Greensboro. The proposed typical sections are shown in Figures 1.1.1 and 1.1.2.

Existing Greensboro Road is presently over capacity and passes through the Central Business District of Jamestown. There is no bypass route for heavy trucks and other through traffic using Greensboro Road.

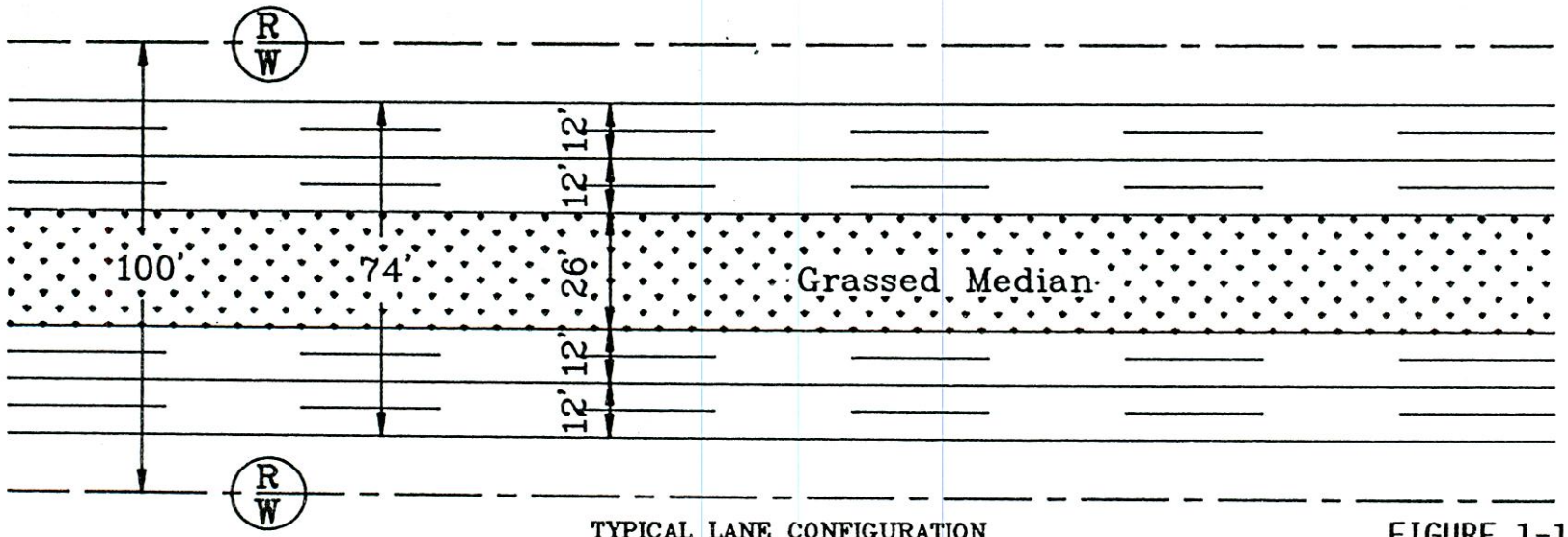
The proposed action is designated as the Greensboro Road/Jamestown Bypass which is currently included in the Planning Area Thoroughfare Plan.

In order to consider all feasible locations of the roadway improvement in the project area, a number of preliminary alternatives were developed and presented for comments at separate municipal level meetings, and jointly at the Multi-jurisdictional



TYPICAL LANE CONFIGURATION
PROPOSED HIGH POINT RD.

FIGURE 1.1.1



TYPICAL LANE CONFIGURATION
PROPOSED GREENSBORO RD.

FIGURE 1-1-2

Planning Committee meeting held in June 1988. After consideration of the comments and preliminary design ideas, feasible alternatives were selected for detailed assessment and comparison.

Based on the information developed during the feasibility study process, plus comments and suggestions received from the local planning officials, elected officials, local institutions and individuals, Alternative I was selected.

Other alternatives considered in the study area are described in detail in Chapter Two of this feasibility study report. These alternatives are identified briefly as follows:

Do Nothing Alternative

This involves doing nothing or making no major facility improvements to provide a bypass of Jamestown. The existing two/three lane sections of Greensboro Road would remain unchanged except for maintenance or safety improvements.

New Facility on New Location

All alternatives are similar for sections I and II of the corridor. Section III includes three alternatives.

Alternative #1 of section II involves the bypass route, beyond Vickery Chapel Road, connecting with the existing High Point Road in the vicinity of Burlington Industry and Guilford Memorial Park, and at approximately 0.5 mile northeast of Millis Road.

Alternative #2 involves the bypass facility aligning with Millis Road, for a merger with existing High Point Road. Alternative #2 shares a common alignment with alternative #1 for the entire southwesterly four mile bypass section up to the vicinity of Vickery Chapel Road.

Alternative #3 veers north beyond the current northeastern Jamestown Corporate limits, and partially aligns with Abbott Lane for a merger with existing High Point Road at the Vickery Chapel Road/High Point Road intersection. All of the alternatives for Section II are urban type four-lane divided facility.

1.2 Surveillance Activity on Current Roadway Status

The first surveillance activity on the Greensboro Road corridor was the examination and review of the level of safe and efficient movement of vehicles on the facility. The review of the traffic operations along the corridor included the **Driver**, **Roadway**, and **Traffic** elements.

1.2.1 Driver Elements: Drivers exhibit many common characteristics. However, certain groups of drivers may display characteristics different from other groups. For example, young drivers may tend to driver faster and take greater risks than

older drivers who are more cautious and drive at slower speeds. Drivers who are regular users of a particular route display different characteristics than unfamiliar drivers. The characteristics of the different groups using the Greensboro Road were evaluated by the level of driver expectancy.

Driver expectancy relates to a driver's readiness to respond to situations, and information displays in predictable and successful ways. It influences the speed and accuracy of the driver's responses. When expectancies are reinforced, driver response is quick and error free; when expectancies are violated, driver response is slow or inappropriate.

Conclusion drawn from field observations of the above criteria show that the driver element of the traffic operations on the existing facility is satisfactory.

1.2.2 Roadway Elements: Roadway elements are static as opposed to dynamic in nature, because they are fixed in place. Therefore, the review was concerned with the presence or absence of the elements its positioning, and its condition.

The narrow lane widths of the existing facility have a significant impact on traffic flow and roadway capacity. The narrow lanes cause vehicles to travel closer to each other laterally. Drivers compensate by slowing down or observing larger longitudinal spacing for a given speed, thus reducing the capacity of the facility. The inadequate lane widths were observed to create frequent bottlenecks, especially during the peak hours.

The shoulder or curb along most of the corridor does not provide adequate storage space for disabled vehicles. The inadequate shoulder widths also house the roadside traffic safety signs. Many drivers tend to "shy away" from the roadside object they perceive as posing a hazard.

There are intersections with high volumes in the northeast area of High Point on the existing facility and Jamestown's central business district that pose obstacles to smooth traffic flow.

There are constraining elements creating poor sight distances in the general vicinities of the Jamestown central business district and the Southern railroad overpass (see photo log #)
The above mentioned inadequacies on the corridor have potentials for interruption of traffic flow.

1.2.3 Traffic Elements: The traffic elements along with driver characteristics represent the dynamic aspect of traffic operations along Greensboro Road corridor. The mix of traffic using the facility includes about 2% single unit trucks and approximately 0.6% tractor trailers. All truck and other vehicular traffic using this facility with High Point and Greensboro as origin-destination points must pass through the central business district of

Jamestown, because there is no available bypass route. Only two out of six intersections along the corridor are signalized.

In this section, the existing traffic operating conditions along the existing facility will be described in terms of levels of service (L.O.S).

Level of Service is a qualitative measure of the effect of a number of factors which include speed and travel time, traffic interruptions, freedom to maneuver, safety, driving comfort and convenience, and operating costs. In practice, selected specific levels are defined in terms of particular limiting values of certain of these factors. Six levels of service designated A through F, from best to worst, cover the entire range of traffic operations that may occur. To better understand the various levels of service, a description of each follows, as found in the Highway Capacity Manual 1965 Edition.

Level of Service A describes a condition of free flow, with low volumes and high speeds. Traffic density is low, with speeds controlled by driver desires, speed limits, and physical roadway conditions. There is little or no restriction in maneuverability due to the presence of other vehicles, and drivers maintain their desired speeds with little or no delay.

Level of Service B is in the zone of stable flow, with operating speeds beginning to be restricted somewhat by traffic conditions. Drivers still have reasonable freedom to select their speed and lane of operation. Reductions in speed are not unreasonable, with a low probability of traffic flow being restricted. The lower limit (lowest speed, highest volume) of this level of service has been associated with service volumes used in the design of rural highways.

Level of Service C is still in the zone of stable flow, but speeds and maneuverability are more closely controlled by higher volumes. Most of the drivers are restricted in their freedom to select their own speed, change lanes, or pass. A relatively satisfactory operating speed is still obtained, with service volumes perhaps suitable for urban design practice.

Level of Service D approaches unstable flow, with tolerable operating speeds being maintained though considerably affected by changes in operating conditions. Fluctuations in volume and temporary restrictions to flow may cause substantial drops in operating speeds. Drivers have little freedom to maneuver, and comfort and convenience are low, but conditions can be tolerated for short periods of time.

Level of Service E cannot be described by speed alone, but represents operations at even lower operating speeds than in level D, with volumes at or near the capacity of the highway. At capacity, speeds are typically, but not always, in the

neighborhood of 30 MPH. Flow is unstable, and there may be stoppages of momentary duration.

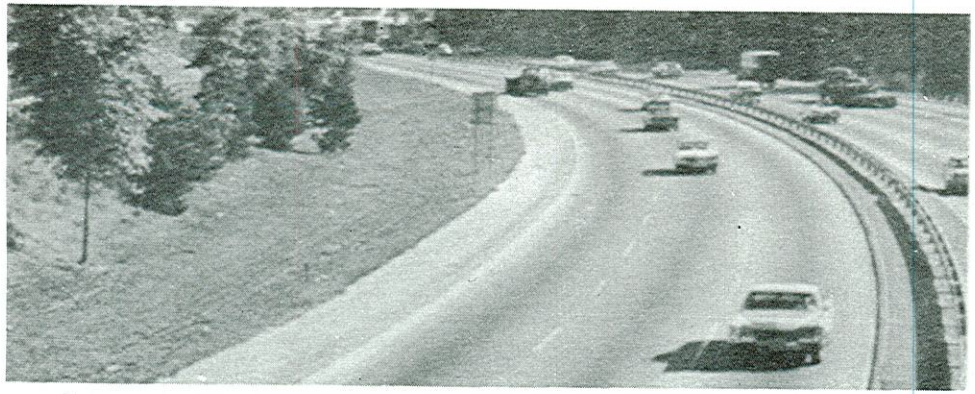
Level of Service F describes forced flow operation at low speeds, where volumes are below capacity. These conditions usually result from queues of vehicles backing up from a restriction downstream. The section under study will be serving as a storage area during parts or all of the peak hour. Speeds are reduced substantially and stoppages may occur for short or long periods; both speed and volume can drop to zero. Photolog depicting the various levels of service is shown in Figure 1.2.1.

The present traffic volumes on the existing facility vary from a low of about 17,000 VPD northeast of Scientific Road in High Point to a high of 25,000 VPD southwest of Greensboro City limit. Table 1.2.1 contains the volume/capacity characteristics.
The design capacity of the existing roadway at 45 MPH is 7,500 VPD at level of service C, and the current average volume is 21,000 VPD. The existing facility has exceeded its capacity by 64%. The estimated year 2010 volume is 35,000 VPD.

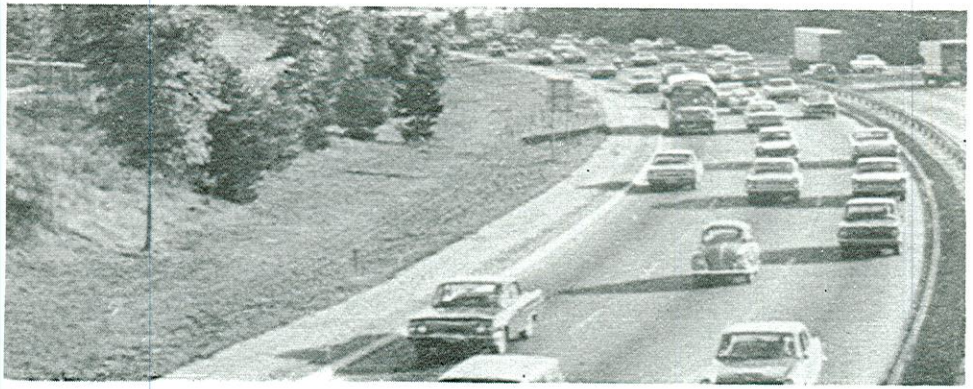
TABLE 1.2.1

CAPACITY-VOLUME CHARACTERISTICS

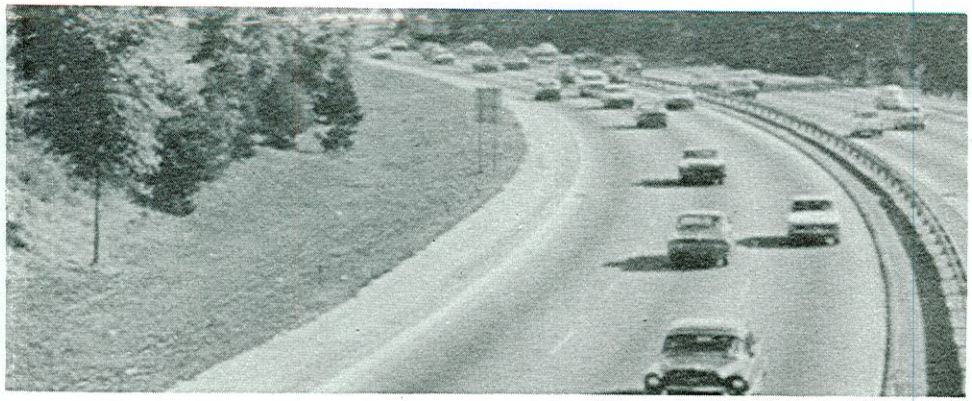
Existing Greensboro Road	
Minimum Desirable Operating Speed(MPH)	45 MPH
Average Daily Traffic (VPD))	21,000 VPD
Capacity at Minimum Desirable Operating Speed (VPD))	7,500 VPD
Volume/Capacity Ratio	2.8
Operating Speed	15 MPH
Design Year 2010	
Average Daily Traffic	35,000 VPD
Capacity at Minimum Desirable Operating Speed (VPD))	7,500 VPD
Volume/Capacity Ratio	4.7
Operating Speed	< 10 MPH
Expected Date of Capacity	Presently over Capacity.



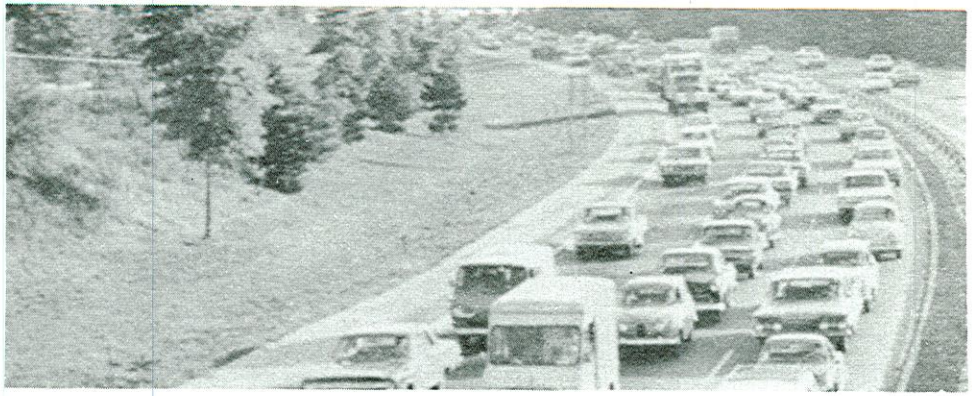
LEVEL OF SERVICE - A



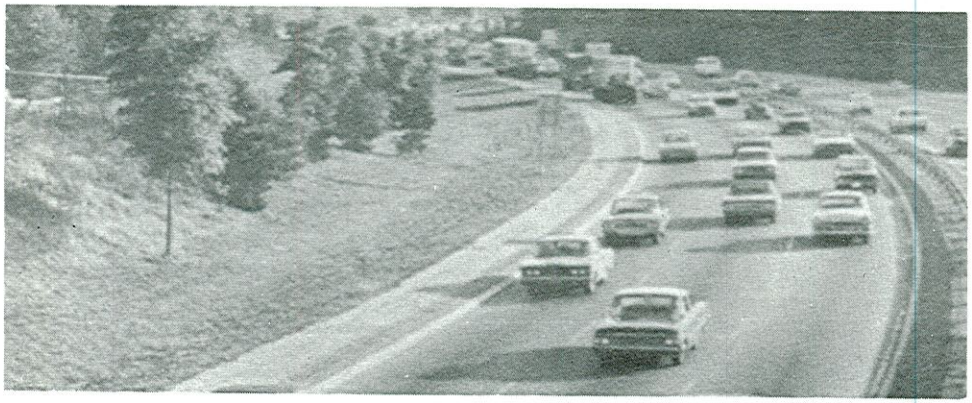
LEVEL OF SERVICE - D



LEVEL OF SERVICE - B



LEVEL OF SERVICE - E



LEVEL OF SERVICE - C

LEVEL OF SERVICE - F

LEVELS OF SERVICE

FIGURE 1-2-1

1.2.4 Accident Investigation

There have been a total of 254 accidents reported along the corridor from 1981 to 1987 for a total property damage estimated at $560,320. The recommended improvement and bypass project will result in a potentially safer highway due to the provision of a median divide and improvement of general roadway elements.
A summary of traffic accidents which were reported during these years is shown on Table 1.2.2.

1.2.5 Existing Roadway Inventory

1. **Length of Roadway Section Studied:**
   Total = 7.8 miles

2. **Pavement Width and Shoulders:**
   24-foot pavement with 10 feet grass shoulders.

3. **Right-of-way Width:**
   Varies from 60 feet to 100 feet.

4. **Control of Access:**
   Partial control of access.

5. **Unrestricted Passing Sight Distance:**
   Greater than 1000 feet along 60% of the alignment.

6. **Alignment:**
   No curves over 8 degrees (AASHTO Standards)
   No grades over 7% (AASHTO Standards)
   The corridor generally has rolling grade.

7. **Capacity:**
   Based upon a minimum desirable operating speed of 45 MPH (level of service C), the existing 2-lane roadway segments have a capacity of 7,500 VPD.

8. **Expected Date of Capacity:**
   The facility has already exceeded its capacity of 7500 VPD at 45 MPH (level of service C) by more than 13,500 VPD.

1.3 Need For The Bypass Project.

Existing Greensboro Road presently passes through the central business district of Jamestown. All truck and through traffic must use this arterial system, because there is no available bypass route.

Greensboro Road is classified as a principal arterial system in the North Carolina Functional Classification System and it is designated as a major thoroughfare in the High Point and Greensboro Thoroughfare Plans. The corridor serves as primary connector between northeast High Point and southwest Greensboro.

TABLE 1.2.2

(HIGH POINT-GREENSBORO ROAD)

	NUMBER ACC	PER-TOT ACCS	% OF VEHICLES ON ROAD-ON NORTH	SOUTH	EAST	WEST
TOTAL ACCIDENTS	254	100	27.1	24.2	23.1	25.7
FATAL ACCIDENTS	2	0.7	33.3	66.7	0.0	0.0
NON-FATAL INJURY ACCIDENTS	107	42.1	25.8	22.5	28.7	23.0
TOTAL INJURY ACCIDENTS	109	42.9	26.0	23.2	28.2	22.7
PROPERTY DAMAGE ONLY ACC.	145	57.0	27.8	24.8	19.6	27.8
NIGHT ACCIDENTS	64	25.1	30.3	27.3	16.2	26.3
WET ACCIDENTS	49	19.2	22.4	25.9	23.5	28.2
ALCOHOL INVOLVED ACCIDENTS	29	11.4	24.4	19.5	31.7	24.4

SUMMARY OF DIRECTION OF VEHICLES ON ROAD-ON

*ANNUAL ADT=11,000 LENGTH=6.2MILES TOTAL-VEH-EXPOSURE=149.3 MILLION-VEH-MILES

TOTAL ACCIDENT RATE	170.06 ACC/100MVM
FATAL ACCIDENT RATE	1.34 ACC/100MVM
NON-FATAL INJURY ACCIDENT RATE	71.64 ACC/100MVM
NIGHT ACCIDENT RATE	42.85 ACC/100MVM
WET ACCIDENT RATE	32.81 ACC/100MVM
EQUIVALENT PROPERTY DAMAGE RATE	2,152.32 ACC/100MVM

SEVERITY-INDEX=12.66 EPDO-ACC-INDEX=3214.70 EST-PROP-DAM=$560320

ACCIDENT TYPE SUMMARY	NO ACC	PERCENT	ACCIDENT TYPE	NO ACC	PERCENT
RAN OFF ROAD-RIGHT	37	14.6	RAN OFF ROAD-LEFT	20	7.9
RAN OFF ROAD-STRAIGHT	2	0.8	NO-COLLISION-OVERTURN	2	0.8
PEDESTRIAN	1	0.4	PARKED VEHICLE	2	0.8
BICYCLE	4	1.6	MOPED	1	0.4
ANIMAL	1	0.4	FIXED OBJECT	1	0.4
OTHER OBJECT	4	1.6	REAR-END SLOW OR STOP	68	26.8
REAR-END TURN	14	5.5	LEFT TURN-SAME ROAD	14	5.5
LEFT TURN-CROSS TRAFF	21	8.3	RIGHT TURN-SAME ROAD	4	1.6
RIGHT TURN-CROSS TRAFF	4	1.6	HEAD ON	4	1.6
SIDESWIPE	4	1.6	ANGLE	40	15.7
BACKING UP	6	2.4			

	NO INJ	PERCENT INJ
FATAL INJURIES	2	1.1
CLASS A INJURIES	33	18.5
CLASS B INJURIES	36	20.2
CLASS C INJURIES	107	60.1
TOTAL NON-FATAL INJ	176	98.9
TOTAL INJURIES	178	100.0

The existing two-lane roadway has pavement width of 24 feet with a total of 10-foot grass shoulders. The roadway has posted speed of 45 MPH and was designed for 7,500 VPD (level of service C). The current traffic volume on the roadway now averages 21,000 VPD, and the year 2010 projections average 35,000 VPD.

Projected land use along the corridor includes 913 acres for residential development, 993.05 acres for industrial and institutional development, and 80 acres for commercial/retail and office developments. The proposed land use projections and classifications are shown in Figure 1.3.1. The levels of the present traffic volumes and additional traffic impacts of the projected development activities along the corridor suggest that the existing Greensboro Road should be upgraded to a six-lane facility. However, improvement of the entire existing facility to accommodate the existing and projected traffic will be severely constrained by economic, environmental, and social factors.

From about 1.35 miles northeast of Deep River to Oakdale Road along the corridor are a series of historic properties; the entire 1.77-mile stretch is designated as the Jamestown National Register Historic District. Most of the historic properties offer at most 10 to 13 feet of additional right-of-way for the existing road.

The Jamestown National Register Historic District also adjoins the central business district of Jamestown. The business district is the only hub of economic activities in Jamestown. The business institutions include banks, restaurants, commercial/retail shops, auto repair shops and the post office. Almost all of the structures housing these businesses encroach on the existing facility, with average available right-of-way of 10 feet. The USGS map showing the boundaries and UTM coordinates of the Jamestown National Register Historic District is presented in Figure 1.3.2. A High Point Area map showing the locations of additional historic structures is shown in Figure 1.3.3.

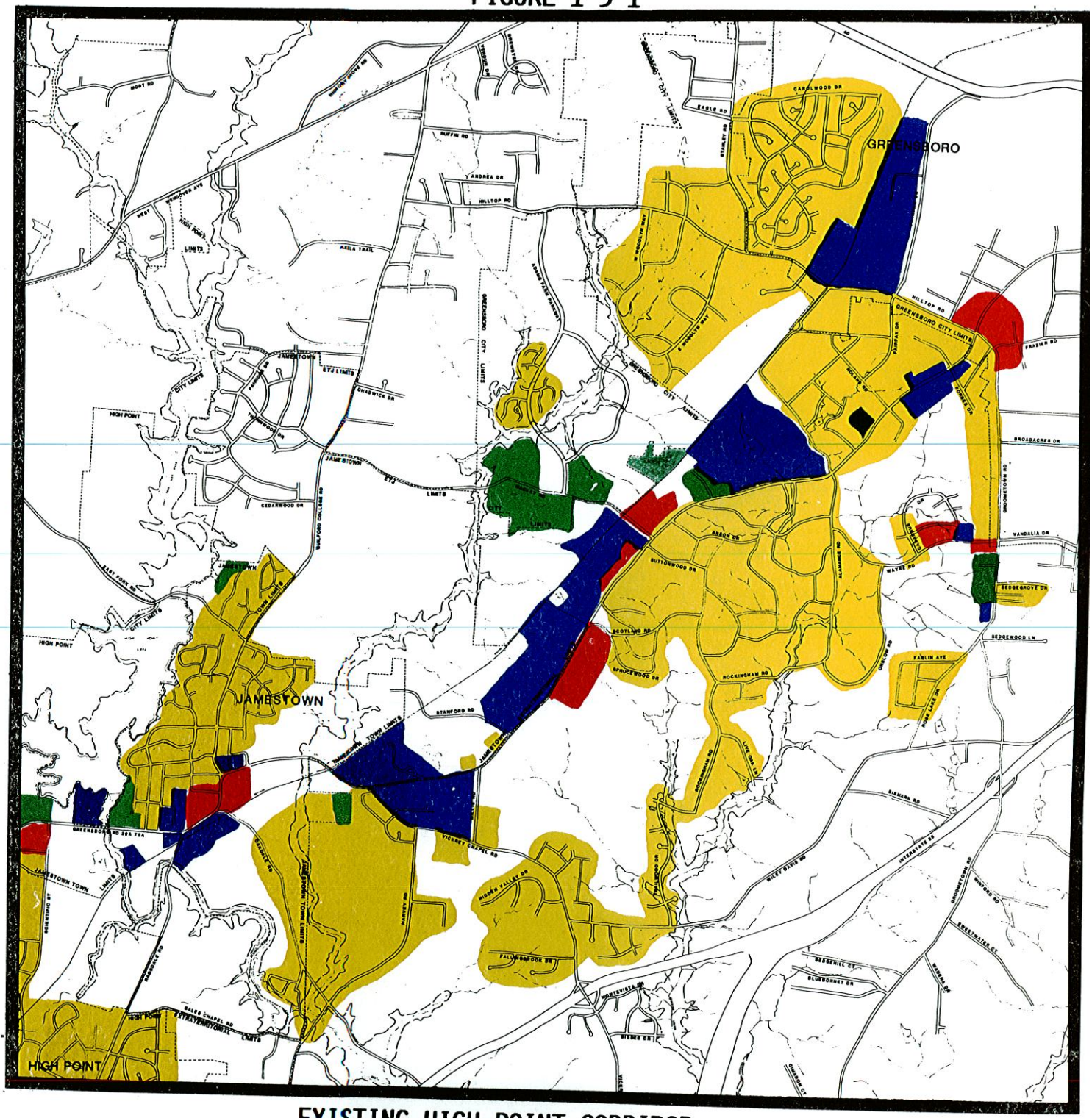
About 0.48 mile northeast of Jamestown central business districtis the Southern Railroad overpass, with a pair of wing walls defining the Greensboro Road facility beneath. The existing roadway has 34-foot right-of-way between the wing walls. Southern Railroad records an average of 40 train movements per day on the overpass.

Given the above constraints, widening the existing roadway would result in prohibitive right-of-way costs, destruction of local and national historic artifacts, massive business and/or residential relocations, and irreversible community social disruption.

A viable course of action therefore, was to provide a bypass of the constraining areas in the vicinity of Jamestown based on the following criteria:

- Efficient placement of the bypass to provide the needed traffic relief for the existing roadway.

FIGURE 1-3-1



EXISTING HIGH POINT CORRIDOR

- RESIDENTIAL/SINGLE FAMILY
- COMMERCIAL/RETAIL
- MULTI-FAMILY/MOBILE HOME PARKS
- INSTITUTIONAL/OFFICE/INDUSTRIAL

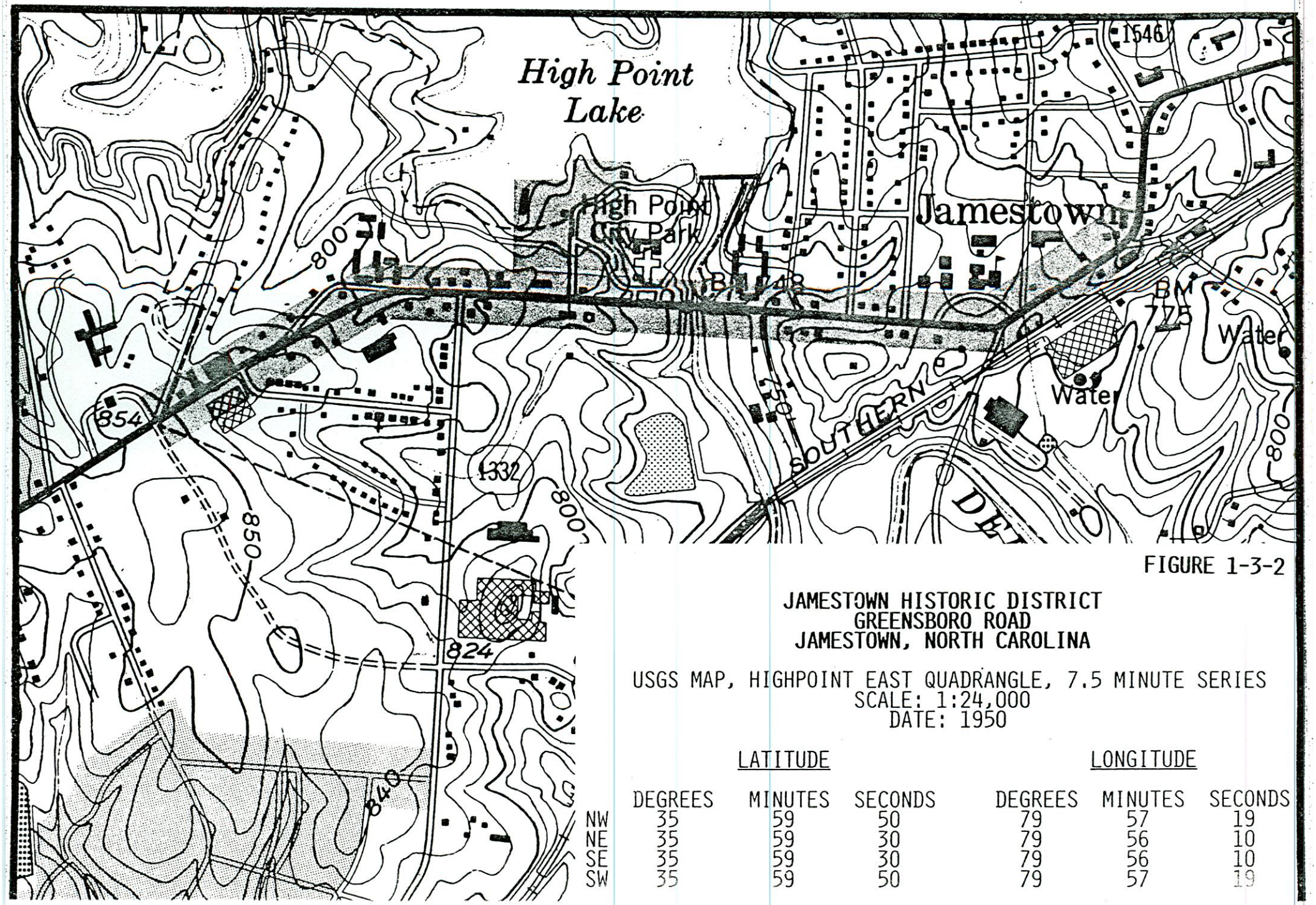


FIGURE 1-3-2

JAMESTOWN HISTORIC DISTRICT
GREENSBORO ROAD
JAMESTOWN, NORTH CAROLINA

USGS MAP, HIGHPOINT EAST QUADRANGLE, 7.5 MINUTE SERIES
SCALE: 1:24,000
DATE: 1950

	LATITUDE			LONGITUDE		
	DEGREES	MINUTES	SECONDS	DEGREES	MINUTES	SECONDS
NW	35	59	50	79	57	19
NE	35	59	30	79	56	10
SE	35	59	30	79	56	10
SW	35	59	50	79	57	19

HISTORIC PROPERTIES IN THE VICINITY OF US 70A/29A FROM HIGH POINT TO GREENSBORO

Key: NR National Register of Historic Places
SL Division of Archives and History's study list for future nomination to the National Register

1. Jamestown National Register Historic District, NR (see USGS map with boundaries and UTM coordinates given for more exact location information).
2. Guilford Technical Institute.
3. Bundy House.
4. Sedgefield Country Club (John Blackwell Cobb Lodge, "The Manor"), SL. (Also in same vicinity, Sedgefield Inn and Sedgefield development.)
5. Orville Williard House (just west of Crestwood Circle).
6. Harper and Welch Houses (at Manor Drive).
7. George T. Penny House (Maryfield Nursing Home), SL (between Manor Drive and Penny Road).
8. Jamestown Dept.
9. Ragsdale House (Magnolia Farm).
10. Mark Iddings House, SL.
11. Pilot Life Insurance Company Home Office Building.

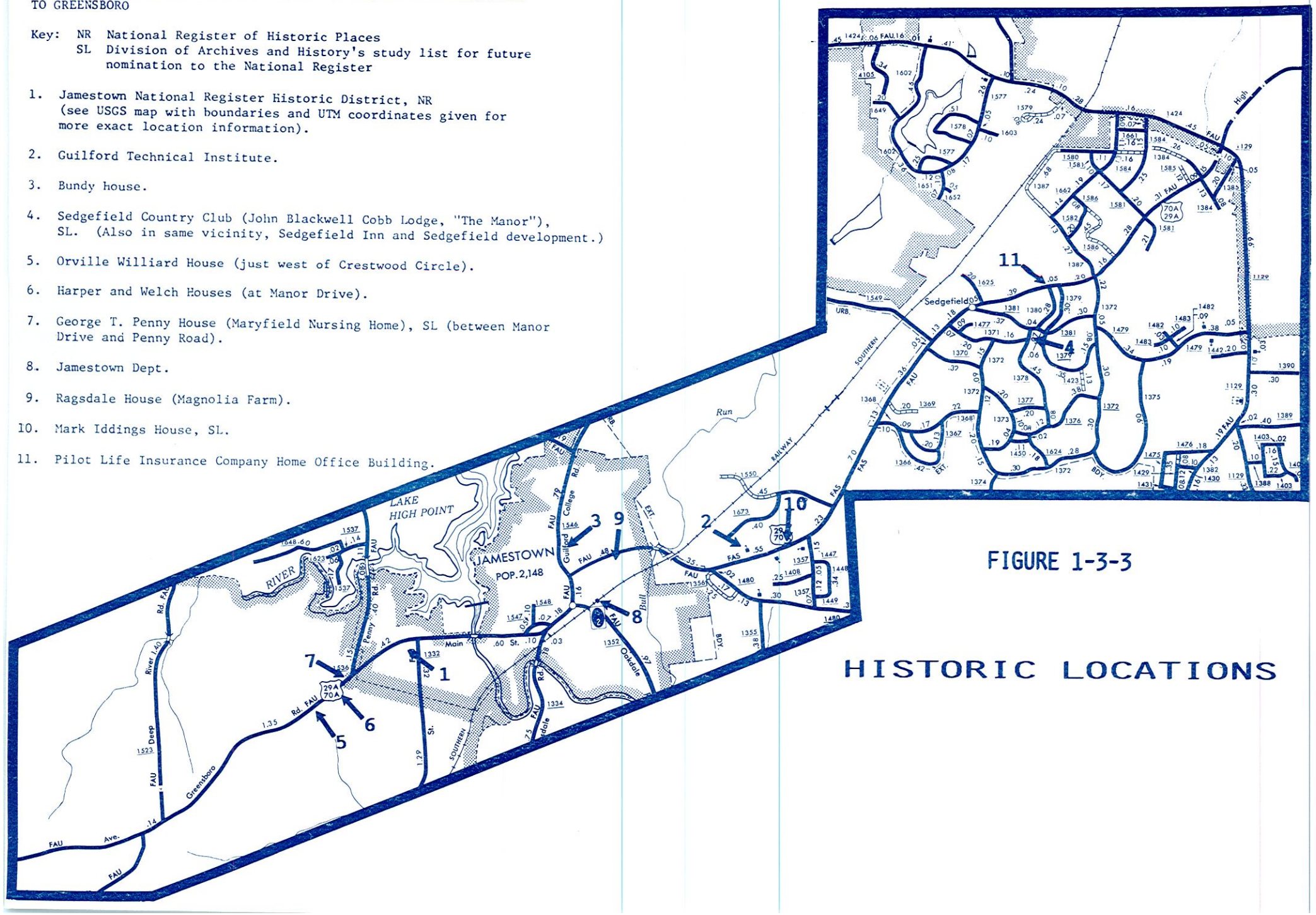


FIGURE 1-3-3

HISTORIC LOCATIONS

- Minimize bypass distance to encourage its use.

- Minimize business and residential displacements.

- Provide the best location for optimum utility for regional transportation network improvements.

- Minimize environmental impact.

1.4 ORIGIN AND DESTINATION SURVEY

The reason for the Origin and Destination Survey was to ascertain how much traffic is likely to be attracted to the bypass to relieve the existing roadway in general, and the Jamestown central business district in particular. The proposed bypass essentially will be a through traffic route; that is, those travelers who ordinarily would not choose to go through Jamestown CBD area would be given an alternate choice. However, the development trends in Jamestown and the adjoining communities indicate that the proposed facility will also serve to improve accessibility to the localities. The amount of the derived traffic volume forecast would then be used to project to the planning year 2010, and to design the bypass facility that would accommodate the projected volumes.

Information on how, when, and where people are currently traveling is of obvious importance in the travel forecasting process. This information can be studied to determine the underlying factors causing people to make certain travel decisions. Models can then be developed and used to forecast how people will travel in the future, or in response to changing conditions.

To be able to analyze the trip-making characteristics along the Greensboro Road corridor, information on where the trips come from and where they go was necessary.

1.4.1 METHODOLOGY

The major assumptions made in the conduct of the survey were:

- The majority of the through traffic on the existing facility originates from the two larger cities, High Point and Greensboro.

- Diversion of the through traffic and some local traffic will provide traffic relief for the Jamestown central business district.

The study required a review of the overall traffic movements originating from High Point and Greensboro and crossing their respective external cordons on the existing facility. To

accomplish this objective, one pneumatic traffic counter was placed in the vicinity of each of the city limits on the High Point/Greensboro Road. Two 24-hour counts were recorded at each location, and averaged. The average of the movements through High Point cordon was 18,000 VPD while the volume for Greensboro was 26,000 VPD.

The next step determined the distributions of the traffic in terms of general direction and destination. Results of the origin/destination surveys were then used to extrapolate the directional flows at each of the count stations.

The origin and destination surveys were conducted for two consecutive days during peak hour periods, in the vicinity of the pneumatic traffic count stations. A total of 4,000 survey questionnaires were handed out to motorists, and more than 50% (2,384) responded. The questionnaire is shown in Figure 1.4.1. Table 1.4.1 summarizes the analysis of the survey responses.

Figure 1.4.1

HIGH POINT (MORNING PEAK HOURS)
Good Morning! Please take a few minutes to answer these two questions to help North Carolina Department of Transportation determine a better route for you to travel.

Please check the appropriate block; if OTHER, please explain.

1) What is your origin of travel this morning?

ARCHDALE HIGH POINT JAMESTOWN
OTHER (explain) _____

2) What is your destination of travel this morning?

JAMESTOWN ADAMS FARM GTCC
GREENSBORO
OTHER (explain) _____

This card is post paid, please drop in the nearest mail box at your convenience. THANK YOU.

NCDOT

TABLE 1.4.1

ORIGIN-DEST.	TOTAL SURVEY COUNT	PERCENT OF TOTAL	EXTRAPOLATED TRAFFIC VOLUMES. **	DEDUCED BYPASS VOLUMES
HP - G'BORO	448	19	3420	3420
HP - JAMESTOWN	524	22	3960	-
G'BORO - HP	280	12	3120	3120
G'BORO-J'TOWN	1132	47	12,220	-
TOTAL	2,384	100%	22,720	6,540

** The recorded ADT count at the High Point station was 18,000 with a calculated 59/41 directional split; that is, 59% external-internal movements (10,620 ADT) and 41% internal-external movements (7,380 ADT). The recorded ADT at Greensboro station was 26,000, with a calculated 41/59 directional split; that is, 41% external-internal traffic movements (10,660 ADT) and 59% internal-external traffic movements (15,340 ADT).

It is concluded from the survey results that the proposed bypass will offer immediate traffic relief to the existing facility, especially at Jamestown central business district. The travel volume of the bypass section is projected to exceed 20,000 VPD by the year 2010, assuming a conservative 3% linear growth rate along the corridor. However, there are other secondary characteristics such as enhanced driveability, improved access control, smoother alignment, and reduced travel time, usually associated with new facilities, that would further increase diversion from the existing facility.

CHAPTER II

DESCRIPTION OF ALTERNATIVES

2.1 Introduction:

The proposed action involves the construction of a multi-lane roadway on parts of the existing High Point Road/Greensboro Road in combination with a new bypass segment of Jamestown central business district.

A 1.3 mile long six-lane widening improvement beginning approximately 0.5 mile northeast of the NC 29A and US 70A confluence in High Point is proposed on the existing Greensboro Road. The improvement diverges from the existing facility in the vicinity of Manor Drive in High Point, and transverses North Scientific Road on grade. It aligns with existing Pump Station Road, then crosses the Southern Railroad tracks on an overpass. It proceeds across Dillon Road, Deep River, Oakdale Road and Harvey Road respectively, then interchanges with Vickery Chapel Road. Finally, it merges with the existing High Point Road southwest of Greensboro. This bypass segment will be 3.9 miles long, and it is proposed to be a four-lane divided facility with grass median. The third section is proposed to be a six-lane improvement on the existing High Point Road from the point of the bypass merger to Hilltop Road in Greensboro. This section will be 2.9 miles long.

2.2 Selection of Preliminary Locations:

The study area is divided into three basic sections: Section I (on US 29A/70A, about 0.5 mile from the US 29A and US 70A confluence); Section II (the bypass section), and Section III (northeastern end of 29A/70A, southwest of Greensboro).

Section I is basically urban in nature, passing through residential and commercial areas. Section II is predominantly rural, consisting of farmland, undeveloped wooded areas, and a few industrial concerns. The Deep River, and other bodies of water are located within the study area. The selection of all reasonable alternatives was controlled by the following guidelines:

1. Relocation of residences and businesses should be minimized or avoided where feasible and practical.

2. Sensitive institutions such as schools, churches, cemeteries hospitals etc, should be avoided where practical.

3. Streams and water crossings should be minimized.

4. Historic and archaeological sites which are listed on, or eligible for nomination to the National Register must be avoided when feasible.

5. When wetlands and floodplains are unavoidable, they should be crossed along the shortest practical route or the route with the least impact.

2.3 PRELIMINARY LOCATIONS DROPPED FROM CONSIDERATION

None

2.4 OTHER ALTERNATIVES DROPPED FROM CONSIDERATION

2.4.1 Improvement of Existing Facility

Existing Greensboro Road (US 27A/70A) is heavily developed throughout most of the study area, with commercial and retail businesses, offices, and residences. Widening of some segments of the existing facility are parts of the alternatives. However, areas north of Scientific Road to the Vickery Chapel Road intersection on the existing facility are burdened with socio-economic and environmental constraints, violations of which would cause severe and irreversible damage. Some of these constraints are shown in Figures 1.3.2 and 1.3.3., and in the photolog section.

Improving the entire existing facility was not selected as an alternative for detailed evaluation, for the following reasons:

* It will not provide the desired traffic service.
* High right-of-way costs will be incurred.
* Disruption of existing development in the Jamestown central business district is expected.

2.5 ALTERNATIVES STUDIED BUT NOT SELECTED

Three new solutions along with the do-nothing alternative were selected for evaluation and comparison. All of the new alternatives were divided into three sections. Sections I and III were common to all three alternatives. These sections will be described in detail under Paragraph 2.6, Proposed Action and Basis for Selection.

Section II begins immediately north of Manor Drive, off US 27A/70A (Greensboro Road) in High Point. The alternatives evaluated in this section (Figure 2.5.1) shared a common alignment and grade throughout portions of this section. Local planning officials have brainstormed over possible locations for section II (the bypass) for several years, but no right-of-way has been dedicated.

PROPOSED

WIDENING & REALIGNMENT

of GREENSBORO–HIGH POINT RD.

PROPOSED US 311 (HIGH POINT)
TO
HILLTOP–GROOMETOWN RD. (GREENSBORO)

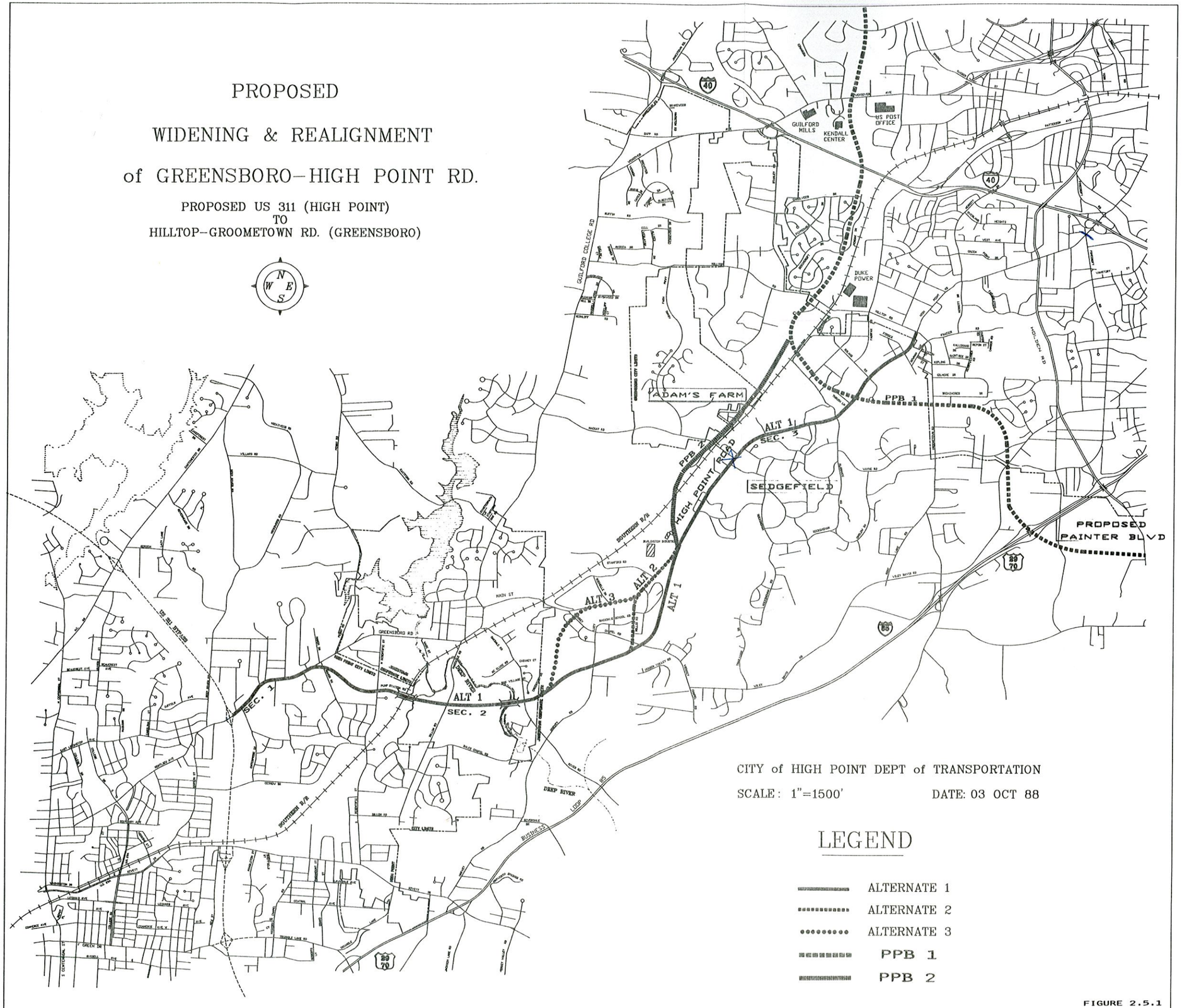


FIGURE 2.5.1

Section II is mostly rural, with sparse residential development. Some farms are still in operation in this area, but much of the land is not in use. Some new subdivisions are developing off Oakdale Village in Jamestown, near which a portion of Section II is proposed. Development in this area is envisioned to be rapid, and it will not remain open very long.

The general terrain in Section II is hilly with well defined ridges and drainage courses. All of the alternatives cross Deep River between Dillon Road and Oakdale Road.

Discussions of non-selected alternatives pertain to Section II only.

2.5.1 Alternative Two (Not Selected)

Alternative Two is 3.4 miles long and follows the general alignment of Section II. There is an interchange at Vickery Chapel Road and the roadway assumes the alignment of Millis Road to the existing High Point Road. Alternative Two will require one interchange at the High Point Road/Alternative Two merger, to serve the existing facility and the proposed bypass route.

Alternative Two violates the following criteria for selection as set forth in section 1.3:

* Relocation of residences: eleven single family residences will be affected.

* Sensitive Institutions: the existing facility currently runs adjacent the northern wing of Ragsdale Elementary School. Alternative Two is proposed to run adjacent the northeastern wing of the institution. The anticipated volumes of traffic on the two facilities in close proximity to the institution are envisioned to create some claustrophobic effects.

* This alternative does not provide enough right-of-way for the proposed interchange between the existing facility and the bypass without encroaching on the school property.

Estimates of the cost of right-of-way, and the affected property are shown on Table 2.5.1

TABLE 2.5.1

TAX MAP	NAME	TYPE	VALUE
174-0001-001	RAGSDALE, MARY	VACANT	TV = $245,870
	TOTAL NEEDED (ESTIMATE)		TV = $50,000
171-0002-001	GLOVER, HAROLD	VACANT	LV = $3,870 TV = $3,870
7039-951-31	MOORE, LINSDAY	SFR	IV = $14,400 LV = $4, 600 TV = $19,040
7039-951-32	BREEDLOVE, J.	SFR	IV = $18,290 LV = $4,600 TV = $22,890
7039-951-34	HODGIN, LUIS	VACANT	LV = $4,600 TV = $4,600
7039-951-35	DUNN, DAVID	SFR	IV = $22,150 LV = $4,050 TV = $26,200
7039-951-36	MODLIN, RUBY	SFR	IV = $12,790 LV = $4,050 TV = $16,840
7039-937-19	MATTHEWS,KEN	VACANT	LV = $6,350 TV = $6,350
7039-937-22	BRYANT, M	SFR	IV = $72,840 LV = $3,800 TV = $76,640
7039-937-04	AUMAN, CORA	FARM	IV = $22,890 LV = $72,363
	(PARTIAL TAKE)		TV = $95,253
7039-0-937-2	MORGAN, ROY	RUR	IV = $350 LV = $50,170
	(PARTIAL TAKE)		TV = $50,520
6805-E-886-1	CECIL, ROBERT	SFR	IV = $55,860
	(NEEDED VALUE)		LV = $12,000
	(ESTIMATED)		TV = $67,860
6805-E-886-2	REDMON, DONALD	SFR	IV = $45,950 LV = $12,000 TV = $57,950

TABLE 2.5.1 CONT'D

TAX MAP	NAME	TYPE	VALUE
6805-E-886-3	POPE, JOSEPH	SFR	IV = $64,390 LV = $8,000 TV = $72,390
6805-E-886-4	BOOZER, FRANCES	SFR	IV = $53,050 LV = $8,000 TV = $61,050
6805-E-886-5	WILLIAMS, DON	SFR	IV = $57,930 LV = $8,000 TV = $65,930
6805-E-886-6	WARNER, JO	VACANT	LV = $8,000 TV = $8,000
6805-E-886-6	WARNER, ETHEL	SFR	IV = $60,890 LV = $16,000 TV = $76,890
	TOTAL COST		= $782,273

*LV = Land Value
TV = Total Value
IV = Improvement Value
SFR = Single Family Residence

2.5.2 Alternative Three (Not Selected)

Alternative three is 2.8 miles long and follows the general alignment of Section II just beyond the Oakdale Road crossing. It veers northeast of alternatives 1 and 2, and partially aligns with Abott Lane for a merger with Vickery Chapel Road and US 29A/70A (Greensboro Road). An interchange will be required at this point to service the existing facility, Vickery Chapel Road, and the Alternative 3 bypass.

Alternative 3 violates the following criteria for selection:

* Relocation of residences: five single family residences will be affected.

* Sensitive institutions: a portion of Ragsdale High School property will be affected. Alternative 3 requires that the improvement of the existing facility (Section III) leading to the Bypass/Vickery Chapel Road/Greensboro Road interchange will be six lanes, with a minimum 100-foot right-of-way. Additional right-of-way may be required for effective transition to the interchange. This proposal will encroach on Ragsdale High School to the east of existing roadway.

* Historical sites: Guilford Technical Community College, to the west of the existing roadway and directly across from Ragsdale High School, is listed in the National Register Properties. Some structures on the campus ground currently offer less than 30 feet of clearance for the existing roadway.

Estimates of costs of right-of-way and the listing of property affected are shown on Table 2.5.2. A Guilford County Tax Map showing GTCC and the appraised values of the properties that will be affected, are included in Figure 2.5.2.

TABLE 2.5.2

TAX MAP	NAME	TYPE	VALUE
174-0001-001	RAGSDALE, MARY	VACANT	TV = $245,870
	TOTAL NEEDED (ESTIMATE)		TV = $50,000
171-0002-001	GLOVER, HAROLD	VACANT	LV = $3,870 TV = $3,870
7039-951-31	MOORE, LINDSAY	SFR	IV = $14.400 LV = $4,600 TV = $19,040
7039-951-32	BREEDLOVE, J.	SFR	IV = $18,290 LV = $4,600 TV = $22,890
7039-951-34	HODGIN, LUIS	VACANT	LV = $4,600 TV = $4,600
7039-951-35	DUNN, DAVID	SFR	IV = $22,150 LV = $4,050 TV = $26,200
7039-951-36	MODLIN, RUBY	SFR	IV = $12,790 LV = $4,050 TV = $16,840
7039-951-37	WIER, WM	SFR	IV = $18,920 LV = $4,050 TV = $22,970
7039-937-04	AUMAN, CORA	FARM	IV = $2,890 LV = $72,363 TV = $95,253
7039-937-13	TAYLOR, GEORGE	RUR	TV = $80,980

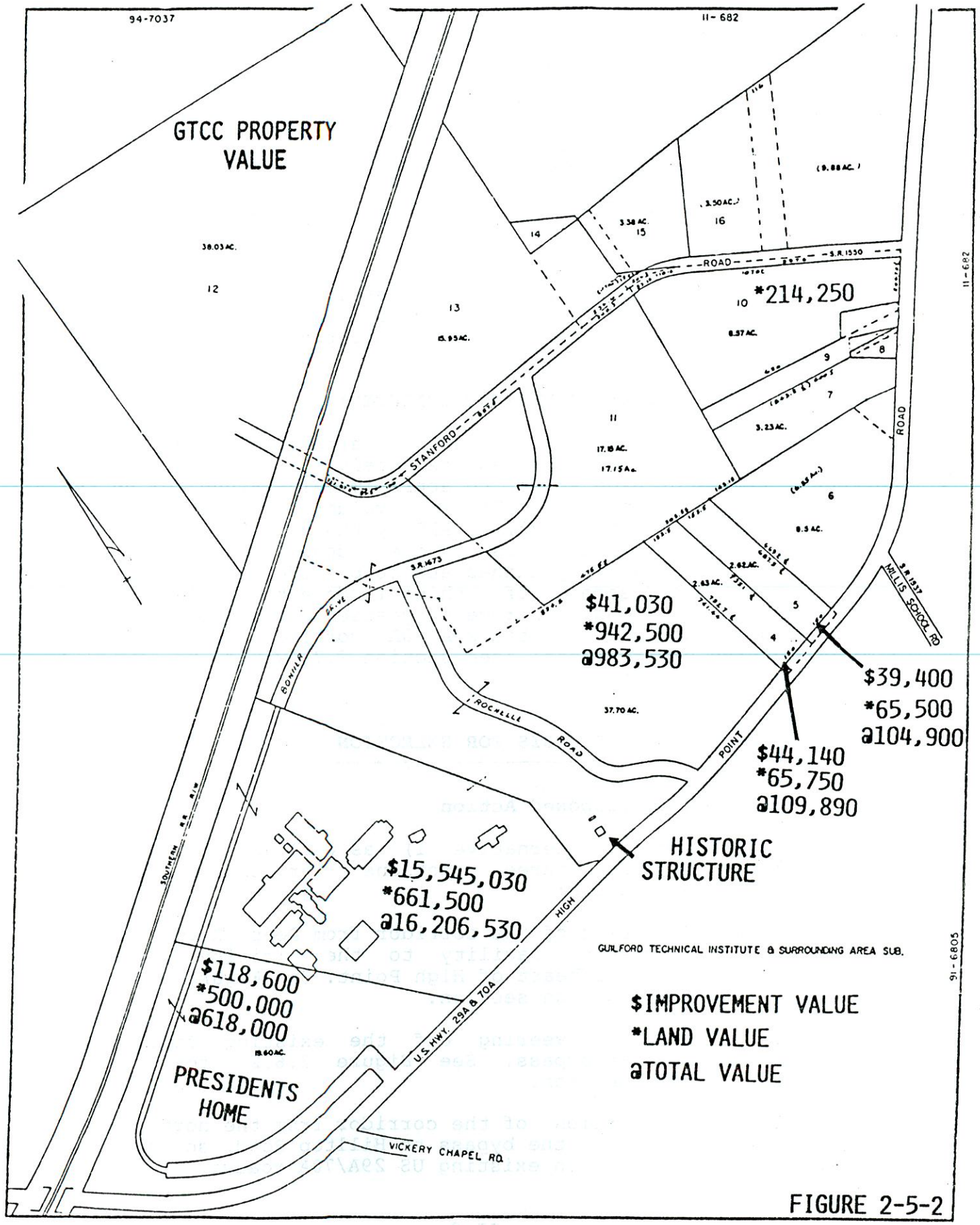

94-7037
11-682
GTCC PROPERTY VALUE
38.03 AC.
12
13
15.95 AC.
14
3.38 AC.
15
3.50 AC.
16
(9.88 AC.)
ROAD
S.R. 1550
10
*214,250
8.57 AC.
9
8
7
3.23 AC.
11
17.18 AC.
17.15 Ac.
STANFORD
ROAD
6
8.5 AC.
2.62 AC.
2.63 AC.
5
4
S.R. 1673
$41,030
*942,500
@983,530
37.70 AC.
BONNER
ROCHELLE
ROAD
POINT
S.R. 1537
MILLIS SCHOOL RD
$39,400
*65,500
@104,900
$44,140
*65,750
@109,890
HISTORIC STRUCTURE
SOUTHERN R.R. R/W
$15,545,030
*661,500
@16,206,530
HIGH
GUILFORD TECHNICAL INSTITUTE & SURROUNDING AREA SUB.
$118,600
*500.000
@618,000
19.60 AC.
U.S. HWY. 29A & 70A
PRESIDENTS HOME
VICKERY CHAPEL RD.
$IMPROVEMENT VALUE
*LAND VALUE
@TOTAL VALUE
11-682
91-6805

FIGURE 2-5-2

TABLE 2.5.2 CONT,D

TAX MAP	NAME	TYPE	VALUE
7039-937-009	GUIL. CO. SCH.	VACANT	TV = $37,500
7039-937-011	GUIL. CO. SCH.	SCHOOL	TV = $3,976,700
	NEEDED VALUE (ESTIMATE)		TV = $100,640 *
	TOTAL COST		= $480,783 **

* The needed value may be more than estimated.
** This total cost does not include the cost of acquisition of any GTCC or Jamestown/Ragsdale School property.

2.5.3 DO NOTHING ALTERNATIVE (NOT SELECTED)

Existing Greensboro Road is a two-lane arterial, with current traffic volumes varying from approximately 18,000 ADT on the northeast limits of High Point, to approximately 26,000 ADT on the southwest end of Greensboro. Traffic volumes are expected to increase along the route to 35,000 ADT by the year 2010.
The "Do-nothing" alternative is judged undesirable since the existing roadway is already inadequate to provide a satisfactory level of service and safety. If nothing is done to provide for the increased traffic demand, extreme congestion and driver delay can be expected along most of the 29A/70A corridor. However, the limited adverse environmental (see section 2.7) would be avoided if no project is built.

2.6 PROPOSED ACTION AND BASIS FOR SELECTION

2.6.1 Description of Proposed Action

The selected corridor (Alternative 1) as well as alternatives 2 and 3, is divided into three sections for the purpose of discussion and description:

Section 1 - the portion of the corridor from Deep River Road on the existing facility to the vicinity of Manor Drive, northeast of High Point. See Figure 2.6.1 for typical design section.

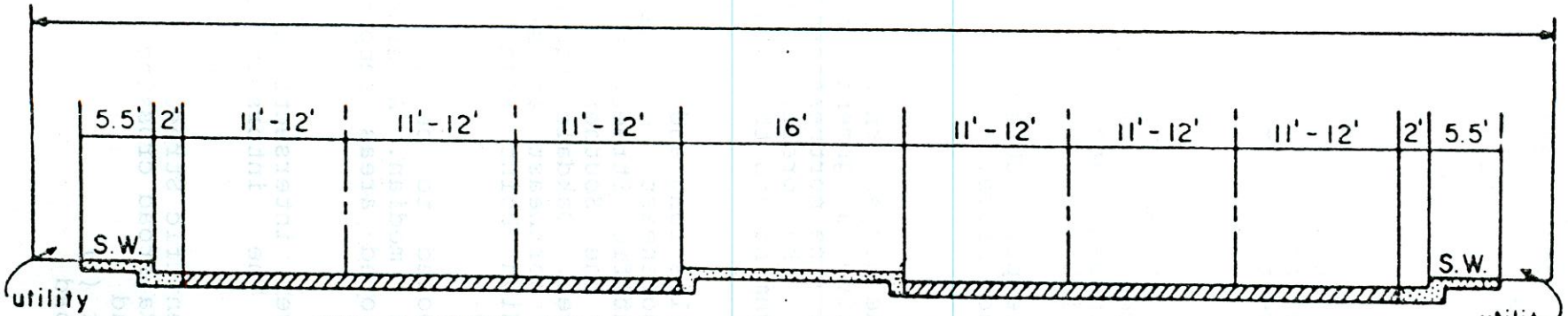
Section II - the portion veering off the existing facility as Jamestown bypass. See Figure 2.6.2 for typical design section.

Section III - the portion of the corridor from the northeastern terminal of the bypass to Hilltop Road, southwest of Greensboro on existing US 29A/70A roadway.

TYPICAL THOROUGHFARE CROSS SECTIONS

E.

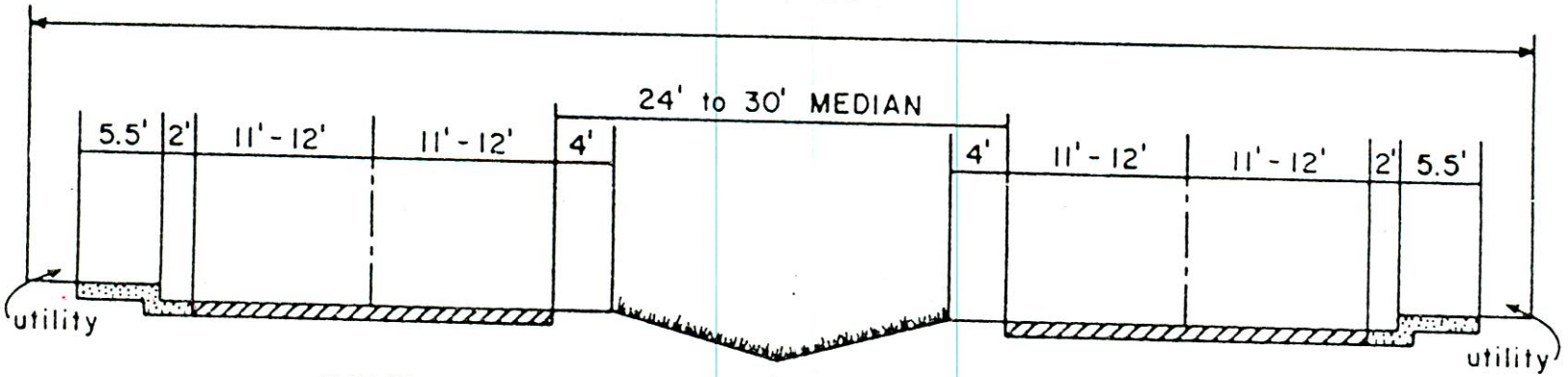
FIGURE 2-6-1



SIX LANES DIVIDED WITH RAISED MEDIAN - URBAN

G.

FIGURE 2-6-2



FOUR LANES DIVIDED - URBAN BOULEVARD
GRASS MEDIAN

All alternatives evaluated in both Sections I and III are basically six-lane roadways. The facility will have limited control of access. See Table 2.6.2 for cost and other design considerations.

Section I:

Section I will be a six-lane facility on the existing roadway beginning at Deep River Road and ending approximately 0.5 mile northeast of Manor Drive. The North Carolina Department of Transportation currently owns approximately 60% of the right-of-way needed to construct this section.

Section I is located in an urban environment. The development in the area is a mixture of health care facilities, retail businesses and residences. It is 1.13 miles long and has two intersections:

* Enterprise Street
* Manor Drive.

Section II:

In the portion of the project known as the Jamestown Bypass, three alternative alignments were developed and analyzed. Alternative 1 (the northeastern-most alignment) has been selected as the preferred alternative. A description of the alignment and the reasons for its selection follows:

Alternative 1 is 3.8 miles long and begins where Section I terminates just northeast of Manor Drive. It transverses North Scientific Street; aligns with Pump Station Road; crosses the Southern Railroad tracks, Dillon Road, Deep River, Oakdale Road and Harvey Road. The alignment proceeds northeast across Vickery Chapel Road to merge with High Point Road (Section III), southwest of Greensboro.

Alternative 1 is proposed to be a four-lane divided facility with a grass median. Alternative 1 passes through sparsely developed areas supporting scattered small-scale farming.

Alternative 1 has seven intersections, including three grade separations(*). The intersections and grade separations are:

* North Scientific Street
* Southern Railroad crossing (*)
* Dillon Road
* Deep River (*)
* Oakdale Road

* Harvey Road
* Vickery Chapel Road (*)

Alternative 1 has been endorsed by the local planning officials of High Point, Jamestown, and Greensboro. Guilford County did not endorse a particular alternative in Section II, but neither did they express opposition to any alternative.

The cities of High Point and Jamestown preferred alternative 1 because it provides needed access to undeveloped areas for future growth and offers the least conflicts with the pre-study criteria for selection, as outlined in section 1.3.

Alternative 1 provides the best opportunity for future interchange access in the developing areas southwest of Greensboro. It also provides the most right-of-way for an interchange with the proposed Painter Boulevard. Alternative 1 involves the least residential relocatees.

Alternative 1 does not impact any historical sites. It shares similar impacts to the natural environment as the other alternatives studied.

Estimates for the cost of right-of-way and a listing of affected property are shown on Table 2.6.1. A summary cost comparison for the three alternatives is shown on Table 2.6.2.

Section III:

Section III is similar to Section I in design and will follow existing US 29A/70A, beginning at the northeastern bypass terminus. The North Carolina Department of Transportation currently owns approximately 60% of the right-of-way needed to construct this section.

Section III is located in an urban environment. The development in the area is a mixture of industrial, commercial, and residential uses. Section III terminates at Hilltop Road, southwest of Greensboro, and has a total length of 2.9 miles.

TABLE 2.6.1

TAX MAP	NAME	TYPE	VALUE
174-0001-001	RAGSDALE, MARY	VACANT	TV = $245,870
	TOTAL NEEDED (ESTIMATE)		TV = $50,000
171-0002-001	GLOVER, HAROLD	VACANT	LV = $3,870 LV = $3,870
7038- 951-31	MOORE, LINDSAY	SFR	IV = $14,400 LV = $4,600 TV = $19,040
7038-951-32	BREEDLOVE, J.	SFR	IV = $18,290 LV = $4,600 TV = $22,890
7038-951-34	HODGIN, LUIS	VACANT	LV = $4,600 TV = $4,600
7038-951-35	DUNN, DAVID	SFR	IV = $22,150 LV = $4,050 TV = $26,200
7038-951-36	MODLIN, RUBY	SFR	IV = $12,790 LV = $4,050 TV = $16,840
7038-937-19	MATTHEWS, KEN	VACANT	LV = $6,350 TV = $6,350
7038-937-22	BRYANT, M.	SFR	IV = $72,840 LV = $3,800 TV = $76,640
7039-937-04	AUMAN, CORA	FARM	IV = $22,890 LV = $72,363
	(PARTIAL TAKE)		TV = $95,253
6805-886-11	TAYLOR, BRUCE	FARM	IV = $7,380 LV = $66,870 TV = $74,250
6805-886-02	MCLEAN, G	FARM	IV = $11,550 LV = $39,100 TV = $50,650

TABLE 2.6.1 CONT'D

6805-886-01	WACHOVIA BANK ESTATE KOURY	FARM	IV = $15,930 LV = $12,015 TV = $27,945
	TOTAL		$474,528

2.6.2 Need for the Project.

The proposed Jamestown Bypass has been an important part of the regional Transportation Plan for many years. Without the proposed project, operating speeds will continue to decrease, delays will increase, and accidents will likely increase. It is highly desirable to remove trucks and through traffic from existing US 29A/70A in order to provide acceptable operating conditions. Without the proposed bypass, US 29A/70A will deteriorate into inadequate facility. The general alignment of the Jamestown Bypass alternatives evaluated in this study vary somewhat from the route on the High Point 1980 Thoroughfare Plan.

TABLE 2-6-2

COMPARISON OF ALTERNATIVES:
CONSTRUCTION/DESIGN CONSIDERATIONS

SEC	LGTH	ROW	INTRCHG	ROADWAY CONSTRUCT	STRUCT	ROW COST	TOTAL
I	1.13	110	3000000 1*	2994500		149725	6144225
II ALT1	3.8	100	3000000 1*	7600000	477000 2*	474528	11551528
III	2.9	110	3000000 1*	7685000		384250	11069250
TOTAL	7.83		9000000	18279500	477000	1008503	

GRAND TOTAL = $ 28,765,003

SEC	LGTH	ROW	INTRCHG	ROADWAY CONSTRUCT	STRUCT	ROW COST	TOTAL
I	1.13	110	3000000 1*	2994500		149725	6144225
II ALT2	3.4	100	3000000 1*	6800000	477000 2*	782273	11059273
III	3.3	110	3000000 1*	8745000		437250	12182250
TOTAL	7.83		9000000	18539500	477000	1369248	

GRAND TOTAL = $ 29,385,748

SEC	LGTH	ROW	INTRCHG	ROADWAY CONSTRUCT	STRUCT	ROW COST	TOTAL
I	1.13	110	3000000 1*	2994500		149725	6144225
II ALT3	2.8	100		5600000	477000 2*	480783	6557783
III	3.8	110	5075000 1*	10070000		1007000	16152000
TOTAL	7.73		8075000	18664500	477000	1637508	

GRAND TOTAL = $ 28,854,008

*1 Number of diamond interchanges
*2 Number of bridge/overpass structures

CHAPTER III

3.1 PROBABLE IMPACT OF THE PROJECT ON THE ENVIRONMENT

3.1 Physiography and Water Resources.

There are no known academic geological sites which will be affected by the proposed project. No known mineral resources will be involved. There is only one major surface stream located along the proposed project, the Deep River, which connects to High Point water supply basin.

The proposed action will have potential adverse impacts on the public water supply.

The project corridor crosses the Deep River, which feeds into High Point's two main water supply sources- the High Point City lake and Oak Hollow Lake. Impacts will occur if silt and pollutants associated with heavy equipment and building materials are allowed to enter the streams and the lake reservoirs during construction.

Any siltation resulting from erosion should be strictly controlled by the Standard Special Provisions. This may include seeding, mulching, the installation of brush barriers where applicable, the construction of silt detention basins where necessary, and the implementation of any silt-control methods as may be prudent and warranted for this project. Other special precautionary measures, such as construction monitoring, may be necessary to prevent any contamination of Deep River.

Long-term adverse impacts may occur if traffic-generated pollutants and hazardous materials are allowed to enter the water supply via facility runoff. The close proximity of the proposed project to the urban water supply sources reduces the opportunity both for natural filtering and for cleanup of spills by emergency personnel before pollutants reach the water supply. Mitigative measures such as routing storm water runoff through containment basins; providing positive barrier rails on structures and fills over water supplies; and using dense grass cover from the pavement edge to the water source, should be utilized to reduce the risks of long-term impacts.

3.2 Plant and Animal Life.

There are no identifiable adverse effects of the project upon animal life. No endangered plant and animal species have been identified at this time.

A distinct bottomland hardwood system is evident at the High Point Pump Station location. Dominant vegetation includes red and silver maple, box elder, jewelweed, and poison ivy. Soils along the tributary are hydric in nature and evidence of periodic flooding

is noticeable. Embankment definition is more pronounced at the Deep River crossing, but similar wetland community patterns are observable in various locations bordering the stream. Highway construction requiring dredge and fill within defined wetland systems may require individual Section 404 permits from the US Army Corps of Engineers. A determination of wetland involvement should be conducted during the EIS phase.

The impact on plant life will be somewhat severe, since much of this project is directed through undeveloped land. However, landscaping techniques will used to preserve plant life.

3.3 Social Impact.

No significant change in the existing character of the area will be caused by the project. The current land use patterns are expected to continue in the future.

3.4 Noise Impact.

There will be an increase in noise level along the proposed corridor due to the proposed action. Several residential communities are expected to receive noise level increases from the current level. However, such increase from the existing level will be too insignificant to warrant abatement measures such as the construction of noise barriers.

3.5 Aesthetics:

The proposed action will remove approximately 44 acres of woodland. Areas of mature forestland will experience a decline in aesthetic values as a result of being bisected by the roadway facility.

However, potential visual impacts can be mitigated by the use of reforestation and landscaping. The requirements of Section 4(f) for parks and recreation areas are not applicable in this instance.

BASIS FOR FINDING

The information and recommendations for this report are based on the following:

1. Field investigation
2. Input from the NCDOT, Planning and Research Branch
3. Accident report from the NCDOT, Traffic Engineering Branch
4. Input from the North Carolina Department of Cultural Resources.
5. Input from the High Point Transportation Department's Engineer and Planning Staff.
6. Input from the Greensboro Transportation Department's Engineer and Planning Staff.

7. Contacts with the NCDOT, District Engineer's Office (Division 7, Greensboro).
8. Input from the Guilford County Planning Department.

OTHER COMMENTS

The Guilford County government, along with the respective local governments of High Point, Jamestown and Greensboro, through their representations on the Multi-jurisdictional Planning Committee, consider the recommended project to be one of the most urgent priority needs in this region. They have expressed the critical need for transportation system planning and implementation to be at least a "step ahead" of the development activities already occurring in this subarea.

If the project is to be implemented at a future date, all feasible alternatives and their associated impacts, including possible archeological sites evaluation and overall project costs will need to be evaluated in a planning/environmental document prior to that time, and a final decision made as to the most appropriate improvement. The number of relocatees and property values indicated in this feasibility study report are approximations, subject to Environmental Impact Studies and NCDOT Appraisors review. An approved Environmental Assessment/Environmental Impact Statement may be required if Federal funds are anticipated; after which the Standard Federal Procedures for design and construction may be followed.

To help reduce the right-of-way cost, it is imperative that the local planning groups protect and preserve the proposed right-of-way in their land use considerations. This advance planning is also important in order to minimize future disruption and displacement of people and businesses.

PHOTOLOG

HISTORIC STRUCTURES ON EXISTING ROADWAY

JAMESTOWN CENTRAL BUSINESS DISTRICT

ROADWAY ELEMENTS US 29/70