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FHWA-NH-EIS-76-02-F
Federal Highway Administration
Region One

ADMINISTRATIVE ACTION

FINAL ENVIRONMENTAL IMPACT/4(F) STATEMENT

U. S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

AND

NEW HAMPSHIRE DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS

FOR

INTERSTATE 93
LINCOLN-FRANCONIA
GRAFTON COUNTY, NEW HAMPSHIRE

I-93-3(89))101
P-2371

August 18, 1978
Date

Reuel W. Webb

Reuel W. Webb, Deputy Commissioner and Chief Engineer, New Hampshire Department of Public Works and Highways

APR 10 1979
Date

W.A. Nostrand, Jr., Director
Office of Environment and Design, Federal Highway Administration

Submitted pursuant to 42 U.S.C. 4332(2)(C), 23 U.S.C. 128(a), 49 U.S.C. 1653(f) and 16 U.S.C. 470(f)

NEW TEXT

(1) Franconia Notch Corridor

The design flexibility provided for in the Cotton Amendment permitted th examination of a wide range of roadway concepts within the Franconi Notch Corridor. The options presented in the DEIS include closing U Route 3 to through traffic (a Park management option that could b implemented only with the construction of I-93 in a bypass corridor), tw and four lane parkways and a traditional four lane interstate highway. Major characteristics of the three roadway alternatives are summarize below in Table S-1:

Table S-1
Major Characteristics of Franconia Notch Roadway Alternatives

Item	Two Lane Parkway	Four Lane Parkway	Four Lane Interstate
Project Length	11.4 mi (18.3 km)	11.4 mi (18.3 km)	11.4 mi (18.3 km
Project Cost*	$23,000,000	$40,200,000	$42,200,000
Annual Maintenance Cost	$50,000	$75,000	$75,000
Design Speed	50 mph (80 km/h)	50 mph (80 km/h)	60 mph (97 km/h
Interchanges			
New	1	4	5
Modified Existing	1	2	2
Intersections (at grade)			
New	0	0	0
Modified Existing	8	0	0
Percent of US Route 3 used	80%	70%	45%

*These costs do not include all of the mitigation and enhancement costs.

The Parkway alternatives were characterized by more landscaping than the Interstate alternative and included grassed shoulders, curbs (with closed drainage systems) and less landform alteration (excavation and filling). All options would have bypassed the commercial strip along US Route 3 south of Franconia Notch State Park with a four lane divided roadway. Environmental impacts associated with these alternatives are summarized in Chapter IX of the FEIS.

(2) Bog Pond Corridor

Considered in this corridor was a divided four lane interstate highway

located using road standards related to 60 mph (97 kmph) appropriate for mountainous terrain. Traversing over Kinsman Ridge and passing through the Easton Valley, the highway had a length of 20.3 miles (32.7 km). Total project cost was $146.9 million with annual maintenance costs of $160,000. Two new interchanges and one modified existing interchange were included.

(3) Kinsman Notch Corridor

The DEIS presented discussion of a divided four lane interstate highway in this corridor, which was located using road standards related to 60 mph (97 kmph) appropriate for mountainous terrain. Generally following the location of New Hampshire Routes 112 and 116 through Woodstock, Easton and Franconia, the road's total length was 21.7 miles (34.9 km). The total cost was $107.4 million and annual maintenance costs were estimated to be $160,000. The project included six new interchanges and one modified existing interchange.

b. Non-Interstate Alternatives

Under these alternatives, the White Mountain section of I-93 would not be completed.

(1) No Build

Under this option, all the roads in the region (including US Route 3) would continue to be maintained and upgraded on a regular basis in accordance with ongoing programs and priorities of the New Hampshire Department of Public Works and Highways. Major modifications to US Route 3 would, however, not be made.

(2) Franconia Notch Corridor

Upgrading US Route 3 as a normal 70-30 (Federal-State) funded road improvement project was addressed in the DEIS. The project involved adding paved shoulders to US Route 3 from Lincoln to Franconia and left hand turns at key intersections and extending additional northbound lanes south of the I-93/Route 3 interchange in Lincoln and an additional southbound lane from I-93 in Franconia to Lafayette Brook. Estimated project costs were $2.7 million and annual maintenance costs would have been increased $3,000. It was estimated that road capacity would have been increased 10 to 15 percent.

(3) Kinsman Notch Corridor

Considered in conjunction with the Franconia Notch Two Lane Parkway was the improvement of New Hampshire Routes 112 and 116 through Woodstock and Easton. The upgrading was not considered part of the I-93 project, but rather was identified as a measure that could be taken to relieve pres-

sure on the road through Franconia Notch during peak traffic periods. Road improvements were identified using standards related to 50 mph (80 kmph) along 7.2 miles (11.6 km) of these State highways. Project costs were estimated to be $5.1 million, which would have been funded on a 70-30 (Federal-State) basis. This project could have been undertaken under the No Build alternative and improvements to the two roads may still be carried out in the future if the need arises.

E. SUMMARY OF BENEFICIAL AND UNAVOIDABLE ADVERSE EFFECTS OF THE PROPOSED ACTION

The following table summarizes the probable beneficial and unavoidable adverse effects of the proposed Franconia Notch Parkway. The table includes certain major traffic characteristics in addition to significant effects of the proposed action. Probable unavoidable adverse effects (effects remaining after mitigation measures are implemented) are used for comparison because it is this set of impacts that will ultimately occur with the proposed action. Presented in the table are effects that can be only partially mitigated as well as those that cannot be mitigated at all.

As described in Chapter IV, the identified effects are generally classified as slight, moderate or severe adverse or slight, moderate or large beneficial. These classifications are assigned from a corridor perspective. Slight effects are not considered significant for evaluating the proposed action and are generally not included in the impact description of the proposed Parkway in Chapters V through VIII. Therefore, only moderate and severe (or large) effects generally appear in the table. Where necessary, slight effects have been identified as such. Effects not listed are those that are not considered significant in any time period (construction related - short term, intermediate or long term).

The traffic characteristics, benefits and adverse effects that appear in the table generally apply to the long-term (except where noted) as it is this set of effects that in most cases provides the best means for evaluating the proposed action.

The information is presented in the table by discipline in the same order as it appears in Chapter V, as follows:

Traffic and Transportation
Natural Features
  Geology, Soils, Topography
  Hydrology
  Biology
Man-Made Features
Man Caused Features
  Air Quality
  Water Quality
  Noise Levels

Within each discipline, information is presented for major components.

For purposes of summarization some information has been rounded or otherwise simplified. These modifications in no way, however, affect the usefulness of the data for evaluating the proposed Parkway. The table contains a short description of the traffic characteristic, resource element or effect being presented to facilitate understanding and use of the information provided. Existing conditions are presented when appropriate. In some cases, descriptions are used to present the effect, such as "moderate," "severe," etc. These are used alone or in conjunction with statistical information describing the effects.

The assessment of effects on recreational experience and visual quality must, because of the nature of these effects, be subjective. Perceptions of each individual vary and value systems of each person will determine his or her response to the changes associated with the proposed action. Consequently, it is considered inappropriate to summarize these effects in abbreviated tabular form. Rather, the reader is referred to Chapter V, Section D.6 and 7 of the FEIS. The analysis of effects on recreational experience was prepared by experienced professionals from the perspective of their disciplines. Although written by professionals with extensive knowledge of the area, the impact assessments nevertheless largely represent only these individuals' perceptions. Therefore, their summarization into simple one or two word phrases would be misleading and unproductive. The proposed Parkway will significantly affect recreational experience and visual quality in the Franconia Notch corridor. The nature of the expected changes is described in Chapter V; each individual must formulate his or her own assessment of their significance and overall effect on the Corridor.

continually informed about the project. Because of the length of the DEIS and the associated Technical Appendices, the considerable amount of public input that was received over the course of the study and the length of the hearing transcript and magnitude of DEIS comments, the Department recognized that staff members kept up-to-date over the course of the 2 1/2 year study/public review/hearing period would be better able to make a reasoned recommendation than if they were presented all the information at one time. Therefore, a number of New Hampshire Department of Public Works and Highways staff members including representatives of various divisions, frequently met with the consultant, either individually or in formal group work sessions. In addition, Department staff, including several members of the Interdisciplinary Evaluation Team, were involved in reviewing the working papers and preliminary working drafts of the DEIS documents. The DEIS documents themselves, as well as the public hearing transcript, were also made available to the Interdisciplinary Evaluation Team members and other Department personnel. The Federal Highway Administration's staff members, at primarily the Divisional, but also the Regional level, were also actively involved in the preparation and review of the background studies and DEIS documents as well as public input, since the beginning of the project. The result is that, while the decision making process normally is quite simple and takes place during a short period of time, for this project the entire process extended over a considerable time period.

Not only were the public comments that were received during the DEIS review period important in the decision making process, but so were the responses of the New Hampshire Department of Public Works and Highways and the Federal Highway Administration to these comments. During the Interdisciplinary Evaluation Team meeting which focused on the White Mountain section of I-93 the substantive DEIS comments and the tentative New Hampshire Department of Public Works and Highways and the Federal Highway Administration's responses were reviewed. The assessment of these comments and responses permitted the identification of both valid and invalid criticisms of the DEIS documents. The implications of the valid criticisms were discussed, especially as they related to the need for the project or a comparison of the alternatives. Opinions expressed in the DEIS or public hearing comments, representing the full range of philosophies and value systems pertinent to the proposed action/alternatives, were also discussed. Finally, the results of a tally of alternative preferences expressed in the more than 1500 comments received were presented.

3. FINAL CORRIDOR DECISION MAKING SETTING/SITUATION

The selection of a corridor for the completion of the White Mountain section of I-93 was considerably more complex than most location decisions. On one level the corridor decision was straightforward: the elimination of the Bog Pond and Kinsman Notch Corridors was justified by overwhelming evidence provided in the DEIS documents and widespread public sentiment.

NEW TEXT

Noise Levels

- Use of the bypass corridors would result in positive noise effects in the Franconia Notch Corridor but generally negative impacts in the corridor where the new road would be constructed, whereas use of the Franconia Notch Corridor would result in both beneficial and adverse noise effects in the corridor; selection of the No Build option would result in uniformly adverse noise impacts in the Franconia Notch Corridor;

Air Quality

- Air quality in the corridors would generally improve over existing conditions, primarily because of more stringent automotive emission controls, although the regional nitrogen oxides (NO_x) burden would be greater for the Kinsman Notch Corridor than the other two corridors, the decrease in regional hydrocarbon (HC) emissions burden would be less for the bypass corridors than it would be for the Franconia Notch Corridor; reductions in carbon monoxide (CO) concentrations with the bypass corridors would be within the range of the Franconia Notch alternatives.

c. Other Considerations

There are a number of other factors which do not fall so clearly into the categories outlined above. Use of either the Bog Pond or Kinsman Notch Corridor would permit the closing of US Route 3 through Franconia Notch State Park to all but Park vehicles, which would offer possibilities for unique Park development and management schemes for the State Park. This alternative would ensure the preservation of the integrity of the Park's resources and the provision of a high quality recreational experience. While the costs of converting the Park to such a scheme would have to be borne without assistance from the Highway Trust Fund, the capital costs involved would not be exorbitant. Obviously, the trade-off with the advantages to closing US Route 3 through the State Park would be the costs and environmental impacts associated with completing I-93 in one of the bypass corridors. On the other hand, use of the Franconia Notch Corridor would offer the possibility of Park improvements being paid for at least in part by the highway project, under the category of functional replacement and mitigation and enhancement measures (including measures to minimize harm, as provided by Section 4(f) requirements).

The Bog Pond and Kinsman Notch Corridors have certain features that were major contributors to their rejection. In the case of the Bog Pond Corridor, it is its location in the middle of highly valued White Mountain National Forest (WMNF) lands. In the case of the Kinsman Notch Corridor, it is the likely irreversible and irretrievable changes that would be caused in the Easton Valley.

NEW TEXT

The entire WMNF holdings bounded by US Route 3 and I-93 on the east a north and NH Routes 112 and 116 on the south and west have recently bee classified "roadless" areas as part of the U.S. Forest Service's Roadles Area Review and Evaluation - II (see Chapter III). The area is beir considered for inclusion in the National Wilderness Preservation Syste Both bypass corridors pass through this area, but the Bog Pond Corrido represents a much more serious threat.

The Bog Pond Corridor passes through the middle of large sections o Management Area III and Management Area IV lands in the WMNF. The Guide for Managing the National Forests in New England explains that Fores lands have been divided into management areas "according to their suita bility to meet various mixes of resource use"(p. 31). The WMNF Forest Plan is considered an official land use plan for the WMNF and reflects not only agency objectives in terms of meeting resource demands but als reflects the optimal allocation of land areas on the basis of existin conditions and resource capabilities.

While general objectives apply to all management areas, each area has a different orientation. According to the 1974 WMNF Forest Plan, i Management Area I (M.A. I) the emphasis is on flexibility of land uses i conjunction with productivity of timber resources. Commercial timbe harvest is the dominant activity. M.A. II contains the most develope recreation facilities. In line with the high density recreational objective, there is more significant site modification and developmen here than in any other management area.

The goal of M.A. III is "a near natural visitor experience" (p. 54). Conspicuous alterations, such as utility corridors, are prohibited, bu minor campground improvements are permitted. In M.A. IV the principa objective is "a natural recreational experience with a high degree o solitude" (p. 54). Modifications are kept to a minimum, and are only carried out to protect sites or to manage for rare and endangere species. This is the only management area with a designated Recreation Experience Level Number 1, which is defined, in part, as providing a "high degree of opportunity for isolation" (Area Guide, p. 41).

At no point does the Forest Plan provide for new highway construction within the WMNF. In that context, any such intrusion would be inconsis tent with the stated objectives. For purposes of this discussion, however, highway construction was considered less in conflict with the Forest Plan when located in M.A. I and M.A. II than in the rest of the Forest because these areas are planned for a relatively high level of human development and activity. In M.A. III and M.A. IV and the spe cially protected Classified Areas and Experimental Forests, it was determined that the presence of any new roadway was most inconsistent with the goals of the Forest Plan and should generally be considered a severe conflict.

the vast majority of people who expressed their opinions on the various alternatives indicated a preference for Franconia Notch, if something were to be done at all. Very little support was expressed for either of the bypass corridors.

This sentiment was echoed during the 90-day DEIS review period which included a public hearing. During this period over 1500 people were heard from. Of the total only twenty people said they preferred the Bog Pond or Kinsman Notch Corridors. It is believed that eighteen of these people supported the bypass corridors because of a misconception that the bypass corridors would not cross the Appalachian Trail. This figure indicates the almost complete absence of public support for either the Bog Pond or Kinsman Notch Corridor. Furthermore, only 108 people stated they favored the No Build option which similarly reflects relatively little public support for this course of action. A more detailed breakdown of support for the various alternatives is presented in the introduction to the comments and responses in Appendix F of this FEIS.

It should be noted that the corridor selection decision did not involve the use of weights in any sort of numerical evaluation scheme. As information presented in the preceding pages clearly demonstrates, the evidence was overwhelmingly against the two bypass corridors: predicted transportation benefits with the two corridors would be less than with the Franconia Notch Corridor, probable socioeconomic and environmental impacts would be substantially greater in the two bypass corridors, the construction and annual maintenance costs of I-93 in either Bog Pond or Kinsman Notch would be considerably greater than in Franconia Notch, conflicts with other governmental actions and with existing and proposed land use would be significantly greater in the two bypass corridors and irreversible resource commitments would be more significant in the two corridors than in Franconia Notch. These findings were considered more important than the benefits to be derived from the opportunity of closing US Route 3 through Franconia Notch State Park, which is the most outstanding benefit of the bypass corridors. This judgment is supported by actions of the State Division of Parks and Recreation. Although indicating that closing the State Park to traffic would ideally be the best course of action, the agency stated that, in all planning conducted over the past four years as part of the EIS study effort and its own planning program, the staff assumed that Franconia Notch would continue to serve as a transportation corridor.

In conclusion, on the basis of the technical information concerning the transportation benefits and socioeconomic and environmental effects of completing I-93 in the Bog Pond, Kinsman Notch or Franconia Notch Corridors, and the public input received during the past four years, the New Hampshire Department of Public Works and Highways rejected the Bog Pond and Kinsman Notch Corridors. The Franconia Notch Corridor is recommended, therefore, to be advanced to the design phase of project development. During design, the roadway will be presented to the public at a formal design public hearing to obtain final public input prior to advancing the project to construction.

With projected traffic increases, construction of the Two Lane Parkway could represent a commitment to increasing congestion over the long term during the peak recreation season. If large amounts of traffic diverted to other roads to avoid the heavy congestion on the Parkway, the resulting changes--socioeconomic and land use, land value, etc.--in the areas through which these roads passed (such as the Easton Valley) could be substantial. In such areas, the changes that could occur may be irreversible and the associated resource commitments may be irretrievable.

d. Bog Pond Interstate (Four Lane)

The project would begin in the Town of Lincoln approximately 0.6 miles (0.9 km) north of the existing interchange between I-93 and Route 112 and would extend north through Kinsman Mountain approximately 20 miles (36 km) ending approximately two miles (3.2 km) south of the existing interchange between I-93 and Route 116 in Franconia (Figure IX-4).

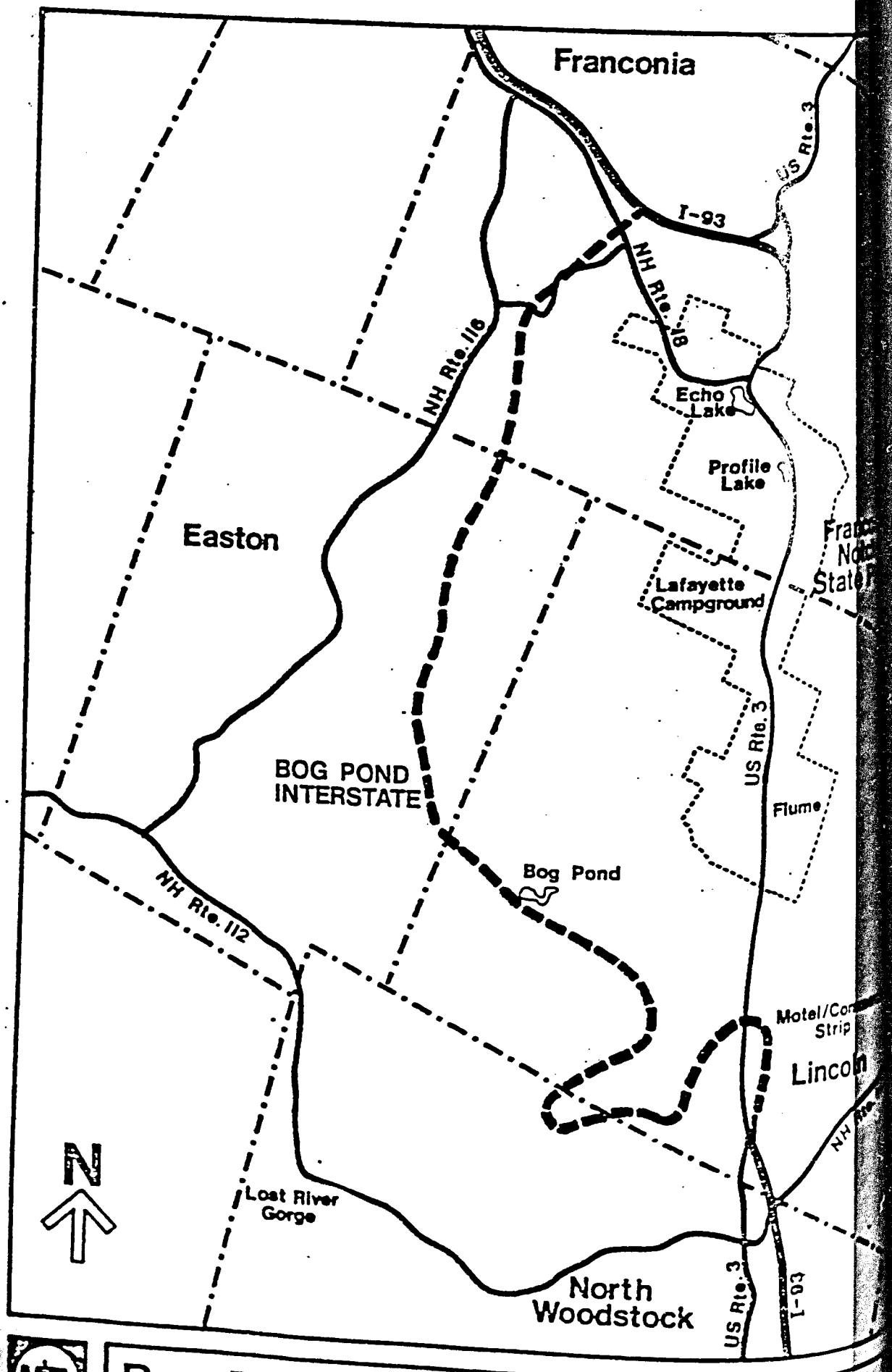
This alternative consists of a four lane divided highway with full access control. The alignment would extend northward from existing I-93 on the east side of existing US Route 3 and Pemigewasset River. Approximately 0.5 miles (0.7 km) from the new interchange, the alignment would make a 180 degree bend from north to south and have a 1000 foot (305 meter) long viaduct over the Pemigewasset River, US Route 3 and Hanson Brook.

A serpentine alignment would be necessary to achieve the 1500 foot (460 meter) gain in elevation between the US Route 3 crossing and Kinsman Ridge located just north of Bog Pond. From this point the alignment would traverse the mountain and follow its westerly side in Easton until reaching Wells Road approximately 0.4 miles (0.6 km) east of the Wells Road - Route 116 intersection.

From Wells Road the alignment would veer eastward from Route 116, cross Route 18 near the intersection of Route 141 and terminate at existing I-93.

The present interchange of I-93 with US Route 3 in Lincoln would be unaltered. A new diamond type interchange would be provided just east of the existing one. The connector between the interchanges would provide access to Franconia Notch State Park and Lincoln. A similar type of interchange would be built at Wells Road in Easton to serve the community and recreation facilities located in the vicinity of Routes 116, 18 and 141. The alternative would terminate with a full service directional interchange at existing I-93 in Franconia.

The long segments of downgrades would require the incorporation of two vehicle escape ramps to assist the motorist who might experience brake failure or inability to downshift. They are designed to have steep upgrades and a gravel surface to slow vehicles upon entering the ramps.



Bog Pond Interstate

The terrain of this alignment dictates that 12 pairs of bridges (northbound to southbound) be used in addition to three long single viaduct type structures to traverse steep valleys. The three viaducts would be 2000 feet (610 meters) 14400 feet (440 meters) and 1000 feet (305 meters) long. The bridges would span maximum heights bove the ground of 280 feet (85 meters), 180 feet (55 meters) and 80 feet (24 meters) respectively. On each of these three long bridges both roadways of the highway would be on one single structure to reduce costs.

Each roadway of the highway would consist of two traffic lanes and paved shoulders on both sides. For the most part, the two roadways of the highway will have independent vertical and horizontal alignments creating variable median widths. This will provide a variety of views to motorists, minimize headlight glare and maximize the ability of the highway to fit the terrain and unusual local conditions.

A construction road between Route 116 in Easton and Route 112 in North Woodstock along the right-of-way of the existing power line would be built to save construction time. During the seven year construction period the existing traffic on US Route 3, Route 112 and Route 116 would be maintained continuously with a negligible amount of interference by construction traffic.

The total project cost would be $146.7 million. Under this alternative, US Route 3 would remain open through Franconia Notch State Park.

(4) The Relationship Between Local Short Term Use of Man's Environment and the Maintenance and Enhancement of Long Term Productivity: Bog Pond Interstate

(a) Summary

Construction of the Bog Pond Interstate would involve a trade-off between short and long term traffic and transportation, economic and environmental gains and losses, as summarized in Table IX-21. The alternative also involves a trade-off of gains and losses between the Franconia Notch and Bog Pond Corridors. The allocation of water and land areas to the Interstate would reduce the long term productivity of these resources, while increasing the efficiency of the transportation system. Construction of the roadway would, to a limited degree, foreclose some future options.

(b) Traffic and Transportation

The alternative would connect two completed portions of the National System of Interstate and Defense highways with a roadway of comparable quality, and after construction would reduce accident rates but increase vehicle operating costs for the traffic now using US Route 3. The Interstate would be a superior roadway to Route 112 and 116 and would divert approximately 17 percent of the Route 112 traffic and 33 percent

TABLE IX-21

SUMMARY OF SHORT AND LONG TERM TRADE-OFFS
BOG POND INTERSTATE
ROUTE 3 OPEN THROUGH FRANCONIA NOTCH

Gain/Loss	Short-Term
Gains:	
Traffic and Transportation	
Decrease in accident rate	-
Decrease in injury rate	-
Decrease in fatality rate	-
Decrease in traffic on other roads	
U. S. Route 3	-
Route 112	-
Route 116	-
Improvement in travel comfort and convenience-Interstate	-
Economic	
Construction Related:	
Cost	$139,300,000
Jobs Generated	900
Annual stimulus in local/ regional real estate trade and service	$4,900,000
Annual equipment and materials expenditures funneled through region	$4,800,000
Long Term:	
Benefit to corridor economic development	-
Environmental	
Improvement in air quality	-
Improvement in noise levels at selected locations	-
Losses:	
Traffic and Transportation	
Days with heavy congestion- U.S. Route 3	-
Days with moderate congestion- U.S. Route 3	-
Vehicle operating cost increase (trucks) via Interstate	$0.64-0.84
Travel distance via Interstate	22.5 mi.

TABLE IX-21 cont.

Gain/Loss	Short-Term	Long-Term
Losses Cont.:		
Environmental		
Loss of forest lands	-	669 acres (271 ha)
Wildlife habitat loss (minimum)**	-	705 acres (286 ha)
Swamp encroachment	-	7 acres (3 ha)
Loss of streambed productivity	-	2300 ft.(700m)
Reduction of attractiveness of Raptor Eyries	-	Severe
Change in species productivity and abundance	-	Severe
Effect on Species of Special Concern	-	Severe
Increased noise levels in the Bog Pond Corridor	-	Severe
Water quality degradation	Moderate	Severe
Adverse Effect on Town Character		
Pristine Qualities of Easton Valley and environs	Severe	Severe
Effect on Management Area IV (WMNF)	Severe	Severe

*Figures in parentheses indicate changes from 1975.

**Includes the entire area shown in Forest Lands and Swamp Encroachment.

of the Route 116 traffic. Roughly one third of the US Route 3 tr
would divert to the Interstate; however, through the year 2000 fo
analysis days, traffic volumes would be greater on Route 3 than o
Interstate. Since the diversion rate is less than the anticip
traffic growth over the next 20 years, congestion on Route 3 would b
heavier and more frequent. Nevertheless traffic congestion during
days (such as fall foliage) would be prevented from deteriorating b
1975 levels.

Due to seasonal travel fluctuations, the greatest benefits to
numbers of travelers would be realized during the summer, the reg
peak recreation period. While on an average day of the year tr
flows freely through Franconia Notch, during the peak recreation s
congestion frequently occurs, sometimes deteriorating into stop a
conditions. Construction of the Bog Pond Interstate would provide
free year round traffic flow in that corridor. The reduction of co
tion and travel times of US Route 3 during peak traffic periods
benefit all traffic, but primarily out of state tourists, as ro
80-85 percent of the summer US Route 3 traffic is from outside
Hampshire. The overall effect of the alternative would be to inc
travel comfort and convenience for traffic now using Route 3.

Construction of the Bog Pond Interstate could remove commercial t
from US Route 3 through Franconia Notch as this traffic could be req
to use the Interstate. Such an approach, although forcing trucks to
a longer and more costly route, would provide a safer route for
traffic and would eliminate conflicts between heavy trucks and autom
traffic and help reduce noise levels on US Route 3. Nevertheless,
approach would reduce travelling convenience for heavy trucks.

(c) Economic

During the seven years of construction, over $139.3 million wou
expended benefiting construction companies throughout New Eng
Approximately 900 jobs would be generated in the local regional
during the seven month construction period, which would add $7.5 mi
to the area's economy each year. Expenditures funneled through
region for equipment and materials would amount to $4.8 million per
Overall, the project would reduce unemployment and underemployment i
region and stimulate the local real estate trade and services indus
during construction.

Construction of this portion of Interstate 93 to Interstate stan
would permit the completion of the entire system from Boston to
Johnsbury. The improved access provided by this fully integrated
quality transportation facility could stimulate long term eco
development in the corridor, particularly in the Littleton, New
shire, area. Long term regional economic benefits would not be s
icant, however.

(d) Environmental Benefits

Construction of the Bog Pond Interstate alternative would result in limited long term environmental benefits. The elimination of commercial truck traffic would reduce noise levels along US Route 3. This gain is accomplished, however, at the expense of increased noise levels in the Bog Pond Corridor. Certain air quality parameters would be lower in both corridors than in the base year (due primarily to implementation of more stringent emission controls). Finally, construction of the Interstate would create new scenic vistas and represent an aesthetic gain in terms of views from the road.

(e) Environmental Losses

Construction and use of the Bog Pond Interstate would result in short and long term losses in the Bog Pond Corridor.

Over 1000 acres (405 hectares) of forest, open space and recreation lands would be required to construct the Interstate, including approximately 770 acres (312 ha.) of forests that would be either directly (669 acres or 271 ha.) or indirectly (101 acres or 41 ha.) affected. While not presently managed strictly for timber production, these lands' productivity would be severely reduced, if not totally destroyed. This area includes over 705 acres (286 hectares) of terrestrial and aquatic wildlife habitats that would be eliminated by construction.

The highway would increase water pollution and noise levels in the corridor. The major water quality problems (sedimentation and increased water temperatures) would adversely affect aquatic biological productivity along the corridor. A major potential problem area would be Bog Pond itself. The sedimentation and water temperature effects would last for several years after completion of construction.

Road construction would eliminate seven acres (three hectares) of swamp and marshland at four locations in the corridor. The 4300 feet (1200 meters) of culverts and stream relocation/channelization would permanently reduce the productivity of these areas through the food web. It is likely that, because of their proximity to the alignment, identified raptor eyries and potential Peregrine Falcon nesting sites would be less attractive habitats for the entire life of the roadway. In addition, the high level of development and human activity associated with the Interstate, especially when located in such an undeveloped area, would cause many wildlife species (including Species of Special Concern) to retreat to more remote areas. The identified biologic effects would significantly alter species productivity and abundance in the corridor.

The above cited environmental losses associated with Interstate construction in the Bog Pond Corridor appear even more significant when considered in light of the existing undeveloped nature of the area. These effects, combined with the physical presence of the road and attendant noise impacts, would essentially reduce or even eliminate the ability of

the area to support a particular type of recreational experience. In other words, Interstate development would destroy the "near natural" "solitude" qualities of a major portion of the White Mountain National Forest through which the road would pass. This impact is considered to be a significant loss of the area's long term productivity.

Interstate construction would represent a major intrusion in the corridor that would permanently change its rural residential/agricultural character and the inherent semi-pristine qualities of the Easton Valley and adjacent hill slopes. The effects of the Interstate appear even more dramatic when it is noted that only 200 cars per day (even on peak summer weekends) wind their way along the narrow two lane Route 116 through the Town of Easton (population about 100, almost half of whom are over 50 years old).

(d) Future Options Foreclosed by the Alternative

Interstate construction could have a severe effect on Management Area lands within the White Mountain National Forest and adjacent private lands that may be acquired by the USFS. The cited effects could preclude future management of this area according to the objectives specified in the Forest Plan. In fact, it is likely that the affected lands would be reclassified for other management practices. There appears little doubt that the affected area could no longer be managed to provide a "natural" recreational experience with a high degree of solitude." (WMNF Plan, p. 55).

Construction of the Bog Pond Interstate would not limit future options within Franconia Notch State Park.

(5) Irreversible and Irretrievable Commitments of Resources: Bog Pond Interstate

(a) Summary

Construction of the Bog Pond Interstate would result in irreversible and irretrievable commitments of human, financial and natural resources.

(b) Commitment of Human Resources

Construction of the Bog Pond Interstate would require an allocation of human resources in both the public and private sectors for planning, analysis, engineering design, construction, administrative and supervisory activities and highway maintenance. The skills required for such work are not in short supply.

Construction would require approximately 900 workers for the seven year construction period for each of the seven years of construction. It is expected that many of the workers would be hired from the regional labor pool which at present includes a large number of unemployed and underemployed people with the requisite skills.

(c) Commitment of Financial Resources

Total project costs for the Bog Pond Interstate would be approximately $146.7 million, with 90 percent, or $132.0 million, paid by the Federal Government and 10 percent, or $14.7 million paid by the State of New Hampshire. In addition, construction of the Interstate commits the State of New Hampshire to the maintenance of an additional 22.5 miles (36 km) of designated Interstate Highway at an estimated annual cost of $160,000.

(d) Commitment of Environmental Resources

In theory, many of the materials used in the construction of the Bog Pond Interstate could be salvaged and reused if the road were modified or removed. Moreover, much of the land covered by the road could be reclaimed and eventually restored to a state approaching its preconstruction conditions. However, there are certain resources that would be irreversibly impacted by construction of the Interstate.

Certain biologic resources would be irretrievably committed to Interstate construction. Seven acres (three hectares) of swamp and marshland at four locations in the corridor would be eliminated. Wetlands are unique biological communities that act as a transition zone between terrestrial and aquatic communities. They are extremely productive biologically, but are also particularly sensitive.

The varied biologic impacts that would result from Interstate construction, including water quality degradation, loss or disruption of over 705 acres (286 hectares) of wildlife habitat and significantly increased development of the corridor, would in some cases irreversibly diminish species productivity and abundance. Such commitments would curtail the range of potential uses of the corridor's biologic resources.

Habitat loss for the northern and black-backed three-toed woodpeckers and the spruce grouse (Species of Special Concern), the Canadian lynx (a Threatened Species) and possibly the eastern cougar and eastern timber wolf (Endangered Species) could affect local populations. Location of the Bog Pond Interstate in the middle of such a remote area could interfere with movements of these animals and force their retreat from the area surrounding the corridor.

The significance of the cited resource commitments is even greater when considered in light of the semi-wilderness qualities of the western portion of the corridor and the existing rural, semi-pristine character of the Easton Valley. The introduction of over 3000 vehicles by 1995 on an average day of the year could irreparably alter the character of the Management Area IV lands in the White Mountain National Forest and the Easton Valley, through which only 200 cars meander per day. The magnitude of the construction activity and the project as a whole and the visual

effects, increased noise levels and direct and indirect land use changes associated with the Interstate would represent an irreversible and irretrievable commitment of the unusual qualities and character of the corridor. Interstate construction would probably mean the end of the undeveloped countryside atmosphere, a particular quality of life that is becoming increasingly rare and that would be impossible to replace.

Construction of the Bog Pond Interstate would represent an irreversible commitment of a portion of the White Mountain National Forest (WMNF) presently managed for rare and endangered species and to provide "a natural recreational experience with a high degree of solitude" (WMNF, p. 55). Interstate construction and use would represent a significant intrusion in the corridor, especially in the more remote higher elevations, which would directly or indirectly reduce wildlife habitat and populations.

The presence of the road and the associated noise levels would likely preclude management of affected WMNF lands as near natural and natural areas. A change in mangement direction could become necessary that would permit increased development and use of the corridor. Such changes could initiate a chain of events that would be essentially irreversible. The loss of these remote public areas (as well as adjacent private lands of similar character that may be acquired by the U. S. Forest Service for inclusion in the WMNF) would, therefore, be irretrievable and would be especially significant as such areas are a declining resource in the region. As noted, species productivity and abundance would definitely alter and loss of habitat (and possibly consequent reduction in population) for rare and endangered species would similarly be an irretrievable loss of another declining resource.

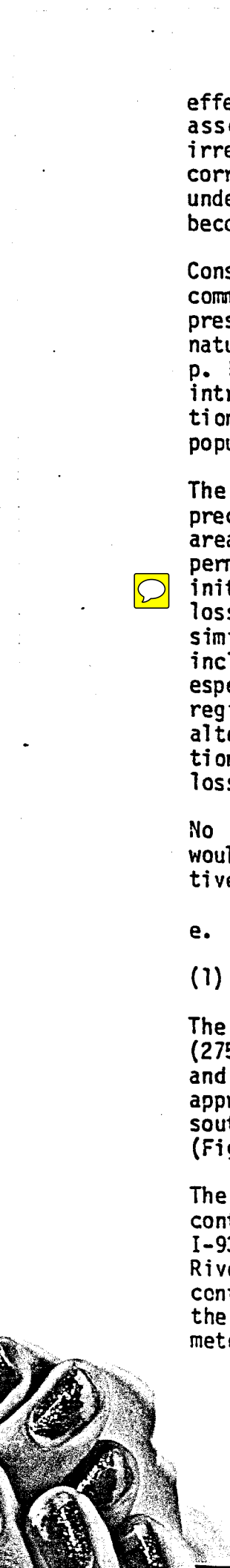
No significant irreversible and irretrievable commitments of resources would occur in the Franconia Notch corridor as a result of this alternative.

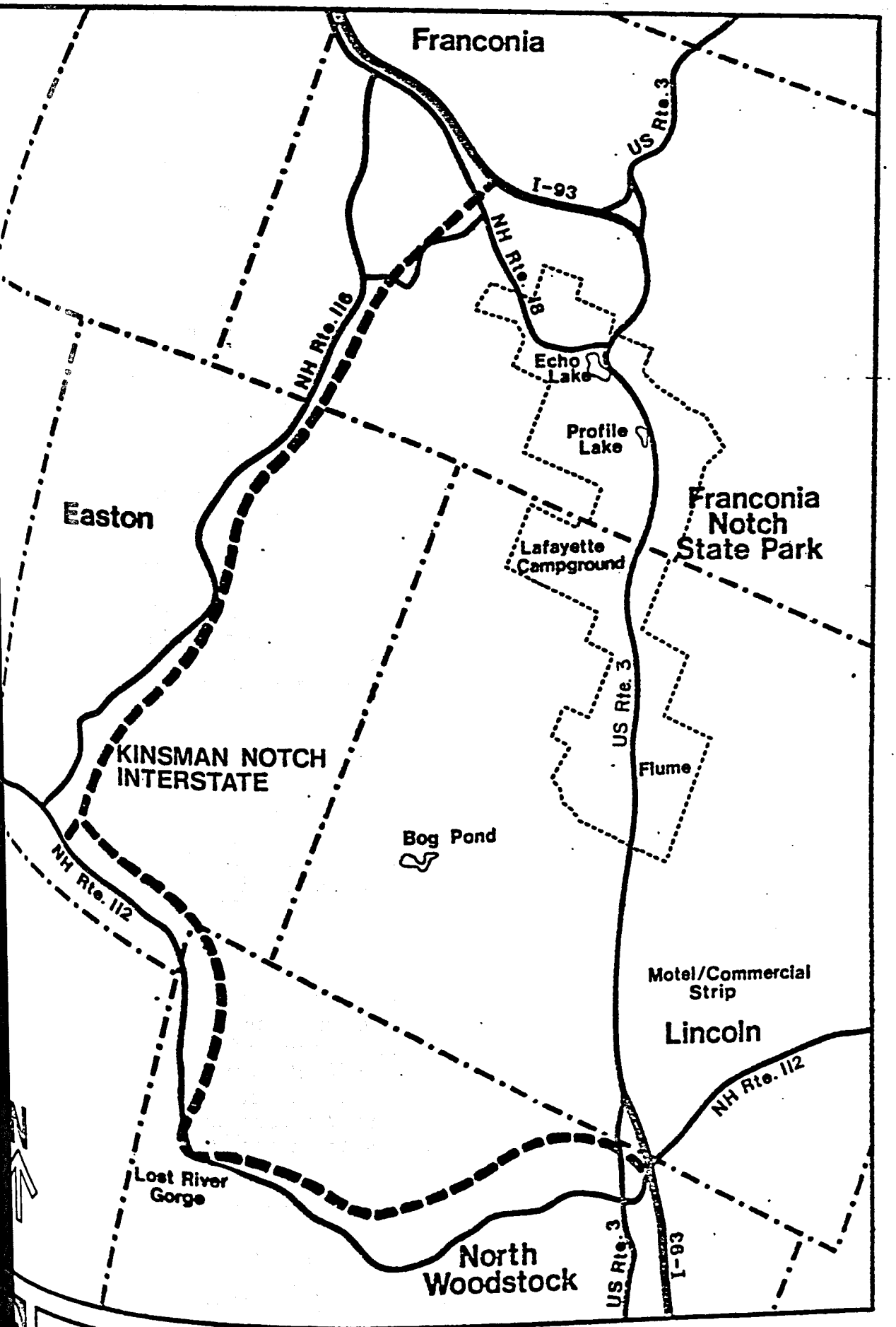
e. Kinsman Notch Interstate (Four Lane)

(1) Description

The project would begin in the Town of Woodstock, approximately 900 feet (275 meters) south of the existing interchange between I-93 and Route 112 and would extend first west along Route 112 then north along Route 116 approximately 22 miles (35 km) ending approximately two miles (three km) south of the existing interchange between I-93 and Route 116 in Franconia (Figure IX-5).

The alternative consists of a four lane divided highway with full access control. The alignment would cross Route 112 just west of the existing I-93 crossing, turn in a westerly direction and bridge the Pemigewasset River and US Route 3, swing north of the Town of North Woodstock and continue roughly parallel to Route 112. Near the Lost River Reservation the alignment would be north of the river approximately 500 feet (150 meters) at the closest locations. Just to the west, I-93 would cross





Kinsman Notch Interstate

FIGURE IX-5