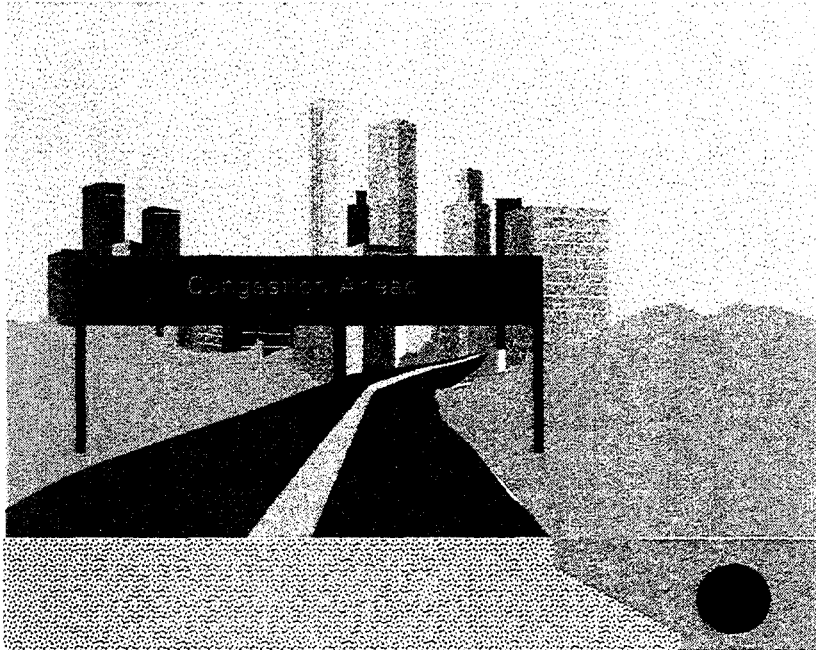




**Federal Highway Administration
Office of Program Quality
Coordination**

**U. S. Department
of Transportation**



A Review Report on:

**Longitudinal Utility Accommodation:
Case Studies for Trading Access to Freeway ROW for
Wireline Telecommunications**

OPQ 96-06

October 1996

TABLE OF CONTENTS

Abstract	1
Background	1
Case Studies of Maryland and Missouri	5
Issues for FHWA Consideration	12
Appendix A, Summary of Statutes and Regulations	14
Appendix B, Best Practice Process	19
Appendix C, Memorandum on the Effects of the Telecommunications Act of 1996	21

ABSTRACT

A number of state highway agencies (States) have permitted telecommunications to be located longitudinally along freeway rights-of-way (ROW). In two instances, the States have traded such longitudinal access to obtain Intelligent Transportation System (ITS) infrastructure. The experiences of these two States can provide valuable information for other States considering longitudinal accommodation. This information is valuable whether a State is considering cash, barter, or no compensation for permitting the access. The experiences of these two States also raised a number of issues and questions for the FHWA to consider regarding utility accommodation policies.

BACKGROUND

The FHWA policy for non highway use of federal-aid highways ROW is covered in one of three ways. The three ways are accommodation of utilities, accommodation of private lines, and encroachments (including airspace use).¹ The two case studies described in this report are accommodations of utilities because the telecommunications providers were defined as utilities in their states.

The FHWA allows accommodation of utilities on freeway ROW so long as the safety and operation of the freeways are not compromised. Under the current FHWA policy, the "States must decide if they want to allow utilities on freeways and if so

¹The distinction is important because the FHWA's policies differ significantly among these uses. Appendix A is a Summary of Statutes and Regulations Relating to Accommodation of Utilities, Accommodation of private lines, and Airspace Use and Occupancy.

to what extent and under what conditions²." They may permit certain utilities and exclude others. If they so choose, the States can prohibit any utility installations. The FHWA does not require that States be compensated when permitting utility accommodation. The States may charge fees for utility access to freeway ROW, or barter for services. The FHWA does not require States to share any compensation so derived with the FHWA or use any compensation on other Federal-aid projects. The FHWA defines utilities generally to be those that serve the public interest and defers to States when the State's definitions are more restrictive.

FHWA has always permitted transverse utility accommodation. Longitudinal utility installations have been permitted on federal-aid, non-freeway highway facilities for many years, but have only been permitted on freeway facilities since 1988. Before 1988 the FHWA prohibited longitudinal utility accommodation except in "extreme case situations³." The prohibition was felt to be needed to maintain access control and maximize safety on Interstates.⁴ The previous prohibition of longitudinal accommodation by both FHWA, and AASHTO, is still evident by the number of States that still prohibit longitudinal accommodation. In a survey conducted in 1993 and 1994, "twelve states indicated they would permit transmission

²Program Guide, Utility Adjustments and Accommodation on Federal-Aid Highway Projects, July 1995 by the Federal-Aid and Design Division, Office of Engineering, Federal Highway Administration, FHWA-PD-95-029.

³Ibid.

⁴Ibid.

type utility facilities to longitudinally occupy freeway right-of-way. Thirty-nine states indicated they would prohibit such use.⁵

Since 1988, the FHWA policy is to allow each State to decide if it will allow longitudinal utility accommodation. This implies that utilities can be longitudinally accommodated under controlled circumstances. AASHTO, as well as some States, is reconsidering its more prohibitive policies. AASHTO recently revised its policy regarding utilities on freeway ROW and now recognizes that longitudinal use of freeway rights of way for buried fiber optic cables is permissible.⁶

The revised AASHTO policy has been supplemented with guidance to identify key elements involved in the implementation of shared resource projects.⁷

When longitudinal accommodation is to be allowed, appropriate State policies must be included in the State utility accommodation policy and approved by the FHWA. These policies must include establishment of a utility strip along the outer edge of the ROW⁸ and conformance to clear

zone policies.⁹ States are also required to document the requirements for individual accommodations in agreements or permits.¹⁰

Status

Some States have permitted telecommunication providers limited use of highway ROW. Several States have adopted permissive longitudinal utility accommodation policies; some have taken the initial steps to form partnerships with telecommunication providers. Two states, Maryland and Missouri, have traded access to freeway ROW for telecommunications (fiber optics) which will be the backbone of their ITS. Most States have decided not to permit longitudinal access or have identified barriers to resource sharing. Some States abide by the previous FHWA and AASHTO policy and prohibit longitudinal accommodation based on safety and access control. Other States lack the incentive to allow longitudinal accommodation because State Statutes prohibit the State from receiving compensation for utility accommodation. Additionally, some State DOTs, that can be compensated, lack the incentive because revenue so derived is not earmarked for transportation use but must go into a general fund.¹¹

Besides this review, the Department of Transportation's ITS Joint Program Office and

⁵Synthesis of Highway Practice 224 "Longitudinal Occupancy of Controlled Access Right-of-Way by Utilities." Transportation Research Board. National Academy Press, Washington, D.C. 1996.

⁶AASHTO Policy Resolution PR-21-95. Approved October 29, 1995 by the AASHTO Board of Directors.

⁷"Guidance on Sharing Freeway and Highway Rights-of-Way for Telecommunications" by AASHTO Task Force on Fiber Optics on Transportation Rights-of-Way under NCHRP Advisory Panel 20-7, Task 76. AASHTO, 1996. ISBN 1-56051-045-5.

⁸23 CFR 645.209 (c), for installations in freeways.

⁹23 CFR 645.209 (a), for the type of highway involved.

¹⁰23 CFR 645.213

¹¹Shared Resources: Sharing ROW for Telecommunications. FHWA-JPO-96-0014. "Shared Resources: Sharing Right-of-Way for Telecommunications" by Apogee Research, Inc. identifies and analyzes a variety of legal, political, and institutional issues for owners of highway right-of-way to consider for resource sharing or right-of-way accommodation projects.

AASHTO are providing assistance to States that are considering the accommodation of telecommunications. The study for the Joint Program Office¹² identifies twenty threshold issues that States need to address before pursuing "resource sharing" arrangements. A number of these issues also apply to longitudinal accommodation. AASHTO is currently developing guidance to accompany their policy resolution that recognizes telecommunications accommodation. These sources provide valuable information for States considering either "resource sharing" or longitudinal accommodation for telecommunications.

Impact of the Telecommunication Act of 1996

The impact of the Telecommunications Act of 1996 has been of concern to many States.¹³ Section 253, Removal of Barriers to Entry, states that "no State or local statute or regulation, or other State or local legal requirement, may prohibit or have the effect of prohibiting the ability of any entity to provide any interstate or intrastate telecommunications service." However the Section goes on to say that this clause should not interfere with State and local governments' ability to manage their public rights-of-way and to be compensated for their use, so long as they manage and charge compensation in a nondiscriminatory fashion.

¹²Ibid.

¹³The AASHTO "Working Paper, the Telecommunications Act of 1996" is an excellent summary of the Act as it impacts the States. The Paper prioritizes the sections of the Act which will have the greatest impact on States. It paraphrases the Sections of the Act for easier understanding and notes potential impacts on State and local governments. The Paper also lists the implementation schedule for rules by the FCC to implement the Act.

Also, Section 704, Facilities Siting, Radio Frequency Emission Standards, contains a statement that State and local governments shall not unreasonably discriminate in decisions to allow placement of personnel wireless service facilities. The FCC has issued rules to implement Section 704. Telecommunications companies that feel that they have been discriminated against under this section must use the courts for remedy. This differs from Section 253.

The FCC will not be issuing any rules for Section 253. Rather, issues will be dealt with as telecommunication companies petition the FCC when they feel they have been denied entry. The FCC has received a couple of petitions from telecommunications companies who believe that they have been denied entry per Section 253. So far these petitions have been against local governments, but they will no doubt develop precedent for any petitions against state governments.¹⁴

The FHWA Office of Engineering has confirmed the authority of the States to control their ROW in light of the Act in a memorandum dated October 25, 1996 (Appendix C is a copy).

Purpose

The intent of this review was to:

- identify the methods used to determine equity

¹⁴One decision has been made to date. The decision in the matter of Classic Telephone is available from the FCC. When the FCC receives petitions, it offers interested parties an opportunity to comment. Recognizing that many State and local governments may not be aware of or familiar with this process, the FCC will consider comments from states after the stated comment period. The FCC encourages comments, as this may be the only way that they will be made aware of any pertinent issues State governments may have.

among partners when the State permits utility accommodation.

- identify the types of instruments used by the States and telecommunication companies to implement their agreements. What provisions of these agreements have worked or not worked or found to be missing?
- identify any Federal Highway statutory, regulatory, policy impedances to utility accommodation that exist or are perceived to exist. Identify any changes needed to Federal Highway statutes, regulations, or policy.
- identify any assistance or guidance that States or FHWA Division offices need from the FHWA program offices regarding utility accommodation.
- identify information needed by States or FHWA Division offices not currently available regarding utility accommodation.

Methodology

The team obtained information regarding longitudinal utility accommodation from those States implementing "resource sharing arrangements." The FHWA has not defined resource sharing arrangements. However a few States have recognized resource sharing arrangements to be those in which the State offers access to freeway right-of-way in trade for fiber optic lines and equipment, and/or cash. Because only two States have resource sharing arrangements, this review documents their experiences as case studies for information to the FHWA and other States.

The team interviewed the following personnel in Maryland and Missouri:

State utility, ROW, ITS, policy, legal, or other senior staff involved with developing policy

and implementing joint ROW activities or agreements

Utility, ROW, ITS, policy, legal, or other senior staff involved with policy and implementing joint ROW activities or agreements for turnpikes, toll roads, cities, counties or other private entities owning highway ROW.

Utility providers or other contractors who have or would like to have agreements for joint ROW usage.

Team Members

Clara Conner
Transportation Specialist
FHWA Office of Program Quality
Coordination
Federal Highway Administration, HPQ-1
Washington, D.C.

David Cox
Assistant Division Administrator
FHWA Tennessee Division
Federal Highway Administration
Nashville, TN

William Pickering, P.E.,
Chief, R/W and Utilities Division
Pennsylvania Department of Transportation
Harrisburg, PA

Stuart A. Waymack
Director, ROW and Utilities Division
Virginia Department of Transportation
Richmond, VA

Acknowledgments

The team would like to thank the telecommunication providers, State, FHWA Region and Division personnel for their candid thoughts and suggestions during the meetings.

The State's Assessment of the Value of ROW	
Similarities	No formal assessment of the value of the ROW has been made by either State. Both States believe that value is market driven and therefore dependent on current value as telecommunication companies wish to expand or provide redundancy in their systems.
Maryland State Highway Administration (SHA)	<p>The SHA feels that because ROW is a special use, conventional appraisal procedures cannot be used. The question becomes what is the cost to the State to meet its needs.</p> <p>Maryland did ask responders to their Request for Proposals (RFP) for fiber optics on the Baltimore Washington corridor to include a monetary value of their offer to the State. This could be seen as the value of the ROW to telecommunication provider.</p> <p>The studies that MdTA conducted (noted below) were shared with the SHA.</p>
Maryland Transportation Authority (MdTA)	<p>The Maryland Transportation Authority (MdTA) is the agency in the DOT responsible for the highway and bridge toll facilities in Maryland.</p> <p>A goal of the MdTA is revenue generation as well as support of various ITS needs. The MdTA views access to the ROW as a source of revenue generation. Two studies for the MdTA assess per site or per mile value of the ROW so that MdTA has a means of evaluating proposals offered by utility companies.</p>
Missouri Department of Transportation (MoDOT)	<p>Offered a minimum position in what it would accept in trade for access. MoDOT believes that the State got value because of the cost the State would have paid to install.</p> <p>The Early Deployment study for St. Louis estimated \$22 million for a fiber optic system to support the total \$96 million estimated ITS implementation. Also, MoDOT requested approval under the Innovative Financing Program to utilize the value of the fiber optic system as soft match against future ITS projects. This proposal was approved with a value to \$30 million credit to be used as soft match for projects any where in the State.</p>

The team found dedicated and knowledgeable individuals who were interested in sharing their experiences with other states.

CASE STUDIES OF MARYLAND AND MISSOURI

Equity

Fundamental to trading ROW access for telecommunications is the determination of equity. In other words, how is the value of ROW access determined? The FHWA and the States have invested much effort and expense to remove

utilities from freeway ROW. Therefore some believe that utilities should not be allowed back on the ROW. Others believe that because of the profits that the telecommunication providers will generate, the States should be correspondingly compensated for allowing access to ROW. Others, as with Maryland and Missouri, believe that if the cost of acquiring telecommunications to support ITS can be significantly reduced or eliminated through a trade for ROW access then an appropriate value has been established. These States allowed the current market, or demand of the telecommunication providers, to decide what the State would receive in trade for permitting access to the ROW.

Process

Both Maryland and Missouri went through a somewhat similar process that culminated in construction of a fiber optic system. A summary of best practices derived from both States is documented in Appendix B.

Both states had interest from telecommunications providers who wanted access to highway right-of-way.

Maryland

Maryland advertised a meeting for interested telecommunications providers to express their interest or concerns with resource sharing. They advertised the meeting nationally as well as locally and it was well attended.

Missouri

Missouri conducted initial interest meetings separately with telecommunication providers in the St. Louis metropolitan area. The providers wanted to be met with individually.

What the telecommunication providers wanted.

It is important to providers that States be flexible on where lines may be located. The safety of personnel and equipment during construction and maintenance, protection of lines, and ease of construction are very important to a provider. Providers have limited funds for installations and they view highways as one of a number of alternatives.

The providers see timing as critical. They want States to have processes in place to react to interest from providers within six months. "A year is a lifetime to the providers."

Providers do not want States to resell fibers (i.e., they do not want States to be perceived as a

telecommunication provider). As long as fibers provided to the State are for State use only¹⁵, these providers see resource sharing as a good deal.

Both States recognized a need to change their existing longitudinal accommodation policies to recognize telecommunications.

Maryland

Maryland's policy had been that they did not permit longitudinal utility lines to be installed on the ROW of expressways. In January 1994, the FHWA Region 3 office approved the revision to Maryland's longitudinal accommodation policy to recognize resource sharing projects. The State Highway Administration (SHA) defined resource sharing projects to be projects undertaken by the State of Maryland and a public/private company to achieve a common goal of meeting each others communication needs. The installations had to be underground. Access to the installations could only be made from adjacent properties or crossroads. The installations were to be located in a utility strip established along the outer edge of the right-of-way. Normally, installation within the median of freeways is not allowed. However, exceptions could be made for medians of extraordinary width. Here the facility could be installed beyond clear zones. An exception for installation in the median was granted so that installation would be where the State might otherwise install its own communication infrastructure.

Missouri

Missouri's policy for the location and relocation of utility lines on the Interstate System or other

¹⁵In Missouri, the telecommunication company wanted the fiber provided for the State's use to be only used for transportation purposes by the DOT.

	<i>What the State offered</i>	<i>What the deal ended up to be</i>
Similarities	The States offered opportunity to all telecommunications companies to compete for access to ROW in exchange for the best offer of fiber optic systems and/or cash.	Telecommunications providers are given access to highway ROW to install fiber optic lines. In exchange, State receives or is dedicated fiber optic lines and some operating equipment. Neither State DOT received cash consideration.
Maryland	<p>SHA offered non-exclusive access to freeway ROW and communications towers and other structures which might be used as communication platforms.</p> <p>ROW along 72 miles of predominately Interstate from Maryland/Pennsylvania border to Washington, D.C. beltway was offered. About 8 miles along the North Central Rail Trail is controlled by the Maryland Department of Natural Resources.</p> <p>The SHA asked for one of the following in return: fiber optic cable facilities (12 fibers minimum), electronics, maintenance and management of facilities, bandwidth, cash, a percentage of gross revenue, or any other consideration offered.</p>	<p>MCI placed two conduits along the ROW offered. One conduit is for MCI's use. The other conduit contains 72 fibers (24 from MCI for State's use, 24 from TCG for State's use, and 24 for TCG's use). MCI prime contractor, TCG sub-contractor to MCI. TCG offered the State the 24 fibers after agreement with MCI was finalized. MCI and SHA agreed to offer from TCG. The State owns the conduit and fiber installed for the State. MCI owns the hand holes and provides all maintenance i.e., access. TCG provided SONET based fiber optic transmission system on 4 of the fibers provided to the State and bandwidth. TCG retains ownership of all electronics and hardware associated with SONET System, except fibers. MCI does all installation for MCI, State, and TCG.</p> <p>The Maryland Department of Natural Resources received cash compensation.</p> <p>State agencies other than the DOT will have access of the bandwidth provided (e.g. state schools under the Governor's "Distance Learning" initiative.</p>
Missouri	<p>MoDOT offered exclusive access to ROW on 1,204 miles of main line freeway including urban area of St. Louis and rural connecting freeways.</p> <p>In exchange MoDOT wanted access nodes at each interchange, a minimum of six fibers, and coverage of the St. Louis area. MoDOT wanted lines 24 to 30 feet off edge of pavement.</p>	<p>An exclusive easement is granted to DTI to be located within MoDOT ROW offered but outside utility corridors. The exclusivity applies only to other fiber optic systems or communications systems. The location of the easement (and fiber optic line) can be moved within the ROW limits at mutual agreement of MoDOT and DTI.</p> <p>In exchange for easement, DTI will provide, for the MoDOT's use, six dedicated and lighted fiber optic strands, access equipment at interchanges, and will maintain and upgrade the system as necessary. DTI owns the six dedicated fibers and operates and maintains the equipment provided.</p>

freeways is that "parallel installations on the right-of-way shall be permitted only where an outer roadway exists, . . . provided that underground facilities are within 6 feet of the normal right-of-way line, and provided that the facility can be installed and maintained between the outer roadway and right-of-way line . . ." In January 94, the FHWA Region 7 office approved an exception from the approved policy. The exception permitted fiber optic cable to be buried generally 24 to 30 feet from the edge of through pavements. The exception was specifically made so that the Missouri Department of Transportation (MoDOT) could pursue a Request for Proposals (RFP). The RFP was to solicit proposals for exclusive access to this right-of-way in exchange for fiber optic communications to be used only by MoDOT for transportation purposes. MoDOT would not permit other fiber optic lines on the freeways outside the utility corridor as long as an agreement is valid between the State and a telecommunication provider.

Both States used a competitive process to request proposals from telecommunications providers.

Both States received only one responsive proposal to their RFP.

Missouri

MoDOT did not advertise publicly. Instead, they sent RFPs to all telecommunications providers recognized by the Missouri Public Service Commission.

Authority to procure telecommunications

In both Maryland and Missouri, a state agency outside the highway agency is responsible for procuring telecommunication services for all state agencies and departments.

Maryland

The Maryland Department of Budget and Management (DBM) has responsibility for procuring telecommunication services for all state agencies including the SHA. When MCI Telecommunications Corporation (MCI) approached the SHA for consideration of a resource sharing arrangement, the SHA and DBM developed the process resulting in the agreement with MCI. Other efforts for additional resource sharing arrangements have been a joint effort by the DBM and the SHA. DBM issued the RFP, and along with the SHA, executed the resulting agreement.

Missouri

After the RFP was issued, the Missouri Office of Administration questioned the authority of MoDOT to contract with a telecommunication provider. The Office of Administration has statutory authority to provide telecommunications services to agencies with the state government. Also, the Missouri Public Service Commission (PSC) did not want the Department of Transportation to become a telecommunication provider. They finally resolved the matter when MoDOT revised the RFP to state that the telecommunications obtained would only be used for highway purposes (e.g., ITS). MoDOT issued the RFP and executed the resulting agreement with Digital Teleport, Inc. (DTI).

Status of Installations

Installations are not complete in either State. In Maryland, while conduit and fiber are in place, not all equipment has been installed. In Missouri, approximately 500 miles, primarily in the St. Louis area, have been installed.

So far, neither State DOT has used the fiber provided.

Permitting

District offices of both States issued permits for the construction of the fiber optic systems. In both States, multiple district offices were involved. Both States conducted preconstruction meetings with contractors during which they discussed the permitting process.

Maryland

Under the agreement in Maryland, fiber optic installation was to occur in four Districts of the SHA. Each District Engineer had unique concerns about when they would allow installation and other traffic control concerns. All four districts agreed to issue one permit that included site specific conditions for lane closures, for example. This is the first time that they have issued a multi-district permit. The districts also felt that issuing one permit was important because MCI had multiple contractors for installation and traffic control who had different boundaries than the Districts.

The design, materials, and construction offices of the SHA reviewed plans from MCI. They required that MCI show on aerial photographs where lines would be located.

They required that MCI have separate and additional permits for lane closures and maintenance work. TCG America, Inc. (TCG) has been issued permits for access to manholes. SHA does not charge a fee for any permits.

Cost penalties for extending lane closures beyond times permitted were included in the permit. SHA inspectors felt this was a valuable tool though it was never used.

Missouri

In Missouri, the districts issued permits for work on a route within each district's limits. The first

district that issued permits and DTI worked out a process for permitting. In this process, the district gives DTI a copy of as-builts that DTI marks up for the permit application. A representative from the district project development staff for utility coordination checks locations against future highway projects and visually inspects the route. The district approved the location of all access points. Inspection during installation is minimal by district personnel.

The district would have preferred to be involved earlier so that they could have planned interfaces to arterials for ITS infrastructure. They could have better defined the process for permitting earlier.

There appears to be little coordination between the initial district involved and others throughout the State that will be involved in the fiber optic installation.

Construction

Both States were pleased with the installations.

Maryland

In Maryland, the SHA's permit required continuous installation. No trenches were left open. The SHA had full time (twenty-four hour) construction inspection staff on the project. SHA inspectors were concerned primarily with traffic control. Inspection of installation was not as big a concern to SHA. Overall SHA was pleased with performance during installation. The FHWA felt that grading in the median could have been more closely reviewed to ensure that unsafe mounds and ruts that could have affected a vehicles trajectory in front of the continuous median barrier were eliminated.

MCI used subcontractors for traffic control.

One fatality occurred during installation, but was attributed to driver error and alcohol.

The SHA felt that there was good communication and coordination among MCI, MCI's subcontractors, SHA, and other state agencies. The SHA felt that this project went better than many other highway construction projects. MCI voluntarily provided the SHA inspectors with cellular phones. The SHA inspectors felt that this was very useful and helped maintain good communication for incident management.

The SHA inspector felt that the permit had the "teeth" in it to back up inspectors when needed. The permit included standard penalties when lane closures were extended and this was thought to be a good technique to help the inspectors.

Missouri

In Missouri, there were no incidents or lane closures due to installation. DTI learned that installation in the direction of the flow of traffic was important.

MoDOT currently has a multi disciplinary team for administration of the agreement with DTI. The team includes representatives from the traffic management, utilities, and legal offices.

Maintenance

Both States required that the contractor provide routine maintenance of systems provided during the life of the agreement. Both States required the contractor to provide two hour response time for major system outages. Both States required that the contractor provide twenty-four hours per day, seven days a week response to calls for service or maintenance.

Maryland

Maryland required that the system and components be warranted for two years.

Since installation, one district in Maryland has not had any emergency repairs. Another has had a number of instances.

Missouri

In Missouri, DTI is required to upgrade system provided to the State when DTI upgrades its own portion, but DTI says they will upgrade the State's portion only when technological upgrades are needed.

Location

Both States' accommodation policies call for a utility strip to be along ROW limits. Due to cost to install, terrain, and possible environmental considerations (e.g. wetlands); providers wanted to use the median for part of the installation. Both States used exceptions to their policy so that conduits could be installed in the median. The mileage installed or to be installed in the median has been or will be significant in both States.

Maryland

In Maryland, the revision to the accommodation policy to recognize resource sharing projects called for a utility strip to be established on the outer edge of the ROW. The policy discourages the use of the median. Also, no part of the resource sharing facility is to be placed in the clear zone. The SHA can make exceptions to these requirements when access or location is unavailable or impractical, but the SHA's Chief Engineer and the FHWA must approve them.

It was apparently cost prohibitive to establish the utility strip. Therefore the SHA allowed installation in the median along I-83 and off the

Features of Agreements			
	Similarities	Maryland	Missouri
Access	Provider has sole access to telecommunication fiber and equipment provided to the State.	Access to the SHA's fiber optic lines is every half mile.	Agreement calls for access at every interchange. DTI also providing access at DTI's expense at rest areas and weigh stations in rural areas.
Term of Agreements	40 years because providers wanted as long as possible	2 ten-year renewals are possible.	Agreement provides for additional 20 year renewals. At termination of the agreement, the provider has the option to remove, sell to MoDOT, or abandon the fiber cable and related equipment.
Relocations	A few relocations have been necessary after original installation in both States.	One relocation since installation has been necessary because of I 695 widening. Costs would be borne by MCI under the terms of the agreement. However, because SHA knew of project during initial installation, SHA and MCI agreed to share the costs of this relocation.	For the mileage of original agreement, MoDOT pays for relocations. DTI pays for relocations on the 400 miles added by an amendment to original agreement. MoDOT has paid for 2 or 3 relocations of DTI's lines so far. Two because DTI worked before permit was approved. In one instance DTI agreed to share costs.
Unique Features of Agreement			DTI obtained a clause in the agreement where they must approve any longitudinal telecommunications utility accommodation of more than 1000 yards requested by any other company.
Liability	Both States required insurance and performance bonds.	A performance bond in the amount of construction estimated by MCI was required.	Both performance and payment bonds were required.

paved shoulder on I-695. In both corridors, the installation was consistent and did not meander from median to shoulder and back. The FHWA approved the exception from the longitudinal policy for the median location. Lines are four to five feet off shoulder and have four feet of cover.

Missouri

In Missouri, the accommodation policy states that a six-foot utility corridor can be established where there is a frontage road. Here utilities can be accessed from frontage roads.

DTI wanted the flexibility to place lines where installation would be easiest. MoDOT is allowing the location to change from off a shoulder to the median. Placement of the fiber optic lines are an exception to the longitudinal accommodation agreement approved by the FHWA. The FHWA approved the exception.

MoDOT's agreement with DTI provided for placement of the fiber optic line 20 to 30 feet from the edge of the pavement. However, after installation was begun, topography dictated the best location for the fiber optic cable, including some installation in the median.

ISSUES FOR THE FHWA CONSIDERATION

During the review, the team identified the following issues for the FHWA consideration. The team recommends that the FHWA Office of Engineering resolve the following questions in concert with Division offices and the States.

- Should the FHWA recognize and issue policy for resource sharing? How would the FHWA define resource sharing? Would resource sharing be defined only in terms of specific accommodation (i.e., telecommunication utilities) or should there be a broader definition for all utilities?
 - Should the FHWA be more involved in helping State's maximize the benefits received by allowing accommodation? If so, how? Currently, the FHWA exempts utility accommodation from the airspace requirement for fair market value compensation. Even so, some States are advancing resource sharing arrangements as utility accommodation for telecommunications. They are trying to maximize a benefit to the State in telecommunication infrastructure and/or services and/or cash.
 - Should the FHWA policy for utility accommodation (and resource sharing) move from permission to encouragement?
 - As the current demand is shifting from wired to wireless utilities, are wireless utilities adequately addressed in existing statutes, regulations, and policies? Are there any issues specific to wireless utilities that need to be addressed?
- Both Maryland and Missouri have received interest by wireless providers for accommodation. Neither State was sure if nor how their current accommodation policy applies to wireless.
- FHWA regulations call for a utility strip to be established at the outer edge of the right-of-way¹⁶. Installations in the median and in the clear zone are not permitted except in "exceptional situations." However, in both Missouri and Maryland it was deemed impractical (i.e., cost prohibitive) to establish a utility strip. The FHWA approved exceptions to the State's utility accommodation policies to allow conduits to be placed in the median and/or close to or under paved shoulders. Access to these locations for maintenance will be controlled

¹⁶23 CFR 645.209(c)

by permits; however, very little maintenance is expected and both State highway agencies believe these were the best possible locations for the utilities. Should the FHWA relax its position for the location of underground utilities?

- States and Divisions should consider reviewing and possibly revising utility accommodation policies. The policies should be reviewed in light of the telecommunications act and accommodation of both wireline and wireless utilities.
- Consider changing delegation of authority for approval of accommodation policies. Currently this authority is delegated to Regional Administrators. The authority to approve airspace agreements has been delegated to Division Administrators. The airspace agreements are similar in nature to the accommodation policies. As a preliminary result of this review the FHWA Federal-Aid and Design Division has clarified the delegations of authority to delegate approval of both longitudinal private lines and approval of air space agreements to Division Administrators¹⁷.

¹⁷Information Memorandum dated October 23, 1996 on Approval of Longitudinal Private Line Installations on Federal-aid or Direct Federal Highway Projects from the Acting Chief, Federal -aid and Design Division

APPENDIX A

SUMMARY OF STATUTES AND REGULATIONS RELATING TO

ACCOMMODATION OF UTILITIES, ACCOMMODATION OF PRIVATE LINES, AND AIRSPACE USE AND OCCUPANCY

Italics are notes added for clarification. Italicized notes do not appear in the original text.

23 CFR 1.23

(b) Use for highway purposes.

Except as provided under paragraph (c) of this section, all real property, including air space, within the right-of-way boundaries of a project shall be devoted exclusively to public highway purposes. No project shall be accepted as complete until this requirement has been satisfied. The State highway department shall be responsible for preserving such right-of-way free of all public and private installations, facilities or encroachments, except

- (1) those approved under paragraph (c) of this section;
- (2) those which the Administrator approves as constituting a part of a highway or as necessary for its operation, use or maintenance for public highway purposes and
- (3) informational sites established and maintained in accordance with Sec. 1.35 of the regulations in this part.

(c) Other use or occupancy.

Subject to 23 U.S.C. 111¹⁸, the temporary or permanent occupancy or use of right-of-way, including air space, for non-highway purposes and the reservation of subsurface mineral rights within the boundaries of the rights-of-way of Federal-aid highways, may be approved by the Administrator, if he determines that such occupancy, use or reservation is in the public interest and will not impair the highway or interfere with the free and safe flow of traffic thereon.

23 CFR 645.205, Policy.

(a) Pursuant to the provisions of 23 CFR 1.23, it is in the public interest for utility facilities to be accommodated on the right-of-way of a Federal-aid or direct Federal highway project when such use and occupancy of the highway right-of-way do not adversely affect highway or traffic safety, or otherwise impair the highway or its aesthetic quality, and do not conflict with the provisions of Federal, State or local laws or regulations.

No such blanket finding of public interest exists for private lines or airspace joint use.

23 U.S.C. 109(I)

(1) In determining whether any right-of-way on any Federal-aid highway should be used for accommodating any utility facility, the Secretary shall-

(A) first ascertain the effect such use will have on highway and traffic safety, since in no case shall any use be authorized or otherwise permitted, under this or any other provision of law, which would adversely affect safety;

(2) For the purpose of this subsection--

¹⁸23 U.S.C. 111, Agreements relating to use of and access to rights-of-way- Interstate System

Agreements between the Secretary and the State highway department for the construction of projects on the Interstate System may authorize a State or political subdivision thereof to use or permit the use of the airspace above and below the established grade line of the highway pavement for such purposes as will not impair the full use and safety of the highway, as will not require or permit vehicular access to such space directly from such established grade line of the highway, or otherwise interfere in any way with the free flow of traffic on the Interstate System.

(A) the term “utility facility” means any privately, publicly, or cooperatively owned line, facility, or system for producing, transmitting, or distributing communications, power, electricity, light, heat, gas, oil, crude products, water, steam, waste, or storm water not connected with highway drainage, or any other similar commodity, including any fire or police signal system or street lighting system, which directly or indirectly serves the public; and

(B) the term “right-of-way” means any real property, or interest therein, acquired, dedicated or reserved for the construction, operation, and maintenance of a highway.

23 CFR 645.209

(e) Private lines.

Because there are circumstances when private lines may be allowed to cross or otherwise occupy the right-of-way of Federal-aid projects, highway agencies shall establish uniform policies for properly controlling such permitted use. When permitted, private lines must conform to the provisions of this part and the provisions of 23 CFR 1.23(c) for longitudinal installations.

Sec. 713.202 Applicability.

(a) The provisions of this subpart apply to the use of airspace on the Federal-aid highway systems, except as provided in paragraph (b) of this section.

(b) This subpart does not apply to railroads and public utilities which cross or otherwise occupy Federal-aid highway rights-of-way,

23 CFR 713.203, Definition.

Air space, as used in this subpart, is that space located above, at, or below the highway's established gradeline, lying within the approved right-of-way limits.

23 U.S.C. 156, Income from airspace rights-of-way

Subject to section 142(f), States shall charge, as a minimum, fair market value, with exceptions granted at the discretion of the Secretary for social, environmental, and economic mitigation purposes, for the sale, use, lease, or lease renewals (other than for utility use and occupancy or for transportation projects eligible for assistance under this title) of right-of-

way airspace acquired as a result of a project funded in whole or in part with Federal assistance made available from the Highway Trust Fund (other than the Mass Transit Account). This section applies to new airspace usage proposals, renewals of prior agreements, arrangements, or leases entered into by the State after the date of the enactment of the Federal-Aid Highway Act of 1987. The Federal share of net income from the revenues obtained by the State for sales, uses, or leases (including lease renewals) under this section shall be used by the State for projects eligible under title.

**FHWA Order M1100.1A
July 14, 1995**

PART I. DELEGATIONS OF AUTHORITY

CHAPTER 5. FEDERAL-AID

SECTION 2. RIGHT-OF-WAY AND ENVIRONMENT

17. REAL PROPERTY ACQUISITION

d. Property Management

- (4) Use of Airspace. Regional Administrators are delegated the authority to approve or disapprove applications for the use of airspace. This authority shall be redelegated to Division Administrators.

24. RIGHT-OF-WAY ENCROACHMENTS. Regional Administrators are delegated the authority to determine that right-of-way encroachments on projects, other than projects on the Interstate System, must be removed, or approve conditions under which they may be permitted to remain (23 CFR 1.23). This authority may be redelegated to Division Administrators.

SECTION 3. ENGINEERING AND OPERATIONS

37. ACCOMMODATION OF UTILITIES

- a. Regional Administrators are delegated the authority to approve a State's statement and policy, and any subsequent changes or modifications thereto, for accommodating utilities and private line crossings on the right-of-way of Federal-aid and Federal lands highway projects under FAPG 23 CFR 645B (Accommodation of Utilities).

- b. Regional Administrators are delegated the authority to approve requests pursuant to [23 CFR 645.215] paragraphs 9d(1) and (2). The authority to approve requests pursuant to [23 CFR 645.215] paragraph 9d(1) may be redelegated to Division Administrators.

APPENDIX B
BEST PRACTICE PROCESS
FOR
TRADING LONGITUDINAL ACCESS TO ROW
FOR TELECOMMUNICATIONS

An interdisciplinary team including State highway utility, right-of-way, acquisition, and telecommunication user¹⁹ representation should lead and coordinate the following process:

1. Determine needs and priorities of state for telecommunication so that the State has a position from which to bargain.
2. State highway department needs to determine authority to procure (either buy or lease) telecommunications.
3. Determine needs of telecommunication providers.
4. Review and revise longitudinal utility accommodation policy if necessary and obtain the FHWA approval. Particular attention should be paid to:
 - a. Defining telecommunication utilities who will be permitted access.
 - b. Generally describing how location and access control will be allowed.
 - c. Generally define if and how multiple providers will be accommodated.
 - d. Address provisions for and restrictions on system construction and maintenance.
5. Use competition to obtain telecommunications.

¹⁹Telecommunication users should be representative of the state highway or agencies who need and will be using the telecommunication infrastructure. These users may include ITS. Coordination with cities, counties, MPOs, and others with whom information may be shared should be encouraged.

6. Structure agreement with telecommunications provider so that ownership (during and after agreement), liability, location, relocation and access issues are addressed. The agreement will also address specific equipment and length of the agreement.
7. Coordinate specific location internally with planning and/or design staff. Put the onus on telecommunication providers to accurately locate proposed locations on as built or aerial photographs.
8. Coordinate permitting processes with telecommunication provider, procurement, and permitting staffs. Coordinate between districts and any other permitting boundaries so that location, construction techniques, traffic control, and any other unique issues are consistently handled.
9. Especially in areas of high volume traffic, assign construction inspection staff to monitor traffic control and work site safety.



U.S. Department
of Transportation

Federal Highway
Administration

Memorandum

Subject: INFORMATION: Effects of the Telecommunications Act on Utility Accommodation Date: October 25, 1996

From: Director, Office of Engineering

Reply to
Action of HNG-10

To: Regional Federal Highway Administrators

Since 1988, Federal Highway Administration (FHWA) policy has allowed State highway agencies (SHA's) to decide for themselves if they want to allow longitudinal utility installations on freeway rights-of-way and, if so, to what extent and under what conditions. They have been allowed to permit certain utilities and exclude others, and, if they so desire, to prohibit longitudinal installations entirely.

We have recently been asked what effect the Telecommunications Act of 1996 (Public Law 104-104) has on this policy. In our opinion, there is no effect, except that any SHA desiring to allow one or more telecommunications companies on freeway rights-of-way must make their intentions publicly known and must give all telecommunications companies the opportunity to compete.

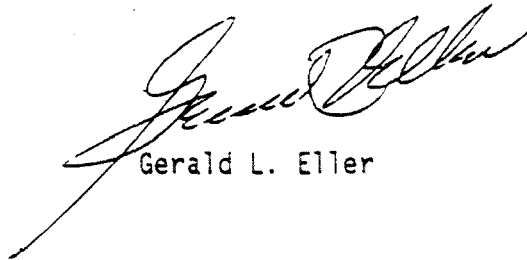
Many SHA's are now interested in entering into shared resources arrangements with telecommunications companies and confusion about this issue may be creating difficulties. Hence, we would like to reaffirm our policy as follows:

1. The FHWA does not encourage any SHA to enter into shared resources arrangements with telecommunications companies, but the FHWA does strongly encourage all SHA's to consider the pros and cons of sharing resources, and to decide for themselves what they want to do.
2. The SHA's may decide if they want to allow telecommunications companies on freeway rights-of-way and, if so, to what extent and under what conditions. They may permit certain companies and exclude others. If they so choose, they can exclude all telecommunications companies.
Note however:
 - If a SHA decides to enter into a shared resources arrangement with one, and only one, telecommunications company, it must make its intentions publicly known and must give all telecommunications companies the opportunity to compete to be the one. The RFP process satisfies these requirements.
 - If a SHA decides to enter into shared resources arrangements with several telecommunications companies, it must similarly, make its intentions publicly known and must give all telecommunications companies the opportunity to compete to be the ones. As before, the RFP process satisfies these requirements.

Telecommunications companies that have been selected through an RFP process to install conduit for fiber optic cable in State owned right-of-way may have to sell capacity in a non-discriminatory manner to other telecommunications companies requesting access. Whether they do or not depends on whether they are a "local exchange carrier" as defined in 47 U.S.C. 153(r)(44) or a "utility" as defined in 47 U.S.C. 224(a)(1). Once the RFP process is completed, however, the SHA does not need to be concerned about whether the firm awarded the use of the right-of-way is providing access to others. That would be a concern of the firm.

Some of the above policies may one day be tested in the courts, as will many aspects of the Telecommunications Act. Even so, until such time as the courts tell them they can no longer do so, SHA's should continue to manage their rights-of-way in the manner they deem most appropriate.

This memorandum has been coordinated with the Office of Real Estate Services, the Intelligent Transportation Systems Joint Program Office, the Office of Traffic Management and Intelligent Transportation Systems Applications, and the Office of Chief Counsel.



Gerald L. Eller