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FEASIBILITY STUDY OF A NEW MOBILE MULTI-MEDIA SERVICE FOR
HAVE-NOT SCHOOL DISTRICTS. FINAL REPORT.

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MASSACHUSETTS UNIV., AMHERST, SCH. OF EDUCATION

REPORT NUMBER BR-6-8193

PUB DATE MAR 67

CONTRACT OEC-6-10-349

EDRS PRICE MF-\$0.50 HC-\$2.56 62P.

DESCRIPTORS- *INSTRUCTIONAL MATERIALS, *MOBILE LABORATORIES,
*PROJECT APPLICATIONS, *FEASIBILITY STUDIES, *RURAL AREAS,
TEACHER ATTITUDES, BERKSHIRE COUNTY, MASS.

THIS STUDY SOUGHT TO ASSESS CURRENT UTILIZATION OF
MULTI-MEDIA FACILITIES IN SMALL, RURAL COMMUNITIES, AND TO
PLAN AN INNOVATIVE MOBILE MULTI-MEDIA LABORATORY FOR THESE
COMMUNITIES. INFORMATION ON CURRENT FACILITIES AND ATTITUDES
WAS GATHERED AT EDUCATORS' MEETINGS AND IN INTERVIEWS WITH
PROFESSIONALS. THE NEEDS FOR QUALIFIED PERSONNEL AND
ADDITIONAL MATERIALS WERE ESPECIALLY STRESSED. A PROPOSAL FOR
A 3-YEAR DEMONSTRATION OF THE MOBILE LABORATORY WAS PREPARED
FOR SUBMISSION TO THE U.S. OFFICE OF EDUCATION UNDER TITLE
III OF THE ELEMENTARY AND SECONDARY ACT. APPENDICES TO THIS
STUDY INCLUDE THE PROPOSAL WITH COST DATA, SURVEY QUESTIONS
AND ENROLLMENT FIGURES. (LH)

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Service for Have-Not School Districts

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Final Report

March 1967

School of Education
The University of Massachusetts
in cooperation with
U.S. Department of Health, Education and Welfare
Office of Education
Washington, D.C.

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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FINAL REPORT

**FEASIBILITY STUDY OF A NEW MOBILE MULTI-MEDIA
SERVICE FOR HAVE-NOT SCHOOL DISTRICTS**

The research reported herein was conducted under contract with the United States Office of Education under the provisions of Public Laws 81-152 and 83-531, Contract Number OE-6-10-349.

Prepared by

Raymond Wyman, Project Director

School of Education

University of Massachusetts

Amherst, 01002

March 1967

I. Introduction

The use of instructional materials such as films, film-strips, transparencies and recordings has improved education substantially in schools where these materials have been made readily available, easy to use, and where teachers have been provided with equipment, room facilities and training in media utilization.

Most urban teachers now have the conditions necessary for good media utilization because audiovisual instructional materials or media centers have been created that include media libraries and the needed professional and technical services.

Both urban and rural teachers now have access to the common audiovisual equipment through local purchases and the several federal programs that provide such equipment. Both are equipping classrooms with the facilities for easy use of media.

Most rural teachers do not have the materials to go with the equipment and the professional and technical services necessary for good media utilization because centers with libraries of media and trained personnel have not yet proved feasible with so few teachers in so many small schools scattered over large geographic areas.

II. Purpose

It was the purpose of this study:

1. To assess the degree to which multi-media facilities have been acquired and are currently utilized in selected small communities.
2. To determine how school officials in these communities might utilize the resources of a mobile multi-media laboratory as one means of extending and supplementing their facilities.
3. To study alternative designs and views for a mobile multi-media laboratory in order to determine the most effective scheme.

III. Procedure

A plan was prepared to consult with many individuals and several groups in order to prepare a comprehensive plan for a mobile multi-media service that would provide rural teachers with needed services and that would be feasible under existing local, state and federal programs.

A set of questions was prepared to be used by the project director during all of the interviews and meetings conducted during the early part of the study. These questions appear as Appendix I. They were never used as a questionnaire, but only to ensure that all people and groups were asked essentially the same questions. The questions were intended to be considerably broader than any resulting proposal could be. The proposal resulting from this study is indeed much less comprehensive in several ways than was originally thought possible. It has also been expanded in some ways.

IV. Survey

Five small Western Massachusetts school districts, each under one superintendent, were selected to determine existing media resources and the degree to which they are being utilized. The following superintendents were invited to attend a day-long conference at the University of Massachusetts:

1. Warren Bennett, South Deerfield
2. Wilfred Gallagher, Stockbridge

3. Charles Smith, New Salem
4. Dana Webber, Huntington
5. Thomas White, Dalton

These men were recommended by the school administration staff at the University as interested in media and representing systems fairly typical of media usage and needs in the non-urban area of Western Massachusetts.

This first conference was conducted on May 11, 1966. Warren Bennett was unable to attend. Dean A.W.Purvis greeted the group and expressed interest in a cooperative University-Public School attack on educational problems. Bruce Oldershaw, Audiovisual Director of the Amherst, Public Schools, was present as a consultant to the project. (He has continued in this capacity throughout the project.) Dr. William Kelly represented the Massachusetts State Department of Education.

The conference included presentation and discussion of the following points:

1. New opportunities for educational innovation with federal funds
2. Idea for a "Filmobile" proposed in a 1949 article by the project director (Appendix II)
3. Review of existing mobile services other than media libraries
4. Review of teacher needs if media are to be effectively used

5. Possible media libraries on buses
7. Possible schedule for buses
8. Professional, technical and clerical services
9. Size of school system needing mobile services
10. Local support after federal support is terminated
11. Existing and needed AV equipment in schools at present
12. Existing and needed media libraries for the schools represented
13. Characteristics of a complete media service (The project director reported on his visit to the San Diego media center.)
14. Logistic problems in rural Western Massachusetts
15. Time needed for a mobile multi-media stop at each school
16. Multiple copies of each media title vs. individual copies
17. The Title III ESEA GRACIE project in Greenfield for Franklin County
18. Need for involving classroom teachers in a project for their benefit (A meeting for this purpose was planned.)
19. The two pages of questions in Appendix I

The conclusions of the superintendents' conference were as follows:

1. The group was very enthusiastic about the project.

2. They agreed that a media service taken directly to the teachers in rural areas was practical.

3. They felt that one dollar per pupil per year was a reasonable amount for each school served to pay for the project after federal support was terminated.

4. They wanted a representative teacher group to consider the project. (It was scheduled for June 8, 1966.)

5. They suggested many answers to the questions proposed.

V. Teacher Conference

The conference of rural classroom teachers chosen by their superintendents to consider a mobile multi-media service was held at the University of Massachusetts on June 8, 1966. Those present in addition to the project director and Bruce Oldershaw (consultant) included:

Henry J. Makuc, Stockbridge

Kenneth Barrows, Huntington

Walter Gehring, Dalton

Duane Wyman, Russell

Elmer Allen, Dalton

Bernard Fleury, Sunderland

Beth Abbott, Leverett

They represented both elementary and secondary schools.

The project director reviewed the terms of the USOE contract which made this study possible. He then demonstrated the wide range of newer media which the project proposed

to make available to rural schools through a mobile multimedia service. Bruce Oldershaw reviewed the conference of superintendents and their suggestions and conclusions.

A spirited discussion followed. There seemed to be much interest in the project which would deliver much needed materials and professional and technical services directly to the schools involved. Most classroom teachers will not travel to distant resource centers to pick up and return materials even if they are freely provided. The opportunity to confront the person directly responsible for scheduling materials also appealed to them. There was some disbelief that such a good thing might ever be provided for schools in the rural areas.

Bruce Oldershaw took the teachers on a tour of his audiovisual center at Amherst Regional High School which serves all of the elementary and secondary schools in his area. They agreed that none of them now had such services, and that the proposed mobile service would approximate such services for them.

The teachers then discussed the questions in Appendix I in great detail and their answers have been incorporated in the proposal which follows.

In order to take stock of existing facilities, equipment and media in the schools represented by the teachers, each agreed to make a survey of his school and report back at a

conference on September 21, 1967. Copies of the DAVI standards for personnel, equipment and materials were distributed to be used as guidelines.

The tenor of the teacher's meeting was that the project was feasible, needed and desired.

VI. Consultation and Research

The project director consulted various knowledgeable people and the literature in order to find who had done anything with mobile facilities similar to those proposed and who might have expert opinions on what should be done.

Weston Woods, Connecticut was visited to see the Children's Caravans which had been reconstructed from old school buses to show selected educational motion picture films to children in areas where no such advantage was available. Mr. Morton Schindel and several members of his staff were consulted.

The filmobile and services of the Wake County Schools at Raleigh, North Carolina were visited. Mr. T.M. Grimes was most helpful in every way. A descriptive summary of their operation is attached as Appendix III. This is the only mobile media service that in any measure is similar to the one proposed, and it was not known to exist when this project was conceived. The actual vehicle had just been delivered and equipped at the time of the visit and no actual experience with it was available. They did, however, report on their experiences with a truck the year before.

The proposed Western Massachusetts mobile service is designed for rural rather than city service, many more schools, many more miles, much more rugged country, multi-media rather than films, and almost entirely mobile rather than based on an extensive county media center.

Travelabs in Rhode Island was visited because they are making a large number of mobile educational units as part of new federal projects. They were either large trailers or trucks designed for parking at a school while students moved into them for special instruction. They did not seem to have the mobility necessary for the proposed project, and student use directly was not considered.

The Pawtucket, Rhode Island audiovisual center was visited because the director, Wilfred Berube, has a special audiovisual Travelab on order. Differing concepts were discussed in detail, and many good ideas were obtained.

Mrs. Galick of the Massachusetts Division of Library Extension was visited in Boston in order to benefit from her long and successful experience with bookmobiles. Several articles on bookmobiles were borrowed and read. Mrs. Galick seemed very enthusiastic about a media service to rural schools. She felt that it was entirely feasible to deliver such materials in a large and heavy vehicle even in New England winters. She agreed to send a knowledgeable representative to the next conference in Amherst.

Project GRACIE was visited in Greenfield, Massachusetts.

The Greenfield Public Schools has a Title III ESEA planning grant for a Greenfield Regional Augmented Center for Innovative Education. Among many other educational services, they are planning for multi-media services through the creation of a learning and resources center.

VII. Follow-up Conference

The follow-up conference with classroom teachers was held at the University on September 21, 1967. It included the following people:

Raymond Wyman, project director

Bruce Oldershaw, Amherst AV director and consultant

Alice Cahill, Division of Library Extension

John Schomer, State Department of Education

Edith Facey, GRACIE project, Greenfield

Kenneth Barrows, Huntington

Duane Wyman, Russell

Wilfred Gallagher, Stockbridge (for Henry Makuc)

Bernard Fleury, Sunderland

Walter Gehring, Dalton

Elmer Allen, Dalton

Beth Abbott, Leverett

Dr. Wyman reported on his travels and the relevance of other projects to the one under consideration.

Mrs. Facey reported on the GRACIE project. She felt that the two projects were in conflict in the area of newer

media.

Possible vehicles were considered. A standard school bus chassis with specially adapted body seemed desirable. It would hold and transport all of the equipment and materials and it was pointed out that all schools to be visited are in fact now serviced by regular school buses each day. Several bus companies would be interested in supplying vehicles.

Bruce Oldershaw reported on his travels and map work to establish routes that would include all schools each week. It would apparently be difficult but possible to include all schools in the rural areas of the four western counties if elementary and secondary media libraries were included on each of the two buses.

Miss Cahill reported on the twenty-six year history of the bookmobile service. She thought that the proposed multi-media school service was an excellent idea and not in conflict with anything that they were doing.

Mr. Schomer commented on the project from the viewpoint of the State Department of Education. He felt that the project was commendable and not in conflict with the state's new regional education centers.

Certain conclusions resulted from the general discussion:

1. Vehicle service will be required on Saturdays.
2. A driver-technician and a clerk-inspector should be on each bus.

3. Professional people are needed for consultations, workshops, etc.

4. Graduate interns should be used to augment the professional staff.

5. Media should be selected on the basis of their popularity in the area rather than by teacher selection committees.

6. A project director and secretary will be needed.

7. A draft proposal should be sent to all superintendents for their comments.

8. Materials should be provided to schools during the initial phase of the project while they are encouraged to increase their equipment budgets.

9. There was doubt about whether Franklin County should be included in this project or with GRACIE alone.

The teachers reported on how well their communities met the DAVI basic standards for staff, media and equipment. The survey results from twenty schools are summarized in Appendix IV. The survey indicated that no schools met the basic personnel standards and that few of them met any of the media standards. They were somewhat better in meeting equipment standards, particularly for 16 mm projectors, opaque projectors and radio receivers. The survey left no doubt that the selected schools were in need of considerable upgrading in all areas of newer media but particularly in need of personnel and materials.

VIII. Further Research and Consultation

On September 27-28, 1966 the project director consulted with Mr. Lee Green of the Colorado State Department of Education and Mr. Harold Lord of the Colorado Audiovisual Association on the Educational Technology Dissemination Project which they had recently completed under Grant No. OE-4-14-022. Their demonstration program was aimed at informing teachers, administrators, school board members and interested citizens as to the value, availability and use of educational media in the public schools and to compare and determine relative strengths and weaknesses between a breadth and depth approach to the dissemination of educational media information. They purchased and equipped a vehicle with all necessary equipment and materials to conduct demonstrations and workshops over a large part of a large state. Their vehicle was a small van and planned only to take the equipment necessary to demonstrated media use and local production. It did not contain libraries of media to be loaned to classroom teachers. The two men gave much helpful advice based on their experience with their media vehicle. They both felt that the proposed project had much merit.

Based on reports of somewhat similar projects at the time of writing this project proposal, trips were originally planned to several other places, but later checking seemed to indicate that no good would be served.

All available reports of federally sponsored supplementary media centers were checked, and reports have been received from a number of them. None of them to date seems to have the essential characteristics of this project. Most of them are designed to assemble materials and services that teachers can visit rather than be delivered directly to them on a regular schedule.

On October 20, 1966 the project director was asked to speak to the Berkshire County Superintendents' Association about this project. There seemed to be a very favorable response from more than thirty men in attendance.

On December 15, 1966 the project director was asked to speak to the Pioneer Valley Superintendents' meeting in Gill, Massachusetts. This large group of superintendents also seemed to approve of the project during the discussion and went on record to support it.

All of the reading, research and consultation conducted to this time pointed toward the feasibility of a project to establish a mobile multi-media service for rural schools in Western Massachusetts. Nothing like it was in existence.

The next question was how to gain the necessary federal support for such an ambitious undertaking. A study of existing programs indicated that Title III of the Elementary and Secondary Education Act (PL 89-10) was the logical one

to use. Among its objectives are those of "...providing supplementary educational services and activities such as ...providing special educational and related services for persons who are in or from rural areas...including where appropriate, the provision of mobile educational services ..."

ESEA operational grants must be submitted by a local educational agency. Mr. Wilfred Gallagher, Superintendent of Schools for the Berkshire Hills Regional School District, Stockbridge, Massachusetts had expressed considerable interest in the project and he was approached about being the project sponsor. With the approval of his committee, he agreed to do this.

Discussions with officials at the State Department of Education in Boston indicated that Mr. Joseph Bastable was the man to give advice on our proposal.

On December 27, 1966 Mr. Gallagher and the project director met for several hours with Mr. Bastable and three of his associates at the State Department of Education. A discussion copy of a proposal for a Title III ESEA operational grant was considered in detail. Many changes were suggested in order to have the proposal fit the national and state guidelines for Title III ESEA projects. The major changes included:

1. From two units to one complete mobile service
2. From all of rural Western Massachusetts to Berk-

shire County

3. From primary emphasis on materials to primary emphasis on services
4. More University of Massachusetts involvement
5. Closed circuit television equipment and personnel
6. More evaluation of effectiveness of the service
7. From a five year to a three year project
8. More private school involvement
9. Addition of demonstration lessons with newer media
10. Addition of in-service and pre-service workshops, seminars and possibly credit courses
11. Revision of budget so that capital outlay will not exceed 50% of total project
12. Survey of teacher needs and administrator approval in the County

IX. ESEA Title III Proposal

As a result of this conference, immediate steps were taken to change the proposal so that it would have a good chance of funding under Title III of ESEA.

A survey of staff opinion on needs to be met by a supplementary educational center in southern Berkshire County was conducted by Mr. Gallagher. Those parts concerned with newer media are extracted and summarized in Appendix V. This survey confirms that teachers really feel a need for the media and personnel services proposed by the project.

Superintendents in Berkshire County were informally

asked for opinions about establishing the proposed mobile multi-media service. Several letters were received and all of them were in favor of the proposal.

In February 1967 a revised proposal for an operational grant under Title III of Public Law 89-10 was prepared. The title was "A Mobile Multi-Media Service for Rural Schools in Berkshire County, Massachusetts." A cover letter to superintendents or headmasters was also prepared to introduce the project and ask for a definite expression of interest. A questionnaire and reply form was prepared in order to collect the information needed to complete the application for a Title III ESEA grant. These three items are combined as Appendix VI and represent the major outcome of this feasibility project.

The proposal for an operational grant will now be turned over to Wilfred Gallagher and the Berkshire Hills Regional School District for revision if needed or desirable and submission to the U.S. Office of Education and the Massachusetts State Department of Education.

X. Questions and Answers

It is now possible to answer the questions proposed at the beginning of this project. (Appendix I)

1. The public and private schools in all of the towns of Berkshire County should be served.
2. These schools do not now have the materials, equipment, facilities and personnel to do an adequate job with

newer media.

3. These schools particularly need local libraries of motion picture films, filmstrips, overhead transparencies and recordings.

4. They need professional and technical help for their equipment problems.

5. They need assistance in securing instructional materials, help in preparation of instructional materials and in-service training in media utilization.

6. Professional, technical and clerical personnel are needed in order to have effective media utilization.

7. One thirty foot specially adapted and equipped school bus and one station wagon will ne needed.

8. The University should be involved with consultation, coursework, demonstrations, interns and practice teachers.

9. Approximately thirty minutes will be required at each building visited so that the building media coordinator can transact his weekly business.

10. A media coordinator is needed at each building. he should have released time in larger schools.

11. The professional media personnel should not go with the vehicle but be available on call and for scheduled demonstrations, workshops, consultations, etc.

12. A three year demonstration project should be financed by the U.S. Office of Education and then the schools

served should finance the project cooperatively.

13. Materials should be selected by the professional project staff from among the most popular offerings of the leading producers.

14. Local school systems of sufficient size should be encouraged to establish their own comprehensive media services during the three year demonstration project and leave the mobile service free in future years to serve only the rural schools perhaps beyond Berkshire County that cannot afford to establish services of their own.

XI. Summary and Conclusions

It is entirely feasible to establish and operate a comprehensive mobile multi-media service for the rural schools in Berkshire County of Massachusetts. The towns, schools and enrollment included appear in Appendix VII. The teachers in these schools have not had available to them the professional and technical services necessary for good classroom media utilization. They have some of the equipment but few of the materials necessary. It is only through cooperative use of personnel and services that the large number of widely scattered small schools can hope to have the necessary media services in the foreseeable future.

A proposed operational project under Title III of the Elementary and Secondary Act has been prepared as the logical outcome of this study, and it appears as Appendix VI.

There are no operating projects in the country similar to this one. It would be truly innovative. It could well be a model for many other rural areas in the country to study and adapt to their needs.

APPENDICES

- I. Questions About Mobile Multi-Media Centers
- II. How About a Filmobile?
- III. Wake County Filmobile and Services
- IV. Selected Schools Personnel, Equipment and Materials Survey
- V. Staff Opinion On Needs That Might Be Met By a Mobile Multi-Media Service in Southern Berkshire County
- VI. ESEA Title III Proposal and Questionnaire
- VII. Towns, Schools and Enrollment in Berkshire County
- VIII. Route Maps for Bus

APPENDIX I

QUESTIONS ABOUT MOBILE MULTI-MEDIA CENTERS

General Question:

Is it feasible for the University of Massachusetts School of Education to establish and operate a secondary multi-media center and an elementary mobile multi-media center for the have-not schools in Western Massachusetts?

Specific Questions:

1. What schools should be served?
2. What is the status of newer media in these schools?
3. What materials do these schools need?
 - a. Motion picture films?
 - b. Filmstrips?
 - c. 2 x 2 slides?
 - d. Overhead transparencies?
 - e. Recordings?
 - f. Study prints?
 - g. Models, Mockups, Specimens?
 - h. Supplementary books and printed materials?
4. What about equipment for classroom use?
 - a. Replacement for inoperative equipment?
 - b. Additional items during rush periods?
5. What services should be provided?
 - a. Professional help to teachers on selection, application, evaluation, etc.?
 - b. Collecting, cataloging, storing, scheduling, repairing, maintaining, delivering and picking up

- materials?
- c. Mounting tear sheets?
 - d. Making transparencies for masters?
 - e. Graphics for transparencies?
 - f. Making 2 x 2 slides from books, magazines, newspapers?
 - g. Making brief motion pictures?
 - h. Copying recordings? Editing recordings?
 - i. Equipment maintenance and/or repair?
 - j. Replacement expendable items such as lamps and tubes?
6. What personnel are needed?
- a. Professional?
 - b. Technical and clerical?
7. What vehicles are needed? Size? Facilities?
8. What support is necessary from and at the University?
9. How long should the mobile center stay at each building served?
10. Is a media coordinator needed at each building?
11. Should the professional media specialist go with the vehicle?
12. How might the service be financed?
- a. Demonstration project?
 - b. Long range plan?
13. How should materials be selected?
14. How can local, independent, self-sufficient media centers be set up in schools able to support them?

R.W. May, 1966

APPENDIX II

old problem and solution. Central film libraries of universities or private companies have been in existence for many years, and they have made it possible for ordinary schools to have the use of some audio-visual materials. The disadvantages of the central library system are so well known that they hardly need enumerating.

1. They are often a hundred or more miles distant.
2. Contact must be made by writing letters and waiting for written replies. Needs must be anticipated far in advance.
3. Transportation charges may be almost as high as the rental charge. (This paper is not concerned with free films.)
4. Films wanted for a certain time are often not available.

Some method must be found for getting the teacher and his needed aids together at the right time with minimum cost, delay, and bother.

In some areas groups of schools or communities have established co-operative film libraries. However, in New England this has not proved to be a very workable answer. Apparently, a central guiding agency is required to keep the best materials properly moving without friction.

The Solution

What is the ideal solution if a school is too small to own its own audio-visual materials? Is there not some way of giving all classes the advantages that large city classes have with a local audio-visual library and a supervisor to give professional help?

I propose that the solution is to set up an audio-visual center at state universities, state teachers colleges, or other convenient educational centers and operate a filmobile that would visit all the schools in a given locality.

A typical audio-visual center might be located at the state university. It would have a full-time director to supervise all its activities and assistants of various qualifications to help him. The center would serve the department of education to which it was attached by giving courses and actual experience in the use of audio-visual aids to present and future teachers taking courses. It would also serve other university departments by helping with their audio-visual needs. In addition it would go beyond the campus by way of the filmobile and serve all the schools in the district.

The new aspect of this solution is the traveling audio-visual center called the filmobile. Schools would be getting audio-visual aid as many of them have been getting library aid already. The extension service has been carrying aid to the farmer and his family for years. We need to carry audio-visual aid out to the schools.

The filmobile would be essentially a traveling audio-visual department that would visit each school on a regular schedule, probably once a week. It should overcome the disadvantages of stationary libraries and get the materials now used by few into the hands of many eager teachers.

This is obviously not an inexpensive solution. The cost could possibly be shared by the university, the state department of education, and the local user of the service. Possibly a grant could be obtained from some source to initiate the service and give it a trial.

Other Suggestions

The filmobile would have its headquarters at the university where it and the contents would be serviced. It would be in charge of a driver who was a teacher interested in the audio-visual field or a university graduate interested in becoming an audio-visual director. It is necessary to have pedagogical as well as technical help in the field.

The filmobile would carry libraries of sound films, filmstrips, slides, transcriptions, and records. It would also have equipment for making small or temporary repairs to keep materials in use.

The driver would have to be a master booking agent, since all ma-

terials would be checked in and out on the spot and advance orders taken constantly. He would, however, have the advantage of direct contact. No letter-writing would be required. Pickup and delivery would be positive. Future bookings could be made or denied instantly. It could be a dependable service geared to real educational needs. The driver could pass out new bulletins regularly and keep the remotest school informed on new methods and materials. The teachers could keep him informed of their needs.

A great economy of time should result from use of the filmobile. Aids would spend more time in the schools and less time in transit. Many aids in demand would seldom get back to the central library, since they would be picked up from one school and left at another. Being in a school a whole week should allow for proper utilization of the aid. It might be used by more than one teacher.

The number of miles or schools or towns one filmobile could service during the five-day week would require extensive study and experiment. The cost of the service is likewise difficult to ascertain. However, the goal is better education for all American youth, and we must experiment and gamble with new methods. What we have done is not enough.

How About a Filmobile?

By **RAYMOND WYMAN**

Audio-Visual Director, Holyoke School Department

FEW educators today deny the value of modern audio-visual aids to education. However, wide and proper use of these teaching tools has generally occurred only in the larger cities. By and large, the schools of the nation have been little changed as a result of new equipment, new materials, and new methods.

There are obviously many reasons for the lag in using audio-visual aids to improve the education of the large but scattered masses of our children. Lack of teacher preparation, lack of equipment for using aids, lack of the aids themselves, and educational inertia can be cited as outstanding reasons why many children are still getting a barren education.

Extension courses, in-service training courses, magazine articles, conferences, required audio-visual courses for teachers in training, and the tireless work of educational salesmen can overcome the poor preparation and high regard for the status quo.

What can be done to get the usual audio-visual materials—records, transcriptions, slides, filmstrips and sound motion pictures—into ordinary classrooms outside the large cities? If materials are readily and not too expensively available, it is possible that schools and/or their friends would get the projectors and playback machines necessary. This paper is based on an assumption that the audio-visual materials constitute the bottleneck that is most in need of being broken at this time. A good film without a projector might receive more attention than a good projector without a film.

Strictly educational audio-visual materials are expensive, by usual school standards, and there is no way of proving to the typical school administrator that his system can own very many of them. Some method of rental or of co-operative ownership seems to be essential, at least for the next few years.

So far this is merely restating a

APPENDIX III

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DESCRIPTIVE SUMMARY
FILMOBILE AND SERVICES

Wake County Schools
Raleigh, N.C.

VITAL STATISTICS:

Chassis: Forward Control

Body: Inside Height 78"
Inside Width 90"
Outside Length 31'
Film Capacity--3000
Heat - Circulating hot water
Air Conditioning - 13,000 BTU
Lighting - Fluorescent tube
Approximate Cost - \$15,000

Optional Equipment: (included in Wake County)
Film inspection machine
Film splicer
Visual catalogue files
Dry transparency producer
Filmstrip projector (preview)
16 mm. projector (preview)
36" x 36" projection screen
Primary typewriter (for lettering)
Tool kit for minor repair and adjustment
Record player (pre-audition)
Album file for recordings

OPERATION:

At present the Filmobile in Wake County visits each of 37 schools once each week. Friday is free for necessary and pre-arranged call-backs. Visits at a school range in duration from 30 to 75 minutes. Basically, ours is a requisition, delivery, pick-up and inspection service of 16 mm. films, although other services are rendered. Requisitions for films for each school are made through the individual

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school A-V Coordinator. Requisitions are processed by the driver-technician while at the school and films are delivered then and there. If a film is not available at the time, it is scheduled on the returned requisition. Quite often the operator is able to recommend a substitute title that fills the need equally well. Films deposited at a school one week are picked up and promptly inspected the next week. Often films are picked up at one school, inspected and delivered to another school on the same day.

During any school visit, the following services are also available: Dry process transparencies are made and delivered immediately if teacher provides the line drawings for the technician. Technician will also label the drawing if the teacher desires such. Primary typewriter is used for this purpose. Overlays and diazo transparencies are produced at the central offices.

The unit is also used for routing films, filmstrips and other A -V materials to preview committees. In this manner we are able to get a trial run of new material in classroom situations.

The unit carries spare equipment at all times. Any school unit needing major repair is exchanged for operable equipment until repairs are made. Minor repairs are made by the technician during his visit to the school. The technician also instructs teachers, especially beginners, on the

III-3-

proper use of equipment. A limited amount of time for film and filmstrip previews is available to teachers during a school visit, but this privilege is not extensively used due to classroom responsibilities.

Services rendered by a filmobile would certainly vary from school district to school district. The number of schools to be served, the distance between schools, the intramural services already available in the schools and the type of central office services are some of the factors which would shape the program. The filmobile, therefore, should be tailored specifically to meet the needs and objectives of the school district.

It is not to be confused as a teaching center for students. It is a service to the staff. It is not a panacea, but it does provide A - V materials to the teacher when she needs them. That is its main objective and, to a very high degree, it achieves the objective.

APPENDIX IV

A SURVEY OF CERTAIN WESTERN MASSACHUSETTS
SCHOOLS TO DETERMINE IF THEY MEET BASIC DAVI STANDARDS
FOR PERSONNEL, EQUIPMENT AND MATERIALS

	New Salem	Shutesbury	Wendell	Leverett	Erving	Conway	Sunderland	Deerfield	East Whately	Whately	Dalton (2 bldg.)	Dalton J.H.	Blandford	Russell	Huntington	Pioneer Reg. H.S.	Gateway Reg. H.S.	Mahconah Reg. H.S.	Frontier Reg. H.S.	New Salem Acad.
Staff																				
16 mm films																				
Filmstrips	x	x		x			x		x	x										x
Recordings																				
Budget														x						
16 mm Proj.	x	x	x	x	x	x	x	x	x	x			x	x	x		x			
8 mm Proj.																				
2 x 2 Slide Proj.																				
Filmstrip/slide Proj.				x																
3 1/4 x 4 Proj.																				
3 1/4 x 4 Proj. Aud.																				
Filmstrip Viewer																				
Overhead Proj. 10x10																				x
Overhead Proj. Aud.																				
Opaque							x	x	x	x	x		x	x	x		x		x	
Record Player																				
Tape Recorder																				
Projection Cart																				
Light Control							x		x					x						
Video Tape Recorder																				
Radio-Receiver							x	x	x	x	x	x	x	x	x		x		x	
Projection Screen																				
Local Prod. Equip.																				
T.V. Receivers							x													

x - meeting basic standards

APPENDIX V

**STAFF OPINION ON NEEDS THAT MIGHT BE MET BY A MOBILE
MULTI-MEDIA SERVICE IN SOUTHERN BERKSHIRE COUNTY**

TYPE OF ACTIVITY	HIGH PRIORITY	NEEDED	LOW PRIORITY
1. Assistance in Securing In- structional Materials	61	78	43
2. Preparation of Visuals and other Materials for In- struction	49	88	27
3. Instructional Materials in Depth by Field	50	88	24
4. Audio-Visual Materials Easily Available	74	77	22
5. More A-V Equipment (Type?)	34	61	29
6. In-Service Training During School Year in Berkshire Area	115	82	12
7. In-Service Training During Summer	46	59	41
8. Effective Use of A-V Materials	40	73	27
9. Training of Teacher Aides and Other Para-Professionals for Local Schools	60	84	19

APPENDIX VI



The Commonwealth of Massachusetts

University of Massachusetts

Amherst

Audiovisual Center

Tel. 413 545-2454

01003

February 20, 1967

Dear Superintendent or Headmaster:

Enclosed is an outline of a proposal for an operational grant under Title III, ESEA, to establish A MOBILE MULTI-MEDIA SERVICE FOR RURAL SCHOOLS IN BERKSHIRE COUNTY, MASSACHUSETTS. It was prepared by Wilfred Gallagher and Raymond Wyman under a Cooperative Research contract OE-6-10-340.

We think that this proposed project will provide the K-12 teachers in the rural areas of Berkshire County with a much needed comprehensive newer media service. Professional and supporting media personnel and an extensive mobile library of newer media would be regularly available to all schools which agree to provide coordinators, basic equipment, classroom facilities and plans for future media use.

Would you be interested in participating in this project if it is approved and funded? If your answer is no, please fill in the top part of the next page and return it. If your answer is yes, please complete the form and return it. This is in no way a binding contract, but a firm indication of interest. You may keep the proposal.

Very truly yours,

Raymond Wyman, Prof.
School of Education

Wilfred Gallagher
Superintendent of Schools
Berkshire Hills Regional School District
Stockbridge, Massachusetts
Telephone: 413-298-3362

RW/ahg

RESPONSE TO PROPOSAL FOR A MOBILE MULTI-MEDIA SERVICE FOR RURAL SCHOOLS IN BERKSHIRE COUNTY

Local Education Agency or Private School _____

Mail Address _____ Zip _____ Tel. _____

1. I am not interested in the project: _____ (Sign and return the form)
2. I am interested in the project: _____ (Continue with form)
3. Total estimated population in that part of Berkshire County that you serve. (LEA only): _____
4. School enrollment and project participation data: (Berkshire County only)

		Pre-K	K	1-6	7-12	Adult	Other	Totals	
School Enrollment	Public								Prof. Staff
	Non-public								
Persons to be Served by Project	Public								
	Non-public								

Total number of Participants by Type (Applicable to figures of persons served by project)	White	Negro	American Indian	Other Non-white	Total

Rural/Urban Distribution of Participants to be Served by Project

	Rural		Metropolitan Area		
	Farm	Non-farm	Central City	Non-cent. City	Other Urban
Percent of Total Number					

6. I feel that we can meet the responsibilities of participating schools outlined on page 6-7 of the project outline: at once _____; by Sept. 1968 _____; other _____.
7. Comments: _____

Signed _____ Title: _____

March 27, 1967

A Proposal for an Operational Grant

Title: A MOBILE MULTI-MEDIA SERVICE FOR RURAL SCHOOLS IN
BERKSHIRE COUNTY, MASSACHUSETTS

Submitted to: United States Office of Education, Title III
of the Elementary and Secondary Act of 1965 (PL 89-10)
and the Massachusetts Division of Elementary and Secondary
Education.

Contractor: The School Committee of the Berkshire Hills
Regional School District, Stockbridge, Massachusetts, 01262.

Project Director: Wilfred M. Gallagher, Superintendent of
Schools, Berkshire Hills Regional School District, Stockbridge,
Massachusetts, 01262.

Objective: To carry out certain of the stated purposes of
Title III of the Elementary and Secondary Education Act
" . . . by providing supplementary educational services and
activities such as . . . providing special educational and
related services for persons who are in or from rural areas
. . . including, where appropriate, the provision of mobile
educational services. . . ."

Submission Date: July 15, 1967

Starting Date: September, 1967

Planned Duration: Three Years

Background: The use of instructional materials such as films,
filmstrips, transparencies and recordings has improved educa-
tion substantially in schools where these materials have been
made readily available and easy to use, and teachers have been
specially trained. Most urban teachers now have such materials,
facilities and training available to them through local in-
structional materials centers. Most rural teachers do not
have the prerequisites for good media utilization because
schools are so small and widely scattered that instructional
materials centers and services have not been feasible. It is

the purpose of this operational grant to supply the rural teachers in Berkshire County with non-book instructional materials and all associated media services by means of a mobile supplementary multi-media center.

Schools Served: All of the public and private elementary and secondary schools in Berkshire County with the exception of Pittsfield and North Adams that agree to provide coordinators, basic equipment, classroom facilities and plans for future media use. Pittsfield and North Adams have already established centers and services.

Project Headquarters: Space will be provided at the new Berkshire Hills Regional School in Great Barrington for the office needs of the professional and non-professional staff and for the two vehicles while not in use. Rented space in Stockbridge will be needed until the new school is opened in January, 1968.

Media Library:

1. **Scope and Size.** Approximately 1000 films, 2000 filmstrips, 10,000 masters for overhead transparencies, 500 prepared transparencies, 500 recordings and small amounts of experimental materials will be included.

2. **Selection.** Films, filmstrips, transparency masters, transparencies, recordings, and experimental materials will be selected by professional AV person and consultants on basis of popularity of commercial materials and needs of teachers in the area.

3. **Storage and Transportation.** The entire media library will be stored and transported by a specially constructed vehicle that is essentially a thirty-foot school bus.

Services Provided:

1. **Local Production.** Equipment in the bus will make convenient the local production of transparencies from masters in the library or from teacher made materials. A mounting and laminating machine will be ready to use at each stop.

2. **Scheduling.** All media would either be in the vehicle or the schools served. Scheduling would be done as teachers visit the vehicle. No time would be lost in transit. (A typical film library schedules one week to deliver the film and one week to return it for one week's use.) Teachers could make definite plans for media. The vehicle would spend up to thirty minutes at each school, depending on the size and needs each week, on a known schedule.

3. Minor Repairs. The bus will provide the equipment and technical assistance necessary to locate and correct minor technical malfunctions in the equipment owned and used by the various schools.

4. Delivery and Pickup. All media will be delivered by the bus directly to the door of each school each week on an advance schedule. No media will be mailed or otherwise transported. Return of materials will be positive.

5. Maintenance. All media will be kept in first-class condition by the media clerk-technician aboard the bus. A complete film inspection machine will be operated while the bus is traveling between stops.

6. Consultation. Professional and technical advice will be provided to the teachers and administrators through regular visits and on demand by the full time project staff. A station wagon will be provided for their use. Consultants from the University of Massachusetts and other places will be available for special needs.

7. Demonstrations. The resources of the center will be used by visiting demonstration teachers and graduate interns in various grades and subjects to show innovative techniques to teachers who do not get to the urban centers where they ordinarily originate. Such demonstrations would be repeated in the northern and southern halves of the County in selected schools. Such demonstrations would be designed to help the teacher who has not used media to see the direct applications to his grade and subject, and the demonstration teacher would be using media known to be available in the County.

8. In-Service Education. Formal and informal courses, seminars and workshops would be given by the professional staff for individual schools and groups of schools. The equipment and media facilities of the bus and station wagon would be available to make such in-service education very practical and directly related to available resources and individual needs.

9. Pre-Service Training. Practice teachers from the University need media to use in their first teaching experiences, and professional help in selection, use and evaluation. The resources of the project will be available to them and special workshops and seminars will be conducted at the University or in the County.

10. **Newsletter.** A media newsletter will be prepared and distributed to all teachers and administrators to report on media, services, innovative utilization by County teachers, coming events and related developments throughout the country.

11. **Evaluation.** The professional staff, with the help of University consultants, will regularly evaluate the outcomes of the project as various materials and techniques are used. School executives will have a conference at the end of each year. The classroom teachers will not only have an opportunity to try innovative techniques, but to determine their effectiveness.

12. **Educational Television.** Community antenna (cable) television is rapidly covering Berkshire County. A channel on the cable and terminals in each school are expected to be provided free to the schools and ready for use. Individual schools or even the schools of one town cannot provide good educational programs to be delivered by the cable. The proposed supplementary center will provide the personnel and equipment necessary to prepare and record lessons and supplementary educational material to be used by an individual school or to go to other schools on the cable. Advice and instruction in utilization of off-air television programs will also be included. An opportunity will be provided for teachers to have lessons recorded on a television tape recorder for self and professional evaluation.

Responsibilities of Participating Schools: Each school that benefits from the services provided by the project must meet the following conditions from its own resources by September 1968.

1. A building media coordinator must be assigned who will be the regular liason person between the project and the school. The person must have or be willing to accept training in newer media. No released time is expected in schools with six teachers or less. In schools with more than six teachers, released time is needed. Schools with twenty teachers should have twenty hours per week and schools with forty teachers or more should have forty hours per week assigned for media coordination. The media coordinator may be professional or a technical-clerical person. One coordinator may share his time in more than one building. Library-audiovisual combinations are encouraged.

2. Basic equipment standards adapted from those established by the Department of Audiovisual Instruction of NEA

must be met.

16 mm sound projector	one per ten teaching stations
Filmstrip or filmstrip 2 x 2 combination	one per three teaching stations for elementary, one per ten teaching stations for secondary
Filmstrip viewer	one per three teaching stations
Overhead projector	one per four teaching stations
Record player	one per teaching station K-3, one per grade 4-6, one per ten teaching stations secondary
Tape recorder	one per five teaching stations elementary, one per ten teaching stations secondary
Projection screen	one permanently mounted, with keystone elimination, per teaching station

3. Each classroom must have light control that permits good projection at any time and two electrical outlets independent of the lighting system.

4. Consumable materials such as transparency film, mounting tissue, recording tape and projection lamps must be provided.

5. This project is planned for three years at government expense. Schools using the service must plan for media services individually or cooperatively at the end of the project.

Personnel:

1. Project Director. Superintendent of Berkshire Hills Regional School District. One-fifth time.

2. Professional AV Director. Teaching experience, graduate media program, media supervisory experience.

3. Television Producer-Coordinator. ETV experience, graduate media program.

4. Secretary.

5. Electronic Technician. AV operation, maintenance and repair.

6. Electronic Technician, ETV operation, maintenance and repair.

7. Bus Driver-Technician. Regular bus crew.

8. Media Clerk-Inspector.

9. Graduate Interns. Two graduate students in the audio-visual program of the University will be assigned to the project each semester as interns. They will work with the bus, equipment, materials and staff of the project in order to improve their understanding of media utilization in rural areas and to help the teachers in the County as they expand their use of media.

10. Demonstration Teachers. University of Massachusetts and elsewhere.

11. Consultants in Newer Media and Evaluation. University of Massachusetts and elsewhere.

University of Massachusetts Involvement:

1. Overall and continuing guidance of total project by national leader in newer media. (Dr. Raymond Wyman, two days per month as consultant.)

2. ETV Consultant.

3. Evaluation Consultants.

4. Graduate Media Interns.

5. Demonstration Teachers (in part).

6. Practice Teachers.

7. Credit Courses and Graduate Programs.

Superintendents' and Headmasters' Involvement:

1. A one day preliminary conference of executives will be held soon after the project is started in order to consider all aspects of the program and make comprehensive plans. The consultants in newer media, television and evaluation will participate. A national leader in newer media will provide a keynote address.

2. A review, evaluation and planning conference will be held toward the end of each year with the executives and consultants.

BUDGET ESTIMATE

Personnel:

	<u>One Year</u>	<u>Three Years*</u>
1. Project Director (part time)	\$ 3,000	\$ 9,000
2. Professional AV Director	11,000	36,300
3. ETV Producer-Coordinator	10,000	33,000
4. Secretary	4,500	14,850
5. Electronic Technician	7,000	23,100
6. Television-Technician	7,000	23,100
7. Bus Driver-Technician	6,000	19,800
8. Media Clerk-Inspector	<u>5,000</u>	<u>16,500</u>
SUB TOTAL	53,500	176,550
Fringe Benefits 5%	1,675	8,828
9. Graduate Interns (4 @ \$2,000 per sem.)	8,000	24,000
10. Demonstration Teachers (10 @ \$75 per day)	750	2,250
11. Conference Keynoter	200	200
12. Consultants		
AV Specialist (2 days per month for 11 months @ \$100 per day)	2,200	6,600
ETV Specialist (1 day per month for 11 months @ \$100 per day)	1,100	3,300
Evaluation (2 days per month for 11 months @ \$100 per day)	<u>2,200</u>	<u>6,600</u>
TOTAL	\$69,625	\$228,328

*10% increase in salaries included to permit raises if and when LEA does so for regular staff.

Equipment:

	<u>One Year</u>	<u>Three Years</u>
1. Bus with special construction		\$20,000
2. AV Equipment on bus		8,700
3. Station Wagon		3,000
4. Television Equipment and Recorder		11,000
5. Demonstration Equipment		3,395
6. Office Equipment		1,280
TOTAL EQUIPMENT	—————	<u>\$47,375</u>

Media Library:

1. 1000 sound films @ \$130		\$130,000
2. 2000 filmstrips @ \$6		12,000
3. 10,000 overhead masters @ \$.10		1,000
4. 500 transparencies @ \$4		2,000
5. 500 recordings @ \$4		2,000
6. Experimental materials		3,000
TOTAL LIBRARY	—————	<u>\$150,000</u>
TOTAL CAPITAL OUTLAY	\$197,375	\$197,375

Operating Expenses:

1. Office expenses (telephone, supplies, catalog, repairs, newsletter, etc.)	1,200	3,600
2. Consumable materials on bus	500	1,500
3. Demonstration materials (workshops, etc.)	500	1,500
4. Bus and station wagon	2,500	7,500
5. Conferences (2 first year, 1 other years)	400	800
TOTAL	<u>\$5,100</u>	<u>\$14,900</u>

Travel and per diem:

	<u>One Year</u>	<u>Three Years</u>
1. Professional staff	500	1,500
2. Consultants	500	1,500
3. Demonstration teachers	500	1,500
4. Executives (to conferences)	<u>200</u>	<u>600</u>
TOTAL	\$1,700	\$5,100

Miscellaneous:

1. Garage rental for station wagon until January, 1968	100	100
2. Office rent until January 1968	800	800
3. Wiring for bus heater (one temporary, one permanent)	<u>500</u>	<u>500</u>
TOTAL	\$1,400	\$1,400
GRAND TOTAL	\$275,000	\$447,103

APPENDIX VII

VII-1-

TOWNS, SCHOOLS AND ENROLLMENT IN BERKSHIRE COUNTY

TOWN	NO. OF PUBLIC SCHOOLS	NO. OF TEACHERS	NO. OF PUPILS	NO. OF PRIVATE SCHOOLS	NO. OF TEACHERS	NO. OF PUPILS
						731
Adams	5	107	2129	2	--	0
Alford	1	---	----	0	0	0
Becket	1	9	153	0	0	0
Cheshire	1	21	465	0	0	0
Clarksburg	2	10	260	0	0	312
Dalton	4	97	1750	1	--	64
Egremont	2	---	---	2	15	0
Florida	1	5	127	0	0	233
Great Barrington	6	62	1520	4	--	0
Hancock	1	7	80	0	0	0
Hinsdale	1	10	253	0	0	0
Lanesborough	1	17	399	0	0	384
Lee	5	56	1367	2	--	1203
Lenox	4	46	999	7	--	36
Monterey	0	0	0	1	8	0
New Ashford	1	3	15	0	0	0
New Marlborough	1	7	23	0	0	0
Otis	1	6	87	0	0	0
Peru	1	2	34	0	0	0
Richmond	1	6	149	0	0	0
Sandisfield	1	4	100	0	0	0
Savoy	1	2	30	0	0	315
Sheffield	4	--	----	1	36	399
Stockbridge	2	69	634	3	--	0
Tyringham	1	6	21	0	0	0
Washington	1	2	56	0	0	0
West Stockbridge	1	8	234	0	0	0
Williamstown	5	99	2015	2	33	200
Windsor	1	3	72	1	5	28

-- unknown numbers

APPENDIX VIII

VIII-1-

ROUTE I

MONDAY

BERKSHIRE COUNTY

LEAVE	TIME	ARRIVE	TIME	MILES	STOPS	NO. OF TEACHERS SERVED ELEM-SECOND	STUDENTS SERVED ELEM-SECOND	REMARKS
Stockbridge	8:00 am	Hinsdale	8:25 am	16	1	10	253	--
Hinsdale	8:50 am	Dalton	9:00 am	7	5	33	1096	1026
Dalton	11:05 am	Windsor*	11:20 am	8	2	3	72	28 includes lunch
Windsor	12:30 pm	Savoy	12:40 pm	5	1	2	30	--
Savoy	1:00 pm	Cheshire	1:15 pm	6	1	21	465	--
Cheshire	1:35 pm	Lanesboro	1:50 pm	4	1	17	399	--
Lanesboro	2:10 pm	Hancock	2:25 pm	7	1	7	80	--
Hancock	2:45 pm	Richmond	3:10 pm	14	1	6	149	--
Richmond	3:30 pm	W. Stockbridge	3:40 pm	5	1	8	234	--
W. Stockbridge	4:00 pm	Stockbridge	4:20 pm	8	--	--	--	--
				80	14	107	2778	268
TOTALS								

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ROUTE 2

TUESDAY

BERKSHIRE COUNTY

LEAVE	TIME	ARRIVE	TIME	MILES	NO. OF STOPS	TEACHERS SERVED ELEM-SECOND	STUDENTS SERVED ELEM-SECOND	REMARKS
Stockbridge	8:00 am	Lee	8:15 am	13	7	41 32	1247 504	
Lee	11:10 am	Lenox*	11:20 am	15	11	53 147	1014 1188	includes lunch
Lenox	2:35 pm	Stockbridge	2:50 pm	12	5	50 42	669 364	
Stockbridge	4:20 pm	garage	4:30 pm	2	—	—	—	
TOTALS				42	23	144 221	2930 2056	

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ROUTE 3

Wednesday

Berkshire County

LEAVE	TIME	ARRIVE	TIME	MILES	NO. OF STOPS	TEACHERS SERVED ELEM-SECOND	STUDENTS SERVED ELEM-SECOND	REMARKS	
Stockbridge	8:00 am	Tyringham	8:15 am	8	1	6	21	--	
Tyringham	8:35 am	Becket	9:05 am	16	1	9	153	--	
Becket	9:25 am	Washington	9:35 am	4	1	2	56	--	
Washington	9:55 am	Peru	10:15 am	9	1	2	34	--	
Peru	10:35 am	Adams*	11:00 am	23	7	55	1749	1111 includes lunch	
Adams	1:50 pm	Florida	2:10 pm	9	1	5	127	--	
Florida	2:30 pm	Clarksburg	2:45 pm	9	2	10	260	--	
Clarksburg	3:25 pm	Williamstown	3:35 pm	6	7	62	1090	1125	
Williamstown	5:35 pm	New Ashford	5:45 pm	8	1	3	15	--	
New Ashford	5:55 pm	Stockbridge	6:35 pm	<u>22</u>	--	--	--	--	
TOTALS				114	22	154	3505	122	2236

Williamstown was added after these routes were established and if all of the private schools actually agree to participate in this project some re-working of the routes will be required.

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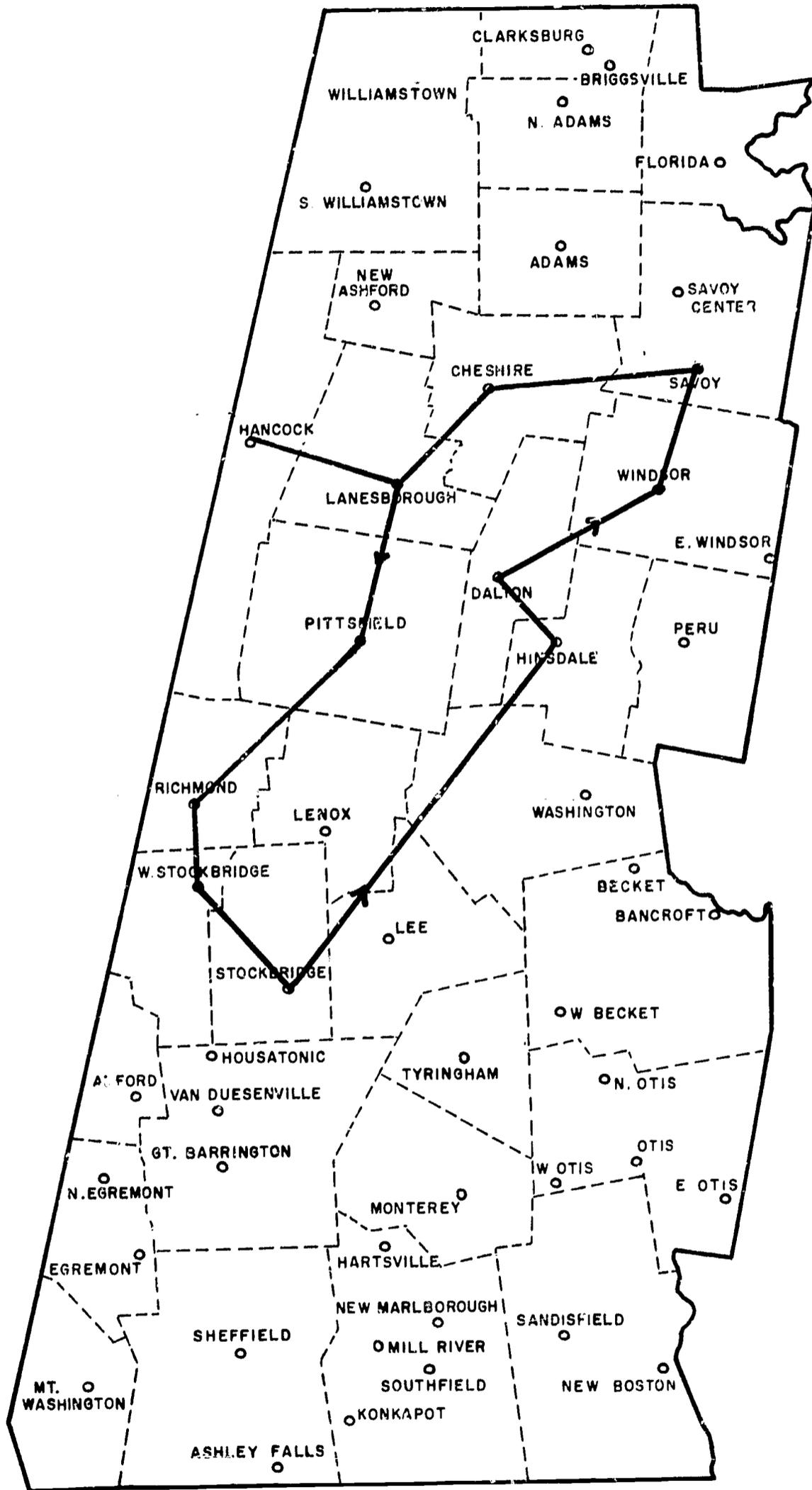
ROUTE 5

FRIDAY

BERKSHIRE COUNTY

LEAVE	TIME	ARRIVE	TIME	MILES	NO. OF STOPS	TEACHERS SERVED ELEM-SECOND	PUPILS SERVED ELEM-SECOND	REMARKS
Stockbridge	8:00 am	Sheffield	8:30 am	24	5	?	38	
Sheffield	10:35 am	Egremont*	10:45 am	7	4	?	15	64 includes lunch
Egremont	12:35 pm	Alford	12:45 pm	4	1	?	?	
Alford	1:05 pm	Stockbridge	1:25 pm	<u>8</u>	-	-	-	
TOTALS				43	10			

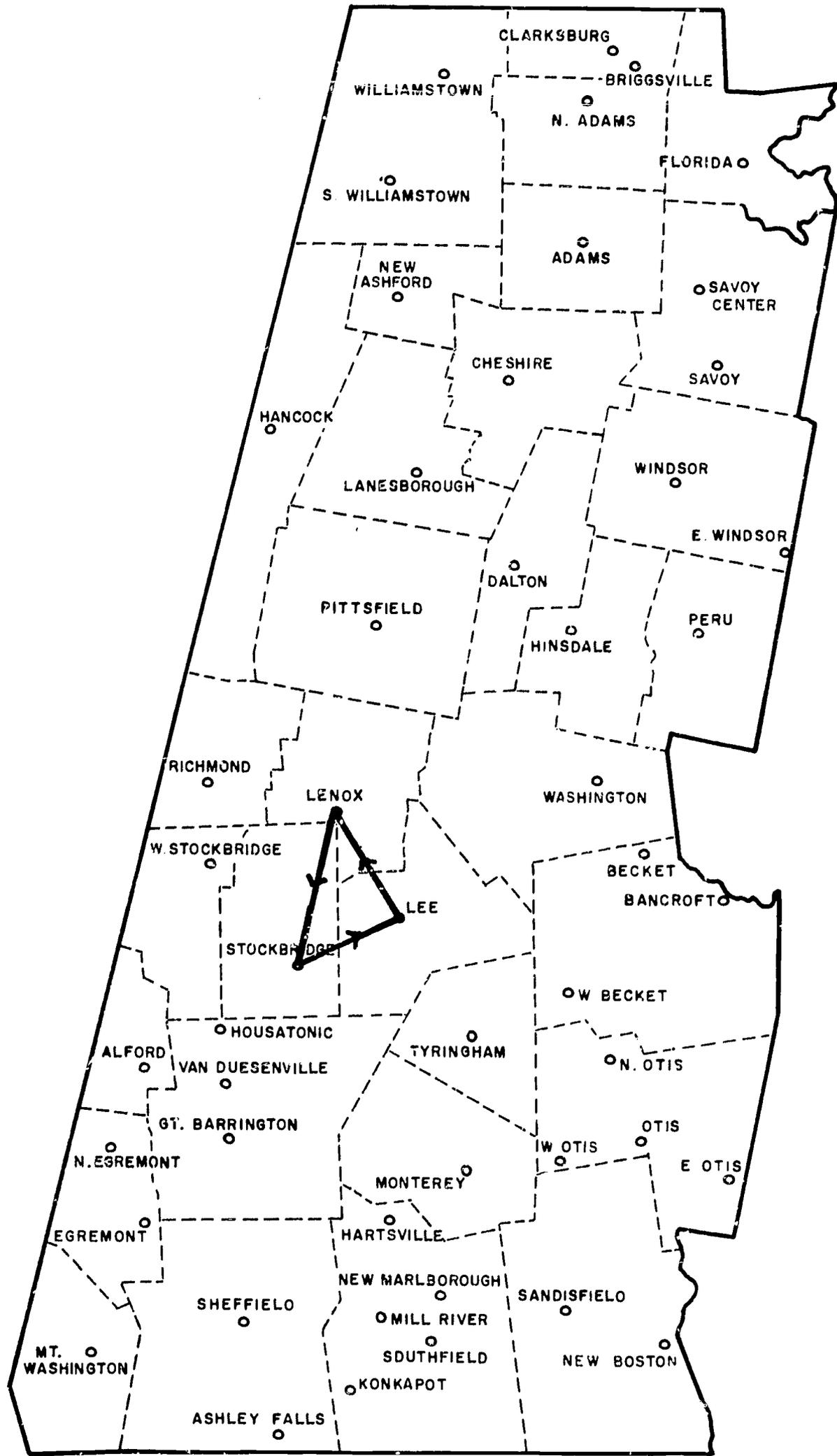
Berkshire County, Massachusetts



ROUTE 1
MONDAY

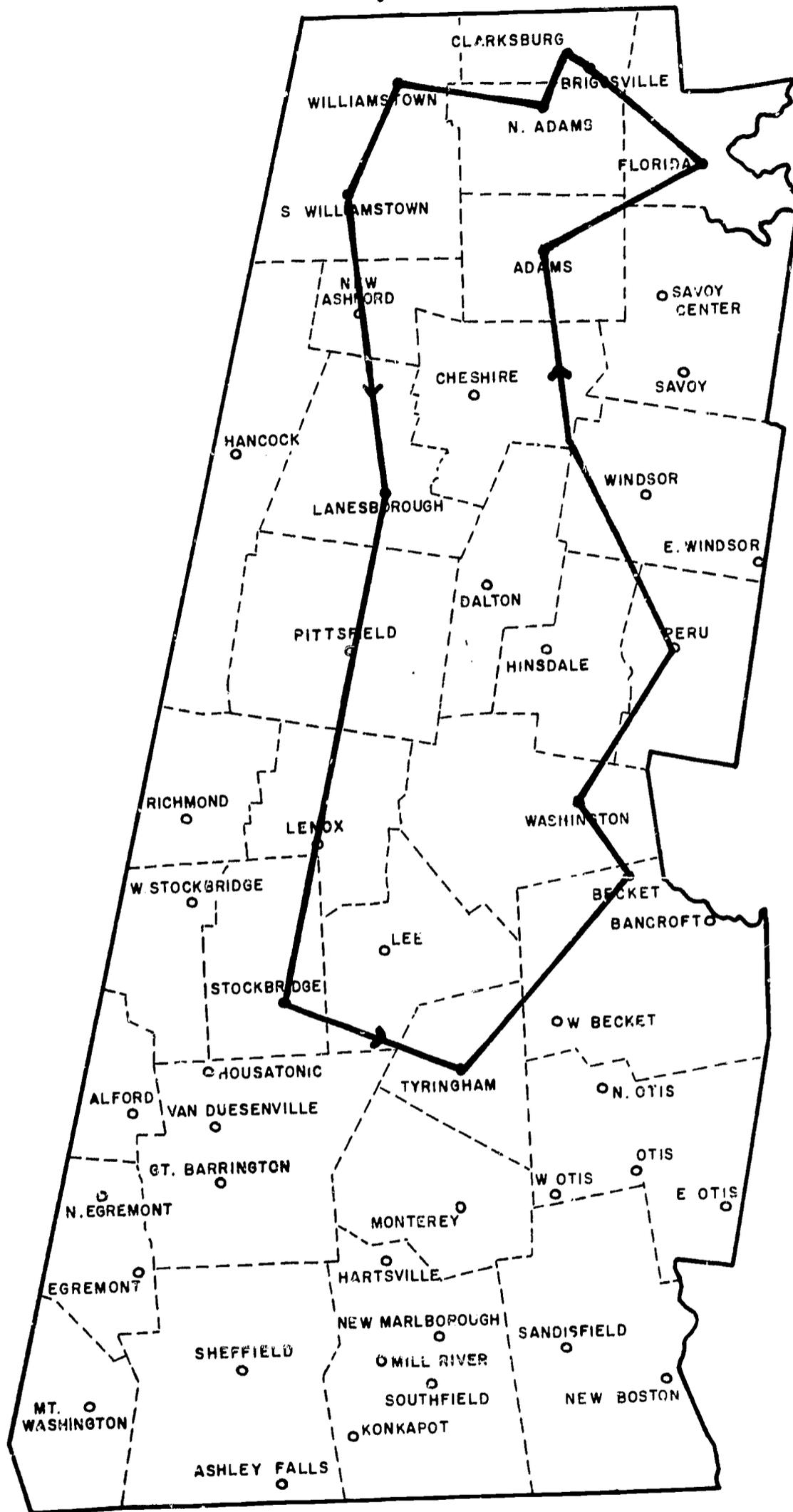
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Berkshire County, Massachusetts



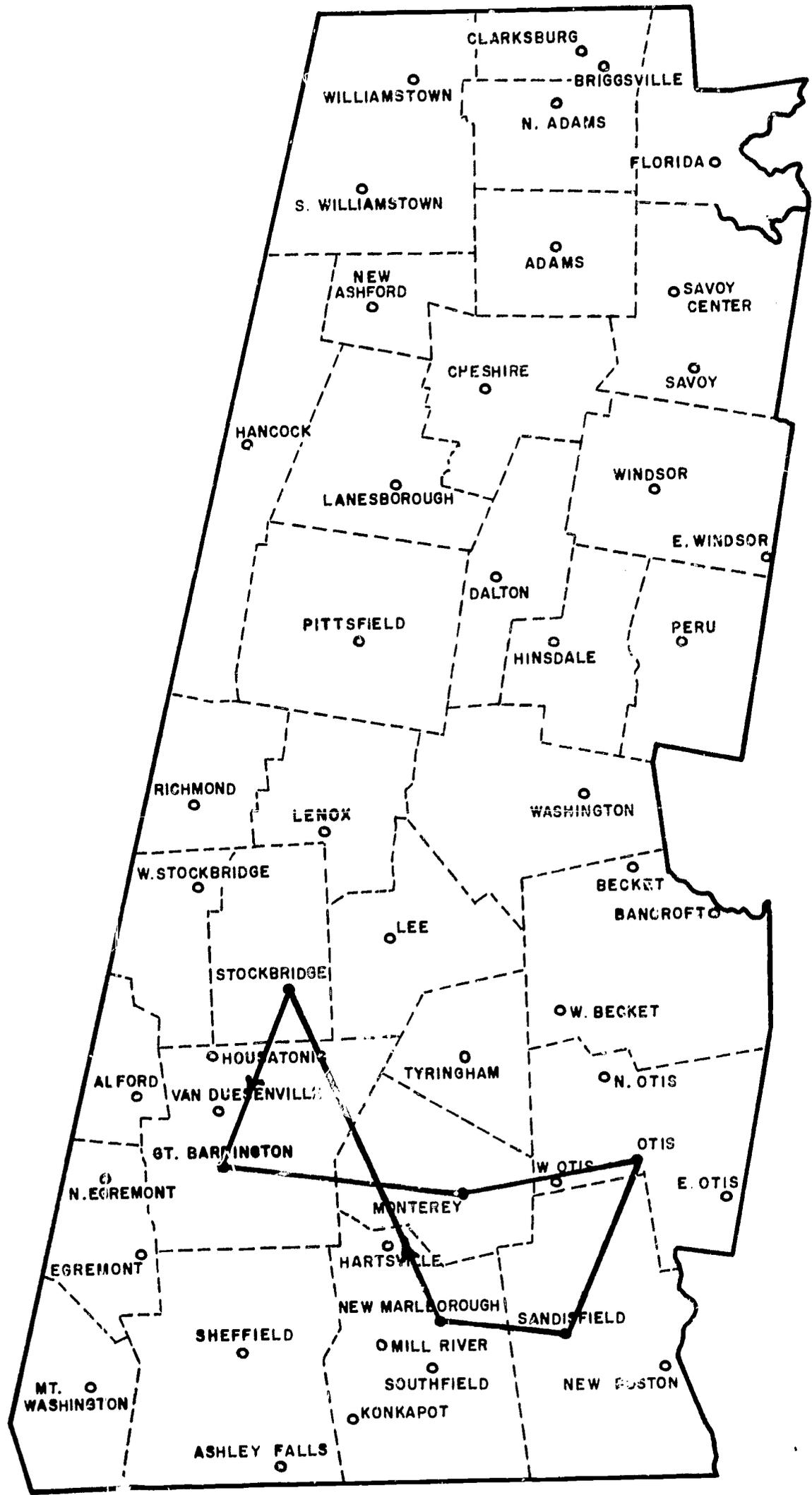
ROUTE 2
TUESDAY

Berkshire County, Massachusetts



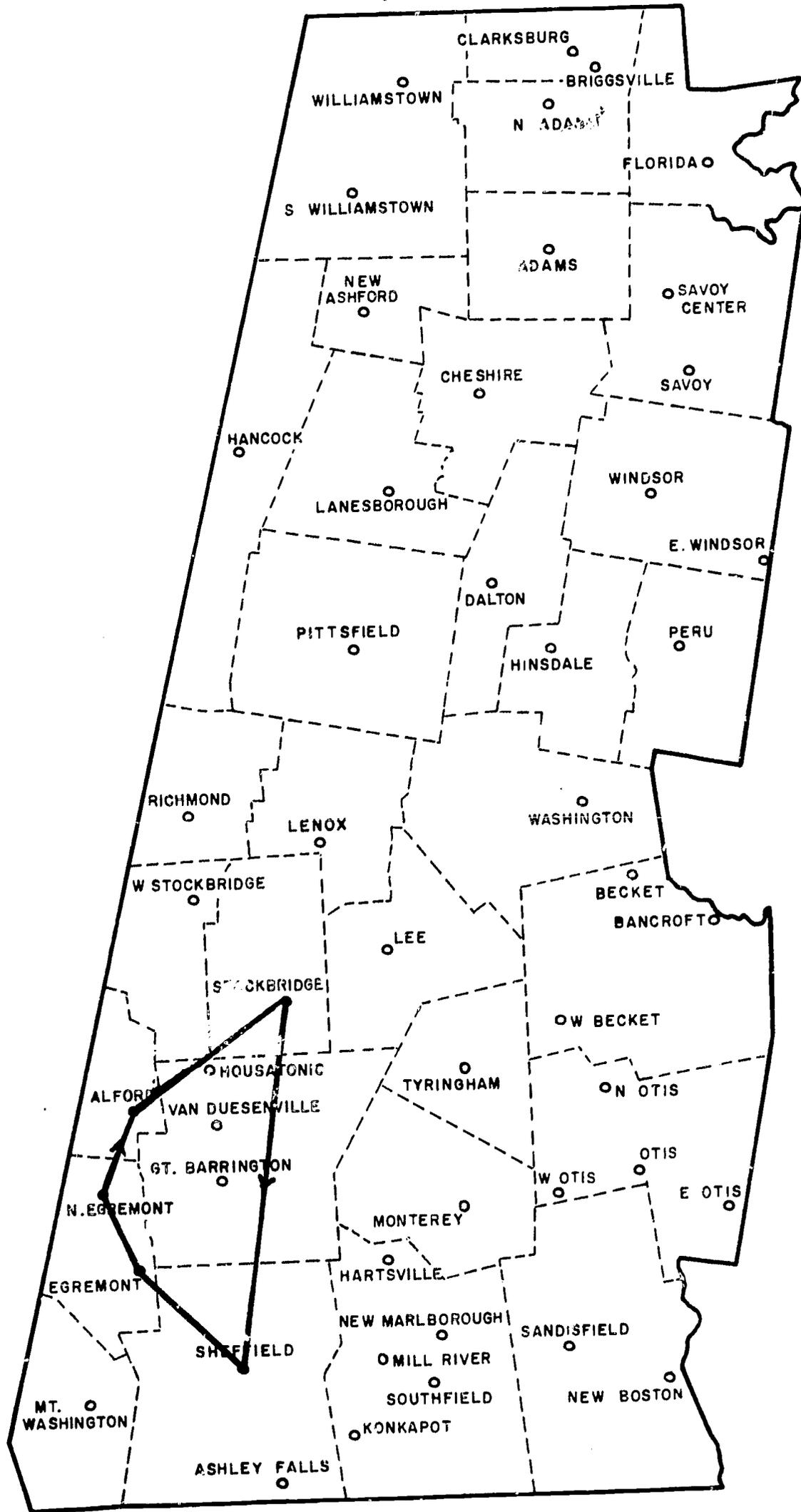
ROUTE 3
WEDNESDAY

Berkshire County, Massachusetts



ROUTE 4
THURSDAY

Berkshire County, Massachusetts



ROUTE 5
FRIDAY