REPORT OF THE VIRGINIA EMPLOYMENT COMMISSION ON

Recommendations for Military Transition Assistance and the Encouragement of Partnerships Between the Commonwealth and the Military to Foster Research and Economic Development

TO THE GOVERNOR AND THE GENERAL ASSEMBLY OF VIRGINIA



HOUSE DOCUMENT NO. 28

COMMONWEALTH OF VIRGINIA RICHMOND 1993

Preface

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his report was prepared in response to House Joint Resolution 325 passed by the 1992 General Assembly. The requested study was conducted and recommendations developed by the Inter-agency Task Force on Defense Conversion and Economic Adjustment under the auspices of the Governor's Commission on Defense Conversion and Economic Adjustment for the Secretaries of Education and Economic Development.

A Transition Assistance Work Group and a Technology/Skills Transfer Work Group were formed to explore these issues. This summary highlights the major findings and recommendations of the respective work groups.

A number of agencies are involved in assisting military personnel.

- The services available are supportive of personnel before and after discharge.
- The Transition Assistance Program (TAP) is a major source of information for separating military personnel.
- Information on educational opportunities should be improved and targeted to veterans.
- Service providers need to be knowledgeable of support available to veterans.
- The Department of Defense (DOD) can become a more active partner in promoting veterans' skills; translating military job skills to the civilian labor market; and providing information to local economic development groups about the potential labor pool of separating military personnel.
- The transition from a military career to civilian employment could be eased with on-the-job training programs.
- The Virginia Tidewater Consortium for Higher Education offers a model that could be used in other regions to promote and support educational cooperation.

There are a number of steps that can be taken to improve educational, training, and employment opportunities for individuals leaving the military. Many items can be accomplished at the agency level and several would be best conducted with the Department of Defense. The work group recommends the following items:

Transition Assistance Work Group

Major Findings

Recommendations

- Information sources should be improved and targeted to military veterans. The Virginia Employment Commission (VEC) should review and modify Virginia VIEW and Career Hunt to highlight areas of interest to military personnel.
- 2) The VEC should ensure that TAP presentations include an overview of educational and training opportunities and distribution of materials to interested individuals.
- 3) The VEC should request assistance from DOD in developing a mechanism to track separating military personnel to determine the potential labor force and skill levels.
- 4) The Virginia Tidewater Consortium for Higher Education should be reviewed by other educational institutions in the Commonwealth for additional applications. (The current bylaws are listed in Appendix B.)
- 5) The VEC should review apprenticeship programs and provide information to agency veterans' employment staff on apprenticeable occupations. The VEC also should work with appropriate organizations to determine if military training and education can substitute for certain apprenticeship training.
- 6) The VEC should determine what post-discharge assistance and training can be provided by local military bases and disseminate this information to agency veterans' employment staff.
- 7) DOD should be encouraged to develop promotional material emphasizing the skills of separating military personnel as well as useful and current material to translate military skills to civilian jobs.
- 8) DOD should consider an on-the-job training program which allows soon to be discharged personnel to work in local businesses to learn the needs of civilian employers and how to apply military training and experience.

The implementation of these recommendations will improve veterans' opportunities for education and new employment.

Technology/Skills Transfer Work Group

Major Findings

- There are 30 federal research and development laboratories operating in Virginia -- 17 military, nine civilian, and four military headquarters activities.
- The Peninsula Advanced Technology Development Center (PATDC)
 model is an important potential link between federal research laboratories and private business and industry for fostering technology transfer
 activities. This model represents a promising and creative strategy for
 regional economic development.
- In visits to two military base training programs, the work group found in a variety of training areas "excess capacity" that potentially could be used for training or retraining civilian workers.

- These military training programs involve advanced capabilities in the technology of teaching and training which could prove to be valuable resources to Virginia educational institutions and have potential for technology transfer for private commercialization.
- 1) The research efforts of this work group should continue and operate concurrently with the tenure of the Governor's Commission on Defense Conversion and Economic Adjustment.

Recommendations

- 2) This work group should report any subsequent research findings and recommendations to the Governor's Commission on a periodic basis.
- 3) This work group should continue its current research agenda by focusing on the following activities:
 - a) developing more detailed information on the operation of federal research and development laboratories and exploring the partnership and transfer possibilities that may be inherent to the operation of the laboratories;
 - continuing to monitor, develop, and evaluate various incentives around the PATDC model to facilitate its transfer to other regions of the state as more experience is gained on the operations of this prototype; and
 - c) continuing to investigate and make contact with additional military training programs and facilities to explore the civilian utilization of these facilities and programs and the transfer of military training technologies to civilian applications.

Specifically, based on the findings from discussions with training program officials at Fort Eustis and Fort Monroe, it is recommended that:

- a more in-depth and systematic inventory of military training capabilities be developed;
- discussions be initiated regarding how such resources could be accessed by the Commonwealth in the event of military installation closures; and,
- advanced training technology capabilities and their possibilities for technology transfer for purposes of private commercialization be explored.

Introduction

Background

his report was prepared in response to House Joint Resolution 325 (Appendix A) of the 1992 General Assembly, which requested the Secretary of Education and the Secretary of Economic Development to "... make recommendations for assisting military personnel in their transition to civilian employment and to encourage partnerships to foster research and economic development." More specifically, the resolution requested that the secretaries "... study and make recommendations on how best to assist military personnel in their transition to civilian employment, particularly in teaching, technology and training applications, and on how to encourage partnerships between the Commonwealth and the military to foster research and economic development in the Commonwealth."

Executive Order Number Forty-three, which created the Governor's Commission on Defense Conversion and Economic Adjustment, tasked this body with the responsibility of accomplishing the mandates of the resolution for the secretaries.

The staff of the Governor's commission, in conjunction with the Interagency Task Force on Defense Conversion and Economic Adjustment, identified two major endeavors: (1) to review and analyze military transition assistance programs and make suggestions and recommendations for improvement; and (2) to review and analyze military research and development activities and technology-related programs and make suggestions and recommendations on how best to encourage partnerships with the civilian sector and foster the transfer of the technology and skills inherent in these activities and programs to the civilian sector to promote economic development. Based on the identification of these two work elements, a Transition Assistance Work Group and a Technology/Skills Transfer Work Group were established.

The Transition Assistance Work Group was chaired by Mr. Richard Crossen, VEC Job Service Deputy Director. The Technology/Skills Transfer Work Group was chaired by Dr. Robert Templin, President of Thomas Nelson Community College and a member of the Governor's Commission on Defense Conversion and Economic Adjustment. Both work groups held meetings, prepared work outlines, and developed findings and recommendations.

Report of the Transition Assistance Work Group

he work group held two meetings: one in Richmond, Virginia, on Magust 25, 1992, and one in Norfolk, Virginia, on September 22, 1992.

Meetings

The work group's task was to recommend how best to assist military personnel in moving to civilian employment, especially in teaching, technology, and training occupations. Overview

Based on projections by the U. S. Department of Labor's Office of Veterans' Employment and Training, Virginia can expect a large number of veterans and dependents to either remain in the Commonwealth or return upon discharge. The estimates are:

Year	Veterans	Spouses	Total
1992	14,800	8,760	23,360
1993	14,000	8,400	22,400
1994	12,800	<i>7,</i> 680	20,480
1995	11,200	6, 72 0	1 <i>7,</i> 920

These estimates indicate the increases that can be expected in the labor force. At this time there is no information on the skills or educational levels of these personnel.

The work group focused on current efforts to assist departing military personnel in their transition to civilian employment and needed improvements. The work group directed its attention to areas that could be readily influenced and also benefit military personnel quickly. Long range improvements or changes were beyond the work group's capacity at this time.

The work group's first tasks were:

- 1) review existing information sources and programs on educational and employment opportunities for service personnel;
- 2) determine how this information is used by military counselors and others in advising veterans and armed forces;
- 3) identify how to make this information available to service personnel;
- 4) determine improvements that could be made in the distribution of information on educational and training opportunities; and
- 5) develop additional suggestions that would assist military personnel and others involved with related activities.

Direction

General Findings

A number of agencies and institutions assist military personnel in their transition from military careers to civilian employment. The downsizing of the armed forces has been occurring over the past several years, and programs already have been established to help the affected individuals.

The Department of Defense, in conjunction with the Department of Labor and the VEC veterans' staff, began in 1990 a series of Transition Assistance Program briefings at three military bases. The program has grown to 13 locations, with 165 presentations planned. Sessions are open to all military personnel and their spouses. During the year ending September 30, 1992, 7,353 individuals completed a TAP session.

All branches of the armed forces provide a variety of on-base services to military personnel and their dependents. The bases work closely with educational institutions and other local agencies. In the Tidewater area a strong network links the military, the community, and state and local agencies. The consortium formed by the educational institutions has proved successful and might be duplicated in other areas of the state.

Educational information from a wide variety of sources has been channeled to appropriate offices at the military bases. The Virginia Tidewater Consortium for Higher Education publishes a comprehensive guide to the various programs offered by area colleges. The publication, A Guide to Higher Education In Greater Hampton Roads, Virginia, provides a ready reference for military counselors. In addition, a shorter companion piece relating degree programs and institutions is published as another reference tool.

The VEC provides **Virginia VIEW** and **Career Hunt** to military installations for use in preparing military personnel for career changes. Veterans may not readily identify with these publications so highlighting areas of interest to these individuals would be beneficial and improve usefulness.

Old Dominion University has established a Military Career Transition Program for teacher training built on the career training and skills of retiring and separating military. The program, similar to others available at educational institutions across the country, currently has 600 participants.

Information on the many educational opportunities should be presented during the TAP sessions and at other appropriate times. Efforts should be made to strengthen the appeal of the material to veterans and to provide useful guidance. Individuals who counsel or advise veterans should be made aware of TAP and the schedule of on-base sessions. A brochure describing TAP should be prepared and distributed to potential sources of referrals.

The availability of data on the veteran labor pool is lacking. Economic development groups have little, if any, information on changes to the labor pool resulting from separations and discharges. Efforts should be made to work with DOD to develop a system to track exiting personnel and their skills. DOD should provide this information to the states in a timely manner for economic development purposes.

Individuals leaving the military with a technical skill often are unaware of opportunities in apprenticeship programs. Current efforts should be reviewed to ensure that personnel have access to information on skills relating to apprenticeable occupations and that military training can be accepted as part of an apprenticeship program.

It often takes longer than anticipated to find suitable employment. Military personnel should be aware of services and programs available after separation. The Army Career Assistance Program (ACAP), family service centers, and many service organizations provide post separation seminars and assistance when individuals need additional help. Veterans not living near their discharge point may not have knowledge of local services. Strengthened exit briefings describing the services available to discharged personnel should assist with this problem.

It is often difficult to translate a military skill to a comparable civilian occupation. DOD should keep the Military Occupational Specialty (MOS) codes and Dictionary of Occupational Titles (DOT) current for use by individuals in employment and training agencies. The most recent publication is not only out of date but out of print as well.

Downsizing provides DOD the opportunity to promote the skills and training of the all volunteer armed forces. It can also help employers understand the intensity and usefulness of military training by promoting the inter-connection of military and civilian skills. This is especially important to non-defense related industries.

With the planned phase down of manpower levels, DOD could assist individuals in their transition by arranging with local firms opportunities for military personnel to work in a civilian setting. An on-the-job program would help individuals understand different employment environments and transfer military skills to a civilian workplace.

The work group findings may be summarized as follows:

- 1) Separating military personnel need additional information and heightened awareness of available assistance.
- 2) Existing programs should be reviewed to ensure that military personnel can apply their training and experience.
- 3) DOD should be a strong partner in promoting the abilities of military personnel and how their skills can be utilized in the civilian economy.
- 4) Mechanisms should be developed to track exiting military personnel to determine new entrants to the work force and to identify their skills.
- 5) The Virginia Tidewater Consortium for Higher Education has proven to be an effective vehicle for promoting education in a coordinated fashion and might be an appropriate model for other areas of the state to adopt.

There are a number of steps that can be taken to improve educational, training, and employment opportunities for individuals leaving the military. Many items can be accomplished at the agency level but several would be best conducted with the Department of Defense. The work group recommends the following activities:

1) Information sources should be improved and targeted to military veterans. The VEC should review and modify Virginia VIEW and Career Hunt to highlight areas of interest to military personnel.

Recommendations

- 2) The VEC should ensure that TAP presentations include an overview of educational and training opportunities and distribution of materials to interested individuals.
- 3) The VEC should request assistance from DOD in developing a mechanism to track separating military personnel to determine the potential labor force and skill levels.
- 4) The Virginia Tidewater Consortium for Higher Education should be reviewed by educational institutions in other areas of the Commonwealth for additional applications. (The current by laws are listed in Appendix B.)
- 5) The VEC should review apprenticeship programs and provide information to agency veterans' employment staff on apprenticeable occupations. The VEC also should work with appropriate agencies to determine if military training and education can substitute for certain apprenticeship training.
- 6) The VEC should determine what post-discharge assistance and training can be provided by local military bases and disseminate this information to agency veterans' employment staff.
- 7) DOD should be encouraged to develop promotional material emphasizing the skills of separating military personnel as well as useful and current material to translate military skills to civilian jobs.
- 8) DOD should consider an on-the-job training program which allows soon to be discharged personnel to work in local businesses to learn the needs of civilian employers and how to apply military training and experience.

The implementation of these recommendations will improve veterans' opportunities for education and new employment.

Report of the Technology/Skills Transfer Work Group

Meetings

he work group held two meetings: one in Richmond, Virginia, on September 10, 1992, and one in Falls Church, Virginia, on October 14, 1992.

Overview/Direction of Work Group Activities

Due in part to the relatively short time frame the work group had to conduct its activities, it decided to focus on programs, activities, resources, and systems currently in place and operational in the technology/skills transfer arena in Virginia.

Based on these considerations, the work group decided to explore three areas of research activity:

- 1) the scope of federal research and development resources in Virginia;
- 2) the research and development projects currently underway that the work group and the commission could support; and
- 3) the transfer possibilities from these research and development resources and projects.

More specifically, the work group decided to pursue the following work activities:

Specific Work Activities

- 1) develop a data base inventory of federal research and development resources in the state;
- 2) utilize the Peninsula Advanced Technology Development Center as a prototype and develop incentives that would facilitate the transfer of this model or stimulate the development of similar models in other regions of the state; and
- 3) investigate the possibility of civilian worker training or retraining in ongoing military training programs and the possibility of transferring the military training technology to the civilian sector.

Data Base Inventory

Research Findings

• The work group found 30 federal research and development laboratories operating in Virginia -- 17 military, nine civilian, and four military head-quarters activities. Data on types of research functions and projects, employment levels, and budget activity was obtained for a number of these laboratories. (See Appendix Table I.) This effort should continue and additional detailed information should be gathered on the operating features of these laboratories.

PATDC Prototype

- The PATDC has been widely recognized as a model for the transfer of technology and skills from the public to the private sector, but regional models will stress different elements depending on the nature of the region's economy. The PATDC concept may require additional funding as well as other types of incentives to facilitate its transfer to other regions of the state or to stimulate the development of similar locally-driven models. Based on these considerations, the work group offers the following suggestion regarding the PATDC model.
- The proposed PATDC, which plans to facilitate community-based technology transfer activities of federal research laboratories on the Peninsula such as the Continuous Electron Beam Accelerator Facility and NASA-

Langley Research Center as well as with military research labs such as the Fort Eustis Aviation Laboratory and the Wright Laboratories at Wright-Patterson Air Force Base, represents a promising and creative strategy for regional economic development which should be encouraged as part of the defense conversion and economic diversification efforts in Virginia. State funds should be used to leverage local, federal, and private dollars to initiate the PATDC and to encourage other communities to develop similar locally-driven models.

Utilization of Military Training Programs and Transfer of Military Training Technology

- It is recognized that the military is one of the nation's leaders in developing and implementing training programs and has many years of experience in developing a superb set of training technologies that may be transferable to the civilian sector.
- The work group investigated this issue through contact with two military base training programs in the Peninsula area, Fort Eustis and Fort Monroe.

Fort Eustis and Fort Monroe indicated the possibility of "excess capacity" in various categories of interest. These include general purpose and computer classrooms for evening use by schools, colleges, or universities; specialized training facilities which possibly could be utilized on a scheduled basis (for example, unique training capabilities in railway operations and maintenance, small watercraft and crane operations, diesel engine maintenance, helicopter aviation maintenance, and truck driver training at Fort Eustis); and instructor expertise which could be accessed on a possible contract or cost-sharing basis with the Commonwealth. Consequently, it is recommended that a more in-depth and systematic inventory of military training capabilities be developed. Also, discussions should be initiated regarding how such resources could be accessed by the Commonwealth in the event of eventual installation closures.

In addition, advanced capabilities in the technology of teaching and training were found at these military installations. These could potentially prove to be invaluable resources to Virginia schools, colleges, and universities should the military decide to downsize its hardware, software, and other training support requirements. Sufficient advanced training technology capabilities were found so that possibilities for technology transfer for purposes of private commercialization could be explored further.

Recommendations/ Future Activities 1) The research of the work group should be continued concurrently with the tenure of the Governor's Commission on Defense Conversion and Economic Adjustment.

- 2) The work group should report any subsequent findings and recommendations to the Governor's commission on a periodic basis.
- 3) The work group should continue its current research agenda by focusing on the following activities:
 - a) develop more detailed information on the operation of federal research and development laboratories and explore the partnership and transfer possibilities that may be inherent to the operation of the laboratories;
 - b) continue to monitor, develop, and evaluate various incentives around the PATDC model and continue to facilitate its transfer to or the development of similar locally-driven models in other regions of the state as more experience is gained on the operations of this prototype; and
 - c) continue to investigate and make contact with additional military training programs and facilities to explore the civilian utilization of these facilities and programs and the transfer of military training technologies to civilian applications.

Specifically, based on the findings from discussions with training program officials at Fort Eustis and Fort Monroe, it is recommended that:

- a more in-depth and systematic inventory of military capabilities be developed;
- discussions be initiated regarding how such resources could be accessed by the Commonwealth in the event of military installation closures; and,
- advanced training technology capabilities and their possibilities for technology transfer for purposes of private commercialization should be explored.

Appendices

APPENDIX A 1992 SESSION

LD4264204

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HOUSE JOINT RESOLUTION NO. 325

Offered February 7, 1992

Requesting the Secretary of Education and the Secretary of Economic Development to make recommendations for assisting military personnel in their transition to civilian employment and to encourage partnerships to foster research and economic development.

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Patrons-Diamonstein, Abbitt, Armstrong, Bennett, Byrne, Callahan, Christian, Cohen, Cooper, Copeland, Councill, Cox, Cranwell, Croshaw, Cunningham, R.K., DeBoer, Deeds, Dickinson, Finney, Fisher, Forehand, Grayson, Hamilton, Heilig, Ingram, Jackson, Jennings, Johnson, Jones, Keating, Maxwell, Mayer, McDonnell, Melvin, Moore, Munford, Murphy, O'Brien, Phillips, Puller, Robinson, Scott, Stieffen, Stump, Thomas, Van Yahres, Wagner, Wood and Woodrum; Senators: Andrews, Goode, Hawkins, Holland, C.A., Howell, Lucas, Miller, Y.B., Potts, Quayle, Reasor, Scott, Stolle, Stosch and Walker

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Unanimous Consent to Introduce

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Referred to the Committee on Rules

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WHEREAS, the long-term presence of the military in Virginia has had a significant positive economic impact on the Commonwealth; and

WHEREAS, the brave men and women of the military stationed in the Commonwealth 23 served with honor and distinction to preserve the goal of freedom for our citizens and citizens around the world; and

WHEREAS, because of dramatic changes in the world order and an end of the Cold War, there will be significant reductions in military forces and installations in the Commonwealth and throughout the United States; and

WHEREAS, many of the military personnel are in the prime of their careers and have significant levels of technical training and skills in using the most current high technology; and

WHEREAS, it would be to the benefit of the Commonwealth to identify ways to capitalize on the skills of military personnel entering our workforce and to work cooperatively with the military in areas of research and technology; now, therefore, be it

RESOLVED by the House of Delegates, the Senate concurring, That the Secretary of 35 Education and the Secretary of Economic Development be requested to study and make recommendations on how best to assist military personnel in their transition to civilian employment, particularly in teaching, technology and training occupations, and on how to encourage partnerships between the Commonwealth and the military to foster research and economic development in the Commonwealth.

The Secretaries shall submit their findings and recommendations to the Governor and 41 the 1993 Session of the General Assembly as provided in the procedures of the Division of Legislative Automated Systems for the processing of legislative documents.

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BY LAWS VIRGINIA TIDEWATER CONSORTIUM for HIGHER EDUCATION

- I. <u>NAME</u>: The name of this organization shall be the Virginia Tidewater Consortium for Higher Education.
- II. <u>PURPOSE</u>: The purpose of this organization shall be to coordinate and facilitate higher education services in the Greater Hampton Roads area in order to provide maximum educational opportunities for the citizens of the region.
- III. GEOGRAPHICAL AREA: The geographical area involved in the Virginia Tidewater Consortium shall be the regional planning districts which comprise the cities of Chesapeake, Hampton, Franklin, Newport News, Norfolk, Poquoson, Portsmouth, Suffolk, Virginia Beach, Williamsburg, and the counties of Accomack, Isle of Wight, James City, Northampton, Southampton, and York.
- IV. MEMBERSHIP: The following institutions of higher education shall be considered full members of this Consortium:

 (1) College of William and Mary, (2) Eastern Shore Community College, (3-) Eastern Virginia Medical School, (4) Hampton University, (5) Norfolk State University, (6) Old Dominion University, (7) Paul D. Camp Community College, (8) Regent University, (9) Thomas Nelson Community College, (10) Tidewater Community College, (11) University of Virginia, (12) Virginia Polytechnic Institute and State University, (13) Virginia Wesleyan College.

Any not-for-profit institution of higher education chartered in Virginia and regionally accredited by the Southern Association of Colleges and Schools, Commission on Colleges may be invited by the Board of Directors of the Virginia Tidewater Consortium to become a full member. Membership requires a two-thirds affirmative vote of the Board of Directors.

The Board of Directors, at its discretion, may invite other institutions or organizations involved in education to become affiliate members. An affiliate member will be a non-voting member of the Board.

V. <u>BOARD OF DIRECTORS</u>: The Consortium shall be governed by a Board of Directors consisting of the President or his/her designated representative from each full member institution. The Chairman of the Board of Directors shall be elected by the Board of Directors. The term of office shall be determined by the Board of Directors.

The Board of Directors shall establish all policies and procedures necessary for the effective operation of the Virginia Tidewater Consortium for Higher Education.

- VI. <u>RESPONSIBILITIES</u>: The responsibilities of the Virginia Tidewater Consortium for Higher Education shall include but not be limited to the following:
 - to encourage cooperative projects among the institutions of higher education to better serve the citizens of the area.
 - 2) to facilitate the continuing education efforts among the member institutions in order to more efficiently utilize resources.
 - 3) to provide, in consultation with the State Council of Higher Education, maximum higher education opportunities for continuing education students.
 - 4) to assess the needs for continuing higher education in the area.
 - 5) to use television to make higher education more accessible to the citizens of Greater Hampton Roads through the operation of the Higher Education Cable Channel.
 - 6) to work cooperatively with the social service agencies to serve adults from low socio-economic backgrounds to encourage them to participate in higher education.
 - 7) to work cooperatively with the cities of Greater Hampton Roads in encouraging economic development.
 - 8) to work cooperatively to develop grant programs to fund Consortium projects.
 - 9) to establish cooperative information offices on military installations to serve the military students.
 - 10) to work cooperatively with the local school divisions to serve the educational needs of teachers and administrators.
 - 11) to encourage through the Summer Institute on College Teaching the improvement of college teaching.
 - 12) to work cooperatively to eliminate drug use and alcohol abuse among college students, faculty, and staff.
 - 13) to work cooperatively with the Department of Education of Virginia in enhancing the cooperation between secondary education and higher education.

- VII. <u>ANNUAL DUES:</u> The Board of Directors will set annual dues for each member institution.
- VIII. <u>BUDGET</u>: The Board of Directors shall approve an annual budget which shall provide for the administrative costs of the Consortium.
- IX. FISCAL REQUIREMENTS: Old Dominion University shall serve as the focal institution of the Consortium in all fiscal matters and all financial requirements of the Consortium will be in agreement with the financial policies and procedures of Old Dominion University.
- X. COMMITTEES OF THE CONSORTIUM: The Board of Directors shall establish the following standing committees: Academic Planning and Coordination, Continuing Education, Library, Registrars, Telecommunications; and, the Board of Directors may also establish, when necessary, any ad hoc committee.
- XI. PRESIDENT: The Board of Directors may appoint a President who shall serve as Chief Executive Officer of the Consortium and shall report directly to the Board of Directors. The President and Chairman of the Board shall be empowered by the Board of Directors to represent the Board and to transact business on behalf of the Board.
- XII. RENEWAL OF MEMBERSHIP: All memberships in the Virginia Tidewater Consortium for Higher Education shall be automatically renewed unless the institution notifies the President of the Consortium and Chairman of the Board of Directors that it chooses to no longer participate. The letter of withdrawal must be received by February 1 of the current year of participation.
- XIII <u>BY LAWS APPROVAL</u>: These By laws require a two-thirds affirmative vote of the Board of Directors for approval.
- XIV. BY LAWS AMENDMENT: These By laws may be amended by a two-thirds affirmative vote of the Board of Directors.

 Proposed changes to the By laws must be circulated at least two weeks prior to the meeting in which they will be acted upon.

APPENDIX TABLE I FEDERAL RESEARCH LABORATORIES, MILITARY AND CIVILIAN OPERATING IN VIRGINIA

Military Laboratories

Army: Aerostructures Directorate NASA Langley Research Center Hampton, Virginia 23665 Mr. John H. Cline (804) 864-3966 FAX: (804) 864-3870

Army: Aviation Applied Technology Directorate Ft. Eustis, Virginia 23604 Mr. Laurence Smail (804) 878-5831 FAX: (804) 878-1101

Army: Belvoir RD&E Center Attention: STRBE-IL Ft. Belvoir, Virginia 22060-5606 Ms. Karen Gordon (703) 704-2279 FAX: (703) 704-2258

Army: Communications-Electronics Command-Signals Warfare Directorate Vint Hill Farms Station Warrenton, Virginia 22186 Mr. G. William Mitchell, Jr. (703) 349-7205 FAX: (703) 349-9085

Army: Institute for Water Resources Ft. Belvoir, Virginia 22060 Mr. Darrell Nolton (703) 355-3084 FAX: (703) 355-3171

Army: Night Vision & Electro-Optics Directorate Ft. Belvoir, Virginia 22060 Mr. Richard W. Fulton (703) 704-1105 FAX: (703) 355-7678

Army: Research Institute for Behaviorial & Social Sciences
Alexandria, Virginia 22333
Dr. James A. Bynum
(703) 274-8637
FAX: (703) 274-5674

Army: Topographic Engineering Center Ft. Belvoir, Virginia 22060 Mr. George Simcox (703) 355-2629 FAX: (703) 355-3176

DoD: ODUSD (R&AT/RLM) The Pentagon Room 3E114 Washington, DC 20363 Mr. David Appler (703) 274-6884 FAX: (703) 274-6708 Marine Corps: Systems Command Quantico, Virginia 22134 Lt. Col. Ronald Faucher (703) 640-5845 FAX: (703) 640-5844

Naval Facilities Engineering Command 200 Stovall Street (Code 03T) Alexandria, Virginia 22332-2300 Mr. Milon E. Essoglou (703) 325-6533 FAX: (703) 325-2263

Naval Safety Center Norfolk, Virginia 23511 Mr. R. Paul Kinzey (804) 444-5093 FAX: (804) 444-5092

Naval Sea Combat Systems Engineering Station Naval Station (Code 214) Norfolk, Virginia 23511-5690 Mr. Lloyd A. Gatling (804) 445-7714 FAX: (804) 445-7515

Naval Space Command Code VN-5T Dahlgren, Virginia 22448-5180 Dr. John F. Springer (703) 663-7591

Navy: Environmental Health Center Norfolk, Virginia 23513-2617 Dr. Glenn H. Randall (804) 444-7575 FAX: (804) 444-3672

Navy: Office of Naval Technology 800 North Quincy Street (Code 26) Arlington, Virginia 22217-5000 Dr. Ronald M. Culpepper (703) 696-4448 FAX: (703) 696-5993

Navy: Office of Naval Research 800 North Quincy Street (Code 261) Arlington, Virginia 22217-5000 Mr. Scott Thayer (703) 696-4448 FAX: (703) 696-5993

APPENDIX TABLE I (Continued) FEDERAL RESEARCH LABORATORIES, MILITARY AND CIVILIAN OPERATING IN VIRGINIA

Headquarter Activities

Air Force Headquarters SAS-AQ, Room 4E969 The Pentagon Washington, DC 20330-1000 Mr. Daniel S. Rak (703) 614-8000

Air Force SAF/AQT
The Pentagon
Room BD-944
Washington, DC 20330-1000
C. J. (Chuck) Chatlynne
(703) 695-3891
FAX: (703) 605-4000

DoD: Strategic Defense Initiative Organization OSD/SDIO/TNI Office of the Secretary of Defense Washington, DC 20301-7100 Mr. Nick Montanarelli (703) 693-1671 FAX: (703) 693-1695

DoD: Deputy Director for Technology Transfer 400 Army Navy Drive Suite 206 Arlington, Virginia 22202-2884 Mr. James Marsh (703) 695-8360 FAX: (703) 697-7548

Civilian Laboratories

Continuous Electron Beam Accelerator Facility (DoE) Newport News, Virginia 23606 Dr. H. Frederick Dylla (804) 249-7450 FAX: (804) 249-7398

DoC: Center for Utilization of Federal Technology 5285 Port Royal Road #300B-F Springfield, Virginia 22161 Mr. Edward Lehmann (703) 487-4805 FAX: (703) 321-8199

DoI: Fish & Wildlife Service MS 725 Arlington Square Washington, DC 20240 Mr. Duncan MacDonald (703) 358-1706 FAX: (703) 358-2202

DoI: U.S. Geological Survey Reston, Virginia 22092 Dr. Ethan T. Smith (703) 648-5022 FAX: (703) 648-5295

DoJ: Federal Bureau of Investigation Quantico, Virginia 22135 Mr. James J. W. Kearney (703) 640-1181 FAX: (703) 285-2379 DoT/FHA: Turner-Fairbank Highway Research Center McLean, Virginia 22101 Mr. Robert J. Kreklau (703) 285-2104 FAX: (703) 285-2379

DoT/FHWA: Turner-Fairbank Highway Research Center HRD-10 6300 Georgetown Pike McLean, Virginia 22010 Mr. Louis J. Colucci (703) 285-2100 FAX: (703) 285-2379

NASA Headquarters Gateway #4 1213 South Jefferson Davis Highway #1200 Arlington, Virginia 22202 Mr. Len Ault (703) 557-5598 FAX: (703) 557-8186

NASA: Langley Research Center Hampton, Virginia 23665 Mr. Joseph Mathis, Jr. (804) 864-2484 FAX: (804) 864-8314

APPE: . TABLE I FEDERAL RESEARCH LABORATORIES, MILITARY AND CIVILIAN OPERATING IN VIRGINIA

Military Laboratories

Name/Address	Location	General Technology Areas	People/ Professional	Budget/ Impact
Army: Aerostructures Directorate NASA Langley Research Center Hampton, VA 23665 Mr. John H. Cline (804) 864-3966 FAX: (804) 864-3870	Hampton, VA	 Aerodynamics Dynamics Vibrations Metal & Composite Structures Fatigue & Fracture Rotocraft Crashworthiness Acoustics 		
Army: Aviation Applied Technology Directorate Ft. Eustis, VA 23604 Mr. Laurence Smail (804) 878-5831 FAX: (804) 878-1101	Ft. Eustis, VA	 Propulsion Structures Weaponization Systems Integration Reliability, Maintainability Mission Technology Safety & Survivability 	290/140	NA/100.0
Army: Belvoir RD&E Center Attention: STRBE-IL Ft. Belvoir, VA 22060-5606 Ms. Karen Gordon (703) 704-2279 FAX: (703) 704-2258	Ft. Belvoir, VA	 Combat Engineering (Bridging, Battlefield Deception, Tunnel Detection, Countersurveil- lance, Physical Security, Topographic Equipment) Logistics Equipment (Electric Power, Environmental Control, Marine Craft, Construction, Support, Water Supply, Fuels Handling) Countermine Systems (Counter- obstacles, Field Fortifica- tions & Barriers) Materials, Fuels & Lubricants 	921/437	186.0/NA

Research Notes:

NAP - Not Applicable

Budget numbers are in millions. Professionals are people with higher degrees.

Note: All people/budget numbers are estimates delivered by telephone.

APPENDIX TABLE I FEDERAL RESEARCH LABORATORIES, MILITARY AND CIVILIAN OPERATING IN VIRGINIA

Military Laboratories

Budget/

People/

Name/Address	Location	General Technology Areas	Professional	Impact
Army: Communications-Electronics Command-Signals Warfare Directorate Vint Hill Farms Station Warrenton, VA 22186 Mr. G. William Mitchell, Jr. (703) 349-7205 FAX: (703) 349-9085	Warrenton, VA	 Computer Reasoning Artificial Intelligence Digital Signal Processing Communications 	NA	NA
Army: Institute for Water Resources Ft. Belvoir, VA 22060 Mr. Darrell Nolton (703) 355-3084 FAX: (703) 355-3171	Ft. Belvoir, VA	 Risk Assessment Water Demand Forecasting & Conservation Planning Benefit Cost Analysis Impact Assessment Non-Litigative, Alternative Dispute Resolution Procedures 	NA	NA
Army: Night Vision & Electro-Optics Directorate Ft. Belvoir, VA 22060 Mr. Richard W. Fulton (703) 704-1105 FAX: (703) 355-7678	Ft. Belvoir, VA	 Thermal Imaging (Uncooled & Cooled) Focal Plane Arrays Sensor Fusion Modeling & Analysis Aided Target Recognizers Lasers Optics Image Intensification 	NA	NA

Research Notes:

NAP - Not Applicable
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APPEN. TABLE I FEDERAL RESEARCH LABORATORIES, MILITARY AND CIVILIAN OPERATING IN VIRGINIA

Military Laboratories

Name/Address	Location	General Technology Areas	People/ Professional	Budget/ Impact
Army: Research Institute for Behavioral & Social Sciences Alexandria, VA 22333 Dr. James A. Bynum (703) 274-8637 FAX: (703) 274-5674	Alexandria, VA	 Selection & Classification Leader Development Survey Technology Manpower & Personnel Policy Unit Collective Training Techniques Simulation-based Training Rotary-wing & Land-Warfare Training 	135/80	40.0/NA
Army: Topographic Engineering Center Ft. Belvoir, VA 22060 Mr. George Simcox (703) 355-2629 FAX: (703) 355-3176	Ft. Belvoir, VA	 Multispectral, Multisensor, & Multifrequency Remote Sensing Digital Image Processing Terrain Feature Extraction Computer-Generated Images 	400/185	15.0/45. <u>+</u> 50.0 K
DoD: ODUSD (R&AT/RLM)	Washington, DC	NA	NA	NA

The Pentagon
Room 3E114
Washington, DC 20363
Mr. David Appler
(703) 274-6884
FAX: (703) 274-6708

Research Notes:

NA - Not Available

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APPENDIX TABLE I FEDERAL RESEARCH LABORATORIES, MILITARY AND CIVILIAN OPERATING IN VIRGINIA

Military Laboratories

Name/Address	Location	General Technology Areas	People/ Professional	Budget/ Impact
Marine Corps: Systems Command Quantico, VA 22134 Lt. Col. Ronald Faucher (703) 640-5845 FAX: (703) 640-5844	Quantico, VA	NA.	NA	NA
Naval Facilities Engineering Command 200 Stovall Street (Code 03T) Alexandria, VA 22332-2300 Mr. Milon E. Essoglou (703) 325-6533 FAX: (703) 325-2263	Alexandria, VA	NA	NA	NA
Naval Safety Center Norfolk, VA 23511 Mr. R. Paul Kinzey (804) 444-5093 FAX: (804) 444-5092	Norfolk, VA	 Analysis & Investigatin of Accidents Flight Data Recorders Develop- ment Analysis Workstation Develop- ment Safety Services 	280/180	8.1/NA
Naval Sea Combat Systems Engineering Station Naval Station (Code 214) Norfolk, VA 23511-5690 Mr. Lloyd A. Gatling (804) 445-7714 FAX: (804) 445-7515	Norfolk, VA	 Combat Systems Maintenance Software/Hardware Updating and Design Changes 	NA	NA

Research Notes:

NA - Not Available NAP - Not Applicable

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APPEN. ABLE I FEDERAL RESEARCH LABORATORIES, MILITARY AND CIVILIAN OPERATING IN VIRGINIA

Military Laboratories

Name/Address	Location	General Technology Areas	People/ Professional	Budget / Impac :
Naval Space Command Code VN-5T Dahlgren, VA 22448-5180 Dr. John F. Springer (703) 663-7591	Dahlgren, VA	NA .	NA	NA
Navy: Environmental Health Center Norfolk, VA 23513-2617 Dr. Glenn H. Randall (804) 444-7575 FAX: (804) 444-3672	Norfolk, VA	NA .	NA	NA
Navy: Office of Naval Technology 800 North Quincy Street (Code 26) Arlington, VA 22217-5000 Dr. Ronald M. Culpepper (703) 696-4448 FAX: (703) 696-5993	Arlington, VA	NA	NA	NA
Navy: Office of Naval Research 800 North Quincy Street (Code 261) Arlington, VA 22217-5000	Arlington, VA	NA	NA	NA

Research Notes:

Mr. Scott Thayer (703) 696-4448 FAX: (703) 696-5993

NA - Not Available

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APPENDIX TABLE I FEDERAL RESEARCH LABORATORIES, MILITARY AND CIVILIAN OPERATING IN VIRGINIA

Headquarter Activities

Name/Address	Location	General Technology Areas	People/ Professional	Budget/ Impact
Air Force Headquarters SAS-AQ, Room 4E969 The Pentagon Washington, DC 20330-1000 Mr. Daniel S. Rak (703) 614-8000	Washington, DC	NA	NA	NA
Air Force SAF/AQT The Pentagon Room BD-944 Washington, DC 20330-1000 Mr. C. J. (Chuck) Chatlynne (703) 695-3891 FAX: (703) 605-4000	Washington, DC	NA	NA	NA
Dod: Strategic Defense Initiative Organization OSD/SDIO/TNI Office of the Secretary of Defense Washington, DC 20301-7100 Mr. Nick Montanarelli (703) 693-1671 FAX: (703) 693-1695	Washington, DC	NA	NA	NA
DoD: Deputy Director for Technology Transfer 400 Army Navy Drive Suite 206 Arlington, VA 22202-2884 Mr. James Marsh	Arlington, VA	NA	NA	NA

Research Notes:

(703) 695-8360 FAX: (703) 697-7548

NA - Not Available

NAP - Not Applicable

Budget r bers are in millions. Professionals are people with higher degrees.

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APPE. K TABLE I FEDERAL RESEÀRCH LABORATORIES, MILITARY AND CIVILIAN OPERATING IN VIRGINIA

Civilian Laboratories

Name/Address	Location	General Technology Areas	People/ Professional	Budget/ Impact
Continuous Electron Beam Accelerator Facility (DoE) Newport News, VA 23606 Dr. H. Frederick Dylla (804) 249-7450 FAX: (804) 249-7398	Newport News, VA	 Nuclear Physics Sensors Signal Processing Superconductors 	NA	NA
DoC: Center for Utilization of Federal Technology 5285 Port Royal Road #300B-F Springfield, VA 22161 Mr. Edward Lehmann (703) 487-4805 FAX: (703) 321-8199	Springfield, VA	NA.	NA	NA
DoI: Fish & Wildlife Service MS 725 Arlington Square Washington, DC 20240 Mr. Duncan MacDonald (703) 358-1706 FAX: (703) 358-2202	Washington, DC	NA.	NA	NA
DoI: U.S. Geological Survey Reston, VA 22092 Dr. Ethan T. Smith (703) 648-5022 FAX: (703) 648-5295	Reston, VA	 National Mapping Water Resources Investigations Geological Investigation International Activities Information System Activities 	NA	NA

Research Notes:

NAP - Not Applicable

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APPENDIX TABLE I FEDERAL RESEARCH LABORATORIES, MILITARY AND CIVILIAN OPERATING IN VIRGINIA

Civilian Laboratories

Name/Address	Location	General Technology Areas	People/ Professional	Budget/I: pact
DoJ: Federal Bureau of Investigation Quantico, VA 22135 Mr. James J. W. Kearney (703) 640-1181 FAX: (703) 640-1394	Quantico, VA	 DNA Profiling Analysis Mono & Divalent Cation Analysis by Ion Chromatography & Capillary Electrophoresis Remote Detection of Organic Vapors by FTIR Telescopy 	NA	NA
DoT/FHA: Turner-Fairbank Highway Reserach Center McLean, VA 22101 Mr. Robert J. Kreklau (703) 285-2104 FAX: (703) 285-2379	McLean, VA	 Safety Traffic Operations including Intelligent Vehicle-Highway Systems Structures Pavement Performance Materials 	NA	NA
DoT/FHWA: Turner-Fairbank Highway	McLean, VA	NA	NA	NA

Research Center
HRD-10
6300 Georgetown Pike
McLean, VA 22010
Mr. Louis J. Colucci
(703) 285-2100
FAX: (703) 285-2379

Research Notes:

NAP - Not Applicable

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Civilian Laboratories

Name/Address	Location	General Technology Areas	People/ Professional	Budget/ Impac z
NASA Headquarters Gateway #4 1213 S. Jefferson Davis Hwy #1200 Arlington, VA 22202 Mr. Len Ault (703) 557-5598 FAX: (703) 557-8186	Arlington, VA	NA	NA	NA
NASA: Langley Research Center Hampton, VA 23665 Mr. Joseph Mathis, Jr. (804) 864-2484 FAX: (804) 864-8314	Hampton, VA	 Theoretical & Experimental Dynamics of Flight Flight Mechanics Materials & Structures 	NA	NA

Research Notes:

NA - Not Available

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