Virginia Department of Transportation

Urban Division

Manual

May 2001

PREFACE

The individuality of the municipalities of the Commonwealth of Virginia has long been recognized. The political and administrative independence of first class cities from the counties is unusual. However, some of the small cities are not totally independent of counties, sharing certain judicial facilities. Towns are also not independent of the counties, receiving certain governmental services and functions required of the counties by the state.

The relationship between certain cities and towns in the Commonwealth and the Department of Transportation is one of mutual responsibility and cooperation in regard to street maintenance and construction. The Code of Virginia establishes the eligibility criteria of localities for receiving funds for these activities. The Code provides for certain localities to receive street assistance payments and to be responsible for the maintenance of streets within their jurisdictions; and to receive apportionments for highway construction work. The Code also provides for the Commonwealth Transportation Board to allocate such funds to the municipalities for specific improvement projects.

The Urban Highway Manual is written for the purpose of identifying the statutes which provide the authority for constructing and maintaining urban highways in the Commonwealth of Virginia. In addition, the manual discusses the policies and procedures that have been developed to carry out the urban highway programs.

The objectives of this manual are a) to provide the municipalities with information on the various urban program requirements; b) to provide information in regard to the role municipalities play in accomplishing the various items of work; and c) to serve as an instructional manual for Urban Division personnel and other Department employees as to their responsibilities. The manual, therefore should be read and considered in light of these objectives recognizing that certain instructions or forms apply only in-house, while other information may be pertinent only to municipalities, and some to both.

This manual is intended to supercede and replace all previous manuals, procedures, directives and other instructional and informational material. Of course, all existing policies adopted by the Transportation Board remain in effect until modified or rescinded by the Board. Throughout the manual, the Commonwealth Transportation Board may be identified by several names – the Commonwealth Transportation Board, CTB, the Transportation Board, or simply the Board. Likewise, the Virginia Department of Transportation may be identified as the Virginia Department of Transportation, the Department, or VDOT.

TABLE OF CONTENTS

Preface

Chapter 1 – General Information
Organization of the Virginia Department of Transportation
Organization of the Urban Division
Urban Highways
Mission of the Urban Division
Legislation Related to Urban Programs

Chapter 2 – Urban Street Payment Program
Legislation
Municipalities Eligible for Street Payments
Road and Street Criteria
Payment Categories
Payment Rates
Quarterly Street Payments
Mileage Adjustments
Inventory and Mapping
Acceptable/Unacceptable Maintenance Activities
Accounting, Reporting and Certifying of Expenditures
Reimbursement and Carryover Provisions
Audit and Recordkeeping Requirements
Standards of Maintenance
Inspection and Approval of Streets Eligible for Street Payments
Bridge Safety Inspections
Maintenance of Primary Route Extensions Within Municipalities

Chapter 3 – Urban Construction Program
Legislation
Funding
Programming
- Eligibility Requirements
- Overview of Transportation Planning
- Virginia Transportation Development Plan

Apportionments and Allocations
Authorizations
- Regular Authorizations
- Interim Authorizations

Project Development
Project Construction, Inspection and Acceptance

Minor Construction Projects
Roundabouts

Chapter 4 – Policies/Requirements
Funding and Cost Responsibilities
    Betterment Funding
    Urban Traffic Studies Funding
    Safety, CMAQ, Regional STP Projects
    Enhancement Projects
Administration of Projects by Municipalities
Structures and Bridges
    Clearances and Weight Limits
    Approach Roadway Funding
    Bridge Safety Inspection
Accommodation of Utilities on Street Right of Way
Roadway Lighting
Storm Sewers (Urban Projects)
Bicycle Facilities
Right of Way
    Limited Access
    Advance Acquisition of Right of Way
    Purchase of Residue Parcels
    Purchase of Right of Way within Municipalities
Maintenance of Roads Within Limited Access Interchanges
Maintenance Standards and Acceptable/Unacceptable Maintenance Activities
On-Street Parking
Traffic Control
    Devices
    Restriction of Traffic
    Traffic Signals
    Traffic Lanes
    Median Crossovers
    Channelization Islands
Construction Speed Zones
Prison Labor
Industrial Access Roads
Airport Access Roads
Recreational Access Roads
Proprietary Traffic Signal Equipment
Non-Conformance With Project Agreement
Landscaping
Service Roads

Chapter 5 – Procedures
Procedures for Cities and Towns Requesting Mileage Additions or Functional Classification Changes for Street Payments
Procedures for Annexations, Mergers, Incorporations or When Town Population Exceeds 3,500
Procedures for Conducting Field Inspections
Procedures for Requesting a "Notice of Willingness to Hold a Public Hearing"
Procedures for Conducting Pre-Advertisement Meetings
Procedures for Administering of Projects by Municipalities
Procedures for Requesting Route Numbers Changes in Municipalities

Chapter 6 – Appendix
Form U-1, Request for Street Additions and Deletions
Form U-2, Request for Change in Functional Classification System
Form U-3, Accounting of Expenditures and Certification of Street Payment Funds Annual Report
Form U-5, Principal-Minor Arterial Streets Street Condition Report
List of Maintenance Activities
Standards of Maintenance
S&B-94-27.4
Letter of May 15, 195 Concerning Bridge Safety Inspections
Project Programming Resolution for Municipalities over 3,500 Population
Project Programming Resolution for Municipalities under 3,500 Population
Form U-9
Municipal-State Agreement
Location Public Hearing Approval Resolution
Location and Design (or Design Only) Public Hearing Approval Resolution
Example Resolution Approving Design When No Public Hearing is Held
Scoping Meeting Agenda
Field Inspection Checklist
Pre-Advertisement Meeting Checklist
Geometric Design Standards
Roadway and Structure Lighting Policy
Guidelines for Bicycle Facilities, Commonwealth Transportation Board Resolution
Underground Utility Relocation Policy
LD-00(D)216.4, Instructional Memorandum on Processing Projects Designed by Municipalities
Traffic Signal Warrants
SR-49-92, Industrial Access Roads Fund
Airport Access Roads, April 1996, Commonwealth Transportation Board Resolution
SR-47-91, Recreational Access Roads
Guidelines for Use of Proprietary Signal Equipment
Example Form Letter for Requesting Proprietary Signal Equipment

State Functional Classification for Urban Highways – Policy (includes discussion of Federal Functional Classification System)
LD-88(D)146.4 – Storm Sewers, Board Policies on Participation by Towns, Cities and Others
Federal Aid Policy Guide on Pavement Policy – Regulatory and Non-Regulatory Supplement
Letter Concerning Purchase of Residue Parcels – July 31, 1997
Specifications for Audits of Counties, Cities and Towns
Form EQ-429, Project Early Notification

I. GENERAL INFORMATION

A. Organization Of The Virginia Department Of Transportation I-2

B. Organization Of The Urban Division I-2

C. Urban Highways I-6

D. Mission Of The Urban Division I-6

E. Legislation Related To Urban Programs I-7

A. ORGANIZATION OF THE VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT)

VDOT is governed by a seventeen member board which includes the Secretary of Transportation (Chairman of the Board) and VDOT Commissioner (Vice-Chairman of the Board). The other Board membership consists of one member from each of the nine highway districts and five at-large members, two from urban areas, two from rural areas and one from anywhere in the State and a representative from the Rail and Public Transportation Agency.

The Commissioner is the chief executive officer of the Department with two (2) Deputy Commissioners, six (6) Assistant Commissioners, one (1) Chief Engineer, one (1) Chief Information Officer and the Transportation Research Council reporting to him. In addition to this top management level, certain staff divisions have been assigned a direct reporting relationship with the Commissioner. The remaining organizational structure is under the guidance and control of the Assistant Commissioners and the Chief Engineer. The **URBAN DIVISION** reports to the Assistant Commissioner for Finance.

Figure 1 on the next page depicts the Organizational Chart of VDOT.

B. ORGANIZATION OF THE URBAN DIVISION

The Urban Division is headed by the Urban Division Administrator, otherwise known as the State Urban Engineer, who reports to the Assistant Commissioner for Finance.

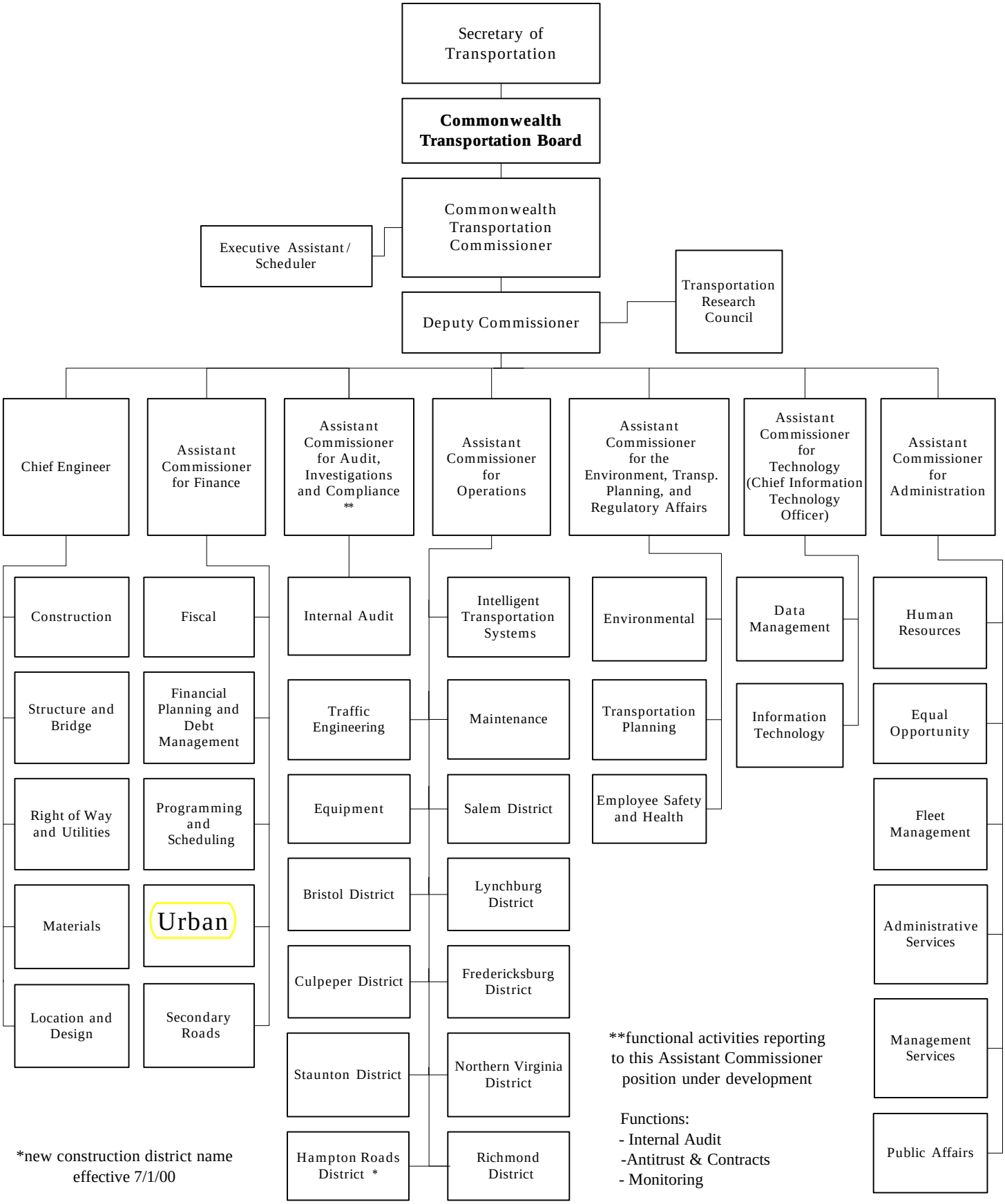
The State Urban Engineer is supported by a Division Assistant Administrator, and five Regional Urban Engineers responsible for administering and monitoring the Urban Highway Construction Program within a designated area of the State.

Figure 2 depicts the organization of the division including the area assignments and telephone numbers and Figure 3 provides the specific City/Town assignments. Municipal officials may desire to communicate directly with the State Urban Engineer on matters dealing with programming and funding of projects, maintenance and other special matters; however, communications will ordinarily be with the Urban Programs Engineer on construction project and traffic operation matters.

Municipal representatives will also have frequent contacts with the District Administrator, district staff members and Resident Engineers. In fact, considerable communication between the Municipality and the Department, on such issues as submissions of resolutions, reports, mileage adjustment requests, etc., should procedurally be made through the Resident Engineer.

Virginia Department of Transportation Organization

October 2, 2000



Urban Division Organization Chart

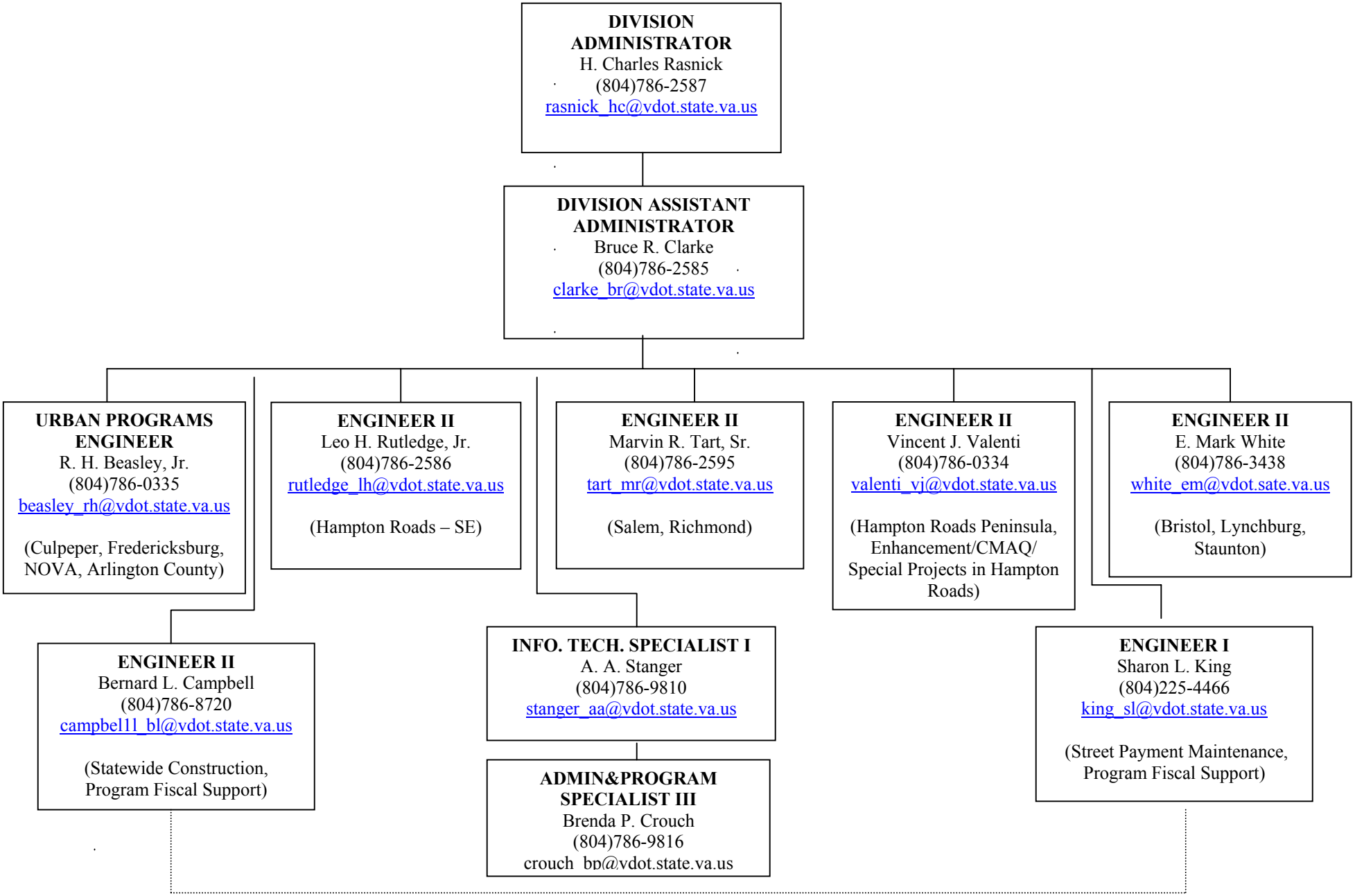


Figure 2 January 2001

URBAN DIVISION
CITY/TOWN ASSIGNMENTS **2/13/01**

Reginald H. Beasley, Jr. (804) 786-0335

Alexandria
Arlington
Charlottesville
Culpeper
Dumfries
Fairfax
Falls Church
Fredericksburg
Herndon
Leesburg
Manassas
Manassas Park
Orange
Vienna
Warrenton

Marvin R. Tart, Sr. (804) 786-2595

Ashland
Bedford
Blacksburg
Blackstone
✽Chase City
Christiansburg
Colonial Heights
Galax
Hopewell
Martinsville
✽Narrows
✽Pearisburg
Petersburg
Pulaski
Radford
Richmond
Roanoke
Rocky Mount
Salem
South Hill
Vinton

Leo H. Rutledge, Jr. (804) 786-2586

Chesapeake
Chincoteague
Norfolk
Portsmouth
Virginia Beach

Vincent J. Valenti (804) 786-0334

Emporia
Franklin
Hampton
Newport News
Poquoson
Smithfield
Suffolk
Williamsburg

Plus all CMAQ Projects in Hampton Roads District

E. Mark White (804) 786-3438

Abingdon
Altavista
Big Stone Gap
Bluefield
Bridgewater
Bristol
Buena Vista
Clifton Forge
Covington
Danville
✽Elkton
Farmville
Front Royal
✽Grottoes
Harrisonburg
Lebanon
Lexington
Lynchburg
Luray
Marion
Norton
Richlands
✽Saltville
South Boston
Staunton
Strasburg
Tazewell
Waynesboro
Winchester
Wise
✽Woodstock
Wytheville

✽Municipalities qualified under Section 33.1-80 for Street Payments

C. URBAN HIGHWAYS

Urban highways include certain roads and streets within the corporate limits of qualifying municipalities. A qualifying municipality is defined under Sections 33.1-23.3 and 33.1-41.1 of the Code as one having 3,500 or more inhabitants, one maintaining certain streets under Section 33.1-80 of the Code as then in effect, all cities and the Towns of Wise, Lebanon, and Blackstone. The seven municipalities qualifying under the old law under Section 33.1-80 are denoted by an asterisk in Figure 3.

As of September, 2000, Urban highways consisted of 10,141 of centerline miles stratified in the following categories:

State Classification	Federal Classification	Mileage
Arterial	Principal Arterial	589 miles
Arterial	Minor Arterial	1,223 miles
Collector	Collector	1,005 miles
Local	Local	7,407 miles
	TOTAL	10,224 miles

See the appendix for further information on the state and federal classification of urban streets.

D. MISSION OF THE URBAN DIVISION

The mission of the Urban Division is to administer the street payment program and develop and manage the construction program with municipalities so as to provide safe, efficient, effective and environmentally balanced urban transportation systems.

Under current law, the Commonwealth Transportation Board annually allocates funds to eligible municipalities for street maintenance and construction activities, and amounts are apportioned based on certain qualifying criteria which are defined in Chapter II. These funds are administered by the Urban Division and are made available through the use of street payments made to eligible municipalities. The Urban Division is responsible for ensuring that such financial assistance payments for maintenance and construction activities are made to localities on a quarterly basis, are properly expended, and that roadways are maintained and constructed to the proper standards. Street payments made to support maintenance activities for eligible streets are based on the number of moving lane-miles available to peak hour traffic, multiplied by a specific rate of payment.

The Urban Division also works closely with cities and towns to develop a program of urban construction projects, and serves to make program recommendations to the Commonwealth Transportation Board on urban allocations. Construction allocations are apportioned based on qualifying city and town populations, in relation to all qualifying city and town populations.

In addition to administering the Urban street payment and construction programs, the Urban Division provides as needed coordination between VDOT and the municipalities for interstate, primary, arterial, toll, Congestion Mitigation Air Quality, enhancement, hazard elimination, highway/railroad crossing, safety, various access roads, or other such highway projects within cities and towns.

E. LEGISLATION RELATED TO URBAN PROGRAMS

LEGISLATION - ALPHABETICALLY

SECTION	33.1-221	ACCESS ROADS - INDUSTRIAL AND AIRPORT
SECTION	46.2-808	ACCESS ROADS - PROHIBIT CERTAIN USES
SECTION	33.1-223	ACCESS ROADS - RECREATIONAL AND HISTORICAL
SECTION	15.2-2030	AIR SPACE OVER PUBLIC STREETS
SECTION	33.1-23.1A,B1,B2	ALLOCATION OF FUNDS AMONG HIGHWAY SYSTEMS

SECTION	33.1-23.2A,B,C,D	ALLOCATION OF FUNDS FOR PRIMARY AND INTERSTATE MATCH
SECTION	33.1-23.3	ALLOCATION OF FUNDS FOR URBAN HIGHWAYS
SECTION	33.1-27	ARTERIAL HIGHWAYS WITHIN A LOCALITY
SECTION	46.2-1110	BRIDGE CLEARANCES
SECTION	33.1-39	BYPASSES
SECTION	33.1-288	CHESAPEAKE BAY BRIDGE TUNNEL PAYMENTS
SECTION	33.1-214	CITY CONTRIBUTIONS TOWARDS CONSTRUCTION OUTSIDE CITY
SECTION	33.1-41.1	CITY STREET PAYMENTS
SECTION	2.1-374 TO 2.1 –376	CONTRACTOR NON-DISCRIMINATION
SECTION	11-53	CONTRACT NEGOTIATION WITH LOW BIDDER
SECTION	15.2-2013, 15.2-2029	CONTROL OF STREETS BY MUNICIPALITY
SECTION	15.2-2021	HANDICAP RAMPS
SECTION LAND	33.1-91	LAND ACQUISITION OF ENTIRE TRACTS OF
SECTION	33.1-47.1	LANDSCAPE STUDIES
SECTION	33.1-58	LIMITED ACCESS HIGHWAYS – BOARD AUTHORITY
SECTION	33.1-23.02	MAINTENANCE DEFINITION
SECTION	33.1-46.1	MASS TRANSIT AID
SECTION	33.1-44	MATCHING HIGHWAY FUNDS

SECTION	33.1-61	PARALLEL SERVICE ROADS
SECTION	46.2-1149	PERMITS - OVERSIZED/OVERWEIGHT VEHICLES
SECTION	46.2-1303	PERMITS - WITHIN RIGHT OF WAY
SECTION	33.1-56	RELOCATION, REMOVAL OF UTILITIES
SECTION	33.1 –89	RIGHT OF WAY - ACQUISITION WITHIN MUNICIPALITY
SECTION	15.2-2003	RIGHT OF WAY - ACQUISITION OUTSIDE CORPORATE LIMITS
SECTION	33.1-90	RIGHT OF WAY - ADVANCE ACQUISITION
SECTION	56-405	R/R GRADE CROSSING - MAINTENANCE
SECTION	33.1-79&82	SECONDARY STREET ADDITION REQUIREMENTS IN TOWNS
SECTION	15.2-3530	SERVICE CONTINUATION AFTER ANNEXATION
SECTION	33.1-46	SIGNS/PAVEMENT MARKINGS APPROVED BY THE COMMISSIONER
SECTION	33.1-25&37	STATE HIGHWAY SYSTEMS
SECTION	15.2-2020	STREET LIGHTING - COUNTIES
SECTION	33.1-43.2	TOWNS WITH RESTRICTED DEVELOPABLE LAND
SECTION	46.2-1300	TRAFFIC CONTROL
SECTION	33.1-47	TRAFFIC LIGHTS AND MARKINGS ON PRIMARY ROADS
SECTION	33.1-224	TRANSFER OF STREETS FROM SECONDARY SYSTEM TO URBAN

SECTION	46.2-1304	TRUCK TRAFFIC REGULATIONS - LOCAL AUTHORITIES
SECTION	46.2-809	TRUCK TRAFFIC REGULATIONS - SECONDARY HIGHWAYS
SECTION	15.2-2017	UTILITIES - OCCUPY RIGHT OF WAY WITH CONSENT
SECTION	33.1 - 190.1	VALUE ENGINEERING REQUIREMENT
SECTION	15.2-2114	WAIVER OF STORMWATER CHARGES FOR PUBLIC ROADS

LEGISLATION BY SECTION CODES

SECTION	2.1-374 TO 2.1-376	CONTRACTOR NON-DISCRIMINATION
SECTION	11-53	CONTRACT NEGOTIATION WITH LOW BIDDER
SECTION	15.2-2013, 15.2-2029	CONTROL OF STREETS BY MUNICIPALITY
SECTION	15.2 -2114	WAIVER OF STORMWATER CHANGES FOR PUBLIC ROADS
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SECTION	15.2-2017	UTILITIES - OCCUPY RIGHT OF WAY WITH CONSENT
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SECTION	33.1-23.3	ALLOCATION OF FUNDS FOR URBAN HIGHWAYS
SECTION	33.1-25 & 37	STATE HIGHWAY SYSTEMS
SECTION	33.1-27	ARTERIAL HIGHWAYS WITHIN A LOCALITY
SECTION	33.1-39	BYPASSES
SECTION	33.1-41.1	CITY STREET PAYMENTS
SECTION	33.1-43.2	TOWNS WITH RESTRICTED DEVELOPABLE LAND
SECTION	33.1-44	MATCHING HIGHWAY FUNDS
SECTION	33.1-46	SIGNS/PAVEMENT MARKINGS APPROVED BY THE COMMISSIONER
SECTION	33.1 -46.1	MASS TRANSIT AID
SECTION	33.1-47	TRAFFIC LIGHTS AND MARKINGS ON PRIMARY ROADS
SECTION	33.1-47.1	LANDSCAPE STUDIES
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		MUNICIPALITY
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SECTION	33.1-224	TRANSFER OF STREETS FROM SECONDARY SYSTEM TO URBAN
SECTION	33.1-288	CHESAPEAKE BAY BRIDGE TUNNEL PAYMENTS
SECTION	46.2- 1110	BRIDGE CLEARANCES
SECTION	46.2-1300	TRAFFIC CONTROL
SECTION	46.2- 1303	PERMITS - WITHIN RIGHT OF WAY
SECTION	46.2-1304	TRUCK TRAFFIC REGULATIONS – LOCAL AUTHORITIES
SECTION	46.2-808	ACCESS ROADS - PROHIBIT CERTAIN USES
SECTION	46.2-809	TRUCK TRAFFIC REGULATIONS – SECONDARY HIGHWAYS
SECTION	46.2-1149	PERMITS - OVERSIZED/OVERWEIGHT VEHICLES
SECTION	56.405	R/R GRADE CROSSING - MAINTENANCE

II. URBAN STREET PAYMENT PROGRAM

A. Legislation II-3

1. Section 33.1-41.1
2. Section 33.1-23.02
3. Section 33.1-80
4. Section 33.1-43.2
5. Section 33.1-224
6. Section 15.1-1131.1

B. Municipalities Eligible For Street Payments II-4

C. Road And Street Criteria II-4

D. Payment Categories II-7

E. Payment Rates II-7

F. Quarterly Street Payments II-7

G. Mileage Adjustments II-7

H. Inventory And Mapping II-8

I. Acceptable/Unacceptable Maintenance Activities II-8

J. Accounting, Reporting And Certifying Of Expenditures II-8

K. Reimbursement And Carryover Provisions II-9

L. Audit And Recordkeeping Requirements II-9

M. Standards Of Maintenance II-10

N. Inspection And Approval Of Streets Eligible For Street Payments II-10

O. Bridge Safety Inspections II-10

P. Maintenance Of Primary Route Extensions Within Municipalities II-11

URBAN STREET PAYMENT PROGRAM

The Urban Street Payment Program is based on statutes in the Code of Virginia which authorize the Commonwealth Transportation Commissioner to make payments to qualifying cities and towns for maintenance, construction and reconstruction of roads and streets meeting specific criteria and under certain conditions. The following paragraphs set forth key statutes and the various requirements of the program:

A. LEGISLATION

1. Section 33.1-23.02 – This section defines the term "maintenance".

2. Section 33.1-41.1. – This section provides for the Department to make payments to cities and certain towns for maintenance, construction, or reconstruction of certain roads and streets. It identifies the eligibility requirements for cities and towns and the criteria for eligible streets. It specifies two functional classifications of highways and establishes for FY 86 base payment rates per moving lane mile and a means of calculating yearly adjustments based on changes in costs for labor, equipment and materials. It provides for quarterly payments, an annual audit, and annual reporting by the municipalities accounting for and certifying the expenditures. It also specifies that payments shall only be made if principal and minor arterial roads and streets are maintained to the proper standards of the Department. Implicit in this section is the requirement that roads must be paved to receive street payments. A tar and gravel surface is considered a minimum to meet the definition of paved.

3. Section 33.1-43.2 – This section enables an incorporated town in which 70% or more of its developable land has a natural grade of 20% or more to provide by ordinance for Collector/Local streets established on or after July 1, 1980, to have a minimum right of way width of 40 feet and a minimum hard surface of 18 feet. Such streets shall be eligible for street payments.

4. Section 33.1-224 – This section provides whenever any incorporated town has a population of more than 3,500, that all the roads, streets, causeways, bridges, landings and wharves, within the Secondary System shall be eliminated from such system and control and jurisdiction over them shall be vested in the local authorities. It should be noted

that similar requirements do not exist for the primary system. Maintenance responsibility for these roads is a matter of negotiation between VDOT and the locality and is dependent on the locality's ability to maintain them.

5. Section 15.2-3530 – This section provides for the Department to continue full services (maintenance, construction, funding, etc.) upon mergers or annexations until, in the opinion of the Commissioner, the merged or annexed areas or portions thereof become substantially urbanized.

B. MUNICIPALITIES ELIGIBLE FOR STREET PAYMENTS

Payments for maintenance construction and reconstruction of certain highways and streets shall be made by the Commonwealth Transportation Commissioner to municipalities satisfying any of the following requirements: (See Section 33.1-41.1)

1. all cities operating under charters regardless of population;

2. all incorporated towns of more than 3,500 population according to the latest U.S. Census;

3. all incorporated towns which have obtained a population of more than 3,500 since the last U.S. Census, according to evidence satisfactory to the Board;

4. all incorporated towns which maintained certain streets under (repealed) Section 33.1-80 of the Code, on June 30, 1985; and

5. the towns of Wise, Lebanon, and Blackstone.

With regard to Item 3 above, the municipality will be brought under the urban system when the latest U. S. census is completed unless it petitions the Board for earlier action.

With regard to Item 4 above, there are seven towns eligible for street payments as a result of operating under Section 33.1-80 on June 30, 1997. They are Chase City, Elkton, Grottoes, Narrows, Pearisburg, Saltville and Woodstock.

C. ROAD AND STREET CRITERIA

Street payments shall be made to eligible municipalities for roads and streets meeting any of the following criteria: (See Section 33.1-41.1)

1. at least 50' of R/W and at least 30' of hard surface;

2. at least 80' R/W and at least 24' of hard surface and approved plans for the addition of at least 24' of hard surface within the same right of way;

3. cul-de-sac and at least 40' of R/W and standard turnaround;

4. **either:** Paved, and in Primary or Secondary System prior to annexation or incorporation;

   or: In Secondary System prior to annexation or incorporation and paved to at least 16' subsequent to annexation or incorporation with the further exception of streets previously maintained under Section 33.1-79 or Section 33.1-82;

5. street eligible for and receiving payments under laws in effect on June 30, 1985;

6. streets established prior to July 1, 1950 with at least 30' of R/W and at least 16' of hard surface;

7. a street functionally classified as a local street and constructed on or after January 1, 1996, which meets the criteria of the then current subdivision street requirements for secondary roads.

   The Commissioner may waive the requirements for hard surface or right of way width at the request of the local governing body to protect its drinking water supply, or for highways constructed after July 1, 1994, to accommodate some other special circumstance where such action would not compromise the health, safety, or welfare of the public.

   VDOT will consider a request for waiver with appropriate supporting information. Each case will be considered on its own merits and should be site specific. At a minimum, a copy of a map or site plan showing the layout of the proposed street(s), the proposed pavement and right of way widths, forecast traffic volumes and reasons for requesting a waiver should be sent to the Urban office.

NOTE: (For an exception to these requirements in mountainous towns, see Section 33.1-43.2 of the Code)

With regard to Item 3, the Code is silent on the issue of pavement widths for cul-de-sacs. However, since the basic right-of-way width of 50' is reduced to 40', the Department will consider requests for pavements less than 30' on a case by case basis giving consideration to the specifics of each case. For the purpose of making this assessment, a cul-de-sac will be defined as a dead end street and open only at one end.

With regard to Item 6, and to be considered established, the Virginia Land Subdivision Law of 1946 requires subdivision plats to be prepared by a licensed surveyor or civil engineer, acknowledged by the owner and approved by the local governing body before recordation. And further, after recordation, the plat transfers the street or streets shown thereon to the county or city in fee simple. Prior to 1946, the law required only that the platting of streets be accepted by a competent public authority.

In addition to the above, the Department has concluded if a city or town receiving street payments has jurisdiction over and operates a toll facility, such is eligible for street payments.

For local, one-way streets and school bus entrances, they will be eligible for street payments if they are constructed to at least a width of 16 feet with a right of way width of not less than 40 feet.

Service Roads are considered local roads, and as such, fall under Item 7 above. The right of way width requirement is considered to be satisfied if it is contiguous to an interstate, primary, or urban highway facility.

In determining lane mileage eligibility, the following conditions shall apply:

1. Turning lanes and ramps will not be considered for street payments. This includes center turn lanes unless they serve as moving through lanes during peak hours.
2. Parking must be restricted and enforced by towing during peak traffic periods.
3. Each road or street with more than two moving lanes must have pavement markings in accordance with the Manual on Uniform Traffic Control Devices (MUTCD) requirements to be consistent with lane mileage eligibility.
4. Pavement widths of less than 14 feet shall quality for only one moving lane even if it carries traffic in two directions.
5. Non-hard surfaced streets do not qualify for street payments.

D. PAYMENT CATEGORIES

Street payments shall be made for two highway categories, which are based on State Functional Classifications as follows: (See Section 33.1-41.1)

1. Principal and Minor Arterial Roads
2. Collector Roads and Local Streets

The State Functional Classification System is distinct from, but is based on the Federal Classification of highways established by the Federal Highway Administration (FHWA). Reference is made to the Appendix for an explanation of the State Functional Classification System for Urban Highways.

E. PAYMENT RATES

Section 33.1-41.1 of the Code established base rates of payment per the number of moving-lane miles of highways available to peak-hour traffic for Fiscal Year 1986 of $7,787 for principal and minor arterial roads and $4,572 for collector roads and local streets.

It also required that the Department to establish a Statewide Maintenance Cost Index (MCI) of unit costs for labor, equipment, and materials used on roads and bridges for 1986 and to use changes in the MCI to determine annual adjustments to the payment rates.

F. QUARTERLY STREET PAYMENTS

The total street payment for each locality will be determined during the first quarter of each fiscal year using the adjusted payment rates multiplied by the number of approved moving lane miles for each category and the yearly calculated payments will be approved by the Board. Payments will be made on a quarterly basis. The number of moving lane-miles available to peak-hour traffic used to calculate street payments for the entire fiscal year will be the mileage for each category approved by the Board prior to the first payment of the fiscal year.

G. MILEAGE ADJUSTMENTS

Regular mileage additions and deletions that occur during the fiscal year, should be submitted by the municipality to the Department as soon as they become eligible during the year but not later than April 1st. The submissions shall include Form U-1, a Council Resolution and a map or sketch of the proposed addition (deletion). In lieu of a resolution for each change, the Department will accept a single resolution authorizing a city official to certify changes. In these cases, a copy of the authorizing resolution should accompany the request. Requests for such mileage additions (deletions) are

made in centerline miles and lane miles and payments are made based on approved lane miles. Procedures for making these mileage addition (deletion) requests are contained in Section V. A copy of Form U-1 is found in the Appendix.

Mileage additions that occur during the year as a result of annexations, mergers or incorporations will be eligible for payment effective on the date said annexation (etc.) is approved by the Court or as mutually agreed by the Municipality and the Department. (See Section V for Annexation procedures.)

H. INVENTORY

An inventory of all roads and streets eligible for street payments in each municipality will be kept by the Department. The inventory includes all roads and streets that were previously determined to be eligible as a result of a comprehensive field survey. All subsequently approved additions, deletions and changes in functional classification will be made to the inventory on a continuing basis. Each fiscal year, each municipality is sent a complete inventory of its roads that receive payment. While the Department has made every reasonable effort to ensure the accuracy of the inventory, municipalities are asked to check for omissions or errors and advise of any changes or corrections needed.

I. ACCEPTABLE/UNACCEPTABLE MAINTENANCE ITEMS

See Section IV for a discussion of items that are eligible or ineligible for the use of street payments.

J. ACCOUNTING, REPORTING AND CERTIFYING OF EXPENDITURES

Cities and towns receiving street payments are required, under Section 33.1-41.1 of the Code, to make an annual report accounting for such expenditures and to certify that none of the money received has been expended for other than street maintenance, construction or reconstruction on eligible streets. The report is to be included in the annual audit of each municipality conducted by independent certified public accountants.

In addition, Form U-3 (a copy is included in the Appendix) should be submitted by each municipality within 60 days of the close of a fiscal year which shows the total street payment money available and how much was expended. It also has a certification by the municipality that all expenditures were spent on eligible activities.

K. REIMBURSEMENT AND CARRYOVER PROVISIONS

In the event the municipality's total street payments exceed the combined total eligible expenditures for the fiscal year, as reflected in the annual audit, the municipality will be given 60 days to refute the audit finding. Failing this will cause the Department to deduct the overpayment from future payment or payments. The Department may use up to four payments to recover the under-expenditures.

In the event a municipality has contractual obligations which have anticipated payouts after the end of the fiscal year, such outstanding obligatory amounts may be authorized to be carried over into the next fiscal year. In the event a municipality has an extraordinary maintenance requirement for which a contractual obligation is not feasible, such item may be authorized for carryover on a case-by-case basis. All carryover requests shall be made in writing, with supporting documentation, within 6 months following the close of the fiscal year by the municipality and approved by the State Urban Engineer.

Basically, street payments are to be spent in the year the payments are made. Within legal framework, however, the Department has developed carryover provision for encumbered contractual obligations and extraordinary maintenance requirements as previously discussed. These are the only exceptions. A prior year's excess maintenance expenditures cannot be accrued to offset a current year's under-expenditures.

L. AUDIT AND RECORDKEEPING REQUIREMENTS

Section 33.1-41.1 requires an annual audit of street payment receipts and expenditures related to maintenance, construction and reconstruction on eligible streets. Such receipts and expenditures shall be recorded by the municipality in a separate highway maintenance fund. The fund should be supported by sufficiently detailed information to determine the source of all receipts and identifying all expenditures by the particular street system or category (Arterial or Collector/Local). Such expenditures may include cost for labor, equipment, materials and any indirect or overhead charges related to applicable street maintenance, construction, or reconstruction expenditures. All expenditures must be supportable and the records maintained by the municipality must meet reasonable audit tests.

The records of each fiscal year shall be audited by a CPA firm, retained by the municipality under the State Auditor of Public Accounts procedures and requirements. The Department reserves the right to perform supplemental audits of accounting systems and records as it deems appropriate. Additional information can be found in the Appendix under "Specifications for Audits of Counties, Cities and Towns."

M. STANDARDS OF MAINTENANCE

Section 33.1-41.1 of the code provides that street payments shall only be made if, in the opinion of the Commonwealth Transportation Board, such highways are maintained in accordance with the applicable standards of the Board.

The Department's Standards of Maintenance are contained in the Appendix.

N. INSPECTION AND APPROVAL OF STREETS ELIGIBLE FOR STREET PAYMENTS

The purpose of street inspections is to identify deficiencies and to expedite corrective actions. Urban systems streets should meet the minimum Standards of Maintenance of the Department. The Department's Resident Engineer is responsible for scheduling the inspections, which shall be made in the company of an authorized municipal employee. The Resident Engineer, or his representative who is performing the inspections, should exercise good judgment in determining maintenance deficiencies. The Street Condition Report Form U-5 (a copy is included in the Appendix) is to be submitted by the Resident Engineer to the State Urban Engineer.

All roads and streets, which are functionally classified as principal arterial and minor arterial, shall be inspected each year. Deficiencies identified on Form U-5 shall be re-inspected after six months and another U-5 submitted with the Resident Engineer's recommendations as to whether or not the street payments should be deleted for the deficient section. This process shall continue until the deficiency is corrected.

A minimum of 0.1 lane mile, and increments of 0.1 mile, thereafter, shall be deleted for payment for each segment of street containing deficiencies. For example, if a drainage inlet is clogged, causing water to stand on one lane, which affects traffic in only one lane, then 0.1 mile shall be deleted. If more than one lane of traffic is affected, each should be counted. As another example, when a sign is non-standard and should be removed or changed, if it is visible to two lanes of traffic for 0.2 mile, then 0.4 mile shall be deleted. All deficiencies noted will be totaled and the deletion of payment for the deficiencies will begin with the next quarterly payment. The State Urban Engineer shall make the final determination for such deletions.

This procedure refers to a deficiency of lane mileage that is not corrected within six months. Any deletion of payment will extend for a minimum of six months (two quarters) and will not be recoverable.

O. BRIDGE SAFETY INSPECTIONS

Bridge safety is of utmost importance. The FHWA and the Department require strict compliance with the National Bridge Inspection Standards (NBIS) in particular regard to the frequency of inspection and load posting requirements. The FHWA has

adopted a policy where the use of Federal Aid funds will be suspended in any State or Local jurisdiction in which there are substantial NBIS deficiencies. Section 116 of Title 23 of the U. S. Code indicates that if a project is constructed in whole or in part with Federal funds, that project is to be maintained at a level acceptable to the U. S. Secretary of Transportation or the Secretary will withhold Federal funds until an acceptable level of maintenance is achieved. The State Urban Engineer may also utilize street payments for delinquent Bridge Inspection Reports.

The District Structure and Bridge Engineers are responsible for insuring that the bridge inspection requirements are met by the localities. Reference is made to the Appendix for bridge safety instructions issued by the Structure and Bridge Division in the Instructional and Informational Memorandum S&B 94-27.4, latest version.

Reference is also made to letter of May 15, 1995, from the Urban Division to the cities and towns concerning bridge safety inspections.

P. MAINTENANCE OF PRIMARY ROUTES

Normally when a municipality assumes responsibility for maintenance of its streets under Section 33.1-41.1, it also has the option of maintaining all primary routes within its corporate limits, though such is not required by statute. VDOT has continued to maintain primary routes in some cases by mutual agreement with the municipality.

III. URBAN CONSTRUCTION PROGRAM

A. Legislation III-3

1. Section 33.1-23.1
2. Section 33.1-23.3
3. Section 33.1-44
4. Section 33.1-89
5. Section 33.1-1-214
6. Section 33.1-1-46.1
7. Section 33.1-221
8. Section 33.1-223
9. Section 33.1-27
10. Section 33.1-39
11. Section 33.1-23.2D

B. Funding III-6

C. Programming III-7

1. Eligibility Requirements
2. Overview Of Transportation Planning
3. Virginia Transportation Development Plan

D. Apportionments And Allocations III-9

E. Authorizations III-9

1. Regular Authorizations

2. Interim Authorizations

F. Project Development III-10

G. Project Construction, Inspection And Acceptance III-15

H. Minor Construction Projects III-16

I. Roundabouts III-17

URBAN CONSTRUCTION PROGRAM

The Urban Construction Program is based on statutes in the Code of Virginia which provides the basis of funding and the distribution of such funding for urban construction projects in qualifying municipalities. The following paragraphs set forth the key statutes and the various requirements of the program:

A. LEGISLATION

1. Section 33.1-23.1 – This section provides that the Commonwealth Transportation Board shall allocate 30% of the remaining funds each year for urban highway construction purposes, after deductions are made for such items as administrative and general expenses, maintenance of all systems, interstate matching funds, and unpaved secondary roads.

2. Section 33.1-23.3 – This section provides methodology for apportioning the available construction funds to qualifying municipalities and for allocating such funds to projects. It specifies that such apportionments are made by population ratio formulas. It also specifies no apportionment will be made to any city or town that does not have a project approved by the Commonwealth Transportation Board. Municipalities without approved projects may accrue their apportionment for up to five years. When a project is requested by a municipality and approved, such accrued funds are to be apportioned to that municipality prior to distribution under the general provision of this section.

   This section also allows a municipality to utilize up to one third (1/3) of its annual construction apportionment to reimburse the locality for debt service for eligible project costs on approved projects. A number of conditions were established in this legislation which are as follows:

   - For a project to be eligible, it must be included in the Commonwealth Transportation Board's Virginia Transportation Development Plan and included in the locality's capital improvement program.
   - A resolution from the municipality will be required requesting a portion of its annual urban apportionment to be set aside for reimbursement for a specific eligible project.

- No more than one-third of the anticipated annual urban apportionment to a municipality shall be used for debt service.

- The apportionment to be set aside will be limited by the amount of funds previously committed by the Board for projects contained in the Virginia Transportation Development Plan. (Procedurally, the Department will consider as committed: funding necessary to finance expenditures on any project, and the funding necessary to fully finance through construction any project that has progressed to the right of way acquisition stage.)

The amount of debt that may be supported under this Section will vary based on the many possible strategies a municipality may pursue and the amount of urban apportionment determined to be uncommitted.

A portion of apportionments made to any city or town under this section may be used on streets functionally classified as arterial for (i) the purchase of residue parcels of land resulting from highway system construction or reconstruction projects where the purchase will result in necessary access control or land use control directly related to the purpose and need for the project, (ii) improvements to traffic safety, (iii) improvements to traffic flow and transportation system utilization, or a combination of (i), (ii), and (iii). A July 31, 1997 letter providing further clarification on the intent of this portion of the Section was issued from the Urban Division of the Department and is included in the Appendix.

3. Section 33.1-44 – This section provides for the Commonwealth Transportation Board to contribute 98% of the necessary funds from federal and/or state sources towards the cost of an urban construction project if municipalities of 3,500 or more population and the Towns of Wise, Lebanon and Blackstone contribute 2%. In municipalities of less than 3,500 population, the Board shall contribute 100%. This section defines the term "construction or improvement". This section also provides for the municipality to reimburse to the State all funds expended in the event the project is cancelled by the municipality. If a project is eliminated due to factors beyond the control of the municipality this provision may be waived by the Board. This section also provides that

contributions of real estate may be credited against the matching obligation of a municipality.

4. Section 33.1-89 – This section enables the Commonwealth Transportation Commissioner, if requested, to acquire the right of way on an urban project for the municipality, and to convey such right of way to the municipality. The condemnation has to be for a public purpose.

5. Section 33.1-214 – This section provides that a municipality may contribute funds within the control of such municipality towards the construction or improvement of a road, bridge, etc., up to 40 miles outside the corporate limits of such municipality, under certain defined conditions.

6. Section 33.1-46.1 – This section allows municipalities to designate urban highway allocation for the purchase of buses and ancillary facilities for public transit systems.

7. Section 33.1-221 – This section applies to Industrial and Airport Access Roads. (see Appendix for detailed information)

8. Section 33.1-223 – This section applies to Recreational Access Roads. (See Appendix for detailed information)

9. Section 33.1-27 – This section pertains to extensions of arterial highways within cities and towns of 3,500 or more population. It provides for such cities and towns to participate in the construction and maintenance of such highways in accordance with Sections 33.1-44 and 33.1-41.1 of the Code. However, it also provides for such extensions to be constructed and maintained solely by the Department when the municipality elects not to participate, if deemed to be in the best interest of the Commonwealth by the Board.

10. Section 33.1-39 – This section pertains to bypasses or extensions of the primary system through cities and towns of 3,500 or more population. It provides for such cities and towns to participate in the construction and maintenance of such highways in accordance with Sections 33.1-44 and 33.1-41.1 of the Code. However, it also provides for such extension to be constructed and maintained solely by the Department when the municipality elects not to participate and when the Board determines such bypasses, extensions or connections to be primarily rural in character.

11. Section 33.1-23.2D – Funds allocated to the primary system in a county, which is subsequently incorporated as or into a city or town, shall not be impaired, but that portion of such city or town shall not be eligible for Urban system funds during the same year.

B. FUNDING

Section 33.1-23.1 provides that all funds (federal and state) available for highway purposes be combined and made available for all systems of state highways for maintenance, construction and other general purposes, with the exception of federal interstate funds and certain other special categories. Generally, no distinction is made between federal and state funds for construction projects; therefore, the decision as to whether or not an urban system project will be funded with federal participation depends on the availability of federal funds in the applicable federal category for which the project is eligible. Thirty percent (30%) of the combined funds available for construction are apportioned to the urban system. These funds are further apportioned to qualifying municipalities based on population.

Special federal planning funds may also be available for urban traffic studies. Likewise, other special federal funds, such as bridge discretionary funds, demonstration projects, emergency relief, timber bridge, etc., may become available from time to time. These special federal funds do not affect or reduce the standard apportionments. Also, special state funds from such sources as bonds, tolls, etc., may be provided.

Regular projects may receive allocations from more than one federal funding source. Under current legislation, these could be regular Surface Transportation Program (STP), Regional Surface Transportation Program (RSTP), Statewide Surface Transportation Program (STP), and Bridge Replacement and Rehabilitation. Expenditure protocol is to spend these funds in the manner most advantageous to the municipality.

Rules governing the allocation of funds establish how matching requirements will be provided. STP funding is money which comes through the state formula. It is interchangeable with state formula dollars. The combination of state and federal dollars is 98% of project cost for urban projects with the locality providing 2% (distribution is 80-18-2 federal, state, local).

RSTP is money distributed under federal formula. The Metropolitan Planning Organizations (MPOs) in Northern Virginia, Richmond and Hampton Roads are given the authority to decide their use. These funds are matched off the top, thereby making them whole dollars not requiring a local match (distribution is 80-20-0).

STP statewide funding is money distributed at the discretion of the Commonwealth Transportation Board. These funds are matched by the receiving

system. For urban projects the locality is required to provide 2% of the system match (distribution is 80-19.6-0.4).

Thus local matching requirements for STP funding varies from 0% to 2%. If project funding is derived from one STP source, the local match at the appropriate rate will be shown on the authorizations.

If urban allocation funds are used to match special federal programs such as the Congestion Mitigation and Air Quality and Safety programs, then the local match is 2% of the urban match requirement for the federal funds. Not all CMAQ projects require an urban match, such as signalization projects. CMAQ funds are made available by the MPO's in those areas eligible for CMAQ funding, and safety funds are made available by the Department through an annual application process.

C. PROGRAMMING

When requesting the inclusion of urban construction projects in the Virginia Transportation Development Plan (VTDP), the municipality should determine that proposed projects meet the eligibility requirements, prioritize all needs, and make a formal request to the Department by submitting an adopted council resolution identifying and describing the requested project. The resolution must include a provision whereby the municipality of 3,500 population or more and certain other municipalities agree to pay its share of the total costs of preliminary engineering, right of way and construction. The resolution must also provide that, in the event the project is subsequently cancelled by the municipality, the municipality agrees to reimburse the Department for the total amount of all costs expended by the Department to date of cancellation (See example of Project Programming Resolution in Appendix). Such resolutions should be submitted to the Department by the first of May. Projects so requested and accepted by the Department may be included in the VTDP. This does not preclude emergency projects being funded during the fiscal year.

In the event the municipality elects to have a project removed from the VTDP, a resolution to this effect must be adopted by the municipality and submitted to the State Urban Engineer.

1. Eligibility Requirements

In order to qualify for urban construction funds, proposed urban projects must:

(a) be classified as an arterial or collector road in the State Functional Classification System, and

(b) be reflected in an approved transportation plan/study conducted by or for the Department or be included in the Statewide Highway Plan, or

(c) be identified as a safety and/or capacity need (as determined by established criteria of the Department); i.e., (i) deficient bridge on a public street, (ii) railroad grade crossing protection, (iii) intersection improvement, (iv) signal or signal system improvement, or other projects as may be approved by the State Urban Engineer, with the concurrence of the Assistant Commissioner for Finance.

In MPO areas for federally-funded projects, all federal planning regulations, such as the inclusion of the project in the fiscally constrained long-range plan, must be met prior to this authorization.

2. Overview Of Transportation Planning

In compliance with Federal Planning Regulations, the Transportation Planning Division (TPD) of the Department of Transportation is responsible for the development and coordination of a Statewide Transportation Plan, which develops recommendations for a statewide thoroughfare system. This includes representing the state in the Metropolitan transportation planning and programming process for urbanized areas. This process is coordinated through Metropolitan Planning Organizations (MPOs) in eleven urbanized areas of the state and results in recommendations that are incorporated into the Statewide plan and projects in the statewide Transportation Improvement Program. TPD staff represent the state as a member of the MPOs.

The Transportation Planning Division is also responsible for the development, updating and continued monitoring of transportation plans for all urban areas in excess of 3,500 population. These plans result in the identification of transportation needs and recommended improvement in cities and towns which are also made a part of the statewide plan. The recommended improvements to urban highways are used to assist municipalities in determining projects and establishing priorities. The projects are included in the Department's Virginia Transportation Development Plan to be designed, right of way acquired and constructed as described in this section of the manual.

Transportation Planning Division is also responsible for the periodic update of the federal and state functional classification of highways.

3. Virginia Transportation Development Plan

The Urban VTDP is updated each year to include new projects that are requested by the municipalities, to reconfirm or adjust cost data for projects already included, to make the actual allocations for the current fiscal year and to adjust the projected allocations for the five "out" years as funding dictates. In addition to the project description and the actual and projected allocations, the program includes the estimated cost, previous funding, additional funding required and balance to complete. An important feature of the program is the horizontal activity lines, which indicate the approximate time frames for starting the preliminary engineering, right of way acquisition and construction phases.

Projects can also be added to the plan by the MPOs through their authority to designate the allocation of RSTP funds or other funds apportioned to the MPOs. In some cases, the funding designated is only enough to undertake feasibility studies, or to initiate preliminary engineering with no identified funding source beyond that phase. As a general rule, VDOT will not initiate an MPO designated project unless a specific objective can be accomplished such as a feasibility study or unless a source of timely funding is identified to complete the project.

D. APPORTIONMENTS AND ALLOCATIONS

Funds provided to the Urban System under Section 33.1-23.1 are allocated to urban highways for construction projects.

Under Section 33.1-23.3, such funds are to be apportioned to municipalities based on the proportion of population of a city or town to the total population of all qualifying cities and towns. If a city or town does not have an approved urban construction project, the apportionment due shall not be allocated; however, such apportionment shall accrue as a credit to the city or town and be held in an accrual account for its future construction projects for five succeeding years. Credits remaining in accrual accounts beyond five years will be lost to that municipality and redistributed to all other eligible municipalities.

E. AUTHORIZATIONS

1. Regular Authorizations

   When projects appear in the VTDP, initial funding authorizations for preliminary engineering and right of way are made in accordance with the project scheduling indicated in the plan. Upon issuance of such authorizations, the actual preliminary engineering work or rights of way acquisition process may begin. No charges are to be made to the project prior to the respective initial authorization.

Supplemental authorizations are made when additional funding is required. (See Form U-9 in the Appendix)

2. Interim Authorizations

a. Programmed projects can be accelerated in development by making authorizations in advance of the schedule or by scheduling in advance of funding with the understanding that funding will be provided by future allocations in subsequent fiscal years.

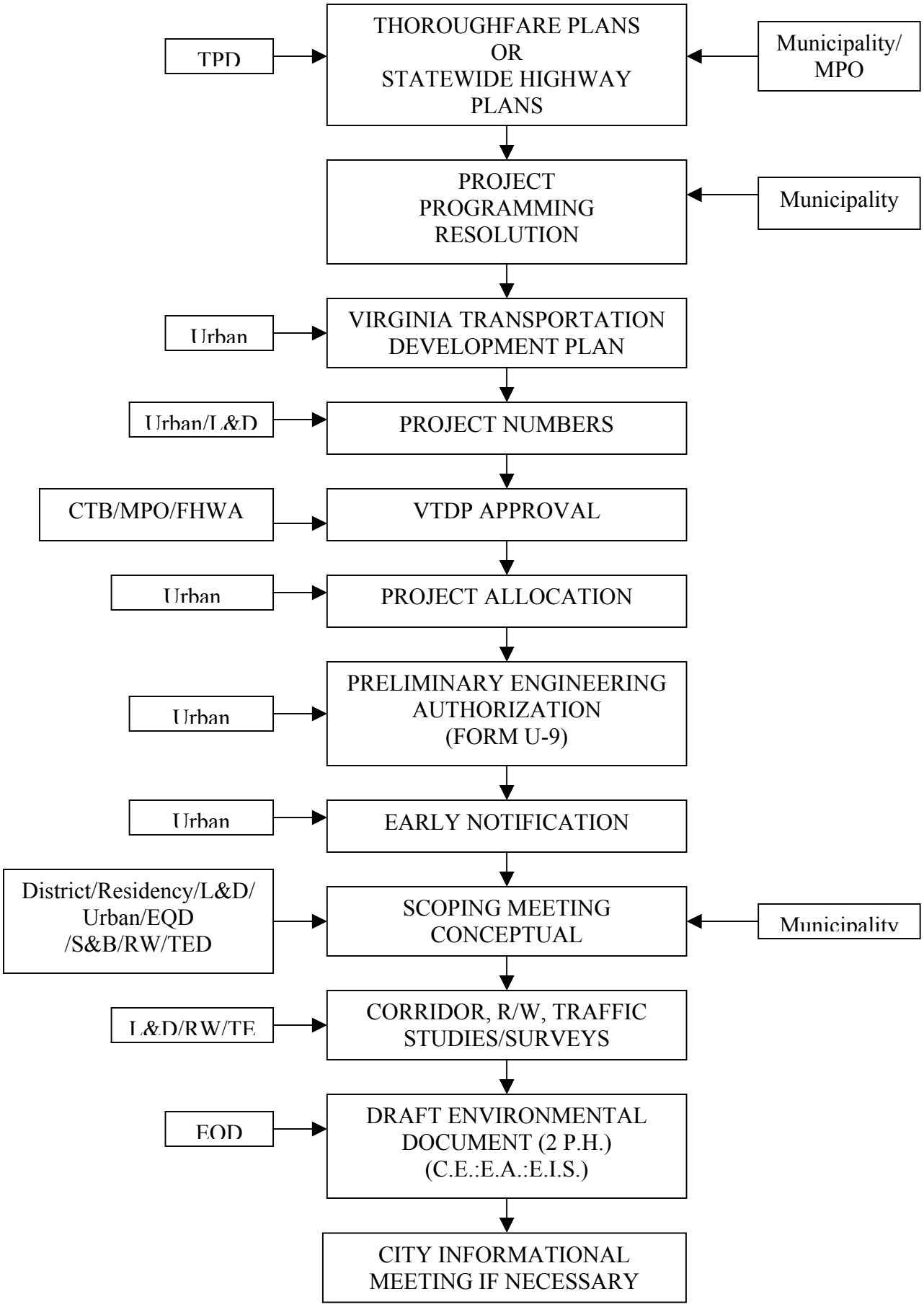
b. Unprogrammed projects which arise due to hazardous conditions or which require urgent expediency can be authorized and funded for preliminary engineering, right of way or construction with the understanding that such allocations will be reimbursed from future apportionments due to the respective municipality.

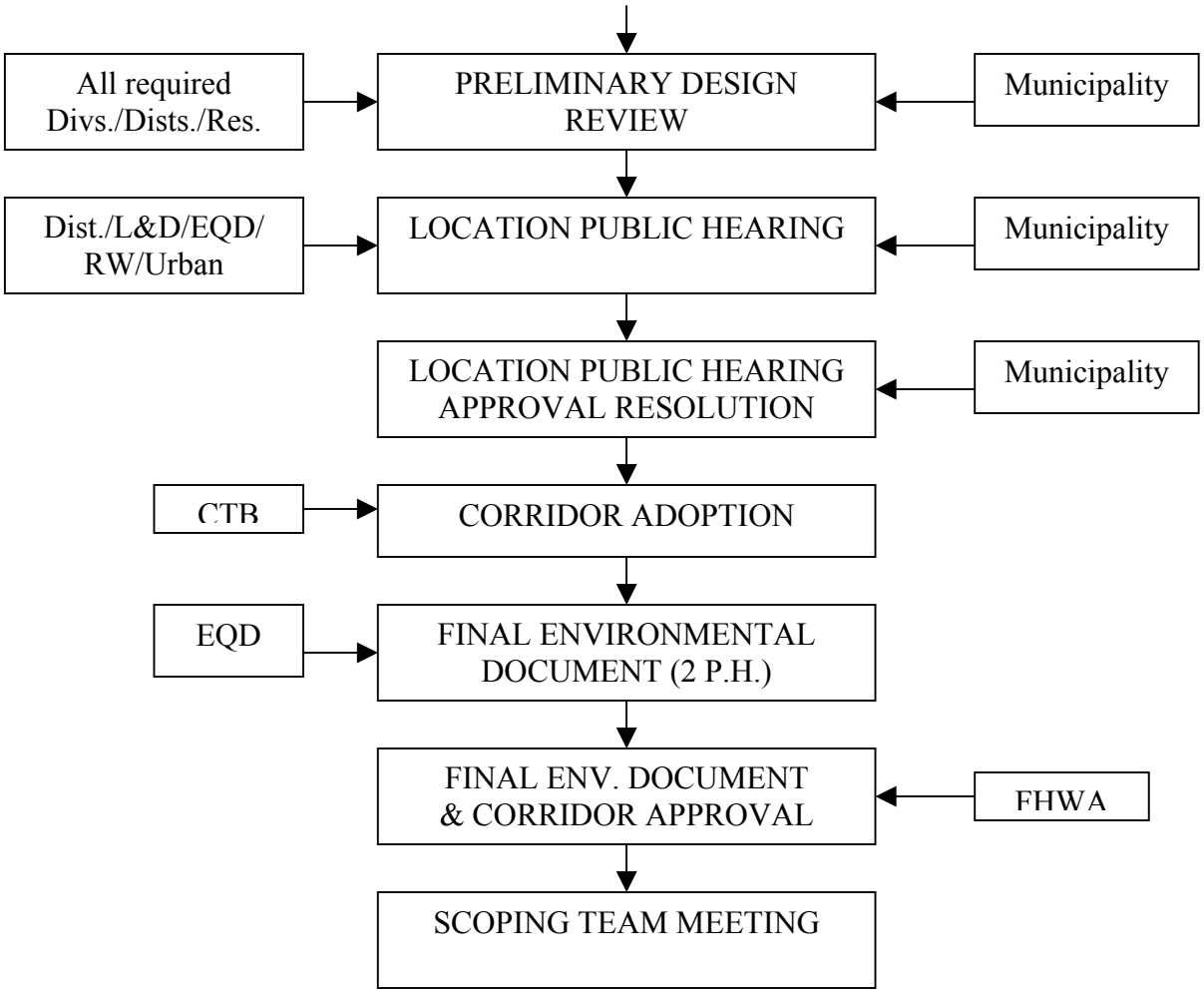
F. PROJECT DEVELOPMENT

The Department has four basic pre-construction project development processes: a) two public hearings, b) one public hearing, c) willingness, and d) no hearing. However, the two public hearing projects are required for projects on new location. The most prevalent type of urban project occurs on the existing street and, therefore, the one hearing process is most frequently used. For the purpose of illustration, the work items required for a two hearing process, and with a project utilizing federal funds will be outlined and briefly explained in the following paragraphs. The description of the plan development process and the accompanying Work Flow Chart should be used only as a guide and should be applied accordingly to the type of project development process involved.

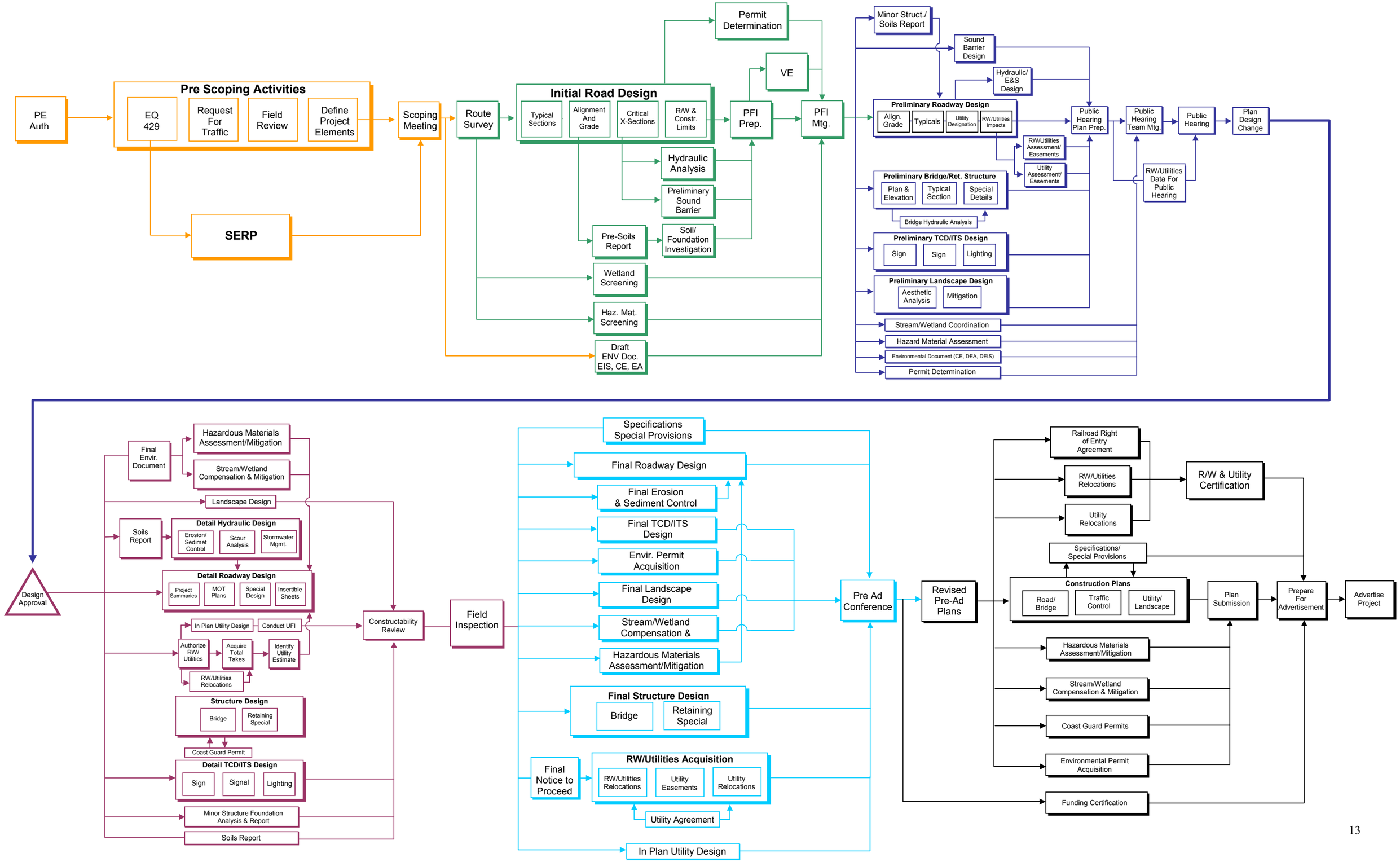
The genesis for an urban project can come from a present day need or evolve through the planning process in the thoroughfare plan or statewide plan process. The project development process begins when preliminary engineering is authorized by the State Urban Engineer. The preliminary stages of the project development process includes such elements as corridor, traffic, right of way and environmental studies, early notification to regulatory agencies (see Appendix for Form EQ429) as to possible environmental concerns and project scoping, all leading toward a location public hearing and adoption of an approved corridor, when applicable. (See the Appendix for

URBAN CONSTRUCTION PROJECT
DEVELOPMENT PROCESS
WORK FLOW CHART




All required Divs./Dists./Res.
PRELIMINARY DESIGN REVIEW
Municipality
Dist./L&D/EQD/ RW/Urban
LOCATION PUBLIC HEARING
Municipality
LOCATION PUBLIC HEARING APPROVAL RESOLUTION
Municipality
CTB
CORRIDOR ADOPTION
EQD
FINAL ENVIRONMENTAL DOCUMENT (2 P.H.)
FINAL ENV. DOCUMENT & CORRIDOR APPROVAL
FHWA
SCOPING TEAM MEETING

Project Development Concurrent Engineering Process



a proposed agenda for conducting a scoping meeting.) The Urban Division is responsible for scheduling the design public hearings and developing and approving the material presented. The municipality must approve a corridor location by council resolution and the letter of transmittal must include the vote count. A corridor is then adopted by the Board.

After the adoption of the location and the completion of the Environmental Document, both are submitted to the Federal Highway Administration for approval of the document and location. The document may consist of a Categorical Exclusion Statement, a draft Environmental Assessment or a draft Environmental Impact Statement, depending on the complexities of the project.

Upon FHWA approval, surveys are conducted and plans begin to be developed. Sign, signal, lighting, landscape and preliminary noise abatement and bridge plans are also developed at this time as well as utility adjustment plans and railroad work. Plan designs should be based on VDOT standards, taking into consideration municipality-adopted standards if they meet or exceed VDOT standards. Under FHWA Certification Acceptance, the detailed design features of a project need not be approved by FHWA. However, the Department will keep FHWA apprised of and involved in the project development process.

As plans continue to be designed, preliminary field reviews, and other meetings are held in order to develop plans to the design public hearing stage. Also, the Environmental Assessment or Environmental Impact Statement is finalized during this time. After the document is finalized, it is submitted to FHWA for approval and issuance of a Finding Of No Significant Impact (FONSI) or a Record of Decision (ROD).

The municipality must approve the design hearing by council resolution and if so desired, request the Department to acquire the right of way. The letter of transmittal must include the vote count. The plans are then approved for right of way and funds are authorized by the State Urban Engineer so right of way acquisition can begin (See Appendix for Example Resolution). The field inspection is then held (See Section V for procedures for conducting a field inspection).

In the event of obvious lack of public concern or when a project has considerable public support, it may be that a public hearing is not necessary. In such cases, a "Notice of Willingness to Hold a Public Hearing" may be issued (See Section V for more detail). In some instances, an informational meeting is held to apprise the public of the design features of the project and to enlist their support. When no request for a public hearing is received to the Notice of Willingness, the project design is approved by the Location and Design Engineer (see Appendix for sample letter). If a request is received and the issue cannot be resolved with the requesting party, a hearing is required. In all circumstances, a council resolution approving the design is still required, along with a transmittal letter indicating the vote count.

While right of way acquisition is being accomplished, the roadway and bridge construction plans are finalized. These plans will include signs, signals, lighting, pavement markings, erosion control, noise walls, ITS, landscaping, typical sections, summaries, special design details and other features. The utility adjustment and railroad agreements are also finalized at this time.

Upon issuance of certificates of clearance for right of way, utilities and railroads, the approved construction plans are forwarded to the contract section of the Construction Division for preparation of the contract proposal and project advertisement. A pre-advertisement meeting is also scheduled by the Urban Programs Engineer to determine the status of all disciplines and to ensure that all issues are resolved so that all phases of work can be satisfactorily completed as scheduled (See Section V for Procedures for Scheduling a Pre-Advertisement Meeting).

Upon receipt and tabulation of bids (letting) and preparation of the detailed estimate based on contract prices by the Contract Section, the Urban Division prepares the Municipal-State Agreement (see Appendix for a sample agreement) and submits it to the municipality for execution with the concurrence and under the authority of municipal council action. This agreement must be fully executed with expediency in order that the contract can be awarded within 60 days from Letting.

The notice to proceed is issued to bid contractor for construction to begin.

G. PROJECT CONSTRUCTION, INSPECTION AND ACCEPTANCE

After acceptance of the lowest qualified bid and awarding of the project to the contractor by the Board, project administration becomes the responsibility of the District Administrator. The District Construction Engineer (Assistant District Administrator) coordinates the work with the Resident Engineer, who has direct supervisory responsibilities over the progress of construction. The Resident Engineer conducts a pre-construction conference, which usually includes utility, railroad and municipal representatives, along with the contractor and other pertinent department personnel. The Resident Engineer issues the notice to proceed, supervises inspection, reviews and processes monthly progress billings, coordinates changes and/or work orders, etc. The Resident Engineer will also coordinate all construction activities, such as detours, maintenance of traffic, and signing, with the municipality.

Upon completion of the project, prior to processing the final billing, the municipality is requested to participate in a final inspection and to accept the project for maintenance responsibility, in writing. After the project is accepted, the municipality should submit Form U-1, requesting additional lane mileage, as applicable, for street payment purposes.

H. MINOR CONSTRUCTION PROJECTS

On occasion, the Urban Division may authorize a locality to undertake a project as a minor construction project. Generally, for a project involving physical construction, the dollar amount should be under $500,000 and it must be a non-federal aid project.

The Department will consider requests for minor construction projects to be accomplished by the municipalities in view of commitments to other projects and the funds available to the cities and towns. They may include, but are not limited to, channelization, and pavement widening with or without curb and gutter, minor bridge improvements, minor drainage improvements, and shoulder improvements. The costs for such improvements may include supervision, inspection, actual construction, surveying, design and mapping, right of way, minor utility adjustments, and signs, signals and pavement markings.

This eligibility is subject to the following procedures:

- Construction may be totally administered by the municipality by force account, local contract or continuing contract provided such improvements are planned and included in the VTDP manner similar to other construction improvements, including appropriate council resolution.

- The municipality shall certify that the planned construction, as a minimum, meets state standards.

- A state project number will be assigned to the construction improvement in the same manner as other construction projects.

- As necessary for implementation, depending on the size and complexity of any phase of project development; preliminary engineering, right of way acquisition or construction must be authorized by the State Urban Engineer prior to the municipality proceeding with the phase of work. On some projects, the State Urban Engineer may require that the plans be reviewed by the Department. The State Urban Engineer may authorize the municipality to proceed with all phases of the work at one time, as may be appropriate.

- As expenditures are incurred by the municipality, the Department may be billed through the Residency Office for 100% of these expenditures. The Department in turn will bill the municipality for its share of the cost at a later date. The billing may be either lump sum upon the completion of the construction or by monthly billings as the expenditures occur. The final billing will be so noted and upon receipt of such by the Residency, the Resident Engineer, along with the appropriate municipal official will make a final inspection to assure completion of the work as programmed.

- Records must be maintained by project number by the municipality to properly support these expenditures for three years after closure of the project. If, as a result of VDOT audit, improper costs are detected or there is insufficient documentation of expenditures, the State share of those expenditures shall be reimbursed to the Department.

I. ROUNDABOUTS

Under certain conditions, the Department may be receptive to the application of Roundabouts. When a locality requests a Roundabout be part of a roadway improvement project, the request must be accompanied by a sketch indicating the geometrics, dimensions, volumes on each approach, design speed and a traffic analysis. Subsequently, the Department's Roundabout Review Committee will review all submittals and render a decision on a case by case basis. The initial request must be submitted to the State Location and Design Engineer.

IV. POLICIES/REQUIREMENTS

A. Funding And Cost Responsibilities IV-3

1. Betterment Funding
2. Urban Traffic Studies Funding
3. Safety, CMAQ, Regional STP Projects
4. Enhancement Projects

B. Administration Of Projects By Municipalities IV-4

C. Structures And Bridges IV-4

1. Clearances and Weight Limits
2. Approach Roadway Funding
3. Bridge Safety Inspection

D. Accommodation Of Utilities On Street Right Of Way IV-4

E. Roadway Lighting IV-5

F. Storm Sewers (Urban Projects) IV-7

G. Bicycle Facilities IV-7

H. Right Of Way IV-8

1. Limited Access
2. Advance Acquisition of Right of Way
3. Purchase of Residue Parcels
4. Purchase of Right of Way within Municipalities

I. Maintenance Of Roads Within Limited Access Interchanges IV-10

J. Maintenance Standards And Acceptable/Unacceptable Maintenance Activities IV-11

K. On-Street Parking IV-12

L. Traffic Control IV-12

1. Devices

2. Restriction of Traffic

3. Traffic Signals

4. Traffic Lanes

5. Median Crossovers

6. Channelization Islands

M. Construction Speed Zones IV-13

N. Prison Labor IV-13

O. Industrial Access Roads IV-13

P. Airport Access Roads IV-13

Q. Recreational Access Roads IV-13

R. Proprietary Traffic Signal Equipment IV-14

S. Non-Conformance With Project Agreement IV-14

T. Landscaping IV-14

U. Service Roads IV-15

A. FUNDING AND COST RESPONSIBILITIES

1. Betterment Funding

Whenever a municipality desires to have certain items of work or materials specified in the highway construction contract which are better than the items normally provided for in the Department's specifications or better than what is needed for project construction purposes, such items may be specified with the provision and agreement that the betterment difference in cost will be borne by the municipality. Whenever betterment items or cost responsibility shares can not be determined on the basis of actual cost, agreed lump sum amounts may be used provided said amounts are determined on the basis of reliable cost estimates which are mutually acceptable to the Department and the Municipality.

2. Urban Traffic Studies Funding

Where traffic studies are required to determine the minimum warrants justifying traffic control signals, such studies can be funded from routine operations of the Traffic Engineering Division.

Special federal planning funds may also be available through the Transportation Planning Division for urban traffic studies.

3. Safety, CMAQ, Regional STP Projects

Municipalities may successfully compete for special statewide federal funds such as hazard elimination and highway/railroad grade crossing safety monies through a yearly application process through the Department and be awarded funds towards a specific project. In addition, municipalities in urbanized areas may also be awarded CMAQ and RSTP (urbanized areas over 200,000 in population) funds (if non-attainment areas) and by the MPO, again for specific projects. The Department's policy has been to allow, at the request of the municipality, the use of urban construction funds to serve as the local match for these types of projects which require a match.

When the original cost estimate of these projects increases, the municipality must either qualify for additional special funding, or be prepared to fund the difference with local funds. Additional urban allocations may be used to fund the local match for any additional special funding, but urban funding may not be used to fund the entire difference.

If municipalities and MPOs have designated funds for projects which are insufficient for anything other than preliminary engineering, the Department will not initiate any MPO designated projects until a source of funding (CMAQ, RSTP, or local

funds) is identified to allow the right of way and construction phases to follow in a timely manner.

4. Enhancement Projects

Municipalities may compete through a yearly application process for another category of funds known as enhancement funds. The municipality is responsible for any match of the federal dollars awarded and for any cost increases.

B. ADMINISTRATION OF PROJECTS BY MUNICIPALITIES

For certain projects, it may be agreed between the municipality and the Urban office that it is more convenient for the municipality to administer certain phases of the urban project. Section 33.1-13 of the code allows the Commissioner to do all acts necessary or convenient for constructing, improving, and maintaining the roads in the state highway system. The prosecution of projects by municipalities is seen as a convenience to the Department. Further information is contained in Instructional and Informational Memorandum LD-00(D) 216.4 in the Appendix.

C. STRUCTURES AND BRIDGES

1. Clearances and Weight Limits

The District Structures and Bridge Engineer shall be notified immediately when a structure on a numbered route in a municipality is altered, thereby affecting the clearance or capacity either permanently or temporarily.

2. Approach Roadway Funding

On bridge replacement and rehabilitation projects funded by Federal Highway Bridge Replacement and Rehabilitation Program funds, funding for the approach roadway will be limited to touchdown point to touchdown point or approximately 10% of the structure cost. The touchdown points will be determined by the FHWA Division Administrator.

3. Bridge Safety Inspection

See Section II – Item O for discussion on this subject.

D. ACCOMMODATION OF UTILITIES ON STREET RIGHT OF WAY

Municipalities have the responsibility to maintain the highway right of way under their jurisdiction and to preserve the operational safety, integrity, and function of the highway facility. Since the manner in which utilities cross or otherwise occupy highway right of way can materially affect the safe operation, maintenance and

appearance of the highway, it is necessary that such use and occupancy be authorized and reasonably controlled. In that regard, a policy is being developed which will set forth the terms and conditions for accommodating and controlling access of utility facilities in the right of way, including those relocated or modified with transportation projects. It is the intent of this policy to provide appropriate opportunities to all public or private utilities, in a non-discriminatory manner, and not to impose any unreasonable restrictions on the utility's ability to expand its facilities to provide utility services nor discourage economic development. This policy will apply to all rights of way controlled by a municipality, including both fully controlled and partially controlled access facilities.

Section 15.2-2017 of the Code provides in essence that no utilities or like enterprises shall be permitted to use the right of way of a municipality without the consent of the corporate authority of such municipality.

On urban projects a formal agreement shall be entered into by the Municipality and the State to provide for a degree of protection to the highway project at least equal to the State's approved utility accommodation policy (Land Use Permit Manual).

The location and installation of utility poles and other above ground utility facilities on Urban projects shall conform to VDOT Land Use Permit Manual or be subject to the approval by the Department.

In regard to placing utility facilities underground, the Department can utilize a municipality's urban allocation to reimburse fifty percent (50% is capped at $5,000,000) of the additional cost to place the facilities underground in conjunction with a transportation improvement project. The 2000 General Assembly enacted legislation to eliminate the municipality's 50% cost for the Cities of Hampton and Newport News. The Department' s policy on placing underground facilities is included in the appendix.

E. ROADWAY LIGHTING

Included in the appendix is a copy of the revised Roadway and Structure Lighting Policy effective for projects advertised July, 1996 and thereafter. The policy embraces all systems and allows VDOT to participate in roadway lighting as a project cost for replacement of existing roadway lighting or when requested by a municipality and when deemed necessary for traffic safety. Illumination of previously unlit roadway which are not considered a safety issue, can be illuminated at the municipality's expense. Stand alone lighting projects would also be considered, when deemed necessary, for traffic safety; however, they would have to be considered and weighted with other system needs.

The policy allows for the construction, operation and maintenance of roadway lighting systems on all VDOT roadway systems. Therefore, the urban system will allow

the operation and maintenance costs of roadway lighting as eligible maintenance activities.

Many localities have depended on their power utility companies to provide roadway lighting, therefore:

- A utility company can install and maintain lighting exclusively in a given locality at project cost as described above. In this case, the lighting would be installed by the utility company and payment would be made by the plan and estimate method. This would make it unnecessary to use the low bid process as power companies work under franchise agreements with localities and have SCC regulated service areas.

- Plans can specify utility poles and other materials if they meet the standards of the localities, the utility and national standards. The utility company should be allowed to approve the poles and materials to ensure effective maintenance and service.

- A utility, whether a local government or a power company, can install lighting by using their crews or a contractor under the plan and estimate procedure once the lighting is approved by VDOT (Traffic Engineering and Right of Way Divisions).

- A utility company could supply their own poles, at project cost or their cost, for installation by the VDOT contractor but this is not recommended. It is best to specify the materials in the plans and require the contractor to bear the liability and responsibility of handling and installing.

- If the utility company is allowed to install lighting under the plan and estimate method at the same time the roadway contractor is pursuing roadway work, a special provision must be included in the plans making the contractor aware of the street lighting work and schedule.

- If the plan and estimate method is used, the utility may want to use a consultant or VDOT to do the engineering design work. Either would be acceptable.

- Poles may be located inside of the desirable clear zone of 9.5 feet provided the justification for doing so exists (no right of way, building lines, undue cost, etc.) and the absolute minimum clear zone of 1.5' from the face of curb is not violated.

- Existing non-roadway lighting may be replaced at project expense.

F. STORM SEWERS

All storm sewers both parallel and transverse and all appurtenances, such as drop inlets, manholes, etc., that fall within the right of way limits of urban improvement or construction projects on existing or new locations and are considered necessary for adequate project drainage by Department engineers will be financed at the percentage required by law for the construction of the project; provided that all stormwater to be conveyed is normal to the project limits and is not diverted from another watershed.

All storm sewers and outfalls constructed outside of the normal right of way limits of urban projects that are considered necessary for adequate project drainage by Department engineers will be financed at the percentage required by law for the construction of the project; provided none of the storm water to be conveyed is diverted from another watershed. All storm sewers and outfalls constructed outside of the normal right of way limits of urban projects that are considered by Department engineers as beyond that needed to adequately drain the highway project shall be financed on a run-off ratio basis between state funds and city or town funds.

Whenever parallel storm sewers, manholes, etc., within an urban project or outfalls beyond the project limits are utilized by a city or town for the conveyance of diverted storm drainage, then the cost of such storm sewers, outfalls, etc., shall be financed on a run-off ratio basis between state funds and city or town funds. See the Appendix for a copy of LD-88 (D) 146.1 for further information.

G. BICYCLE FACILITIES

The Department's general guidelines and procedures for developing bicycle facilities in conjunction with urban highway projects or for comprehensive planning purposes are found in the December 1990 resolution from the Commonwealth Transportation Board(See the Appendix). Design guidance is provided in the Department's Road Design Manual.

When bicycle facilities are provided on urban projects, the maintenance of the facility shall be the responsibility of the municipality. The municipality shall prohibit all motorized vehicles, except those for maintenance purposes.

H. RIGHT OF WAY

1. Limited Access

Projects designated as Limited Access shall have the right of way acquired strictly as designated on the approved plans. No changes or additional access points will be permitted without official action and written approval of the Board. Under Section 33.1-58 of the Code, the Commonwealth Transportation Board has the authority to regulate or limit the use of a highway including designating it as a limited highway. If it is subsequently incorporated in the street system of a municipality, the city or town may discontinue such limited access features with the approval of the Board.

2. Advance Acquisition of Rights of Way

Municipalities should work with the Urban Division on site plan reviews where private development is (or will be) taking place along urban roads or streets which may require reconstruction or improvement as an urban highway project. Every effort should be made to preclude development within an area that may be needed for project rights of way.

Controlling such areas required for future project development is difficult. Some techniques available may be: deduction of right of way through zoning ordinance requirements, urban permit requirements, advance purchases by the municipality, advance right of way acquisition by the Department, or other procedures.

Advance purchase by the municipality is another possible procedure for preserving such needed right of way. In such cases, the city or town must utilize its own funds for the original purchase. Accurate records should be kept in order to document the value at the appropriate time. The Department may purchase any needed right of way for the project under current land acquisition guidelines.

Advance acquisition of right of way by the Department may be authorized for extreme landowner hardship or for protective buying for an impending transportation project. However, such procedures can only be authorized if (a) a project has been programmed, (b) funds are available (an allocation to the project) and authorized, and (c) a location has been approved by the CTB and a plan has been prepared for right of way acquisition.

3. Purchase of Residue Parcels

VDOT heretofore has purchased residue parcels based on the conditions outlined in Section 33.1-91 of the Code. That being, where it is economically appropriate, the residue is purchased along with the right of way. It is important to note that this section of the Code limits VDOT's ability to purchase residue parcels of no more than

two acres using the eminent domain procedures and no more than ten acres of residue parcels through voluntary conveyance. Where an acquisition results in an uneconomic remnant (that which cannot continue to be used because of size, shape, etc., for the same highest and best use as before) Section 25-248 of the Code requires that VDOT offer to acquire the entire property subject to the acreage limitations discussed above.

Section 33.1-23.3 allows acquisition of property outside of the normal right of way width when the property's use has been impacted by the transportation improvement for which right of way is to be acquired. This broadens the traditional economic justification for right of way acquisition for construction improvements on functionally classified arterial streets. Accordingly, should a municipality want VDOT to pursue acquisition of residue parcels based on this legislation, it will be necessary for the municipality to demonstrate that one or all of the conditions in the legislation are satisfied. This should include, but not necessarily be limited to, the following:

- The locality master plan and zoning support the need for special land use control directly related to the purpose and need of the project.

- A traffic analysis of sufficient detail that provided justification for access control.

- A traffic analysis that demonstrates improvements to traffic flows and traffic system utilization.

- A traffic engineering analysis that demonstrates improvements to traffic safety.

Procedurally, a locality interested in pursuing an improvement project in this manner should present the necessary data to support its request at the project scoping stage. Each such improvement will be considered by VDOT on a project by project basis, and approved by the State Urban Engineer, if appropriate.

4. Purchase of Right of Way Within Municipalities

The Commonwealth Transportation Commissioner is vested with the power to acquire by purchase, gift, or power of eminent domain such lands, structures, rights-of way, franchises, and easements deemed to be necessary for the construction and maintenance of public highways. For state and federal projects within a municipality, the Commissioner is authorized to exercise this power if requested by the municipality. The Commissioner shall convey the title so acquired to the municipality under state law.

I. MAINTENANCE OF ROADS WITHIN LIMITED ACCESS INTERCHANGES

As a general policy, where the Interstate, Arterial network, or Toll Road System construction provides an interchange within a municipality charged with the responsibility for maintenance of its street system, the Department of Transportation, through the appropriate system maintenance funds, will be responsible for the maintenance of the complete highway facility within the controlled limits of the interchange. Street payments will not be paid to any municipality for street or road mileage maintained by the Department under this provision.

Municipalities desiring to maintain municipal streets passing through Interstate, Arterial network, or toll road facilities may maintain such streets in accordance with the following provisions:

- Where the Interstate, Arterial, or toll route passes under a street within a municipality maintaining its own street system, the maintenance of the surface and sidewalks of the structure and the approach roadways to the back of the shoulder line shall be the responsibility of the municipality. The Department of Transportation, using the appropriate system maintenance funds, will maintain the remainder of the structure, and slopes beyond the shoulder line, within the limits of normal right of way.

- Where the Interstate, Arterial, or toll route passes over a street within a municipality maintaining its own street system, the maintenance of the entire structure and slopes back of the normal ditch or sidewalks shall be the responsibility of the Department using the appropriate system funds. The street roadway underneath the Interstate, Arterial, or toll route shall continue to be the responsibility of the municipality.

As a general policy, the Department of Transportation will continue to control and maintain all signs, signals, other traffic control devices and lighting within the limited access right of way of interchange areas. Signals within the interchange areas may be maintained by the municipality when mutually agreed upon by the Department and the Municipality.

Guide signs, once installed, on urban streets beyond the interchange area within the Municipality, shall be maintained by the jurisdiction having maintenance responsibility for said streets.

J. MAINTENANCE STANDARDS AND ACCEPTABLE/UNACCEPTABLE MAINTENANCE ACTIVITIES

Acceptable Items:

1. Costs to implement and continue these procedures.

2. Payroll additives and applicable overhead charges. Overhead charges are any personnel, activity or equipment charges that support the street payment program indirectly but cannot be charged directly, such as copiers, faxes, phones, desks, computers, City Manager, Director of Public Works, City Council, City Hall, etc. One way to quantify this would be to add all indirect costs to street maintenance costs and divide by total city expenditures. The resultant percentage could be considered as overhead applicable to the street maintenance program. A second way would be for the municipality to have its CPA develop a method of allocating indirect costs to the street maintenance program through overhead charges.

3. Expenditures for training in maintenance or bridge inspection work.

4. Bridge inspection costs for bridges on all public streets.

5. Energy costs for traffic signals.

6. Energy costs for roadway lighting.

7. Cost to maintain features within the right of way such as sidewalks, bikeways, etc.

8. Use of municipal prison labor as long as there is a work order system sufficient to document the work is an eligible activity on an eligible street.

Unacceptable Items:

1. Parking meter costs.

2. All costs on ineligible streets, except for bridge inspection costs.

3. Follow-up repairs to utility cuts.

4. Municipality's share (contribution) on construction projects.

5. All non-highway related items.

K. ON-STREET PARKING

As a general rule, on-street parking is not to be provided at project cost as a part of an urban construction project. Where on-street parking is permitted, it is generally allowed until such time as traffic volumes warrant otherwise; at which time on-street parking will be removed per the City-State Agreement. Where parking is prohibited, appropriate "No Parking" signs shall be erected in conformance with the Manual on Uniform Traffic Control Devices (MUTCD). Any changes in parking provisions shall be subject to the approval of the Department.

All parking where permitted shall be parallel to the curb. No angle parking will be allowed on Urban projects.

L. TRAFFIC CONTROL

1. Devices

All signs, signals and signal detection devices, pavement markings and other message relating mediums shall conform to the most current edition of the MUTCD and the Virginia Supplement to MUTCD. To the extent possible, design and installation shall conform to the VDOT Road and Bridge Specifications and Standards. All such devices shall be subject to the approval of the Department.

When a municipality requests the use of emerging types of devices, VDOT will evaluate each request on a case by case basis. Generally, VDOT will be supportive if the municipality is already using similar devices, plans to use these devices at other locations, or is truly interested in possible use at other locations and wants an evaluation test.

2. Restriction of Traffic

The installation, maintenance and control of traffic signs and pavement markings shall be under the jurisdiction of the municipality having street maintenance responsibilities on the Urban System. Prohibition of traffic through a municipality may be allowed on selective routes when reasonable alternative routes are provided and are properly signed and marked.

3. Traffic Signals

Installation of traffic control signals should meet the warrants in MUTCD. Where traffic signals are requested by localities, investigations are to be made by the Department or the municipality and where the minimum warrants have been met, the appropriate signal(s) may be approved for installation.

Signal poles may need to be stronger and higher or provide an extension for luminaries. If such a pole is needed, it is eligible as a project expense. Non-breakaway

Poles, cabinets and other associated fixed objects located within the clear zone should be protected with the appropriate guardrail system.

4. Traffic Lanes

No reduction in the width or number of traffic lanes is permitted after the construction of a project without the prior approval of the Department.

5. Median Crossovers

No additional or enlargement of median crossovers are permitted after the construction of a project without the prior approval of the Department.

6. Channelization Islands

Alterations of channelization islands will not be permitted after the construction of a project without prior approval of the Department.

M. CONSTRUCTION SPEED ZONES

Municipalities shall make necessary provisions for establishing temporarily reduced speed limits on urban construction projects as may be required in the interest of safety to the traveling public and persons working on the project as per Section 46.1-180 of the Code.

N. PRISON LABOR

On federal-aid projects, prison labor shall not be used for any purposes whatsoever during the life of the construction contract.

O. INDUSTRIAL ACCESS ROADS

Reference is made to Secondary Roads Division's Memorandum SR-45-86 for funding and general criteria concerning industrial access roads. (See Appendix)

P. AIRPORT ACCESS ROADS

Reference is made to the CTB resolution of April 18, 1996 for funding and general criteria covering airport access roads. (See Appendix)

Q. RECREATIONAL ACCESS ROADS

Reference is made to Secondary Roads Division's Memorandum SR-47-91 for funding and general criteria covering recreational access roads. (See Appendix)

R. PROPRIETARY TRAFFIC SIGNAL EQUIPMENT

An affirmative public interest finding must be made in order to allow proprietary (brand name) traffic signal equipment to be used on urban projects. The use of proprietary equipment will not be approved for total traffic signal projects; however, additional local controllers may be included when the circuitry provides for direct interfacing with the master controller. The request, including the cost estimate, must be made by the Municipality and received in the Urban Division office at the field inspection stage of the project.

Reference is made to "Guidelines for use of Proprietary Signal Controllers and Cabinets" dated October 7, 1976 in the appendix. Reference is also made to Appendix for an example Form Letter for requesting permission to purchase and stockpile proprietary signal equipment.

When such request is approved, the municipality will purchase the equipment at its cost. A special provision will be included in the urban project proposal document advising the contractor of the specific equipment to be furnished by the Municipality and which is to be installed by the contractor at project expense. After the equipment is installed, and prior to the completion of the project, the Municipality may bill the Department for 100% of the received invoice price of the equipment. This billing should be processed through the Residency Office. When the bill has been paid by the Department, the Department will include such costs in the total project cost for which the Municipality will be billed its proportionate share.

S. NON-CONFORMANCE WITH PROJECT AGREEMENT

The municipal-state agreement normally provides for the Department to prepare the plans for the urban projects with the municipality's input during plan development and with its concurrence in the final design features. The agreement also provides for the municipality to maintain the project as constructed and in accordance with the general intent for which the project was designed. Changes in the intent are subject to or require the prior approval of the Department. Should the design features of the project be altered by the Municipality, subsequent to project completion, without the approval of the Department, the Municipality inherently agrees, by execution of the agreement, to make restitution, either physically or monetarily, as may be required by the Department.

T. LANDSCAPING

Landscaping is important to enhance the safety and visual quality of our roads, mitigate negative views, and maintain quality of life for our communities. It is VDOT's policy that a maximum of 3% of the construction budget for individual interstate, primary, and urban projects may be allocated for landscape improvements. Recommendations for landscaping should be made at the scoping stage of the project.

- No tree or shrub that will reach a caliper width of 4 inches (100 mm) at maturity may be planted within the clear zone. The clear zone width is provided in Appendix A, Section A-2 of the "*VDOT Road Design Manual*".

- Horizontal and vertical sight distances, and stopping sight distances, as determined by the "*VDOT Road Design Manual*" and the FHWA publication #FHWA-HI-97-026, "*Design Construction and Maintenance of Highway Safety Features and Appurtenances*", shall not be obstructed. Similarly, the view of traffic control devices, signs, intersections, ramps and turn lanes shall not be obstructed.

- Where guard rails or other barriers are used, the designer must allow for the minimum deflection zone behind the barrier as indicated by the offsets provided in Appendix A, Section A-3 of the "*VDOT Road Design Manual*".

- Requests for irrigation systems in conjunction with a landscape project will be considered as a part of the landscape project. The locality will pay 100% of the cost of an irrigation system and assume all maintenance responsibilities upon completion of the project.

- Where landscaping will be provided by local government or private groups or individuals all plant material, signs, irrigation systems, or other right of way encroachments shall comply with Regulation for Landscape Recognition and Identification Signs and Structures, 24 VAC 30-125-10 et seq.

U. SERVICE ROADS

Service roads must be constructed or reconstructed to meet the standards and minimum eligibility requirements as discussed in Chapter II of this manual in order to qualify for street payments.

V. PROCEDURES

A.	Procedures For Cities And Towns Requesting Mileage Additions Or Functional Classification Changes For Street Payments	V-2
B.	Procedures For Annexations, Mergers, Incorporations Or When Town Population Exceeds 3,500	V-3
C.	Procedures For Conducting Field Inspections	V-4
D.	Procedures For Requesting A "Notice Of Willingness To Hold A Public Hearing"	V-5
E.	Procedures For Conducting Pre-Advertisement Meetings	V-6
F.	Procedures For Administering Of Projects By Municipalities	V-6
G.	Procedures For Requesting Route Numbers Changes In Municipalities	V-7

A. PROCEDURES FOR CITIES AND TOWNS REQUESTING MILEAGE ADDITIONS OR FUNCTIONAL CLASSIFICATION CHANGES FOR STREET PAYMENTS

Streets must meet the criteria as specified in Section 33.1-41.1 of the Code to qualify for street payments. When streets meet these criteria, the Municipality may request the Department to accept the streets into the Urban Highway System as follows:

1.a. Additions (or deletions) – the municipality should prepare Form U-1, (See Appendix) completing all but the last column. (Note: If criteria is used which contains verifiable dates, include necessary documentation).

(Note to Resident Engineer: If deletions or changes occur due to project construction or traffic control measures by the municipalities, the municipalities should be notified that Form U-1 submission is required).

b. Functional classification changes – the municipality should prepare Form U-2 (See Appendix) leaving last column blank.

2. City or Town Council adopts a resolution making a formal request.

3. City or Town prepares a map or sketch (8 ½" x 11") showing location and dimensions.

4. City or Town submits resolution, form and sketch to local Resident Engineer in triplicate.

5. Resident Engineer reviews documents, inspects proposed street(s), approves Form U-1 and/or Form U-2 and forwards these to the Urban Division.

6. The Urban Division, upon concurrence, will transmit the submission to the Transportation Planning Division for review and determination of the appropriate State Functional Classification of each road or street. See the

Appendix for an explanation of the State Classification System for urban streets.

7. The Urban Division, will have the appropriate lane mileage added to or changes made on the urban street inventory log.

8. The completed assembly is presented by the Urban Division to the Board for approval of the centerline mileage.

   (Note: In the event centerline mileage is not affected, i.e., request involves modification only to lane mileage, the State Urban Engineer reviews and approves such requests and notifies all parties accordingly).

B. PROCEDURES FOR ANNEXATIONS, MERGERS, INCORPORATIONS OR WHEN TOWN POPULATION EXCEEDS 3,500

Section 15.2-3530 of the Code requires that upon annexation or merger of a county with a city or town, and when in the opinion of the Commissioner, the annexed or merged areas become substantially urbanized, the streets may be transferred to the new municipality for construction, reconstruction and maintenance and funds therefore shall be allocated as provided by law. (Under Section 33.1-23.2D, any allocation made to a primary system highway, which subsequently is incorporated into a City or Town, shall remain but such road shall not be eligible for an urban construction allocation or street payment within the same fiscal year).

Section 33.1-1-224 requires that when a town's population exceeds 3,500, all roads and streets within the Secondary System shall be eliminated from that system and the control and jurisdiction shall be vested in the local authority. Under Section 33.1-41.1, this exceedence is defined as according to the latest U.S. Census or according to evidence satisfactory to the Department.

The procedures for the transfer of roads and streets to the municipality for street payments are as follows:

1. City or Town submits to the Resident Engineer the following documents or information:
   a. Copy of approved annexation order, if applicable.
   b. Certification of updated population.
   c. Map of area involved.
   d. Form U-1 (See Appendix) listing streets to be

transferred.

e. Council resolution requesting the roads or streets be accepted for urban street payments (Note: Only hard surface roads are eligible for street payments).

2. The Resident Engineer shall provide the necessary guidance to the City or Town in completing the required forms, etc. After receipt and verification of the documents, inspection of the proposed streets and approval of Form U-1, they should be forwarded to the Urban Division, along with any appropriate comments and recommendations.

3. The Urban Division, upon concurrence, will then transmit the submission to the Transportation Planning Division for review and determination of the appropriate Federal and State functional classification of each road and street.

4. The inventory records will be updated accordingly. The effective date for street payments will be the date annexation is approved by the court, or July 1 of the year in which the Municipality obtains a population of 3,500, or as mutually agreed to by the Municipality and the Department.

5. The completed assembly is presented by the Urban Division to the Board for approval of the centerline mileage.

C. PROCEDURES FOR CONDUCTING FIELD INSPECTIONS

The Urban Programs Engineer shall schedule a field inspection for each urban project during plan development in such a manner as to allow the plans to continue to be designed without undue delays. The meeting date, time and place shall be confirmed in writing.

The Municipal representative, FHWA (when applicable), District and Residency personnel and all affected disciplines (divisions) shall be notified and requested to have a knowledgeable representative present.

A checklist of some of the usual items to be covered at the field inspection is included in the Appendix.

After the meeting is held, a report including recommendations and conclusions should be written and sent to the municipality with copies to all appropriate parties.

D. PROCEDURES FOR REQUESTING A NOTICE OF WILLINGNESS TO HOLD A PUBLIC HEARING

The Urban Programs Engineer is responsible for determining the need to hold a public hearing on Urban projects. In an effort to reduce the time required to bring a project to the advertisement stage, a Notice of Willingness to Hold a Public Hearing should be requested whenever no opposition is likely, using the following procedures:

1. After the Preliminary Field Inspection has been held and while the plans are being updated, the Urban Programs Engineer shall prepare a memorandum to the Location and Design Engineer requesting the "Notice of Willingness to Hold a Public Hearing", to be issued. This memo should include a description of the project. It should also contain a brief description of the right of way to be acquired, the number of residences and businesses involved, etc. The status of the Environmental Assessment and any other pertinent information should also be included.

2. If no requests for a public hearing are received, the District Administrator will notify the Urban Programs Engineer who shall prepare a memorandum to the Location and Design Engineer, recommending approval of the location and design features and providing a signature line for approval by the Chief Engineer.

3. If a written request(s) for a public hearing is received, the Urban Programs Engineer should follow the Public Hearing scheduling procedures outlined in Chapter III. (In some instances, requests for a public hearing are simply requests for information which can be satisfactorily addressed without a public hearing. If a written request is received, a letter rescinding the request for a public hearing should be obtained from each person making the initial request. This procedure will then satisfy the public hearing requirement).

4. In either event, if the Municipality desires the Department to acquire the right of way, a resolution to this effect should be submitted accordingly. (See Appendix for example resolution with and without public hearings.)

E. PROCEDURES FOR CONDUCTING PRE-ADVERTISEMENT MEETINGS

The Urban Programs Engineer shall schedule a pre-advertisement meeting for each urban project at least four (4) months in advance of the scheduled advertisement date. The meeting date, time and place should be confirmed in writing.

The municipal representative, FHWA (when applicable), district and residency personnel and all affected disciplines (divisions) should be notified and requested to have a knowledgeable representative present.

The purpose of this meeting is to ensure the timely completion of all phases of the project development prior to advertisement. Items to be discussed include right of way, utilities, railroads, road plans, structure plans, signs, signals, lighting, landscaping, permits, maintenance of traffic, sequence of construction, temporary signing, detours, work zone safety, construction time, special provision, advertisement date, etc. A checklist of some of the items to be considered is included in the Appendix.

After the meeting is held, a report including recommendations should be written and sent to Location and Design Division, with copies to all interested parties.

F. PROCEDURES FOR ADMINISTERING OF PROJECTS BY MUNICIPALITIES

Upon concurrence by the Urban Division, Urban projects may be administered by the municipality including any or all phases of development such as: preliminary engineering, design, environmental considerations, right of way acquisition, utility relocation, preparation of proposal, advertisement, review of bids, award of contract, inspection of work, payments to contractors, etc.

In such instances, an agreement between the Department and the municipality must be executed to cover who is responsible for different aspects of project development. Details are included in Instructional Memorandum of Processing Projects Designed by Municipalities (LD-00(D) 216.4) included in the Appendix.

G. PROCEDURES FOR REQUESTING ROUTE NUMBER CHANGES IN MUNICIPALITIES

In order to maintain continuity of the primary system and to expedite the flow of traffic through Cities and Towns, it is essential that the best possible routings be selected.

Whenever a Municipality decides, or agrees to a request by the Department, to alter or eliminate the numbering of a primary route within the City or Town, a resolution adopted by City or Town council should be submitted to the State Urban Engineer requesting the change. Requests will be forwarded to the Traffic Engineering Division, which will obtain the necessary concurrence from Transportation Planning Division, FHWA and AASHTO committee, when applicable. In towns under 3,500 population, upon agreement by all affected parties, the Traffic Engineering Division will obtain final approval by Commonwealth Transportation Board for route changes and have the records and maps revised accordingly. In Cities and Towns of 3,500 or more population, the Urban Division will obtain final approval by the Commonwealth Transportation Board for route changes and, upon approval, have the Urban street inventory and maps revised. The Urban Division will then notify the municipality that the route numbers can be changed.

VI. APPENDIX

Form U-1, Request for Street Additions and Deletions

Form U-2, Request for Change in Functional Classification System

Form U-3, Accounting of Expenditures and Certification of Street Payment Funds Annual Report

Form U-5, Principal-Minor Arterial Streets Street Condition Report

List of Maintenance Activities

Standards of Maintenance

S&B-94-27.4

Letter of May 15, 1995 Concerning Bridge Safety Inspections

Project Programming Resolution For municipalities over 3,500 population

Project Programming Resolution For municipalities under 3,500 population

Form U-9

Municipal-State Agreement

Location Public Hearing Approval Resolution

Location and Design (or Design Only) Public Hearing Approval Resolution

Example Resolution Approving Design When No Public Hearing is Held

Scoping Meeting Agenda

Field Inspection Checklist

Pre-Advertisement Meeting Checklist

Geometric Design Standards

Roadway and Structure Lighting Policy

Guidelines for Bicycle Facilities, Commonwealth Transportation Board Resolution

Underground Utility Relocation Policy

LD-00 (D) 216.4, Instructional Memorandum on Processing Projects Designed by Municipalities

Traffic Signal Warrants

SR-49-92, Industrial Access Roads Fund

Airport Access Roads, April, 1996 Commonwealth Transportation Board Resolution

SR-47-91, Recreational Access Roads

Guidelines for Use of Proprietary Signal Equipment

Example Form Letter for Requesting Proprietary Signal Equipment

State Functional Classification for Urban Highways – Policy (includes discussion of Federal Functional Classification System)

LD-88 (D) 146.4 – Storm Sewers, Board Policies on Participation by Towns, Cities and Others

Federal Aid Policy Guide on Pavement Policy – Regulatory and Non-Regulatory Supplement

Letter Concerning Purchase of Residue Parcels – July 31, 1997

Specifications for Audits of Counties, Cities, and Towns

Form EQ-429, Project Early Notification

Form U-1 (Rev. 1-1-87)

URBAN DIVISION
VDOT

REQUEST FOR STREET ADDITIONS AND DELETIONS
FOR STREET PAYMENTS

MUNICIPALITY _____

STREET NAME - ROUTE NUMBER *	TERMINI FROM	TERMINI TO	R/W WIDTH (FEET)	PAVEMENT WIDTH (FEET)	CENTER-LANE MILES	NUMBER OF LANES	LANE MILES	FUNC. CLASS. (TPD USE ONLY)

*Council Resolution & map attached

SIGNED _____
RESIDENT ENGINEER DATE

SIGNED _____
MUNICIPAL OFFICIAL DATE

CLASSIFIED BY _____
TPD ENGINEER DATE

Submit to: Resident Engineer in triplicate

Form U-2 (Rev. 1-1-87)

URBAN DIVISION
VDOT

REQUEST FOR CHANGE IN FUNCTIONAL CLASSIFICATION SYSTEM

MUNICIPALITY _____

STREET NAME - ROUTE NUMBER *	TERMINI FROM	TERMINI TO	PRESENT FUNCT CLASS	PROPOSED FUNCT CLASS	CENTER-LINE MILES	NUMBER OF LANES	LANE MILES	FUNC. CLASS. (TPD USE ONLY)

*Council Resolution & map attached

SIGNED _____
RESIDENT ENGINEER DATE

SIGNED _____
MUNICIPAL OFFICIAL DATE

CLASSIFIED BY _____
TPD ENGINEER DATE

Submit to: Resident Engineer in triplicate

FORM U-3

(REVISED 6-97)

URBAN DIVISION
VDOT

ACCOUNTING OF EXPENDITURES AND CERTIFICATION OF STREET PAYMENT FUNDS ANNUAL REPORT

MUNICIPALITY _____

FOR FISCAL YEAR _____

NOTE: THIS REPORT SHALL BE SUBMITTED BY THE MUNICIPALITY WITHIN 60 DAYS AFTER THE END OF FISCAL YEAR.

ANNUAL STREET PAYMENT _____

APPROVED CARRY OVER FROM PREVIOUS YEAR(S) _____

TOTAL STREET PAYMENT _____

TOTAL ANNUAL EXPENDITURES _____

BALANCE _____

CERTIFICATION OF EXPENDITURES

THIS IS TO CERTIFY THAT THE EXPENDITURES OF THE FUNDS RECEIVED IN ACCORDANCE WITH SECTION 33.1-41.1 OF THE CODE OF VIRGINIA REPORTED ABOVE HAVE ONLY BEEN EXPENDED FOR MAINTENANCE, CONSTRUCTION OR RECONSTRUCTION ON ELIGIBLE ROADS AND STREETS IN THE AFORESAID MUNICIPALITY.

SIGNED _____

TITLE _____

DISTRIBUTION:
STATE URBAN ENGINEER

Form U-5
(Rev. 6/97)

URBAN DIVISION
VDOT
PRINCIPAL-MINOR ARTERIAL STREETS
STREET CONDITION REPORT
Section 33.1-41.1
Code of Virginia

MUNICIPALITY _____

DATE OF INSPECTION _____

☐ Check as Appropriate:
☐ This report is a reinspection of deficient sections noted in the previous report.
☐ No deficient sections noted.
☐ All streets inspected are acceptable, except as noted below:
☐ Bridge inspection reports are current, except as noted below:

STREET NAME - ROUTE NUMBER	DESCRIPTION OF DEFICIENT SECTIONS		TOTAL LANE MILE LENGTH	DESCRIBE DEFICIENCY (Refer to Standard of Maintenance)	DELETE PAYMENT YES/NO
	From	To			
					No
					No
					No
					No
					No
					No
					No
					No
					No
					No
					No
					No

Inspection made by _____, in company with _____, _____
VDOT Representative Municipal Officer Title

Distribution:
Municipality
State Urban Engineer
District Administrator

SIGNED _____, _____
Resident Engineer Date

LIST OF MAINTENANCE ACTIVITIES

Section 33.1-23.02 of the Code of Virginia defines the term "maintenance" as follows:

"For the purpose of this title, unless otherwise explicitly provided, the term 'maintenance' shall include ordinary maintenance, maintenance replacement, and any other categories of maintenance which may be designated by the Commissioner".

Ordinary maintenance activities pertain to the cost of preserving each type of roadway structure and facility as near as possible in its condition as constructed.

Maintenance replacement activities pertain to costs involved in the function of restoring each type of roadway structure and facility as near as possible to its condition as constructed.

Maintenance payments, are not be used for construction, reconstruction or improvement purposes, except as provided under Expanded Definition of maintenance (Paragraph II.L).

In general, replacements-in-kind are acceptable charges; betterments are not acceptable. However, betterment or improvement work may be accomplished along with maintenance work provided proper credits or deductions are made and documented in the accounting and recording process.

A list of authorized ordinary maintenance and maintenance replacement activities is included in Addendum #1. In addition, the following items of acceptable and unacceptable allowable costs are set forth:

Acceptable items:

1. Costs to implement and continue these procedures.
2. Payroll additives and applicable overhead charges.
3. Expenditures for training in maintenance or bridge inspection work.
4. Bridge inspection costs for bridges on all public streets.
5. Energy costs for traffic signals.
6. Energy costs for roadway lighting. (If necessary, prorated costs should be developed).
7. Labor, equipment and material costs for lighting on Arterials and Collector/Local.
8. All construction, reconstruction and improvement costs, except as noted.

Unacceptable items:

1. Parking meter costs.
2. All costs on ineligible streets, except for bridge inspection costs.
3. Follow-up repairs to utility cuts.
4. All non-highway related items.
5. Municipality's share (contribution) on construction projects.

EXPANDED DEFINITION OF MAINTENANCE AS DESIGNATED BY THE COMMISSIONER

The definition of maintenance is expanded to include the following categories:

1. Storm drainage replacement for undersized culverts.
2. Minor pavement widening where tractor trailers run off the pavement or intersection radii need to be increased to accommodate turning movements.
3. Reconstruction or replacement of roadbeds or sidewalks where deteriorated beyond repair.
4. Plant mix overlays for streets previously only surface treated.
5. Higher grade materials, such as traffic signs and paint, than originally used.
6. High intensity pavement marking devices on roadways.
7. Traffic control devices upgrading and replacement.
8. Barriers or guardrails to protect traffic control cabinets when the barrier or guardrail is immediately adjacent to the cabinet.

ADDENDUM #1

July 1, 1985

AUTHORIZED ORDINARY MAINTENANCE AND MAINTENANCE REPLACEMENT ACTIVITIES FOR ELIGIBLE MUNICIPAL STREETS

I. ORDINARY MAINTENANCE ACTIVITIES – preserves the roadway structure and/or facility as near as possible in its condition as constructed.

ACTIVITIES	DESCRIPTION
Engineering & Administration	
Engineering	Salaries, expenses and equipment rentals for field engineering, inspection, and materials testing
Expendable Equipment	Purchase and repair of small tools and non-rental equipment; rental charges on inactive equipment
Administrative Overhead	Salary & expenses of maintenance supervisory personnel building overhead
Surface Repair – Bituminous	
Spot Sealing or Skin Patching	Patching with liquid asphalt
Premix Patching	Patching with commercial or shop prepared mixes
Spot Reconditioning	All surface and base repairs for reshaping and reconditioning sections of roadway less than 1,00 feet
Seal Cracks on Bituminous Surfaces	With liquid asphalt
Repairing Bleeding Pavements	General Maintenance
Slurry Patching	With slurry machine
Heavy Mechanized Patching	Application of hot or cold bituminous mixes with motor graders and paving machines
Other Bituminous Surface Maintenance	Planeing and smoothing bituminous surface emergency patching with stone dust or other non bituminous materials.
Surface Repair – Concrete	
Patching with Concrete	Holes and blow-ups including removal of existing concrete
Patch with Other Material	With bituminous or epoxy material
Grouting, Undersealing, & Pavement Jacking	Pumping bituminous material beneath pavement, filling voids by grouting, and pavement jacking

Shoulder Maintenance	
Non-Hard Surface	Machining and repairing low shoulders
Hard Surfaced Shoulders	Spot sealing, patching holes, sealing joint between shoulder and pavement, repairing low or high shoulders
Other Shoulder Maintenance	Applying dust palliatives to shoulder
Ditches and Drainage	
Clean and Reshape Ditches by Machine	Where ditch spoil is used on shoulders or loaded and hauled
Hand Cleaning of Ditches	All hand ditch work
Other Drainage Maintenance	Cleaning curb and gutter and drop inlets
Road Side	
Erosion Repair	To cut slopes, fill slopes, washouts, and the removal of minor slides
Cleaning Right-of-Way	Removing debris on right of way
Reseeding, Mulching, Sodding, and Resoiling	Replacing soil, sod, mulch, and reseeding right of way
Waysides and Rest Areas	General maintenance of areas to serve traveling public adjacent to eligible street
Bus Shelters	General maintenance
Roadside Structures	Maintenance of sidewalks, retaining walls, rip rap, curb and gutter and guard rails
Fences	Maintenance of right of way and access control fences
Street Sweeping	Mechanical cleaning of roadways
Vegetation Control	
Tractor Mowing and Hand Mowing	Within standards of maintenance
Brush Cutting	Cutting and removal
Spraying Brush, Weeds and Grass	All use of herbicides or soil sterilants
Signs and Traffic Control	
Signs	Cleaning, repairing, replacing, and resetting signs
Traffic Signals	Maintenance and energy costs
Railroad Protection Devices	Payments to railroads for maintenance and operation to grade crossing protection
Traffic Services and Operations	
Traffic Counts	Arterial Roads and Collector/Road Streets
Highway Lighting	Energy costs
Operation and Maintenance of Fog Warning System	General maintenance

Maintenance of Impact Attenuators	General maintenance
<u>Snow and Ice Control</u>	
Deicing Chemicals and Abrasives	
Snow Removal Expendable Equipment	Cost of spreaders, plows, or other snow removal equipment
Snow Fence	Cost of fence, erection and removal
Snow and Ice Control Support	Cleaning and servicing of snow removal equipment, and cleaning and washing bridges after storms
Snow Removal and Ice Control Availability Fee	Paid to hired equipment owners for making their equipment available for snow removal
<u>Structures</u>	
Bridge Inspection	All structures
Repairing Substructure	Repair and repainting bridge substructure removal of drift and ice flows
Repairing Superstructure	Repair and repainting the bridge superstructure
Repairs to Large Drainage Pipelines	
Repairs to Box Culverts	
Waterproof Bridge Decks	Includes linseed oil or epoxy treatments to bridge decks, wheel guards, and rails
Underwater Substructure Investigations	
Operation of non-toll Bridges	Operational expenses of drawbridges
Purchase of Equipment	Required to accomplish ordinary maintenance activities
Purchase of Materials	Required to accomplish ordinary maintenance activities

II. MAINTENANCE REPLACEMENT ACTIVITIES – restore the roadway structure and/or facility as near so possible to its condition as constructed.

ACTIVITIES	DESCRIPTION
Engineering and Administration	
Engineering	Salaries, expenses and equipment rentals for field engineering, inspection, and materials testing
Expendable Equipment	Purchase and repair of small tools and non-rental equipment; rental charges on inactive equipment
Administrative Overhead	Salary and expenses of maintenance supervisory personnel building overhead
Pavement Management Inspection	As required
Surface Replacement	
Reconditioning Hard-Surfaced Roads	Restoration of base and surface to original condition bituminous resurfacing
Bituminous Retreatments	Applied to existing bituminous surfaces
Portland Cement Concrete Pavement Slab Replacement	Portland cement concrete overlays and grooving
Shoulders and Drainage	
Bituminous Retreatments	Existing hard-surfaced shoulders
Drainage Structures	Replacement of structures with equivalent dimensions
Extraordinary Cleaning of Major Outfall Ditches and Channels	Street drainage only
Roadside	
Major Cut and Fill Washouts and Slides	Replacing major cut and fill slopes, removal of major slides
Major Waysides and Rest Areas	Major repairs or replacements of roadsides serving the traveling public adjacent to eligible street
Replacement of Right of Way Fences	All replacement
Replacement of Existing Shrubs and Trees	All replacement
Signs	
Signs	Replacing sigh structures, refurbishing major signs
Traffic Signals	Replacing traffic signals and equipment
Pavement Marking	Painting centerlines, edge lines and messages
Reflectorize Pavement Markers	Replace raised pavement markers
Structures	
Major Substructure	Major repairs with equivalent dimensions
Major Superstructure	Major repairs with equivalent dimensions

Equipment and Materials

Purchase of Equipment	Required to accomplish maintenance replacement activities
Purchase of Materials	Required to accomplish maintenance replacement activities

STANDARDS OF MAINTENANCE
FOR URBAN HIGHWAYS

1. Pavement

   The roadway surfaces shall be maintained as near as practical to the originally constructed, reconstructed, or improved condition. Maintenance performed on roadway surfaces should provide a reasonably smooth and safe traveling surface.

2. Shoulders and Curb and Gutter

   These should be maintained as near as practical to the originally constructed, reconstructed, or improved condition. They should have a uniform slope that will conduct water away from the pavement and be free of excessive irregularities and drop-offs from the edge of the pavement.

3. Roadsides

   Policy: The roadside shall be maintained in a reasonably safe manner and is aesthetically pleasing to the traveling motorist.

   Vegetation

   Vegetation control shall be performed to protect erosion of embankment soils and provide an unobstructed view of signs and other appropriate roadside features.

   Organizations or individuals may place and maintain planting within the right of way. A sketch showing the location and type of plantings shall be submitted for review to the District Administrator or designee for approval. Approval shall be documented on a Land Use Permit.

   Sidewalk

   The sidewalk surfaces shall be maintained as near as practical to the originally constructed, reconstructed, or improved condition. Maintenance performed on sidewalk surfaces should provide a reasonably smooth and safe traveling surface.

4. Drainage

   All drainage facilities shall be maintained to (a) provide safety and protection to the traveling motorist, (b) provide reasonably adequate drainage of the roadway surfaces, shoulders, and other any incidental drainage items, and (c) preserve the structural integrity of the roadway.

5. Traffic Control and Safety

   All traffic control and safety devices shall be fabricated, erected, and maintained in conformance with the current standards. The State Traffic Engineer, or her/his designee, shall render decision regarding exceptions to the standards. In addition to physical

maintenance, functional maintenance is required to adjust traffic control devices to current conditions and to remove devices when no longer required.

6. Snow and Ice Control

The municipality shall provide snow and ice control services when required and commensurate with the needs of all segments of the traveling public and the highway system.

7. Structures

a. Bridges, box culverts and pipe culverts that meet the American Association of State Highway and Transportation Officials' (AASHTO) definition of a bridge, generally structures having a clear opening greater than 20', shall be inspected in accordance with the National Bridge Inspection Standards. Maintenance shall be performed as needed.

b. Bridges, box culverts and pipe culverts that do not meet AASHTO's definition of a bridge should be inspected on a regular basis and maintained as regular drainage (Item 4 above).

VIRGINIA DEPARTMENT OF TRANSPORTATION

STRUCTURE AND BRIDGE DIVISION

INSTRUCTIONAL AND INFORMATIONAL MEMORANDUM

SUBJECT: Bridge Safety Inspections	**NUMBER:** S&B 94-27.4
DIRECTED TO: District Structure and Bridge Engineers	**DATE:** September 1, 1994
SIGNATURE: Malcolm T. Kerley	**SUPERSEDES:** BR-73-27.3, BR-83-50.2, S&B-90-60, S&B-91-64, S&B-91-63, BR-82-42, BR-75-33, BR-74-29, BR-85-55.2

The attached instructions are intended to complement the National Bridge Inspection Standards(NBIS). The NBIS may be found in Section 23 Highways - Part 650, Subpart C of the Code of Federal Regulations.

TABLE OF CONTENTS

1.000 DEFINITIONS
- 1.010 INITIAL INSPECTIONS 2
- 1.020 ROUTINE INSPECTIONS 2
- 1.030 INTERIM INSPECTIONS 2
- 1.040 COMPONENT CONDITION RATINGS 2

2.000 FREQUENCY OF INSPECTIONS 3

3.000 FORMS AND DISTRIBUTION
- 3.010 SAFETY INSPECTION REPORTS 4
- 3.020 CRITICAL RECOMMENDATIONS FOR POSTING, REPAIR AND STRENGTHENING . . 5

4.000 SPECIAL CATEGORY INSPECTIONS
- 4.010 WATERWAY AND UNDERWATER INSPECTIONS 6
- 4.020 PIN AND HANGER INSPECTIONS 6
- 4.030 FATIGUE PRONE INSPECTIONS 7
- 4.040 FRACTURE CRITICAL INSPECTIONS 7

5.000 INSTRUCTIONS FOR STRUCTURE RATING 8

ATTACHMENTS
- NATIONAL BRIDGE INSPECTION STANDARDS(NBIS) 10
- ORIGINAL BRIDGE INSPECTION REPORT(Form B-5) 12
- SUPPLEMENTARY BRIDGE REPORT(Form B-6) 15
- INSPECTION REPORTS(Forms B-7, B-7a, B-7b) 16
- VEHICLES FOR RATING AND ANALYSIS. 22
- COVER SHEET FOR RATING CALCULATIONS 24
- EQUIVALENT CAPACITY COEFFICIENTS. 25
- CRITICAL RECOMMENDATION FORMS-DEPARTMENT MAINTAINED STRUCTURES. 29
- CRITICAL RECOMMENDATION FORMS-MAINTAINED BY OTHER AGENCIES. 30
- WEIGHT LIMIT AND VERTICAL CLEARANCE POSTING POLICY(TE-244 MEMO) 31

1.000 DEFINITIONS

1.010 INITIAL INSPECTIONS

The first inspection of a structure as it becomes part of the highway system.

1.020 ROUTINE INSPECTIONS

Scheduled inspections which meet the requirements of the NBIS.

1.030 INTERIM INSPECTIONS

Inspections to assess structural damage or to monitor a structural deficiency.

1.040 COMPONENT CONDITION RATINGS

In addition to the NBIS general condition ratings, the components of the structure will be given one of the following ratings:

G - GOOD - The component is in new or almost new condition with no repairs necessary.
For "Paint" - no painting is necessary.
For "Adequacy of Opening" - waterway opening is excessive.

F - FAIR - The component is performing the function for which it was intended, but may require major maintenance or minor rehabilitation.
For "Paint" - spot painting is needed.
For "Adequacy of Opening" - waterway opening is sufficient.

P - POOR - The component is performing the function for which it was intended, but at a minimum level. The component is in need of rehabilitation.
For "Paint" - all steel must be painted.
For "Adequacy of Opening" - waterway opening is barely sufficient.

C - CRITICAL - The component is no longer performing the function for which it was intended.
For "Paint" - not used.
For "Adequacy of Opening" - waterway opening is insufficient.

N - For "Paint" - unpainted A588 steel.
For "Adequacy of Opening" - not applicable to structure.

A - For "Paint" - A588 steel with beam ends painted.

" - " A dash indicates that a component is not applicable to the structure.

2.000 FREQUENCY AND LEVEL OF INSPECTIONS

All VDOT maintained structures having an opening of 36 square feet or greater are to receive a detailed inspection, at intervals not to exceed two years. Pipe, box and arch culverts, that are less than 20′ long as measured along the centerline of the road and in fair or good condition, are to be inspected at intervals not to exceed four years.

When the reinforcing details are not known, concrete structures with an opening of 20 feet or greater between the undercopings of the abutments will be inspected at intervals not exceeding one year.

For concrete structures with openings less than 20 feet, inspections may be made at intervals not exceeding two years provided the structure has been carrying normal traffic for an appreciable length of time with no visible signs of distress.

Posted structures are to be inspected at intervals not to exceed one year.

Structures having one or more items with a general condition rating of 4 or less are to have that item(s) inspected at intervals not to exceed one year; these inspections may be interim inspections or part of a routine inspection.

Structures meeting the NBIS definition of a bridge and maintained by other agencies, i.e., municipalities, toll authorities, etc. are to receive initial, routine and special inspections as outlined in the NBIS.

The Federal Highway Administration has ruled that the states must comply with the NBIS or risk loss of federal highway funds. The following procedures are necessary for compliance:

1. A list titled "Structures To Be Inspected In The Next 90 Days" is to be generated each month by the district structure and bridge section.

2. Inspections are to be made by the due date and the data in the structure inventory is to be updated within one month of the date of inspection.

3. A list titled "Structures With Past Due Inspections" is to be generated each month by the district structure and bridge section. If a structure appears on the past due list, immediate action must be taken to correct the situation.

4. A list titled "Structures With Delinquent Inspections" is to be generated each month by the district structure and bridge section. If a structure appears on the delinquent list, immediate action is to be taken to correct the situation.

5. Municipalities and other agencies that have the responsibility of inspecting their own structures are to inspect their structures as noted above. They are to be notified by the district structure and bridge section as follows:

   a. Write a letter to the official in the highest authority with a copy to the official directly involved with the inspection program to notify them of structures to be inspected, at least three months in advance of the inspection due date.

   b. When structures appear on the past due list, notify the structures' owner of the inspections that are past due. Write a letter to the official in the highest authority with a copy to the official directly involved with the inspection program.

   c. When a municipality's structure(s) appear on the delinquent list, write a letter to the Urban Division so they may deal with the municipality directly.

3.000 FORMS AND DISTRIBUTION

3.010 SAFETY INSPECTION REPORTS

For all structures except culverts and footbridges, the original bridge report (form B-5), along with the bridge inspection report(form B-7), are to be used to report the initial inspection.

The supplementary bridge report(form B-6), along with the B-7 form are to be used to report routine inspections.

The form B-7 is required for interim inspections only when there are changes from the previous routine inspection. Where the interim inspection reveals no changes from the last regular inspection, reference to the last B-7, and its date, are to be listed as the condition of the structure on the B-6 form.

For culverts, the culvert inspection report(form B-7a) is to be used to report the initial and all subsequent inspections.

For footbridges, which cross non-highways, the pedestrian inspection report(form B-7b) is to be used to report the initial and all subsequent inspections.

On the bridge inspection report(form B-7), the ratings good, fair, poor or critical are to be used to describe the condition of each component. For component ratings other than "good", and condition ratings of "5" or less, comments are to be added to the report to describe the condition of the components. Notes and photographs or sketches are to be made of all items which warrant a general condition rating of "4" or less, or have a component condition rating of "critical".

On the supplementary bridge report(form B-6), the most critical items are to be covered first when making recommendations. If any repairs are urgent, they are to be so noted and a "Critical Recommendation for Posting, Repair and Strengthening" form will be submitted to ensure expedient follow-up action is taken to correct the critical conditions.

Copies of the initial, all routine and all interim inspection reports, including all forms and attachments, are to be sent to the Structure and Bridge Division - Central Office. For Department maintained structures, copies are to be sent to the residency office.

Inspection reports are to be sent to the Structure and Bridge Division - Central Office within three months after the inspection due date.

A folder containing the forms for the initial inspection, all routine inspections and all interim inspections is to be maintained by the district structure and bridge section for each structure. This folder is to be labeled to indicate the route carried by the structure, the feature intersected, the Virginia four digit structure number and the city or county in which the structure is located. This folder is the official record of the structure.

All inspection reports are to be reviewed by the district structure and bridge engineer or his representative. This review is to be documented by the reviewer initialing and dating the inspection report.

VDOT's computerized bridge safety inspection reports should be used by our inspectors to report the conditions of the bridges. Copies of the fill-in-the-blank paper forms previously used are attached for reference.

3.020 CRITICAL RECOMMENDATIONS FOR POSTING, REPAIR AND STRENGTHENING

Certain categories of recommended work must be performed promptly. The "Critical Recommendation Form for Posting, Repair and Strengthening" is to be completed and transmitted in accordance with memorandum S&B-92-59 to ensure the performance of the required work and to document the completion of the work.

4.000 SPECIAL CATEGORY INSPECTIONS

4.010 WATERWAY AND UNDERWATER INSPECTIONS

Structures which cross streams are to have a waterway inspection performed to determine the effects of stream action on the structure. Characteristics of the stream are to be investigated for streambed degradation and/or aggregation activity and for stream channel shifting which may result in embankment erosion or local scour of the foundations.

A channel profile is to be taken and recorded during the initial inspection of each structure. At each routine inspection, that profile is to be compared to the existing profile to determine if significant differences have occurred. If the profile has changed, a new profile is to be included with the inspection report. The new profile is to be plotted so as to show previous streambed plots. If the profile has not changed, a comment that the profile was checked is to be added to the inspection report, and the channel profile sketch must also have a note indicating that it is up-to-date.

Structures with members located in waterways must have those members inspected to determine their structural condition with certainty. This will include determining if scour or foundation instability exists. Probing of the substructure members located in the stream is to be performed during each routine inspection of the structure. If the water depth or turbidity limits the dependability of probing, the inspection may require the aid of divers.

4.020 PIN AND HANGER INSPECTIONS

A hands-on inspection of each pin and hanger assembly is to be made during each routine inspection of the structure. An ultrasonic inspection of the pins in the connection assemblies is to be made in accordance with the following:

1. Redundant structures which have new or newly placed pins, have backup systems installed or do not demonstrate any distress, will require an ultrasonic inspection at each routine inspection.

2. Redundant structures with evidence of problems such as frozen pins or other questionable conditions will require an ultrasonic inspection on an annual frequency, as a minimum.

3. Non-redundant structures which have new or newly placed pins, have backup systems installed or do not demonstrate any distress, will require an ultrasonic inspection on an annual frequency.

4. Non-redundant structures with questionable conditions will require an ultrasonic inspection every six months, as a minimum.

The inspection report is to document the results of the hands-on inspection and the ultrasonic inspection. Deficiencies are to be documented by sketches and photographs. An on-site comparison of the documentation is to be made at each inspection. If any repairs are urgent, they are to be brought to the attention of the district structure and bridge engineer. A "Critical Recommendation for Posting, Repair and Strengthening" form may be submitted to ensure action is taken to correct the deficiencies.

4.030 FATIGUE PRONE INSPECTIONS

Structures on mainline interstate routes and other routes which carry a high volume of truck traffic are to have an up-close inspection of the fatigue prone details at each scheduled inspection. Inspection folders are to include instructions and sketches which show the members that have fatigue prone details and the specific details that are to be inspected. A statement about the condition of each fatigue prone member or groups of members is to be entered under "REMARKS" on the B-7 form.

4.040 FRACTURE CRITICAL INSPECTIONS

Fracture critical members are metal tension members whose failure would result in the collapse of the structure.

Inspection folders are to include instructions and sketches showing the members that are fracture critical, and the specific details that are to be inspected.

During each inspection, hands-on inspections of the fracture critical members are to be made. Documentation of deficiencies is to be made and brought to the attention of the district structure and bridge engineer. An on-site comparison of the documentation is to be made at each subsequent inspection. A statement about the condition of each fracture critical member is to be entered under the "REMARKS" on form B-7.

5.000 INSTRUCTIONS FOR STRUCTURE RATING

All structures that are on the National Bridge Inventory (NBI) are to be analyzed and load rated in accordance with the NBIS. The NBI structures are to be analyzed using the load factor method to determine the allowable weight limit of a HS-20 design vehicle. In addition to the NBI structures, bridges that were designed for less than HS20-44 loads or are in poor condition, are to be analyzed and load rated.

Chapter 6 of the Manual for Condition Evaluation of Bridges should be used for guidelines on analyzing existing bridges.

A fatigue evaluation of existing bridges is not required. A hands-on inspection of fatigue prone details is required at each scheduled routine inspection.

Concrete decks supported by longitudinal beams, and concrete substructures, in fair or good condition, need not be analyzed.

The Bridge Analysis and Rating System(BARS) should be used for the analysis of the superstructures. This will reduce the workload if the analysis of the structure has to be updated.

Most structural failures occur at connections. Therefore, it is important that the capacity of bolted, riveted or welded connections, in primary members, and pin and hanger assemblies be examined.

Bridges must be analyzed to determine if the blanket permit vehicles can cross the structure without exceeding the operating load level. Details of the blanket permit vehicles are attached.

In order to determine if posting is required, each structure must be evaluated to determine if legal loads can cross the structure without causing overstress. Virginia's legal loads are to be substituted for the Type 3, 3S2, and 3-3 or 3-4 that have previously been used for ratings. Details of the legal loads are attached. Ratings for the Type 3, 3S2 and 3-3 are not required. For some span lengths, Virginia's legal loads can carry about 20% larger loads than would be allowed using AASHTO's legal loads. Virginia's legal vehicles have been built into BARS, version 5.4. The working stress method of analysis may be used to determine the capacities of legal loads for posting of all structures.

On steel superstructures, the capacity at a stress level midway between inventory and operating may be used to determine if posting is required.

For concrete superstructures, the capacity at operating level may be used to determine if posting is required.

The analysis calculations are to be filed in the district office's bridge safety inspection folder. The cover sheet of the calculations must show the rated capacity for the legal loads and the gross tonnage capacity of the HS vehicle at inventory and operating. A suggested cover sheet is attached. The structural element controlling the rating of each vehicle should be shown.

The analysis and rating assumptions are to be reviewed as part of each scheduled inspection. If a changed condition has occurred since the previous analysis, consideration should be given to updating the rating calculations. For posted bridges, a copy of the rating cover sheet is to be attached to each regular safety inspection report with a statement that the rating has been reviewed.

To paraphrase AASHTO, "the safe load capacity of the bridge is to be based on the existing structural conditions. Every effort should be made to minimize hardships related to economic hauling without jeopardizing the safety of the public."

Attachments

CC: Mr. J. S. Hodge, P.E.
Mr. A. W. Coates, Jr.
Mr. J. W. Atwell
Assistant Commissioner - Operations
Mr. C. D. Garver, Jr.
District Administrators
Mr. C. F. Gee
Mr. E. T. Robb
Mr. E. W. Potter
Mr. E. C. Cochran, Jr.
Mr. A. V. Bailey, II
Mr. W. L. Hayden
Mr. S. A. Waymack
Mr. M. S. Hollis
Mr. J. S. Givens
Assistant State Structure and Bridge Engineers
Structural Engineer Supervisors
Resident Engineers
Mr. C. S. Napier, Jr. (FHWA)

available resources, such as the procedures presented in the AASHTO ''Model Drainage Manual,'' 1991.[2]

(c) Consistent with the requirements of section 6217(g) of the Coastal Zone Act Reauthorization Amendments of 1990 (Pub. L. 101–508, 104 Stat. 1388–299), highway construction projects funded under title 23, United States Code, and located in the coastal zone management areas of States with coastal zone management programs approved by the United States Department of Commerce, National Oceanic and Atmospheric Administration, should utilize ''Guidance Specifying Management Measures for Sources of Nonpoint Source Pollution in Coastal Waters,'' 84–B–92–002, U.S. EPA, January 1993.[3] State highway agencies should refer to this Environmental Protection Agency guidance document for the design of projects within coastal zone management areas.

National Bridge Inspection Standards Begin Here →

Subpart C—National Bridge Inspection Standards

§ 650.301 Application of standards.

The National Bridge Inspection Standards in this part apply to all structures defined as bridges located on all public roads. In acordance with the AASHTO (American Association of State Highway and Transportation Officials) Transportation Glossary, a *bridge* is defined as a structure including supports erected over a depression or an obstruction, such as water, highway, or railway, and having a track or passageway for carrying traffic or other moving loads, and having an opening measured along the center of the roadway of more than 20 feet between undercopings of abutments or spring lines of arches, or extreme ends of openings for multiple boxes; it may also include multiple pipes, where the clear distance between openings is less than half of the smaller contiguous opening.

[44 FR 25435, May 1, 1979, as amended at 51 FR 16834, May 7, 1986]

§ 650.303 Inspection procedures.

(a) Each highway department shall include a bridge inspection organization capable of performing inspections, preparing reports, and determining ratings in acordance with the provisions of the AASHTO Manual[1] and the Standards contained herein.

(b) Bridge inspectors shall meet the minimum qualifications stated in § 650.307.

(c) Each structure required to be inspected under the Standards shall be rated as to its safe load carrying capacity in accordance with section 4 of the AASHTO Manual. If it is determined under this rating procedure that the maximum legal load under State law exceeds the load permitted under the Operating Rating, the bridge must be posted in conformity with the AASHTO Manual or in accordance with State law.

(d) Inspection records and bridge inventories shall be prepared and maintained in accordance with the Standards.

(e) The individual in charge of the organizational unit that has been delegated the responsibilities for bridge inspection, reporting and inventory shall determine and designate on the individual inspection and inventory

[2] This document is available for inspection from the FHWA headquarters and field offices as prescribed by 49 CFR part 7, appendix D. It may be purchased from the American Association of State Highway and Transportation Officials offices at Suite 225, 444 North Capitol Street, NW., Washington, DC 20001.

[3] This document is available for inspection and copying as prescribed by 49 CFR part 7, appendix D.

[1] The *AASHTO Manual* referred to in this part is the *Manual for Maintenance Inspection of Bridges 1983* together with subsequent interim changes or the most recent version of the AASHTO Manual published by the American Association of State Highway and Transportation Officials. A copy of the Manual may be examined during normal business hours at the office of each Division Administrator of the Federal Highway Administration, at the office of each Regional Federal Highway Administrator, and at the Washington Headquarters of the Federal Highway Administration. The addresses of those document insepction facilities are set forth in appendix D to part 7 of the regulations of the Office of the Secretary (49 CFR part 7). In addition, a copy of the Manual may be secured upon payment in advance by writing to the American Association of State Highway and Transportation Officials, 444 N. Capitol Street, NW., Suite 225, Washington, DC 20001.

records and maintain a master list of the following:

(1) Those bridges which contain fracture critical members, the location and description of such members on the bridge and the inspection frequency and procedures for inspection of such members. (Fracture critical members are tension members of a bridge whose failure will probably cause a portion of or the entire bridge to collapse.)

(2) Those bridges with underwater members which cannot be visually evaluated during periods of low flow or examined by feel for condition, integrity and safe load capacity due to excessive water depth or turbidity. These members shall be described, the inspection frequency stated, not to exceed five years, and the inspection procedure specified.

(3) Those bridges which contain unique or special features requiring additional attention during inspection to ensure the safety of such bridges and the inspection frequency and procedure for inspection of each such feature.

(4) The date of last inspection of the features designated in paragraphs (e)(1) through (3) of this section and a description of the findings and follow-up actions, if necessary, resulting from the most recent inspection of fracture critical details, underwater members or special features of each so designated bridge.

[36 FR 7851, Apr. 27, 1971. Redesignated at 39 FR 10430, Mar. 20, 1974, as amended at 44 FR 25435, May 1, 1979; 53 FR 32616, Aug. 26, 1988]

§ 650.305 Frequency of inspections.

(a) Each bridge is to be inspected at regular intervals not to exceed 2 years in accordance with section 2.3 of the AASHTO Manual.

(b) Certain types or groups of bridges will require inspection at less than 2-year intervals. The depth and frequency to which bridges are to be inspected will depend on such factors as age, traffic characteristics, state of maintenance, and known deficiencies. The evaluation of these factors will be the responsibility of the individual in charge of the inspection program.

(c) The maximum inspection interval may be increased for certain types or groups of bridges where past inspection reports and favorable experience and analysis justify the increased interval of inspection. If a State proposes to inspect some bridges at greater than the specified two-year interval, the State shall submit a detailed proposal and supporting data to the Federal Highway Administrator for approval. The maximum time period between inspections shall not exceed four years.

[36 FR 7851, Apr. 27, 1971. Redesignated at 39 FR 10430, Mar. 20, 1974, as amended at 39 FR 29590, Aug. 16, 1974; 53 FR 32616, Aug. 26, 1988; 57 FR 53281, Nov. 9, 1992]

§ 650.307 Qualifications of personnel.

(a) The individual in charge of the organizational unit that has been delegated the responsibilities for bridge inspection, reporting, and inventory shall possess the following minimum qualifications:

(1) Be a registered professional engineer; or

(2) Be qualified for registration as a professional engineer under the laws of the State; or

(3) Have a minimum of 10 years experience in bridge inspection assignments in a responsible capacity and have completed a comprehensive training course based on the ''Bridge Inspector's Training Manual,''[2] which has been developed by a joint Federal-State task force, and subsequent additions to the manual.[3]

(b) An individual in charge of a bridge inspection team shall possess the following minimum qualifications:

(1) Have the qualifications specified in paragraph (a) of this section; or

(2) Have a minimum of 5 years experience in bridge inspection assignments in a responsible capacity and have completed a comprehensive training course based on the ''Bridge Inspector's

[2]The ''Bridge Inspector's Training Manual'' may be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

[3]The following publications are supplements to the ''Bridge Inspector's Training Manual'': ''Bridge Inspector's Manual for Movable Bridges.'' 1977, GPO Stock No. 050–002–00103–5; ''Culvert Inspector's Training Manual,'' July 1986, GPO Stock No. 050–001–0030–7; and ''Inspection of Fracture Critical Bridge Members,'' 1986, GPO Stock No. 050–001–00302–3.

Training Manual,'' which has been developed by a joint Federal-State task force.

(3) Current certification as a Level III or IV Bridge Safety Inspector under the National Society of Professional Engineer's program for National Certification in Engineering Technologies (NICET)[4] is an alternate acceptable means for establishing that a bridge inspection team leader is qualified.

[36 FR 7851, Apr. 27, 1971. Redesignated at 39 FR 10430, Mar. 20, 1974, as amended at 44 FR 25435, May 1, 1979; 53 FR 32616, Aug. 26, 1988]

§ 650.309 Inspection report.

The findings and results of bridge inspections shall be recorded on standard forms. The data required to complete the forms and the functions which must be performed to compile the data are contained in section 3 of the AASHTO Manual.

[39 FR 29590, Aug. 16, 1974]

§ 650.311 Inventory.

(a) Each State shall prepare and maintain an inventory of all bridge structures subject to the Standards. Under these Standards, certain structure inventory and appraisal data must be collected and retained within the various departments of the State organization for collection by the Federal Highway Administration as needed. A tabulation of this data is contained in the structure inventory and appraisal sheet distributed by the Federal Highway Administration as part of the Recording and Coding Guide for the Structure Inventory and Appraisal of the Nation's Bridges (Coding Guide) in January of 1979. Reporting procedures have been developed by the Federal Highway Administration.

(b) Newly completed structures, modification of existing structures which would alter previously recorded data on the inventory forms or placement of load restriction signs on the approaches to or at the structure itself shall be entered in the State's inspection reports and the computer inventory file as promptly as practical, but no later than 90 days after the change in the status of the structure for bridges directly under the State's jurisdiction and no later than 180 days after the change in status of the structure for all other bridges on public roads within the State.

[44 FR 25435, May 1, 1979, as amended at 53 FR 32617, Aug. 26, 1988]

Subpart D—Highway Bridge Replacement and Rehabilitation Program

SOURCE: 44 FR 15665, Mar. 15, 1979, unless otherwise noted.

§ 650.401 Purpose.

The purpose of this regulation is to prescribe policies and outline procedures for administering the Highway Bridge Replacement and Rehabilitation Program in accordance with 23 U.S.C. 144.

§ 650.403 Definition of terms.

As used in this regulation:

(a) *Bridge*. A structure, including supports, erected over a depression or an obstruction, such as water, a highway, or a railway, having a track or passageway for carrying traffic or other moving loads, and having an opening measured along the center of the roadway of more than 20 feet between undercopings of abutments or spring lines of arches, or extreme ends of the openings for multiple boxes; it may include multiple pipes where the clear distance between openings is less than half of the smaller contiguous opening.

(b) *Sufficiency rating*. The numerical rating of a bridge based on its structural adequacy and safety, essentiality for public use, and its serviceability and functional obsolescence.

(c) *Rehabilitation*. The major work required to restore the structural integrity of a bridge as well as work necessary to correct major safety defects.

§ 650.405 Eligible projects.

(a) *General*. Deficient highway bridges on all public roads may be eligible for replacement or rehabilitation.

[4] For information on NICET program certification contact: National Institute for Certification in Engineering Technologies, 1420 King Street, Alexandria, Virginia 22314, Attention: John D. Antrim, P.E., Phone (703) 684–2835.

B-5 (5-71)

ORIGINAL BRIDGE REPORT

BRIDGE NO. _____ CITY OR COUNTY _____

DATE OF INSPECTION _____

(1) LOCATION - PRINCIPAL ROUTE _____ ☐ OVER ☐ UNDER _____

MILEPOST _____ (a) _____ MILES FROM _____ _____ MILES TO _____

(2) FEDERAL AID SYSTEM ☐ YES ☐ NO F.A. Rte. NO. _____

(3) FULL NAME OF BRIDGE _____

(4) DESIGN LIVE LOADING - ORIGINAL PORTION _____

WIDENED PORTION _____

(5) POSTING _____

(6) DATE BUILT _____ DATE WIDENED _____

(7) TYPE WEARING SURFACE _____ THICKNESS _____

(8) ALIGNMENT - ☐ TANGENT ☐ CURVE RADIUS _____

REMARKS: _____

(9) (b) DESCRIPTION FLOOR _____

SUPERSTRUCTURE:

NO. _____ LENGTH _____ MATERIAL _____ TYPE _____

NO. _____ LENGTH _____ MATERIAL _____ TYPE _____

NO. _____ LENGTH _____ MATERIAL _____ TYPE _____

NO. _____ LENGTH _____ MATERIAL _____ TYPE _____

PIERS:

NO. _____ TYPE _____ FOUNDATION _____

NO. _____ TYPE _____ FOUNDATION _____

NO. _____ TYPE _____ FOUNDATION _____

NO. _____ TYPE _____ FOUNDATION _____

ABUTMENT A:

TYPE _____ FOUNDATION _____

ABUTMENT B:

TYPE _____ FOUNDATION _____

CITY OR
COUNTY _____ BRIDGE NO. _____

(10) TOTAL LENGTH (c) _____ (11) NO. TRAFFIC LANES _____ (12) SKEW _____

(13) TRANSVERSE SECTION (d)

OVERPASS:

(e) SIDEWALKS _____

ROADWAY _____ MEDIAN _____ ROADWAY _____ HOR. CL _____ (f) VERT.CL _____

UNDERPASS:

LEFT LANE OR SINGLE LANE -

SHOULDER _____ ROADWAY _____ SHOULDER _____ HOR. CL. _____ (f) VERT. CL. _____

RIGHT LANE - MEDIAN _____

SHOULDER _____ ROADWAY _____ SHOULDER _____ HOR. CL. _____ (f) VERT. CL. _____

(14) WATERWAY -
- ☐ NOT A FACTOR
- ☐ EXCESSIVE
- ☐ SUFFICIENT
- ☐ BARELY SUFFICIENT
- ☐ INSUFFICIENT

STREAM VELOCITY-
- NORMALLY HIGH ☐
- NORMALLY MEDIUM ☐
- NORMALLY LOW ☐

STREAM BED MATERIAL _____

(15) OTHER FEATURES CROSSED _____

_____

(16) PLANS AVAILABLE - (CIRCLE IF "AS BUILT") _____

_____ WHERE FILED _____

(17) UNUSUAL ENVIRONMENT AFFECTING STRUCTURE _____

_____

(18) AVERAGE DAILY TRAFFIC _____ DATE OF RECORD _____

(19) STRESS ANALYSIS -

STRESSES USED _____

RESULTS (NOTE WEAK MEMBERS) _____

_____

_____

(20) TYPE RAILING -
- ☐ TRAFFIC
- ☐ PEDESTRIAN
- ☐ COMBINATION

MATERIAL _____

(21) CONDITION OF PAINT _____ DATE LAST PAINTED _____

(c) -Record from paving notch to paving notch or back of backwall to back of backwall.
(d) -Taken left to right in direction of route.
(e) -Record width of sidewalks. If only one present, the side shall be noted. If no sidewalks, note "None".
(f) -Drop fractions back to nearest inch.

Note: All measurements shall be given in feet & inches

CITY OR
COUNTY _____ BRIDGE NO. _____

(22) CONDITION OF STRUCTURE _____

(23) MISCELLANEOUS _____

(24) RECOMMENDATIONS _____

ATTACHMENTS

- ☐ CLEARANCE SHEET
- ☐ DIMENSION SHEET
- ☐ CHANNEL PROFILE SHEET
- ☐ ENCROACHMENT SHEET
- ☐ OTHER _____

_____
SIGNATURE OF INSPECTOR

Form B-6 (7-82)

SUPPLEMENTARY BRIDGE REPORT

☐ REGULAR INSPECTION
☐ INTERIM INSPECTION

DATE OF INSPECTION _____

BRIDGE NO. _____ CITY OR COUNTY _____

(1) LOCATION - PRINCIPAL ROUTE _____ ☐ OVER ☐ UNDER _____

MILEPOST _____ _____ MILES FROM _____
INTERSTATE MARKER _____ _____ MILES TO _____

(2) WORK DONE _____

(3) REVISED DIMENSIONS _____

(4) MISCELLANEOUS _____

(5) CONDITION OF STRUCTURE _____

(6) REVISED STRESS ANALYSIS _____

(7) RECOMMENDATIONS _____

ATTACHMENTS
☐ CLEARANCE SHEET
☐ DIMENSION SHEET
☐ CHANNEL PROFILE SHEET
☐ ENCROACHMENT SHEET
☐ B-7 INSPECTION REPORT
☐ OTHER _____

_____
SIGNATURE OF INSPECTOR

BRIDGE INSPECTION REPORT

☐ Regular Inspection
☐ Interim Inspection

City or County _____ Principal Route _____ ☐ Over ☐ Under _____

Bridge No. _____ Date _____ Inspector _____

	COMPONENT CONDITION RATING	REMARKS
36 TRAFFIC SAFETY FEATURES		
1. Bridge Railing		
2. Transitions		
3. Approach Guardrail		
4. Approach Guardrail Terminal		
58 DECK		
1. Wearing Surface		
2. Deck - Structural Condition		
3. Curbs		
4. Median		
5. Sidewalks		
6. Parapet		
7. Railing		
8. Drains		
9. Lighting Standards		
10. Utilities		
11. Expansion Joints or Devices		
GENERAL CONDITION RATING		
59 SUPERSTRUCTURE		
1. Bearing Devices		
2. Stringers		
3. Girder or Beams A. General		
B. Diaphragms or Cross Frames		
C. Bracing		
4. Floor Beams		
5. Trusses A. General		
B. Portals		
C. Bracing		
6. Paint (See Sheet 4)		Year Painted _____
7. Machinery (Movable Span)		
GENERAL CONDITION RATING		

City or County _____

Bridge No. _____

	COMPONENT CONDITION RATING	REMARKS
60 SUBSTRUCTURE		
1. Abutments A. Wings		
B. Backwall		
C. Bearing Seats		
D. Breast Wall		
E. Weep Holes		
F. Footing		
G. Piles		
H. Erosion or Scour		
I. Settlement		
2. Piers or Bents A. Caps		
B. Bearing Seats		
C. Column, stem or wall		
D. Footing		
E. Piles		
F. Bracing		
G. Erosion or Scour		
H. Settlement		
3. Pile Bents A. Caps		
B. Bearing Seats		
C. Piles		
D. Bracing		
GENERAL CONDITION RATING		

61 CHANNEL & CHANNEL PROTECTION OR SLOPE PROTECTION		
1. Channel Scour		
2. Embankment Erosion		
3. Drift		
4. Vegetation		
5. Fender System		
6. Spur Dikes & Jetties		
7. Rip Rap or Slope Protection		
8. Adequacy of Opening		
GENERAL CONDITION RATING		

Numerical rating when channel and channel protection apply.
Alphabetic rating when slope protection only applies.
Code N when neither of above apply.

City or
County _____

Bridge No. _____

COMPONENT CONDITION RATING	REMARKS

66 RATED LOADING

1. Posted Loading .....
2. Legibility .....
3. Visibility .....

ADDITIONAL REMARKS

B-7-a (7-82)

CULVERT INSPECTION REPORT

(36 S.F. OPENING AND GREATER)

City or County _____ Principal Route _____ ☐ Over ☐ Under _____

Culvert No. _____ Posted Load Limit _____ _____ Miles From _____

Date _____ Milepost _____ _____ Miles To _____

	COMPONENT CONDITION RATING	REMARKS
36 TRAFFIC SAFETY FEATURES		
1. Bridge Railing		
2. Transitions		
3. Approach Guardrail		
4. Approach Guardrail Terminal		
61 CHANNEL & CHANNEL PROTECTION		
1. Channel Scour		
2. Embankment Erosion		
3. Drift		
4. Vegetation		
GENERAL CONDITION RATING		
62 CULVERT & RETAINING WALLS		
1. Barrel		
Concrete		
Steel		
2. Headwall		
3. Wing Wall		
4. Debris		
5. Erosion or Scour		
6. Settlement		
7. Adequacy of Existing Opening	N/A ☐ EXC. ☐ SUFF. ☐ BARELY SUFF. ☐ INSUFF. ☐	
If Silt Present - Percent of Design Opening Remaining _____ %		
8. Adequacy of Cover		
GENERAL CONDITION RATING		
63 ESTIMATED REMAINING LIFE		
Inspectors appraisal of structural condition of structure	_____ Years	
65 ROADWAY		
1. Shoulders		
2. Embankment		
3. Pavement		
GENERAL CONDITION RATING		

RECOMMENDATIONS

B-7-b (7-82)

FOOT BRIDGE INSPECTION REPORT

County _____ Route _____ Over _____

Bridge No. _____ Date _____ Inspector _____

Location _____

	COMPONENT CONDITION RATING	REMARKS
ANCHORAGE		
1. Dead Man		
2. Anchor Bars or Rods		
- condition		
- imbedment		
3. Strand Shoes or Sockets		
4. Backstays		
GENERAL CONDITION RATING		
TOWERS OR PIERS		
1. Footings		
2. Columns		
3. Caps		
4. Bracing		
5. Bearing Seats		
6. Saddles		
7. Paint		
GENERAL CONDITION RATING		
DECK		
1. Condition		
2. Railing		
GENERAL CONDITION RATING		
SUPERSTRUCTURE		
1. Cable		
- Clamps		
2. Suspenders		
3. Floor Beams		
4. Stringers		
5. Paint		
GENERAL CONDITION RATING		
APPROACH SPANS		
1. Deck		
2. Stringers		
3. Railing		
4. Steps		
5. Pile Bents - Caps		
- Bearing Seats		
- Piles		
- Bracing		
GENERAL CONDITION RATING		

Is bridge posted in accordance with the Policy Manual Maintenance Division

County _____ Bridge _____ Date _____

WORK DONE

RECOMMENDATIONS

SIGNATURE OF INSPECTOR

VEHICLES FOR RATING AND ANALYSIS

HS20

Axle No.	Weight (lbs.)	Distance to Next Axle(ft.)	
1	8,000	14′	center of gravity is 18.67′
2	32,000	14′	from axle no. 1, and
3	32,000		9.33′ from axle no. 3

or a uniform load of 640#/1. f., plus a concentrated load of 18,000# for moment or a load of 26,000# for shear.

GVW = 36 Tons

Legal load - single unit truck

Axle No.	Weight (lbs.)	Distance to Next Axle(ft.)	
1	20,000	20′	center of gravity is 13.85′
2	17,000	4′	from axle no. 1, and
3	17,000		10.15′ from axle no. 3

GVW = 27 Tons

Legal load - truck and semi-trailer

Axle No.	Weight (lbs.)	Distance to Next Axle(ft.)	
1	12,000	10′	center of gravity is 25.92′
2	17,000	4′	from axle no. 1, and 25.08′
3	17,000	33′	from axle no. 5
4	17,000	4′	
5	17,000		

GVW = 40 Tons

(continues)

VEHICLES FOR RATING AND ANALYSIS
(continued)

90,000# Blanket Permit Vehicle

Axle No.	Weight (lbs.)	Distance to Next Axle(ft.)	
1	12,500	8′	center of gravity is 20.52′
2	22,000	4′	from axle no. 1 and 23.48′
3	22,000	28′	from axle no. 5
4	16,750	4′	
5	16,750		

GVW = 45 Tons

115,000# Blanket Permit Vehicle

Axle No.	Weight (lbs.)	Distance to Next Axle(ft.)	
1	12,000	8′	center of gravity is 31.41′
2	17,833	4′	from axle no. 1 and 32.59′
3	17,833	4′	from axle no. 7
4	17,833	40′	
5	16,500	4′	
6	16,500	4′	
7	16,500		

GVW = 57.5 Tons

COVER SHEET OF RATING CALCULATIONS

Rte.:_____

Over:_____

County:_____

Str. No.:_____

Rated by:_____ Date:_____

Checked by:_____ Date:_____

POSTING RATING - Virginia's Legal Loads

(at _____ % Yield)

Single Unit _____ Tons - Controlling member _____

Truck and Semi-trailer _____ Tons - Controlling member _____

NBIS RATINGS

HS20 - at Inventory _____ Tons - Controlling member _____

HS20 - at Operating _____ Tons - Controlling member _____

NOTE: The rating is the gross tonnage on a HS20 vehicle.

BLANKET PERMIT RATING

(at Operating)

90,000# vehicle _____ Tons - Controlling member _____

115,000# vehicle _____ Tons - Controlling member _____

EQUIVALENT CAPACITY COEFFICIENTS-SIMPLE SPANS

(FOR LONGITUDINAL MEMBERS CONTROLLED BY FLEXURE)

SPAN (FT.)	HS20 GROSS	SINGLE UNIT	TRUCK &SEMI	90K PERMIT	115K PERMIT	SCHOOL BUS	H TRUCK	H LANE
2	1.000	1.2000	2.0915	1.8182	2.8662	0.647	0.556	0.556
4	1.000	1.2000	2.0915	1.8182	2.8662	0.654	0.556	0.556
6	1.000	1.2000	2.0915	1.8182	2.8662	0.652	0.556	0.556
8	1.000	1.2000	1.8591	1.6162	2.5474	0.654	0.556	0.556
10	1.000	1.1029	1.6340	1.4205	2.0471	0.651	0.556	0.556
12	1.000	1.0165	1.5059	1.3091	1.7196	0.653	0.556	0.556
14	1.000	0.9608	1.4234	1.2374	1.5432	0.652	0.556	0.556
15	1.000	0.9398	1.3923	1.2103	1.4824	0.652	0.556	0.556
16	1.000	0.9220	1.3659	1.1874	1.4330	0.653	0.556	0.556
18	1.000	0.8934	1.3235	1.1225	1.3576	0.653	0.556	0.556
20	1.000	0.8715	1.2911	1.0605	1.3027	0.654	0.556	0.556
22	1.000	0.8541	1.2247	1.0145	1.2610	0.653	0.556	0.556
24	1.000	0.8430	1.1722	0.9826	1.2167	0.655	0.556	0.556
25	1.000	0.8647	1.1870	0.9999	1.2305	0.677	0.576	0.576
26	1.000	0.8848	1.2007	1.0159	1.2432	0.697	0.593	0.593
28	1.000	0.9210	1.2252	1.0445	1.2659	0.735	0.617	0.617
30	1.000	0.9526	1.2465	1.0692	1.2856	0.767	0.636	0.636
32	1.000	0.9804	1.2651	1.0909	1.3029	0.776	0.652	0.652
34	1.000	1.0064	1.2833	1.1115	1.3199	0.785	0.666	0.666
35	1.000	1.0243	1.2991	1.1275	1.3354	0.793	0.677	0.677
36	1.000	1.0411	1.3139	1.1424	1.3498	0.802	0.688	0.688
38	1.000	1.0628	1.3406	1.1695	1.3759	0.816	0.706	0.706
40	1.000	1.0585	1.3641	1.1935	1.3988	0.828	0.723	0.723
42	1.000	1.0547	1.3850	1.2150	1.4191	0.839	0.737	0.737
44	1.000	1.0515	1.4037	1.2342	1.4372	0.848	0.750	0.750
45	1.000	1.0500	1.4123	1.2431	1.4455	0.853	0.756	0.756
46	1.000	1.0486	1.4204	1.2516	1.4534	0.857	0.762	0.762
48	1.000	1.0460	1.4356	1.2673	1.4680	0.864	0.773	0.773
50	1.000	1.0437	1.4494	1.2817	1.4813	0.871	0.783	0.783
52	1.000	1.0416	1.4620	1.2948	1.4934	0.877	0.792	0.792
54	1.000	1.0397	1.4735	1.3069	1.5045	0.833	0.800	0.800
55	1.000	1.0388	1.4789	1.3125	1.5097	0.886	0.804	0.804
56	1.000	1.0380	1.4841	1.3180	1.5147	0.888	0.808	0.808
58	1.000	1.0364	1.4939	1.3283	1.5241	0.893	0.815	0.808
60	1.000	1.0350	1.5030	1.3339	1.5328	0.897	0.821	0.803
62	1.000	1.0336	1.5114	1.3162	1.5408	0.901	0.828	0.798

(continues)

EQUIVALENT CAPACITY COEFFICIENTS-SIMPLE SPANS

(FOR LONGITUDINAL MEMBERS CONTROLLED BY FLEXURE)

SPAN (FT.)	HS20 GROSS	SINGLE UNIT	TRUCK &SEMI	90K PERMIT	115K PERMIT	SCHOOL BUS	H TRUCK	H LANE
64	1.000	1.0324	1.5192	1.3004	1.5483	0.905	0.834	0.792
65	1.000	1.0318	1.5229	1.2930	1.5519	0.906	0.836	0.790
66	1.000	1.0312	1.5265	1.2860	1.5553	0.908	0.839	0.787
68	1.000	1.0302	1.5317	1.2730	1.5618	0.911	0.844	0.781
70	1.000	1.0292	1.5047	1.2611	1.5679	0.915	0.849	0.775
75	1.000	1.0269	1.4480	1.2355	1.5816	0.921	0.860	0.759
80	1.000	1.0250	1.4027	1.2144	1.5935	0.927	0.869	0.742
85	1.000	1.0234	1.3658	1.1969	1.6038	0.932	0.877	0.726
90	1.000	1.0219	1.3351	1.1820	1.5658	0.936	0.884	0.709
95	1.000	1.0207	1.3092	1.1692	1.5159	0.940	0.891	0.693
100	1.000	1.0195	1.2870	1.1580	1.4741	0.943	0.896	0.677
105	1.000	1.0185	1.2678	1.1483	1.4386	0.946	0.901	0.662
110	1.000	1.0176	1.2510	1.1397	1.4080	0.949	0.906	0.647
115	1.000	1.0168	1.2362	1.1320	1.3814	0.952	0.910	0.632
120	1.000	1.0160	1.2231	1.1252	1.3581	0.954	0.914	0.618
125	1.000	1.0153	1.2113	1.1190	1.3375	0.956	0.918	0.605
130	1.000	1.0147	1.2007	1.1134	1.3191	0.958	0.921	0.592
135	1.000	1.0141	1.1911	1.1083	1.3026	0.959	0.924	0.579
140	1.000	1.0136	1.1824	1.1036	1.2878	0.961	0.926	0.567
145*	1.000	1.0138	1.1754	1.1002	1.2753	0.963	0.930	0.556
150*	1.000	1.0345	1.1925	1.1191	1.2894	0.984	0.952	0.556
160*	1.000	1.0761	1.2278	1.1577	1.3195	1.028	0.996	0.556
170*	1.000	1.1181	1.2644	1.1970	1.3518	1.071	1.040	0.556
180*	1.000	1.1604	1.3021	1.2370	1.3858	1.114	1.084	0.556
190*	1.000	1.2030	1.3406	1.2776	1.4213	1.158	1.127	0.556
200*	1.000	1.2457	1.3799	1.3186	1.4578	1.201	1.172	0.556

*-HS20 lane load was used for these spans

EQUIVALENT CAPACITY COEFFICIENTS-SIMPLE SPANS

(FOR LONGITUDINAL MEMBERS CONTROLLED BY SHEAR AT BEARINGS)

SPAN (FT.)	HS20 GROSS	SINGLE UNIT	TRUCK &SEMI	90K PERMIT	115K PERMIT	SCHOOL BUS	H TRUCK	H LANE
2	1.000	1.2000	2.0915	1.8182	2.8660	0.653	0.566	0.566
4	1.000	1.2000	2.0915	1.8182	2.8660	0.653	0.556	0.556
6	1.000	1.0588	1.5686	1.3636	2.1495	0.653	0.556	0.556
8	1.000	0.9412	1.3943	1.2121	1.9107	0.653	0.556	0.556
10	1.000	0.8824	1.3072	1.1364	1.5922	0.653	0.556	0.556
12	1.000	0.8471	1.2549	1.0909	1.4330	0.653	0.556	0.556
14	1.000	0.8235	1.2200	1.0124	1.3375	0.653	0.556	0.556
15	1.000	0.8688	1.2530	1.0498	1.3896	0.696	0.465	0.465
16	1.000	0.9076	1.2799	1.0809	1.4330	0.734	0.505	0.505
18	1.000	0.9706	1.3213	1.1295	1.4548	0.768	0.570	0.570
20	1.000	1.0196	1.3515	1.1657	1.4702	0.784	0.620	0.620
22	1.000	1.0588	1.3745	1.1939	1.4816	0.796	0.660	0.660
24	1.000	1.0909	1.3927	1.2163	1.4905	0.806	0.692	0.692
25	1.000	1.0774	1.4004	1.2259	1.4942	0.810	0.706	0.706
26	1.000	1.0655	1.4074	1.2346	1.4976	0.814	0.718	0.718
28	1.000	1.0458	1.4195	1.2499	1.5034	0.821	0.741	0.741
30	1.000	1.0412	1.4452	1.2765	1.5246	0.835	0.760	0.760
32	1.000	1.0374	1.4671	1.2993	1.5425	0.848	0.776	0.776
34	1.000	1.0343	1.4859	1.3190	1.5578	0.858	0.791	0.787
35	1.000	1.0329	1.4944	1.3279	1.5647	0.863	0.797	0.789
36	1.000	1.0316	1.5023	1.3362	1.5711	0.868	0.803	0.790
38	1.000	1.0293	1.5168	1.3514	1.5827	0.876	0.814	0.791
40	1.000	1.0274	1.5295	1.3649	1.5930	0.883	0.824	0.790
42	1.000	1.0257	1.5409	1.3770	1.6021	0.889	0.833	0.789
44	1.000	1.0241	1.5511	1.3878	1.6102	0.895	0.841	0.786
45	1.000	1.0234	1.5558	1.3929	1.6139	0.898	0.845	0.785
46	1.000	1.0228	1.5603	1.3976	1.6175	0.900	0.849	0.783
48	1.000	1.0216	1.5686	1.3958	1.6241	0.905	0.856	0.779
50	1.000	1.0205	1.5762	1.3795	1.6301	0.909	0.862	0.775
52	1.000	1.0195	1.5832	1.3554	1.6356	0.913	0.867	0.770
54	1.000	1.0186	1.5445	1.3341	1.6406	0.916	0.872	0.765
55	1.000	1.0182	1.5263	1.3244	1.6430	0.918	0.875	0.762
56	1.000	1.0178	1.5093	1.3153	1.6452	0.920	0.877	0.759
58	1.000	1.0171	1.4783	1.2985	1.6495	0.922	0.882	0.753
60	1.000	1.0164	1.4509	1.2834	1.6535	0.925	0.886	0.747
62	1.000	1.0158	1.4265	1.2697	1.6571	0.928	0.890	0.741

(continues)

EQUIVALENT CAPACITY COEFFICIENTS-SIMPLE SPANS

(FOR LONGITUDINAL MEMBERS CONTROLLED BY SHEAR AT BEARINGS)

SPAN (FT.)	HS20 GROSS	SINGLE UNIT	TRUCK &SEMI	90K PERMIT	115K PERMIT	SCHOOL BUS	H TRUCK	H LANE
64	1.000	1.0152	1.4046	1.2573	1.6532	0.930	0.893	0.735
65	1.000	1.0149	1.3945	1.2515	1.6390	0.932	0.895	0.732
66	1.000	1.0146	1.3848	1.2460	1.6256	0.933	0.897	0.729
68	1.000	1.0141	1.3669	1.2356	1.6007	0.936	0.900	0.723
70	1.000	1.0137	1.3506	1.2261	1.5721	0.937	0.903	0.716
75	1.000	1.0126	1.3154	1.2053	1.5064	0.941	0.910	0.700
80	1.000	1.0117	1.2867	1.1881	1.4543	0.945	0.915	0.685
85	1.000	1.0109	1.2628	1.1735	1.4119	0.949	0.921	0.669
90	1.000	1.0102	1.2426	1.1610	1.3768	0.952	0.925	0.654
95	1.000	1.0096	1.2252	1.1502	1.3472	0.955	0.929	0.640
100	1.000	1.0091	1.2102	1.1408	1.3219	0.957	0.933	0.625
105	1.000	1.0086	1.1970	1.1324	1.3000	0.959	0.936	0.612
110	1.000	1.0082	1.1854	1.1250	1.2809	0.961	0.939	0.598
115	1.000	1.0078	1.1751	1.1184	1.2641	0.963	0.942	0.585
120	1.000	1.0074	1.1659	1.1125	1.2492	0.964	0.944	0.573
125*	1.000	1.0071	1.1576	1.1071	1.2359	0.966	0.946	0.556
130*	1.000	1.0184	1.1633	1.1149	1.2380	0.967	0.960	0.556
135*	1.000	1.0392	1.1804	1.1334	1.2525	0.969	0.981	0.556
140*	1.000	1.0602	1.1979	1.1522	1.2677	0.970	1.003	0.556
145*	1.000	1.0812	1.2159	1.1713	1.2836	0.970	1.025	0.556
150*	1.000	1.1024	1.2341	1.1907	1.3000	0.972	1.047	0.556
160*	1.000	1.1448	1.2715	1.2300	1.3341			
170*	1.000	1.1876	1.3099	1.2700	1.3697			
180*	1.000	1.2305	1.3491	1.3105	1.4065			
190*	1.000	1.2736	1.3889	1.3515	1.4443			
200*	1.000	1.3168	1.4292	1.3929	1.4829			

* - HS20 Lane load was used for these spans

VIRGINIA DEPARTMENT OF TRANSPORTATION

VDOT

STRUCTURE AND BRIDGE DIVISION

Location:_____Mi. To_____
_____Mi. From_____
Rte._____Over_____
_____County
Str. No._____NBIS:___Insp. Date_____
Inspected By:_____

SUBJECT: CRITICAL RECOMMENDATION FORM for Posting, Repair and/or Strengthening.

TO:_____ FROM:_____ DATE:_____
Resident Engineer — Dist. Str. & Bridge Engr.
CC: Asst. Dist. Engr. - Maint.
CC: Mr. M. T. Kerley, P.E.
CC: Bridge/Structure Inspector Team Leader
CC: Environmental Division

TO:_____ FROM:_____ DATE:_____
District Structure and Bridge Engineer — Resident Engineer

TO: Mr. M. T. Kerley, P.E. FROM:_____ DATE:_____
State Structure and Bridge Engineer — Dist. Str. & Bridge Engr.

TO: Mr. J. M. Tumlin FROM: Mr. J. S. Hodge DATE:_____
Division Administrator — Chief Engineer
Federal Highway Administration
P.O. Box 10045
Richmond, Virginia 23240-0045

15 Digit Federal Str. No._____
0000000000+Str. Id.

CRITICAL CONDITION REQUIRING IMMEDIATE ATTENTION

( ) Immediate performance of work on fracture critical member(s) is needed.
( ) Immediate correction of scour and/or hydraulic problem is needed.
( ) Condition rating of 3 or less for superstructure and/or substructure.
( ) Appraisal rating of 3 or less for waterway adequacy.
( ) Recommendations for immediate work to prevent substantial reduction in safe load capacity.

Inspection by the District Structure and Bridge Section revealed_____

PROPOSED RECOMMENDATION_____

ESTIMATED COST - $_____

TO BE FILLED OUT BY RESIDENT ENGINEER

Action (taken)(to be taken) by (Residency)(District Bridge Crew)_____

Date action (was)(will be) taken:_____

Follow-up Inspection

Signature:_____
Resident Engineer

_____
Bridge/Structure Inspector Team Leader — Date

VIRGINIA DEPARTMENT OF TRANSPORTATION

VDOT

STRUCTURE AND BRIDGE DIVISION

Location:_____Mi. To_____
_____Mi. From_____

SUBJECT: CRITICAL RECOMMENDATION FORM for Posting, Repair and/or Strengthening.

Rte._____Over_____
City/Agency _____
Str. No._____NBIS:___Insp. Date_____
Inspected By:_____

TO:_____ FROM:_____ DATE:_____
District Structure and Bridge Engineer — Title

CC: Mr. M. T. Kerley, P.E.
CC: File

TO: Mr. M. T. Kerley, P.E. FROM:_____ DATE:_____
State Structure and Bridge Engineer — Dist. Str. & Bridge Engr.

TO: Mr. J. M. Tumlin
Division Administrator
Federal Highway Administration
P.O. Box 10045
Richmond, Virginia 23240-0045

FROM: Mr. J. S. Hodge DATE:_____
Chief Engineer

15 Digit Federal Str. No._____
0000000000+Str. Id.

CRITICAL CONDITION REQUIRING IMMEDIATE ATTENTION

( ) Immediate performance of work on fracture critical member(s) is needed.
( ) Immediate correction of scour and/or hydraulic problem is needed.
( ) Condition rating of 3 or less for superstructure and/or substructure.
( ) Appraisal rating of 3 or less for waterway adequacy.
( ) Recommendations for immediate work to prevent substantial reduction in safe load capacity.

An inspection of this structure revealed_____

PROPOSED RECOMMENDATION_____

ESTIMATED COST - $_____

Action (taken)(to be taken) _____

Date action (was)(will be) taken:_____

Follow-up Inspection

Signature:_____
Title

_____
Bridge/Structure Inspector Team Leader — Date

VIRGINIA DEPARTMENT OF TRANSPORTATION

TRAFFIC ENGINEERING DIVISION

MEMORANDUM

GENERAL SUBJECT: Signing	NUMBER: TE - 244
SPECIFIC SUBJECT: Signing for Structure Vertical Clearances and Weight Restrictions	DATE: May 7, 1994
	SUPERSEDES: TP-56, BR76-34, T&S-132,BR-77-38, T&S-142
DIRECTED TO: District Administrators	SIGNATURE: John H. Butner

In order to promote safety, and uniformity in the posting of structure vertical clearances and weight restrictions, the following minimum guidelines have been established:

Signing for Structure Vertical Clearances

All structures with actual vertical clearances less than 14'3" shall have a sign erected at or on the structure, two signs erected at least 1500' ahead of the structure in accordance with Section 46.2-1110 of the Code of Virginia, and a sign erected in advance of the last alternate route. Dual indication of signs may be needed on multi-lane roadways.

One additional sign should be installed a maximum of 150' past the alternate route to alert traffic approaching from either direction on the alternate route. Discretion should be used in determining the effective placement of this sign, and it may be desirable in some instances to place signs on the intersecting route approaches in lieu of past the alternate route to assure the signs are effective in alerting drivers to the restriction. On highways where the intersection of the last alternate route is via an interchange, signs should be installed on the alternate route for both directions. When signing in advance of the last alternate route is at least 1500' in advance of the structure, this signing may suffice for one (or both if dual indicated) of the two signs required 1500' in advance of the structure.

The vertical clearance posted on the signs shall be 3" less than the actual vertical clearance. W12-2 signs shall be utilized for indicating the structure vertical clearance

except the sign may be a rectangular shape with the legend (number) FT (number) IN if mounted on the structure. Advance signs located on the alternate routes shall include the appropriate M6 directional arrow panel mounted below the W12-2 sign to indicate the direction of the structure.

Signing for Structure Weight Restrictions

Structures which require weight restrictions and the actual weights to be posted will be determined by the District Structure and Bridge Engineer in accordance with Structure and Bridge Division's memorandum S&B 94-27, latest revision.

Signs for structure weight restrictions shall be erected at the structure and in advance of the last alternate route in accordance with Section 46.2-1130 of the Code of Virginia. Additionally, one sign should be installed a maximum of 150' past the alternate route to alert traffic approaching from either direction on the alternate route. Discretion should be used in determining the effective placement of this sign, and it may be desirable in some instances to place signs on the intersecting route approaches in lieu of past the alternate route to assure the signs are effective in alerting drivers to the restriction. On highways where the intersection of the last alternate route is via an interchange, signs should be installed on the alternate route for both directions.

Restricted structures on interstate and primary routes, and secondary routes which carry trucks with semi-trailers shall be signed using the modified R12-5 sign (copy attached). Advance signing should consist of two signs. The top sign should be similar to the M3-1 cardinal direction sign with the message BRIDGE in place of the cardinal direction, and the bottom sign should be the modified R12-5 sign. When the advance signs are installed on the alternate routes, a third sign consisting of the appropriate M6 directional arrow to indicate the direction of the structure shall be installed below the other two signs.

Restricted structures on secondary routes which do not carry trucks with semi-trailers shall be signed using the R12-1 sign. Advance signing should consist of two signs. The top sign should be similar to the M3-1 cardinal direction sign with the message BRIDGE in place of the cardinal direction and the bottom sign should be the R12-1 sign. When the advance signs are installed on the alternate routes, a third sign consisting of the appropriate M6 directional arrow to indicate the direction of the structure shall be installed below the other two signs.

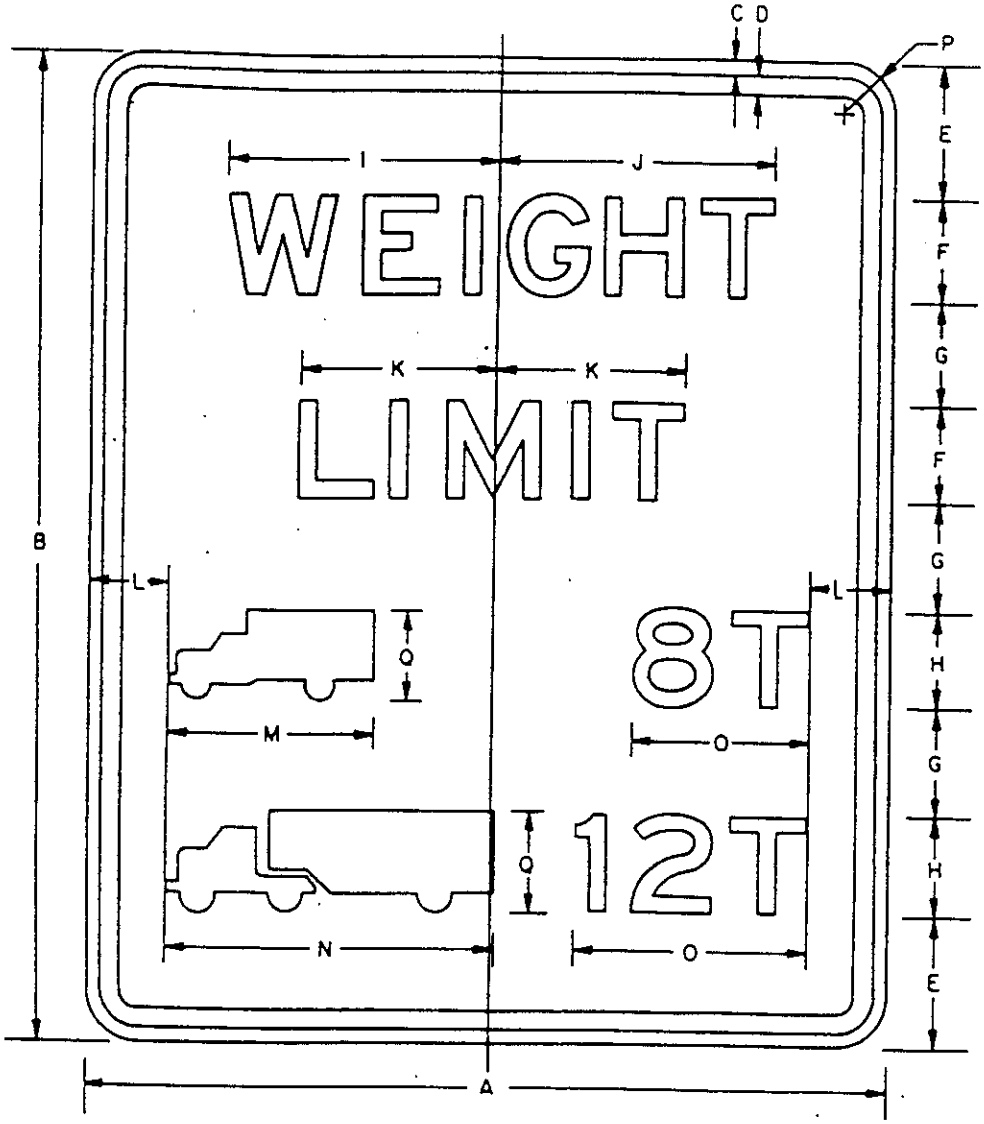
When other roadways exist between the last alternate route and the restricted structure which will generate traffic that may exceed the weight or height restrictions, consideration should be given to posting additional signs at those intersecting locations. All structures not signed in accordance with this memorandum shall be corrected to conform by no later than December 31, 1994.

DCF/df
cc: Mr. David R. Gehr
Mr. A. W. Coates, Jr.
Assistant Commissioner - Operations
Mr. J. S. Hodge
Division Administrators
Resident Engineers
District Traffic Engineers

R12-5 Modified

COLORS

Message and Border.....Black (non-reflectorized)
Field.....White (reflectorized)



SIGN	DIMENSIONS (INCHES)																
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
A	24	30	$\frac{3}{8}$	$\frac{5}{8}$	$4\frac{1}{8}$	3E	$3\frac{1}{4}$	3D	$7\frac{7}{8}$	$8\frac{3}{8}$	$5\frac{3}{4}$	$2\frac{1}{2}$	6	$9\frac{1}{2}$	Var.	$1\frac{1}{2}$	3
B	30	36	$\frac{1}{2}$	$\frac{3}{4}$	$4\frac{3}{4}$	4E	$3\frac{1}{2}$	4D	$10\frac{1}{2}$	$11\frac{1}{8}$	$7\frac{3}{8}$	$2\frac{3}{4}$	8	12	Var.	$1\frac{7}{8}$	4
C	36	48	$\frac{5}{8}$	$\frac{7}{8}$	$6\frac{7}{8}$	5E	$4\frac{3}{4}$	5D	$13\frac{1}{8}$	14	$9\frac{1}{8}$	3	10	15	Var.	$2\frac{1}{4}$	5
E	48	60	$\frac{3}{4}$	$1\frac{1}{4}$	$8\frac{1}{4}$	6E	$6\frac{1}{2}$	6D	$15\frac{3}{4}$	$16\frac{3}{4}$	$11\frac{1}{2}$	5	12	18	Var.	3	6

NOTES: If the weight restriction for a single unit truck is over 20 tons, the truck symbol should show tandem axles on the rear.

If the weight restriction for a tractor-trailer combination is over 30 tons, the trailer symbol should show tandem axles.

COMMONWEALTH of VIRGINIA

DEPARTMENT OF TRANSPORTATION
1401 EAST BROAD STREET
RICHMOND, VIRGINIA 23219-2000

DAVID R. GEHR
COMMISSIONER

M. S. HOLLIS
STATE URBAN ENGINEER

May 15, 1997

Bridge Safety Inspections

LETTER TO CITIES AND TOWNS

Federal compliance reviews of the bridge safety inspection program have surfaced several deficiencies common to most municipalities. These are as follows:

1. A separate file or folder must be maintained for each structure. This folder should contain all inspection reports, a record of maintenance and repair work performed, and a Structure Inventory and Appraisal (SI&A) sheet. The SI&A sheet should be updated as part of each inspection and the revised information provided to the District Structure and Bridge Engineer for entry into the structure inventory system.

2. Persons in responsible charge positions must review and initial each inspection report. The purpose of this review is to ensure the quality of the inspection and report, and to review the maintenance and repair needs of the structure.

3. Municipalities need to monitor maintenance needs and perform routine maintenance as funding permits. This would prevent more costly repairs down the road.

4. Stream profiles must be updated as part of every regular inspection. If the profile has changed since the pervious inspection, the revised profile should be drawn on the same sketch as the previous profile and the date of the revised profile noted. If the profile has not changed, a note stating that the profile was checked should be included in the inspection report. Preferably, a copy of the stream profile should be included with each inspection report submitted to VDOT.

Attached is a copy of the Structure and Bridge Division I&I Memorandum 92-27.4, and Section 116 of U. S. Code Title 23, both dealing with bridge inspection requirements. The Department is requesting you to take note of the compliance review deficiencies and, if appropriate, revise your inspection program.

Sincerely,

M. S. Hollis

M. S. Hollis
State Urban Engineer

attachment

(EXAMPLE)

PROJECT PROGRAMMING RESOLUTION

WHEREAS, in accordance with Virginia Department of Transportation construction allocation procedures, it is necessary that a request by council resolution be made in order that the Department program an urban highway project in the City/Town of _____; now

THEREFORE BE IT RESOLVED, that the Council of the City/Town of _____, Virginia, requests the Virginia Department of Transportation to establish an urban system highway project for the improvement of _____ from _____ to _____, a distance of approximately _____. (or describe other type of project; such as bridge, signals, etc.)

BE IT FURTHER RESOLVED, that the Council of the City/Town of _____ hereby agrees to pay its share of the total cost for preliminary engineering, right of way and construction of this project in accordance with Section 33.1-44 of the Code of Virginia, and that, if the City/Town of _____ subsequently elects to cancel this project, the City/Town of _____ hereby agrees to reimburse the Virginia Department of Transportation for the total amount of the costs expended by the Department through the date the Department is notified of such cancellation.

Adopted this _____ day of _____, 2000

City/Town of _____, Virginia

ATTEST

_____ BY_____

Clerk of Council Mayor/Manager

(EXAMPLE)

PROJECT PROGRAMMING RESOLUTION
(For Towns under 3500 Population)

WHEREAS, in accordance with Virginia Department of Transportation construction allocation procedures, it is necessary that a request by council resolution be made in order that the Department program an urban highway project in the Town of _____; now

THEREFORE BE IT RESOLVED, that the Council of the Town of _____, Virginia, requests the Virginia Department of Transportation to establish a project for the improvement of _____ from _____ to _____, a distance of approximately _____. (or describe other type of project; such as bridge, signals, etc.)

BE IT FURTHER RESOLVED, that the Council of the Town of _____ hereby agrees that, if the Town subsequently elects to cancel this project, the Town hereby agrees to reimburse the Virginia Department of Transportation for the total amount of the costs expended by the Department through the date the Department is notified of such cancellation.

Adopted this _____ day of _____, 2000

City/Town of _____, Virginia

ATTEST

_____ BY_____

Clerk of Council Town Manager

Form U-9
(Rev. 9/22/2000)

VIRGINIA DEPARTMENT OF TRANSPORTATION
URBAN DIVISION

To: Ms. Christy Epps

PPMS/UPC NUMBER _____

Authorization is hereby approved for:

Prel. Engineering ☐
Right-of-Way ☐
Construction ☐

Date _____

R534 Data

(1) (2) (3) (4-5)

Street Name _____

State Project: _____

Town/City of _____

Route _____

Federal Project _____

Length _____

Description: _____

Character of Work: _____

Bridges: _____

Railroads: _____

Fiscal Manager's Funding Information

Allocation Type(s) _____

Town/City Authority _____

CURRENT AUTHORIZATION				
ITEM	ESTIMATED COST	FEDERAL SHARE	STATE SHARE	CITY/TOWN SHARE
Preliminary Engineering 910 1				
Right-of-way 910 2				
Construction 910 4				
Total				

REMARKS: _____

/
attachment

_____
State Urban Engineer

AGREEMENT BETWEEN THE CITY/TOWN OF _____
AND VIRGINIA DEPARTMENT OF TRANSPORTATION

The City/Town of _____, Commonwealth of Virginia, hereinafter referred to as _____, and the Commonwealth of Virginia, Department of Transportation, hereinafter referred to as the DEPARTMENT, hereby agree as follows:

1. The DEPARTMENT will prosecute a project for the improvement of _____ mile(s) of _____ within _____ from _____, Station _____ to _____, Station _____ and designated as Route _____, Project _____ and Federal Project _____.

2. _____ approves the plans as designed and requests the DEPARTMENT to submit the project with recommendation that it be approved by the Commonwealth Transportation Board/Federal Highway Administration and agrees that if such project is approved and constructed by the DEPARTMENT, _____, thereafter, at its own expense, will maintain the project, or have it maintained, in a manner satisfactory to the DEPARTMENT or its authorized

representatives and will make ample provision each year for such maintenance.

3. _____ agrees that after construction of the project, or any part thereof, it will not permit any reduction in the number of or width of traffic lanes, or any additional median crossovers and enlargement of existing median crossovers, or any alterations to channelization islands, without the prior written approval of the DEPARTMENT.

4. _____ agrees to furnish complete plans, adjust utilities, and furnish all necessary rights of way, all at no expense to the DEPARTMENT.

5. Right of way for this project was acquired with rights of access restricted to points designated on the plans. _____ agrees that no additional access points will be permitted without prior written approval of the DEPARTMENT.

6. _____ and _____ streets will be operated as a one way pair.

7. Parking will be prohibited at all times on both sides of this project and appropriate NO PARKING signs shall be erected. The signs shall conform to the standards as shown in the current edition of the Manual on Uniform Traffic Control Devices.

7A. Parking will be prohibited during peak hours on both sides of this project.

7B. Parking will be prohibited at all times on both sides of this project. Stopping or standing in cases of emergency must be on the shoulders.

7C. Parking will be allowed on this project only until such time as DEPARTMENT traffic engineering studies show that the traffic conditions warrant the prohibition of parking at which time _____ agrees to prohibit parking on the project.

7D. Where parking lanes are provided and parking is permitted on the project, the limits of parking zones parallel to the curb shall be marked at a distance of eight feet from the face of the curb and perpendicular to the curb in accordance with the current edition of the Manual on Uniform Traffic Control Devices.

7E. Where parking is prohibited, appropriate NO PARKING signs shall be erected. The signs shall conform to the standards as shown in the current edition of the Manual on Uniform Traffic Control Devices.

8. _____ agrees that the location, form and character of informational, regulatory and warning signs, curb and pavement or other markings and traffic signals, installed or placed by any public authority, or other agency, shall conform to the standards as shown in the current edition of the Manual

on Uniform Traffic Control Devices or be subject to the approval of the DEPARTMENT.

9. _____ agrees that the location and installation of utility poles, lighting standards, traffic signal poles or any other facility installed or placed within the right of way by any public authority, or other agency, shall conform to VDOT Land Use Permit Manual or be subject to the approval of the DEPARTMENT.

10. _____ agrees to comply with Title VI of the Civil Rights Act of 1964 and the Virginia Fair Employment Contracting Act, Section 2.1-374 through 2.1-376 of the Code of Virginia (1950), as amended.

11. _____ agrees to comply with all applicable federal, state and local rules, regulations and statutes when work is performed on this project with municipal forces or its agent at project expense.

12. _____ agrees that prison labor will not be used for any purpose whatsoever on this project.

13. _____ agrees to participate in the actual cost of this project which includes a special provision for price adjustment in accordance with the following tabulation, understanding that the costs shown are estimated and the percentages will be applied to actual costs:

13A. _____ agrees to participate in the actual cost of this project in accordance with the following tabulation, understanding that the costs shown are estimated and the percentages will be applied to actual costs:

PROJECT COST

_____'S SHARE

ITEM	ESTIMATED COST	%	AMOUNT

IN WITNESS WHEREOF, the parties have hereunto affixed their signatures, the CITY/TOWN of _____ on the _____ day of _____, _____, and the DEPARTMENT on the _____ day of _____, _____.

ATTEST:

CITY/TOWN OF _____

BY _____
CITY/TOWN CLERK

BY _____
CITY/TOWN MANAGER

NOTE: The official signing for the municipality must attach a certified copy of the authority under which this agreement is executed. This agreement is executed in three originals.

APPROVED AS TO FORM

_____
CITY/TOWN ATTORNEY

COMMONWEALTH OF VIRGINIA, DEPARTMENT OF TRANSPORTATION

BY _____
COMMISSIONER

(EXAMPLE)

LOCATION PUBLIC HEARING APPROVAL RESOLUTION

WHEREAS, a Location Public Hearing was conducted on _____, 2000, in the City/Town of _____ by representatives of the Commonwealth of Virginia, Department of Transportation after due and proper notice for the purpose of considering the proposed location of _____ Project _____ in the City/Town of _____, at which hearing aerial photographs, drawings and other pertinent information were made available for public inspection in accordance with state and federal requirements; and

WHEREAS, all persons and parties in attendance were afforded full opportunity to participate in said public hearing; and

WHEREAS, representatives of the City/Town of _____, were present and participated in said hearing; and

WHEREAS, the Council had previously requested the Virginia Department of Transportation to program this project; and

WHEREAS, the Council considered all such matters; now

THEREFORE BE IT RESOLVED that the Council of the City/Town of _____ hereby approves the location of the proposed project as presented at the Public Hearing.

Adopted this _____ day of _____, 2000

City/ Town of _____, Virginia

ATTEST:

_____ BY _____

CLERK OF COUNCIL MAYOR/MANAGER

(EXAMPLE)

LOCATION AND DESIGN (OR DESIGN ONLY)
PUBLIC HEARING APPROVAL RESOLUTION

WHEREAS, a Location and Design Public Hearing was conducted on _____, 2000, in the City/Town of _____ by representatives of the Commonwealth of Virginia, Department of Transportation after due and proper notice for the purpose of considering the proposed (location and design) (design) of _____ Project _____ in the City/Town of _____, at which hearing aerial photographs, drawings and other pertinent information were made available for public inspection in accordance with state and federal requirements; and

WHEREAS, all persons and parties in attendance were afforded full opportunity to participate in said public hearing; and

WHEREAS, representatives of the City/Town of _____, were present and participated in said hearing; and

WHEREAS, the Council had previously requested the Virginia Department of Transportation to program this project; and

WHEREAS, the Council considered all such matters; now

THEREFORE BE IT RESOLVED that the Council of the City/Town of _____ hereby approves the location of the proposed project as presented at the Public Hearing; and

BE IT FURTHER RESOLVED, that the City/Town of _____ will acquire all rights of way necessary for this project and certify same to the Department at the appropriate time.

or

BE IT FURTHER RESOLVED, that the City/Town of _____ requests the Virginia Department of Transportation to acquire all rights of way necessary for the project in the name of

the Commonwealth of Virginia at the appropriate time.

or

BE IT FURTHER RESOLVED that the City/Town of _____ requests the Virginia Department of Transportation to acquire all rights of way necessary for this project conveying said rights of way to the City/Town at the appropriate time.

and

BE IT FURTHER RESOLVED that the (include title of Municipal Official) is hereby authorized to execute, on behalf of the City/ Town of _____, all necessary railroad and utility agreements required in conjunction with acquiring such rights of way.

Adopted this _____ day of _____, 2000

City/ Town of _____, Virginia

ATTEST:

_____ BY _____

CLERK OF COUNCIL MAYOR/MANAGER

EXAMPLE RESOLUTION APPROVING DESIGN WHEN NO PUBLIC HEARING IS HELD

WHEREAS, a "Notice of Willingness to Hold a Public Hearing" was posted for the purpose of considering the design features for Project No. _____ in the City/Town of _____; and

WHEREAS, no requests were received or all inquiries were satisfactorily answered, so that a public hearing is not required; and

WHEREAS, Section 33.1-89 of the Code of Virginia authorizes the Department of Transportation to acquire rights of way for the construction of such projects, upon official request from the City/Town; and,

WHEREAS, the City/Town Council has previously requested the Department to program this project; now

THEREFORE, BE IT RESOLVED, that the City/Town Council of _____ hereby approves the major design features of the proposed project as presently designed; and,

(Include one of the following clauses)

(BE IT FURTHER RESOLVED, that the Council hereby requests the Department to acquire the necessary rights of way for Project _____ within the Corporate Limits of said City/Town and agrees to reimburse the Department for two percent (2%) of all costs incurred in the acquisition of such rights of way, and it is understood that such acquisitions will be handled by the Commissioner under established policies and procedures; and his decision in all instances shall be final.)

(or)

(BE IT FURTHER RESOLVED, that the Council hereby requests the Department to acquire the necessary rights of way for Project _____ within the Corporate Limits of said City/Town and to convey the title of such right of way to the City/Town which agrees to reimburse the Department for two percent (2%) of all costs incurred in the acquisition and conveyance of such rights of way; and it is understood that such acquisitions will be handled by the Commissioner under established policies and procedures and his decision in all instances shall be final.); and

(or)

BE IT FURTHER RESOLVED, that the City/Town of _____ will acquire all rights of way necessary for this project and certify same to the Department at the appropriate time; and

BE IT FURTHER RESOLVED that the (<u>include title of Municipal Official)</u> is hereby authorized to execute, on behalf of the City/Town of _____, all necessary railroad and utility agreements required in conjunction with acquiring such rights of way.

ATTEST: CITY/TOWN COUNCIL OF _____

BY: _____ BY:_____

CLERK MAYOR/MANAGER

_____, 20_____

DATE

SCOPING MEETING AGENDA

I. Project History

II. Anticipated Project Schedule

III. Anticipated Project Cost/Type of Funding (State or Fed)

A. P. E. $ _____ / _____

B. R/W $ _____ / _____

C. CONST $ _____ / _____

D. Anticipated Betterments

E. Anticipated Relocations

1. Commercial

2. Residential

IV. Design Items:

		Existing	Proposed
A.	Traffic Year	_____ ADT _____	Year _____ ADT _____
B.	Level of Service	_____	_____
C.	DHV		_____
E.	%Trucks		_____
F.	# Lanes	_____	_____
G.	Width Lanes	_____	_____
H.	Shoulder Width	_____	_____
I.	Safety Slopes	_____	_____
J.	Median Width	_____	_____
K.	R/W	_____	_____

	Existing	Proposed
L.	Sidewalk	Width _____ Location _____
M.	Bikeways	Width _____ Location _____
N.	Bridges Required	Number _____
O.	Utilities Involved	
	1. Underground	_____
	2. Overhead	_____
P.	Street Lighting Desired	_____
Q.	Signals (Location)	
R.	Hazardous Material Review	
S.	Known Environmental Concerns	
T.	Railroads Involved	
U.	Proffers Anticipated	
V.	Landscaping Desired	

V. City's/Town's Desires

CHECKLIST

FIELD INSPECTION ITEMS

1. Tentative Schedule
   a. Public Hearing
   b. Advertisement

2. Type of Hearing

3. Environmental Document
   a. Type
   b. Date Needed

4. Estimate
   a. Construction
   b. Right of Way

5. Bikeways?

6. Bridges

7. Entrances

8. Landscape Study?

9. Permits Required

10. Parking

11. New Utilities?

12. Signalization
    a. Proprietary Equipment
    b. Plans By?

13. Street Lighting
    a. City to furnish plans
    b. City may light after project is completed

14. Right of Way Acquired by _____
    Resolution needed if by State

15. Pavement Marking Plans

16. Bridge Safety Shields

17. Type of Right of Way Marker

18. Items to be Furnished by the City

CHECKLIST

Pre-Ad Meeting

Attendance List

Advertisement Date

Bridge, Roadway Lighting, Pavement Marking, Plans Ready?

Any outstanding parcels of right-of-way to be cleared?

Any relocations still to take place?

All permit requirements satisfied?

Status of utility adjustments

- Virginia Power
- City Water
- Telephone
- Sewer
- Natural Gas
- Others

Utility coordinator required

Sequence of construction and special provisions for traffic control

On-the-job trainees

Maintenance of inspection records on "As Built" plans?

Need for fireproof vault in field office

Type of field office required

Fixed time limit

Signing and pavement marking

Changes in construction zone safety items

Changes in other summary items

Proprietary Signals anticipated

Parking

Other Items

GEOMETRIC DESIGN STANDARDS FOR URBAN PRINCIPAL ARTERIAL SYSTEM (GS-5)

	MIN. DESIGN SPEED (MPH)	MAXIMUM DEGREE OF CURVATURE		(13) STOPPING SIGHT DISTANCE		MIN. WIDTH OF LANE	(1) MIN. WIDTH GRADED SHOULDERS		(2) PAVED STABILIZED SHOULDER WIDTH		(3) WIDTH OF DITCH (FRONT SLOPE)	(4) SLOPE	(7) NEW AND RECONSTRUCTED MINIMUM BRIDGE WIDTHS
		U	ULS	DES.	MIN.								
FREEWAYS	70	3°	-	850'	625'	12'	15'	12'	10'	4'	12'	CS-4 OR CS-4B	2 THRU LANES SAME DIRECTION = 5' PAVE. WIDTH + 12' 3 OR MORE THRU LANES SAME DIRECTION = 12' PAVE. WIDTH + 12'
	60	4°30'	-	650'	525'								
	50	7°30'	-	475'	400'							CS-4 OR 4E	
OTHER PRINCIPAL ARTERIAL WITH SHOULDER DESIGN	60	4°30'	-	650'	525'	(12) 12'	13'	10'	8'	3'	10'	CS-4 OR CS-4E	UNDIVIDED & DIVIDED 3 OR MORE THRU LANES SAME DIRECTION = 12' + PAVE. WIDTH + 12'
	50	6°	-	475'	400'						6'		
	40	10°	9°	325'	275'	(5)(6)(12) 11'						CS-3 OR CS-3B	2 THRU LANES (DIVIDED) SAME DIRECTION 5' + PAVE. WIDTH + 10'
	30	19°	17°	200'	200'								
	MIN. DESIGN SPEED (MPH)	MAXIMUM DEGREE OF CURVATURE		STOPPING SIGHT DISTANCE		MIN. WIDTH OF LANE	(8) STANDARD CURB & GUTTER		BUFFER STRIP WIDTH		(9) MIN. SIDEWALK WIDTH	(10) SLOPE	(7) NEW AND RECONSTRUCTED MINIMUM BRIDGE WIDTHS
		U	ULS	DES.	MIN.								
OTHER PRINCIPAL ARTERIAL WITH GUTTER	60	4°30'	-	650'	525'	(12) 12'	CG-7		(11)		4'	2:1	SAME AS CURB TO CURB OF APPROACHES
	50	6°	-	475'	400'								
	45	8°	7°	400'	325'								
	40	10°	9°	325'	275'	(5)(6)(12) 11'	CG-6						
	30	19°	17°	200'	200'								

GENERAL NOTES

Freeways - Urban Freeways should accommodate desired safe operating speeds during non-peak hours, but should not be so high as to exceed the limits of prudent construction, right of way and socioeconomic costs due to the large proportion of vehicles which are accommodated during periods of peak flow when lower speeds are necessary. The design speeds for Freeways should never be less than 50 mph.

On many Urban Freeways, particularly in suburban areas, a design speed of 60 mph or higher can be provided with little additional cost above that required for 50 mph design speed. The corridor of the mainline may be relatively straight and the character and location of interchanges may permit high speed design. Under these conditions, a design speed of 70 mph is most desirable because the higher design speeds are closely related to the overall quality and safety of the facility.

Other Principal Arterials - Design speeds for Urban Arterials generally range from 40 to 60 mph, and occasionally may be as low as 30 mph. The lower (40 mph and below) speeds apply in the central business district and intermediate areas. The higher speeds are more applicable to the outlying business and developing areas.

Standard TC-5R superelevation based on 0.08 ft./ft. maximum is to be used for all Freeways and other Principal Arterials with a design speed greater than or equal to 60 mph.

RELATIONSHIP OF MAXIMUM GRADES TO DESIGN SPEEDS								
TYPE OF TERRAIN	FREEWAYS			ARTERIALS				
	DESIGN SPEED (MPH)							
	50	60	70	30	40	45	50	60
	GRADES (PERCENT)							
LEVEL	4	3	3	8	7	6	6	5
ROLLING	5	4	4	9	8	7	7	6
MOUNTAINOUS	6	6	5	11	10	9	9	8

Grades 1 percent steeper than the value shown may be used on Urban Freeways for extreme cases in urban areas where development precludes the use of flatter grades.

Standard TC-5U (Urban) superelevation based on 0.04 ft./ft. maximum is to be used on Other Principal Arterials with a design speed less than 60 mph.

Standard TC-5ULS (Urban Low Speed) superelevation based on 0.0208 ft./ft. maximum is to be used on Other Principal Arterials with a design speed less than or equal to 45 mph (45 mph = 7° maximum).

Clear Zone and Recoverable Area information can be found in Appendix A, Section A-2 of the Road Design Manual.

If medians are included, see Section 2D-6 of Chapter 2D of the Road Design Manual.

A minimum 30' width of surfacing or a minimum 30' face to face of curb is to be used within incorporated cities or towns to qualify for maintenance payments.

For guidelines on Interchange Ramp, see Standard GS-R.

FOOTNOTES

(1) Shoulder widths shown are for right shoulders and independently graded median shoulders. An 8' graded median shoulder will be provided when the mainline is 4 lanes (both directions). For 6 or more lanes, the median shoulder provided will be the same as that shown for independent grading.

(2) When the mainline is 6 or more lanes, the left paved shoulder width should be the same as the right paved shoulder. On Freeways, if truck traffic exceeds 250 DDHV, the right paved shoulder width preferably should be 12', and on 6 or more lane Freeways, the left paved shoulder width should also preferably be 12' if truck traffic exceeds 250 DDHV.

(3) Ditch slopes to be 6:1 - 10' and 12' widths and 4:1 - 6' width.

(4) Additional or modified slope criteria to apply where shown on typical sections.

(5) Minimum lane width to be 12' at all interchange locations.

(6) If heavy truck traffic is anticipated, an additional 1 foot width is desirable

(7) Vertical clearance at roadway underpasses for new and reconstructed bridges is to be 16'-6" (1' additional clearance required for non-vehicular overpasses).

(8) Or equivalent City or Town design.

(9) Width of 8' or more may be needed in commercial areas.

(10) 3:1 and flatter slopes may be used when the right of way is behind the sidewalk (or sidewalk space) in residential or other areas where slopes will be maintained by the property owner.

(11) If a buffer strip is used between the back of curb and sidewalk, it should be 2' minimum.

(12) Situations having restrictions on trucks may allow the use of lanes 1 foot less in width.

(13) For intersection sight distance requirements see Appendix C, Table C-1-5

GEOMETRIC DESIGN STANDARDS-URBAN MINOR ARTERIAL STREET SYSTEM (GS-6)

	MIN. DESIGN SPEED (MPH)	MAXIMUM DEGREE OF CURVATURE		(12) STOPPING SIGHT DISTANCE		(11) MIN. WIDTH OF LANE	(3) MIN. WIDTH GRADED SHOULDERS	BUFFER STRIP WIDTH	(4) MIN. SIDEWALK WIDTH	(5) SLOPE	(7) NEW AND RECONSTRUCTED MINIMUM BRIDGE WIDTHS
		U	ULS	DES.	MIN.						
STREETS WITH CURB & GUTTER	60	4°30'	-	650'	525'	12'	CG-7	(10)	4'	2:1	SAME AS CURB TO CURB OF APPROACHES
	50	6°	-	475'	400'		CG-6				
	45	8°	7°	400'	325'	(1)(2) 11'					
	40	10°	9°	325'	275'						
	30	19°	17°	200'	200'						

	MIN. DESIGN SPEED (MPH)	MAXIMUM DEGREE OF CURVATURE		STOPPING SIGHT DISTANCE		MIN. WIDTH OF LANE	(7) MIN. WIDTH GRADED SHOULDERS		(8) PAVED/ STABILIZED SHOULDER WIDTH		(9) MIN. SIDEWALK WIDTH	(5) SLOPE	(7) NEW AND RECONSTRUCTED MINIMUM BRIDGE WIDTHS
		U	ULS	DES.	MIN.		FILL W/GR	CUT & FILL	RT	LT			
STREETS WITH SHOULDER DESIGN	60	4°30'	-	650'	525'	12'	13'	10'	8'	3'	10'	2:1	10' + PAVEMENT WIDTH + 10'
	50	6°	-	475'	400'								
	40	10°	9°	325'	275'	(1)(2) 11'	11'	8'	6'	3'	6'		8' + PAVEMENT WIDTH + 8'
	30	19°	17°	200'	200'								

GENERAL NOTES

Design Speeds for Urban Arterials generally range from 40 to 60 mph and occasionally may be as low as 30 mph. The lower (40 mph and below) speeds apply in the central business district and intermediate areas. The higher speeds are more applicable to the outlying business and developing areas.

Standard TC-5R superelevation based on 0.08 ft./ft. maximum is to be used for 60 mph design speed.

Standard TC-5U (Urban) superelevation based on 0.04 ft./ft. maximum is to be used for design speeds less than 60 mph.

Standard TC-5ULS (Urban Low Speed) superelevation based on 0.0208 ft./ft. maximum may be used for design speeds less than or equal to 45 mph (45 mph = 7° maximum).

Clear Zone and Recoverable Area information can be found in Appendix A, Section A-2 of the Road Design Manual.

If medians are included, see Section 2D-6 of Chapter 2D of the Road Design Manual.

A minimum 30' width of surfacing or a minimum 30' face to face of curb is to be used within incorporated cities or towns to qualify for maintenance payments.

RELATIONSHIP OF MAXIMUM GRADES TO DESIGN SPEEDS					
TYPE OF TERRAIN	DESIGN SPEED (MPH)				
	30	40	45	50	60
	GRADES (PERCENT)				
LEVEL	8	7	6	6	5
ROLLING	9	8	7	7	6
MOUNTAINOUS	11	10	9	9	8

FOOTNOTES

(1) Lane width to be 12' at all interchanges.

(2) If heavy truck traffic is anticipated, an additional 1' width is desirable.

(3) Or equivalent City or Town design.

(4) A width of 8' or more may be needed in commercial areas.

(5) 3:1 and flatter slopes may be used when the right of way is behind the sidewalk (or sidewalk space) in residential or other areas where slopes will be maintained by the property owner.

(6) Vertical clearance at roadway underpasses for new and reconstructed bridges is to be 16'-6" (1' additional clearance required for non-vehicular overpasses).

(7) If graded median is used, the width of median shoulder is to be 8'.

(8) The Paved/Stabilized widths shown are the widths to be used if the Materials Division recommends the shoulders be paved or stabilized. When the mainline is 4 lanes (both directions) a minimum 8' wide paved shoulder will be provided on the right of traffic and a minimum 3' wide paved shoulder on the median side. Where the mainline is 6 or more lanes, both the right and median paved shoulders will be 8' in width. If paved shoulders are not recommended by the Materials Division, the mainline pavement structure will be extended 1' at the same slope into the shoulder to eliminate raveling of the pavement edge.

(9) Ditch slope to be 6:1 - 10' width and 4:1 - 6' width.

(10) If a buffer strip is used between the back of curb and sidewalk, it should be 2' minimum.

(11) Situations having restrictions on trucks may allow the use of lanes 1' less in width.

(12) For intersection sight distance requirements see Appendix C, Table C-1-5.

FIGURE A - 1 - 6

GEOMETRIC DESIGN STANDARDS FOR URBAN COLLECTOR STREET SYSTEM (GS-7)

	MIN. DESIGN SPEED (MPH)	MAXIMUM DEGREE OF CURVATURE		(11) STOPPING SIGHT DISTANCE		(1) (2) MIN. WIDTH OF LANE	(3) STANDARD CURB & GUTTER	BUFFER STRIP WIDTH	(4) MIN. SIDEWALK WIDTH	(5) SLOPE	(8)(9) NEW AND RECONSTRUCTED MINIMUM BRIDGE WIDTHS
		U	ULS	DES.	MIN.						
STREETS WITH CURB & GUTTER	50	6°	-	475'	400'	12'	CG-7	(10)	4'	2:1	SAME AS CURB TO CURB OF APPROACHES
	45	8°	7°	400'	325'		CG-6				
	40	10°	9°	325'	275'	(1)(2) 11'					
	30	19°	17°	200'	200'						
	MIN. DESIGN SPEED (MPH)	MAXIMUM DEGREE OF CURVATURE		STOPPING SIGHT DISTANCE		(1)(2) MIN. WIDTH OF LANE	(7) MIN. WIDTH GRADED SHOULDERS		(10) WIDTH OF DITCH (FRONT) SLOPE	(5) SLOPE	(8)(9) NEW AND RECONSTRUCTED MINIMUM BRIDGE WIDTHS
		U	ULS	DES.	MIN.		FILL W/GR.	CUT & FILL			
STREETS WITH SHOULDER DESIGN	50	6°	-	475'	400'	12'	11'	8'	6'	2:1	8' + PAVEMENT WIDTH + 8'
	40	10°	9°	325'	275'	(1)(2) 11'					
	30	19°	17°	200'	200'		7'	4'	4'		4' + PAVEMENT WIDTH + 4

GENERAL NOTES

A minimum design speed of 30 mph or higher should be used for collector streets, depending on available right of way, terrain, adjacent development and other area controls.

In the typical street grid, the closely spaced intersections usually limit vehicular speeds and thus make the effect of design speed of less significance. Nevertheless, the longer sight distances and curve radii commensurate with design speeds higher than the value indicated result in safer highways and should be used to the extent practicable.

Standard TC-5U (Urban) superelevation based on 0.04 ft./ft. maximum.

Standard TC-5ULS (Urban-Low Speed) superelevation based on 0.0208 ft./ft. maximum may be used with a design speed of 45 mph or less (45 MPH = 7° maximum).

A minmum 30' width of surfacing or a minimum 30' curb to curb is to be used within incorporated cities or towns to qualify for maintenance payments.

Clear zone and Recoverable Area information can be found in Appendix A, Section A-2 of the Road Design Manual.

RELATIONSHIP OF MAXIMUM GRADES TO DESIGN SPEEDS				
TYPE OF TERRAIN	DESIGN SPEED (MPH)			
	30	40	45	50
	GRADES (PERCENT)			
LEVEL	9	9	7	7
ROLLING	11	10	8	8
MOUNTAINOUS	12	12	10	10

Maximum grades of short lengths (less than 500 ft.) and one-way down grades may be 2% steeper.

FOOTNOTES

(1) Where feasible, lanes should be 12' wide in industrial areas; however, where available or attainable right of way imposes severe limitations, 10' lanes can be used in residential areas and 11' lanes can be used in industrial areas.

(2) Lane width to be 12' at all interchange locations.

(3) Or equivalent City or Town Design.

(4) A width of 8' or more may be needed in commercial areas.

(5) 3:1 and flatter slopes may be used when right of way is behind the sidewalk (or sidewalk space) in residential or other areas where the slopes will be maintained by the property owner.

(6) Ditch slopes to be 4:1 - 6' width and 3:1 - 4' width.

(7) Provide **4'** wide paved shoulders when design year ADT exceeds **2000** VPD, with 5% or more truck and bus usage. All shoulders not being paved will have the mainline pavement structure extended 1' on the same slope

(8) Where the approach roadway width (traveled way plus shoulder) is surfaced, that surfaced width shall be carried across all structures if that width exceeds the width shown in this table.

(9) Vertical clearance at roadway underpasses for new and reconstructed bridges is to be 16'-6" desirable and 14'-6" minimum (1' additional clearance required for non-vehicular overpasses).

(10) If a buffer strip is used between the back of curb and sidewalk, it should be 2' minimum.

(11) For intersection sight distance requirements see Appendix C, Table C-1-5.

FIGURE A - 1 - 7

GEOMETRIC DESIGN STANDARDS FOR URBAN LOCAL STREET SYSTEM (GS-8)

	MIN. DESIGN SPEED (MPH)	MAXIMUM DEGREE OF CURVATURE		(1) MAX. PERCENT OF GRADE	(11) STOPPING SIGHT DISTANCE	(2) MIN. WIDTH OF LANE	(3) STANDARD CURB & GUTTER	(4) BUFFER STRIP WIDTH	(5) MINIMUM SIDEWALK WIDTH	(6) SLOPES	(9) NEW AND RECONSTRUCTED MINIMUM BRIDGE WIDTHS
		U	ULS								
STREETS WITH CURB & GUTTER	30	19°	17°	15	200'	10'	CG-6	(10)	4'	2:1	SAME AS CURB TO CURB OF APPROACHES
	20	130°R	140°R		125'						

	MIN. DESIGN SPEED (MPH)	MAXIMUM DEGREE OF CURVATURE		(1) MAX. PERCENT OF GRADE	MINIMUM STOPPING SIGHT DISTANCE	(2) MIN. WIDTH OF LANE	(7) MIN. WIDTH GRADED SHOULDERS		(8) WIDTH OF DITCH (FRONT) SLOPE	(6) SLOPES	(9)(10) NEW AND RECONSTRUCTED MINIMUM BRIDGE WIDTHS
		U	ULS				FILL W/GR.	CUT & FILL			
STREETS WITH SHOULDER DESIGN	50	19°	17°	15	200'	10'	7'	4'	4'	3:1	4' + PAVEMENT WIDTH + 4'
	40	130°R	140°R		125'						

GENERAL NOTES

Design Speeds is not a major factor for local streets. For consistency in design elements, design speeds ranging from 20 to 30 mph may be used, depending on available right of way, terrain, adjacent development and other area controls.

In the typical street grid, the closely spaced intersections usually limit vehicular speeds, making the effect of a design speed of less significance.

Design speeds exceeding 30 mph in residential areas may require longer sight distances and increased curve radii, which would be contrary to the basic function of a local street.

Standard TC-5U (Urban) superelevation based on 0.04 ft./ft. maximum.

Standard TC-5ULS (Urban Low Speed) superelevation based on 0.0208 ft./ft. maximum may be used with a design speed of 45 mph or less (45 mph = 7° maximum).

A minimum 30' width of surfacing or a minimum 30' curb to curb is to be used within incorporated cities or towns to qualify for maintenance payments.

FOOTNOTES

(1) Grades in commercial and industrial areas should be less than 8 percent; desirably, less than 5 percent.

(2) Where feasible, lanes should be 11' wide and in industrial areas should be 12' wide; however, where available or attainable right of way imposes severe limitations, 9' lanes can be used in residential areas and 11' lanes can be used in industrial areas.

(3) Or equivalent City or Town design.

(4) The minimum buffer strip width with no sidewalk or sidewalk space is to be 5'.

(5) A width of 8' or more may be needed in commercial areas.

(6) 3:1 and flatter slopes may be used when the right of way is behind the sidewalk (or sidewalk space) in residential or other areas where slopes will be maintained by the property owner.

(7) Provide 4' wide paved shoulders when design year ADT exceeds 2000 VPD, with 5% or more truck and bus usage. All shoulders not being paved will have the mainline pavement structure extended 1' on the same slope into the shoulder to eliminate raveling at the pavement edge.

(8) Ditch slopes to be 3:1 - 4' width.

(9) Vertical clearance at roadway underpasses for new and reconstructed bridges is to be 16'-6" desirable and 14'-6" minimum (1' additional clearance required for non-vehicular overpasses).

(10) If a buffer strip is used between the back of curb and sidewalk, it should be 2' minimum.

(11) For intersection sight distance requirements see Appendix C, Table C-1-5.

FIGURE A - 1 - 8

Date: 7/20/95 DPM Number 9-4

Approved: Supersedes: 9-4 (5/6/91)

ROADWAY AND STRUCTURE LIGHTING

Introduction The construction of lighting on Virginia roadways assists the traveling public in its safe passage. This policy covers the conditions when the Department may pay for the construction and maintenance of roadway lighting or when costs should be borne by others.

Definitions These terms are important in understanding the policy:

TERM	MEANING
Construction of roadway lighting	The installation of poles, pole bases, luminaires, conduit, wiring, pull boxes, meter enclosures, energy connections, and other necessary incidentals.
Maintenance of roadway lighting	The preservation of the lighting system in an as-constructed condition or the restoration to such.
Operation of roadway lighting	The authority to control additions/deletions or changes to a lighting system, establish on and off times, and responsible for energy costs.
Highway Systems	Includes Interstate, Primary, Secondary, Urban, and access roads

Traffic Safety	The secure, unimposing, non-threatening, and safe movement of people and goods over highway systems and public rights-of-way.
Traffic Control Devices (lighting)	Amenities added to a system of highways and public rights-of-way to enhance visibility thereby reducing the potential or severity of accidents.

Policy

VDOT may construct, maintain, and operate roadway lighting on highway systems which are maintained by it, where such lighting is deemed necessary for traffic safety by the engineers of the Department. The cost of the installation of the lighting shall be funded from annual construction allocations to the system. The cost of maintenance and operation of lighting will be borne by the appropriate system maintenance funds.

VDOT may construct roadway lighting on urban system highways where such lighting is deemed necessary for traffic safety by the engineers of the Department or for replacement of existing roadway lighting. The cost of the installation of the lighting shall be funded from the annual urban system construction allocations to the requesting locality. The cost of maintenance and operation of the lighting shall be borne by the locality.

Where roadway lighting on highway systems is requested by others for their benefit and convenience, and is not deemed necessary for traffic safety by the engineers of VDOT, the installation, maintenance and operation of the lighting shall be provided by and at the sole expense of others provided all necessary permits and agreements have been secured. Where approved lighting plans exist, the Department may provide conduit and other roadway lighting amenities, at project cost, to avoid future disruptions to traffic.

VDOT will be guided by AASHTO and IES standards in the execution of this policy.

Rules

These are the rules which apply to this policy:

* stand-alone lighting projects shall be prioritized in the same manner as regular construction projects for the appropriate system.

* this policy shall apply to those construction projects advertised in July, 1996 and thereafter.

Reference

* Highway Commission Minutes 12-8-60.

* Memorandum of September 8, 1972 from J. E. Harwood, Deputy Commissioner and Chief Engineer, to A. K. Hunsberger, Director of Engineering.

* Memorandum of September 8, 1976 from W. S. G. Britton, Deputy Commissioner and Chief Engineer, to H. R. Perkinson, Jr., Director of Program Management.

* Lighting committee report dated April, 1995 to Commissioner David R. Gehr.

Moved by Mr. Musselwhite, Seconded by Mr. Wells, that

WHEREAS, a September 16, 1974, memorandum by Mr. J. E. Harwood, Chief Engineer, initiated general guidelines covering Department participation in the construction of bikeways; and

WHEREAS, The July 23, 1981, Department Policy Memorandum (DPM 4-33) titled "Control and Use of Right-of-Way and Adjacent Land - Bicycle Facilities" was prepared which has guided the Department in the development of bicycle facilities; and

WHEREAS, Section 33.1-223 of the Code of Virginia relating to the fund for access roads and bikeways to public recreational areas and historic sites was amended and re-enacted by the 1989 session of the General Assembly; and

WHEREAS, Section 15.1-16.2 of the Code of Virginia permits local jurisdictions to adopt ordinances to establish bicycle paths and regulate their use; and

WHEREAS, increased public demand for bicycle facilities and changes in concepts as to how to best accommodate bicyclists has necessitated a re-evaluation of the Department's current policies and procedures;

NOW THEREFORE, BE IT RESOLVED, that the guidelines contained in Mr. J. E. Harwoods September 16, 1974, memorandum and DPM 4-33 dated July 23, 1981, be and hereby are rescinded and the Commonwealth Transportation Board adopts the following policy relative to bicycle facilities;

I. **GENERAL GUIDELINES FOR BICYCLE FACILITIES**

a. Local governments are encouraged to develop bicycle facilities on a local and regional basis in order to satisfy the demands within each geographic area.

b. The Department's participation in bicycle facilities is principally oriented toward facilities that may be constructed with a roadway improvement as part of the highway construction project.

c. Bicycle facilities can include shared wide highway lanes, paved highway shoulders, bicycle lanes, bicycle paths, multipurpose paths, and other physical improvements to better accommodate bicyclists.

d. Bicycle facilities may be constructed for access purposes when the conditions under Section V are met.

II. **COMPREHENSIVE BICYCLE PLAN DEVELOPMENT**

a. The Department will participate in comprehensive bicycle facility planning in the urbanized areas of the State (population greater than

50,000) as part of the Continuous, Comprehensive, and Cooperative ("3C") transportation planning process.

b. The Department may assist all other local governments and Planning District Commissions in developing a comprehensive bicycle facility plan when requested. This may be either technical or financial assistance.

III. DEPARTMENT PARTICIPATION IN BICYCLE FACILITIES

a. The Department will consider financially participating in the construction of a bicycle facility where all the following conditions are satisfied:

1. The bicycle facility will not impair the safety of the bicyclist, motorist, or pedestrian, and is designed to meet current AASHTO guidelines and/or VDOT guidelines.

2. The bicycle facility will be accessible to users and will form a segment located and designed pursuant to a comprehensive bicycle plan that has been adopted by the local jurisdiction or is part of the AASHTO approved Interstate Bicycle Route System.

3. It is reasonably expected that the bicycle facility will have sufficient use in relation to cost to justify expenditure of public funds in its construction and maintenance, or the bicycle facility is a significant link in a comprehensive bicycle system that is needed for route continuity.

4. The Department will initiate bicycle facility construction only at the request of the affected local government, with the exception of the AASHTO approved Interstate Bicycle Route System. Local government is defined as follows:

   1. Primary System Projects
      a. County Boards of Supervisors
      b. City/Town Councils

   2. Secondary System Projects
      a. County Boards of Supervisors

   3. Urban System Projects
      a. City/Town Councils

5. Bicycle facility design plans must be coordinated with the affected local government and approved by the Department prior to any official implementation by the Department.

6. The bicycle facility is constructed concurrently with a highway construction project with the exception of the conditions in sections V and VI.

b. All proposed highway projects involving major construction or redevelopment along the AASHTO approved Interstate Bicycle Route System should provide the necessary design features to facilitate bike travel along those routes.

c. The Department may elect not to participate in the construction of a bicycle facility even if all the conditions in IIIa and IIIb are met.

IV. FINANCIAL PARTICIPATION

a. For a Department approved bicycle facility project that is constructed concurrently with a highway project, the Department may financially participate as follows:

1. Primary System - in all jurisdictions, except towns under 3,500 population where the Department maintains the Primary System highways, all additional preliminary engineering, right-of-way, and 1/2 of the construction costs for the bicycle facility may be borne by the Primary System highway construction funds allocated for the Construction District. For the following exceptions, the additional costs may be borne totally by the Primary System funds allocated:

   - Towns under 3,500 population
   - Relocated Existing Bicycle Facilities
   - Paved Shoulders and Shared Roadways where provisions for such are necessary to provide for proper motor vehicle traffic service
   - AASHTO Approved Interstate Bicycle Route System (Item IV a.4)

2. Secondary System - In counties and towns where the Department maintains the Secondary System highway, all additional preliminary engineering, right-of-way, and 1/2 of the construction costs for the bicycle facility may be borne by the Secondary System highway construction funds allocated for the county. For the following exceptions, the additional costs may be borne totally by the Secondary System funds allocated:

   - Relocated Existing Bicycle Facilities
   - Paved Shoulders and Shared Roadways for highways functionally classified as Arterials or Collectors where

provisions for such are necessary to provide for proper motor vehicle traffic service

- AASHTO Approved Interstate Bicycle Route System (Item IV a.4)

3. Urban System - In all cities and towns that maintain their own highways, the cost for additional preliminary engineering, right-of-way, and construction of bicycle facilities may be borne by the Urban System construction funds allocated to the locality with the same local match required by law for construction of the highway project.

4. AASHTO Approved Interstate Bicycle Route System - For all bicycle projects located along the AASHTO approved Interstate Bicycle Route System on the Primary and Secondary Systems, the additional costs for preliminary engineering, right-of-way, and construction of the bicycle facility may be borne totally by the funds allocated by law for those systems. The additional costs for those Interstate Bicycle System projects on the Urban System may be borne by the urban funds allocated to the locality with the same local match required by law for construction of the highway project.

V. BICYCLE ACCESS FACILITIES

a. The Department may participate in the development of bicycle access facilities to serve public recreational areas and historic sites based upon the current Recreational Access Fund Policy.

VI. EXISTING ROADS

In some instances, for route continuity, bicycle facilities may be routed over existing facilities which are not planned for expansion. In these cases, these facilities are an operational feature and usually result on the identification of a bike lane, restriction of parking, or some other physical modification to accommodate bicycle travel. It is necessary for the Transportation Planning Engineer to coordinate with the District Administrator, the District Traffic Engineer, and appropriate Divisions in the Central Office to assure agreement on the method of treatment for a bikeway over an existing route. All of the conditions of Sections III and IV need to be met except for III.a.6. Financial participation will be the same as in Section IV.

VII MAJOR DEVELOPMENTS AND SITE PLANS

a. When bicycle facilities are considered as a part of the total development of a tract of property where the road system will be maintained in the future by the Department and the local government requires bikeways in new developments, the following conditions must be satisfied:

1. The bicycle element of the entire plan for the development must be reviewed and approved by the local government prior to final approval by the Transportation Planning Engineer. Appropriate review must be made, and communication regarding the resolution of bicycle facility systems must be carried on between the Resident Engineer, District Traffic Engineer, and the Transportation Planning Engineer.

2. Along any roadways identified in the site plan, which will be maintained in the future by the Department, a bike trail may be incorporated into the development parallel to but off of the right-of-way dedicated for street purposes. The maintenance and the responsibility for operating the bike trail would fall on the owner which would be either the locality, the developer, or other entity with the responsibility of maintenance of the common land of the development and not the responsibility of this Department. The bike trail right-of-way will be exclusive of the road right-of-way; thus, future changes and/or modifications in the bike trail would not be the responsibility of this Department.

3. Bikeways within the roadway right-of-way shall be designed to meet AASHTO guidelines and/or VDOT guidelines.

b. For major developments and site plans where the road system will not be maintained in the future by the Department, all bicycle facility connections to Department maintained facilities shall be subject to review and approval by the District Administrator.

VIII. MAINTENANCE

The department will maintain approved bicycle facilities located within the right-of-way for roadways which are under its operational control, except for snow and ice removal. If the Department does not maintain the adjacent road then the bicycle facility must be maintained by others.

Motion carried.

12/20/90

VIRGINIA DEPARTMENT OF TRANSPORTATION

POLICY ON PLACING UTILITY FACILITIES UNDERGROUND

24 VAC 30-210-10. Purpose.

The purpose of this policy is to prescribe the policies, procedures and reimbursement provisions for the underground relocation of existing overhead utility facilities on selected transportation improvement projects.

24 VAC 30-210-20. Definitions.

The following words and terms, when used in this chapter, shall have the following meaning, unless the context clearly indicates otherwise.

"Betterment" means any upgrading of the utility facility being relocated that is not attributable to the highway construction or the placing of the facility underground and is made solely for the benefit of and at the election of the utility. Any materials or items of work determined by the department to be the standard underground replacement for a functionally similar overhead material or item of work shall not be considered betterment.

"Relocation" means the adjustment of a utility facility required by the highway project. It includes removing and reinstalling the facility, including necessary temporary facilities, acquiring necessary rights of way on the new location, moving, rearranging or changing the type of existing facilities and taking any necessary safety and protective measures. It shall also mean constructing a replacement facility that is both functionally equivalent to the existing facility and necessary to continuous operation of the utility service, the project economy, or sequence of highway construction.

VIRGINIA DEPARTMENT OF TRANSPORTATION

POLICY ON PLACING UTILITY FACILITIES UNDERGROUND

"Theoretical Replacement Facility" means a preliminary utility relocation engineering design, of sufficient detail, which shows the necessary utility relocations required for the most economical adjustments necessitated by highway project construction. This design shall be based on the standard of practice prevalent across the state and the latest design criteria of the department.

"Theoretical Replacement Facility Cost" means an engineering cost estimate prepared for the theoretical replacement facility.

"Utility" means a privately, publicly or cooperatively owned line, facility, or system for producing, transmitting, or distributing communications, cable television, power, electricity, light, heat, gas, oil, crude products, water, steam, waste, storm water not connected with highway drainage, or any other similar commodity, including any firm or police signal system or street lighting system, which directly or indirectly serves the public. The term utility shall also mean a wholly owned or controlled subsidiary of a utility company.

24 VAC 30-210-30. Authority.

In accordance with § 33.1-12(3) of the Code of Virginia, as amended, the Commonwealth Transportation Board is authorized to adopt and promulgate rules and regulations regarding the operation and safety of the State Highway Systems.

In accordance with § 33.1-44 and § 33.1-96 of the Code of Virginia, as amended, and judicial rulings and legal opinions, the Commissioner of the Virginia Department of Transportation shall reimburse utility companies for the nonbetterment relocation of their facilities affected by a

transportation project, where the facilities are located on private property, the utility company has a real property interest/right or by a prior agreement.

24 VAC 30-210-40. Applicability.

This policy applies to transportation projects which are created and constructed in accordance with § 33.1-44 of the Code of Virginia, as amended, which covers the Urban System of Highways. This policy shall not apply to overhead electric transmission facilities which operate at a phase to phase voltage in excess of 40 KV due to excessive costs and potential operational problems.

Where placing a telecommunications facility underground will cause a potential operational problem, an analysis shall be made to determine if the undergrounding is warranted.

24 VAC 30-210-50. Policy.

Since by tradition and practice, highway and utility facilities frequently coexist within common rights of way or along the same transportation corridors, it is essential in such situations that these public service facilities be compatibly designed and operated.

The potential impact on the highway and its users should be considered in the design and location of utility facilities on or along highway rights of way. The manner in which utility facilities are located with respect to the traveled roadway can materially affect the highway, its safe operation, aesthetic quality and maintenance.

Similarly, due to replacement cost theories, most utility relocation plans are developed based on a similar replacement facility. Existing overhead utility facilities are usually placed in a new overhead position which is compatible with the proposed roadway features and the clear roadside

recovery policy. Existing overhead utility facilities have previously been placed underground when project design features left no other choice.

Therefore, in the applicable situations as outlined in 24 VAC 30-210-40 and when the requirements as outlined in 24 VAC 30-210-60 have been met, the commissioner is authorized to reimburse the utility company for a portion of the additional costs to replace existing overhead utility facilities with underground facilities. This shall include customer service lines which are located between the distribution facility and the building or meter point.

Whenever the geographic features of the highway corridor would permit an offsite overhead relocation of the existing utility facilities, the locality, utility owner and the department may agree to such a relocation plan, instead of placing the facilities underground, so long as the offsite overhead relocation is the most cost effective alternative.

When overhead utility facilities are replaced with underground facilities, certain appurtenances which are normally installed above ground in accordance with accepted utility practices may be so installed. These include equipment such as electric distribution transformer, switch gears, meter pedestals, telephone and cable television pedestals, and terminals and other similar equipment. Meters and service connections attached to buildings may continue to be attached above ground.

Within the selected project area, for placement of the facilities underground in accordance with this policy, the underground facilities shall extend a maximum of 45.7 meters (150 feet) beyond the end of the proposed construction, for a connecting side street or roadway, unless it is determined to be necessary from an engineering standpoint to extend beyond this limit.

VIRGINIA DEPARTMENT OF TRANSPORTATION

POLICY ON PLACING UTILITY FACILITIES UNDERGROUND

In no instance, shall any betterment cost, as determined in accordance with the department's Utility Relocation Procedures Manual (eighth edition, effective May 1, 1996), be paid by the commissioner.

When necessary to facilitate the project construction sequencing or the physical characteristics of the project site, temporary overhead lines may be installed in connection with projects selected for replacement with underground facilities in accordance with this policy. The cost of this temporary work shall be apportioned among the locality, utility owner and the department in accordance with the cost responsibility determination. If temporary work is accomplished solely to accelerate the construction of the highway project, the cost of the temporary work for this purpose shall be paid as a project cost.

24 VAC 30-210-60. General Requirements.

The local governing body shall enact or have enacted an ordinance or regulation establishing an underground utility district, corridor, or area. The ordinance must require that all new utility facilities, publicly or privately owned, be installed underground and should include criteria where modifications to existing overhead facilities will necessitate placing the replacement utility facilities underground. The boundaries of the underground utility district, corridor or area should be based on logical termini points at which changes in physical characteristics occur.

The local governing body shall provide the department with a resolution, in connection with a proposed transportation project, requesting that the department have the utility relocations placed underground as a part of the project. They may elect to include all or a portion of the project area,

provided the previously described ordinance or regulation is effective within the selected limits. A copy of the locality's ordinance or regulation shall be provided with the resolution.

The resolution or ordinance shall also include assurances that future utility facilities required for any proposed improvement, including street lighting, shall not be permitted to be placed overhead within any section of a street or roadway where the utility facility was placed underground in accordance with this policy. In addition, assurances shall be included in the resolution that the local governing body has the financial resources available to pay its share of the costs to place facilities underground as defined in 24 VAC 30-210-70 and the appropriate official shall be authorized to sign an agreement with the department and the utility owner for the necessary utility relocation.

The commissioner shall determine which projects are eligible for federal funding and shall utilize the available federal funds on those projects which meet the department's overall program objectives. The decision to utilize or not utilize federal funds shall, in no way, affect the commissioner's financial participation under this policy. The locality shall not directly request federal funds for the payment of its share of any additional costs, as defined in 24 VAC 30-210-70.

24 VAC 30-210-70. Cost Development and Reimbursement.

The utility owner will prepare a plan for the theoretical replacement facility of sufficient detail that a cost estimate can be prepared. The plan may be red-lined on the highway plan sheets and a copy is to be submitted to the department.

An engineering estimate of the theoretical replacement facility cost shall be prepared by the utility owner using the cost estimating system approved for use on highway relocation projects. This estimate shall include all customary overhead loadings.

VIRGINIA DEPARTMENT OF TRANSPORTATION

POLICY ON PLACING UTILITY FACILITIES UNDERGROUND

The department shall prepare the cost responsibility determination form (UT-9) in accordance with the department's Utility Relocation Procedures Manual (eighth edition, effective May 1, 1996), based on the existing facilities in conflict with the proposed construction and those that would be relocated based on the theoretical replacement facility plan. In accordance with the procedures, the utility owner shall provide any additional compensable rights documentation to the department in order that final cost reimbursement can be developed. This proration of cost shall be defined as a percentage and shall be applicable to the theoretical replacement facility cost.

The utility owner shall prepare a plan and estimate assembly, as defined in the Utility Relocation Procedures Manual (eighth edition, effective May 1, 1996), for the utility relocations proposed to be constructed in connection with the highway project. The plan and estimate shall be based on placing utility facilities underground for the portion of the project selected by the locality in accordance with this policy.

Whenever it is in the best interests of all involved parties, a portion or all of the utility relocation work (such as conduits, manholes, etc.) may be included in the highway contract as work to be performed by the highway contractor. Any work included in the highway contract shall be constructed to the standards and specifications of the utility owner. Appropriate special provisions should be prepared regarding coordination of the contract work with work to be performed by the utility owner.

The necessary changes to the customer service line between the distribution facility and the meter base shall be included in the utility owner's plan and estimate as a part of the additional project expense. Any necessary conversion of the customers premise wiring or service cable location, or

both, shall be included in the additional cost to place utility facilities underground. The locality, utility owner and the department shall agree on the method to facilitate any necessary changes to the customers service location.

The cost of the replacement easements required for the theoretical replacement facility will be a normal project cost in accordance with the Utility Relocation Procedures Manual (eighth edition, effective May 1, 1996). The department may include a portion or all of the cost of the acquisition of additional replacement utility easements required by placing the facilities underground in the cost of the project.

The cost estimate prepared for the proposed utility relocation shall include a breakout and deduction of any betterment cost resulting from any upgrading included at the election of the utility owner. In addition, the final estimated relocation cost shall be allocated to the appropriate responsible party in accordance with the following reimbursement schedule.

If it is elected that utilities be placed underground in accordance with this policy, the commissioner shall reimburse the utility companies for nonbetterment utility relocation work as follows:

1. Part A Cost. The theoretical replacement facility cost developed by the utility owner and accepted by the department.

Reimbursed by:

Project funds - 98% of the portion of the prorate percentage shown as state cost on the cost responsibility determination form (UT-9) prepared for the project.

Locality - 2% of the portion of the prorate percentage shown as state cost on the cost responsibility determination form (UT-9) prepared for the project.

Utility Company - that portion of the prorate percentages shown as utility cost on the cost responsibility determination form (UT-9) prepared for the project.

2. Part B Cost. The additional cost to place the utility facilities underground in accordance with this policy. This is the mathematical difference between the proposed estimated underground relocation cost, accepted by the department, and the theoretical replacement facility cost.

Reimbursed By:

Project Funds - 50% of the additional cost. The maximum reimbursement to utility companies from project funds for any Part B cost shall not exceed $5,000,000 on any project.

Locality - 50% of the additional cost.

Utility Company - None.

After each parties' share of the reimbursement cost has been determined in accordance with the above, the sum of all parts shall be computed for each party. The utility company's portion of the total estimated cost shall be established as a flat charge to be deducted from the actual costs accumulated for the project. The remaining portion of the estimated cost shall be computed as a

percentage to be borne by project funds and a percentage to be borne by the locality. The proposed plan and estimate shall be approved and authorized by the department.

The utility owner shall submit billings to the department, deducting any betterment credit and any applicable flat charge, indicating each parties share of the actual relocation cost. The department shall reimburse the utility company for work performed and shall charge the locality's Part B costs to an accounts receivable code. The department will bill the locality as charges are accumulated and the locality shall reimburse the department within 30 days upon receipt of an invoice. A final billing shall be prepared in accordance with the Utility Relocation Procedures Manual (eighth edition, effective May 1, 1996), and will be subject to the audits as outlined in the agreement.

24 VAC 30-210-80. Effective Date.

This policy shall be effective on the date the Commonwealth Transportation Board's approval is obtained. This policy shall not be retroactive to utility relocation work which was authorized for construction prior to that date.

24 VAC 30-210-90. Commonwealth Transportation Board's Direction.

The Commonwealth Transportation Board, due to its concern with the overall availability of transportation funds, established a ceiling on how much project funds should be expended for the purpose of placing utility facilities underground. They directed that new transportation projects be established based on need and logical termini points and not in a manner to bypass the maximum expenditure per project ceiling.

VIRGINIA DEPARTMENT OF TRANSPORTATION

LOCATION AND DESIGN DIVISION

INSTRUCTIONAL AND INFORMATIONAL MEMORANDUM

GENERAL SUBJECT: PROJECTS DEVELOPED/DESIGNED/ADVERTISED BY CITIES, TOWNS, AND COUNTIES	NUMBER: IIM-LD-216.4
SPECIFIC SUBJECT: GUIDELINES FOR PROCESSING PROJECTS DEVELOPED/DESIGNED/ADVERTISED BY A LOCALITY	DATE: DECEMBER 11, 2000
	SUPERSEDES: LD-98 (D) 216.3
DIVISION ADMINISTRATOR APPROVAL: *J. T. Mills*	

CURRENT REVISION

- All previous revisions and errata have been incorporated into this memorandum.

EFFECTIVE DATE

- This memorandum is effective upon receipt.

POLICY

- A locality (city, town or county) may request to develop, design and manage a VDOT project.
- A Locality may be authorized to:
  - design the project, purchase right of way, provide utility relocations, advertise and administer the project

or

  - design only, with R/W and utilities, advertisement and administration by VDOT

or

  - purchase right of way only, with design, advertisement, and administration by VDOT or any combination of the above as mutually agreed upon.

- Projects shall be developed in accordance with this memorandum.

- There shall be a minimum of four meetings during the preliminary engineering phase to discuss the project development in accordance with Business Process Re-Engineering (BPR).

- A locality has the option of providing the environmental services or having the environmental services provided by VDOT. VDOT's Environmental Division is to be consulted immediately to coordinate appropriate environmental requirements and procedures.

AUTHORIZATION AND AGREEMENTS

- All requests from localities must be approved (Urban projects – Urban Division, Other projects – Chief Engineer).

- After the request has been approved, an agreement will be made by the appropriate VDOT division.

- The responsibilities for programming, authorization, funding, agreements and contract management are typically as follows:

- Projects designed by a city/town or Primary Projects in Arlington Co.	- Urban Division
- Projects (except Secondaries) designed by a county	- Prog. & Sched. Div.
- Secondary projects designed by a county; industrial access/ recreational access roads/ revenue sharing projects	- Secondary Roads Div.

- Agreements are developed through consultation with all appropriate divisions within VDOT.

- All agreements must contain an appendix outlining the project's environmental requirements. The agreement must indicate if the environmental services will be provided by the Locality or by VDOT.

PROGRAM/PROJECT MANAGEMENT STSTEM (PPMS)

- The project will be established in the Program/Project Management System (PPMS) by the division within VDOT responsible for authorizing the project.

- Activities appropriate to the project and the provisions of the agreement are to be entered. Typically, the following activities are appropriate:

  - PROJECT AGREEMENT
  - 11 REQUEST FOR PE AUTHORIZATION (Secondaries only)
  - 11z SECONDARY PROJECT NUMBER ASSIGNED (Secondaries only)
  - 12 AUTHORIZE PE
  - 18 SATE ENVIRONMENTAL REVIEW PROCESS
  - 22 SCOPE PROJECT/PFR
  - 22z SCOPING APPROVAL (Secondaries only)
  - 22x SCOPE PROJECT/PFR
  - 24 DETER. PERMITS NEEDED
  - 25D DRAFT ENVIRON. DOC. OR CE-DO (if Federally funded)
  - 36 PLAN DESIGN/F.I.
  - 36X SCHEDULED F.I. DATE
  - 43 FURN. UTIL. F.I. PLANS
  - 47 APPROVE WILLINGNESS (if Public Hear. not anticipated)
  - 48 CONDUCT LOC./DES. HRG
  - 48X SCHEDULE P.H. HRG
  - 49 LOC.DES. ADOPTION
  - 52 AUTHORIZE R/W FUNDS (projects requiring R/W)
  - 80 ADVERTISE PROJECT/BEGIN STF

- It may be necessary during the plan development process for the VDOT Project Manager to add or delete PPMS activities as deemed appropriate.

PROJECT ASSIGNMENT

- Immediately after the project has been included in the Six-Year Improvement Plan (SYIP) the VDOT division responsible for programming the project will request that the appropriate division assign a Project Manager.

- Urban funded projects (Urban Div.)–

  The Urban Program Engineer will be the point of contact for decisions affecting all phases of the project during the design process.

- Primary funded projects (Programming and Scheduling Div.) -

  The Programming and Scheduling Division Administrator (or Assistant Division Administrator) will be the point of contact for decisions affecting funding and project scope.

- Secondary funded projects –

  The Resident Engineer will be the point of contact for Secondary Projects. The Secondary Roads Division will be consulted on decisions affecting scope or funding of projects administered by that division.

- The locality shall also designate a Project Manager to oversee the project and coordinate the project development process between the locality's design team (or their consultant) and the VDOT Project Manager.

- The Locality Project Manager shall adhere to the appropriate VDOT documents for Project Development. The VDOT Project Manager is to be the point of contact for documents and guidelines.

PROJECT DEVELOPMENT

- A project designed by a locality (or a locality's consultant) should follow the same Project Development Process as a project designed by VDOT if State or Federal funding will be utilized in the Design, R/W Acquisition or Construction. See VDOT's Project Development Flow Chart (attached).

- All projects shall be designed and administered in accordance with applicable federal and state laws and regulations.

- The Locality Project Manager shall provide the VDOT Project Manager with necessary prints and information at appropriate stages in the Project Development Process.

- The VDOT Project Manager will coordinate involvement between appropriate VDOT divisions and the Locality Project Manager throughout the Project Development Process. Contact with Cities/Towns is to be coordinated with the Urban Division.

- The Project Development Process typically includes the following stages:

  - State Environ. Review Process (Early Proj. Notification)
  - Scoping (Conducted in accordance with Loc. & Des. Div.'s Instructional and Informational Memo. LD- (D) 210).
  - Environmental studies/documents/permits
  - Field reviews
  - Field Inspection
  - Submittal of plans to the VDOT Project Manager for Quality Control Reviews by Location and Design Division and Construction Division
  - Value Engineering (projects with estimates over $2 million)
  - Public Hearing
  - Utility Field Inspection

- Pre-advertisement meeting

- Small projects such as Congestion Mitigation and Air Quality (CMAQ), Enhancement, Safety, Access Roads, Revenue Sharing and City/Town Minor Construction Improvement may require modifications to procedures to fit specific situations.

- Projects requiring roadway bridges, bicycle lanes or trails, or environmental mitigation should be submitted by the Project Manager to the appropriate divisions for review during the Preliminary Engineering Stage.

- All applicable VDOT divisions (Location and Design, Structure and Bridge, Traffic Engineering, Environmental, Right of Way and Utilities, etc.) will assign an individual to review and provide recommendations during development of the agreement and throughout the Project Development Process. Plans will be distributed by VDOT's Project Manager to the appropriate divisions during the Project Development Process.

- For Interstate, Primary and Urban projects, the Locality Project Manager shall submit, by December 1 of each year, an updated engineers estimate* for each phase of the project (Preliminary Engineering, R/W and Construction) to the VDOT Project Manager for inclusion in VDOT's SYIP update.

- For Secondary projects, the Locality Project Manager shall submit by August 1 of each year, an updated engineer's estimate* for each phase of the project (Preliminary Engineering, R/W and Construction) to the VDOT Project Manager and Resident Engineer for inclusion into the Secondary SYIP.

  * (in "Trns.Port" for VDOT administered projects)

- If the scope of the project changes following the Environmental Division's review of the project, an additional review shall be required by the Environmental Division.

- VDOT's Quality Control Checklist (See VDOT's Road Design Manual, Chapter 1E) shall be completed for Field Inspection, Right of Way, and Advertisement. Environmental compliance forms and a detailed construction estimate (Trns.Port) shall be submitted with the plans to the VDOT Project Manager at these stages of plan development. (VDOT Administered Projects)

STANDARDS/SPECIFICATIONS/ESTIMATES

- It is the VDOT Project Manager's responsibility to see that the following procedures are implemented:

- The Locality may request appropriate software from VDOT's Automated Engineering Support Section. The Locality shall make requests for software on VDOT's Software License Request Form LD-893, accessible on the VDOT Extranet at **http://www.extranet.vdot.state.va.us/forms/**. This form is also available from the VDOT Project Manager.

- Projects administered or advertised by VDOT shall utilize the following VDOT resources:

  - VDOT's Road and Bridge Standards
  - VDOT's Road and Bridge Specifications
  - VDOT's Road Design Manual
  - VDOT 's Instructional and Informational Memoranda
  - VDOT's Current Design Software
  - VDOT's Pay Items and Item Code Numbers
  - VDOT's Trns.Port Engineering Estimate System

- For projects advertised by a Locality:

  - It is recommended that the Locality utilize the following VDOT resources:

    - VDOT's Road and Bridge Standards
    - VDOT's Road and Bridge Specifications
    - VDOT's Road Design Manual
    - VDOT 's Instructional and Informational Memoranda
    - VDOT's Current Design Software
    - VDOT's Pay Items and Item Code Numbers

  - Any Standards or Specifications used that differ from VDOT's Road and Bridge Standards or Road and Bridge Specifications shall meet or exceed VDOT's Standards, and be approved by VDOT prior to beginning design. The VDOT Project Manager will forward such Standards or Specifications to the appropriate VDOT division(s) for review and approval.

  - If Standards are used other than VDOT's Road and Bridge Standards, a copy of the applicable Standard, and/or appropriate details, shall be included in the plan assembly, or contract document, submitted for Field Inspection.

- Any Standards or Specifications used that differ from VDOT's Road and Bridge Standards or Road and Bridge Specifications shall be submitted to VDOT's Project Manager for final review and approval 6 months prior to advertisement for construction (30 days prior to Quality Control Review).

- Bridge Projects shall be designed in accordance with the current AASHTO Standard Specifications for Highway Bridges including Interim Specifications and VDOT Modifications as well as any applicable AASHTO Guide Specifications relevant to the design of bridges and structures. Details and standards for bridges and structures shall be in accordance with the Manuals of the Structure and Bridge Division and VDOT's Road and Bridge Standards. VDOT's State Structure and Bridge Engineer must approve any variances from these standards and specifications.

- The project title sheet shall specify the Standards and Specifications under which the project is to be constructed.

RIGHT OF WAY ACQUISITION

- Acquisition of rights of way, or property, will be in accordance with Titles 25 and 33 of the 1950 Code of Virginia, as amended. Refer to Chapter 9, Section 9.1 and 9.2 of VDOT's Right of Way Manual for instructions on the acquisition of Right of Way by a Locality.

- An Original Title Sheet (with appropriate signature blocks) and a right of way cost estimate shall be submitted to the VDOT Project Manager to obtain Right of Way Approval and Funding Authorization.

- The Locality Project Manager shall provide the VDOT Project Manager one set of reproducible plans and cross-sections (or grading plans) in the appropriate format, as designated by the VDOT Project Manager, for the distribution of Right of Way prints. The VDOT Project Manager will provide these plans and cross-sections (or grading plans) to the Location and Design Division Plan Coordinator for distribution of Approved Right of Way Plans.

ENVIRONMENTAL PERMITS

- When a Locality advertises the project -

- It shall be the Locality Project Manager's responsibility to obtain the necessary permits (Corp of Engineers, Department of Environmental Quality, Virginia Marine Resources Commission, U.S. Coast Guard) through the normal permit acquisition process.

- VDOT cannot obtain permits through the inter-agency process for projects that are not administered by VDOT.

- When VDOT advertises the project -

  - VDOT will allow the locality to utilize VDOT's inter-agency permit acquisition process.

  - U.S. Coast Guard permits shall be obtained by the Locality and provided to VDOT.

  - The Locality shall act as VDOT's agent throughout the permitting process to obtain the necessary permits for the project being advertised and administered by VDOT.

  - The Locality Project Manager shall seek guidance from the VDOT Project Manager and the Environmental Division concerning acquisition of environmental permits.

APPROVAL FOR ADVERTISEMENT

- For projects advertised by VDOT - Electronic files shall be provided by the Locality in accordance with VDOT's CADD Manual.

- For projects advertised by the Locality - It is recommended that electronic files be provided by the Locality in accordance with VDOT's CADD Manual.

- Five (5) months prior to advertisement for construction the Locality Project Manager shall provide to the VDOT Project Manager:

  - 2 sets of Quality Control Review Plans

  - Completed Quality Control Review Checklist

  - Water Quality Permits

  - 5 sets of black-line prints (3 may be ½ size)

  - A detailed Construction Estimate.

  - Original title sheet.

- 2 copies of the Draft Bid Proposal and Specifications.

- Letter certifying that right of way, utilities, environmental and railroad involvements (if not included in contract) have been cleared.

- Contract Documents (Construction Division will review documents for general conformity with State and Federal requirements)

- Approval is required from the Construction Division and the Commonwealth Transportation Board. The following items must be accomplished before the project can be approved for advertisement:

  - The project is included in VDOT's Six-Year Improvement Program (SYIP), as well as FHWA and FTA Transportation Improvement Programs, as appropriate.

  - Funding has been appropriately designated.

  - All permits have been obtained.

  - The contract documents include an approved environmental document, water quality permits, and all identified environmental commitments.

  - The project design is in accordance with appropriate design criteria.

  - All right of way is clear, or will be clear, prior to project execution.

  - All utility and railroad relocations and certification are included appropriately, or satisfactory arrangements have been made.

  - A public hearing, or willingness, was accomplished.

  - All appropriate Federal Aid Project information, including minimum wage rates and EEO provisions, are included.

  - Any hazardous wastes have been identified and appropriate provisions have been provided within the proposal for safe disposal.

- A Pre-advertisement Meeting shall be conducted 4½ months prior to advertisement. Quality Control Review prints will be utilized for this meeting. Comments from the Construction Division shall be provided at the Pre-advertisement meeting.

- Advertisement of all projects, regardless of cost, shall conform to the applicable provisions of the Virginia Public Procurement Act.

- It shall be the Locality Project Manager's responsibility to submit the procurement proposal to the VDOT Project Manager. The VDOT Project Manager will forward the procurement proposal to VDOT's Construction Division to obtain Federal approval for the method of procurement (if Federally funded).

PROJECTS ADVERTISED BY THE LOCALITY

- After advertisement and receipt of bids, the Locality Project Manager shall submit to the VDOT Project Manager the following documents:

  - Copy of bid tabulations from all bidders

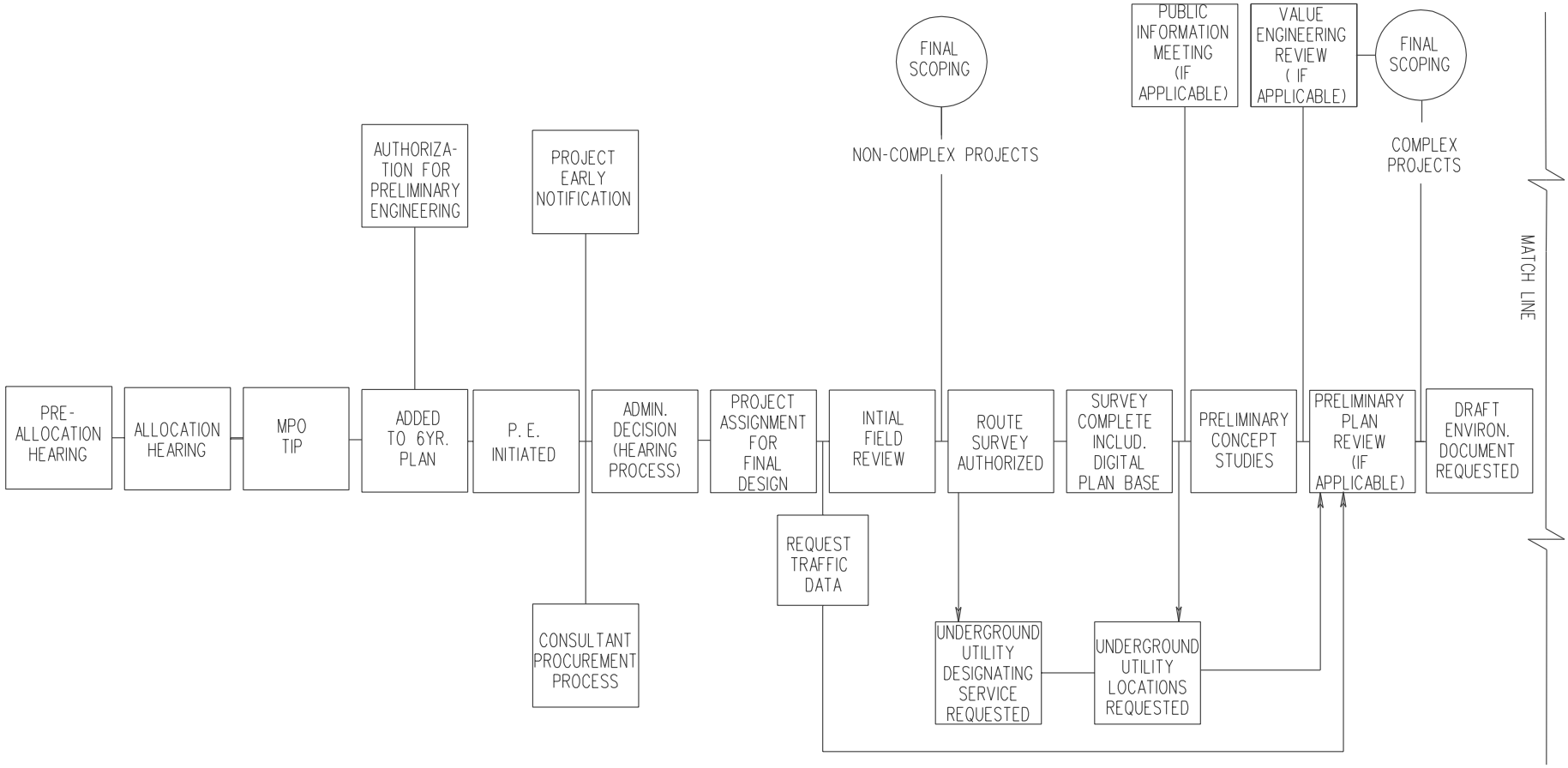
  - Breakdown of project funding sources

  - Recommendation on awarding the project

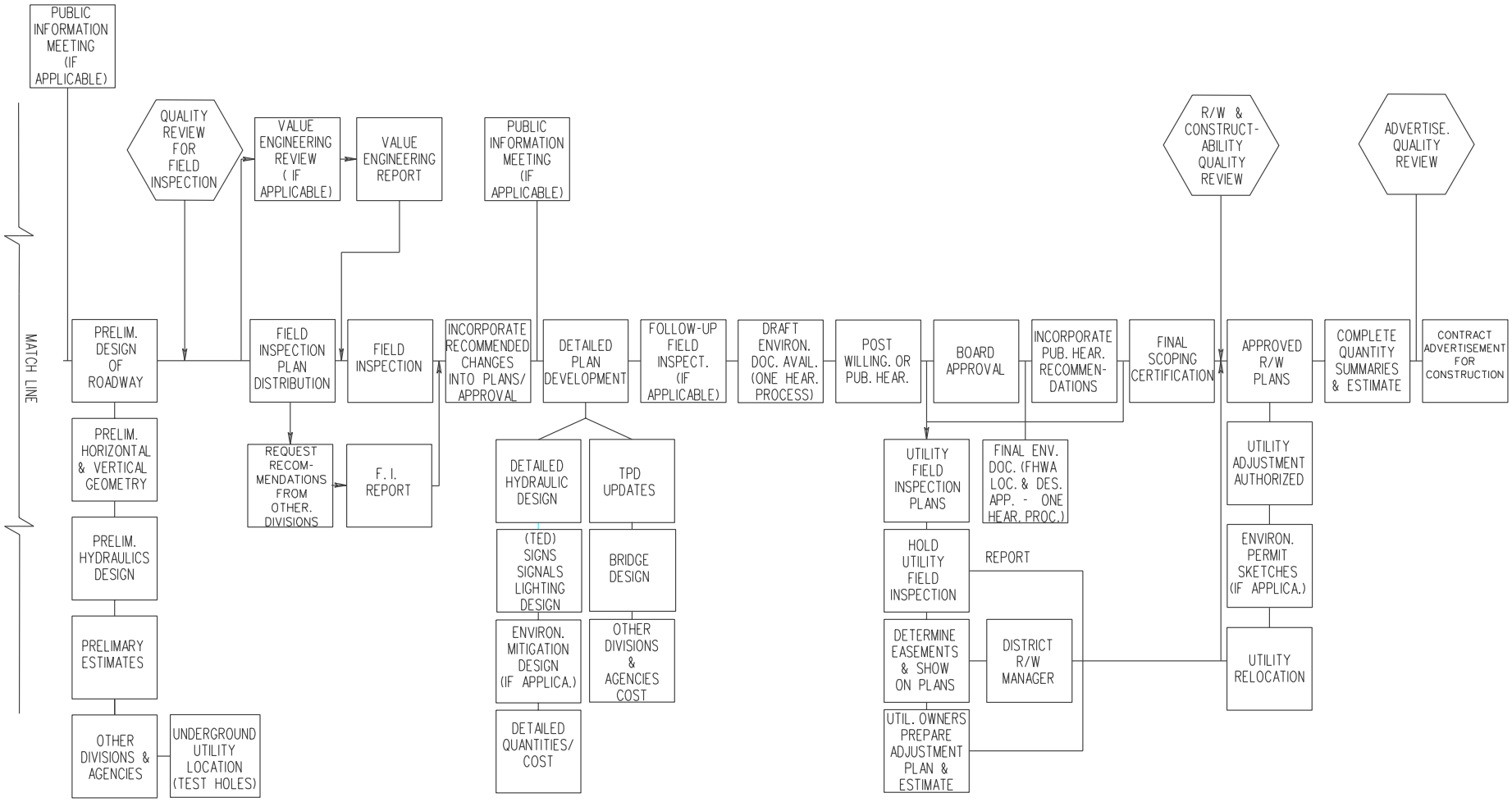
- The VDOT Project Manager will forward these documents to the Construction Division for approval by the Commonwealth Transportation Board.

PROJECT DEVELOPMENT FLOW CHART

(for continuation, see next page)



PROJECT DEVELOPMENT FLOW CHART



C. WARRANTS

4C-1 Advance Engineering Data Required

A comprehensive investigation of traffic conditions and physical characteristics of the location is required to determine the necessity for a signal installation and to furnish necessary data for the proper design and operation of a signal that is found to be warranted. Such data desirably should include:

1. The number of vehicles entering the intersection in each hour from each approach during 16 consecutive hours of a representative day. The 16 hours selected should contain the greatest percentage of the 24-hour traffic.

2. Vehicular volumes for each traffic movement from each approach, classified by vehicle type (heavy trucks, passenger cars and light trucks, public-transit vehicles and, in some locations, bicycles), during each 15-minute period of the two hours in the morning and of the two hours in the afternoon during which total traffic entering the intersection is greatest. Editorial Change Rev. 5

3. Pedestrian volume counts on each crosswalk during the same periods as the vehicular counts in paragraph (2) above and also during hours of highest pedestrian volume. Where young or elderly persons need special consideration, the pedestrians may be classified by general observation and recorded by age groups as follows:

   (a) under 13 years
   (b) 13 to 60 years
   (c) over 60 years.

4. The 85-percentile speed of all vehicles on the uncontrolled approaches to the location.

5. A conditions diagram showing details of the physical layout, including such features as intersectional geometrics, channelization, grades, sight-distance restrictions, bus stops and routings, parking conditions, pavement markings, street lighting, driveways, location of nearby railroad crossings, distance to nearest signals, utility poles and fixtures, and adjacent land use.

6. A collision diagram showing accident experience by type, location, direction of movement, severity, time of day, date, and day of week for at least one year.

The following data are also desirable for a more precise understanding of the operation of the intersection and may be obtained during the periods specified in (2) above:

1. Vehicle-seconds delay determined separately for each approach.

2. The number and distribution of gaps in vehicular traffic on the major street when minor-street traffic finds it possible to use the intersection safely.

3. The 85-percentile speed of vehicles on controlled approaches at a point near to the intersection but unaffected by the control.

4. Pedestrian delay time for at least two 30-minute peak pedestrian delay periods of an average weekday or like periods of a Saturday or a Sunday.

Adequate roadway capacity at a signalized intersection is desirable. Widening of both the major street and the minor street may be warranted to reduce the delays caused by assignment of right-of-way at intersections controlled by traffic signals. Widening of the minor street is often beneficial to operation on the major street because it reduces the green time that must be assigned to minor street traffic. In urban areas, the effect of widening can be achieved by elimination of parking at intersectional approaches. It is always desirable to have at least two lanes for moving traffic on each approach to a signalized intersection. Additional width may be necessary on the leaving side of the intersection, as well as the approach side, in order to clear traffic through the intersection effectively. Before an intersection is widened, the additional green time needed by pedestrians to cross the widened streets should be checked to ensure that it will not exceed the green time saved through improved vehicular flow. IV-105 (c) Rev. 5

4C-2 Warrants for Traffic Signal Installation

Traffic control signals should not be installed unless one or more of the signal warrants in this Manual are met. The satisfaction of a warrant or warrants is not in itself justification for a signal. Information should be obtained by means of engineering studies and compared with the requirements set forth in the warrants. The engineering study should indicate the installation of a traffic signal will improve the overall safety and/or operation of the intersection. If these requirements are not met, a traffic signal should neither be put into operation nor continued in operation (if already installed). IV-66 (c) Rev. 5

For the purpose of warranting signalization, a wide-median intersection should be considered as one intersection.

When a traffic control signal is indicated as being warranted, it is presumed that the signal and all related traffic control devices and markings are installed according to the standards set forth in this Manual. It is further presumed that signal indications are properly phased, that roadways are properly designed, that adjacent traffic signals are properly coordinated, that there is adequate supervision of the operation and maintenance of the signal and all of its related devices, and that the traffic

signal controller will be selected on the basis of engineering study and judgment.

An investigation of the need for traffic signal control should include where applicable, at least an analysis of the factors contained in the following warrants:

Warrant 1—Minimum vehicular volume.
Warrant 2—Interruption of continuous traffic.
Warrant 3—Minimum pedestrian volume.
Warrant 4—School crossings.
Warrant 5—Progressive movement.
Warrant 6—Accident experience.
Warrant 7—Systems.
Warrant 8—Combination of warrants.
Warrant 9—Four Hour Volumes.
Warrant 10—Peak Hour Delay.
Warrant 11—Peak Hour Volume.

IV-43 (c)
IV-20 (c)
Rev. 4

The analysis should consider the effects of the right turn vehicles from the minor street approaches. Engineering judgment should be used to determine what, if any, portion of the right turn traffic is subtracted from the minor street traffic count when evaluating the count against the above warrants.

IV-68 (c)
Rev. 5

4C-3 Warrant 1, Minimum Vehicular Volume

The Minimum Vehicular Volume warrant is intended for application where the volume of intersecting traffic is the principal reason for consideration of signal installation. The warrant is satisfied when, for each of any 8 hours of an average day, the traffic volumes given in the table below exist on the major street and on the higher-volume minor-street approach to the intersection. An "average" day is defined as a weekday representing traffic volumes normally and repeatedly found at the location.

MINIMUM VEHICULAR VOLUMES FOR WARRANT 1

Number of lanes for moving traffic on each approach		Vehicles per hour on major street (total of both approaches)	Vehicles per hour on higher-volume minor-street approach (one direction only)
Major Street	Minor Street		
1	1	500	150
2 or more	1	600	150
2 or more	2 or more	600	200
1	2 or more	500	200

These major-street and minor-street volumes are for the same 8 hours. During those 8 hours, the direction of higher volume on the minor street may be on one approach during some hours and on the opposite approach during other hours.

When the 85-percentile speed of major-street traffic exceeds 40 mph in either an urban or a rural area, or when the intersection lies within the built-up area of an isolated community having a population of less than 10,000, the Minimum Vehicular Volume warrant is 70 percent of the requirements above.

4C-4 Warrant 2, Interruption of Continuous Traffic

The Interruption of Continuous Traffic warrant applies to operating conditions where the traffic volume on a major street is so heavy that traffic on a minor intersecting street suffers excessive delay or hazard in entering or crossing the major street. The warrant is satisfied when, for each of any 8 hours of an average day, the traffic volumes given in the table below exist on the major street and on the higher-volume minor-street approach to the intersection, and the signal installation will not seriously disrupt progressive traffic flow.

MINIMUM VEHICULAR VOLUMES FOR WARRANT 2

Number of lanes for moving traffic on each approach		Vehicles per hour on major street (total of both approaches)	Vehicles per hour on higher-volume minor-street approach (one direction only)
Major Street	Minor Street		
1	1	750	75
2 or more	1	900	75
2 or more	2 or more	900	100
1	2 or more	750	100

These major-street and minor-street volumes are for the same 8 hours. During those 8 hours, the direction of higher volume on the minor street may be on one approach during some hours and on the opposite approach during other hours.

When the 85-percentile speed of major-street traffic exceeds 40 mph in either an urban or a rural area, or when the intersection lies within the built-up area of an isolated community having a population of less than 10,000, the Interruption of Continuous Traffic warrant is 70 percent of the requirements above.

4C-5 Warrant 3, Minimum Pedestrian Volume

A traffic signal may be warranted where the pedestrian volume crossing the major street at an intersection or mid-block location during an average day is: IV-60 (c) Rev. 5

100 or more for each of any four hours; or
190 or more during any one hour

The pedestrian volume crossing the major street may be reduced as much as 50 percent of the values given above when the predominant pedestrian crossing speed is below 3.5 feet per second.

In addition to a minimum pedestrian volume of that stated above, there shall be less than 60 gaps per hour in the traffic stream of adequate length for pedestrians to cross during the same period when the pedestrian volume criterion is satisfied. Where there is a divided street having a median of sufficient width for the pedestrian(s) to wait, the requirement applies separately to each direction of vehicular traffic.

Where coordinated traffic signals on each side of the study location provide for platooned traffic which result in fewer than 60 gaps per hour of adequate length for the pedestrians to cross the street, a traffic signal may not be warranted.

This warrant applies only to those locations where the nearest traffic signal along the major street is greater than 300 feet and where a new traffic signal at the study location would not unduly restrict platooned flow of traffic. Curbside parking at non-intersection locations should be prohibited for 100 feet in advance of and 20 feet beyond the crosswalk. IV-60 (c) Rev. 5

A signal installed under this warrant should be of the traffic-actuated type with push buttons for pedestrians crossing the main street. If such a signal is installed within a signal system, it should be coordinated if the signal system is coordinated.

Signals installed according to this warrant shall be equipped with pedestrian indications conforming to requirements set forth in other sections of this Manual.

4C-6 Warrant 4, School Crossing

A traffic control signal may be warranted at an established school crossing when a traffic engineering study of the frequency and adequacy of gaps in the vehicular traffic stream as related to the number and size of groups of school children at the school crossing shows that the number of adequate gaps in the traffic stream during the period when the children are using the crossing is less than the number of minutes in the same period (sec. 7A-3).

When traffic control signals are installed entirely under this warrant:

1. Pedestrian indications shall be provided at least for each crosswalk established as a school crossing.

2. At an intersection, the signal normally should be traffic-actuated. As a minimum, it should be semi-traffic-actuated, but full actuation with detectors on all approaches may be desirable. Intersection installations that can be fitted into progressive signal systems may have pretimed control.

3. At non-intersection crossings, the signal should be pedestrian-actuated, parking and other obstructions to view should be prohibited for

at least 100 feet in advance of and 20 feet beyond the crosswalk, and the installation should include suitable standard signs and pavement markings. Special police supervision and/or enforcement should be provided for a new non-intersection installation.

4C-7 Warrant 5, Progressive Movement

Progressive movement control sometimes necessitates traffic signal installations at intersections where they would not otherwise be warranted, in order to maintain proper grouping of vehicles and effectively regulate group speed. The Progressive Movement warrant is satisfied when:

1. On a one-way street or a street which has predominantly unidirectional traffic, the adjacent signals are so far apart that they do not provide the necessary degree of vehicle platooning and speed control, or

2. On a two-way street, adjacent signals do not provide the necessary degree of platooning and speed control and the proposed and adjacent signals could constitute a progressive signal system.

The installation of a signal according to this warrant should be based on the 85-percentile speed unless an engineering study indicates that another speed is more desirable.

The installation of a signal according to this warrant should not be considered where the resultant signal spacing would be less than 1000 feet.

4C-8 Warrant 6, Accident Experience

The Accident Experience warrant is satisfied when:

1. Adequate trial of less restrictive remedies with satisfactory observance and enforcement has failed to reduce the accident frequency; and

2. Five or more reported accidents, of types susceptible to correction by traffic signal control, have occurred within a 12-month period, each accident involving personal injury or property damage apparently exceeding the applicable requirements for a reportable accident; and IV-67 (c) Rev. 5

3. There exists a volume of vehicular and pedestrian traffic not less than 80 percent of the requirements specified either in the Minimum Vehicular Volume warrant, the Interruption of Continuous Traffic warrant, or the Minimum Pedestrian Volume warrant; and

4. The signal installation will not seriously disrupt progressive traffic flow.

Any traffic signal installed solely on the Accident Experience warrant should be semi-traffic-actuated (with control devices which provide proper coordination if installed at an intersection within a coordinated system) and normally should be fully traffic-actuated if installed at an isolated intersection.

4C-9 Warrant 7, Systems Warrant

A traffic signal installation at some intersections may be warranted to encourage concentration and organization of traffic flow networks. The Systems Warrant is applicable when the common intersection of two or more major routes: (1) has a total existing, or immediately projected, entering volume of at least 1000 vehicles during the peak hour of a typical weekday and has five year projected traffic volumes, based on an engineering study, which meet one or more of Warrants 1, 2, 8, 9, and 11 during an average weekday; or (2) has a total existing or immediately projected entering volume of at least 1000 vehicles for each of any five hours of a Saturday and/or Sunday. IV-85 (c) Rev. 5

A major route as used in the above warrant has one or more of the following characteristics:

1. It is part of the street or highway system that serves as the principal network for through traffic flow;

2. It includes rural or suburban highways outside, entering or traversing a city;

3. It appears as a major route on an official plan such as a major street plan in an urban area traffic and transportation study.

4C-10 Warrant 8, Combination of Warrants

In exceptional cases, signals occasionally may be justified where no single warrant is satisfied but where Warrants 1 and 2 are satisfied to the extent of 80 percent or more of the stated values. IV-60 (c) Rev. 5

Adequate trial of other remedial measures which cause less delay and inconvenience to traffic should precede installation of signals under this warrant.

4C-10.1 Warrant 9—Four Hour Volumes IV-43 (c) Rev. 4

The Four Hour Volume Warrant is satisfied when each of any four hours of an average day the plotted points representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher volume minor street approach (one direction only) all fall above the curve in Figure 4-7 for the existing combination of approach lanes.

When the 85th percentile speed of the major street traffic exceeds 40 miles per hour or when the intersection lies within a built-up area of an isolated community having a population less than 10,000, the four hour volume requirement is satisfied when the plotted points referred to fall above the curve in Figure 4-8 for the existing combination of approach lanes.

4C-10.2 Warrant 10, Peak Hour Delay

The peak hour delay warrant is intended for application where traffic conditions are such that for one hour of the day minor street traffic suffers undue delay in entering or crossing the major street. The peak hour delay warrant is satisfied when the conditions given below exist for one hour (any four consecutive 15-minute periods) of an average weekday.

The peak hour delay warrant is met when:

IV-20 (c) Rev. 4

1. The total delay experienced by the traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle hours for a two-lane approach, and

2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes, and

3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four (or more) approaches or 650 vph for intersections with three approaches.

4C-10.3 Warrant 11, Peak Hour Volume

The peak hour volume warrant is also intended for application when traffic conditions are such that for one hour of the day minor street traffic suffers undue traffic delay in entering or crossing the major street.

The peak hour volume warrant is satisfied when the plotted point representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicle per hour of the higher volume minor street approach (one direction only) for one hour (any four consecutive 15-minute periods) of an average day falls above the curve in Figure 4–5 for the existing combination of approach lanes.

IV-20 (c) Rev. 4

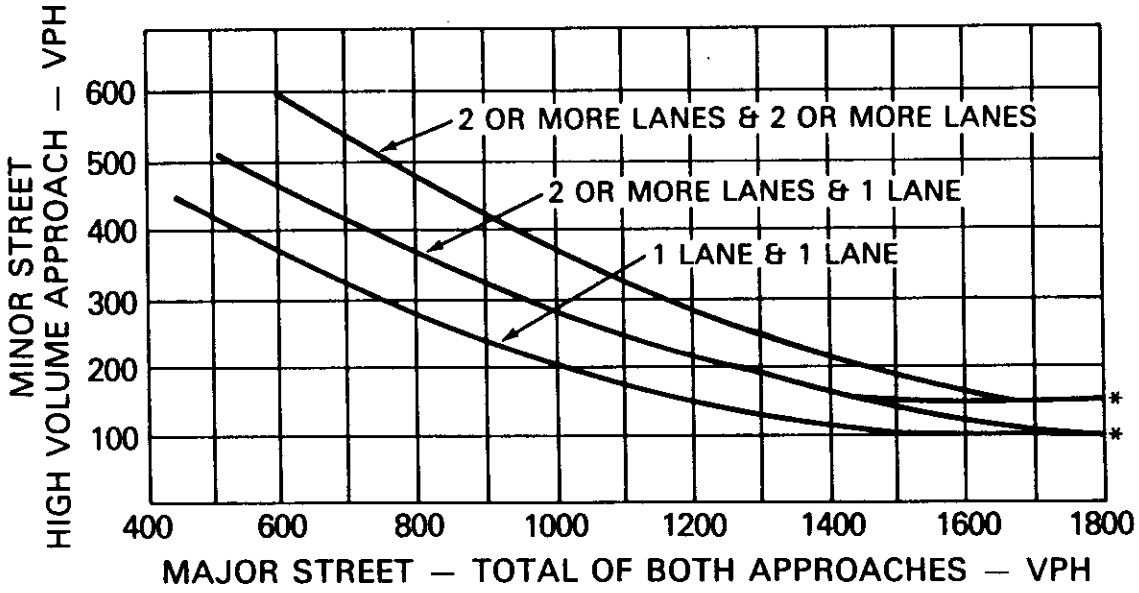
When the 85th percentile speed of major street traffic exceeds 40 mph or when the intersection lies within a built-up area of an isolated community having a population less than 10,000, the peak hour volume requirements is satisfied when the plotted point referred to above falls above the curve in Figure 4–6 for the existing combination of approach lanes.

4C-11 Factors Governing Selection of Type of Control

The principal factors that may lead to the favorable consideration of traffic-actuated control in the selection of the type of signal control include:

1. Low, fluctuating or unbalanced traffic volumes.
2. High side street traffic volumes and delays only during the peak hours.
3. The pedestrian or accident warrant is the only warrant which is met.
4. The installation is to provide for one-way movement of two-way traffic.
5. The installation is at a non-intersection location.

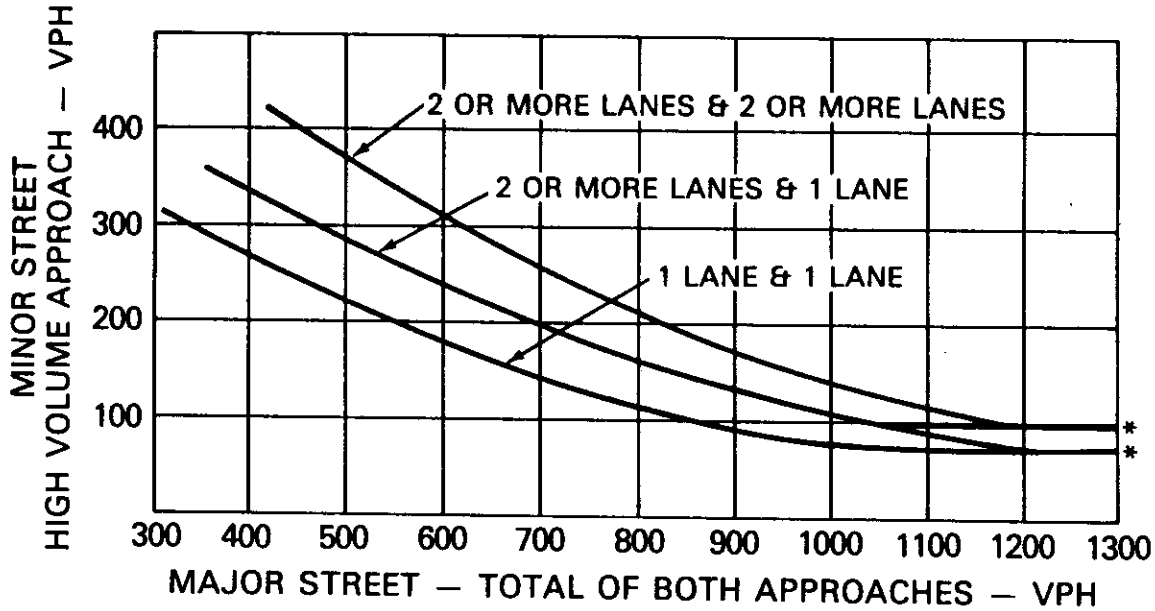
FIGURE 4-5. PEAK HOUR VOLUME WARRANT



*NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

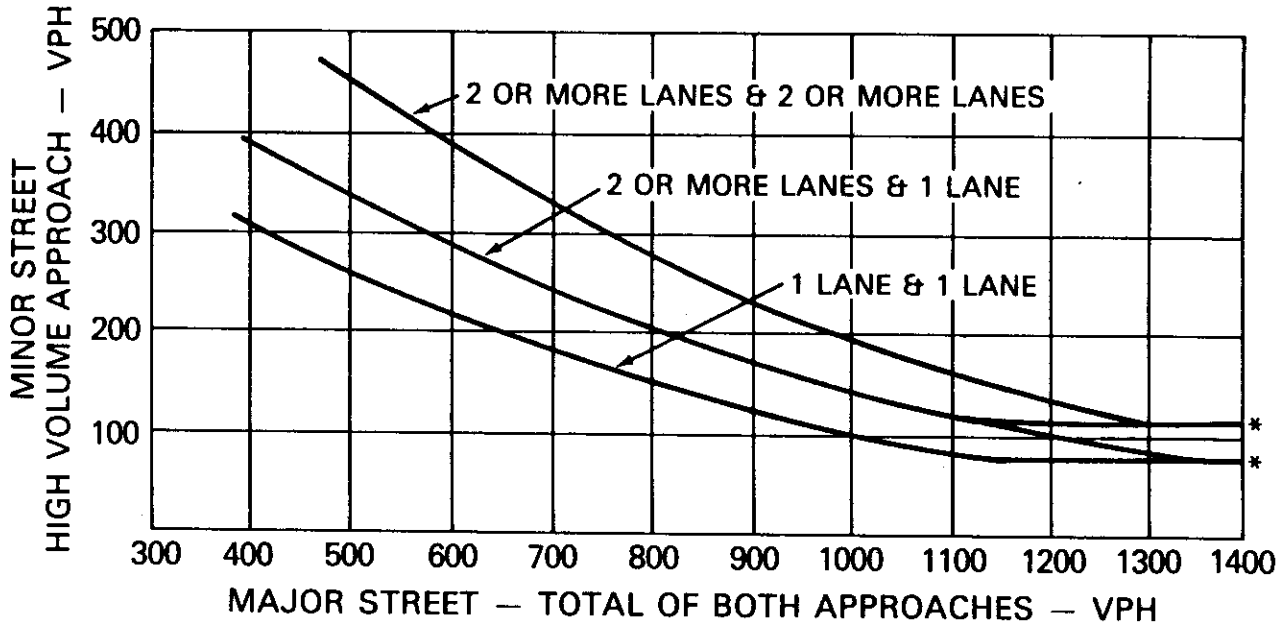
FIGURE 4-6. PEAK HOUR VOLUME WARRANT

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*NOTE: 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 75 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

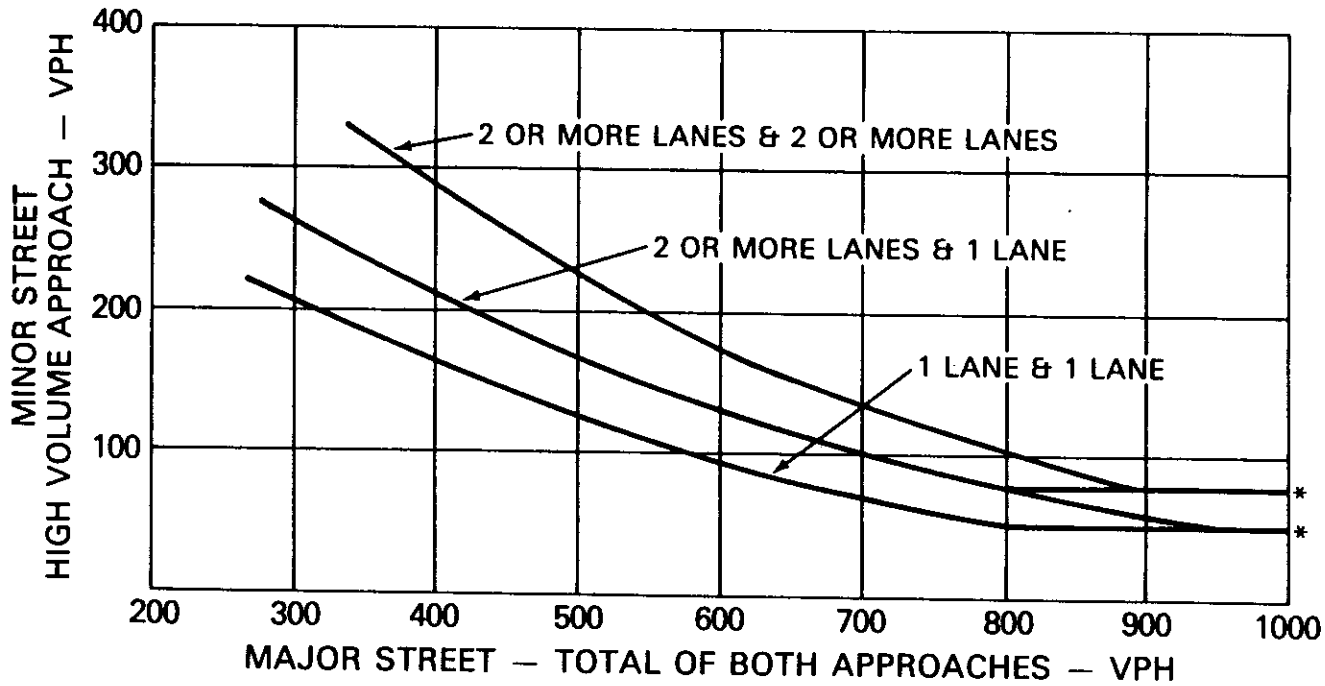
FIGURE 4-7. FOUR HOUR VOLUME WARRANT



*NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 80 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

FIGURE 4-8. FOUR HOUR VOLUME WARRANT

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*NOTE: 80 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 60 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

GUIDE

for the

INDUSTRIAL ACCESS PROGRAM

administered by the

Virginia Department of Transportation

Secondary Roads Division

Memorandum SR-49-02

Richmond, Virginia

April 2002

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For further information, contact:

Resident Engineer (or other VDOT designate)
Virginia Department of Transportation

(See local telephone directory)

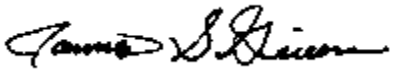
State Secondary Roads Engineer
Virginia Department of Transportation
1401 East Broad Street
Richmond, Virginia 23219

(804) 786-2746

VIRGINIA DEPARTMENT OF TRANSPORTATION

SECONDARY ROADS DIVISION

MEMORANDUM

<table>
<tr><td colspan="2">Subject: INDUSTRIAL ACCESS PROGRAM</td><td>Number: SR-49-02</td></tr>
<tr><td colspan="2" rowspan="2">Specific Subject: GUIDE FOR THE INDUSTRIAL ACCESS ROADS PROGRAM per Commonwealth Transportation Board Policy Adopted Feb. 15, 2001 and Code of Virginia § 33.1-221, as amended.</td><td>Date: April 3, 2002</td></tr>
<tr><td>Supersedes: SR-49-92, dated March 20, 1992</td></tr>
<tr><td>Directed To:
LOCAL GOVERNMENTS
DISTRICT ENGINEERS
RESIDENT ENGINEERS</td><td colspan="2">Signature:
 
State Secondary Roads Engineer</td></tr>
</table>

This revised document was prepared to incorporate the change in the Industrial Access Program by action of the Commonwealth Transportation Board at its meeting on February 15, 2001 which addressed the application of this program for regional industrial facilities established pursuant to §15.2-6400 through §15.2-6402 of the Code of Virginia. It also reflects the Commonwealth Transportation Board's action of July 15, 1999 extending the maximum time for bonded projects from three to five years and several minor changes to better reflect current practices in administering this program.

All previous instructions regarding the administrative procedures for industrial access projects are hereby superseded.

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Guide for the
INDUSTRIAL ACCESS PROGRAM

TABLE OF CONTENTS

		Page
	FREQUENTLY ASKED QUESTIONS	**i**
I.	**PURPOSE:**	**1**
II.	**DEFINITIONS:**	**1**
A.	Project Cost	1
B.	Adequate Access	1
C.	Qualifying Establishments	2
D.	Qualifying Investment	2
E.	Under Contract	3
F.	Bond or Other Acceptable Device	3
III.	**PROCEDURES:**	**4**
A.	The Industry	4
B.	The Local Government	5
C.	The Resident Engineer	7
D.	The District Administrator	7
E.	The Secondary Roads Engineer – Coordination and Recommendations	7
F.	The State Environmental Review Process (SERP)	7
G.	CTB - Allocation	8
H.	Administration	8
I.	Acceptance into System	10
	Figure 1	11
IV.	**LIMITATIONS:**	**12**
A.	Maximum Allocation	12
B.	Funds Not to be Anticipated	12
C.	Time Limits for Regular Industrial Access Projects	12
D.	Improvements to Existing Roads	13
E.	Towns	13

Guide for the
INDUSTRIAL ACCESS PROGRAM

LIST OF APPENDICES

APPENDIX I
INDUSTRIAL SUBDIVISIONS
FIGURE 2

APPENDIX II. A
SAMPLE RESOLUTION – REGULAR PROJECTS

APPENDIX II. B
SAMPLE RESOLUTION – BONDED PROJECT

APPENDIX III
TOWNS MAINTAINING OWN STREETS

APPENDIX IV
STATUTORY AUTHORITY

APPENDIX V
INDUSTRIAL ACCESS POLICY

APPENDIX VI
STATE ENVIRONMENTAL REVIEW PROCESS REQUIREMENT FOR PROJECTS UTILIZING VDOT FUNDING

APPENDIX VII
ENVIRONMENTAL PROCESS FOR STATE-FUNDED PROJECTS

APPENDIX VIII. A
IRREVOCABLE STANDBY LETTER OF CREDIT

APPENDIX VIII. B
SURETY BOND

APPENDIX VIII. C
PLEDGE AND ASSIGNMENT OF DEPOSITS

APPENDIX VIII. D
ESCROW AGREEMENT

APPENDIX IX
OUTLINE/CHECKLIST

FREQUENTLY ASKED QUESTIONS

How do I apply for Industrial Access funds?
Refer to Page 5, section III.B

When are applications due?
Refer to Page 4, section III and APPENDIX IX, Page 2 (under "SECONDARY ROADS DIVISION REVIEW")

How often does the CTB meet?
Refer to Page 4, section III and APPENDIX IX, Page 2 (under "SECONDARY ROADS DIVISION REVIEW")

How long does it take for a project to be approved?
Refer to Page 4, section III

When will the Industrial Access funds be available?
Refer to Page 8, section III.G

What types of industries are eligible for Industrial Access funds?
Refer to Page 2, section II.C

How much funding is available for an Industrial Access Project?
Refer to Page 12, section IV.A

What if the maximum allocation is not enough?
Refer to Pages 5 and 6, sections III.B.1 and III.B.2 and Page 12, sections IV.A and IV.B

When can we expect to receive these funds?
Refer to Page 9, section III.H.6

What are eligible costs?
Refer to Page 1, sections II.A and II.B

What type of documentation is needed to verify capital investment?
Refer to Page 2, section II.D

How long is the bonded period and when does it start?
Refer to Page 6, section III.B.2

What are acceptable types of surety?
Refer to Page 3, section II.F

When will surety have to be provided?
Refer to Page 9, sections III.H.5 and III.H.6

When will the road be accepted for maintenance?
Refer to Page 10, section III.I

How can the amount of surety be reduced?
Refer to Page 6, section III.B.2

Guide for the

INDUSTRIAL ACCESS PROGRAM

I. PURPOSE:

The Industrial Access program is an incentive program designed to provide funds for access road improvements in order to promote industrial development and the establishment of sustainable industries that create jobs and generate tax revenues within the locality. Industrial Access Funds may be allocated by the Commonwealth Transportation Board (hereinafter referred to as "CTB") to be used for financing the construction or improvement of secondary or local system roads within counties, cities and towns to provide adequate access for sites on which new or substantially expanding manufacturing, processing or other qualifying establishments will be built or are already constructed.

II. DEFINITIONS:

A. Project Cost

"Cost of constructing or improving" includes the actual construction cost of a roadway built to Virginia Department of Transportation standards for accommodating the projected industrial traffic, including shoulders and ditches, but excluding other items such as curbs and gutters, storm sewer systems, sidewalks, additional traffic lanes, medians, lighting, right-of-way, and relocation of utilities. Roadway features other than those covered by this program may be included in a project, provided that the costs of these features are borne by others. Reasonable costs of preliminary engineering and surveying for the road are allowable.

Costs incurred (i.e., paid items or those for which a contract or purchase order has been executed) prior to allocation by the CTB are not reimbursable.

B. Adequate Access

"Adequate Access" means a road from a location on or outside the property line of the industrial site to the nearest adequate publicly maintained road. Industrial Access funds shall not be used to construct or improve roads on a privately owned site.

Adequate access may require the construction of a new roadway, or the improvement of an existing road (see page 13, paragraph IV.D), or a combination of the two. Where a new roadway is requested, care shall be taken in locating the road to assure that it serves primarily to provide economical access to the qualifying industry rather than to facilitate adjacent land development.

Standards for a new or improved roadway will vary according to the amount of industrial and other traffic it is projected to accommodate. For all roads in the state secondary system, it is customary to construct a good two-lane road with shoulders and a pavement width of 20 to 24 feet. In cities and towns, for existing streets which are less than 30 feet wide but which qualify for payment of maintenance funds, a similar standard is followed. However, for new roadways in cities

and those towns that maintain their own street systems, a maximum of a 30-foot pavement width can be funded through the program (when necessary to qualify these roads for future maintenance payments).

Any parcel abutting an adequate publicly maintained road is deemed to have access by virtue of its location and is ineligible for funding to construct a new roadway, unless the existing road is a limited access highway and no other access exists. Extreme topography that makes an entrance for such a parcel difficult or expensive is not a justification for use of state funds to construct and entrance road. Under certain conditions, however, a qualifying establishment on an abutting parcel may justify improvement of the existing road (see page 13, paragraph IV.D, Improvements to Existing Roads).

C. Qualifying Establishments

"Manufacturing, processing or other qualifying establishments" means those establishments determined as qualifying by the CTB in consultation with the Virginia Department of Business Assistance. These standards include consideration of the establishment itself as well as the impact of the proposed facility, given the type of employment and tax base generated for the Commonwealth of Virginia as a whole and whether the industry meets the definition of a "Basic Employment Industry" as determined by the Department of Business Assistance.

Excluded from consideration are the following establishments: schools, hospitals, libraries, airports, armories, shopping center, speculative office buildings, apartment buildings, professional offices, residential developments, churches, hotels, motels, government installations or similar facilities, whether public or private.

D. Qualifying Investment

"Qualifying Industrial Investment" or "Eligible Capital Outlay" shall usually include the cost of the land, the building cost, and the cost of newly purchased manufacturing or processing equipment. Costs for items such as office equipment, office computer systems, manufacturing equipment transferred from another plant, and rolling stock are ineligible. Also ineligible are legal fees, taxes, recording fees, interest and similar type expenses.

Eligible investments require documentation such as originals of deeds, executed construction contracts, cancelled checks, and purchase orders, and other documentation deemed necessary to validate capital investment expenditures. Capital costs incurred more than six months prior to date of resolution of governing body will normally be disallowed.

Lease arrangements for land and buildings, as opposed to direct property ownership by an industry, may require extraordinary documentation to establish the amount of eligible capital investment. Further, the inclusion of a tenant's option to purchase does not constitute tenant's capital investment. A qualifying lease must be for a term of no less than five years, must require payments equivalent to those for comparable properties, and must include a substantial financial penalty for default or early termination by the leasing industry.

Lease-purchase agreements, depending on their specific provisions, may qualify as eligible capital investments. To qualify, these must be legitimate financing instruments for the payment of an owner's actual and reasonable capital costs and profit, plus market-rate interest. Further, there must be provision for substantial penalty in the event that an industry defaults, and provision for the transfer of full ownership of subject real property to the qualifying industry upon the timely completion of a specified payment schedule.

If a lease or lease-purchase agreement is considered acceptable, the qualifying investment will be the owner's documented cost to develop the leased premises, along with any eligible items installed by the leasing industry. If the lease does not meet the criteria for acceptance, no capital outlay credit can be established by the leasing industry.

E. Under Contract

"Under firm contract" means that there is a binding construction contract between a property-owning industry and a qualified general contractor to construct a building or buildings for new or expanding manufacturing facilities on that property.

Construction of a building or other facilities by an industry acting in its own behalf does not constitute the necessary arm's length contractual obligation. It is necessary for such an industry to complete the building and have an independent appraiser (acceptable to the Department) establish the eligible capital investment upon completion, before construction of an access road is authorized. In such instances, it may be better to request a bonded project.

F. Bond or Other Acceptable Device

"Bond or other acceptable device" means:

- a surety bond issued by a commercial bonding or insurance company;
- an irrevocable letter of credit established with a bank or other financial institution;
- a certificate of deposit registered to the locality or jointly with the Virginia Department of Transportation with an accompanying signed certification;
- or an escrow account established under agreement between the locality and the Virginia Department of Transportation.

The purpose of such instrument is to provide a means for the Department of Transportation to recover the funds expended on a bonded project in the event sufficient capital outlay is not documented within the five-year bonded period. The conditions of any such device must authorize the Department of Transportation to collect the appropriate amount within 30 days of the end of the bonded period if other suitable arrangements for payment have not been made by the locality. The bond or other device must be provided by the locality. See APPENDIX VIII. A, APPENDIX VIII. B, APPENDIX VIII. C, and APPENDIX VIII. D for examples of approved formats of surety devices.

III. PROCEDURES:

An initial request to a local governing body for Industrial Access funding usually takes four to six months to reach approval by the CTB. Meeting the conditions of CTB approval often requires another two or more months. It should be remembered that a number of different local and state governmental officials and bodies, some of which, including the CTB meet once each month, will review each request.

Preparing and approving local-state agreements (if necessary), environmental and historical reviews, advertising for bids, awarding a contract, and constructing the road will require additional time. Two to four months should be allowed to complete the SERP (State Environmental Review Process), which may be in addition to the time required for environmental permits. The SERP process (see page 7, paragraph F) must be completed prior to any land disturbance activity. *Planning ahead for an access road project is important*.

If an industrial development authority, a locality, or a developer plans to develop an industrial park, or if an industry intends to locate within an industrial park, please refer to APPENDIX I for guidance relating to industrial parks.

The roles and responsibilities of each party are illustrated in Figure 1 (see page 11) described in the following sections.

A. The Industry

After the industry has made a decision to locate on a particular site, the industry representatives should then provide the following to the locality and the Resident Engineer.

1. A preliminary plan showing the entire parcel of land, and the locations of: the building, other major site features, the proposed entrance, the proposed access road, and existing public roads and highways in the immediate vicinity of the site. If the site is part of a subdivided industrial park, all parcels must be delineated and numbered.

2. A letter of request to the appropriate local governing body on its corporate letterhead incorporating the following information:

    a. Intent to build or expand on a designated site
    b. Description and location of the site
    c. Target date for building construction
    d. Target date for beginning plant operation
    e. Capital investment planned on the site, itemized
    f. Product or products to be manufactured
    g. The number of new jobs to be created
    h. Access road improvements requested
    i. Estimates of the numbers of additional employee vehicles and truck traffic

which will use the access road on an average business day

It is also advisable to forward a copy of this letter to the Director, Existing Business Services, Virginia Department of Business Assistance, P. O. Box 446, Richmond, Virginia 23218-0446.

B. The Local Government

The local government serves as the coordinator for all Industrial Access applications. After reviewing the application and consulting with the local Resident Engineer (or other official designated to represent VDOT's local Residency office; for the purposes of this guide, this designate will be referred to as the "Resident Engineer"), the locality will officially request the Industrial Access allocation with the appropriate resolution depending on whether requesting a "regular", "bonded" or "regional industrial facility authority" project.

If Industrial Access funds are requested to construct a new road (as opposed to improving an existing public road), please see APPENDIX I for a discussion of whether the parcel in question is likely to qualify. For improvements to existing roads, please refer to page 13, paragraph IV.D, "Improvements to Existing Roads". *For Industrial Access projects, the locality will be the responsible party for all contingencies, which generally include the execution of an agreement with VDOT, right of way acquisition, provision of appropriate surety, obtaining environmental permits, implementation of environmental commitments identified through the SERP and ineligible costs associated with the access project.*

1. Regular Projects (where an existing industry is expanding or a new industry is under firm contract to build):

Counties, cities, and those towns which receive highway maintenance payments under §33.1-41.1 of the Code of Virginia may request funding for a road to an industry or other qualifying establishment by resolution directly to the Resident Engineer of the Virginia Department of Transportation in that locality. In other towns, the request by a Town Council should be concurred in by a separate resolution of the County Board of Supervisors.

Allocations for road construction are limited to one-tenth of the qualifying capital investment; where the amount of such investment is not at least ten times the estimated cost of road construction, the resolution should state that the locality will assure the provision of the construction funds not justified by the capital investment. No funds administered by the Department may be utilized in providing any such supplemental financing for a new road.

For new roads, the resolution should state that right of way and utility relocation will be provided at no cost to the Department, and that the road will be accepted into the appropriate road system for maintenance. The identity of the industry is also to

be specified. See APPENDIX II. A for a suggested resolution.

2. Bonded Projects (where no industry is under contract to build or when the identity of the industry is held confidential):

Where a county, city, or town desires to have an industrial access road constructed in anticipation of a commitment by a manufacturing, processing or other qualifying establishment to locate, such a request may be made as above. However, it will be necessary that the governing body guarantee to the CTB that a bond or other acceptable surety will be provided to cover the cost of the road which is not yet justified by qualifying industrial investment. For new roads, the resolution should assure that right of way and utility relocation will be provided at no cost to the Department.

It is also necessary that the resolution of the governing body state that, should no establishment acceptable to the CTB be constructed or under firm contract within the time limit of the bond, such bond shall be forfeited. During the term of the surety, the locality may request a partial reduction in the value of the surety. This reduction would be commensurate with the amount of qualified capital investment properly documented. If only partial qualifying investment occurs on appropriate site(s) within the time limit of the bond, proportional credit against the bond will be granted for that partial investment. The time limit shall be 5 years from the date of allocation by the CTB. See APPENDIX II. B for a suggested resolution.

While the bonded project process allows an excellent opportunity for localities to receive an allocation and build an access road that may attract qualifying industries, it also represents a risk and localities need to consider the financial impacts if they are unable to attract qualifying industries with sufficient capital investment within the five year bond period.

Frequently in the development of an industrial park, road costs will exceed one-tenth the amount of qualifying capital investment of the first industry. In such circumstances, it is possible to combine a regular project and a bonded project, in order to provide for both present and prospective industries. These are somewhat complicated, and are not easily explained in advance. The local Resident Engineer will assist a local government in the specific procedures to be followed in such an instance.

3. Regional Industrial Authority Projects

A locality may request Industrial Access funds on behalf of a regional industrial authority. If an eligible site is owned by such a regional industrial facility authority, as defined in §15.2-6400 et seq. of the Code of Virginia, funds may be allocated for construction of an access road project to that site without penalty to the jurisdiction in which the site is located. This provision may be applied to one regional project per fiscal year in any jurisdiction, with the same funding limitations as prescribed for

other individual projects. The host locality will provide the required surety if a bonded project allocation is requested and execute the local-state agreement.

C. The Resident Engineer

The Resident Engineer of the Virginia Department of Transportation will assist the county, city, or town in preparing a resolution requesting funding, in preparing sketches and cost estimates for requested road improvements, initiating the SERP process, and in assembling a file with information necessary for review by other offices of the Department of Transportation and by the Department of Business Assistance. This assembly of information will be forwarded to the District Administrator with a recommendation regarding the application.

D. The District Administrator

The District Administrator will verify road design standards and cost estimates, and will forward the assembly with a recommendation to the office of the State Secondary Roads Engineer.

E. The Secondary Roads Engineer – Coordination and Recommendations

The State Secondary Roads Engineer will coordinate review of the application between the Departments of Business Assistance and Transportation. A site visit may be scheduled, a recommendation will be requested from the Department of Business Assistance indicating whether, in its judgment, the industry is a qualifying establishment or the development constitutes an appropriate use of funds and whether it recommends that an allocation be made. After all prerequisites have been met for a viable project, including the signed SERP acknowledgement form, the State Secondary Roads Engineer may recommend approval to the CTB, normally after reviewing requests with the CTB Access Roads and Grounds Transportation Committee.

F. The State Environmental Review Process (SERP)

A memorandum of agreement (MOA) was executed by the Secretary of Natural Resources and the Secretary of Transportation on July 31, 1991. This document requires that the state natural and historic resource agencies be provided an opportunity to comment on all state-funded road projects at the earliest stage of development. The State Environmental Review Process (SERP) ensures that state resource agency views and interests will be considered in the project development process from concept through construction. The MOA for SERP was created pursuant to the Code of Virginia, §10.1-1188 (Article 2, Environmental Impact Reports of State Agencies).

Projects developed under the Industrial Access Program often must address a much more compressed development schedule than regular construction projects, in order to accommodate a locality's or industry's desire for a facility or site to be accessed and eventually operational. The administrative aspects of the SERP coordination may take up to

four months to complete. Therefore, the time necessary for completion of the SERP and any commitments that may result from this review must be anticipated in the project's development schedule often prior to the CTB's approval of, and allocation to, an Industrial Access project. For this reason, the locality and the Department's Resident Engineer must work together in determining the viability of each proposed Industrial Access Project with respect to the development schedule proposed for the project. The Resident Engineer will initiate the SERP process once the locality provides the location information and requests SERP initiation. The locality will be notified once the SERP is complete and informed of any environmental commitments. Also, officials with local governments requesting Industrial Access funds are directed to the SERP acknowledgement form found within Appendix VI. This acknowledgement addresses environmental responsibilities associated with preliminary review of state-funded projects. The completed form must accompany each request for Industrial Access funding.

Also, please refer to APPENDIX VII within this guide. This document outlines the responsibilities involved with the administration of the SERP for state funded projects. Where projects are to be administered by the locality requesting Industrial Access Program funds, this document will be made a part of the local-state agreement. ***The agreement must be fully executed by the locality and the Department prior to the locality entering into any contract for project work and before initiating any land disturbance activities that would impact the area of the proposed access road project.***

Should additional information and guidance of the SERP be desired, please refer to the State Environmental Review Process Handbook. Specific questions or concerns regarding the SERP may be addressed to the Department's Environmental Quality Division (1201 East Broad Street, Richmond, VA 23219, Phone 804-371-6752).

G. CTB - Allocation

The CTB, upon consideration of a complete application, may allocate funds for an access project. Contingencies which must be satisfied will be specified in the language of the allocation resolution. This allocation is for the exclusive purpose of financing the eligible costs actually incurred in constructing the specific access facility rather than as an unrestricted grant.

Expenditure of funds will be authorized when all contingencies of the CTB have been satisfied.

H. Administration

1. When funding for an Industrial Access project is approved by the CTB, the project is deemed viable. However, it is subject to the same rules of design, right of way acquisition, environmental review, scheduling for advertisement, bidding, and construction as other projects administered by the Department.

2. The Secondary Roads Division prepares a local-state agreement between a

county, city, or town and the Department if: 1) the locality wishes to administer the Industrial Access project itself; 2) the project requires matching funds; 3) the project includes ineligible project costs; or, 4) the project requires the provision of a surety. The local-state agreement requires that the locality follow state procurement regulations in the administration of any project's construction, and specifies responsibilities, schedules, and payment of costs. Such agreement is subject to review and concurrence by the Secondary Roads and Fiscal Divisions of VDOT and by the office of the Attorney General, prior to its execution by a local governing body and Virginia Department of Transportation management. The local-state agreement is the contract that authorizes the locality to perform any work that can be reimbursed from VDOT funds and *must be executed prior to authorizing work*. Any cost incurred or contract executed by a local governing body or its agent, before an agreement is signed by all parties, is the responsibility of the local governing body, unless otherwise agreed to by the State Secondary Roads Engineer.

3. The Resident Engineer provides documentation of the dedicated right of way for the project to the District Right of Way Manager. The District forwards this information and its recommendation to the VDOT's Right of Way and Utilities Division Director, who certifies that right of way and utility adjustments for the project have been obtained at no cost to the Industrial Access Program fund. The provision of unencumbered right of way by the locality includes completion of any extensive environmental studies and required mitigation of existing environmental conditions.

4. The locality provides payment to the Resident Engineer for any required matching funds, ineligible project costs, or eligible projects in excess of the Industrial Access allocation. The Resident Engineer forwards this payment to the Secondary Roads Division, which will ensure that it is credited to the project.

5. The local government provides documentation to the Resident Engineer that an industry has made firm commitment to locate on an eligible site (executed construction contract) and an official letter from the industry's chief financial officer outlining capital expenditures as specified in this document under "Eligible Capital Outlay."

   If bonded, the local government shall provide required surety to the Resident Engineer. The Resident Engineer forwards the surety to the Secondary Roads Division.

6. The expenditure of funds for the project may be authorized by VDOT only after all contingencies of the Transportation Board's resolution have been met.

   A VDOT-administered project must be authorized before the project may be advertised or constructed. A locally administered project must be authorized before VDOT will reimburse a locality for eligible costs attributed to the

construction of the project. Also, for locally administered projects, appropriate documentation of costs and billing information must be provided by the locality.

7. Once a project is authorized, the Resident Engineer will coordinate all aspects of the construction of VDOT-administered projects. The Resident Engineer also will monitor the construction of locally administered projects and will notify the Secondary Roads Division when the construction is started and completed.

I. Acceptance into System

New roadways, upon completion, are opened to public use and are to be accepted into the appropriate system for maintenance. In all counties except Arlington and Henrico, in towns not maintaining their own road systems, and in the former Nansemond County portion of the City of Suffolk, these roads will be added to the Secondary System of State Highways. In cities, in towns receiving maintenance payments, and in the Counties of Arlington and Henrico, the roads are to be taken into the road systems of these localities. If an industrial park developer or other landowner intends to close or gate a road into an industrial park for security or other reasons, the Industrial Access Program is an inappropriate source of funding.

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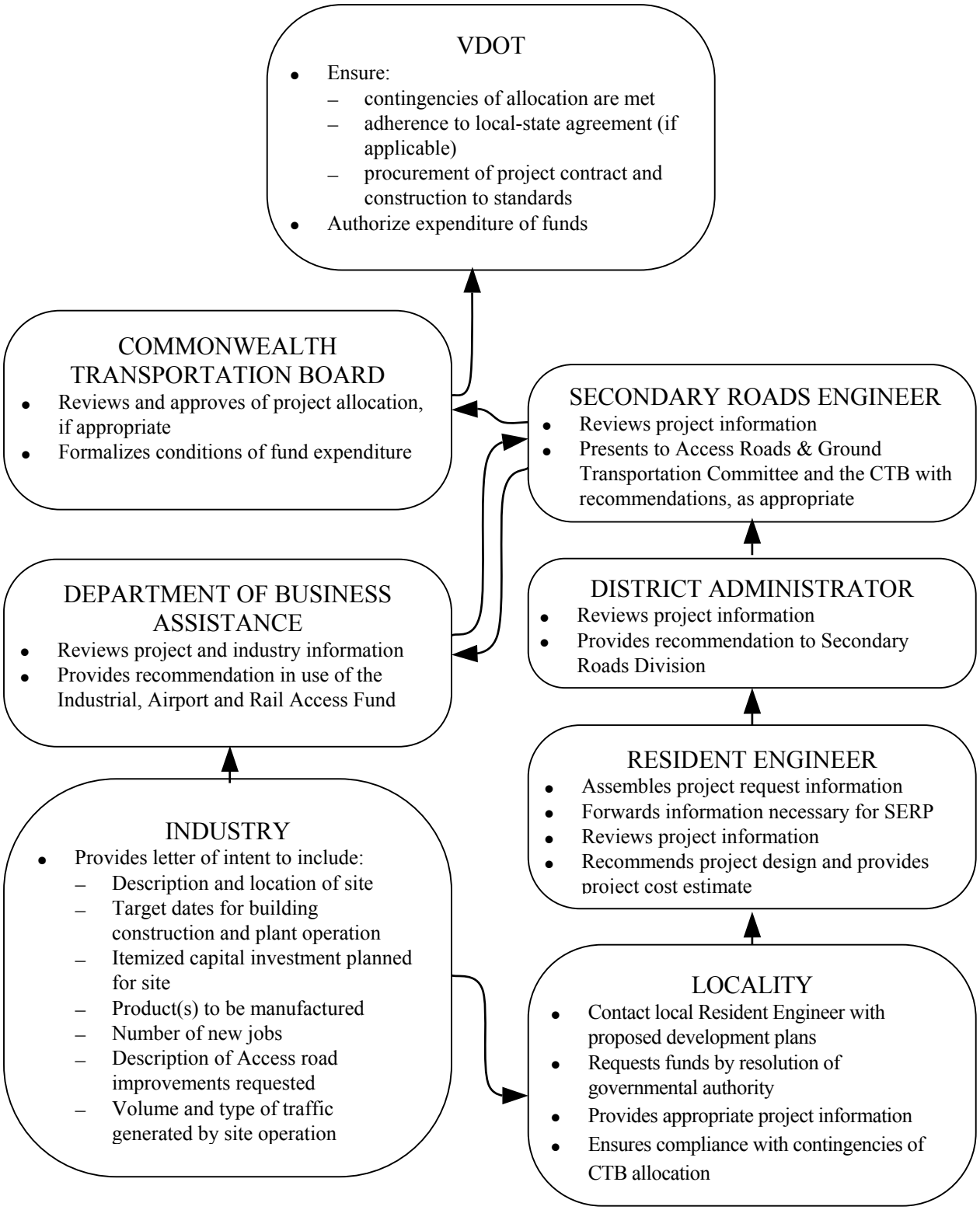

Figure 1
FLOW CHART OF PROCESS THROUGH FUND AUTHORIZATION

IV. LIMITATIONS:

A. Maximum Allocation

The maximum allocation to any regular project is limited to the lesser of either: the reasonable cost of a two-lane road (see page 1, paragraph II.A) or 10% of the qualifying industrial investment made by the private industry.

Example 1	Cost of constructing road	=	$	90,000
	Qualifying investment	=		1,500,000
	10% of qualifying investment	=		150,000
	Allocation is limited to		$	90,000
Example 2	Cost of constructing road	=	$	90,000
	Qualifying investment	=		600,000
	10% of qualifying investment	=		60,000
	Allocation is limited to		$	60,000

Subject to available funding, the maximum unmatched allocation to any county, city, or town within any one fiscal year is $300,000; allocations may be used for one or more projects. Further, the total amount available statewide under this program is limited by statute.

A locality may receive an allocation on behalf of a regional industrial authority without impacting its annual allocation eligibility. An allocation for a regional industrial facility authority project is subject to the same limitations as other Industrial Access projects.

When the cost of an individual access project exceeds $300,000, the county, city, or town may request up to $150,000 in supplemental funds which must be matched on a dollar-for-dollar basis by a contribution from the general fund of the county, city, or town. Such supplemental funding shall be limited to 5% of the qualifying industrial investment above $3,000,000.

B. Funds Not to be Anticipated

It is the intent of the CTB that industrial access funds be requested as reasonably needed by the localities of the state, but that these funds not be anticipated from year to year. Unused eligibility from a preceding year shall not be carried forward to an ensuing fiscal year.

C. Time Limits for Regular Industrial Access Projects

In order to ensure the most effective use of the limited funds available for the program, allocations made for new access roads or improvements to serve a specific industry are expected to be committed by contract or otherwise under construction within 2 years

from the date of CTB approval. Allocations for projects that are not completed or actively under way within 2 years of project approval by the CTB may be deallocated for funds to be available for new projects unless the State Secondary Roads Engineer grants an exception due to unusual circumstances. At the end of 22 months following the allocation, if the proposed improvements to serve the new or expanding industry have not been initiated, the locality shall submit a written explanation of the status of the project and reason for delay if an extension of time is needed. Nothing precludes the locality from reapplying for an allocation in the future once the plans for industrial development are more imminent.

D. Improvements to Existing Roads

Where an existing road constitutes a portion of the secondary system of state highways or is part of the road system of the locality in which it is located, industrial access funds may be used to upgrade the existing road only to the extent required to meet the needs of traffic generated by the new or expanding industrial facility. Additionally, where access to a qualified industrial site is via an existing road that can be determined inadequate for providing safe and efficient movement of the industrial traffic generated by the site or that this traffic conflicts with the surrounding road network to the extent that it poses a safety hazard to the general public, consideration may be given to funding additional improvements. Such projects must be requested by resolution of the local governing body and will be evaluated on case-by-case basis by the Secondary Roads Engineer. The District Traffic Engineer may be requested to evaluate and provide a recommendation on such requests.

When a project is established to improve an existing road to serve an eligible parcel having frontage on that road, industrial access funds will normally provide for improvements of the existing road to a point 100' past the point at which the parcel's nearest property line intersects the road. It is expected, however, that the improvement will extend to the proposed main entrance to the parcel and that the industry or the locality will provide whatever additional funds are required to improve the portion between 100' past the property line and the proposed entrance and any additional requested improvements. Requests for exceptions to this funding limitation will be directed to the State Secondary Roads Engineer.

E. Towns

Towns maintaining their own streets and receiving maintenance payments under §33.1-41.1 of the Code of Virginia shall be treated for purposes of this program as independent entities (for a list of these towns, see APPENDIX III).

Towns whose streets are maintained as a part of the secondary system of highways will be considered as part of their respective county; an allocation to such a town will be calculated as a portion of its county's $300,000 annual unmatched limitation and will be subject to concurrence by resolution of the respective Board of Supervisors.

APPENDIX I

INDUSTRIAL SUBDIVISIONS

and the

INDUSTRIAL ACCESS PROGRAM

A. CREATING MARKETABLE INDUSTRIAL PARKS.

Division of land to create an industrial park should provide marketable industrial parcels; each parcel should be large enough to support quality industrial development and some future expansion of that development. Local and state agencies charged with the review of Industrial Access applications are encouraged to assist applicants in creating marketable industrial locations with good support facilities.

Many support facilities are needed for even a small industry; locating a new industrial park on more expensive land near existing facilities is often a better investment than building expensive roads, water lines, and other new support facilities to serve remote property which appears to be inexpensive or is simply available. Cheap land is often expensive to develop.

Support facilities to be considered in locating and developing industrial parks include water, sewer, waste disposal, communications systems (telephone, data transmission, microwave, satellite), energy sources (electricity, coal, oil, gas, gasoline, diesel oil), emergency services (police, fire, rescue, hazardous materials), and transportation (highway, rail, and air) for materials, products, clients, and employees. For larger industries, schools, housing, hospitals, churches, shopping, recreation, and other employee needs should be considered when selecting land for an industrial park.

B. INDUSTRIAL ACCESS FUNDING FOR SPECIFIC PARCELS.

1. In the XYZ Industrial Park (see Figure 2), requests for Industrial Access funding will be considered to serve qualifying industrial development on Lots 3, 4 or 5.

2. Within funding limitations set forth on page 12 (see paragraph IV.A), full funding of the access road will be considered if there is sufficient qualifying industrial investment on Lot 5. A proportionate share will be considered on lots requiring only a portion of the access road constructed

3. If Lot 3 is the first off-highway road parcel to be used for a qualifying industrial establishment, funding will be considered for building the access road only as far as required to allow construction of an entrance to serve the qualifying lot (point A). This point will be set at the nearest property line of the qualifying lot, or if necessary to provide frontage for an entrance, not to exceed 100 feet beyond the nearest edge of the property. The road will not be extended to enhance on-site development or to reduce entrance costs.

If desired, and if within funding limitations, the road may be completed to the cul-de-sac in one of two ways:

(a) it may be constructed simultaneously with, and as an extension of, the access road to Lot 3 if the additional cost of the road to serve Lots 4 and 5 is bonded or paid for by the locality, or

(b) the road may be constructed only to point A as an initial project, and a subsequent allocation will be considered when qualifying industrial development of Lot 4 or 5 occurs.

4. Lots 1 and 2, because they abut a public street, already have access and development on these parcels will not qualify for Industrial Access funding to construct a new access road (see page 1, paragraph II.B). Extreme topography that makes an entrance for such a lot difficult or expensive is not a justification for use of state funds to provide access to the lot.

5. Where the existing street or highway is inadequate for increased industrial traffic, qualifying capital investment on any parcel may qualify for industrial access funds to improve the existing public road (see page 13, paragraph D). However, turn lanes, signal lights or crossover improvements are not usually warranted as stand-alone projects and no primary highway may be improved with these funds.

C. CREDIT FOR A BONDED PROJECT.

For a bonded project with no initial industry and where the entire access road was constructed under bond, then sufficient qualifying capital investment on Lot 5 within the five-year bond period will satisfy the entire bond. Partial credit will be given for such investment on Lots 3 and 4. No credit will be given for such investment on Lots 1 or 2.

D. COMBINING CAPITAL INVESTMENTS ON TWO OR MORE SITES.

It is possible to combine the capital investments of industries located on two or more eligible parcels in order to justify the cost of one access road that serves all of the industries involved. The process is much more cumbersome and uncertain than working with one industry, and the road project may only be authorized for construction after the last industry is under contract. This would result in the earlier industry or industries going into production without adequate access, and is not recommended.

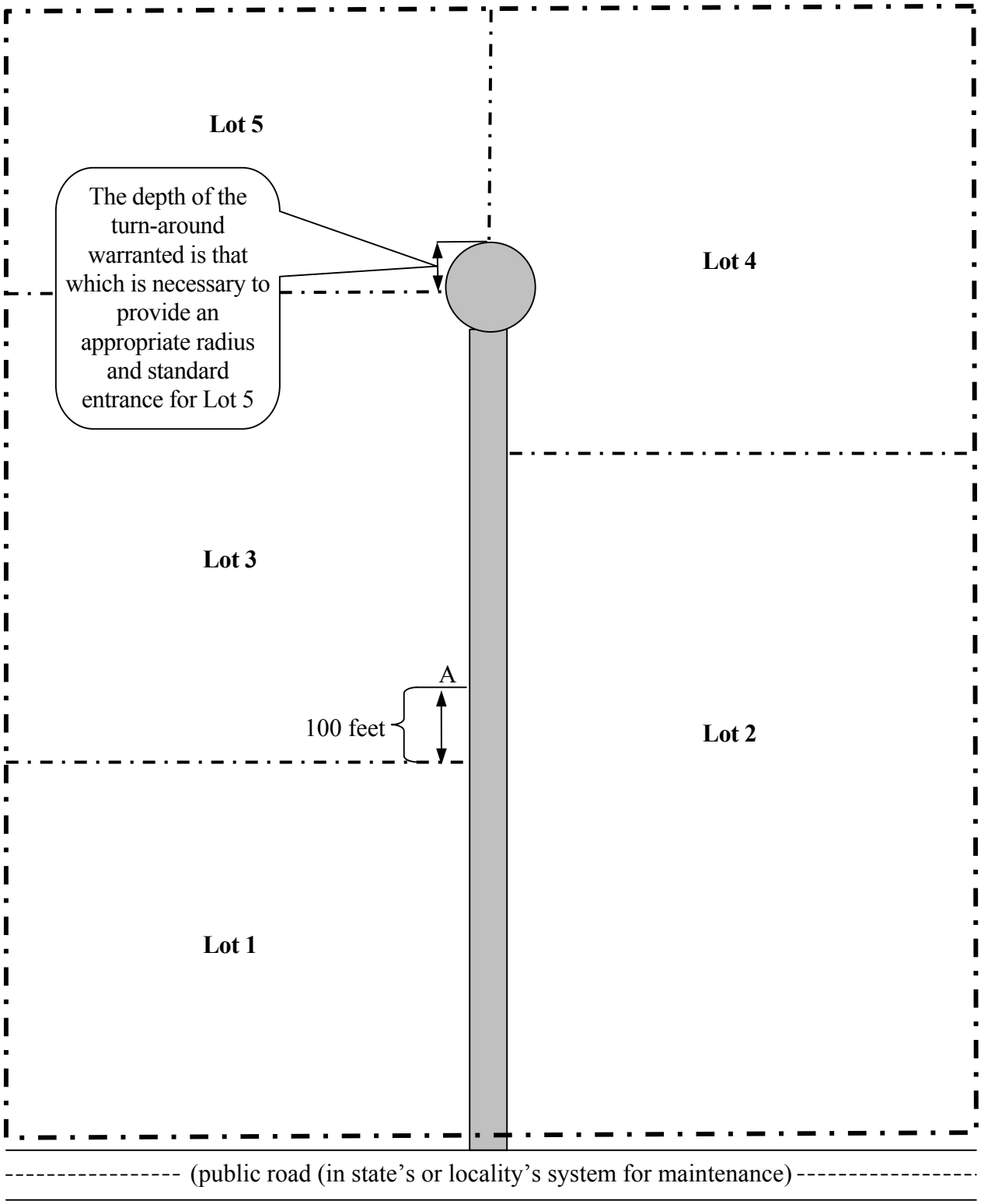

Figure 2
INDUSTRIAL PARK DEVELOPMENT (XYZ Industrial Park)

APPENDIX II. A

SAMPLE RESOLUTION – REGULAR PROJECTS

[The industry exists or is under firm contract]

At a regularly scheduled meeting of the [City/Town Council] of [name of locality (or, if applicable) [(name of county) and "County Board of Supervisors"] held on [month & day], 20___, on a motion by [name of Council or Board member] [name of Council or Board member] [name of Council or Board member] [name of Council or Board member], seconded by [name of Council or Board member] [name of Council or Board member][name of Council or Council or Board member], the following resolution was adopted by a vote of [#]to [#]:

WHEREAS, the [full name of corporation or entity] has purchased property located in the [City/Town/County] of [name of city, town or county] [name of city, town or county] and [has entered or will enter] into a firm contract to [construct/expand] its facilities on that property for the purpose of producing [identify product]; and

WHEREAS, this new facility is expected to involve a new private capital investment in land, building, and manufacturing equipment of approximately $[amount] and the [name of company] is expected to employ [###] persons at this facility; and

WHEREAS, manufacturing operations are expected to begin at this new facility on or about [month & day], 20__; and

FOR A NEW ROAD

WHEREAS, the property on which this facility (is/will be) located has no access to a public street or roadway and will require the construction of a new roadway which will connect to [name of road] (Route [####]; and

WHEREAS, the (City/Town/County) of [city, town, or county name] hereby guarantees that the necessary environmental analysis, mitigation and right of way for this new roadway and utility relocation or adjustments, if necessary, will be provided at no cost to the Virginia Department of Transportation; and

FOR IMPROVEMENTS TO AN EXISTING ROAD

WHEREAS, the existing public road network does not provide for adequate access to this facility and it is deemed necessary that improvements be made to [name of road] (Route [####]); and

WHEREAS, the [City/Town/County] of [city, town, or county name] hereby guarantees that the necessary environmental analysis, mitigation, and fee simple right of way for this improvement, and utility relocations or adjustments, if necessary, will be provided at no cost to the Industrial, Airport and Rail Access Fund; and

FOR A NEW ROAD OR AN EXISTING ROAD

WHEREAS, the [City/Town/County] of [city, town or county name] acknowledges that the State Environmental Review Process (SERP) must be completed prior to any construction activity on this project as a condition of the use of the Industrial, Airport and Rail Access Fund**;** and

WHEREAS, the [City/Town/County] of [city, town or county name] of hereby guarantees that all ineligible project costs and any other costs not justified by eligible capital outlay will be provided from sources other than those administered by the Department of Transportation.

NOW, THEREFORE, BE IT RESOLVED THAT: The [City/Town Council] of [name of locality] (or, if applicable [name of county) and "County Board of Supervisors"] hereby requests that the Commonwealth Transportation Board provide financing from the Industrial, Airport and Rail Access Fund to provide an adequate road to this new manufacturing facility; [and]

FOR A NEW ROAD ONLY

BE IT FURTHER RESOLVED THAT: The [City/Town Council] of [name of locality] (or, if applicable [name of county) and "County Board of Supervisors"] hereby agrees that the new roadway so constructed will be added to and become a part of the road system of the (City/Town of [name of locality] maintaining its own road system) (or, [Secondary System of Highways], if locality does not maintain its own road system]).

(SEAL) A COPY TESTE: _____[signature of official]_____
[Chairman/Mayor]

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Note:

In the BE IT FURTHER RESOLVED paragraph, any locality which maintains its own street system will indicate that it will accept and maintain the new roadway. In all counties except Arlington and Henrico, in the former Nansemond County portion of the City of Suffolk, and in all towns which do not maintain their own streets, new roadways constructed under the Industrial Access Program will become part of the Secondary System of Highways.

Where road costs are expected to exceed an amount equal to one-tenth of the qualifying capital investment by an industry, see "Funding Limitations" on Page 5, section III.B.1.

APPENDIX II. B

SAMPLE RESOLUTION – BONDED PROJECT

[No (or insufficient) qualifying investment]

At a regularly scheduled meeting of the [City/Town Council] of [name of locality] (or, if applicable, [name of county] and ["County Board of Supervisors"] held on [month & day] 20___, on a motion by [name of Council or Board member], seconded by [name of Council or Board member], the following resolution was adopted by a vote of [#] to[#]:

WHEREAS, the [full name of Industrial Authority, local government, or regional agency desires to facilitate the industrial development of property located in [City/Town/County] of [locality name]; and

WHEREAS, this property is expected to be the site of new private capital investment in land, building, and manufacturing equipment which will provide substantial employment; and

FOR A NEW ROAD

WHEREAS, the subject property has no access to a public street or roadway and will require the construction of a new roadway which will connect to [name of road] (Route [###]; and

WHEREAS, the [City/Town/County] of [city, town or county name] hereby guarantees that the necessary environmental analysis, mitigation and right of way for this new roadway and utility relocation or adjustments, if necessary, will be provided at no cost to the Virginia Department of Transportation; and

FOR IMPROVEMENTS TO AN EXISTING ROAD

WHEREAS, the existing public road network does not provide for adequate access to this property and it is deemed necessary that improvements be made to [name of road] (Route [###]; and

WHEREAS, the [City/Town/County] of [city, town or county name] hereby guarantees that the necessary environmental analysis, mitigation, and fee simple right of way for this improvement and utility relocations or adjustments, if necessary, will be provided at no cost to the Industrial, Airport and Rail Access Fund; and

FOR A NEW ROAD OR AN EXISTING ROAD

WHEREAS, the [City/Town/County] of [city, town or county name] acknowledges that the State Environmental Review Process (SERP) must be completed prior to any construction activity on this project as a condition of the use of the Industrial, Airport and Rail Access Fund.

WHEREAS, the [City/Town/County] of [city, town or county name] hereby guarantees that all ineligible project costs and any other costs not justified by eligible capital outlay will be provided from sources other than other than those administered by the Department of Transportation.

NOW, THEREFORE, BE IT RESOLVED THAT: The [City/Town Council of [city or town name] (or, if applicable, [name of county] and "[County Board of Supervisors]") hereby

requests that the Commonwealth Transportation Board provide financing from the Industrial, Airport and Rail Access Fund to provide an adequate road to this property; and

BE IT FURTHER RESOLVED THAT: The [City/Town/County] of [city, town or county name] hereby agrees to provide a surety or bond, acceptable to and payable to the Virginia Department of Transportation, in the full amount of the cost of the road; this surety shall be exercised by the Department of Transportation in the event that sufficient qualifying capital investment does not occur on parcel(s) [identify parcel(s) (e.g., Lot #, Parcel #)] within five years of the Commonwealth Transportation Board's allocation of funds pursuant to this request.

FOR A NEW ROAD ONLY

BE IT FURTHER RESOLVED THAT: The [City/Town Council of] [name of locality] (or, if applicable [name of county]) and ["County Board of Supervisors"]) hereby agrees that the new roadway so constructed will be added to and become a part of the road system of the [City/Town of name of locality] (or, [Secondary System of Highways], if locality does not maintain its own road system]).

(SEAL) A COPY TESTE: _____[signature of official]_____
[Chairman/Mayor]

- - - - - - - - - - - - - - -

Note:

In the second BE IT FURTHER RESOLVED paragraph, any locality which maintains its own street system will indicate that it will accept and maintain the new roadway. In all counties except Arlington and Henrico, in the former Nansemond County portion of the City of Suffolk, and in all towns which do not maintain their own streets, new roadways constructed under the Industrial Access Program will become part of the Secondary System of Highways.

APPENDIX III
TOWNS MAINTAINING OWN STREETS

Under §33.1-41.1, Code of Virginia
(As of July 1, 2001)

Abingdon
Altavista
Ashland
Big Stone Gap
Blacksburg
Blackstone
Bluefield
Bridgewater
Chase City
Chincoteague
Christiansburg
Clifton Forge
Culpeper
Dumfries
Elkton
Farmville
Front Royal
Grottoes
Herndon
Lebanon
Leesburg
Luray
Marion
Narrows
Orange
Pearisburg
Pulaski
Richlands
Rocky Mount
Saltville
Smithfield
South Boston
South Hill
Strasburg
Tazewell
Vienna
Vinton
Warrenton
Wise
Woodstock
Wytheville

APPENDIX IV

STATUTORY AUTHORITY

Code of Virginia

§ 33.1-221. Funds for access roads to industrial sites and airports; construction, maintenance, etc., of such roads.

A. Notwithstanding any other provision of law, there shall be appropriated to the Commonwealth Transportation Board funds derived from taxes on motor fuels, fees and charges on motor vehicle registrations, road taxes or any other state revenue allocated for highway purposes, which shall be used by the Board for the purposes hereinafter specified, after deducting the costs of administration before any of such funds are distributed and allocated for any road or street purposes.

Such funds shall be expended by the Board for constructing, reconstructing, maintaining or improving access roads within counties, cities and towns to industrial sites on which manufacturing, processing or other establishments will be built under firm contract or are already constructed and to licensed, public-use airports; in the event there is no such establishment or airport already constructed or for which the construction is under firm contract, a county, city, or town may guarantee to the Board by bond or other acceptable device that such will occur and, should no establishment or airport acceptable to the Board be constructed or under firm contract within the time limits of the bond, such bond shall be forfeited. Towns, which receive highway maintenance payments under § 33.1-41.1, shall be considered separately from the counties in which they are located when receiving allocations of funds for access roads.

B. In deciding whether or not to construct or improve any such access road, and in determining the nature of the road to be constructed, the Board shall base its considerations on the cost thereof in relation to the volume and nature of the traffic to be generated as a result of developing the airport or the industrial establishment within the total industrial area. In any industrial park or airport, the total volume of traffic to be generated shall be taken into consideration in regard to the overall cost thereof. No such access road shall be constructed or improved on a privately owned plant site.

C. Any access road constructed or improved under this section shall constitute a part of the secondary system of state highways or the road system of the locality in which it is located and shall thereafter be constructed, reconstructed, maintained and improved as other roads in such system.

(Code 1950, § 33-136.1; 1956, c. 161; 1962, c. 550; 1964, c. 254; 1970, c. 322; 1978, c. 299; 1980, c. 38; 1989, c. 336; 1996, cc. 85, 128; 1997, c. 89.)

APPENDIX V

RESOLUTION
OF THE
COMMONWEALTH TRANSPORTATION BOARD

February 15, 2001
MOTION

Made By: Mr. Grubb Seconded By: Ms. Welsh Action: Motion Carried

Title: Industrial Access Policy
(Revision)

WHEREAS, the General Assembly has from time to time amended Section 33.1-221 of the Code of Virginia (1950) relating to the fund for the construction of industrial access roads within the counties, cities and towns of the Commonwealth; and

WHEREAS, it is the sense of this Board that its present policy should be revised and restated to be more compatible with present conditions.

NOW, THEREFORE, BE IT RESOLVED that the Commonwealth Transportation Board hereby adopts the following policy to govern the use of industrial access funds pursuant to Section 33.1-221, as amended, of the Code of Virginia (1950):

1. The use of industrial access funds shall be limited to: (1) providing adequate access to new or substantially expanding manufacturing, processing and industrial facilities, or other establishments; and (2) improving existing roads that may not be adequate to serve new industry or substantially expanding manufacturing, processing and industrial facilities, or other establishments.

2. Industrial access funds shall not be used for the acquisition of rights of way or adjustment of utilities. These funds are to be used only for the actual construction and engineering of a road facility adequate to serve the traffic generated by the new or expanding establishments.

3. Industrial access funds may not be used for the construction of access roads to schools, hospitals, libraries, airports, armories, speculative office buildings, shopping centers, apartment buildings, professional offices, residential developments, churches, hotels, motels, government installations, or similar facilities, whether public or private. (Access roads to licensed, public-use airports, while provided for in Section 33.1-221, are funded and administered separately).

4. No cost incurred prior to this Board's approval of an allocation from the industrial access funds may be reimbursed by such funds. Industrial access funds shall be authorized only after certification that the manufacturing, processing or other establishment will be built under firm contract, or is already constructed, or upon presentation of acceptable surety in accordance with paragraph (a) of Section 33.1-221, as amended, of the Code of Virginia (1950).

5. When an eligible establishment is not yet constructed or under firm contract and a local governing body guarantees by bond or other acceptable surety that such will occur, the maximum time limit for such bond shall be five years, beginning on the date of the allocation of the industrial access funds by the Commonwealth Transportation Board. At the end of the five-year period, the amount of industrial access funds expended on the project and not justified by eligible capital outlay of one or more establishments acceptable to the Board shall be reimbursed to the Department of Transportation by forfeiture of the surety. The bonded period for projects approved between March 21, 1996, and July 1, 1999, shall be extended for a period of two additional years beyond their original expiration dates, contingent upon the affected locality providing acceptable surety for the extended period.

6. Industrial access funds shall not be used to construct or improve roads on a privately owned plant site. Nor shall the construction of a new access road to serve any industrial site on a parcel of land which abuts a road constituting a part of the systems of state highways or the road system of the locality in which it is located be eligible for industrial access funds, unless the existing road is a limited access highway and no other access exists. Further, where the existing road is part of the road system of the locality in which it is located, or the secondary system of state highways, industrial access funds may be used to upgrade the existing road only to the extent required to meet the needs of traffic generated by the new or expanding industrial facility.

In the event an industrial site has access according to the foregoing provisions of this policy, but it can be determined that such access is not adequate in that it does not provide for safe and efficient movement of the industrial traffic generated by the industry on the site or that the site's traffic conflicts with the surrounding road network to the extent that it poses a safety hazard to the general public, consideration will be given to funding additional improvements. Such projects shall be evaluated on a case-by-case basis upon request, by resolution, from the local governing body. Localities are encouraged to establish planning policies which will discourage

incompatible mixes such as industrial and residential traffic.

7. Not more than $300,000 of unmatched industrial access funds may be allocated in any fiscal year for use in any county, city or town which receives highway maintenance payments under Section 33.1-41.1, Code of Virginia. A town whose streets are maintained under either Section 33.1-79 or 33.1-82, Code of Virginia, shall be considered as part of the county in which it is located. The maximum eligibility of unmatched funds shall be limited to 10% of the capital outlay of the designated industry or industries. The unmatched eligibility may be supplemented with additional industrial access funds, in which case the supplemental access funds shall not be more than $150,000, to be matched dollar-for-dollar from funds other than those administered by this Board. The supplemental industrial access funds over and above the unmatched eligibility shall be limited to 5% of the capital outlay of the designated industry or industries. Such supplemental funds shall be considered only if the total estimated cost of eligible items for the individual access improvement exceeds $300,000.

If an eligible site is owned by a regional industrial facility authority, as defined in §15.2-6400 et seq. of the Code of Virginia, funds may be allocated for construction of an access road project to that site without penalty to the jurisdiction in which the site is located. This provision may be applied to one regional project per fiscal year in any jurisdiction, with the same funding limitations as prescribed for other individual projects.

8. Eligible items of construction and engineering shall be limited to those which are essential to providing an adequate facility to serve the anticipated traffic. Items such as storm sewers, curb and gutter, and extra pavement width will not normally be eligible. However, additional pavement width may be eligible where necessary to qualify the road facility in a city or town for maintenance payments under Section 33.1-41.1, as amended, of the Code of Virginia.

9. It is the intent of the Board that industrial access funds not be anticipated from year to year. Unused eligibility cannot be allowed to accumulate and be carried forward from one fiscal year to another.

10. The Commonwealth Transportation Board will consult and work closely with the Department of Business Assistance in determining the use of industrial access funds and may rely on the recommendations of this Department in making decisions as to the allocation of these funds. In making its recommendations to this Board, the Department of Business Assistance will take into consideration the impact of the proposed facility on the employment and tax base of both the area in which the facility is to be located and the Commonwealth of Virginia. The determination by the Department of Business Assistance that the subject establishment impacts the economic growth of the Commonwealth to such an extent that an allocation should be made regardless of the manufacturing or distributive classification will be given considerable weight by this Board.

11. Prior to the formal request for the use of industrial access funds to provide access to new or expanding industries, the location of the access road shall be submitted for approval of the engineers of the Virginia Department of Transportation. The engineers shall take into consideration the cost of the facility as it relates to the location and as it relates to the possibility of the future extension of the road to serve other possible industrial establishments, as well as the future development of the area traversed.

12. Prior to this Board's allocation of funds for such construction or road improvements to an industry proposing to locate or expand in a county, city or town, the governing body shall by resolution request the access funds and shall be responsible for the preliminary negotiations with the industries and others interested. Engineers of the Virginia Department of Transportation will be available for consultation with the governing bodies and others, and may prepare surveys, plans, engineering studies, and cost estimates.

13. The Commonwealth Transportation Commissioner is directed to establish administrative procedures to assure the provisions of this policy and legislative directives are adhered to and complied with.

BE IT FURTHER RESOLVED that the above policy shall become effective immediately, and all policies heretofore adopted by this Board governing the use of industrial access funds shall be rescinded simultaneously.

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APPENDIX VI
Acknowledgment of the Virginia Department of Transportation's State Environmental Review Process Requirement for Projects Utilizing VDOT Funding

This acknowledgement should accompany all requests by localities for state funding for Access Road Program projects

As a representative for the City/ Town/ County of _____, my signature below indicates this locality's understanding of the following:

- The State Environmental Review Process (SERP) is a product of the Code of Virginia § 10.1-1188 and a subsequent agreement entered into by the Secretaries of Transportation and Natural Resources to provide for the environmental review of state funded projects prior to construction.
- This 60-120 day process is accomplished by VDOT based upon information provided by local government and must be completed prior to construction and the actual distribution of the funds authorized by the Commonwealth Transportation Board (CTB).
- The locality will provide the VDOT Resident Engineer or representative with specific information on construction activities for the subject project to be funded by Special Funding Programs from VDOT's Secondary Roads Division.
- The locality will also provide the VDOT Resident Engineer or representative with the results of any environmental reviews previously performed on the project area relative to the subject project.
- The locality will not begin construction activities within the access roadway until receiving written notification from the VDOT Resident Engineer or representative of the completion of the SERP, along with details regarding the environmental commitments that remain outstanding.
- The locality will not permit access road project construction activities to occur within the area of the access roadway project until an agreement between the Department and the locality has been fully executed.
- The locality is responsible for seeing that all outstanding environmental commitments are completed or addressed satisfactorily prior to construction. The Department reserves the right to refuse reimbursement of costs associated with this Industrial Access project should the locality neglect to comply with responsibilities assumed by engaging in any activity which may impact the project.
- Should any land disturbance activities associated with the access road project occur within the project area prior to the completion of the SERP and satisfaction of associated outstanding environmental commitments, the project will no longer be considered eligible for funding approved by the CTB for this project.

Project Name/ Description: _____

_____

Name: _____

Title: _____

City/ Town/ County: _____

Signature: _____

Date: _____

APPENDIX VII

Environmental Process for State-Funded Projects

The following general requirements pertain to all state-funded projects. Regardless of funding, the State Environmental Review Process (SERP) must be completed prior to advertisement and land disturbance in order to satisfy the requirements of the Code of Virginia 10.1-1188 (b). If the Locality agrees to assume responsibility for environmental studies, the following items establish the general responsibilities of the parties under this agreement:

A. The Department will:

1. Process the project through the SERP. Upon receipt of the completed Early Notification form (EQ-429) from the Locality, the Resident Engineer and/or Urban Division will submit the form to the District Environmental Section for processing through the SERP.
2. Provide the results of the SERP to the Resident Engineer and/or Urban Division, who will forward the results to the Locality.
3. Identify a VDOT representative for environmental decisions.
4. Confirm, with Locality assistance, compliance with all environmental commitments before, during, and after construction.

B. The Locality will:

1. Submit the completed Early Notification form (EQ-429) and any other necessary information to the Resident Engineer and/or Urban Division regarding the scope of the proposed project.
2. Meet with Department personnel (and other agency personnel at the Department's discretion) to scope the project and discuss the procedures by which the environmental commitments will be fulfilled by either the Department or the Locality. Scoping will include discussion of:
   a. Description of the proposed action;
   b. Certification that the project is included in any necessary planning documents (i.e., Transportation Improvement Plan (TIP), Constrained Long Range Plan (CLRP), Secondary Roads Six-Year Plan);
   c. Project schedule;
   d. Water quality permits;
   e. Appropriate VDOT, Locality and agency contacts;
   f. Required technical studies.
3. Provide qualified staff to manage the environmental process.
4. Provide the Department an opportunity to review and approve the consultant to perform the environmental studies required as a result of the SERP.
5. Provide the Department an opportunity to review and approve the environmental scope of work for any technical studies.
6. Provide all requests to VDOT for technical and coordination assistance from Locality staff and not from the Locality's consultant.

7. Ensure that results of the SERP are considered in the location and design decisions for the project.
8. Provide a letter of certification when the project is submitted for Plans, Specifications, and Estimates (PS&E) approval that the project description has not changed since completion of the SERP, or if any changes have occurred submit a revised Early Notification form (EQ-429) to the Department for consideration and additional coordination with state agencies.
9. Identify control measures to ensure compliance during construction with environmental commitments.
10. If the Locality constructs the project, ensure and certify that all environmental commitments have been achieved, before, during and after construction, that all necessary permits have been obtained, and that all conditions of local, state, and federal erosion and sedimentation (E&S) and storm water related ordinances, laws, and regulations have been satisfied.

APPENDIX VIII. A

IRREVOCABLE STANDBY LETTER OF CREDIT

Beneficiary:
Virginia Department of Transportation
1401 East Broad Street
Richmond, Virginia 23219

Date: _____
Amount US Dollars: _____

Applicant:
[enter name of City/Town/County]
[enter address]
enter City, State and zip code]

Letter of Credit # _____
Expiration Date: _____

Dear Sirs:

We hereby issue this irrevocable standby letter of credit in your favor available by your draft(s) up to the aggregate amount of [enter written amount] US Dollars ([enter dollar amount] drawn on us at sight accompanied by the following document:

Beneficiary's signed statement certifying that "The drawing is for reimbursement to the Virginia Department of Transportation for costs incurred in the construction of the industrial access road, Project [enter state number assigned to project] to and within the [enter name of industrial park development] in the [enter name of City/Town/County of (locality name)] Virginia. Said reimbursement is pursuant to the Commonwealth Transportation Board's resolution of [enter CTB resolution date, [if applicable, include "and the local-state agreement dated (date of agreement), requiring that eligible industry be constructed or under firm contract no later than [enter date].

Partial drawings are permitted.

Each draft drawn relative hereto must be marked: "Drawn under [enter name of institution providing surety] Letter of Credit # _____," and be accompanied by this original letter of credit.

This irrevocable standby letter of credit sets forth in full the terms of our undertaking. This undertaking shall not in any way be modified, amended or amplified by reference to any documents or contracts referred to herein.

We hereby agree to honor each draft drawn under and in compliance with the terms of this credit, if duly presented (together with the documents as specified) at our office at [enter address of institution providing surety], on or before the expiration date hereof.

This credit is subject to the "Uniform Customs and Practice for Documentary Credits" (1993 Revision), International Chamber of Commerce Publication No. 500.

_____
Authorized Signature

_____
Title

APPENDIX VIII. B
SURETY BOND

Bond Number: _____

KNOW ALL MEN BY THESE PRESENTS, THAT the [enter name of city/town/county, Virginia, as Principal, and [enter name of financial backing institution], as Surety, are held and firmly bound unto the Virginia Department of Transportation, as oblige, in the full sum of [enter written amount of surety necessary] Dollars ([enter currency amount)] lawful money of the United States of America, for payment whereof well and truly to be made we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

Signed, sealed, and dated this _____ day of _____, 20 ___.

WHEREAS, the Virginia Department of Transportation, through the Commonwealth Transportation Board, has allocated (enter amount of CTB allocation)] in Industrial Access Program funds for the [enter name of industrial park], located [enter location (e.g., "off Route [###], north/south/east/west of …")], in [enter name of city/town/county, Virginia, Project [enter state project #], to assist in providing access to the proposed industrial park.

NOW, THEREFORE, the condition of the above obligation is such that the [enter City/Town/County of (locality name)] shall reimburse the Virginia Department of Transportation for any expenses incurred by the Industrial Access Program fund for that part of this project's construction not justified by the eligible capital outlay of eligible industry served by the project, as of [enter date of expiration (5 years after date of CTB allocation)] [enter date of expiration (5 years after date of CTB allocation)], pursuant to the contingency #____ of the Commonwealth Transportation Board's resolution of [enter date of CTB allocation] enter date of CTB allocation], then this obligation to be void and of no effect; otherwise to be and remain in full force and virtue.

Attest: _____ Principal: _____

By: _____

Attest: _____ Surety: _____

By: _____

APPENDIX VIII. C

PLEDGE AND ASSIGNMENT OF DEPOSITS

1. For good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, the County/City/Town of _____ (hereinafter referred to as "Debtor") pledges, assigns, and grants this _____ day of _____, 20____, to the Commonwealth of Virginia, Department of Transportation ("VDOT") a security interest in all of the Debtor's right, title and interest in and to the following:

   Certificate of Deposit Number _____, dated _____ , 20____ , in the principal amount of $ _____ issued by or maintained with _____(the "Financial Institution"), ("the Deposits"), to secure the payment and performance of the Obligations (hereinafter defined).

2. WITHDRAWALS: Unless and until the VDOT notifies the Financial Institution in writing that this Pledge and Assignment of Deposits (the "Pledge and Assignment") has been terminated, the Debtor agrees that THE FINANCIAL INSTITUTION SHALL NOT PERMIT WITHDRAWALS OF THE DEPOSIT WITHOUT THE WRITTEN AUTHORIZATION OF VDOT. In permitting such withdrawals, the Financial Institution may conclusively rely on a withdrawal order signed by the Resident Engineer of the VDOT Residency Office in _____, Virginia. VDOT is entitled to enforce its rights hereunder without regard to any resulting imposition of withdrawal penalties or other charges by the Financial Institution against the Debtor. The Debtor alone shall remain liable to the Financial Institution for any withdrawal penalties or other charges.

3. OBLIGATIONS: The following obligations ("Obligations") are secured by this Pledge and Assignment: a qualifying industrial investment in the [name of industrial park development] within 5 (five) years of the date of the Industrial Access allocation approved by the Commonwealth Transportation Board by resolution dated _____, 20___, for State Project _____-_____-_____, _____ along the portion of the road heretofore constructed identified as [road name]. If only partial qualifying investment occurs on an appropriate site[s] with the time limit set herein, proportional credit against this pledge will be made for that partial investment. These Obligations shall be governed by such rules, regulation, and guidelines to the VDOT Industrial Access Roads Program as they exist on the date of this pledge.

4. WARRANTIES: The Debtor represents, warrants and covenants that (a) the Debtor is the owner of the Deposits and has authority to execute and deliver this Pledge and Assignment; (b) the Deposits are not subject to any liens or offsets of any person, firm or corporation other than VDOT; (c) it has not made and will not make, any pledge, assignment or transfer of the Deposits except to VDTOT; (d) it has not withdrawn, canceled, been repaid or redeemed all or any part of the Deposits, nor is there any pending application to do so; (e) it shall not, so long as any Obligations are outstanding, assign, transfer, withdraw, cancel, redeem or seek repayment of the Deposits; (f) it shall, immediately upon VDOT's request, execute and deliver such further instruments and documents, and take all such other action,

as VDOT deems necessary or desirable, to further evidence and perfect this assignment, pledge and grant of security; (g) it shall promptly notify VDOT of any claim, action or proceeding affecting title to the Deposits, or any part thereof, or the security interest herein, and, at the request of VDOT, appear in and defend any such action or proceeding; and, (h) the Debtor authorizes VDOT to notify any issuer or depository of the Deposits of VDOT's interest therein.

5. DEFAULT: In the event of any default in the performance of the Obligations, the Debtor irrevocably authorizes the VDOT to demand, withdraw and receive from the financial institutionary and all funds and deposits comprising the Deposits, at such times and in such amounts as VDOT in its sole discretion shall determine. Such demand shall be comprised of a written statement of VDOT that the Deposits are at the time of such demand assigned as a security interest pursuant to this Pledge and Assignment of Deposits, and that VDOT is entitled to payment of the Obligations from such funds. Debtor agrees to hold the financial institution harmless in relying upon such written statement of VDOT, and confirms that any payments by the Financial Institution to VDOT pursuant to such demand shall, to the extent thereof, satisfy any obligation of the Financial Institution with respect to the Deposits and be a full and complete release, discharge and acquaintance for the Financial Institution making such payment to the extent of the amounts so paid. Upon receipt of the funds, VDOT may, in its discretion either (a) hold such funds or any portion thereof subject to the terms of this agreement, or (b) apply such funds or any portion thereof to the Obligations in such order and manner as VDOT may elect.

6. This Pledge and Assignment shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns. This Pledge and Assignment shall remain in full force and effect unless and until all of the Obligations have been fully satisfied. The terms and conditions hereof cannot be limited or amended without VDOT's written consent.

County/City/Town of

_____

BY: _____

TITLE _____

STATE OF _____

COUNTY/CITY OF _____, to wit:

The foregoing instrument was acknowledged before me this _____ day of

_____, 20____, by _____.

My commission expires: _____

_____
Notary Public

STATE OF _____

VIRGINIA DEPARTMENT OF
TRANSPORTATION

BY: _____

TITLE: _____

DATE: _____

ACKNOWLEDGED:

[name of financial institution]

BY: _____

TITLE: _____

DATE: _____

APPENDIX VIII. D

ESCROW AGREEMENT

THIS ESCROW AGREEMENT, ("Escrow Agreement") made and entered into as of the __ day of _____, 20___, among the Virginia Department of Transportation ("VDOT"), the CITY/TOWN/COUNTY OF_____, VIRGINIA, a body corporate and politic (the "City" / "Town" / "County"), and _____ (the "Escrow Agent") recites and provides:

WITNESSETH:

The County/City/Town and VDOT entered into an agreement dated _____, relating to the construction and funding of an industrial access road in the _____ (the "Agreement").

Paragraph designated _____ of the Agreement requires surety, not to exceed $___,___.__, be given by the County to VDOT for reimbursement of costs incurred in the construction of the industrial access road, VDOT Project No. ____-___-___, ____, ("Industrial Access Project").

The City/Town/County, VDOT and Escrow Agent desire to evidence their agreement with respect to the holding, investment, and disbursement of the funds to be held in escrow.

NOW THEREFORE, in consideration of the covenants hereinafter set forth, and other good and valuable consideration, the receipt and sufficiency whereof are acknowledged, the parties hereunto do hereby agree as follows:

1. **Escrow Fund Investment.** The City/Town/County shall, prior to payment by VDOT pursuant to the Agreement, deposited with the Escrow Agent an equal sum of money in cash ("Escrow Fund"). The Escrow Agent agrees to hold, invest and disburse the Escrow Fund only in accordance with this Escrow Agreement. The Escrow Agent is hereby authorized and directed to invest the Escrow Fund in the name of the County/Town/City in any investment vehicle, insured or backed by government securities, as reasonably permitted by law. The Escrow Fund shall remain the property of the County/Town/City unless and until such time as the Escrow Fund becomes due and payable pursuant to the terms of this Escrow Agreement. All interest or other return (the "Interest") earned by the investment of the Escrow Fund shall be the property of the County/Town/City or VDOT, the Escrow Agent shall provide information regarding the investment status of the Escrow Fund. The initial principal balance of the Escrow Fund shall not be jeopardized, but in any event should the amount of the Escrow Fund drop below $___,___.__, unless authorized by this Escrow Agreement and the Agreement, the County/Town/City shall promptly pay Escrow Agent a sufficient amount to restore the balance to no less than $___,___.__.

2. **Disbursement of Escrow Fund to VDOT.** Upon written request by VDOT after _____ ___, 20___, the Escrow Agent shall pay to VDOT all or a portion of the Escrow Fund necessary to reimburse VDOT for expenses incurred in construction of the Industrial Access Road not offset by eligible industrial capital outlay by eligible industry (ies) as determined under VDOT's usual policy and practices for administering the Industrial Access Fund, based on documentary

evidence submitted by the County/Town/City.

3. Disbursement of the Escrow Fund to County/Town/City.

a. Upon written request by VDOT, the Escrow Agent shall pay to the County/Town/City all or a portion of the Escrow Fund for which the County/Town/City is entitled to a credit for eligible industrial capital outlay by eligible industry (ies) along the Industrial Access Road. The amount to be credited to the County/Town/City shall be determined by VDOT using its usual policy and practice for administering the Industrial Access Fund, based on documentary evidence submitted by the County/Town/City.

b. After payment to VDOT under paragraph numbered 2 or in any event after _____, 20___, the Escrow Agent shall pay the County/Town/City the remaining amount of the Escrow Fund.

4. **Escrow Agent.** In order to induce the Escrow Agent to hold, invest, and disburse the Escrow Fund as required by this Escrow Agreement, VDOT and the County/Town/City do hereby agree that:

a. The Escrow Agent shall not be liable for any loss caused by the failure, suspension, bankruptcy or dissolution of any interest-bearing investment vehicle or fund in which the Escrow Fund is deposited.

b. The Escrow Agent shall not be liable for any loss or damage resulting from the following:

(i) Any default, error, action or omission of any party, other than the Escrow Agent.

(ii) The expiration of any time limit or other delay, unless such time limit was known to the Escrow Agent and the resulting loss was solely caused by failure of the Escrow Agent to proceed in accordance herewith.

(iii) Lack of authenticity, sufficiency or effectiveness of any documents delivered to it and lack of genuineness of any signature or authority of any person to sign any such document.

(iv) Compliance by the Escrow Agent with any and all legal process, writs, orders, judgments and decrees of any court whether issued with or without jurisdiction and whether or not subsequently vacated, modified, set aside or reversed.

(v) The Escrow Agent's assertion or failure to assert any cause of action or defense in any judicial, administrative or other proceeding either in its own interest or in the interest of any party or parties.

c. The County/Town/City hereby agrees to pay the Escrow Agent for all its

expenses, costs, and reasonable attorney's fees incurred in connection with any interpleader action which Escrow Agent may file, in its sole discretion, to resolve any dispute; or which may be filed against the Escrow Agent. Such costs, expenses or attorney's fees, as well as the fees of the Escrow Agent described below, may be deducted from the Escrow Fund.

d. If the Escrow Agent is made a party to any judicial, non-judicial or administrative action, hearing or process based on acts of any of the other parties hereto and not on the malfeasance and/or negligence of the Escrow Agent in performing its duties hereunder, the expenses, costs and reasonable attorney fees incurred by the Escrow Agent in responding to such action, hearing or process may be deducted from the Escrow Fund and the party/parties whose alleged acts are a basis for such proceedings shall save and hold the Escrow Agent harmless form said expenses, costs and fees so incurred.

Notwithstanding the foregoing, nothing shall be deemed to relieve the Escrow Agent from liability hereunder arising out of its gross negligence, willful or deliberate acts, fraud, embezzlement, or misappropriation.

e. The County/Town/City and VDOT shall have the right to remove the Escrow Agent and appoint a new escrow agent by written notice signed by both the County/Town/City and VDOT and sent to the Escrow Agent.

5. **Successors and Assigns.** This Escrow Agreement shall insure to the benefit of and be binding upon the parties hereto and their respective heirs, executors, legal representatives, successors, successors-in-title and assigns. This Escrow Agreement is made and intended as a Virginia contract and shall be so constructed.

6. **Capitalized Terms.** Capitalized terms not expressly defined herein shall have the same meaning set forth in the Agreement.

7. **Completeness and Modification.** This Escrow Agreement constitutes the entire agreement between the parties hereto as to the transactions contemplated hereby and supersedes all prior discussions, understanding or agreements between the parties hereto.

8. **Counterparts.** To facilitate execution, this Escrow Agreement may be executed in as many counterparts as may be required. It shall not be necessary that the signature on behalf of all parties hereto appear on each counterpart hereof, and it shall be sufficient that the signature on behalf of each party hereto appear on one or more such counterparts. All counterparts shall collectively constitute a single agreement.

9. **Notices**. Any notice to the parties hereunder shall be sent to the following addresses unless the parties are given written notice of a change of address.

If to VDOT	Virginia Department of Transportation 1401 East Broad Street Richmond, VA 23219 Attention: James S. Givens Telecopier: (804) 786-2603
If to the Locality:	[County/ /Town/City] of [locality name], Virginia [mailing address of locality] [city], Virginia [Zip Code] Attention: [locality representative] Telecopier: [_____]
If to Escrow Agent:	[Escrow Agent's name], [Title] [mailing address] [city], Virginia [Zip Code]

IN WITNESSED WHEREOF, the parties hereby have executed this Agreement under seal, as of the date first above written.

VDOT:

Virginia Department of Transportation

By _____
Its _____

COUNTY/CITY/TOWN:

[COUNTY/CITY/TOWN] OF _____,
VIRGINIA, a body corporate and politic

By _____
Its _____

ESCROW AGENT:

_____

APPENDIX IX
Virginia Department of Transportation
Industrial Access Program
Outline/Checklist

The purpose of the Industrial Access Program is to assist localities in providing adequate access to new or expanding industrial development sites. Adequate access, in consideration of the type and volume of traffic to be generated by the subject site, may require the construction of a new roadway, improvement of an existing roadway, or both to serve the qualifying development. The program is administered by VDOT under the authority of § 33.1-221 of the Code of Virginia.

FUNDING LIMITATIONS

These funds may be requested by the local form of government of counties, cities, and certain towns that receive highway maintenance payments under § 33.1-41.1 of the Code of Virginia.

The maximum unmatched allocation within any one fiscal year is $300,000. A supplement of up to $150,000 is available upon locality's match (dollar for dollar). Funding is dependent on the estimated cost of eligible portion of access road and anticipated eligible capital investment of sites served.

- ❑ Such supplemental funds shall be considered only when an *individual* project's estimated eligible costs exceed $300,000
- ❑ Funds may be allocated for construction of an access road project to an eligible site that is owned by a regional industrial facility authority, created pursuant to §15.2-6402 of the Code of Virginia, without penalty to the jurisdiction in which the site is located. This provision may be applied to one regional project per fiscal year in any jurisdiction, subject to the same funding limitations as prescribed for other individual projects.

TYPE OF PROJECT

- ❑ Qualifying Industry – (where it has been determined that a named industry is eligible and the industrial site does not have adequate access)
  - ❑ Determination by VDOT and VDBA (Dept. of Business Assistance)
  - ❑ Documentation of Eligible Capital Outlay – (figure 10% for purpose of justifying road costs)
  - ❑ Reimbursement based on actual project cost, not to exceed 10% of the documented eligible capital outlay of industry(s) served
- ❑ Bonded Project – (where site(s) is (are) determined not to have adequate access and the locality is willing to guarantee that eligible capital investment will occur warranting the use of the access road funds)
  - ❑ Determination by VDOT and VDBA (Dept. of Business Assistance)
  - ❑ Provision of bond by locality for 5 year period beginning with date of CTB

allocation

- ❑ Reimbursement based on eligible capital outlay (again, 10%) (established w/in 5 year bond period) of industry(s) served in relation to cost of project

REQUEST & PROJECT INFORMATION SUBMITTAL

- ❑ Coordination of locality's project request initiated through VDOT's Resident Engineer (then, District office and Secondary Roads Division)
  - ❑ Locality's governmental body provides resolution request
  - ❑ For a 'Qualifying Industry' project - Description of proposed company/development (i.e., investment, facilities, target dates for completion/operation, number of employees, products manufactured, etc.)
  - ❑ Description of project, anticipated traffic type and volume (with consideration toward adequacy of surrounding existing road system), anticipated funding source(s) and a detailed estimate of road project costs (eligible costs are to be based on a rural typical section design)
  - ❑ SERP – Please note that the State Environmental Review Process (SERP) must be conducted and completed prior to initiating work on all state-funded projects
  - ❑ Project administration (project design and construction-contract administration responsibilities)
  - ❑ Location map/plat delineating parcels to be served (project right of way to be certified by State Right of Way Director prior to expenditure of Industrial Access funds)

SECONDARY ROADS DIVISION REVIEW

- ❑ If appropriate, assemble information and recommend proposed project to CTB for consideration (CTB agenda is set 2 weeks prior to CTB meeting which is usually held on the 3rd Thursday of each month)

CTB REVIEW

- ❑ CTB's Access Roads and Ground Transportation Committee reviews for recommendation to CTB
- ❑ If acceptable, CTB allocates from the Industrial, Airport and Rail Access Fund

- ❑ Locality-VDOT Agreement – Required if project is to be administered by locality; may be necessary even if project is to be administered by VDOT

AIRPORT ACCESS POLICY
OF THE
COMMONWEALTH TRANSPORTATION B0ARD

Moved by Mr. Porter, seconded by Mr. Prettyman, that

WHEREAS, the General Assembly has from time to time amended Section 33.1-221 of the Code of Virginia (1950), relating to the fund for the cons~ction or irnprovement of access roads to industrial sites ard publicly-owned airports within the counties. cities. and towns of the Commonwealth; and

WHEREAS, the Secretary of Transportation initiated a strategic planning process known as VizBinia *Connectons* which included a study of Access Funds administered by the Department of Transponation to promote flexibility in the use of such funds for all modes of transportation and to enhance economic development throughout the Commonwealth; and

WHEREAS, a task force appointed by the Secretary of Transportation reviewed the rail, industrial, airport, and recreational access programs and recommended certain changes in the airport access program; and

WHEREAS, Section 33.1-221 of the Code of Virginia has been revised by Chapters 85 and 128 of the 1996 Acts of the General Assembly to change the eligibility for Airport Access Funding from only publicly owned airports to licensed, public use airports effective July 1, 1996; and

WHEREAS, the existing policy governing the use of this fund in providing access to airports was adopted some years ago and it is the sense of this Board that certain revisions and restatements of this policy is warranted.

NOW, THEREFORE, BE IT RESOLVED tbat the Commonwealth Transponation Board hereby rescinds the Airport Access Policy adopted July 16, 1981, and adopts the following policy to govern the use of funds available for access to airports pursuant to Section 33.1-221 of the Code of Virginia (1950), as amended:

1. The progam for implementation of this policy and the funding available for this program shall be designated respectively as the Airport Access Roads Program and the Industrial, Airport, and Rail Access Fund.

2. The use of Indusnial; Airport, and Rail Access Funds for airport access shall be limited to assisting in the financing of adequate access to a licensed, public use airport. Termination of access to a licensed, public use airport shall be at the property line of the airport.

3. No expenditure of Industrial, Airport, and Rail Access Funds shall be made for costs incurred prior to this Board's approval of an allocation from such fund. Costs incurred or contracts executed by or on bebalf of a local government before all parties sign any required local-state project agreement are the responsibility of the local government and will not be reimbursed from the Industrial, Airport, and Rail Access Fund.

4. Industrial, Airport, and Rail Access Funds shall be used only for the design and construction of the roadway, including preliminary environmenlal review and standard drainage and storm water facilities required solely by construction of the road. Industrial, Airport, and Rail Access Funds shall not be used for the acquisition of right of way, the adjustment of utilities, or the attainment of necessary environmental permits.

5. Eligible items in the design and construction of an airport access road shall be limited to those essential for providing an adequate roadway facility to serve traffic generated by the airport's operations. Ineligible items normally shall include such features as storm sewers, curb and gutters, and any pavement width in excess of tbat required to serve the traffic estimated to result from the development of the airport. Normally, a two-lane rural typical section shall be constructed but addidonal lanes will be considered if warranted by existing or projected traffic. A 30' pavement width on a rural typical section may be constructed in towns and cities maintaining their own street systems where the access road will consist of a new facility or an existing facility not presently eligible for highway maintenance payment under Section 33.141.1.

6. The governing body of a city, county, or town in which the proposed airport access road is located shall serve as the applicant and submit a formal resolution to request Industrial, Airport, and Rail Access Funds from this Board. A town whose streets are maintained under either Sections 33.1-79 or 33.1-82, Code of Virginia, shall file the applicadon through the governing body of the county in which it is located. The resolution of request shall include a commitment to provide without cost to the Industrial, Airport, and Rail Access Funds, the right of way, adjustment of utilities, and necessary environmental permits.

7. Not more than $450,000 ($300,000 umnatched and $150,000 matched dollar for dollar) of the Industrial, Airport, and Rail Access Funds may be used in any fiscal year to provide access for any one airpot. Local matching funds shall be provided from funds other than those administered by this Board.

8. The Department shall determine a location for the new access road and base the estimated cost on a roadway facility adequate for the anticipated traffic.

9. The Board will consult with and may rely on the recommendations of the Virginia Department of Aviation in determining the use of Industrial, Airport, and Rail Access Funds for airport access.

10. Industrial, Airport, and Rail Access Funds may be authorized only after all contingencies of this Board's allocation of funding to the project have been met for airport access.

BE IT FURTHER RESOLVED that this revised policy shall (i) become effective immediately with the exception that only publicly owned airports shall be eligible for funding prior to July 1, 1996 and (ii) does not in any way obviate the stipulations of the current or any future revisions to this Board's policy govermng the use of industrial access funds to industrial sites.

Motion Carried
April 18, 1996

GUIDE

to the

RECREATIONAL ACCESS PROGRAM

of the

Virginia Department of Transportation

Secondary Roads Division Memorandum SR-47-91

Richmond, Virginia July, 1991

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For further information, contact:

Resident Engineer Virginia Department
of Transportation

(See local telephone directory)

State Secondary Roads Engineer
Virginia Department of Transportation
1401 E. Broad Street Richmond,
Virginia 23219

Recreation Resources Bureau Manager

(804) 786-2746

Virginia Department of Conservation and
Recreation Division of Planning and Recreation
Resources
203 Governor Street Suite 326
Richmond, Virginia 23219

(804) 371-7898

VIRGINIA DEPARTMENT OF TRANSPORTATION

SECONDARY ROADS DIVISION

MEMORANDUM

Subject: RECREATIONAL ACCESS PROGRAM	Number: SR-47-91
Specific Subject: GUIDE TO THE RECREATIONAL ACCESS ROADS PROGRAM	Date: JULY , 1 9 9 1
Commonwealth Transportation Board Policy Adopted October 25, 1 9 8 9 and Code of Virginia S 33.1-223, 1 9 9 0	Supersedes: SR-42-86, dated February 20, 1 9 8 6
Directed To: LOCAL GOVERNMENTS DISTRICT ENGINEERS RESIDENT ENGINEERS	Signature: State Secondary Roads Engineer

This revised document was prepared to provide a comprehensive summary of the Recreational Access Program as established by the Code of Virginia and as governed by the policies of the Commonwealth Transportation Board. It is intended to serve as a reference for local jurisdictions and VDOT staff in the preparation and disposition of applications for program funding.

The document defines eligible projects, summarizes funding limitations, and describes the roles of the parties involved in the application and approval process. Appendices contain copies of the program's statutory authority, the Commonwealth Transportation Board's policy, and sample resolutions for local governing bodies.

All previous instructions regarding administrative procedures for recreational access projects are hereby superseded.

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TABLE OF CONTENTS

	Page
Introduction	1
Eligible Projects	
General	2
Recreational Access Roads	2
Bikeways	4
Funding Limitations	
Roads	5
Bikeways	5
Application Process	6
Approval Process	8
Appendices	
I Statutory Authority	11
II Recreational Access Policy of the Transportation Board	13
III Sample Resolutions	
Recreational Access Road	17
Combined Recreational Access Road/Bikeway	19
Separate Bikeway	21

INTRODUCTION

The purpose of the Recreational Access Program is to provide adequate access to or within publicly developed recreational areas or historic sites operated by the Commonwealth of Virginia, or by a local government or authority.

The program is administered by the Department of Transportation under the authority of Section 33.1-223 of the Code of Virginia, with designation, recommendation and concurrence by the Director of the Department of Conservation and Recreation. An annual appropriation of funds from the highway portion of the Transportation Trust Fund is designated by the Commonwealth Transportation Board for Recreational Access projects, with statutory limitations on the amount authorized per project.

Application for program funding must be made by resolution of the governing body of the jurisdiction in which the access road or bikeway is to be located. Project funding is allocated by resolution of the Commonwealth Transportation Board, and construction may be accomplished by the Department of Transportation or, where appropriate, by the locality under an agreement with the Department.

Roads constructed under this program become part of the primary or secondary state highway system, or of the local road system of the locality in which they are located. They also must be designated as scenic highways or Virginia byways. Bikeways constructed outside the right-of-way limits of access roads become the responsibility of the authority or agency maintaining the site which they serve.

ELIGIBLE PROJECTS

General

Construction, reconstruction, maintenance and improvement of roads and bikeways are eligible for Recreational Access funding. A road or bikeway constructed with Recreational Access funds must serve a publicly developed recreational area or historic site operated by a state agency, a locality, or a local authority (not a federal facility). No access road or bikeway may be constructed, reconstructed, maintained or improved on privately owned property.

Development of the site to be served by the road or bikeway must be complete or in progress, or assurance must be provided that such development will occur within a specified period. In addition, the site must be designated as a public recreational or historic area by the Director of the Department of Conservation and Recreation, and the Director must recommend construction of the access facility.

The program may provide, as deemed necessary, access to the site's entrance or to a logical focal point within the site. An access road and bikeway may be combined into a single facility.

It must be shown that the cost of constructing the facility is justified by the anticipated volume and type of traffic to be generated by the recreational or historic attraction. Evidence of sufficient public demand to support construction of the facility must also be provided.

Costs incurred in the development, design or construction of a Recreational Access facility prior to the allocation of funds by the Commonwealth Transportation Board are not eligible for reimbursement through this program. Right of way acquisition and adjustment of utilities costs are not eligible for reimbursement at any time and must be funded by the applicant or from other available sources.

Recreational Access Roads

Several important considerations should be kept in mind when proposing a Recreational Access road. Among these are:

1. Logical termini and alignment - The road should be located to provide the most direct, cost-effective access to the recreational area or historic site. It should end either at the entrance to the area or at the main focal point within its boundaries (e.g., parking lot, information center, administration building, camping area). The first point at which visitors would leave their automobiles generally defines the focal point.

If the existing road system does not provide adequate access to the park/historic site, the application must separately address the two specific segments involved: the proposed improvement to the existing road leading to the recreational facility and the proposed access facility within the recreational area itself.

A road alignment which would open adjacent land to residential or commercial development should be avoided. If the Recreational Access road must traverse privately owned property, efforts should be made to impose restrictions on such development through appropriate means such as zoning or deed restrictions. Also to be avoided, if possible, are alignments which involve railroad crossings or bridges.

2. Design - Pavement width will be only that required for expected traffic, usually 18 to 22 feet. Wider pavement may be included in the design, but the cost of the additional width must be paid by the locality. (NOTE: In cities and towns that maintain their streets, the pavement width must be 30 feet to qualify for maintenance payments). Additional width for turn movements may be included in program funding if fully warranted and documented.

   The program will fund a rural typical section, i.e. shoulders with ditches. Curb and gutter, storm sewer, and other amenities may be included in the design, but must also be provided at local expense.

   A design speed of 30 mph is normal for park roads, but a higher or lower design speed may be considered if justification is provided.

   A minimum right of way of 50 feet must be provided by the locality, at no cost to the Department. (In certain cases involving the improvement of existing roadways maintained by the Department, however, the cost of additional right of way may be funded from the Department's Improvement allocations to the system involved.) Lesser right of way width will be considered in areas of special concern.

3. Acceptance into Primary, Secondary or Local System - New roadways, upon completion, are opened to public use and are accepted into the appropriate system for maintenance. Recreational Access roads are normally designated as part of either the secondary or local road system, according to their location. In all counties except Arlington and Henrico, in towns not maintaining their own road systems, and in the former Nansemond County portion of the City of Suffolk, these roads may be added to the secondary system of state highways. In cities, in towns receiving maintenance payments, and in the Counties of Arlington and Henrico, the roads are taken into the road systems of these localities. In a few exceptional instances, it has been deemed appropriate to designate the new access facility as part of the primary system of state highways.

   Recreational Access roads are expected to be open to public use at all times. In certain cases, they may be closed during specified hours for security purposes. If maintained as part of the primary or secondary state highway system, a permit for closure must be issued by the Department of Transportation.

   No fee may be charged for the use of a roadway constructed with Recreational Access Funds.

4. Scenic Highway or Virginia Byway Designation - Any Recreational Access road constructed under this program must be designated as a scenic highway or a Virginia byway, and a commitment to such designation must be contained in the resolution from the local governing body. Either designation obligates the locality to employ all reasonable means, such as zoning, to protect the aesthetic and cultural value of the road.

Bikeways

Recreational Access bikeways, because of their special nature, warrant additional considerations:

1. Purpose - A Recreational Access bikeway is intended to serve the same purpose as an access road. That is, to provide access for cyclists to; a recreational or historic site, not to provide a recreational facility in itself. Like the access road, it should end at a logical focal point, normally the first place cyclists could park their bikes.

   It follows, then, that a proposed bikeway should either connect to an existing bikeway or, if none is present, it should be located in an area which generates a significant amount of bicycle traffic. Recreational or historic attractions in remote areas are not logical candidates for bikeway projects unless they are located on established bicycle routes.

2. Concept - A bikeway may be combined with a road as a single project, or it may be constructed as a separate facility. If independent bikeway access is deemed appropriate, it will be established on a separate right of way, which must be provided at no cost to the Department.

3. Design - The design of the bikeway facility must be in accordance with the Department's standards for bikeways.

4. Maintenance - A bikeway built within the right of way of an access road will be maintained as part of the road. Independent bikeways constructed outside the right of way limits of an access road must be regulated and maintained by the authority, agency or locality maintaining the site which they serve.

5. Zoning - A zoning ordinance must be in effect and the corridor for the proposed bikeway facility appropriately classified.

FUNDING LIMIITATIONS

The Recreational Access Program is funded through an annual appropriation. Up to $3 million may be available annually for the program. Except for amounts allocated but not yet spent for approved access projects, funds cannot be carried forward at the end of each fiscal year, so that the total amount available in any year is limited by the appropriation. Applications are considered on a first come, first served basis.

Funding limitations for qualified projects have been established by statute, and they are as follows:

Roads

State Facility - Not more than $400,000 may be allocated for an access road in any facility operated by a state agency.

Local Facility - Not more than $250,000 may be allocated for an access road operated by a locality or authority, with an additional $100,000 if matched on a dollar-for-dollar basis by the locality or authority from other than highway sources.

Bikeways

State Facility - Not more than $75,000 may be allocated to a bikeway operated by a state agency.

Local Facility - Not more than $60,000 may be allocated to a bikeway operated by a locality or authority, with an additional $15,000 if matched on a dollar-for-dollar basis by the locality or authority from other than highway sources.

APPLICATION PROCESS

Application for Recreational Access Funds may be made only by the governing body of the county, city or town in which the access road or bikeway is to be provided or maintained. The following preliminary steps should be observed in developing an application:

1. Develop a plan for the recreational area or historic site to the extent that, if it is not already established, its cost has been estimated and funding for its construction or expansion has been a.) appropriated, b.) included in an approved capital improvement plan, or c.) anticipated for a future year's capital improvement plan. Adequate assurance must be provided that the attraction will be developed and operational at the approximate time the access facility is proposed for completion.

2. Contact the Department of Conservation and Recreation for a preliminary opinion as to whether or not the proposed recreational area or historic site meets its criteria for official designation as such. This designation is a requisite for Recreational Access funding.

3. Contact the Department of Transportation's Resident Engineer. The Resident Engineer is the primary liaison between the Department and the applicant from the preliminary phase through project completion and should be consulted at an early stage for advice and assistance. The locality may request that the Department provide the design for the road. If the locality designs the Recreational Access facility, it must ensure that the road or bikeway design conforms to VDOT standards. Construction of the facility may be administered by the Department of Transportation or by the applicant through a local-state agreement.

Once the plan for development and funding of the recreational area or historic site is established and the preliminary road or bikeway design has been completed, the formal application process may be initiated. The following actions and documentation are required of the applicant:

1. Make an official request for Recreational Access funds by resolution of the local governing body. If a proposed access facility is located within more than one locality, a separate resolution will be required from each locality. Likewise, if the proposed facility is to be located in a town which does not maintain its own streets, the request from the Town Council should be concurred in by a separate resolution of the county Board of Supervisors. Sample resolutions are included in Appendix III.

2. Submit the following information to the Resident Engineer:

   a. Original or certified copy of resolution from the local governing body requesting Recreational Access funds for the project. The resolution must contain a guarantee to provide right of way and adjustment of utilities, if required, at no cost to the Recreational Access Fund. It must also provide for designation of the Recreational Access road as a "Virginia Byway." (See sample resolution in Appendix III).

   b. Site plan of park or historical site, showing proposed access road or bikeway.

   c. Description of existing and/or proposed park or historical site facilities.

   d. Estimated volume and nature of traffic to be generated by the recreational attraction/historic site.

   e. Amount and status of funding for construction, development or improvement of the recreational or historic attraction to be served by the proposed access facility (documentation of appropriation in current year, inclusion in capital improvement plan for future year, etc.).

   f. Description of the proposed access facility (design standards, location).

VDOT's Resident Engineer will determine the cost of constructing the proposed road or bikeway. (Recreational Access funds may not be used for the acquisition of right of way or the adjustment of utilities, and these costs must be funded by the applicant or from other available sources. Likewise, all costs above the maximum Recreational Access allocation and any costs considered ineligible for program funding must be borne by the applicant.)

The Resident Engineer will review the entire assembly and resolve any apparent problems before sending it forward.

APPROVAL PROCESS

The Resident Engineer will forward the request for funds through the District Administrator to the State Secondary Roads Engineer.

1. The District Administrator will review the application assembly for completeness, determine whether the proposed facility's location, scope and design are appropriate, and confirm the accuracy of cost estimates. The application will then be forwarded to the State Secondary Roads Engineer with a recommendation from the District Administrator as to whether or not the proposed facility should be provided with Recreational Access funds.

2. The State Secondary Roads Engineer will coordinate review of the application between the Department of Transportation and the Department of Conservation and Recreation. A site visit may be conducted, either jointly or independently, by both agencies. The applicant will be contacted if any details remain unresolved or if the proposed facility requires modification to meet eligibility criteria. If either agency finds that the proposal is not in accordance with the Recreational Access Program's intent or otherwise fails to meet its basic qualifications, the applicant will be notified.

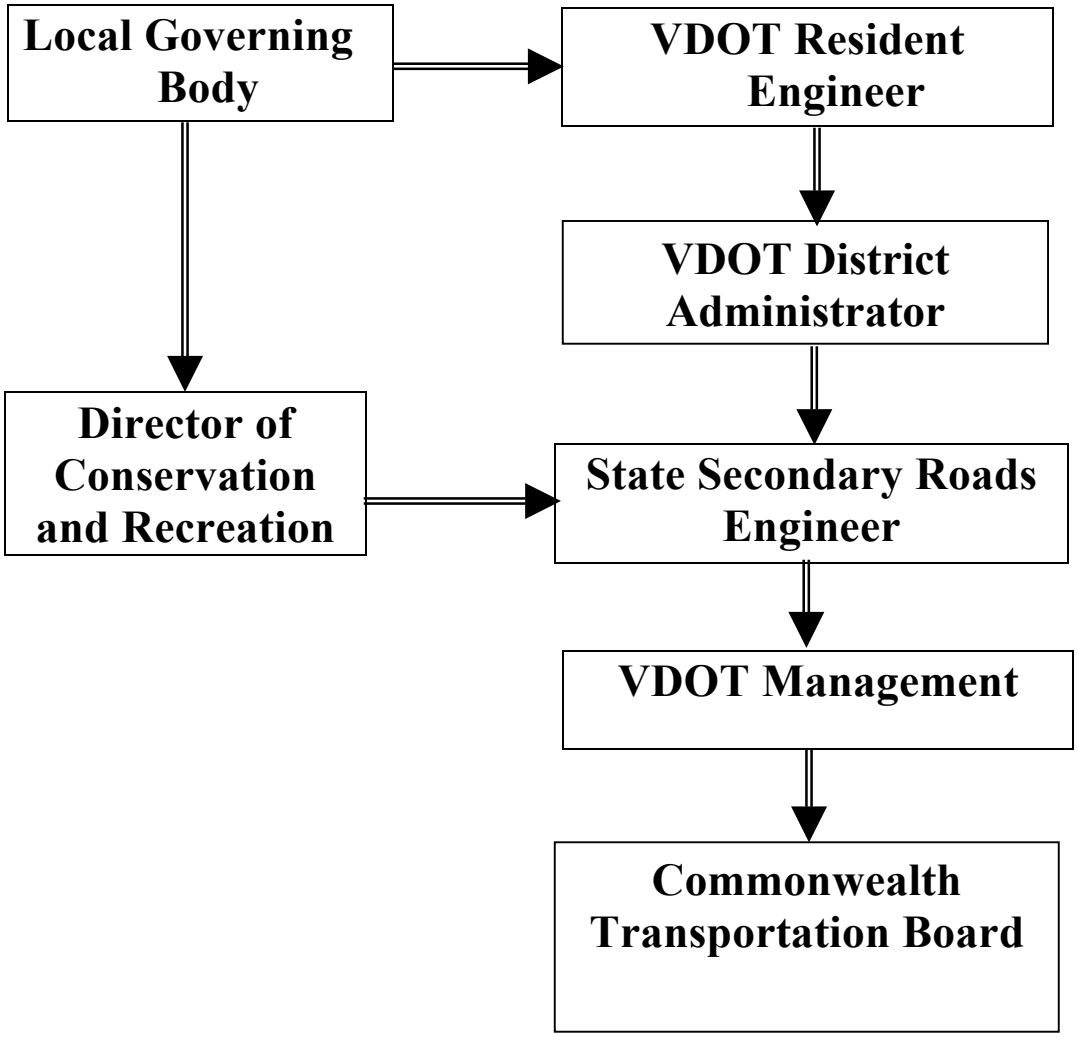
3. If all requirements are met, formal designation and approval of the access project will be requested from the Director of the Department of Conservation and Recreation. Subsequent to this action, a recommendation for funding will be . prepared by the State Secondary Roads Engineer for consideration by the Commonwealth Transportation Board. The Board may allocate funds for the project, subject to contingencies that are specified in the Board's resolution. The applicant will be notified of the Transportation Board's official action on the request. Upon allocation, the project is subject to all rules of design, right of way, scheduling for advertisement, bidding and construction of other similar projects administered by the Department of Transportation.

4. If a county, city or town desires to administer a project itself and the Department of Transportation concurs, the Department will prepare an appropriate local/state agreement covering respective responsibilities, schedules and payment of costs. Any cost incurred or contract executed by a local governing body or its agent before a local/state agreement is signed by all parties is the responsibility of the local governing body.

5. Expenditure of funds will be authorized by the Department when all contingencies of the Board's resolution have been satisfied. No program funding will be authorized until assurance is provided that the recreational area or historic site will be open for public use at approximately the same time that the access project is completed.

6. Once an access road or bikeway is completed and undergoes final inspection, it is taken into the appropriate system for maintenance (state primary, state secondary or local). A bikeway constructed on separate right of way is the maintenance responsibility of the locality or authority operating the site which it serves.

Recreational Access Roads Approval Process



APPENDIX I STATUTORY

AUTHORITY

Code of Virginia

§ 33.1-223. Fund for access roads and bikeways to public recreational areas and historical sites; construction, maintenance, etc., of such facilities.

A. The General Assembly finds and declares that there is an increasing demand by the public for more public recreational areas throughout the Commonwealth, therefore creating a need for more access to these areas. There are also many sites of historical significance to which access is needed.

The General Assembly hereby declares it to be in the public interest that access roads and bikeways for public recreational areas and historical sites be provided by using funds obtained from motor fuel tax collections on motor fuel used for propelling boats and ships and funds contained in the highway portion of the Transportation Trust Fund.

B. In order to provide equal matching of funds hereinafter appropriated, the Commonwealth Transportation Board shall, from funds allocated to the primary system, secondary system, or urban system of state highways, set aside the sum of $3 million initially. This fund shall be expended by the Board for the construction, reconstruction, maintenance or improvement of access roads and bikeways within counties, cities and towns. At the close of each succeeding fiscal year the Board shall replenish this fund to the extent it deems necessary to carry out the purpose intended, provided the balance in the fund plus the replenishment does not exceed the aforesaid $3 million.

C. Upon the setting aside of the funds as herein provided, the Commonwealth Transportation Board shall construct, reconstruct, maintain or improve access roads and bikeways to public recreational areas and historical sites upon the following conditions:

1. When the Director of the Department of Conservation and Recreation has designated a public recreational area as such or an historic area as such and recommends to the Commonwealth Transportation Board that an access road or bikeway be provided or maintained to that area;

2. When the Commonwealth Transportation Board pursuant to the recommendation from the Director of the Department of Conservation and Recreation declares by resolution that the access road or bikeway be provided or maintained;

3. When the governing body of the county, city or town in which the access road or bikeway is to be provided or maintained passes a resolution requesting the road; and

4. When the governing body of the county, city or town in which the bikeway is to be provided or maintained adopts an ordinance pursuant to Article 8 (§ 15.1-486 et seq.), Chapter 11, Title 15.1.

No access road or bikeway shall be constructed, reconstructed, maintained or improved on privately owned property.

D. Any access road constructed, reconstructed, maintained or improved pursuant to the provisions of this section shall become part of the primary system of state highways, the secondary system of state highways or the road system of the locality in which it is located in the manner provided by law and shall be designated as a scenic highway or byway as provided for in Article 5 (§ 33.1-62 et seq.), Chapter 1 of this title, and shall thereafter be constructed, reconstructed, maintained and improved as other roads in such systems. Any bikeway path constructed, reconstructed, maintained or improved pursuant to the provisions of this section which is not situated within the right-of-way limits of an access road which has become, or which is to become, part of the primary system of state highways, the secondary system of state highways, or the road system of the locality, shall, upon completion, become part of and be regulated and maintained by the authority or agency maintaining the public recreational area or historical site. It shall be the responsibility of the authority, agency, or locality requesting that a bicycle path be provided for a public recreational or historical site to provide the right-of-way needed for the construction, reconstruction, maintenance or improvement of the bicycle path if such is to be situated outside the right-of-way limits of an access road.

To maximize the impact of the Fund, not more than $400,000 of recreational access funds may be allocated for an access road in any facility operated by a state agency and not more than $250,000 for an access road for a facility operated by a locality or an authority with an additional $100,000 if supplemented on a dollar-for-dollar basis by the locality or authority from other than highway sources. Not more than $75,000 of recreational access funds may be allocated to any specific bikeway operated by a state agency and not more than $60,000 to a bikeway operated by a locality or an authority with an additional $15,000 if supplemented on a dollar-for-dollar basis by a locality or authority from other than highway sources.

The Commonwealth Transportation Board, with the concurrence of the Director of the Department of Conservation and Recreation, is hereby authorized to make regulations to carry out the provisions of this section. (Code 1950, § 33-136.3; 1966, c. 484; 1968, c. 221; 1970, c. 322; 1975, c. 362; 1982, c. 643; 1984, c. 739; 1989, cc. 305,656; 1990, c. 689.)

APPENDIX II

RECREATIONAL ACCESS POLICY

of the

COMMONWEALTH TRANSPORTATION BOARD

Moved by Mr. Musselwhite, seconded by Dr. Thomas, that

WHEREAS, Section 33.1-223 of the Code of Virginia providing for access roads to public recreational areas and historical sites was amended and reenacted by the 1989 session of the General Assembly; and .

WHEREAS, the Commonwealth Transportation Board, with the concurrence of the Director of Conservation and Historic Resources, is authorized by this section of the Code to make certain regulations to carry out the provisions of the law; and

WHEREAS, it is deemed necessary by both agencies to amend the previously adopted policy on the use of such funds.

NOW, THEREFORE, BE IT RESOLVED that the Commonwealth Transportation Board hereby rescinds its previous policy adopted on February 20, 1986, and adopts the following policy governing the use of recreational access funds, which new policy has been concurred in by the Director of Conservation and Historic Resources pursuant to Section 33.1-223 of the Code of Virginia, as amended:

The Commonwealth Transportation Board adopts this policy to govern the use of recreational access funds pursuant to Section 33.1-223, of the Code of Virginia, as amended. The statute provides that the concept of access be applicable to facilities for motor vehicles and bicycles, whether in separate physical facilities or combined in a single facility. In the event independent bikeway access is deemed appropriate and justified, the access will be established on a separate right of way independent of motor vehicle traffic and specifically designated to provide for bicycle access to the recreational area or historical site as a connecting link between an existing bikeway or otherwise recognized bicycle route.

The following items are incorporated in this policy:

1. The use of recreational access funds shall be limited to the purpose of providing proper access to or within publicly developed recreational areas or historical sites where the full provisions of Section 33.1-223 have been complied with.

2. Recreational access funds shall not be used for the acquisition of right of way or

adjustment of utilities. These funds are to be used only for the actual engineering and construction of a road or bikeway facility adequate to serve traffic generated by the public recreational area or historical site.

3. For each project, the identified need or demand for the access facilities will be analyzed and mutually agreed upon between the Commonwealth Transportation Board and the Director of Conservation and Recreation. The decision to construct or improve an access facility to a public recreational area or historical site will be based upon the following parameters:

   A. The cost of construction in relation to the volume and nature of traffic to be generated as a result of the attraction.

   B. Identification of sufficient public demand to support the construction of the access facilities.

   C. In the consideration of any bikeway request as described herein, one of these features should be applicable:

      (1) The bikeway should serve a connecting route of established bikeway usage in the recreational area or historical site.

      (2) The recreational area or historical site is located within an area of substantial bicycle traffic generation.

   D. Type of protective zoning in effect (applicable only when the request involves a bikeway facility).

   For each project, the identified need or demand for the access facilities will be analyzed and mutually agreed upon between the Commonwealth Transportation Board and the Director of Conservation and Historic Resources.

4. Recreational access funds will not be considered for the construction, reconstruction, maintenance, or improvement of recreational access roads or bikeways until such time as adequate assurance has been given that the recreational facility is already in operation or will be developed and operational at the approximate time of the completion of the road or bikeway.

5. Motor vehicle access and/or bikeway access may be considered as either combined facilities or separate entities. Funding limitations have been established by statute, for qualified projects, as follows:

   Not more than $400,000 of recreational access funds may be allocated for an access road in any facility operated by a state agency and not more than $250,000

for an access road for a facility operated by a locality or an authority with an additional $100,000 if supplemented on a dollar-for-dollar basis by the locality or authority from other than highway sources. Not more than $75,000 of recreational access funds may be allocated to any specific bikeway operated by a state agency and not more than $60,000 to a bikeway operated by a locality or an authority with an additional $15,000 if supplemented on a dollar-for-dollar basis by a locality or authority from other than highway sources.

6. Prior to the formal request for the use of recreational access funds to provide access to public recreational areas or historical sites, the location of the access road or bikeway shall be submitted for approval by the engineers of the Department of Transportation and to the staff of the Director of Conservation and Recreation. In making recommendations, personnel of the Department of Transportation and the Department of Conservation and Recreation shall take into consideration the cost of the access road or bikeway as it relates to the location, the possibility of any future extension to serve other public recreational areas or historical sites, and the anticipated future development of the area traversed.

7. The use of recreational access funds shall be limited to the construction or reconstruction of motor vehicle access roads or bikeway access to publicly owned recreational areas or historical sites or to officially designated major development units within such areas or sites.

   The beginning and termination of the recreational access facility shall be at logical locations. Termination of the access shall be the park or historical site entrance or may be within. If within, the main focal point of interest shall be construed as the termination at which "adequate access" is judged to be provided for the facility. This may be an administration building, information center, auditorium, stadium, parking lot, picnic area, camping area, etc., depending upon the character of the recreational area. Generally, it would be interpreted as the first point at or within the recreational area or historical site that visitors would leave their automobiles or bikes and commence to utilize some feature of the facility.

8. It is the intent of the Commonwealth Transportation Board and the Director of Conservation and Recreation that recreational access funds not be anticipated from year to year.

MOTION CARRIED

October 25, 1989

APPENDIX III

SAMPLE RECREATIONAL ACCESS RESOLUTIONS

1. Recreational Access Road

2. Combined Recreational Access Road/Bikeway

3. Separate Bikeway

SAMPLE RESOLUTION

(RECREATIONAL ACCESS ROAD)

BOARD OF SUPERVISORS/ CITY OR TOWN COUNCIL

Date _____

WHEREAS, the _____ (Park or Historical Site,) is owned and is to be developed by the (County/City/Town) of _____as a recreational facility serving the residents of_____ (County/City/Town) and adjoining localities; and

WHEREAS, the facility is in need of adequate access; and

WHEREAS, the procedure governing the allocation of recreational access funds as set forth in Section 33.1-223 of the Code of Virginia requires joint action by the Director of the Department of Conservation and Recreation and the Commonwealth Transportation Board; and

WHEREAS, a statement of policy agreed upon between the said Director and Board approves the use of such funds for the construction of access roads to publicly-owned recreational areas or historical sites; and

WHEREAS, it appears to the (Board/Council) that all requirements of the law have been met to permit the Director of the Department of Conservation and Recreation to designate the _____ Park as a public (recreational facility/historical site) and further permit the Commonwealth Transportation Board to provide funds for access to this public recreation area in accordance with Section 33.1-223 of the Code of Virginia; and

WHEREAS, the right of way of the proposed access road is provided by the County/City/Town of _____at no cost to the Recreational Access Fund; and

WHEREAS, the (Board/Council) acknowledges that, pursuant to the provisions of Section 33.1-223 of the Code of Virginia, this road shall be designated a "Virginia Byway" and recommends the Commonwealth Transportation Board, in cooperation with the Director of the Department of Conservation and Recreation, take the appropriate action to implement this designation. Further, the (Board/Council) agrees, in keeping with the intent of Section 33.1-63 of the Code of Virginia, to use its good offices to reasonably protect the aesthetic or cultural value of this road.

NOW, THEREFORE BE IT RESOLVED, that the (Board of Supervisors/City/Town Council) of _____ hereby requests the Director of the Department of Conservation and Recreation to designate the _____Park as a public (recreational

area/historical site) and to recommend to the Commonwealth Transportation Board that recreational access funds be allocated for an access road to serve said park; and

BE IT FURTHER RESOLVED, that the Commonwealth Transportation Board is hereby requested to allocate the necessary recreational access funds to provide a suitable access road as hereinbefore described.

_____

County Administrator/
City/Town Manager

_____ SAMPLE RESOLUTION

(COMBINED RECREATIONAL ACCESS ROAD/BIKEWAY)

BOARD OF SUPERVISORS/ CITY OR TOWN COUNCIL

Date

WHEREAS, the_____ (Park or Historical Sited is owned and is to be developed by the (County/City/Town) of_____ as a recreational facility serving the residents of_____(County/City/Town) and adjoining localities;, and

WHEREAS, the facility is in need of adequate vehicular and bicycle access; and

WHEREAS, the procedure governing the allocation of recreational access funds as set forth in Section 33.1-223 of the Code of Virginia requires joint action by the Director of the Department of Conservation and Recreation and the Commonwealth Transportation Board; and

WHEREAS, a statement of policy agreed upon between the said Director and Board approves the use of such funds for the construction of access facilities to publicly-owned recreational areas or historical sites; and

WHEREAS, the (Board/Council) has duly adopted a zoning ordinance pursuant to Article 8 (Section 15.1-486 et seq, Chapter 11, Title 15.1 of the Code of Virginia; and

WHEREAS, it appears to the (Board/Council) that all requirements of the law have been met to permit the Director of the Department of Conservation and Recreation to designate the _____ Park as a public (recreational facility/historical site) and further permit the Commonwealth Transportation Board to provide funds for access to this public recreation area in accordance with Section 33.1-223 of the Code of Virginia; and

WHEREAS, the right of way of the proposed access road and bikeway is provided by the (County/City/Town) of _____ at no cost to the Recreational Access Fund; and

WHEREAS, the (Board/Council) acknowledges that, pursuant to the provisions of Section 33.1-223 of the Code of Virginia, this road and bikeway shall be designated a "Virginia Byway" and recommends the Commonwealth Transportation Board, in cooperation with the Director of the Department of Conservation and Recreation, take the appropriate action to implement this designation. Further, the (Board/Council) agrees, in keeping with the intent of Section 33.1-63 of the Code of Virginia, to use its good offices to reasonably protect the aesthetic or cultural value of this road and bikeway.

NOW, THEREFORE BE IT RESOLVED, that the (Board of Supervisors/City/Town Council) of_____ hereby requests the Director of the Department of Conservation and Recreation to designate the_____ Park as a public (recreational area/historical site) and to recommend to the Commonwealth Transportation Board that recreational access funds be allocated for an access road and bikeway to serve said park; and

BE IT FURTHER RESOLVED, that the Commonwealth Transportation Board is hereby requested to allocate the necessary recreational access funds to provide a suitable access road and bikeway as hereinbefore described.

_____
County Administrator/
City/Town Manager

SAMPLE RESOLUTION

(SEPARATE BIKEWAY)

BOARD OF SUPERVISORS/ CITY OR TOWN COUNCIL

Date _____

WHEREAS, the_____ (Park or Historical Site) is owned and is to be developed by the (County/City/Town) of _____as a recreational facility serving the residents of _____ (County/City/Town) and *adjoining* localities; and

WHEREAS, the facility is in need of adequate bicycle access; and

WHEREAS, the procedure governing the allocation of recreational access funds as set forth in Section 33.1-223 of the Code of Virginia requires joint action by the Director of the Department of Conservation and Recreation and the Commonwealth Transportation Board; and

WHEREAS, a statement of policy agreed upon between the said Director and Board approves the use of such funds for the construction of access facilities to publicly-owned recreational areas or historical sites; and

WHEREAS, the (Board/Council) has duly adopted a zoning ordinance pursuant to Article 8 (Section 15.1-486 et sea), Chapter 11, Title 15.1 of the Code of Virginia; and

WHEREAS, it appears to the (Board/Council) that all requirements of the law have been met to permit the Director of the Department of Conservation and Recreation to designate the _____Park as a public (recreational facility/historical site) and further permit the Commonwealth Transportation Board to provide funds for access to this public recreation area in accordance with Section 33.1-223 of the Code of Virginia; and

WHEREAS, the right of way of the proposed bicycle access is provided by the (County/City/Town) of _____ at no cost to the Recreational Access Fund; and

WHEREAS, the (Board/Council) acknowledges that, pursuant to the provisions of Section 33.1-223 of the Code of Virginia, this bikeway, once constructed, shall be regulated and maintained by the (County/City/Town/Operating Authority) [if bikeway constructed as separate facility].

NOW, THEREFORE BE IT RESOLVED, that the (Board of Supervisors/City/Town Council) of _____ hereby requests the Director of the Department of Conservation

and Recreation to designate the _____Park as a public (recreational area/historical site) and to recommend to the Commonwealth Transportation Board that recreational access funds be allocated for a bikeway to serve said park; and

BE IT FURTHER RESOLVED, that the Commonwealth Transportation Board is hereby requested to allocate the necessary recreational access funds to provide a suitable bikeway as hereinbefore described.

_____

County Administrator/
City/Town Manager

VIRGINIA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

GUIDELINES FOR USE OF

PROPRIETARY SIGNAL CONTROLLERS AND CABINETS

I. The following procedure is to be used in making public interest findings relative to requests from Municipalities to stockpile proprietary (Brand Name) signal controllers and cabinets, with Federal participation, for installation by contract:

A. The following must be furnished by the Municipality making the request:

1. Number of signalized intersections (fixed-time or traffic actuated, as appropriate) in the Municipality.

2. Number of signalized intersections (fixed-time or traffic actuated, as appropriate) in the Municipality controlled by the desired proprietary controller.

3. Number of specific controller(s) and cabinet(s) (Brand name and model) to be stockpiled for a specific project.

4. Statement of whether proposed stockpiled controller(s) and cabinet(s) will be interconnected to existing signal system. Give description of that system.

5. Statement that present maintenance personnel have been predominantly trained in the desired proprietary controller.

6. Statement that present maintenance equipment is designed to service the desired proprietary controller.

7. Cost estimate for each particular controller and cabinet desired and statement that same will be obtained by means which will result in a cost equal to or less than the acceptable market value at the time of purchase.

B. Fixed-time controllers and traffic actuated controllers will be considered separately and, in order for an affirmative public interest finding to be made, the following conditions must be met:

1. All the information required in Item I.A. must be furnished.

2. The major number (at least 75%) of existing installations in Item I.A.1. must be of the same brand as that desired.

3. The number of units to be stockpiled for the specific project is limited to a few installations, dependant upon individual consideration by the Department of location,

distances between installations, interconnection coordination, etc., and which will not constitute a totally new traffic control system or subsytem.

II. The information required in Item I.A. is to be submitted by the municipality through appropriate channels to the Urban Division. The Urban Division will review the information submitted, with necessary assistance from Traffic and Safety Division, and in the event the conditions in Item I.B. are met, will make a recommendation to the Construction Division concerning the public interest finding. Copies of supporting data must be attached to the recommendation.

The Construction Division will review the recommendation and supporting data and make a public interest finding accordingly:

A. On Certification Acceptance (CA) projects, the files will be documented by letter, with copies to Urban, Traffic and Safety, Location and Design and Fiscal and Accounting Divisions.

B. On non-CA projects, affirmative public interest findings will be submitted by the Construction Division to the FHWA, requesting their concurrence. Copies of the request will be transmitted to Urban, Traffic and Safety, Location and Design, and Fiscal and Accounting divisions. Copies of the FHWA response will be transmitted to the same Divisions.

III. The Construction Division will incorporate a special provision in the proposal documents for the project which advises the Contractor of the specific controller and cabinet which will be furnished by the Municipality and is to be installed by him at project expense.

IV. Controllers and cabinets purchased and stockpiled by the Municipality will be at the expense of the Municipality. In the event of an affirmative public interest finding and upon installation by the Department's contractor of the specified equipment, the Municipality will bill the Department, through the normal billing process, for 100% of the receipted invoice price. (District personnel will ensure that the specific equipment installed is that for which the invoice is submitted). The Department will pay the receipted invoice price and will bill the Municipality for their share of the cost through the normal billing process. Accordingly, the FHWA will be billed for their share of the cost.

The total amount of cost increases which occur as a result of changing controller brands or wiring after award of the contract and at the request of a Municipality will be borne by the Municipality.

October 18, 1976

Guidelines for Use of Proprietary
Signal Controllers and Cabinets

MEMORANDUM

TO: Mr. J. G. Ripley

The attached copy of the subject guidelines has been amended to include Virginia Department of Highways and Transportation in the title, incorporate the phrase in Item I.A.3 which was inadvertently left out in our transmittal to the FHWA, and to add the date on which we received FHWA approval of the guidelines.

We are also attaching a suggested format, one blank and one completed example, for your consideration as a means by which a Municipality could furnish the information necessary for making a public interest finding without a lot of unnecessary words. While we are not making a recommendation that this form be furnished the Municipalities, our task of making a public interest finding would be made easier if the information were furnished to us in a similar format.

There are two areas in which we would appreciate some assistance from you in your transmittal of Municipality requests. The first is with respect to the estimated cost submitted. An indication from you as to whether such cost is in line with the current list price would be helpful. Perhaps this could be furnished to you by the Traffic and Safety Division. The second area relates to the number of controllers which the Municipality requests to purchase and stockpile. In the event the request is for more than two controllers, we would need some guidance in making our public interest finding.

We will be happy to discuss this matter further with you if you so desire.

/original signed by/
F. L. Burroughs
Construction Engineer

JGGM/ef
cc: Mr. W. L. Brittle, Jr.
Mr. R. G. Corder
ATTN: Mr. S. M. Gedney
Mr. J. P. Mills, Jr.
ATTN: Mr. W. C. Nelson, Jr.

SAMPLE

Project No. _____

_____

Subject: Request to Purchase and Stockpile Proprietary Signal Equipment

Mr. J. G. Ripley
Urban Engineer
Virginia Department of Highways and Transportation
1221 East Broad Street
Richmond, Virginia 23219

Dear Mr. Ripley:

We hereby request to be permitted to purchase and stockpile the following proprietary signal controller(s) and cabinet(s) for future installation on the above project by the Virginia Department of Highways and Transportation's contractor:

No.	Brand Name & Model Controller	Brand Name & Model Cabinet	Estimated Cost

The following information is furnished in accordance with the Virginia Department of Highways and Transportation Guidelines for Use of Proprietary Signal Controllers and Cabinets:

1. No. of signalized intersections in the Municipality
   Pre-timed _____
   Traffic Actuated _____
2. No. of signalized intersections controlled by _____ controllers
   Pre-timed _____
   Traffic Actuated _____
3. The _____controller(s) will/will not be interconnected to existing signal system.
   Description of existing system, if to be interconnected (brand of Master Controller, brand(s) of Local Controllers): _____
   _____
4. Our present maintenance personnel have been predominantly trained in _____ controllers.
5. Our present maintenance equipment is designed to service _____ controllers.
6. The equipment for which this request is made will be obtained by means which will result in a cost equal to or less than the acceptable market value at the time of purchase.

Sincerely,

EXAMPLE

Project No. U000-186-105, C-501

Subject: Request to Purchase and Stockpile Proprietary Signal Equipment

Mr. J. G. Ripley
Urban Engineer
Virginia Department of Highways and Transportation
1221 East Broad Street
Richmond, Virginia 23219

Dear Mr. Ripley:

We hereby request to be permitted to purchase and stockpile the following proprietary signal controller(s) and cabinet(s) for future installation on the above project by the Virginia Department of Highways and Transportation's contractor:

No.	Brand Name & Model Controller	Brand Name & Model Cabinet	Estimated Cost
1	Stopengo Signal XG10	Stopengo Signal C90	$600.00

The following information is furnished in accordance with the Virginia Department of Highways and Transportation Guidelines for Use of Proprietary Signal Controllers and Cabinets:

1. No. of signalized intersections in the Municipality
   Pre-timed _____
   Traffic Actuated 26
2. No. of signalized intersections controlled by Stopengo Signal controllers
   Pre-timed _____
   Traffic Actuated 23
3. The Stopengo Signal XG10 controller(s) will/will not be interconnected to existing signal system.
   Description of existing system, if to be interconnected (brand of Master Controller, brand(s) of Local Controllers): _____
4. Our present maintenance personnel have been predominantly trained in Stopengo Signal controllers.
5. Our present maintenance equipment is designed to service Stopengo Signal controllers.
6. The equipment for which this request is made will be obtained by means which will result in a cost equal to or less than the acceptable market value at the time of purchase.

Sincerely,

STATE FUNCTIONAL CLASSIFICATION SYSTEM
FOR URBAN HIGHWAYS POLICY
(includes discussion of Federal Functional System)

1. A State Functional Classification System has been developed for urban roads and streets in cities and towns eligible to receive street payments under Section 33.1-41.1 of the Code of Virginia. This system will be reviewed and re-designated every ten years along with the periodic reevaluation of the Federal Functional Classification System.

2. The state system will consist of two categories:

   a. Arterial (Principal Arterial and Minor Arterial)
   b. Collector/Local

3. The Transportation Planning division (TPD) of the Virginia Department of Transportation will assign the appropriate State Functional Classification to urban roadways and streets. TPD will generally follow the Federal Highway Administration guidelines as presented in the most recent publication of Highway Functional Classification, Concepts, Criteria, and Procedures. The state system will parallel the federal system as much as possible with the following exceptions (see Table 5):

   a. An existing year will be used rather than a future year.
   b. Non-existing highways will not be considered in the state system.
   c. Proposed new location highways that are included in the federal system will be removed. An existing facility(ies) that is to be replaced by the proposed new highway and/or primarily serves the traffic that will use the new facility may have its state classification changed to correspond to the federal classification for the new facility. The classifications will revert back to the original federal classifications when the new location facilities are opened to traffic.
   d. The percentage guidelines in the above referenced FHWA publication are statewide. Each municipality may not fall within the percentages for a particular functional classification, but we need to strive for equality in each area.
   e. Those facilities that qualify as major collector in the federal system in areas of under 5,000 population will be functionally classified in the state system as an Arterial.

4. The state system will include all existing highways regardless of maintenance responsibility for functional classification purposes only. These will include interstate highways, state maintained highways, toll facilities, city/town streets, etc. For street payment purposes, all interstates, toll facilities, and state maintained roads will be excluded from lane mileages eligible for payment.

5. The Urban Division will be responsible for obtaining the Highway Board's approval for any change in functional classification centerline mileage which effects the street payments.

6. The following procedures will be utilized when municipalities request changes to the State Functional Classification System eligible for street payments.

a. The municipality will submit to the appropriate VDOT Resident Engineer, on VDOT form (U-2), changes to the State Functional Classification System. The request should include council resolutions and appropriate maps.
b. The Resident Engineer will check and sign each form verifying the accuracy of the data and will transmit the forms, resolutions, and maps to the Urban Division.
c. The Urban Division will transmit the forms to TPD for determination of the appropriate state functional classification of each highway sections. TPD will then execute and return the forms to the Urban Division.
d. If needed, an MPO resolution should be obtained by the Municipality.
e. The Commonwealth Transportation Board will be requested by the Urban Engineer to approve the changes in the State Functional Classification System centerline mileage developed by TPD.
f. The Urban Division will have the official State Functional Classification System maps and inventory log revised once Board approval is received.

TABLE 5
HIGHWAY FUNCTIONAL CLASSIFICATION
FEDERAL SYSTEM/STATE SYSTEM

Area Size	Federal Classification	State Classification
Urbanized (Population greater than 50,000)	1. Principal Arterial 2. Minor Arterial 3. Collector 4. Local	Arterial (Principal) Arterial (Minor) Collector Local
Urban (Population 5,000 – 50,000)	1. Principal Arterial 2. Minor Arterial 3. Collector 4. Local	Arterial (Principal) Arterial (Minor) Collector Local
Rural (Population less than 5,000)	1. Principal Arterial 2. Minor Arterial 3. Major Collector 4. Minor Collector 5. Local	Arterial (Principal) Arterial (Minor) Arterial (Minor) Collector Local

VIRGINIA DEPARTMENT OF TRANSPORTATION

LOCATION AND DESIGN DIVISION

INSTRUCTIONAL AND INFORMATIONAL MEMORANDUM

GENERAL SUBJECT: BOARD POLICIES ON PARTICIPATION BY TOWNS, CITIES AND OTHERS	NUMBER: IIM-LD-146.1
SPECIFIC SUBJECT:	DATE: MARCH 23, 1988
	SUPERSEDES: LD-83 (D) 146
DIVISION ADMINISTRATOR APPROVAL: *E. C. Cochran, Jr.*	

Attached for your information and use is the policy revision, pertaining to state and local participation in the cost of right of way, sidewalks, utility adjustments, and storm sewers on improvements to the state's highway systems, that was adopted by the Commonwealth Transportation Board on February 18, 1988, and became effective upon adoption

Section 1.00 of this policy is applicable to the SECONDARY SYSTEM PROJECTS IN COUNTIES AND TOWNS OF UNDER 3,500 POPULATION. This revision provides the following principal changes on secondary system projects:

- Permits the right of way cost for sidewalks, where justified, to be borne by secondary construction allocations for the county.

- Where the Department determines the utilization of curb and gutter project's construction as the most economical design, the cost of the necessary storm sewer and appurtenances may be borne by secondary construction allocations for the county.

- Required right of way acquisition costs for projects within towns operating under Sections 33.1-79 and 33.1-82, Code of Virginia, may be provided from the secondary construction allocations for the county, in the same manner as previously permitted for projects situated beyond the corporate limits of such towns.

- All justification and/or design determination studies are to be documented in the project file.

Section 2.00 of this policy is applicable to the PRIMARY AND URBAN SYSTEMS WITHIN THE CORPORATE LIMITS OF CITIES AND TOWNS operating under the provisions of Sections 33.1-23.2, 33.1-23.3 and 33.1-44. Code of Virginia, as amended. The revision provides the following principal changes:

- It provides a uniform method for determining drainage participation costs within incorporated cities and towns without regard to population.

- Where storm sewer outfalls are constructed outside of the normal right of way limits and deemed necessary for adequate project drainage, the cost will be a part of the normal project rather than figured on a run-off ratio basis, provided none of the storm water conveyed is diverted from another watershed.

- Provides clarification that all storm sewers and outfalls constructed outside the normal right of way limits and deemed beyond that necessary to adequately drain the project will be financed on a run-off ratio basis.

Adopted by the Commonwealth Transportation Board of February 18, 1988.

POLICY FOR STATE PARTICIPATION IN THE COST OF RIGHT OF WAY, SIDEWALKS AND STORM SEWERS IN COUNTIES, TOWNS AND CITIES

WHEREAS, the Commonwealth Transportation Board has previously adopted a policy for state and local participation in the costs of right of way, sidewalks, utility adjustments, and storm sewers on projects in cities, towns, and counties; and

WHEREAS, changes in conditions, including revisions to the statutes of Virginia, make it advisable to amend certain provisions of this policy;

NOW, THEREFORE, BE IT RESOLVED, that the attached "Policy for State Participation in the Cost of Right of Way, Sidewalks and Storm Sewers in Counties, Towns and Cities" on Secondary System projects in counties and towns of under 3,500 population, and on Urban and Primary System projects within the corporate limits of cities and towns is hereby adopted; and

BE IT FURTHER RESOLVED, that the Board's policies – adopted on August 18, 1966 and September 21, 1978, be and hereby are rescinded

1.00 SECONDARY SYSTEM PROJECTS IN COUNTIES AND IN TOWNS OF UNDER 3,500 POPULATION.

1.01 The provisions of this section apply to the system of state highways in the several counties of the state as authorized by Section 33.1-67, Code of Virginia, as amended; and those within the corporate limits of towns of less than 3,500 population which operate under the provisions of Sections 33.1-79 and 33.1-82, Code of Virginia, as amended.

1.02 Where new sidewalks are desired and justified by traffic studies or otherwise determined by the Department as required for pedestrian safety, all right of way necessary for the construction of the sidewalks may be borne by secondary construction funds allocated for use in the county.

1.03 Where new sidewalks are desired and justified by traffic studies, one-half the construction cost of new sidewalks shall be borne by secondary construction funds allotted for use in the county and one-half from funds other than highway funds. However, where the contemplated improvement requires the relocation of existing sidewalks, these shall be replaced and the total cost shall be borne by secondary construction funds allocated for use in the county.

1.04 Existing storm sewers shall be relocated or replaced at no cost to others; secondary construction funds allocated for use in the county shall bear 100 percent of the cost.

1.05 Where the construction of new curb and gutter is determined by Department engineers to be the most economical design, the cost of new storm sewers and appurtenances such as drop inlets, manholes, etc., may be borne by secondary construction funds allocated for use in the county, provided none of the storm water to be conveyed is diverted from another watershed.

1.06 Where the construction of curb and gutter within the right of way limits is desired, or is necessary for the development of adjacent property, but is not deemed by Department engineers to be the most economical design, the cost of storm sewers and appurtenances (drop inlets, manholes and similar items) shall be financed from secondary construction funds and other sources on the basis of run-off ratios and percentages of participation as indicated below:

State: Run-off from within right of way, 100%. Run-off from areas outside the road right of way and within the watershed common to the project, 25%.

Others: Run-off from areas outside the road right of way and within the watershed common to the project, 75%.

1.07 Diverted drainage from water sheds not common to the project shall be financed from secondary construction funds and other sources on the run-off ratios and percentages of participation as indicated below:

State: Run-off from the state's right of way within the area of the diverted watershed, 100%

Others: Run-off from all areas in the diverted watershed, exclusion of state right of way, 100%

1.08 All storm sewer outfalls that are found necessary or desirable shall be financed from secondary construction funds and other sources on the run-off ratios and percentages of participation as indicated below:

State: Run-off from the state's right of way within the area being drained, 100%

Others: Run-off from all areas other than the state's right of way in the area being drained, 100%

1.09 Where, through zoning and development control ordinances, the local governing body requires participation in the off-site drainage and where their plans from an overall standpoint reasonably conform to the above-established policy, the local governing body's plan shall become the Transportation Board's policy for that locality.

1.10 The adjustment of utilities necessitated by the construction of sidewalk or storm sewer will be borne by secondary construction funds, except where the utilities are located on public property which has been dedicated or acquired for street or road purposes, including uses incidental thereto, or where there are franchise or other provisions where by the utility owner is required to bear the expense of such relocation of adjustment.

1.11 Unless otherwise specified by state statute or policy of the Commonwealth Transportation Board, all other right of way required for improvements to secondary system shall be acquired by purchase, gift, or power of eminent domain and cost thereof financed from secondary construction funds allocated for use in the county.

2.00 URBAN AND PRIMARY SYSTEM PROJECTS WITHIN THE CORPORATE LIMITS OF CITIES AND TOWNS

2.01 The provisions of this sections apply to improvements in cities and towns for which construction funds, pursuant of Sections 33.1-23.2, 33.1-23.3 and 33.1-44, Code of Virginia, as amended, are allocated.

2.02 All storm sewers, both parallel and transverse and all appurtenances, such as drop inlets, manholes, etc., that fall within the right of way limits of urban improvement or construction projects on exiting or new locations and are considered necessary for adequate project drainage by Department engineers will be financed at the percentage required by law for the construction of the project; provided none of the storm water to be conveyed is diverted from another watershed.

2.03 All storm sewers and outfalls constructed outside of the normal right of way limits of urban projects that are considered by Department engineers as necessary for adequate project drainage will be financed at the percentage required by law for the construction of the project; provided none of the storm water to be conveyed is diverted from another watershed.

2.04 All storm sewers and outfalls constructed outside of the normal right of way limits of urban projects that are considered by Department engineers as beyond that needed to adequately drain the highway project shall be financed on a run-off ratio basis between federal and/or state funds and city or town funds.

2.05 Whenever parallel storm sewer, manholes, etc., within an urban project or outfalls beyond the right-of-way and project limits are utilized by a city or town for the conveyance of diverted storm drainage, then the cost of such storm sewers, outfalls, etc., shall be financed on a run-off ratio basis between federal and/or state funds and city or town funds.

FEDERAL-AID POLICY GUIDE
April 8, 1999, Transmittal 25

23 CFR 626

OPI: HIF

*entire document is new material

PART 626 - PAVEMENT POLICY

SUBCHAPTER G - ENGINEERING AND TRAFFIC OPERATIONS

Sec.

626.1 Purpose.
626.2 Definitions.
626.3 Policy.

Authority: 23 U.S.C. 101(e), 109, and 315; 49 CFR 1.48(b)

Sec. 626.1 Purpose.

To set forth pavement design policy for Federal-aid highway projects.

Sec. 626.2 Definitions.

Unless otherwise specified in this part, the definitions in 23 U.S.C. 101(a) are applicable to this part. As used in this part:

Pavement design means a project level activity where detailed engineering and economic considerations are given to alternative combinations of subbase, base, and surface materials which will provide adequate load carrying capacity. Factors which are considered include: Materials, traffic, climate, maintenance, drainage, and life-cycle costs.

Sec. 626.3 Policy.

Pavement shall be designed to accommodate current and predicted traffic needs in a safe, durable, and cost effective manner.

NON-REGULATORY SUPPLEMENT

OPI: HIF

*entire document is new material

1. GENERAL PAVEMENT DESIGN CONSIDERATIONS (23 CFR 626) Title 23 CFR 626 establishes the following requirement: "Pavements shall be designed to accommodate current and predicted traffic needs in a safe, durable, and cost-effective manner." The regulations do not specify the procedures to be followed to meet this requirement. Instead, each State Highway Agency (SHA) is expected to use a design procedure that is appropriate for its conditions. The SHA may use the design procedures outlined in the "AASHTO Guide for Design of Pavement Structures," or it may use other pavement design procedures that, based on past performance or research, are expected to produce satisfactory pavement designs.
   a. FHWA Evaluation of Pavement Design Procedures

      (1) Consistent with FHWA's operational philosophy on process review/product evaluation (PR/PE) attached to Executive Director Carlson's November 12, 1991, memorandum, the FHWA field offices can conduct periodic reviews of the SHA's pavement design process. As part of the review, FHWA field offices will sample a sufficient number of projects to determine that the pavement design process is being followed and the process provides reasonable engineering results. If the reviews show that the SHAs have and are following an acceptable pavement design process, routine pavement design reviews of individual projects will not be required.

      (2)The FHWA encourages the development of mechanistic pavement design procedures.
      To promote consistency in application of mechanistic-related design procedures, the Office of Pavement Technology will participate with the Resource Centers and Division Offices in reviewing and discussing these procedures with the State during their development.

   b. Pavement Design Factors. Highway agencies should pay particular attention to the following items in designing pavements.

      (1) Traffic. Pavement designers should work closely with the SHA component responsible for traffic volume, classification, and truck weight data required for pavement design.

         (a) Accurate cumulative load (normally expressed as 18 kip equivalent single axle loads or ESALs) estimates are extremely important to pavement structural design. Load estimates should be based on representative current vehicle classification and truck weight data and anticipated growth in heavy truck volumes and weights. Representative current traffic data should be obtained using statistically valid procedures for obtaining count, classification, and weight data, based on the

concepts described in the FHWA "Traffic Monitoring Guide" and the "AASHTO Guidelines for Traffic Data Programs."

(b) Accurate vehicle classification data on the number and types of trucks is essential to estimate cumulative loads during the design period and should be given special emphasis. Weight information should be obtained using weigh-in-motion (WIM) equipment, for this data is more representative than data obtained using static enforcement scales, which are plagued with avoidance problems. States should continue to automate their monitoring program through installation of strategically placed automatic vehicle classification and WIM systems as soon as possible to improve the current base traffic data used to forecast future truck volumes and loads. It is anticipated that individual axle load information will be needed for future mechanistic-based design procedures.

(c) The SHA's forecasts of future loadings should, as a minimum, be based on two truck classes: trucks up to 4-axle combination and trucks with 5-axles or more. Changes in load factors should also be monitored and forecasted. The forecasting procedures should consider past trends and future economic activity in the area. A traffic data collection and forecasting program that identifies the most important truck types and the changes in numbers and weights of these truck types during the design period should provide realistic load estimates.

(2) Foundation. Providing a uniform, stiff, moisture and frost resistant foundation is the most important aspect of pavement structural design. Special attention needs to be given to subgrade uniformity and stiffness and the inclusion of subbase layers for pavements on the NHS. When the subgrade consists of fine grain clay or silt materials, stabilization of the upper 300 to 600 mm should be considered. In addition, the SHAs are encouraged to include a 200 to 600 mm thick granular subbase layer in NHSpavement foundations. In areas where frost penetration occurs, the subbase layer should be non-frost susceptible. Base courses should either be free draining or resistant to moisture related damage.

(a) Both the 1986 and 1993 versions of the "AASHTO Guide For Design of Pavement Structures" require the use of the Resilient Modulus (MR)(a measure of the elastic property of soils) in lieu of soil support value as the basic materials value to characterize roadbed soils for flexible pavements. The AASHTO guide strongly recommends that SHAs acquire the necessary equipment to measure (MR). SHAs who use (MR) values converted from CBR and R-value should conduct correlation studies using a range of soil types, saturation levels, and densities to determine realistic input values. The FHWA LTPP TECHBRIEF - Improved Guidance for Users of the 1993 AASHTO Flexible Pavement Design Procedures (FHWA-RD-97-091), dated August 1997, summarizes improved guidance for users of the 1993 AASHTO flexible pavement design procedures.

(b) For rigid pavements, the use of a k-value is required. LTPP TECHBRIEF - Phase 1: Validation of Guidelines for k-Value Selection and Concrete Performance Prediction (FHWA-RD-96-198), dated January 1997, and LTPP TECHBRIEF - Data Analysis, Validation of Guidelines for k-Value Selection and Concrete Pavement Performance Prediction (FHWA-RD-97-035), dated March 1998, provide updated

guidance on selecting appropriate values for this factor. AASHTO has approved a modification to the 1986 and 1993 rigid pavement design equations that are discussed in these referenced publications and the 1998 Supplement to the AASHTO Guide for the Design of Pavement Structures. FHWA has developed a LTPP Website at: http://www.tfhrc.gov where the LTPP TECHBRIEF can be viewed.

(c) Drainage is an important factor in pavement design, and should be considered on all projects. However, inadequate subsurface drainage continues to be a significant cause of pavement distress, particularly in portland cement concrete pavements. During the last 10 years, significant strides have been made in the development of positive drainage systems for new and reconstructed pavements. There have also been major developments in products and materials that can be used for retrofit longitudinal edgedrains.

(d) The developments in permeable base technology and longitudinal edgedrains make positive pavement drainage possible and affordable. Accordingly, pavement design procedures need to consider the effects of moisture on the performance of the pavement. Where the drainage analysis or past performance indicates the potential for reduced service life due to saturated structural layers or pumping, the design needs to include positive measures to minimize that potential. NHI Course 13126, Pavement Subsurface Drainage, is being developed to provide updated guidance and will be available in 1999.

(3) Shoulder Structure

(a) Research results have shown that widening the right pavement lane and placing the edge stripe 0.5 m from the outside pavement edge significantly improves both asphalt and concrete pavement performance by providing edge support.

(b) The SHAs are encouraged to use paved shoulders where conditions warrant. Shoulders should be structurally capable of withstanding wheel loadings from encroaching truck traffic. On urban freeways or expressways, strong consideration should be given to constructing the shoulder to the same structural section as the mainline pavement. This will allow the shoulder to be used as a temporary detour lane during future rehabilitation or reconstruction.

(c) On new and reconstructed pavement projects, the SHAs are encouraged to investigate the advantage of specifying that the shoulder be constructed of the same materials as the mainline, particularly on high-volume roadways. Constructing shoulders of the same materials as the mainline facilitates construction, reduces maintenance costs, improves mainline pavement performance, and provides additional flexibility for future rehabilitation.

(d) SHAs are encouraged to investigate the advantage of specifying rumble strips on the road shoulder as a safety improvement. FHWA has developed a Rumble Strip Website at: http://safety.fhwa.dot.gov/rumblestrips and a CD-ROM of technical information on rumble strips. The CD-ROM includes information on

different types of rumble strips, placement and specifications, weather concerns, bicycle safety, benefit/cost ratio calculations, and frequently asked questions.

(4) Engineering Economic Analysis. The design of both new and rehabilitated pavements should include an engineering and economic evaluation of alternative strategies and materials. The project specific analysis should be evaluated in light of the needs of the entire system. The "1993 AASHTO Guide for Design of Pavement Structures" (Appendix B) and the "FHWA Pavement Rehabilitation Manual," provide guidance on engineering considerations. The engineering evaluation should include consideration of the use of recycled materials and/or pavement recycling techniques, where feasible. Economic considerations include an economic analysis based on Life Cycle Costs (LCC). The FHWA Final Policy Statement on LCC analysis published in the September 18, 1996, Federal Register provides guidance on LCC Analysis. The FHWA Memorandum "National Highway System Designation Act - Life Cycle Cost Analysis Requirements" (April 19, 1996), provides supporting information and guidance to assist in implementing Life-Cycle Cost Analysis (LCCA) requirements in the National Highway System (NHS) Designation Act of 1995. The FHWA Office of Pavement Technology's "Interim Technical Bulletin: Life Cycle Cost Analysis in Pavement Design FHWA-SA-98-079, September 1998" and FHWA's "Demonstration Project 115: Probabilistic Life Cycle Cost Analysis in Pavement Design" provide technical guidance and training on good practice.

(a) Pavements are long-term public investments and all the costs (both agency and user) that occur throughout their lives should be considered. LCCA identifies the long-term economic efficiency of competing pavement designs. However, the resulting numbers themselves are less important than the logical analysis framework fostered by LCCA in which the consequences of competing alternatives are evaluated. When performing LCCA for pavement design, the variability of input parameters needs to be considered. The results of LCCA should be evaluated to determine whether differences in costs between competing alternatives are statistically significant. This evaluation is particularly important when the LCC analysis reflects relatively small economic differences between alternatives.

(b) The FHWA's policy on alternate bids, which would include bids for alternate pavement types, is addressed in 23 CFR 635.411(b). This section requires the use of alternate bid items "When ... more than one... product... will fulfill the requirements... and these... products are judged...equally acceptable on the basis of engineering analysis and the anticipated prices... are estimated to be approximately the same."

(1) The FHWA does not encourage the use of alternate bids to determine the mainline pavement type, primarily due to the difficulties in developing truly equivalent pavement designs.

(2) In those rare instances where the use of alternate bids is considered, the SHA's engineering and economic analysis of the pavement type selection process should clearly demonstrate that there is no clear cut choice between two or more alternatives having equivalent designs. Equivalent design implies that each alternative will be designed to perform equally, and provide the

same level of service, over the same performance period and have similar life-cycle costs.

2. 5 .Rehabilitation Pavement Design. It is essential that rehabilitation projects be properly engineered to achieve the best return possible for the money expended. When an existing pavement structure is sound, and the cost to restore serviceability is minor when compared to the cost of a new pavement structure or major rehabilitation, an engineering and economicanalysis of alternative actions may not be necessary. In general, for all major rehabilitation projects, each of the following steps should be followed to properly analyze and design the project.
   a. Project Evaluation

      (1) Obtain the necessary information to evaluate the performance and establish the condition of the in-place pavement with regard to traffic loading, environmental conditions, material strength, and quality. Historical pavement condition data, obtained from the Pavement Management System (PMS), can provide good initial information.

      (2) Identify the types of pavement distresses and the factors causing the distresses before developing appropriate rehabilitation alternatives. The tools necessary to analyze pavement failures, such as coring, boring, trenching, and deflection measurements, are well known, and need to be employed more often.

      (3) Evaluate the array of feasible alternatives in terms of how well they address the causes of the deterioration, repair the existing distress, and prevent the premature reoccurrence of the distress.

   b. Project Analysis

      (1) Perform an engineering and economic analysis of candidate strategies. The engineering analysis should consider the traffic loads, climate, materials, construction practices, and expected performance. The economic analysis should be based on life cycle costs and consider service life, initial cost, maintenance costs, user costs, andfuture rehabilitation requirements, including maintenance of traffic.

      (2)Select the rehabilitation alternative that best satisfies the needs of a particular project considering economics, budget constraints, traffic service, climate, and engineering judgment.

   c. Project Design

      (1) Conduct sufficient testing, both destructive and non-destructive, to verify the assumptions made during the alternative evaluation phase. The SHAs should consider a new distress survey if the original condition survey was sample based or if the survey is not current in terms of the time the project is scheduled to go to contract.

      (2) Consider and address all factors causing the distress in addition to the surface indicators in the final design. Such factors as structural capacity, subgrade support, surface and subsurface drainage characteristics need to be considered and provided for in the final design.

(3) Once a rehabilitation alternative is selected, design the project using appropriate engineering techniques. A number of publications are available to guide the selection of these engineering techniques. The FHWA's "Pavement Rehabilitation Manual," and the NHI training course "Techniques for Pavement Rehabilitation" provide excellent guidelines. There are also a number of excellent guides available from the asphalt and concrete industries.

d. Project Implementation

(1) Document the intent of the design in the project plans and specifications to provide both the contractor and the construction engineering personnel a clear and concise project proposal. In addition, maintain adequate communication between the design, construction, and maintenance engineers. This will reinforce the intent of the design and provide feedback on project constructability, maintainability, and performance to aid timely evaluation of the selected rehabilitation alternative.

(2) The performance information should also be included as a part of the SHA's PMS. The lack of good as-constructed data on pavement rehabilitation and preventive maintenance techniques is one of the weaker points in the pavement management process. Increased emphasis should be placed on developing basic as-constructed, performance monitoring, and maintenance cost data on rehabilitation techniques where this data is not presently available.

3. 6. Safety
   a. The SHAs should provide skid resistant surfaces on all projects, regardless of funding source.
   b. The SHAs should analyze pavement performance histories and existing skid data to ensure that the materials, mix designs, and construction techniques used are capable of providing a satisfactory skid resistant surface over the expected performance period of the pavement. This should include periodic analysis of wet weather crash rates on all standard surfacing types used. Each SHA's skid crash reduction program should include a systematic process to identify, analyze, and correct hazardous skid locations. The SHA's should use the same construction procedures and quality standards used in constructing new pavements in pavement maintenance operations. "Surface Finishing of Portland Cement Concrete Pavements - Final Report FHWA-SA-96-068, Tire Pavement Noise and Safety Performance, May 1996," transmitted by Messrs. Toole and Eller's memorandum dated November 12, 1996, summarizes FHWA's existing guidelines on surface related characteristics, including safety.
   c. Plans and specifications for proposed pavement rehabilitation, reconstruction, and maintenance projects should include items to minimize disruption and ensure adequate protection of the motorists and workers within the construction work zone, in accordance with the provisions of 23 CFR 630, Subpart J and 23 CFR 635, Subpart A.

COMMONWEALTH of VIRGINIA

DEPARTMENT OF TRANSPORTATION
1401 EAST BROAD STREET
RICHMOND, VIRGINIA 23219-2000

DAVID R. GEHR
COMMISSIONER

M. S. HOLLIS
STATE URBAN ENGINEER

July 31, 1997

New Legislation
1997 General Assembly
House Bill 2303

LETTER TO CITIES AND TOWNS

The 1997 General Assembly passed House Bill 2303, a copy of which is attached. This bill amends Section 33.1-23.3 of the Code of Virginia regarding the purchase of residue parcels of land acquired in relation to highway construction improvement projects. This is indicated by the italicized language in the bill.

The Department of Transportation (VDOT) heretofore has purchased residue parcels based on the conditions outlined in Section 33.1-91 of the Code. That being, where it is economically appropriate, the residue is purchased along with the right of way. It is important to note that this section of the Code limits VDOT's ability to purchase no more than two acres using the eminent domain procedures and no more than ten acres through voluntary conveyance. Where an acquisition results in an uneconomic remnant (that which cannot continue to be used because of size, shape, etc., for the same highest and best use as before) Section 25-248 of the Code requires that VDOT offer to acquire the entire property.

While this new legislation lacks clarity, it is VDOT's view that it will allow acquisition of property outside of the normal right of way width when the property's use has been impacted by the transportation improvement for which right of way is to be acquired. This broadens the traditional economic justification for right of way acquisition for construction improvements on functionally classified arterial streets. Accordingly, should a locality want VDOT to pursue acquisition of residue parcels based on this legislation, it will be necessary for the locality to demonstrate that one or all of the conditions in the legislation are satisfied. This should include, but not necessarily be limited to the following:

- The locality master plan and zoning support the need for special land use control directly related to the purpose and need of the project.
- A traffic analysis of sufficient depth that provides justification for access control.
- A traffic analysis that demonstrates improvements to traffic flow and traffic system utilization.
- A traffic engineering analysis that demonstrates improvements to traffic safety.

Procedurally, a locality interested in pursuing an improvement project in this manner should normally present the necessary data to support its request at the project scoping stage. Each such improvement will be considered by VDOT on a project by project basis.

We look forward to our continued cooperative and joint efforts in the implementation of your urban construction program. If you have any questions, please let me know.

Sincerely,

M. S. Hollis

M. S. Hollis
State Urban Engineer

MSH:afd
attachment

9-18 Highway Street Payment Funds

9-18.1 Section 33.1-41.1 of the Code of Virginia requires an annual report accounting for all expenditures of highway street payment funds and that such report shall be included in the scope of the locality's annual audit. Accordingly, the auditor must perform the procedures contained in this section regardless of materiality.

9-18.2 The State Department of Transportation makes payments to all cities and certain towns for the maintenance of highways. **Effective March 8, 1996, these funds may also be used for construction and reconstruction. (Highway maintenance expenditures for purposes of this program include expenditures for maintenance, construction and reconstruction, and therefore the term "maintenance" shall be inclusive of these categories of expenses.)** Section 33.1-41.1 of the Code of Virginia establishes the criteria for determining which local governments and highways are eligible for these funds. These eligibility requirements are summarized together with the required treatment for the funds in the Urban Division Manual published by the Department of Transportation. The auditor should familiarize himself with this manual prior to commencing test work. Section 3-28 provides additional information on highway maintenance funds.

9-18.3 Special Requirement – Separate Accounting

Revenues and expenditures applicable to street payments must be accounted for in a separate fund or separate accounts within the local government's accounting system (Urban Division Manual).

Required Audit Procedure: Determine whether the method used by the local government to account for street payments is adequate to separately account for such funds. Also, using the Schedule of State Disbursements to Localities (LO52 Report) provided by the Auditor of Public Accounts, trace all Urban Highway Street payments to the local government's general ledger and determine proper recording.

9-18.4 Allowability Requirement – Program Costs

Costs reported on the **annual** U-3 report must be allowable costs for the maintenance, **construction, or reconstruction** of eligible streets (Urban Division Manual).

Required Audit Procedure: **Obtain a copy of the annual U-3 report** for testing. Obtain a copy of, or access to, all schedules, worksheets, and other documentation supporting the costs claimed on the U-3 report. Select a representative sample of

charges claimed on the U-3 report and examine supporting documentation to determine whether:

(a) costs were incurred for the maintenance, **construction or reconstruction** of the street(s) as defined by the Urban Division Manual,

(b) costs are "acceptable" costs under the program as defined by the Urban Division Manual,

(c) the street is an eligible street included on the Department of Transportation's annual listing of eligible streets, and

(d) charges that have been allocated to eligible maintenance, construction or reconstruction are supported by adequate documentation to justify the amounts allocated (i.e. time logs, equipment use logs and rental rates, indirect cost plans, etc.)

(**Note:** The annual listing of eligible streets required to perform step (c) can be obtained from the local government's public works department).

9-18.5 Reporting Requirement – Annual Report

Local governments receiving street payment funds must submit **an annual U-3** report to the State Department of Transportation accounting for payments

received and related expenditures (§ 33.1-41.1 of the Code of Virginia and Urban Division Manual). Payments and expenditures claimed on the **annual** report must reconcile to the local government's accounting system and must be supported by detailed documentation.

Required Audit Procedures: Obtain the **annual** U-3 report for the audit year. Determine timeliness of submission. Also obtain (or prepare if so specified in the audit contract) a reconciliation of revenues (total allocation) and expenditures per the U-3 report to the locality's general ledger or **highways** cost accounting system. Review the reconciliation for reasonableness. If amounts are reconciled to the cost accounting system, the auditor also shall review the internal controls over that system.

Form EQ-429
(Revised 3/22/01)

Virginia Department of Transportation - PROJECT EARLY NOTIFICATION

PPMS ID: _____ Route: _____

City/County: _____
Zip Code: _____
VDOT Project #: _____
VDOT Charge #: _____
Funding Source: State ☐ Federal ☐
Target Advertisement date:
Project Limits
From: _____
To: _____

For use by Environmental staff only:
District Environmental Staff Initials: _____
Date received by Environmental: _____
IECC Notification Date: _____
Deadline for agency response (30th day):

Form submitted by: _____
District/Division/Residency: _____
Date submitted to Environmental: _____
Locality Administered Project: Yes ☐ No ☐
Length of Project (feet/miles): _____

Project description and comments (**be as specific as possible**): _____

Road Type:	**Type of project:**	**Location of work:**
Interstate ☐	Construction ☐	Work within existing corridor ☐
Primary ☐	Maintenance/Replacement ☐	Work on new location ☐
Secondary ☐	Maintenance ☐	Changes to Existing Alignment ☐
Urban ☐	Railroad ☐	
Other ☐	Roadway work included: Yes ☐ No ☐ Constructed by: State ☐ Railroad Co. ☐	**VPDES Permit: How many acres of area are disturbed by this project?** _____

Road Conditions	**Existing Conditions (must be completed)**	**Proposed Conditions (must be completed)**
Pavement width (ft/m)		
Number of traffic lanes		
Right-of-way width (ft/m)		

Additional information, include only if applicable to the proposed project:

Stream crossing (s)	Name of stream(s) crossed:	*For use by Environmental staff only:* Drainage Area: ☐ <5 miles² ☐ ≥5 miles²	
Existing bridge(s)/drainage structure(s)	Type of bridge/structure:	Bridge/structure #:	Date constructed (bridge only):
Public park(s) /forest(s)/ recreational area(s)	Name of facility:	Degree of impact (if known):	

Review agency responses must be sent to (*appropriate VDOT District Environmental Manager and mailing address)*: _____

Agency comments (attach additional sheets as necessary)
State agencies are requested to provide available existing database information on the project described above within 30 days of this notification. Database information should be sent directly to the District Environmental Manager indicated above.

VDOT will send review agencies a copy of the Preliminary Environmental Inventory (PEI) for this project unless indicated here that review of the PEI is not necessary: ☐ ***Our agency does not need to review the PEI. Please consider our early comments in project development.***
Name: _____ Agency: _____ Telephone number: _____