

APPENDIX G

VDOT Road Design Manual Excerpts

Section A-7

“No Plan” and “Minimum Plan Projects”

Pages A-105 to A-134

SECTION A-7-"NO PLAN" AND "MINIMUM PLAN" PROJECTS

GENERAL CONCEPTS

Description

The "No Plan" and "Minimum Plan" concepts provide for the accomplishment by contract of the type improvements that would not require complete and detailed surveys and plans, and where the use of standard Specifications would be appropriate. Generally, the improvements will consist of widening, grading, draining and stabilizing primary and secondary roads with relatively low traffic volumes by using engineering judgment. "No Plan" and "Minimum Plan" concepts are to be used only for projects where significant reductions in the cost of engineering, and construction can be experienced by using these concepts to obtain the quality of improvement necessary for the particular situation. To optimize the usefulness of this concept, very careful initial study and project selection by the District and Residency staff is required. The Federal Highway Administration has concurred with the use of the "No Plan" and "Minimum Plan" concept on selected projects with Federal Oversight.

"No Plan" projects are used when—minimal survey is required to accomplish engineering, right of way and construction stakeout, and no major hydraulic analysis or river mechanics studies are needed. Right of way may be acquired on "No Plan" projects provided it is acquired through donations and no condemnation is required. A "No Plan" contract contains an assembly of letter size sketches showing the location of the project with a typical cross section and estimated quantities.

A "Minimum Plan" project requires survey and topo to provide sufficient right of way plans necessary for the acquisition of right of way by the Right of Way Division and plan, profile and cross section sheets are to be provided. In the establishment of such projects, attention should be given to determine that the project location and selection is in an area where disruption due to construction can be tolerated by the users of that particular roadway for a reasonable period of time.

PUBLIC HEARING AND RIGHT OF WAY

All right of way negotiations are to be conducted in accordance with the applicable statutes, regulations, policies, and procedures stipulated in the Right of Way Division's Manual of Instructions and related memoranda.

Deleted Information*

* Rev. 2/10

For "No Plan" projects any required right of way and/or easements will normally be secured by donation provided no condemnation is required. However, right of way may be purchased by individual deeds or under the "Minimum Plan" concept (See - second paragraph under "Minimum Plan" Projects). Right of Way Division will issue a Notice to Proceed on "No Plan" projects when incidental costs, such as fencing, shrubbery, etc. occur. Activity 52 should be added to iPM because of the costs.*

The Commonwealth Transportation Board's resolution of February 16, 1961 specifies a minimum 40-foot right of way is to be provided for any initial improvement to the secondary system, except in extenuating circumstances.

Section 33.1 - 70.1, Code of Virginia permits consideration for hard surfacing of a secondary road on less than a 40-foot right of way.

Right of Way - Donations

Public hearing requirements will normally be waived on "No Plan" and "Minimum Plan" projects when all landowners are willing to donate the right of way provided there is no evidence of controversy, the landowners have been advised of their right to receive just compensation prior to requesting donations, and the project files have been so documented.

Right of Way - Acquisitions

On "Minimum Plan" projects when right of way must be acquired, a "Willingness to Hold a Public Hearing" will be advertised and public hearings will be conducted upon request. A public hearing handout and appropriate environmental document, on projects with Federal Oversight, will be prepared following the usual guidelines. If there are questions concerning the public hearing requirements or procedures, check with the State Location and Design Engineer.

SPECIAL DESIGN STRUCTURES, SOIL SURVEY AND PAVEMENT DESIGN

"No Plan" projects may include drainage structures; however, major structures with "B" or "D" designation numbers and all standard box culverts and/or major channel modifications that require a hydraulic study are to be constructed under the "Minimum Plan" concept. When pipes are to be extended and endwalls, end sections, pipe spillouts, etc., are to be provided, separate bid items are to be set up.

The District Materials section is to review the project site to determine if soil samples may be necessary. The District Materials Engineer is to furnish recommendations regarding any undercutting or pipe bedding requirements and pavement design.

* Rev. 7/09

MOBILIZATION AND FIELD OFFICE

Mobilization is to be set up as a contract item on "No Plan" and "Minimum Plan" projects in accordance with VDOT's Road and Bridge Specifications.

When it is necessary to set up a field office, it is set up as a contract item in accordance with VDOT's Road and Bridge Specifications at the discretion of the District; however, other arrangements should be considered such as the use of existing facilities where feasible to eliminate the need for the extra cost of a field office.

DRAINAGE FACILITIES AND EROSION AND SEDIMENT CONTROL MEASURES

For all land disturbance activities that disturb an area equal to or greater than 10,000 square feet or 2,500 square feet or greater in Tidewater Virginia** an Erosion and Sediment Control (ESC) Plan and a Stormwater Pollution Prevention Plan (SWPPP) must be prepared and included in the contract documents. The appropriate notes on the SWPPP General Sheets must be completed and the SWPPP General Information Sheets must be included in the plan set or other such contract documents. Guidelines for developing and approving an ESC Plan are contained in the latest version of [IIM-LD-11](#). Guidelines for completing the SWPPP General Information Sheets are contained in the latest version of [IIM-LD-246](#).*

Temporary and permanent erosion and sediment control measures are required in accordance with the Department's approved ESC and SWM Standards and Specifications. Plan details must accompany any plan narrative and shall denote the type and location of proposed erosion and sediment control measures.

Seeding operations, erosion, and sedimentation control measures shall be included as specific contract items in accordance with standard specifications and procedures or shall be performed by State Forces, at the discretion of the District. When seeding operations and other items are to be performed by State Forces, a plan note must be included to denote such State Force work; and, in the event of Federal Funding, finding of cost effectiveness must be furnished in accordance with existing policy and procedures. All drainage facilities shall be designed in accordance with the appropriate design criteria noted in the VDOT Drainage Manual and shall comply with Minimum Standard 19 of the Virginia Erosion and Sediment Control Law and Regulations.

** Tidewater, VA, as defined by the Virginia Chesapeake Bay Preservation Act, Title 10.1, Chapter 21, Code of Virginia.

* Rev. 1/10

POST CONSTRUCTION STORMWATER MANAGEMENT PLAN AND VSMP CONSTRUCTION PERMIT

For all land disturbance activities that disturb an area equal to or greater than one acre or 2,500 square feet or greater in an area locally designated as a Chesapeake Bay Preservation Area, a post construction stormwater management plan and coverage under the Virginia Stormwater Management Program (VSMP) Construction Permit are required. For routine maintenance activities, the land disturbance threshold is 5 acres (see the latest version of [IIM-LD-242](#) for additional information).*

Permanent Stormwater management facilities may be addressed in a similar fashion as the erosion and sediment control facilities provided sufficient detail is included to ensure their proper construction. Any Plan Narrative or details will also become part of the contract assembly. The appropriate notes on the SWPPP General Sheets must be completed and the SWPPP General Information Sheets must be included in the plan set or other such contract documents. Guidelines for developing and approving a post construction SWM Plan are contained in the latest version of [IIM-LD-11](#) and [195](#). Guidelines for completing the SWPPP General Information Sheets are contained in the latest version of [IIM-LD-246](#). Guidelines for applying for VSMP Construction permit coverage are contained in the latest version of [IIM-LD-242](#).

CONTRACT TIME LIMIT

Generally, a fixed contract completion date should be established. However, the contract time limit should be determined after thorough consideration of the need to realize the lowest cost possible to provide the improvement at the earliest practical date.

PROCEDURES

General Description of Work

A general description of the work must be provided on Form C-99 (No Plan and Minimum Plan Quantity Support Report) and the Project Narrative to denote the nature of the work to be performed, such as daylighting of slopes; realignment; intersection improvement; or widening of shoulders and ditchlines are to be completed by the District Construction Engineer or the District Administrator's Staff. "Simple" sketches may be used in lieu of the narrative. They are to be submitted with the project assembly for the purpose of providing information concerning the general description of construction work from which to develop and support the construction cost estimate.

PROJECT SCOPING FIELD REVIEW

All projects are to be scoped and a Field Review is to be held in accordance with [PM-100](#). These procedures will define the potential need for field and office engineering as well as right of way and environmental requirements.

* Rev. 1/10

"NO PLAN" PROJECTS

The "No Plan" concept may be used when:

- (a) Minimal survey is required to accomplish engineering, right of way and construction stakeout.
- (b) Improvements to roadways do not involve major structures with "B" or "D" designation numbers, channel modifications or special design items
- (c) Major hydraulic analysis or river mechanics studies are not required.
- (d) Rights of way are acquired through donations and no condemnation is required.
- (e) Environmental permits including VSMP Construction Permit coverage* will not normally be required
- (f) Construction activities must be handled in an expeditious manner
- (g) Engineering is required

Projects that may be developed with the "No Plan" concept include, but are not limited to:

- (a) Addition of Turn lanes
- (b) Shoulder Widening, Ditch Work, Minor Relocation and Alignment Work
- (c) Intersection Improvements
- (d) Sidewalks and Curb Ramps
- (e) Safety Improvements
- (f) Guardrail Upgrade and Replacement
- (g) Pavement Overlays and Pavement Markers and Markings
- (h) Maintenance Operations
- (i) Sign, Signal and Luminaire Repair and Replacement

The District Construction Engineer normally obtains any donated right of way by use of the appropriate Right of Way Forms. When a "No Plan" project is to be constructed within existing right of way, a note must be placed on the title sheet indicating that "All construction is to be performed within existing right of way."*

Metes and bounds plans are required for right of way from unique clients (e.g. Federal and State agencies, the National Forest, railroads, Virginia Power, etc.) - see VDOT's [Road Design Manual Chapter 2E, Section 2E-5](#).

The construction baseline should generally follow the center of the existing roadway; however, minor relocation and alignment improvements (horizontal and vertical), roadway widening, and turn lanes may be accomplished. The geometrics should comply with the appropriate design standards. However, where it is impractical or not economical to obtain the minimum design and a design exception is required, permission shall be secured from the State Location and Design Engineer and, if applicable, from the Federal Highway Administration.

The Project Manager, with the assistance of the project team, determines the typical section and furnishes an estimate of quantities on the "Quantity Support Report" Form C-99. Grading should generally be balanced and set up as a lump sum quantity. Form C-99 should indicate an estimate of grading quantities, including anticipated waste quantities, to guide the Scheduling and Contract Division in preparing the construction cost estimate.

When borrow material is anticipated, "Borrow Excavation" is to be set up as a separate bid item in accordance with VDOT's Road and Bridge Specifications. Borrow sources should be located and designated whenever possible in accordance with VDOT's Road Design Manual [Chapter 2E, Section 2E-1](#) - SOIL SURVEY AND PAVEMENT DESIGN.

A unit price for extra excavation is to be established by the District Construction Engineer or the District Administrator's staff and entered on Form C-99 for inclusion in the contract assembly by the contract section.

The Project Manager is responsible for coordinating utility field inspections with the Residency Administrator and preparing the field inspection reports. The Residency Administrator is responsible for determining utility conflicts, method of adjustment, cost responsibility and for obtaining and forwarding all plans and estimates from utility owners to the District Administrator (District Utilities Engineer) for approval and authorization. The District Administrator (District Utilities Engineer) will then forward a copy of the approval and authorization letter to the Project Manager to be placed in the project.

The Residency Administrator is also responsible for notifying the District Administrator (District Utilities Engineer) in writing, no later than 60 days prior to the advertisement of the project, that all arrangements have been made with the utility owners to relocate or adjust the utilities prior to or in conjunction with the project construction.

* Rev. 7/09

The Central Office Location and Design, Utilities Section will obtain any necessary FHWA authorization for utility work and will furnish the usual utility clearances and estimates to the Scheduling and Contract Division for contract projects and State Force projects with Federal Oversight. If no known utilities and/or railroads are involved, the plans will contain a note so stating.*

The District Administrator or Designee is responsible for the district project funding confirmation for "No Plan" Construction and Maintenance projects and shall sign the "No Plan" Title Sheet. For all other required signatures see the "No Plan" Title Sheet, which can be found in Falcon under the eng_ser directory, subfolder for "No Plan".

On Secondary "No Plan" projects, the project manager will submit the plan assembly directly to the Central Office Plan Coordination Section for processing. Plan coordination will forward the plan assembly to the Scheduling & Contract Division for construction advertisement or authorization for State Force work on projects with Federal Oversight, whichever is applicable.

Primary "No Plan" projects will continue to be submitted to the Central Office Plan Coordination Section for processing and recommended approval for advertisement (See IIM-68 for Electric Plan Submission). Construction plans will be retained in the District until right of way has been secured and arrangements made for utility adjustments. When retained, status reports (containing applicable correspondence) will be submitted by the District Administrator's staff quarterly until all right of way is acquired and utilities are clear.

"MINIMUM PLAN" PROJECTS

Those projects that require an engineering design should be designated as "Minimum Plan" projects. This will provide the mechanism for the development of required engineering studies and will provide a vehicle for transmitting critical information to the contractor.

Projects that should be developed with the "Minimum Plan" concept include, but are not limited to:

- (a) Projects requiring more than minimal survey
- (b) Major stream crossing sites
- (c) Projects that will require environmental evaluation and/or permits
- (d) Projects with "B" and "D" designation numbers
- (e) Projects requiring major hydraulic analysis or river mechanics studies
- (f) Projects that involve the acquisition of right of way and/or condemnation

* Rev. 7/09

The basic difference between the "Minimum Plan" and the "No Plan" project is the need for more than minimal survey and topo to provide sufficient right of way plans necessary to acquire right of way. Form RW-205 or individual deed forms are to be used. If any additional right of way or easements are necessary, the usual right of way certification letter and release for advertisement will be required. If additional right of way or easements are not required, the "Minimum Plan" title sheet is to contain a note indicating that "All construction is to be performed within existing right of way."

"Minimum Plan" projects may include relocation or alignment improvements (horizontal or vertical), roadway widening, and the addition of turn lanes that involve the acquisition of right of way and/or condemnations.

A general description of work must be provided on Form C-99 and the Field Narrative to denote additional work that is not covered on the plans.

Special attention should be given to major drainage sites and the limits set for the proposed right of way. The geometrics should comply with the appropriate design standards. However, where it is impractical or not economical to obtain minimum design **standard*** a design exception is required, permission must be secured from the State Location and Design Engineer and, if applicable, from the Federal Highway Administration.

Quantities, typical sections, entrance profiles and other similar information should be shown on the initial plan and profile sheets. A grade line is required when the grade is to be different than that of the existing road. In areas where right of way is to be obtained and entrance grading is necessary, a profile showing the approximate grade of the proposed entrance should be included in the plan assembly.

When borrow material is anticipated, "Borrow Excavation" is to be set up as a separate bid item in accordance with Section 303 of VDOT's Road and Bridge Specifications. Borrow sources should be located and designated, whenever possible, in accordance with VDOT's Road Design Manual, [Chapter 2E, Section 2E-1](#) - SOIL SURVEY AND PAVEMENT DESIGN.

A unit price for extra excavation is to be established by the District Construction Engineer or the District Administrator's staff and entered on Form C-99 for inclusion in the contract assembly by the contract section.

The Project Manager is responsible for coordinating utility field inspections with the District Administrator (District Utilities Engineer) and preparing the field inspection reports. Utility adjustments shall be handled in accordance with IIM-LD-140 and Road Design Manual, Chapters 2E and 2G, which can be accessed at <http://www.virginia-dot.org/business/locdes/rdmanual-index.asp>

* Rev. 2/10

For all land disturbance activities that disturb an area equal to or greater than 10,000 square feet or 2,500 square feet or greater in the area defined as Tidewater Virginia**, an Erosion and Sediment Control Plan and a Stormwater Pollution Prevention Plan (SWPPP) must be developed, reviewed, and approved by appropriate qualified personnel in accordance with the latest version of [IIM-LD-11](#) and [IIM-LD-246](#).*

** Tidewater, VA, as defined by the Virginia Chesapeake Bay Preservation Act, Title 10.1, Chapter 21, Code of Virginia.

For all land disturbance activities that disturb one acre of land or greater or 2,500 square feet or greater in an area locally designated as a Chesapeake Bay Preservation Area, a Stormwater Management Plan must be developed, reviewed, and approved by appropriate qualified personnel in accordance with the latest version of [IIM-LD-11](#) and [IIM-LD-195](#).

PERMITS AND REVIEWS ("NO PLAN" AND "MINIMUM PLAN" PROJECTS)

Historical and archaeological reviews are to be made. (Request Forms [LD-252](#) and [EQ-429](#)). The need for 401, 404, navigation, and other environmental permits are to be considered in accordance with the Guidelines for the Preparation of Permit Application. Any land disturbing activity that disturbs one acre or greater (or 2,500 square feet or greater in an area locally designated as a Chesapeake Bay Preservation Area, (except certain routine maintenance activities specifically exempted by the Virginia Stormwater Management Law and the Virginia Stormwater Management Program (VSMP) Permit Regulations - 4VAC50-30 et seq. and 4VAC50-60 et seq.) must have a project specific VSMP Construction Permit registration. Instructions for registering a project for VSMP Construction Permit coverage are contained in [IIM-LD-242](#). (Request Form [LD-445](#), [445A](#), [445B](#) and [445C](#))

PLAN PREPARATION

The sample plan assemblies for both "No Plan" and "Minimum Plan" projects provide the manner of showing the minimum essential information and the notes necessary to govern construction. For the current version of the "No Plan" title sheet, see the CADD No Plan Directory, which is in Falcon under Engineering Services (eng-ser).

"Minimum Plan" title sheet shall include all the information as that shown on a "Construction Plan" title sheet. Variation may be made to the formats to meet the specific project needs and to best utilize all available sheet space, thereby minimizing the total number of project assembly sheets. Careful attention should be given to the notes shown thereon.

* Rev. 7/09

The plan assemblies for both "No Plan" and "Minimum Plan" projects are to be placed in Falcon and transmitted electronically to the Plan Coordination Section in the Central Office. The document assembly instructions are located in Falcon along with the other typical drawings needed for "No Plan" and "Minimum Plan" projects.

Generally, plan variations from AASHTO guidelines, as set forth in the Geometric Design Standards (See VDOT's Road Design Manual, Appendix A), are not readily apparent in an office review; therefore, it is very important that the variations be defined in the project assembly (consisting of the plan details, Form C-99, cost analysis, and narrative or description of the work) by the Project Manager and/or District Administrator.

Aggregate Material No. 21, 21A, 25 or 26 should be set up as a contract item for roadway base or subbase, maintenance of traffic, private entrances, and mailbox turnouts. Normally, one contract item should cover all uses.

SPECIFICATIONS*

It is intended that modified versions of parts of VDOT's Road and Bridge Specifications will be followed in order to reduce the field engineering and final computations required; however, the use of such modifications must still be consistent with good construction practices in relation to the kind and type of improvement being provided and must comply with the Department's Approved Erosion and Sediment Control and Stormwater Management Standards and Specifications and the Virginia Stormwater Management Program Laws and Regulations.

A unit price for extra excavation is to be established by the District Construction Engineer or the District Administrator's staff and entered on Form C-99 for inclusion in the contract assembly by the contract section.

The Special Provisions for "No Plan" and "Minimum Plan" Projects (available from VDOT's Scheduling and Contract Division) are approved by the Federal Highway Administration for use on a project by project basis. When additional changes to the Specifications are necessary, such changes should be documented and submitted with the project assembly. (Any additional Special Provisions are to be reviewed by the Scheduling and Contract Division in ample time for inclusion in the project bid proposal.)

"No Plan" and "Minimum Plan" projects will often consist of small quantities of materials; therefore, materials testing requirements for most items will fall within the limits of minimum testing as set forth in VDOT's Materials Manual. Compactive effort must be provided by the Contractor in such a manner as to attain the required densities and random compaction tests will be performed to the extent required to assure proper compaction.

Generally, materials from sources that have proven to be satisfactory in the past will normally be accepted by certification as determined by VDOT's Materials Division, subject to visual inspection at the project site.

* Rev. 7/09