TABLE OF CONTENTS - TITLE SHEET

CHAPTER 2

* Indicates 11 x 17 sheet; all others are 8½ x 11.

TABLE OF CONTENTS - TITLE SHEET

CHAPTER 2

* Indicates 11 x 17 sheet; all others are 8 ½ x 11.

GENERAL PROCEDURES

Chapter 2 of this manual establishes the practices for the completion of the title sheet (front sheet) for a plan assembly. This chapter includes all the required items to complete the title sheet. Included is a checklist for completing preliminary plans (TS&L) and final plans (PS&E).

A typical project normally has a single title sheet. For major projects or long structures, however, the title sheet may have to be extended to additional sheets to adequately show the appropriate details. In all cases the first sheet shall contain all of the items detailed in this chapter.

The title sheet (front sheet) is a cell named ***FSHT*** and may be found in the *bdetails1.cel* library. It is recommended that this sheet be generated by using the *bsht* program from the ***VDOT BRIDGE MDL*** task bar. This ensures that the cell is placed at the proper location in the file and facilitates the entering of information in the project block and title block. This program will also place initials and the CADD no.

The details noted for general drafting procedures in Chapter 1 shall be adhered to.

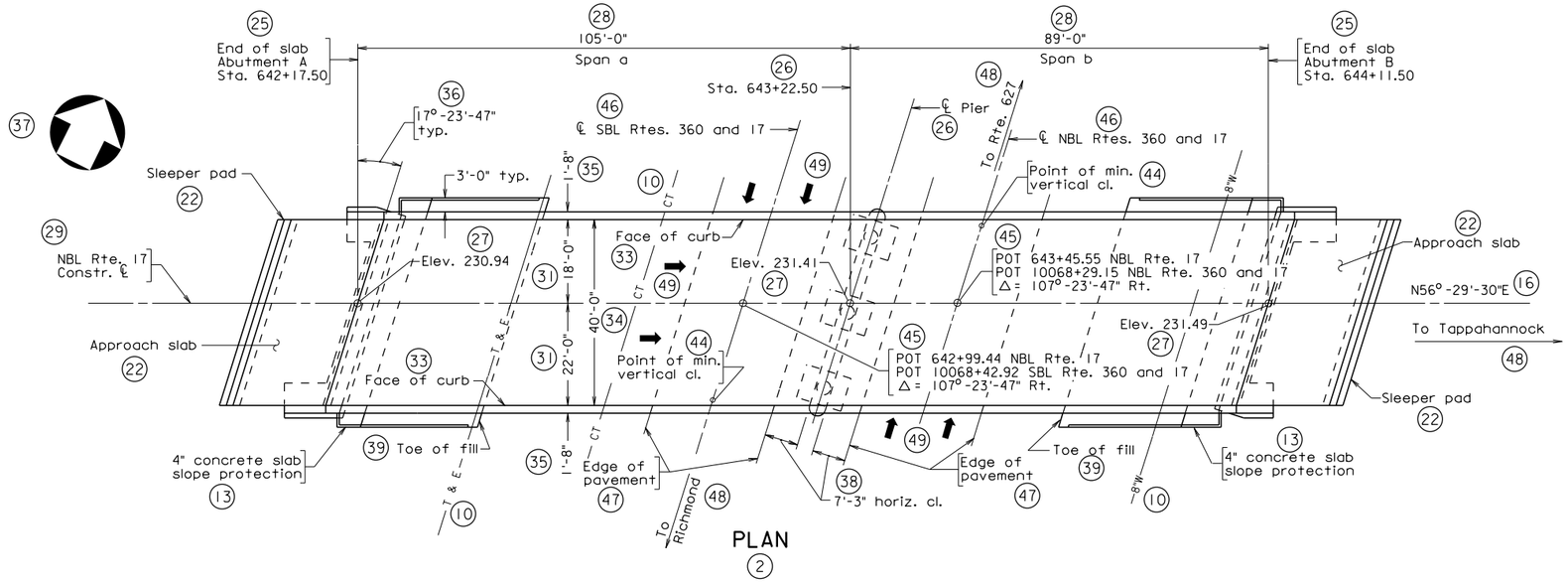
Several major changes to past practices are as follows:

1. Bridge title sheet requirements are updated to include railroad right-of-way limits where applicable.

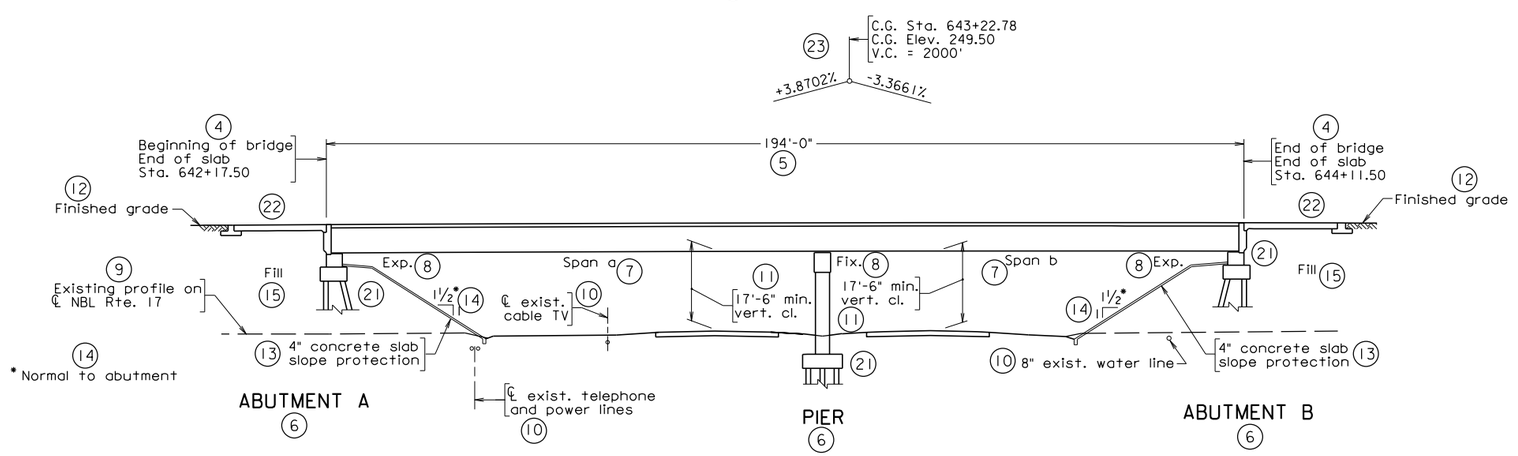
2. The Special Provisions section is updated.

3. General Notes are updated for the 2016 Road and Bridge Specifications, Specification reference changes (Construction, Design and Standards) and the current IIM-S&B-81 (corrosion resistant reinforcing steel).

NOTE:
Due to various restrictions on placing files in this manual onto the Internet, portions of the drawings shown do not necessarily reflect the correct line weights, line types, fonts, arrowheads, etc. Wherever discrepancies occur, the written text shall take precedence over any of the drawn views.



PLAN (2)



DEVELOPED SECTION ALONG ℄ (1) (2)

STATE	FEDERAL AID ROUTE	FEDERAL AID PROJECT	STATE ROUTE	STATE PROJECT	SHEET NO.
VA.	—	BR-007-1(013)	I-7	0017-028-107, B604	1
NBIS Number: 0000000000006133			UPC No. 10007		
(53) Federal Oversight Code: FO			FHWA Construction and Scour Code: X271-SN		

(60) DESIGN EXCEPTION(S):

None

(54) GENERAL NOTES:

The original approved sheet, including original signatures, is filed in the VDOT Central Office. Any misuse of electronic files, including scanned signatures is illegal. Violators will be prosecuted to the full extent of the applicable laws.

Width: 40'-0" face-to-face of curbs.

Span layout: 105'-89' continuous steel plate girder spans.

Capacity: HL-93 loading.

Specifications:

Construction: Virginia Department of Transportation Road and Bridge Specifications, 2016.

Design: AASHTO LRFD Bridge Design Specifications, 7th Edition, 2014; and VDOT Modifications.

Standards: Virginia Department of Transportation Road and Bridge Standards, 2008; including all current revisions.

These plans are incomplete unless accompanied by the Supplemental Specifications and Special Provisions included in the contract documents.

Design loading includes 20 psf allowance for construction tolerances and construction methods.

Structural steel for girder webs and flanges including splice plates and filler plates shall be ASTM A709 Grade 50. All other structural steel including diaphragms, cross frames, stiffeners, connector plates and bearings including sole plates shall be ASTM A709 Grade 36.

Finish paint color shall be green, 595-24227.

Concrete in prestressed piles shall be Class A5. Concrete in superstructure and parapets, integral backwalls and terminal walls shall be Low Shrinkage Class A4 Modified; in abutments and pier, Class A3.

All reinforcing steel shall be deformed and shall conform to ASTM A615 Grade 60 except for steels noted as Corrosion Resistant Reinforcing (CRR) which shall conform to Section 223 of the Specifications. All reinforcing bar dimensions on the detailed drawings are to centers of bars except where otherwise noted and are subject to fabrication and construction tolerances.

CRR steels shall conform to one or more of the three Classes listed in Section 223 of the Specifications. The Class(es) of CRR steel(s) required on this project is/are noted on plan sheets and in the reinforcing steel schedule. CRR Steel, Class II or Class III, may be substituted for Class I. CRR Steel, Class III, may be substituted for Class II.

General Notes continued on next sheet.

VDOT

COMMONWEALTH OF VIRGINIA

DEPARTMENT OF TRANSPORTATION

PROPOSED BRIDGE ON

(52) NBL RTE. 17 OVER RTES. 360 AND 17 ESSEX CO. - 0.7 MI. S. OF RTE. 627 PROJ. 0017-028-107, B604

(59) PRELIMINARY PLANS

THESE PLANS NOT TO BE USED FOR CONSTRUCTION OF BRIDGE

COMMONWEALTH OF VIRGINIA
LEE L. SMITH
Lic. No. 000000
PROFESSIONAL ENGINEER

(57)

Lee L. Smith
2016.05.12 16:34:12-04'00'

Diversified Eng.
Virginia Beach, VA
STRUCTURAL ENGINEER

(55) TITLE SHEET
SAMPLE SHEET FOR GRADE SEPARATION

PLANS BY:	Consultant
COORDINATED:	
SUPERVISED:	Lee L. Smith
DESIGNED:	David B. Byrd
DRAWN:	David L. Martin
CHECKED:	Chuck E. Patterson

(2) Scale: 1/16" = 1'-0"

No.	Description	Date

REVISIONS

For Table of Revisions, see Sheet 2.

(58) Recommended for Approval: John E. Doe — State Structure and Bridge Engineer — 5/15/16 Date

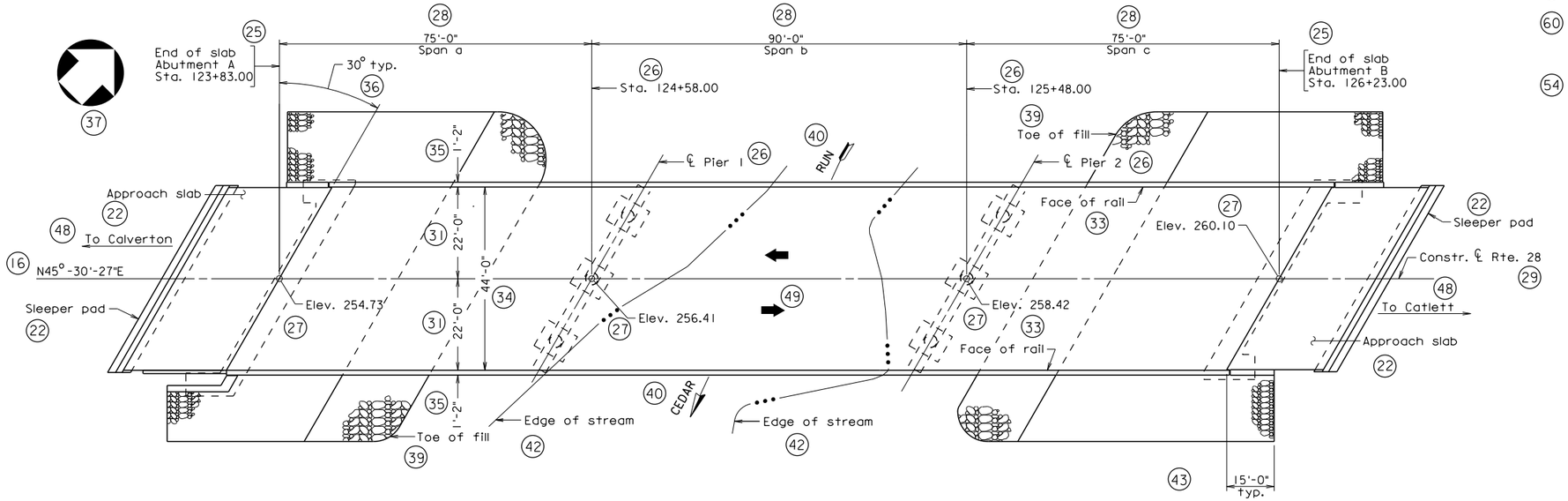
Approved: David F. Hansel — Chief Engineer — 5/15/16

ORIGINAL SIGNATURES ON TITLE SHEET OF ROAD PLANS

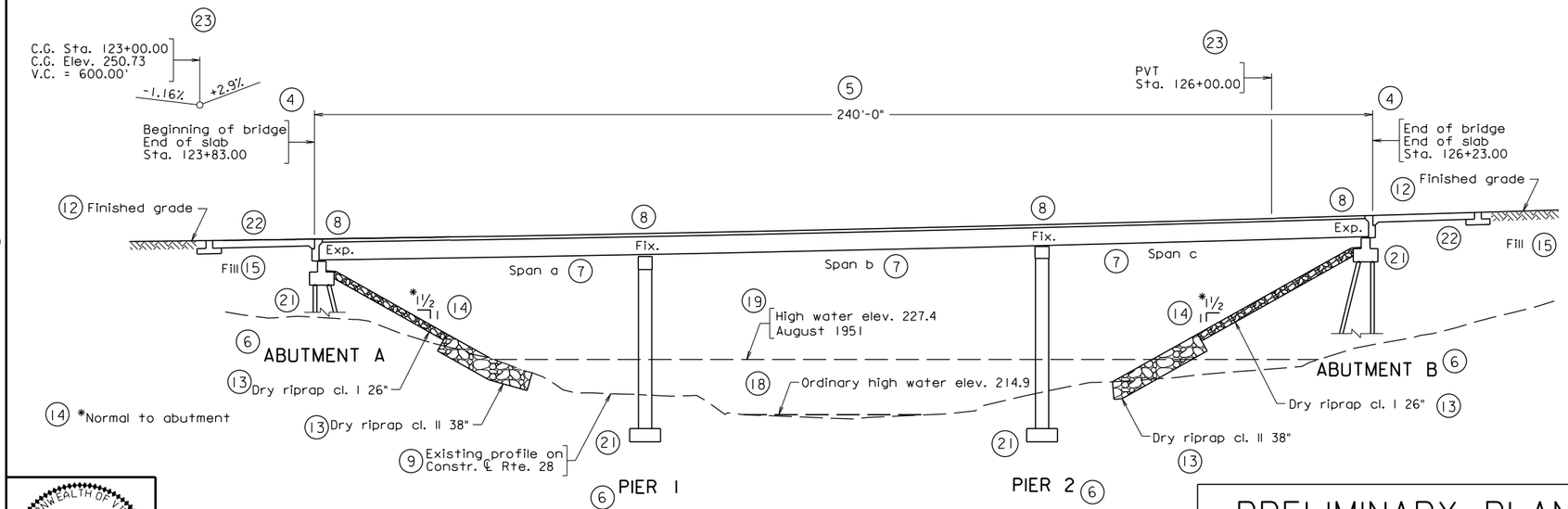
Date: May 12, 2016

PART 2
DATE: 18May2016
SHEET 1 of 12
FILE NO. 02.01-1

STATE	FEDERAL AID		STATE		SHEET NO.
	ROUTE	PROJECT	ROUTE	PROJECT	
VA.	—	STP-030-7(016)	28	0028-030-101, B601	1
NBIS Number: 000000000006121			UPC No. 56130		
Federal Oversight Code: NFO			FHWA Construction and Scour Code: X071-S5		



② PLAN



DEVELOPED SECTION ALONG ℄
① ②

Scale: 1/16" = 1'-0"

53 Federal Oversight Code: NFO

60 DESIGN EXCEPTION(S):

None

54 GENERAL NOTES:

The original approved sheet, including original signatures, is filed in the VDOT Central Office. Any misuse of electronic files, including scanned signatures, is illegal. Violators will be prosecuted to the full extent of the applicable laws.

Width: 44'-0" face-to-face of rails.

Span Layout: 75'-90'-75' continuous steel plate girder spans.

Capacity: HL-93 loading.

Drainage Area: 61 sq. mi.

Specifications:

Construction: Virginia Department of Transportation Road and Bridge Specifications, 2016.

Design: AASHTO LRFD Bridge Design Specifications, 7th Edition, 2014; and VDOT Modifications.

Standards: Virginia Department of Transportation Road and Bridge Standards, 2008; including all current revisions.

These plans are incomplete unless accompanied by the Supplemental Specifications and Special Provisions included in the contract documents.

Design loading includes 20 psf allowance for construction tolerances and construction methods.

All structural steel, including bearings, shall be ASTM A709 Grade 50W and shall be unpainted.

Concrete in superstructure and parapets, terminal walls and integral backwalls shall be Low Shrinkage Class A4 Modified; in abutments and piers, Class A3.

All reinforcing steel shall be deformed and shall conform to ASTM A615 Grade 60 except for steels noted as Corrosion Resistant Reinforcing (CRR) which shall conform to Section 223 of the Specifications. All reinforcing bar dimensions on the detailed drawings are to centers of bars except where otherwise noted and are subject to fabrication and construction tolerances.

CRR steels shall conform to one or more of the three Classes listed in Section 223 of the Specifications. The Class(es) of CRR steel(s) required on this project is/are noted on plan sheets and in the reinforcing steel schedule. CRR Steel, Class II or Class III, may be substituted for Class I. CRR Steel, Class III, may be substituted for Class II.

Footings for piers shall bear on competent bedrock. For bearing requirements for piers, see the Spread Footing Data Table on sheet 6.

H-piles in abutments shall be ASTM A709 Grade 50 steel. All piles shall be driven to practical refusal and to the nominal axial resistance. For axial resistance requirements for abutments, see the Pile Footing Data Table on sheet 4.

General Notes continued on next sheet.

VDOT

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION
PROPOSED BRIDGE ON

52 RTE. 28 OVER CEDAR RUN
FAUQUIER CO. - 0.2 MI. S. RTE. 818
PROJ. 0028-030-101, B601

COMMONWEALTH OF VIRGINIA
Charlie B. Ocean
PROFESSIONAL ENGINEER

57

Charlie B. Ocean
2016.05.12 16:34:12-04'00'

VDOT S&B DIVISION
RICHMOND, VA
STRUCTURAL ENGINEER

55

PLANS BY:	Central Office
COORDINATED:	
SUPERVISED:	Charlie B. Ocean
DESIGNED:	Sam L. Reid
DRAWN:	Sam L. Reid
CHECKED:	Edward E. Lawson

TITLE SHEET
SAMPLE SHEET FOR STREAM CROSSING

59 PRELIMINARY PLANS

THESE PLANS NOT TO BE USED FOR CONSTRUCTION OF BRIDGE

No.	Description	Date

REVISIONS

For Table of Revisions, see Sheet 2.

Recommended for Approval: John E. Doe — 5/19/16
State Structure and Bridge Engineer — Date

58

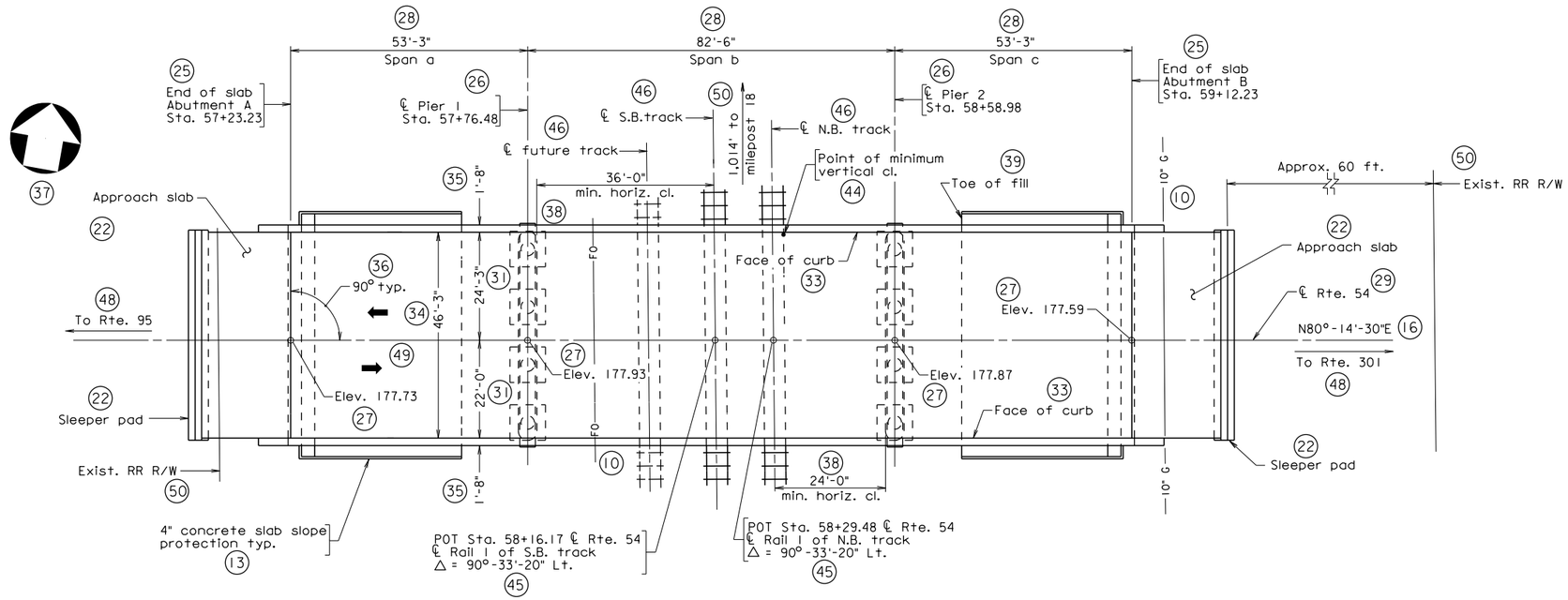
Approved: David F. Hansel — 5/19/16
Chief Engineer

ORIGINAL SIGNATURES ON TITLE SHEET OF ROAD PLANS

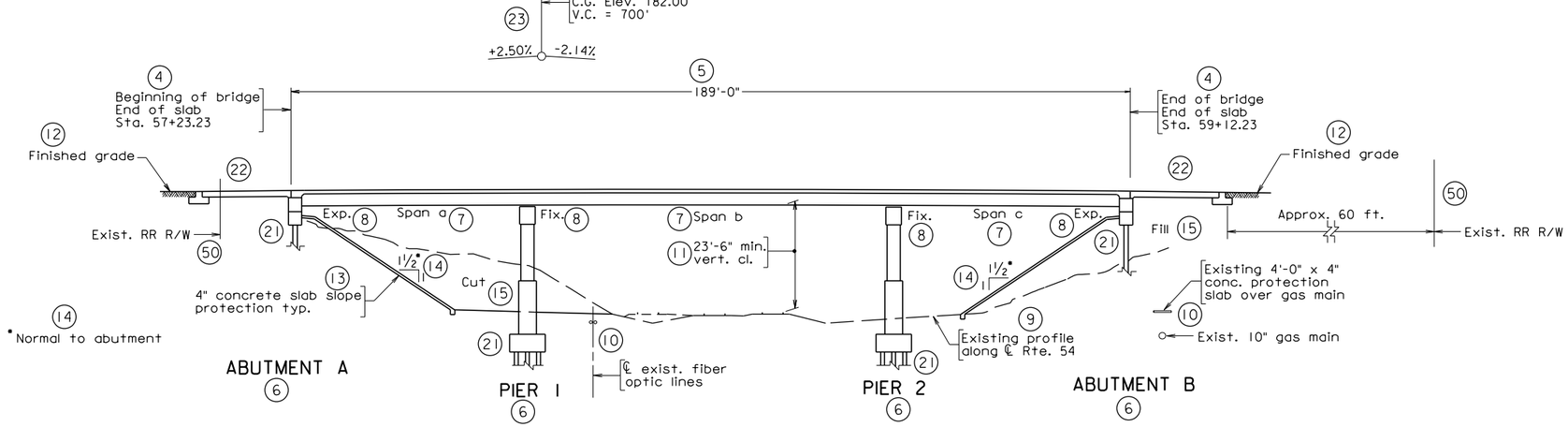
Date: May 12, 2016

PART 2
DATE: 18May2016
SHEET 2 of 12
FILE NO. 02.01-2

56 999-99.001.dgn



PLAN



DEVELOPED SECTION ALONG ℄

PRELIMINARY PLANS

THESE PLANS NOT TO BE USED FOR CONSTRUCTION OF BRIDGE

TITLE SHEET
SAMPLE SHEET FOR RAILROAD CROSSING

Scale: 1/16" = 1'-0"

STATE	FEDERAL AID ROUTE	FEDERAL AID PROJECT	STATE ROUTE	STATE PROJECT	SHEET NO.
VA.	—	—	54	0054-042-103, B603	1

NBIS Number: 000000000005233
UPC No. 10001
Federal Oversight Code: N/A
FHWA Construction and Scour Code: X171-SN

DESIGN EXCEPTION(S):

None

GENERAL NOTES:

The original approved sheet, including original signatures, is filed in the VDOT Central Office. Any misuse of electronic files, including scanned signatures, is illegal. Violators will be prosecuted to the full extent of the applicable laws.

Width: 46'-3" face-to-face of curbs.

Span layout: 53'-3" - 82'-6" - 53'-3" continuous steel rolled beam spans.

Capacity: HL-93 loading.

Specifications:

Construction: Virginia Department of Transportation Road and Bridge Specifications, 2016.

Design: AASHTO LRFD Bridge Design Specifications, 7th Edition, 2014; and VDOT Modifications.

Standards: Virginia Department of Transportation Road and Bridge Standards, 2008; including all current revisions.

These plans are incomplete unless accompanied by the Supplemental Specifications and Special Provisions included in the contract documents.

Design loading includes 20 psf allowance for construction tolerances and construction methods.

All structural steel, including bearings, shall be ASTM A709 Grade 50W and shall be unpainted.

Concrete in superstructure and parapets, terminal walls and integral backwalls shall be Low Shrinkage Class A4 Modified; in abutments and piers, Class A3.

All reinforcing steel shall be deformed and shall conform to ASTM A615 Grade 60 except for steels noted as Corrosion Resistant Reinforcing (CRR) which shall conform to Section 223 of the Specifications. All reinforcing bar dimensions on the detailed drawings are to centers of bars except where otherwise noted and are subject to fabrication and construction tolerances.

CRR steels shall conform to one or more of the three Classes listed in Section 223 of the Specifications. The Class(es) of CRR steel(s) required on this project is/are noted on plan sheets and in the reinforcing steel schedule. CRR Steel, Class II or Class III, may be substituted for Class I. CRR Steel, Class III, may be substituted for Class II.

Piles in Abutment B shall be driven through pre-bored holes. Preboring shall penetrate fill and original ground to El. 142.

All H-piles shall be ASTM A709 Grade 50 steel. H-Piles in abutments and piers shall be driven to practical refusal and to the required nominal axial resistance. All piles shall be driven to or below the minimum tip elevation(s) shown in the Pile Data Table, unless otherwise directed or authorized by the Engineer. For axial resistance requirements for abutments and piers, see sheet 3. Nominal axial resistance shall be determined by Dynamic Pile Testing.

General Notes continued on next sheet.

VDOT

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION
PROPOSED BRIDGE ON

ROUTE 54 OVER CSX RAILROAD
HANOVER CO. - 1.4 MI. W. OF INT. RTE. 301
PROJ. 0054-042-103, B603

COMMONWEALTH OF VIRGINIA
Ron I. Patterson
Lic. No. 000000
PROFESSIONAL ENGINEER

Ron I. Patterson
2016.05.12 16:34:12-04'00'

VDOT S&B DIVISION
RICHMOND, VA
STRUCTURAL ENGINEER

PLANS BY:	Central Office
COORDINATED:	
SUPERVISED:	Ron I. Patterson
DESIGNED:	Walter L. Knight
DRAWN:	Walter L. Knight
CHECKED:	Bruce I. Goodman

No.	Description	Date
	REVISIONS	

For Table of Revisions, see Sheet 2.

Recommended for Approval: John E. Doe — State Structure and Bridge Engineer — 5-14-16 Date

Approved: David F. Hansel — Chief Engineer — 5/14/16

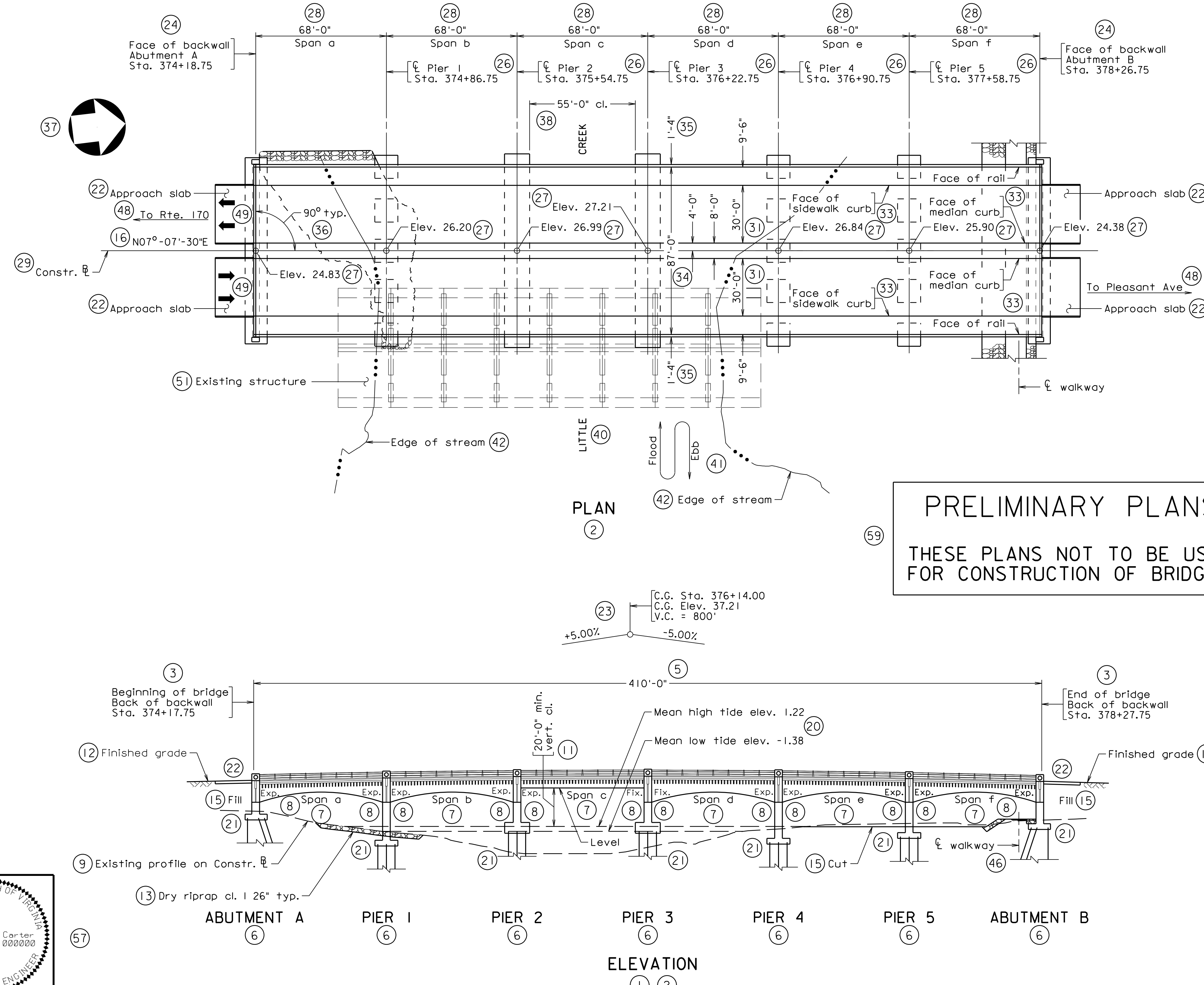
ORIGINAL SIGNATURES ON TITLE SHEET OF ROAD PLANS
Date: May 12, 2016

PART 2
DATE: 18May2016
SHEET 3 of 12
FILE NO. 02.01-3

999-99_001.dgn

STATE	FEDERAL AID ROUTE	FEDERAL AID PROJECT	STATE ROUTE	STATE PROJECT	SHEET NO.
VA.	—	BR-060-5(005)	60	0060-122-F02, B602	1

NBIS Number: 000000000026314	UPC No. 8888
(53) Federal Oversight Code: FO	FHWA Construction and Scour Code: X081-S5



(59)

PRELIMINARY PLANS

THESE PLANS NOT TO BE USED FOR CONSTRUCTION OF BRIDGE

(60) **DESIGN EXCEPTION(S):**

None

(54) **GENERAL NOTES:**

The original approved sheet, including original signatures, is filed in the VDOT Central Office. Any misuse of electronic files, including scanned signatures, is illegal. Violators will be prosecuted to the full extent of the applicable laws.

Widths: 9'-6" sidewalk, 30'-0" roadway, 8'-0" median, 30'-0" roadway, 9'-6" sidewalk. Overall width 87'-0" face-to-face of rails.

Span Layout: 6 - 68'-0" prestressed concrete bulb-T beam spans continuous for live load.

Capacity: HL-93 loading.

Drainage Area: Tidal

Specifications:

Construction: Virginia Department of Transportation Road and Bridge Specifications, 2016.

Design: AASHTO LRFD Bridge Design Specifications, 7th Edition, 2014; and VDOT Modifications.

Standards: Virginia Department of Transportation Road and Bridge Standards, 2008; including all current revisions.

These plans are incomplete unless accompanied by the Supplemental Specifications and Special Provisions included in the contract documents.

Design loading includes 20 psf allowance for construction tolerances and construction methods.

The use of metal stay-in-place forms will not be permitted.

Concrete in prestressed piles and arch girder shall be Class A5. Concrete in superstructure and sidewalks and medians shall be Low Shrinkage Class A4 Modified; in abutments, piers and pre-cast cladding, Class A3.

Prestressed concrete in bulb-T beams shall be class A5 having a minimum compressive cylinder strength at 28 days equal to 10,000 psi and a minimum compressive cylinder strength at time of release of strands equal to 5800 psi.

All reinforcing steel shall be deformed and shall conform to ASTM A615 Grade 60 except for reinforcing steels noted as CRR (Corrosion Resistant Reinforcement) which shall conform to Section 223 of the Specifications. All reinforcing bar dimensions on the detailed drawings are to centers of bars except where otherwise noted and are subject to fabrication and construction tolerances.

CRR steels conform to one or more of the three Classes listed in Section 223 of the Specifications. The Class(es) of CRR steel(s) required on this project is/are noted on plan sheets and in the reinforcing steel schedule. CRR Steel, Class II or Class III, may be substituted for Class I. CRR Steel, Class III, may be substituted for Class II.

General Notes continued on next sheet.

VDOT

(52)

COMMONWEALTH OF VIRGINIA

DEPARTMENT OF TRANSPORTATION

PROPOSED BRIDGE ON RTE. 60 OVER LITTLE CREEK CITY OF NORFOLK 0.5 MI. N. INT. RTE. 170 PROJ. 0060-122-F02, B602

Recommended for Approval: John E. Doe — State Structure and Bridge Engineer — Date 5-15-16

(58)

Approved: David F. Hansel — Chief Engineer — 5/16/16

ORIGINAL SIGNATURES ON TITLE SHEET OF ROAD PLANS

Date: May 12, 2016

PART 2
DATE: 18May2016
SHEET 4 of 12
FILE NO. 02.01-4

(56) 999-99.001.dgn

(57) COMMONWEALTH OF VIRGINIA — Paul E. Carter Lic. No. 000000 — PROFESSIONAL ENGINEER

Paul E. Carter
2016.05.12 16:34:12-04'00'

VDOT S&B DIVISION
RICHMOND, VA
STRUCTURAL ENGINEER

(55)

PLANS BY:	Central Office
COORDINATED:	
SUPERVISED:	Paul E. Carter
DESIGNED:	Larry W. Knight
DRAWN:	Steve J. Gibson
CHECKED:	Steve J. Gibson

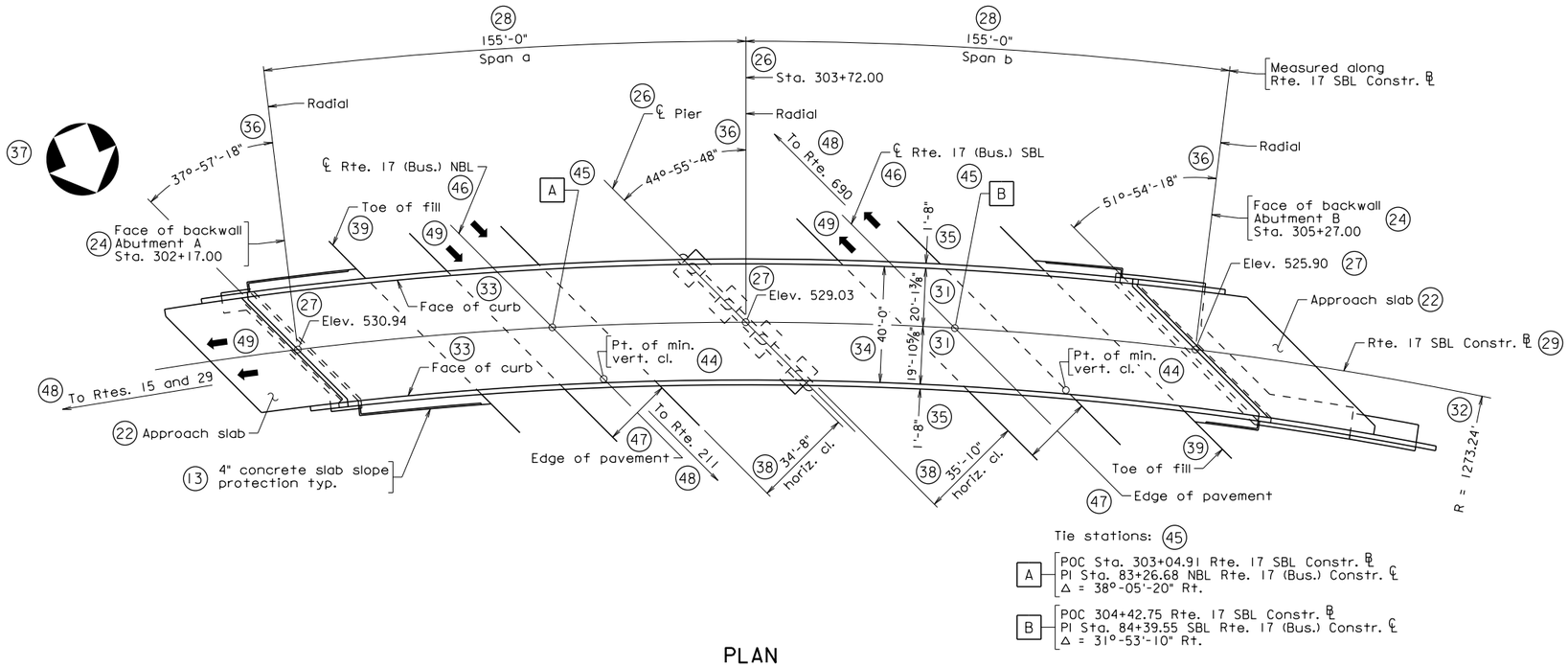
TITLE SHEET
SAMPLE SHEET FOR STREAM CROSSING (TIDAL)

(2) Scale: 1" = 30'

No.	Description	Date

REVISIONS

For Table of Revisions, see Sheet 2.



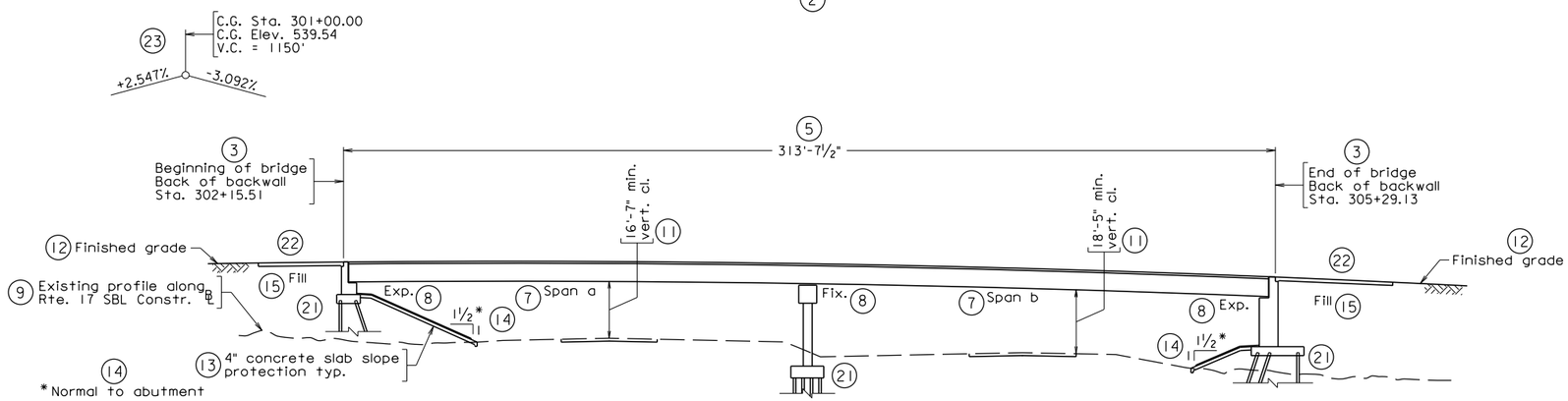
Tie stations:

A — POC Sta. 303+04.91 Rte. 17 SBL Constr. ℄
PI Sta. 83+26.68 NBL Rte. 17 (Bus.) Constr. ℄
Δ = 38°-05'-20" Rt.

B — POC Sta. 304+42.75 Rte. 17 SBL Constr. ℄
PI Sta. 84+39.55 SBL Rte. 17 (Bus.) Constr. ℄
Δ = 31°-53'-10" Rt.

PLAN

(2)



ABUTMENT A (6) PIER (6) ABUTMENT B (6)

DEVELOPED SECTION ALONG CONSTR. ℄

(1) (2)

PRELIMINARY PLANS

THESE PLANS NOT TO BE USED FOR CONSTRUCTION OF BRIDGE

STATE	FEDERAL AID ROUTE	FEDERAL AID PROJECT	STATE ROUTE	STATE PROJECT	SHEET NO.
VA.	—	AC-STP-117-1(115)	I-7	6017-030-f08, b608	1

NBIS Number: 000000000004356 — UPC No. 8888

Federal Oversight Code: NFO — FHWA Construction and Scour Code: X271-SN

DESIGN EXCEPTION(S):

None

GENERAL NOTES:

The original approved sheet, including original signatures, is filed in the VDOT Central Office. Any misuse of electronic files, including scanned signatures, is illegal. Violators will be prosecuted to the full extent of the applicable laws.

Width: 40'-0" face-to-face of curbs.

Span Layout: 155'-155' continuous steel plate girder spans.

Capacity: HL-93 loading.

Specifications:

Construction: Virginia Department of Transportation Road and Bridge Specifications, 2016.

Design: AASHTO LRFD Bridge Design Specifications, 7th Edition, 2014; and VDOT Modifications.

Standards: Virginia Department of Transportation Road and Bridge Standards, 2008; including all current revisions.

These plans are incomplete unless accompanied by the Supplemental Specifications and Special Provisions included in the contract documents.

Design loading includes 20 psf allowance for construction tolerances and construction methods.

All structural steel, except in bearings and sole plates, shall be ASTM A709 Grade 50W and shall be unpainted except as required by Section 407 of the Specifications. Structural steel in bearings and sole plates shall be ASTM A709 Grade 36 and shall be painted.

Girders shall be curved by cutting the flanges to proper curvature or by heat curving.

Concrete in superstructure and parapets, terminal walls and pier shall be Low Shrinkage Class A4 Modified; in abutments Class A3.

All reinforcing steel shall be deformed and shall conform to ASTM A615 Grade 60 except for steels noted as Corrosion Resistant Reinforcing (CRR) which shall conform to Section 223 of the Specifications. All reinforcing bar dimensions on the detailed drawings are to centers of bars except where otherwise noted and are subject to fabrication and construction tolerances.

CRR steels shall conform to one or more of the three Classes listed in Section 223 of the Specifications. The Class(es) of CRR steel(s) required on this project is/are noted on plan sheets and in the reinforcing steel schedule. CRR Steel, Class II or Class III, may be substituted for Class I. CRR Steel, Class III, may be substituted for Class II.

All H-Piles shall be ASTM A709 Grade 50 steel. All H-piles shall be driven to practical refusal and to the required nominal axial resistance. For axial resistance requirements for abutments and piers, see the Pile Footing Data Table on sheets 4 and 7 respectively. Nominal axial resistance shall be determined by Dynamic Pile Testing.

General Notes continued on next sheet.

VDOT

COMMONWEALTH OF VIRGINIA

DEPARTMENT OF TRANSPORTATION

PROPOSED BRIDGE ON
SBL RTE. 17 BYPASS OVER
NBL AND SBL RTE. 17 (BUS.)
FAUQUIER CO. - 1.7 MI. W. INT. RTES. 15 AND 29
PROJ. 6017-030-F08, B608

COMMONWEALTH OF VIRGINIA
Chris S. Carter
Lic. No. 000000
PROFESSIONAL ENGINEER

Chris S. Carter
2016.05.12 16:34:12-04'00'

VDOT S&B DIVISION
RICHMOND, VA
STRUCTURAL ENGINEER

PLANS BY:	Central Office
COORDINATED:	
SUPERVISED:	Chris S. Carter
DESIGNED:	John E. Stead
DRAWN:	Ken J. Martin
CHECKED:	Steve J. Bryant

TITLE SHEET
SAMPLE SHEET FOR CURVED BRIDGE

Scale: 1" = 25'

No.	Description	Date

REVISIONS

For Table of Revisions, see Sheet 2.

Recommended for Approval: John E. Doe — 5-15-16
State Structure and Bridge Engineer — Date

Approved: David F. Hansel — 5/15/16
Chief Engineer

ORIGINAL SIGNATURES ON TITLE SHEET OF ROAD PLANS

Date: May 12, 2016

PART 2
DATE: 18May2016
SHEET 5 of 12
FILE NO. 02.01-5

999-99.001.dgn

STATE	FEDERAL AID ROUTE	FEDERAL AID PROJECT	STATE ROUTE	STATE PROJECT	SHEET NO.
VA.	—	—	29	0029-005-130, B645	1

NBIS Number: 000000000001339 — UPC No. 76552

Federal Oversight Code: N/A — FHWA Construction and Scour Code: X071-S_

DESIGN EXCEPTION(S):

None

GENERAL NOTES:

Width: 40'-0" face-to-face of curbs.

Span layout: 111'-6" - 140' - 140' - 140' - 111'-6"

Capacity: HL-93 loading.

Drainage area: 52 sq. mi.

Specifications:

Construction: Virginia Department of Transportation Road and Bridge Specifications, 2016.

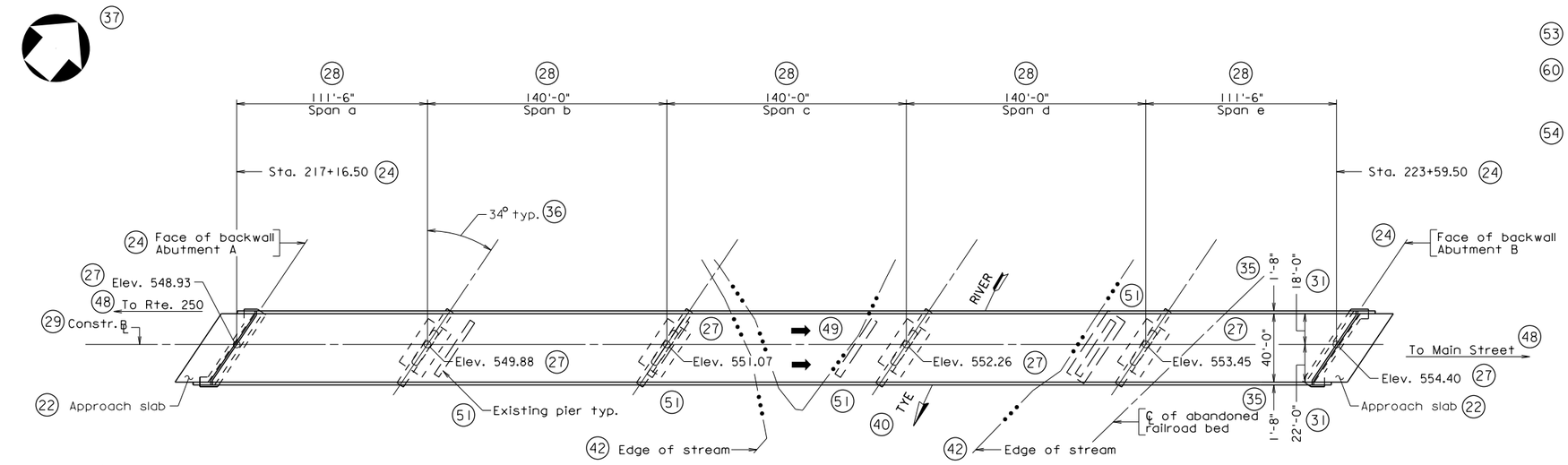
Design: AASHTO LRFD Bridge Design Specifications, 7th Edition, 2014; and VDOT Modifications.

Standards: Virginia Department of Transportation Road and Bridge Standards, 2008; including all current revisions.

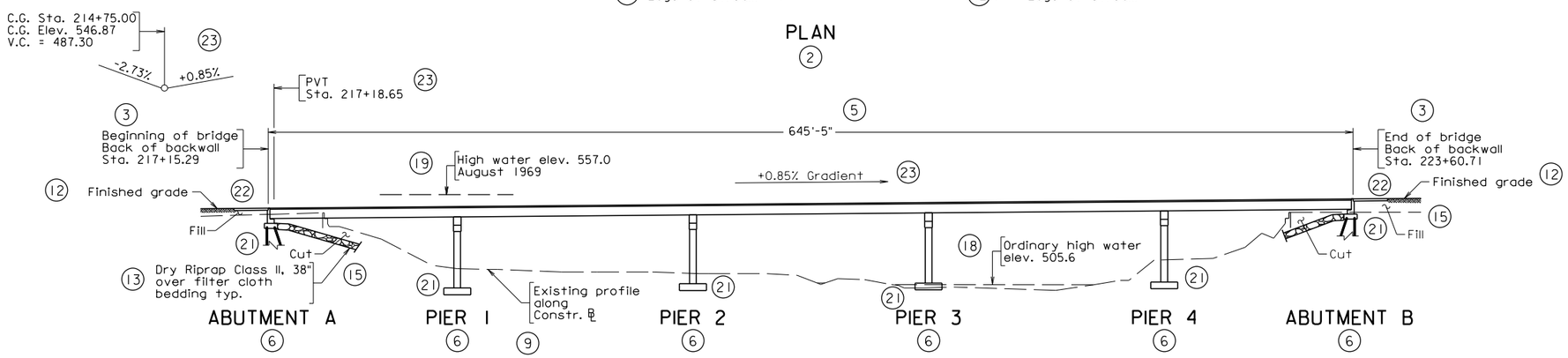
These plans are incomplete unless accompanied by the Supplemental Specifications and Special Provisions included in the contact documents.

Bridge No. of existing bridge is 1939. Plan No. is 091-19.

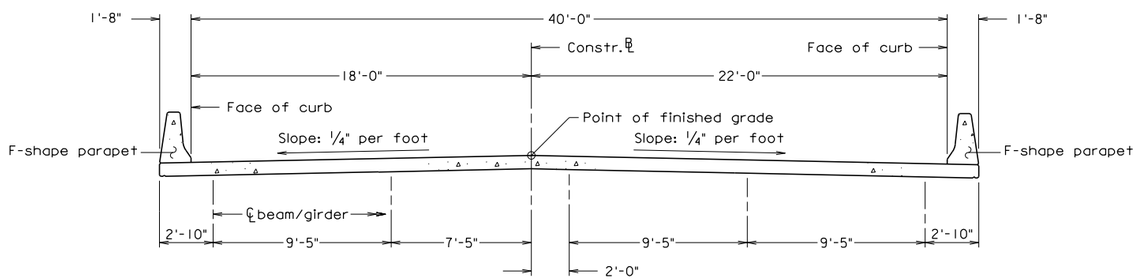
The existing structure is designated a Type B structure in accordance with Sec. 411.



PLAN



DEVELOPED SECTION ALONG CONSTR. ℄



TRANSVERSE SECTION

Scale 1/4" = 1'-0"

Note to Offerors:

These plans depict the approximate location and a concept of the proposed structure. The bridge geometrics, span lengths, type and size of superstructure members and substructure elements and maintenance of traffic are to be developed by the Offeror.

PRELIMINARY PLANS

THESE PLANS NOT TO BE USED FOR CONSTRUCTION OF BRIDGE

288-78_001.dgn

RECOMMENDED FOR APPROVAL FOR CONSTRUCTION
VDOT PROJECT MANAGER
DISTRICT CONSTRUCTION MANAGER

PLANS BY:	Central Office
COORDINATED:	
SUPERVISED:	Steve L. Smith
DESIGNED:	Bryan B. Byrd
DRAWN:	David L. Shepard
CHECKED:	Chuck E. Patterson

VDOT

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION

PROPOSED BRIDGE ON

RTE. 29 NBL OVER TYE RIVER
AMHERST-NELSON COUNTY LINE
PROJ. 0029-005-130, B645

TITLE SHEET
SAMPLE SHEET FOR DESIGN-BUILD PROJECT - PRELIMINARY PLANS

Scale: 1" = 40' unless otherwise noted

No.	Description	Date

REVISIONS

For Table of Revisions, see Sheet 2.

Recommended for Approval: _____ (Developer's Designee) Date

Approved: _____ Chief Engineer

Date: May 1, 2016

PART 2
DATE: 18May2015
SHEET 6 of 12
FILE NO. 02.01-6

DETAILING CHECK LIST FOR TITLE SHEET

Items marked by an asterisk (*) are required for preliminary plans

1. *Elevation view is drawn as a developed section along ℄ / ℬ. Therefore, skewed substructure units, wingwalls and parapets should not be shown. Sections of the abutments and piers shall be taken 90° to the individual unit. For piers, a column will always be shown. For relatively flat curved bridges, the developed section shall be projected down from the plan view. In the case of a sharp curve, the developed section shall be taken along the ℄ / ℬ shown on the plan view. For bridges with special architectural treatments, e.g. arches on exterior, decorative railings etc., an elevation taken along the outside face of bridge will be permitted.

2. *Title and scale. Drawings drawn to a scale other than those listed in File No. 01.04 shall be indicated as Not to scale.

3. *For non-integral abutments, label:
   Beginning/End of bridge
   Back of backwall
   Beginning/End of bridge station

4. *For integral abutments, label:
   Beginning/End of bridge
   End of Slab/End of slab
   Beginning/End of bridge station

5. *Dimension beginning to end of bridge. When multiple continuous units are used, the length of each individual unit should also be shown.

6. *Label abutments and piers/bents. Print with all capitals and use *subtitle* lettering symbology. Abutments will be designated by capital letters, e.g. ABUTMENT A. Piers/bents will be designated by using consecutive numbers when more than one pier exists, e.g., PIER 1, BENT 1.

7. Label spans using lower case span designators, e.g., Span a, Span b.

8. Label bearing types (Fix., Exp.).

9. *Label existing ground profile on ℄ / ℬ. If grade separation is existing, draw using *phantom* line symbology; if part of the project, use object line symbology with a line weight of 3.

10. *Label existing and proposed underground/overhead utilities (if applicable).

11. *Dimension minimum vertical clearance (if applicable). The label should be shown at the point of minimum vertical clearance on roadway pavement or railroad as projected from the plan view. When there is a divided highway, CD road or ramp under the bridge, the vertical clearance shall be given for each roadway (round down to nearest 1” increment).

12. *Label finished grade.

13. *Label riprap/slope protection (if applicable).

14. *Label slope of riprap/slope protection. Note the orientation of slope as Normal to abutment.

15. *Label fill or cut as applicable.

16. Provide the bearing of ℄ / ℔.

17. *Label sheeting or bulkhead for protection of track or temporary protection from adjoining roadways (if applicable).

18. *Label: elevation of ordinary high water (if applicable), e.g., Ordinary high water elev. 238.4.

19. *Label: elevation and date of high water (if applicable), e.g., High water elev. 248.7, March 1967.

20. *Label: elevation of Mean low tide and Mean high tide (if applicable), e.g., Mean low tide, elev. -0.50 or Mean high tide, elev. 1.75 Where there are discrepancies between the survey and hydraulic report elevations, the report elevations (obtained from tide tables) should be used. If differences are large enough to suggest an error, the Hydraulics Section of Location and Design should be requested to resolve the difference.

21. *Substructure elements drawn below ground line shall be drawn using a solid object line.

22. *Show approach slab (if applicable) and sleeper pad (if applicable). Label in plan view.

23. *Show vertical curve data, including grade in and grade out, at the approximate PVI location using the following format: (C.G. Sta. XX+XX.XX; C.G. Elev. XX.XX & V.C. = XXX.XX). If a straight grade is used, the percent and direction of grade shall be shown. When the vertical curve begins and/or ends on the bridge, locate the PVT and/or PVC and give station on the developed section only.

24. *For non-integral abutments, label:
    Face of backwall
    Abutment A or B
    Face of backwall station

25. *For integral abutments, label:
    End of slab
    Abutment A or B
    End of slab station

26. Label ℄ pier(s)/bent(s) and show station(s).

27. *Show elevation at each intersection of substructure reference line (Face of backwall, End of slab, ℄ of pier or bent) and the project ℄ / ℔.

28. *Dimension span length(s) and label span(s).

(29) *Label ℄ / ℄ of bridge. This designation should match that shown on the road plans. Do not include the word proposed. Do not show station tics or station callouts along the ℄ / ℄.

(30) Label retaining walls (if applicable).

(31) *Dimension ℄ / ℄ of bridge to face of curb(s).

(32) Show ℄ / ℄ radius (if applicable).

(33) Label the face of curb. If there is a median, label as: Face of median curb; sidewalk curb as: Face of sidewalk curb; for all else: Face of curb (or) Face of rail.

(34) *Dimension face-to-face of curb/rail.

(35) Dimension parapet/barrier/rail widths. For Kansas Corral railing, dimension to the outside edge of slab. Where architectural treatment is used on the inside (traffic) and/or outside (non-traffic) faces of parapets/rails, the dimensioned width shall include the relief.

(36) *Label skew angle(s) (if applicable). For a 0° skew, show as 90° to ℄ / ℄. Do not label as normal to ℄ / ℄. Curved bridges require the skew angle to be shown between the Face of backwall/End of slab or the ℄ of pier/bent and a radial line passing through the intersection of these noted lines with the ℄ / ℄ of bridge.

(37) *Show North Arrow above plan view.

(38) *Dimension horizontal clearance (if applicable). When under-passing roadway/railroad is parallel to substructure units this clearance shall be shown as horizontal clearance. If the under-passing roadway/railroad is curved/skewed in relation to substructure units, the clearance shall be shown as minimum horizontal clearance and shall be shown as taken at the actual location of the minimum clearance.

(39) *Label toe of fill (if applicable).

(40) *Show stream flow arrow and give stream name in all capital letters using *lettering/dimension* lettering symbology in a weight of 6.

(41) *If tidal, show stream ebb and flood arrow.

(42) *Label edge of stream (if applicable). If tidal, the edge of stream should coincide with the approximate contour of the mean high tide. If non-tidal, the edge of stream should coincide with ordinary high water.

(43) Provide 15'-0" dimension for riprap extension behind face of backwall/end of slab for abutments without U-back wings. When U-back wings are used, riprap shall extend 15'-0" or the length of wing, whichever is greater. Riprap beyond this point shall be referred to the road designer for inclusion in road plans.

(44) Label the point of minimum vertical clearance for each vertical clearance shown in developed section (if applicable).

(45) *Label tie stations and delta angle (if applicable).

(46) *Label ℄ / ℄ of roadway and/or track under the bridge (if applicable). For bridges over railroads, show and label the ℄ of any future track. Draw future track using *phantom* line symbology.

(47) *Label edges of pavement (if applicable).

(48) *Provide traffic direction of all roadways to a town or intersection of prominent roadways, e.g., To Route 150, To Town of Farmville, etc. Arrow and text shall be placed outside of view area and in the direction of traffic flow.

(49) *Provide traffic direction arrows, bent arrows for turning lanes, for each lane on all roadways.

(50) *Give the distance and direction to nearest railroad milepost (if applicable). Add Existing RR R/W limits.

(51) *Show any existing bridge(s) using *phantom* line symbology with a line weight of 1. Label as existing bridge. Show substructure features as appropriate.

(52) For instructions on completing the title block, see File No. 02.04-1 thru -10.

(53) For instructions on completing the project block, see File No. 02.02-1 thru -6.

(54) For instructions on completing the General Notes, see File No. 02.03-1 thru -7.

(55) For instructions on completing this portion of sheet, see File No. 02.05-1.

(56) For instructions on developing the CADD sheet number, see File No. 01.01-7 and 01.14-4.

(57) For instructions on sealing and signing, see File No. 01.16.

(58) For instructions on signature requirements for bridge title sheet, see File No. 02.04-4 thru -9.

(59) *Add to preliminary plans. Cell PREL is available in bdetails1.cel library. Delete on final plans.

(60) For instructions on design exceptions, see File No. 02-07-1.

(61) *Add for preliminary plans for Design-Build projects only. Cell PDB is available in bdetails1.cel library. Delete block on final plans.

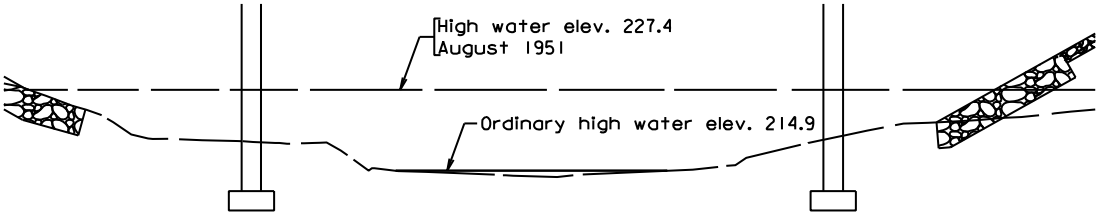
(62) *Add TRANSVERSE SECTION for preliminary plans for Design-Build projects only. Label type(s) of parapet(s), rail(s) etc. to be used. Delete TRANSVERSE SECTION from title sheet on final plans.

(63) Add signature blocks for approved construction plans when obtaining Chief Engineer signature for Design-Build projects only. Use electronic signatures. Cell PDD3 is available in bdetails1.cel library.

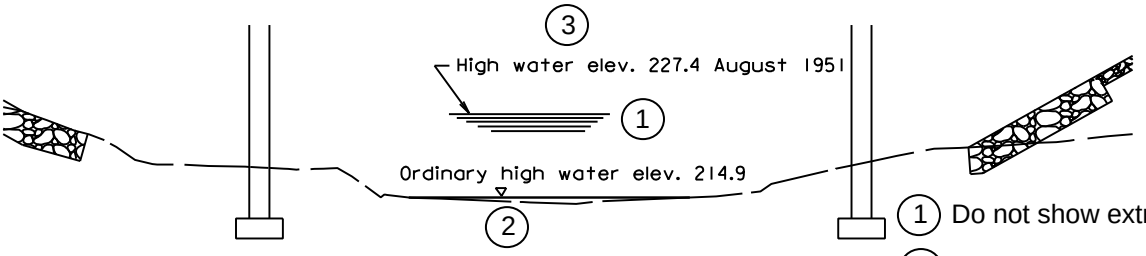
General:

Illustrated below are preferred drafting techniques used primarily on the title sheet.

Water elevation line: This line shall be drawn using *phantom* line symbology. No extra lines shall be shown underneath, nor shall any symbol be shown.



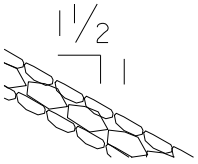
ACCEPTABLE



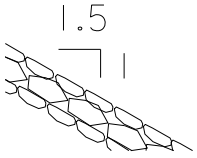
UNACCEPTABLE

1. Do not show extra lines.
2. Do not show a symbol.
3. Capitalization incorrect.

Riprap/slope protection: Show as 1½ : 1, not as 1.5 : 1.



ACCEPTABLE



UNACCEPTABLE

Bearing: When showing the bearing of the roadway/bridge centerline, place a dash between the degrees, minutes and seconds.

N30º-52'-36"E

ACCEPTABLE

N30º 52' 36"E

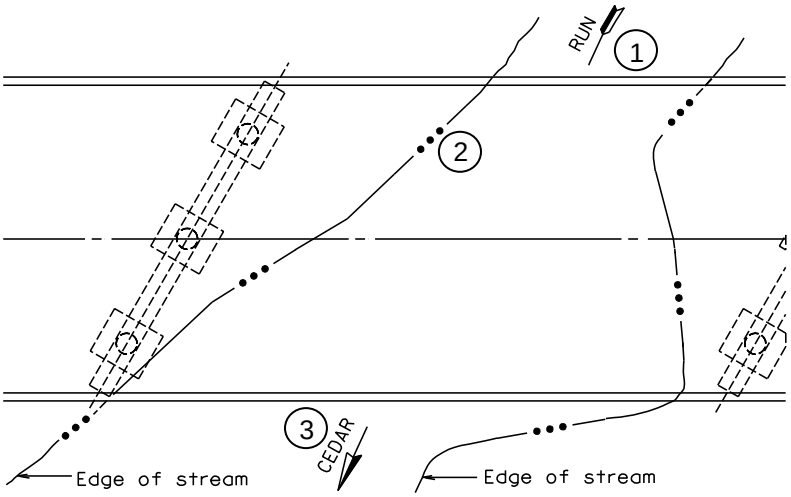
UNACCEPTABLE

TITLE SHEET
DRAFTING PREFERENCES

Stream Designation: The edges of the body of water are always designated as *Edge of stream*.

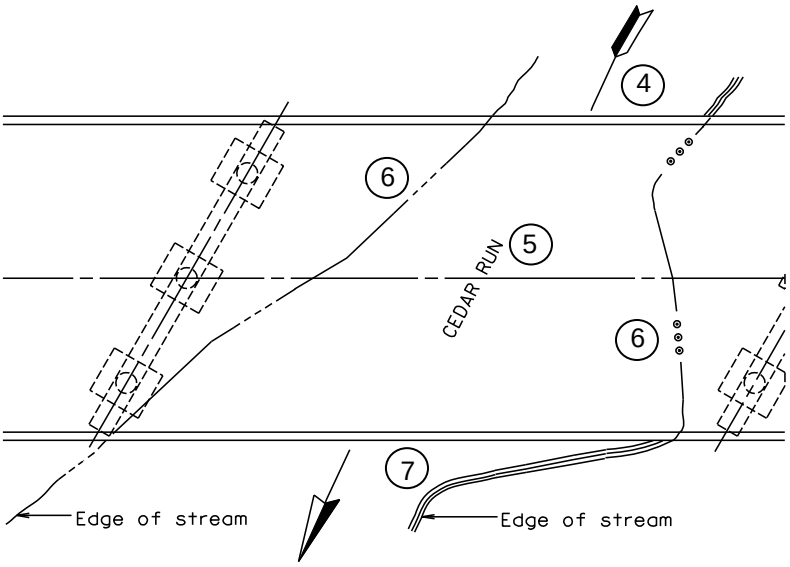
Stream arrows: To show the stream arrow, use the cells ***STRM1*** and ***STRM2*** from the *bdetails1.cel* library. Place the name of the stream, in all caps, over the two cells. Enter the stream name using the text symbology *lettering/dimen.* from the *bls* MDL; change the weight of the text to 6 to make it bolder.

Edge of stream lines: The edge of stream lines shall be drawn using a stream curve line with the *dimension* line symbology from the *bls* MDL. The line shall be uniquely identified as an edge of stream line by inserting the cell ***STRME*** intermittently along the line.
This cell is found in the *bdetails1.cel* library and is a short piece of line with three embedded opaque dots. —— ● ● ● —— The cell shall be placed, rotated to the proper angle and fitted along the stream line. Portions of the stream line shall then be removed so that the cell meets the edges.



ACCEPTABLE

1. Stream arrow cells placed in proper location at scale of 1.0.
2. Stream edge cell placed along stream line.
3. Name of stream placed along two arrows.



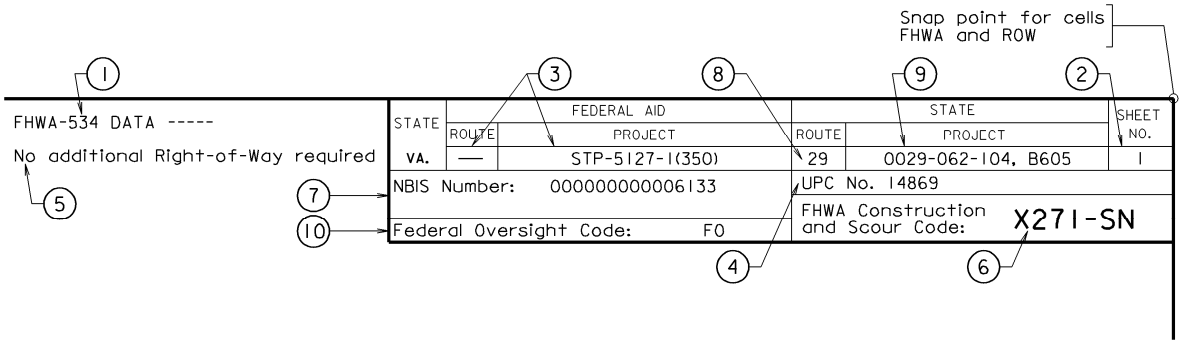
UNACCEPTABLE

4. Stream arrow cells are too large.
5. Name of stream placed on bridge, not over arrows.
6. Cell ***STRME*** not used for line breaks.
7. Do not show parallel lines for edge of stream.

TITLE SHEET
DRAFTING PREFERENCES

General:

The upper right-hand corner project block for the title sheet is illustrated below. Detailed information is given for the required data in each block.



(1) FHWA-534 data code: Show on bridge-only projects. See L&D current I&I Memo LD-151 (Highway Capital Outlay Code). This code is five digits. Show on title sheet only. This code is a cell named ***FHWA*** and is found in the *bdetails1.cel* library. The snap point for the cell is the right top corner of the sheet border, as illustrated above.

(2) Sheet no.: Enter the number of the bridge plan sheet.

(3) Federal aid route and project number:

Route block: The route number block is not used at this time and will be already filled in with a dash. This dash should not be removed from any sheet in the set of plans.

Project block: For projects with federal aid, enter the federal aid project number for construction; for projects without federal aid, draw a long dash in the block.

Project block - applicable sheets: Show on the title sheet and on sheet 2 (sheet with Table of Revisions). If the Table of Revisions falls on a sheet other than 2 due to a major project or long structure, the federal aid project number (or the long dash) shall be shown on all sheets up to and including the sheet with the Table of Revisions.

(4) UPC no.: Enter the UPC number. Show on title sheet only.

(5) No additional Right-of-Way required. Show on bridge-only projects. The text “No additional Right-of-Way required” is a cell named ***ROW*** and is found in the ***bdetails 1.cel*** library***.*** The snap point for the cell is the right top corner of the sheet border, as illustrated above. Show on the title sheet only.

(6) FHWA construction and scour code: This code is shown on all projects. Show on title sheet only. See File Nos. 02.02-3 thru -5 for codes.

(7) NBIS Number: The District Bridge Safety Inspection Engineer can provide the NBIS number for each structure(s). Leading zeros for the number should be shown for the 15 digit number. Space has been provided for two numbers if required. A bridge with a longitudinal joint is considered two structures. Therefore, two NBIS numbers will be required on new structures. Show on title sheet only.

(8) Enter route number when available. Otherwise, draw a dash in this block.

(9) State project number: Do not include the PE number or construction number, e.g., C501.

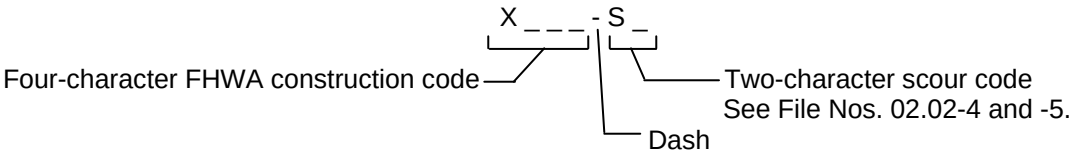
(10) Federal oversight code: For projects with federal funding, enter FO for those with federal oversight; enter NFO for those without federal oversight. For projects not federally funded, enter N/A. Show on title sheet only.

Text Sizes: The information in the project block may be placed when the sheet is first generated using the *bsht* program from the ***VDOT BRIDGE MDL*** task bar. This will ensure that all parameters (size, weight, color, level and font) are correct. If the information is placed at a later time, the *bsht* program may be re-accessed. By selecting "Existing", additional text may be placed automatically.

Note: At this time, *bsht* has not been updated for the new project block. The designer may use the current *bsht*, but will need to adjust the text to the correct block. The designer may also use the cell FSHTB from bdetails1.cel library. This cell provides sample text for the upper right corner which the designer will need to modify for their specific project. An updated version of *bsht* will be released later this year.

To set the text parameters without using the *bsht* program, select *bls* program from the ***VDOT BRIDGE MDL*** task bar. From the ***Line Settings S&B*** sub-palette, select *subtitle* for the FHWA construction and scour code. All other text is placed using the text style *lettering/dimension*.

The FHWA coding consists of two parts: the FHWA construction code and the scour code.



FHWA construction code

First character "X" indicates bridge classification, i.e., structure over twenty feet in length:

X_ _ _

Second character indicates the nature of the structure:

X0_ _	Highway over waterway
X1_ _	Highway over railroad
X2_ _	Highway over highway (project route is over)
X3_ _	Highway over waterway and railroad
X4_ _	Highway over waterway and highway
X5_ _	Highway over railroad and highway (project route is over)
X6_ _	Highway under railroad
X7_ _	Highway under highway (project route is under)
X8_ _	Highway under railroad and highway (project route is under)
X9_ _	Other combinations, including highway over waterway, railroad and highway; also 3-level and 4-level grade separations; miscellaneous.

Third character identifies the material of the principal supporting members of the span identified in column 4:

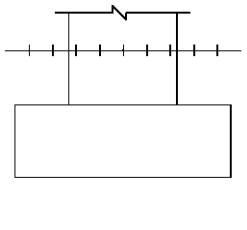
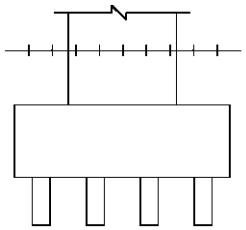
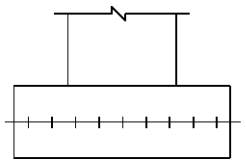
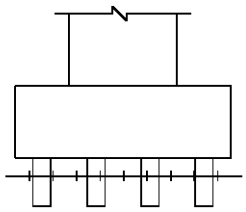
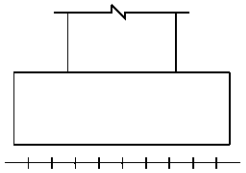
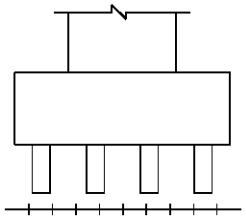
X_0_	Timber
X_1_	Masonry
X_2_	Concrete, not prestressed
X_3_	Steel
X_4_	Steel and concrete
X_5_	Timber and steel
X_6_	Timber and concrete
X_7_	Composite steel and concrete
X_8_	Concrete, prestressed
X_9_	Aluminum

Fourth character identifies the type of span (identifies main span type if the bridge is comprised of two or more span types):

X_ _0	Slab
X_ _1	Girder
X_ _2	Truss (except cantilever)
X_ _3	Rigid frame
X_ _4	Arch
X_ _5	Cantilever truss
X_ _6	Movable
X_ _7	Suspension
X_ _8	Box culvert (bridge length)
X999	Highway tunnels

The scour code consists of two characters. The first character "S" indicates scour. The second character identifies the current status of the bridge regarding its vulnerability to scour (see table). For foundations on rock where scour cannot be calculated, use the coding S8.

If more than one foundation condition exists for a bridge, use the lowest coding.

		ABUTMENTS AND PIERS
-SN	Bridge not over waterway.	
-S9	Bridge foundations (including piles) on dry land well above flood water elevations.	
-S8	Bridge foundations determined to be stable for the assessed or calculated scour conditions. Scour is determined to be above top of footing by assessment (i.e., bridge foundations are on rock formations that have been determined to resist scour within the service life of the bridge), by calculation or by installation of properly designed countermeasures.	 **SPREAD FOOTING**  **PILE FOOTING***
-S7	Applies to existing bridges only, not to new structures. Countermeasures have been installed to mitigate an existing problem with scour and to reduce the risk of bridge failure during a flood event.	
-S5	Bridge foundations determined to be stable for assessed or calculated scour conditions. Scour is determined to be within the limits of the footing or piles by assessment (i.e., bridge foundations are on rock formations that have been determined to resist scour within the service life of the bridge), by calculations or by installation of properly designed countermeasures.	 **SPREAD FOOTING**  **PILE FOOTING*** Embedment length provides stability of foundation.
SCOUR CRITICAL: Scour below spread footing base or piles tips or embedment length (of piles) does not provide stability of foundation. Foundation design must be modified or adequate countermeasures employed.		 **SPREAD FOOTING**  **PILE FOOTING***

See next sheet for pile bents.

---I---I---I---I---I---I--- Indicates depth of scour.

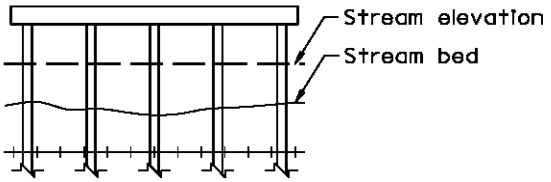
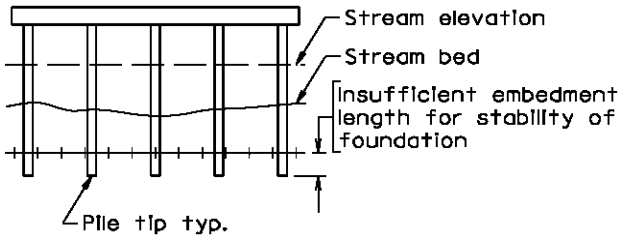
***** Applicable to piles and drilled shafts.

See FHWA Memorandum dated April 27, 2001, Subject: Revision of Coding Guide, Item 113 – Scour Critical Bridges.

See VDOT Drainage Manual, Chapter 12, for scour determination procedures.

The scour code consists of two characters. The first character "S" indicates scour. The second character identifies the current status of the bridge regarding its vulnerability to scour (see table). For foundations on rock where scour cannot be calculated, use the coding S8.

If more than one foundation condition exists for a bridge, use the lowest coding.

		PILE BENTS
-SN	Bridge not over waterway.	
-S9	Bridge foundations (including piles) on dry land well above flood water elevations.	
-S8	Bridge foundations determined to be stable for the assessed or calculated scour conditions. Scour is determined to be above top of footing by assessment (i.e., bridge foundations are on rock formations that have been determined to resist scour within the service life of the bridge), by calculation or by installation of properly designed countermeasures.	 Embedment length provides stability of foundation.
-S7		Not Applicable
-S5		Not Applicable
SCOUR CRITICAL: Scour below spread footing base or piles tips or embedment length (of piles) does not provide stability of foundation. Foundation design must be modified or adequate countermeasures employed.		

See previous sheet for abutments and piers.

---I---I---I---I---I---I--- Indicates depth of scour.

See FHWA Memorandum dated April 27, 2001, Subject: Revision of Coding Guide, Item 113 – Scour Critical Bridges.

See VDOT Drainage Manual, Chapter 12, for scour determination procedures.

If applicable to the project, the following Special Provisions, Supplemental Specifications and Special Provision Copied Notes will be included automatically by the Contract Office (Scheduling and Contract Division). During the biddability review, the bridge designer shall confirm that the correct Special Provisions, Supplemental Specifications and Copied Notes are in the contract by memo to Scheduling and Contract Division.

The Special Provisions, Supplemental Specifications and Special Provision Copied Notes as of December 2008 are no longer be listed by number in the upper-right corner of the title sheet of each bridge plan.

C504	Exposed Aggregate Finish	03-26-92 Reissued July 2008
S107	Sec. 107.19 Railway - Highway Provisions	01-14-08
S109D	Price Adjustment for Steel	02-06-09
S223AG3	Corrosion Resistant Reinforcing Steel	03-17-16
S303J	Turbidity Curtain	01-14-08
S403B	Dynamic Pile Testing for Friction Piles (This is ASD version, designer shall check for LRFD version)	05-25-99 Reissued July 2008
S403C	Dynamic Pile Testing for End Bearing Piles (This is ASD version, designer shall check for LRFD version)	05-25-99 Reissued July 2008
S403D	Wave Equation Analysis (This is ASD version, designer shall Check for LRFD version)	05-25-99 Reissued July 2008
S404B	Concrete Surface Color Coating	08-01-91 Reissued July 2008
S404C	Gravity Filled Polymer Crack Sealing	08-08-95 Reissued July 2008
S404D	Sealing Expansion Joints	06-14-00 Reissued July 2008
S404F	Concrete Surface Penetrant Sealer	08-01-91 Reissued July 2008
S404G	Filling and Sealing Pattern Cracks in Concrete Decks and Overlays	05-17-10

S404H	Sealing Linear Cracks in Concrete Decks and Overlays Using Epoxy and Carbon Fiber Mesh	09-16-09
S407B	Tooth Expansion Joint	01-14-08
S407D	Metallization of Ferrous Metal Surfaces	01-05-98 Reissued July 2008
SSMCON	Imperial unit to Metric Unit Conversion	12-01-11
SS214	Hydraulic Cement	01-28-08
SS215	Hydraulic Cement Concrete Admixtures	01-28-08
SS217	Hydraulic Cement Concrete	01-27-11
SS226	Structural Steel	12-16-08
SS40102	Structure Excavation	04-17-12
SS404	Hydraulic Cement Concrete Operations	12-17-10
SS405	Prestressed Concrete	12-20-10
SS40605	Reinforcing Steel	03-17-16
SS40703	Steel Structures	01-02-12
SS408	Bearing Devices and Anchors	12-20-10
SS412	Widening, Repairing, and Reconstructing Existing Structures	08-05-08
SS413	Dismantling and Removing Existing Structures or Removing Portions of Existing Structures	08-05-08
SS414	Riprap	01-25-10
SS423	NBIS Inspection Using Under Bridge Device	04-16-12
SU404	Epoxy Concrete Overlay	05-31-01
SU421	Elastic Inclusion (EPS)	06-24-03

C = Copied Note
S = Special Provision
SS = Supplemental Specification
SU = Special Use Special Provisions

The following Copied Notes, Special Provisions and Supplemental Specifications have been added to the Road and Bridge Specifications or are no longer applicable. They are listed for informational purpose only.

C105(c)	Sec. 105.04 Furnishing and Erecting Precast Structures – Dropped from the 2007 Road and Bridge Specifications	09-15-95
C223	Sec. 223 Steel Reinforcement – Replaced by SS223A	02-19-09
C403(a)	Sec. 403 – Bearing Piles – Added to 2007 Road and Bridge Specifications as Sec. 403(d)4	11-29-04
C406	Sec. 406.04 Measurement and Payment – Replaced by SS223A	12-28-07
C407(a)	Sec. 407.04(J) Stud Shear Connectors – Dropped from the 2007 Road and Bridge Specifications	12-16-02
C410(a)	Sec. 410 – Railings and Parapets – Added to 2007 Road and Bridge Specifications as Sec. 410.03(b)	01-25-05
C413(a)	Sec. 413.02(b) Removing Portion of Existing Structures - Added to the 2007 Road and Bridge specifications	07-10-03
C504(a)	Exposed Aggregate Finish - Reissued on July 2008 as C504(c)	03-26-92
S105A	Sec. 105.10 Construction Stakes, Lines and Grades – Dropped from the 2007 Road and Bridge Specifications	10-29-01
S107	Sec. 107.08 Railway-Highway Provisions - Reissued on 01-14-08 as Sec.107.19	06-24-92c
S217B	Low Permeability Concretes – Included in SS217	12-02-02
SS22301 S223AG0 S223AG1 S223AG2	Steel Reinforcement – Replaced by S223AG3	03-17-16
S231A	Sec. 231 – Paint – Added to 2007 Road and Bridge Specifications	11-29-04
SS40604	Reinforcing Steel-Replaced by SS40605	03-17-16
S411	Protective Coating of Metal in Structures – Added to the 2007 Road and Bridge Specifications	12-17-03
S412A	Section 412 - Widening, Repairing and Reconstructing Existing Structures - Added to the 2007 Road and Bridge Specifications	03-19-03

C = Copied Note
S = Special Provision
S = Supplemental Specification

GENERAL NOTES (TITLE SHEET OF BRIDGE PLANS)

General: The following are suggested wordings for notes that are regularly needed on the title sheet of bridge plans. Where these notes are fully applicable, there may be no need to change the wording. The wording should be changed or other notes added wherever they are not adequate.

Notes should line up with the GENERAL NOTES on the title sheet. The notes are a cell named ***GNNTE*** and are found in the *bdetails1.cel* library. Snap the cell to the top of the "G" of GENERAL NOTES on the title sheet. Notes may be edited after dropping status on the cell. Construction lines are provided to give guidance for left and right borders for the notes. The construction lines are displayed or not displayed in the *SETTINGS-VIEW ATTRIBUTES* menu.

Notes in single parentheses indicate alternate wordings to be selected by the designer. Notes in double parentheses *((italics))* are explanations and instructions to the designer. Skip a line between notes. * Indicates notes to be shown on preliminary plans. + Indicates notes to be shown on preliminary plans for Design-Build projects.

GENERAL NOTES:

The words "GENERAL NOTES" are part of the ***FSHT*** cell. The general notes cell, ***GNNTE***, shall be snapped to the top of the "G".

The original approved sheet, including original signatures, is filed in the VDOT Central Office. Any misuse of electronic files, including scanned signatures, is illegal. Violators will be prosecuted to the full extent of the applicable laws.

+ *Width: (_____'-_____") face-to-face of (curbs) (rails). (Includes widening of ____'-_____" on left of traffic) (and) (_____'-_____" on right of traffic). (Includes widening of _____'-_____" on each side.) *((See rail standards for location of face of curb or rail))*

OR

+ *Widths: ((*Beginning with upstream, North or East Side*)) (_____'-_____", sidewalk, _____'-_____" roadway, _____'-_____" median, _____'-_____" roadway, _____'-_____" sidewalk.) Overall width (_____'-_____") face-to-face of (curbs) (rails). (Includes widening of _____'-_____" on left of traffic) (and) (____'-_____" on right of traffic.) (Includes widening of _____'-_____" on each side.) ((*See rail standards for location of face of curb or rail*))

+ *Span layout: (_____-_____ ft.) *((Show number and length(s) of span(s))* (steel rolled beam) (steel plate girder) (reinforced concrete _____) (prestressed concrete beam) spans *((or other type of spans. For example: 80'-100'-80' continuous steel plate girder spans; 3 units of 100'-100'-100'-100' prestressed concrete 69" deep bulb-T beam spans continuous for live load; 75'-75' prestressed concrete 61" deep bulb-T beam spans continuous for live load.))*

+ *Capacity: HS20-44 loading and alternate military loading. *((Use other loading only for special cases if approved by the State Structure and Bridge Engineer.)) ((Use when design is by ASD))*

+ *Capacity: HL-93 loading. *((Use other loading only for special cases if approved by the State Structure and Bridge Engineer.)) ((*Use when structure is designed for LRFD.*))*

+ *Drainage area: (_____) sq. mi. *((in place of "_____ sq. mi.", show "tidal" when indicated in hydraulic analysis))*

+ *Specifications:

Construction: Virginia Department of Transportation Road and Bridge Specifications, 2007. *((Effective for projects with an Advertisement date before July 1, 2016.))*

Virginia Department of Transportation Road and Bridge Specifications, 2016. *((Effective for projects with an Advertisement date after June 30, 2016.))*

Design: AASHTO Standard Specifications for Highway Bridges, 16th Edition, 1996; 1997 and 1998 Interim Specifications; and VDOT Modifications (,using Load Factor Design). (Bridge(s) (Structure(s)) is (are) designed for Seismic Performance Category B.) *((Use note only when designing for Seismic Performance Category B. Do not show note when designing for Seismic Performance Category A.))((Use when structure is designed by ASD.))*

AASHTO Guide Specifications for Horizontally Curved Steel Girder Highway Bridges with Design Examples for I-Girder and Box Girder Bridges, 2003. *((Use when structure is designed by ASD))*

AASHTO LRFD Bridge Design Specifications, 6th Edition, 2012; and VDOT Modifications. ((*Use when structure is designed for LRFD. Effective for projects with an Advertisement date before June 15, 2016.*))

AASHTO LRFD Bridge Design Specifications, 7th Edition, 2014; and VDOT Modifications. ((*Use when structure is designed for LRFD. Effective for projects with an Advertisement date after June 14, 2016.*))

AASHTO LRFD Movable Highway Bridge Design Specifications, 2nd Edition, 2007; 2008 thru 2015 Interim Specifications. ((Include for projects with movable bridges.))

Guide Specifications and Commentary for Vessel Collision Design Highway Bridges, 2nd Edition, 2009; 2010 Interim Specifications. *((Specify when used for design of the bridge/structure.))*

Guide Specifications for Design and Construction of Segmental Concrete Bridges, 2nd Edition, 1999; 2003 Interim Specifications. *((Use for segmental bridge/structure design.))*

Guide Specifications for Highway Bridge Fabrication with High Performance Steel, 3rd Edition, 2011. *((Use when HPS 70W is specified on the plans.))*

Guide Specifications for Seismic Isolation Design, 4th Edition, 2014. *((Specify when used for design of the bridge/structure.))*

LRFD Guide Specifications for Design of Pedestrian Bridges, 2nd Edition, 2009; and VDOT Modifications. *((Use for the design of pedestrian bridge/structure))*

Standards: Virginia Department of Transportation Road and Bridge Standards, 2008; including all current revisions.

+These plans are incomplete unless accompanied by the Supplemental Specifications and Special Provisions included in the contract documents.

This project is to be constructed in accordance with the Virginia Department of Transportation Work Area Protection Manual, June 2011 and latest revisions. *((For bridge-only projects))*

Design loading includes (_____) psf allowance for construction tolerances and construction methods. *((Use 20 psf minimum for steel or precast concrete beam spans with cast-in-place slabs when metal stay-in-place forms are permitted. Use 10 psf minimum when forms are not required. Examples for latter include prestressed concrete box beams or voided slabs with cast-in-place concrete decks or asphalt overlays.))*

Design loading includes (_____) psf allowance for future wearing surface. *((Use 15 psf minimum. Use on all projects.))*

The use of metal stay-in-place forms will not be permitted. *((Use note for: cast-in-place T-beam spans; cast-in-place slabs for existing beams that are not re-designed for construction tolerances (20 psf); bridges carrying railway traffic; bridges to be maintained by Hampton, Newport News, Chesapeake, Norfolk, Portsmouth and Virginia Beach.))*

((NOTE FOR STRUCTURAL STEEL: Designer shall specify type of structural steel required. All bearings to the extent possible should be laminated elastomeric bearings. If steel bearings are required, they shall be ASTM A709 Grade 36 unless stresses require higher strength steel, ASTM A709 Grade 50W is specified with integral abutment(s) or a hybrid HPS girder is used. Use of weathering steel is subject to Article 10.2.1 of the AASHTO Bridge Specifications and FHWA "Technical Advisory on Uncoated Weathering Steel in Structures," dated October 3, 1989.))

*All structural steel, including bearings, shall be ASTM A709 Grade 36. *((Use on projects where ASTM A709 Grade 36 is specified.))*

*All structural steel, including bearings, shall be ASTM A709 Grade 50W and shall be unpainted. *((Use on projects where full integral abutments, semi-integral abutments, conventional cantilever abutments with deck slab extensions or Virginia Abutments are used.))*

*All structural steel, except in bearings and sole plates, shall be ASTM A709 Grade 50. Structural steel in bearings and sole plates shall be ASTM A709 Grade 36. *((Use on projects where steel greater than Grade 36 is required, the structure is to be painted and when ASTM A709 Grade 36 is used in bearings and sole plates.))*

*Structural steel for (beams) (girder webs and flanges) (including cover plates, splice plates and filler plates) shall be ASTM A709 Grade 50. All other structural steel including (diaphragms, cross frames, stiffeners, connector plates and bearings including sole plates,) shall be ASTM A709 Grade 36. *((Use on projects where higher than Grade 36 steel is required, the structure is to be painted and when ASTM A709 Grade 36 can be used in bearings, sole plates and secondary members.))*

*All structural steel, except in bearings and sole plates, shall be ASTM A709 Grade 50W and shall be unpainted except as required by Section 407 of the Specifications. Structural steel in bearings and sole plates shall be ASTM A709 Grade 36 and shall be painted. *((Use on projects where ASTM A709 Grade 50W steel is specified and when ASTM A709 Grade 36 is used for bearings and sole plates.)) ((Insides of steel box girders and steel box pier caps shall be painted white, 595-37925.))*

Structural steel in flanges as designated in the plans shall be ASTM A709 Grade HPS70W. Additional fabrication requirements shall be in accordance with AASHTO Guide Specifications for Highway Bridge Fabrication with HPS. Structural steel in bearings, channels and angles shall be ASTM A709 Grade 50W. All other structural steel shall be ASTM A709 Grade 50W. All structural steel shall be unpainted except as required by Section 407 of the Specifications. *((Use on projects where high performance steel (ASTM A709M Grade HPS70W) is used in selected areas such as over the negative moment areas in the top and bottom flanges and the bottom flange in the positive moment areas.))*

(_____) is a fracture critical member and the requirements of AASHTO/AWS Fracture Control Plan (FCP) for Nonredundant Members as noted in the AASHTO/AWS Bridge Welding Code shall apply. *((Designer should also add on the sheet where such a member is detailed the following note: (_____) is designated as a fracture critical member.))*

Finish paint color shall be (_____), 595-(_____). *((Specify color and color number. Selected by the District Administrator --- call the District Structure and Bridge Engineer. Urban bridges in the City of Newport News shall be gray, 595-26373. Bridges maintained by Norfolk Southern Corp. shall be Norfolk Southern Light Grey, ANSI No. 70. Bridges matching existing aluminum paint color shall be aluminum, 595-26493. When the total weight of structural steel in <u>all</u> bridges included in the contract is less than 100 tons, the paint color shall be either brown, 595-20059, or green, 595-24227. The brown color matches the weathering steel.)) ((Insides of steel box girders and steel box pier caps shall be painted white, 595-37925.))*

Plate girders shall be curved (by cutting the flanges to proper curvature) (or) (by heat curving).

Beams shall be curved by heat curving.

Concrete in prestressed piles shall be Class A5. ((*Delete this portion of note if prestressed piles are not used.))* Concrete in superstructure and (sidewalks) (rails) (parapets) (terminal walls) (medians) (median barriers) (integral backwalls) shall be Low Shrinkage Class A4 Modified; in (substructure) (piers) (abutments), Class A3; in (_____), Class B2; in bag riprap, Class C1. *((Bag riprap in tidal water, Class A3.))*

Prestressed concrete in *((indicate structural member required))* shall be Class A5 having a minimum compressive cylinder strength at 28 days equal to *((specify strength))* psi and a minimum compressive cylinder strength at time of release of strands equal to *((design value --- rounded off to 100 psi))* psi. *((Use this note when concrete strength is greater than 5000 psi. Note is not to be used for piles.))*

Permeability testing does not apply to this project. ((*Use note only for non-NHS bridge structures < 300 feet in length and with a design ADT<2000*.))

Concrete surface color coating shall be (_____), ((specify color)) similar to Federal Standard Color No. 595-(_____). *((Selected by the District Administrator -- call District Structure and Bridge Engineer*.))

Deformed reinforcing bars shall conform to ASTM A615, Grade 60. All reinforcing bar dimensions on the detailed drawings are to centers of bars except where otherwise noted and are subject to fabrication and construction tolerances. *((Use this note when corrosion resistant reinforcement is not used on the project.))*

All reinforcing steel shall be deformed and shall conform to ASTM A615 Grade 60 except for steels noted as Corrosion Resistant Reinforcing (CRR) which shall conform to Section 223 of the Specifications. All reinforcing bar dimensions on the detailed drawings are to centers of bars except where otherwise noted and are subject to fabrication and construction tolerances. *((Use this note when corrosion resistant reinforcing steel is used on the project. Note: Some of the bars in the reinforcing steel schedule will be black bars while others may be CRR. There may be more than one type of CRR steel designated in the plans.))*

CRR steels shall conform to one or more of the three Classes listed in Section 223 of the Specifications. The Class(es) of CRR steel(s) required on this project is/are noted on plan sheets and in the reinforcing steel schedule. CRR Steel, Class II or Class III, may be substituted for Class I. CRR Steel, Class III, may be substituted for Class II. *((Use this note when corrosion resistant reinforcing steel is used on the project. Also allows for substitution of CRR steel based on availability.))*

Prestressing strands shall be uncoated, seven-wire, low-relaxation steel strands conforming to ASTM A416 Grade 270.

Continuous spiral ties may be substituted for the ties shown in the details of pier columns, provided that they are placed at an equivalent density and at no extra cost to the State. *((Use only when columns are detailed with separate tie bars --- e.g., square or rectangular columns with individual ties.))*

((For additional information on Spread Footing, Drilled Shaft and Pile Data Tables referenced in the geotechnical General Notes below, see File Nos. 15.01-7, 15.03-1 thru -4 and 17.02-3.))

Footings (for ___) shall bear on (firm material) (weathered rock) (competent bedrock). For bearing requirements (for ___), see the Spread Footing Data Table on sheet(s) (___).

Drilled shafts (for ___) shall provide the axial resistances shown in the Drilled Shaft Data Table on sheet(s) (___). Drilled shafts shall be installed to the minimum tip elevations shown in the Drilled Shaft Data Table, unless otherwise directed or authorized by the Engineer. *((For drilled shafts that must be constructed to a minimum tip elevation.))*

((For all piles used as end bearing piles.)) (All H-piles) (H-Piles in ___) shall be ASTM A709 Grade 50 steel. (All H-Piles) (H-Piles in ___) shall be driven to practical refusal and to the required nominal axial resistance. For axial resistance requirements (for ___), see the Pile Data Table on sheet(s) (___). (All piles shall be driven to or below the minimum tip elevation(s) shown in the Pile Data Table, unless otherwise directed or authorized by the Engineer.) *((For piles that must be driven to a minimum tip elevation due to scour and/or lateral stability requirements.))* Nominal axial resistance shall be determined (by the FHWA Gates Formula) (by Wave Equation Analysis) (by Dynamic Pile Testing) (by Static Load Testing).

((For all piles used as friction piles.)) (All H-piles) (H-piles in ___) shall be ASTM A709 Grade 50 steel. *((Where steel H-piles are used.))* All piles shall be driven to the required nominal axial resistance. For axial resistance requirements (for ___), see the Pile Data Table on sheet(s) (___). (All piles shall be driven to or below the minimum tip elevation(s) shown in the Pile Data Table, unless otherwise directed or authorized by the Engineer.) *((For piles that must be driven to a minimum tip elevation due to scour and/or lateral stability requirements.))* Nominal axial resistance shall be determined (by the FHWA Gates Formula) (by Wave Equation Analysis) (by Dynamic Pile Testing) (by Static Load Testing).

(All piles) (Piles in ___) shall be driven through pre-bored holes. Preboring shall penetrate fill and original ground to El. (___). *((Where preboring is required to advance the pile through a hard stratum. Add the General Note content for end bearing or friction piles.))*

(All piles) (Piles in ___) have been designed to support additional vertical loads caused by downdrag. The factored drag loads have been added to the nominal axial resistance in the Pile Data Table. When determining if the nominal axial resistance has been achieved during construction, the resistance provided by the soil above Elev. ___ shall be neglected. *((For piles subjected to downdrag. The elevation cited in this note corresponds to the estimated location of the neutral plane.))*

(__)" diameter *((Same nominal dimension as prestressed pile))* cast-in-place concrete piles may be substituted for (__)" prestressed concrete piles. *((Substitution should be allowed only for piles having side dimensions less than or equal to 14 inches. C-I-P piles shall not be used in pile bents or where driving may induce shell collapse. Areas where shell collapse may occur include, but are not limited to, the Fredericksburg District and the peninsular zone from Mercury Blvd. to Hampton Roads Harbor in the Hampton Roads District.))*

+Bridge No. of existing bridge (in _____ lane) is (_____). Plan No. is (_____). *((When new structure is for replacement, modification, or paralleling of an existent structure --- see HTRIS for bridge* no.*))*

The Bridge Date Plate shall be installed in accordance with VDOT's Road and Bridge Standards and obtained from the District Structure and Bridge Office.

Cost of removal of existing (_____) surfacing shall be included in price bid for new (_____) surfacing material.

Cost to provide and maintain all temporary navigation lights and signals and other temporary work required by the Coast Guard for the protection of navigation during construction shall be included in prices for bid items.

The Contractor shall submit his proposed scheme and schedule of operations to the Engineer for review in sufficient time for the District Administrator to notify the Coast Guard at least 30 days prior to commencement of construction. Request for approval to take out of operation or demolish the existing bridge or for approval of any work performed in or over the waterway shall be made in writing by the Contractor to the Coast Guard so that it is received at least 30 days prior to the desired operation. Request is to be sent to Commander (dbp), Fifth Coast Guard District, Federal Building, 431 Crawford Street, Portsmouth, VA 23704-5004. The Coast Guard shall be notified in writing of any changes in construction schedules, emergency or otherwise, which will interfere with navigation outside of timeframes previously approved. Payment of any penalty that may be levied by the Coast Guard for Contractor violations of bridge regulations found in 33 CFR Parts 115, 116, 117 and 118 is the responsibility of the Contractor. *((Used on all projects over navigable waters.))*

The existing structure will be removed by State Forces after construction of the proposed bridge is completed*. ((When recommended by the District Administrator.))*

+The existing structure is designated a Type B structure in accordance with Sec. 411. *((Use when the contract requires dismantling and removing existing structure(s) or removing portions of existing structure(s) which involve(s) heating, welding, straightening or demolition of a structure with coatings containing lead or other hazardous materials.))*

Seeding, if required, will be done by State forces. *((Use on contract bridge projects where there is no approach work or where approaches are to be built by State Forces.))*

Use of (_____) is a (FHWA) (State) approved experimental project. No substitutions will be allowed. The office of the State Structure and Bridge Engineer shall be notified at least seven days in advance of any work to be performed on this item*. ((Use note on all experimental projects.))*

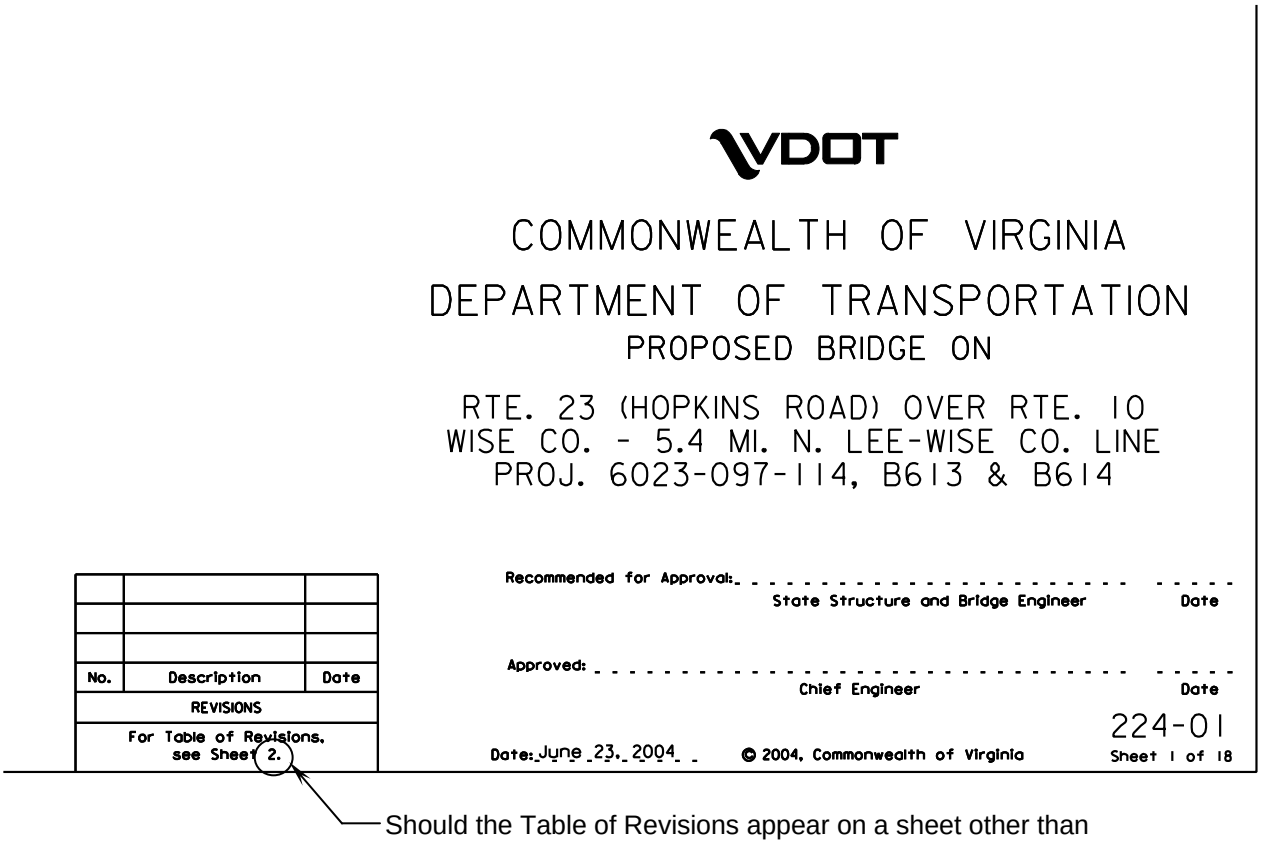
B.M.: (_____) *((Bench mark description)) ((To agree with situation plan and road plans, except for grade separations which will usually only have road plans.))*

NOTES SPECIFIC TO THE TABLE OF ESTIMATED QUANTITES ARE LOCATED IN CHAPTER 3.

PAGE INTENTIONALLY LEFT BLANK

General:

The lower right-hand corner of the title sheet contains the title block. This block designates the location of the structure, the project number, the signature lines, the copyright date, the plan number, revision table and the date of the plans.



Should the Table of Revisions appear on a sheet other than sheet 2, change this number to reflect the proper sheet.

Text Size: The project information and plan number may be placed when the sheet is first generated, using the *bsht* program from the ***VDOT Bridge MDL*** task bar. This will ensure that all parameters (size, weight, color, level and font) are correct. If the information is placed at a later time, the *bsht* program may be re-accessed. By selecting "Existing", additional text may be placed automatically.

To set the text parameters without using the *bsht* program, select *bls* program from the ***VDOT Bridge MDL*** task bar. From the ***Line Settings S&B*** sub-palette, select *Plan No*.

Preliminary Plans: The Preliminary Plans cell shall be placed on all sheets that are part of the preliminary plan submission. The cell is named ***PREL*** and may be found in the *bdetails1.cel* library.

PRELIMINARY PLANS

THESE PLANS NOT TO BE USED FOR CONSTRUCTION

VDOT

COMMONWEALTH OF VIRGINIA

DEPARTMENT OF TRANSPORTATION

PROPOSED BRIDGE ON

RTE. 23 (HOPKINS ROAD) OVER RTE. 10
WISE CO. - 5.4 MI. N. LEE-WISE CO. LINE
PROJ. 6023-097-114, B613 & B614

No.	Description	Date
REVISIONS		
For Table of Revisions, see Sheet 2.		

Recommended for Approval: _____ _____
State Structure and Bridge Engineer Date

Approved: _____ _____
Chief Engineer Date

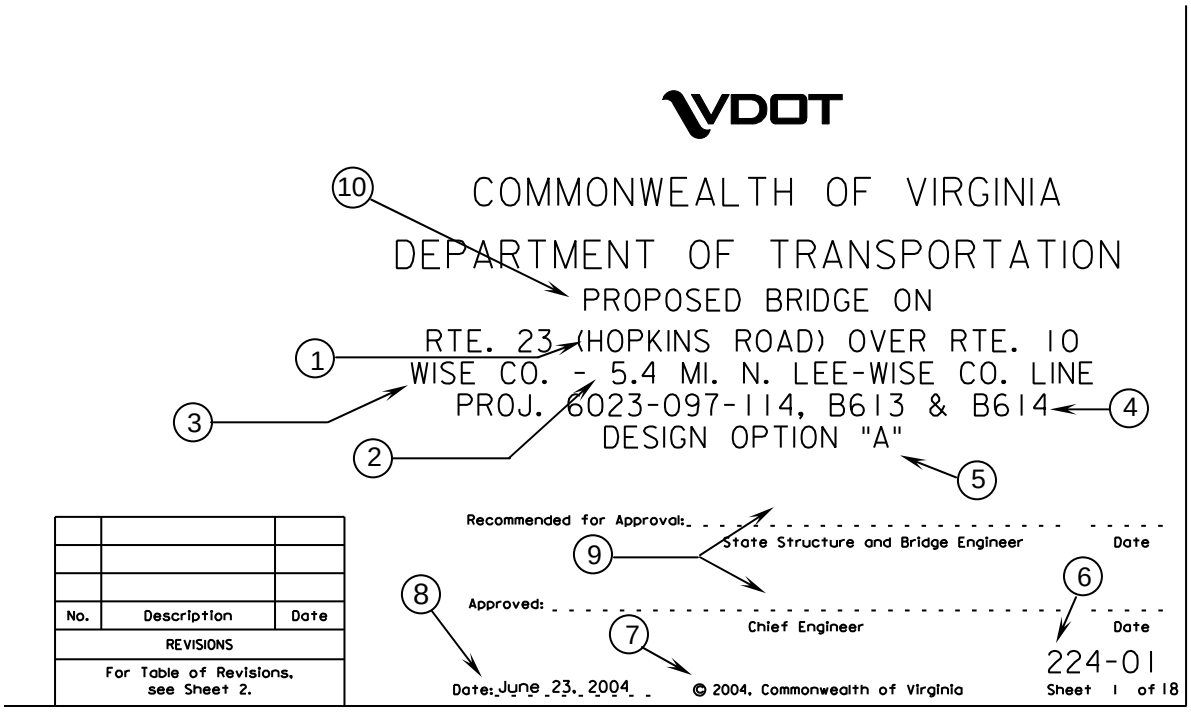
224-01

Date: June 23, 2004

Sheet 1 of

TITLE SHEET
TITLE BLOCK
PRELIMINARY PLANS

VOL. V - PART 2
DATE: 01Jul2011
SHEET 2 of 14
FILE NO. 02.04-2



1. Add street name in parentheses, when applicable.

2. Show in miles and tenths, to accuracy known.

3. City/town or county to agree with project number. If project is on a corporate line, list both counties or county and city; first county to agree with project number.

4. Do not include the PE number or construction number in the state project number.

5. Use when options are shown on separate plans.

6. Each bridge plan requires a plan number. When one or more plans are prepared as alternates, separate numbers are required. Plan numbers are assigned only by the VDOT Central Office Structure and Bridge Division plan file room, Deborah A. Moore (804) 786-2854, e-mail: Debbie.Moore@VDOT.Virginia.gov. Plans of any type of modification or repair will require a letter suffix to the plan number of the original structure: e.g., 224-01A. Therefore, it is important when contacting Ms. Moore for the plan number that you inform her of the specifics of the work (widening, repair, etc.) so the appropriate letter suffix can be assigned. Consulting firms shall request the plan number through the VDOT S&B Coordinator.

7. Copyright date (year) shall reflect the year the plans are dated.

8. Format for date on title sheet is: month (no abbreviations), day, year; for example, September 24, 2004.

⑨ Signatures and dates: Request for signature must be submitted after the project manager has certified that the plans are complete and that the plans and estimate are ready for advertisement. The electronic files shall show only printed names and dates (names and dates to be shown exactly as signed).

For bridge projects included in road plans:

For Tier 1 projects, the District will be responsible for obtaining the appropriate signatures. The signed sheet shall be filed with Central Office Plan File Room. The designer will enter the printed names and dates in the appropriate blocks and the following annotation "ORIGINAL SIGNATURES ON TITLE SHEET OF ROAD PLANS" will be added in the space between the District Administrator and the copyright dates. See example below:

Recommended for Approval: _____ _____
District Project Development Engineer Date

Approved: _____ _____
District Administrator

ORIGINAL SIGNATURES ON TITLE SHEET OF ROAD PLANS 226-01B

Date: July 1, 2011 © 2011, Commonwealth of Virginia Sheet 1 of 18

For Tier 2 projects, the State Structure and Bridge Engineer and the Chief Engineer will only sign the title sheet of the road plans. See File No. 02.04-7. Once the plans have been signed, the Location and Design Plan Coordination Section will notify Mr. Patrick Mancuso and he will provide the dates the plans were signed to the supervisor or plan coordinator for each set of plans. The designer will enter the printed names and dates in the appropriate blocks and the following annotation "ORIGINAL SIGNATURES ON TITLE SHEET OF ROAD PLANS" will be added in the space between the Chief Engineer and the copyright dates. See example below:

Recommended for Approval: _____ _____
State Structure and Bridge Engineer Date

Approved: _____ _____
Chief Engineer Date

ORIGINAL SIGNATURES ON TITLE SHEET OF ROAD PLANS 224-01

Date: May 12, 2009 © 2009, Commonwealth of Virginia Sheet 1 of 18

For “bridge only” projects:

For Tier 1 projects, the District will be responsible for obtaining the appropriate signatures. The signed sheet shall be filed with Central Office Plan File Room. The designer will enter the printed names and dates in the appropriate blocks.

For Tier 2, projects, the State Structure and Bridge Engineer , Chief Engineer, and others as needed will sign the title sheet (paper or mylar) of the bridge/structure plans. Once the plans have been signed, Mr. Patrick Mancuso will provide the dates the plans were signed to the supervisor or plan coordinator. The designer will enter the printed names and dates in the appropriate blocks. The original signed plan sheet will be retained in the Central Office Structure and Bridge Division file room.

Text size of printed names and dates: For printed names, select the *bls* program from the ***VDOT Bridge MDL*** task bar. From the ***Line Settings S&B*** sub-palette, select *subtitle*. Change the weight to 4. For the date and additional text for bridge projects in road plans, from the ***Line Settings S&B*** sub-palette select *lettering/dimen.* Do not change the line weight.

(10) The PROPOSED BRIDGE ON line may be modified to reflect the scope of work, e.g., PROPOSED BRIDGE REPAIRS ON, PROPOSED BRIDGE WIDENING ON., etc.

Sample L&D Title Sheet Signature Block – Tier 1:

TIER 1 PROJECT

RECOMMENDED FOR APPROVAL FOR RIGHT OF WAY ACQUISITION	
DATE	DISTRICT PLANNING AND INVESTMENT MANAGER
DATE	DISTRICT PROJECT DEVELOPMENT ENGINEER
APPROVED FOR RIGHT OF WAY ACQUISITION	
DATE	DISTRICT ENGINEER/ADMINISTRATOR

RECOMMENDED FOR APPROVAL FOR CONSTRUCTION	
DATE	DISTRICT PLANNING AND INVESTMENT MANAGER
DATE	DISTRICT PROJECT DEVELOPMENT ENGINEER
APPROVED FOR CONSTRUCTION	
DATE	DISTRICT ENGINEER/ADMINISTRATOR

	PROJECT	SHEET NO.
	0000-000-000	1

Sample L&D Title Sheet Signature Block – Tier 2:

TIER 2 PROJECT

RECOMMENDED FOR APPROVAL FOR RIGHT OF WAY ACQUISITION	
DATE	INFRASTRUCTURE INVESTMENT DIRECTOR
DATE	STATE LOCATION AND DESIGN ENGINEER
DATE	CHIEF FINANCIAL OFFICER
DATE	CHIEF ENGINEER

APPROVED FOR RIGHT OF WAY ACQUISITION	
DATE	CHIEF OF POLICY

RECOMMENDED FOR APPROVAL FOR CONSTRUCTION	
DATE	INFRASTRUCTURE INVESTMENT DIRECTOR
DATE	STATE LOCATION AND DESIGN ENGINEER
DATE	STATE STRUCTURE AND BRIDGE ENGINEER
DATE	CHIEF FINANCIAL OFFICER

APPROVED FOR CONSTRUCTION	
DATE	CHIEF ENGINEER

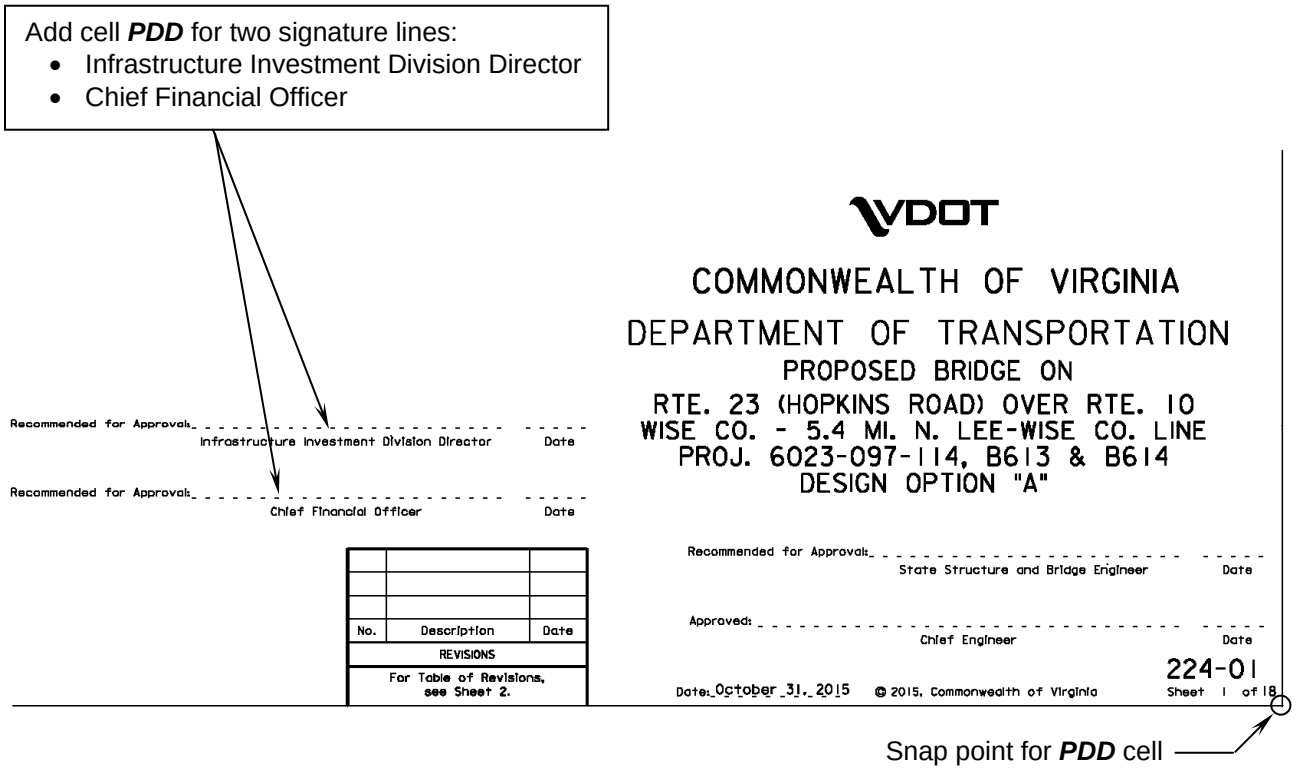
APPROVED	
DATE	DIVISION ADMINISTRATOR FEDERAL HIGHWAY ADMINISTRATION U.S. DEPARTMENT OF TRANSPORTATION

	PROJECT	SHEET NO.
	0000-000-000	1

TITLE SHEET
TITLE BLOCK
DETAILS

For Tier 2, “Bridge-only” projects built by contract with construction funds (Federal and State funding), for “Bridge-only” projects with Federal funds, and for “Bridge-only” projects that are to be built with State Forces, add the cell ***PDD*** from the *bdetails1.cel* library. This cell places two additional *Recommended for Approval* signature lines in the title block. The snap point for the cell is at the bottom right-hand corner of the sheet border, as depicted below.

By signing the plans, the Infrastructure Investment Division Director and Chief Financial Officer are verifying the availability of funding. The Structure and Bridge Division coordinator will receive a PD-4 form letter.

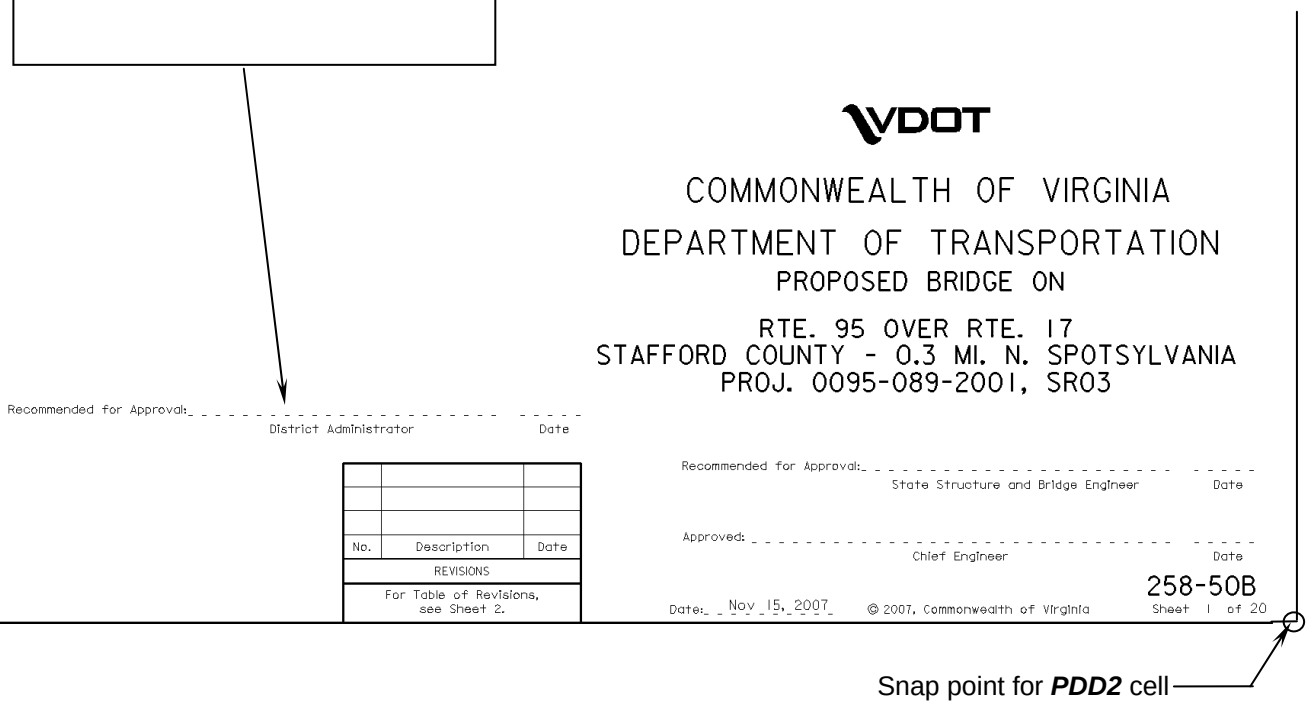


TITLE SHEET – TITLE BLOCK PROJECT BUILT WITH CONSTRUCTION FUNDS, FEDERAL FUNDING, AND BUILT BY STATE FORCES	VOL. V - PART 2 DATE: 15Oct2015 SHEET 8 of 14 FILE NO. 02.04-8

For Tier 2, “Bridge-only” maintenance projects with State Funds, add the cell ***PDD2*** from the *bdetails1.cel* library. This cell places one additional *Recommended for Approval* signature lines in the title block. The snap point for the cell is at the bottom right-hand corner of the sheet border, as depicted below.

By signing the plans, the District Administrator is verifying the availability of funding.

For “Bridge Only” projects
Add cell ***PDD2*** for one signature line: • District Administrator



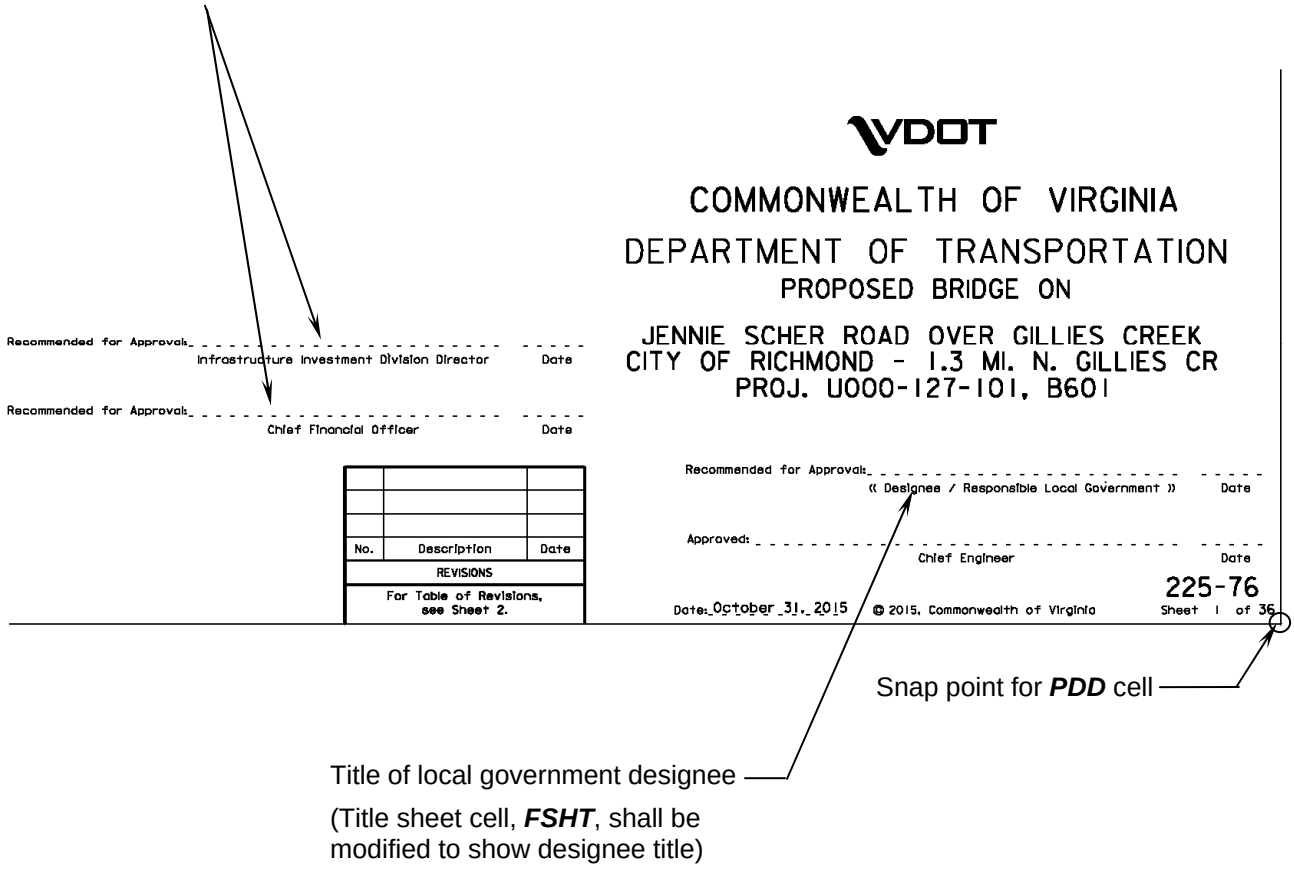
Snap point for ***PDD2*** cell

TITLE SHEET
TITLE BLOCK
MAINTENANCE PROJECTS WITH STATE FUNDING

For Tier 2, “Bridge-only” projects built by contract under the Department’s Locally Administered Projects program, add the cell ***PDD*** from the *bdetails1.cel* library. This cell places two additional *Recommended for Approval* signature lines in the title block. The snap point for the cell is at the bottom right-hand corner of the sheet border, as depicted below.

By signing the plans, the Infrastructure Investment Division Director and Chief Financial Officer are verifying the availability of funding.

For “Bridge Only” projects
Add cell ***PDD*** for two signature lines: • Infrastructure Investment Division Director • Chief Financial Officer

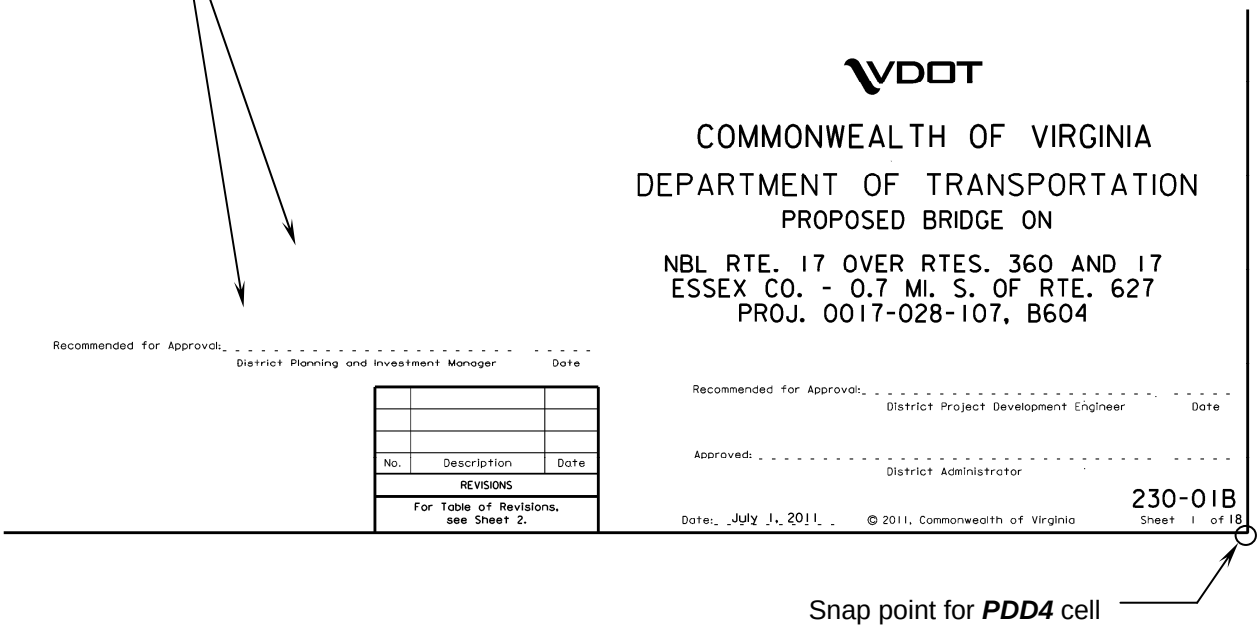


For Tier 1 projects, drop status and delete the signatures shown on the cell ***FSHT***. Add the cell ***PDD4*** from the *bdetails1.cel* library. For information on projects that may be designated Tier 1, see current IIM-S&B-19. This cell replaces the District Preliminary Engineering Manager for the State Structure and Bridge Engineer and District Administrator for the Chief Engineer. The signature of the District Planning Investment Manager is added for verification of funding for projects. For tier 1 projects with road plans, the signatures will only be required on the roadway title sheet. See File No. 02.04-4.

For "Tier 1" projects

Add cell ***PDD4*** for three signature lines:

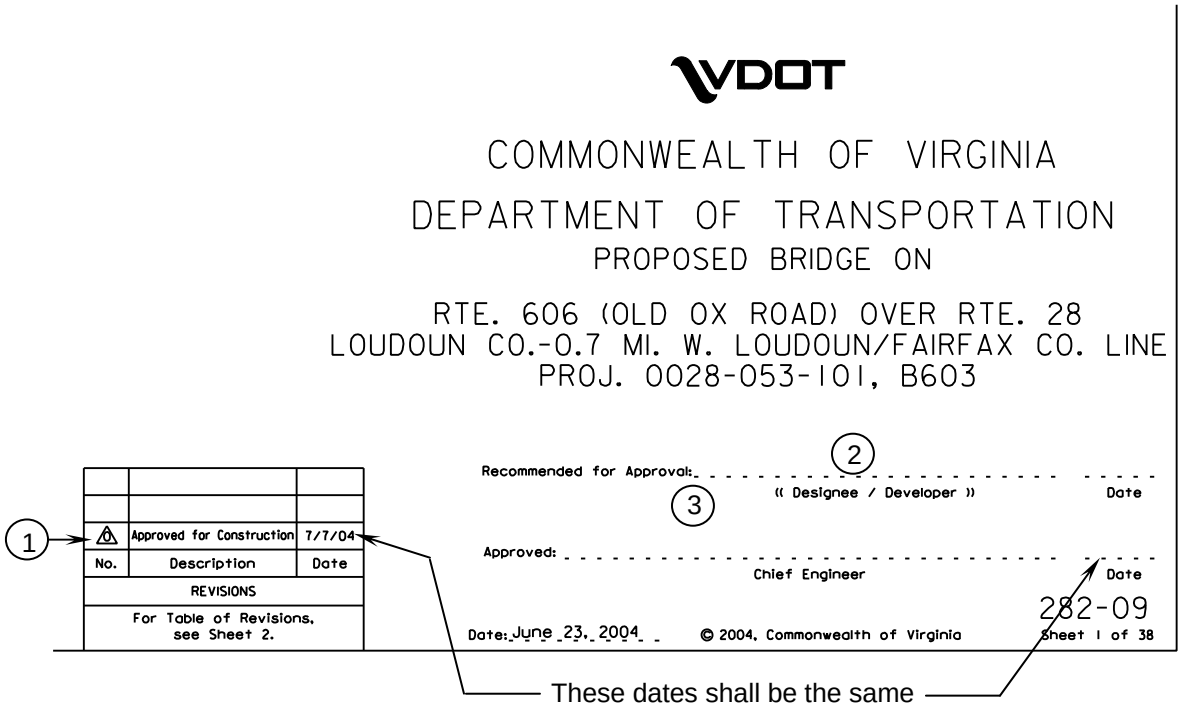
- District Planning and Investment Manager
- District Project Development Engineer
- District Administrator



Snap point for ***PDD4*** cell

TITLE SHEET
TITLE BLOCK
TIER 1 PROJECTS

A title block for PPTA and Design-Build projects built under contract for the Department is shown below.



1. The following information shall be shown on all plan sheets in the Revision Table:

   Delta 0 (△0) in the **No**. block. This is a cell named ***AC*** and is found in the *symbols1.cel* library.

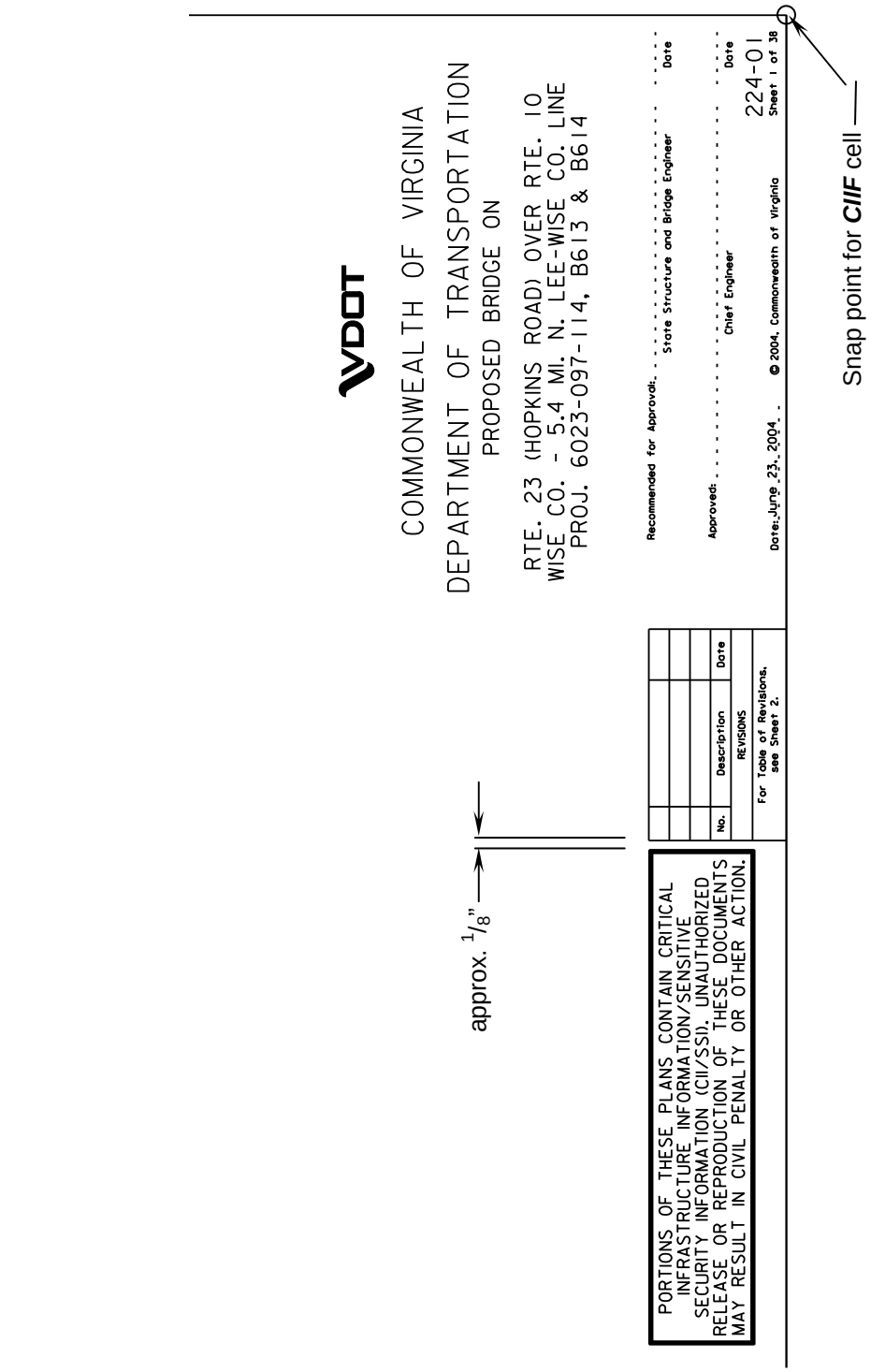
   "Approved for Construction" in the **Description** block.

   The date the plans are signed by the Department in the **Date** block.

2. The Recommended for Approval signature line shall contain the signature of the developer's designee.

3. The title sheet cell, ***FSHT***, shall be modified to show the name of the developer under the Recommended for Approval line.

For projects identified as containing Critical Infrastructure Information, the cell ***CIIF***, found in the *bdetails1.cel* library, shall be placed on the title sheet. The snap point for the cell is at the bottom right-hand corner of the sheet border, as depicted below.

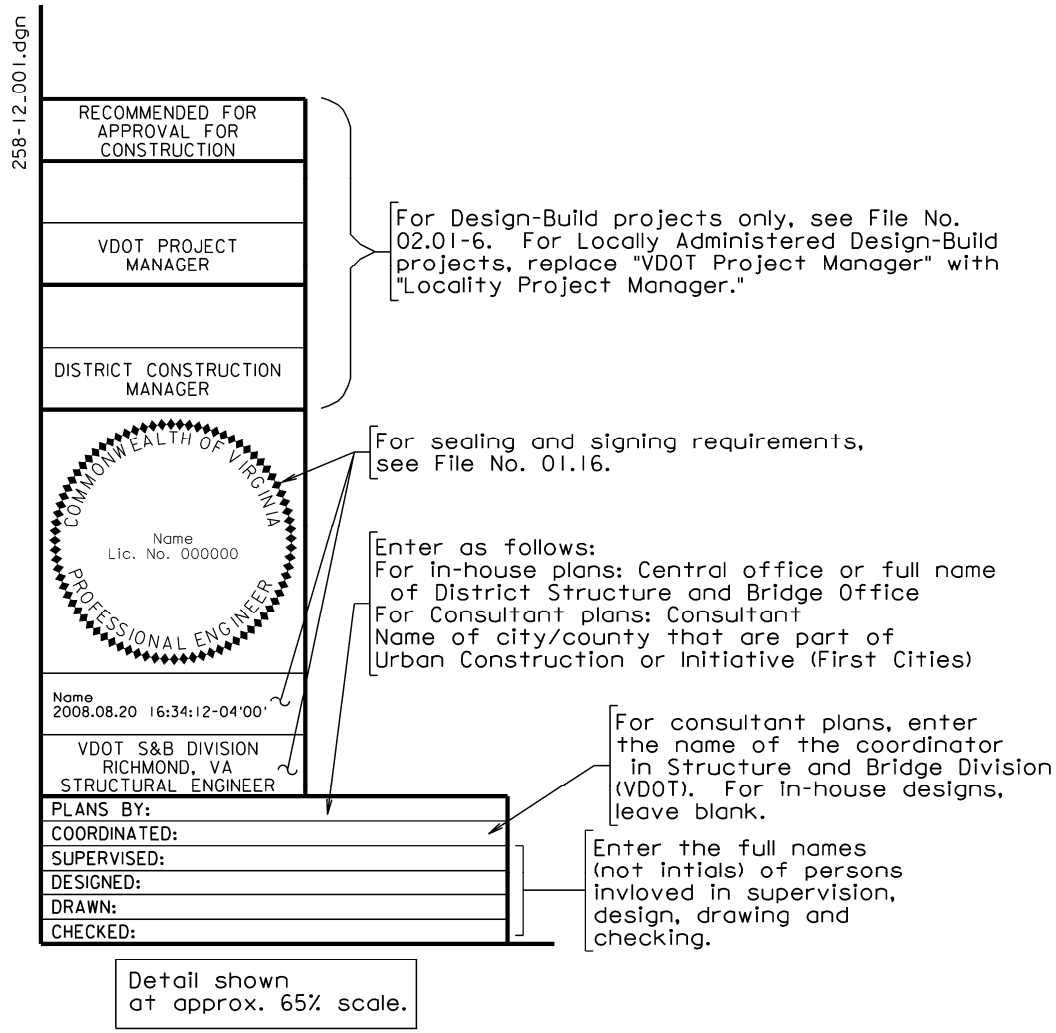


TITLE SHEET
TITLE BLOCK
CRITICAL INFRASTRUCTURE INFORMATION

PAGE INTENTIONALLY LEFT BLANK

General:

The lower left corner of the title sheet contains information on who completed the plan assembly and blocks for sealing and signing the plans.



Text Size: The text may be placed when the sheet is first generated, using the *bsht* program from the ***VDOT BRIDGE MDL*** task bar. This will ensure that all parameters (size, weight, color, level and font) are correct. If the information is placed at a later time, the *bsht* program may be re-accessed. By selecting “Existing”, additional text may be placed automatically.

To set the text parameters without using the *bsht* program, select *bls* program from the ***VDOT BRIDGE MDL*** task bar. From the ***Line Settings S&B*** sub-palette, select *CADD no./initials.*

General:

When a plan set is prepared for a bridge replacement or repair and no road plans or minimal road plans are provided, the project is known as bridge only. A location map must be provided on the title sheet. This map is intended to locate the project in relationship to an intersection of another road or City/Town limit. The instructions for developing this location map are given in the following.

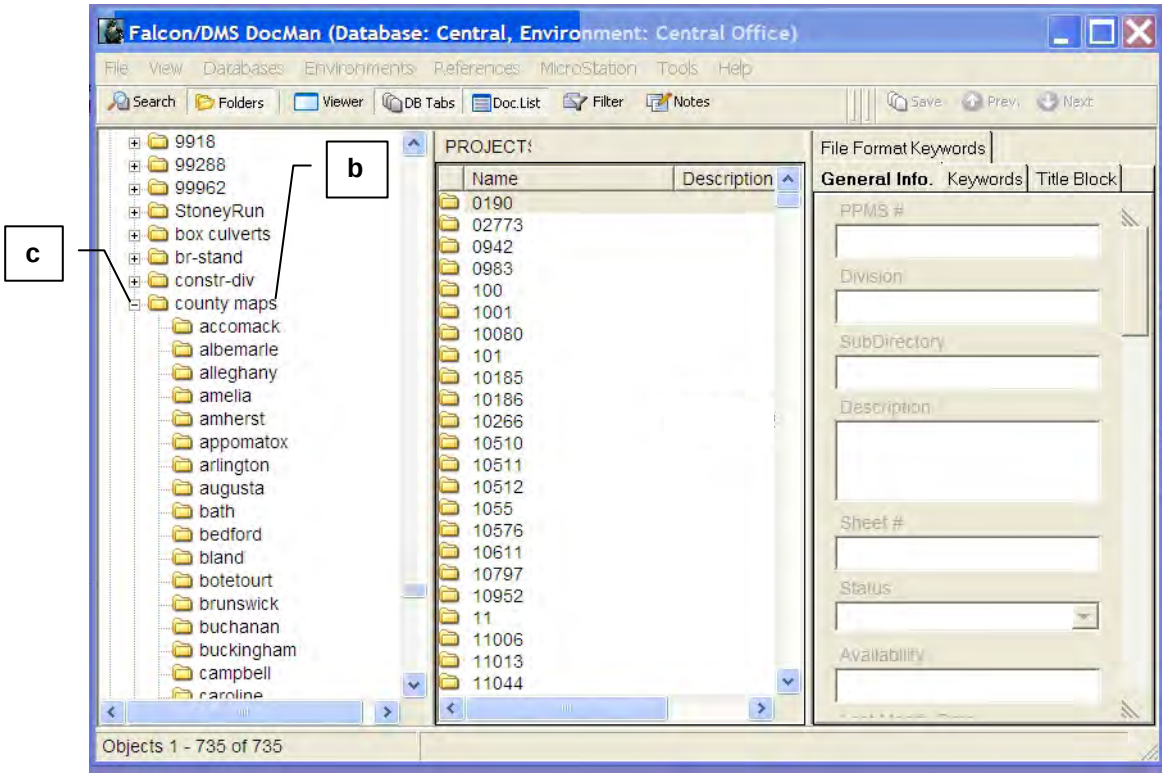
Instructions:

The location map can be produced by clipping and copying a portion of a county map and pasting in the file for the title sheet. The following steps are provided to aid in the development of the required location map.

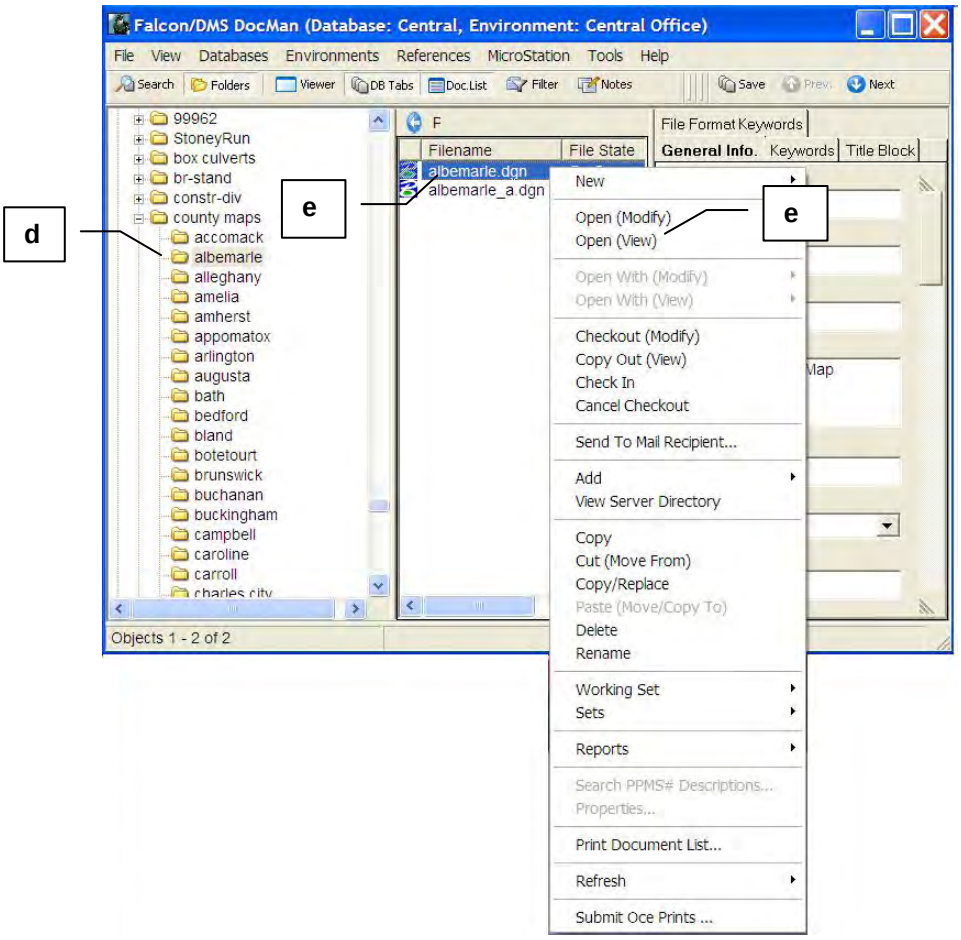
1. Locate the desired county map on Document Manager.

   a. In MicroStation V8, click on Falcon/DMS and go to DocMan.

   b. Scroll down the field listing the PPMS numbers until you see county maps.



   c. Click on the + which will show all the available county maps. Scroll down until you find the county you need.



d. Click on the county you require. A list of .dgn file(s) will be displayed for the county selected.

e. Highlight the desired .dgn file and open by right clicking on the highlighted file and then clicking on “Open (View)” in the drop down.

f. When map opens, use the “Save as” command and save a copy on your hard drive (C:).

2. Access the copy of the map saved to your hard drive. Zoom in on the map and locate the area you need for your location map. The line weights should be turned off.

a. Place a fence (Fence Mode: Clip) around the area required to show project location. Try to make the clipped area as close as possible to a square area. You should limit the area clipped since these county maps are full size.

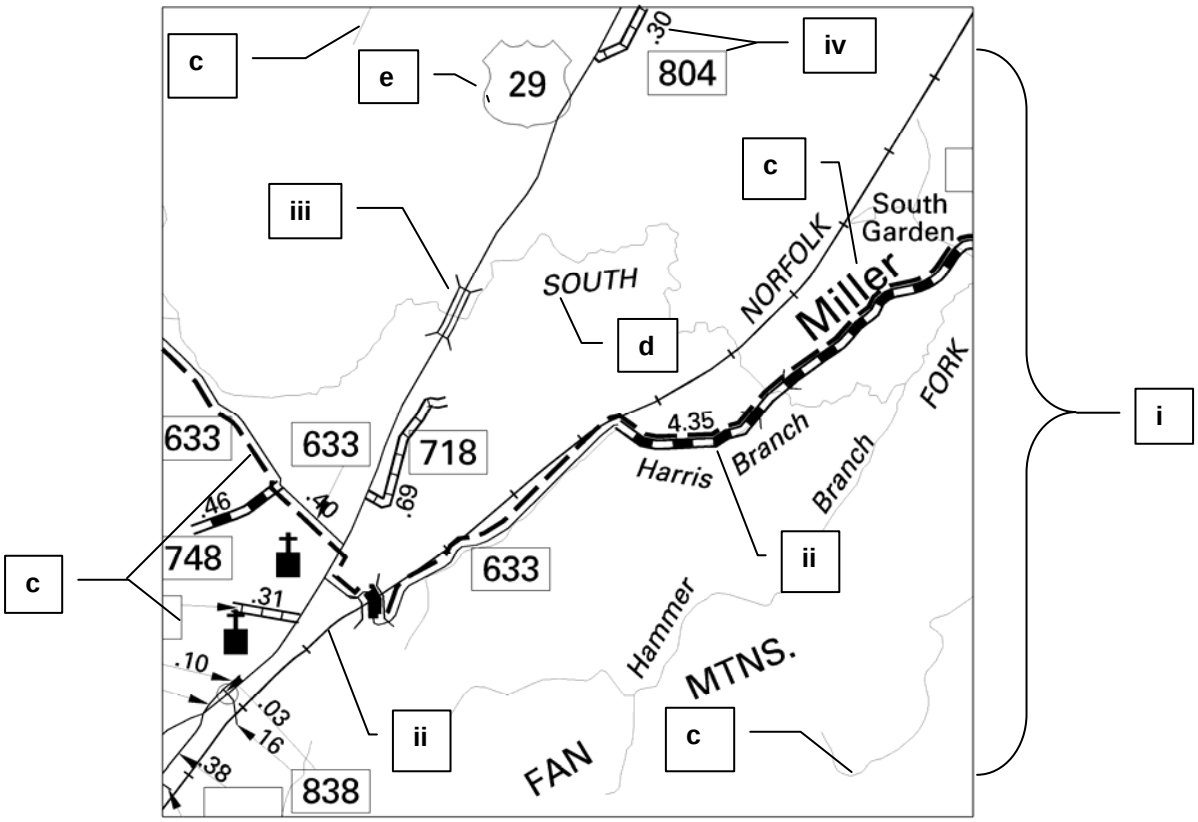
b. Copy the fenced area to a location outside of the main map where you can modify the information contained in the area you copied.

i. At this point you need to square up the clipped map. It will have to fit a 4” x 4” square when the final reduction is done on the title sheet.

ii. Prior to copying the map to title sheet the line style of any road that shows up in a style other than 0 needs to be changed to a line style of 0. Many of the roads will show up in a line style used to designate an “All weather surface”. You will also have to adjust the line weights; this can be done after map is placed on the title sheet. On railroads, place crossbars overtop existing ones prior to changing the line style to 0.

iii. Delete any bridge symbols shown on the clipped view. These will create problems when you try to reduce the map if not removed.

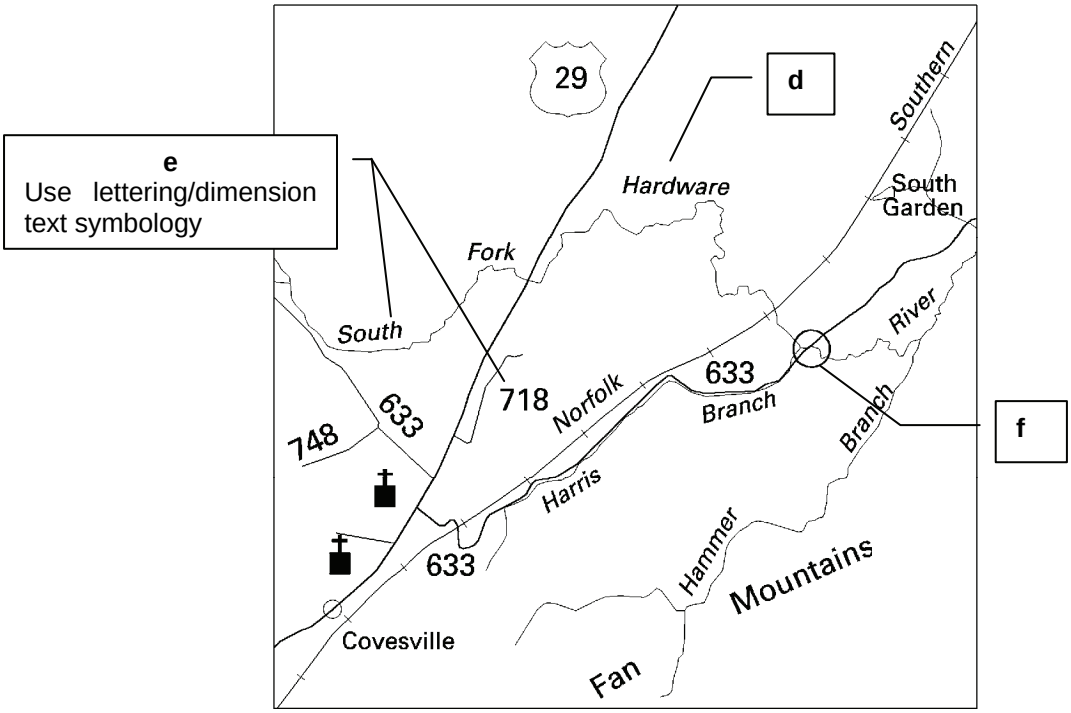
iv. Delete all mileages shown on clipped view and the boxes around the route numbers.



SAMPLE MAP PORTION AS CLIPPED FROM COUNTY MAP

c. In order to make the map clear, the information contained on the map can be moved and/or rotated using MicroStation commands. Any irrelevant information, shown on the clipped portion, can be deleted from the map.

d. In the event the project structure is over a stream, make sure the stream name is shown clearly on the map. Many times the clipped area will not contain the stream name; in that case, refer to the large map to find the name shown elsewhere and copy to the clipped map. If the name is not shown anywhere on the large map, copy another stream name and edit it to show the name required. Rotate the name to fit the location. In the event the stream has more than one name, such as South Fork Big River, give the entire name, not just Big River.



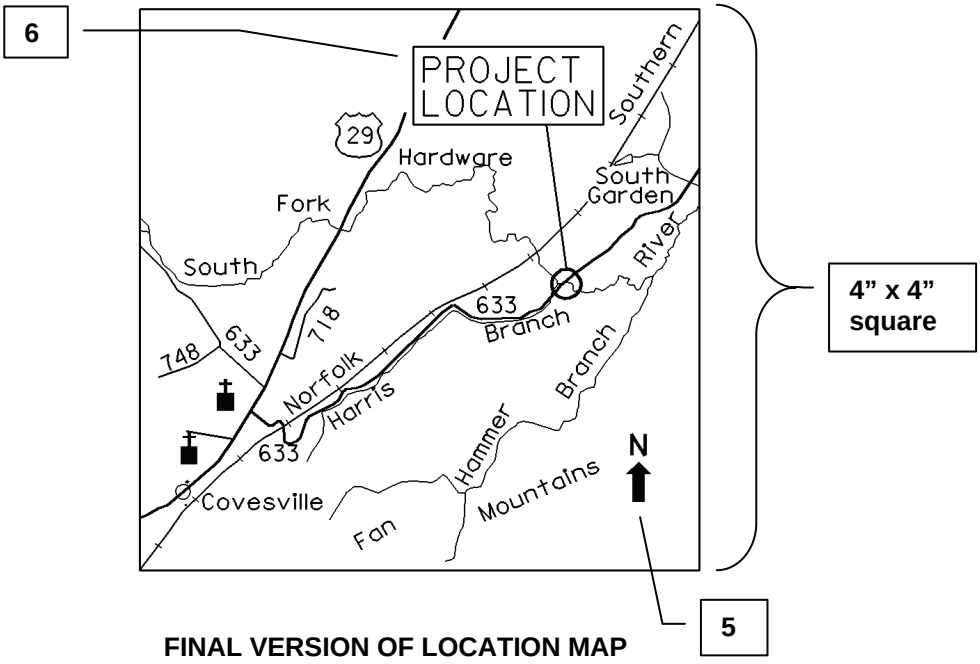
SAMPLE CLIPPED PORTION AFTER CLEANUP

e. On some maps, there are symbols shown for Interstate Highway, U. S. Highway or VA. Primary Highway. In most of these instances, the symbols are too large for the available space in the final map. Therefore, these symbols and the associated route number can be reduced in size to better fit your situation. The text style and size can be changed on the final location map so it will match all other text on the title sheet.

f. Place a circle around the project location. If desired this can wait until map is placed on the title sheet. See item number 6 on File No. 02.06-5.

3. Scale down the location map using an active scale of at least 0.025. This scale will generally produce a figure on the title sheet of a size that can be re-scaled to fit the 4" x 4" square.

4. Create a cell of the scaled down map portion and place in a personal library. On the title sheet, place the cell near the lower left corner of the sheet. The cell may have to be re-scaled to fit within the 4" x 4" box.

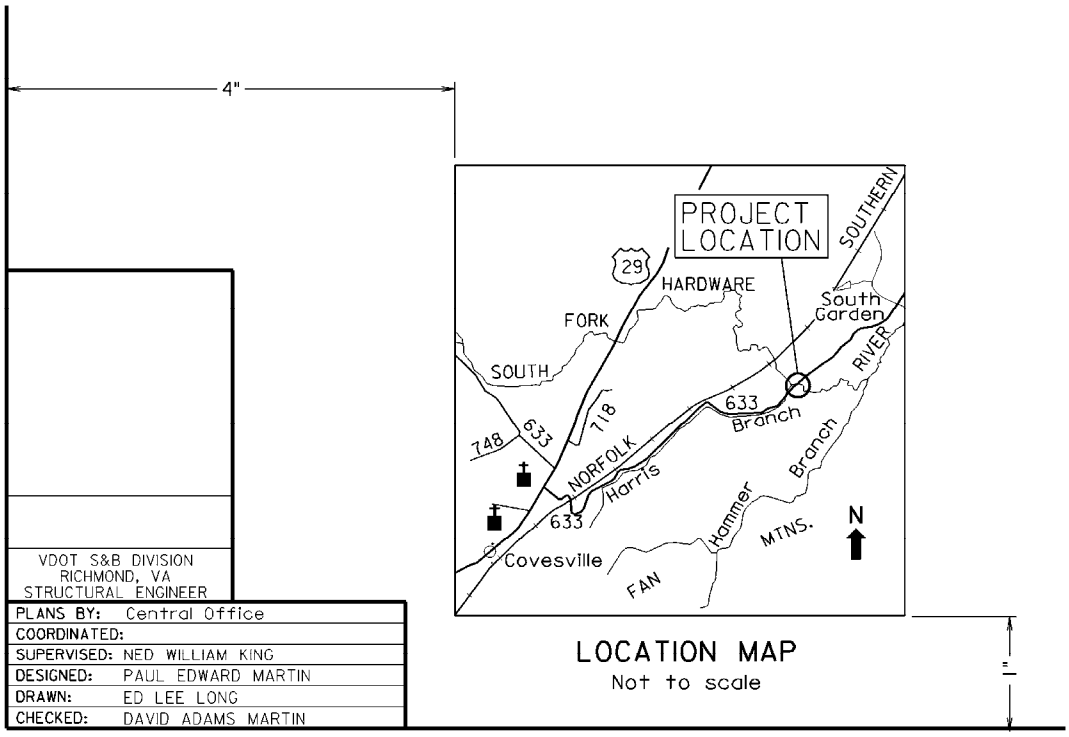


FINAL VERSION OF LOCATION MAP

5. Once map is located on the title sheet and properly sized, place a north arrow utilizing cell ***DIRSA*** located in the *symbols1.cel* library. This cell should be used full sized. Above the DIRSA cell, place an upper case "N". The "N" shall be lettering/dimensioning symbology, but with the weight changed to 6.

6. The "Project Location" must be shown on map using subtitle symbology. Place a rectangular box around labeling and draw an extension line to the circle placed previously. If desired, the circle can be placed in this step rather than before placing on title sheet.

7. When the location map is complete, locate it at the bottom of the title sheet as shown on the following page. Label the map as "Location Map" and show as "Not to scale".



FINAL LOCATION ON TITLE SHEET

TITLE SHEET **BRIDGE-ONLY PROJECT** **LOCATION MAP**	VOL. V - PART 2 DATE: 19May2009 SHEET 6 of 6 FILE NO. 02.06-6

DESIGN EXCEPTIONS

List a summary of design exceptions approved for project. If no design exceptions are required, indicate "None." Summary should be brief but enough to be understood. Indicate approval by the State Structure and Bridge Engineer and date of approval.

Shift GENERAL NOTES down as required to clear design exception(s) text.

EXAMPLES:

1. No design exception is required on Project.

DESIGN EXCEPTION(S):

None.

2. Design exception example for geometrics:

DESIGN EXCEPTION(S):

Reduced shared use path width from 10'-0" to 8'-0". Approved by State Structure and Bridge Engineer on August 11, 2009.

3. Design exception for variances of crash tested parapet/rail:

DESIGN EXCEPTION(S):

Modification to BR27C railing by adding architectural treatment to the face of railing. Approved by State Structure and Bridge Engineer on April 7, 2009.

Single-faced traffic barrier for use as permanent barrier. Approved by State Structure and Bridge Engineer on May 8, 2009.