

MANUAL OF THE STRUCTURE AND BRIDGE DIVISION

PART 5

PRESTRESSED CONCRETE ADJACENT MEMBER STANDARDS



**VIRGINIA DEPARTMENT OF
TRANSPORTATION**

VDOT GOVERNANCE DOCUMENT

**VDOT Manual of the Structure and Bridge Division: Part 05: Prestressed
Concrete Adjacent Member Standards**

OWNING DIVISION: Structure and Bridge

DATE OF ISSUANCE: 08/08/2018



COMMONWEALTH of VIRGINIA

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

Stephen Brich
COMMISSIONER

August 8, 2018

SUBJECT: Manual of the Structure and Bridge Division – Part 5
Prestressed Concrete Adjacent Member Standards

MEMORANDUM

TO: Holders of Manual

VOIDED:

None

NEW ISSUES:

None

REVISIONS:

<u>File Number</u>	<u>Description of change(s)</u>
TOC-1 thru -5	Revised dates.
PST-2A and -2B	Updated special provision name referenced in Engineered Cementitious Composite (ECC) concrete note.
PST-3 and -4	Removed seat adjustment note and content covered by 2016 Road and Bridge Supplemental Section 405 from design camber note. Revised CAMBER DIAGRAM. Added DEAD LOAD DEFLECTION DIAGRAM title for cell placement.
PST-6A and -6B	Added adjustment note removed from other standard sheet and updated. Removed references to the publication year of the Specifications from notes.
PSV-2A and -2B	Updated special provision name referenced in Very High Performance Concrete (VHPC) note.
PSV-3 and -4	Removed seat adjustment note and content covered by 2016 Road and Bridge Supplemental Section 405 from design camber note. Revised CAMBER DIAGRAM. Added DEAD LOAD DEFLECTION DIAGRAM title for cell placement.

REVISIONS (cont'd):

<u>File Number</u>	<u>Description of change(s)</u>
PSV-6A and -6B	Added adjustment note removed from other standard sheet and updated. Removed references to the publication year of the Specifications from notes.
PBT-2A and -2B	Updated special provision name referenced in Engineered Cementitious Composite (ECC) concrete note.
PBT-3 and -4	Removed seat adjustment note and content covered by 2016 Road and Bridge Supplemental Section 405 from design camber note. Revised CAMBER DIAGRAM. Added DEAD LOAD DEFLECTION DIAGRAM title for cell placement.
PBT-6A and -6B	Added adjustment note removed from other standard sheet and updated. Removed references to the publication year of the Specifications from notes.
PBV-2A and -2B	Updated special provision name referenced in Very High Performance Concrete (VHPC) note.
PBV-3 and -4	Removed seat adjustment note and content covered by 2016 Road and Bridge Supplemental Section 405 from design camber note. Revised CAMBER DIAGRAM. Added DEAD LOAD DEFLECTION DIAGRAM title for cell placement.
PBV-6A and -6B	Added adjustment note removed from other standard sheet and updated. Removed references to the publication year of the Specifications from notes.
PITN-3 and -4	Removed seat adjustment note and content covered by 2016 Road and Bridge Supplemental Section 405 from design camber note. Revised CAMBER DIAGRAM. Added DEAD LOAD DEFLECTION DIAGRAM title for cell placement.
PITN-6	Added adjustment note removed from other standard sheet and updated. Removed references to the publication year of the Specifications from notes.
CELLINDEX-1 thru -5 CELLINDEX-5	Revised dates. Added ITN3DLDD and changed ITN34DLDD to ITN4DLDD. Updated File Numbers of cell depictions.
PSCS-24 and -55	Inserted cell depictions for ST34DLDD and SV34DLDD.
PSCB-24 and -55	Inserted cell depictions for BT34DLDD and BV34DLDD.
PCIT-1 thru -5 PCIT-6 PCIT-7 thru -13 PCIT-9	Updated number of sheets in footer. Inserted sheet for ITN3DLDD depiction. Updated sheet and file numbers. Changed cell name from ITN34DLDD to ITN4DLDD and inserted cell depiction. Moved ITN4ELVS to next sheet.
PCIT-10	Added ITN4ELVS from previous sheet.

RETAIN THIS MEMO IN FRONT OF INDEX TO PART 5

/original signed/
Junyi Meng, P.E.
Assistant State Structure and Bridge Engineer

For: Kendal R. Walus, P.E.
State Structure and Bridge Engineer



COMMONWEALTH of VIRGINIA

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

Stephen Brich
COMMISSIONER

May 3, 2018

SUBJECT: Manual of the Structure and Bridge Division – Part 5
Prestressed Concrete Adjacent Member Standards

MEMORANDUM

TO: Holders of Manual

VOIDED:

None

NEW ISSUES:

None

REVISIONS:

<u>File Number</u>	<u>Description of change(s)</u>
TOC-1 thru -5 PST-2A and -2B	Revised dates. Updated payment and special provision reference for Engineered Cementitious Composite concrete in notes and removed notes repeating special provision content. Updated Detail A note to include joint fabric in items not shown.
PST-3 and -4	Added design camber at erection to table, modified CAMBER DIAGRAM accordingly and added note for camber including modified specification content.
PST-3-3 and -4-3 PST-6A and -6B	Added Dead Load Deflection Diagram instructions. Revised note for surface preparation to reference Section 416.
PSV-2A and -2B	Updated payment and special provision reference for Very High Performance Concrete in notes and removed notes repeating special provision content. Updated Detail A note to include joint fabric in items not shown.
PSV-3 and -4	Added design camber at erection to table, modified CAMBER DIAGRAM accordingly and added note for camber including modified specification content.

REVISIONS (cont'd):

<u>File Number</u>	<u>Description of change(s)</u>
PSV-3-3 and -4-3 PSV-6A and -6B	Added Dead Load Deflection Diagram instructions. Removed note repeating special provision content for VHPC curing requirements for epoxy and joint fabric placement. Revised note for surface preparation to reference Section 416.
PBT-2A and -2B	Updated payment and special provision reference for Engineered Cementitious Composite concrete in notes and removed notes repeating special provision content. Updated Detail A note to include joint fabric in items not shown.
PBT-3 and -4	Updated references from slab to beam and added design camber at erection to table. Modified CAMBER DIAGRAM accordingly. Added note for camber including modified specification content.
PBT-3-3 and -4-3 PBT-6A and -6B	Added Dead Load Deflection Diagram instructions. Revised note for surface preparation to reference Section 416.
PBV-2A and -2B	Updated payment and special provision reference for Very High Performance Concrete in notes and removed notes repeating special provision content. Updated Detail A note to include joint fabric in items not shown.
PBV-3 and -4	Updated references from slab to beam and added design camber at erection to table. Modified CAMBER DIAGRAM accordingly. Added note for camber including modified specification content.
PBV-3-3 and -4-3 PBV-6A and -6B	Added Dead Load Deflection Diagram instructions. Removed note repeating special provision content for VHPC curing requirements for epoxy and joint fabric placement. Revised note for surface preparation to reference Section 416.
PITN-3 and -4	Added design camber at erection to table, modified CAMBER DIAGRAM accordingly and added note for camber including modified specification content.
PITN-3-3 and -4-3 PITN-6	Added Dead Load Deflection Diagram instructions. Revised note for surface preparation to reference Section 416.
CELLINDEX-1	Revised dates. Added ST34DLDD.
CELLINDEX-2	Revised dates. Added SV34DLDD.
CELLINDEX-3	Revised dates. Added BT34DLDD.
CELLINDEX-4	Revised dates. Added BV34DLDD.
CELLINDEX-5	Revised date. Added ITN34DLDD.
PSCS-8, -17, -39, -48 & -61 PSCS-24 and -55	Updated cell depictions. Inserted ST34DLDD and SV34DLDD content.
PSCB-8, -17, -39 and -48 PSCB-24 and -55	Updated cell depictions. Inserted BT34DLDD and BV34DLDD content.
PCIT-8	Inserted ITN34DLDD content.

Page 3
May 3, 2018

RETAIN THIS MEMO IN FRONT OF INDEX TO PART 5

/original signed/
Junyi Meng, P.E.
Assistant State Structure and Bridge Engineer

For: Kendal R. Walus, P.E.
State Structure and Bridge Engineer

RELEASE LETTERS

PART 5 PRESTRESSED CONCRETE ADJACENT MEMBER STANDARDS

A complete set of all release (revision) letters is located at the following link:

http://www.virginiadot.org/business/bridge_manual_archives_part_5.asp

**PART 5
PRESTRESSED CONCRETE ADJACENT MEMBER STANDARDS**

TABLE OF CONTENTS

FILE NO.	TITLE	DATE
TABLE OF CONTENTS AND GENERAL INSTRUCTIONS		
TOC	-1 Table of Contents	08Aug2018
TOC	-2 Table of Contents	08Aug2018
TOC	-3 Table of Contents	08Aug2018
TOC	-4 Table of Contents	08Aug2018
TOC	-5 Table of Contents	08Aug2018
INSTR	-1 General Instructions	30Jan2018
INSTR	-2 General Instructions	30Jan2018
INSTR	-3 External Users: File Access Instructions.....	28Dec2016
INSTR	-4 External Users: File Access Instructions.....	28Dec2016

VOIDED SLABS – TRANSVERSE TENDONS

* PST-1	-1	Erection Diagram	20Apr2017
	-2	Notes to Designer	28Dec2016
	-3	Notes to Designer	28Dec2016
	-DGN	MicroStation Drawing File	
* PST-2A	-1	Transverse and Typical Sections; Asphalt Overlay	08Aug2018
	-2	Notes to Designer	20Apr2017
	-3	Notes to Designer	20Apr2017
	-DGN	MicroStation Drawing File	
* PST-2B	-1	Transverse and Typical Sections; Concrete Overlay.....	08Aug2018
	-2	Notes to Designer	28Dec2016
	-3	Notes to Designer	28Dec2016
	-DGN	MicroStation Drawing File	
* PST-3	-1	Exterior Slab; Type A	08Aug2018
	-2	Notes to Designer	20Apr2017
	-3	Notes to Designer	03May2018
	-4	Notes to Designer	20Apr2017
	-DGN	MicroStation Drawing File	
* PST-4	-1	Interior Slab; Type B	08Aug2018
	-2	Notes to Designer	20Apr2017
	-3	Notes to Designer	03May2018
	-4	Notes to Designer	20Apr2017
	-DGN	MicroStation Drawing File	
* PST-5A	-1	Cast-in-Place Concrete Parapet (F-shape).....	07Aug2012
	-2	Notes to Designer	28Dec2016
	-DGN	MicroStation Drawing File	
* PST-6A	-1	End Bearing and Waterproofing Details for Asphalt Overlay.....	08Aug2018
	-2	Notes to Designer	20Apr2017
	-DGN	MicroStation Drawing File	
* PST-6B	-1	End Bearing and Waterproofing Details for Concrete Overlay	08Aug2018
	-2	Notes to Designer	20Apr2017
	-DGN	MicroStation Drawing File	

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

**PART 5
PRESTRESSED CONCRETE ADJACENT MEMBER STANDARDS**

TABLE OF CONTENTS

FILE NO.	TITLE	DATE
VOIDED SLABS – VIRGINIA ADJACENT MEMBER CONNECTIONS (VAMC)		
* PSV-1	-1	Erection Diagram 20Apr2017
	-2	Notes to Designer 28Dec2016
	-3	Notes to Designer 28Dec2016
	-DGN	MicroStation Drawing File
* PSV-2A	-1	Transverse and Typical Sections; Asphalt Overlay 08Aug2018
	-2	Notes to Designer 20Apr2017
	-3	Notes to Designer 20Apr2017
	-DGN	MicroStation Drawing File
* PSV-2B	-1	Transverse and Typical Sections; Concrete Overlay 08Aug2018
	-2	Notes to Designer 28Dec2016
	-3	Notes to Designer 28Dec2016
	-DGN	MicroStation Drawing File
* PSV-3	-1	Exterior Slab; Type A 08Aug2018
	-2	Notes to Designer 20Apr2017
	-3	Notes to Designer 03May2018
	-4	Notes to Designer 20Apr2017
	-DGN	MicroStation Drawing File
* PSV-4	-1	Interior Slab; Type B 08Aug2018
	-2	Notes to Designer 20Apr2017
	-3	Notes to Designer 03May2018
	-4	Notes to Designer 20Apr2017
	-DGN	MicroStation Drawing File
* PSV-5A	-1	Cast-in-Place Concrete Parapet (F-shape) 07Aug2012
	-2	Notes to Designer 28Dec2016
	-DGN	MicroStation Drawing File
* PSV-6A	-1	End Bearing and Waterproofing Details for Asphalt Overlay 08Aug2018
	-2	Notes to Designer 20Apr2017
	-DGN	MicroStation Drawing File
* PSV-6B	-1	End Bearing and Waterproofing Details for Concrete Overlay 08Aug2018
	-2	Notes to Designer 20Apr2017
	-DGN	MicroStation Drawing File

BOX BEAMS – TRANSVERSE TENDONS

* PBT-1	-1	Erection Diagram; Transverse Tendons 20Apr2017
	-2	Notes to Designer 28Dec2016
	-3	Notes to Designer 28Dec2016
	-DGN	MicroStation Drawing File
* PBT-2A	-1	Transverse and Typical Sections; Asphalt Overlay 08Aug2018
	-2	Notes to Designer 20Apr2017
	-3	Notes to Designer 20Apr2017
	-DGN	MicroStation Drawing File

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

**PART 5
PRESTRESSED CONCRETE ADJACENT MEMBER STANDARDS**

TABLE OF CONTENTS

FILE NO.	TITLE	DATE
BOX BEAMS – TRANSVERSE TENDONS (cont.)		
* PBT-2B	-1 Transverse and Typical Sections; Concrete Overlay	08Aug2018
	-2 Notes to Designer	28Dec2016
	-3 Notes to Designer	28Dec2016
	-DGN MicroStation Drawing File	
* PBT-3	-1 Exterior Box; Type A	08Aug2018
	-2 Notes to Designer	20Apr2017
	-3 Notes to Designer	03May2018
	-4 Notes to Designer	20Apr2017
	-5 Notes to Designer	20Apr2017
	-DGN MicroStation Drawing File	
* PBT-4	-1 Interior Box; Type B	08Aug2018
	-2 Notes to Designer	20Apr2017
	-3 Notes to Designer	03May2018
	-4 Notes to Designer	20Apr2017
	-5 Notes to Designer	20Apr2017
	-DGN MicroStation Drawing File	
* PBT-5A	-1 Cast-in-Place Concrete Parapet (F-shape).....	07Aug2012
	-2 Notes to Designer	28Dec2016
	-DGN MicroStation Drawing File	
* PBT-6A	-1 End Bearing and Waterproofing Details for Asphalt Overlay	08Aug2018
	-2 Notes to Designer	20Apr2017
	-DGN MicroStation Drawing File	
* PBT-6B	-1 End Bearing and Waterproofing Details for Concrete Overlay	08Aug2018
	-2 Notes to Designer	20Apr2017
	-DGN MicroStation Drawing File	

BOX BEAMS – VIRGINIA ADJACENT MEMBER CONNECTIONS (VAMC)

* PBV-1	-1 Erection Diagram	20Apr2017
	-2 Notes to Designer	28Dec2016
	-3 Notes to Designer	28Dec2016
	-DGN MicroStation Drawing File	
* PBV-2A	-1 Transverse and Typical Sections; Asphalt Overlay	08Aug2018
	-2 Notes to Designer	20Apr2017
	-3 Notes to Designer	20Apr2017
	-DGN MicroStation Drawing File	
* PBV-2B	-1 Transverse and Typical Sections; Concrete Overlay	08Aug2018
	-2 Notes to Designer	28Dec2016
	-3 Notes to Designer	28Dec2016
	-DGN MicroStation Drawing File	

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

**PART 5
PRESTRESSED CONCRETE ADJACENT MEMBER STANDARDS**

TABLE OF CONTENTS

FILE NO.	TITLE	DATE
BOX BEAMS – VIRGINIA ADJACENT MEMBER CONNECTIONS (VAMC) (cont.)		
* PBV-3	-1 Exterior Box; Type A	08Aug2018
	-2 Notes to Designer	20Apr2017
	-3 Notes to Designer	03May2018
	-4 Notes to Designer	20Apr2017
	-5 Notes to Designer	20Apr2017
	-DGN MicroStation Drawing File	
* PBV-4	-1 Interior Box; Type B	08Aug2018
	-2 Notes to Designer	20Apr2017
	-3 Notes to Designer	03May2018
	-4 Notes to Designer	20Apr2017
	-5 Notes to Designer	20Apr2017
	-DGN MicroStation Drawing File	
* PBV-5A	-1 Cast-in-Place Concrete Parapet (F-shape).....	07Aug2012
	-2 Notes to Designer	28Dec2016
	-DGN MicroStation Drawing File	
* PBV-6A	-1 End Bearing and Waterproofing Details for Asphalt Overlay.....	08Aug2018
	-2 Notes to Designer	20Apr2017
	-DGN MicroStation Drawing File	
* PBV-6B	-1 End Bearing and Waterproofing Details for Concrete Overlay	08Aug2018
	-2 Notes to Designer	20Apr2017
	-DGN MicroStation Drawing File	

INVERTED T-BEAMS – NON-WELDED TRANSVERSE CONNECTIONS

* PITN-1	-1 Erection Diagram	30Jan2018
	-2 Notes to Designer	30Jan2018
	-DGN MicroStation Drawing File	
* PITN-2	-1 Transverse and Typical Sections	30Jan2018
	-2 Notes to Designer	30Jan2018
	-DGN MicroStation Drawing File	
* PITN-3	-1 Exterior Slab.....	08Aug2018
	-2 Notes to Designer	30Jan2018
	-3 Notes to Designer	03May2018
	-DGN MicroStation Drawing File	

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

**PART 5
PRESTRESSED CONCRETE ADJACENT MEMBER STANDARDS**

TABLE OF CONTENTS

FILE NO.	TITLE	DATE
INVERTED T-BEAMS – NON-WELDED TRANSVERSE CONNECTIONS (cont.)		
* PITN-4	-1 Interior Beams	08Aug2018
	-2 Notes to Designer	30Jan2018
	-3 Notes to Designer	03May2018
	-DGN MicroStation Drawing File	
* PITN-5A	-1 Cast-in-Place Concrete Parapet (F-shape)	30Jan2018
	-2 Notes to Designer	30Jan2018
	-DGN MicroStation Drawing File	
* PITN-6	-1 End Bearing and Waterproofing Details	08Aug2018
	-2 Notes to Designer	30Jan2018
	-3 Notes to Designer	30Jan2018
	-DGN MicroStation Drawing File	
* PITN-7	-1 Deck Plan and Part Section	30Jan2018
	-2 Notes to Designer	30Jan2018
	-DGN MicroStation Drawing File	

CELL LIBRARIES: PSC_VS.CEL, PSC_BB.CEL AND PSC_IT.CEL

CELLINDEX -1	Index of Cells	08Aug2018
CELLINDEX -2	Index of Cells	08Aug2018
CELLINDEX -3	Index of Cells	08Aug2018
CELLINDEX -4	Index of Cells	08Aug2018
CELLINDEX -5	Index of Cells	08Aug2018
PSCS-1 thru -62	Cells	08Aug2018
PSC_VS.CEL	MicroStation Cell Library	
PSCB-1 thru -62	Cells	08Aug2018
PSC_BB.CEL	MicroStation Cell Library	
PCIT-1 thru -13	Cells	08Aug2018
PSC_IT.CEL	MicroStation Cell Library	

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

**VIRGINIA DEPARTMENT OF TRANSPORTATION
MANUAL OF THE STRUCTURE AND BRIDGE DIVISION**

**PART 5
PRESTRESSED CONCRETE ADJACENT MEMBER STANDARDS**

The prestressed concrete voided slab standards include slab widths of 3'-0" and 4'-0" and depths of 15", 18" and 21". In general, the slabs are similar to the Precast/Prestressed Concrete Institute (PCI) standards and are economical for spans in the 25-50 foot range. For section properties, weights, etc., see Part 2, Chapter 12, of this manual. Charts are developed to assist the designer in selecting economic slab sizes.

The prestressed concrete box beam standards include beam widths of 3'-0" and 4'-0" and depths of 27", 33", 39" and 42". In general, the beams are similar to the PCI standards and are economical for spans in the 50-80 foot range. For section properties, weights, etc., see Part 2, Chapter 12, of this manual. Charts are developed to assist the designer in selecting economic beam sizes.

Detail series are developed for transverse post-tensioning and Virginia Adjacent Member Connections (VAMC). For asphalt overlays, VAMC details shall be used where skew exceeds 10 degrees. For the remaining cases, contact the District Structure and Bridge Engineer for design approval on which detail type to use. See Part 2, Chapter 12, of this manual for additional requirements and guidelines including overlay type.

The prestressed concrete inverted T-beam standards include 6'-0" wide interior inverted T-beams with tapered webs and exterior slab widths between 1'-8" and 4'-8". All member depths are 18". For development information, span and skew limitations, section properties, weights, etc., see Part 2, Chapter 12, of this manual.

Refer to notes to designer for specific comments on each standard sheet.

The designer must consider the effects of net camber at release (including camber tolerance) and 1/4" per foot cross slope when setting the bituminous overlay thickness at face of parapet/railing curb. Parapet/railing heights and dimensions for reinforcing steel shown on the parapet/railing standards may require adjustments. For required adjustments, see Notes to Designer for parapet/railing standards.

Completion of the project block, title block and lower left corner shall be in accordance with the requirements of File Nos. 04.04-1 thru -2 of Part 2 of this manual and as specified herein.

If a standard sheet is modified by the designer, the letters "MOD." (without quotes) shall be added behind the standard designation in the lower left portion of the border, e.g., PST-1 MOD. Completing items on the standard that are indicated in the NOTES TO DESIGNER are not considered to be modifications. Minor modifications do not require approval (except for those proposed by Concessionaire/Design-Builder where emailed approval by the District Structure and Bridge Engineer documented to the project design file is required for any modification). See Part 1 of this manual, File No. Pre.02-6 for definition of minor modification.

Modifications not considered minor as defined in File No. Pre.02-6 require email approval by the District Structure and Bridge Engineer documented to the project design file unless a design exception is required.

**PRESTRESSED CONC. ADJACENT MEMBER STANDARDS
GENERAL INSTRUCTIONS**

PART 5
DATE: 30Jan2018
SHEET 1 of 4
FILE NO. INSTR-1

**VIRGINIA DEPARTMENT OF TRANSPORTATION
MANUAL OF THE STRUCTURE AND BRIDGE DIVISION**

**PART 5
PRESTRESSED CONCRETE ADJACENT MEMBER STANDARDS**

In general, in the title block (lower right hand corner of sheet) Designed, Drawn and Checked are blank and need to be filled in with the appropriate initials. For standard sheets without any design or detailing requirements, Designed, Drawn and Checked are filled in with "S&B DIV." If the design or details are modified, these fields should be filled in with initials as appropriate.

The CADD standard beam detail sheets are located in Falcon [...\PROJECTS\br-stand\br\pss] directory (central office environment). The drawing file name for the standard sheet corresponds with the file number (name of standard sheet) as listed in the Table of Contents (minus the dash). For example, standard PST-3 is drawing pst3.dgn.

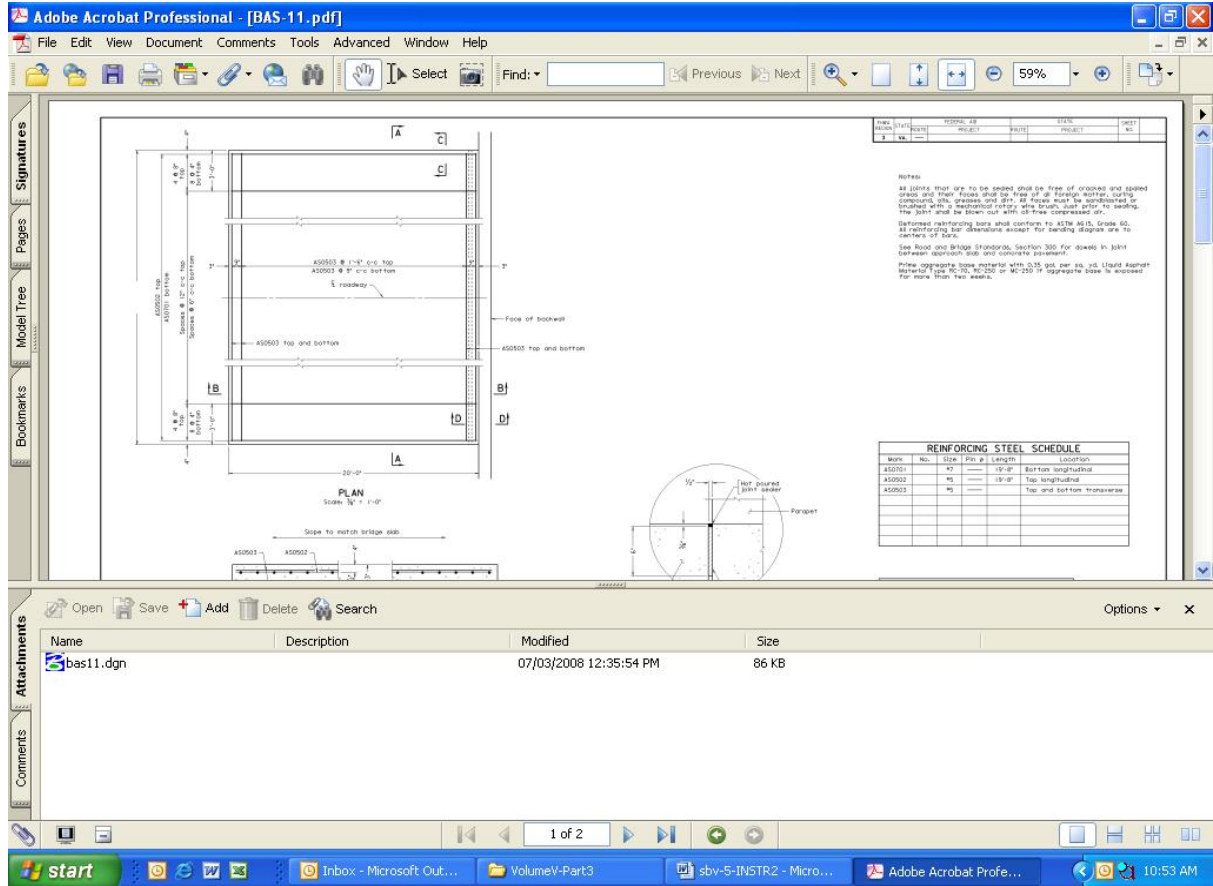
Three cell libraries (PSC_VS.cel, PSC_BB.cel and PSC_IT.cel) are included with the standards to allow the designer to add the required details on the standard sheets for voided slab, box beam and inverted T-beam bridges. The PSC_VS, PSC_BB and PSC_IT sheets included herein depict the cells found in the cell libraries along with the name of the cell, an image of the cell, a description of the cell and the origin of cell. The origin of cell is indicated by a star ★. To attach a cell library, use the pull down menu in MicroStation under ELEMENT – CELLS and select FILE to get a drop-down listing of available cell libraries.

**VIRGINIA DEPARTMENT OF TRANSPORTATION
MANUAL OF THE STRUCTURE AND BRIDGE DIVISION**

**PART 5
PRESTRESSED CONCRETE ADJACENT MEMBER STANDARDS**

For external users, the CADD standard detail sheets are attached to the PDF files for each drawing located on VDOT's Structure and Bridge Division website. The user will need Adobe Reader version 7.0 or higher to be able to access the files. Either click on the DGN link in the table of contents or click on the attachment tab in the PDF file for each standard sheet.

Using either method, the screen will appear similar to that shown below.



By left clicking on the icon, the following menu will appear:



Users may then save the file to their computer.

VIRGINIA DEPARTMENT OF TRANSPORTATION
MANUAL OF THE STRUCTURE AND BRIDGE DIVISION

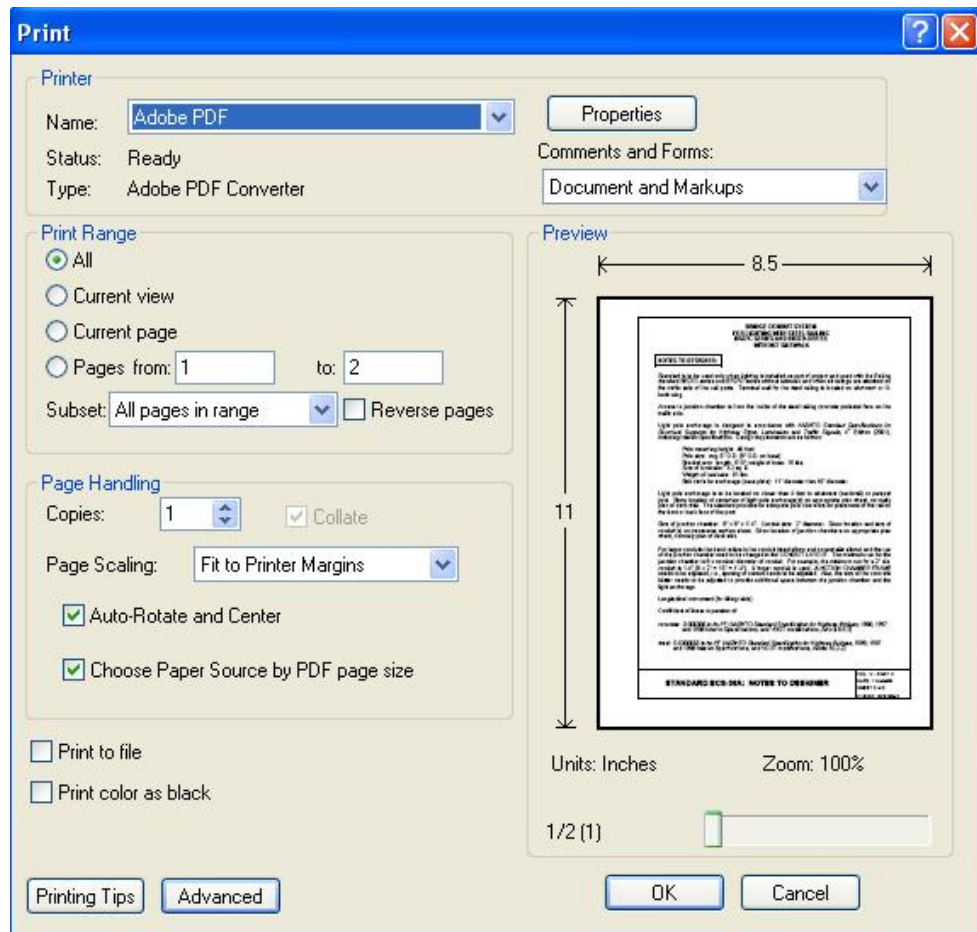
PART 5
PRESTRESSED CONCRETE ADJACENT MEMBER STANDARDS

For accessing the cell library, click on CEL link in the table of contents.

To simplify printing of this manual, a PDF of the complete manual in one PDF file with no links may be accessed by clicking on the link below.

[Full manual no links](#)

If the printer has both 8 ½ x 11 and 11 x 17 paper sizes available, the drawings and notes to designer may be printed on the correct paper size by placing a check next to the item “Choose Paper Source by PDF page size” as shown in the dialog below:



If the printer only has 8 ½ x 11 paper, the drawings will default to the reduced paper size.

Depending on the printer margins, the 11 x 17 drawing(s) may not be true half-size drawing(s).