

New Jersey DOT
Structural Document
Management System

SDMS

*Contractors Specifications for
Scanning, PDFing, and Electronic
Deliverables*

January 2006

Version 3.1

The New Jersey DOT's old Bridge Document Management System (BDMS) and new Structural Document Management System (SDMS) provide for the electronic storage and retrieval of various types of documents concerning New Jersey's bridges. The system is maintained by the Structural Evaluation Unit.

Version 3.0 of this document represents a rewrite of our specifications to improve readability and to allow for compatibility with the new SDMS. Although the document has been reorganized, those thoroughly familiar with the existing standards will find that there are few significant changes outside of the way the SDMSindex.xls and SDMSindex.xml files are to be prepared, and how filenames are to be constructed.

Version 3.1 of this document provides additional clarification for a few TOC codes, corrects and further describes the graphic on page 27, further clarifies our file naming conventions and method of submission of working files, and reinforces the need for clarity and completeness in descriptions when submitting databases. Also, a revised index file has been issued to fix cell data formatting errors.

All provisions of this document take effect immediately.

For questions concerning this document contact Jack Evans, Supervising Engineer, at (609) 530-3572 or via e-mail at Jack.Evans@dot.state.nj.us. If you wish to provide suggestions on how to improve this document, please send your comments via e-mail to the above address.

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I. General Information

A. Which version of this document applies.

This document specifies formats for the preparation and delivery of documents in various electronic formats. Due to the rapidity of change in the computer field in general, this document will always be considered to be in flux. Therefore, our specifications will always require that the **current** version of this document be applied to any and all work being performed for which this document applies. It is the consultant's responsibility to ensure that the current version of these specifications, the one in use at the time the work is actually performed, is the one utilized.

Former versions of this document referenced the Bridge Document Management System (BDMS). As the Structural Document Management System (SDMS) is replacing the BDMS, this version of the specifications is the current version of the BDMS Contractors Specifications (don't let the name change confuse you).

B. A Few General Notes to Consultants Concerning the Quality of Source Documents

Where scanning is to be performed, we, of course, expect any scanning sub-contractor to carefully perform all work. This does not relieve the prime consultant from taking appropriate steps to ensure that the scanning contractor has a good quality report to start with.

There are several steps that the Consultant can take to improve the original report including, but not limited to the following:

- Take good quality photographs. **Use a UV filter if possible.** Avoid poor light conditions such as dusk or severely overcast days.
- When using a digital camera, ensure the quality of the photographs, as well as the quality of the printing process, produces a true photo quality result (Note: Poor quality prints, even if acceptable to the eye, often scan very poorly. Poor prints cannot be repaired during scanning, and could result in all photos having to be reprinted (at your cost) in order to complete the scanning process).
- Use DARK pencil if notes are written in pencil. The pages in the report **MUST** be able to be reproduced clearly and completely.
- Do NOT shade table titles (or anything else for that matter) in the reports, where text is within the shaded area. The text is often unreadable in the scanned image.
- Use only one side of the paper. Two sided sheets are very difficult to scan and the second side is sometimes missed.
- Do not use a binding method that puts more than three holes in the paper.
- Use only white or light yellow paper for title pages.
- No page in the report is to be larger than 11" x 17".

In addition, the following practices by the consultant will improve our use of the final images:

- Pictures shall be mounted on the sheets so that the page can be viewed in portrait orientation. The only exception to this should be when panoramic photographs are provided. This particular item affects all future use of the images in an on-line environment, as most systems, including ours, present all images in portrait mode.

If scanning a report, the “original” report is always to be the one scanned. Never scan a copy unless specific approval is received from the NJDOT Project Manager. The original report is defined as the primary copy to be supplied to the bridge owner. The original report is often the only one with original photographs, and may sometimes contain other items not included in copies.

II. How to Prepare a CD for Submission

A. The Submission

Each CD stands alone. If your submission requires more than one CD, each is to be treated as a separate submission.

All submissions shall be sent with either a letter (not a transmittal sheet) or a signed checklist (if required) from the consultant stating which version of these specifications was used, and certifying that the work was properly performed according to the specifications.

All electronic deliverables will be provided to us on a CD (Note: DVDs are NOT currently being accepted). **The CD will be properly labeled**, and will be submitted in a properly labeled hard plastic "Jewel" type case (a square case that is essentially the same size as the CD) to protect the CD against damage.

Note: As CDs are now considered to be a primary deliverable, the Consultant's rating can be impacted by any CD submitted which does not meet our current standards.

For all submissions, the database, document, image, and index files must be submitted on CD-ROM media. Rewritable CDs and any form of DVD media are NOT acceptable. **The format of the CD-ROM is to be ISO 9660 compliant CD-ROM (Mode 1) or CD-ROM XA Mode 2 Form 1 (do not use Form 2 unless approved in writing). The CD is to be written in one session.**

Note: We have found that when a CD is cut on a DVD burner it is often not compatible with older computers. PLEASE, if possible, do not use a state-of-the-art computer when cutting CDs. If you have no choice but to cut the CD on a DVD drive, cut the CD at a slow speed (use a speed 2 settings below the maximum speed the drive is capable of). This will reduce the likelihood of our having to require you to cut a new CD.

B. CD-ROM Format and Labeling

Each CD must stand alone as a submission. If the CD contains indexing files, they must cover all document/image files on that CD and only that CD. If your submission requires more than one CD, you must separate the document/image files into groupings, each of which will fit on one CD, create an index file (if required) for that grouping, and put the index file and the relevant group of images onto a CD. All CDs shall be submitted in Jewel (hard plastic) cases.

CD Labeling

The following minimum information is to appear on each and every CD and CD case submitted (see requirements in the individual sections for more specific requirements):

- **State Agreement Number (for example 2004 BI 492A)**
- Name of Contract
- NJDOT Project Group Number (for example ST5A)
- Consultant's Name
- **Consultant Project Manager's E-mail Address**
- What is on the CD – be specific (and be clear about doc. types)
(For example, is it a Sign Structure Database CD, or a Current Cycle PDF Reports CD, or a Prior Cycles Reports CD, etc.)
- "Prepared by:" Contractor Name
- Date the disk was prepared
- Also, IF the CD replaces a previously submitted CD, include:
"Replaces CD: *CD Unique ID*" (see [Section II.C.2.b](#))
For example: Replaces CD: ST3B_01_C_2005042

Structure of the CD

The CD is to be structured in one of three ways:

Note: Doc and CAD files (working file submissions) must now be placed on a separate CD from PDF or other image files (report submissions).

CD File Structure Alternate 1

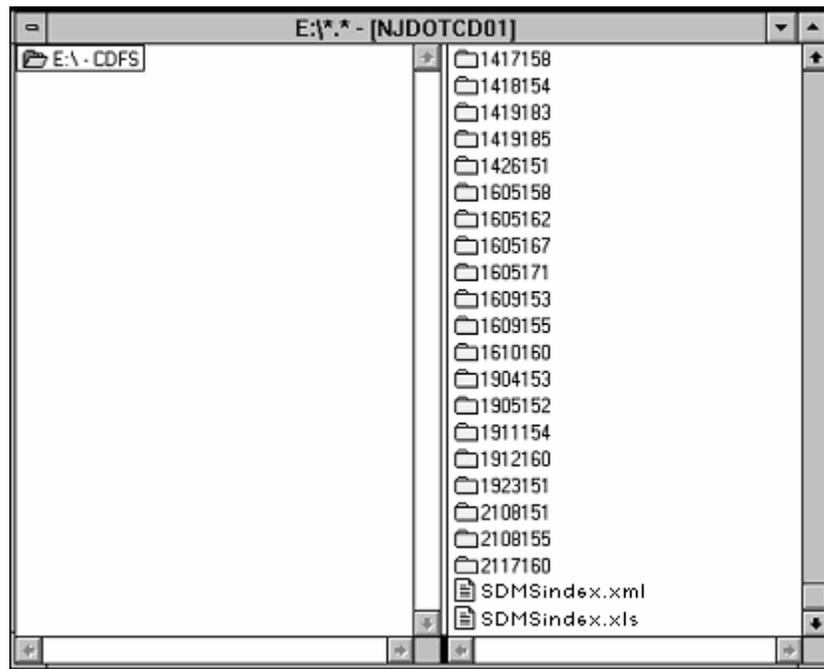
This form is an option for CDs containing just PDF documents.

All files can be placed in the root (main) directory of the CD. No subdirectories are permitted. The SDMSindex.xls and SDMSindex.xml files shall also be placed in the root directory on the CD.

CD File Structure Alternate 2

This form is REQUIRED for CDs with scanned documents, and CDs used to submit the DOC and CAD files. It is an option for CDs containing just PDF documents.

The CD-ROM shall contain a directory named for each bridge structure number represented in the submission. All files relating to a bridge shall be stored in the sub-directory named for that bridge. For example, all documents related to bridge 1405053 must be placed in a sub-directory named "1405053", which is itself located in the root (main) directory. The SDMSindex.xls and SDMSindex.xml files shall be placed in the root directory on the CD (see the following example).



CD File Structure Alternate 3

This form is **REQUIRED** for CDs containing database submissions.

All files are to be in the root directory except for those which are specified to be in a subdirectory. For example, sign structure submissions currently require that two subdirectories be present: "NJDOTSignDatabase" and "NJDOTSignImages".

C. How to Index the Documents on the CD

Where CDs are being submitted containing document files that will be loaded to our SDMS, additional files must be created to tell our system exactly what each file is. This submission consists of 3 elements:

1. Document files in specific formats.
2. The "SDMSindex.xml" file, providing both overall information on the submission and index information about all files in the submission.
3. The media on which the files are submitted.

1. Important Definitions

At this point, several terms have to be defined. These are:

Contract Requirement

This is a fancy term for the document(s) generated as the result of an inspection effort listed in the Agreement or Contract Addendum or Modification.

For example, a Regular Bridge Inspection is called for. This regular inspection may have an Underwater inspection component and an Electrical/Mechanical inspection component, but it is collectively thought of as a Regular Inspection.

A year later, an Interim Inspection may be called for. This would be a separate contract requirement.

Data Collection

Items 1 & 2 combined are what we call a **Data Collection**. In essence, a Data Collection is a group of files to be loaded to the SDMS (in this case, the files on the CD) along with the index file needed to tell the system exactly what is in each file and where to put it.

Document

For the purpose of the SDMS the term “document” has a VERY specific meaning. Also, this meaning varies depending upon whether the document is inspection related or non-inspection related.

Inspection Documents

An inspection document is defined as a file or group of files that together address a particular issue or contract requirement pertaining to a particular structure, and are delivered on the same CD or equivalent media.

Example No. 1 - A regular inspection consisted of the structural inspection, an underwater inspection, and an electrical/mechanical inspection. These three together satisfy the contract requirement of performing a regular inspection for structure 2201-151, and therefore constitute one document. The electronic files are all together on one CD. Also on this CD is an electronic file containing an interim inspection. This would be a separate document as it fulfills a different contract requirement.

Example No. 2 - A regular inspection is requested to include the structural inspection, the underwater inspection, and the electrical / mechanical inspection as described in the 1st example. Collectively they represent the contract requirement. In this variation the Consultant sends a CD with only the structural and electrical/mechanical inspection materials. Then at a later date they send another CD with the underwater material. Also, on the 2nd CD is the Interim Inspection material that was requested under a different contract requirement. In this variation the structural and electrical/mechanical inspection materials on the first CD are one document, the underwater material on the second CD is another document, and the interim inspection report on the second CD is a third document.

Non-Inspection Documents

Contract Documents (agreements, proposals, modifications, etc.), and General Documents (everything else) are another matter entirely. A non-inspection document is defined as a file or group of files that together address a particular issue, and are delivered on the same CD or equivalent media.

Examples:

1. An Agreement is submitted for scanning. This is one document.
2. A Notice to Proceed letter is issued. Attached is a copy of the AD-12 and the Agreement. This is one document (although it has more than one TOC Item).

TOC Item (Table of Contents Item)

An index file entry is created for each document and major component. These index entries are called Table of Contents Items (or **TOCs**) as the SDMS will be able to search specifically for these entries. TOCs are a way of indicating in the index file that a document has major subsections, or sub-documents that could be considered to be documents if they had been submitted separately. An additional index entry is created for each of these sub-items.

A list of TOCs can be found in [Appendix B](#).

Report

A report is a type of document. It will often contain sub-documents that will require additional TOC entries.

XML

XML stands for eXtensible Markup Language, a relatively new file format that promises to provide data portability between applications.

CD Number

This is an identifier of the CD and is generated by the system during audit.

Error Log

This is the file generated during a CD audit which describes errors on the CD. It is returned to the Project Manager via e-mail if a CD contains errors.

Error Log Number

This is the number in the Error Log file which references the system error log entry.

2. How to Prepare the Index File

The index file is an XML data file, generated from an Excel spreadsheet. You will be inputting indexing data into 2 sections of the Excel file spreadsheet and, when complete, will generate an XML file from this.

a. The Excel Spreadsheet

The Excel file we will provide is named:

“NJDOT_SDMSindex_verXXXX.xls” (XXXX is the version number.)

When you are ready to begin preparing the index file, **rename** this Excel spreadsheet to the following:

SDMSindex.xls

This spreadsheet has the following two sections in it:

“**master**” - This section describes the overall submission. You will only be filling out one line of data in this section.

“**index**” – This section contains one index entry for every TOC in the submission. (Note: For those familiar with the BMDS, the index section is essentially a combination of the older “reports.txt” and “index.txt” files)

A spreadsheet must be prepared for each CD submitted. Only the files physically located on the CD are to be indexed.

WARNING – Do NOT change anything in the spreadsheet other than entering the data as described below. You could end up preventing the spreadsheet from generating a valid XML file.

b. The “master” Section

The “master” section is used by the SDMS to obtain information on the overall submission. The SDMS will use this information to identify the project this submission is related to, and to tag each index record with this data so that each document is completely identified. In order for data to be loaded properly, the “master” section must be error free.

You will be entering only one row of data in this section. The following items will need to be entered (a description of each field follows):

Format of the “Master” Section

	Column Title	Column Purpose	Sample Data
M1	Doc Type	Type of Documents	Inspection NonInspection Other
M2	Date of Index	Date This Index Was Prepared	20050417
M3	Submit Medium	Medium Used for Submission	CD
M4	Number of Docs	Number of Documents	24
M5	Index Rows Total	Number of Index File Entries	55
M6	Prime Consultant	Code for Prime Consultant	A23
M7	CD Consultant	Code for Consultant Who Prepared CD	B56
M8	Project Group	Project Group Number	ST5A
M9	AgreeMod Num	Project Agreement or Mod. Number	00 02
M10	CD CorA	Does the CD Contain Current or Archival Documents	C A

M1. Type of Documents – (Character 13 – Left Justified)

This field tells the system whether the files on the CD are Inspection related or not. Inspection and NonInspection documents are NOT to be mixed on one CD. If both types of documents need to be submitted, they are to be prepared and submitted on separate CDs.

For a CD containing Inspection Reports, code “Inspection”

For a CD not containing Inspection Reports, code “NonInspection”

Note: The spreadsheet we are currently providing already has this field coded.

M2. Date This Index Was Prepared – (Date)

This is the date the index file was completed (assumed to be the date the CD was created).

If you alter the index file (due to a CD resubmission) change this date to the current date! Note: Only one CD can be submitted for any project with any given date!

The format is: YYYYMMDD for example: 20050417

M3. Medium Used for Submission – (Character xx – Left Justified)

This field describes to the system what type of media is being submitted.

For now, the only acceptable type is a CD that complies with [Section II.A.](#)

For a CD-ROM, code “CD”

Note: The spreadsheet we are currently providing already has this field coded.

M4. Number of Documents – (Number 3 – Integer)

This field indicates the number of documents on the CD. A maximum of 999 documents is permitted on one CD.

Code the exact number of documents on the CD. For example: “122”

M5. Number of Index File Entries – (Number 4 – Integer)

This field indicates the number of index file entries in the SDMSindex file on the CD. A maximum of 9,999 index file entries is permitted in one SDMSindex file.

Code the exact number of index entries in the SDMSindex file.

For example: “315”

M6. Code for Prime Consultant – (Character 3 – All characters must be filled)

This field tells the system who the prime consultant is on the project.

For a list of these codes, see [Appendix A](#).

Provide the 3-digit code indicating the Consultant

For example: “C16” would represent Chilton Engineers.

M7. Code for Consultant Who Prepared CD – (Character 3 – All characters must be filled)

This field tells the system who the consultant was who actually prepared the CD. For a list of these codes, see [Appendix A](#).

Provide the 3-digit code indicating the Consultant

For example: “C16” would represent Chilton Engineers.

M8. Project Group Number – (Character 4 – All characters must be filled)

This field tells the system the Group Number of the project the CD was funded under. This number was provided to you in your Notice TO Proceed letter.

Provide the 4-digit code indicating the Project Group. For example: “ST5A”

M9. Project Agreement/Mod. – (Character 2 – All characters **must** be filled)
This field tells the system which agreement or modification the project was funded under.

For an Agreement, code “00”

For Contract Modification or Addendum 1, code “01”

For Contract Modification or Addendum 2, code “02”

Etc.

M10. Does the CD Contain Current or Archival Documents – (Character 1 – The character must be filled)

This field tells the system whether the documents contained on the CD are current or archival in nature. Current (cycle) documents are documents being prepared as part of the current contracted effort.

Archival documents (prior cycles) are documents that were prepared in the past and are being provided to complete the online record. These documents are typically from 2 to 20+ years old. Often, these are documents that have been sent out for scanning.

Note: A third code (P) will be implemented in the future for Current Cycle Preliminary documents. When this code is implemented, Preliminary and Final documents will not be allowed on the same CD.

For Current (cycle) documents, code “C”

For Archival (prior cycles) documents, code “A”

CD Unique ID

Four of the fields listed above, the Project Group (M.8), AgreeMod Num (M.9), CD CorA (M.10), and Date of Index (M.2) will be concatenated together by the SDMS to produce the CD Unique Identifier. This identifier will be how we refer to the CD in any correspondence.

c. The “index” Section

The “index” Excel spreadsheet section is used by the SDMS to generate database entries for each “document” stored in the system, and to create a link between that database entry and the proper image file. In order for the data to be loaded properly, the index file must be error free.

Note: This version of the index file performs the tasks that used to be split between two files (the BDMS index.txt and reports.txt files). The choice to combine the files was made to try to simplify the indexing process as much as possible.

Note: It is CRITICAL that the section be completed without changing any of its attributes. Also, there cannot be any spaces in any field entered. Either of these issues could cause a rejection of the entire submission.

The index utilizes several numerical fields to describe to our system the associations and order of the files and TOCs within each logical document. It is important that each field be properly understood and coded.

The index section shall contain the following information for each TOC Item required. The following items will need to be entered (a list of each field follows in the table on the next page):

Format of the "Index" Section

	Column Name	Column Purpose	Sample Data
1.	Doc Number	Document Number	4
2.	Doc Line Number	Document Indexing Line Number	3
3.	Doc Total Lines	Total Num of Index Lines for this Document	7
4.	Structure Number	Structure Number	1234151
5.	Inspection Firm	Firm That Inspected the Structure	C14
6.	Inspection Type	Type of Inspection	(R) Reg., (F) FC, (E)Emergency, etc.
7.	Cycle Number	Cycle Number	13
8.	Document Date	Document Date	20050417
9.	Doc Total Files	Total Number of Files for this Doc	4
10.	Doc File Number	Document File Number	3
11.	File Name	File Name	...
12.	TOC Item Code	TOC Item Code	101
13.	Doc Review Priority	Document Review Priority	1,2,3,4
14.	Doc Author	Author of the Document	Lane, James

1. Document Number – (Number 4)

Documents are numbered consecutively. The first document is "1", the second is "2", etc.

2. Doc Line Number – (Number 3)

Within each document, each row is numbered consecutively. The first index row in document 1 is "1", the index second row in document 1 is "2", etc. Numbers restart at "1" whenever a new document is encountered.

3. **Total Number of Index Lines for this Document** – (Number 2)
 This is the number of indexing lines for this Document. For example, if document 3 has 4 index entries (rows), then the number coded for this field on all 4 lines is “4”.

4. **Structure Number** – (Character 7 – All characters must be filled)
 This is the 7-digit structure number of the bridge or other structure. It shall be in the format of: 1234567 with NO dash or other separators.

5. **Firm That Inspected the Structure** – (Character 3–All characters must be filled)
This field is to be coded only for Inspection CDs. Otherwise, leave blank.
 Provide the 3-digit code indicating the Consultant. This field tells the system who the actual creator of this document is when it is an inspection document. This code will also be used to populate index Field 14 (Document Author). For a list of these codes, see [Appendix A](#).

For example: “C16” would represent Chilton Engineers.

6. **Type of Inspection** – (Character 1)
This field is to be coded only for Inspection CDs. Otherwise, leave blank.

Provide a 3-digit code indicating the primary type of inspection contracted for this structure. Acceptable entries are:

R = Regular Inspection	F = Fracture Critical Member Inspection
E = Emergency Inspection	L = Load Factor Rating Report
I = Interim Inspection	D = Dam Inspection
U = Underwater Inspection	S = Sign Structure Inspection
C = Scour Inspection	H = High Mast Light Pole Inspection
	X = Other Types of Inspection Docs.

This field defines the intention of the inspection effort (what the Primary Consultant was hired to do). For example, if you were hired to do a Regular Inspection, code “R”. If an Underwater Inspection is required as part of the

regular inspection, code "R", however, if you were hired JUST to do an underwater inspection, code "U".

Example 1 - If document 2 is a Regular Inspection, code "R".

Example 2 - If document 5 is a Priority Repair Letter, generated from a Regular Inspection, code "R".

Example 3 - If document 8 includes an Underwater Inspection report, that was prepared as part of a Regular Inspection, code "R".

(Note: This could also happen if the Underwater Inspection Report is submitted on a separate CD from the Regular Inspection Report.)

Example 4 - If a document is an Underwater Inspection report, that was prepared as a stand-alone contract, code "U".

7. **Cycle Number** – (Number 2)

This field is to be coded only for Inspection CDs, and only where Type of Inspection is coded "R". Otherwise, leave blank.

For Regular Bridge Inspection Reports the Cycle Number is the number of the inspection cycle as indicated on the report.

Note: This represents a change in the way Cycle is coded. In the BDMS we required a code for all reports. Also, if the cycles started over, we had other procedures that no longer apply.

For a Cycle 1 Regular Inspection Report, code "1"

For a Cycle 14 Regular Inspection Report, code "14"

8. **Document Date** – (Date)

The document date shall be in the format: YYYYMMDD. For example, August 16, 1995 would be 19950816. If no day is specified in the document, default the day field to "01". If no month is specified, default the month field to January (01). The same date, and cycle number, should be listed for all sections bound in with the report.

For any Document, **all dates are to match**. For example, if there are 3 index entries for a Regular Inspection report (for the report, an underwater inspection, and a priority repair letter), the three document dates are all to be the date of the regular report.

9. Total Number of Files for this Document – (Number 2)

This is the number of actual image or PDF files that make up the document. Although there would usually (but not always) be only one PDF file per document, there can be many image files (TIFF & JPEG) if the files are scanned.

Example 1 - If document 3 consists of 1 PDF file, then the number coded for this field on all lines associated with document 3 is “1”.

Example 2 - If document 3 consists of 5 TIF and 8 JPG files, then the number coded for this field on all lines associated with document 3 is “13”.

10. Document File Number – (Number 3)

This field describes the order of the files in a document. This is the same as the “file number” in the old BDMS system. Each file can only have one number associated.

Within each document, each row is numbered consecutively based on the File Name in the next column. For document 1, the first file name is “1”, the second file name is “2”, etc. Numbers restart at “1” whenever a new document is encountered.

Example 1, a document consists of scanned files – 5 TIFF and 4 JPEG:

Doc File No	File Name
1	Filename1.tif
2	Filename2.tif
3	Filename3.tif
4	Filename4.tif
5	Filename5.jpg
6	Filename6.jpg
7	Filename7.jpg
8	Filename8.jpg
9	Filename9.tif

Example 2 – an unusual example. A document consists of a few PDF files. As the document has 6 TOCs associated with it, and 2 of the 3 files have

more than one TOC associated, the Doc File Numbers would be coded as follows:

Doc File No	File Name	TOC Item Code
1	1812151a20050417cy09.pdf	101
1	1812151a20050417cy09.pdf	102
2	1812151b20050417cy09.pdf	103
3	1812151c20050417cy09.pdf	104
3	1812151c20050417cy09.pdf	105
3	1812151c20050417cy09.pdf	171

11. File Name – (Character 40 – Left Justified)

The file name must match any standard format specified elsewhere in this document. If there is no specific requirement elsewhere in this document, any file name convention may be used, but shall never exceed 40 characters including the file extension. The file name shall not include the directory path.

All filenames shall have an appropriate file extension (such as “.pdf”, “.tif”, “.jpg”, etc.).

The Filename CANNOT have spaces or more than one period (.), although underscores (_) and dashes (-) are permitted.

Example 1 – For a PDF file: 0306158_20021001cy07_51.pdf

12. TOC Item Code – (Number 5)

These serve a similar purpose to the “Document Type Code” in the old BDMS system. However, the codes are now 3 digits and are more comprehensive than before.

Due to the complexity of working with TOCs, complete instructions on how to use TOC codes, as well as a complete listing, can be found in:

[Appendix B – How to Use TOC Item Codes](#)

Example 1 – For a PDF file of a regular report, code “100”

13. Document Review Priority – (Character 1)

This field is to be coded only for Inspection CDs, and only where the TOC code of the row is “100” or “101”. Otherwise, leave blank.

This field defines the priority for review of the inspection document by State Maintenance forces. Provide a 1-digit code indicating the review priority of the report. Acceptable entries are:

4 = Where the lowest of SI&A Items 59, 60 or 62 is 7, 8, or 9

3 = Where the lowest of SI&A Items 59, 60 or 62 is 5 or 6

2 = Where the lowest of SI&A Items 59, 60 or 62 is 4

1 = Where the lowest of SI&A Items 59, 60 or 62 is 3 or less

14. Author of the Document – (Character 50 – Left Justified)

This field is to be coded only for NonInspection CDs. Otherwise, leave blank.

This is the author of the document. If a Consultant, list the Firm Name. If InHouse, list the Originating Bureau or Unit, or else the Person.

Example 1 – For an InHouse Unit: Structural Design or Dunne, Richard

Example 2 – For a Consultant: Arora & Associates

Example Spreadsheet

Following is a screen shot of a sample Excel SDMSindex.xls file. The section in Orange is the “master” section, while the section in Yellow is the “Index”.

Although the above descriptions probably sound very complicated, chances are that when you start to fill out the spreadsheet you will find it is relatively easy to do.

Here is one step by step method (feel free to develop your own). This method is intended for use with PDF files.

1. List the PDF file name in Column K.
2. While looking at the report:
 - a. Start assigning TOC codes (Column L).
 - b. If a file requires more than one TOC, drag and drop the filename into the new line and enter the TOC code.
 - c. Enter the values for Columns F & G (Inspection Type and Cycle Number), and Column M (Doc Review Priority).
 - d. If any sub-document (such as an underwater inspection) was performed by another consultant, enter the value in Column E (Inspection Firm).
 - e. Once all of the above values are entered, put down the reports.
3. Enter the values in Column D (Structure Number) and Column H (Doc Date) based on the information in the PDF filename.
4. Fill in the remaining columns of the “index” section.

Once all index records are entered

5. Complete the “master” section.
6. Save the file and put it through your internal QC/QA checks.
7. Generate the XML file.

Notes on the “Sample Index Spreadsheet” on the next page:

Doc Number 6 – references one PDF file requiring two index file entries.

Doc Number 7 – references one PDF file requiring three index file entries.

Doc Number 8 – references a PDF submission consisting of a Report PDF file (which includes a copy of a Priority Repair Letter), and separate Underwater inspection PDF file. A total of three index file entries are required.

Doc Number 9 – A general example for scanned documents.

Sample Index Spreadsheet File

A	B	C	D	E	F	G	H	I	J	K	L	M
Doc Type	Date of Index	Submit Medium	Number of Docs	Index Rows Total	Prime Consultant	CD Consultant	Project Group	Agree Mod Num	CD CorA	This index file is for Inspection Documents ONLY		
Inspection	20050901	CD	9	20	A12	A12	ST5Z	01	C			
Doc Number	Doc Line Number	Doc Total Lines	Structure Number	Inspection Firm	Inspection Type	Cycle Number	Doc Date	Doc Total Files	Doc File Number	File Name	TOC Item Code	Doc Review Priority
1	1	1	1812151	A12	R	3	20050101	1	1	1812151_20050101cy03.pdf	100	3
2	1	1	1812152	A12	R	2	20050304	1	1	1812152_20050304cy02.pdf	100	3
3	1	1	1812152	A12	I		20040522	1	1	1812152_20040522int.pdf	120	
4	1	1	1812153	A12	R	5	20050602	1	1	1812153_20050602cy05.pdf	100	3
5	1	1	1812165	A12	R	13	20050603	1	1	1812165_20050603cy13_Pr2_01.pdf	170	
6	1	2	1914152	A12	R	14	20050521	1	1	1914152_20050521cy14.pdf	100	1
6	2	2	1914152	A12	R	14	20050521	1	1	1914152_20050521cy14.pdf	171	
7	1	3	1914153	A12	R	12	20050601	1	1	1914153_20050601cy12.pdf	100	4
7	2	3	1914153	A12	R	12	20050601	1	1	1914153_20050601cy12.pdf	111	
7	3	3	1914153	A12	R	12	20050601	1	1	1914153_20050601cy12.pdf	171	
8	1	3	1914154	A12	R	11	20050604	2	1	1914154_20050604cy11.pdf	100	3
8	2	3	1914154	A12	R	11	20050604	2	1	1914154_20050604cy11.pdf	171	
8	3	3	1914154	C16	R	11	20050604	2	2	1914154_20050604cy11_UVV.pdf	111	
9	1	7	2002151	A12	R	4	20050411	7	1	2002151_20050411_01.tif	101	2
9	2	7	2002151	A12	R	4	20050411	7	2	2002151_20050411_02.tif	102	
9	3	7	2002151	A12	R	4	20050411	7	3	2002151_20050411_03.tif	103	
9	4	7	2002151	A12	R	4	20050411	7	4	2002151_20050411_04.tif	104	
9	5	7	2002151	A12	R	4	20050411	7	5	2002151_20050411_04b.jpg	104	
9	6	7	2002151	A12	R	4	20050411	7	6	2002151_20050411_04c.jpg	104	
9	7	7	2002151	A12	R	4	20050411	7	7	2002151_20050411_05.tif	105	
25												
26												
27												
28												
29												

d. Creating and Submitting the XML file

The “SDMSindex.xml” file is used by the SDMS to provide information for loading the Data Collection to the system.

To generate an XML file (in Microsoft Excel 2003) with the SDMSindex.xls file open:

Select: File → Save As

A “Save As” screen will appear.

Make sure you are saving to the location you wish to.

Save as type: XML Data(*.xml)

Make sure filename is SDMSindex.xml

Hit: Save

A warning will appear that says: “Saving the file as XML Data will result in a loss of worksheet features ...”

Hit: Continue

File will be saved.

Place the SDMSindex.xls and the SDMSindex.xml files in the root directory of the CD.

3. Error Reports and CD Resubmission

The CD and the XML index file will be put through an extensive audit upon receipt. If there are errors requiring correction, then an error log will be generated. The error log will contain a list of any structural errors on the CD, as well as a line by line description of any index file errors encountered.

This error log will be e-mailed to the e-mail address listed on the CD. Based on this error log, you are to correct all errors described, and then resubmit the CD. In your submission, reference the Log Number and the “CD Unique ID” of the CD being replaced.

Note: When resubmitting a CD, change the date in the index file to the current date. This date is part of the CD Unique Identifier.

III. Scanning Standards

New Jersey DOT requires the following formats for all images submitted for the SDMS:

- TIFF Group 4 (.tif), also called “CCITT with Group 4 compression”, for black and white (bi-tonal) images (scanline orientation shall be “Upper left / horizontal” - see below for definition)
- JPEG (.jpg) for color photographs and pages with color photographs mounted on them.
- JPEG (.jpg) for sheets with several shades of gray (where important information would be lost if scanned as a bi-tonal image)

The above types are the only ones accepted, no matter whether they are being submitted as part of a CD containing scanned reports, or when the images are included in a PDF file.

Color pages or pages containing photographs are to be scanned at a resolution of 160 (200 DPI is acceptable if your scanner does not support 160 DPI). The compressed file size of 160 DPI images will typically average 300K and should not exceed 500K on average (obviously, 200 DPI scans will result in somewhat larger images).

Note: We would prefer normal (or heavy) sharpening be used rather than extra heavy sharpening as the latter setting increases file size substantially with little additional visual benefit.

Black and white (bi-tonal) pages are to be scanned at a resolution of 300 or 320 DPI.

Exception:

22” x 34” or 24” x 36” black-and-white drawings (typical plan sheets), when included in the report as full size plan sheets. Please arrange to scan these as full size sheets at 200 dpi.

Some submissions require multiple page scan files. The following are rules for single page and multi-page files:

- Each color image (an image where the image MUST be scanned in color in order to be readable), a sheet containing photographs or a sheet with many shades of gray, must be stored as a single page “.jpg” file. A typical 8.5” x 11” report page containing photographs is to be scanned as one image and is not to be cropped.
- All black and white images with the same bridge number, document type code and cycle number will be stored as a multi-page “.tif” file.

Exceptions:

1. We have noticed that the efficiency of use of these files may start to fall when the files exceed 60 pages. Therefore, for very large sections (over 70 to 80 pages), multiple “.tif” files may be used, and that the size of each “.tif” file should typically not exceed 60 to 70 pages.
2. 22” x 34” or 24” x 36” black-and-white drawings (typical plan sheets), when included in the report as full size plan sheets, may be scanned as single page “.tif” files.
3. 11” x 36” or 11” x 42” black-and-white drawings (found in some of the older reports)

Please scan as three 11” x 17” b/w pages without prior reduction. The three images would constitute one file.

All images are to retain the quality and readability of the original. Additionally, in the case of color images, the color balance and brightness of the electronic image is to be comparable to the original, and all information conveyed by the original photograph is to be accurately conveyed by the image. The NJDOT has the option to reject any submission that, in our opinion, does not achieve the intent of the above.

Definition of Scanline Orientation

Scanline orientation identifies the zero point (origin) of the raster image and the direction the scanlines are written and read. Scanline orientation is described by the location of the zero point and the scanline direction from the zero point. For example, Upper Left Horizontal means that the zero point is in the upper left corner of the image and that the scanlines proceed horizontally across the image.

The following are a few of the common errors we have noticed. Please be aware of them and make appropriate corrections prior to submission:

1. The original sheets are in light pencil. The scanning process fails to adjust for this resulting in images that are partly unreadable. Or, the scanning over-adjusts, sometimes resulting in general text thickening to the point where all text becomes difficult or impossible to read.
2. When a sheet with photographs is scanned - The original photograph is dark with poor contrast. The JPG image is even darker with a general loss of detail.

Or

- . The color scanning process produces JPG images that are consistently darker than the original image. This is a COMMON problem. If much darker, often detail is lost in shadows and/or color shifts occur.

IV. Preparation and Delivery of Scanned Reports & Documents

A. Overview

The Structural Document Management System (SDMS) is capable of accepting scanned documents in several formats. These formats are dependent upon the documents being scanned, and the use to which the documents will be put.

When scanned images will be submitted as a final product (for example when Prior Cycle reports are scanned for submission) the file indexing and CD submission shall conform to [Section II](#) of these specifications. Please contact us if you need additional guidance for file naming or TOC usage during index file creation.

A submission of scanned images for the New Jersey DOT Structural Document Management System (SDMS) consists of 3 elements:

1. Scanned document image files in specific raster formats.
2. The XML based index file, providing both overall information on the submission and index information about all files in the submission.
3. The media on which the files are submitted.

Each of these elements is fully described in [Section II.C](#).

The contractor is responsible for the quality of both the documents and the index file.

Note: The “original” report (not a copy) is always the one to be scanned.

B. Description

- Many of the document type codes will often contain both a “.tif” and several “.jpg” files.
Example:
An Electrical/Mechanical Report will often include a “.tif” section, then several color photographs (JPEGs), then another “.tif” section for each of the electrical and mechanical sections of the report. Sometimes the report will also contain an electrical potential plot (a section with shades of gray) that requires scanning as individual “.jpg” files). Please note that, for this example, the entire report would have a TOC of 125. The Doc File numbers would increment for each file.

- Some of the very early reports (typically prior to 1972) will contain photographs mixed in with the report text, with a photograph on almost every page. Also, the document type codes may be hard to determine for these early reports. A determination of how to scan these reports will often need to be handled on a case-by-case basis. Please contact our office for specific guidance if you are stumped.

The following are a few of the common errors we have noticed. Please be aware of them and make appropriate corrections prior to submission:

1. The original calculation sheets are in light pencil. The scanning process fails to adjust for this resulting in images that are partly unreadable. Or, the scanning over-adjusts, sometimes resulting in general text thickening to the point where all text becomes difficult or impossible to read.
2. The original photograph is dark with poor contrast. The JPG image is even darker with a general loss of detail.
3. The color scanning process produces JPG images that are consistently darker than the original image. This is a COMMON problem. If much darker, often detail is lost in shadows and/or color shifts occur.
4. The index file does not contain at least one record for each file on the disk.

5. The document date is to be the date of inspection, NOT the date of a cover or transmittal letter. Also, only one date applies to the entire report (ignore the different dates often found on individual pages of the report).

V. Preparation and Delivery of Documents in Adobe Portable Document Format

The following requirements (as detailed in Section V.A.) apply to a project if the Adobe Portable Document Format (.PDF) is specified as the final format for the submission of the electronic reports.

Note: Section V.B. contains guidance on how we perform some of the work. This section is included purely for your information.

(The information in this section was originally broadcast via e-mail to all Consultants on July 14, 2005.)

A. Preparing the Files and CD

Note: We have made available a “Joboptions” file that automates much of what is stated below. If you need a copy, please contact your State Project Manager. See [Section V.A.5](#) for more information.

1. Adobe PDF File Version

The PDF file is to be based upon the published spec for “Portable Document Format - Version 1.5” (Corresponding to Acrobat - version 6.x). Adobe Acrobat 6 is the current standard for PDF file submission. Please note that Acrobat 7 is not approved as we have not had the chance to determine if it produces equivalent results.

Note: For in-house PDF file creation, we use Adobe Acrobat 6, but produce the file to be compatible with version 1.4 of the Adobe File Specification (equivalent to Adobe Acrobat 5).

2. Quality of the PDF document

The intent of this portion of the specification is to ensure that a high quality print document is produced that is still reasonably small in size. Unfortunately, as our definition of Print Quality and Adobe's definition do not match (our requirements are higher), all references to Print Quality in this document are based on the following guidelines:

Photographs, at a minimum, are to maintain the quality, resolution and clarity as described in [Section VI.C.1](#) (which describes Requirements for the Preparation and Printing of Electronic Documents). Electronic photographs (JPEGs) are generally to be included at their full JPEGed resolution and quality unless the resolution of the photo, as included in the report document, exceeds 300 DPI (dots per inch). Photos that exceed this value are to be Bi-cubic down-sampled by Adobe to 300ppi (points per inch), and compressed using the High setting.

All black & white (bi-tonal) pages that have to be scanned for inclusion in the report will be scanned in compliance with [Section III](#). (above).

All fonts to be used in the document are to be standard Windows fonts (Times New Roman, Arial, Courier, etc.). All fonts are to be embedded in the document.

When creating a PDF document, the following two Adobe PDF “Advanced Settings” shall be enabled:

Save Adobe PDF settings inside PDF file.

Save Portable Job Ticket inside PDF file.

Note: Currently, for your information, the settings used in-house for conversion of MS Word documents to Adobe PDF are as follows:
Conversion Setting – Press Quality (with compression changed to High in the Images screen of the Advanced Settings area).

3. **Bookmarks & Links**

All links will be clearly visible (distinguishable from the surrounding text - for example, by using [blue text](#)). The following links will be required in each type of report:

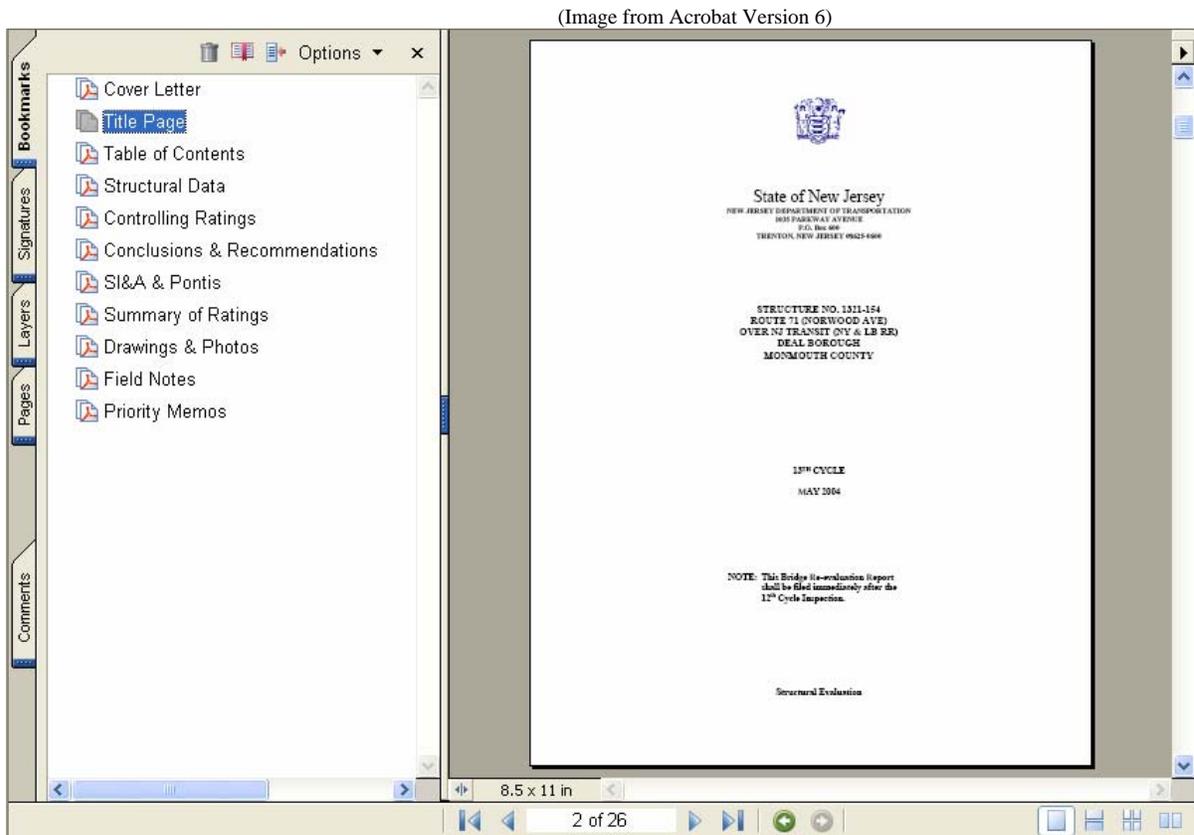
- a. The report must be indexed (using bookmarks) to the following items:
 - Cover Letter
 - Title Page
 - Table of Contents
 - Summary
 - Any Other Significant Sections

Each Appendix (if there are Appendices, state briefly what each is, for example – “Appendix II – Calculations”)

The following bookmarks will typically be found in a Typical Regular Report Written in 2005:

- Cover Letter (if included)
- Title Page
- Table of Contents
- Structural Data
- Controlling Ratings
- Conclusions & Recommendations
- SI&A & Pontis Data
- Computations
- Drawings & Photographs
- Field Notes
- Priority Repairs
- Underwater Inspection report
- Etc.

- b. A link from each reference to a photograph to the actual photo.
- c. Other links as appropriate to the type of report (don't get carried away).
(Note: The Table of Contents need not be linked to other locations as this function is performed within the electronic report by the index (called bookmarks)).
- d. The initial display configuration (the way the file displays when you first open the document) is for bookmarks to be displayed on the left and the first page of the report to be displayed on the right. An example of the typical starting display is shown below (Note how the bookmarks are titled, and the full-page display of the report sheet).



The report page is always to be displayed so that 100% of the page is displayed. For example, when pointing to a photograph, display the page so the entire page is visible.

- e. The thumbnails section (Pages tab in Adobe Acrobat version 6) is to be configured so as to display thumbnails if accessed.

4. **Number and Sizes of PDF Files**

We would prefer the entire report be contained in one PDF file (cover letter, summary, history, SI&A, Pontis, Seismic, Calculations, Plan Sheets, Photographs, Field Notes, etc.) with the following exceptions:

- a. Any stand-alone report shall be a separate PDF file. This includes most reports prepared by a firm other than the one who preformed the overall inspection. Include one sheet in the Appendix detailing the information listed below.

(Note: The summary of this report is still to be included in the Summary section of the main bridge inspection report as it always has been).

For example, an Underwater Report is to be in a separate PDF file. An Appendix is still to be included in the regular bridge inspection report, but this appendix will only contain one sheet citing the following information:

- Name of the Inspection (type of inspection)
- Date of the Inspection
- Name of the consultant performing the inspection and preparing the report
- Name of the PDF file containing the report. This “name” should be hyper-linked to the actual report.

(Note: This hyperlink must be a local reference, assuming the file will be in the same subdirectory. Do not allow the hyperlink to include a specific “path”!)

- b. Report sizes are not to be so large as to make it extremely difficult to work with the report. If a report needs to be split, contact the Department for guidance.

Discussion: Very large reports may have to be broken into more than one piece. The consultant is to receive specific approval from Structural Evaluation on a case-by-case basis when this is the situation, as we have not yet determined the upper bound of the size of a report: the point above which accessing the report becomes unwieldy (Note: We once received a 248 Meg main report that performed adequately). Therefore, this point will have to be determined by the consultant during the execution of the project.

5. Use of the “Joboptions” file

The current version of this file available **when you PDF your files** is always the one to be used.

(Note: The version of the joboptions file in use when this specification was originally issued was: NJDOT_StrEval_20050606.joboptions)

The joboptions file automatically sets certain parameters in Acrobat so that the file produced matches many of our standards for PDF files.

We suggest you use this file when creating PDF files. Please note that we are not requiring the use of the joboptions file (although we are strongly encouraging it's use) as many Consultants already have a

method that produces compliant files. However, for those that don't produce files that fully comply with our requirements, use of the joboptions file makes it easier to comply. If you choose to use this file, it needs to be placed in the following (existing) subdirectory on a PC that has Adobe Acrobat 6 installed:

C:\Documents and Settings\All Users\Documents\Adobe PDF 6.0\Settings
(C: or other drive letter depending on which drive Acrobat has been installed to)

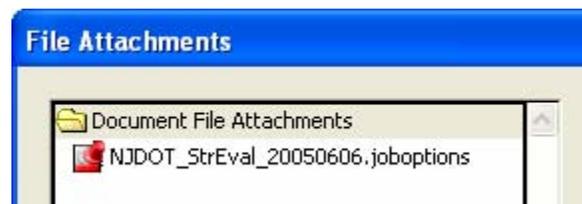
This file solves a lot of problems that many Consultants are having with PDF submissions. However, it is not a magic pill. In other words, your method of PDF creation may not be perfectly suited to the settings in this file. Ultimately, it is still fully up to you to comply with our standards.

Note: See [Section V.B.](#) for some information on how we use this file.

Note: To verify this file has been attached and to view this file, open the document in Adobe Acrobat and hit:

Document → File Attachments

The following screen (a portion shown below) appears:



Double click on the file to open it and see the embedded settings.

6. **PDF Format Report**

For firms that have not recently demonstrated the ability to prepare PDF documents according to our standards, a PDF format report, preferably of a bridge that would result in one of the larger PDF files to be expected in the contract, is to be submitted in PDF format at the same time as the format reports normally submitted to Structural Evaluation (This is suggested to be one of the format reports), along with a properly filled out copy of the [“PDF CD Quality Statement & Review Checklist.”](#) This report is to receive separate and specific approval from Structural Evaluation for layout, formatting, hyper-links, usability, etc.

7. **County or Agency Projects**

The final submission will consist of all PDF files for the entire contract on one CD. A copy of this CD, as well as a properly filled out copy of the “[PDF CD Quality Statement & Review Checklist](#),” shall be provided to Structural Evaluation and a minimum of one copy of the CD and one high quality print of each report shall be provided to the County or Agency involved.

Note: All working files involved, including all CAD files and word processing files are NOT to be placed on the same CD as the PDF files (see [Section VII](#) for information on how to submit these files).

8. **Projects Involving State Owned Bridges**

The final submission will consist of all PDF files for the entire contract on one CD. Two copies of this CD, as well as a properly filled out copy of the “[PDF CD Quality Statement & Review Checklist](#),” and one high quality print of each report shall be provided to Structural Evaluation.

Note: All working files involved, including all CAD files and word processing files are NOT to be placed on the same CD as the PDF files (see [Section VII](#) for information on how to submit these files).

9. **SDMSindex.xml file**

An index file is to be created for each CD. This file is to be placed in the root directory. For instructions on how to create the SDMSindex file, see [Section II.C](#).

10. **Makeup of the CD-ROM**

See [Section II](#) of this document for guidance on how to organize and label the CD.

Notes:

Organization - Any CAD, word processing, or other files pertaining to a specific structure are now required to be placed on a separate CD).

Disk Labeling – In addition to what is stated in [Section II.B.](#), also state whether the CD is a “PDF Sample” or a “PDF Final Submission”

File Names

All files are to be named according to the following conventions:

Characters 1 thru 7

- the seven-digit structure number (without a dash)

Character 8

- either an underbar (if the report is contained in one file)
- or a small alpha character (if the report had to be split into multiple PDF files)

Characters 9 thru 16

- the report date in the following format: YYYYMMDD

Characters 17 thru 20

- “cy” plus a 2-digit cycle number
(If there is no cycle number, use xxxx)

Character 21

- An underbar

Characters 22 thru 27 (as required)

- **The Report Type**
- Leave blank if a regular report
- **For other report types, use:**
 - **uw – Underwater**
 - **me – Mechanical/Electrical**
 - **int – Interim**
 - **prX_01 – Priority Repair Letter**
(where X = E, 1 or 2 = priority type)
(where 01 = the first letter issued on this day
for this priority type and this structure)

Samples of File Names

Regular Report	-	1234567_19970823cy05.PDF
Regular Report (file 1 of 3)	-	1234567a19970823cy05.PDF
Regular Report (file 2 of 3)	-	1234567b19970823cy05.PDF
Regular Report (file 3 of 3)	-	1234567c19970823cy05.PDF
Underwater Inspection (if part of the cycle inspection)	-	1234567_19970823cy05_uw.PDF
Underwater Inspection (if <u>not</u> part of the cycle inspection)	-	1234567_19970911xxxx_uw.PDF
Interim Inspection	-	1234567_19970823xxxx_int.PDF
Mech/Elec Inspection	-	1234567_19970823cy05_me.PDF
Priority Repair Letter	-	1234567_19970823cy05_pr1_01.pdf

B. Guide Information

1. Guide information on how we PDF a file using the joboptions file from within MS Word.

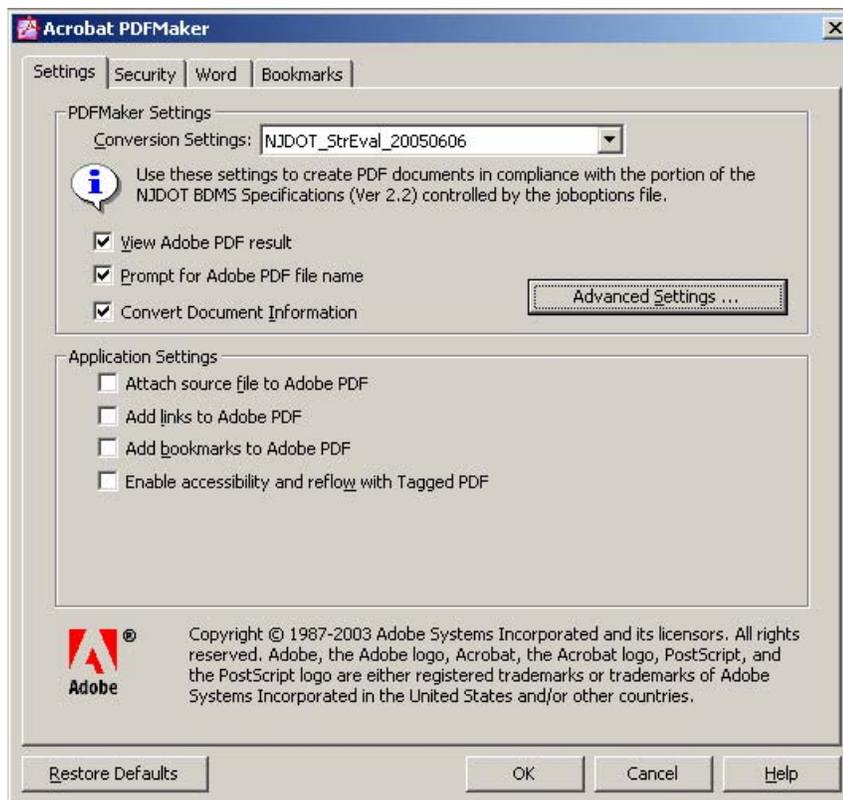
To PDF the MS Word document:

At a workstation with Adobe Acrobat Version 6 loaded on it:

1. Open the Report file in MS Word (file is located in S:\StrEval\BI\.....).
2. Check the settings (**Adobe PDF → Change Conversion Settings**) to ensure the correct settings will be applied.
3. In the Acrobat PDFMaker window, check the Conversion Settings box to ensure it shows: **NJDOT_StrEval_20050606**

Make sure the first 3 boxes have check marks in them. Then hit **OK**.

Note: All check boxes on the screens for the other 3 tabs (Security, Word, and Bookmarks) should be unchecked.



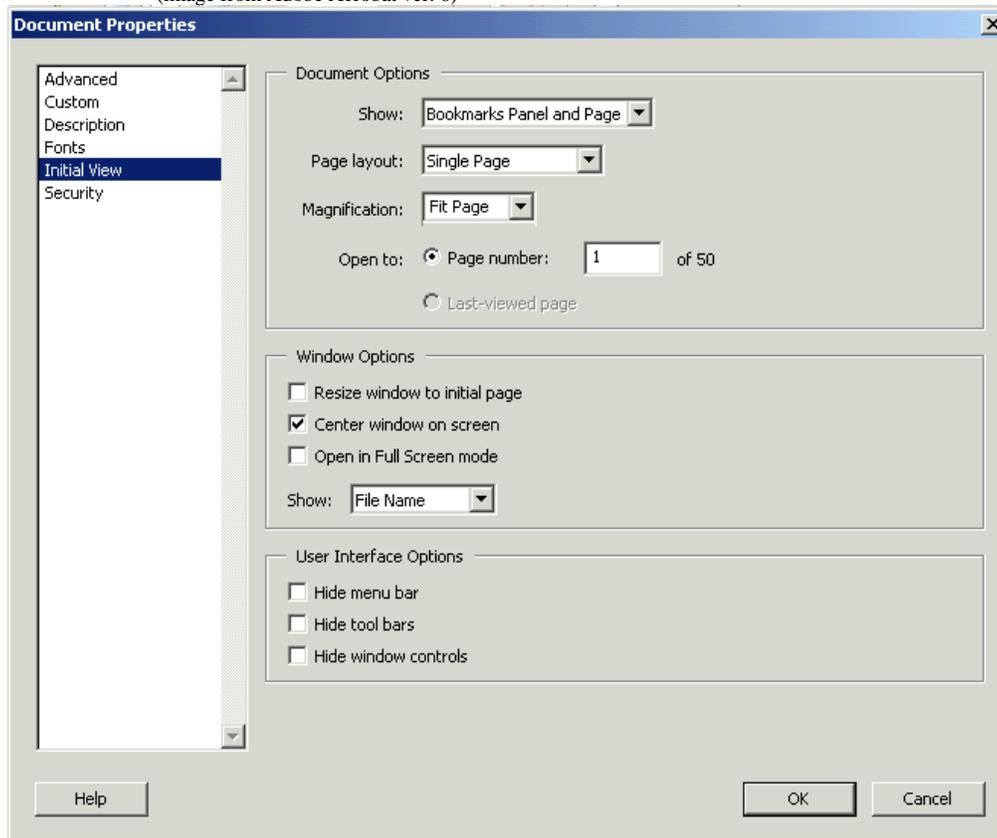
4. Convert the MS Word file to Adobe PDF by hitting the “**Convert to Adobe PDF**” button.
-
2. **Guide information on how we set the Initial View settings when preparing PDF files in-house.**

To Set the Initial View settings:

With the PDF file open in Adobe Acrobat.

1. Select **File → Document Properties**
2. Highlight **Initial View**
3. Set the settings as shown in the following screen, then hit OK.
4. **Close** the document (when it asks you to save, say **yes**).

(image from Adobe Acrobat ver. 6)



VI. Requirements for the Preparation and Printing of Electronic Documents

A. General

The following requirements apply, as appropriate, to any project in which ANY of the following sections apply:

1. The **consultant shall include in the draft proposal** a section describing the general process to be followed from initiation of the inspection effort to final submission of all deliverables. Included in this description is to be the following:
 - a. The type of digital camera intended to be used and the general manner in which it will be used (resolution, file types, etc.).
 - b. The method to be used to provide panoramic views.
 - c. The method of collection and annotation of the field notes.
 - d. The file format of any graphical or CAD files.
 - e. The method and software to be used in preparing the reports.
 - f. How the report will be printed (type of printer, resolution, etc.).
 - g. What electronic deliverables are to be provided: including file formats, how prepared (where appropriate), and method of delivery.

2. This section will be modified as agreed and resubmitted with the final proposal.

B. Color Laser & Inkjet Printers

Color Laser Printers have greatly improved over the last several years. Although there are only a few that deliver printed image quality close enough to an inkjet to warrant consideration, the stability of laser ink is much better than inkjets. Therefore, color laser printer submissions will be acceptable IF:

1. The image is actually of photo quality.
2. The image is printed on matte paper specifically designed for color images. In other words, general purpose laser paper IS NOT ACCEPTABLE for color images.

Inkjet Printers are still acceptable, however the printer must be less than two years old. As archival quality printing is a rapidly evolving area, the printer inks must represent the current state of the art in producing archival quality prints.

The following requirements apply, as appropriate, to any project in which Inkjet Printers are used:

1. Paper to be used in inkjet printers, for the printing of pages containing photographs or multi-color maps for format or final reports, is to be optimized for printing photographic images. The paper is to be of archival quality, as stated by the manufacturer (note: Matte finish Heavyweight paper is often recommended as the best paper for this purpose by manufacturers).
2. **Printed sheets** of the photographic images are to be of photo quality, and are to be sufficient to be used in a report that will have an infinite retention requirement. Ensure that the ink is properly bonded to the paper (will not wear off or stick to the prior page). The **ink is to be of archival quality**, as stated by the manufacturer.

Please note that color Xerox copies of photo pages will not be accepted for any submission.

C. Digital Cameras

NOTES: The following guidelines are provided for digital cameras:

1. The actual (not interpolated) resolution of all images shall be 1280x960 minimum or greater.
(Note: The more information you can provide to compression algorithms such as JPEG, the better they do. That's why high-resolution images from scans and mega-pixel cameras look better, even on highly compressed JPEG images).
2. The images shall not be over compressed (JPEG compressive effects should not be visible).
(FYI – Our digital photos typically exceed 200K per photo).
3. Make sure the digital camera is capable of capturing “high quality” images (with accurate coloration and sufficient light, detail, and appropriate framing) in all situations typically encountered during a bridge inspection.

The following requirements apply, as appropriate, to any project in which digital photography is used:

1. When digital cameras are used, any **photo files** submitted to Structural Evaluation are to meet the following minimums:
 - a. Must be in JPEG (JFIF) format.
 - b. Must be of high quality
(Note: The definition of high quality is somewhat subjective and so the general guideline is that the images fully provide what has been typically required of conventional photographs.)
2. **Printed sheets** of the photographic images are to be of photo quality, and are to be sufficient to be used in a report that will have an infinite retention requirement (as the State is required to maintain these documents in good condition for the for the life of the bridge).

Please note that color Xerox copies of photo pages will not be accepted for any submission.

3. For all State, County and Agency contracts where photographs are to be included in the draft proposal, the consultant may be asked to submit a CD containing a copy of one digital image for each bridge, in JPEG format.

If this is requested, this image is to be the best elevation view of the bridge, and is to be in landscape orientation. These files should be titled as follows: xxxxxxxx_yyyymmdd_01.jpg (where xxxxxxxx is the seven-digit structure number, yyyymmdd is the date, and 01 is any number you wish). For example: "0700H04_20041219_01.jpg" would be proper.

VII. Delivery of the Electronic Version of Supporting & Source Report Documents

All electronic files are to be delivered to the NJDOT (or the structure owner - if directed by us) upon completion of the project. This includes all word processing and CAD files as well as any other electronic files utilized. These files are to be placed together on a properly labeled CD as described in [Section II.B](#). Two copies of this CD are to be provided unless otherwise instructed.

The word processing and CAD files for each bridge are to be placed in a subdirectory. The subdirectory name will be the structure number, without a dash.

All CAD files are to be delivered as Microstation “.DGN” files unless AutoCAD “.DXF” files are EXPLICITLY agreed to during scoping. Visio files are to be delivered in “.VSD” format.

Any drawing (CAD or Visio) and MS Word files, created as part of the Report preparation, are to be stored with the following naming conventions:

1234567_YYYYMMDDcy02_01

Where 1234567 - is the structure number

YYYYMMDD - is the date of the first day of inspection in year, month, day format (we prefer this be the same date as in the PDF filename)

02 - is the inspection cycle number

01 - is the numbering scheme for the drawing (typically 01, 02, 03)

(we will allow specific descriptions instead of this last number)

VIII. Delivery of Databases

The submission of a database, and any linked or supporting files, requires a clear communication of contents and intent, in order to ensure that sufficient information is provided to enable us to reliably utilize what has been submitted. To this end we now require the following:

The database CD is to be labeled in compliance with [Section II. B](#) of this document.

The letter from the Consultant, when submitting a database, shall clearly state the following:

1. How many CDs are in the package, and specifically what is on each one. For each database or other data file (an Excel file for example), a clear statement of what the file or database contains AND what to do with it (Please be VERY clear with this – assume the reader has no familiarity with the project at all).
2. The intent of the submission.
3. Whether any of the files are unusual or require special handling.
4. Whether it is a preliminary or final submission.

For example:

- This submission consists of 2 CDs dated 3/30/04.

CD 1 of 2 contains the following: 1 Excel spreadsheet, 1 database file, 184 JPEG files & 42 TIFF files.

CD 2 of 2 contains the following: 322 JPEG files & 79 TIFF files.

- The excel spreadsheet contains a complete inventory listing of all sign structures in Camden and Burlington Counties. We used this spreadsheet to track our progress in identifying sign structure numbers. Please note that 2 sign structures are listed that have been taken out of service.

- *The database also contains entries for all sign structures in Camden and Burlington Counties (including the 2 mentioned above) except for the 29 for which previous complete inspection information was submitted as part of the original inspection effort. This database contains inventory records for 181 sign structures and complete inspections of 104 sign structures.*

- *This is a final submission. This CD represents a complete record for sign structures in Camden and Burlington Counties, with the above noted exclusion of the 29 sign structures for which complete inspection data was previously provided.*

A copy of this information should be placed in a MS Word file and included on the first CD.

The above information will always be required for any type of database submission in order to prevent errors or confusion as to how to utilize what has been provided.

Additional information is to be provided as required by the NJDOT Project Manager.

Appendix A – SDMS Consultant ID Codes

The following is copied from the 2003 Recording and Coding Guide for Structure Inventory and Appraisal of New Jersey Bridges.

Note: The source of this list is Pontis. Therefore, this list will not be updated here. If you need a code not listed here, go to the Pontis manual.

ITEM CM - CONSULTANT

DIGITS 3

Use the three-digit code, representing the consultant, involved in the inspection of the structure. For consultant codes not listed below, contact your Project Manager.

<u>Consultant Name</u>	<u>Consultant Code</u>	<u>Consultant Decode</u>
Richard Alaimo Associates	A09	Alaimo Assoc.
Andrews & Clark, Inc.	A17	Andrews & Clark
Arora and Associates	A22	Arora & Assoc.
A. I. & Associates, PC	A41	A. I. Assoc.
AmerCom Corporation	A43	Amercom Corp.
A-Tech Engineering, Inc.	A46	A-Tech
Abbingtion Associates, Inc.	A47	Abbingtion
Agency In-House Staff	A97	Agency In-House
Michael Baker, Jr., Inc.	B01	Baker Michael
Louis Berger Group	B14	Berger L.
N. H. Bettigole, Inc.	B18	Bettigole
Bettigole, Andrews & Clark	B18	Bettigole
Blauvelt Engineers	B21	Blauvelt Engrs.
Boswell Engineering Company	B29	Boswell Engr.
Buchart-Horn, Inc.	B34	Buchart-Horn
Burns & Roe Ind. Serv. Corp.	B36	Burns & Roe
Byrd, Tallamy, MacDonald & Lewis	B38	Byrd, Tallamy
Bergmann Associates	B41	Bergmann & Assoc.
B & H Engineering	B57	B & H Engr.
Joseph B. Callaghan, Inc.	C02	Callaghan, J.
Leroy Callender, PC	C03	Callender, L.
Cherry Weber & Associates	C14	Cherry Weber
Chilton Engineering, Inc.	C16	Chilton Engr.
Churchill Consulting Engineers	C17	Churchill Assoc.
Clarke and Rapuano, Inc.	C21	Clarke Rapuano
Clough Harbour & Associates, LLP	C24	Clough, Harbour
W. J. Castle, PE & Associates	C63	Castle Assoc.

<u>Consultant Name</u>	<u>Consultant Code</u>	<u>Consultant Decode</u>
CTE Engineers	C66	CTE Engrs.
Collins Engineers	C67	Collins Engrs.
C. V. Associates, NY	C68	C. V. Assoc.
County In-House Staff	C98	County In-House
Delta Consulting Engineers	D21	Delta Engrs.
Ebasco Services, Inc.	E03	Ebasco Inc.
Edwards & Kelcey, Inc.	E07	E & K Inc.
Envirodyne Engineers, Inc.	E12	Envirodyne
Erdman Anthony & Associates	E15	Erdman Anthony
(EMJ) McFarland Johnson, Inc.	E19	McFarland
Fong & Associates	F16	Fong & Assoc
Gannett Fleming, Inc.	G03	Gannett Fleming
Gibson Associates, PC	G11	Gibson Assoc.
Goodkind & o'Dea, Inc.	G15	G & O, Inc.
Greenman Pederson, Inc.	G19	Greenman-Ped
Garg Consulting Services, Inc.	G33	Garg Inc.
Hardesty & Hanover	H06	H & H
HNTB, Inc.	H23	HNTB
DMJM + Harris	H41	F. Harris
HAKS Engineers	H43	HAKS Engrs.
Hatch, Mott McDonald	H44	Hatch McDonald
Iffland Kavanagh Waterbury	I02	Iffland Kav
Integrated Engineering	I12	Integrated
Jenny Engineering Corporation	J05	Jenny Engr
Sidney M. Johnson & Associates	J08	Johnson Sid.
John J. Kassner & Company, Inc.	K03	Kassner Inc
L. Robert Kimball & Associates	K09	Kimball Assoc
Kupper Associates	K15	Kupper Assoc
K. S. Engineers, PC	K24	K. S. Engrs.
Frank H. Lehr, Associates	L07	Lehr Assoc.
Lichtenstein Consulting Engineers	L10	Lichtenstein
T. Y. Lin International	L12	Lin, T.Y.
Lord Anderson Worrell & Barnett	L17	Lord Anderson
Maguire Group, Inc.	M04	Maguire
Metcalf & Eddy, Inc.	M19	Metcalf Eddy
Modjeski & Masters	M26	Modjeski Master
Maitra Associates, Inc.	M36	Maitra Assoc
Massand Engineering	M46	Massand Engg.
Mueser Rutledge Consulting Engrs.	M59	Mueser
MEGA Engineering, Inc.	M61	Mega Eng
Omega Consultants, Inc.	O02	Omega Inc.
Parsons Brinckerhoff-FG, Inc.	P04	PBFG Inc.
Parson Brinckerhoff Quade Dougl.	P05	PBQD Inc.
<u>Consultant Name</u>	<u>Consultant Code</u>	<u>Consultant Decode</u>

Parsons Transportation Group	P06	Parsons Trans.
O'Dea, Pavlo & Associates, Inc.	P08	Pavlo Engr
Pennoni Associates, Inc.	P13	Pennoni Assoc.
Pickering, Corts & Summerson, Inc.	P14	Pickering Corts
Post, Buckley, Schuh & Jernigan	P19	Post Buckley
PRC Harris	P20	P R C Harris
Purcell Associates	P24	Purcell Assoc
Parsons Brinckerhoff Cons. Serv.	P28	PB-CS Inc.
Clyde Porter, Jr., Consulting Engrs.	P38	Porter
Polytran Engineering Associates	P44	Polytran Engg.
QBS International	Q05	QBS Int.
RBA Group	R07	RBA Group
Rensselaer Engineers, Inc.	R11	Rensselaer Engr
Reutter Associates	R13	Reutter Assoc
Remington & Vernick Engineers	R33	Remington
Raytheon Infrastructure, Inc.	R36	Raytheon
Safe International, Inc.	S02	Safe Inter
Schoor DePalma	S12	Schoor DePalma
STV Incorporated	S13	STV
Shah Associates	S18	Shah Assoc
Sheladia Associates, Inc.	S20	Sheladia Assoc
Site-Blauvelt Engineers	S26	Site-Blauvelt
Wilbur Smith & Associates	S28	Smith, Wilbur
Steinman Boynton Gronquist & Bird	S34	Steinman Boynto
Stone & Webster Engineering Corp.	S37	Stone & Webster
Storch Engineers	S39	Storch Engrs.
Sverdrup & Parcel Consultants, Inc.	S41	Sverdrup
The Sear-Brown Group	S65	Sear-Brown
Chas. H. Sells	S67	Chas Sells
State In-House Forces	S99	State In-House
T & M Associates	T01	T&M Assoc
Taylor, Wiseman & Taylor	T03	TWT
TAMS Consultants, Inc.	T17	TAMS
Urban Engineers, Inc.	U01	Urban Engrs.
Urbitran Associates, Inc.	U04	Urbitran
URS Company, Inc.	U05	URS Co.
Van Note-Harvey Associates	V03	Van Note-Harv
VEP Associates, Inc.	V06	VEP Assoc.
Vollmer Associates, Inc.	V08	Vollmer Assoc.
Weidlinger Associates	W07	Weidlinger
I-T'an Yu Associates	Y01	I-T'An Yu

Appendix B – How to Use TOC Item Codes

The use of TOC codes revolves around the concept of a **Document**. This concept can sometimes be complicated as sometimes a stand-alone document may be included within another Document. The goal of TOC use is to properly describe what documents are contained within a particular Document.

For example, if you submit a regular Inspection in PDF format (TOC = 100) you might also have included an Underwater Inspection Report (TOC = 111) and a copy of a Priority Repair Letter (TOC = 171). For this example, 3 index file entries would be required. If an Electrical/Mechanical report (TOC = 125) is also included, then a 4th index entry would be required.

It is important to get these relationships correct as our future ability to recall these files will rely upon the accuracy of the index file you create. We expect that there will be many questions in the beginning. Please, if you are not sure, Don't Guess!

As we bump into unusual examples, we will add them to this area of this document for everyone's information.

As report scanning is now performed almost exclusively by specialty vendors, we will not offer examples here of how to handle scanned documents. However, Document no. 9 in our example index file in [Section II.C.2.c](#) does have an example of how TOCs work for scanned files.

Regular Bridge Inspection Reports

The **Bridge Inspection Report** is the only type of report that might have multiple type codes. All Other Types of Reports are scanned as one type code.

The Regular Report has 2 options for coding – either using TOC = 100 or TOCs = 101 thru 105. Typically, a PDF file would just be given the TOC code of 100 as the entire report is in one file. On the other hand, scanned reports consist of one or more files per report section. These files would be given TOC codes of 101 thru 105, corresponding to the section referenced.

Please note that some types of reports such as Underwater, Fracture Critical, Electrical/Mechanical inspections, and Load Capacity Rating reports are sometimes included in the bridge inspection report as an Appendix. Anything bound in with the Bridge Inspection Report is to be indexed as a part of the Document, using TOCs as necessary to describe both the master document and all sub-documents.

Any stand-alone report, which was issued as a separate report, is to be assigned the correct Type Code. Sometimes this can be confusing when a very large Bridge Inspection Report is bound in multiple sections. When in doubt, ask for clarification. Please be sure to use the appropriate type code.

TOC Codes for Structure Related Inspection Documents

Report Code	TOC Code	Description
		Regular Bridge Inspection (BI) Report
	100	Regular Bridge Inspection Report – Entire Report in one file (usually a PDF file)
		OR Sections of Regular Bridge Inspection Report
	101	Regular Bridge Inspection Report – Summary (Maps, Structural Data, Controlling Ratings, Conclusions and Recommendations, Historical Info., Bridge Description)
	102	Appendix 1. - Structural Inventory & Appraisal Sheets, Pontis Data, Seismic Data
	103	Appendix 2. – Computations (and Included Drawings)
	104	Appendix 3. - Drawings, Soundings and Photographs
	105	Appendix 4. - Field Notes (and Included Drawings)
		Other Appendices or Stand-Alone Reports
	111	Underwater Inspection Report, Drawings & Photographs
	112	Fathometer Survey (FS)
	114	Scour Report Summary – When Included as an Appendix to BI Report
	116	Scour Critical Report – Stage I (Screening)
	117	Scour Critical Report – Stage II (In-Depth)
	120	Interim Inspection
	121	Interim Inspection – when copy included as BI Report Appendix
	122	Special Inspection (Various Types)
	123	Special Inspection (Emergency Inspection)
	125	Electrical/Mechanical Report, Drawings and Photographs
	126	Fracture Critical/Pin-Hanger Report, Drawings and Photos

	128		Load Capacity Rating Report, Drawings and Photographs
	141		Deck Condition Survey Report, Drawings & Photographs
	143		Geotechnical Report
	145		Historic (Corridor or Bridge) Engineering Survey
	146		Corridor or Bridge Preservation Plan
	148		FHWA Movable Bridge Survey
	151		Sign Structure - Structural Evaluation Survey Report
	155		High Mast Light Pole – Structural Eval. Intersection Survey Report
	156		High Mast Light Pole – Index entry for individual pole.
	158		Unusual Report NOT Matching any other category listed herein (for example - a paint report)
	159		Report Segment or Minor Report Extract
			Other Inspection Related Documents
	170		Priority (and Emergency) Repair Letters – State Maintained Structure
	171		Priority (and Emergency) Repair Letters – State – <u>copy</u> included in BI report
	173		Priority and Emergency Memos and Priority Action Memos sent to Maintenance (can include a copy of the Priority Letter) also includes Underclearance & other memos to Traffic Eng. [code is for InHouse use]
	175		County/Agency Priority Letters
	176		County/Agency Priority Letters – <u>copy</u> included in BI report
	177		Other Letters to/from County/Agency
	179		Other Misc. Correspondence included with report <u>as an appendix</u>
	181		Memos to File (Referencing an Inspection)
	185		

Note: For a list of TOCs associated with non-inspection related documents, contact us as described in page 2 of this document.

Appendix C – Type Codes vs. DocIDCode Cross Reference Table

(This Appendix is only for use in re-indexing older CDs.)

Regular Bridge Inspection Report			
SDMS Codes		Legacy BDMS Descriptions	
Report Code	TOC Code	OLD BDMS Code	Section of Regular Bridge Inspection Report
R	100	51	Regular Bridge Inspection Report – Entire Report in one file (usually a PDF file)
R	101	01	Regular Bridge Inspection Report - Summary (Maps, Structural Data, Controlling Ratings, Conclusions and Recommendations, Historical Info., Bridge Description)
R	102	02	Appendix 1. - Structural Inventory & Appraisal Sheets, Pontis Data, Seismic Data
R	103	03	Appendix 2. – Computations (and Included Drawings)
R	104	04	Appendix 3. - Drawings, Soundings and Photographs
R	105	05	Appendix 4. - Field Notes (and Included Drawings)
			Additional Appendices as Appropriate
R	126	06	Appendix ? - Fracture Critical/Pin-Hanger Report, Drawings and Photos
R	125	07	Appendix ? - Electrical/Mechanical Report, Drawings and Photographs
R	121	08	Appendix ? – Interim Inspection – When Included as an Appendix to BI Report
R	114	09	Appendix ? – Scour Report Summary – When Included as an Appendix to BI Report
R	112	10	Appendix ? - Fathometer Survey (FS)
R	171	11	Appendix ? - Correspondence included with report as an <u>appendix</u> (Priority Repair Letters – State Owned Bridge)
R	176	11	Appendix ? - Correspondence included with report as an <u>appendix</u> (Priority Repair Letters – County or Other Owner)
R	179	11	Appendix ? - Correspondence included with report as an <u>appendix</u> (Other Correspondence)
R	111	12	Appendix ?. - Underwater Inspection Report, Drawings & Photographs
R	158	13	Appendix ? - Unusual Appendices NOT Matching ANY of the Above (for example – a geotechnical report, etc.)

Other Types of Reports			
SDMS Codes		Legacy BDMS Descriptions	
Report Code	TOC Code	OLD BDMS Code	Type of Report
C	116	16	Scour Critical Report – Stage 1 (Screening)
C	117	16	Scour Critical Report – Stage 2 (In Depth)
I	120	23	Interim Inspection
E or R	123	24	Special Inspection (Emergency Inspection)
R	122	24	Special Inspection (Various Types)
U or R	111	32	Underwater Inspection Report, Drawings and Photographs
F or R	126	36	Fracture Critical/Pin-Hanger Report, Drawings & Photos
R	125	37	Electrical/Mechanical Report, Drawings and Photographs
L	128	39	Load Capacity Rating Report, Drawings and Photographs
X	141	41	Deck Condition Survey Report, Drawings & Photographs
R or X	158	43	Unusual Report NOT Matching ANY other category listed herein (for example – an unusual inspection report, etc.)
S	151	44	Sign Structure – Structural Evaluation Survey Report
H	155	45	High Mast Light Pole – Structural Eval. Survey Report
H	156	45	High Mast Light Pole – Structural Eval. Survey Report (additional TOC entries for EACH structure number)
X	145	46	Historic (Corridor or Bridge) Engineering Survey
X	146	47	Corridor or Bridge Preservation Plan
		Other Types of Documents	
R or I	170	20	State Priority Letters – from Consultant
R or I	173	20	Priority Memo to Maintenance
R or I	175	22	County Priority Letters – from Consultant
X	148	81	FHWA Movable Bridge Survey
		Non-Inspection Documents	
	215	28	Proposal Photo (just the photo) - JPEG Format
	217	29	Proposal Photo Page - JPEG Format
	218	59	Proposal Photo Page - Adobe Acrobat (.PDF) Format
	224	25	Plans
	n/a	21	Obsolete (none of these will be transferred)
	Not allowed	99	Unknown (OPEN DOC and index properly)

Appendix D – FORMS -- PDF File Quality Statement & Review Checklist

The following 2 pages contain images of these sheets.

PDF CD Quality Statement & Review Checklist

This PDF CD Quality Statement and Adobe PDF CD Review Checklist is to be completed by the Consultant and submitted with any sample or final PDF files submitted to NJDOT Structural Evaluation.

Firm Name: _____ Firm who prepared the CD: _____

State Agreement Number: _____ CD is a **Sample** or **Final** (circle one)

Group Number: _____ CD is from **1st** or **2nd** Round of Inspections (circle one)

Date of Index File on CD: _____

Project Name: _____

Number ON-System: _____ BR-NBIS(_____) State Job Number _____

Number OFF-System: _____ BRZ-NBIS(_____) State Job Number _____

We used SDMS Contractors Specifications Version _____, Dated _____ 200__ in the preparation of this CD. I certify that the submitted CDs meet the current SDMS standards.

Project Manager Signature: _____ Date: _____

The following helps us to understand your process for creating reports and PDF files.

Source Images

Color Photo File Format: _____ **JPEG** _____ Typical Min. Resolution _____ x _____ pixels

Bitonal (B&W) Image File Format: _____ Typical Min. Resolution _____ Pixels Per Inch(PPI)

Other Image File Format: _____ Typical Min. Resolution _____ x _____ pixels or PPI

Word Processing Program and Version Used: _____

Program(s) and Version used to Create PDF files: _____

Please describe - How did you create the PDF files:

Are you also submitting Working Files (must be on separate CD): **Yes** or **No** (circle one)

If Yes, does format of the CD and the file names comply with Section VII (page 50) **Yes** or **No** (circle one)

Printer used for Printing Final Reports:

Type (circle one): **laser** or **inkjet** Brand and Model: _____

Paper for Color Pages - Brand _____, Type _____ and Weight: _____ lb.

Misc. Comments: _____

Attach a copy of the Adobe PDF CD Review Checklist

Adobe PDF CD Review Checklist

(All references are to the SDMS Contractors Specifications - Version 3.1)

Date of CD

Submission: _____

Agreement Number: _____

Group Number: _____

File Generation & Makeup

- Software is configured to produce a Print Quality document according to OUR standards (Sec.V.A.2.).
When creating a PDF document, the following two Adobe PDF "Advanced Settings" were enabled:
 - Save Adobe PDF settings inside PDF file (Sec. V.A.2.).
 - Save Portable Job Ticket inside PDF file (Sec. V.A.2.).
- Source photograph quality complies with Section VI.C.
- Images have maintained high quality & clarity throughout the report creation process (Sec. V.A.2.).
- All scanned pages were scanned in compliance with Section III.
- All fonts used in the document are standard Windows fonts (Times New Roman, Arial, Courier, etc.). (Sec. V.A.2.).
- All fonts are embedded in the document. (Sec. V.A.2.).
- PDF Report sizes are not so large as to make it difficult to work with the report (Sec. V.A.4.b.).
- Stand-alone reports are in separate PDF files (Sec. V.A.4.a.).
- A sheet is included in the Appendix of main report when stand-alone reports are in separate PDF files (see following Sample page, and Sec. V.A.4.a.).
 - This sheet is linked to the other report.
 - The sheet is titled as required by the specs.

Bookmarks, Thumbnails & Links

- The report must contain the correct bookmarks - as specified in Section V.A.3.
- The initial display configuration has bookmarks displayed on the left and the first page of the report displayed on the right (Sec. V.A.3.d).
- The report page always displays so 100% of the page is displayed (Sec. V.A.3.d).
- All links are clearly visible (distinguishable from the surrounding text - for example, by using blue text) (Sec. V.A.3.).
- All hyperlinks are **local** links (if between files, it assumes the file is in the same subdirectory and therefore does not contain any path information) (Sec. V.A.4.a.).
The following links (as a minimum) are in each report:
 - A link from each reference to a photograph to the actual photo (Sec. V.A.3.b.).
 - Other links as appropriate to the type of report (Sec. V.A.3.c.).
- Thumbnails are enabled (Sec. V.A.3.e.).

SDMSIndex.xls and SDMSindex.xml files

- SDMSindex.xls file created according to Section II.C.
- SDMSindex.xml file included on CD is properly named per Section II.C.
- Both files are located in the Root directory (Sec. II.C.2.d.)

Makeup of the CD-ROM

- Makeup of the CD-ROM complies with Section V.A.10. & Section II.
 - EITHER All Files are in the correct subdirectories (Sec. II.B.).
 - OR All Files are in the root directory (Sec. II.B.).
 - Disk and disk cases are Labeled correctly (Sec. V.A.10. & Sec. II.).
 - All file names are according to our specifications (Sec. V.A.10.).
 - Dates included in the file name of supporting reports are the same date as the associated Regular Bridge Inspection Report (Sec. II.C.2.c.8.)
 - Working files are NOT included on the CD (Sec. V.A. 7 & 8.).

SAMPLE: A sample of how to include a reference to another report in the main report.

COUNTY OF ESSEX

UNDERWATER BRIDGE EVALUATION SURVEY REPORT

OF THE

Structure No. 0700-H03
Bridge Street over Passaic River
City of Newark
Essex County, New Jersey
Cycle No. 8
July 2002

INSPECTED AND REPORT PREPARED BY:
Pacific Engineering
102 Carter Road, Suite 11
Carter, NJ 07405

This report has been submitted as a separate PDF file.
PDF File Name: [0700H03_20020711cy08_uw.pdf](#)

PREPARED FOR:
PARSONS TRANSPORTATION GROUP
200 Cottontail Lane South
Somerset, New Jersey 08873

Notes:

1. The above is a sample of a good structure for a single sheet to be included in the Appendix of the master Bridge Inspection Report when the subject report will be submitted under separate cover. The PDF File Name shown above is to be linked to the subject report title page so the link can be followed directly to the report.
2. The PDF files of all supporting reports for a particular structure are to reside in the same subdirectory (in this case 0700H03) as the PDF file for the master Bridge Inspection Report.