

Chapter 8

Summary of Drainage Structures and Optional Materials Tabulation

8.1	Summary of Drainage Structures	8-1
8.1.1	Sheet Setup and Data	8-1
8.2	Optional Materials Tabulation.....	8-3

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Chapter 8

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8.1 Summary of Drainage Structures

The summary of drainage structures sheet shows the location, size, length, number and type of drainage structures used in a project. The sheet format is available in the FDOT CADD Software. Specific levels and fonts are in the FDOT **CADD Manual**.

For an illustration of the summary of drainage structures sheet, see **Exhibit SDS-1a**.

8.1.1 Sheet Setup and Data

Prepare and include a summary of drainage structures in the plans. List the structures in numerical order of structure number. Identify the location of each structure by station along the centerline of construction (**Exhibit SDS-1a**).

Tabulate storm and cross drains in the summary of drainage structures by structure number, providing the station, size, length and incidental quantities appropriate for the material detailed in the plans. When the number of columns exceeds one page, the additional sheet is to be numbered using a suffix (i.e. 3 and 3A, 4 and 4a, etc.).

Prepare and include a tabulation form for optional culvert material (see **Section 8.2**).

Modification for Non-Conventional Projects:

Delete the last sentence of the above paragraph and replace with the following:

See **Chapter 6** of the **Drainage Manual** for Optional Material requirements. Designate installed material on the Optional Materials Sheet, Summary of Drainage Structures or on the as-built plan view.

Information for the drainage elements in the columns is obtained from drainage structure sheets and plan-profile sheets. The order in which the elements are listed should be as follows:

1. Pipe Sizes for
 - a. Storm and Cross Drains
 - b. Gutter Drain
2. Curb Inlets
3. Manholes
4. Junction Boxes
5. Ditch Bottom Inlets
6. Gutter Inlets
7. Flared End Sections
8. Mitered End Sections
9. Performance Turf, Sod
10. Class of Concrete
11. Reinforcing Steel
12. Riprap

Use the "Description" column to specify the type of structure, the outgoing pipe and the end treatment of that pipe, if applicable.

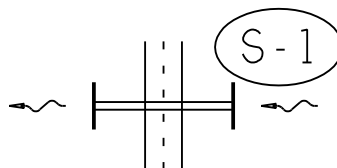
The remarks column contains special notes pertaining to the structure. The "Final Quantity" line is for construction to use and must be left blank.

On smaller projects the summary of quantities and the summary of drainage structures may be combined on one sheet.

It is recommended that structure numbers be established using the convention shown in the exhibits and described as follows:

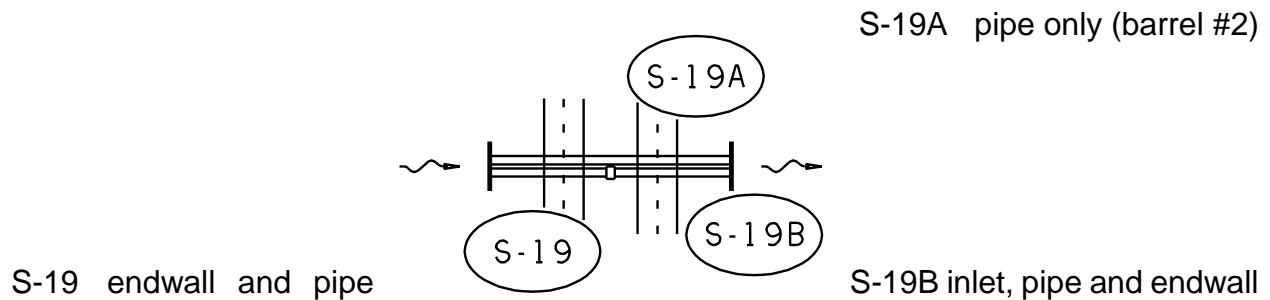
1. For simple cross drains, one structure number is appropriate for the inlet and outlet treatments and the pipe.

Example #1 (cross drain w/o median inlet)



- For complex cross drains, it is suggested that the first and all intermediate structure numbers identify the hydraulically upper end treatment and pipe. The last structure number should identify the hydraulically upper end treatment, pipe and hydraulically lower end treatment.

Example #2 (Double pipe cross drain and median inlet)



8.2 Optional Materials Tabulation

All culverts, with the exception of pipe extensions and end section replacements, require an Optional Pipe Materials Analysis. Prepare and include an optional materials tabulation in the plans (see **Exhibits SDS-2a** and **SDS-3a**). The sheet format is available in the FDOT CADD Software.

The optional pipe material tabulation should include size, thickness or class, corrugation requirements, if necessary, and protective coating, if any. Additional information such as structure number, design service life (DSL), length, and flow line information may be included.

Modification for Non-Conventional Projects:

Delete **PPM 8.2** and see **Chapter 6** of the **Drainage Manual** for Optional Material requirements. Designate installed material on the Optional Materials Sheet, Summary of Drainage Structures, or on the as-built plan view.

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