ANNUAL REINFORCED CONCRETE PIPE PLANT INSPECTION CHECKLIST

Plant Name _____

Plant Location _____

Date of Inspection _____

PLANT RECORDS

	Yes	No	
1.	___	___	Are certifications on file for cement, aggregates, and reinforcement steel? Remarks_____ _____
2.	___	___	Do shipping tickets contain the proper information? (See Section 905-Pipe) Remarks _____
3.	___	___	Are mix designs on file? Remarks _____
4.	___	___	Are batch tickets consistent with mix design?_____ _____
5.	___	___	Are lot sizes correct? See below Remarks _____ _____

MD STANDARD 905.02.01 Responsibilities of the Concrete Pipe Producer. A pipe lot is defined as a maximum 14 day production run of concrete pipe, all being of like size, material, strength designation, and manufacturing process. The 14 days need not be consecutive, as long as they occur within a one month period and the process is not altered in any way between production days.

ASTM C-497

PIPE SIZE	CLASS	MINIMUM FREQUENCY
12’ - 15”	CLASS V and BELOW	1/1000 PIECES
18” - 36”	CLASS IV and BELOW	1/800 PIECES
18”- 36”	CLASS V	1/400 PIECES
42”- 60”	CLASS III and BELOW	1/400 PIECES
42”- 60”	CLASS IV & V	1/200 pieces
66” AND LARGER	ALL CLASSES	As required by project specs

5. ___ ___ Have gaskets been approved? See below

MD STANDARD 303.03.04 Joints. Reinforced Concrete Pipe. Seal joints with rubber type gaskets (circular pipe) or resilient type material (elliptical pipe) meeting **M 198**. AASHTO M 198 Standard Specification for Joints for Concrete Pipe, Manholes, and Precast Box Section Using Preformed Flexible Sealants (10-psi. in plant hydrostatic test)

Remarks: OR **ASTM C443**_____

6. ___ ___ Is the Quality Control Plan being followed? Remarks _____

PHYSICAL REQUIREMENTS

External Load Crushing Strength Test by the Three-Edge Bearing Method

Yes No

1. ___ ___ Is the testing apparatus in accordance with **AASHTO T280**?
Remarks_____

2. Date testing machine was calibrated _____

Yes No

3. ___ ___ Is crack *and* ultimate load tested properly? Remarks_____
_____

4. ___ ___ If any pipe failed, were the appropriate retests performed?

5. ___ ___ Are Records kept?

6. Is the following information clearly marked on each section of pipe?

Yes No

___ ___ The pipe class
905.01 CERTIFICATION. The manufacture shall furnish certification for all pipe as specified in TC-1.03

Reinforced Concrete Pipe	M 170, Class 4 and 5	Load bearing option

___ ___ Date of Manufacture is clearly marked?

___ ___ Name or Trademark of the manufacturer and identification of plant?
Remarks _____

6. ___ ___ Are the results of all tests recorded by the producer's technician?

ABSORPTION TEST

Yes No

1. ___ ___ Is the laboratory adequately equipped to perform the test?
Remarks_____

2. ___ ___ Do test specimens meet the minimum dimensional requirements?

3. ___ ___ Are absorption test results performed in accordance with the requirements
(**AASHTO T280** or. **ASTM C49**
Remarks _____

MD STANDARD 905.02.01 Responsibilities of the Concrete Pipe Producer. Perform at least one absorption test per year on each *size* and *class* of pipe manufactured and shipped to Administration projects. Ensure that the ultimate load test and absorption test is completed on the first lot of the year of that size and class pipe shipped to Administration projects.

4. ___ ___ Do the absorption test results meet the specified requirements?
Remarks _____

5. ___ ___ If a test specimen failed, was the appropriate retest performed?
Remarks _____

COMPRESSIVE STRENGTH CYLINDERS

Yes No

1. ___ ___ Is the laboratory adequately equipped to perform the test?
Remarks _____

2. ___ ___ Are concrete cylinders prepared in accordance with **AASHTO T-23** and **AASHTO M242**?
(Test Methods for Making and Curing Concrete Test Specimens in the Field)
Remarks _____

3. ___ ___ Are cylinders cured in like manner as the pipe? Remarks _____

4. ___ ___ Are cylinders capped in accordance with **AASHTO T-231**?

Yes No

5. ___ ___ Are cylinders tested in accordance with AASHTO T-22

6. ___ ___ If a test specimen failed, was the appropriate retest performed?

7. ___ ___ Date cylinder testing machine was calibrated_____

8. ___ ___ Are results of all tests recorded by the producer's technician? _____

COMPRESSIVE STRENGTH – CORES

Yes No

1. ___ ___ Is the laboratory adequately equipped to perform the test?
Remarks _____

2. ___ ___ Are cores cut and tested in accordance with **AASHTO T-280**? _____

3. ___ ___ Are cores capped in accordance with **AASHTO T-231**? _____
describes procedures for providing plane surfaces on the end surfaces of freshly molded concrete cylinders, hardened cylinders, or drilled concrete cores when the end surfaces do not conform with the planeness and perpendicularity requirements of applicable standards.

4. ___ ___ If a test specimen failed, was the appropriate retest performed? _____

6. ___ ___ Are results of all tests recorded by the producer's technician?
Remarks _____

MANUFACTURE **Use Wire gauge and measuring tape and indicate size of pipe and cage dimension.**

Yes No

1. ___ ___ Does gauge of wire, spacing and minimum cover conform to specification?
Remarks _____

2. ___ ___ Are dimensions, laps and welds of wire cages within tolerance?_____

_____

3. ___ ___ Are curing facilities adequate? _____

4. DIMENSIONS OF PIPE - Do the following components comply with specification requirements?
___ ___ Wall thickness?
___ ___ Variation in laying length?
___ ___ Underrun in length?
___ ___ Internal diameter?
___ ___ Bell and spigot?

Yes No

5. ___ ___ Is reinforcing wire/steel exposed? _____

6. ___ ___ Is the position of the reinforcing wire/steel in the pipe within specification? _____

7. ___ ___ Is the pipe substantially free of fractures, cracks and surface roughness? _____

8. ___ ___ If repairs were necessary, are the repairs sound and properly finished and cured?

Plant Quality Control Representative _____

S.H.A. Verification Representative _____