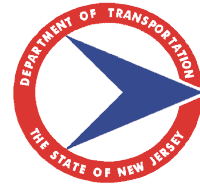


*New Jersey Department of Transportation*  
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## *Baseline Document Change Announcement*

- ANNOUNCEMENT:**            **BDC21S-12**
- DATE:**                        **August 16, 2022**
- SUBJECT:**                    **Polypropylene (PP) and HDPE Pipe**  
                                       - **Revision to the 2019 Standard Specifications for Road and Bridge Construction, Subsection 601.02, Subparts 601.03.01, 601.03.03, 601.03.04, 601.03.06, 601.03.07, Subsection 601.04, and Subpart 909.02.02.**
- REFERENCES:**              **Drainage and Pipe Material Updates**  
                                       - **Revision to “Section 10 – Drainage” of the Roadway Design Manual, 2015**  
                                       **BDC21MR-02 dated August 16, 2022**

Subsection 601.02, Subparts 601.03.01, 601.03.03, 601.03.04, 601.03.06, 601.03.07, Subsection 601.04, and Subpart 909.02.02 of the 2019 Standard Specifications for Road and Bridge Construction. These changes are required to add the PP pipe material and update design guidelines for HDPE pipe, including drainage. The Revisions in this BDC must be read in conjunction with the referenced Roadway Design Manual BDC Announcement, BDC21MR-02.

**The following revisions have been incorporated into the Standard Inputs (SI 2019):**

**601.02 MATERIALS**

THE FOLLOWING MATERIAL IS ADDED:

Polypropylene (PP) Pipe ..... [909.02.02](#)

**601.03.01 Pipe**

**B. Excavating.**

THE FIFTH PARAGRAPH IN PART B IS CHANGED TO:

If the material at the bottom of the trench is rock or other hard material, remove at least 6 inches of the material for RCP or at least 12 inches of the material below the bottom of the pipe for corrugated metal, steel, aluminum alloy pipe, HDPE or polypropylene (PP) pipe. Backfill the undercut with Class C bedding.

**D. Installing Pipe**

THE FIRST PARAGRAPH IN PART D IS CHANGED TO:

Before the installation of HDPE and polypropylene (PP) pipe and as directed by the RE, provide a technical representative from the pipe manufacturer on the work site for the first day of pipe installation to ensure proper installation procedures.

THE LAST PARAGRAPH IN PART D IS CHANGED TO:

When using heavy construction equipment (100 kips axle load) over, or within 10 feet of HDPE and polypropylene (PP) pipe or corrugated aluminum alloy pipe, place the manufacturer recommended temporary compacted cover over the top of the pipe. Ensure that the temporary cover is free from stones larger than 1 inch.

**E. Joining Pipe.**

THE LAST PARAGRAPH IN PART E IS CHANGED TO:

Do not use split couplings to join field-cut HDPE and polypropylene (PP) pipe unless approved by the RE. Ensure that joints are bell and spigot type, or bell and spigot type with a gasket, according to ASTM F 477, to provide a silt-tight seal. Construct pipe connections according to the manufacturer's recommendations for assembly of joint components, lubrications, and making of joints. Ensure that the pipe fittings are free of inclusions and visible defects. Cut the ends of the pipe squarely so as not to adversely affect joining.

**F Backfilling.**

THE FIRST PARAGRAPH IN PART F IS CHANGED TO:

When using corrugated aluminum pipe, backfill from the bottom of the trench to 2 feet above the top of the pipe with Class C bedding. When using HDPE and polypropylene (PP) pipe, backfill from the bottom of the trench to 1 foot above the top of the pipe with Class C bedding. When using pipe other than corrugated aluminum, HDPE or polypropylene (PP) pipe, backfill from the bottom of the trench to 2 feet above the top of the pipe with suitable excavated material free from stones and rock larger than 2 inches in any dimension. For distances 2 feet above the top of the pipe, backfill using suitable excavated material.

**601.03.03 End Section**

THE SECOND PARAGRAPH IS CHANGED TO:

Use end sections of the same material as the adjoining pipe or pipe arch, except use concrete end sections for HDPE and polypropylene (PP) pipe.

**601.03.04 Underdrain****A. Excavating.**

THE FOURTH PARAGRAPH IN PART A IS CHANGED TO:

If the material at the bottom of the trench is rock or other hard material, remove at least 6 inches of the material for RCP or at least 12 inches of the material below the bottom of the pipe for corrugated metal, steel, aluminum alloy pipe, HDPE or polypropylene (PP). Backfill the undercut with Class C bedding.

**601.03.06 Video Inspection of Pipe**

THE SECOND PARAGRAPH IS CHANGED TO:

Perform the video inspection in dry pipe conditions to ensure viewing of the entire pipe circumference. Ensure that a visual numerical registration of the distance the video camera is traveling from the starting point to the ending point within the pipe drainage structure is recorded on the digital footage at all times. Also, ensure that the name of the pipe run and the name of the structure is recorded on the digital footage at all times. Stop the video camera at all joints, lateral connections, breaks, and irregularities to ensure full view at these locations. Ensure that the video provides clear, sharply focused pictures. The Department will not accept blurred or out of focus footage. Submit color digital footage of the inspection to the RE to become the property of the Department. Number the files sequentially and provide a corresponding index for all videos, listing the location, date, size and type of pipe, cross or longitudinal drains, berm, slope, and similar identifying information.

**601.03.07 Deflection Inspection of HDPE Pipe**

THE SUBPART HEADING IS CHANGED TO:

**601.03.07 Deflection Inspection of HDPE Pipe and Polypropylene (PP) Pipe**

THE FIRST SENTENCE OF THE FIRST PARAGRAPH IS CHANGED TO:

Test approximately 25 percent of the length of HDPE and polypropylene (PP) pipe for deflection no sooner than 30 days after installation.

**601.04 MEASUREMENT AND PAYMENT**

THE FOLLOWING ITEMS ARE ADDED:

<i>Item</i>	<i>Pay Unit</i>
_____ " POLYPROPYLENE PIPE	LINEAR FOOT
DEFLECTION TESTING OF POLYPROPYLENE PIPE	LINEAR FOOT

**909.02.02 HDPE Pipe**

THE SUBPART HEADING IS CHANGED TO:

**909.02.02 HDPE Pipe and Polypropylene (PP) Pipe**

THE ENTIRE SUBPART IS CHANGED TO:

Use corrugated HDPE drainage pipe that conforms to AASHTO M 294 and is Type S (smooth interior with annular corrugations) with gasketed silt-tight joints.

Use corrugated polypropylene (PP) drainage pipe that conforms to AASHTO M 330 and is Type S (smooth interior with annular corrugations) with gasketed silt-tight joints.

Use HDPE and polypropylene (PP) pipe from a manufacturer who is an AASHTO NTPEP (National Transportation Product Evaluation Program) certified manufacturer. For a list of NTPEP certified manufacturers, see the following webpage: <https://data.ntpep.org/>.

Submit a certification of compliance, as specified in 106.07, for HDPE and polypropylene (PP) pipe.

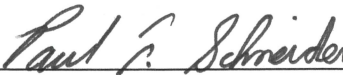
This revision must be read in conjunction with the referenced BDC Announcements.

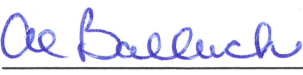
**Implementation Code R (ROUTINE)**

Changes must be implemented in all applicable Department projects scheduled for Final Design Submission at least one month after the date of the BDC announcement. This will allow designers to make necessary plan, specifications, and estimate/proposal changes without requiring the need for an addenda or postponement of advertisement or receipt of bids.

**Recommended By:**

**Approved By:**

  
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 Paul F. Schneider  
 Director  
 Capital Program Support

  
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 Parth Oza, P.E.,  
 Acting Assistant Commissioner  
 Capital Program Management