ST. CHARLES PARISH

OFFICE OF THE PARISH PRESIDENT

P.O. BOX 302 • HAHNVILLE, LOUISIANA 70057
(985) 783-5000 • Website: www.stcharlesgov.net

V.J. ST. PIERRE, JR.
PARISH PRESIDENT

January 23, 2008

TO: Mr. Paul J. Hogan, P.E.
Councilman, District IV

FROM: Sam Scholle
Director of Public Works/Wastewater

SUBJECT: PVC for Approved Culvert Types

I have reviewed the request as per your attached memo dated January 15, 2008. I do not have a problem adding the PVC pipe to the Code Book. Should you have any questions or need additional information, please advise.

SS:red

Attachments

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V.J. ST. PIERRE, JR.
PARISH PRESIDENT

MEMORANDUM

DATE: January 22, 2008

TO: Mr. Sam Scholle
Director Public Works/Wastewater

FROM: Lawrence "Lee" Zeringue, PE
Senior Parish Engineer

RE: Councilman Hogan's Request on PVC for Approved Culvert Types

This memorandum is in response to your request for evaluation of Councilman Hogan's request, (copy attached) for inclusion of polyvinyl chloride (PVC) culverts in the list of approved culvert types for driveways and subsurfacing.

Over the past few years PVC or Ribbed PVC (RPVCP) has been used extensively by the Parish and by citizens with the approval of the Parish. This pipe has been preferred alternative to concrete pipe due to cost, weight, and flow properties. I do concur that RPVCP is not an approved pipe to use due to its recent acceptance by LaDOTD. The Ordinance as written was approved before RPVCP was in use. Even though RPVCP is not listed as approved I would still recommend its use whenever possible as the cost savings is significant. Its use in no way has degraded the level of quality we require for culverts.

If Mr. Hogan wishes to add RPVCP to the list of approved culverts then he only needs to add Ribbed Polyvinyl Chloride to the list of approved culverts.

Also as per your request I have included the specifications from the DOTD Blue Book and the Qualified Products List for DOTD for RPVCP for your use.

Attachments (3)

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V.J. ST. PIERRE, JR.
PARISH PRESIDENT

MEMORANDUM

DATE: JANUARY 15, 2008

TO: MR. SAM SCHOLLE
PUBLIC WORKS DIRECTOR

FROM: PAUL J. HOGAN
COUNCILMAN, DISTRICT IV

It is my understanding that PVC pipe is used under driveways in the Parish. However, in Section 7-2 of the Code of Ordinances for St. Charles Parish, (a) (6) there is no statement regarding PVC pipes. If PVC pipe is approved for use in the Parish it would be an advantage to include this in the Code.

I would like introduced at the February 25th Parish Council Meeting an amendment to the Code of Ordinances regarding PVC pipe.

I have attached the section in question for your review.

Thank you.

BJT/ag

attachment

cc: Mr. V.J. St. Pierre, Jr., Parish President
Mr. John "Rusty" Walker, Chief Operating Officer

ARTICLE I. IN GENERAL

Sec. 7-1. Permitting sand, dirt, concrete, lumber, etc., to fall into drainage ditches and canals.

(a) It shall be unlawful for any person to allow any dirt, sand, concrete, lumber, etc., to be placed or be allowed to be placed so as to slip, fall, or run into any drainage ditches and canals under the jurisdiction of the parish council.

(b) Any person found guilty of violating the provisions of this section shall be fined not more than one hundred dollars ($100.00), or imprisoned for not more than thirty (30) days, or both, at the discretion of the court for each offense.

(Code 1970, § 13-9)

State law references: General statutory maximum for penalty for ordinance violations, R.S. 33:1243.

Sec. 7-2. Open-swale drainage systems; construction specifications and administrative procedures.

(a) *Construction Specifications.*

(1) The side slope of the swale shall be a minimum of two and one-half (2 1/2) to one (1) and adjusted to meet on-site conditions, with a minimum bottom width of one and one-half (1 1/2) feet.

(2) The bank of the swale on the lot side shall be the same as the bank on the street side. The swale shoulder on the lot side shall not be pulled into the lot to provide fill for the lot.

(3) The swale and the swale shoulder shall have a clayey base. If the natural soil is granular, the material to be brought in and used shall have a consistency not less than pit bottom. No river sand shall be used.

(4) A two-foot aggregate shoulder at an acceptable depth adjacent to the roadway shall be provided.

(5) The swale slopes shall be seeded by the developer. Sod may be placed on both sides of the swale, however, sod shall be prohibited on the shoulder of the road. Sod must not be placed in the required one and one-half-foot swale bottom. Allowance should be made for the thickness of the sod so that the slope is not materially altered. No plant materials, such as irises, cattails, or materials other than grass seed or sod, may be placed in the swales.

(6) Culvert sizes shall match those for the lot or parcel as shown on the approved subdivision plan. Culverts may be either corrugated steel, bituminous coated corrugated steel pipe, or concrete. All corrugated steel pipe utilized within both the state's and parish's right of ways shall be bituminous coated corrugated steel pipe. (see section 21-1 for further details).

(b) *Administrative Procedures; Permitting.*

(1) Application for related improvements or development must be submitted to the department of public works. Applicants shall submit a non-refundable application fee of

one hundred dollars ($100.00). In addition, a swale deposit shall be submitted:three hundred dollars ($300.00) for lots up to ninety (90) feet in width and four hundred dollars ($400.00) for lots over ninety (90) feet and up to two hundred (200) feet in width. For lots over two hundred (200) feet in width, fees will be determined on a case-by-case basis. The deposit for normal corner lots shall include an additional one hundred dollars ($100.00).

(2) The swale deposit shall only be returned if the swale meets all of the above standards. The applicant must submit a written request to the department of public works to inspect the swale. The department shall arrange for the inspection of the swale by a licensed professional engineer registered in the State of Louisiana, either employed by the parish or contracted by the parish for the said purpose. If the swale fails to pass inspection, the department of public works shall inform the applicant in writing of the deficiencies noted in the inspection. If the deficiencies are not corrected within thirty (30) days of the date of the notice, then the department of public works may use all or a portion of the swale deposit to correct the deficiencies and to defray the cost of additional inspections; any remaining funds shall be returned to the applicant.

(3) Upon final approval of the swale by the engineer, the department of public works shall furnish written certification of the completed swale to the department of planning and zoning. No permanent electric meter shall be installed until the swale passes inspection. Written notice by the planning department must be given to the electric utility company before the meter is installed at the site.

(Ord. No. 95-2-6, 2-20-95; Ord. No. 04-7-3, § II, 7-12-04)

Secs. 7-3--7-12. Reserved.

Section 1006
Concrete and Plastic Pipe

1006.01 GENERAL.

(a) Cementitious materials for concrete pipe shall comply with one of the following:

(1)	Portland cement	1001.01
(2)	Portland blast-furnace slag cement	1001.04
(3)	Portland pozzolan cement	1001.02
(4)	Portland cement with ground granulated blast-furnace slag	1018.27
(5)	Portland cement with fly ash	1018.15

The concrete pipe manufacturer may use up to 50 percent grade 120 ground granulated blast-furnace slag as a substitute for portland cement on a pound-for-pound (kilogram for kilogram) basis in accordance with Subsection 901.08. Fly ash may be substituted up to 25 percent.

(b) Any admixture for portland cement concrete listed in QPL 58 is allowed for use in concrete pipe manufacture except for chloride-type accelerators and high range water reducers.

(c) Compressive strength specimens for concrete pipe shall be made and cured in accordance with DOTD TR 227 and tested in accordance with DOTD TR 230.

(d) Concrete pipe shall be cured by one of the methods listed in ASTM C 76 and no other combination or methods will be allowed.

(e) Regardless of the ASTM specifications utilized, the Department reserves the right to have any concrete pipe tested to ultimate load.

(f) The addition of synthetic fibers will only be allowed upon approval of the engineer.

(g) Regardless of the sampling requirements listed in the ASTM specifications, all sampling for concrete pipe shall be in accordance with the DOTD Materials Sampling Manual.

(h) Regardless of the ASTM specifications utilized, if concrete pipe is to be accepted based upon cored samples, all samples shall meet the minimum concrete strengths specified. No more than three (3) joints of pipe shall be tested per maximum of 300 joints or three (3) days consecutive production, whichever is less, unless approved by the engineer.

All coring shall be performed by the manufacturer as directed by the engineer.

1006.02 CONCRETE SEWER PIPE. Nonreinforced (plain) concrete sewer pipe shall comply with ASTM C 14, Class III. Joints shall comply with Subsection 1006.05.

1006.03 REINFORCED CONCRETE PIPE. Reinforced concrete pipe shall be from an approved product source listed in QPL 77, and shall comply with ASTM C 76, amended as follows:

(a) Unless otherwise specified, Class III, Wall A, B or C pipe shall be furnished.

(b) When extra strength pipe is required, either Class IV or Class V pipe shall be furnished as specified. Either Wall A, B or C may be furnished.

(c) For pipe sizes not included in ASTM C 76, the area of reinforcement shall be approved in accordance with ASTM C 655. The producer shall provide fabrication drawings and design calculations reflecting compliance with these specifications prior to pipe fabrication.

(d) No modified designs will be allowed.

(e) Joints shall comply with Subsection 1006.05.

1006.04 REINFORCED CONCRETE PIPE ARCH. Reinforced concrete pipe arch shall be from an approved product source listed in QPL 77, and shall comply with ASTM C 506, amended as follows:

(a) Unless otherwise specified, Class A-III pipe arch shall be furnished.

(b) No modified designs will be allowed.

(c) For pipe arch sizes not included in ASTM C 506, the area of reinforcement shall be approved in accordance with ASTM C 655. The producer shall provide fabrication drawings and design calculations reflecting compliance with these specifications prior to pipe fabrication.

(d) Joints shall comply with Subsection 1006.05.

1006.05 CONCRETE PIPE JOINTS. Joints for concrete pipe and pipe arch shall comply with AASHTO M 198 with the following modifications. Gasket material shall comply with Subsection 1006.06. All joint systems will be approved by the Materials Engineer Administrator.

(a) Type 1 Joints (T1): Type 1 pipe joints shall be soil tight, and shall use approved rubber or flexible plastic gaskets.

(b) Type 2 Joints (T2): Type 2 pipe joints shall use approved rubber or flexible plastic gaskets and shall pass the 5 psi (35 kPa) hydrostatic pressure test.

(c) Type 3 Joints (T3):

(1) Pipe for Type 3 joints shall have a maximum taper of 12 degrees and a maximum differential between the joint taper of the bell and spigot (tongue and groove) of 2 degrees provided that it passes the 10 psi (70 kPa) hydrostatic pressure test. The 10 psi (70 kPa) hydrostatic pressure test requirement will apply to all pipe with diameters greater than 15 inches (375 mm).

(2) Joints for use with rubber gaskets and with a taper less than 6 degrees will require the 10 psi (70 kPa) hydrostatic pressure test, only when the maximum differential between the joint taper of the bell and the spigot is greater than 2 degrees. If the joint taper is 6 degrees to 8 degrees inclusive, its use will be permitted provided the joint will pass the 10 psi (70 kPa) hydrostatic pressure test.

(3) Joints for use with flexible plastic gaskets will be permitted provided the joint will pass the 10 psi hydrostatic pressure test.

(d) Repair of Joints: Joint repairs shall conform to ASTM C 443.

1006.06 GASKET MATERIALS. Gasket material sizes shall be as approved by the Materials and Testing Section.

(a) Rubber Gaskets: Rubber gaskets for pipe joints shall comply with AASHTO M 315. The rubber gaskets and lubricant shall be approved products listed in QPL 4. Each rubber gasket shall be identified with a batch or lot number.

(b) Flexible Plastic Gaskets: Flexible plastic gaskets for pipe joints shall comply with AASHTO M 198. The hydrostatic test shall be performed using AASHTO M 315. Flexible plastic gasket material and primer shall be approved products listed in QPL 4.

1006.07 PLASTIC PIPE. Plastic pipe and joint systems shall be approved products listed in QPL 66.

(a) Storm Drains: Plastic pipe for storm drains shall be Ribbed Polyvinyl Chloride Pipe (RPVCP). Ribbed Polyvinyl Chloride Pipe shall comply with ASTM F 794 or ASTM F 949, Series 46 with UV inhibitors. The resin shall have a minimum cell classification of 12454-C in accordance with ASTM D 1784.

(b) Cross Drains: Plastic pipe for cross drains shall be Ribbed Polyvinyl Chloride Pipe (RPVCP). Ribbed Polyvinyl Chloride Pipe shall comply with ASTM F 794 or ASTM F 949, Series 46 with UV inhibitors. The resin shall have a minimum cell classification of 12454-C in accordance with ASTM D 1784.

(c) Side Drains: Plastic pipe for side drains shall be one of the following:

(1) Ribbed Polyvinyl Chloride Pipe (RPVCP): Ribbed Polyvinyl Chloride Pipe shall comply with ASTM F 794 or ASTM F 949, Series 46 with UV inhibitors. The resin shall have a minimum cell classification of 12454-C in accordance with ASTM D 1784.

(2) Corrugated Polyethylene Pipe (Double Wall) (CPEPDW): Corrugated Polyethylene Pipe (Double Wall) shall comply with AASHTO M 294, Type S. The minimum cell classification shall be 335400C in accordance with ASTM D 3350.

(d) Joints for Plastic Pipe: Joints shall be approved by the DOTD Materials Engineer Administrator and listed on the QPL. Joint gasket materials shall comply with Subsection 1006.06. Joint requirements are as follows:

(1) Type 1 Joints (T1): These joints shall provide a soil tight joint.

(2) Type 2 Joints (T2): These joints shall pass a 5 psi (35 kPa) hydrostatic pressure test.

(3) Type 3 Joints (T3): These joints shall pass a 10 psi (70 kPa) hydrostatic pressure test.

(4) Joints With Split Coupling Bands: Split coupling bands shall be one piece and composed of the same material as the pipe. The bands shall be the same thickness as the base pipe. The width of the band shall be equal to one-half the diameter of the pipe but shall be a minimum of 12 inches (300 mm) wide. The band shall be secured to the pipe with a minimum of five stainless steel or other approved corrosion resistant circumferential bands.

1006.08 PLASTIC UNDERDRAIN PIPE. Plastic pipe for underdrains shall be perforated or nonperforated, as specified, and shall be an approved product listed on QPL 73 and one of the following.

(a) Corrugated Polyethylene Pipe (Single Wall) (CPEPSW): Corrugated Polyethylene Pipe (Single Wall) shall be perforated and shall comply with AASHTO M 252, Type C. Perforations shall comply with

AASHTO M 252. Corrugated Polyethylene Pipe (Single Wall) shall not be used as shoulder outlet underdrain pipe.

(b) Polyvinyl Chloride Pipe (PVCP): Polyvinyl Chloride Pipe shall comply with AASHTO M 278 or ASTM D 3034, SDR 35. Perforations, if specified, shall comply with AASHTO M 252.

(c) Corrugated Polyethylene Pipe (Double Wall) (CPEPDW): Corrugated Polyethylene Pipe shall comply with AASHTO M 252, Type S. Perforations, if specified, shall comply with AASHTO M 252.

1006.09 PLASTIC YARD DRAIN PIPE.

(a) Pipe: Plastic pipe for yard drains shall be an approved product listed on QPL 73 and one of the following:

(1) Polyvinyl Chloride Pipe (PVCP): Polyvinyl Chloride Pipe shall comply with AASHTO M 278 or ASTM D 3034, SDR 35.

(2) Corrugated Polyethylene Pipe (Double Wall) (CPEPDW): Corrugated Polyethylene Pipe (Double Wall) shall comply with AASHTO M 252, Type S, with a resin of minimum cell classification of 324420C in accordance with ASTM D 3350 or AASHTO M 294, Type S, with a resin of minimum cell classification of 335400C in accordance with ASTM D 3350.

(3) Ribbed Polyvinyl Chloride Pipe (RPVCP): Ribbed Polyvinyl Chloride Pipe shall comply with ASTM F 794 or ASTM F 949.

(b) Joints: Gaskets for joining plastic yard drain pipe shall comply with the requirements of Subsection 1006.06.

State of Louisiana
Department of Transportation and Development

Qualified Products List 66

PLASTIC CULVERT PIPE AND JOINT SYSTEMS

PRODUCT SOURCE CODE	PRODUCT	SOURCE	DIAMETER mm (in.)	JOINTS
STORM OR CROSS DRAINS **RIBBED POLYVINYL CHLORIDE (RPVCP)** **ASTM F 794 or ASTM F 949** **SERIES 46 WITH UV INHIBITORS** *Minimum cell classification of 12454 in accordance with ASTM D 1784*				
6606	A-2000	Contech Constructon Products, Inc. 1110 Adlai Stevenson Drive Springfield, IL 62703-4297	300 (12) 375 (15) 450 (18) 525 (21) 600 (24) 750 (30) 900 (36)	TYPE 3 1) Bell & spigot with single contoured rubber gasket TYPE 2 1) Bell & spigot with single contoured rubber gasket TYPE 1 1) Bell & spigot with single contoured rubber gasket
6609	A-2000	Contech Construction Products, Inc. 2700 Gunter Drive, West Montgomery, AL 36109	200 (8) 250 (10) 300 (12) 375 (15) 450 (18) 525 (21) 600 (24) 750 (30) 900 (36)	TYPE 3 1) Bell & spigot with single contoured rubber gasket TYPE 2 2) Bell & spigot with single contoured rubber gasket TYPE 1 3) Bell & spigot with single contoured rubber gasket
6602	Ultra-Rib	Uponor ETI, Inc. 101 East Avenue M Conroe, TX 77301	200 (8) 250 (10) 300 (12) 375 (15) 450 (18) 600 (24) 750 (30)	TYPE 3 1) Bell & spigot with integral rubber gasket TYPE 2 1) Bell & spigot with integral rubber gasket TYPE 1 1) Bell & spigot with integral rubber gasket
6607	Ultra-Corr		600 (24) 675 (27) 750 (30) 900 (36)	TYPE 3 1) Bell & spigot with single contoured rubber gasket TYPE 2 2) Bell & spigot with single contoured rubber gasket TYPE 1 3) Bell & spigot with single contoured rubber gasket

PRODUCT SOURCE CODE	PRODUCT	SOURCE	DIAMETER mm (in.)	JOINTS
SIDE DRAINS **(1) RIBBED POLYVINYL CHLORIDE (RPVCP)** **ASTM F 794 or ASTM F 949** **SERIES 46 WITH UV INHIBITORS** *Minimum cell classification of 12454 in accordance with ASTM D 1784*				
6606	A-2000	Contech Construction Products, Inc. 1110 Adlai Stevenson Drive Springfield, IL 62703-4297	300 (12) 375 (15) 450 (18) 525 (21) 600 (24) 750 (30) 900 (36)	TYPE 3 1) Bell & spigot with single contoured rubber gasket TYPE 2 1) Bell & spigot with single contoured rubber gasket TYPE 1 1) Bell & spigot with single contoured rubber gasket
6609	A-2000	Contech Construction Products, Inc. 2700 Gunter Drive, West Montgomery, AL 36109	200 (8) 250 (10) 300 (12) 375 (15) 450 (18) 525 (21) 600 (24) 750 (30) 900 (36)	TYPE 3 1) Bell & spigot with single contoured rubber gasket TYPE 2 2) Bell & spigot with single contoured rubber gasket TYPE 1 3) Bell & spigot with single contoured rubber gasket
6602	Ultra-Rib	Uponor ETI, Inc. 101 East Avenue M Conroe, TX 77301	200 (8) 250 (10) 300 (12) 375 (15) 450 (18) 600 (24) 750 (30)	TYPE 3 1) Bell & spigot with integral rubber gasket TYPE 2 1) Bell & spigot with integral rubber gasket TYPE 1 1) Bell & spigot with integral rubber gasket
6607	Ultra-Corr		600 (24) 675 (27) 750 (30) 900 (36)	TYPE 3 1) Bell & spigot with single contoured rubber gasket TYPE 2 2) Bell & spigot with single contoured rubber gasket TYPE 1 3) Bell & spigot with single contoured rubber gasket

PRODUCT SOURCE CODE	PRODUCT	SOURCE	DIAMETER mm (in.)	JOINTS
CROSS DRAINS <3000 ADT as allowed by EDSM II.2.1.1 AND SIDE DRAINS **(2) CORRUGATED POLYETHYLENE (DOUBLE WALL) (CPEPDW)** **AASHTO M 294, TYPE S** *Minimum cell classification of 335400C in accordance with ASTM D 3350*				
6603	A. D. S. N-12	Advanced Drainage Systems, Inc. 205 Apache Drive Jackson, MS 39272	300 (12) 375 (15) 450 (18) 600 (24) 750 (30) 900 (36) 1050 (42) 1200 (48)	TYPE 3 1) ProLink WT (Polyethylene coupler with QPL 4 rubber gasket material) TYPE 2 1) Pro Link WT (Polyethylene coupler with QPL 4 rubber gasket material) TYPE 1 1) Pro Link ST (Polyethylene coupler with QPL 4 rubber gasket material) 2) N-12 Polyethylene Premium Split Coupler (Neoprene Gasket)
6610	Sure-Lok Pipe with Blue Seal WT joint system and Sure-Lok 10.8 gasket (Gasket Source Code 0420)	Hancor, Inc. 401 Olive Street Findlay, OH 45840	300 (12) 375 (15) 450 (18) 600 (24) 750 (30) 900 (36) 1050 (42) 1200 (48)	TYPE 3 1) Blue-Seal WT TYPE 2 1) Blue-Seal WT TYPE 1 1)Sure-Lok F477 (Integral bell & spigot with attached chair rail gasket) 2) HI-Q with split coupler (Neoprene gasket)
6612	Sure-Lok pipe with Blue Seal WT joint system and Sure-Lok 10.8 gasket (Gasket Source Code 0420)	Hancor, Inc. 6001 Belmore St. Olympia, WA 98512	300 (12) 375 (15) 450 (18) 600 (24) 750 (30) 900 (36) 1050 (42) 1200 (48)	TYPE 3 1) Blue-Seal WT TYPE 2 1) Blue-Seal WT TYPE 1 1) HI-Q with split coupler (Neoprene gasket)
6613	Sure-Lok pipe with Blue Seal WT joint system and Sure-Lok 10.8 gasket (Gasket Source Code 0420)	Hancor, Inc. 5659 Hwy. 61 S. Vicksburg, MS 39180	300 (12) 375 (15) 450 (18) 600 (24) 750 (30) 900 (36) 1050 (42) 1200 (48)	TYPE 3 1) Blue-Seal WT TYPE 2 1) Blue-Seal WT TYPE 1 1) HI-Q with split coupler (Neoprene gasket

PRODUCT SOURCE CODE	PRODUCT	SOURCE	DIAMETER mm (in.)	JOINTS
CROSS DRAINS <3000 ADT as allowed by EDSM II.2.1.1 AND SIDE DRAINS **(2) CORRUGATED POLYETHYLENE (DOUBLE WALL) (CPEPDW) Continued** **AASHTO M 294, TYPE S** *Minimum cell classification of 335400C in accordance with ASTM D 3350*				
6608	Corrugated Polyethylene Culvert Pipe	Quail Piping Products 2220 Duracrete Drive Magnolia, AR 71753	300 (12) 375 (15) 450 (18) 600 (24)	TYPE 1 1) Bell & spigot with integral rubber gasket
6611	Storm Seal pipe with Integral Bell/Spigot joint system and IR/SBR gasket (Gasket Source Code 0435)	Quality Culvert, Inc. 25726 CR 561 P. O. Box 435 Astatula, FL 34705	300 (12) 375 (15) 450 (18) 600 (24) 750 (30) 900 (36) 1050 (42)* 1200 (48)* *Only used with backfill greater than 2 feet	TYPE 3 1) Bell & spigot with rubber gasket TYPE 2 1) Bell & spigot with rubber gasket TYPE 1 1) Bell & spigot with rubber gasket

REFERENCE:

2000 DOTD Standard Specifications, Subsection 1006.07
DOTD EDSM II.2.1.1 (9/30/05)

NOTE:

All materials, regardless of prior approval, shall be sampled by the Construction Materials Unit for testing for conformance specification requirements of the pipe and joint systems and to ensure that the submitted material is identical to the origina samples. Project acceptance of plastic culvert pipe shall be in accordance with the Materials Sampling Manual.

Any deviation in composition or performance from the original sample submitted may result in removal of the product from the qualified list.

No information contained in this list is to be used for promotional purposes.