BLD Services, LLC
2424 Tyler Street
Kenner, Louisiana 70062
LA Contractor's License **#46722**

Jefferson Parish Purchasing Department
Jefferson Parish General Government Building
200 Derbigny Street, Suite 4400
Gretna, Louisiana 70053

Sealed Bid For:

Two (2) Year Contract for Preventative Maintenance (Lining) of Existing Sanitary and Storm Sewers, Including Service Laterals at Scattered Locations for Jefferson Parish Department of Sewerage

Bid Proposal No.: 50-00145944

October 10, 2024, at 2:00 p.m.

LOUISIANA UNIFORM PUBLIC WORK BID FORM

TO: JEFFERSON PARISH
PURCHASING DEPT
200 DERBIGNY ST. SUITE 4400
GRETNA, LA 70053
(Owner to provide name and address of owner)

BID FOR: Two (2) Year Contract for Preventive Maintenance (Lining) of Existing Sanitary and Storm Sewers, Including Service Laterals at Scattered Locations
(Owner to provide name of project and other identifying information)

The undersigned bidder hereby declares and represents that she/he; a) has carefully examined and understands the Bidding Documents, b) has not received, relied on, or based his bid on any verbal instructions contrary to the Bidding Documents or any addenda, c) has personally inspected and is familiar with the project site, and hereby proposes to provide all labor, materials, tools, appliances and facilities as required to perform, in a workmanlike manner, all work and services for the construction and completion of the referenced project, all in strict accordance with the Bidding Documents prepared by: Jefferson Parish Public Works Department of Sewerage and dated: August 22, 2024
(Owner to provide name of entity preparing bidding documents.)

Bidders must acknowledge all addenda. The Bidder acknowledges receipt of the following **ADDENDA**: (Enter the number the Designer has assigned to each of the addenda that the Bidder is acknowledging) Add. #1 dated 9/20/24

TOTAL BASE BID: For all work required by the Bidding Documents (including any and all unit prices designated "Base Bid" * but not alternates) the sum of:

Thirteen Million Three Hundred Seventy Seven Thousand Two Hundred Fifty Eight Dollars ($) 13,377,258.00
And Zero Cents

ALTERNATES: For any and all work required by the Bidding Documents for Alternates including any and all unit prices designated as alternates in the unit price description.

Alternate No. 1 (Owner to provide description of alternate and state whether add or deduct) for the lump sum of:

N/A Dollars ($) N/A

Alternate No. 2 (Owner to provide description of alternate and state whether add or deduct) for the lump sum of:

N/A Dollars ($) N/A

Alternate No. 3 (Owner to provide description of alternate and state whether add or deduct) for the lump sum of:

N/A Dollars ($) N/A

NAME OF BIDDER: BLD Services, LLC

ADDRESS OF BIDDER: 2424 Tyler Street, Kenner, LA., 70062

LOUISIANA CONTRACTOR'S LICENSE NUMBER: 46722

NAME OF AUTHORIZED SIGNATORY OF BIDDER: Danny M. Albert

TITLE OF AUTHORIZED SIGNATORY OF BIDDER: Estimator / Project Manager

SIGNATURE OF AUTHORIZED SIGNATORY OF BIDDER **:

DATE: 10/10/24

THE FOLLOWING ITEMS ARE TO BE INCLUDED WITH THE SUBMISSION OF THIS LOUISIANA UNIFORM PUBLIC WORK BID FORM:

* The Unit Price Form shall be used if the contract includes unit prices. Otherwise it is not required and need not be included with the form. The number of unit prices that may be included is not limited and additional sheets may be included if needed.

** **A CORPORATE RESOLUTION OR WRITTEN EVIDENCE** of the authority of the person signing the bid for the public work as prescribed by LA-R.S. 38:2218 (B)(5).

BID SECURITY in the form of a bid bond, certified check or cashier's check as prescribed by LA-R.S. 38:2218.(A) is attached to and made a part of this bid.

LOUISIANA UNIFORM PUBLIC WORK BID FORM
UNIT PRICE FORM

Bid# 50-00145944

TO: JEFFERSON PARISH
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(Owner to provide name and address of owner)

Two (2) Year Contract for Preventive Maintenance (Lining) of Existing Sanitary and Storm Sewers, Including Service Laterals at Scattered Locations
(Owner to provide name of project and other identifying information)

UNIT PRICES: This form shall be used for any and all work required by the Bidding Documents and described as unit prices. Amounts shall be stated in figures and only in figures.

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0001 - Clean 8 Inch or 10 Inch Sanitary or Storm Sewer TWO (2) YEAR CONTRACT FOR PREVENTATIVE MAINTENANCE (LINING) OF EXISTING		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
1	20,000.00	LF	$1.00	$20,000.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0002 - Clean 12 Inch Sanitary or Storm Sewer		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
2	1,000.00	LF	$1.00	$1,000.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0003 - Clean 15 Inch or 18 Inch Sanitary or Storm Sewer		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
3	1,500.00	LF	$5.00	$7,500.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0004 - Clean 21 Inch and 24 Inch Sanitary or Storm Sewer		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
4	1,000.00	LF	$6.00	$6,000.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0005 - Clean 27 Inch and 30 Inch Sanitary or Storm Sewer		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
5	1,000.00	LF	$8.00	$8,000.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0006 - Clean 36 Inch Sanitary or Storm Sewer		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
6	100.00	LF	$9.00	$900.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0007 - Lateral Cleaning From Mainline or Cleanout Access Point		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
7	1,000.00	EA	$400.00	$400,000.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0008 - Lateral Inspection From Cleanout/Access Point		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
8	10.00	EA	$400.00	$4,000.00

Wording for "DESCRIPTION" is to be provided by the Owner.
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UNIT PRICE FORM

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(Owner to provide name and address of owner)

Two (2) Year Contract for Preventive Maintenance (Lining) of Existing Sanitary and Storm Sewers, Including Service Laterals at Scattered Locations
(Owner to provide name of project and other identifying information)

UNIT PRICES: This form shall be used for any and all work required by the Bidding Documents and described as unit prices. Amounts shall be stated in figures and only in figures.

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0009 - Lateral Inspection From Mainline-Launching		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
9	1,000.00	EA	$400.00	$400,000.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0010 - Setup for Lateral Cleaning		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
10	100.00	EA	$1,000.00	$100,000.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0011 - Setup for Lateral Inspection		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
11	100.00	EA	$1,000.00	$100,000.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0012 - Combination Vacuum/Cleaning Truck		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
12	1,000.00	HR	$400.00	$400,000.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0013 - Clean 42 Inch Storm Sewer		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
13	1,000.00	LF	$10.00	$10,000.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0014 - Clean 48 Inch Storm Sewer		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
14	1,000.00	LF	$15.00	$15,000.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0015 - Clean 54 Inch Storm Sewer		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
15	100.00	LF	$18.00	$1,800.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0016 - Clean 60 Inch Storm Sewer		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
16	100.00	LF	$20.00	$2,000.00

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UNIT PRICES: This form shall be used for any and all work required by the Bidding Documents and described as unit prices. Amounts shall be stated in figures and only in figures.

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0017 - Root Removal 8 inch Pipe		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
17	500.00	LF	$5.00	$2,500.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0018 - Root Removal 10 inch Pipe		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
18	200.00	LF	$5.00	$1,000.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0019 - Root Removal 12 inch Pipe		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
19	200.00	LF	$5.00	$1,000.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0020 - Root Removal 15 inch Pipe Thur 24 Inch Pipe		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
20	100.00	LF	$20.00	$2,000.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0021 - Video Inspection/Radial View Camera in 8 Inch Thru 12 Inch Pipe		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
21	2,000.00	LF	$15.00	$30,000.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0022 - Video Inspection/Radial Camera in 15 Inch Thru 21 Inch Pipe		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
22	3,000.00	LF	$30.00	$90,000.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0023 - Video Inspection/Radial Camera in 24 Inch Thru 60 Inch Pipe		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
23	2,000.00	LF	$50.00	$100,000.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0024 - Additional Setup for TV Inspection 6 Inch Thru 12 Inch Pipe		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
24	10.00	EA	$25.00	$250.00

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UNIT PRICE FORM

Bid# 50-00145944

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DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0025 - Additional Set up for TV Inspection 15 Inch Thru 36 Inch Pipe		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
25	10.00	EA	$25.00	$250.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0026 - Insertion of 4.5MM CIPP In 6 Inch Pipe		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
26	1,000.00	LF	$5.00	$5,000.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0027 - Insertion of 4.5MM CIPP in 8 Inch Vitrified Clay Pipe		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
27	2,000.00	LF	$5.00	$10,000.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0028 - Insertion of 6.0MM CIPP in 8 Inch Pipe		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
28	20,000.00	LF	$52.00	$1,040,000.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0029 - Insertion of 6.0MM CIPP in 10 Inch Pipe		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
29	1,000.00	LF	$53.00	$53,000.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0030 - Insertion of 6.0MM CIPP in 12 Inch Pipe		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
30	2,000.00	LF	$54.00	$108,000.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0031 - Insertion of 6.0MM CIPP in 15 Inch Pipe		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
31	2,000.00	LF	$55.00	$110,000.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0032 - Insertion of 6.0MM CIPP in 18 Inch Pipe		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
32	1,000.00	LF	$70.00	$70,000.00

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UNIT PRICE FORM

Bid# 50-00145944

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DESCRIPTION:	☒ Base Bid ☐ Alt.#__	0033 - Insertion of 7.5MM CIPP in 21 Inch Pipe		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
33	1,500.00	LF	$80.00	$120,000.00

DESCRIPTION:	☒ Base Bid ☐ Alt.#__	0034 - Insertion of 9.0MM CIPP in 24 Inch Pipe		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
34	1,500.00	LF	$100.00	$150,000.00

DESCRIPTION:	☒ Base Bid ☐ Alt.#__	0035 - Insertion of 9.0MM CIPP in 27 Inch Pipe		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
35	500.00	LF	$90.00	$45,000.00

DESCRIPTION:	☒ Base Bid ☐ Alt.#__	0036 - Insertion of 10.5MM CIPP in 30 Inch Pipe		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
36	1,000.00	LF	$110.00	$110,000.00

DESCRIPTION:	☒ Base Bid ☐ Alt.#__	0037 - Insertion of 12.0MM CIPP in 36 Inch Pipe		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
37	500.00	LF	$125.00	$62,500.00

DESCRIPTION:	☒ Base Bid ☐ Alt.#__	0038 - Insertion of 13.5MM CIPP in 42 Inch Pipe		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
38	500.00	LF	$135.00	$67,500.00

DESCRIPTION:	☒ Base Bid ☐ Alt.#__	0039 - Insertion of 15.0MM CIPP in 48 Inch Pipe		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
39	1,000.00	LF	$150.00	$150,000.00

DESCRIPTION:	☒ Base Bid ☐ Alt.#__	0040 - Insertion of 16.5MM CIPP in 54 Inch Pipe		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
40	300.00	LF	$160.00	$48,000.00

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UNIT PRICE FORM

Bid# 50-00145944

TO: JEFFERSON PARISH
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(Owner to provide name and address of owner)

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DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0041 - Insertion of 18.0MM CIPP in 60 Inch Pipe		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
41	300.00	LF	$180.00	$54,000.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0042 - Additional 1.5MM Thickness for 8 Inch and 10 Inch CIPP		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
42	2,000.00	LF	$5.00	$10,000.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0043 - Additional 1.5MM Thickness for 12 Inch and 15 Inch CIPP		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
43	2,000.00	LF	$20.00	$40,000.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0044 - Additional 1.5MM Thickness for 18 Inch and 21 Inch CIPP		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
44	2,000.00	LF	$50.00	$100,000.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0045 - Additional 1.5MM Thickness for 24 Inch CIPP		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
45	2,000.00	LF	$60.00	$120,000.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0046 - Additional 1.5MM Thickness for 27 Inch CIPP		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
46	1,000.00	LF	$35.00	$35,000.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0047 - Additional 1.5MM Thickness for 30 Inch CIPP		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
47	2,000.00	LF	$75.00	$150,000.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0048 - Additional 1.5MM Thickness for 36 Inch CIPP		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
48	400.00	LF	$100.00	$40,000.00

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DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0049 - Additional 1.5MM Thickness for 42 Inch CIPP		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
49	2,000.00	LF	$105.00	$210,000.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0050 - Additional 1.5MM Thickness for 48 Inch CIPP		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
50	2,000.00	LF	$110.00	$220,000.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0051 - Additional 1.5MM Thickness for 54 Inch CIPP		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
51	100.00	LF	$160.00	$16,000.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0052 - Additional 1.5MM Thickness for 60 Inch CIPP		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
52	100.00	LF	$175.00	$17,500.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0053 - Lateral Reconstruction From Cleanout by CIPP		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
53	25.00	EA	$150.00	$3,750.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0054 - Extension of Lateral Reconstruction From Cleanout by CIPP		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
54	100.00	LF	$15.00	$1,500.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0055 - Setup for Long Segment Lateral Reconstruction From Mainline CIPP		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
55	100.00	EA	$2,500.00	$250,000.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0056 - Long Segment Lateral Reconstruction From Mainline by CIPP		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
56	200.00	EA	$5,000.00	$1,000,000.00

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DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0057 - Extension of Long Segment Lateral Reconstruction From Mainline by CIPP		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
57	100.00	LF	$25.00	$2,500.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0058 - Setup for Short Segment Lateral CIPP Lateral Connection Reconstruction		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
58	30.00	EA	$2,500.00	$75,000.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0059 - Short Segment Lateral Connection Reconstruction From Mainline by CIPP		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
59	300.00	EA	$3,000.00	$900,000.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0060 - Service Reconstruction/ Replacement by Excavation 0 Foot-6 Foot Deep		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
60	10.00	EA	$2,500.00	$25,000.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0061 - Service Reconstruction/ Replacement by Excavation 6 Foot-10 Foot Deep		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
61	5.00	EA	$3,500.00	$17,500.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0062 - Service Reconstruction/ Replacement by Excavation 10 Foot or Greater		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
62	20.00	EA	$4,500.00	$90,000.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0063 - Repair/Adjust Cleanout		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
63	5.00	EA	$250.00	$1,250.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0064 - Installation of Sewer Cleanout Type 1		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
64	100.00	EA	$1,000.00	$100,000.00

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LOUISIANA UNIFORM PUBLIC WORK BID FORM
UNIT PRICE FORM

Bid# 50-00145944

TO: JEFFERSON PARISH
PURCHASING DEPT
200 DERBIGNY ST. SUITE 4400
GRETNA, LA 70053
(Owner to provide name and address of owner)

Two (2) Year Contract for Preventive Maintenance (Lining) of Existing Sanitary and Storm Sewers, Including Service Laterals at Scattered Locations
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DESCRIPTION:	☒ Base Bid ☐ Alt.#__	0065 - Replace Section of Service Line		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
65	150.00	EA	$500.00	$75,000.00

DESCRIPTION:	☒ Base Bid ☐ Alt.#__	0066 - Restore 8 Inch - 10 Inch Main by Point Repair (0 Foot - 8 Foot Deep)		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
66	30.00	EA	$10,000.00	$300,000.00

DESCRIPTION:	☒ Base Bid ☐ Alt.#__	0067 - Restore 8 Inch - 10 Inch Main by Point Repair (8 Foot - 12 Foot Deep)		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
67	10.00	EA	$20,000.00	$200,000.00

DESCRIPTION:	☒ Base Bid ☐ Alt.#__	0068 - Restore 8 Inch - 10 Inch Main by Point Repair (Beyond 12 Foot Deep)		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
68	2.00	EA	$25,000.00	$50,000.00

DESCRIPTION:	☒ Base Bid ☐ Alt.#__	0069 - Restore 8 Inch - 10 Inch Main Beyond Point Repair (0 Foot - 8 Foot Deep)		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
69	200.00	LF	$150.00	$30,000.00

DESCRIPTION:	☒ Base Bid ☐ Alt.#__	0070 - Restore 6 Inch - 10 Inch Main Beyond Point Repair (8 Foot - 12 Foot Deep)		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
70	100.00	LF	$175.00	$17,500.00

DESCRIPTION:	☒ Base Bid ☐ Alt.#__	0071 - Restore 8 Inch - 10 Inch Main Beyond Point Repair (Beyond 12 Foot Deep)		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
71	10.00	LF	$250.00	$2,500.00

DESCRIPTION:	☒ Base Bid ☐ Alt.#__	0072 - Repoint Existing Sewer Manholes or Wetwells		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
72	1,000.00	SQFT	$1.00	$1,000.00

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Bid# 50-00145944

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PURCHASING DEPT
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GRETNA, LA 70053
(Owner to provide name and address of owner)

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DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0073 - Chemical Grout to Fill Voids and Stop Leaks in Structures		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
73	100.00	GL	$350.00	$35,000.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0074 - Sewer Manhole/Wetwell Rehab by Cementitous Lining Method		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
74	2,000.00	BG	$300.00	$600,000.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0075 - Sewer Manhole/Wetwell Rehab by Epoxy Lining Method		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
75	1,000.00	SQFT	$5.00	$5,000.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0076 - Manhole Cover Adjustments		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
76	30.00	EA	$2,500.00	$75,000.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0077 - Rebuilding Manhole Bench/Invert		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
77	10.00	EA	$150.00	$1,500.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0078 - Remove and Replace Manhole Cone		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
78	20.00	EA	$5,000.00	$100,000.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0079 - Remove and Replace Manhole Wall		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
79	10.00	VF	$50.00	$500.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0080 - Repair Manhole Line Connection		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
80	20.00	EA	$40.00	$800.00

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DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0081 - Replace Manhole Cover and Casting		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
81	20.00	EA	$3,500.00	$70,000.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0082 - Install Force Main Discharge Turndown		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
82	10.00	EA	$1,000.00	$10,000.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0083 - Remote Cut and Brush Services		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
83	1,200.00	EA	$0.01	$12.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0084 - Internally Trim Protruding Service Connections		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
84	100.00	EA	$50.00	$5,000.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0085 - Set Up 6 Inch Bypass Pump		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
85	25.00	EA	$3,500.00	$87,500.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0086 - Set Up 8 Inch Bypass Pump		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
86	5.00	EA	$100.00	$500.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0087 - Set Up 10 Inch Bypass Pump		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
87	2.00	EA	$100.00	$200.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0088 - Set Up 12 Inch Bypass Pump		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
88	10.00	EA	$10,000.00	$100,000.00

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DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0089 - Operation of 3 inch Bypass Pump		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
89	10.00	HR	$5.00	$50.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0090 - Operation of 3 inch Bypass Pump		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
90	1.00	WK	$25.00	$25.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0091 - Operation of 3 inch Bypass Pump		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
91	1.00	MO	$50.00	$50.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0092 - Operation of 4 inch Bypass Pump		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
92	48.00	HR	$5.00	$240.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0093 - Operation of 4 inch Bypass Pump		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
93	1.00	WK	$25.00	$25.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0094 - Operation of 4 inch Bypass Pump		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
94	1.00	MO	$50.00	$50.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0095 - Operation of 6 inch Bypass Pump		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
95	100.00	HR	$250.00	$25,000.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0096 - Operation of 6 inch Bypass Pump		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
96	10.00	WK	$12,000.00	$120,000.00

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DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0097 - Operation of 6 inch Bypass Pump		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
97	10.00	MO	$20,000.00	$200,000.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0098 - Operation of 8 inch Bypass Pump		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
98	48.00	HR	$10.00	$480.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0099 - Operation of 8 Inch Bypass Pump		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
99	1.00	WK	$750.00	$750.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0100 - Operation of 8 Inch Bypass Pump		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
100	1.00	MO	$2,500.00	$2,500.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0101 - Operation of 10 Inch Bypass Pump		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
101	48.00	HR	$10.00	$480.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0102 - Operation of 10 Inch Bypass Pump		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
102	1.00	WK	$750.00	$750.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0103 - Operation of 10 Inch Bypass Pump		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
103	1.00	MO	$2,500.00	$2,500.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0104 - Operation of 12 Inch Bypass Pump		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
104	48.00	HR	$300.00	$14,400.00

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Bid# 50-00145944

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DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0105 - Operation of 12 Inch Bypass Pump		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
105	1.00	WK	$20,000.00	$20,000.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0106 - Operation of 12 Inch Bypass Pump		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
106	4.00	MO	$25,000.00	$100,000.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0107 - Extension of 6 Inch Bypass Discharge Force Main Piping		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
107	200.00	LF	$1.00	$200.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0108 - Extension of 8 Inch Bypass Discharge Force Main Piping		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
108	200.00	LF	$1.00	$200.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0109 - Extension of 10 Inch Bypass Discharge Force Main Piping		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
109	200.00	LF	$1.00	$200.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0110 - Extension of 12 Inch Bypass Discharge Force Main Piping		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
110	500.00	LF	$1.00	$500.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0111 - Place and Remove Temporary Ashpaltic Concrete		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
111	1,000.00	SQYD	$10.00	$10,000.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0112 - Remove and Replace PCC Roadway (9 Inch Thick)		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
112	2,000.00	SQYD	$130.00	$260,000.00

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Bid# 50-00145944

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DESCRIPTION:	☒ Base Bid ☐ Alt.#__	0113 - Remove and Replace Asphaltic Concrete Roadway		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
113	1,500.00	SQYD	$180.00	$270,000.00

DESCRIPTION:	☒ Base Bid ☐ Alt.#__	0114 - Remove and Replace Concrete Driveways (4 Inch Thick)		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
114	2,000.00	SQYD	$30.00	$60,000.00

DESCRIPTION:	☒ Base Bid ☐ Alt.#__	0115 - Remove and Replace Concrete Driveways (6 Inches Thick)		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
115	2,000.00	SQYD	$30.00	$60,000.00

DESCRIPTION:	☒ Base Bid ☐ Alt.#__	0116 - Remove and Replace Concrete Curb		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
116	1,000.00	LF	$50.00	$50,000.00

DESCRIPTION:	☒ Base Bid ☐ Alt.#__	0117 - Site Specific Traffic Control Device Plan		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
117	8.00	EA	$1,500.00	$12,000.00

DESCRIPTION:	☒ Base Bid ☐ Alt.#__	0118 - TRAFFIC CONTROL DEVICE SET-UP		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
118	200.00	EA	$750.00	$150,000.00

DESCRIPTION:	☒ Base Bid ☐ Alt.#__	0119 - TRAFFIC CONTROL DEVICE OPERATION		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
119	1,000.00	DY	$200.00	$200,000.00

DESCRIPTION:	☒ Base Bid ☐ Alt.#__	0120 - TRAFFIC FLAGMAN		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
120	200.00	HR	$75.00	$15,000.00

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DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0121 - Insertion of 5.5MM RCPP in 8 Inch Force Main		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
121	500.00	LF	$2.00	$1,000.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0122 - Insertion of 5.5MM RCPP in 10 Inch Force Main		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
122	1,000.00	LF	$3.00	$3,000.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0123 - Insertion of 5.5MM RCPP in 12 Inch Force Main		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
123	500.00	LF	$4.00	$2,000.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0124 - Insertion of 5.5MM RCPP in 14 Inch Force Main		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
124	500.00	LF	$5.00	$2,500.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0125 - Insertion of 5.5MM RCPP in 18 Inch Force Main		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
125	500.00	LF	$6.00	$3,000.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0126 - Additional 1.5 MM Thickness for 8 Inch - 12 Inch RCPP		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
126	1,000.00	LF	$1.00	$1,000.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0127 - Additional 1.5 MM Thickness for 14 Inch - 18 Inch RCPP		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
127	500.00	LF	$1.00	$500.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0128 - End Seals - Pressure RCPP 8 Inch - 12 Inch		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
128	4.00	EA	$250.00	$1,000.00

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DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0129 - End Seals - Pressure RCPP 14 Inch - 18 Inch		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
129	2.00	EA	$300.00	$600.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0130 - Restore 6 Inch - 12 Inch Force Main by Point Repair (0 Foot - 10 Foot Deep)		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
130	4.00	EA	$20,000.00	$80,000.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0131 - Restore 14 Inch - 18 Inch Force Main by Point Repair (0 Foot - 10 Foot Deep)		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
131	2.00	EA	$35,000.00	$70,000.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0132 - Data Entry Clerk		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
132	100.00	HR	$10.00	$1,000.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0133 - 4 Inch HDPE Horizontal Directional Drilled Force Main		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
133	500.00	LF	$100.00	$50,000.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0134 - 6 Inch HDPE Horizontal Directional Drilled Force Main		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
134	1,000.00	LF	$140.00	$140,000.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0135 - 8 Inch HDPE Horizontal Directional Drilled Force Main		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
135	1,000.00	LF	$180.00	$180,000.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0136 - 10 Inch HDPE Horizontal Directional Drilled Force Main		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
136	500.00	LF	$210.00	$105,000.00

Wording for "DESCRIPTION" is to be provided by the Owner.
All quantities are estimated. The contractor will be paid based upon actual quantities as verified by the Owner.

LOUISIANA UNIFORM PUBLIC WORK BID FORM
UNIT PRICE FORM

Bid# 50-00145944

TO: JEFFERSON PARISH
PURCHASING DEPT
200 DERBIGNY ST. SUITE 4400
GRETNA, LA 70053
(Owner to provide name and address of owner)

Two (2) Year Contract for Preventive Maintenance (Lining) of Existing Sanitary and Storm Sewers, Including Service Laterals at Scattered Locations
(Owner to provide name of project and other identifying information)

UNIT PRICES: This form shall be used for any and all work required by the Bidding Documents and described as unit prices. Amounts shall be stated in figures and only in figures.

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0137 - 12 Inch HDPE Horizontal Directional Drilled Force Main		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
137	1,000.00	LF	$240.00	$240,000.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0138 - 16 Inch HDPE Horizontal Directional Drilled Force Main		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
138	500.00	LF	$260.00	$130,000.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0139 - 24 Inch HDPE Horizontal Directional Drilled Force Main		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
139	500.00	LF	$390.00	$195,000.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0140 - 30 Inch HDPE Horizontal Directional Drilled Force Main		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
140	500.00	LF	$425.00	$212,500.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0141 - Installation of Handicap Access Ramp at Curb/Street Transition		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
141	100.00	SQYD	$250.00	$25,000.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0142 - Additional Granular Material		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
142	500.00	CUYD	$175.00	$87,500.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0143 - 5/8 Cubic Yard Track Backhoe		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
143	100.00	DY	$495.00	$49,500.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0144 - 1 Cubic Yard Track Backhoe		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
144	100.00	DY	$595.00	$59,500.00

Wording for "DESCRIPTION" is to be provided by the Owner.
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UNIT PRICE FORM

Bid# 50-00145944

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GRETNA, LA 70053
(Owner to provide name and address of owner)

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UNIT PRICES: This form shall be used for any and all work required by the Bidding Documents and described as unit prices. Amounts shall be stated in figures and only in figures.

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0145 - 2 Cubic Yard Rubber Tire Loader		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
145	100.00	DY	$795.00	$79,500.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0146 - 2 Cubic Yard Track Backhoe		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
146	100.00	DY	$695.00	$69,500.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0147 - D-4 Dozer		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
147	10.00	DY	$250.00	$2,500.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0148 - Chain Saw		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
148	10.00	DY	$2.00	$20.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0149 - Multi-Purpose Saw		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
149	10.00	DY	$2.00	$20.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0150 - 3 Inch Diaphram Pump with 20 Foot and 50 Foot Discharge Hoses		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
150	10.00	DY	$2.00	$20.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0151 - 6 Inch Centrifugal Pump with 20 Foot and 50 Foot Discharge Hoses		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
151	10.00	DY	$2.00	$20.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0152 - Small Tools		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
152	300.00	DY	$125.00	$37,500.00

Wording for "DESCRIPTION" is to be provided by the Owner.
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UNIT PRICE FORM

Bid# 50-00145944

TO: JEFFERSON PARISH
PURCHASING DEPT
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GRETNA, LA 70053
(Owner to provide name and address of owner)

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UNIT PRICES: This form shall be used for any and all work required by the Bidding Documents and described as unit prices. Amounts shall be stated in figures and only in figures.

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0153 - Pick-Up Truck		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
153	100.00	DY	$295.00	$29,500.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0154 - Utility Truck		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
154	100.00	DY	$395.00	$39,500.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0155 - Single Axle Truck		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
155	50.00	DY	$370.00	$18,500.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0156 - Tandem Axle Dump Truck		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
156	50.00	DY	$795.00	$39,750.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0157 - Welding Truck Complete with 200A Welder and Torch Set		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
157	20.00	DY	$595.00	$11,900.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0158 - Small Gasoline Wacker Plate Approx. 24 Inch X 24 Inch		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
158	15.00	DY	$3.00	$45.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0159 - Low Boy		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
159	50.00	HR	$275.00	$13,750.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0160 - Foreman		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
160	1,000.00	HR	$195.00	$195,000.00

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UNIT PRICE FORM

Bid# 50-00145944

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(Owner to provide name and address of owner)

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DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0161 - Operator		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
161	1,000.00	HR	$170.00	$170,000.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0162 - Pipe Layer		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
162	500.00	HR	$120.00	$60,000.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0163 - Laborer		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
163	1,000.00	HR	$120.00	$120,000.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0164 - Welder		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
164	200.00	HR	$170.00	$34,000.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0165 - Welder Helper		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
165	100.00	HR	$5.00	$500.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0166 - Carpenter		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
166	100.00	HR	$50.00	$5,000.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0167 - Truck Driver		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
167	100.00	HR	$125.00	$12,500.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0168 - Electrician		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
168	500.00	HR	$225.00	$112,500.00

Wording for "DESCRIPTION" is to be provided by the Owner.
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UNIT PRICE FORM

Bid# 50-00145944

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(Owner to provide name and address of owner)

Two (2) Year Contract for Preventive Maintenance (Lining) of Existing Sanitary and Storm Sewers, Including Service Laterals at Scattered Locations
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DESCRIPTION:	☒ Base Bid ☐ Alt.#__	0169 - Mechanic		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
169	100.00	HR	$25.00	$2,500.00

DESCRIPTION:	☒ Base Bid ☐ Alt.#__	0170 - Unforeseen Work-Point Repair of Existing Sewer Mainline/Force Mains, Upgrade Lift Stations. This item Shall not be Included in the Total Bid Price		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
170	1.00	JOB	$1.00	$1.00

DESCRIPTION:	☒ Base Bid ☐ Alt.#__	0171 - Set Up 3 Inch Bypass Pump		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
171	10.00	EA	$1.00	$10.00

DESCRIPTION:	☒ Base Bid ☐ Alt.#__	0172 - Set Up 4 Inch Bypass Pump		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
172	10.00	EA	$1.00	$10.00

DESCRIPTION:	☒ Base Bid ☐ Alt.#__	0173 - Slab Sodding		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
173	1,000.00	SQYD	$10.00	$10,000.00

DESCRIPTION:	☐ Base Bid ☐ Alt.#__			
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)

DESCRIPTION:	☐ Base Bid ☐ Alt.#__			
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)

DESCRIPTION:	☐ Base Bid ☐ Alt.#__			
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)

Wording for "DESCRIPTION" is to be provided by the Owner.
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BLD SERVICES, LLC

AUTHORIZATION OF AGENT
AND ATTORNEY-IN-FACT FOR BLD
SERVICES, L.L.C., BY SHIRLEY JARRELL WAGNER

I, Shirley Jarrell Wagner, the duly elected and acting Secretary/Treasurer and Manager of BLD Services, L.L.C., a Louisiana limited liability company, pursuant to the authority granted to me by resolutions unanimously adopted by the Members and Managers of BLD Services, L.L.C., in a Unanimous Written Consent of the Members and Managers of BLD Services, L.L.C., dated June 15, 2018, which resolutions are in full force and effect as of the date hereof, do hereby take the following action:

I hereby authorize, empower and appoint Danny M. Albert, Project Manager, to serve as authorized Agent and Attorney-in-Fact of BLD Services, L.L.C., to act on behalf of BLD Services, L.L.C., in connection with any and all negotiations, bids, concerns and transactions, including but not limited to the execution of any and all bids, papers, documents, affidavits, bonds, sureties, contracts and acts, and to receive and receipt thereof all purchase orders and notices issued pursuant to the provisions of any such bids or contracts; and further to take any and all actions necessary to carry to the purposes and intents of this action; and that the Members and Managers of BLD Services, L.L.C., therefore do therefore ratify, confirm and approve and accept each and every act performed by Danny M. Albert, Project Manager, as said Agent and Attorney-in-Fact of BLD Services, L.L.C., in furtherance of this appointment.

10/10/24

DATE

BLD SERVICES, LLC CORPORATE SEAL EST. 2001

Shirley Jarrell Wagner

SHIRLEY JARRELL WAGNER
SECRETARY/TREASURER AND MANAGER

00606400-1

UNANIMOUS WRITTEN CONSENT
OF THE MEMBERS AND MANAGERS OF BLD SERVICES, L.L.C.

We, the undersigned, constituting all of the Members and Managers of BLD Services, L.L.C., a Louisiana limited liability company, do hereby unanimously approve the following resolutions, effective immediately:

RESOLVED, that the following persons are hereby elected and confirmed as the Officers and Managers of BLD Services, L.L.C.:

Dan Wagner – President and Manager

Shirley Jarrell Wagner – Secretary/Treasurer and Manager

Jacob Trapani – Vice President and Manager

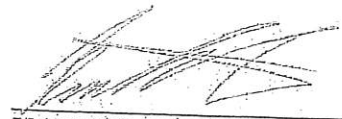
RESOLVED FURTHER, that Shirley Jarrell Wagner be and is hereby authorized and empowered to submit bids for private or public contracts for or on behalf of BLD Services, L.L.C., whether such bids be inside or outside the State of Louisiana, with all of the rights, powers, and authority incumbent thereto.

FURTHER RESOLVED, that Shirley Jarrell Wagner be and she is further authorized and empowered to sign or otherwise execute any and all contracts for or on behalf of BLD Services, L.L.C., whether they be inside or outside the State of Louisiana, including but not limited to the execution of any and all bids, papers, documents, change orders, affidavits, bonds, sureties and acts, and to receive and receipt thereof all purchase orders and notices issued pursuant to the provisions of any such bids or contract, with all of the rights, powers, and authority incumbent thereto.

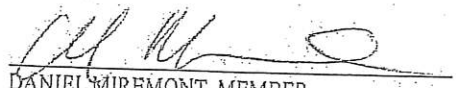
FURTHER RESOLVED, that Shirley Jarrell Wagner be and she is an authorized agent of BLD Services, L.L.C., for any and all purposes and with all of the rights, powers and authority incumber thereto.

FURTHER RESOLVED, that Shirley Jarrell Wagner be and she is further authorized and empowered to appoint Daniel P. Wagner, III, Jacob Trapani, Brent D. Albert, Danny M. Albert and Dustin T. Richards to each serve as an authorized Agent and Attorney-in-Fact of BLD Services, L.L.C., to act on behalf of BLD Services, L.L.C., in connection with any and all negotiations, bids, concerns and transactions, including but not limited to the execution of any and all bids, change orders, papers, documents, affidavits, bonds, sureties, contracts and acts, and to receive and receipt thereof all purchase orders, notices issued pursuant to the provisions of any such bids or contracts; and further to take any and all actions necessary to carry to the purpose and intent of this resolution; and that the Members and Managers of BLD Services, L.L.C., therefore do ratify, confirm and approve and accept each and every act performed by Daniel P. Wagner, III, Jacob Trapani, Brent D. Albert, Danny M. Albert and Dustin T. Richards as an Agent and Attorney-in-Fact of BLD Services, L.L.C., in furtherance of this resolution.

Thus done and signed this 15th day of June, 2018.

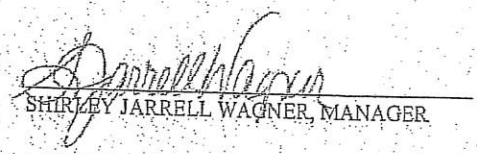


BRAD LOUIS DUTRUCH, MEMBER



DANIEL MIREMONT, MEMBER

DANIEL WAGNER, MANAGER



SHIRLEY JARRELL WAGNER, MANAGER

JACOB TRAPANI, MANAGER

Public Works Bid

AFFIDAVIT

STATE OF LOUISIANA

PARISH/COUNTY OF JEFFERSON

BEFORE ME, the undersigned authority, personally came and appeared: _____

Danny M. Albert, (Affiant) who after being by me duly sworn, deposed and said that he/she is the fully authorized Estimator/Project Manager of BLD Services, LLC (Entity), the party who submitted a bid in response to Bid Number 50-00145944, to the Parish of Jefferson.

Affiant further said:

Campaign Contribution Disclosures

(Choose A or B, if option A is indicated please include the required attachment):

Choice A X — Attached hereto is a list of all campaign contributions, including the date and amount of each contribution, made to current or former elected officials of the Parish of Jefferson by Entity, Affiant, and/or officers, directors and owners, including employees, owning 25% or more of the Entity during the two-year period immediately preceding the date of this affidavit or the current term of the elected official, whichever is greater. Further, Entity, Affiant, and/or Entity Owners have not made any contributions to or in support of current or former members of the Jefferson Parish Council or the Jefferson Parish President through or in the name of another person or legal entity, either directly or indirectly.

Choice B _____ — there are **NO** campaign contributions made which would require disclosure under Choice A of this section.

Affiant further said:

Debt Disclosures

(Choose A or B, if option A is indicated please include the required attachment):

Choice A _____ Attached hereto is a list of all debts owed by the affiant to any elected or appointed official of the Parish of Jefferson, and any and all debts owed by any elected or appointed official of the parish to the Affiant.

Choice B X There are **NO** debts which would require disclosure under Choice A of this section.

Affiant further said:

That Affiant has employed no person, corporation, firm, association, or other organization, either directly or indirectly, to secure the public contract under which he received payment, other than persons regularly employed by the Affiant whose services in connection with the construction, alteration or demolition of the public building or project or in securing the public contract were in the regular course of their duties for Affiant; and

That no part of the contract price received by Affiant was paid or will be paid to any person, corporation, firm, association, or other organization for soliciting the contract, other than the payment of their normal compensation to persons regularly employed by the Affiant whose services in connection with the construction, alteration or demolition of the public building or project were in the regular course of their duties for Affiant.

Affiant further said:

Affiant personally has not been convicted of, nor has he/she entered into a plea of guilty or nolo contendere to any of the crimes or equivalent federal crimes listed below. No individual partner, incorporator, director, manager, officer, organizer, or member, who has a minimum of a ten percent ownership in the Bidding Entity, has been convicted of, or has entered a plea of guilty or nolo contendere to any of the crimes or equivalent federal crimes listed below. A conviction of or plea of guilty or nolo contendere to the following state crimes or equivalent federal crimes shall permanently bar any person or the bidding entity from bidding on public projects:

(a) Public bribery (R.S. 14:118)
(b) Corrupt influencing (R.S. 14:120)
(c) Extortion (R.S. 14:66)
(d) Money laundering (R.S. 14:230)

A conviction of or plea of guilty or nolo contendere to the following state crimes or equivalent federal crimes shall bar any person or the bidding entity from bidding on public projects for a period of five years from the date of conviction or from the date of the entrance of the plea of guilty or nolo contendere:

(a) Theft (R.S. 14:67)
(b) Identity Theft (R.S. 14:67, 16)
(c) Theft of a business record (R.S. 14:67.20)
(d) False accounting (R.S. 14:70)
(e) Issuing worthless checks (R.S. 14:71)
(f) Bank fraud (R.S. 14:71.1)
(g) Forgery (R.S. 14:72)
(h) Contractors; misapplication of payments (R.S. 14:202)
(i) Malfeasance in office (R.S. 14:134)

The five-year prohibition provided for in this section shall apply only if the crime was committed during the solicitation or execution of a contract or bid awarded pursuant to these provisions. If evidence is submitted substantiating that a false attestation has been made and the project must be readvertised or the contract cancelled, the awarded entity making the false attestation shall be responsible to the public entity for the costs of rebidding, additional costs due to increased costs of bids and any and all delay costs due to the rebid or cancellation of this project.

[*The remainder of this page is intentionally left blank.*]

Affiant further said:

(1) Entity is registered and participates in a status verification system to verify that all employees in the State of Louisiana are legal citizens of the United States or are legal aliens.

(2) Entity shall continue, during the term of the contract, to utilize a status verification system to verify the legal status of all new employees in the State of Louisiana.

(3) Entity shall require all subcontractors to submit to the Entity a sworn affidavit verifying compliance with statements (1) and (2).

Signature of Affiant

Danny M. Albert
Printed Name of Affiant

SWORN AND SUBSCRIBED TO BEFORE ME
ON THE 10th DAY OF October, 2024.

Regina Marshall
Notary Public

Regina Marshall
Printed Name of Notary

133028
Notary/Bar Roll Number

REGINA LYNN MARSHALL
Notary Public
Parish of Jefferson
Notary ID # 133028
State of Louisiana

My commission expires at death.

BLD SERVICES, LLC

CAMPAIGN CONTRIBUTIONS BLD SERVICES, LLC

JEFFERSON PARISH

Scott Walker	$4,000	03/18/22
Cynthia Lee Sheng	$2,500	07/07/22
Jennifer Van Vrancken	$2,500	11/29/22
Dominick Impastato	$2,500	12/06/22
Scott Walker	$5,000	10/31/23
Ricky Templet	$2,500	11/07/23
Joseph Lopinto	$5,000	11/08/23
Arita Bohannan	$2,500	11/23/23
Jennifer Van Vrancken	$5,000	01/17/24
Marion Edwards	$2,500	01/17/24
Deano Bonano	$2,500	01/17/24
Byron Lee	$2,500	01/17/24
Arita Bohannan	$2,500	01/17/24
Hans Liljeberg	$2,500	01/17/24
Jason Ural	$2,500	09/14/24

2424 Tyler Street Kenner, LA 70062 Office 504-466-1344 Fax 504-461-5971 Toll-Free 888-272-6711

Print

Notary Search - Detail

Name:	**MS. REGINA LYNN MARSHALL**
Address:	**4432 LOVELAND STREET** **METAIRIE, LA 70006**
Phone:	**504-234-3719**
Phone 2:	**504-456-2485**
Notary ID Number:	**133028**
Parish:	JEFFERSON **with STATEWIDE JURISDICTION**
Agency:	N/A
Notary Type:	Non Attorney
Status:	Active
Commission Date:	03/08/2013
Oath Date:	02/27/2013
Surety Expiration Date:	03/25/2028
Annual Report Current:	**Yes**
Remote Online Notarization:	**No**

Notary Events

Suspension From: 05/09/2016 To: 05/09/2016

Deceased, Inactivated, Leave of Absence, Pre-Assessment Registration, Pre-Assessment Taken, Remote Notary Registration, Remote Notary Reinstatement, Remote Online Notary Resignation, Resigned, Retirement, and Revoked events are not available prior to February 11, 2012.

Back to Search Results **New Search**

Form **W-9**
(Rev. March 2024)
Department of the Treasury
Internal Revenue Service

Request for Taxpayer Identification Number and Certification

Go to *www.irs.gov/FormW9* for instructions and the latest information.

Give form to the requester. Do not send to the IRS.

Before you begin. For guidance related to the purpose of Form W-9, see *Purpose of Form*, below.

Print or type. See *Specific Instructions* on page 3.

1 Name of entity/individual. An entry is required. (For a sole proprietor or disregarded entity, enter the owner's name on line 1, and enter the business/disregarded entity's name on line 2.)

BLD Services,LLC

2 Business name/disregarded entity name, if different from above.

3a Check the appropriate box for federal tax classification of the entity/individual whose name is entered on line 1. Check only **one** of the following seven boxes.

☐ Individual/sole proprietor ☐ C corporation ☐ S corporation ☐ Partnership ☐ Trust/estate

☑ LLC. Enter the tax classification (C = C corporation, S = S corporation, P = Partnership) . . . . . P

Note: Check the "LLC" box above and, in the entry space, enter the appropriate code (C, S, or P) for the tax classification of the LLC, unless it is a disregarded entity. A disregarded entity should instead check the appropriate box for the tax classification of its owner.

☐ Other (see instructions)

4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3):

Exempt payee code (if any)

Exemption from Foreign Account Tax Compliance Act (FATCA) reporting code (if any)

(Applies to accounts maintained outside the United States.)

3b If on line 3a you checked "Partnership" or "Trust/estate," or checked "LLC" and entered "P" as its tax classification, and you are providing this form to a partnership, trust, or estate in which you have an ownership interest, check this box if you have any foreign partners, owners, or beneficiaries. See instructions . . . . . ☐

5 Address (number, street, and apt. or suite no.). See instructions.

2424 Tyler Street

Requester's name and address (optional)

6 City, state, and ZIP code

Kenner, LA 70062

7 List account number(s) here (optional)

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the instructions for Part I, later. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN*, later.

Note: If the account is in more than one name, see the instructions for line 1. See also *What Name and Number To Give the Requester* for guidelines on whose number to enter.

Social security number

			–			–				

or

Employer identification number

7	2	–	1	5	1	2	6	2	5

Part II Certification

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
2. I am not subject to backup withholding because (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
3. I am a U.S. citizen or other U.S. person (defined below); and
4. The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and, generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions for Part II, later.

Sign Here **Signature of U.S. person** Christ Poole **Date** 7/19/2024

General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Future developments. For the latest information about developments related to Form W-9 and its instructions, such as legislation enacted after they were published, go to *www.irs.gov/FormW9*.

What's New

Line 3a has been modified to clarify how a disregarded entity completes this line. An LLC that is a disregarded entity should check the appropriate box for the tax classification of its owner. Otherwise, it should check the "LLC" box and enter its appropriate tax classification.

New line 3b has been added to this form. A flow-through entity is required to complete this line to indicate that it has direct or indirect foreign partners, owners, or beneficiaries when it provides the Form W-9 to another flow-through entity in which it has an ownership interest. This change is intended to provide a flow-through entity with information regarding the status of its indirect foreign partners, owners, or beneficiaries, so that it can satisfy any applicable reporting requirements. For example, a partnership that has any indirect foreign partners may be required to complete Schedules K-2 and K-3. See the Partnership Instructions for Schedules K-2 and K-3 (Form 1065).

Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS is giving you this form because they

must obtain your correct taxpayer identification number (TIN), which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following.

- Form 1099-INT (interest earned or paid).
- Form 1099-DIV (dividends, including those from stocks or mutual funds).
- Form 1099-MISC (various types of income, prizes, awards, or gross proceeds).
- Form 1099-NEC (nonemployee compensation).
- Form 1099-B (stock or mutual fund sales and certain other transactions by brokers).
- Form 1099-S (proceeds from real estate transactions).
- Form 1099-K (merchant card and third-party network transactions).
- Form 1098 (home mortgage interest), 1098-E (student loan interest), and 1098-T (tuition).
- Form 1099-C (canceled debt).
- Form 1099-A (acquisition or abandonment of secured property).

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

Caution: If you don't return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See *What is backup withholding*, later.

By signing the filled-out form, you:

1. Certify that the TIN you are giving is correct (or you are waiting for a number to be issued);
2. Certify that you are not subject to backup withholding; or
3. Claim exemption from backup withholding if you are a U.S. exempt payee; and
4. Certify to your non-foreign status for purposes of withholding under chapter 3 or 4 of the Code (if applicable); and
5. Certify that FATCA code(s) entered on this form (if any) indicating that you are exempt from the FATCA reporting is correct. See *What Is FATCA Reporting*, later, for further information.

Note: If you are a U.S. person and a requester gives you a form other than Form W-9 to request your TIN, you must use the requester's form if it is substantially similar to this Form W-9.

Definition of a U.S. person. For federal tax purposes, you are considered a U.S. person if you are:

- An individual who is a U.S. citizen or U.S. resident alien;
- A partnership, corporation, company, or association created or organized in the United States or under the laws of the United States;
- An estate (other than a foreign estate); or
- A domestic trust (as defined in Regulations section 301.7701-7).

Establishing U.S. status for purposes of chapter 3 and chapter 4 withholding. Payments made to foreign persons, including certain distributions, allocations of income, or transfers of sales proceeds, may be subject to withholding under chapter 3 or chapter 4 of the Code (sections 1441–1474). Under those rules, if a Form W-9 or other certification of non-foreign status has not been received, a withholding agent, transferee, or partnership (payor) generally applies presumption rules that may require the payor to withhold applicable tax from the recipient, owner, transferor, or partner (payee). See Pub. 515, Withholding of Tax on Nonresident Aliens and Foreign Entities.

The following persons must provide Form W-9 to the payor for purposes of establishing its non-foreign status.

- In the case of a disregarded entity with a U.S. owner, the U.S. owner of the disregarded entity and not the disregarded entity.
- In the case of a grantor trust with a U.S. grantor or other U.S. owner, generally, the U.S. grantor or other U.S. owner of the grantor trust and not the grantor trust.
- In the case of a U.S. trust (other than a grantor trust), the U.S. trust and not the beneficiaries of the trust.

See Pub. 515 for more information on providing a Form W-9 or a certification of non-foreign status to avoid withholding.

Foreign person. If you are a foreign person or the U.S. branch of a foreign bank that has elected to be treated as a U.S. person (under Regulations section 1.1441-1(b)(2)(iv) or other applicable section for chapter 3 or 4 purposes), do not use Form W-9. Instead, use the appropriate Form W-8 or Form 8233 (see Pub. 515). If you are a qualified foreign pension fund under Regulations section 1.897(l)-1(d), or a partnership that is wholly owned by qualified foreign pension funds, that is treated as a non-foreign person for purposes of section 1445 withholding, do not use Form W-9. Instead, use Form W-8EXP (or other certification of non-foreign status).

Nonresident alien who becomes a resident alien. Generally, only a nonresident alien individual may use the terms of a tax treaty to reduce or eliminate U.S. tax on certain types of income. However, most tax treaties contain a provision known as a saving clause. Exceptions specified in the saving clause may permit an exemption from tax to continue for certain types of income even after the payee has otherwise become a U.S. resident alien for tax purposes.

If you are a U.S. resident alien who is relying on an exception contained in the saving clause of a tax treaty to claim an exemption from U.S. tax on certain types of income, you must attach a statement to Form W-9 that specifies the following five items.

1. The treaty country. Generally, this must be the same treaty under which you claimed exemption from tax as a nonresident alien.
2. The treaty article addressing the income.
3. The article number (or location) in the tax treaty that contains the saving clause and its exceptions.
4. The type and amount of income that qualifies for the exemption from tax.
5. Sufficient facts to justify the exemption from tax under the terms of the treaty article.

Example. Article 20 of the U.S.-China income tax treaty allows an exemption from tax for scholarship income received by a Chinese student temporarily present in the United States. Under U.S. law, this student will become a resident alien for tax purposes if their stay in the United States exceeds 5 calendar years. However, paragraph 2 of the first Protocol to the U.S.-China treaty (dated April 30, 1984) allows the provisions of Article 20 to continue to apply even after the Chinese student becomes a resident alien of the United States. A Chinese student who qualifies for this exception (under paragraph 2 of the first Protocol) and is relying on this exception to claim an exemption from tax on their scholarship or fellowship income would attach to Form W-9 a statement that includes the information described above to support that exemption.

If you are a nonresident alien or a foreign entity, give the requester the appropriate completed Form W-8 or Form 8233.

Backup Withholding

What is backup withholding? Persons making certain payments to you must under certain conditions withhold and pay to the IRS 24% of such payments. This is called "backup withholding." Payments that may be subject to backup withholding include, but are not limited to, interest, tax-exempt interest, dividends, broker and barter exchange transactions, rents, royalties, nonemployee pay, payments made in settlement of payment card and third-party network transactions, and certain payments from fishing boat operators. Real estate transactions are not subject to backup withholding.

You will not be subject to backup withholding on payments you receive if you give the requester your correct TIN, make the proper certifications, and report all your taxable interest and dividends on your tax return.

Payments you receive will be subject to backup withholding if:

1. You do not furnish your TIN to the requester;
2. You do not certify your TIN when required (see the instructions for Part II for details);
3. The IRS tells the requester that you furnished an incorrect TIN;
4. The IRS tells you that you are subject to backup withholding because you did not report all your interest and dividends on your tax return (for reportable interest and dividends only); or
5. You do not certify to the requester that you are not subject to backup withholding, as described in item 4 under *"By signing the filled-out form"* above (for reportable interest and dividend accounts opened after 1983 only).

Certain payees and payments are exempt from backup withholding. See *Exempt payee code*, later, and the separate Instructions for the Requester of Form W-9 for more information.

See also *Establishing U.S. status for purposes of chapter 3 and chapter 4 withholding*, earlier.

What Is FATCA Reporting?

The Foreign Account Tax Compliance Act (FATCA) requires a participating foreign financial institution to report all U.S. account holders that are specified U.S. persons. Certain payees are exempt from FATCA reporting. See *Exemption from FATCA reporting code*, later, and the Instructions for the Requester of Form W-9 for more information.

Updating Your Information

You must provide updated information to any person to whom you claimed to be an exempt payee if you are no longer an exempt payee and anticipate receiving reportable payments in the future from this person. For example, you may need to provide updated information if you are a C corporation that elects to be an S corporation, or if you are no longer tax exempt. In addition, you must furnish a new Form W-9 if the name or TIN changes for the account, for example, if the grantor of a grantor trust dies.

Penalties

Failure to furnish TIN. If you fail to furnish your correct TIN to a requester, you are subject to a penalty of $50 for each such failure unless your failure is due to reasonable cause and not to willful neglect.

Civil penalty for false information with respect to withholding. If you make a false statement with no reasonable basis that results in no backup withholding, you are subject to a $500 penalty.

Criminal penalty for falsifying information. Willfully falsifying certifications or affirmations may subject you to criminal penalties including fines and/or imprisonment.

Misuse of TINs. If the requester discloses or uses TINs in violation of federal law, the requester may be subject to civil and criminal penalties.

Specific Instructions

Line 1

You must enter one of the following on this line; **do not** leave this line blank. The name should match the name on your tax return.

If this Form W-9 is for a joint account (other than an account maintained by a foreign financial institution (FFI)), list first, and then circle, the name of the person or entity whose number you entered in Part I of Form W-9. If you are providing Form W-9 to an FFI to document a joint account, each holder of the account that is a U.S. person must provide a Form W-9.

- **Individual.** Generally, enter the name shown on your tax return. If you have changed your last name without informing the Social Security Administration (SSA) of the name change, enter your first name, the last name as shown on your social security card, and your new last name.

Note for ITIN applicant: Enter your individual name as it was entered on your Form W-7 application, line 1a. This should also be the same as the name you entered on the Form 1040 you filed with your application.

- **Sole proprietor.** Enter your individual name as shown on your Form 1040 on line 1. Enter your business, trade, or "doing business as" (DBA) name on line 2.

- **Partnership, C corporation, S corporation, or LLC, other than a disregarded entity.** Enter the entity's name as shown on the entity's tax return on line 1 and any business, trade, or DBA name on line 2.

- **Other entities.** Enter your name as shown on required U.S. federal tax documents on line 1. This name should match the name shown on the charter or other legal document creating the entity. Enter any business, trade, or DBA name on line 2.

- **Disregarded entity.** In general, a business entity that has a single owner, including an LLC, and is not a corporation, is disregarded as an entity separate from its owner (a disregarded entity). See Regulations section 301.7701-2(c)(2). A disregarded entity should check the appropriate box for the tax classification of its owner. Enter the owner's name on line 1. The name of the owner entered on line 1 should never be a disregarded entity. The name on line 1 should be the name shown on the income tax return on which the income should be reported. For example, if a foreign LLC that is treated as a disregarded entity for U.S. federal tax purposes has a single owner that is a U.S. person, the U.S. owner's name is required to be provided on line 1. If the direct owner of the entity is also a disregarded entity, enter the first owner that is not disregarded for federal tax purposes. Enter the disregarded entity's name on line 2. If the owner of the disregarded entity is a foreign person, the owner must complete an appropriate Form W-8 instead of a Form W-9. This is the case even if the foreign person has a U.S. TIN.

Line 2

If you have a business name, trade name, DBA name, or disregarded entity name, enter it on line 2.

Line 3a

Check the appropriate box on line 3a for the U.S. federal tax classification of the person whose name is entered on line 1. Check only one box on line 3a.

IF the entity/individual on line 1 is a(n) . . .	THEN check the box for . . .
• Corporation	Corporation.
• Individual or • Sole proprietorship	Individual/sole proprietor.
• LLC classified as a partnership for U.S. federal tax purposes or • LLC that has filed Form 8832 or 2553 electing to be taxed as a corporation	Limited liability company and enter the appropriate tax classification: P = Partnership, C = C corporation, or S = S corporation.
• Partnership	Partnership.
• Trust/estate	Trust/estate.

Line 3b

Check this box if you are a partnership (including an LLC classified as a partnership for U.S. federal tax purposes), trust, or estate that has any foreign partners, owners, or beneficiaries, and you are providing this form to a partnership, trust, or estate, in which you have an ownership interest. You must check the box on line 3b if you receive a Form W-8 (or documentary evidence) from any partner, owner, or beneficiary establishing foreign status or if you receive a Form W-9 from any partner, owner, or beneficiary that has checked the box on line 3b.

Note: A partnership that provides a Form W-9 and checks box 3b may be required to complete Schedules K-2 and K-3 (Form 1065). For more information, see the Partnership Instructions for Schedules K-2 and K-3 (Form 1065).

If you are required to complete line 3b but fail to do so, you may not receive the information necessary to file a correct information return with the IRS or furnish a correct payee statement to your partners or beneficiaries. See, for example, sections 6698, 6722, and 6724 for penalties that may apply.

Line 4 Exemptions

If you are exempt from backup withholding and/or FATCA reporting, enter in the appropriate space on line 4 any code(s) that may apply to you.

Exempt payee code.

- Generally, individuals (including sole proprietors) are not exempt from backup withholding.
- Except as provided below, corporations are exempt from backup withholding for certain payments, including interest and dividends.
- Corporations are not exempt from backup withholding for payments made in settlement of payment card or third-party network transactions.
- Corporations are not exempt from backup withholding with respect to attorneys' fees or gross proceeds paid to attorneys, and corporations that provide medical or health care services are not exempt with respect to payments reportable on Form 1099-MISC.

The following codes identify payees that are exempt from backup withholding. Enter the appropriate code in the space on line 4.

1—An organization exempt from tax under section 501(a), any IRA, or a custodial account under section 403(b)(7) if the account satisfies the requirements of section 401(f)(2).

2—The United States or any of its agencies or instrumentalities.

3—A state, the District of Columbia, a U.S. commonwealth or territory, or any of their political subdivisions or instrumentalities.

4—A foreign government or any of its political subdivisions, agencies, or instrumentalities.

5—A corporation.

6—A dealer in securities or commodities required to register in the United States, the District of Columbia, or a U.S. commonwealth or territory.

7—A futures commission merchant registered with the Commodity Futures Trading Commission.

8—A real estate investment trust.

9—An entity registered at all times during the tax year under the Investment Company Act of 1940.

10—A common trust fund operated by a bank under section 584(a).

11—A financial institution as defined under section 581.

12—A middleman known in the investment community as a nominee or custodian.

13—A trust exempt from tax under section 664 or described in section 4947.

The following chart shows types of payments that may be exempt from backup withholding. The chart applies to the exempt payees listed above, 1 through 13.

IF the payment is for . . .	THEN the payment is exempt for . . .
• Interest and dividend payments	All exempt payees except for 7.
• Broker transactions	Exempt payees 1 through 4 and 6 through 11 and all C corporations. S corporations must not enter an exempt payee code because they are exempt only for sales of noncovered securities acquired prior to 2012.
• Barter exchange transactions and patronage dividends	Exempt payees 1 through 4.
• Payments over $600 required to be reported and direct sales over $5,000[1]	Generally, exempt payees 1 through 5.[2]
• Payments made in settlement of payment card or third-party network transactions	Exempt payees 1 through 4.

[1] See Form 1099-MISC, Miscellaneous Information, and its instructions.

[2] However, the following payments made to a corporation and reportable on Form 1099-MISC are not exempt from backup withholding: medical and health care payments, attorneys' fees, gross proceeds paid to an attorney reportable under section 6045(f), and payments for services paid by a federal executive agency.

Exemption from FATCA reporting code. The following codes identify payees that are exempt from reporting under FATCA. These codes apply to persons submitting this form for accounts maintained outside of the United States by certain foreign financial institutions. Therefore, if you are only submitting this form for an account you hold in the United States, you may leave this field blank. Consult with the person requesting this form if you are uncertain if the financial institution is subject to these requirements. A requester may indicate that a code is not required by providing you with a Form W-9 with "Not Applicable" (or any similar indication) entered on the line for a FATCA exemption code.

A—An organization exempt from tax under section 501(a) or any individual retirement plan as defined in section 7701(a)(37).

B—The United States or any of its agencies or instrumentalities.

C—A state, the District of Columbia, a U.S. commonwealth or territory, or any of their political subdivisions or instrumentalities.

D—A corporation the stock of which is regularly traded on one or more established securities markets, as described in Regulations section 1.1472-1(c)(1)(i).

E—A corporation that is a member of the same expanded affiliated group as a corporation described in Regulations section 1.1472-1(c)(1)(i).

F—A dealer in securities, commodities, or derivative financial instruments (including notional principal contracts, futures, forwards, and options) that is registered as such under the laws of the United States or any state.

G—A real estate investment trust.

H—A regulated investment company as defined in section 851 or an entity registered at all times during the tax year under the Investment Company Act of 1940.

I—A common trust fund as defined in section 584(a).

J—A bank as defined in section 581.

K—A broker.

L—A trust exempt from tax under section 664 or described in section 4947(a)(1).

M—A tax-exempt trust under a section 403(b) plan or section 457(g) plan.

Note: You may wish to consult with the financial institution requesting this form to determine whether the FATCA code and/or exempt payee code should be completed.

Line 5

Enter your address (number, street, and apartment or suite number). This is where the requester of this Form W-9 will mail your information returns. If this address differs from the one the requester already has on file, enter "NEW" at the top. If a new address is provided, there is still a chance the old address will be used until the payor changes your address in their records.

Line 6

Enter your city, state, and ZIP code.

Part I. Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. If you are a resident alien and you do not have, and are not eligible to get, an SSN, your TIN is your IRS ITIN. Enter it in the entry space for the Social security number. If you do not have an ITIN, see *How to get a TIN* below.

If you are a sole proprietor and you have an EIN, you may enter either your SSN or EIN.

If you are a single-member LLC that is disregarded as an entity separate from its owner, enter the owner's SSN (or EIN, if the owner has one). If the LLC is classified as a corporation or partnership, enter the entity's EIN.

Note: See *What Name and Number To Give the Requester*, later, for further clarification of name and TIN combinations.

How to get a TIN. If you do not have a TIN, apply for one immediately. To apply for an SSN, get Form SS-5, Application for a Social Security Card, from your local SSA office or get this form online at *www.SSA.gov*. You may also get this form by calling 800-772-1213. Use Form W-7, Application for IRS Individual Taxpayer Identification Number, to apply for an ITIN, or Form SS-4, Application for Employer Identification Number, to apply for an EIN. You can apply for an EIN online by accessing the IRS website at *www.irs.gov/EIN*. Go to *www.irs.gov/Forms* to view, download, or print Form W-7 and/or Form SS-4. Or, you can go to *www.irs.gov/OrderForms* to place an order and have Form W-7 and/or Form SS-4 mailed to you within 15 business days.

If you are asked to complete Form W-9 but do not have a TIN, apply for a TIN and enter "Applied For" in the space for the TIN, sign and date the form, and give it to the requester. For interest and dividend payments, and certain payments made with respect to readily tradable instruments, you will generally have 60 days to get a TIN and give it to the requester before you are subject to backup withholding on payments. The 60-day rule does not apply to other types of payments. You will be subject to backup withholding on all such payments until you provide your TIN to the requester.

Note: Entering "Applied For" means that you have already applied for a TIN or that you intend to apply for one soon. See also *Establishing U.S. status for purposes of chapter 3 and chapter 4 withholding*, earlier, for when you may instead be subject to withholding under chapter 3 or 4 of the Code.

Caution: A disregarded U.S. entity that has a foreign owner must use the appropriate Form W-8.

Part II. Certification

To establish to the withholding agent that you are a U.S. person, or resident alien, sign Form W-9. You may be requested to sign by the withholding agent even if item 1, 4, or 5 below indicates otherwise.

For a joint account, only the person whose TIN is shown in Part I should sign (when required). In the case of a disregarded entity, the person identified on line 1 must sign. Exempt payees, see *Exempt payee code*, earlier.

Signature requirements. Complete the certification as indicated in items 1 through 5 below.

1. Interest, dividend, and barter exchange accounts opened before 1984 and broker accounts considered active during 1983. You must give your correct TIN, but you do not have to sign the certification.

2. Interest, dividend, broker, and barter exchange accounts opened after 1983 and broker accounts considered inactive during 1983. You must sign the certification or backup withholding will apply. If you are subject to backup withholding and you are merely providing your correct TIN to the requester, you must cross out item 2 in the certification before signing the form.

3. Real estate transactions. You must sign the certification. You may cross out item 2 of the certification.

4. Other payments. You must give your correct TIN, but you do not have to sign the certification unless you have been notified that you have previously given an incorrect TIN. "Other payments" include payments made in the course of the requester's trade or business for rents, royalties, goods (other than bills for merchandise), medical and health care services (including payments to corporations), payments to a nonemployee for services, payments made in settlement of payment card and third-party network transactions, payments to certain fishing boat crew members and fishermen, and gross proceeds paid to attorneys (including payments to corporations).

5. Mortgage interest paid by you, acquisition or abandonment of secured property, cancellation of debt, qualified tuition program payments (under section 529), ABLE accounts (under section 529A), IRA, Coverdell ESA, Archer MSA or HSA contributions or distributions, and pension distributions. You must give your correct TIN, but you do not have to sign the certification.

What Name and Number To Give the Requester

For this type of account:	Give name and SSN of:
1. Individual	The individual
2. Two or more individuals (joint account) other than an account maintained by an FFI	The actual owner of the account or, if combined funds, the first individual on the account[1]
3. Two or more U.S. persons (joint account maintained by an FFI)	Each holder of the account
4. Custodial account of a minor (Uniform Gift to Minors Act)	The minor[2]
5. a. The usual revocable savings trust (grantor is also trustee)	The grantor-trustee[1]
b. So-called trust account that is not a legal or valid trust under state law	The actual owner[1]
6. Sole proprietorship or disregarded entity owned by an individual	The owner[3]
7. Grantor trust filing under Optional Filing Method 1 (see Regulations section 1.671-4(b)(2)(i)(A))**	The grantor*
8. Disregarded entity not owned by an individual	The owner
9. A valid trust, estate, or pension trust	Legal entity[4]
10. Corporation or LLC electing corporate status on Form 8832 or Form 2553	The corporation
11. Association, club, religious, charitable, educational, or other tax-exempt organization	The organization
12. Partnership or multi-member LLC	The partnership
13. A broker or registered nominee	The broker or nominee
14. Account with the Department of Agriculture in the name of a public entity (such as a state or local government, school district, or prison) that receives agricultural program payments	The public entity
15. Grantor trust filing Form 1041 or under the Optional Filing Method 2, requiring Form 1099 (see Regulations section 1.671-4(b)(2)(i)(B))**	The trust

[1] List first and circle the name of the person whose number you furnish. If only one person on a joint account has an SSN, that person's number must be furnished.

[2] Circle the minor's name and furnish the minor's SSN.

[3] You must show your individual name on line 1, and enter your business or DBA name, if any, on line 2. You may use either your SSN or EIN (if you have one), but the IRS encourages you to use your SSN.

[4] List first and circle the name of the trust, estate, or pension trust. (Do not furnish the TIN of the personal representative or trustee unless the legal entity itself is not designated in the account title.)

*__Note:__ The grantor must also provide a Form W-9 to the trustee of the trust.

**For more information on optional filing methods for grantor trusts, see the Instructions for Form 1041.

Note: If no name is circled when more than one name is listed, the number will be considered to be that of the first name listed.

Secure Your Tax Records From Identity Theft

Identity theft occurs when someone uses your personal information, such as your name, SSN, or other identifying information, without your permission to commit fraud or other crimes. An identity thief may use your SSN to get a job or may file a tax return using your SSN to receive a refund.

To reduce your risk:

- Protect your SSN,
- Ensure your employer is protecting your SSN, and
- Be careful when choosing a tax return preparer.

If your tax records are affected by identity theft and you receive a notice from the IRS, respond right away to the name and phone number printed on the IRS notice or letter.

If your tax records are not currently affected by identity theft but you think you are at risk due to a lost or stolen purse or wallet, questionable credit card activity, or a questionable credit report, contact the IRS Identity Theft Hotline at 800-908-4490 or submit Form 14039.

For more information, see Pub. 5027, Identity Theft Information for Taxpayers.

Victims of identity theft who are experiencing economic harm or a systemic problem, or are seeking help in resolving tax problems that have not been resolved through normal channels, may be eligible for Taxpayer Advocate Service (TAS) assistance. You can reach TAS by calling the TAS toll-free case intake line at 877-777-4778 or TTY/TDD 800-829-4059.

Protect yourself from suspicious emails or phishing schemes. Phishing is the creation and use of email and websites designed to mimic legitimate business emails and websites. The most common act is sending an email to a user falsely claiming to be an established legitimate enterprise in an attempt to scam the user into surrendering private information that will be used for identity theft.

The IRS does not initiate contacts with taxpayers via emails. Also, the IRS does not request personal detailed information through email or ask taxpayers for the PIN numbers, passwords, or similar secret access information for their credit card, bank, or other financial accounts.

If you receive an unsolicited email claiming to be from the IRS, forward this message to *phishing@irs.gov*. You may also report misuse of the IRS name, logo, or other IRS property to the Treasury Inspector General for Tax Administration (TIGTA) at 800-366-4484. You can forward suspicious emails to the Federal Trade Commission at *spam@uce.gov* or report them at *www.ftc.gov/complaint*. You can contact the FTC at *www.ftc.gov/idtheft* or 877-IDTHEFT (877-438-4338). If you have been the victim of identity theft, see *www.IdentityTheft.gov* and Pub. 5027.

Go to *www.irs.gov/IdentityTheft* to learn more about identity theft and how to reduce your risk.

Privacy Act Notice

Section 6109 of the Internal Revenue Code requires you to provide your correct TIN to persons (including federal agencies) who are required to file information returns with the IRS to report interest, dividends, or certain other income paid to you; mortgage interest you paid; the acquisition or abandonment of secured property; the cancellation of debt; or contributions you made to an IRA, Archer MSA, or HSA. The person collecting this form uses the information on the form to file information returns with the IRS, reporting the above information. Routine uses of this information include giving it to the Department of Justice for civil and criminal litigation and to cities, states, the District of Columbia, and U.S. commonwealths and territories for use in administering their laws. The information may also be disclosed to other countries under a treaty, to federal and state agencies to enforce civil and criminal laws, or to federal law enforcement and intelligence agencies to combat terrorism. You must provide your TIN whether or not you are required to file a tax return. Under section 3406, payors must generally withhold a percentage of taxable interest, dividends, and certain other payments to a payee who does not give a TIN to the payor. Certain penalties may also apply for providing false or fraudulent information.

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 10/1/2024

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER
Marsh McLennan Agency
8144 Walnut Hill Lane, 16th Floor
Dallas TX 75231

CONTACT NAME: Laurie Gibbs (Formerly Carter)
PHONE (A/C, No, Ext): 972-770-7138 **FAX (A/C, No):** 972-404-5580
E-MAIL ADDRESS: Laurie.Gibbs@MarshMMA.com

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A : XL Specialty Insurance Company	37885
INSURER B : National Union Fire Ins Co PittsburghPA	19445
INSURER C : New Hampshire Insurance Company	23841
INSURER D :	
INSURER E :	
INSURER F :	

INSURED BLDSERVI
BLD Services, LLC
2424 Tyler St.
Kenner LA 70062

COVERAGES **CERTIFICATE NUMBER:** 341747723 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
B	X COMMERCIAL GENERAL LIABILITY CLAIMS-MADE X OCCUR X $10,000 X Incl. Cont. Liab GEN'L AGGREGATE LIMIT APPLIES PER: POLICY X PRO-JECT LOC OTHER:			9894831	6/1/2024	6/1/2025	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG $	$ 2,000,000 $ 300,000 $ 10,000 $ 2,000,000 $ 15,000,000 $ 4,000,000 $
B	AUTOMOBILE LIABILITY X ANY AUTO OWNED AUTOS ONLY / SCHEDULED AUTOS X HIRED AUTOS ONLY / X NON-OWNED AUTOS ONLY X $250 Comp / X $500 Coll			5717849	6/1/2024	6/1/2025	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident) $	$ 2,000,000 $ $ $ $
A	X UMBRELLA LIAB X OCCUR EXCESS LIAB CLAIMS-MADE DED X RETENTION $ 10,000			US00081760LI24A	6/1/2024	6/1/2025	EACH OCCURRENCE AGGREGATE $	$ 10,000,000 $ 10,000,000 $
C	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANYPROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) Y / N: Y If yes, describe under DESCRIPTION OF OPERATIONS below	N / A		WC015853407	6/1/2024	6/1/2025	X PER STATUTE / OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	 $ 1,000,000 $ 1,000,000 $ 1,000,000
A	Builders Risk			UM00060469MA24A	6/1/2024	6/1/2025	SEE BELOW	SEE BELOW

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

CONTINUED ON PAGES 2 & 3

See Attached...

CERTIFICATE HOLDER

The Parish of Jefferson, Its Districts, Departments, and Agencies Under the Direction of the Parish President and the Parish Council
Jefferson Parish Department of Purchasing
1221 Elmwood Pk. Blvd., Suite 404
Jefferson LA 70123

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

AGENCY CUSTOMER ID: BLDSERVI

LOC #:

ADDITIONAL REMARKS SCHEDULE

AGENCY	NAMED INSURED
Marsh McLennan Agency	BLD Services, LLC 2424 Tyler St. Kenner LA 70062
POLICY NUMBER	
CARRIER / NAIC CODE	EFFECTIVE DATE:

ADDITIONAL REMARKS

THIS ADDITIONAL REMARKS FORM IS A SCHEDULE TO ACORD FORM,

FORM NUMBER: 25 FORM TITLE: CERTIFICATE OF LIABILITY INSURANCE

CONTINUED FROM PAGE 1

Blanket Additional Insured Form #CG 2010, Edition 12/19 (Additional Insured - Owners, Lessees or Contractors - Scheduled Person or Organization) Applies to the General Liability Policy
Blanket Additional Insured Form #CG 2011, Edition 12/19 (Additional Insured - Managers or Lessors of Premises) Applies to the General Liability Policy
Blanket Additional Insured Form #CG 2012, Edition 12/19 (Additional Insured - State or Political Subdivision - Permits or Authorizations) Applies to the General Liability Policy
Blanket Additional Insured Form #CG 2015, Edition 12/19 (Additional Insured - Vendors) Applies to the General Liability Policy
Blanket Additional Insured Form #CG 2018, Edition 12/19 (Additional Insured - Mortgagee, Assignee or Receiver) Applies to the General Liability Policy
Blanket Additional Insured Form #CG 2034, Edition 12/19 (Additional Insured - Lessor of Leased Equipment Automatic Status When Required in Lease Agreement With You) Applies to the General Liability Policy
Blanket Additional Insured Form #CG 2037, Edition 12/19 (Additional Insured - Owners, Lessees or Contractors - Completed Operations) Applies to the General Liability Policy
Blanket Primary & Non-Contributory Form #CG 2001, Edition 12/19 Applies to the General Liability Policy
Blanket Waiver of Subrogation Form #CG 2404, Edition 12/19 Applies to the General Liability Policy
Blanket 90-Day Notice of Cancellation Form #CG 0224, Edition 10/93 (Earlier Notice of Cancellation Provided By Us - 90 Days, Except For Non-Payment of Premium) Applies to the General Liability Policy

Blanket Additional Insured Including Primary Non-Contributory Form #74445, Edition 10/99 Applies to the Automobile Liability Policy
Blanket Additional Insured Form #87950, Edition 09/14 (Additional Insured - Where Required Under Written Contract) Applies to the Automobile Liability Policy
Blanket Lessor - Additional Insured & Loss Payee Form #CA 0413, Edition 10/13 Applies to the Automobile Liability Policy
Blanket Primary & Non-Contributory Form #74445, Edition 10/99 Applies to the Automobile Liability Policy
Blanket Waiver of Subrogation Form #62897, Edition 06/95 Applies to the Automobile Liability Policy
Blanket 90-Day Notice of Cancellation Endorsement Form #99307, Edition 09/14 (Early Notice of Cancellation Provided By Us - 90 Days, Except 10 Days For Non-Payment of Premium) Applies to the Automobile Liability Policy

Blanket Waiver of Subrogation Form #WC 000313, Edition 04/84 Applies to the Workers' Compensation Policy
Blanket Waiver of Subrogation Form #WC 420304B, Edition 06/14 Applies to the Workers' Compensation Policy For Texas
Blanket Notice of Cancellation Endorsement Form #WC 170601J, Edition 08/18 Applies to the Workers" Compensation Policy

The General Liability Policy Includes a Blanket Additional Insured Endorsement to the Certificate Holder Only When There is a Written Contract Between the Named Insured and the Certificate Holder That Requires Such Status

The General Liability Policy Contains a Blanket Endorsement With Primary and Non-Contributory Wording That May Apply Only When There is a Written Contract Between the Named Insured and the Certificate Holder That Requires Such Status

The General Liability Policy Contains a Blanket Waiver of Subrogation Endorsement That May Apply Only When There is a Written Contract Between the Named Insured and the Certificate Holder That Requires Such Status

The General Liability Policy Contains a Blanket Notice of Cancellation Endorsement That May Apply Only When There is a Written Contract Between the Named Insured and the Certificate Holder That Requires Such Status

The Automobile Liability Policy Includes a Blanket Additional Insured Endorsement to the Certificate Holder Only When There is a Written Contract Between the Named Insured and the Certificate Holder That Requires Such Status

The Automobile Liability Policy Contains a Blanket Endorsement With Primary and Non-Contributory Wording That May Apply Only When There is a Written Contract Between the Named Insured and the Certificate Holder That Requires Such Status

The Automobile Liability Policy Contains a Blanket Waiver of Subrogation Endorsement That May Apply Only When There is a Written Contract Between the Named Insured and the Certificate Holder That Requires Such Status

The Automobile Liability Policy Contains a Blanket Notice of Cancellation Endorsement That May Apply Only When There is a Written Contract Between the Named Insured and the Certificate Holder That Requires Such Status

The Workers' Compensation Policy Contains a Blanket Waiver of Subrogation Endorsement That May Apply Only When There is a Written Contract Between the Named Insured and the Certificate Holder That Requires Such Status

The Workers' Compensation Policy Contains a Blanket Notice of Cancellation Endorsement That May Apply Only When There is a Written Contract Between the Named Insured and the Certificate Holder That Requires Such Status

CONTINUED ON PAGE 3

AGENCY CUSTOMER ID: BLDSERVI

LOC #:

ADDITIONAL REMARKS SCHEDULE

AGENCY	NAMED INSURED
Marsh McLennan Agency	BLD Services, LLC 2424 Tyler St. Kenner LA 70062
POLICY NUMBER	
CARRIER / NAIC CODE	EFFECTIVE DATE:

ADDITIONAL REMARKS

THIS ADDITIONAL REMARKS FORM IS A SCHEDULE TO ACORD FORM,

FORM NUMBER: 25 FORM TITLE: CERTIFICATE OF LIABILITY INSURANCE

CONTINUED FROM PAGES 1 & 2

Includes Contractual Liability

Excluded Officers: Brad Dutruch & Danny Miremont

X, C, U is Not Excluded; Therefore, Included

Includes Hired Auto Physical Damage

Umbrella Policy Follows Form of Underlying Insurance

BUILDERS RISK CONTINUED FROM ABOVE

Builders Risk Policy Continued From Above
Insurer Letter A - XL Specialty Insurance Company
Policy Term: 6/1/2024 through 6/1/2025
Policy #: UM00060469MA24A

$20,000,000 - Maximum Limit of Insurance
$7,500,000 - Covered Property, Except
$2,500,000 - As Respects Frame, Brick Veneer & Joisted Masonry Construction

- Sub-Limits -
$1,000,000 - Named Storm
$1,000,000 - Temporary Premises
$250,000 - Transit

- Deductibles -
$2,500 - Covered Property
3% of Values At Risk At The Time of Loss Subject to $10,000 Minimum As Respects Named Windstorm in Tier 2 Parishes or Counties. $500,000 Applies to Tier 1 Parishes and Counties

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Bid No. 50-00145944 / Bid Date: October 10, 2024 / Two (2) Year Contract For Preventive Maintenance (Lining) of Existing Sanitary and Storm Sewers, Including Service Laterals at Scattered Locations for the Jefferson Parish Department of Sewerage

State of Louisiana

State Licensing Board for Contractors

This is to Certify that:

BLD SERVICES, LLC
2424 Tyler Street
Kenner, LA 70062

is duly licensed and entitled to practice the following classifications

BUILDING CONSTRUCTION; ELECTRICAL WORK (RESTRICTED); HEAVY CONSTRUCTION; HIGHWAY, STREET AND BRIDGE CONSTRUCTION; MECHANICAL WORK (STATEWIDE); MUNICIPAL AND PUBLIC WORKS CONSTRUCTION; SPECIALTY: COASTAL RESTORATION & HABITAT ENHANCEMENT; SPECIALTY: LANDFILL GAS AND LEACHATE CONTROL SYSTEMS; SPECIALTY: WHARVES, DOCKS, HARBOR IMPROVEMENTS AND TERMINALS

Witness our hand and seal of the Board dated,
Baton Rouge, LA 16th day of December 2021

Director

Chairman

Treasurer

Expiration Date: December 15, 2024

License No:46722

This License Is Not Transferrable

BLD SERVICES, LLC

October 10, 2024

Jefferson Parish
Department of Purchasing
200 Derbigny Street
Suite 4400
Gretna, LA 70053

Attn: Mark Buttery (Purchasing Specialist II)
Mark.buttery@jeffparish.net
504-364-2810

RE: Two (2) Year Contract for Preventative Maintenance (Lining) of Existing Sanitary and Storm Sewers, Including Service Laterals at Scattered Locations for Jefferson Parish Department of Sewerage (Bid Number 50-00145944)

Dear Mark,

Listed below are the subcontractors BLD plan to utilize on the above project.

1. Prince Dump Truck Services
2. Moons Enterprises
3. Fleming Construction
4. RAMJ Construction
5. P.M. Construction and Rehab.
6. JF Fontenot Electric
7. Tullier Services
8. RUE Contractors
9. Advantage Manhole

Please contact me if you should have any questions.

Sincerely,

Danny M. Albert
Estimator / Project Manager
2424 Tyler Street
Kenner, LA 70062
504-466-1344 (Office) / 504-461-5971 (Fax) / 504-382-3817 (Cell)
dalbert@bldllc.net / www.bldllc.net

BLD SERVICES, LLC

October 10, 2024

Jefferson Parish
Department of Purchasing
200 Derbigny Street
Suite 4400
Gretna, LA 70053

Attn: Mark Buttery (Purchasing Specialist II)
Mark.buttery@jeffparish.net
504-364-2810

RE: Two (2) Year Contract for Preventative Maintenance (Lining) of Existing Sanitary and Storm Sewers, Including Service Laterals at Scattered Locations for Jefferson Parish Department of Sewerage (Bid Number 50-00145944) / Qualifications – Section 1.13-5

Dear Mark,

In accordance with specification section "1.13-5 references for a new product", BLD Services, LLC will install all products as specified and no proposed acceptable equal product will be used on this contract.

Please contact me if you should have any questions.

Sincerely,

Danny M. Albert
Estimator / Project Manager
2424 Tyler Street
Kenner, LA 70062
504-466-1344 (Office) / 504-461-5971 (Fax) / 504-382-3817 (Cell)
dalbert@bldllc.net / www.bldllc.net

BLD SERVICES, LLC

October 10, 2024

Jefferson Parish
Department of Purchasing
200 Derbigny Street
Suite 4400
Gretna, LA 70053

Attn: Mark Buttery (Purchasing Specialist II)
Mark.buttery@jeffparish.net
504-364-2810

RE: Two (2) Year Contract for Preventative Maintenance (Lining) of Existing Sanitary and Storm Sewers, Including Service Laterals at Scattered Locations for Jefferson Parish Department of Sewerage (Bid Number 50-00145944) / Qualifications – Section 1.13-6

Dear Mark,

In accordance with specification section "1.13-6 proposed installer statement as to country origin of all material used to produce the final installed product", BLD Services, LLC has attached (2) documents for certification.

Please contact me if you should have any questions.

Sincerely,

Danny M. Albert
Estimator / Project Manager
2424 Tyler Street
Kenner, LA 70062
504-466-1344 (Office) / 504-461-5971 (Fax) / 504-382-3817 (Cell)
dalbert@bldllc.net / www.bldllc.net

INTERPLASTIC CORPORATION

1225 Willow Lake Boulevard
Saint Paul, MN 55110-5145
651.481.6860 Fax 651.481.9834

To Whom It May Concern:

INTERPLASTIC CORPORATION hereby certifies that the following product listed below is

Made in the USA.

PRODUCT: COR72-AA-441OS – ONESTEP™ CIPP System (US Pat. 10,131,766)
Manufactured by: Interplastic Corporation – 5019 Hunt Street, Pryor, OK 74361

INTERPLASTIC CORPORATION

Tim Engelsgaard

Tim Engelsgaard
Logistics Specialist III

UNITED FELTS
A VORTEX COMPANY

July 15, 2024

To whom it may concern:

United Felt (UF) produces Cured-In-Place-Pipe (CIPP) liners at our manufacturing facility located in Martinsville, VA. For purposes of compliance with Public Law 117-58, Build America, Buy America (BABA) included in the Infrastructure Investment & Jobs Act (IIJA}, all United Felts CIPP liners are produced in the United States.

Please feel free to contact United Felts with any further questions.

Sincerely,

Stacey Dunn

Stacey Dunn
Director of Quality Assurance

450 College Drive | Martinsville, Virginia 24112 | (973)609-5449
Unitedfelts.com

BLD SERVICES, LLC

October 10, 2024

Jefferson Parish
Department of Purchasing
200 Derbigny Street
Suite 4400
Gretna, LA 70053

Attn: Mark Buttery (Purchasing Specialist II)
Mark.buttery@jeffparish.net
504-364-2810

RE: Two (2) Year Contract for Preventative Maintenance (Lining) of Existing Sanitary and Storm Sewers, Including Service Laterals at Scattered Locations for Jefferson Parish Department of Sewerage (Bid Number 50-00145944) / Qualifications – Section 1.13-7

Dear Mark,

In accordance with specification section "1.13-7 proposed installer shall provide detailed installation procedures and specific procedures for rehabilitation of mainlines, rehabilitation of service laterals, internal re-establishment of laterals, and installation of new service connections on lined pipe", BLD Services, LLC provides the following procedures.

- Confirm diameter and length of segment to be rehabilitated
- Review CCTV to make sure all debris/roots/stabilized materials/protruding taps have been removed from the segment, locate taps to be opened up after CIPP rehab and there are no point repairs needed in order to facilitate CIPP rehab
- Design tube thickness per field survey of depth of segment and review of cctv of segment
- Vacuum impregnate needled flexible felt tube with the proper volume of resin and the appropriate resin and catalyst system for the application- Epoxy, Vinylester, Polyester
- Install flexible liner through an existing entry point (manhole/catch basin/excavation), maintaining recommended head pressures inside of the tube
- Capture a restrained sample for testing. 8" to 12" samples to be captured using a short section of pvc pipe, lining thru that pipe. For diameters larger than 12", use a plate sample for testing
- Water or air/steam can be utilized as the installation method

- Cure with water/air steam per manufacturer's recommendations, monitoring the interface resin temperature throughout the cooking process
- After curing is complete, cool the pipe down below 110 degrees Fahrenheit
- Cut the excess material from the segments at the manhole, leaving approx. 2-3" of excess "flared material" beyond the host pipe
- Reconnect all active services utilizing a robotic cutter to allow for all taps to be restored without the need for excavation
- Post cctv the segment confirming the quality of the finished product to the customer utilizing the customers software, following all PACP guidelines
- Should any defects be identified, refer to paragraph 8 for methods of repair

Please contact me if you should have any questions.

Sincerely,

Danny M. Albert
Estimator / Project Manager
2424 Tyler Street
Kenner, LA 70062
504-466-1344 (Office) / 504-461-5971 (Fax) / 504-382-3817 (Cell)
dalbert@bldllc.net / www.bldllc.net

BLD SERVICES, LLC

BLD Services LLC
2424 Tyler St
Kenner LA 70062
P: 504.466.1344
F: 504.461.5971

Mainline Cured-In-Place Rehabilitation

BLD SERVICES, LLC

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Applied Felts Technical Information.....11-20

BLD SERVICES, LLC

Statement of Qualifications

BLD Services, LLC. is a Louisiana owned company, specializing in the installation of Cured-in• Place-Pipe (CIPP) for mainline sanitary and storm drains. Our employees have over 1000 years combined CIPP mainline experience with aproven project record. BLD has (CIPP) Mainline and Specialty Point Repair Crewsto cover the needs of our customers throughout the United States.

Our crews focus on the quality of its installation of mainline and point repair piping, and our employees have successfully installed over one million feet of Cured-In-Place Pipe (CIPP). BLD Crews are equipped with proven equipment that assist in successful installations.

We are able to professionally conduct the installation operations and schedule cleanup in a manner that causes the least possible obstructions and inconveniences to traffic, pedestrians, business, and homeowners or tenants. BLD Services has a knowledgeable and solid work force with highly trained and experienced crews.

For additional information, please contact me at tommyt@bldllc.net or (985) 507-2015.

Sincerely,

Tommy Trapp
Regional Manager

BLD SERVICES, LLC

Certificate of Warranty

BLD Services "Cured-In-Place Pipe"

BLD Services, LLC (BLD) warrants to the Owner, that the "Cured-in-Place Pipe" provided & installed by BLD Services, LLC for the Rehabilitation of Sewer Pipe will be free from material defects in workmanship and materials for a period of five (5) years from the date on which BLDs work is accepted. In the event that a material defect in workmanship or materials supplied is found during that five (5) year period following acceptance of the work, then such defect shall be repaired, replaced or adjusted by BLD at no additional cost to the Owner. The industry standard for Cured-in-Place Pipe is designed to last for a minimum of 50 years.

Sincerely,

Tommy Trapp
Regional Manager

BLD SERVICES, LLC

Wet-Out Quality Assurance & Installation for CIPP

Pipe Lining System

The product description is taken from observation during the installation process. This process changes from application to application. The following notes are notintended to be complete and exhaustive descriptions, but are a brief description of the proposed construction system.

Liner CIPP consists of polyester felt, polyester resin, and polyurethane (PU) or polypropylene PP coating. The polyester felt is overlaid on one side with a PU or PP barrier and formed into a tube with a diameter to match the pipe, and a thickness as required for strength. The polyester felt tube is impregnated with polyester resin and the tube is inverted in place and cured.

Material Inspection & Receiving Report

The shipping documents received at the plant, with each individual load will include: (a) the shipper; (b) shipping point; (c) consignee; (d) contract and item number; (e) product identification.

Housekeeping & Cleanliness During Manufacturing

Cleanliness is essential during the resin mixing process. Resins must not be in direct sunlight during mixing, transportation or inversion.

Resin Storage

Improper storage of the resin will cause premature exotherm. Resins are perishable materials that have a shelf and pot life. Resin storage is as recommended by the manufacturer. The tests for deterioration of resin include visual observation and gel time. An air-conditioned storage facility ensures proper resin temperatures are maintained prior to and during the wet-out process.

Catalyst & Promoters

Catalyst and promoters are stored separately and away from other flammable material. The stock is rotated so the maximum storage time is as recommended by the manufacturer.

Solvents

Solvents are used in the tube manufacturing process for patching the coating and taping the seams. The most commonly used solvent is Tetrahydrofuran (THF), which is highly flammable; only a small quantity of this solvent is needed to bond the tube coating.

Tube Fabrication

Liner fabrication starts with a field report of the actual length of the line to be rehabilitated. This initial record includes the diameter of the pipe, depth of each manhole structures on either side of the reach and the recommended inversion method. The liner length is indicated by making tic mares, with the actual length value in 5-foot intervals, on the liner itself using a permanent ink. The thickness of the liner is made with one or many layers of felt with the outer layer coated with polyurethane.

Wet-Out

Resin and promoters are introduced into a Static Mixing System. Calibration and the use of key measuring devices is strictly followed and documented. Wet out process follows a defined procedure which includes gel testing at defined intervals, visual inspections, patching and repairs, control on non-conforming materials, catalyst flow rates to resin flow rates, nip roller gap control, vacuum lines and other aspects of the wet-out process.

Wet-Out Tube Delivery

Wet-Out tubes are loaded directly into reefer units, packed in ice and otherwise prepared for jobsite shipment. These units are monitored to ensure proper temperatures are maintained.

BLD SERVICES, LLC

CIPP Inversion Process

Pre-Installation CCTV

Each line segment will be examined and cleaned prior to CIPP inversion. Service locations and pipe conditions are evaluated during this process

Inversion Process

Wet-Out tubes are placed into a "chip unit" or "shooter"and placed over the inversion manhole. Air or water can be used to invert the tube throughout the length of segment.

Curing Process

Once the tube has been inverted fully into the segment, steam is generated through the inversion equipment and introduced into the CIPP tube for curing. Cure logs are used throughoutthis process to ensure quality control.

Service Re-Instatement & Post Video

Once the CIPP tube has been cured, the ends of the pipe segment are re-instated. A robotic cutter and camera are then used to re-instate service connections located within the line segment. A post installation video is taken of the line segment, noting service re-instatements and post condition of the lined pipe segment.

APPLIED FELTS
YOUR SUCCESS IS OUR SUCCESS

Technical Data Sheet

AQUACURE PU: POLYURETHANE COATED FELT LINER

PRODUCT DESCRIPTION

Polyester fiber Liner with Polyurethane coating custom sized for pipe rehabilitation manufactured in accordance with the current ISO 9001 Standards. To accommodate the requirement for liners of varying thicknesses multi-layer liners are employed using multiple polyester fiber rolls.

DIMENSION AVAILABILITY

	HOT CURE EVERSION	AMBIENT/WARM CURE EVERSION	HOT CURE DRAG-IN	AMBIENT/WARM CURE DRAG-IN
DIAMETER	4in to 100in	3in to 9in	6in to 72in	3in to 9in
THICKNESS	3mm to 50mm	3mm to 6mm	3mm to 12mm	3mm to 6mm
LENGTH	ANY	ANY	Up to 300 feet	Up to 300 feet
COATING WEIGHT	400GSM (NOMINAL)			
LINER DESIGN	Liner undersized <10% Liner features a welded or stitched seam. Stitched liners only available up to 24in diameter. Liner can negotiate pipe bends up to 45°			

INSTALLATION METHODS

	RESIN TYPE		CURING REGIME				
LINER TYPE	EPOXY	POLYESTER/ VINYLESTER	HOT WATER <194°F	STEAM <194°F	AMBIENT	WARM WATER <122°F	WARM AIR ACCELERATED
HOT CURE EVERSION	✗	✓	✓	✓	✗	✗	✗
AMBIENT/WARM CURE EVERSION	✓	✓	✗	✗	✓	✓	✓
HOT CURE DRAG-IN	✗	✓	✓	✓	✗	✗	✗
AMBIENT/WARM CURE DRAG-IN	✓	✓	✗	✗	✓	✓	✓

TEST SPECIFICATIONS

	CHARACTERISTIC	TEST	STANDARD
ROLL	Density and density distribution at various applied pressures.	Compression measured at increasing pressure.	ASTM D5199
ROLL	Load at break in machine and cross directions.	Tensile testing - Maximum Resistive Force.	ASTM D5035
ROLL	Secant Modulus in machine and cross directions (resistance to stretch)	Tensile testing - Maximum Resistive Force vs Extension %.	ASTM D5035
ROLL	Coating weight and distribution.	Samples weighed to determine distribution of coating in cross direction of the roll.	-
ROLL	Coating adhesion and ability to weld.	Peel strength of welded tape.	ASTM D903
LINER	Density, Gauge of liner under various applied pressures.	Compression test of sample of all layers.	ASTM D1777
LINER	Felt weld strengths.	Each weld is sampled and destructively tested.	ASTM D5035
LINER	Sealing tape weld strengths.	Each weld is sampled and destructively tested.	ASTM D5035

Direct Sales: (914) 548-1938
General Inquiries: (276) 656-1904
info@appliedfelts.com

Note: Liners are manufactured to internal standard or customer specifications. All liners are tested to the tests declared above and adhere to the declared ISO standards. Test data is available on request.

APPLIED FELTS
YOUR SUCCESS IS OUR SUCCESS

Technical Data Sheet

POLYURETHANE COATED FELT LINER (PU)

CURING TEMPERATURE MAX 90°C

DIAMETER (in)	LINER THICKNESS (mm)	MINIMUM INVERSION PRESSURE (psi)	MAX COLD INVERSION PRESSURE (psi)	IDEAL CURING PRESSURE (psi)	MAX HOT PRESSURE (psi) @ 90°C	RESIN AMOUNT (Gallon/ft)	PINCH ROLLER GAP (mm)
4	3	9	13	11	11	0.06	8.4
5	3	6	10	8	9	0.09	8.3
6	3	5	9	7	8	0.10	8.2
6	4.5	8	13	10	11	0.15	12.2
8	3	4	7	5	6	0.14	8.1
8	4.5	6	10	7	9	0.21	12.0
8	6	7	13	10	11	0.27	16.0
8	7.5	9	16	12	14	0.36	20.2
9	4.5	5	9	6	8	0.23	11.9
9	6	7	12	8	10	0.31	15.9
10	4.5	4	8	6	7	0.28	11.9
10	6	6	10	8	9	0.35	15.8
10	7.5	7	13	9	11	0.45	19.8
12	6	4	9	6	8	0.42	15.6
12	7.5	6	12	8	10	0.55	20.9
12	9	7	14	9	13	0.68	26.5
15	7.5	4	9	6	8	0.69	19.4
15	9	5	10	7	9	0.82	23.3
15	10.5	6	12	8	11	0.95	27.4
18	9	4	9	6	8	0.99	23.1
18	10.5	5	10	7	9	1.15	27.0
18	12	6	12	8	10	1.31	31.1
18	13.5	7	13	9	11	1.47	35.2
21	9	4	7	5	7	1.16	22.9
21	10.5	4	9	6	8	1.35	26.8
21	12	5	10	6	9	1.54	30.8
21	13.5	6	11	7	10	1.72	34.8
21	15	6	12	8	11	1.91	38.8
24	9	3	7	4	6	1.33	22.8
24	10.5	4	8	5	7	1.54	26.7
24	12	4	9	6	8	1.76	30.6
24	13.5	5	10	6	9	1.97	34.5
24	15	5	11	7	9	2.19	38.5

1. Suitable only for Applied Felts liners designed for and to be installed by eversion.
2. Roller gap setting is for guidance only. Impregnation equipment differs: Rubber wrappings on rollers, positional hysteresis and flexing of rollers cause roller gap settings to vary between different equipment. Roller gap setting for any given equipment should be reasonably repeatable.
3. We strongly recommend the resin addition be monitored and controlled by adjustment of the roller gap setting. Ultimately, it is the correct resin addition which is imperative, not the roller gap.
4. All information is provided by Applied Felts in good faith, but without warranty. All calculations should be verified.

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FLEXURAL PROPERTIES OF PLASTICS (ASTM D790)

SUPPORT SPAN = 4"

Flexural 3 point bend

Instron Corporation
Series IX Automated Materials Testing System 6.05

Operator name: K. PHOUANGSAVANH

Test Date: 15 Jan 2009

Sample Identification: 8F55-6-C

Sample Type: ASTM

Interface Type: 42/43/4400 Series

Machine Parameters of test:

Sample Rate (pts/sec): 10.000

Humidity (%): 50

Crosshead Speed (in/min): .1100

Temperature (deg. F): 71

Dimensions:

	Spec. 1	Spec. 2	Spec. 3	Spec. 4	Spec. 5
Width (in)	.54000	.54000	.53900	.54300	.53400
Depth (in)	.23400	.24300	.25300	.25800	.26100
Span (in)	4.0000	4.0000	4.0000	4.0000	4.0000

Out of 5 specimens, 0 excluded.

Sample comments: COR72-AA, CONTROL

Specimen Number	Displcment at Yield (in)	Strain at Yield (in/in)	Load at Yield (lbs)	Stress at Yield (psi)	Modulus Of Elasticity (psi)
1	.5649	.0496	49.1	9963.4	542763
2	.5574	.0508	50.4	9487.4	568673
3	.3427	.0325	50.8	8832.8	577090
4	.5130	.0496	56.6	9394.0	579930
5	.3631	.0355	52.1	8595.1	589867
Mean:	.4683	.0436	51.8	9254.5	571665.
Standard Deviation:	.1074	.0088	2.9	545.2	17842.
Minimum:	.3427	.0325	49.1	8595.1	542763.
Maximum:	.5649	.0508	56.6	9963.4	589867.

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FLEXURAL PROPERTIES OF PLASTICS (ASTM D790)

SUPPORT SPAN = 4"

Flexural 3 point bend

Instron Corporation
Series IX Automated Materials Testing System 6.08

Operator name: K. PHOUANGSAVANH

Test Date: 15 Jan 2009

Sample Identification: 8F55-6-1

Sample Type: ASTM

Interface Type: 42/43/4400 Series

Machine Parameters of test:

Sample Rate (pts/sec): 10.000

Crosshead Speed (in/min): .1100

Humidity (%): 50

Temperature (deg. F): 71

Dimensions:

	Spec. 1	Spec. 2	Spec. 3	Spec. 4	Spec. 5
Width (in)	.53900	.54900	.54700	.54000	.53800
Depth (in)	.24400	.25300	.25900	.26100	.26700
Span (in)	4.0000	4.0000	4.0000	4.0000	4.0000

Out of 5 specimens, 0 excluded.

Sample comments: COR72-AA, SAMPLE SOAKED IN TAP WATER (100%) FOR 30 DAYS

Specimen Number	Displcment at Yield (in)	Strain at Yield (in/in)	Load at Yield (lbs)	Stress at Yield (psi)	Modulus Of Elasticity (psi)
1	.5235	.0479	51.3	9597.4	561930
2	.4640	.0440	56.2	9597.4	558367
3	.4010	.0390	56.7	9266.5	556157
4	.3813	.0373	50.4	8227.2	531714
5	.3041	.0305	57.8	9050.0	534908
Mean:	.4148	.0397	54.5	9147.7	548615.
Standard Deviation:	.0834	.0067	3.4	564.7	14167.
Minimum:	.3041	.0305	50.4	8227.2	531714.
Maximum:	.5235	.0479	57.8	9597.4	561930.

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FLEXURAL PROPERTIES OF PLASTICS (ASTM D790)

SUPPORT SPAN = 4"

Flexural 3 point bend

Instron Corporation
Series IX Automated Materials Testing System 6.05

Operator name: K. PHOUANGSAVANH

Test Date: 15 Jan 2009

Sample Identification: 8F55-6-2

Sample Type: ASTM

Interface Type: 42/43/4400 Series

Machine Parameters of test:

Sample Rate (pts/sec): 10.000

Crosshead Speed (in/min): .1100

Humidity (%): 50

Temperature (deg. F): 71

Dimensions:

	Spec. 1	Spec. 2	Spec. 3	Spec. 4	Spec. 5
Width (in)	.55100	.55200	.55300	.54400	.54900
Depth (in)	.24200	.25100	.26300	.27100	.27500
Span (in)	4.0000	4.0000	4.0000	4.0000	4.0000

Out of 5 specimens, 0 excluded.

Sample comments: COR72-AA, SAMPLE SOAKED IN NITRIC ACID (5%) FOR 30 DAYS

Specimen Number	Displcment at Yield (in)	Strain at Yield (in/in)	Load at Yield (lbs)	Stress at Yield (psi)	Modulus Of Elasticity (psi)
1	.3917	.0356	50.0	9295.1	518011
2	.4525	.0426	57.0	9837.7	565053
3	.3689	.0364	57.4	9007.0	557880
4	.3296	.0335	57.6	8651.9	552288
5	.4436	.0457	61.7	8915.1	533841
Mean:	.3973	.0388	56.7	9141.3	545414.
Standard Deviation:	.0515	.0052	4.2	452.0	19191.
Minimum:	.3296	.0335	50.0	8651.9	518011.
Maximum:	.4525	.0457	61.7	9837.7	565053.

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FLEXURAL PROPERTIES OF PLASTICS (ASTM D790)

SUPPORT SPAN = 4"

Flexural 3 point bend

Instron Corporation
Series IX Automated Materiale Testing System 6.05

Operator name: K. PHOUANGSAVANH

Test Date: 15 Jan 2009

Sample Identification: 8F55-6-3

Sample Type: ASTM

Interface Type: 42/43/4400 Series

Machine Parameters of test:

Sample Rate (pts/sec): 10.000

Crosshead Speed (in/min): .1100

Humidity (%): 50

Temperature (deg. F): 71

Dimensions:

	Spec. 1	Spec. 2	Spec. 3	Spec. 4	Spec. 5
Width (in)	.54100	.55100	.55200	.55300	.55600
Depth (in)	.23600	.25100	.25200	.26800	.27300
Span (in)	4.0000	4.0000	4.0000	4.0000	4.0000

Out of 5 specimens, 0 excluded.

Sample comments: COR72-AA, SAMPLE SOAKED IN PHOSPHORIC ACID (10%) FOR 30 DAYS

Specimen Number	Displcment at Yield (in)	Strain at Yield (in/in)	Load at Yield (lbs)	Stress at Yield (psi)	Modulus Of Elasticity (psi)
1	.5375	.0476	49.4	9840.9	563843
2	.4398	.0414	54.4	9395.8	526852
3	.3453	.0339	55.9	8846.8	549445
4	.3036	.0305	54.0	8178.2	556384
5	.4355	.0446	58.5	8466.1	529863
Mean:	.4124	.0396	54.4	8945.6	545277.
Standard Deviation:	.0912	.0072	3.3	676.9	16298.
Minimum:	.3036	.0305	49.4	8178.2	526852.
Maximum:	.5375	.0476	58.5	9840.9	563843.

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FLEXURAL PROPERTIES OF PLASTICS (ASTM D790)

SUPPORT SPAN = 4"

Flexural 3 point bend

Instron Corporation
Series IX Automated Materials Testing System 6.05

Operator name: K. PHOUANGSAVANH

Test Date: 15 Jan 2009

Sample Identification: SF55-6-4

Sample Type: ASTM

Interface Type: 42/43/4400 Series

Machine Parameters of test:

Sample Rate (pts/sec): 10.000

Crosshead Speed (in/min): .1100

Humidity (%): 50

Temperature (deg. F): 71

Dimensions:

	Spec. 1	Spec. 2	Spec. 3	Spec. 4	Spec. 5
Width (in)	.54800	.55000	.55600	.55400	.54400
Depth (in)	.23900	.25000	.25800	.26100	.26500
Span (in)	4.0000	4.0000	4.0000	4.0000	4.0000

Out of 5 specimens, 0 excluded.

Sample comments: COR72-AA, SAMPLE SOAKED IN SULFURIC ACID (10%) FOR 30 DAYS

Specimen Number	Displcment at Yield (in)	Strain at Yield (in/in)	Load at Yield (lbs)	Stress at Yield (psi)	Modulus Of Elasticity (psi)
1	.3752	.0336	49.5	9493.9	564628
2	.3111	.0292	54.2	9460.4	538663
3	.4297	.0416	53.4	8665.3	539819
4	.4233	.0414	56.6	9005.0	560656
5	.3484	.0346	53.2	8352.4	564881
Mean:	.3775	.0361	53.4	8995.4	553729.
Standard Deviation:	.0502	.0054	2.6	496.8	13338.
Minimum:	.3111	.0292	49.5	8352.4	538663.
Maximum:	.4297	.0416	56.6	9493.9	564881.

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FLEXURAL PROPERTIES OF PLASTICS (ASTM D790)

SUPPORT SPAN = 4"

Flexural 3 point bend

Instron Corporation
Series IX Automated Materials Testing System 6.05

Operator name: K. PHOUANGSAVANH

Test Date: 15 Jan 2009

Sample Identification: 8F55-6-5

Sample Type: ASTM

Interface Type: 42/43/4400 Series

Machine Parameters of test:

Sample Rate (pts/sec): 10.000

Crosshead Speed (in/min): .1100

Humidity (%): 50

Temperature (deg. F): 71

Dimensions:

	Spec. 1	Spec. 2	Spec. 3	Spec. 4	Spec. 5
Width (in)	.55300	.55200	.55500	.55600	.55600
Depth (in)	.23400	.24400	.25200	.25500	.26200
Span (in)	4.0000	4.0000	4.0000	4.0000	4.0000

Out of 5 specimens, 0 excluded.

Sample comments: COR72-AA, SAMPLE SOAKED IN GASOLINE (100%) FOR 30 DAYS

Specimen Number	Displcment at Yield (in)	Strain at Yield (in/in)	Load at Yield (lbs)	Stress at Yield (psi)	Modulus Of Elasticity (psi)
1	.3799	.0333	49.8	9873.8	554866
2	.5525	.0506	52.6	9595.9	567451
3	.5050	.0477	57.8	9839.8	557660
4	.4312	.0412	56.6	9391.5	575970
5	.3034	.0298	56.2	8833.5	576322
Mean:	.4344	.0405	54.6	9506.9	566454.
Standard Deviation:	.0988	.0089	3.3	424.3	10007.
Minimum:	.3034	.0298	49.8	8833.5	554866.
Maximum:	.5525	.0506	57.8	9873.8	576322.

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FLEXURAL PROPERTIES OF PLASTICS (ASTM D790)

SUPPORT SPAN = 4"

Flexural 3 point bend

Instron Corporation
Series IX Automated Materials Testing System 6.05

Operator name: K. PHOUANGSAVANH

Test Date: 15 Jan 2009

Sample Identification: 8F55-6-6

Sample Type: ASTM

Interface Type: 42/43/4400 Series

Machine Parameters of test:

Sample Rate (pts/sec): 10.000

Crosshead Speed (in/min): .1100

Humidity (%): 50

Temperature (deg. F): 71

Dimensions:

	Spec. 1	Spec. 2	Spec. 3	Spec. 4	Spec. 5
Width (in)	.55000	.54600	.55200	.55300	.55600
Depth (in)	.24300	.25300	.26000	.26600	.26800
Span (in)	4.0000	4.0000	4.0000	4.0000	4.0000

Out of 5 specimens, 0 excluded.

Sample comments: COR72-AA, SAMPLE SOAKED IN VEGETABLE OIL (100%) FOR 30 DAYS

Specimen Number	Displcment at Yield (in)	Strain at Yield (in/in)	Load at Yield (lbs)	Stress at Yield (psi)	Modulus Of Elasticity (psi)
1	.5562	.0507	52.7	9736.1	571465
2	.4295	.0407	56.3	9674.1	553541
3	.4862	.0474	56.0	9012.4	554508
4	.4132	.0412	59.5	9117.8	579456
5	.3366	.0338	59.5	8942.7	596537
Mean:	.4443	.0428	56.8	9296.6	571101.
Standard Deviation:	.0922	.0065	2.8	378.7	18032.
Minimum:	.3366	.0338	52.7	8942.7	553541.
Maximum:	.5562	.0507	59.5	9736.1	596537.

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FLEXURAL PROPERTIES OF PLASTICS (ASTM D790)

SUPPORT SPAN = 4"

Flexural 3 point bend

Instron Corporation
Series IX Automated Materials Testing System 6.05

Operator name: K. PHOUANGSAVANH

Test Date: 15 Jan 2009

Sample Identification: 8F55-6-7

Sample Type: ASTM

Interface Type: 42/43/4400 Series

Machine Parameters of test:

Sample Rate (pts/sec): 10.000

Crosshead Speed (in/min): .1100

Humidity (%): 50

Temperature (deg. F): 71

Dimensions:

	Spec. 1	Spec. 2	Spec. 3	Spec. 4	Spec. 5
Width (in)	.55000	.55600	.56300	.55500	.54600
Depth (in)	.22700	.23800	.24800	.25500	.26300
Span (in)	4.0000	4.0000	4.0000	4.0000	4.0000

Out of 5 specimens, 0 excluded.

Sample comments: COR72-AA, SAMPLE SOAKED IN DETERGENT (0.1%) FOR 30 DAYS

Specimen Number	Displcment at Yield (in)	Strain at Yield (in/in)	Load at Yield (lbs)	Stress at Yield (psi)	Modulus Of Elasticity (psi)
1	.5112	.0435	44.8	9473.9	568827
2	.5239	.0468	50.8	9670.4	568317
3	.4521	.0420	51.6	8941.1	567055
4	.3684	.0352	55.9	9292.1	574388
5	.3268	.0322	54.0	8580.7	575566
Mean:	.4365	.0400	51.4	9191.6	570831.
Standard Deviation:	.0858	.0060	4.2	434.5	3862.
Minimum:	.3268	.0322	44.8	8580.7	567055.
Maximum:	.5239	.0468	55.9	9670.4	575566.

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FLEXURAL PROPERTIES OF PLASTICS (ASTM D790)

SUPPORT SPAN = 4"

Flexural 3 point bend

Instron Corporation
Series IX Automated Materials Testing System 6.05

Operator name: K. PHOUANGSAVANH

Test Date: 15 Jan 2009

Sample Identification: 8F55-6-8

Sample Type: ASTM

Interface Type: 42/43/4400 Series

Machine Parameters of test:

Sample Rate (pts/sec): 10.000

Crosshead Speed (in/min): .1100

Humidity (%): 50

Temperature (deg. F): 71

Dimensions:

	Spec. 1	Spec. 2	Spec. 3	Spec. 4	Spec. 5
Width (in)	.55400	.55000	.54700	.55700	.54900
Depth (in)	.23800	.25100	.26400	.27100	.27700
Span (in)	4.0000	4.0000	4.0000	4.0000	4.0000

Out of 5 specimens, 0 excluded.

Sample comments: COR72-AA, SAMPLE SOAKED IN SOAP (0.1%) FOR 30 DAYS

Specimen Number	Displcment at Yield (in)	Strain at Yield (in/in)	Load at Yield (lbs)	Stress at Yield (psi)	Modulus Of Elasticity (psi)
1	.4765	.0425	49.6	9485.4	530465
2	.3459	.0326	53.6	9277.8	558504
3	.3662	.0363	60.0	9450.8	551144
4	.3223	.0328	56.9	8340.0	568426
5	.3650	.0379	61.7	8791.1	576566
Mean:	.3752	.0364	56.4	9069.0	557021.
Standard Deviation:	.0594	.0041	4.9	492.8	17706.
Minimum:	.3223	.0326	49.6	8340.0	530465.
Maximum:	.4765	.0425	61.7	9485.4	576566.

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FLEXURAL PROPERTIES OF PLASTICS (ASTM D790)

SUPPORT SPAN = 4"

Flexural 3 point bend

Instron Corporation
Series IX Automated Materials Testing System 6.08

Operator name: K. PHOUANGSAVANH

Test Date: 15 Jan 2009

Sample Identification: 8F55-6-9

Sample Type: ASTM

Interface Type: 42/43/4400 Series

Machine Parameters of test:

Sample Rate (pts/sec): 10.000

Crosshead Speed (in/min): .1100

Humidity (%): 50

Temperature (deg. F): 71

Dimensions:

	Spec. 1	Spec. 2	Spec. 3	Spec. 4	Spec. 5
Width (in)	.55700	.55500	.55900	.55000	.55300
Depth (in)	.24600	.26100	.26900	.26800	.27600
Span (in)	4.0000	4.0000	4.0000	4.0000	4.0000

Out of 5 specimens, 0 excluded.

Sample comments: COR72-AA, SAMPLE SOAKED IN NITRIC ACID (1%) FOR 30 DAYS

Specimen Number	Displcment at Yield (in)	Strain at Yield (in/in)	Load at Yield (lbs)	Stress at Yield (psi)	Modulus Of Elasticity (psi)
1	.5283	.0487	55.4	9863.1	544338
2	.3563	.0349	58.4	9266.5	536348
3	.3352	.0338	58.1	8625.5	549497
4	.2740	.0275	57.8	8783.6	537040
5	.3321	.0333	63.5	9043.0	542141
Mean:	.3632	.0357	58.7	9116.3	541873.
Standard Deviation:	.0971	.0078	3.0	484.1	5435.
Minimum:	.2740	.0275	55.4	8625.5	536348.
Maximum:	.5283	.0487	63.5	9863.1	549497.

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FLEXURAL PROPERTIES OF PLASTICS (ASTM D790)

SUPPORT SPAN = 4"

Flexural 3 point bend

Instron Corporation
Series IX Automated Materials Testing System 6.05

Operator name: K. PHOUANGSAVANH

Test Date: 15 Jan 2009

Sample Identification: 8F55-610

Sample Type: ASTM

Interface Type: 42/43/4400 Series

Machine Parameters of test:

Sample Rate (pts/sec): 10.000

Crosshead Speed (in/min): .1100

Humidity (%): 50

Temperature (deg. F): 71

Dimensions:

	Spec. 1	Spec. 2	Spec. 3	Spec. 4	Spec. 5
Width (in)	.55700	.55000	.55200	.55600	.55000
Depth (in)	.23300	.24200	.25400	.26300	.26700
Span (in)	4.0000	4.0000	4.0000	4.0000	4.0000

Out of 5 specimens, 0 excluded.

Sample comments: COR72-AA, SAMPLE SOAKED IN SULFURIC (5%) FOR 30 DAYS

Specimen Number	Displcment at Yield (in)	Strain at Yield (in/in)	Load at Yield (lbs)	Stress at Yield (psi)	Modulus Of Elasticity (psi)
1	.5806	.0507	49.3	9774.1	525396
2	.5076	.0461	49.7	9066.1	565841
3	.4073	.0388	54.3	9150.1	568115
4	.3766	.0371	60.4	9423.3	566229
5	.3614	.0362	59.5	9108.1	575523
Mean:	.4467	.0418	54.4	9304.3	560221.
Standard Deviation:	.0941	.0063	5.5	297.5	19855.
Minimum:	.3614	.0362	48.7	9066.1	525396.
Maximum:	.5806	.0507	60.4	9774.1	575523.

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FLEXURAL PROPERTIES OF PLASTICS (ASTM D790)

SUPPORT SPAN = 4".

Flexural 3 point bend

Instron Corporation
Series IX Automated Materials Testing System 6.05

Operator name: E. CARRILLO

Test Date: 16 Dec 2009

Sample Identification: 8F55-6Y4

Sample Type: ASTM

Interface Type: 42/43/4400 Series

Machine Parameters of test:

Sample Rate (pts/sec): 10.000

Humidity (%): 50

Crosshead Speed (in/min): .1100

Temperature (deg. F): 71

Dimensions:

	Spec. 1	Spec. 2	Spec. 3	Spec. 4	Spec. 5
Width (in)	.54500	.54300	.53100	.53600	.55000
Depth (in)	.25300	.25900	.26500	.26500	.23100
Span (in)	4.0000	4.0000	4.0000	4.0000	4.0000

Out of 5 specimens, 0 excluded.

Sample comments: COR72-AA, SAMPLE SOAKED IN SULFURIC ACID (10%) FOR 1 YEAR

Specimen Number	Displcment at Yield (in)	Strain at Yield (in/in)	Load at Yield (lbs)	Stress at Yield (psi)	Modulus Of Elasticity (psi)
1	.4226	.0401	57.2	9843.2	539325
2	.4347	.0422	59.4	9777.9	532130
3	.3119	.0310	56.5	9084.6	551399
4	.4501	.0447	59.1	9427.1	565631
5	.5043	.0437	47.9	9796.7	563082
Mean:	.4247	.0403	56.0	9585.9	550314.
Standard Deviation:	.0704	.0055	4.7	325.6	14579.
Minimum:	.3119	.0310	47.9	9084.6	532130.
Maximum:	.5043	.0447	59.4	9843.2	565631.

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FLEXURAL PROPERTIES OF PLASTICS (ASTM D790)

SUPPORT SPAN = 4".

Flexural 3 point bend

Instron Corporation
Series IX Automated Materials Testing System 6.05

Operator name: K. PHOUANGSAVANH

Test Date: 16 Dec 2009

Sample Identification: 8F55-6Y1

Sample Type: ASTM

Interface Type: 42/43/4400 Series

Machine Parameters of test:

Sample Rate (pts/sec): 10.000

Crosshead Speed (in/min): .1100

Humidity (%): 50

Temperature (deg. F): 71

Dimensions:

	Spec. 1	Spec. 2	Spec. 3	Spec. 4	Spec. 5
Width (in)	.53900	.54000	.53300	.53500	.54300
Depth (in)	.25600	.27100	.28000	.28300	.29100
Span (in)	4.0000	4.0000	4.0000	4.0000	4.0000

Out of 5 specimens, 0 excluded.

Sample comments: COR72-AA, SAMPLE SOAKED IN TAP WATER (100%) FOR 1 YEAR

Specimen Number	Displcment at Yield (in)	Strain at Yield (in/in)	Load at Yield (lbs)	Stress at Yield (psi)	Modulus Of Elasticity (psi)
1	.4188	.0402	53.4	9079.8	546004
2	.4583	.0466	61.6	9325.7	521094
3	.4342	.0456	62.0	8900.8	539392
4	.1438	.0153	57.6	8063.0	556857
5	.3616	.0395	61.8	8064.1	531189
Mean:	.3633	.0374	59.3	8686.5	538907.
Standard Deviation:	.1278	.0128	3.7	588.4	13690.
Minimum:	.1438	.0153	53.4	8063.0	521094.
Maximum:	.4583	.0466	62.0	9325.7	556857.

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FLEXURAL PROPERTIES OF PLASTICS (ASTM D790)

SUPPORT SPAN = 4".

Flexural 3 point bend

Instron Corporation
Series IX Automated Materials Testing System 6.05

Operator name: K. PHOUANGSAVANH

Test Date: 16 Dec 2009

Sample Identification: 8F55-6Y2

Sample Type: ASTM

Interface Type: 42/43/4400 Series

Machine Parameters of test:

Sample Rate (pts/sec): 10.000

Humidity (%): 50

Crosshead Speed (in/min): .1100

Temperature (deg. F): 71

Dimensions:

	Spec. 1	Spec. 2	Spec. 3	Spec. 4	Spec. 5
Width (in)	.54000	.53800	.54400	.54200	.55200
Depth (in)	.26200	.26800	.27500	.28000	.23700
Span (in)	4.0000	4.0000	4.0000	4.0000	4.0000

Out of 5 specimens, 0 excluded.

Sample comments: COR72-AA, SAMPLE SOAKED IN NITRIC (5%) FOR 1 YEAR

Specimen Number	Displcment at Yield (in)	Strain at Yield (in/in)	Load at Yield (lbs)	Stress at Yield (psi)	Modulus Of Elasticity (psi)
1	.3448	.0339	54.4	8808.7	546343
2	.4285	.0431	59.7	9266.8	557707
3	.2383	.0246	56.8	8276.6	556508
4	.4123	.0433	66.9	9442.1	550019
5	.3867	.0344	43.5	8421.8	527027
Mean:	.3621	.0358	56.2	8843.2	547521.
Standard Deviation:	.0761	.0078	8.5	509.4	12371.
Minimum:	.2383	.0246	43.5	8276.6	527027.
Maximum:	.4285	.0433	66.9	9442.1	557707.

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FLEXURAL PROPERTIES OF PLASTICS (ASTM D790)

SUPPORT SPAN = 4".

Flexural 3 point bend

Instron Corporation
Series IX Automated Materials Testing System 6.05

Operator name: K. PHOUANGSAVANH

Test Date: 16 Dec 2009

Sample Identification: 8F55-6Y3

Sample Type: ASTM

Interface Type: 42/43/4400 Series

Machine Parameters of test:

Sample Rate (pts/sec): 10.000

Humidity (%): 50

Crosshead Speed (in/min): .1100

Temperature (deg. F): 71

Dimensions:

	Spec. 1	Spec. 2	Spec. 3	Spec. 4	Spec. 5
Width (in)	.54300	.54300	.54300	.54100	.54400
Depth (in)	.24900	.25900	.26700	.27300	.27800
Span (in)	4.0000	4.0000	4.0000	4.0000	4.0000

Out of 5 specimens, 0 excluded.

Sample comments: COR72-AA, SAMPLE SOAKED IN PHOSPHORIC ACID (10%) FOR 1 YEAR

Specimen Number	Displcment at Yield (in)	Strain at Yield (in/in)	Load at Yield (lbs)	Stress at Yield (psi)	Modulus Of Elasticity (psi)
1	.4523	.0422	53.2	9483.0	536994
2	.4184	.0406	56.7	9339.7	537423
3	.3257	.0326	51.3	7956.1	546556
4	.2881	.0295	61.6	9163.6	560864
5	.2343	.0244	55.4	7903.4	550351
Mean:	.3438	.0339	55.6	8769.2	546438.
Standard Deviation:	.0905	.0075	3.9	774.8	9923.
Minimum:	.2343	.0244	51.3	7903.4	536994.
Maximum:	.4523	.0422	61.6	9483.0	560864.

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FLEXURAL PROPERTIES OF PLASTICS (ASTM D790)

SUPPORT SPAN = 4".

Flexural 3 point bend

Instron Corporation
Series IX Automated Materials Testing System 6.05

Operator name: E. CARRILLO

Test Date: 16 Dec 2009

Sample Identification: 8F55-6Y5

Sample Type: ASTM

Interface Type: 42/43/4400 Series

Machine Parameters of test:

Sample Rate (pts/sec): 10.000

Crosshead Speed (in/min): .1100

Humidity (%): 50

Temperature (deg. F): 71

Dimensions:

	Spec. 1	Spec. 2	Spec. 3	Spec. 4	Spec. 5
Width (in)	.55100	.53900	.54200	.54300	.57300
Depth (in)	.23500	.24400	.26100	.26400	.25000
Span (in)	4.0000	4.0000	4.0000	4.0000	4.0000

Out of 5 specimens, 0 excluded.

Sample comments: COR72-AA, SAMPLE SOAKED IN GASOLINE (100%) FOR 1 YEAR

Specimen Number	Displcment at Yield (in)	Strain at Yield (in/in)	Load at Yield (lbs)	Stress at Yield (psi)	Modulus Of Elasticity (psi)
1	.3014	.0266	49.4	9744.7	528595
2	.3189	.0292	53.2	9943.3	541340
3	.1941	.0190	58.9	9576.5	548527
4	.3300	.0327	61.7	9785.2	546431
5	.3307	.0310	55.4	9283.4	554905
Mean:	.2950	.0277	55.7	9666.6	543960.
Standard Deviation:	.0577	.0054	4.8	250.9	9870.
Minimum:	.1941	.0190	49.4	9283.4	528595.
Maximum:	.3307	.0327	61.7	9943.3	554905.

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FLEXURAL PROPERTIES OF PLASTICS (ASTM D790)

SUPPORT SPAN = 4"

Flexural 3 point bend

Instron Corporation
Series IX Automated Materials Testing System 6.05

Operator name: K. PHOUANGSAVANH

Test Date: 16 Dec 2009

Sample Identification: 9F55-6Y6

Sample Type: ASTM

Interface Type: 42/43/4400 Series

Machine Parameters of test:

Sample Rate (pts/sec): 10.000

Humidity (%): 50

Crosshead Speed (in/min): .1100

Temperature (deg. F): 71

Dimensions:

	Spec. 1	Spec. 2	Spec. 3	Spec. 4	Spec. 5
Width (in)	.55000	.53800	.53700	.53900	.55100
Depth (in)	.24800	.25600	.26200	.26600	.26600
Span (in)	4.0000	4.0000	4.0000	4.0000	4.0000

Out of 5 specimens, 0 excluded.

Sample comments: COR72-AA, SAMPLE SOAKED IN VEGETABLE OIL (100%) FOR 1 YEAR

Specimen Number	Displacement at Yield (in)	Strain at Yield (in/in)	Load at Yield (lbs)	Stress at Yield (psi)	Modulus Of Elasticity (psi)
1	.3516	.0327	47.6	8451.8	528445
2	.4038	.0388	51.1	8702.6	543173
3	.2810	.0276	53.0	8621.9	552045
4	.3518	.0351	54.7	8599.4	555860
5	.2773	.0277	54.9	8453.7	560296
Mean:	.3331	.0324	52.3	8565.9	547964.
Standard Deviation:	.0537	.0048	3.0	110.2	12600.
Minimum:	.2773	.0276	47.6	8451.8	528445.
Maximum:	.4038	.0388	54.9	8702.6	560296.

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FLEXURAL PROPERTIES OF PLASTICS (ASTM D790)

SUPPORT SPAN = 4"

Flexural 3 point bend

Instron Corporation
Series IX Automated Materials Testing System 6.05

Operator name: B. CARRILLO

Test Date: 16 Dec 2009

Sample Identification: 8F55-6Y7

Sample Type: ASTM

Interface Type: 42/43/4400 Series

Machine Parameters of test:

Sample Rate (pts/sec): 10.000

Crosshead Speed (in/min): .1100

Humidity (%): 50

Temperature (deg. F): 71

Dimensions:

	Spec. 1	Spec. 2	Spec. 3	Spec. 4	Spec. 5
Width (in)	.53400	.53000	.52800	.52500	.54600
Depth (in)	.25200	.26100	.27100	.27600	.28000
Span (in)	4.0000	4.0000	4.0000	4.0000	4.0000

Out of 5 specimens, 0 excluded.

Sample comments: COR72-AA, SAMPLE SOAKED IN DETERGENT(0.1%) FOR 1 YEAR

Specimen Number	Displcment at Yield (in)	Strain at Yield (in/in)	Load at Yield (lbs)	Stress at Yield (psi)	Modulus Of Elasticity (psi)
1	.4668	.0441	54.1	9580.9	535370
2	.4487	.0439	53.2	8846.1	544588
3	.4346	.0442	56.1	8682.0	547475
4	.4841	.0501	62.9	9444.3	561893
5	.3568	.0375	65.7	9211.4	548887
Mean:	.4382	.0440	58.4	9152.9	547643.
Standard Deviation:	.0492	.0045	5.6	383.2	9547.
Minimum:	.3568	.0375	53.2	8682.0	535370.
Maximum:	.4841	.0501	65.7	9580.9	561893.

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FLEXURAL PROPERTIES OF PLASTICS (ASTM D790)

SUPPORT SPAN = 4"

Flexural 3 point bend

Instron Corporation
Series IX Automated Materials Testing System 6.05

Operator name: E. CARRILLO

Test Date: 16 Dec 2009

Sample Identification: 8F55-6Y8

Sample Type: ASTM

Interface Type: 42/43/4400 Series

Machine Parameters of test:

Sample Rate (pts/sec): 10.000

Crosshead Speed (in/min): .1100

Humidity (%): 50

Temperature (deg. F): 71

Dimensions:

	Spec. 1	Spec. 2	Spec. 3	Spec. 4	Spec. 5
Width (in)	.54300	.52900	.50600	.53700	.53800
Depth (in)	.24600	.26400	.27000	.27200	.23400
Span (in)	4.0000	4.0000	4.0000	4.0000	4.0000

Out of 5 specimens, 0 excluded.

Sample comments: COR72-AA, SAMPLE SOAKED IN SOAP (0.1%) FOR 1 YEAR

Specimen Number	Displcment at Yield (in)	Strain at Yield (in/in)	Load at Yield (lbs)	Stress at Yield (psi)	Modulus Of Elasticity (psi)
1	.4141	.0382	48.4	8833.8	539591
2	.4688	.0464	54.2	8815.5	538409
3	.4310	.0436	56.1	9126.7	572880
4	.4033	.0411	64.0	9669.9	558694
5	.4237	.0372	46.3	9438.3	533107
Mean:	.4282	.0413	53.8	9176.8	548536.
Standard Deviation:	.0250	.0038	7.0	374.9	16707.
Minimum:	.4033	.0372	46.3	8815.5	533107.
Maximum:	.4688	.0464	64.0	9669.9	572880.

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FLEXURAL PROPERTIES OF PLASTICS (ASTM D790)

SUPPORT SPAN = 4"

Flexural 3 point bend

Instron Corporation
Series IX Automated Materials Testing System 6.05

Operator name: E. CARRILLO

Test Date: 16 Dec 2009

Sample Identification: 8F55-6Y9

Sample Type: ASTM

Interface Type: 42/43/4400 Series

Machine Parameters of test:

Sample Rate (pts/sec): 10.000

Crosshead Speed (in/min): .1100

Humidity (%): 50

Temperature (deg. F): 71

Dimensions:

	Spec. 1	Spec. 2	Spec. 3	Spec. 4	Spec. 5
Width (in)	.53500	.54200	.54800	.54400	.54200
Depth (in)	.23800	.24800	.25900	.26700	.27000
Span (in)	4.0000	4.0000	4.0000	4.0000	4.0000

Out of 5 specimens, 0 excluded.

Sample comments: COR72-AA, SAMPLE SOAKED IN NITRIC ACID (1%) FOR 1 YEAR

Specimen Number	Displement at Yield (in)	Strain at Yield (in/in)	Load at Yield (lbs)	Stress at Yield (psi)	Modulus Of Elasticity (psi)
1	.4362	.0389	49.3	9758.9	533614
2	.5477	.0509	54.3	9775.3	543712
3	.5189	.0504	61.1	9968.4	532612
4	.4189	.0419	60.2	9320.0	533060
5	.4486	.0454	63.6	9657.9	543505
Mean:	.4741	.0455	57.7	9696.1	537301.
Standard Deviation:	.0560	.0052	5.8	238.4	5770.
Minimum:	.4189	.0389	49.3	9320.0	532612.
Maximum:	.5477	.0509	63.6	9968.4	543712.

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FLEXURAL PROPERTIES OF PLASTICS (ASTM D790)

SUPPORT SPAN = 4".

Flexural 3 point bend

Instron Corporation
Series IX Automated Materials Testing System 6.05

Operator name: E. CARRILLO

Test Date: 16 Dec 2009

Sample Identification: 8F55Y610

Sample Type: ASTM

Interface Type: 42/43/4400 Series

Machine Parameters of test:

Sample Rate (pts/sec): 10.000

Crosshead Speed (in/min): .1100

Humidity (%): 50

Temperature (deg. F): 71

Dimensions:

	Spec. 1	Spec. 2	Spec. 3	Spec. 4	Spec. 5
Width (in)	.53500	.53200	.54500	.53600	.55400
Depth (in)	.23900	.25200	.27400	.28200	.22400
Span (in)	4.0000	4.0000	4.0000	4.0000	4.0000

Out of 5 specimens, 0 excluded.

Sample comments: COR72-AA, SAMPLE SOAKED IN SULFURIC ACID (5%) FOR 1 YEAR

Specimen Number	Displcment at Yield (in)	Strain at Yield (in/in)	Load at Yield (lbs)	Stress at Yield (psi)	Modulus Of Elasticity (psi)
1	.4749	.0426	48.3	9487.0	534140
2	.5383	.0509	53.8	9560.1	539496
3	.3264	.0335	61.1	8955.3	528076
4	.3407	.0360	63.0	8865.2	546516
5	.5742	.0482	43.6	9404.4	531228
Mean:	.4509	.0422	54.0	9254.4	535891.
Standard Deviation:	.1130	.0075	8.2	320.5	7276.
Minimum:	.3264	.0335	43.6	8865.2	528076.
Maximum:	.5742	.0509	63.0	9560.1	546516.

CIPP Projects

Project Name	General Contractor	Owner			Diameter	CIPP Footage	Project Cost	Completion Date
		Address	Contact Name	Number				
City of Nashville	Reynolds Liner LLC	4701 Decker Drive Baytown, Texas 77520	Larry Purlee	(812) 865-3232	8-18 in	60,000	$ 1,637,842	Jan 2014
City of Evansville	Reynolds Liner LLC	4701 Decker Drive Baytown, Texas 77520	Larry Purlee	(812) 865-3232	12-30 in	38,000	$ 1,976,443	Jan 2014
City of Owensboro	Reynolds Liner LLC	4701 Decker Drive Baytown, Texas 77520	Larry Purlee	(812) 865-3232	24-36 in	8,500	$ 1,213,723	Jan 2014
City of Indianapolis	Reynolds Liner LLC	4701 Decker Drive Baytown, Texas 77520	Larry Purlee	(812) 865-3232	66 in	1,800	$ 967,331	Jan 2014
City of Lewisport	Reynolds Liner LLC	4701 Decker Drive Baytown, Texas 77520	Larry Purlee	(812) 865-3232	8 in	19,700	$ 403,584	Jan 2014
City of Columbus	Reynolds Liner LLC	4701 Decker Drive Baytown, Texas 77520	Larry Purlee	(812) 865-3232	36-42 in	29,000	$ 2,444,356	Jan 2014
Harris County, TX	Reynolds Liner LLC	4701 Decker Drive Baytown, Texas 77520	Larry Purlee	(812) 865-3232	8-24 in	88,500	$ 2,133,453	Jan 2014
Harris County, TX	Wesco Infrastructure	411 W 168th St Gardena, CA 90248	Shawn Sidihu	(713) 206-4479	8-24 in	29,000	$ 679,045	March 2014
Corpus Christi	Wesco Infrastructure	411 W 168th St Gardena, CA 90248	Carl Cruell	(361) 816-5773	24-36 in	7,650	$ 956,031	March 2014
City of Houston	Wesco Infrastructure	411 W 168th St Gardena, CA 90248	Shawn Sidihu	(713) 206-4479	54 in	1,300	$ 504,233	March 2014
Shell Refinery Houston	Wesco Infrastructure	411 W 168th St Gardena, CA 90248	Shawn Sidihu	(713) 206-4479	24-26 in	4,600	$ 671,495	March 2014
Exxon Mobile Beaumont	BC Liner	6009 Cottonwood St Pearland, TX 77584	Linus Gibbons	(281) 357-5755	42 in	1,470	$ 367,027	June 2014
Shepherd Air Force Base	BC Liner	6009 Cottonwood St Pearland, TX 77584	Linus Gibbons	(281) 357-5755	30 in	1,800	$ 262,720	June 2014
Harris County, TX Mud No.1	BC Liner	6009 Cottonwood St Pearland, TX 77584	Jackie Chance	(713) 553-5506	12-28 in	14,260	$ 534,462	June 2014
Jefferson Parish, LA-DPW	BLD Services, LLC	2424 Tyler Street Kenner, LA 70062	Tommy Trapp	(504) 602-1057	8-60 in	180,000	$ 4,760,000	Feb 2016
New Orleans, LA- S & WB	BLD Services, LLC	2424 Tyler Street Kenner, LA 70062	Tommy Trapp	(504) 602-1057	8-48 in	145,000	$ 2,990,776	March 2016

Miller-Coors Plant	Evanco Environmental Inc	12750 Jefferson Davis Hwy Ste 362 Wester, VA 23831	Bobby Pike	(985) 966-8096	4-24 in	24,000	$ 764,445	March 2016
New Iberia, LA - DPW	New Iberia, LA - DPW	1303 J. Allen Daigre Dr New Iberia, LA 70560	Bobby Pike	(985) 966-8096	8-12 in	12,800	$ 354,880	Feb 2015
Faulkey Gully Mud	Coker Pipeline Rehab Inc	175 Scottsville Crossing Scottsville, TX 75688	Bobby Pike	(985) 966-8096	8-30 in	77,000	$ 1,905,367	April 2015
Velasco Drainage District	Velasco Drainage District	915 Stratton Ridge Rd PO Box 7 Clute, TX 77531	Bobby Pike	(985) 966-8096	24-60 in	3,500	$ 789,056	April 2015
New Hope Pipeliners	New Hope Pipeliners	162 Miller St Newark, NJ 07114	Bobby Pike	(985) 966-8096	80 in	1,800	$ 1,745,433	Feb 2016
Alaska Road Boring	Alaska Road Boring	1600 A St #302 Anchorage, AK 99501	Bobby Pike	(985) 966-8096	8-60 in	18,000	$ 1,254,880	Feb 2016
Masterliner Inc	Masterliner Inc	42305 S. Airport Rd Hammond, LA 70403	Bobby Pike	(985) 966-8096	8-24 in	96,000	$ 2,654,771	Sept 2016
Kiewit Infrastructure West Co	Kiewit Infrastructure West Co	10704 Shoemaker Ave Santa Fe Springs, CA 90670	Bobby Pike	(985) 966-8096	24-60 in	3,500	$ 1,517,900	Sept 2016
City of Hammond	S & P Liner, LLC	219 E. Robert St Hammond, LA 70401	Guy Palermo	(985)277-5640	8 in	4,700	$ 136,000	Dec 2016
Metro Sewer Services, Inc	Metro Sewer Services, Inc	2720 West State Road 46 Sanford, Fl 32771	Bobby Pike	(985) 966-8096	55 in	8,500	$ 620,000	Jan 2017
Ecuador	Aqua Rehabilitation	Ecuador	Bobby Pike	(985) 966-8096	12 in	500	$ 15,670	March 2017
BLD New Orleans Project	BLD Services, LLC	2424 Tyler Street Kenner, LA 70062	Tommy Trapp	(504) 602-1057	15 in	100	$ 4,000	March 2017
BLD Dallas/Plano TX	Insituform Technologies, LLC	PO Box 1110 Tampa, Fl 33601	Ben Hawkins	(214) 245-6089	12 in	240	$ 32,350	May 2017
BLD Jefferson Parish, LA	BLD Services, LLC	2424 Tyler Street Kenner, LA 70062	Tommy Trapp	(504) 602-1057	54 in	200	$ 97,500	June 2017
BLD Jefferson Parish, LA	BLD Services, LLC	2424 Tyler Street Kenner, LA 70062	Tommy Trapp	(504) 602-1057	8 in	4,600	$ 117,083	June 2017
BLD Jefferson Parish, LA	BLD Services, LLC	2424 Tyler Street Kenner, LA 70062	Tommy Trapp	(504) 602-1057	10 in	340	$ 11,124	July 2017
BLD Jefferson Parish, LA	BLD Services, LLC	2424 Tyler Street Kenner, LA 70062	Tommy Trapp	(504) 602-1057	8 in	782	$ 23,845	July 2017
BLD Jefferson Parish, LA	BLD Services, LLC	2424 Tyler Street Kenner, LA 70062	Tommy Trapp	(504) 602-1057	12 in	398	$ 11,618	July 2017
Amite City, LA	S & P Liner, LLC	212 East Oak St Amite City, LA 70422	Joe Dupuy	(985) 748-8488	8 in	700	$ 24,680	July 2017

BLD Prairieville	BLD Services, LLC	2424 Tyler Street Kenner, LA 70062	Tommy Trapp	(504) 602-1057	8 in	11	$ 2,500	July 2017
Land Ofrost-Searcy, AR	S & P Liner, LLC	911 Hastings Ave Searcy, AR 72143	Brandon Barnett	(501) 268-2473	8-12 in	300	$ 66,000	July 2017
City of Slidell	BLD Services, LLC	2424 Tyler Street Kenner, LA 70062	Tommy Trapp	(504) 602-1057	18-40 in	1,680	$ 145,000	March 2018
BLD Jefferson Parish, LA-Sewer	BLD Services, LLC	2424 Tyler Street Kenner, LA 70062	Tommy Trapp	(504) 602-1057	27-30 in	3,200	$ 500,000	May 2018
BLD Jefferson Parish, LA-Drainage	BLD Services, LLC	2424 Tyler Street Kenner, LA 70062	Tommy Trapp	(504) 602-1057	72 in	900	$ 270,000	May 2018
City of Baton Rouge-Fl-Flannery	Allen & Leblanc	222 St. Louis St Baton Rouge, LA 70802	Paul Nata	(225)229-8004	8-24 in	33,500	$ 980,000	December 2018
City of Baton Rouge-Gus Young Ave	Magnolia Construction	222 St. Louis St Baton Rouge, LA 70802	Paul Nata	(225)229-8004	6-12 in	48,000	$ 1,200,000	December 2018
Hawaii Pacific Trenchless Inc	Hawaii Pacific Trenchless	PO Box 356 Kapaa, HI 96746	Bobby Pike	(985) 966-8096	60 in	1,800	$ 45,907	December 2018
Dellwood Basin	Fleming Construction	23 E Airline Dr Kenner, LA	Joe Malley	504-296-9913	8"-12"	11,500	$ 284,000	Aug. 2018
Lee St Drain	Hardrock Construction	1255 Peters Rd Harvey, LA	Chris McClellan	504-628-4015	8"-12"	9,300	$ 195,300	March 2019
Piedmont, AL	Tren-Tay, Inc.	5558 Curry Hwy Jasper, AL	Kevin Farley	205-275-6749	8"-12"	4,900	$ 127,500	Sept. 2019
Orchard Drive	S & P Liner	10383 Automall Pkwy D'Iberville, MS	Ned Hogg	228-385-2350	8"	1,050	$ 29,500	Sept. 2019
Jefferson Parish	BLD Services	2424 Tyler St Kenner, LA	Tommy Trapp	985-507-2015	8"-72"	25,500	$ 1,985,000	Dec. 2019
I-110 Hollywood	S & P Liner	49171 Hwy 51 Tickfaw, LA	Paul Nata	225-229-8004	8"-30"	70,000	$ 2,800,000	Dec. 2019
MAWSS	S & P Liner	49171 Hwy 51 Tickfaw, LA	Cole Schmidt	256-221-1219	8"-15"	19,050	$ 778,000	Feb. 2020
City of Carencro	S & P Liner	49171 Hwy 51 Tickfaw, LA	Colten Dore	337-680-0811	8"-15"	11,000	$ 305,000	April 2020
Kings Point	Subterranean	1686 North Ct Mandeville, LA	Evan Conravey	504-782-7680	8'-10"	6,000	$ 183,000	May 2020
Bayou Pattasat	BLD Services	2424 Tyler St Kenner, LA	Tommy Trapp	985-507-2015	8"-24"	43,000	$ 987,000	April 2020

BLD Services LLC
2424 Tyler St
Kenner LA 70062
P: 504.466.1344
F: 504.461.5971

World's Largest in CIPP Lateral Rehabilitation

Service Connection Seal + Lateral
SCS+L

Full Wrap Lateral Liner Repair Submittal

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BLD SERVICES, LLC

SCS+L: Product / Preparation / Installation

Product

- BLD "Service Connection Seal + Lateral" (SCS+L) service lateral rehabilitation is performed using a proven, non-disruptive process. Working remotely from inside a mainline sewer, we rehabilitate service laterals and create a watertight seal at the connection while structurally repairing the lateral line. This allows the process to take place without requiring access to the lateral pipe from the property side.
- Using a polyester felt tube with a hydrophilic sealant that will create a watertight–fitting connection at the mainline connection and terminating end.
- This process requires minimal access from the homeowner or business side of the property, as all work is completed from the mainline.
- Typically for lengths up to 30 feet +, the installation is achieved in a one piece jointless tube that will structurally repair the lateral from the mainline to a clean-out, access point, or termination point.
- No cleanout/access point is necessary for laterals up to 80 feet +, as this process can be installed as a one piece jointless tube that will terminate at the property line or designated point. Unless cleaning cannot be accomplished from the mainline, a cleanout/access point may be needed.
- For lengths over 30 feet + that cannot be cleaned from the mainline a clean-out/access point is required to perform an overlap process. This method is a pull-in-process installation from a clean-out/access point back to the mainline.
- Process can be installed rapidly with the use of ambient cure Polyester or Vinylester resins.
- Diameters of 4 - 8-inch service lateral rehabilitation with over 50,000 sucessful installations completed in 6-inch to 36-inch mainlines. Customizable applications in large pipes.
- The mainline is covered up to 16", 360 degrees with a smooth tapered transition to the host pipe

Preparation

- The service connection is inspected using a radial view camera system in the mainline pipe. The service lateral is inspected with a mini camera that can be propelled into the service lateral from the mainline pipe or pushed in from a clean-out/secondary access point.
- This video inspection provides valuable information about the condition and profile of the connection and lateral pipe.
- It is necessary to thoroughly clean the pipe prior to the rehabilitation process.
- We typically use high-pressure water to free the service lateral of roots, mineral deposits, grease, sand and sludge.
- After cleaning, and before installation, another video inspection insures that the lateral pipe is properly prepared.
- Clean-outs/access points may be needed if cleaning cannot be accomplished through the mainline.

Installation

- An installation device (silicone bladder installation lateral train) will be used to carry and install the SCS+L.
- After loading the SCS+L into the lateral train, it is then placed into the mainline pipe and positioned at the damaged service connection with the use of a rotation device.
- The installation device is then used to hold the semi-ridgid flange in place at the connection while it is inverted into the service lateral using an inversion silicone hose with air pressure.
- The curing process begins, during which the liner is held in place by the inversion silicone bladder at the recommended air pressure.
- Once the SCS+L has fully cured, the installation device is removed, leaving the service lateral structurally rehabilitated, a watertight seal at the connection, and ready for normal use.

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BLD Services can offer the following data in support of our manufactures qualifications and installation process:

1. *Manufactures qualifications*

Manufacturer's license certificate – BLD Services manufacturers the product in the field by combining the submitted felt tube and an AOC resin system to create a Cured-In-Place Pipe that provides a water tight seal at the main and a structural, watertight repair up the lateral . We are the manufacturer and installer of our product and therefore do not license contractors for the installation of our product.

BLD Services manufactures our service connection seal and lateral liner at BLDs manufacturing facility by combining a typical felt CIPP liner with a felt brim assembly or Full-wrap assembly. The wet out process takes place onsite by vacuum impregnating the liner with resins manufactured by the approved manufacturer, Alpha Owens Corning (AOC).

The 4-6" felt CIPP liners are purchased from the following approved CIPP manufacturers:

Layne Inliner/Liner Products
1468 West Hospital Rd
Paoli, IN 47454

Applied Felts, Inc.
450 College Dr
Martinsville, VA 24112

The brim material or full-wrap is manufactured on site using liner material made by one of the above suppliers. The PVC collar is special made for BLD and is proprietary in nature.

2. *Installation Guidelines*

The following data contains proprietary information.

The general sequence followed for the installation of the Service Lateral Connection (SLC) seal is as follows:

1. Setup traffic control as required
2. Equipment setup at the upstream and downstream manholes
3. Bypass pumping equipment setup (if required)
4. Plugs and suction/discharge hoses placed in the appropriate locations
5. CCTV inspection of the mainline sewer and applicable laterals
6. Cleaning of the lateral sewers as required
7. CCTV inspection of the lateral sewers to ensure they have been adequately cleaned
8. Additional cleaning, if required, followed by final pre-lining CCTV inspection
9. Manufacture of the dry felt liner on site
10. Wetout of the SLC CIPP liner on site
11. Placement of the SLC CIPP liner into the installation train

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12. Position the installation train in the pipe
13. Move the installation train to the appropriate lateral connection
14. Inflate the main line bladder
15. Invert the lateral bladder up the lateral connection
16. Hold in place until curing times have been met or exceeded
17. De-invert the lateral bladder and deflate the main line bladder
18. Remove the installation train from the pipeline
19. CCTV inspect the main line at the connection and the lateral liner
20. Repeat steps 9-18 as required for each lateral connection

The details pertaining to each of the steps listed above are proprietary in nature. We are providing them in confidence. These proprietary details are as follows:

a) Set-up:
   i) Position equipment.
   ii) Set-up adequate traffic control for the conditions present, establishing a defined work space.
   iii) Clean the mainline with the Cleaning Unit.
   iv) Video the mainline with the CCTV Truck, noting the location, size, type and length of the service lateral that is required rehabilitating the service. **Care must be taken to note any abnormalities on CCTV log of the service i.e. overcut, undercut, infiltration, heavy flow thru service that may require custom modifications of the SCS+L and/or curing time.**
   v) Prep Connection (as required)
      (1) Brush connection if not cut properly
   vi) Prep Lateral Line without cleanout/access point – from mainline(as required)
      (1) Clean and remove all loose debris
      (2) De-root
      (3) TV-Lateral Launching (if required, or pan and tilt from main line)
      (4) Rehabilitation Length
   vii) Prep Lateral Line with cleanout/access point (as required)
      (1) Clean and remove all loose debris
      (2) De-root
      (3) TV-push camera
      (4) Rehabilitation Length
   viii) Set-up, test and verify size of rotational alignment device to correlate with mainline then position into mainline.
   ix) Set-up safety items for Confined Space Entry.
   x) Set-up Staging Area
      (1) Tarp to protect installation device (silicone bladder installation lateral train) from abrasions and contain excess resin while loading lateral train.
      (2) Portable shade device if no shade is available to protect lateral train from sun.
      (3) Restraining device (girdle) to restrain mainline silicone bladder from over expanding while loading.
      (4) Chain and cup connected to a fixed object to hold the lateral train while retracting the inversion silicone bladder.
      (5) Vegetable Shorting (Crisco) used to lubricate the inversion silicone bladder and mainline silicone bladder.

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b) Train Preparations:
   i) Select appropriate train assembly for the size and length of lateral to be rehabilitated.
   ii) Attach a radial view camera via a camera saddle to the lateral train for alignment purposes.
   iii) Add vegetable oil daily or as needed to the lateral train through the air fitting at the rear of the assembly.
   iv) Lubricate the inversion silicone bladder and mainline silicone bladder with Crisco, install girdle over lateral train mainline silicone bladder and secure to chain/cup.
   v) Connect air line to rear of lateral train. Connect winch cable to installation hose then apply enough air pressure to invert the inversion silicone bladder (2 to 10 PSI 6"), (2 to 15 PSI 4"). Once the inversion silicone bladder has inverted, maintain minimal pressure and clean the inversion silicone bladder if necessary with a clean cloth soaked in Acetone. Check the inversion and mainline silicone bladder for leaks, repair if necessary.
   vi) Lubricate inversion silicone bladder with Crisco, deplete air pressure then retract inversion silicone bladder back into the lateral train assembly assuring that the bladder doesn't bunch up in the process.
   vii) During higher air temperature ranges the lateral train may need to be cooled via covering the lateral train with tarps or felt that has been soaked in ice water during the wet-out procedure.

c) SCS+L Preparations:
   i) Cut coated polyester felt material to form the brim or full-wrap using the template that adequately matches the service being rehabilitated. **NOTE: Pay close attention to any abnormalities of the service noted on the CCTV Log that may require modifications of the brim**.
   ii) Cut uncoated polyester felt material to fit backside of brim as required.
   iii) Cut the appropriate size lateral tube.
   iv) Flatten the lateral tube on the work bench with the seam on one edge and trace the appropriate template i.e. wye, tee on the tube.
   v) Carefully cut the profile traced on the tube to accurately fit the service.
   vi) Stretch the end of the lateral tube to receive the PVC Collar.
   vii) Clean the coated side of the brim felt and the appropriate PVC Collar with PVC Cleaner.

d) SCS+L Assembly:
   i) Ensure the tube seam is positioned as noted on the template and attach the tube to the extended lip of the PVC Collar using adhesive (cyanoacrylate).
   ii) Slide the coated side of the brim to the PVC Collar and attach it with adhesive.
   iii) Inspect the assembly components to ensure they have properly bonded.
   iv) Attach an inch and half strip of black tie strap, on the seam side of a tee service or the long side of a wye service, with adhesive. **Note:** This may have to be modified depending on position of equipment to direction of flow, typical set-up has alignment camera on the downstream side of service.
   v) Seal the end of the tube so that a vacuum can be applied.
   vi) Cut a slit in coating of tube in the center two inches from sealed end, and circle the slit with felt marker to establish a vacuum port.
   vii) Measure from side of tube at PVC Collar to required length of tube to be installed. With a straight edge draw a line across the tube.

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e) Resin/Chemical Preparation:
   i) Weigh out required amount of resin in a bucket with a clean bucket liner.
   ii) Weigh out required amount of peroxide (BPO), add to the resin and mix for approximately two minutes.
   iii) Weigh out required amount of thickening agent (MGO) and set aside.
   iv) **Evaluate ground, air and resin temperatures, any abnormalities of the service noted on the CCTV Log and anticipated difficulty of installation to determine desired pot life.**
   v) Weigh out required amount of catalyst (DEA/DMA) as determined in "D" above and set aside.

f) Resin Mixing and Wet-Out:
   i) Add thickening agent (MGO) to resin.
   ii) Record the time on the wet-out/curing log.
   iii) Add catalyst (DEA/DMA) to resin and mix for approximately two minutes.
   iv) Attach vacuum cup to the previously prepared vacuum port.
   v) Submerge SCS+L brim or Full-wrap and 4 to 6 inches of tube into resin for approximately one minute.
   vi) Remove from resin and ensure the brim is thoroughly wet-out.
   vii) Pour remainder of resin mixture into the lateral tube. Wet-out the entire lateral tube moving resin slug towards vacuum port.
   viii) Remove the vacuum cup before resin is absorbed into the vacuum system.
   ix) Cut the lateral tube at the predetermined length marked. Cut the sample & test piece from remainder of tube, place in the shade for final preparation.
   x) Wipe off any excess resin from the coated side of brim and PVC Collar.
   xi) Transport SCS+L to the lateral train staging area.

g) Loading:
   i) Pre-Invert (typically 5-10psi) the silicone bladder to the length of the lateral liner above ground.
   ii) Deflate silicone bladder.
   iii) Apply a hydrophilic caulk 6-12" inside the terminating end of the lateral liner.
   iv) Place the wet out SCS+L into the deflated silicone bladder and apply 1-3 psi and begin inverting the silicone bladder back inside the train.
   v) The Service Connection Seal will begin slowly being pulled into the train until the Connection Seal itself has reached the installation train assembly.
   vi) Wipe off any excess resin from lateral train assembly and Service Connection Seal.
   vii) Flip Service Connection Seal over and fold tightly over itself and apply 2 wraps of black electrical tape or 1-2 standard rubber bands.
   viii) Apply a hydrophilic caulk into the pocket around the backside of the Service Connection Seal
   **See attached Adeka Caulking Specifications*
   Apply the silicate resin around Brim or the Full-wrap
   **See attached RS Technik specifications*

h) Inserting SCS+L into mainline:
   i) Transport loaded lateral train assembly to downstream manhole.
   ii) Lower the loaded lateral train assembly into manhole with the mainline silicone bladder end first.

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iii) Lower a lateral lining technician into manhole.
iv) The lateral lining technician will attach the lateral train assembly to the lateral train rotational alignment device and the radial view camera to video cable.
v) With the SCS+L facing 12 o'clock the CCTV Operator slowly takes up the slack pulling the lateral train assembly into the mainline ensuring that the assembly does not twist nor does the brim fold.
vi) Continue to feed lateral train into manhole/mainline until rear of lateral train is in mainline, stop pulling and remove the lateral lining technician from manhole.
vii) As the CCTV Operator pulls lateral train assembly, downstream personnel will continue to feed slack on air line and installation hose/cable until the SCS+L reaches the service to be rehabilitated.

i) Inversion:
i) CCTV Operator pulls the lateral train assembly passed the connection to be rehabilitated, approximately one foot. The lateral train assembly will then be pulled back toward the downstream, as the CCTV Operator rotates the lateral train assembly via the rotational alignment device to align the SCS+L. The black tie strap that was attached to lateral tube during tube preparation will be used as a guide to center the SCS+L in the connection.
ii) Once the lateral train assembly is in place the installation hose/cable is marked for the length of the SCS+L being installed. The cable reel is locked to prevent the inversion silicone bladder from going beyond the required distance.
iii) The CCTV Operator will communicate to the downstream personnel that the lateral train assembly is lined up and to apply air pressure to the lateral train to invert the SCS+L. The lateral train will normally invert at approximately 15-25 psi assuming, 4" laterals are 25-35 psi. The inversion hose/cable should be held to delay installation until the mainline silicone bladder of lateral train assembly has fully inflated, as viewed by the CCTV Operator. Once the mainline silicone bladder is fully inflated the inversion hose/cable should be released, allowing SCS+L to be inverted into the lateral line.
iv) **NOTE: If the inversion has not been completed within the predetermined pot life of the resin, it may be deemed necessary to abort the installation.**
v) Once the inversion is completed, allotted distance of installation hose/cable is pulled taut; the air pressure should be lowered to the hold pressure which is approximately 15-25 psi depending on condition of lateral train, ground water and infiltration.
vi) The sample of the lateral tube should be attached to a rope and lowered into the downstream manhole ensuring that it is not exposed to direct sunlight nor allowed to come in contact with water in the manhole.
vii) The test piece is placed in a clamp mold calibrated for the designed thickness and lowered into the downstream manhole ensuring that it is not exposed to direct sunlight nor allowed to come in contact with water in the manhole, as required.

j) Curing:
i) Curing is achieved with an ambient cure resin system. The cure time is approximately 30 – 60 minutes.
ii) Lateral lining technician will monitor the air pressure throughout the cure cycle.
iii) Lateral lining technician will monitor the sample that is suspended in the manhole to observe when the exotherm begins. The times of each curing stage are recorded on the wet-out cure log.

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iv) Once the sample has cured, the air pressure should be maintained for approximately 15 – 30 minutes depending on ground water, infiltration, etc. **NOTE: Pay close attention to any abnormalities of the service noted on the CCTV Log.**

k) Train Removal/Retraction:
   i) Open the pressure relief valve. While air pressure is bleeding off ensure that the CCTV winch is in gear then pull back on the installation hose/cable pulling the inversion silicone bladder down into the lateral train assembly.
   ii) With the radial view camera on the lateral train assembly, confirm the newly rehabilitated SCS+L is complete.
   iii) Take the CCTV winch out of gear and pull the lateral train assembly back to the downstream manhole.
   iv) Lower a lateral lining technician into manhole to disconnect the lateral train assembly from the rotational alignment device.
   v) Remove lateral lining technician from manhole.
   vi) Remove the lateral train assembly from manhole and transport the lateral train to the Staging Area. Prep the lateral train assembly for the next installation as previously described in Set-up section above.

l) Post Installation Video:
   i) Mainline
      (a) Post video inspection of mainline while radial viewing newly rehabilitated connections. **NOTE:** If SCS+L can be viewed from the mainline post video inspection, no additional video is required.
   ii) Lateral Line without cleanout
      (a) Post video inspection using lateral launching camera
   iii) Lateral Line with cleanout
      (a) Post video inspection using lateral push camera

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LINER PRODUCTS

1468 WEST HOSPITAL ROAD • PAOLI, INDIANA 47454 • PHONE: (812) 723-0244 • FAX: (812) 723-0405

PRODUCT INFORMATION

POLYESTER FELT CURED-IN-PLACE PIPE LINING TUBE FOR INSTALLATION IN SMALL DIAMETER PIPELINES USING THE DIRECT INVERSION METHOD

REVISED MARCH 1, 2004

COMPANY PROFILE

PRODUCT TYPES

OVERVIEW OF TUBE CONSTRUCTION

QUALITY ASSURANCE

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FINISHED PRODUCTS

PRODUCT SPECIFICATIONS

LINER PRODUCTS, LLC
PRODUCT INFORMATION
POLYESTER FELT CURED-IN-PLACE PIPE LINING TUBE FOR INSTALLATION IN SMALL DIAMETER PIPELINES USING THE DIRECT INVERSION METHOD

COMPANY PROFILE

Liner Products, LLC is a worldwide supplier of quality lining tubes to the cured-in-place pipe (CIPP) industry. The Liner Products manufacturing facility, located in Paoli, Indiana, occupies approximately 78,000 square feet of production and administrative area.

PRODUCT TYPES

The information contained in this book pertains to polyester felt CIPP lining tubes designed for installation in small diameter pipelines using the direct inversion and curing method. This installation technique generally utilizes a flexible tube with an exterior thermoplastic coating. Tubes may be manufactured with a single layer or multiple layer construction, depending upon the required thickness. The tube is impregnated with a thermosetting resin and everted into place inside the host pipe. The resin is then cured to produce a finished liner which is continuous, seamless, and fits tightly inside the original pipe. Direct inversion small diameter inversion tubes may be installed with a removable calibration hose so that the remote end of the CIPP is left open and and expanded to the pipe wall after the calibration hose is removed.

OVERVIEW OF TUBE CONSTRUCTION

Polyester felt CIPP lining tubes for small diameter pipelines are generally manufactured from one or more needled polyester felt layers constructed together to form a tube. Each tube is tailor made to be the proper diameter, thickness, and length per the customer's specifications. These customer specifications usually originate from measurements of the host pipe and a CIPP thickness design.

The proper diameter of each tube is achieved by slitting felt for individual layers to a calculated width before closure into tubular form. Butt seams are formed by stitching the adjoining edges.

Appropriate sizing for each tube is determined in the tube design phase. Tubes are typically undersized to prevent wrinkling of the liner along the length of the pipe and minimize wrinkling at bends and points where the diameter of the pipe may be substantially reduced, such as offset joints and areas of significant deflection. This provides a smooth interior surface for the finished liner.

The specified thickness of each tube is achieved through combinations of the number of layers and the respective thicknesses of each of the layers. The outermost layer of each tube is coated with an impermeable thermoplastic film to allow for vacuum-assisted resin impregnation of the tube, resin containment, and containment of the fluid(s) used to invert the tube and cure the thermosetting resin. Seams in this coated layer are sealed with an impermeable thermoplastic sealing strip which is bonded to the exterior of the coated layer. All seams are inspected to ensure an adequate bond between the coated layer and the sealing strip.

QUALITY ASSURANCE

Liner Products maintains an advanced quality control laboratory in which quality assurance testing and documentation is performed for all component materials, manufacturing processes, and finished tubes to ensure conformance with customer specifications and applicable standards. All lining tubes comply with applicable ASTM standards, including ASTM D5813, ASTM F1216, and ASTM F1743.

All felt used in the manufacture of lining tubes is individually numbered and quality tested to rigid specifications for thickness, weight, and density in accordance with ASTM standards and material specifications. Thermoplastic coated felts are also tested for coating thickness and porosity. Each roll is individually tested before incorporation into inventory; any materials not meeting specifications are rejected.

All finished tubes are quality tested for length, circumference, thickness, and quality of construction in accordance with ASTM standards and manufacturing specifications.

RAW MATERIALS

Specifications for each raw material component are formalized in a Material Specification. Each lot of incoming materials is inspected and quality tested for conformance with the governing Material Specification.

POLYESTER FELT:

Polyester felt is generally received in the form of rolls, each of which is uniquely numbered for identification. The properties of polyester felt which are measured and recorded are given in Table 1.

Table 1. Tested Polyester Felt Properties

Property	Description of Test
Roll width	Measured with approved steel rule
Thickness	Measured with ASTM specified gage
Weight	Measured with approved electronic balance
Density	Calculated from thickness and weight measurements
Tensile strength	Supplier certified

THERMOPLASTIC COATED POLYESTER FELT:

Direct inversion tubes have a polyurethane coating to allow for resin impregnation of the tube and containment of the fluid(s) used for inversion and curing.

Polyester felt which is coated with a thermoplastic film is received in roll form. Each roll is uniquely numbered for identification. The properties of thermoplastic coated polyester felt which are measured and recorded are listed in Table 2.

Table 2. Tested Thermoplastic Coated Polyester Felt Properties

Property	Description of Test
Roll width	Measured with approved steel rule
Felt thickness	Measured with ASTM specified gage
Felt weight	Measured with approved electronic balance
Felt density	Calculated from thickness and weight measurements
Coating thickness	Measured with approved gage
Coating weight	Calculated from thickness and felt weight measurements
Tensile strength	Supplier certified

THERMOPLASTIC SEALING STRIPS:
Seams in the outermost, coated layer are sealed with an impermeable thermoplastic sealing strip which is bonded to the exterior of the coated layer.

Thermoplastic sealing strips are received in rolls wound on a core or reel as specified in an approved Material Specification. The properties which are measured and recorded are provided in Table 3.

Table 3. Tested Thermoplastic Sealing Strip Properties

Property	Description of Test
Sealing strip thickness	Measured with approved gage
Sealing strip weight	Measured with approved electronic balance
Sealing strip density	Calculated from thickness and weight measurements

PRODUCT DESIGN, DOCUMENTATION, AND SCHEDULING

PRODUCT DESIGN:
Before production, a tube design is generated to determine the planned construction of the tube. The design of each tube requires the determination of the sequence and specific attributes of individual layers to be combined in the construction of the tube in order to meet the customer's specifications. The specific attributes of each layer include:

1. Felt thickness
2. Coating type (if applicable)
3. Coating thickness (if applicable)
4. Total layer width (or circumference)
5. Individual felt width(s)
6. Overlap width(s)
7. Number of seam(s)
8. Location of seam(s)

TUBE CONSTRUCTION WORKSHEET:
A Tube Construction Worksheet is generated for each tube to be manufactured. The Tube Construction Worksheet identifies the tube and planned product design and serves as the primary quality control document. Information regarding specific attributes of each tube (i.e., diametrical transitions, thickness changes, etc.), the felt rolls used in fabrication, certain process information, and identification of the manufacturing technicians participating in each phase of production are recorded on the Tube Construction Worksheet.

TUBE IDENTIFICATION:
Each tube is assigned a unique tube number for identification purposes. These numbers are generated sequentially. The tube number is included on the Tube Construction Worksheet.

PRODUCTION SCHEDULING:
Production of tubes is scheduled to best meet customer delivery requirements. After each tube has been designed it is entered into the production schedule. The production schedule is kept current by updating schedule information as the manufacture of individual tubes is commenced and completed.

FINISHED PRODUCTS

Each finished tube is quality control tested to ensure it meets customer specifications. A quality control technician takes a sample from the full circumference of each end of each tube to be destructively tested. The properties of finished tubes which are measured and recorded are listed in Table 4.

Table 4. Tested Finished Product Properties

Property	Description of Test
Tube length	Measured with footage counter or other approved means
Tube circumference	Measured with approved flexible rule
Tube thickness	Measured with ASTM specified gage
Coating thickness and quality	Measured with approved gage and visual inspection
Sealing strip bond	Visual inspection
Quality of construction	Visual inspection

The seams of all inversion tubes are subjected to a separate visual inspection to ensure a watertight bond between the outer coating and thermoplastic sealing strips. Any finished lining tube not meeting customer specifications is rejected.

LINER PRODUCTS

1468 West Hospital Road • Paoli, Indiana 47454 • Phone: (812) 723-0244 • Fax: (812) 723-0405

- Product Specifications -

Product Type

Polyester Felt Cured-In-Place Pipe (CIPP) Lining Tube For Installation In Small Diameter Pipelines Using The Direct Inversion Method

---

Product Description

Thermoplastic coated polyester felt cured-in-place pipe lining tube.

General Installation Technique

A flexible tube is vacuum impregnated with resin and inverted into place inside the host pipe and the resin is cured. A preliner may be everted into the host pipe prior to inversion of the resin impregnated tube to control resin migration and contamination.

Resin Types

Compatible with polyester, vinyl ester, and epoxy resins. Resins may be cured in a variety of ways, including ambient and semi-ambient cures, hot water, and steam.

Tube Coatings

Small diameter inversion tubes have a polyurethane or polyurethane-based coating. Coating thickness is dependent upon specific application.

Tube Sizes

Diameter:	4" to 10"
Thickness:	3.0 mm to 7.5 mm
Length:	Customer specified

Minimum Tube Tensile Strength

750 psi
Longitudinal and transverse directions

Complies with applicable ASTM standards, including ASTM D5813 and ASTM F1216.

Variations of this general product type may be manufactured for specific applications. Consult Liner Products, LLC for technical guidance.

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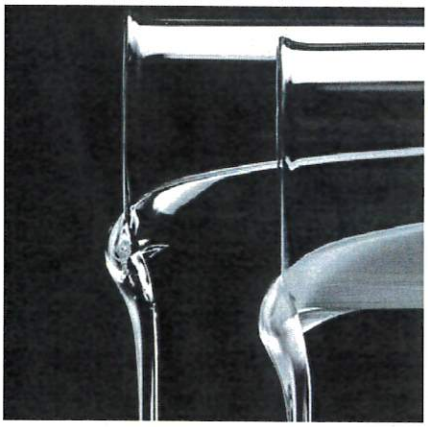
World Leader in Resin Technology

PR 200
Polyester Resin

Product Information

Isophthalic Based Resin for Underground Sewer Pipe Liners and Lateral Connection



TYPICAL CURED LINER MECHANICAL PROPERTIES

		Test Method
Flexural Strength, psi/MPa	4,500/31.0	ASTM D 790
Flexural Modulus, psi/GPa	300,000/2.1	ASTM D 790

***Typical properties are not to be construed as specifications.**

DESCRIPTION

PR 200 is a high molecular weight isophthalic unsaturated polyester resin that was developed for ambient cure sewer and lateral lining. PR 200 provides the corrosion resistance, durability and toughness that is required in this environment. PR 200 can be adjusted to cure at a wide range of ambient conditions by varying catalyst and promoter levels. PR 200 thixotropic properties reduce resin pooling while providing superior PET felt wet-out.

FEATURES

- Superior mechanical properties
- High molecular weight
- High heat distortion tempature

APPLICATION

- Sewer pipe liners
- Lateral lining
- Spot repair lining

PERFORMANCE GUIDELINES

Consistent shop conditions contribute to consistent gel times.

STORAGE STABILITY

Resins are stable for three months from date of production when stored in the original containers away from sunlight at no more than 70°F/21°C. After extended storage, some drift may occur in gel time.During the hot summer months, no more than two months stability at 86°F/30°C should be anticipated.

SAFETY

See appropriate Material Safety Data Sheet for guidelines.

ISO 9001:2000 CERTIFIED

The Quality Management Systems at every AOC manufacturing facility have been certified as meeting ISO 9001:2000 standards. This certification recognizes that each AOC facility has an internationally accepted model in place for managing and assuring quality. We follow the practices set forth in this model to add value to the resins we make for our customers.

AOC® World Leader in Resin Technology

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Pub. No. F-AOC-PR 200

Effective Date: June 2009

AOC®
World Leader in Resin Technology

CERTIFICATION OF COMPLIANCE

June 22, 2016

To Whom It May Concern,

This letter certifies that PR200 polyester resin manufactured by AOC, LLC for use by BDL Services, LLC, is manufactured in accordance with ISO certified manufacturing practices. The PR200 polyester resin is a corrosion resistant isophthalic resin that does not contain any filler, and is not made using recycled PET. The PR200 polyester resin meets the chemical resistance requirements of ASTM F1216-08 as tested in accordance with ASTM D543, and is designed specifically for use in the rehabilitation of CIPP lateral connections. The PR200 polyester resin has a heat deflection temperature of grater than 100ºC and is resistant to domestic sewage.

PR200 polyester resin exceeds the minimum design properties of 300,000 psi flexural modulus and 4,500 psi flexural strength as outlined in ASTM F1216-08.

Regards,

Bill Moore

Bill Moore
AOC, LLC
Product Leader CIPP

AOC
World Leader in Resin Technology

June 22, 2016

The following cure procedures are recommended when using the PR200 polyester resin in ambient cure Cured In Place Pipe applications.

PR200 polyester resin can be cured as an ambient cure system for CIPP applications using BPO (dibenzoyl peroxide) and an amine promoter such as DEA (diethyl aniline) or DMA (dimethyl aniline).

For an ambient cure system no heat is applied so the composite is cured at the temperatures it is exposed to in the host pipe being repaired. The cure schedule will consist of a ***"time to cure"*** followed by a ***"post cure"*** period. The time to cure is defined as the time it takes for a sample piece from the same liner exposed to as similar conditions as possible to gel and exotherm. The post cure period is the additional time the bladder or liner is held in place to ensure the development of adequate mechanical properties of the CIPP composite.

The **time to cure** is adjusted by changing the amount of BPO and amine added to the resin. Inhibitor can also be added if necessary to extend the working time. The **time to cure** is generally between 30 and 60 minutes but may be longer based on actual field conditions or other factors such as resin temperature. The **post cure** period should be a minimum of 50% of the **time to cure** period. For example if the **time to cure** is 60 minutes the minimum **post cure** period will be 30 minutes.

Additional post cure time is recommended in very cold or very wet conditions. Job site and other field conditions should be monitored and adjusted for by the installation crew.

Bill Moore

Bill Moore
AOC, LLC
Product Leader - CIPP

AOC
World Leader in Resin Technology

ASTM F1216 Test Results on 6 mm Felt Composite
PR-200 Series Polyester Resin
One Month Results at 25°C

	PR-200	REQUIREMENTS %	PASS OR FAIL
CONTROL SAMPLE			
FLEXURAL STRENGTH, psi	7,770		
STANDARD DEVIATION	263		
FLEXURAL MODULUS, psi	560,000		
STANDARD DEVIATION	14,386		
TAP WATER			
FLEXURAL STRENGH, psi	7,908		
STANDARD DEVIATION	354		
% FLEXURAL STRENGTH, psi RETENTION	102	>80	PASSED
FLEXURAL MODULUS, psi	544,825		
STANDARD DEVIATION	3,167		
% FLEXUARAL MODULUS RETENTION	97	>80	PASSED
5% NITRIC ACID			
FLEXURAL STRENGH, psi	7,886		
STANDARD DEVIATION	998		
% FLEXURAL STRENGTH, psi RETENTION	101	>80	PASSED
FLEXURAL MODULUS, psi	549,971		
STANDARD DEVIATION	10,720		
% FLEXUARAL MODULUS RETENTION	98	>80	PASSED
10% PHOSPHORIC ACID			
FLEXURAL STRENGH, psi	8,281		
STANDARD DEVIATION	447		
% FLEXURAL STRENGTH, psi RETENTION	107	>80	PASSED
FLEXURAL MODULUS, psi	562,022		
STANDARD DEVIATION	11,714		
% FLEXUARAL MODULUS RETENTION	100	>80	PASSED
10% SULFURIC ACID			
FLEXURAL STRENGH, psi	7,943		
STANDARD DEVIATION	1,014		
% FLEXURAL STRENGTH, psi RETENTION	102	>80	PASSED
FLEXURAL MODULUS, psi	556,517		
STANDARD DEVIATION	9,215		
% FLEXUARAL MODULUS RETENTION	99	>80	PASSED

AMOCO GASOLINE			
FLEXURAL STRENGH, psi	8,471		
STANDARD DEVIATION	611		
% FLEXURAL STRENGTH, psi RETENTION	109	>80	PASSED
FLEXURAL MODULUS, psi	556,885		
STANDARD DEVIATION	8,082		
% FLEXURAL MODULUS RETENTION	99	>80	PASSED
VEGETABLE OIL			
FLEXURAL STRENGH, psi	8,449		
STANDARD DEVIATION	110		
% FLEXURAL STRENGTH, psi RETENTION	109	>80	PASSED
FLEXURAL MODULUS, psi	577,791		
STANDARD DEVIATION	7,359		
% FLEXUARAL MODULUS RETENTION	103	>80	PASSED
0.1% DETERGENT			
FLEXURAL STRENGH, psi	7,921		
STANDARD DEVIATION	405		
% FLEXURAL STRENGTH, psi RETENTION	102	>80	PASSED
FLEXURAL MODULUS, psi	547,321		
STANDARD DEVIATION	11,995		
% FLEXUARAL MODULUS RETENTION	98	>80	PASSED
0.1% SOAP			
FLEXURAL STRENGH, psi	7,595		
STANDARD DEVIATION	380		
% FLEXURAL STRENGTH, psi RETENTION	98	>80	PASSED
FLEXURAL MODULUS, psi	549,681		
STANDARD DEVIATION	2,713		
% FLEXURAL MODULUS RETENTION	98	>80	PASSED

September, 2009

AOC
World Leader in Resin Technology

ASTM D2990 Flexural Creep Test Results
6 mm Felt Composite
PR200 Resin

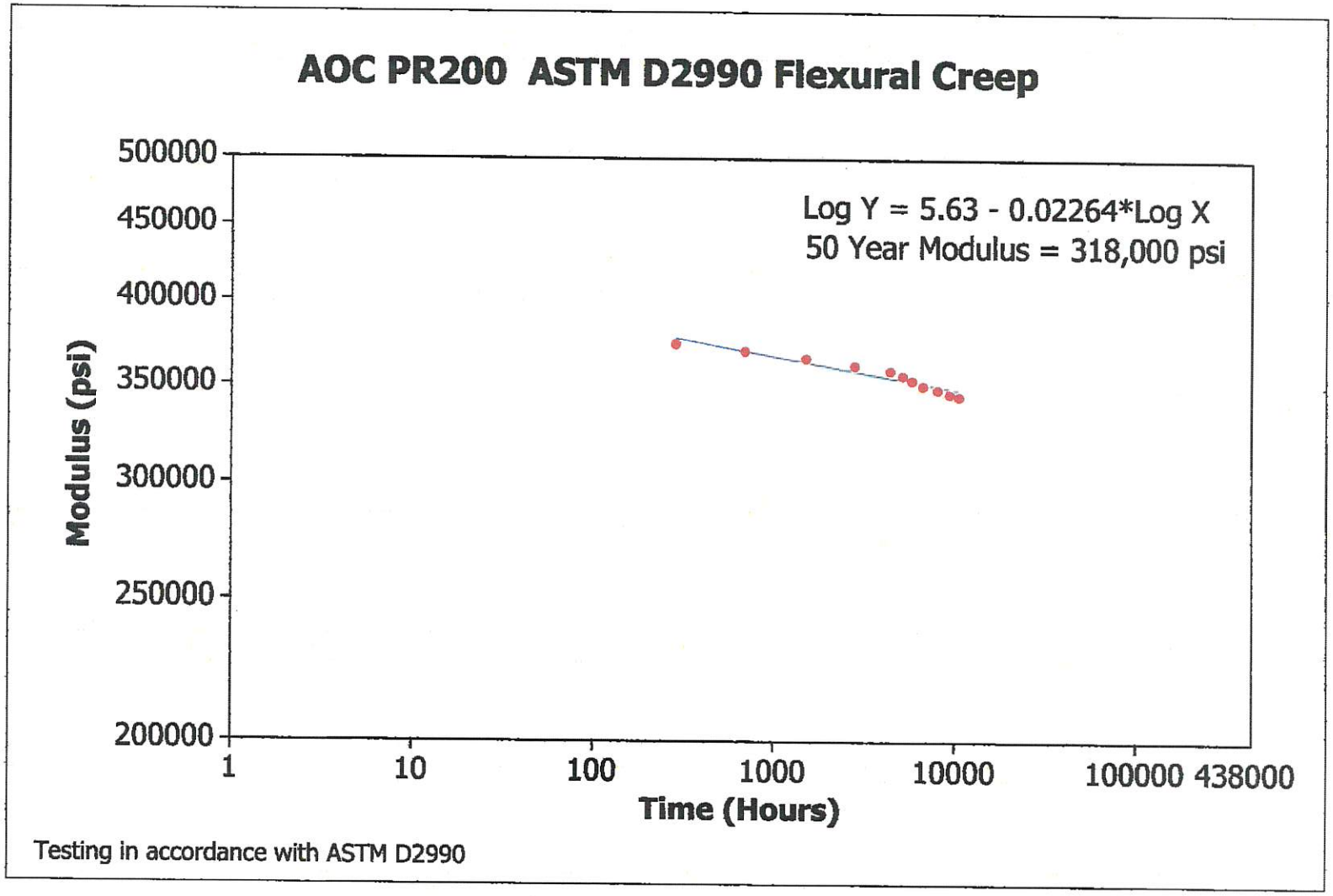
Details: 10,000 hour Flexural Creep test run on 6 mm PET felt laminate. Testing was done in accordance with ASTM D2990-09 *Tensile, Compressive, and Flexural Creep and Creep Rupture of Plastics*. The loading was set at 0.25% of the short term flexural modulus of 560,000 psi. A 50 year modulus was calculated be extrapolating the linear portion of the graph (288 to 10,632 hours) using regression analysis to determine the equation for the slope of the line. The 50 year extrapolated flexural modulus is 318,000 psi.

Data:

Results: Presented in attached graph.

Elapsed Time					
Hours	1	2	3	4	Average
0.03	426782	428939	467098	443331	441538
0.083	416288	417187	450514	428430	428105
0.25	404141	408240	436315	417894	416647
0.5	397810	401777	428940	410052	409645
1	390670	397581	421811	403560	403405
5	384751	390444	413787	396242	396306
24	374352	383560	407149	385263	387581
48	369809	377850	401778	380471	352477
120	365375	372306	398622	376723	378257
288	360192	366924	395516	372140	373693
696	356818	363421	391449	367667	369839
1512	355154	361694	385503	360730	365770
2808	351874	357449	381639	355696	361664
4416	348653	354950	378791	353232	358906
5184	346276	352485	376915	349199	356219
5832	344709	350054	373220	349039	353505
6696	342385	348452	370496	340644	350494
8088	340853	346864	367811	337637	348291
9408	339335	344510	366043	333951	345959
10632	338581	342958	364291	332499	344582

June 2014


AOC PR200 ASTM D2990 Flexural Creep
Log Y = 5.63 - 0.02264*Log X
50 Year Modulus = 318,000 psi
Modulus (psi)
500000
450000
400000
350000
300000
250000
200000
1
10
100
1000
10000
100000
438000
Time (Hours)
Testing in accordance with ASTM D2990

AOC®

World Leader in Resin Technology

Material Safety Data Sheet

MSDS #: 11346V4

WHMIS (Canada)	NFPA (USA)	HMIS (USA)	Protective clothing
 B-2 D-2A D-2B	 Fire: 3, Health: 2, Reactivity: 2, Specific hazard	Health hazards * 2 Flammability 3 Physical hazards 2 Personal protection X	

Section 1. Chemical product and company identification

Trade name	**PR 200**
Product type	Polyester Resin Solution
Chemical family	Aromatic.
Material uses	Used in the manufacture of thermoset plastic parts.

Manufacturer

AOC, LLC
950 Highway 57 East
Collierville, TN U.S.A. 38017
Website: www.aoc-resins.com
Phone Number: (901) 854-2800
8am-5pm (Central Time) Mon-Fri

In case of emergency

CHEMTREC (US): 24 hours/7 days (800) 424-9300
CANUTEC (Canada): 24 hours/7 days (613) 996-6666

Section 2. Hazards identification

OSHA status	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Routes of entry	Eye contact, Skin contact, Inhalation, Ingestion
Potential acute health effects	**Eyes:** Severe eye irritant which may result in redness, burning, tearing and blurred vision. **Skin:** Skin irritant which may result in burning sensation. Repeated or prolonged skin contact may cause dermatitis. **Ingestion:** Ingestion may result in mouth, throat and gastrointestinal irritation, nausea, vomiting and diarrhea. **Inhalation:** Inhalation of spray mist or liquid vapors may cause upper respiratory irritation and possible central nervous system effects including headaches, nausea, vomiting, dizziness, drowsiness, loss of coordination, impaired judgement and general weakness.
Potential chronic health effects	**CARCINOGENIC EFFECTS:** Styrene: Classified A4 (not classifiable for human or animal) by ACGIH. Classified 2B (possible for human) by IARC. An increased incidence of lung tumors was observed in mice from a recent inhalation study. The relevance of this finding is uncertain since data from other long-term animal studies and from epidemiology studies of workers exposed to styrene do not provide a basis to conclude that styrene is carcinogenic to humans. Lung effects have been observed in mouse studies following repeated exposure. Silica, Amorphous: Classified 3 (not classifiable for human) by IARC. **MUTAGENIC or TERATOGENIC EFFECTS:** No known effect according to our database.

Section 3. Composition/information on ingredients

Name	CAS #	% by weight
1) Styrene	100-42-5	37.5
2) Silica, Amorphous	7631-86-9	1 - 5

Section 4. First aid measures

Eye contact	Flush with a continuous flow of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Use of buffered baby shampoo will aid in removal. Seek medical attention.
Skin contact	Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. If irritation persists, seek medical attention.
Inhalation	Move the victim to a safe area as soon as possible. Allow the victim to rest in a well-ventilated area. If breathing is difficult, give oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.
Ingestion	Do not induce vomiting. Seek immediate medical attention.

Section 5. Fire fighting measures

The product is:	Flammable liquid, Class IC.
Auto-ignition temperature	914°F(490°C) Styrene
Flash point	87.6°F (31°C) Styrene
Flammable limits	**Lower:** 0.9% **Upper:** 6.8% (Styrene)
Products of combustion	May produce carbon monoxide, carbon dioxide, and irritating or toxic vapors, gases or particulate.
Fire hazard	Flammable in the presence of open flames, sparks, or heat.
Explosion hazard	Can react with oxidizing materials. Explosive in the form of vapor when exposed to heat or flame. Material may polymerize when container is exposed to heat (fire) and polymerization will increase pressure in a closed container which may cause the container to rupture violently.
Fire-fighting media and instructions	SMALL FIRE: Use carbon dioxide, foam, dry chemical or water fog to extinguish. LARGE FIRE: Evacuate surrounding areas. Use carbon dioxide, foam, dry chemical or water fog to extinguish. Wear self-contained breathing apparatus (SCBA) and full fire-fighting protective clothing. Cool containing vessels with water spray in order to prevent pressure build-up, autoignition or explosion. Prevent run off to sewers or other water ways.

Section 6. Accidental release measures

Small spill	Absorb with an inert material and place in an appropriate waste disposal container.
Large spill	Stop leak if without risk. Eliminate all ignition sources. Contain with an inert material, recover as much as possible and place the remainder in an appropriate waste disposal container. Warn unauthorized personnel to move away. Prevent entry into sewers or confined areas.

Section 7. Handling and storage

Handling	WARNING! Use only in well-ventilated areas. Store away from direct sunlight. Avoid inhalation and contact with eyes, skin, and clothing. Wear appropriate personal protective equipment for your task. Ground and bond all containers when transferring the material. Empty containers may retain product and product vapor. Do not expose to heat, flame, sparks or other ignition sources such as cutting, welding, drilling, grinding or static electricity. Do not pressurize. Provide adequate safety showers and eyewashes in the area of use. Note: If product contains metal compounds (Section III), avoid dust from dried product or grinding of articles made from this material.
Storage	Keep away from heat. Keep away from sources of ignition. Keep container tightly closed. Keep in a cool, well-ventilated place. Containers should be grounded.

Section 8. Exposure controls/personal protection

Exposure limits	Styrene	**ACGIH TLV (United States, 1/2009). Skin** TWA: 20 ppm 8 hour(s). TWA: 85 mg/m³ 8 hour(s). STEL: 40 ppm 15 minute(s). STEL: 170 mg/m³ 15 minute(s). **OSHA PEL Z2 (United States, 11/2006).** TWA: 100 ppm 8 hour(s). CEIL: 200 ppm AMP: 600 ppm 5 minute(s). **NIOSH REL (United States, 6/2009).** TWA: 50 ppm 10 hour(s). TWA: 215 mg/m³ 10 hour(s). STEL: 100 ppm 15 minute(s). STEL: 425 mg/m³ 15 minute(s).
	Silica, Amorphous	**NIOSH REL (United States, 6/2009).** TWA: 6 mg/m³ 10 hour(s).
	While the federal workplace exposure limit for styrene is 100 ppm, OSHA accepted the styrene industry's proposal to voluntarily meet a PEL of 50 ppm on an 8 hours TWA.	
Engineering controls	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective occupational exposure limits. Provide adequate safety showers and eyewashes in the area of use.	
Personal protection	Personal protective equipment may vary depending on the job being performed. **Eye/face:** Wear eye protection such as safety glasses with side shields, splash goggles or face shield with safety glasses. **Skin:** Avoid skin contact. Impervious gloves should be worn. Other items may include long sleeves, lab coats, or impervious jackets. **Respiratory:** Determine if airborne concentrations are below the recommended exposure limits in accordance your company's PPE program and regulatory requirements. If they are not, select a NIOSH-approved respirator that provides adequate protection from the concentration levels encountered. Air-purifying respirators are generally adequate for organic vapors. Use positive pressure, supplied-air respirators if there is potential for an uncontrolled release, if exposure levels are unknown, or under circumstances where air-purifying respirators may not provide adequate protection. Reference OSHA 29 CFR 1910.134.	
Personal protection in case of a large spill	Chemical resistant gloves, full protective suit, and boots. Respiratory protection in accordance with OSHA regulation 29 CFR 1910.134. A self-contained breathing apparatus should be used to avoid inhalation of the product vapors.	

Section 9. Physical and chemical properties

Physical state	Liquid.
Color	Clear to Amber.
Odor	Aromatic.
Molecular weight (g/mol)	1000 to 15000
Boiling point	293°F(145°C) Styrene
Melting point	Not available.
pH (1% soln/water)	Not applicable.
Vapor pressure	4.5 mm Hg@ 68°F (20°C) Styrene
Vapor density	3.59 Styrene (Air = 1)
Specific gravity	1.1 (Water = 1)
Water/oil dist. coeff.	Not available.
Evaporation rate	Not available.
Odor threshold	0.14 ppm Styrene

Section 9. Physical and chemical properties

Solubility in water	Slight.
Dispersibility properties	Not dispersed in water.

Section 10. Stability and reactivity

Stability	This product is normally stable, but can become unstable at elevated temperatures and undergo polymerization, which could produce heat and fumes resulting in over-pressurization and rupture in a closed container.
Instability temperature	>170°F (77°C)
Conditions of instability	Heat.
Incompatibility with various substances	Polymerizes in the presence of organic peroxides, oxidizing materials, or heat.
Corrosivity	Our database contains no additional remark on the corrosivity of this product

Section 11. Toxicological information

Toxicity to animals

Name	Result	Species	Dose	Exposure
Styrene	LD50 Oral	Rat	2650 mg/kg	-
	LC50 Inhalation Vapor	Rat	5634.2 ppm	4 hours

Special remarks on toxicity to animals	Lung effects have been observed in mouse studies following repeated exposure.
Special remarks on chronic effects on humans	No additional remark.
Special remarks on other toxic effects on humans	No additional remark.

Section 12. Ecological information

Ecotoxicity	Toxic to aquatic organisms. Should not be released to sewage system or other bodies of water at concentrations above limits established in regulations or permits.

Section 13. Disposal considerations

Waste disposal	Recycle to process, if possible. Consult your local or regional authorities. Ignitable characteristic.

Section 14. Transport information

DOT	UN1866; Resin Solution; 3; III.	**Labels** 
TDG	UN1866; Resin Solution; 3; III.	
IATA/IMDG	UN1866; Resin Solution; 3; III	
Additional information	US regulations require the reporting of spills when the amount exceeds the Reportable Quantity (RQ) for specific components of this material. See CERCLA in Section 15, Regulatory Information, for the Reportable Quantities.	

Section 15. Regulatory information

Other regulations

This section does not reference all applicable regulatory compliance lists.

TSCA: All ingredients are listed or compliant with TSCA.

DSL: All ingredients are listed or compliant with the NSNR.

Proposition 65 Warning: This product contains a chemical(s) known to the State of California to cause cancer, birth defects and/or reproductive harm.

SARA 302 component(s): None.

SARA 313 component(s): Styrene.

CERCLA(RQ): Styrene - 1000 lbs. (453.6 kg)

Section 16. Other information

Prepared by AOC, LLC - Corporate Regulatory Affairs. ON

LEGAL DISCLAIMER

The information contained in this data sheet is furnished in good faith and without warranty, representation, or inducement or license of any kind, except that it is accurate to the best of AOC, LLC's knowledge, or was obtained from sources believed by AOC, LLC to be reliable. The accuracy, adequacy or completeness of health and safety precautions set forth herein cannot be guaranteed, and the buyer is solely responsible for ensuring that the product is used, handled, stored, and disposed of safely and in compliance with applicable federal, state or provincial, and local laws. AOC, LLC disclaims liability for any loss, damage or personal injury that arises from, or is in any way related to, use of the information contained in this data sheet.

HTS Pipe Consultants, Inc.
420 Pickering Street, Houston, TX 77091
www.htspipeconsultants.com

Phone 713-692-8373
Fax 713-692-8502
Toll Free 1-800-692-TEST

June 29, 2017

AOC, LLC
955 Hwy 57E
Collierville, TN 38017

Attn: Mr. Bill Moore

Re: **10,000 Hour Test Report**
ASTM D 2990 Flexural Creep Test
AOC PR200/L780

Dear Mr. Moore:

Please find the enclosed ASTM D2990 10,000 hour Flexural Creep test report.

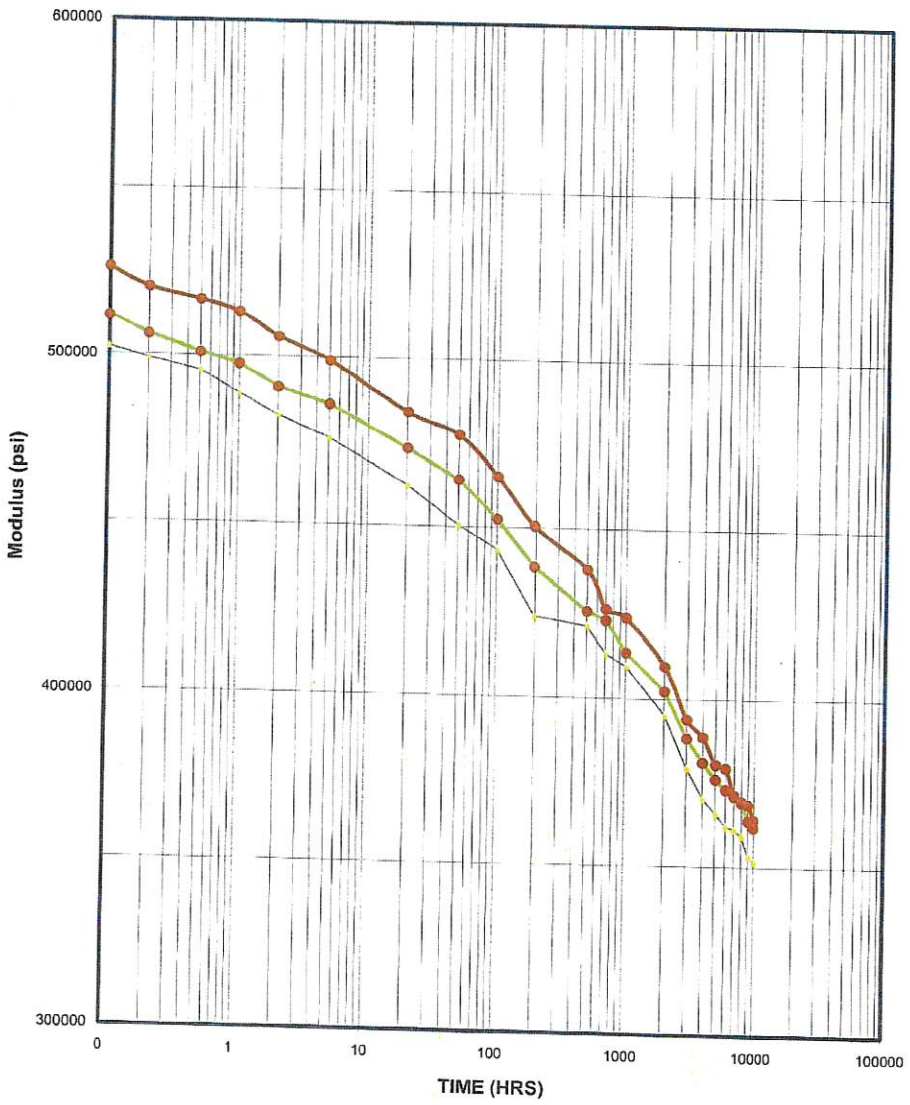
We appreciate the opportunity to work with you. If you have any questions or comments, please call. Thank you very much.

Sincerely,
HTS Pipe Consultants, Inc.

Rick Eastwood
Vice President

HTS Pipe Consultants, Inc.
420 Pickering, Houston, Texas 77091
Tel: (713) 692-8373 Fax: (713) 692-8502

FLEXURAL CREEP
ASTM D2990



Project Name:

Project No.:

Sample ID No.: *PR200/L780*

HTS Report#: *AOCF631.002*

Tested Temperature: 71°F

Lab Humidity: *50%*

Specimen Gage Length: 4.0"

Stress: 1325 psi

HTS Report AOCF631.002

Sample ID: PR200/L780

Spec# 1	Stress: 1325 psi	Spec# 2	Stress: 1325 psi	Spec# 3	Stress: 1325 psi
Thickness: 0.244"	Width: 0.559"	Thickness: 0.245"	Width: 0.558"	Thickness: 0.245"	Width: 0.555"

TIME (HRS)	Modulus (psi)	TIME (HRS)	Modulus (psi)	TIME (HRS)	Modulus (psi)
0.02	532385	0.02	542172	0.02	513230
0.10	511692	0.10	526342	0.10	502501
0.20	506324	0.20	520641	0.20	499023
0.50	501068	0.50	516909	0.50	495593
1	497625	1	513230	1	488874
2	490877	2	506027	2	482333
5	485935	5	499023	5	475966
20	473231	20	483952	20	462236
50	464131	50	477542	50	450680
100	452527	100	465218	100	443747
196	438814	196	450680	196	424170
500	425908	500	438352	500	421689
700	423417	700	426680	700	413231
1004	413739	1004	424170	1004	409709
2012	402247	2012	409709	2012	395117
3000	388227	3000	394037	3000	379520
4004	381076	4004	388727	4004	370740
5012	376127	5012	380522	5012	366035
6000	373218	6000	379520	6000	362356
7004	371304	7004	371695	7004	361448
8000	369410	8000	369789	8000	359645
9000	363841	9000	368843	9000	353475
10004	362022	10004	364186	10004	351750

HTS Pipe Consultants

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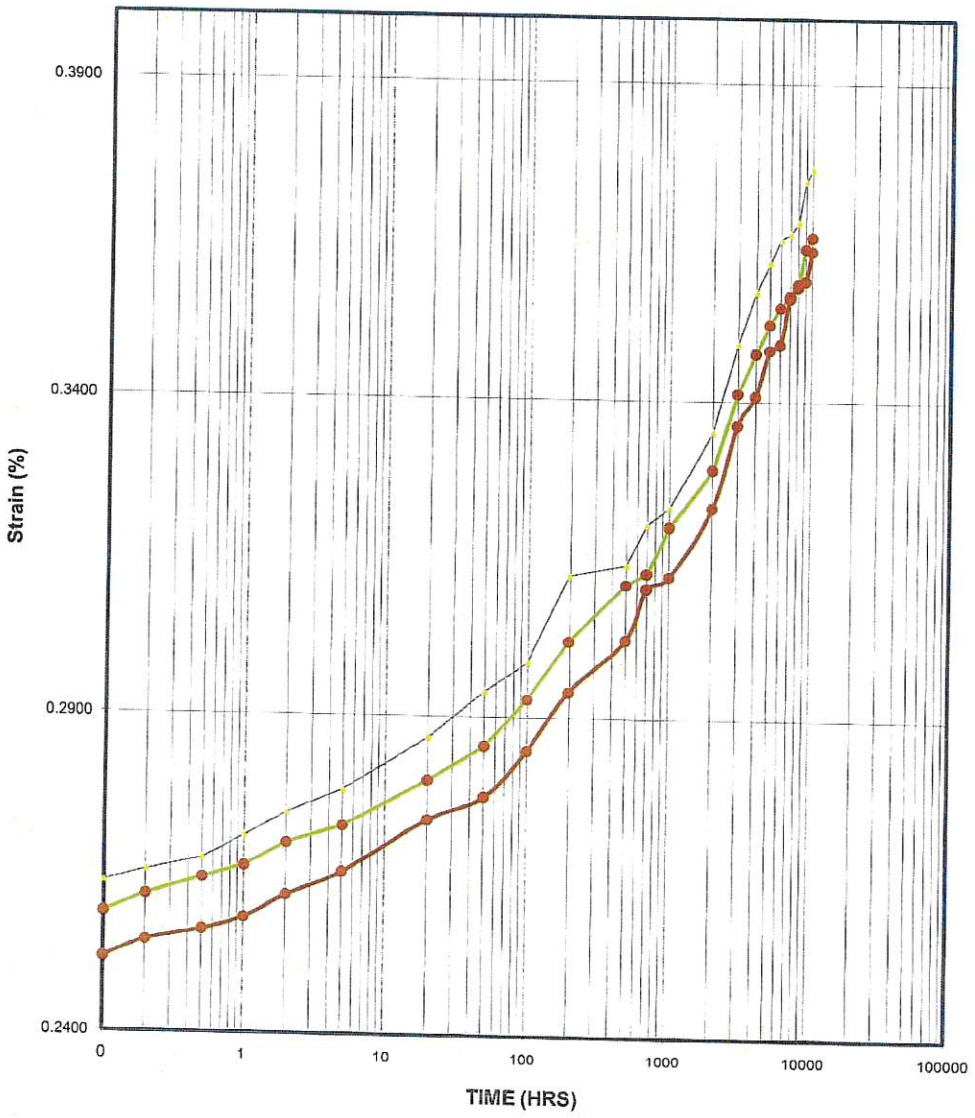
FLEXURAL CREEP
ASTM D2990



Project Name:

Project No.:

Sample ID No.: *PR200/L780*

HTS Report#: *AOCF631.002*

Tested Temperature: 71°F

Lab Humidity: *50%*

Specimen Gage Length: 4.0"

Stress: 1325 psi

HTS Report AOCF631.002

Sample ID: PR200/L780

Spec# 1	Stress: 1325 psi	Spec# 2	Stress: 1325 psi	Spec# 3	Stress: 1325 psi
Thickness: 0.244"	Width: 0.559"	Thickness: 0.245"	Width: 0.558"	Thickness: 0.245"	Width: 0.555"

TIME (HRS)	Strain (%)	TIME (HRS)	Strain (%)	TIME (HRS)	Strain (%)
0.02	0.2489	0.02	0.2444	0.02	0.2582
0.10	0.2589	0.10	0.2517	0.10	0.2637
0.20	0.2617	0.20	0.2545	0.20	0.2655
0.50	0.2644	0.50	0.2563	0.50	0.2674
1	0.2663	1	0.2582	1	0.2710
2	0.2699	2	0.2618	2	0.2747
5	0.2727	5	0.2655	5	0.2784
20	0.2800	20	0.2738	20	0.2867
50	0.2855	50	0.2775	50	0.2940
100	0.2928	100	0.2848	100	0.2986
196	0.3020	196	0.2940	196	0.3124
500	0.3111	500	0.3023	500	0.3142
700	0.3129	700	0.3105	700	0.3206
1004	0.3203	1004	0.3124	1004	0.3234
2012	0.3294	2012	0.3234	2012	0.3353
3000	0.3413	3000	0.3363	3000	0.3491
4004	0.3477	4004	0.3409	4004	0.3574
5012	0.3523	5012	0.3482	5012	0.362
6000	0.3550	6000	0.3491	6000	0.3657
7004	0.3568	7004	0.3565	7004	0.3666
7996	0.3587	7996	0.3583	7996	0.3684
9000	0.3642	9000	0.3592	9000	0.3748
10004	0.3660	10004	0.3638	10004	0.3767

HTS Pipe Consultants

Technical Report

Sealing of the Connection of BLD Services, LLC's Cured-In-Place Lateral Lining using Hydrophilic Material

October 12, 2015

Introduction

Service laterals are commonly reinstated and put back into service by the use of a robotic cutter immediately after main line rehabilitation. It has been proven that the reinstated service lateral connection is a source of infiltration as groundwater will track in the annular space between the main line host pipe and the installed CIPP liner (see Fig 1). The tracking water will enter into the main line pipe at the point of least resistance which is typically at service lateral openings and manholes. Many municipalities now require that 100% of the service laterals be rehabilitated after any main line rehabilitation is conducted.

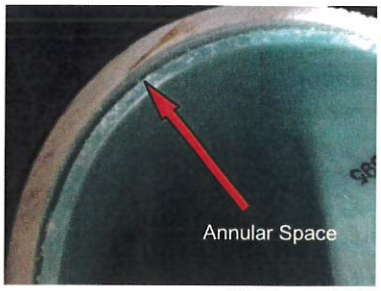


Fig. 1

Cured-in-place lateral lining has been utilized since the early 1990's as a means of repairing service laterals without the need to excavate. The ability to seal the connection of the CIPP service lateral at the main line pipe is critical to eliminate infiltration from entering the pipe. Multiple techniques and materials have been used to accomplish a lateral connection seal at the main, with the most successful being the use of a hydrophilic material. Hydrophilic material expands upon contact with water creating a watertight seal. Hydrophilic materials come in a variety of configurations with the most common being a paste that is packaged in a tube for easy application (see Fig 2).

Fig. 2

BLD Services, LLC utilizes a urethane based hydrophilic material, more specifically Adeka Ultra Seal P-201®, to seal the connection at the interface of the installed lateral liner and the main line pipe and at the terminating end of the lateral. BLD Services, LLC, a Cured-In-Place-Pipe (CIPP) service lateral contractor headquartered in Kenner, Louisiana, has successfully installed and sealed over 75,000 CIPP service laterals in more than 500 separate projects while using Adeka Ultra Seal P-201®.

This report will provide information on the following:

- Specifications for Adeka Ultra Seal P-201®
- Sealing verification of Adeka Ultra Seal P-201® in installed CIPP laterals
- Independent report confirming the use of hydrophilic material to seal in CIPP applications

- BLD Services, LLC's ability to ensure consistent application and placement during installation of Adeka P-201® to ensure proper sealing.
    - Test data to demonstrate sealing capabilities at varying pressures up to 20 psi (equivalent to 46 ft of hydrostatic pressure)

Specifications for Hydrophilic Material (Adeka P-201®)

Adeka Ultra Seal P-201® is a hydrophilic material for the use in water stopping in cracks, cold joints, construction joints, piping penetrations, between precast segments or between other structural elements against penetration of water from wet-face of structure. P-201 is used as a water stop in new construction, repair applications, or sealing in Cured-In-Place applications. Adeka Ultra Seal P-201® can be placed on damp or uneven surfaces and functions in a wide range of temperatures and ground water conditions.

Adeka Ultra Seal P-201® is a Hydrophilic Urethane Paste (packaged in a cartridge) and meets the minimum performance requirements as shown in Fig.3. The hydrophilic agent is a urethane polymer and withstands a hydrostatic head pressure of 150 feet when applied in a ½" bead. BLD Servcies, LLC applies a minimum ½ - inch bead for 4-inch and 6-inch diameter services, thus ensuring the minimal amount required for seal is applied. Adeka Ultra Seal P-201® is manufactured by Adeka Corporation and distributed by OCM, Inc. Chicago, IL.

Performance Specification for Adeka Ultra Seal P-201®

Property	P-201
Hardness Hs	A45
Tensile Strength MPa	4 MPa
Elongation (%)	850 %
Specific Gravity	1.25
Volume Exp. %	100%
[1] Mass Change%	Not greater than 5.0 %

1 Mass Change % measures the durability of the product. It reflects the amount of material that is lost through repeated cycles of hydration and dehydration.

Fig. 3

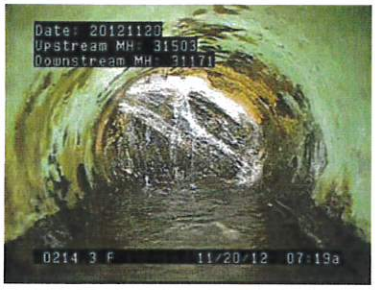
Adeka Ultra Seal P-201® will expand up to 2 times (100%) by volume in the presence of water and will expand in the direction of least resistance. When expansion is inhibited, the product will produce expansion pressure against the resisting pipe wall with the expansion pressure effectively sealing off water penetration. See Appendix A validating OCM's recognition of the successful use of Adeka Ultra Seal P-201® in CIPP lateral lining.

Sealing

BLD Services, LLC has installed over 75,000 CIPP laterals using Adeka Ultra Seal P-201® to successfully seal the lateral connection at the main line pipe. These installations have been conducted under varying pipe conditions/configurations with ground water levels that have resulted in hydrostatic pressures exceeding 20 feet.

Over 10,000 CIPP laterals have been installed to date in Metropolitan Nashville, TN which have been subjected to and passed pressure testing to confirm the lateral connection seal.

Pre and post installation CCTV inspection is conducted on 100% of CIPP laterals installed to verify installation quality. These CCTV inspections confirm, via video observation (see Fig. 4), that BLD Services, LLC's CIPP lateral when used with Adeka Ultra Seal P-201® successfully seals service lateral connections at the main line pipe.



Before Lateral Rehabilitation

After Lateral Rehabilitation

Fig. 4

CCTV inspection is also periodically performed (see Fig. 5) on CIPP laterals that have been in service for extended periods. The long term sealing capabilities of the Adeka Ultra Seal P-201® after hydration and dehydration demonstrates the hydrophilic material's ability to perform during wet and dry weather patterns that are typical throughout the U.S..

CIPP Lateral after 15 months in Service

Fig. 5

Independent Research of Adeka Ultra Seal P-201® in CIPP Applications

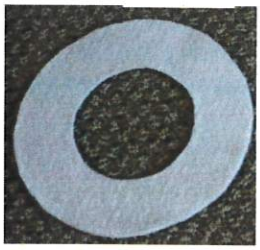
Fig. 6

A report titled **Results of Evaluation of Potential Failures from Infiltration Between Cured-In-Place-Pipe (CIPP) Liners and Host Pipes** (see Fig. 6) was presented at the 1997 "Five Cities Conference" in Louisiville, Ky. Technical personnel from the Metropolitan St. Louis Sewer District, Insituform Technologies, Utah State University, and H&S Engineering concluded that ***"These seals expand volumetrically to an extent well beyond the maximum amount of space created by the predicted liner deflection. No other mitigative measures appear to be warranted at this time."***

Application of Adeka Ultra Seal P-201®

BLD Services, LLC work practices ensures that the Adeka Ultra Seal P-201® is handled in a manner for consistency of positioning to ensure the sealing at the interface connection of the service lateral to the main. Resin saturated "Backing Rings" ensure that the hydrophilic material stays in place while handling to ensure proper positioning and application during installation.

Fig. 7



A felt "Backing Ring" (see Fig. 7) of exact dimension is attached to the liner prior to resin saturation (wet out). The "Backing Ring is secured leaving a defined "pocket" size along the inside diameter. The pocket size has been designed to hold the proper amount Adeka Ultra Seal P-201® required to adequately seal the interface connection.

"Technical Bulletins" (see Fig. 8) detailing the "Backing Ring" and attachment to the CIPP lateral is used for consistency among all BLD Services, LLC installation personnel. Technical Bulletins are also used to define the application of the Adeka Ultra Seal P-201® at the terminating end of the lateral.

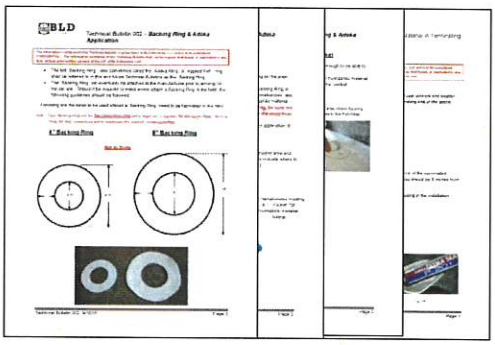


Fig. 8

The "Backing Ring" is also designed to ensure that the Adeka Ultra Seal P-201® remains in position during travel of the installation assembly through the main line pipe and until installation. The "Backing Ring" filled with the hydrophilic material is

positioned on the top side of the installation assembly and the position monitored via CCTV (see Fig 9).

Fig. 9

Sealing Capabilities at Varying Pressures

Tests were conducted on BLD Services, LLC's CIPP laterals to observe and measure the effectiveness of the lateral seal at the connection to the main line pipe using Adeka Ultra Seal P-201®.

Test Conditions:

- 8-inch schedule 40 PVC pipes (simulating a main line pipe) with varying 4-inch and 6-inch Tee connections were lined per manufacturer's recommendations by a 3rd party main line CIPP installer. A 4-inch or 6-inch pipe depending on the Tee connection size were installed prior to the CIPP installation to simulate a service lateral.
- Holes were drilled in the interface of the Tee connection of the lined pipe assemblies (LPA) to simulate a faulty connection that would result in groundwater infiltration into the lined pipe. The same size, number, and location of the holes were used to provide an accurate comparison among the tests.
- The LPA's were placed in a pressure canister and sealed at each end of the 8-inch "main" and service lateral. (see Fig. 10). The service lateral was reinstated per standard procedures.
- The pressure canister was filled with water, any residual air removed, and the pressure achieved and maintained at the desired level to simulate hydrostatic pressure.
- The volume of water leaking from the imposed infiltration was measured to establish a "pre-rehabilitated lateral" base line.
- All laterals openings were reinstated per standard procedures and lined using BLD Services, LLC standard installation procedures. Tests were conducted using "Full-Wrap" style laterals.

Fig. 10

- The volume of water from any infiltration present was measured for 48 hours after installation and cure of the CIPP lateral.
- Sample sizes were used to provide a statistically valid population.

Following are the data for the infiltration testing conducted at varying pressures:

*Hydrostatic Pressure (psi)	Equivalent Groundwater (ft)	Infiltration (gallons/min) Before Lateral Rehabilitation	After Lateral Rehabilitation	% Reduction
5	11.6	1.5	0	100
10	23.1	2.2	0	100
15	34.7	2.6	0	100
20	46.2	3.2	0	100

*Held for 48 hrs at each pressure

Conclusion

Testing conducted confirms that Adeka Ultra Seal P-201® effectively seals the connection of BLD Services, LLC's CIPP lateral at the main line pipe. Furthermore, testing also confirms that Adeka Ultra Seal P-201® is an effective material for the elimination of infiltration at the CIPP lateral and main line pipe connection.

OCM
1215 HENRI DRIVE, WAUCONDA, ILLINOIS 60084 TOLLFREE: 866-457-5710 (847)-462-4258 FAX: 847-462-4259

Brendan Doyle
Project Manager
BLD Services LLC
2424 Tyler St
Kenner, LA 70062

October 21, 2014

RE: Adeka P-201 Product use in Cured-In-Place-Pipe (CIPP) Applications

Dear Mr. Doyle,

BLD Services has effectively utilized Adeka P-201 to stop water when placed between the host pipe and cured-in-place liners. The product has very good adhesive qualities allowing it to bond to the host pipe and the CIPP. Once exposed to water the product will expand putting pressure on the host pipe and liner. The pressure acts as a seal stopping liquids. P-201 will maintain its performance over years of exposure to wet and dry cycles. When initially applied with a large bead size ½" X ½" or more the heavy urethane paste will resist compression. It is expected to be compressed and spread between the liner and host pipe after liner inversion. Once cured it becomes a solid water stop barrier. BLD Services has a proven track record using P-201 successfully as a water stop between pipe and the cured in place liner.

Sincerely,

Mike Leginski

Mike Leginski
Adeka Product Manager
Adeka Hydrophilic Waterstop by OCM, Inc.
847-462-4258 X-2713

BLD SERVICES, LLC

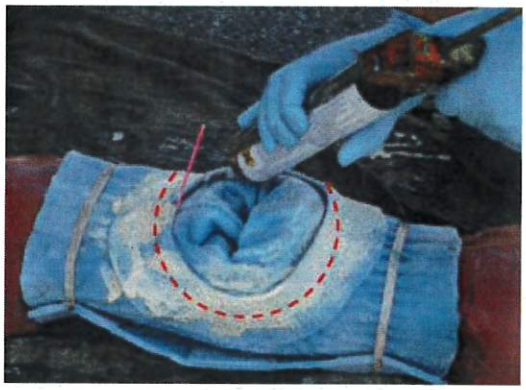
Hydrophilic Sealing – Twice the Benefit

Paste

- Compresses during installation pushing it into pipe voids (cracks, offsets, voids)
- Doesn't prohibit resin migration
- BLD's "backing ring technology" ensures
  - The correct amount of material is used
  - Protects the paste during installation

Hydrophilic Sealing Gasket

- Provides secondary sealing in addition to paste migration benefits
- "Pre-Cured" material prevents thinning as a result of installation pressure
- Does not restrict resin migration
- Provides improved sealing as compared to a non-hydrophilic gasket (swells with moisture)



Saving the World One Lateral at a Time!

BLD SERVICES, LLC

2424 Tyler Street Kenner, LA 70062 Office 504-466-1344 Fax 504-461-5971

Adeka P-201 in CIPP Service Laterals

BLD SERVICES, LLC

PRODUCT DESCRIPTION
Single component hydrophilic urethane grey paste

PAKAGING
24 cartridges per case
320 ml (10.8 oz.) per cartridge

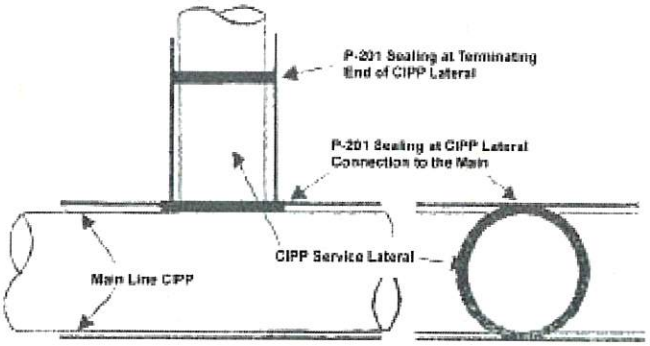
EXPANSION INFORMATION BY VOLUME
Approximately 100% (2 times by volume)

GENERAL DESCRIPTION

P-201 is a water swelling single component urethane rubber used as a water stop in a variety of Cure-In-Place-Pipe (CIPP) applications to seal infiltration at connections and annular spaces. P-201 is a material that can be applied on wet or uneven surfaces and functions in a wide range of temperatures, ground water conditions, pressures, and hydration/dehydration cycling.

TYPICAL USES

ADEKA ULTRASEAL® P-201 has been utilized in a wide variety of construction applications including the elimination of infiltration between the main line and installed CIPP main line and service laterals. P-201 will expand in the direction of least resistance. When expansion is inhibited, the product will produce expansion pressure against pipe walls effectively sealing off infiltration with hydrostatic head pressures as high as 150 ft.



CURED-IN-PLACE-PIPE (CIPP)

ADEKA ULTRASEAL® P-201 is an excellent product to seal infiltration tracking that occurs between host pipes and installed main line and service lateral CIPP.

MAIN LINE CIPP

P-201 has successfully been used in installed CIPP at the ends near manholes to seal annular spaces that occur between installed main line CIPP and the host pipe. This sealing eliminates water tracking in the annular space that otherwise would enter manholes and service laterals that have not been rehabilitated.

SERVICE LATERAL CIPP

P-201 is a commonly used material to effectively eliminate infiltration at the connection of the lateral to the main and the terminating end of installed CIPP service laterals

The ability for P-201 to be applied to wet surfaces with cracks and voids makes it an ideal material for CIPP service lateral applications.

P-201 is capable of sealing and eliminating infiltration, even after years of hydration and dehydration cycling.

BLD manufacturing, a state-of-the-art facility, extrudes Adeka P-201 into the hydrophilic gaskets that are used at the lateral-to-main connection. The Adeka gaskets are used in addition to hydrophilic paste to provide exceptional sealing to eliminate infiltration.

BLD Services, LLC
2424 Tyler Street
Kenner, LA 70062
Phone: 504.466.1344
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www.bldllc.net

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420 Pickering Street, Houston, TX 77091
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Phone 713-692-8373
Fax 713-692-8502
Toll Free 1-800-692-TEST

February 29, 2016

HTS Report #:	BLDF627.001.Doc

Mr. Tim Matheson
BLD Services, LLC
2424 Tyler Street
Kenner, LA 70062

Customer Project Name: 16" "Full Wrap"/Adeka P-201
Customer Project #:
Date Sample Received:
Date Sample Tested: 2/22/16 – 2/25/16

Testing of BLD Services' "Full-Wrap" CIPP lateral system lateral liner system, with Adeka Ultra Seal P201® hydrophilic material, was conducted at BLD Services headquarters located at 2424 Tyler Street in Kenner, LA. The test was to measure the volume of water infiltration by installing a cured-in-place lateral liner in the lateral of a previously lined pipe, with a hydrophilic material, and monitor the volume of infiltration as head pressure was increased through a series of steps.

Introduction

Cured-in-place lateral lining has been utilized since the early 1990's as a means of repairing service laterals without the need to excavate. The ability to seal the connection of the CIPP service lateral at the main line pipe is critical to the elimination of the unwanted infiltration from entering the pipe. Multiple techniques and materials have been used to accomplish a lateral connection seal at the main, with the most successful being the use of a hydrophilic material. The hydrophilic material expands upon contact with water creating a watertight seal.

BLD Services, LLC utilizes a urethane based hydrophilic paste, Adeka Ultra Seal P-201®, to seal the connection at the interface of the installed CIPP lateral liner and the main line pipe and at the terminating end of the CIPP lateral.

This report will provide the following:

- Specifications for Adeka Ultra Seal P-201®.
- Test Results demonstrating Adeka Ultra Seal P-201's® sealing capabilities at varying pressures up to 20 psi
- Ability to ensure a minimum volume of Adeka Ultra Seal P-201® required for sealing
- Ability to protect Adeka Ultra Seal P-201® while positioning in pipe
- Ability to consistently apply Adeka Ultra Seal P-201® to the terminating end of the lateral liner
- Conclusion

Specifications for Adeka Ultra Seal P-201® Hydrophilic Material

Per reviewed marketing literature, Adeka Ultra Seal P-201® is a hydrophilic material for the use in water stopping in cracks, cold joints, construction joints, piping penetrations, between precast segments or between other structural elements against penetration of water from wet-face of structure. P-201 is used as a water stop in new construction, repair applications, or sealing in Cured-In-Place applications. Adeka Ultra Seal P-201® can be placed on damp or uneven surfaces and functions in a wide range of temperatures and ground water conditions.

BLD Services, LLC utilizes a urethane based hydrophilic paste, Adeka Ultra Seal P-201®, to seal the connection at the interface of the installed CIPP lateral liner and the main line pipe and at the terminating end of the CIPP lateral. Adeka Ultra Seal P-201® will expand up to 2 times (100%) by volume in the presence of water and will expand in the direction of least resistance. When expansion is inhibited, the product will produce expansion pressure against the resisting pipe wall with the expansion pressure effectively sealing off water penetration.

The Adeka Ultra Seal P-201® is packaged in a cartridge and meets the minimum performance requirements as shown in Fig.1. The hydrophilic agent is a urethane polymer which is able to withstand hydrostatic head pressures up to 150 feet when applied in a ½" bead.

Performance Specification for Adeka Ultra Seal P-201®

Property	P-201
Hardness Hs	A45
Tensile Strength MPa	4 MPa
Elongation (%)	850 %
Specific Gravity	1.25
Volume Exp. %	100%
[1] Mass Change%	Not greater than 5.0 %

1 Mass Change % measures the durability of the product. It reflects the amount of material that is lost through repeated cycles of hydration and dehydration.

Fig. 1

Test Procedure

Main-Line Liner Installation:

Ten foot sections of eight inch diameter schedule 40 PVC pipe with PVC Tee connections were lined by an independent 3rd party main line CIPP contractor. The CIPP liner was wet out under vacuum to ensure thorough resin saturation. Installation was performed in a single installation through multiple pipe sections using water inversion at recommended head pressures. The CIPP main line pipe was cured per the manufacturer's recommended cure schedule and allowed to cool for a minimum of 48 hours.

Note: Adeka P-201 Ultra-Seal® was used between the PVC host pipe and the CIPP liner on each end to seal the annular space.

Holes were drilled at a 45° angle in the interface of the Tee connection of the lined pipe assemblies (LPA) to allow water to enter the pipe, thus representing a faulty connection and simulating a source for groundwater infiltration. The same size, number, and location of holes were used for all tests (see Fig. 2).

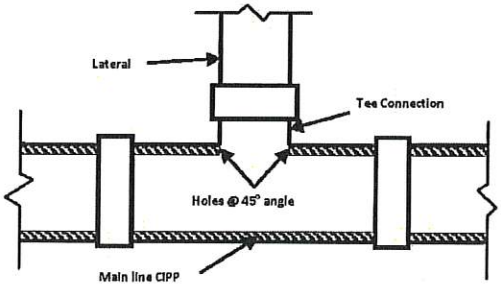


Fig. 2

The LPA's were placed in a "pressure canister" (PC) with each end of the main and lateral pipes secured using high pressure Furnco seals. The PC was manufactured to allow varying water pressures to be applied around the entire LPA, thus simulating hydrostatic groundwater pressure. Piping was engineered in a manner to enable the release of trapped air to ensure the ability to accurately adjust and maintain desired hydrostatic pressures. The volume of water entering the LPA was measured under hydrostatic pressures of 5 psi, 10 psi, 15 psi, and 20 psi respectively to establish the "pre-lining" infiltration rate (see Results...Data Table 1).

CIPP Lateral Installation:

A BLD Services "Full-Wrap" CIPP lateral system (FWL) was used to line the lateral (see Fig. 3). The CIPP lateral consisted of a "Full-Wrap" for the 8" diameter host pipe and a CIPP lateral liner, both of which were attached via a sewn seam to prevent separation. The (FWL) was wet out using polyester resin (with manufacturer's recommended catalyst package/ratios/temperatures) while under a vacuum to ensure thorough resin saturation.

Fig. 3

Blue dye was used to provide visual confirmation to ensure thorough resin saturation during wet out (see Fig 4). Squeeze rollers with calibrated gage blocks were used to set the defined gap setting to ensure proper resin saturation. (see Fig 5).

Fig. 4

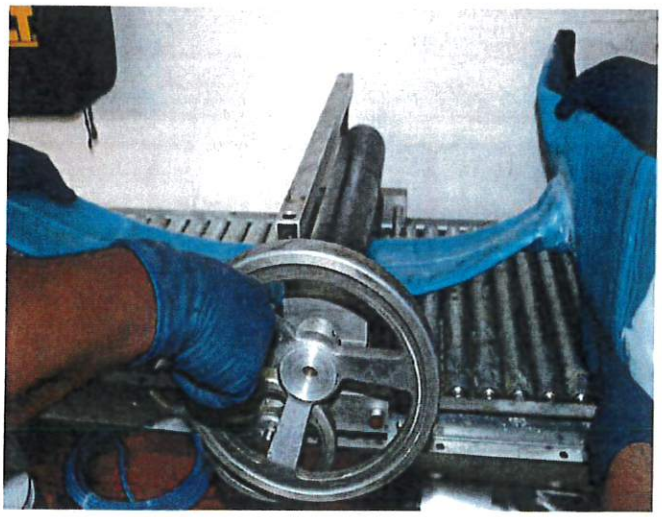


Fig. 5

The recommended ½" wide bead of Adeka Ultra Seal P-201® was applied around the entire circumference of the connection and the terminating end of the lateral liner to ensure sealing. It was inserted into the "Backing Ring" attached to the lateral lining (See Fig 6). A pre-measured bead of Adeka Ultra Seal P-201® was then applied to the terminating end of the lateral liner. Silicate resin was then evenly distributed over the exterior of the "Full-Wrap" to provide additional adhesion to the host pipe. The FWL was installed[1] per standard procedures[2].

Fig. 6

Once the installation and curing was complete, infiltration into the main line through the "Full-Wrap" CIPP lateral system was measured. Measurements were taken when the hydrostatic pressures achieved 5 psi, 10 psi, 15 psi, and 20 psi respectively to establish the amount of reduction after CIPP lateral lining (see Results...Data Table 2).

[1] The CIPP lateral was installed during active infiltration to represent field conditions.
[2] Certain details of installation procedures have been omitted due to confidential and proprietary processes.

Post-Test Inspection

Upon completion of the testing, cross-sections were made of the samples tested to inspect the distribution of Adeka Ultra Seal P-201®. The Adeka Ultra Seal P-201® was evenly distributed around the entire circumference of the lateral opening and the CIPP lateral termination end (see Fig 7).

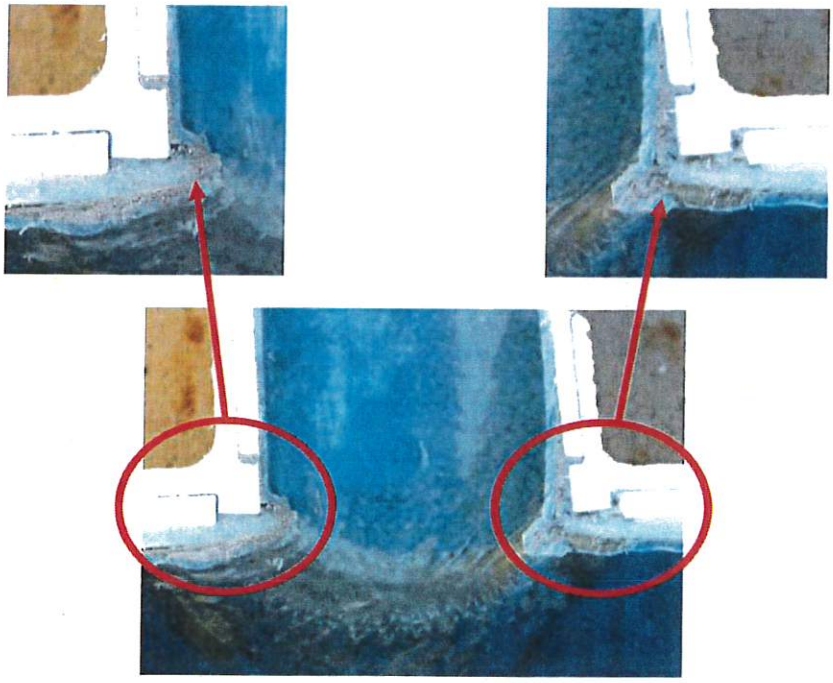


Fig. 7

Testing also confirmed the ability of Adeka Ultra Seal P-201® to adequately seal the terminating end of the lateral, thus eliminating an additional infiltration source (see Fig. 8).

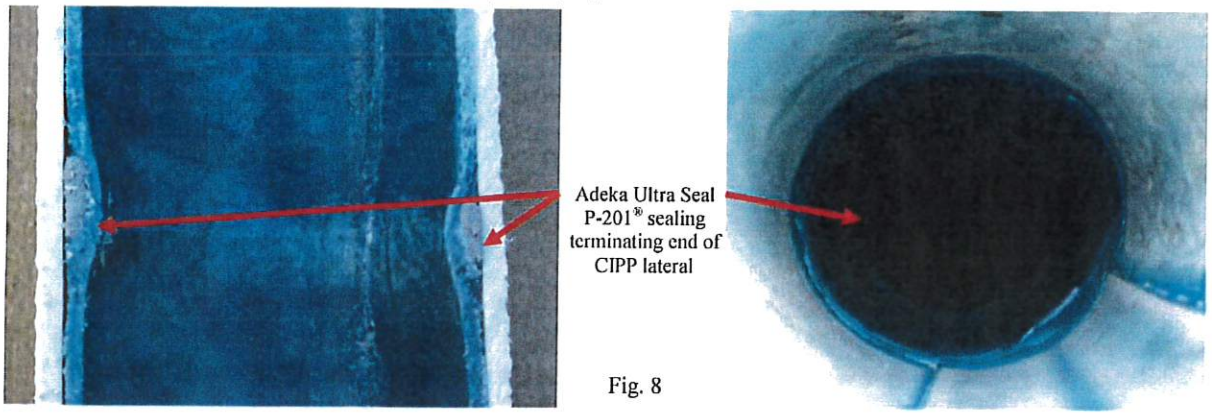


Fig. 8

Test Results

Infiltration Volume Prior to Lateral Lining

Date	Time	Hydrostatic Pressure (psi)	Equivalent Groundwater (ft.)	Pre-Lateral Installation Infiltration (gal/min)
February 22, 2016	10:00AM	5	11.6	1.00
February 22, 2016	10:15AM	10	23.1	1.25
February 22, 2016	10:30AM	15	34.7	1.55
February 22, 2016	10:45AM	20	46.2	1.84

Data Table 1

Infiltration Volume After Lateral Lining

Date	Time	Hydrostatic Pressure (psi)	Equivalent Groundwater (ft.)	Post-Lateral Installation Infiltration (gal/min)
February 22, 2016	11:00AM	5	11.6	0
February 23, 2016	11:00AM	10	23.1	0
February 24, 2016	11:00AM	15	34.7	0
February 25, 2016	11:00AM	20	46.2	0

Data Table 2

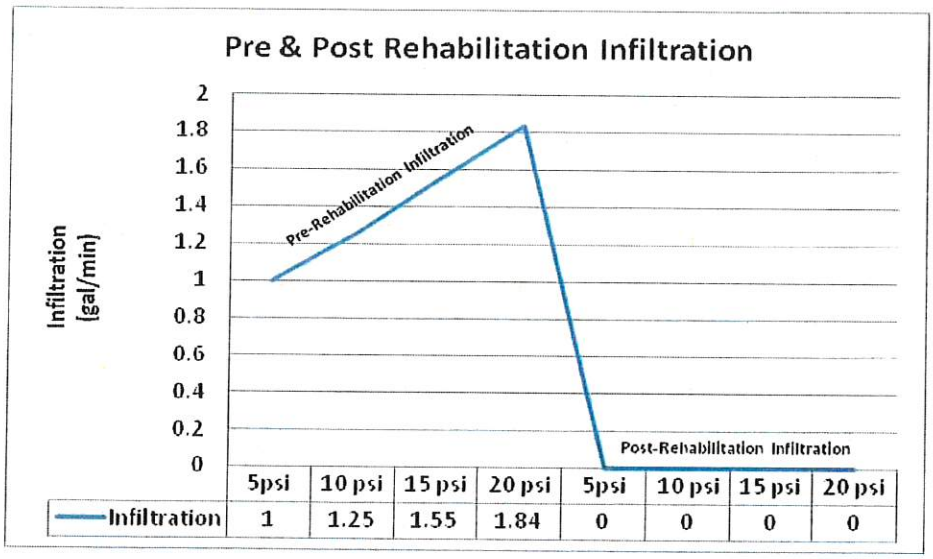
Infiltration before and after lateral lining was eliminated using Adeka Ultra Seal P-201® (see Results...Data Table 3 & 4).

Infiltration Volume Before and After Lateral Lining

Hydrostatic Pressure (psi)	Equivalent Groundwater (ft.)	Pre-Lateral Installation Infiltration (gal/min)	Post-Lateral Installation Infiltration (gal/min)	% Infiltration Reduction
5	11.6	1.00	0	100%
10	23.1	1.25	0	100%
15	34.7	1.55	0	100%
20	46.2	1.84	0	100%

Data Table 3

HTS Pipe Consultants



Data Table 4

Conclusion

HTS Pipe Consultants confirms the results from testing conducted show Adeka Ultra Seal P-201® effectively seals the connection of BLD Services, LLC's CIPP Full-Wrap Lateral at the main line pipe and at the terminating end of the CIPP lateral. BLD Services, LLC has demonstrated, through the use of their "Backing Ring" technology, wet out/installation/curing procedures the ability to apply a consistent volume of Adeka Ultra Seal P-201® and ensure that the Adeka Ultra Seal P-201® is not jeopardized during installation.

In summary, HTS Pipe Consultants has performed third party inspection to confirm that Adeka main-line Adeka Ultra Seal P-201® can be consistently used in conjunction with the installation of CIPP service laterals to prevent infiltration at the interface connections of main line pipes and lateral openings.

Sincerely,

Rick Eastwood
Business Development

This test report relates only to the items tested and shall not be reproduced except in full without approval of HTS, Inc.

RS Technik

RS MaxPatch™ Summer

Pipe Rehabilitation Resin System

Description

The RS MaxPatch™ Summer resin system is a non-foaming, elasticized, two-component, odor free resin for the application of partial liners in localized sewer repairs. As a part of the RS MaxPatch™ Sectional Repair System, this resin system has excellent chemical resistance and adhesion properties, is very low shrink and cured under ambient conditions, even in the presence of water. It is used in conjunction with RS Fiberglass Liners to produce a structural solution for short sections of sewer pipelines without excavation.

Technical Data

Mixed resin pot life varies with temperature and total mass of material mixed. The laboratory data provided below is for reference only. For more detailed product information, contact RS Technik prior to use.

Reaction Data

Mixing Ratio A:B	1:2 by volume	
Components	RS MaxPatch Summer (Part A)	RS MaxPatch (Part B)

Temperature

°F (°C)	50°F (10°C)	68°F (20°C)	86°F (30°C)
Pot life (for spreading)*	35-50 min	25-38 min	20-25 min
Time for placing*	65-80 min	35-55 min	28-33 min
Curing time*	270-290 min	120-140 min	85-105 min

* Laboratory values may vary from field results

Material Data

		Part A	Part B
Density	at 77°F (25°C), lb/gal	12.43 ± 0.42 (1490 ± 50)	9.43 ± 0.33 (1130 ± 40)
Color		honey color	black brown
Flash Point	°F (°C)	none	> 392 (> 200)
Viscosity	At 77°F, cps	300 ± 140	150 ± 50
pH value		12-13	-

Components and Properties

Components:

RS MaxPatch Summer (Part A) is a special waterglass (aqueous sodium silicate) with additives. RS MaxPatch (Part B) is a modified polyisocyanate. RS fiberglass liners are specifically designed for RS MaxPatch applications. Contact RS Technik for additional information on this product.

System:

Measured volumes of Part A and B are mixed and applied to the required size of RS Fiberglass Liner, wrapped tightly around and secured to an inflatable rubber packer, pulled into position, expanded against the host pipe using air pressure and cured under ambient conditions. The packer is then deflated and removed, completing the sectional repair.

Final Product:

Upon cure, the resin components form an interpenetrating network, a tough elastic, non-foamed silicate resin. RS MaxPatch is a durable, high strength, resin-fiberglass composite with excellent chemical resistance.

Packing

Part A:
Pails or Canisters, 31 lb (14 kg)
Drums, 617 lb (280 kg)

Part B:
Pails or Canisters, 46 lb (21 kg)
Drums, 463 lb (210 kg)

Other packing options available upon request

Shelf Life and Storage

At least 12 months from date of delivery when stored in a dry place between 50-86°F (10-30°C). Frost may damage part A. If flocculation occurs or if the material's shelf life has been exceeded, please consult RS Technik prior to use.

Safety

Refer to the Material Safety Data Sheets for these products for safety and health information prior to use. Follow all notices on the MSDS. If you do not understand or cannot adhere to the guidelines and procedures for handling and use of these products in strict accordance with the MSDS, do not use these products. Contact RS Technik at 919-481-1977 for a copy of the Material Safety Data Sheets.

Disposal

Follow local, state and federal regulations for disposal. Refer to product MSDS for additional information.

Version 01-2010

105 Woodwinds Industrial Ct.
Cary, NC 27511 USA

Phone 919.481.1977
Fax 919.468.9906

contact@rstechnik.com
www.rstechnik.com

STS

Specialty Testing Services

TEST REPORT (CIP PROPERTIES)

Client:	**BLD Services, LLC**	**Project Name:**	28th Ave
	2424 Tyler St.	**Project No.:**	Job #22155
	Kenner, LA 70062	**Sample ID:**	1
		Diameter:	5.75"
	Attention: Hugh Cornell	**Thickness:**	5 mm
		Length:	
		Manhole Location:	
		Installed Date:	06/01/23
TEST DATE:	10/02/2023	**Street:**	2604 Booker St.
REPORT DATE:	10/04/2023	**Specimen Prepared By:**	R. Woods
REPORT NO.:	120-23-0036	**Specimen Tested By:**	R. Woods
REMARKS:	**SAMPLES RECEIVED 09/29/2023**		**TEMPERTATURE:72 F**
CONDITION PROCEDURE:	ASTM D618 PROCEDURE A		**Humidity: 50%**

FLEXURAL PROPERTIES (ASTM D-790 Type 1 Procedure B)

SAMPLE ID	Depth In.	Width In.	FLEXURAL YIELD STRENGTH PSI	MODULUS OF ELASTICITY PSI
1	.204	.756	9434	380257
2	.198	.750	8099	306098
3	.191	.756	7590	305791
4	.190	.750	6844	289976
5	.192	.758	7848	290198
Mean			**7963**	**313364**
Standard Deviation			947	37624

THICKNESS PROPERTIES (ASTM D-3567)

Reading #	1	2	3	4	5	6	7	8
Thickness mm	4.92	4.82	4.8	4.85	5.13	4.98	5.05	5.16

Min. Thickness mm	Max. Thickness mm	Avg. Thickness mm
4.80	5.16	**4.964**

Remarks:

Respectfully Submitted,
Specialty Testing Services

Rob Anchors
Operations Manager

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STS

Specialty Testing Services

TEST REPORT (CIP PROPERTIES)

Client:	**BLD Services, LLC**	**Project Name:**	Bandywood
	2424 Tyler St.	**Project No.:**	Job #22301
	Kenner, LA 70062	**Sample ID:**	2
		Diameter:	5.75"
	Attention: Hugh Cornell	**Thickness:**	5 mm
		Length:	
		Manhole Location:	
		Installed Date:	02/15/23
TEST DATE:	10/02/2023	**Street:**	2009 Galbrath
REPORT DATE:	10/04/2023	**Specimen Prepared By:**	R. Woods
REPORT NO.:	120-23-0037	**Specimen Tested By:**	R. Woods
REMARKS:	**SAMPLES RECEIVED 09/29/2023**		**TEMPERTATURE:72 F**
CONDITION PROCEDURE:	ASTM D618 PROCEDURE A		**Humidity: 50%**

FLEXURAL PROPERTIES (ASTM D-790 Type 1 Procedure B)

SAMPLE ID	Depth In.	Width In.	FLEXURAL YIELD STRENGTH PSI	MODULUS OF ELASTICITY PSI
1	.190	.766	7086	291221
2	.188	.756	6509	265979
3	.191	.765	7121	251033
4	.187	.765	6464	232453
5	.187	.759	7124	263567
Mean			**6861**	**260851**
Standard Deviation			342	21557

THICKNESS PROPERTIES (ASTM D-3567)

Reading #	1	2	3	4	5	6	7	8
Thickness mm	5.26	4.81	4.84	4.81	4.71	4.73	5.02	4.95

Min. Thickness mm	Max. Thickness mm	Avg. Thickness mm
4.71	5.26	**4.891**

Remarks:

Respectfully Submitted,
Specialty Testing Services

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TEST REPORT (CIP PROPERTIES)

Client:	**BLD Services, LLC**	**Project Name:**	Bandywood
	2424 Tyler St.	**Project No.:**	Job #22301
	Kenner, LA 70062	**Sample ID:**	3
		Diameter:	5.75"
	Attention: Hugh Cornell	**Thickness:**	5 mm
		Length:	
		Manhole Location:	
		Installed Date:	09/08/23
TEST DATE:	10/02/2023	**Street:**	3500 Hopkins St.
REPORT DATE:	10/04/2023	**Specimen Prepared By:**	R. Woods
REPORT NO.:	120-23-0038	**Specimen Tested By:**	R. Woods
REMARKS:	**SAMPLES RECEIVED 09/29/2023**		**TEMPERTATURE:72 F**
CONDITION PROCEDURE:	ASTM D618 PROCEDURE A		**Humidity: 50%**

FLEXURAL PROPERTIES (ASTM D-790 Type 1 Procedure B)

SAMPLE ID	Depth In.	Width In.	FLEXURAL YIELD STRENGTH PSI	MODULUS OF ELASTICITY PSI
1	.177	.762	6661	253493
2	.179	.764	6004	229977
3	.188	.766	6459	236414
4	.192	.763	7521	316197
5	.204	.764	6893	315751
Mean			**6707**	**270367**
Standard Deviation			560	42511

THICKNESS PROPERTIES (ASTM D-3567)

Reading #	1	2	3	4	5	6	7	8
Thickness mm	5.12	4.76	4.54	4.78	4.88	4.65	4.41	4.96

Min. Thickness mm	Max. Thickness mm	Avg. Thickness mm
4.41	5.12	**4.763**

Remarks:

Respectfully Submitted,
Specialty Testing Services

Rob Anchors
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Specialty Testing Services

TEST REPORT (CIP PROPERTIES)

Client:	**BLD Services, LLC**	**Project Name:**	Bandywood
	2424 Tyler St.	**Project No.:**	Job #22301
	Kenner, LA 70062	**Sample ID:**	4
		Diameter:	5.75"
	Attention: Hugh Cornell	**Thickness:**	5 mm
		Length:	
		Manhole Location:	
		Installed Date:	08/22/23
TEST DATE:	10/02/2023	**Street:**	2002 Overhill Dr.
REPORT DATE:	10/04/2023	**Specimen Prepared By:**	R. Woods
REPORT NO.:	120-23-0039	**Specimen Tested By:**	R. Woods
REMARKS:	**SAMPLES RECEIVED 09/29/2023**		**TEMPERTATURE:72 F**
CONDITION PROCEDURE:	ASTM D618 PROCEDURE A		**Humidity: 50%**

FLEXURAL PROPERTIES (ASTM D-790 Type 1 Procedure B)

SAMPLE ID	Depth In.	Width In.	FLEXURAL YIELD STRENGTH PSI	MODULUS OF ELASTICITY PSI
1	.180	.766	8157	366026
2	.189	.767	8423	355400
3	.184	.765	7736	331459
4	.200	.769	7725	328422
5	.197	.772	7214	317311
Mean			**7851**	**339724**
Standard Deviation			462	20223

THICKNESS PROPERTIES (ASTM D-3567)

Reading #	1	2	3	4	5	6	7	8
Thickness mm	4.67	4.55	4.57	4.5	4.5	4.87	4.69	5.02

Min. Thickness mm	Max. Thickness mm	Avg. Thickness mm
4.50	5.02	**4.671**

Remarks:

Respectfully Submitted,
Specialty Testing Services

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TEST REPORT (CIP PROPERTIES)

Client:	**BLD Services, LLC**	**Project Name:**	Bandywood
	2424 Tyler St.	**Project No.:**	Job #22301
	Kenner, LA 70062	**Sample ID:**	5
		Diameter:	5.75"
	Attention: Hugh Cornell	**Thickness:**	5 mm
		Length:	
		Manhole Location:	
		Installed Date:	04/02/23
TEST DATE:	10/02/2023	**Street:**	2229 Bandywood Dr.
REPORT DATE:	10/04/2023	**Specimen Prepared By:**	R. Woods
REPORT NO.:	120-23-0040	**Specimen Tested By:**	R. Woods
REMARKS:	**SAMPLES RECEIVED 09/29/2023**		**TEMPERTATURE:72 F**
CONDITION PROCEDURE:	ASTM D618 PROCEDURE A		**Humidity: 50%**

FLEXURAL PROPERTIES (ASTM D-790 Type 1 Procedure B)

SAMPLE ID	Depth In.	Width In.	FLEXURAL YIELD STRENGTH PSI	MODULUS OF ELASTICITY PSI
1	.202	.765	7405	290161
2	.188	.763	7795	308015
3	.186	.767	8047	322196
4	.184	.760	8029	318250
5	.184	.763	7298	275694
Mean			**7715**	**302863**
Standard Deviation			348	19599

THICKNESS PROPERTIES (ASTM D-3567)

Reading #	1	2	3	4	5	6	7	8
Thickness mm	4.77	4.64	4.67	5.08	4.82	4.91	4.75	4.79

Min. Thickness mm	Max. Thickness mm	Avg. Thickness mm
4.64	5.08	**4.804**

Remarks:

Respectfully Submitted,
Specialty Testing Services

Rob Anchors
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Specialty Testing Services

TEST REPORT (CIP PROPERTIES)

Client:	**BLD Services, LLC**	**Project Name:**	W. Nashville
	2424 Tyler St.	**Project No.:**	Job #23032
	Kenner, LA 70062	**Sample ID:**	6
		Diameter:	5.75"
	Attention: Hugh Cornell	**Thickness:**	5 mm
		Length:	
		Manhole Location:	091-05-064 to 063
		Installed Date:	
TEST DATE:	10/02/2023	**Street:**	631 Ries
REPORT DATE:	10/04/2023	**Specimen Prepared By:**	R. Woods
REPORT NO.:	120-23-0041	**Specimen Tested By:**	R. Woods
REMARKS:	**SAMPLES RECEIVED 09/29/2023**		**TEMPERTATURE:72 F**
CONDITION PROCEDURE:	ASTM D618 PROCEDURE A		**Humidity: 50%**

FLEXURAL PROPERTIES (ASTM D-790 Type 1 Procedure B)

SAMPLE ID	Depth In.	Width In.	FLEXURAL YIELD STRENGTH PSI	MODULUS OF ELASTICITY PSI
1	.163	.763	8457	356351
2	.174	.760	9780	352704
3	.160	.762	9590	438736
4	.169	.765	8654	388748
5	.172	.761	7915	358061
Mean			**8879**	**378920**
Standard Deviation			786	36422

THICKNESS PROPERTIES (ASTM D-3567)

Reading #	1	2	3	4	5	6	7	8
Thickness mm	4.44	4.21	4.08	4.1	4.28	4.35	4.16	4.49

Min. Thickness mm	Max. Thickness mm	Avg. Thickness mm
4.08	4.49	**4.264**

Remarks:

Respectfully Submitted,
Specialty Testing Services

Rob Anchors
Operations Manager

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STS

Specialty Testing Services

TEST REPORT (CIP PROPERTIES)

Client:	**BLD Services, LLC**	**Project Name:**	W. Nashville
	2424 Tyler St.	**Project No.:**	Job #23032
	Kenner, LA 70062	**Sample ID:**	7
		Diameter:	5.75"
	Attention: Hugh Cornell	**Thickness:**	5 mm
		Length:	
		Manhole Location:	091-05-064 to 063
		Installed Date:	
TEST DATE:	10/02/2023	**Street:**	627 Ries
REPORT DATE:	10/04/2023	**Specimen Prepared By:**	R. Woods
REPORT NO.:	120-23-0042	**Specimen Tested By:**	R. Woods
REMARKS:	**SAMPLES RECEIVED 09/29/2023**		**TEMPERTATURE:72 F**
CONDITION PROCEDURE:	ASTM D618 PROCEDURE A		**Humidity: 50%**

FLEXURAL PROPERTIES (ASTM D-790 Type 1 Procedure B)

SAMPLE ID	Depth In.	Width In.	FLEXURAL YIELD STRENGTH PSI	MODULUS OF ELASTICITY PSI
1	.176	.760	8038	328850
2	.164	.766	7158	286989
3	.180	.759	8015	324086
4	.172	.760	7048	358493
5	.176	.760	7264	322941
Mean			**7505**	**324272**
Standard Deviation			482	25415

THICKNESS PROPERTIES (ASTM D-3567)

Reading #	1	2	3	4	5	6	7	8
Thickness mm	4.5	4.66	4.98	4.86	4.62	4.55	5.05	5.09

Min. Thickness mm	Max. Thickness mm	Avg. Thickness mm
4.50	5.09	**4.789**

Remarks:

Respectfully Submitted,
Specialty Testing Services

Rob Anchors
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STS

Specialty Testing Services

TEST REPORT (CIP PROPERTIES)

Client:	**BLD Services, LLC**	**Project Name:**	W. Nashville
	2424 Tyler St.	**Project No.:**	Job #23032
	Kenner, LA 70062	**Sample ID:**	8
		Diameter:	6"
	Attention: Hugh Cornell	**Thickness:**	5 mm
		Length:	
		Manhole Location:	091-05-064 to 063
		Installed Date:	
TEST DATE:	10/02/2023	**Street:**	629 Ries
REPORT DATE:	10/04/2023	**Specimen Prepared By:**	R. Woods
REPORT NO.:	120-23-0043	**Specimen Tested By:**	R. Woods
REMARKS:	**SAMPLES RECEIVED 09/29/2023**		**TEMPERTATURE:72 F**
CONDITION PROCEDURE:	ASTM D618 PROCEDURE A		**Humidity: 50%**

FLEXURAL PROPERTIES (ASTM D-790 Type 1 Procedure B)

SAMPLE ID	Depth In.	Width In.	FLEXURAL YIELD STRENGTH PSI	MODULUS OF ELASTICITY PSI
1	.168	.766	7252	303168
2	.176	.764	7095	364832
3	.186	.770	6782	297703
4	.175	.768	7944	340367
5	.172	.762	7806	365173
Mean			**7376**	**334249**
Standard Deviation			488	32522

THICKNESS PROPERTIES (ASTM D-3567)

Reading #	1	2	3	4	5	6	7	8
Thickness mm	4.68	4.72	4.61	4.69	4.44	4.51	4.89	4.82

Min. Thickness mm	Max. Thickness mm	Avg. Thickness mm
4.44	4.89	**4.670**

Remarks:

Respectfully Submitted,
Specialty Testing Services

Rob Anchors
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STS

Specialty Testing Services

TEST REPORT (CIP PROPERTIES)

Client:	**BLD Services, LLC**	**Project Name:**	28th Ave
	2424 Tyler St.	**Project No.:**	Job #22155
	Kenner, LA 70062	**Sample ID:**	9
		Diameter:	5.75"
	Attention: Hugh Cornell	**Thickness:**	5 mm
		Length:	
		Manhole Location:	
		Installed Date:	06/16/23
TEST DATE:	10/02/2023	**Street:**	30th Ave
REPORT DATE:	10/04/2023	**Specimen Prepared By:**	R. Woods
REPORT NO.:	120-23-0044	**Specimen Tested By:**	R. Woods
REMARKS:	**SAMPLES RECEIVED 09/29/2023**		**TEMPERTATURE:72 F**
CONDITION PROCEDURE:	ASTM D618 PROCEDURE A		**Humidity: 50%**

FLEXURAL PROPERTIES (ASTM D-790 Type 1 Procedure B)

SAMPLE ID	Depth In.	Width In.	FLEXURAL YIELD STRENGTH PSI	MODULUS OF ELASTICITY PSI
1	.173	.776	8243	383853
2	.172	.771	9214	399244
3	.171	.771	9053	396422
4	.177	.770	9330	389922
5	.174	.773	9790	414962
Mean			**9126**	**396880**
Standard Deviation			564	11735

THICKNESS PROPERTIES (ASTM D-3567)

Reading #	1	2	3	4	5	6	7	8
Thickness mm	4.42	4.49	4.46	4.54	4.47	4.31	4.39	4.44

Min. Thickness mm	Max. Thickness mm	Avg. Thickness mm
4.31	4.54	**4.440**

Remarks:

Respectfully Submitted,
Specialty Testing Services

Rob Anchors
Operations Manager

Laboratory Address:
3151 Rex St.
Leeds, AL 35094

Mailing and Shipping Address:
3179 Green Valley Rd.
Vestavia, AL 35243

Telephone:
Rob: (205) 962-8410
Raymond: (205) 960-9524

BLD SERVICES, LLC

October 10, 2024

Jefferson Parish
Department of Purchasing
200 Derbigny Street
Suite 4400
Gretna, LA 70053

Attn: Mark Buttery (Purchasing Specialist II)
Mark.buttery@jeffparish.net
504-364-2810

RE: Two (2) Year Contract for Preventative Maintenance (Lining) of Existing Sanitary and Storm Sewers, Including Service Laterals at Scattered Locations for Jefferson Parish Department of Sewerage (Bid Number 50-00145944) / Qualifications – Section 1.13-8

Dear Mark,

In accordance with specification section "1.13-8 proposed installer shall provide a narrative description of typical modes of failure for the proposed Product with the bid", BLD Services, LLC provides the following narrative. The narrative below includes typical and suggested means of repair, along with brief description of both the causes of the potential failure and effectiveness of proposed repairs.

Curing Issues

- Recure as is appropriate per manufactures recommendations

Mis-measurements

- Too short-cut end out internally, install another liner overlapping original installation

Diameter

- Too small of a tube-grout annulus
- Too big of a tube-cut wrinkles out

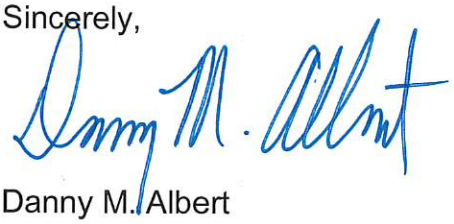
Ultimate Repair Should the Repair Not Be able To Be Repaired Via Robotic Methods

- Point repair as needed, regardless of the mode of failure

2424 Tyler Street Kenner, LA 70062 Office 504-466-1344 Fax 504-461-5971 Toll-Free 888-272-6711

Please contact me if you should have any questions.

Sincerely,



Danny M. Albert
Estimator / Project Manager
2424 Tyler Street
Kenner, LA 70062
504-466-1344 (Office) / 504-461-5971 (Fax) / 504-382-3817 (Cell)
dalbert@bldllc.net / www.bldllc.net

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October 10, 2024

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Dear Mark,

In accordance with specification section "1.13-9 proposed installer shall submit a narrative description of limitations of the proposed Product with the bid", BLD Services, LLC provides the following narrative. The narrative below includes a minimum of suitable diameter ranges, degree of host pipe integrity required, job site installation limitations, depth limitations, required obstacle removal, point repairs, etc.

- CIPP diameter ranges are 4" to 110"
- Typical design parameters call for a 5% ovality. Ovality in excess of 5% is something that CIPP can handle, just needs to be designed accordingly with increase thickness of material in the deformed area
- Job site limitations can impact how you attack an installation, but I have NEVER had a liner that COULD NOT be installed as a result of the job site. We may need to remove tops of manholes, set up additional traffic control, alter the installation schedule(nights/weekends)
- Depth installations should never be an issue, design the tube thickness accordingly
- Obstacle removal such as protruding taps/tuburculation/grout-all of the obstacles noted can typically be removed internally using hydraulic cleaning tools or robotic remote-controlled cutters without the need to excavate
- Should obstructions require conventional excavation, follow all appropriate OSHA guidelines to ensure trench safety and all applicable confined space requirements

Please contact me if you should have any questions.

Sincerely,

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Dear Mark,

In accordance with specification section "1.13-10 proposed installer should also submit at least five (5) Inflow/Infiltration reduction case studies documenting quantifiable results of rehabilitation with the bid.", BLD Services, LLC provides the following information.

Chapel Hill, Jefferson County Alabama
Contact-Tad Powell

MAWSS-Mobile Area Water and Sanitary Sewer
Contact-Jason Dobbs

ECUA-Emerald Coast Utility Authority
Contact-Stacy Hayden

Baton Rouge City Parish
Contact-Paul Nata

Jefferson Parish Sewerage Department
Contact-Pablo San Martin

Jefferson Parish Drainage Department
Contact-Dominic Ditcharo

New Orleans Sewerage and Water Board
Contact-STANTEC, Susan Nolan

City of Slidell
Contact-Blaine Clancey

Please contact me if you should have any questions.

Sincerely,

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RE: Two (2) Year Contract for Preventative Maintenance (Lining) of Existing Sanitary and Storm Sewers, Including Service Laterals at Scattered Locations for Jefferson Parish Department of Sewerage (Bid Number 50-00145944) / Qualifications – Section 1.14

Dear Mark,

In accordance with specification section "1.14 all requests and data submittals for consideration of new Products and Installers as "equal" shall be submitted with the bid.

BLD Services, LLC will install all products as specified and no proposed acceptable equal product will be used on this contract.

Please contact me if you should have any questions.

Sincerely,

Danny M. Albert
Estimator / Project Manager
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Kenner, LA 70062
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