



RedZone[®]
ROBOTICS

Street:	North Colorado Street		Flow Control:	Not Controlled	
City:	Hobart, IN		Year Renewed:		
Location:	Local rural streets with light traffic, t		Tape/Media #:		
Purpose:	Routine Assessment		Dia/Height:	10"	
Use:	Sanitary Sewage Pipe		Material:	VCP	
Drain Area:			Lining:	None	
Category:	NA				
Comment:					
Location Details:			Direction of Survey:	Upstream	
US MH:	M-504-034	DS MH:	M-504-041	Total Length Surveyed (ft):	161.8

O&M Index:	1.66	O&M Quick:	2E1B	O&M Rating:	78.00
Structural Index:	2.46	Structural Quick:	413A	Structural Rating:	64.00
Overall Index:	1.95	Overall Quick:	413A	Overall Rating:	142.00

Tuesday, April 25, 2023

91.9	MWLS(F03)	Miscellaneous Water Level Sag	1018	S 2
94.9	RFJ	Roots Fine Joint	1049	M 1
94.9	CL	Crack Longitudinal	1077	S 2
95.0	FS	Fracture Spiral	1112	S 3
97.6	FM	Fracture Multiple	1165	S 4
97.6	RFJ	Roots Fine Joint	1182	M 1
100.1	RFJ	Roots Fine Joint	1219	M 1
105.3	RFJ	Roots Fine Joint	1274	M 1
107.7	RFJ	Roots Fine Joint	1313	M 1
110.6	JAM	Joint Angular Medium	1365	S 3
110.7	MWLS(S04)	Miscellaneous Water Level Sag	1385	S 2
112.9	RFJ	Roots Fine Joint	1422	M 1
115.4	RFJ	Roots Fine Joint	1478	M 1
118.1	RFJ	Roots Fine Joint	1522	M 1
118.2	JAM	Joint Angular Medium	1543	S 3
120.8	RFJ	Roots Fine Joint	1587	M 1
123.1	MWLS(F04)	Miscellaneous Water Level Sag	1629	S 2
123.4	RFJ	Roots Fine Joint	1648	M 1
129.3	SSS	Surface Damage Surface Spalling	1704	S 2
131.0	SSS	Surface Damage Surface Spalling	1732	S 2
133.6	RFJ	Roots Fine Joint	1786	M 1
135.2	MWLS(S05)	Miscellaneous Water Level Sag	1815	S 2
138.4	JOM	Joint Offset Medium	1843	S 3
139.0	DSF	Deposits Settled Fine	1862	M 2
143.8	RFJ	Roots Fine Joint	1916	M 1
146.6	SZ	Surface Damage Other	1960	NA
151.7	RFJ	Roots Fine Joint	2003	M 1
153.8	MWLS(F05)	Miscellaneous Water Level Sag	2054	S 2
154.2	RFJ	Roots Fine Joint	2082	M 1
156.9	SZ	Surface Damage Other	2119	NA
156.9	RFJ	Roots Fine Joint	2139	M 1
159.9	DAE(F02)	Deposits Attached Encrustation	2168	M 2
161.8	AMH	Manhole	2263	NA

M-504-034



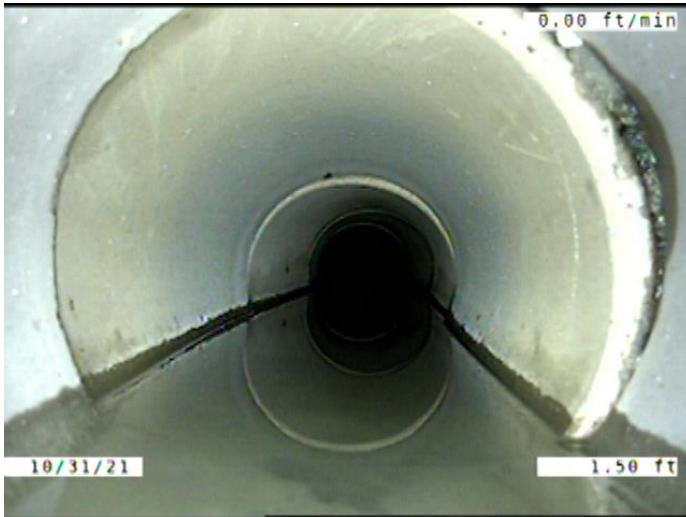
Code: **AMH**
Description: **Manhole**

Distance (ft): **.0**
Structural Grade: **0**
O&M Grade: **0**
Clock Start/From:
Clock To:
1st Value:
2nd Value:
Value Percent:
Continuous Index:
Within 8" of Joint: **NO**
Remarks: **M-504-041**



Code: **MWL**
Description: **Miscellaneous Water Level**

Distance (ft): **.0**
Structural Grade: **0**
O&M Grade: **0**
Clock Start/From:
Clock To:
1st Value:
2nd Value:
Value Percent: **10.000**
Continuous Index:
Within 8" of Joint: **NO**
Remarks:



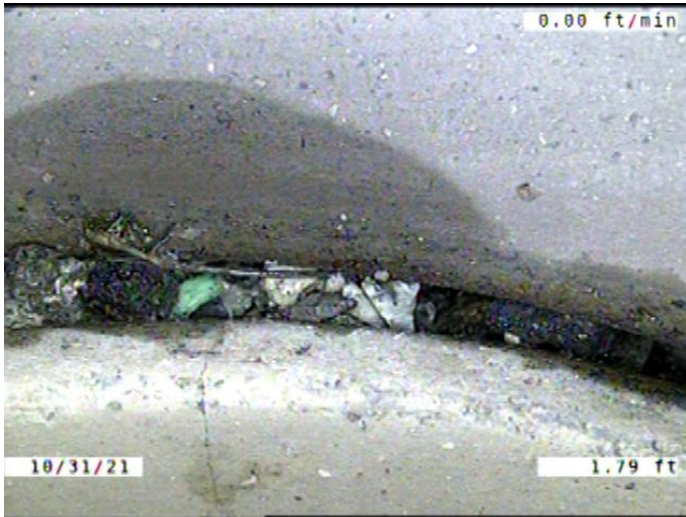
Code: **MGO**
 Description: **Miscellaneous General Observation**

Distance (ft): **1.5**
 Structural Grade: **0**
 O&M Grade: **0**
 Clock Start/From:
 Clock To:
 1st Value:
 2nd Value:
 Value Percent:
 Continuous Index:
 Within 8" of Joint: **NO**
 Remarks: **DROP INTO THE MANHOLE. HAD TO START IN THE PIPE.**



Code: **MWLS**
 Description: **Miscellaneous Water Level Sag**

Distance (ft): **1.5**
 Structural Grade: **2**
 O&M Grade: **0**
 Clock Start/From:
 Clock To:
 1st Value:
 2nd Value:
 Value Percent: **10.000**
 Continuous Index: **S01**
 Within 8" of Joint: **NO**
 Remarks:



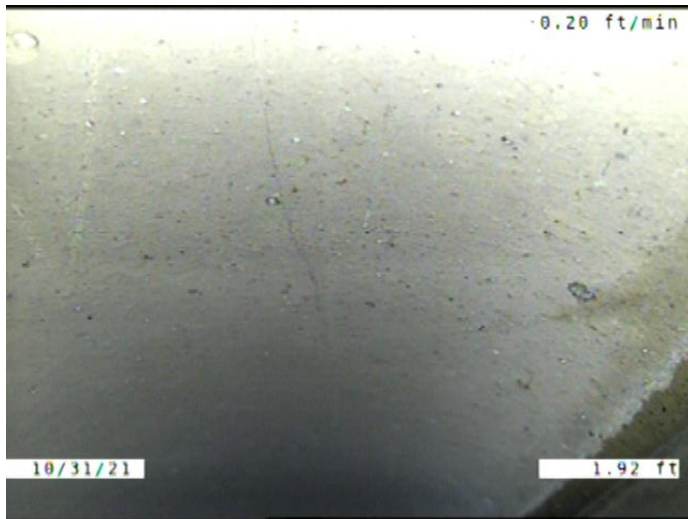
Code: **RFJ**
Description: **Roots Fine Joint**

Distance (ft): **1.8**
Structural Grade: **0**
O&M Grade: **1**
Clock Start/From: **2**
Clock To:
1st Value:
2nd Value:
Value Percent:
Continuous Index:
Within 8" of Joint: **YES**
Remarks:



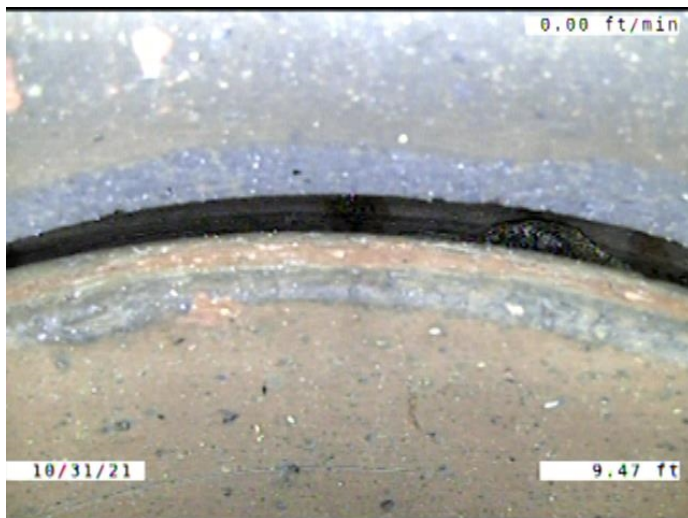
Code: **JOMD**
Description: **Joint Offset Medium Defective**

Distance (ft): **1.8**
Structural Grade: **3**
O&M Grade: **0**
Clock Start/From:
Clock To:
1st Value:
2nd Value:
Value Percent:
Continuous Index:
Within 8" of Joint: **NO**
Remarks: **LOOKS TO BE LEAKING WATER**



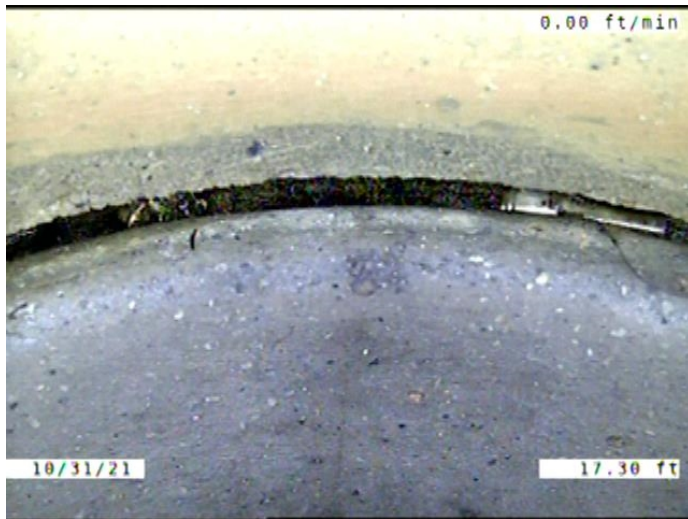
Code: **CM**
Description: **Crack Multiple**

Distance (ft): **1.9**
Structural Grade: **3**
O&M Grade: **0**
Clock Start/From: **2**
Clock To: **4**
1st Value:
2nd Value:
Value Percent:
Continuous Index:
Within 8" of Joint: **YES**
Remarks:



Code: **JOM**
Description: **Joint Offset Medium**

Distance (ft): **9.5**
Structural Grade: **3**
O&M Grade: **0**
Clock Start/From:
Clock To:
1st Value:
2nd Value:
Value Percent:
Continuous Index:
Within 8" of Joint: **NO**
Remarks:



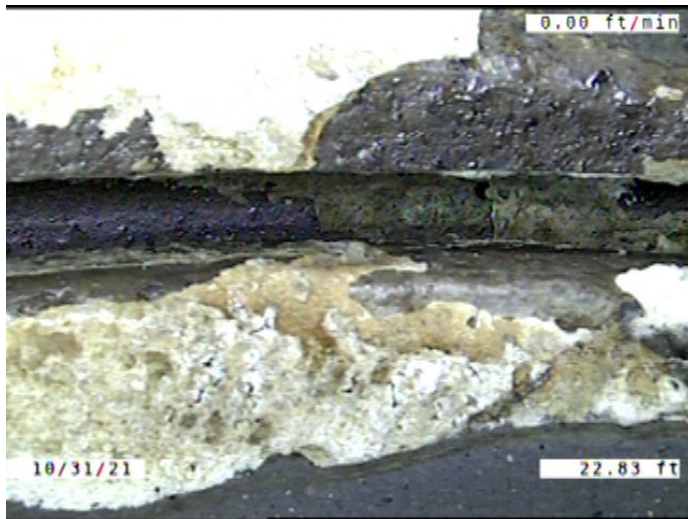
Code: **JOM**
 Description: **Joint Offset Medium**

Distance (ft): **17.3**
 Structural Grade: **3**
 O&M Grade: **0**
 Clock Start/From:
 Clock To:
 1st Value:
 2nd Value:
 Value Percent:
 Continuous Index:
 Within 8" of Joint: **NO**
 Remarks:



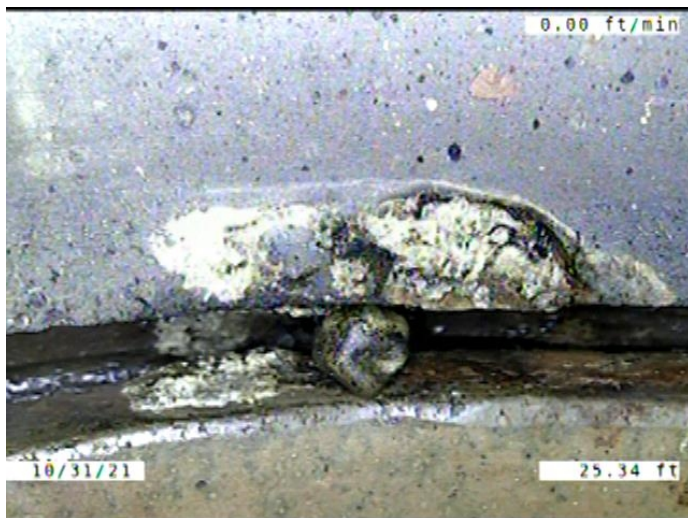
Code: **DAE**
 Description: **Deposits Attached Encrustation**

Distance (ft): **20.2**
 Structural Grade: **0**
 O&M Grade: **2**
 Clock Start/From: **9**
 Clock To: **3**
 1st Value:
 2nd Value:
 Value Percent: **5.000**
 Continuous Index:
 Within 8" of Joint: **YES**
 Remarks:



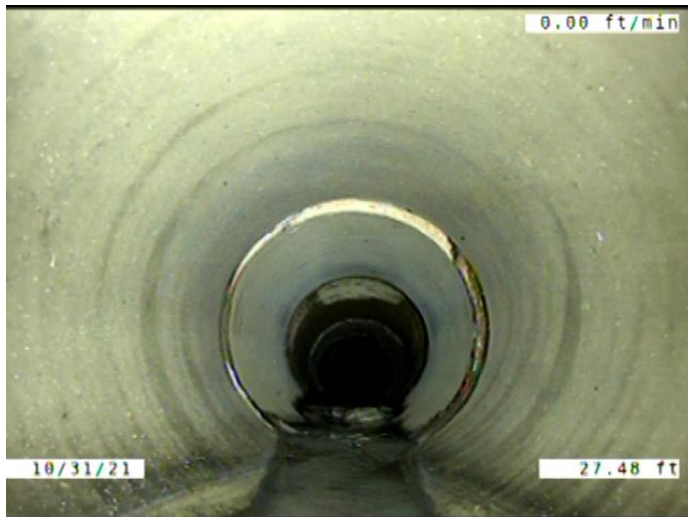
Code: **DAE**
Description: **Deposits Attached Encrustation**

Distance (ft): **22.8**
Structural Grade: **0**
O&M Grade: **2**
Clock Start/From: **9**
Clock To: **2**
1st Value:
2nd Value:
Value Percent: **5.000**
Continuous Index:
Within 8" of Joint: **YES**
Remarks:



Code: **DAE**
Description: **Deposits Attached Encrustation**

Distance (ft): **25.3**
Structural Grade: **0**
O&M Grade: **2**
Clock Start/From: **7**
Clock To: **5**
1st Value:
2nd Value:
Value Percent: **5.000**
Continuous Index: **S02**
Within 8" of Joint: **YES**
Remarks:



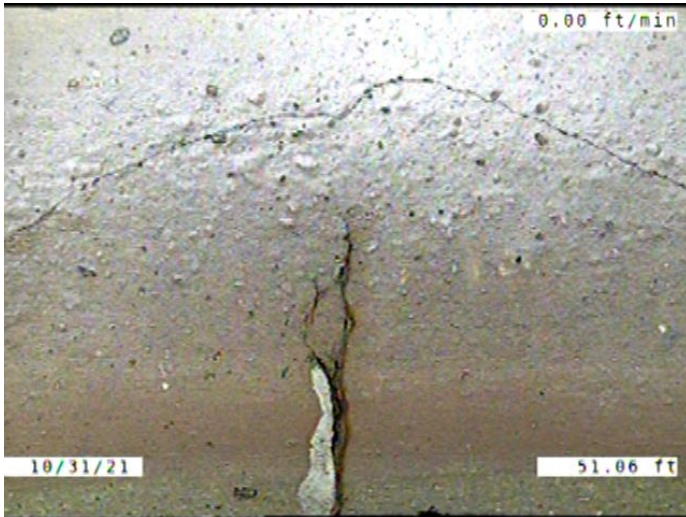
Code: **MWLS**
 Description: **Miscellaneous Water Level Sag**

Distance (ft): **27.5**
 Structural Grade: **2**
 O&M Grade: **0**
 Clock Start/From:
 Clock To:
 1st Value:
 2nd Value:
 Value Percent: **10.000**
 Continuous Index: **F01**
 Within 8" of Joint: **NO**
 Remarks:



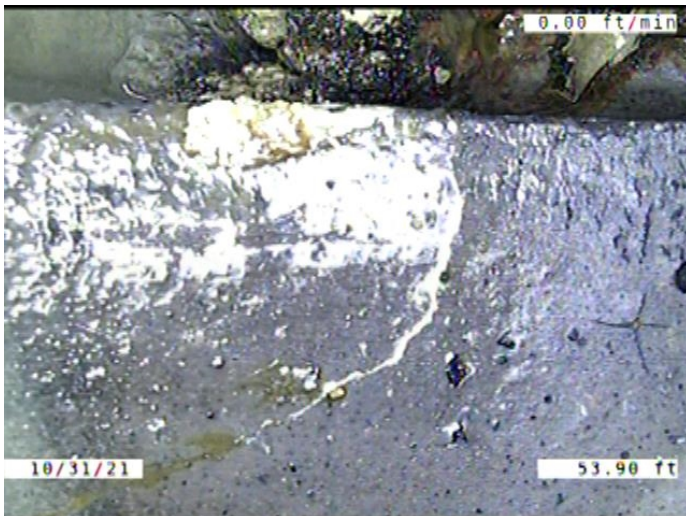
Code: **OBM**
 Description: **Obstruction Pipe Material in Invert**

Distance (ft): **31.9**
 Structural Grade: **0**
 O&M Grade: **2**
 Clock Start/From: **6**
 Clock To:
 1st Value:
 2nd Value:
 Value Percent: **5.000**
 Continuous Index:
 Within 8" of Joint: **YES**
 Remarks:



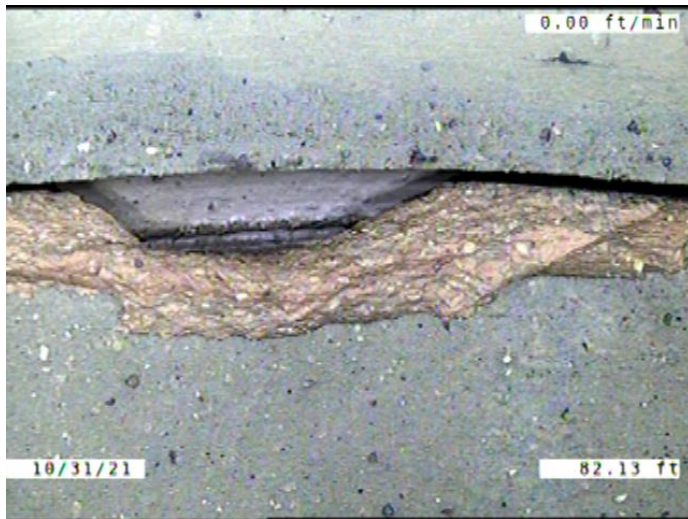
Code: **CM**
 Description: **Crack Multiple**

Distance (ft): **51.1**
 Structural Grade: **3**
 O&M Grade: **0**
 Clock Start/From: **9**
 Clock To: **1**
 1st Value:
 2nd Value:
 Value Percent:
 Continuous Index:
 Within 8" of Joint: **YES**
 Remarks:

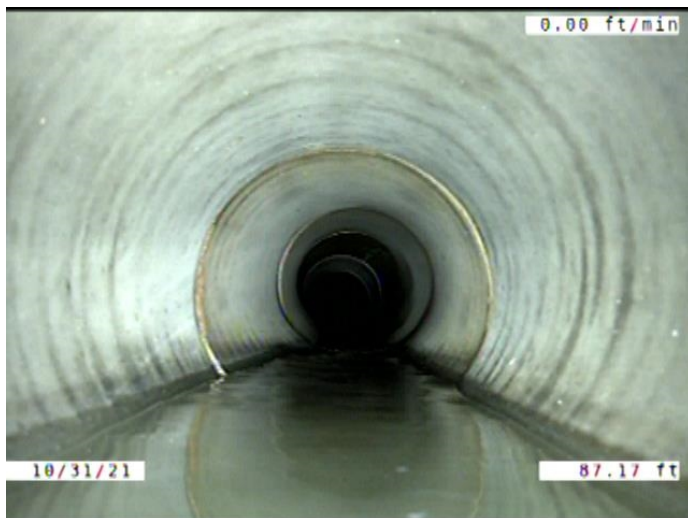


Code: **CM**
 Description: **Crack Multiple**

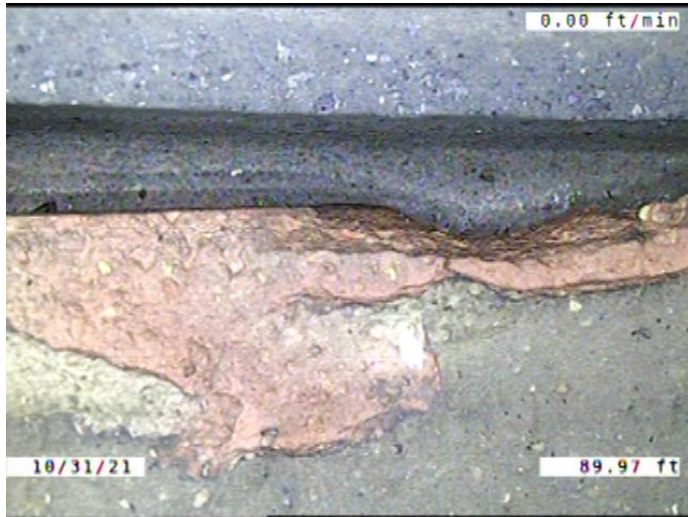
Distance (ft): **53.9**
 Structural Grade: **3**
 O&M Grade: **0**
 Clock Start/From: **3**
 Clock To: **4**
 1st Value:
 2nd Value:
 Value Percent:
 Continuous Index:
 Within 8" of Joint: **YES**
 Remarks:



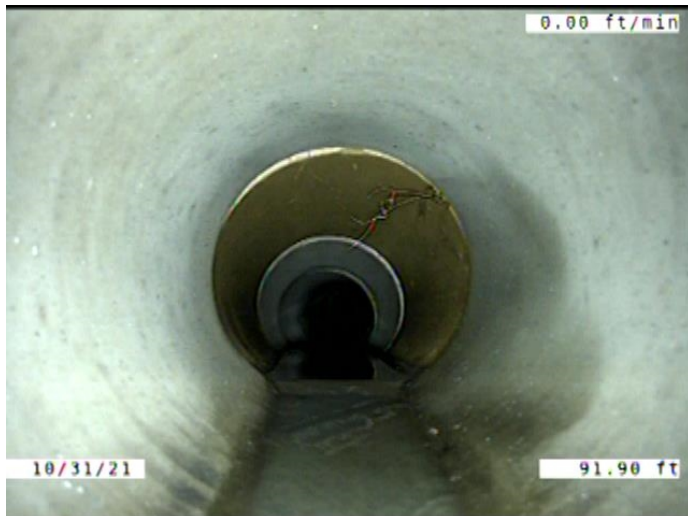
Code:	SZ
Description:	Surface Damage Other
Distance (ft):	82.1
Structural Grade:	0
O&M Grade:	0
Clock Start/From:	10
Clock To:	12
1st Value:	
2nd Value:	
Value Percent:	
Continuous Index:	
Within 8" of Joint:	YES
Remarks:	A PIECE CHIPPED AWAY FROM THE JOINT



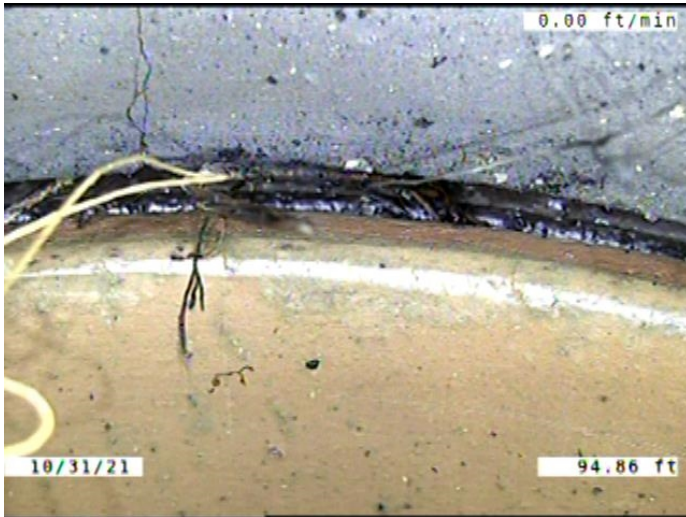
Code:	MWLS
Description:	Miscellaneous Water Level Sag
Distance (ft):	87.2
Structural Grade:	2
O&M Grade:	0
Clock Start/From:	
Clock To:	
1st Value:	
2nd Value:	
Value Percent:	10.000
Continuous Index:	S03
Within 8" of Joint:	NO
Remarks:	



Code:	SZ
Description:	Surface Damage Other
Distance (ft):	90.0
Structural Grade:	0
O&M Grade:	0
Clock Start/From:	9
Clock To:	10
1st Value:	
2nd Value:	
Value Percent:	
Continuous Index:	
Within 8" of Joint:	YES
Remarks:	A PIECE CHIPPED AWAY FROM THE JOINT

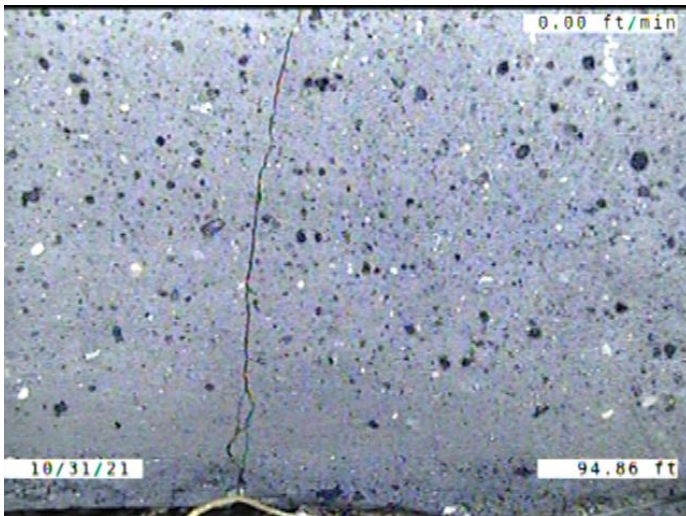


Code:	MWLS
Description:	Miscellaneous Water Level Sag
Distance (ft):	91.9
Structural Grade:	2
O&M Grade:	0
Clock Start/From:	
Clock To:	
1st Value:	
2nd Value:	
Value Percent:	10.000
Continuous Index:	F03
Within 8" of Joint:	NO
Remarks:	



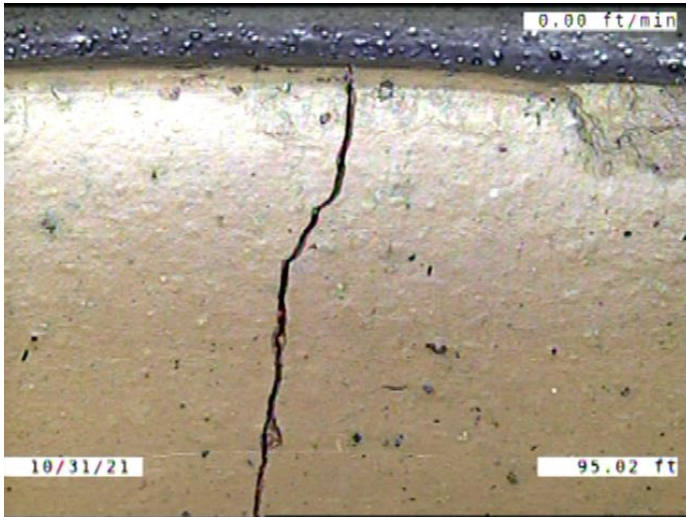
Code: **RFJ**
 Description: **Roots Fine Joint**

Distance (ft): **94.9**
 Structural Grade: **0**
 O&M Grade: **1**
 Clock Start/From: **1**
 Clock To: **2**
 1st Value:
 2nd Value:
 Value Percent:
 Continuous Index:
 Within 8" of Joint: **YES**
 Remarks:



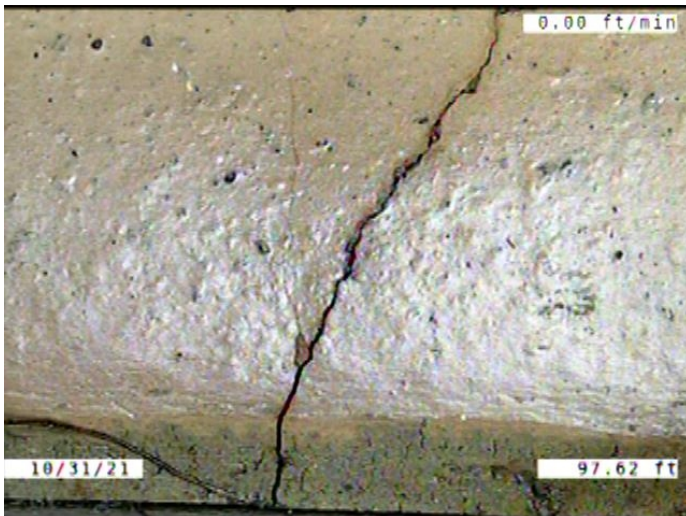
Code: **CL**
 Description: **Crack Longitudinal**

Distance (ft): **94.9**
 Structural Grade: **2**
 O&M Grade: **0**
 Clock Start/From: **1**
 Clock To:
 1st Value:
 2nd Value:
 Value Percent:
 Continuous Index:
 Within 8" of Joint: **YES**
 Remarks:



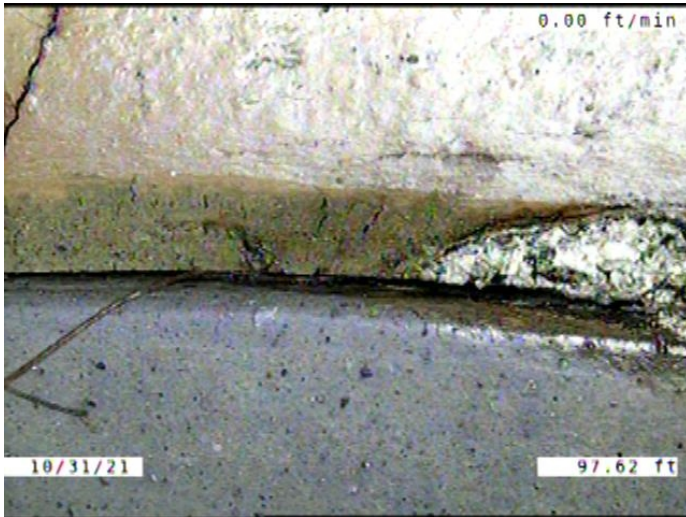
Code: **FS**
 Description: **Fracture Spiral**

Distance (ft): **95.0**
 Structural Grade: **3**
 O&M Grade: **0**
 Clock Start/From: **11**
 Clock To: **12**
 1st Value:
 2nd Value:
 Value Percent:
 Continuous Index:
 Within 8" of Joint: **YES**
 Remarks:



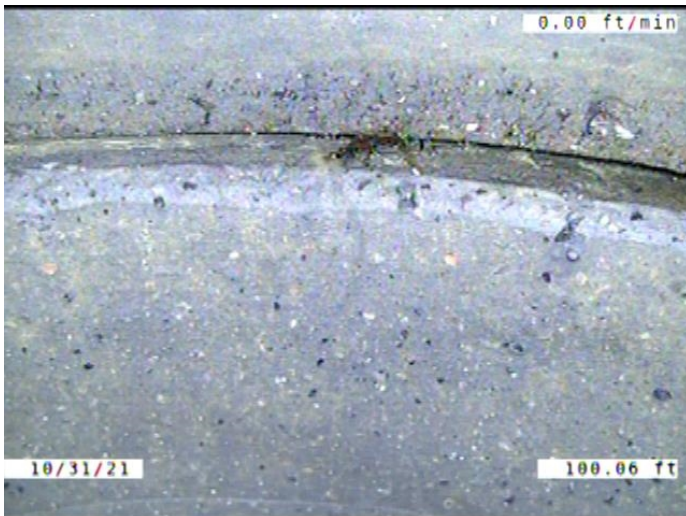
Code: **FM**
 Description: **Fracture Multiple**

Distance (ft): **97.6**
 Structural Grade: **4**
 O&M Grade: **0**
 Clock Start/From: **3**
 Clock To: **4**
 1st Value:
 2nd Value:
 Value Percent:
 Continuous Index:
 Within 8" of Joint: **YES**
 Remarks:



Code: **RFJ**
Description: **Roots Fine Joint**

Distance (ft): **97.6**
Structural Grade: **0**
O&M Grade: **1**
Clock Start/From: **2**
Clock To: **4**
1st Value:
2nd Value:
Value Percent:
Continuous Index:
Within 8" of Joint: **YES**
Remarks:



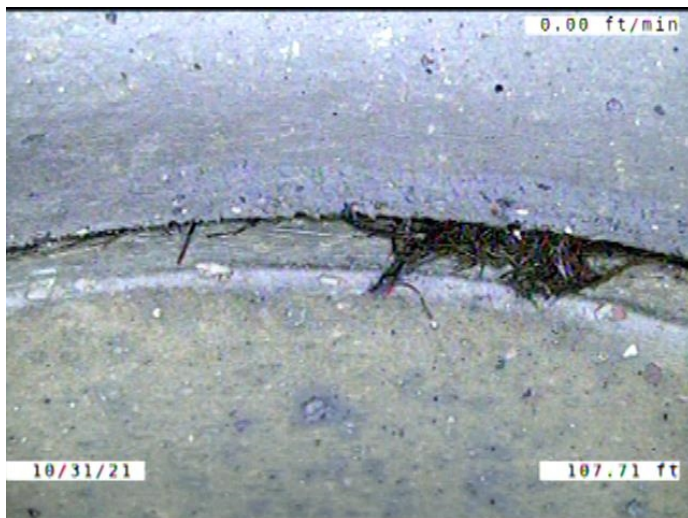
Code: **RFJ**
Description: **Roots Fine Joint**

Distance (ft): **100.1**
Structural Grade: **0**
O&M Grade: **1**
Clock Start/From: **2**
Clock To:
1st Value:
2nd Value:
Value Percent:
Continuous Index:
Within 8" of Joint: **YES**
Remarks:



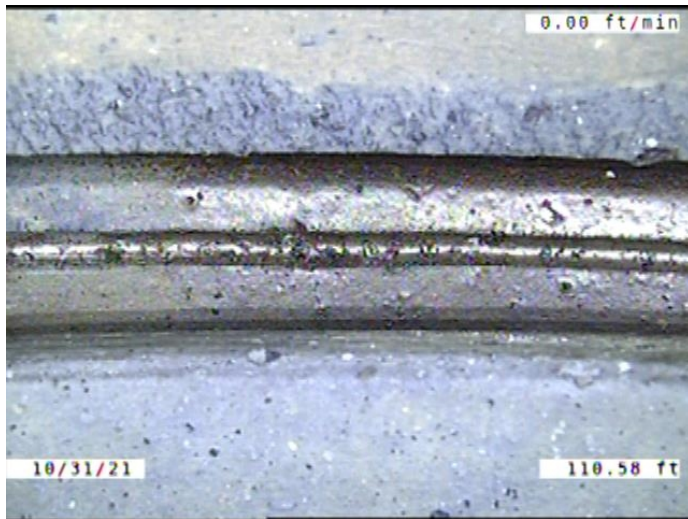
Code: **RFJ**
Description: **Roots Fine Joint**

Distance (ft): **105.3**
Structural Grade: **0**
O&M Grade: **1**
Clock Start/From: **9**
Clock To: **11**
1st Value:
2nd Value:
Value Percent:
Continuous Index:
Within 8" of Joint: **YES**
Remarks:



Code: **RFJ**
Description: **Roots Fine Joint**

Distance (ft): **107.7**
Structural Grade: **0**
O&M Grade: **1**
Clock Start/From: **11**
Clock To: **12**
1st Value:
2nd Value:
Value Percent:
Continuous Index:
Within 8" of Joint: **YES**
Remarks:



Code: **JAM**
 Description: **Joint Angular Medium**

Distance (ft): **110.6**
 Structural Grade: **3**
 O&M Grade: **0**
 Clock Start/From:
 Clock To:
 1st Value:
 2nd Value:
 Value Percent:
 Continuous Index:
 Within 8" of Joint: **NO**
 Remarks:



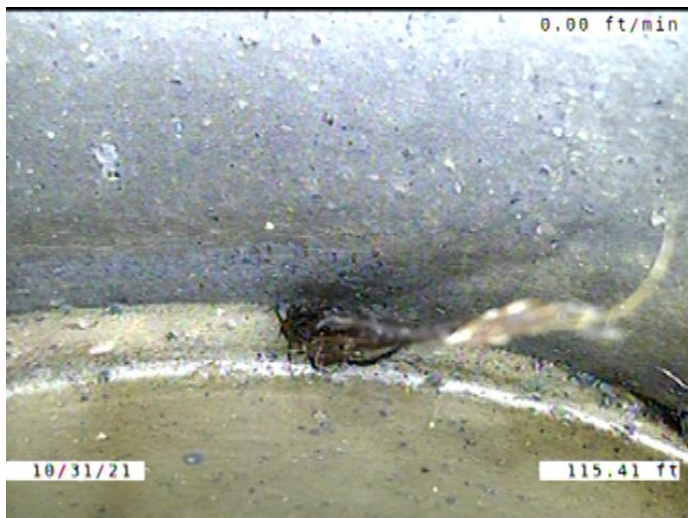
Code: **MWLS**
 Description: **Miscellaneous Water Level Sag**

Distance (ft): **110.7**
 Structural Grade: **2**
 O&M Grade: **0**
 Clock Start/From:
 Clock To:
 1st Value:
 2nd Value:
 Value Percent: **10.000**
 Continuous Index: **S04**
 Within 8" of Joint: **NO**
 Remarks:



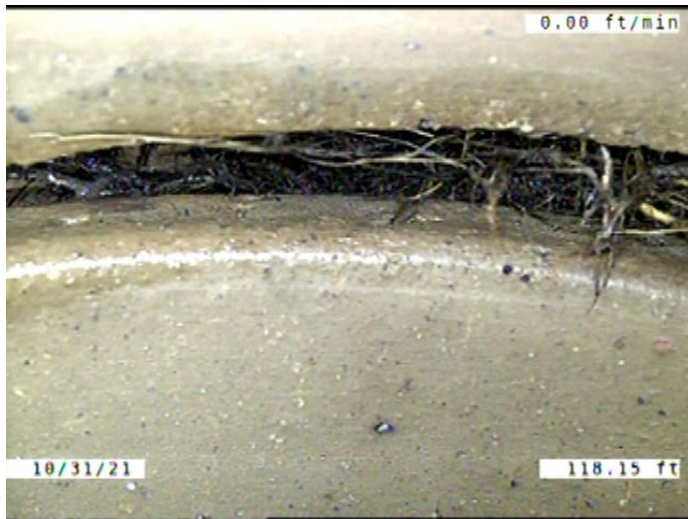
Code: **RFJ**
 Description: **Roots Fine Joint**

Distance (ft): **112.9**
 Structural Grade: **0**
 O&M Grade: **1**
 Clock Start/From: **11**
 Clock To: **2**
 1st Value:
 2nd Value:
 Value Percent:
 Continuous Index:
 Within 8" of Joint: **YES**
 Remarks:



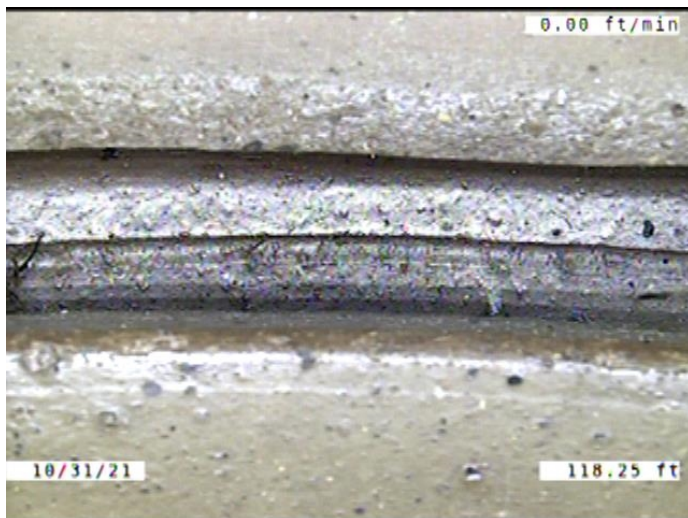
Code: **RFJ**
 Description: **Roots Fine Joint**

Distance (ft): **115.4**
 Structural Grade: **0**
 O&M Grade: **1**
 Clock Start/From: **11**
 Clock To: **3**
 1st Value:
 2nd Value:
 Value Percent:
 Continuous Index:
 Within 8" of Joint: **YES**
 Remarks:



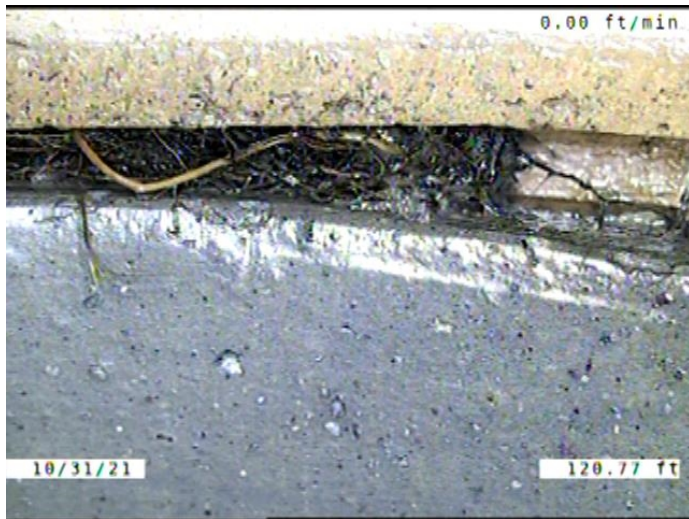
Code: **RFJ**
 Description: **Roots Fine Joint**

Distance (ft): **118.1**
 Structural Grade: **0**
 O&M Grade: **1**
 Clock Start/From: **9**
 Clock To: **2**
 1st Value:
 2nd Value:
 Value Percent:
 Continuous Index:
 Within 8" of Joint: **YES**
 Remarks:



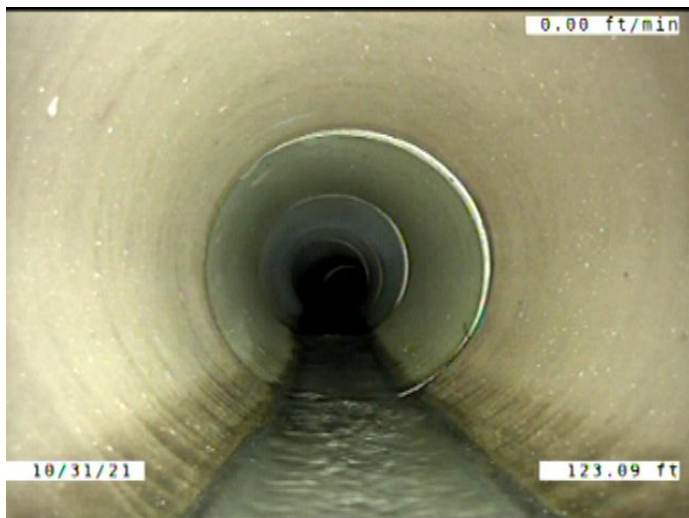
Code: **JAM**
 Description: **Joint Angular Medium**

Distance (ft): **118.2**
 Structural Grade: **3**
 O&M Grade: **0**
 Clock Start/From:
 Clock To:
 1st Value:
 2nd Value:
 Value Percent:
 Continuous Index:
 Within 8" of Joint: **NO**
 Remarks:



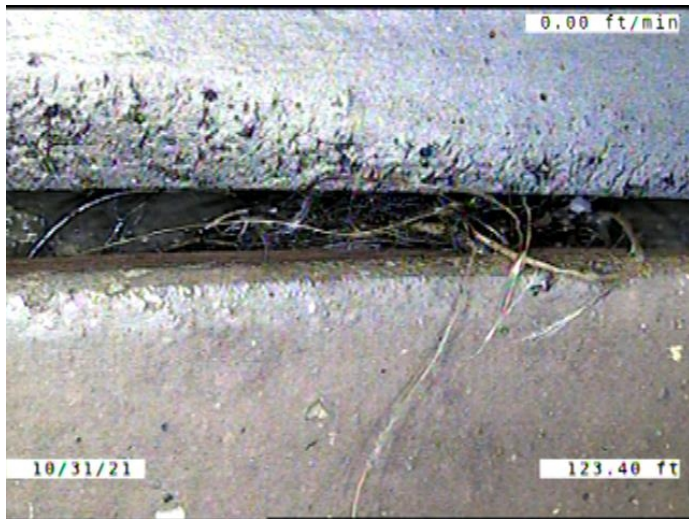
Code: **RFJ**
 Description: **Roots Fine Joint**

Distance (ft): **120.8**
 Structural Grade: **0**
 O&M Grade: **1**
 Clock Start/From: **9**
 Clock To: **3**
 1st Value:
 2nd Value:
 Value Percent:
 Continuous Index:
 Within 8" of Joint: **YES**
 Remarks:



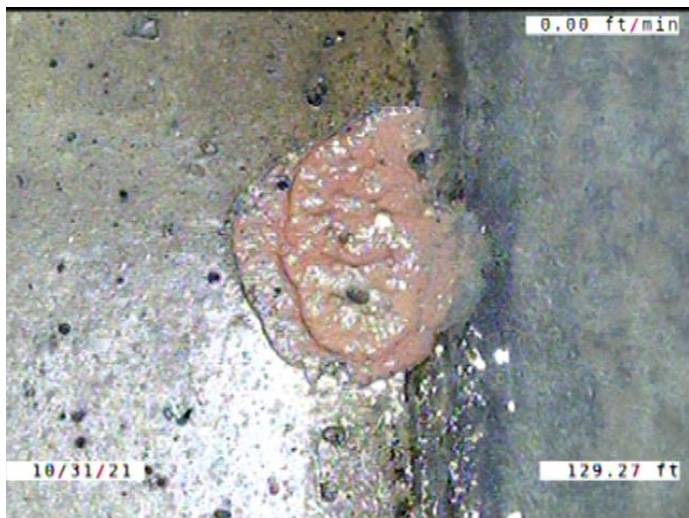
Code: **MWLS**
 Description: **Miscellaneous Water Level Sag**

Distance (ft): **123.1**
 Structural Grade: **2**
 O&M Grade: **0**
 Clock Start/From:
 Clock To:
 1st Value:
 2nd Value:
 Value Percent: **10.000**
 Continuous Index: **F04**
 Within 8" of Joint: **NO**
 Remarks:



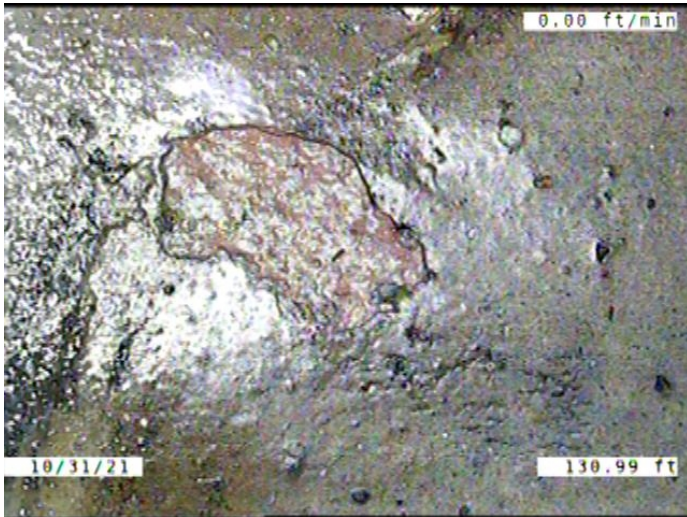
Code: **RFJ**
 Description: **Roots Fine Joint**

Distance (ft): **123.4**
 Structural Grade: **0**
 O&M Grade: **1**
 Clock Start/From: **9**
 Clock To:
 1st Value:
 2nd Value:
 Value Percent:
 Continuous Index:
 Within 8" of Joint: **YES**
 Remarks:



Code: **SSS**
 Description: **Surface Damage Surface Spalling**

Distance (ft): **129.3**
 Structural Grade: **2**
 O&M Grade: **0**
 Clock Start/From: **7**
 Clock To:
 1st Value:
 2nd Value:
 Value Percent:
 Continuous Index:
 Within 8" of Joint: **NO**
 Remarks:



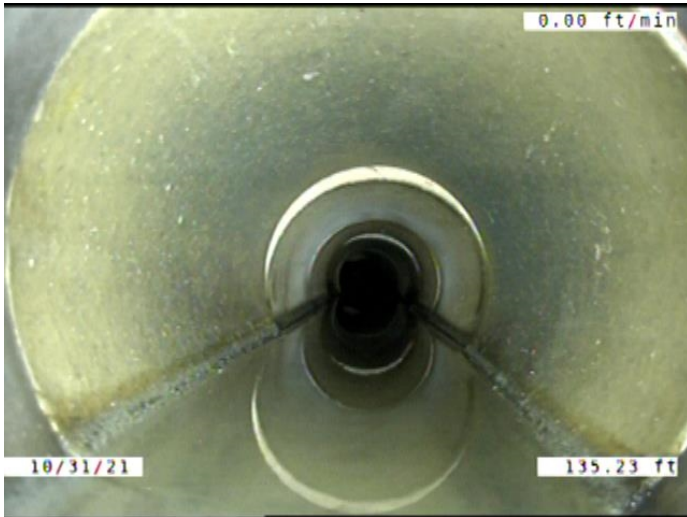
Code: **SSS**
 Description: **Surface Damage Surface Spalling**

Distance (ft): **131.0**
 Structural Grade: **2**
 O&M Grade: **0**
 Clock Start/From: **4**
 Clock To:
 1st Value:
 2nd Value:
 Value Percent:
 Continuous Index:
 Within 8" of Joint: **YES**
 Remarks:



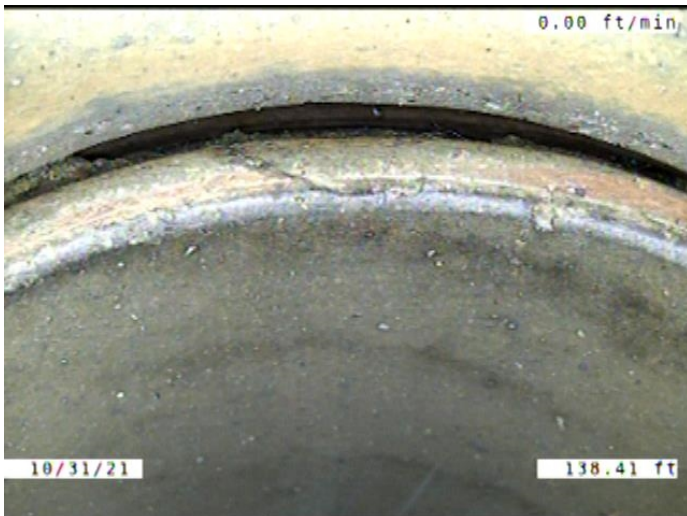
Code: **RFJ**
 Description: **Roots Fine Joint**

Distance (ft): **133.6**
 Structural Grade: **0**
 O&M Grade: **1**
 Clock Start/From: **10**
 Clock To:
 1st Value:
 2nd Value:
 Value Percent:
 Continuous Index:
 Within 8" of Joint: **YES**
 Remarks:



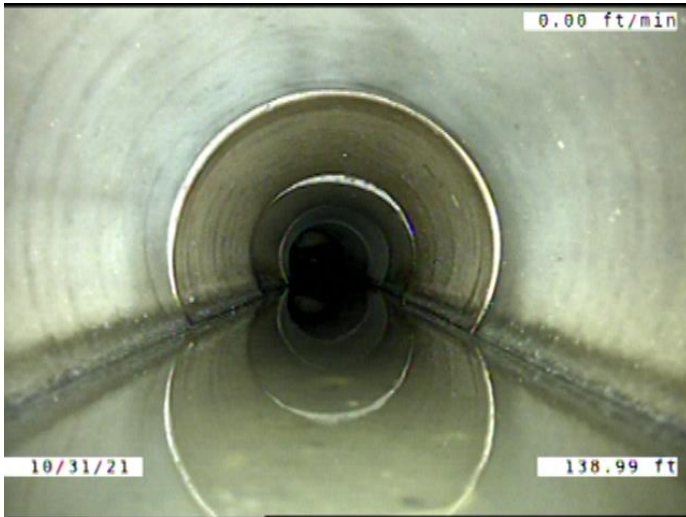
Code: **MWLS**
Description: **Miscellaneous Water Level Sag**

Distance (ft): **135.2**
Structural Grade: **2**
O&M Grade: **0**
Clock Start/From:
Clock To:
1st Value:
2nd Value:
Value Percent: **10.000**
Continuous Index: **S05**
Within 8" of Joint: **NO**
Remarks:



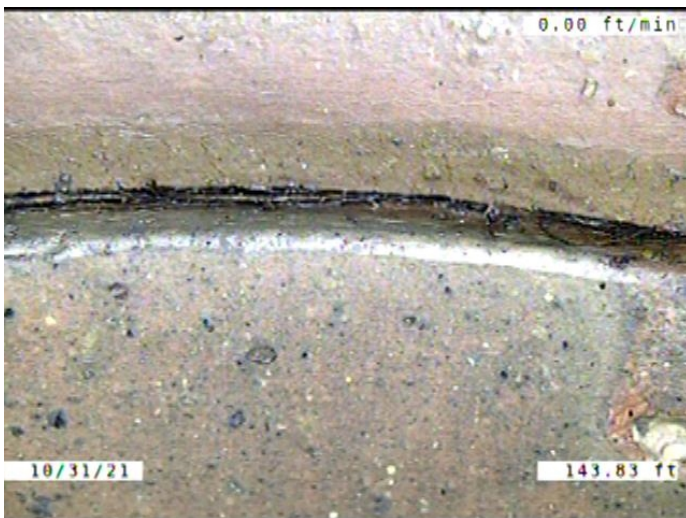
Code: **JOM**
Description: **Joint Offset Medium**

Distance (ft): **138.4**
Structural Grade: **3**
O&M Grade: **0**
Clock Start/From:
Clock To:
1st Value:
2nd Value:
Value Percent:
Continuous Index:
Within 8" of Joint: **NO**
Remarks:



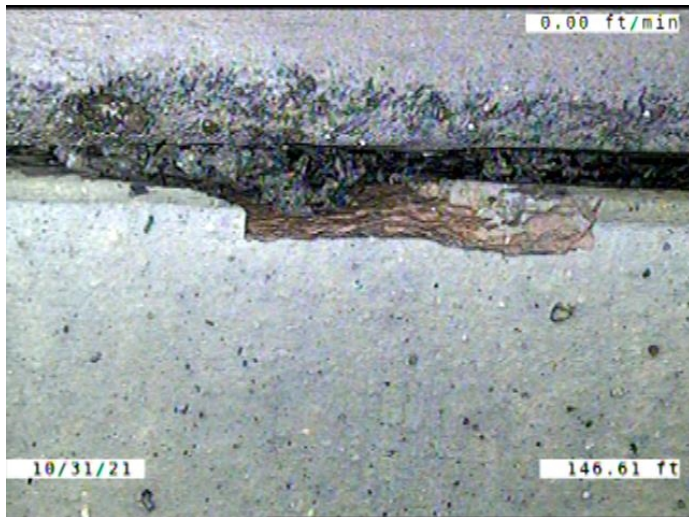
Code: **DSF**
Description: **Deposits Settled Fine**

Distance (ft): **139.0**
Structural Grade: **0**
O&M Grade: **2**
Clock Start/From: **5**
Clock To: **7**
1st Value:
2nd Value:
Value Percent: **5.000**
Continuous Index:
Within 8" of Joint: **YES**
Remarks:

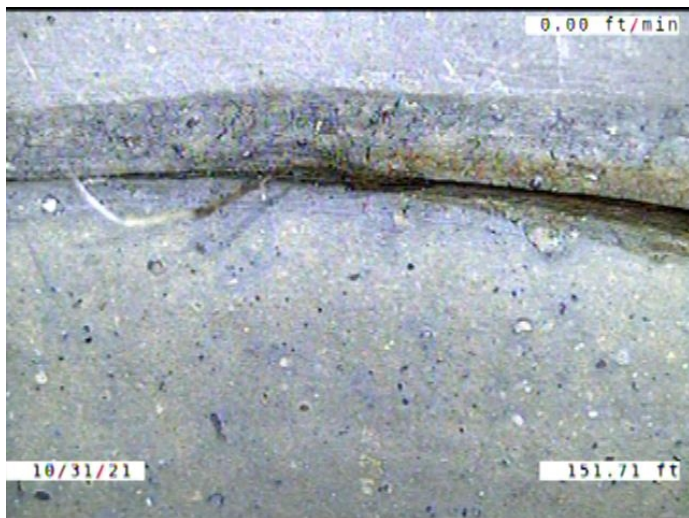


Code: **RFJ**
Description: **Roots Fine Joint**

Distance (ft): **143.8**
Structural Grade: **0**
O&M Grade: **1**
Clock Start/From: **12**
Clock To: **2**
1st Value:
2nd Value:
Value Percent:
Continuous Index:
Within 8" of Joint: **YES**
Remarks:



Code:	SZ
Description:	Surface Damage Other
Distance (ft):	146.6
Structural Grade:	0
O&M Grade:	0
Clock Start/From:	10
Clock To:	11
1st Value:	
2nd Value:	
Value Percent:	
Continuous Index:	
Within 8" of Joint:	YES
Remarks:	A PIECE CHIPPED AWAY FROM THE JOINT



Code:	RFJ
Description:	Roots Fine Joint
Distance (ft):	151.7
Structural Grade:	0
O&M Grade:	1
Clock Start/From:	1
Clock To:	
1st Value:	
2nd Value:	
Value Percent:	
Continuous Index:	
Within 8" of Joint:	YES
Remarks:	



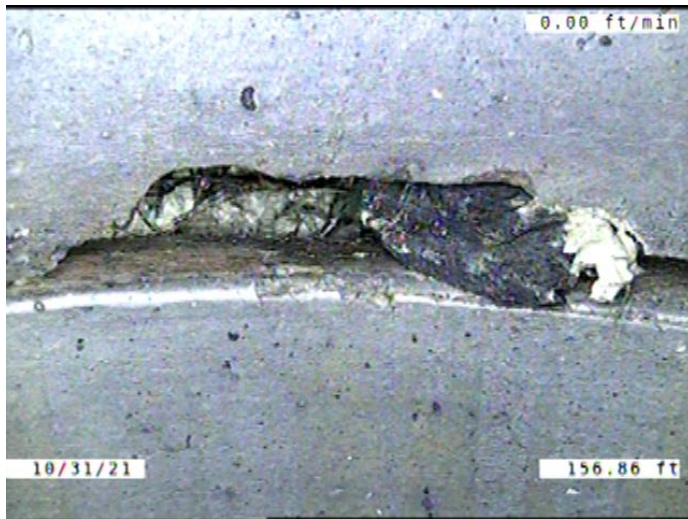
Code: **MWLS**
Description: **Miscellaneous Water Level Sag**

Distance (ft): **153.8**
Structural Grade: **2**
O&M Grade: **0**
Clock Start/From:
Clock To:
1st Value:
2nd Value:
Value Percent: **10.000**
Continuous Index: **F05**
Within 8" of Joint: **NO**
Remarks:

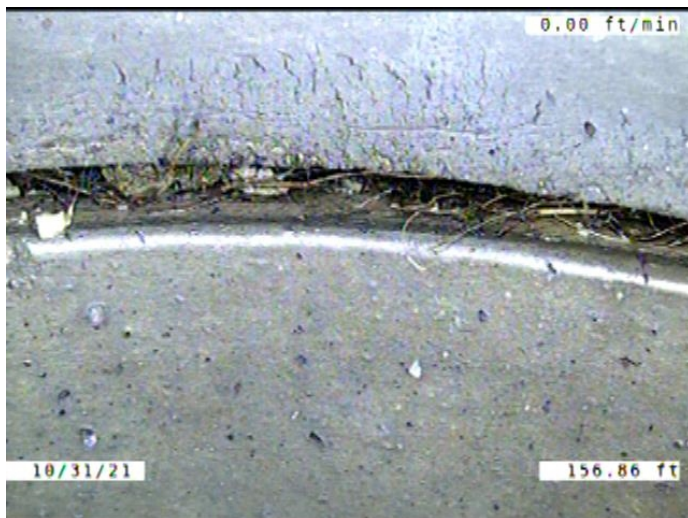


Code: **RFJ**
Description: **Roots Fine Joint**

Distance (ft): **154.2**
Structural Grade: **0**
O&M Grade: **1**
Clock Start/From: **11**
Clock To: **12**
1st Value:
2nd Value:
Value Percent:
Continuous Index:
Within 8" of Joint: **YES**
Remarks:



Code:	SZ
Description:	Surface Damage Other
Distance (ft):	156.9
Structural Grade:	0
O&M Grade:	0
Clock Start/From:	10
Clock To:	11
1st Value:	
2nd Value:	
Value Percent:	
Continuous Index:	
Within 8" of Joint:	YES
Remarks:	A PIECE CHIPPED AWAY FROM THE JOINT

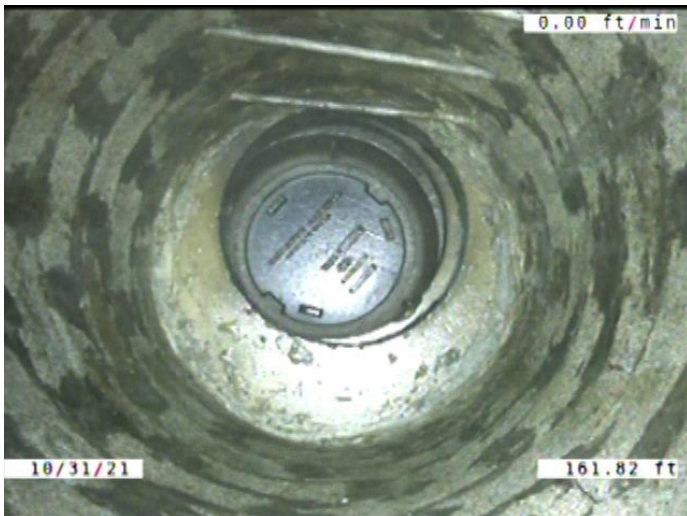


Code:	RFJ
Description:	Roots Fine Joint
Distance (ft):	156.9
Structural Grade:	0
O&M Grade:	1
Clock Start/From:	1
Clock To:	3
1st Value:	
2nd Value:	
Value Percent:	
Continuous Index:	
Within 8" of Joint:	YES
Remarks:	



Code: **DAE**
 Description: **Deposits Attached Encrustation**

Distance (ft): **159.9**
 Structural Grade: **0**
 O&M Grade: **2**
 Clock Start/From: **7**
 Clock To: **5**
 1st Value:
 2nd Value:
 Value Percent: **5.000**
 Continuous Index: **F02**
 Within 8" of Joint: **YES**
 Remarks:



Code: **AMH**
 Description: **Manhole**

Distance (ft): **161.8**
 Structural Grade: **0**
 O&M Grade: **0**
 Clock Start/From:
 Clock To:
 1st Value:
 2nd Value:
 Value Percent:
 Continuous Index:
 Within 8" of Joint: **NO**
 Remarks: **M-504-034**