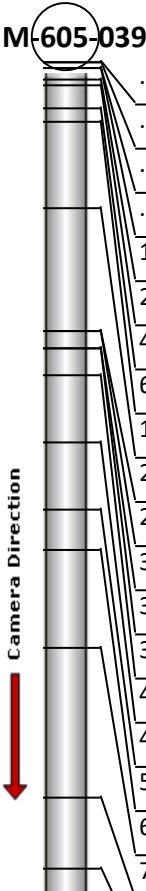


RedZone
ROBOTICS

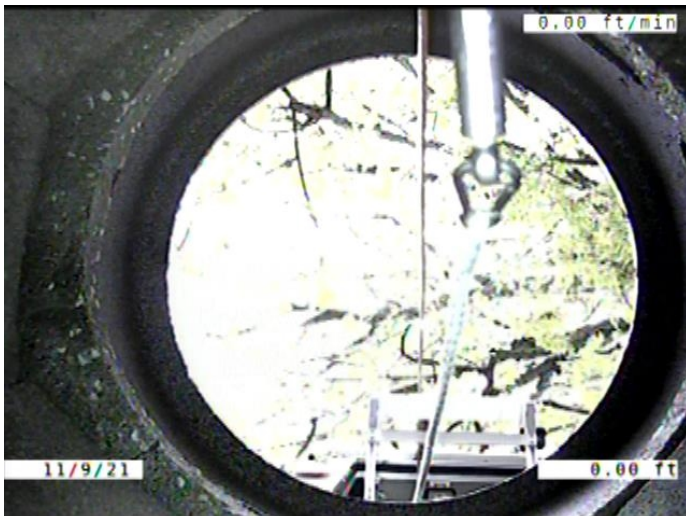
Street:	South Pennsylvania Street		Flow Control:	Not Controlled	
City:	City of Hobart		Year Renewed:		
Location:	Local rural streets with light traffic, t		Tape/Media #:		
Purpose:	Routine Assessment		Dia/Height:	12"	
Use:	Sanitary Sewage Pipe		Material:	VCP	
Drain Area:			Lining:	None	
Category:	NA				
Comment:					
Location Details:			Direction of Survey:	Downstream	
US MH:	M-605-039	DS MH:	M-605-040	Total Length Surveyed (ft):	212.4

O&M Index:	2.19	O&M Quick:	372A	O&M Rating:	46.00
Structural Index:	3.21	Structural Quick:	4H2E	Structural Rating:	260.00
Overall Index:	3.00	Overall Quick:	4H37	Overall Rating:	306.00

Position	Code	Observation	Video (sec)	Grade
				
.0	AMH	Manhole	1	NA
.0	MWL	Miscellaneous Water Level	77	NA
.7	RFJ	Roots Fine Joint	144	M 1
.7	FM(S03)	Fracture Multiple	192	S 4
1.9	SZ	Surface Damage Other	219	NA
2.5	RMJ(S01)	Roots Medium Joint	260	M 3
4.9	JSL	Joint Separated Large	347	S 4
6.3	DSF	Deposits Settled Fine	389	M 2
15.6	DR(S02)	Deformed Rigid	538	S 4
28.8	RMJ(F01)	Roots Medium Joint	641	M 3
28.8	DR(F02)	Deformed Rigid	649	S 4
30.6	TFD	Tap Factory Defective	676	M 3
30.6	SZ	Surface Damage Other	691	NA
33.4	FM(F03)	Fracture Multiple	709	S 4
40.6	TFD	Tap Factory Defective	756	M 3
47.8	FM(S04)	Fracture Multiple	808	S 4
52.1	ISJ	Infiltration Stain Joint	854	M 1
62.5	B	Broken	929	S 4
78.7	TF	Tap Factory	1014	NA

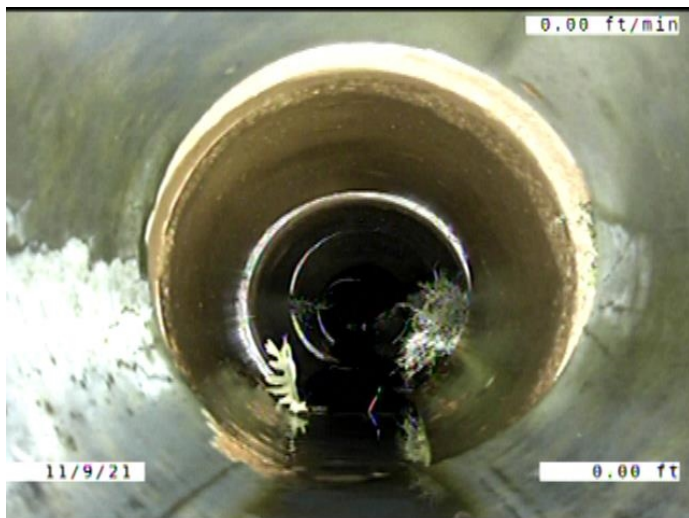
86.2	MWLS(S05)	Miscellaneous Water Level Sag	1073	S 2
96.5	ISB	Infiltration Stain Barrel	1151	M 1
135.2	MWLS(S06)	Miscellaneous Water Level Sag	1368	S 2
150.7	SSS	Surface Damage Surface Spalling	1568	S 2
150.9	TBI	Tap Break-in Intruding	1590	M 2
152.5	SSS	Surface Damage Surface Spalling	1625	S 2
152.8	TBI	Tap Break-in Intruding	1648	M 2
152.8	MWLS(F05)	Miscellaneous Water Level Sag	1668	S 2
168.7	B	Broken	1760	S 4
176.6	DAE	Deposits Attached Encrustation	1852	M 2
177.3	B	Broken	1877	S 4
179.4	B	Broken	1895	S 4
182.8	DAE	Deposits Attached Encrustation	1942	M 2
186.7	DAE	Deposits Attached Encrustation	2020	M 2
190.8	SSS	Surface Damage Surface Spalling	2064	S 2
194.9	DAE	Deposits Attached Encrustation	2126	M 2
197.0	DAE	Deposits Attached Encrustation	2199	M 2
197.6	SSS	Surface Damage Surface Spalling	2220	S 2
197.9	TBI	Tap Break-in Intruding	2248	M 2
200.1	TFC	Tap Factory Capped	2286	NA
201.1	B	Broken	2322	S 4
201.8	TBI	Tap Break-in Intruding	2345	M 2
205.0	DAE	Deposits Attached Encrustation	2393	M 2
210.4	FM(F04)	Fracture Multiple	2449	S 4
210.4	MWLS(F06)	Miscellaneous Water Level Sag	2459	S 2
212.4	AMH	Manhole	2544	NA

M-605-040



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-605-039**



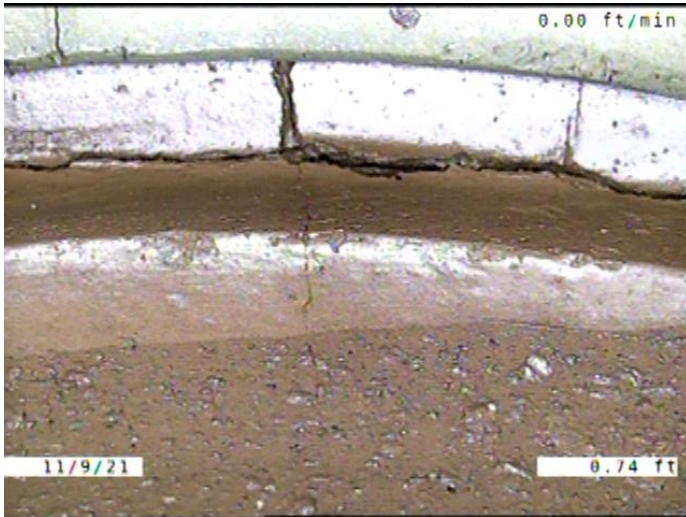
Code: **MWL**
 Description: **Miscellaneous Water Level**

Distance (ft): **.0**
 Structural Grade: **0**
 O&M Grade: **0**
 Clock Start/From:
 Clock To:
 1st Value:
 2nd Value:
 Value Percent: **5.000**
 Continuous Index:
 Within 8" of Joint: **NO**
 Remarks:



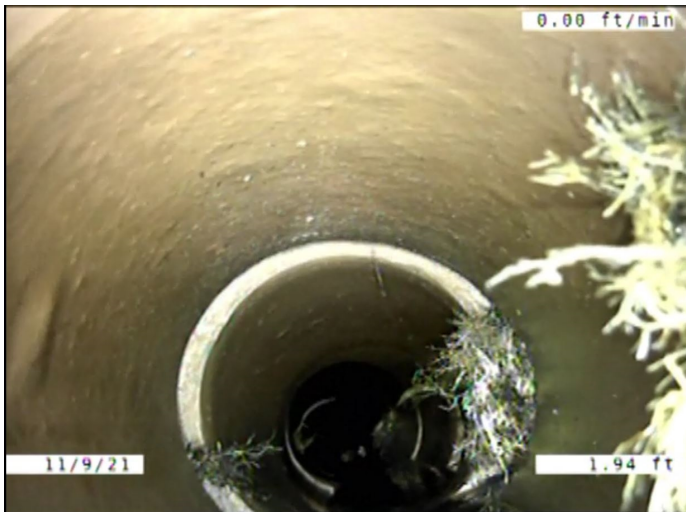
Code: **RFJ**
 Description: **Roots Fine Joint**

Distance (ft): **.7**
 Structural Grade: **0**
 O&M Grade: **1**
 Clock Start/From: **3**
 Clock To: **4**
 1st Value:
 2nd Value:
 Value Percent:
 Continuous Index:
 Within 8" of Joint: **YES**
 Remarks:



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

Distance (ft): **.7**
 Structural Grade: **4**
 O&M Grade: **0**
 Clock Start/From: **12**
 Clock To: **12**
 1st Value:
 2nd Value:
 Value Percent:
 Continuous Index: **S03**
 Within 8" of Joint: **YES**
 Remarks:



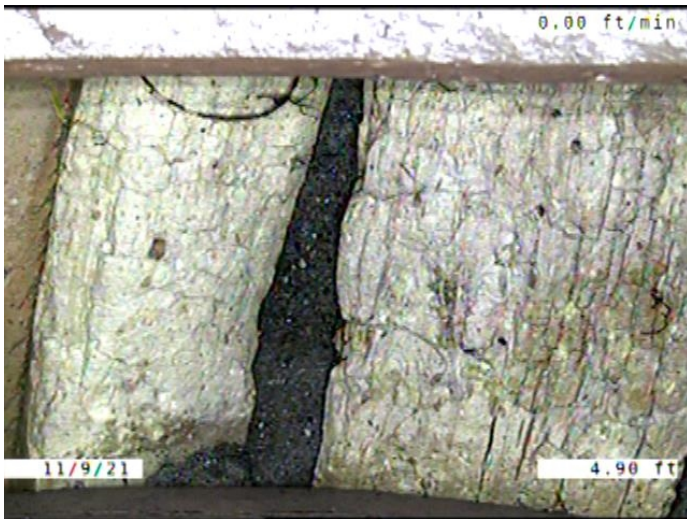
Code: **SZ**
 Description: **Surface Damage Other**

Distance (ft): **1.9**
 Structural Grade: **0**
 O&M Grade: **0**
 Clock Start/From: **10**
 Clock To:
 1st Value:
 2nd Value:
 Value Percent:
 Continuous Index:
 Within 8" of Joint: **NO**
 Remarks: **Indentation, Factory Defect**



Code: **RMJ**
 Description: **Roots Medium Joint**

Distance (ft): **2.5**
 Structural Grade: **0**
 O&M Grade: **3**
 Clock Start/From: **8**
 Clock To: **4**
 1st Value:
 2nd Value:
 Value Percent: **10.000**
 Continuous Index: **S01**
 Within 8" of Joint: **YES**
 Remarks:



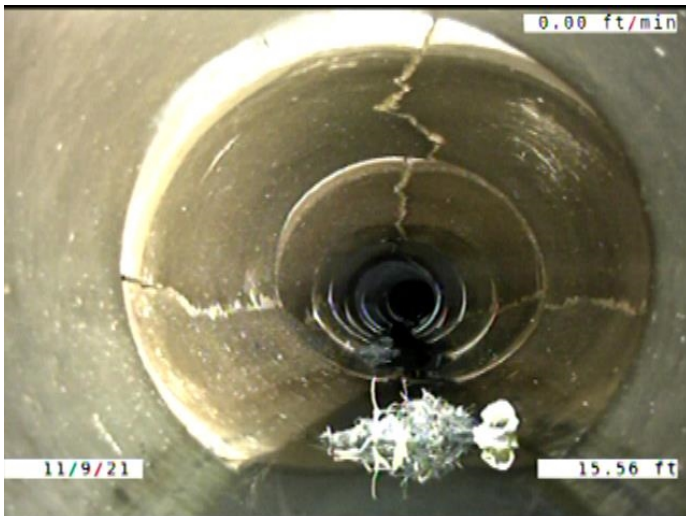
Code: **JSL**
 Description: **Joint Separated Large**

Distance (ft): **4.9**
 Structural Grade: **4**
 O&M Grade: **0**
 Clock Start/From:
 Clock To:
 1st Value:
 2nd Value:
 Value Percent:
 Continuous Index:
 Within 8" of Joint: **NO**
 Remarks: **HAS BEEN BRICKED BACK TOGETHER.**



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

Distance (ft): **6.3**
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: **DR**
Description: **Deformed Rigid**

Distance (ft): **15.6**
Structural Grade: **4**
O&M Grade: **0**
Clock Start/From:
Clock To:
1st Value:
2nd Value:
Value Percent: **5.000**
Continuous Index: **S02**
Within 8" of Joint: **NO**
Remarks:



Code: **RMJ**
Description: **Roots Medium Joint**

Distance (ft): **28.8**
Structural Grade: **0**
O&M Grade: **3**
Clock Start/From: **8**
Clock To: **4**
1st Value:
2nd Value:
Value Percent: **10.000**
Continuous Index: **F01**
Within 8" of Joint: **YES**
Remarks:

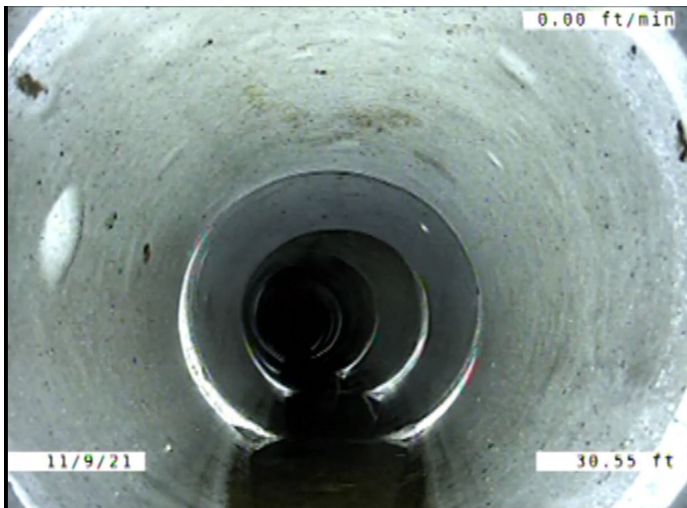


Code: **DR**
Description: **Deformed Rigid**

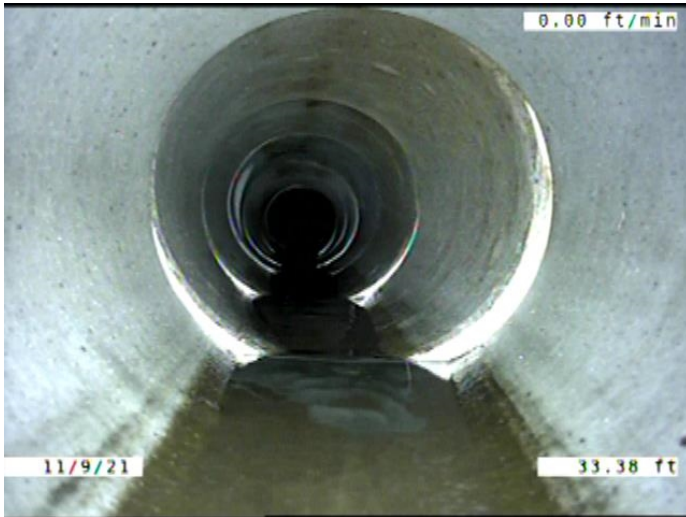
Distance (ft): **28.8**
Structural Grade: **4**
O&M Grade: **0**
Clock Start/From:
Clock To:
1st Value:
2nd Value:
Value Percent: **5.000**
Continuous Index: **F02**
Within 8" of Joint: **NO**
Remarks:



Code:	TFD
Description:	Tap Factory Defective
Distance (ft):	30.6
Structural Grade:	0
O&M Grade:	3
Clock Start/From:	2
Clock To:	
1st Value:	4.000
2nd Value:	
Value Percent:	
Continuous Index:	
Within 8" of Joint:	YES
Remarks:	CRACKED. LOOKS TO BE 95% PLUGGED



Code:	SZ
Description:	Surface Damage Other
Distance (ft):	30.6
Structural Grade:	0
O&M Grade:	0
Clock Start/From:	10
Clock To:	2
1st Value:	
2nd Value:	
Value Percent:	
Continuous Index:	
Within 8" of Joint:	NO
Remarks:	Indentations. Factory defect.



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

Distance (ft): **33.4**
Structural Grade: **4**
O&M Grade: **0**
Clock Start/From: **12**
Clock To: **12**
1st Value:
2nd Value:
Value Percent:
Continuous Index: **F03**
Within 8" of Joint: **YES**
Remarks:



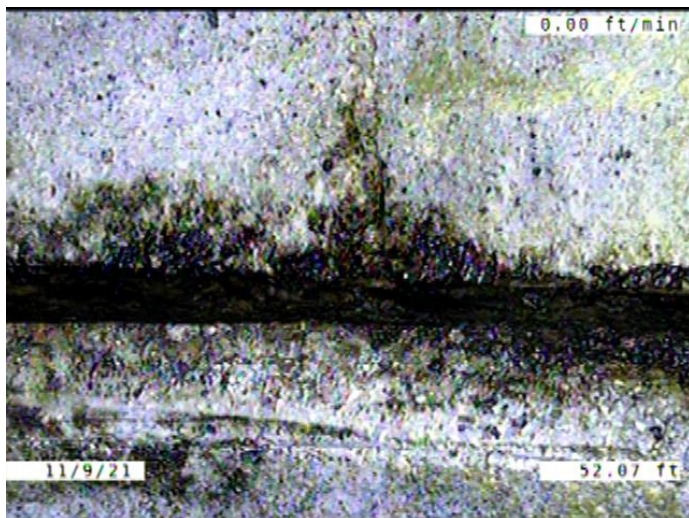
Code: **TFD**
Description: **Tap Factory Defective**

Distance (ft): **40.6**
Structural Grade: **0**
O&M Grade: **3**
Clock Start/From: **9**
Clock To:
1st Value: **4.000**
2nd Value:
Value Percent:
Continuous Index:
Within 8" of Joint: **YES**
Remarks: **OFFSET.**



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

Distance (ft): **47.8**
 Structural Grade: **4**
 O&M Grade: **0**
 Clock Start/From: **12**
 Clock To: **12**
 1st Value:
 2nd Value:
 Value Percent:
 Continuous Index: **S04**
 Within 8" of Joint: **YES**
 Remarks: **Wandering**



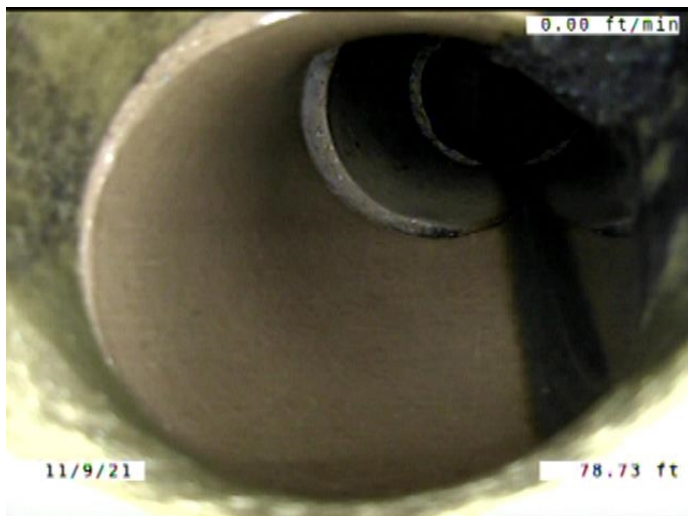
Code: **ISJ**
 Description: **Infiltration Stain Joint**

Distance (ft): **52.1**
 Structural Grade: **0**
 O&M Grade: **1**
 Clock Start/From: **2**
 Clock To: **5**
 1st Value:
 2nd Value:
 Value Percent:
 Continuous Index:
 Within 8" of Joint: **YES**
 Remarks:



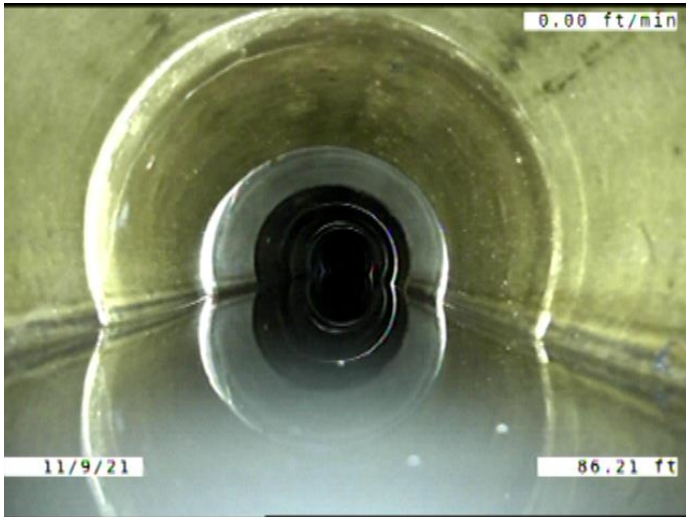
Code: **B**
 Description: **Broken**

Distance (ft): **62.5**
 Structural Grade: **4**
 O&M Grade: **0**
 Clock Start/From: **8**
 Clock To: **12**
 1st Value:
 2nd Value:
 Value Percent:
 Continuous Index:
 Within 8" of Joint: **YES**
 Remarks:



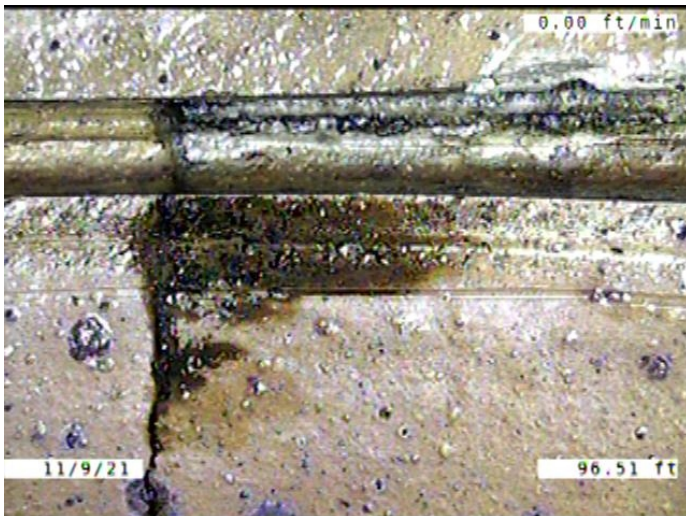
Code: **TF**
 Description: **Tap Factory**

Distance (ft): **78.7**
 Structural Grade: **0**
 O&M Grade: **0**
 Clock Start/From: **2**
 Clock To:
 1st Value: **4.000**
 2nd Value:
 Value Percent:
 Continuous Index:
 Within 8" of Joint: **YES**
 Remarks: **ROOTS GROWING IN THE TAP**



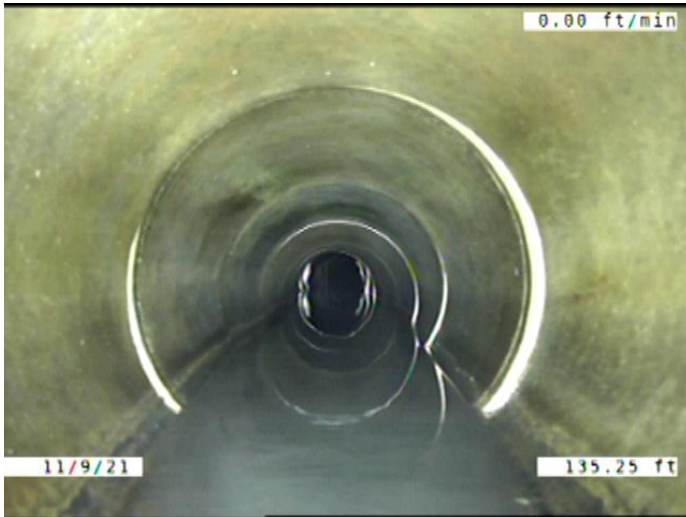
Code: **MWLS**
 Description: **Miscellaneous Water Level Sag**

Distance (ft): **86.2**
 Structural Grade: **2**
 O&M Grade: **0**
 Clock Start/From:
 Clock To:
 1st Value:
 2nd Value:
 Value Percent: **15.000**
 Continuous Index: **S05**
 Within 8" of Joint: **NO**
 Remarks:



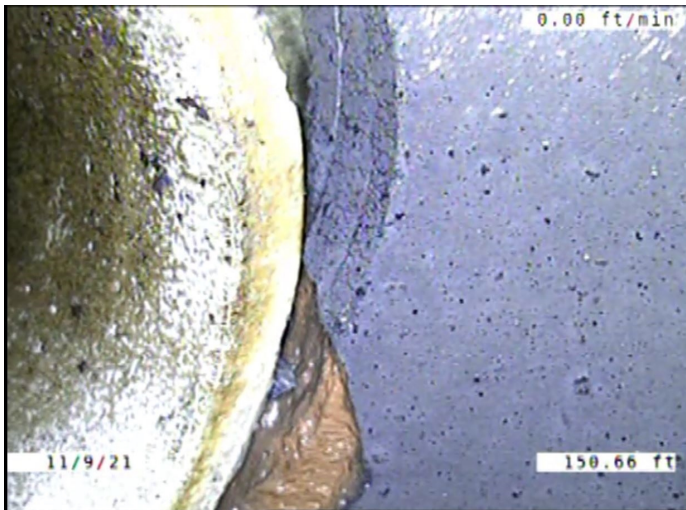
Code: **ISB**
 Description: **Infiltration Stain Barrel**

Distance (ft): **96.5**
 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:



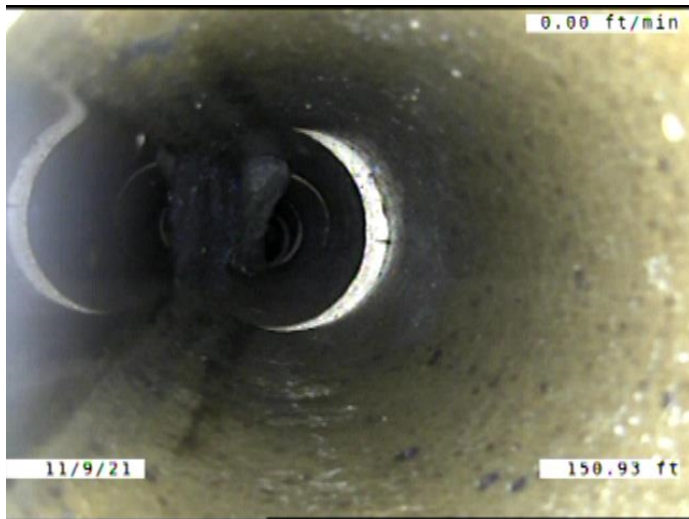
Code: **MWLS**
 Description: **Miscellaneous Water Level Sag**

Distance (ft): **135.2**
 Structural Grade: **2**
 O&M Grade: **0**
 Clock Start/From:
 Clock To:
 1st Value:
 2nd Value:
 Value Percent: **20.000**
 Continuous Index: **S06**
 Within 8" of Joint: **NO**
 Remarks:



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

Distance (ft): **150.7**
 Structural Grade: **2**
 O&M Grade: **0**
 Clock Start/From: **9**
 Clock To: **10**
 1st Value:
 2nd Value:
 Value Percent:
 Continuous Index:
 Within 8" of Joint: **NO**
 Remarks:



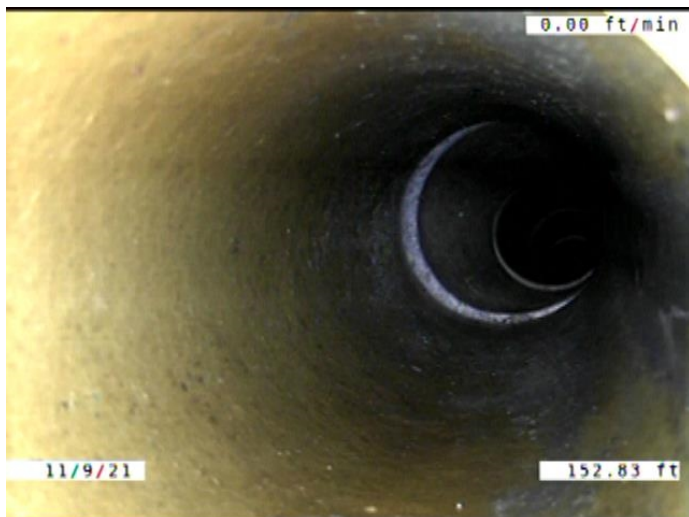
Code: **TBI**
 Description: **Tap Break-in Intruding**

Distance (ft): **150.9**
 Structural Grade: **0**
 O&M Grade: **2**
 Clock Start/From: **9**
 Clock To:
 1st Value: **4.000**
 2nd Value: **2.000**
 Value Percent:
 Continuous Index:
 Within 8" of Joint: **YES**
 Remarks:



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

Distance (ft): **152.5**
 Structural Grade: **2**
 O&M Grade: **0**
 Clock Start/From: **1**
 Clock To: **3**
 1st Value:
 2nd Value:
 Value Percent:
 Continuous Index:
 Within 8" of Joint: **NO**
 Remarks:



Code: **TBI**
Description: **Tap Break-in Intruding**

Distance (ft): **152.8**
Structural Grade: **0**
O&M Grade: **2**
Clock Start/From: **2**
Clock To:
1st Value: **4.000**
2nd Value: **2.000**
Value Percent:
Continuous Index:
Within 8" of Joint: **YES**
Remarks:

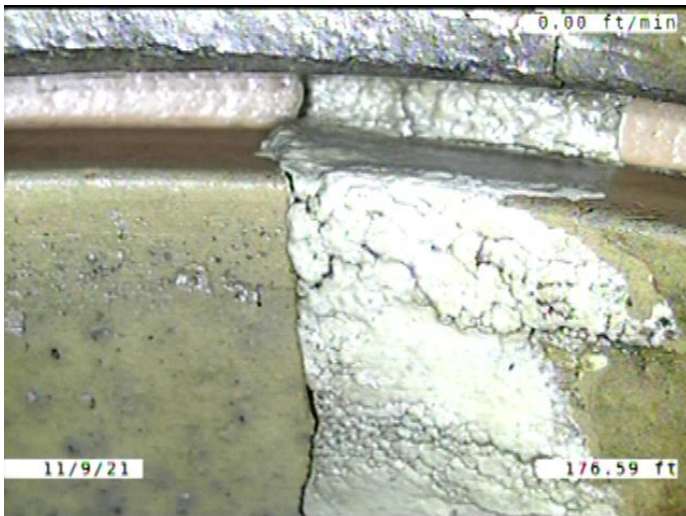
Code: **MWLS**
Description: **Miscellaneous Water Level Sag**

Distance (ft): **152.8**
Structural Grade: **2**
O&M Grade: **0**
Clock Start/From:
Clock To:
1st Value:
2nd Value:
Value Percent: **15.000**
Continuous Index: **F05**
Within 8" of Joint: **NO**
Remarks:



Code: **B**
 Description: **Broken**

Distance (ft): **168.7**
 Structural Grade: **4**
 O&M Grade: **0**
 Clock Start/From: **10**
 Clock To: **1**
 1st Value:
 2nd Value:
 Value Percent:
 Continuous Index:
 Within 8" of Joint: **YES**
 Remarks:



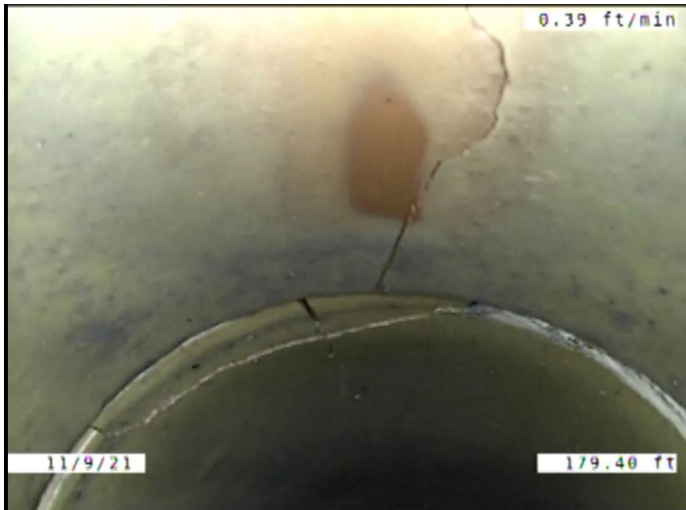
Code: **DAE**
 Description: **Deposits Attached Encrustation**

Distance (ft): **176.6**
 Structural Grade: **0**
 O&M Grade: **2**
 Clock Start/From: **2**
 Clock To: **3**
 1st Value:
 2nd Value:
 Value Percent: **5.000**
 Continuous Index:
 Within 8" of Joint: **YES**
 Remarks:



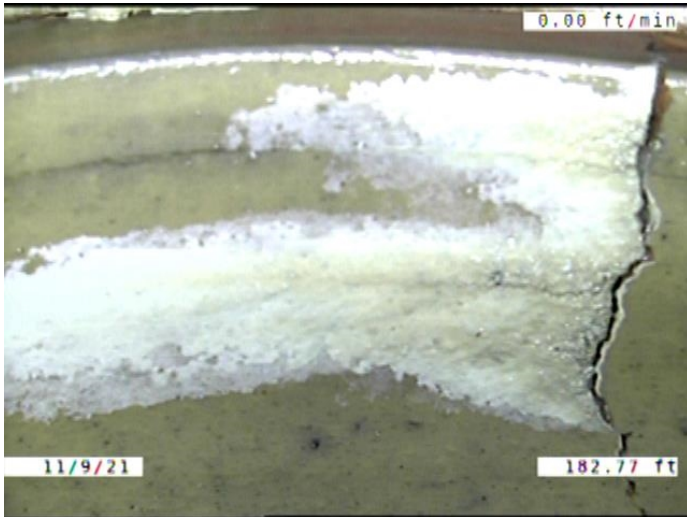
Code: **B**
Description: **Broken**

Distance (ft): **177.3**
Structural Grade: **4**
O&M Grade: **0**
Clock Start/From: **8**
Clock To: **11**
1st Value:
2nd Value:
Value Percent:
Continuous Index:
Within 8" of Joint: **YES**
Remarks:



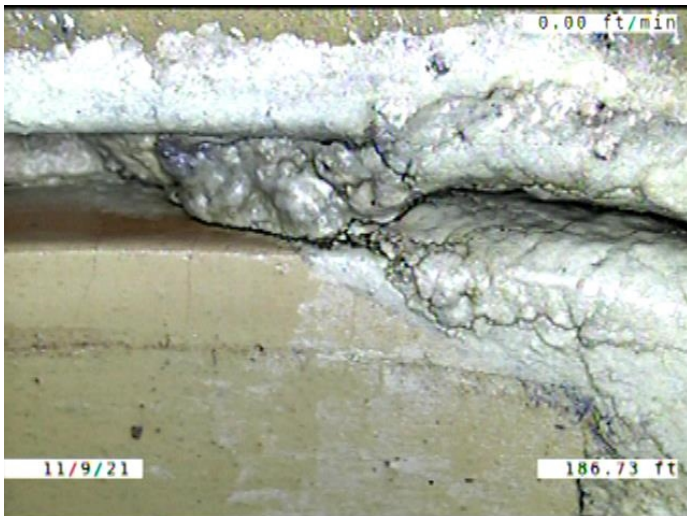
Code: **B**
Description: **Broken**

Distance (ft): **179.4**
Structural Grade: **4**
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:



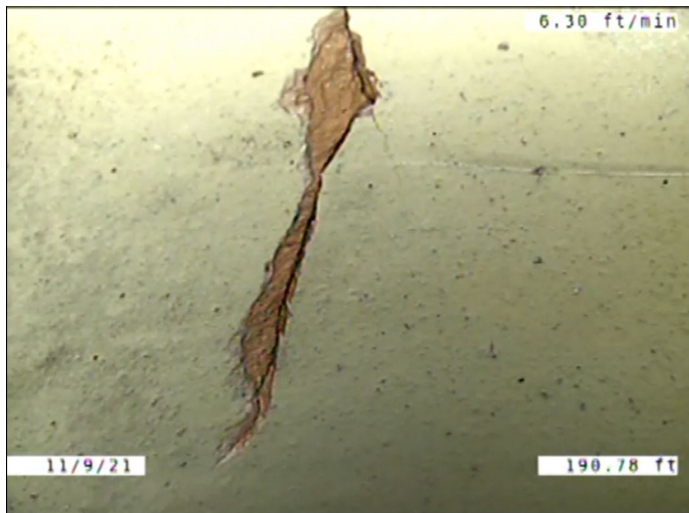
Code: **DAE**
 Description: **Deposits Attached Encrustation**

Distance (ft): **182.8**
 Structural Grade: **0**
 O&M Grade: **2**
 Clock Start/From: **10**
 Clock To: **11**
 1st Value:
 2nd Value:
 Value Percent: **5.000**
 Continuous Index:
 Within 8" of Joint: **YES**
 Remarks:



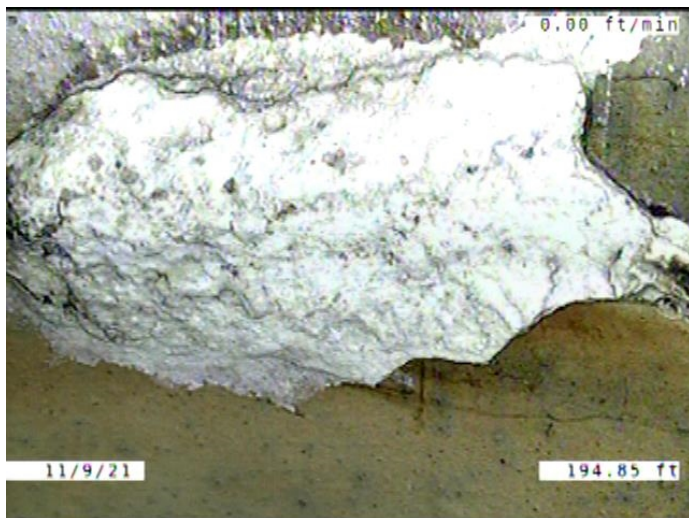
Code: **DAE**
 Description: **Deposits Attached Encrustation**

Distance (ft): **186.7**
 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: **SSS**
Description: **Surface Damage Surface Spalling**

Distance (ft): **190.8**
Structural Grade: **2**
O&M Grade: **0**
Clock Start/From: **10**
Clock To:
1st Value:
2nd Value:
Value Percent:
Continuous Index:
Within 8" of Joint: **YES**
Remarks:



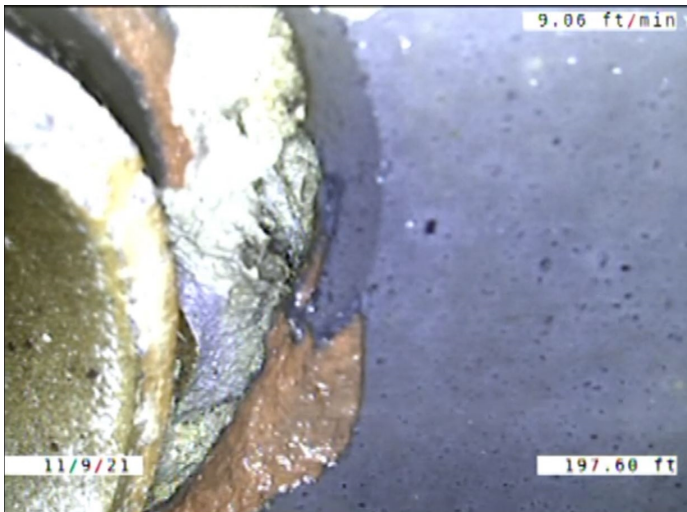
Code: **DAE**
Description: **Deposits Attached Encrustation**

Distance (ft): **194.9**
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:



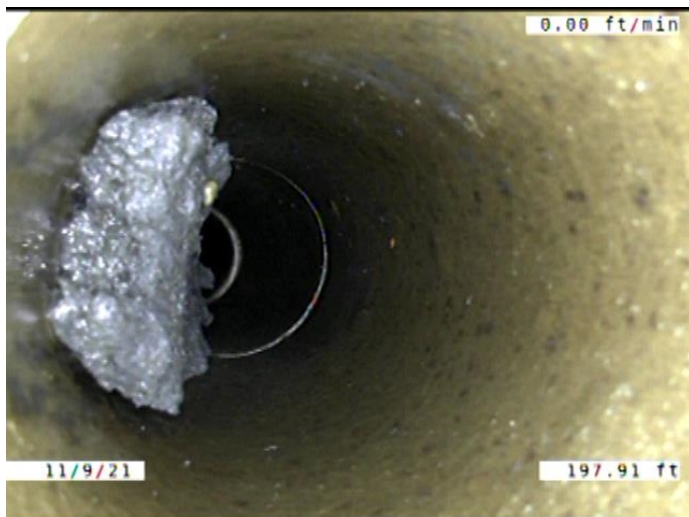
Code: **DAE**
 Description: **Deposits Attached Encrustation**

Distance (ft): **197.0**
 Structural Grade: **0**
 O&M Grade: **2**
 Clock Start/From: **3**
 Clock To: **4**
 1st Value:
 2nd Value:
 Value Percent: **5.000**
 Continuous Index:
 Within 8" of Joint: **YES**
 Remarks:



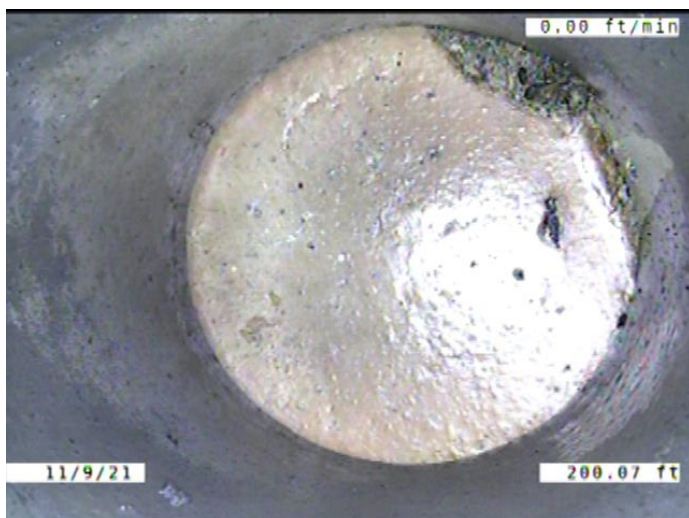
Code: **SSS**
 Description: **Surface Damage Surface Spalling**

Distance (ft): **197.6**
 Structural Grade: **2**
 O&M Grade: **0**
 Clock Start/From: **8**
 Clock To: **10**
 1st Value:
 2nd Value:
 Value Percent:
 Continuous Index:
 Within 8" of Joint: **NO**
 Remarks:



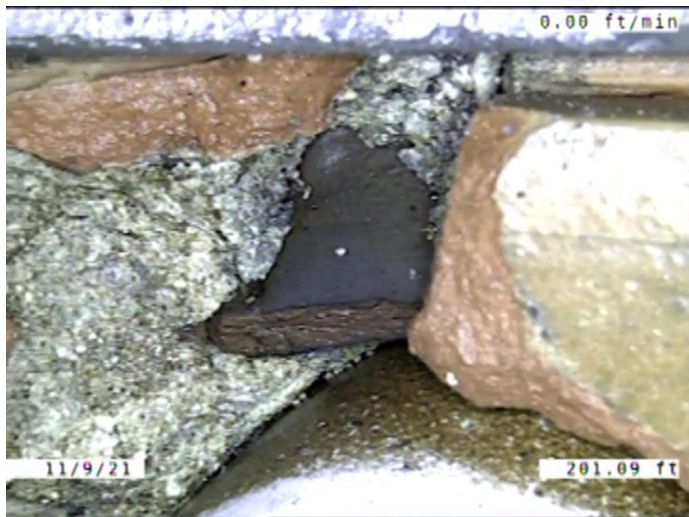
Code: **TBI**
Description: **Tap Break-in Intruding**

Distance (ft): **197.9**
Structural Grade: **0**
O&M Grade: **2**
Clock Start/From: **9**
Clock To:
1st Value: **4.000**
2nd Value: **1.000**
Value Percent:
Continuous Index:
Within 8" of Joint: **YES**
Remarks:



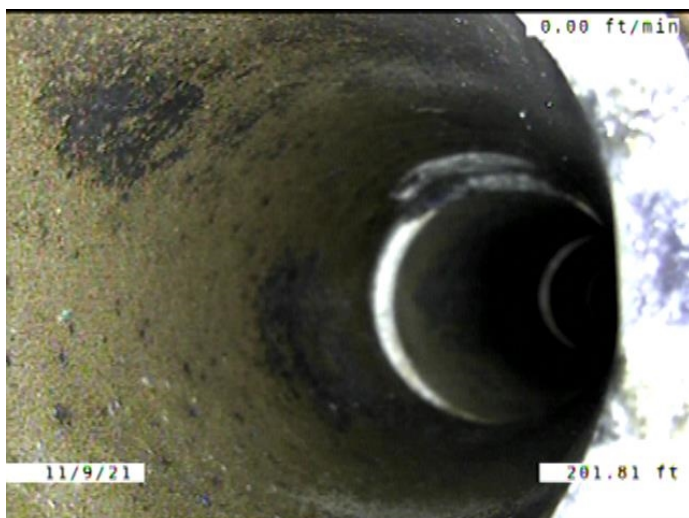
Code: **TFC**
Description: **Tap Factory Capped**

Distance (ft): **200.1**
Structural Grade: **0**
O&M Grade: **0**
Clock Start/From: **1**
Clock To:
1st Value: **4.000**
2nd Value:
Value Percent:
Continuous Index:
Within 8" of Joint: **YES**
Remarks:



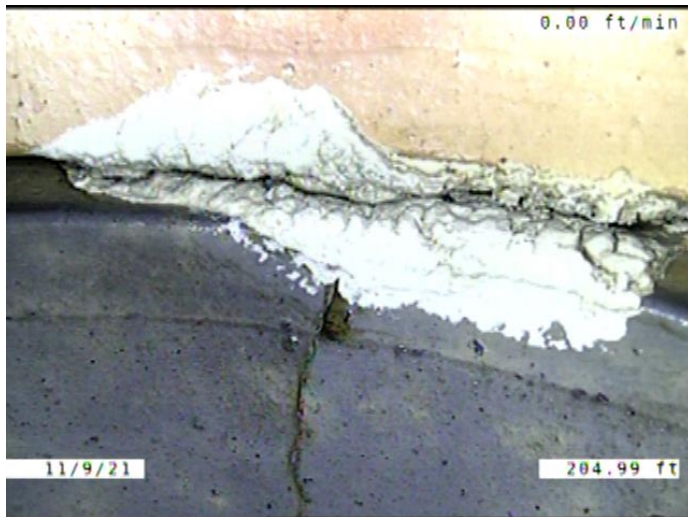
Code: **B**
 Description: **Broken**

Distance (ft): **201.1**
 Structural Grade: **4**
 O&M Grade: **0**
 Clock Start/From: **2**
 Clock To: **3**
 1st Value:
 2nd Value:
 Value Percent:
 Continuous Index:
 Within 8" of Joint: **NO**
 Remarks:



Code: **TBI**
 Description: **Tap Break-in Intruding**

Distance (ft): **201.8**
 Structural Grade: **0**
 O&M Grade: **2**
 Clock Start/From: **2**
 Clock To:
 1st Value: **4.000**
 2nd Value: **1.000**
 Value Percent:
 Continuous Index:
 Within 8" of Joint: **YES**
 Remarks:



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

Distance (ft): **205.0**
 Structural Grade: **0**
 O&M Grade: **2**
 Clock Start/From: **2**
 Clock To: **3**
 1st Value:
 2nd Value:
 Value Percent: **5.000**
 Continuous Index:
 Within 8" of Joint: **YES**
 Remarks:



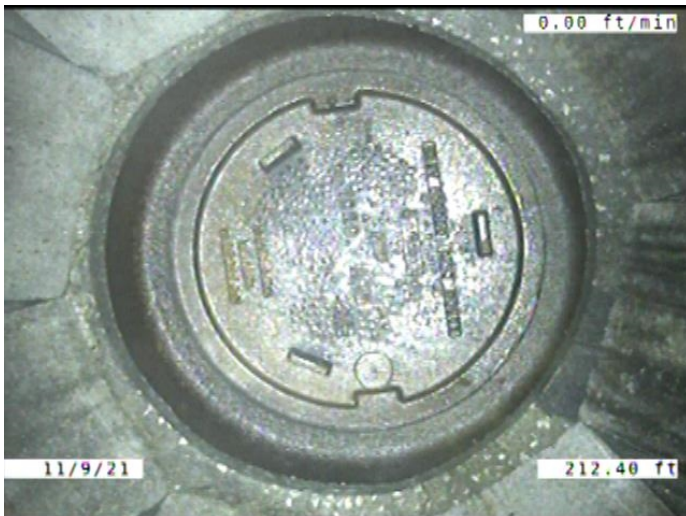
Code: **FM**
 Description: **Fracture Multiple**

Distance (ft): **210.4**
 Structural Grade: **4**
 O&M Grade: **0**
 Clock Start/From: **12**
 Clock To: **12**
 1st Value:
 2nd Value:
 Value Percent:
 Continuous Index: **F04**
 Within 8" of Joint: **YES**
 Remarks: **Wandering**



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

Distance (ft): **210.4**
 Structural Grade: **2**
 O&M Grade: **0**
 Clock Start/From:
 Clock To:
 1st Value:
 2nd Value:
 Value Percent: **20.000**
 Continuous Index: **F06**
 Within 8" of Joint: **NO**
 Remarks:



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

Distance (ft): **212.4**
 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-605-040**