



RedZone<sup>®</sup>  
ROBOTICS

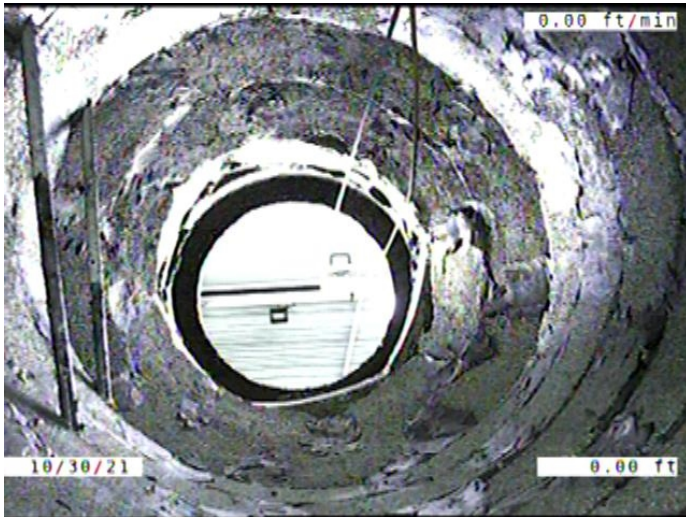
Street:	North Delaware Street		Flow Control:	Not Controlled	
City:	Hobart, IN		Year Renewed:		
Location:	Alley		Tape/Media #:		
Purpose:	Routine Assessment		Dia/Height:	10"	
Use:	Sanitary Sewage Pipe		Material:	VCP	
Drain Area:			Lining:	None	
Category:	NA				
Comment:					
Location Details:			Direction of Survey: Downstream		
US MH:	M-504-048	DS MH:	M-504-047	Total Length Surveyed (ft):	167.0

O&M Index:	<b>1.90</b>	O&M Quick:	<b>4132</b>	O&M Rating:	<b>99.00</b>
Structural Index:	<b>2.83</b>	Structural Quick:	<b>5444</b>	Structural Rating:	<b>68.00</b>
Overall Index:	<b>2.20</b>	Overall Quick:	<b>5445</b>	Overall Rating:	<b>167.00</b>

**Tuesday, April 25, 2023**

45.1	MWLS(S05)	Miscellaneous Water Level Sag	885	S 2
51.1	SSS	Surface Damage Surface Spalling	960	S 2
51.4	TBI	Tap Break-in Intruding	989	M 2
64.3	TFD	Tap Factory Defective	1076	M 3
74.6	TFC	Tap Factory Capped	1141	NA
86.7	FM	Fracture Multiple	1274	S 4
86.7	DAE	Deposits Attached Encrustation	1286	M 2
87.5	TFC	Tap Factory Capped	1310	NA
91.2	MWLS(F05)	Miscellaneous Water Level Sag	1345	S 2
110.8	TFC	Tap Factory Capped	1425	NA
115.5	SSS	Surface Damage Surface Spalling	1493	S 2
115.5	IRC	Infiltration Runner Connection	1511	M 4
116.0	TBI	Tap Break-in Intruding	1536	M 2
134.1	TFC	Tap Factory Capped	1621	NA
154.7	TFC	Tap Factory Capped	1722	NA
162.9	BSV	Broken Soil Visible	1790	S 5
163.4	TBI	Tap Break-in Intruding	1837	M 2
165.0	OBN	Obstruction Construction Debris	1881	M 2
165.8	B	Broken	1971	S 4
167.0	DSF(F01)	Deposits Settled Fine	2117	M 2
167.0	AMH	Manhole	2134	NA

**M-504-047**



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-504-048**



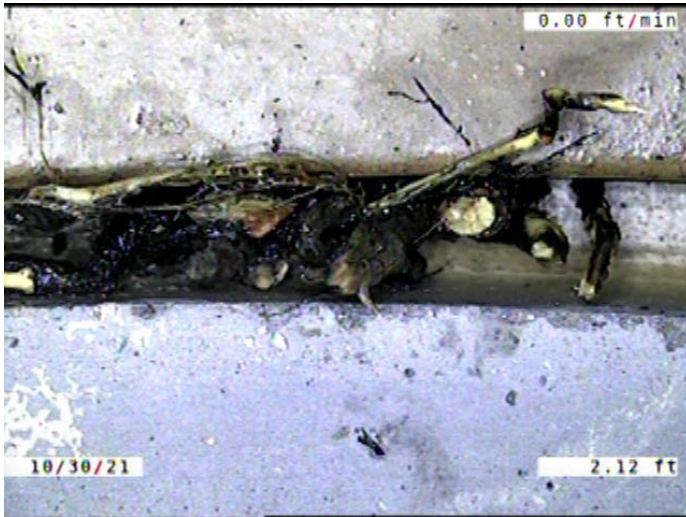
Code: **MWL**  
 Description: **Miscellaneous Water Level**

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:



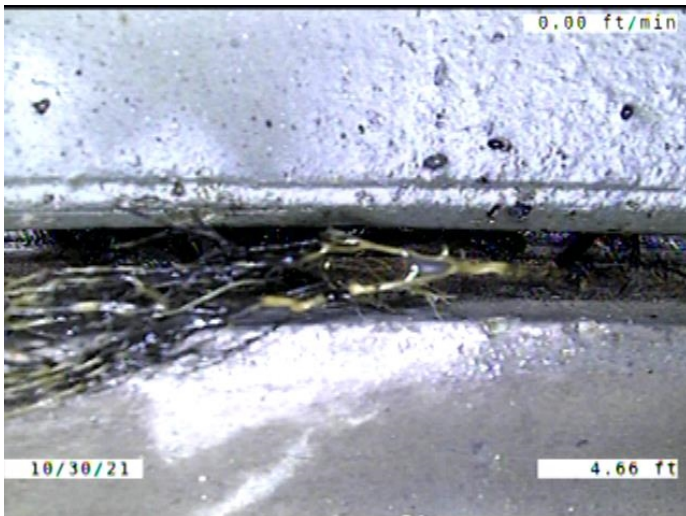
Code: **DSF**  
 Description: **Deposits Settled Fine**

Distance (ft): **.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: **S01**  
 Within 8" of Joint: **YES**  
 Remarks:



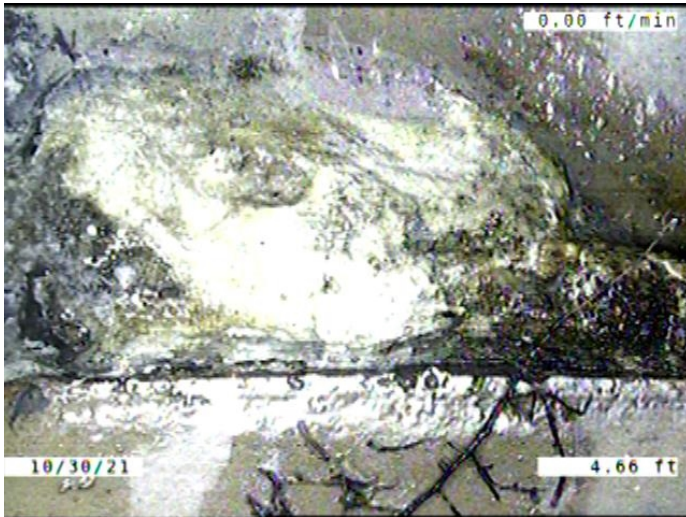
Code: **RFJ**  
 Description: **Roots Fine Joint**

Distance (ft): **2.1**  
 Structural Grade: **0**  
 O&M Grade: **1**  
 Clock Start/From: **9**  
 Clock To: **4**  
 1st Value:  
 2nd Value:  
 Value Percent:  
 Continuous Index:  
 Within 8" of Joint: **YES**  
 Remarks:



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

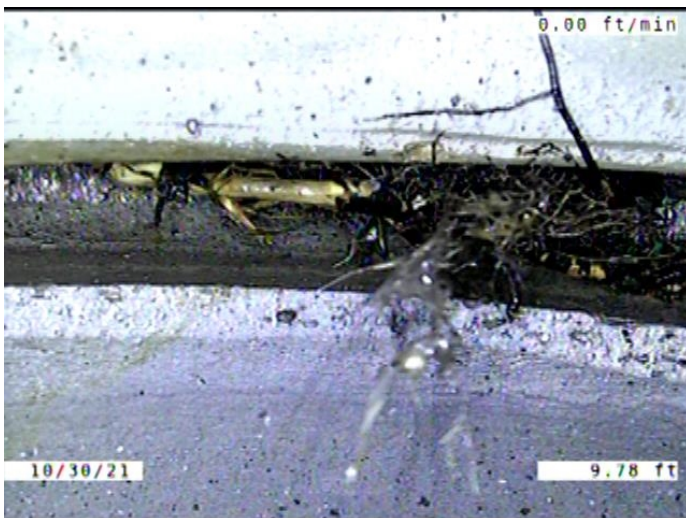
Distance (ft): **4.7**  
 Structural Grade: **0**  
 O&M Grade: **1**  
 Clock Start/From: **9**  
 Clock To: **11**  
 1st Value:  
 2nd Value:  
 Value Percent:  
 Continuous Index:  
 Within 8" of Joint: **YES**  
 Remarks:



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

Distance (ft): **4.7**  
Structural Grade: **0**  
O&M Grade: **2**  
Clock Start/From: **4**  
Clock To: **8**  
1st Value:  
2nd Value:  
Value Percent: **5.000**  
Continuous Index:  
Within 8" of Joint: **YES**  
Remarks:

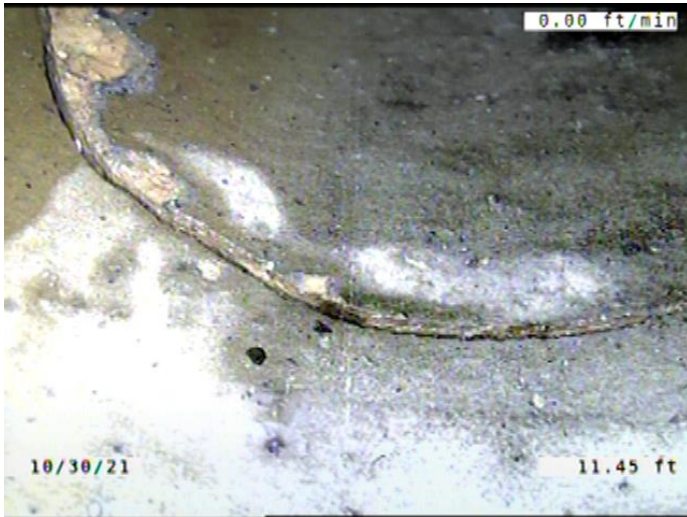
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Code: **RFJ**  
Description: **Roots Fine Joint**

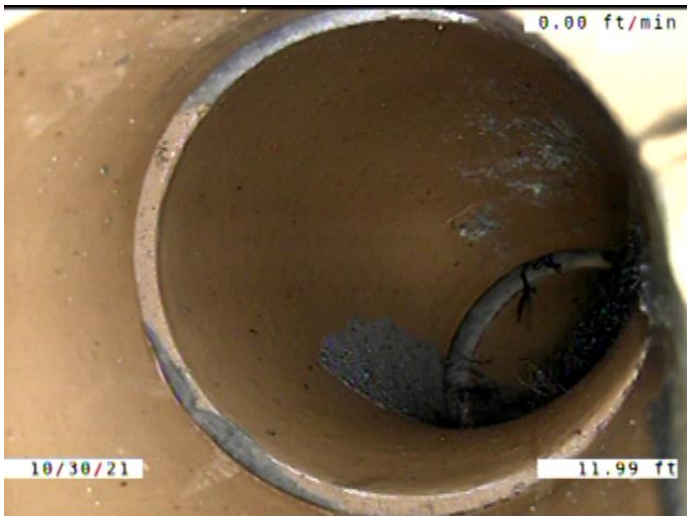
Distance (ft): **9.8**  
Structural Grade: **0**  
O&M Grade: **1**  
Clock Start/From: **8**  
Clock To: **4**  
1st Value:  
2nd Value:  
Value Percent:  
Continuous Index: **S03**  
Within 8" of Joint: **YES**  
Remarks:

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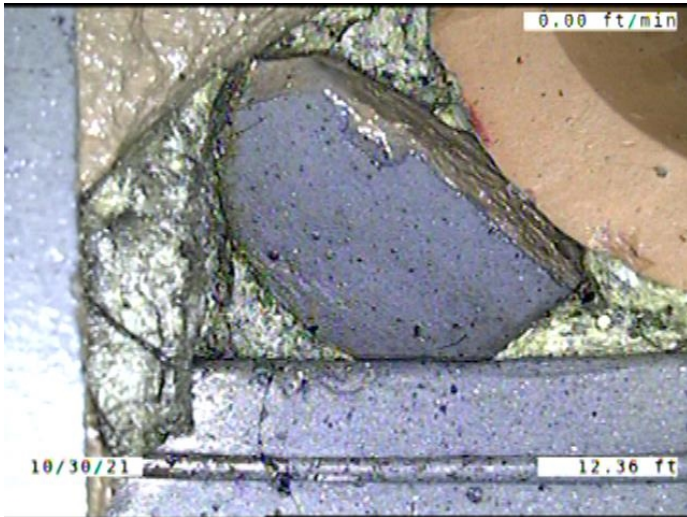
Code: **B**  
Description: **Broken**

Distance (ft): **11.5**  
Structural Grade: **4**  
O&M Grade: **0**  
Clock Start/From: **12**  
Clock To: **7**  
1st Value:  
2nd Value:  
Value Percent:  
Continuous Index:  
Within 8" of Joint: **YES**  
Remarks:



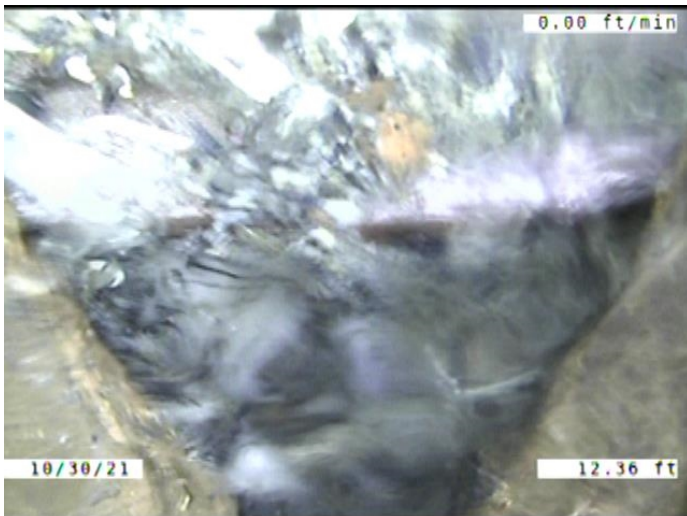
Code: **TBI**  
Description: **Tap Break-in Intruding**

Distance (ft): **12.0**  
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: **CONSTANTLY RUNNING WATER**



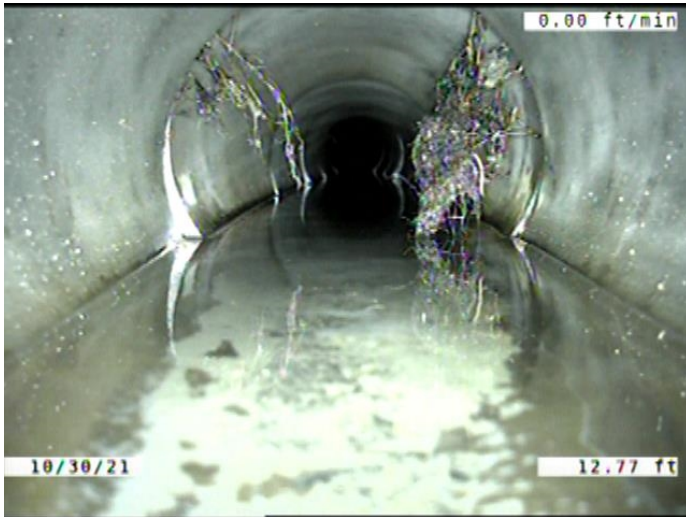
Code: **SMW**  
 Description: **Surface Damage Missing Wall**

Distance (ft): **12.4**  
 Structural Grade: **5**  
 O&M Grade: **0**  
 Clock Start/From: **12**  
 Clock To: **3**  
 1st Value:  
 2nd Value:  
 Value Percent:  
 Continuous Index:  
 Within 8" of Joint: **YES**  
 Remarks:



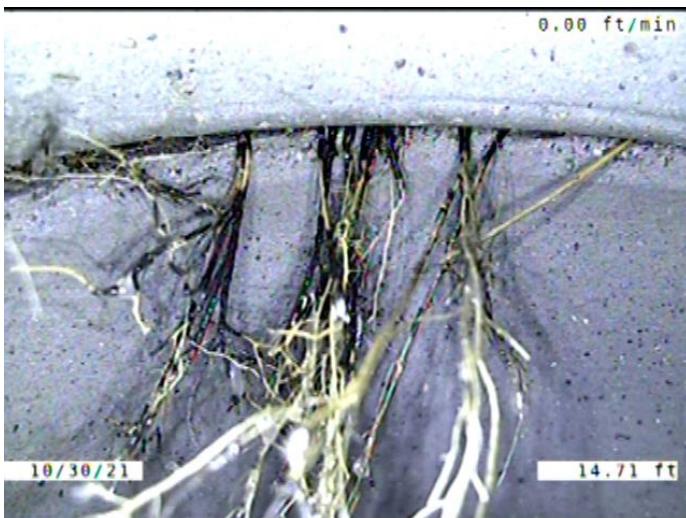
Code: **HSV**  
 Description: **Hole Soil Visible**

Distance (ft): **12.4**  
 Structural Grade: **5**  
 O&M Grade: **0**  
 Clock Start/From: **6**  
 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): **12.8**  
 Structural Grade: **2**  
 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:



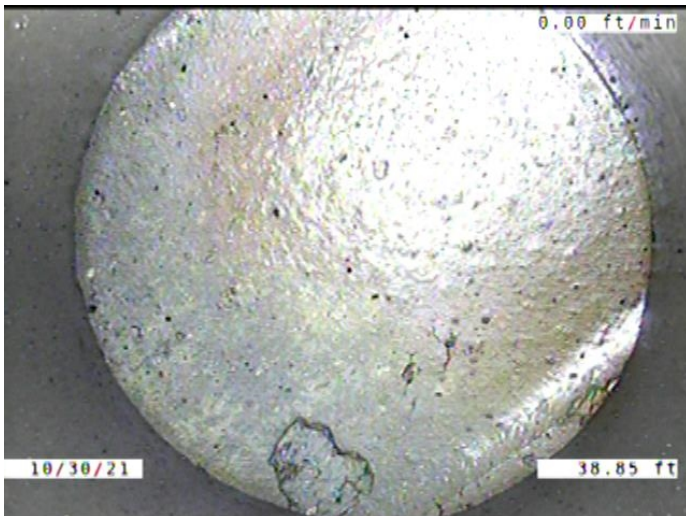
Code: **RMJ**  
 Description: **Roots Medium Joint**

Distance (ft): **14.7**  
 Structural Grade: **0**  
 O&M Grade: **3**  
 Clock Start/From: **10**  
 Clock To: **3**  
 1st Value:  
 2nd Value:  
 Value Percent: **5.000**  
 Continuous Index:  
 Within 8" of Joint: **YES**  
 Remarks:



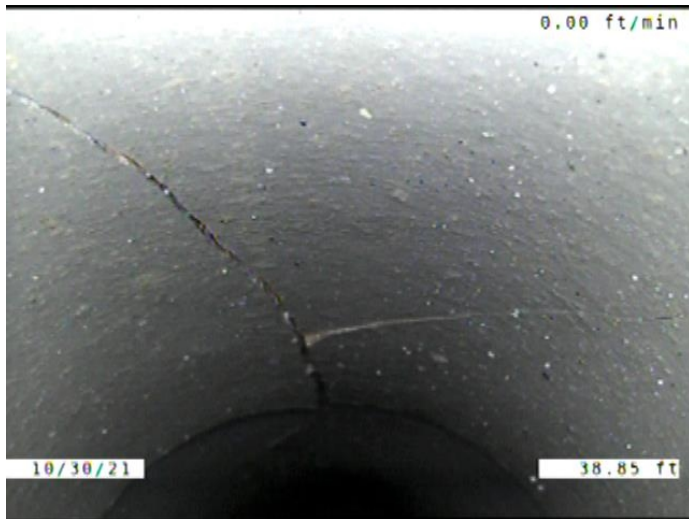
Code: **MWLS**  
 Description: **Miscellaneous Water Level Sag**

Distance (ft): **37.2**  
 Structural Grade: **2**  
 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: **TFC**  
 Description: **Tap Factory Capped**

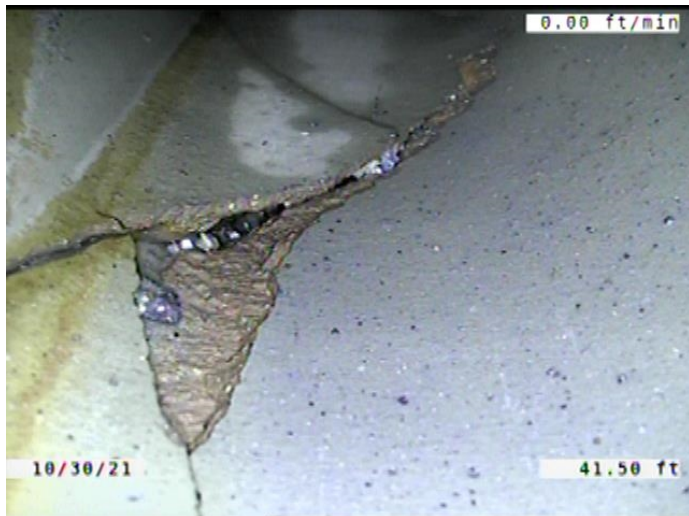
Distance (ft): **38.8**  
 Structural Grade: **0**  
 O&M Grade: **0**  
 Clock Start/From: **1**  
 Clock To:  
 1st Value: **4.000**  
 2nd Value:  
 Value Percent:  
 Continuous Index:  
 Within 8" of Joint: **YES**  
 Remarks:



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

Distance (ft): **38.8**  
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:

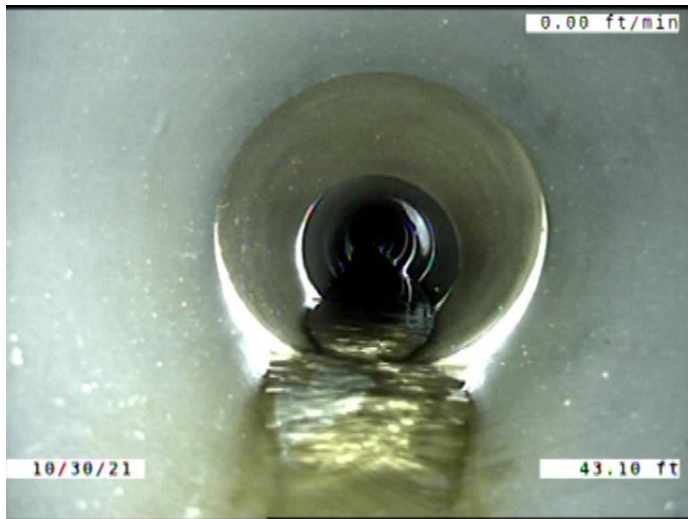
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Code: **BSV**  
Description: **Broken Soil Visible**

Distance (ft): **41.5**  
Structural Grade: **5**  
O&M Grade: **0**  
Clock Start/From: **4**  
Clock To: **5**  
1st Value:  
2nd Value:  
Value Percent:  
Continuous Index:  
Within 8" of Joint: **YES**  
Remarks:

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

Distance (ft): **43.1**  
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:

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

Distance (ft): **45.1**  
Structural Grade: **0**  
O&M Grade: **1**  
Clock Start/From: **8**  
Clock To: **4**  
1st Value:  
2nd Value:  
Value Percent:  
Continuous Index: **F03**  
Within 8" of Joint: **YES**  
Remarks:

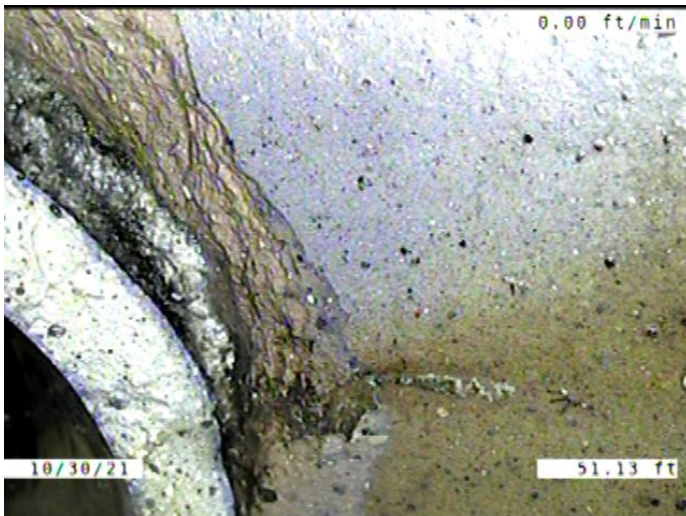
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Code: **MWLS**  
Description: **Miscellaneous Water Level Sag**

Distance (ft): **45.1**  
Structural Grade: **2**  
O&M Grade: **0**  
Clock Start/From:  
Clock To:  
1st Value:  
2nd Value:  
Value Percent: **5.000**  
Continuous Index: **S05**  
Within 8" of Joint: **NO**  
Remarks:

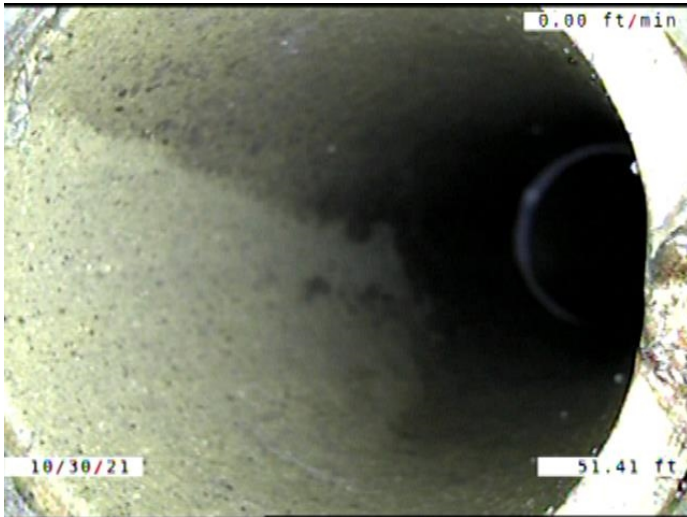
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Code: **SSS**  
Description: **Surface Damage Surface Spalling**

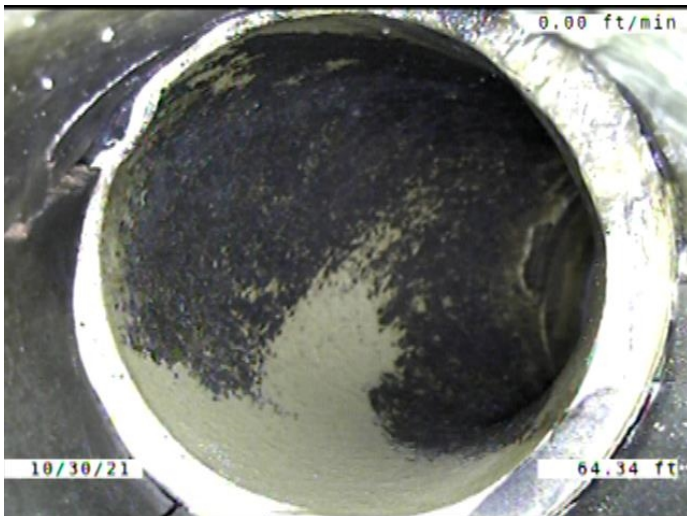
Distance (ft): **51.1**  
Structural Grade: **2**  
O&M Grade: **0**  
Clock Start/From: **12**  
Clock To: **3**  
1st Value:  
2nd Value:  
Value Percent:  
Continuous Index:  
Within 8" of Joint: **YES**  
Remarks:

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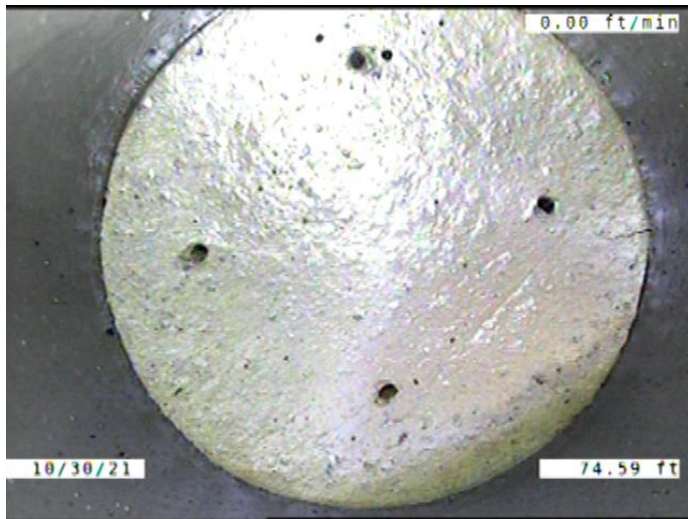
Code: **TBI**  
 Description: **Tap Break-in Intruding**

Distance (ft): **51.4**  
 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: **CONSTANTLY RUNNING WATER**



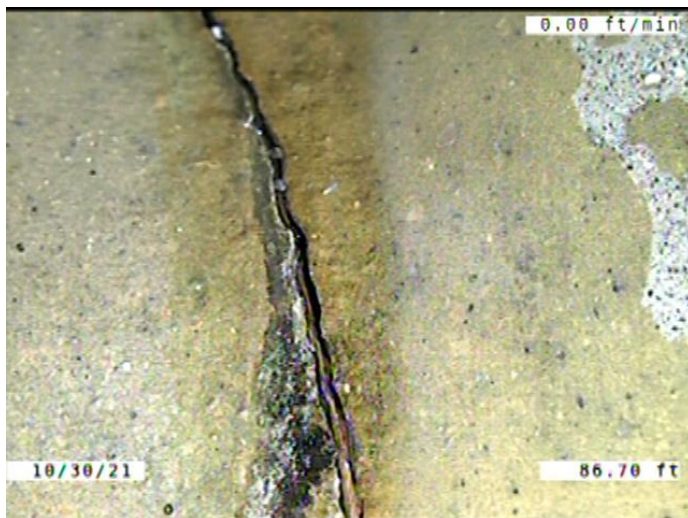
Code: **TFD**  
 Description: **Tap Factory Defective**

Distance (ft): **64.3**  
 Structural Grade: **0**  
 O&M Grade: **3**  
 Clock Start/From: **1**  
 Clock To:  
 1st Value: **4.000**  
 2nd Value:  
 Value Percent:  
 Continuous Index:  
 Within 8" of Joint: **YES**  
 Remarks: **TAP BROKEN. CONSTANTLY RUNNING WATER**



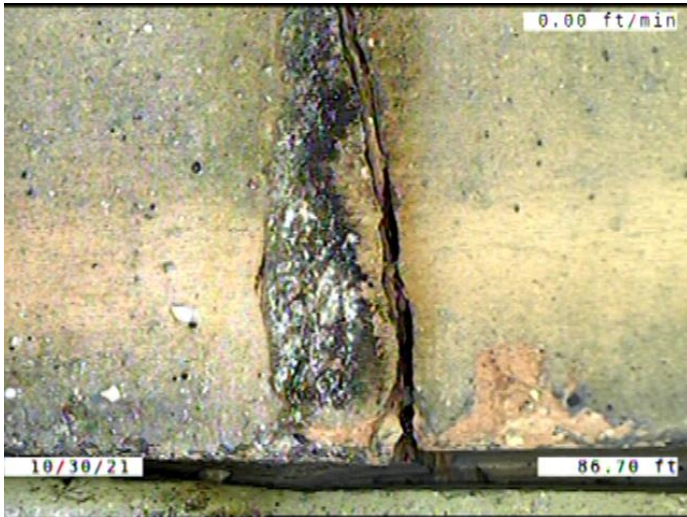
Code: **TFC**  
 Description: **Tap Factory Capped**

Distance (ft): **74.6**  
 Structural Grade: **0**  
 O&M Grade: **0**  
 Clock Start/From: **11**  
 Clock To:  
 1st Value: **4.000**  
 2nd Value:  
 Value Percent:  
 Continuous Index:  
 Within 8" of Joint: **YES**  
 Remarks:



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

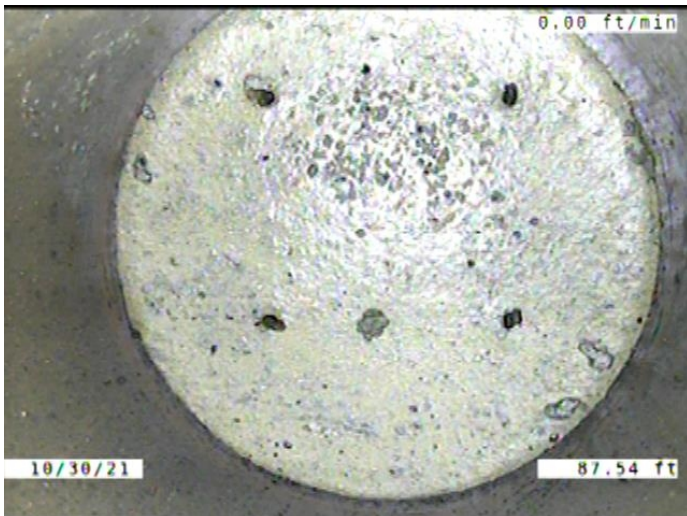
Distance (ft): **86.7**  
 Structural Grade: **4**  
 O&M Grade: **0**  
 Clock Start/From: **7**  
 Clock To: **2**  
 1st Value:  
 2nd Value:  
 Value Percent:  
 Continuous Index:  
 Within 8" of Joint: **YES**  
 Remarks:



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

Distance (ft): **86.7**  
Structural Grade: **0**  
O&M Grade: **2**  
Clock Start/From: **7**  
Clock To: **9**  
1st Value:  
2nd Value:  
Value Percent: **5.000**  
Continuous Index:  
Within 8" of Joint: **YES**  
Remarks:

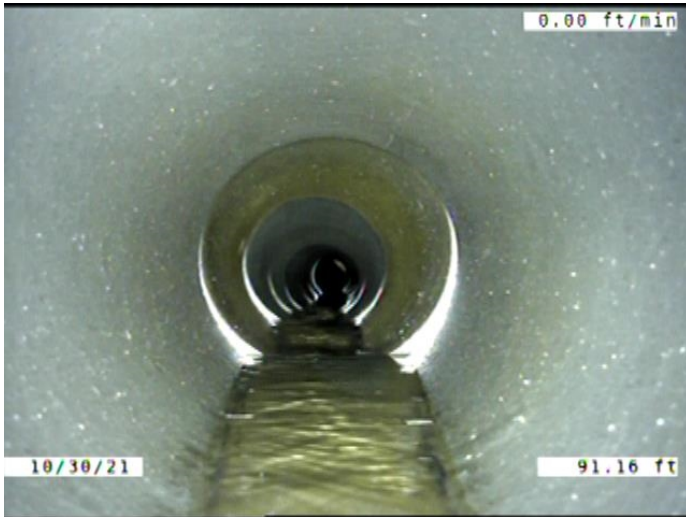
---



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

Distance (ft): **87.5**  
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:

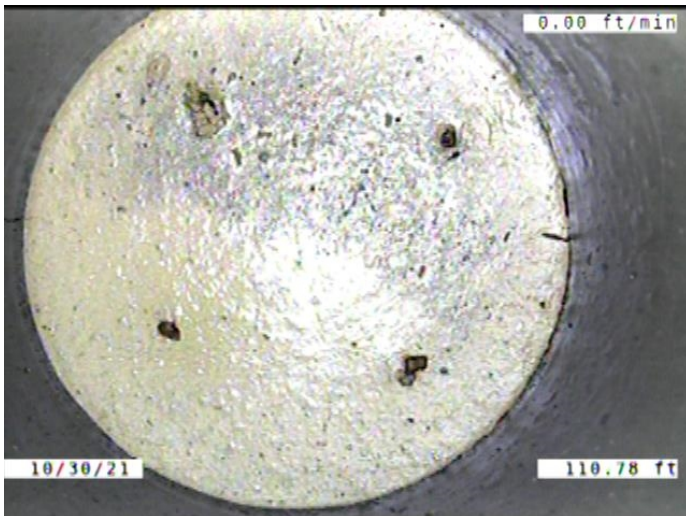
---



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

Distance (ft): **91.2**  
Structural Grade: **2**  
O&M Grade: **0**  
Clock Start/From:  
Clock To:  
1st Value:  
2nd Value:  
Value Percent: **5.000**  
Continuous Index: **F05**  
Within 8" of Joint: **NO**  
Remarks:

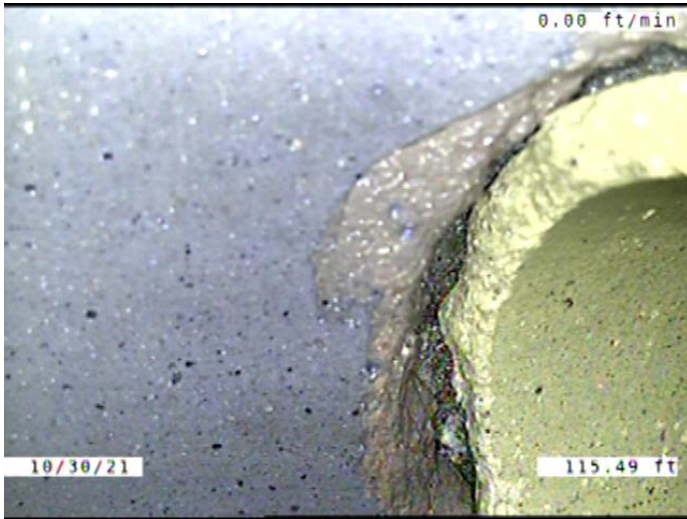
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Code: **TFC**  
Description: **Tap Factory Capped**

Distance (ft): **110.8**  
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: **TAP CRACKED**

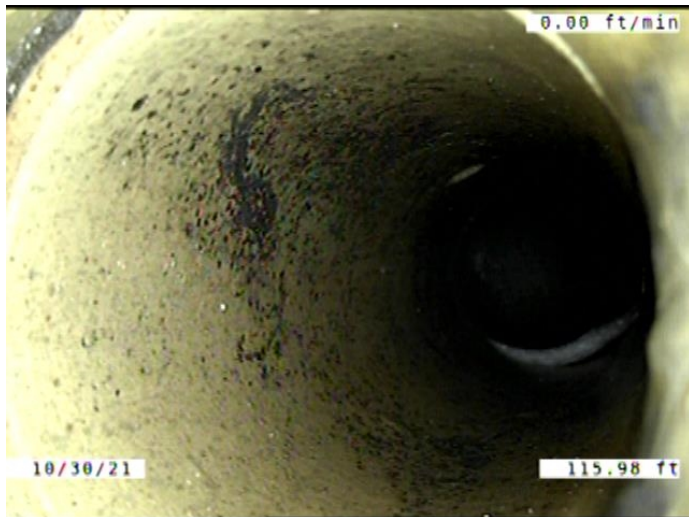
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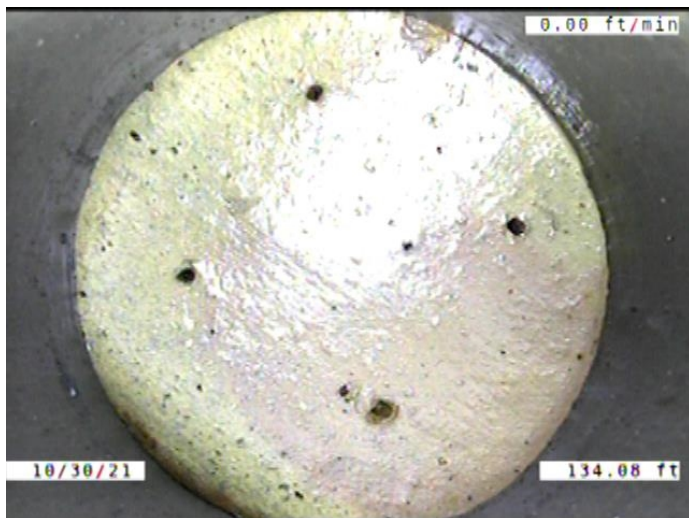
Code:	<b>SSS</b>
Description:	<b>Surface Damage Surface Spalling</b>
Distance (ft):	<b>115.5</b>
Structural Grade:	<b>2</b>
O&M Grade:	<b>0</b>
Clock Start/From:	<b>12</b>
Clock To:	<b>3</b>
1st Value:	
2nd Value:	
Value Percent:	
Continuous Index:	
Within 8" of Joint:	<b>NO</b>
Remarks:	



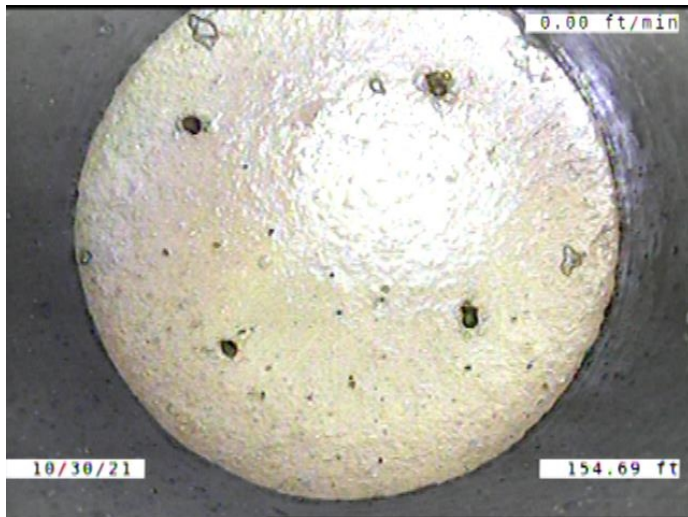
Code:	<b>IRC</b>
Description:	<b>Infiltration Runner Connection</b>
Distance (ft):	<b>115.5</b>
Structural Grade:	<b>0</b>
O&M Grade:	<b>4</b>
Clock Start/From:	<b>3</b>
Clock To:	
1st Value:	
2nd Value:	
Value Percent:	
Continuous Index:	
Within 8" of Joint:	<b>YES</b>
Remarks:	



Code:	<b>TBI</b>
Description:	<b>Tap Break-in Intruding</b>
Distance (ft):	<b>116.0</b>
Structural Grade:	<b>0</b>
O&M Grade:	<b>2</b>
Clock Start/From:	<b>1</b>
Clock To:	
1st Value:	<b>4.000</b>
2nd Value:	<b>1.000</b>
Value Percent:	
Continuous Index:	
Within 8" of Joint:	<b>YES</b>
Remarks:	<b>CONSTANTLY RUNNING WATER</b>



Code:	<b>TFC</b>
Description:	<b>Tap Factory Capped</b>
Distance (ft):	<b>134.1</b>
Structural Grade:	<b>0</b>
O&M Grade:	<b>0</b>
Clock Start/From:	<b>1</b>
Clock To:	
1st Value:	<b>4.000</b>
2nd Value:	
Value Percent:	
Continuous Index:	
Within 8" of Joint:	<b>YES</b>
Remarks:	



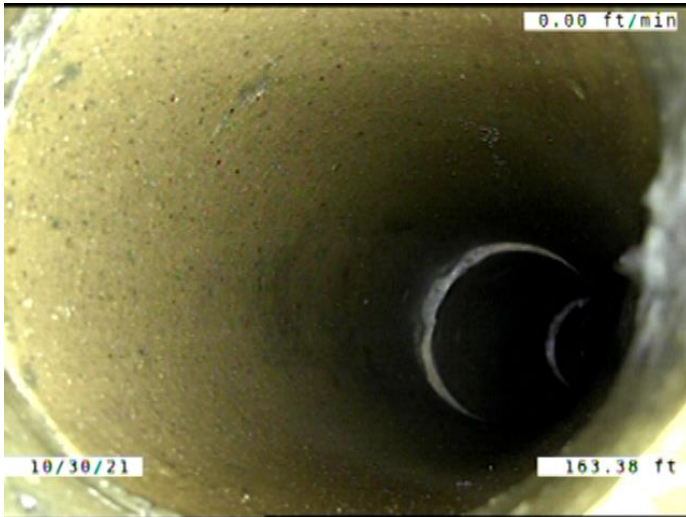
Code: **TFC**  
 Description: **Tap Factory Capped**

Distance (ft): **154.7**  
 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:



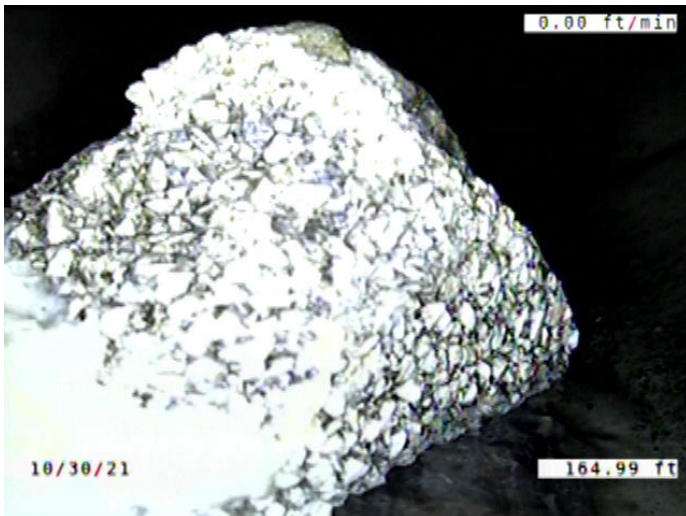
Code: **BSV**  
 Description: **Broken Soil Visible**

Distance (ft): **162.9**  
 Structural Grade: **5**  
 O&M Grade: **0**  
 Clock Start/From: **12**  
 Clock To: **3**  
 1st Value:  
 2nd Value:  
 Value Percent:  
 Continuous Index:  
 Within 8" of Joint: **NO**  
 Remarks:



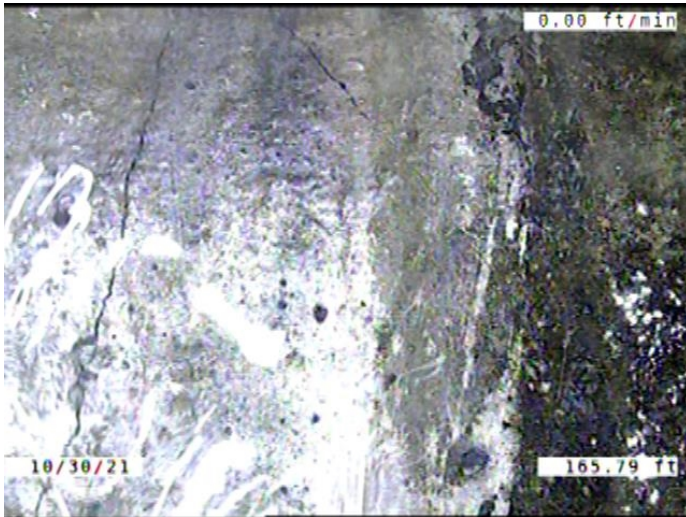
Code: **TBI**  
 Description: **Tap Break-in Intruding**

Distance (ft): **163.4**  
 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: **CONSTANTLY RUNNING WATER**



Code: **OBN**  
 Description: **Obstruction Construction Debris**

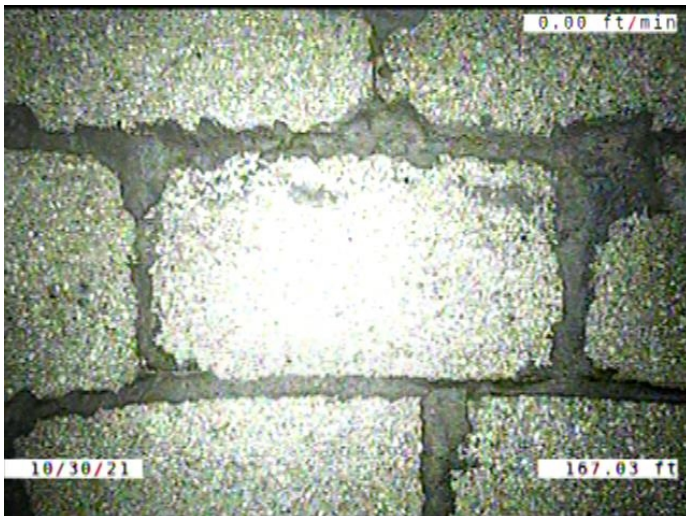
Distance (ft): **165.0**  
 Structural Grade: **0**  
 O&M Grade: **2**  
 Clock Start/From: **6**  
 Clock To:  
 1st Value:  
 2nd Value:  
 Value Percent: **5.000**  
 Continuous Index:  
 Within 8" of Joint: **YES**  
 Remarks:



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

Distance (ft): **165.8**  
Structural Grade: **4**  
O&M Grade: **0**  
Clock Start/From: **12**  
Clock To: **12**  
1st Value:  
2nd Value:  
Value Percent:  
Continuous Index:  
Within 8" of Joint: **YES**  
Remarks:

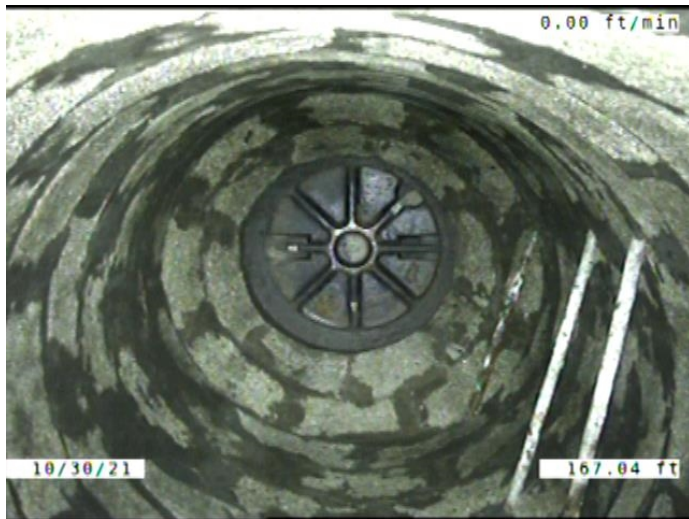
---



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

Distance (ft): **167.0**  
Structural Grade: **0**  
O&M Grade: **2**  
Clock Start/From: **5**  
Clock To: **7**  
1st Value:  
2nd Value:  
Value Percent: **5.000**  
Continuous Index: **F01**  
Within 8" of Joint: **YES**  
Remarks:

---



Code:	<b>AMH</b>
Description:	<b>Manhole</b>
Distance (ft):	<b>167.0</b>
Structural Grade:	<b>0</b>
O&M Grade:	<b>0</b>
Clock Start/From:	
Clock To:	
1st Value:	
2nd Value:	
Value Percent:	
Continuous Index:	
Within 8" of Joint:	<b>NO</b>
Remarks:	<b>M-504-047</b>