

RedZone
ROBOTICS

Street:	ALLEY BETWEEN SOFTWOOD DR & C		Flow Control:	Not Controlled	
City:	Hobart, IN		Year Renewed:		
Location:	Yard		Tape/Media #:		
Purpose:	Routine Assessment		Dia/Height:	8"	
Use:	Sanitary		Material:	VCP	
Drain Area:	NA		Lining:		
Category:	NA				
Comment:	P_C at 147 roots				
Location Details:			Direction of Survey:	Upstream	
US MH:	M-405-031	DS MH:	M-405-035	Total Length Surveyed (ft):	148.5

Position	Code	Observation	Video (sec)	Grade
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Thursday, November 16, 2023

63.5	IW	Infil Weeper	336	M 2
69.7	H	Hole	359	S 3
78.7	FM	Fracture Multiple	388	S 4
78.7	DAE	Deposits Attached Encrustation	398	M 2
85.0	TF	Tap Factory	421	NA
93.0	MMC	Material Change	448	NA
97.0	MMC	Material Change	466	NA
102.5	RFJ	Roots Fine Joint	487	M 1
105.5	RMJ	Roots Medium Joint	503	M 3
108.6	CL	Crack Longitudinal	520	S 2
111.6	CL	Crack Longitudinal	536	S 2
111.8	IS	Infil Stain	548	NA
117.5	MWL	Water Level	570	NA
117.5	RMJ	Roots Medium Joint	580	M 3
120.5	RMJ	Roots Medium Joint	597	M 3
124.5	TB	Tap Break-in	616	NA
126.7	RFJ	Roots Fine Joint	631	M 1
126.7	CM	Crack Multiple	641	S 3
127.4	TFC	Tap Factory Capped	653	NA
129.6	RBJ	Roots Ball Joint	668	M 4
131.9	MGO	General Observation	684	NA
133.4	CS	Crack Spiral	699	S 2
133.4	RMJ	Roots Medium Joint	710	M 3
133.4	MWL	Water Level	720	NA
136.7	RBJ	Roots Ball Joint	737	M 4
139.6	RMJ	Roots Medium Joint	754	M 3
145.7	RMJ	Roots Medium Joint	776	M 3
147.5	RMJ	Roots Medium Joint	792	M 3
148.5	MSA	Abandoned Survey	809	NA

M-405-031

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

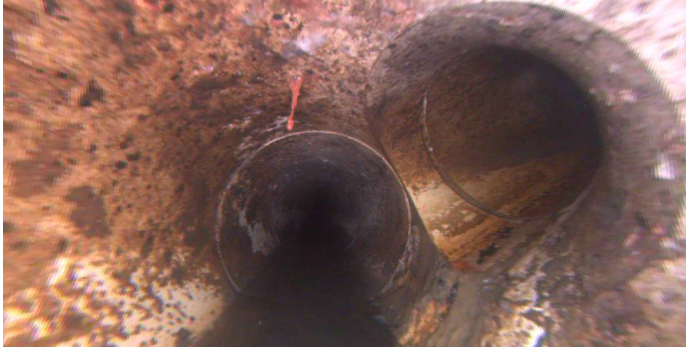


Distance (ft): **.0**
Structural Grade: **0**
O&M Grade: **0**
Clock Start/From:
Clock To:
1st Value:
2nd Value:
Value Percent:
Continuous Index:
Within 8" of Joint: **NO**
Remarks: **M-405-035**

Code: **MWL**
Description: **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: **M-405-031**



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

Distance (ft): **3.8**
Structural Grade: **0**
O&M Grade: **0**
Clock Start/From: **2**
Clock To:
1st Value: **6.000**
2nd Value:
Value Percent:
Continuous Index:
Within 8" of Joint:
Remarks:



Code: **FL**
Description: **Fracture Longitudinal**

Distance (ft): **9.5**
Structural Grade: **3**
O&M Grade: **0**
Clock Start/From: **2**
Clock To:
1st Value:
2nd Value:
Value Percent:
Continuous Index:
Within 8" of Joint: **YES**
Remarks:

Code: **IS**
Description: **Infil Stain**



Distance (ft): **9.5**
Structural Grade: **0**
O&M Grade: **0**
Clock Start/From: **2**
Clock To: **5**
1st Value:
2nd Value:
Value Percent:
Continuous Index:
Within 8" of Joint: **YES**
Remarks:

Code: **CS**
Description: **Crack Spiral**



Distance (ft): **9.5**
Structural Grade: **2**
O&M Grade: **0**
Clock Start/From: **8**
Clock To: **9**
1st Value:
2nd Value:
Value Percent:
Continuous Index:
Within 8" of Joint: **YES**
Remarks:

Code: **CS**
Description: **Crack Spiral**



Distance (ft): **12.4**
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: **YES**
Remarks:

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



Distance (ft): **18.4**
Structural Grade: **3**
O&M Grade: **0**
Clock Start/From: **9**
Clock To: **4**
1st Value:
2nd Value:
Value Percent:
Continuous Index:
Within 8" of Joint: **YES**
Remarks:

Code: **IS**
Description: **Infil Stain**



Distance (ft): **21.3**
Structural Grade: **0**
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: **CM**
Description: **Crack Multiple**



Distance (ft): **24.4**
Structural Grade: **3**
O&M Grade: **0**
Clock Start/From: **10**
Clock To: **4**
1st Value:
2nd Value:
Value Percent:
Continuous Index:
Within 8" of Joint: **YES**
Remarks:

Code: **CS**
Description: **Crack Spiral**



Distance (ft): **27.4**
Structural Grade: **2**
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: **TBI**
Description: **Tap Break-in Intruding**

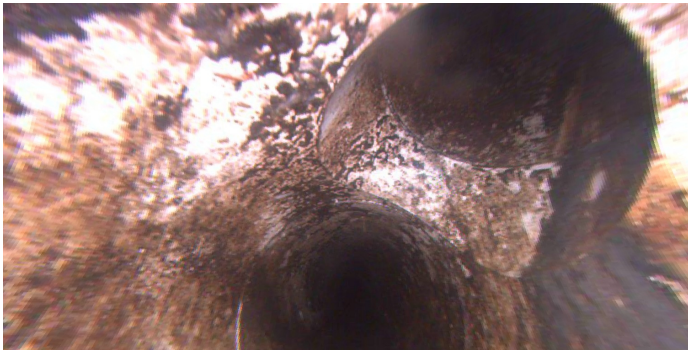


Distance (ft): **33.7**
Structural Grade: **0**
O&M Grade: **2**
Clock Start/From: **10**
Clock To:
1st Value: **6.000**
2nd Value: **2.000**
Value Percent:
Continuous Index:
Within 8" of Joint:
Remarks:



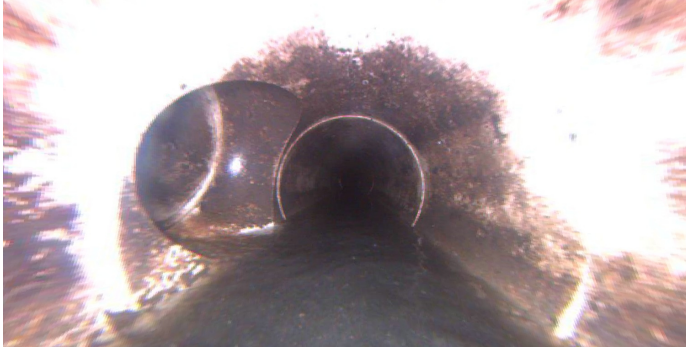
Code: **MMC**
Description: **Material Change**

Distance (ft): **39.5**
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: **vcp to pvc**



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

Distance (ft): **41.3**
Structural Grade: **0**
O&M Grade: **0**
Clock Start/From: **1**
Clock To:
1st Value: **6.000**
2nd Value:
Value Percent:
Continuous Index:
Within 8" of Joint:
Remarks:



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

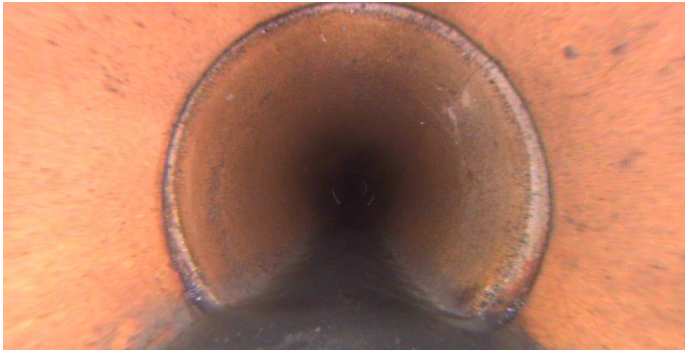
Distance (ft): **48.8**
Structural Grade: **0**
O&M Grade: **0**
Clock Start/From: **9**
Clock To:
1st Value: **6.000**
2nd Value:
Value Percent:
Continuous Index:
Within 8" of Joint:
Remarks:



Code: **MMC**
Description: **Material Change**

Distance (ft): **51.6**
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: **pvc to vcp**

Code: **CS**
Description: **Crack Spiral**



Distance (ft): **57.5**
Structural Grade: **2**
O&M Grade: **0**
Clock Start/From: **2**
Clock To: **5**
1st Value:
2nd Value:
Value Percent:
Continuous Index:
Within 8" of Joint: **YES**
Remarks:

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



Distance (ft): **60.6**
Structural Grade: **3**
O&M Grade: **0**
Clock Start/From: **5**
Clock To: **8**
1st Value:
2nd Value:
Value Percent:
Continuous Index:
Within 8" of Joint: **YES**
Remarks:

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



Distance (ft): **63.5**
Structural Grade: **0**
O&M Grade: **2**
Clock Start/From: **3**
Clock To: **5**
1st Value:
2nd Value:
Value Percent: **5.000**
Continuous Index:
Within 8" of Joint: **YES**
Remarks:

Code: **IW**
Description: **Infil Weeper**



Distance (ft): **63.5**
Structural Grade: **0**
O&M Grade: **2**
Clock Start/From: **3**
Clock To: **5**
1st Value:
2nd Value:
Value Percent:
Continuous Index:
Within 8" of Joint: **YES**
Remarks:

Code: **H**
Description: **Hole**



Distance (ft): **69.7**
Structural Grade: **3**
O&M Grade: **0**
Clock Start/From: **7**
Clock To:
1st Value:
2nd Value:
Value Percent:
Continuous Index:
Within 8" of Joint: **YES**
Remarks:

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



Distance (ft): **78.7**
Structural Grade: **4**
O&M Grade: **0**
Clock Start/From: **10**
Clock To: **5**
1st Value:
2nd Value:
Value Percent:
Continuous Index:
Within 8" of Joint: **YES**
Remarks:

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



Distance (ft): **78.7**
Structural Grade: **0**
O&M Grade: **2**
Clock Start/From: **2**
Clock To: **4**
1st Value:
2nd Value:
Value Percent: **5.000**
Continuous Index:
Within 8" of Joint: **YES**
Remarks:

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



Distance (ft): **85.0**
Structural Grade: **0**
O&M Grade: **0**
Clock Start/From: **10**
Clock To:
1st Value: **6.000**
2nd Value:
Value Percent:
Continuous Index:
Within 8" of Joint:
Remarks:



Code: **MMC**
Description: **Material Change**

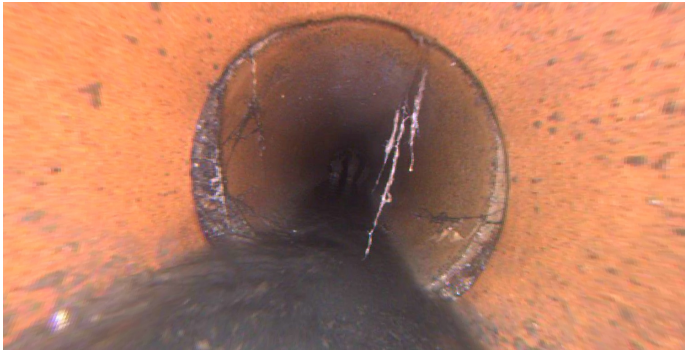
Distance (ft): **93.0**
Structural Grade: **0**
O&M Grade: **0**
Clock Start/From:
Clock To:
1st Value:
2nd Value:
Value Percent:
Continuous Index:
Within 8" of Joint: **NO**
Remarks: **vcp to pvc**



Code: **MMC**
Description: **Material Change**

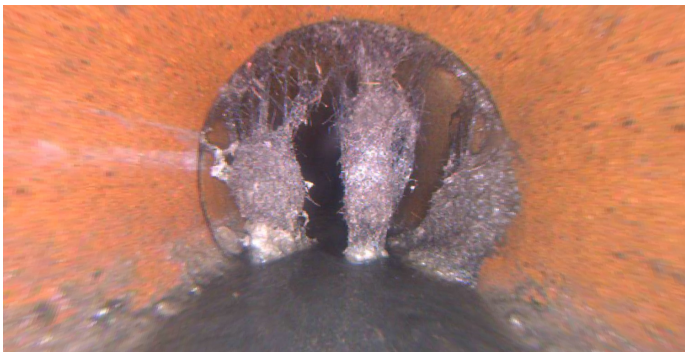
Distance (ft): **97.0**
Structural Grade: **0**
O&M Grade: **0**
Clock Start/From:
Clock To:
1st Value:
2nd Value:
Value Percent:
Continuous Index:
Within 8" of Joint: **NO**
Remarks: **pvc to vcp**

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



Distance (ft): **102.5**
Structural Grade: **0**
O&M Grade: **1**
Clock Start/From: **7**
Clock To: **4**
1st Value:
2nd Value:
Value Percent:
Continuous Index:
Within 8" of Joint: **YES**
Remarks:

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



Distance (ft): **105.5**
Structural Grade: **0**
O&M Grade: **3**
Clock Start/From: **8**
Clock To: **4**
1st Value:
2nd Value:
Value Percent: **50.000**
Continuous Index:
Within 8" of Joint: **YES**
Remarks:

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



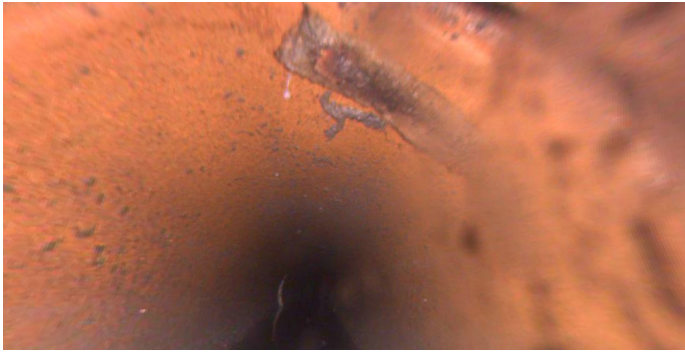
Distance (ft): **108.6**
Structural Grade: **2**
O&M Grade: **0**
Clock Start/From: **9**
Clock To:
1st Value:
2nd Value:
Value Percent:
Continuous Index:
Within 8" of Joint: **YES**
Remarks:

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



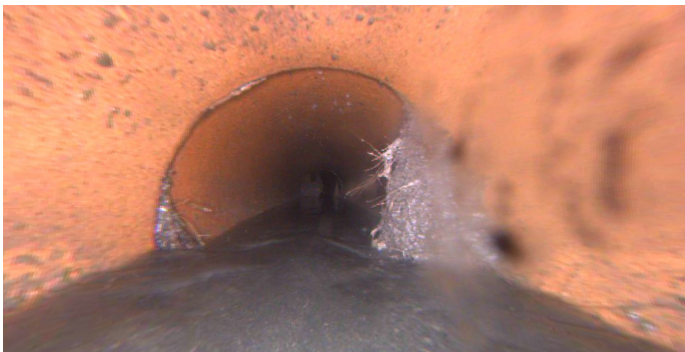
Distance (ft): **111.6**
Structural Grade: **2**
O&M Grade: **0**
Clock Start/From: **12**
Clock To:
1st Value:
2nd Value:
Value Percent:
Continuous Index:
Within 8" of Joint: **YES**
Remarks:

Code: **IS**
Description: **Infil Stain**



Distance (ft): **111.8**
Structural Grade: **0**
O&M Grade: **0**
Clock Start/From: **12**
Clock To:
1st Value:
2nd Value:
Value Percent:
Continuous Index:
Within 8" of Joint: **YES**
Remarks:

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



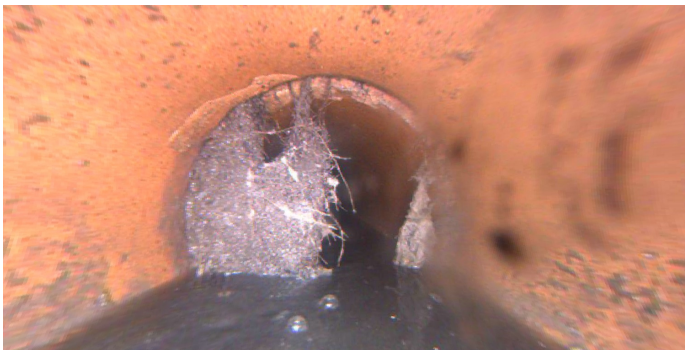
Distance (ft): **117.5**
Structural Grade: **0**
O&M Grade: **0**
Clock Start/From:
Clock To:
1st Value:
2nd Value:
Value Percent: **25.000**
Continuous Index:
Within 8" of Joint: **NO**
Remarks:

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



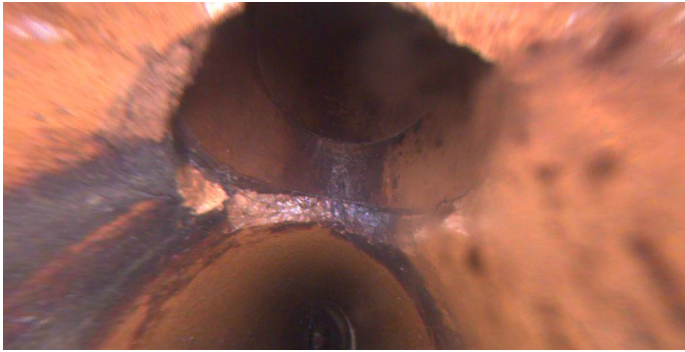
Distance (ft): **117.5**
Structural Grade: **0**
O&M Grade: **3**
Clock Start/From: **8**
Clock To: **4**
1st Value:
2nd Value:
Value Percent: **20.000**
Continuous Index:
Within 8" of Joint: **YES**
Remarks:

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



Distance (ft): **120.5**
Structural Grade: **0**
O&M Grade: **3**
Clock Start/From: **8**
Clock To: **4**
1st Value:
2nd Value:
Value Percent: **50.000**
Continuous Index:
Within 8" of Joint: **YES**
Remarks:

Code: **TB**
Description: **Tap Break-in**



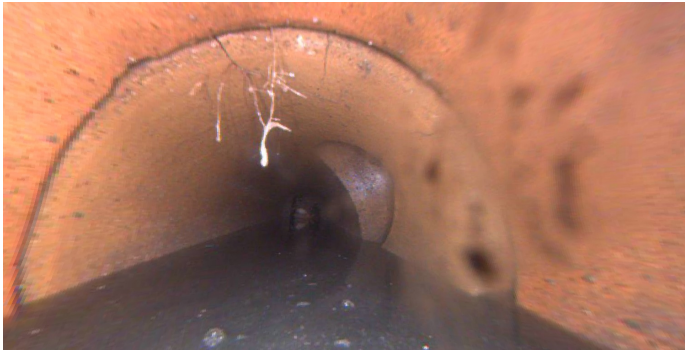
Distance (ft): **124.5**
Structural Grade: **0**
O&M Grade: **0**
Clock Start/From: **12**
Clock To:
1st Value: **6.000**
2nd Value:
Value Percent:
Continuous Index:
Within 8" of Joint:
Remarks:

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



Distance (ft): **126.7**
Structural Grade: **0**
O&M Grade: **1**
Clock Start/From: **12**
Clock To:
1st Value:
2nd Value:
Value Percent:
Continuous Index:
Within 8" of Joint: **YES**
Remarks:

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

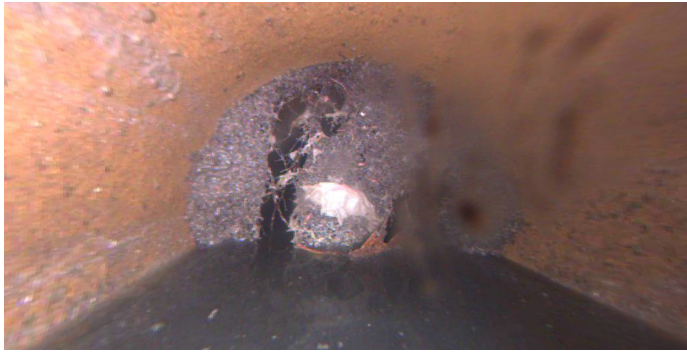


Distance (ft): **126.7**
Structural Grade: **3**
O&M Grade: **0**
Clock Start/From: **11**
Clock To: **2**
1st Value:
2nd Value:
Value Percent:
Continuous Index:
Within 8" of Joint: **YES**
Remarks:

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

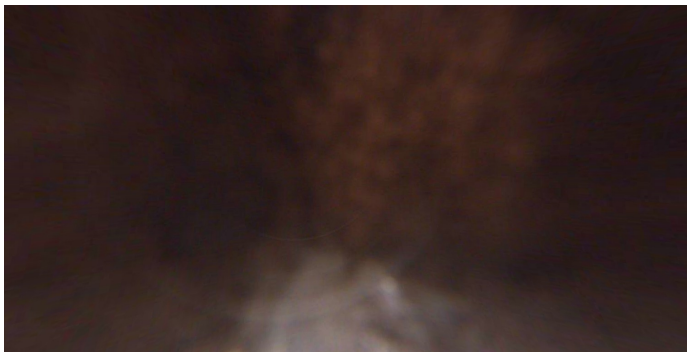


Distance (ft): **127.4**
Structural Grade: **0**
O&M Grade: **0**
Clock Start/From: **2**
Clock To:
1st Value: **6.000**
2nd Value:
Value Percent:
Continuous Index:
Within 8" of Joint:
Remarks:



Code: **RBJ**
Description: **Roots Ball Joint**

Distance (ft): **129.6**
Structural Grade: **0**
O&M Grade: **4**
Clock Start/From: **8**
Clock To: **4**
1st Value:
2nd Value:
Value Percent: **55.000**
Continuous Index:
Within 8" of Joint: **YES**
Remarks:



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

Distance (ft): **131.9**
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: **switching to rear view**

Code: **CS**
Description: **Crack Spiral**



Distance (ft): **133.4**
Structural Grade: **2**
O&M Grade: **0**
Clock Start/From: **9**
Clock To: **2**
1st Value:
2nd Value:
Value Percent:
Continuous Index:
Within 8" of Joint: **YES**
Remarks:

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



Distance (ft): **133.4**
Structural Grade: **0**
O&M Grade: **3**
Clock Start/From: **9**
Clock To: **3**
1st Value:
2nd Value:
Value Percent: **20.000**
Continuous Index:
Within 8" of Joint: **YES**
Remarks:

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



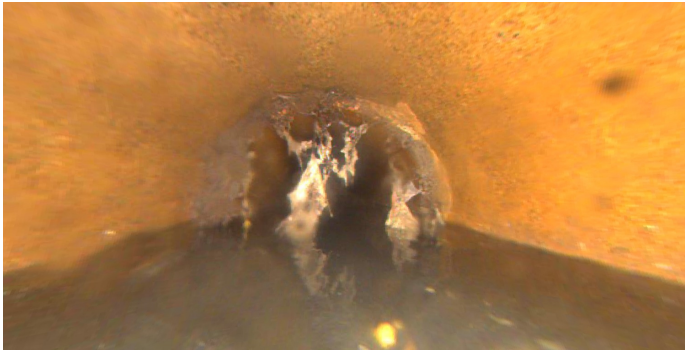
Distance (ft): **133.4**
Structural Grade: **0**
O&M Grade: **0**
Clock Start/From:
Clock To:
1st Value:
2nd Value:
Value Percent: **35.000**
Continuous Index:
Within 8" of Joint: **NO**
Remarks:

Code: **RBJ**
Description: **Roots Ball Joint**



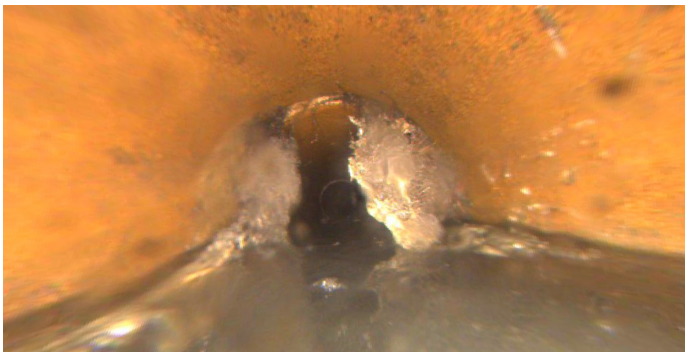
Distance (ft): **136.7**
Structural Grade: **0**
O&M Grade: **4**
Clock Start/From: **8**
Clock To: **4**
1st Value:
2nd Value:
Value Percent: **55.000**
Continuous Index:
Within 8" of Joint: **YES**
Remarks:

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



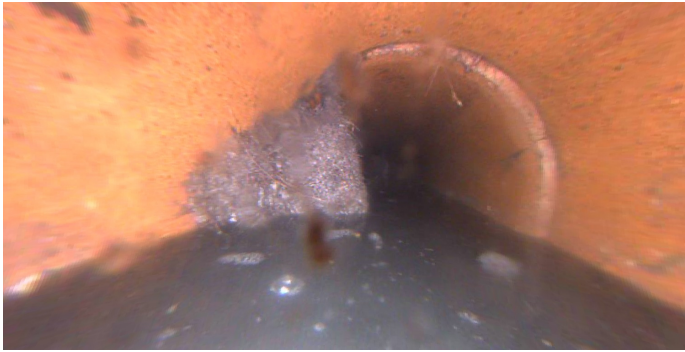
Distance (ft): **139.6**
Structural Grade: **0**
O&M Grade: **3**
Clock Start/From: **8**
Clock To: **4**
1st Value:
2nd Value:
Value Percent: **20.000**
Continuous Index:
Within 8" of Joint: **YES**
Remarks:

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



Distance (ft): **145.7**
Structural Grade: **0**
O&M Grade: **3**
Clock Start/From: **8**
Clock To: **4**
1st Value:
2nd Value:
Value Percent: **30.000**
Continuous Index:
Within 8" of Joint: **YES**
Remarks:

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



Distance (ft): **147.5**
Structural Grade: **0**
O&M Grade: **3**
Clock Start/From: **8**
Clock To: **11**
1st Value:
2nd Value:
Value Percent: **25.000**
Continuous Index:
Within 8" of Joint: **YES**
Remarks:

Code: **MSA**
Description: **Abandoned Survey**



Distance (ft): **148.5**
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: **cannot pass RMJ**