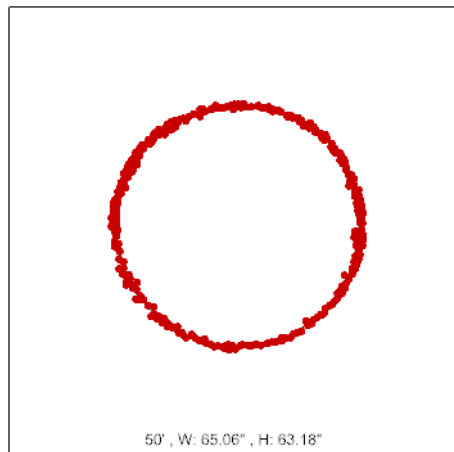
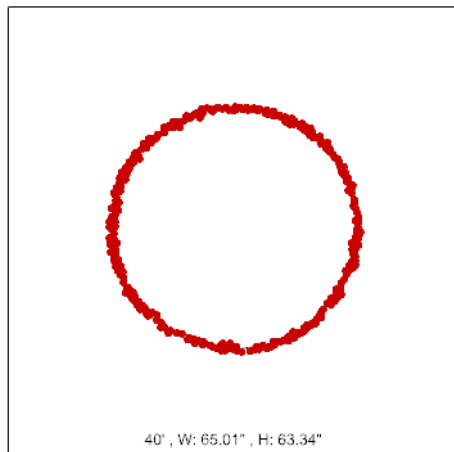
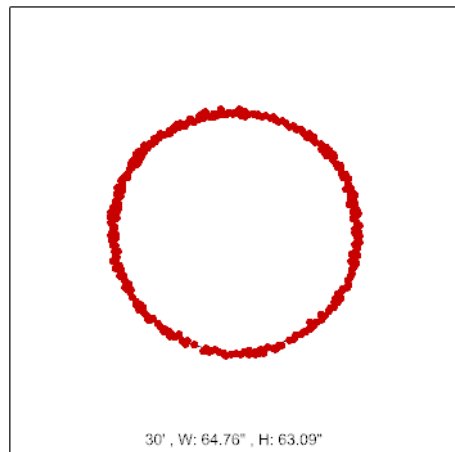
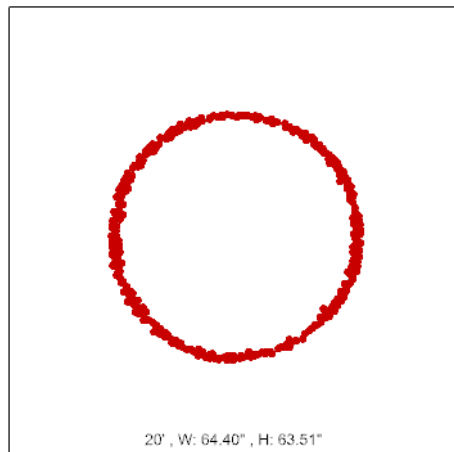
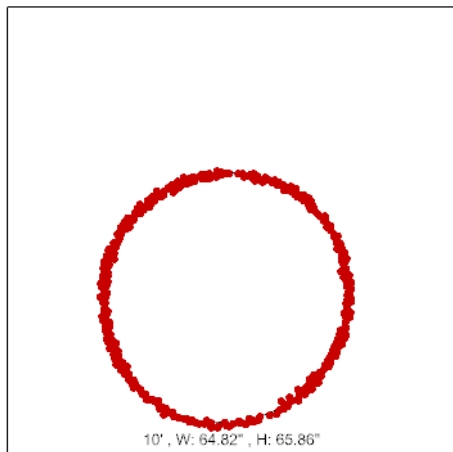
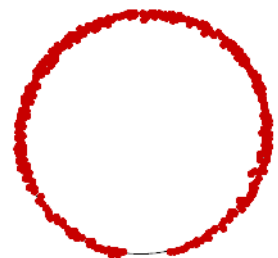




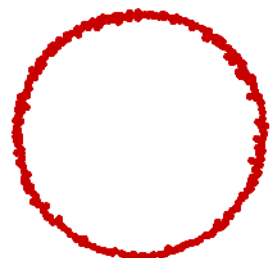
Inspection	Marion County, Ohio
US Manhole	11
DS Manhole	9
Inspected	October 10, 2024
Platform	Aerial Drone
Sensor	3D Lidar
Report Date	October 29, 2024



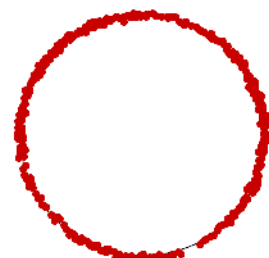




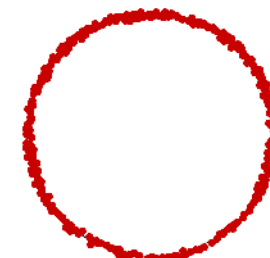
60° , W: 65.27" , H: 63.35"



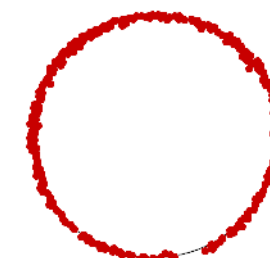
70° , W: 64.87" , H: 63.48"



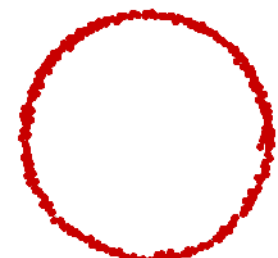
80° , W: 64.74" , H: 63.50"



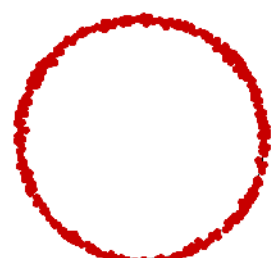
90° , W: 65.10" , H: 63.92"



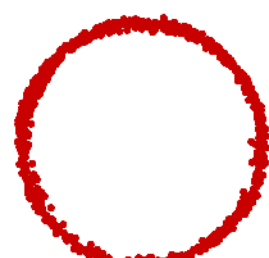
100° , W: 64.88" , H: 63.90"



110° , W: 64.65" , H: 64.13"



120° , W: 64.98" , H: 63.38"



130° , W: 63.75" , H: 63.21"



140° , W: 64.93" , H: 63.47"



150° , W: 65.36" , H: 64.16"



160° , W: 64.25" , H: 63.59"



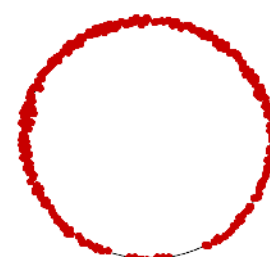
170° , W: 65.25" , H: 63.17"



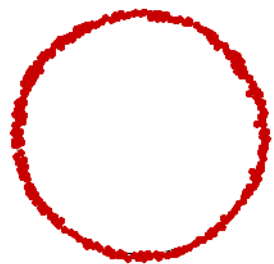
180° , W: 64.86" , H: 64.08"



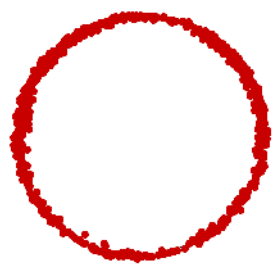
190° , W: 65.10" , H: 63.44"



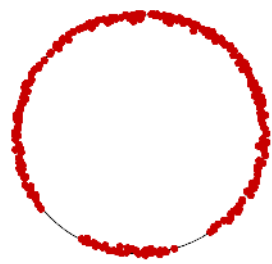
200° , W: 65.08" , H: 62.81"



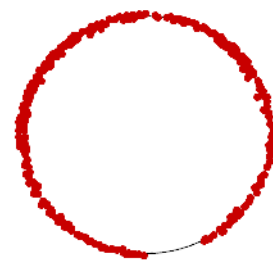
210' , W: 65.31" , H: 63.14"



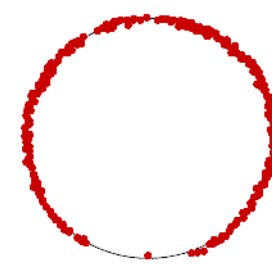
220' , W: 64.52" , H: 62.67"



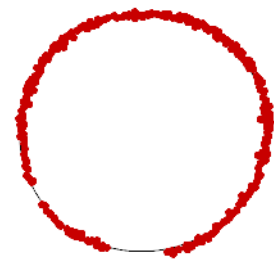
230' , W: 65.74" , H: 62.96"



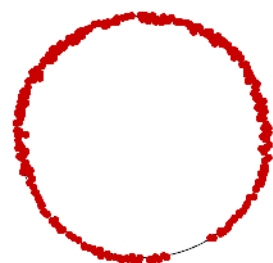
240' , W: 65.71" , H: 62.67"



250' , W: 65.42" , H: 63.27"



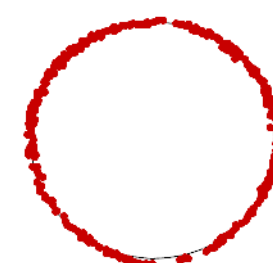
260' , W: 65.48" , H: 62.95"



270' , W: 65.71" , H: 63.54"



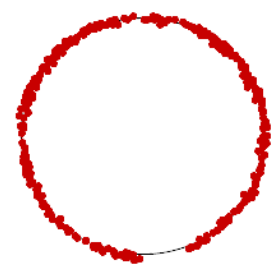
280' , W: 66.42" , H: 61.52"



290' , W: 65.04" , H: 62.35"



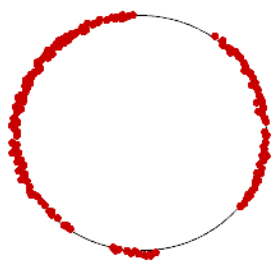
300' , W: 64.99" , H: 63.10"



310' , W: 64.70" , H: 62.73"



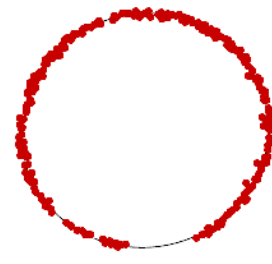
320' , W: 65.56" , H: 62.29"



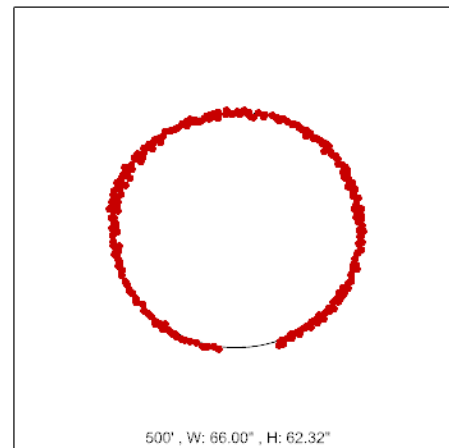
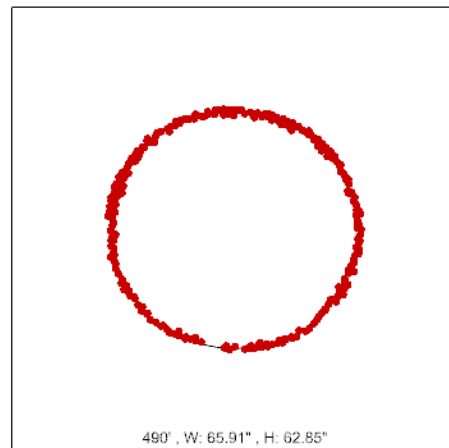
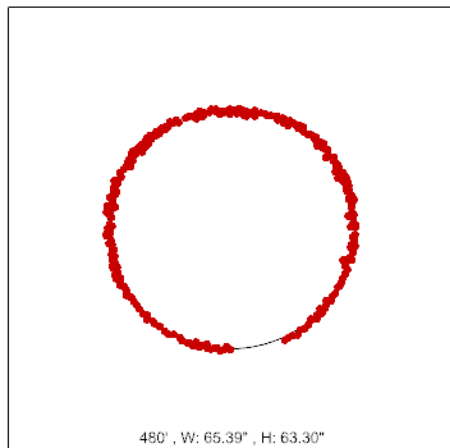
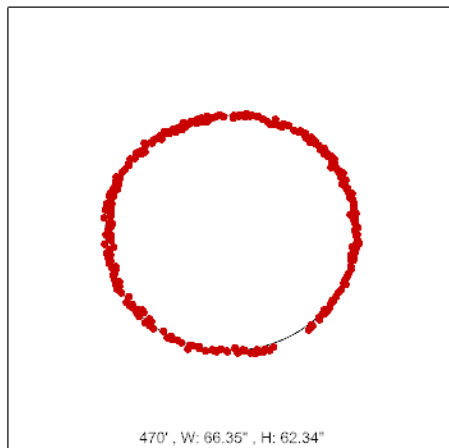
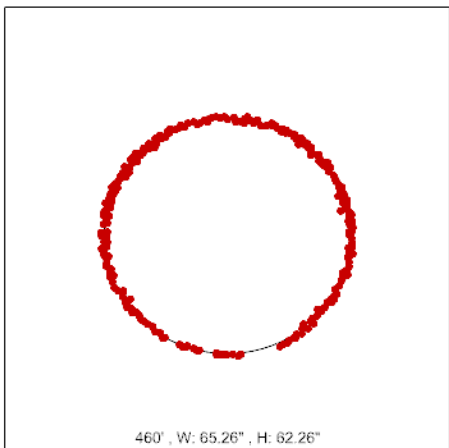
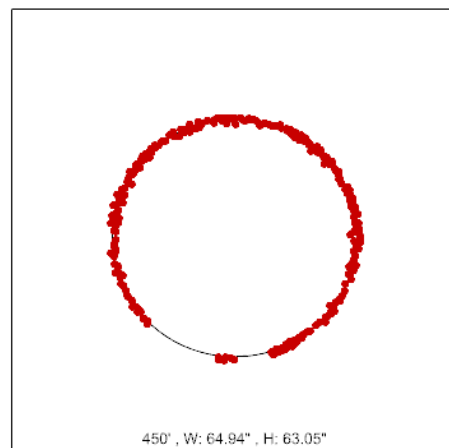
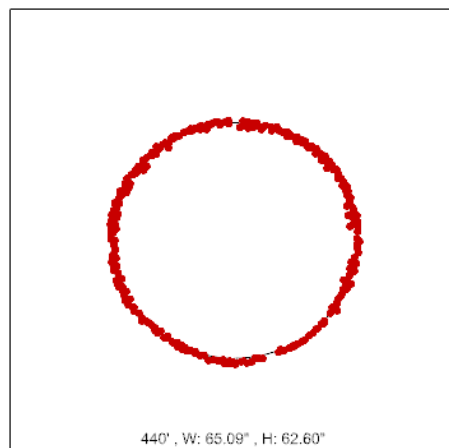
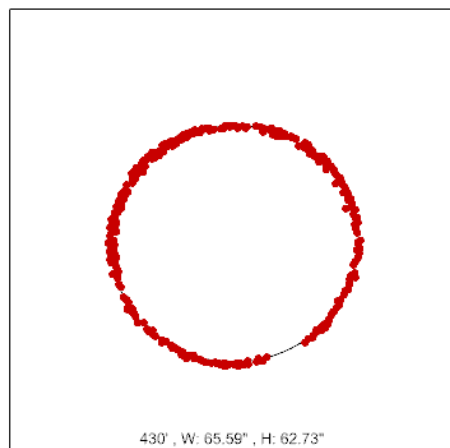
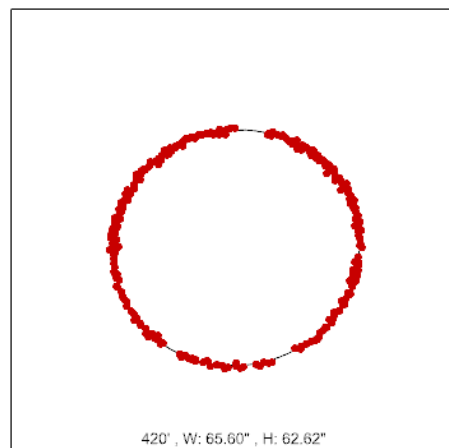
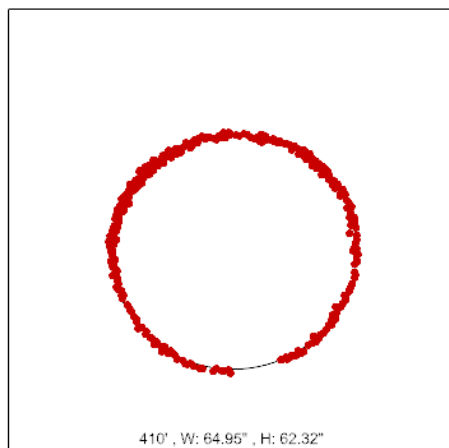
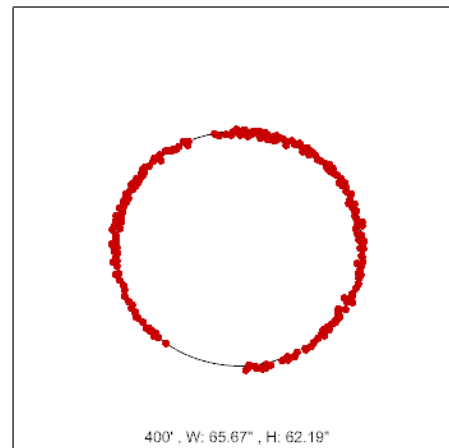
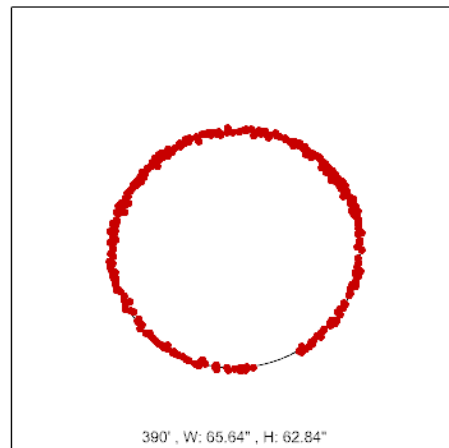
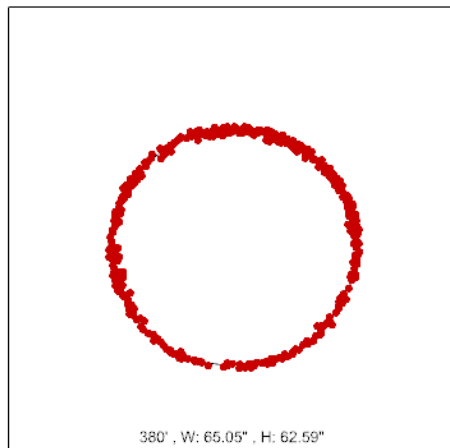
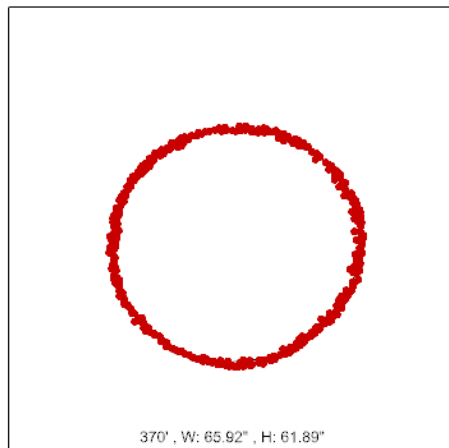
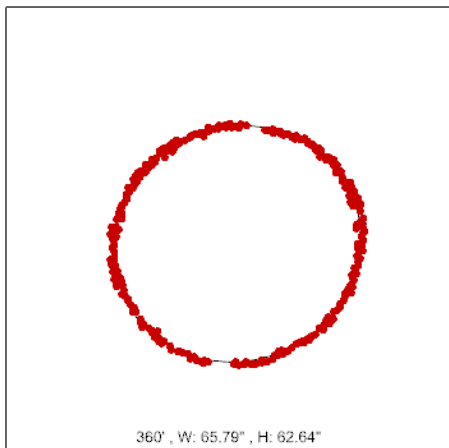
330' , W: 66.86" , H: 62.42"

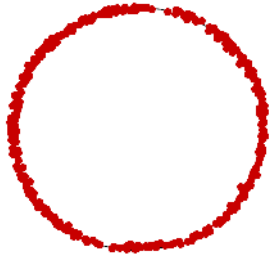


340' , W: 66.50" , H: 62.65"

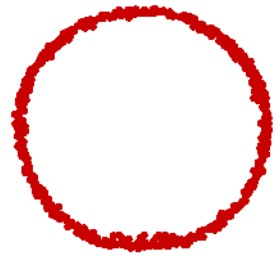


350' , W: 65.62" , H: 62.13"

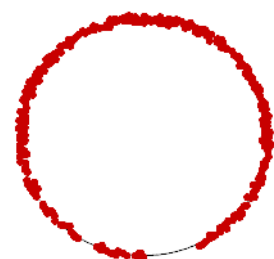




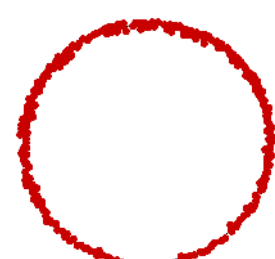
510' , W: 66.31" , H: 63.88"



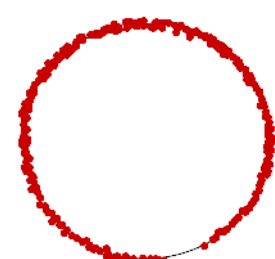
520' , W: 65.60" , H: 61.71"



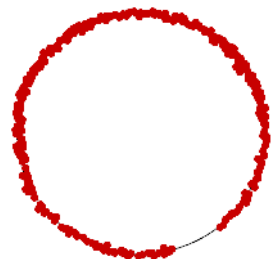
530' , W: 65.50" , H: 62.54"



540' , W: 65.42" , H: 62.90"



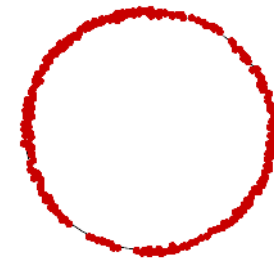
550' , W: 65.14" , H: 61.94"



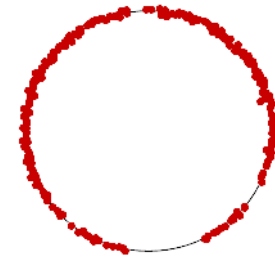
560' , W: 65.36" , H: 63.33"



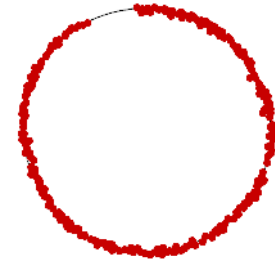
570' , W: 65.65" , H: 63.94"



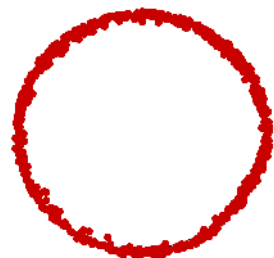
580' , W: 65.45" , H: 62.75"



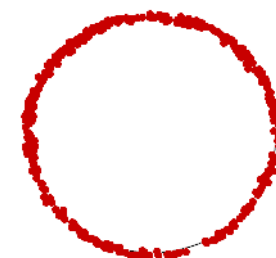
590' , W: 65.33" , H: 63.23"



600' , W: 65.43" , H: 63.89"



610' , W: 65.16" , H: 61.68"



620' , W: 65.63" , H: 62.30"



630' , W: 65.92" , H: 62.66"



640' , W: 65.76" , H: 62.74"



650' , W: 65.30" , H: 63.62"



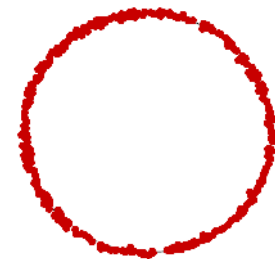
660' , W: 65.25" , H: 63.28"



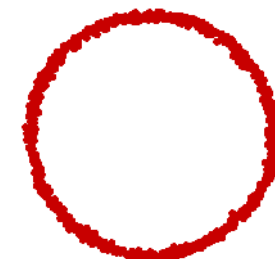
670' , W: 65.04" , H: 62.31"



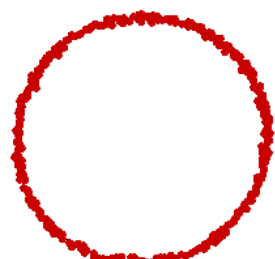
680' , W: 65.25" , H: 62.67"



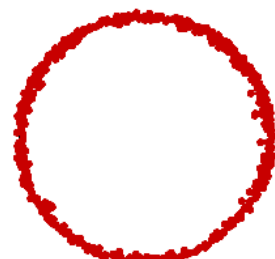
690' , W: 65.10" , H: 63.10"



700' , W: 64.23" , H: 62.62"



710' , W: 65.06" , H: 63.48"



720' , W: 64.71" , H: 62.95"

INSPECTION HEADER

DATE: 10/10/2024
PIPE SEG REF. MH 11 - MH 9
UP MH: MH 11
DOWN MH: MH 9

SUMMARY

Inspection Date 10/10/2024 12:00 AM	Pipe Segment Reference MH 11 - MH 9	Surveyed By SHAWN DUNNELL	Certificate Number U-915-70001437
Project 2420053PW	Street SILVER ST	Upstream MH MH 11	Downstream MH MH 9
Direction Upstream	Pre-Cleaning No Pre-Cleaning	Total Length (ft)	Length Surveyed (ft) 717.4

ASSET

Height (mm) 72	Shape Circular	Material BR	Pipe Use Combined Pipe
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PROJECT

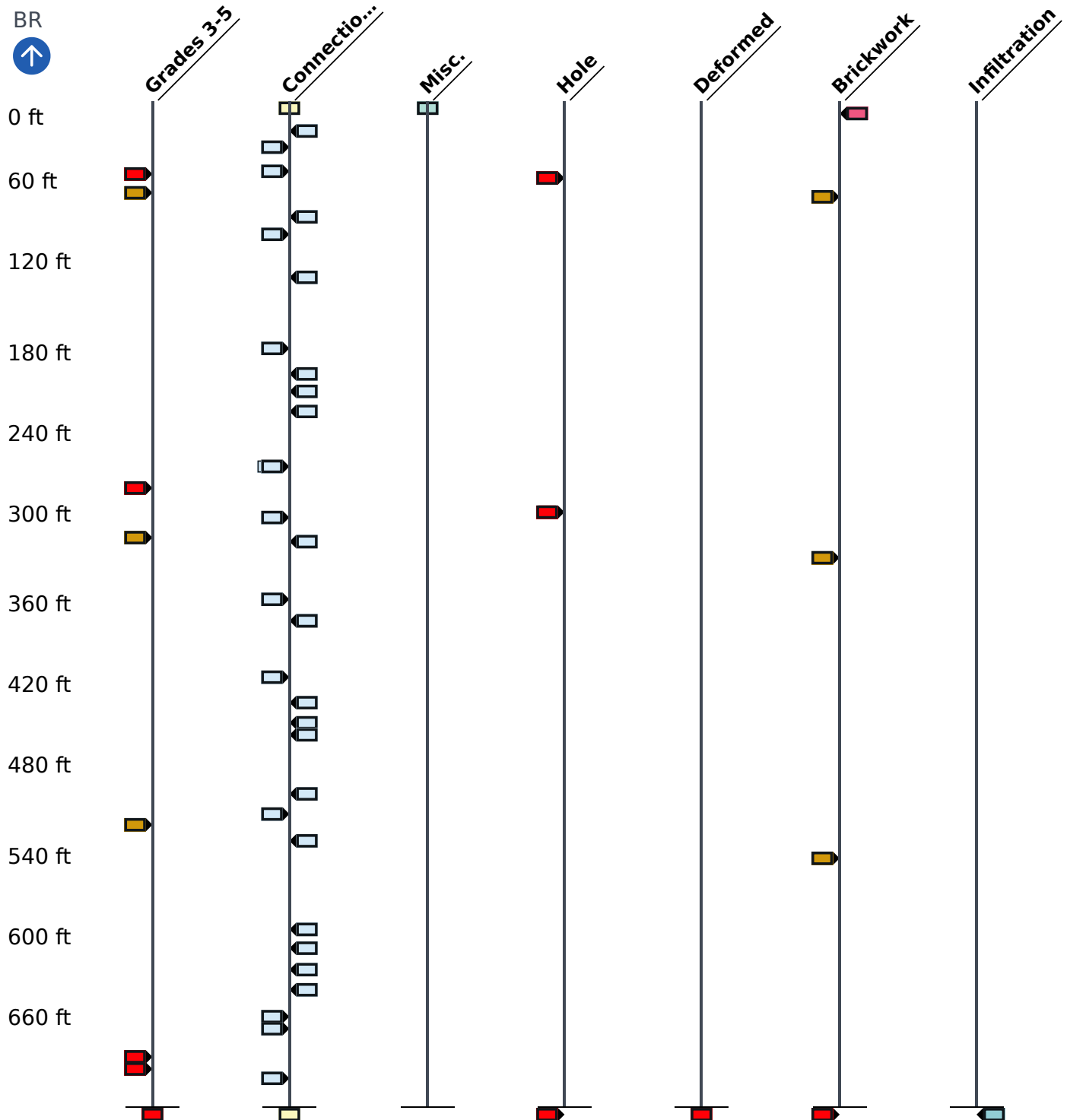
Owner CITY OF MARION	Customer CT CONSULTANTS
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INSPECTION

Inspection Time 12:00 AM	City MARION	Inspection Status CI	In Feet (Imperial) Yes
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







SMART DIAGRAM

DATE: 10/10/2024
 PIPE SEG REF. MH 11 - MH 9
 UP MH: MH 11
 DOWN MH: MH 9






















DATE: 10/10/2024
PIPE SEG REF. MH 11 - MH 9
UP MH: MH 11
DOWN MH: MH 9

OBSERVATIONS

Dist	Time	Description	Code	Clock	Dim. 1	Dim. 2	%	Remarks	Cont.	Grade
0	0:00	Manhole	AMH	-	-	-	-	MH 9	-	-
0	0:15	Miscellaneous Water Level	MW	-	-	-	5	-	-	-
3.9	0:18	Missing Mortar Small	MMS		-	-	-	-	-	2
13	0:25	Infiltration Stain	IS		-	-	-	-	-	1
16.4	0:30	Tap Break-in/Hammer	TB		6	-	-	-	-	-
27.5	0:49	Tap Break-in Activity	TBA		6	-	-	-	-	-
45	1:05	Tap Break-in/Hammer	TB		4	-	-	-	-	-
45	1:07	Hole Soil Visible	HSV		-	-	-	AROUND CONNECTION	-	5
57.9	1:18	Missing Mortar Medium	MM		-	-	-	-	S01	3
77.7	1:33	Tap Break-in/Hammer	TB		4	-	-	-	-	-
90.2	1:47	Tap Break-in/Hammer	TB		4	-	-	-	-	-
120.3	2:09	Tap Break-in/Hammer	TB		4	-	-	-	-	-
171.7	2:47	Tap Break-in/Hammer	TB		6	-	-	-	-	-
189.3	2:59	Tap Break-in Activity	TBA		12	-	-	-	-	-

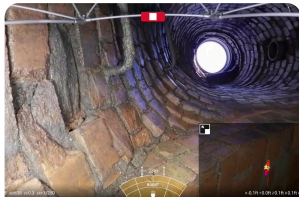
Dist	Time	Description	Code	Clock	Dim. 1	Dim. 2	%	Remarks	Cont.	Grade
194.1	3:06	Tap Break-in Activity	TBA		8	-	-	-	-	-
202	3:18	Tap Break-in Activity	TBA		12	-	-	-	-	-
216.2	3:29	Tap Break-in/Hammer	TB		8	-	-	-	-	-
255.6	4:02	Tap Break-in/Hammer	TB		4	-	-	-	-	-
256.6	4:08	Tap Break-in/Hammer	TB		4	-	-	-	-	-
259.7	4:15	Hole Soil Visible	HSV		4	-	-	AROUND CONNECTION	-	5
259.7	4:15	Tap Break-in Capped	TBC		4	-	-	COLLAPSED	-	-
292.1	4:38	Tap Break-in Activity	TBA		4	-	-	-	-	-
292.9	4:42	Missing Mortar Medium	MM		-	-	-	-	F01	3
309.2	4:54	Tap Break-in/Hammer	TB		4	-	-	-	-	-
312.5	5:01	Tap Break-in/Hammer	TB		6	-	-	-	-	-
350.2	5:24	Tap Break-in/Hammer	TB		4	-	-	-	-	-
365.1	5:36	Tap Break-in/Hammer	TB		4	-	-	-	-	-
369.1	5:44	Tap Break-in/Hammer	TB		4	-	-	-	-	-
405.7	6:08	Tap Break-in/Hammer	TB		4	-	-	-	-	-

Dist	Time	Description	Code	Clock	Dim. 1	Dim. 2	%	Remarks	Cont.	Grade
423.4	6:20	Tap Break-in Activity	TBA		4	-	- -		-	-
438.4	6:43	Tap Break-in/Hammer	TB		4	-	- -		-	-
446.3	6:53	Tap Break-in/Hammer	TB		4	-	- -		-	-
489.2	7:21	Missing Mortar Medium	MM		-	-	- -		-	3
489.2	7:21	Tap Break-in Intruding	TBI		4	2	- -		-	2
503.2	7:33	Tap Break-in Activity	TBA		4	-	- -		-	-
521.9	8:07	Tap Break-in Capped	TBC		4	-	- -		-	-
522.6	7:49	Tap Break-in/Hammer	TB		4	-	- -		-	-
585.3	8:46	Tap Break-in Capped	TBC		10	-	- -		-	-
591	8:54	Tap Break-in/Hammer	TB		4	-	- -		-	-
598.7	9:00	Tap Break-in Intruding	TBI		10	5	- -		-	2
613.8	9:13	Tap Break-in Activity	TBA		10	-	- -		-	-
628.1	9:26	Tap Break-in/Hammer	TB		6	-	- -		-	-
631.5	9:34	Tap Break-in/Hammer	TB		4	-	- -		-	-
647.5	9:47	Hole Soil Visible	HSV		-	-	-	AROUND CONNECTION	-	5

Dist	Time	Description	Code	Clock	Dim. 1	Dim. 2	%	Remarks	Cont.	Grade
647.5	9:47	Tap Break-in/Hammer	TB		6	-	-	-	-	-
656.2	9:55	Missing Brick	MB		-	-	-	AROUND CONNECTION	-	4
656.2	9:55	Tap Break-in/Hammer	TB		6	-	-	-	-	-
687.2	10:13	Deformed Flexible Bulging Round	DRB	-	-	-	10	AROUND 6 TO 9 O'CLOCK POSIT...	-	4
691.2	10:17	Tap Break-in/Hammer	TB		4	-	-	-	-	-
717.4	10:34	Manhole	AMH	-	-	-	-	MH 11	-	-

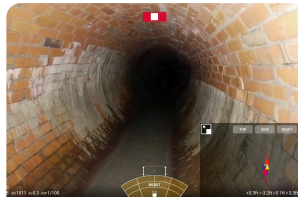
OBSERVATION SNAPSHOTS

DATE: 10/10/2024
 PIPE SEG REF. MH 11 - MH 9
 UP MH: MH 11
 DOWN MH: MH 9



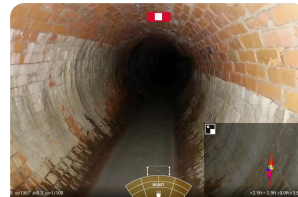
AMH

0 ft



MWL

0 ft



MMS

3.9 ft

2

8 - 4:00



IS

13 ft

1

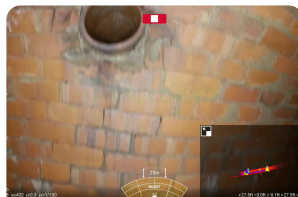
6 - 12:00



TB

16.4 ft

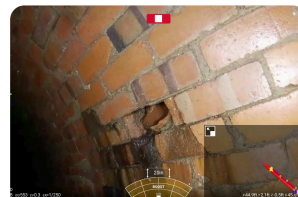
10:00



TBA

27.5 ft

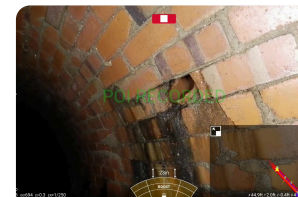
2:00



TB

45 ft

2:00

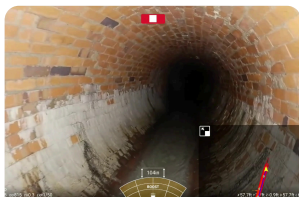


HSV

45 ft

5

2:00

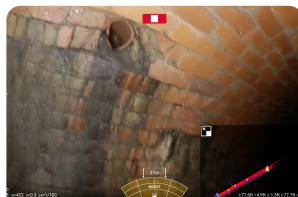


MMM

57.9 ft

3 - 9:00

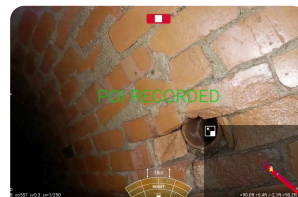
3



TB

77.7 ft

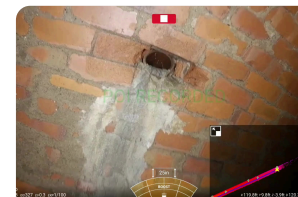
10:00



TB

90.2 ft

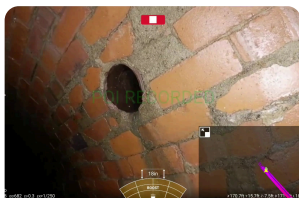
2:00



TB

120.3 ft

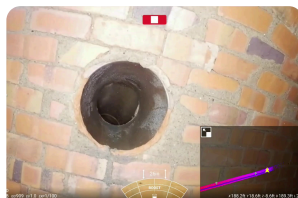
10:00



TB

171.7 ft

2:00



TBA

189.3 ft

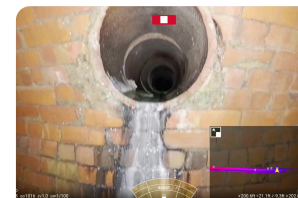
9:00



TBA

194.1 ft

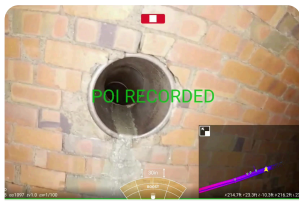
9:00



TBA

202 ft

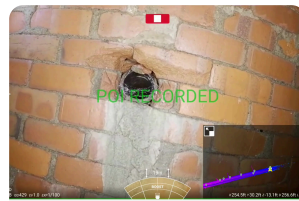
10:00



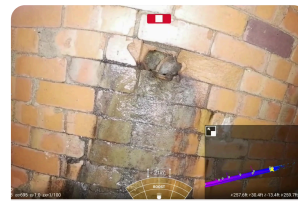
TB
 216.2 ft 10:00



TB
 255.6 ft 2:00



TB
 256.6 ft 10:00



HSV **5**
 259.7 ft 2:00



TBC
 259.7 ft 2:00



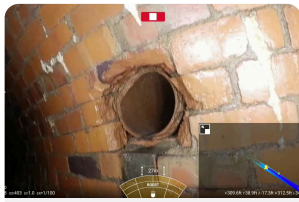
TBA
 292.1 ft 2:00



MMM **3**
 292.9 ft 3 - 9:00



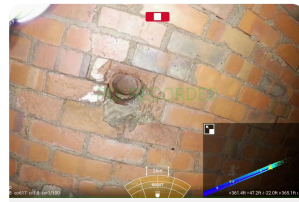
TB
 309.2 ft 10:00



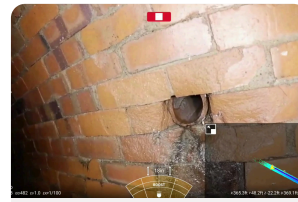
TB
 312.5 ft 2:00



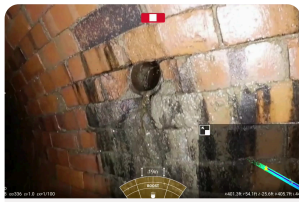
TB
 350.2 ft 1:00



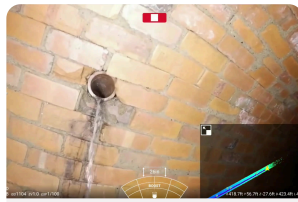
TB
 365.1 ft 10:00



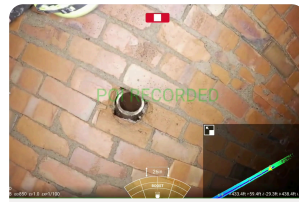
TB
 369.1 ft 2:00



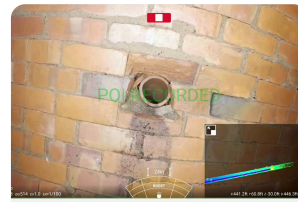
TB
 405.7 ft 1:00



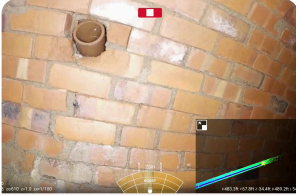
TBA
 423.4 ft 10:00




TB
 438.4 ft 10:00



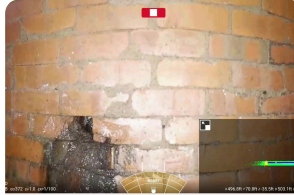
TB
 446.3 ft 10:00




MMM **3**
 489.2 ft 2 - 4:00



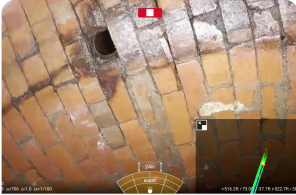
TBI **2**
 489.2 ft 11:00




TBA
 503.2 ft 2:00




TBC
 521.9 ft 10:00




TB
 522.6 ft 12:00




TBC
 585.3 ft 10:00



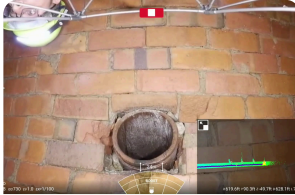
TB
 591 ft 2:00




TBI **2**
 598.7 ft 10:00




TBA
 613.8 ft 10:00




TB
 628.1 ft 10:00



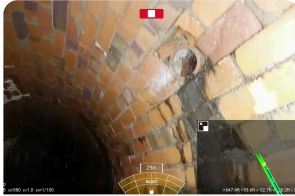
TB
 631.5 ft 3:00




HSV **5**
 647.5 ft 2:00




TB
 647.5 ft 2:00



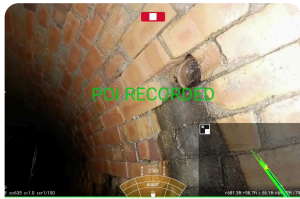
MB **4**
 656.2 ft 2:00



TB
 656.2 ft 2:00



DFBR **4**
 687.2 ft



TB

691.2 ft

2:00



AMH

717.4 ft

DATE: 10/10/2024
PIPE SEG REF. MH 11 - MH 9
UP MH: MH 11
DOWN MH: MH 9

RATINGS

PIPE RATING INDEX	Overall	Structural	O&M
	3.1	3.1	1.7

Sum of all graded conditions divided by the total number of conditions. 0-5 scale.

PIPE RATING	Overall	Structural	O&M
	174	169	5

Sum of all graded conditions.

QUICK RATING	Overall	Structural	O&M	Likelihood of Failure
	5 3 4 2	5 3 4 2	2 2 1 1	

First digit is highest graded condition. Second digit is count of those conditions (A = 10-14, B = 15-19, etc.). Third digit is second-highest graded condition. Fourth digit is count of those conditions. LoF is Quick Rating divided by 10 (scale from 0-6).

FREQUENCY OF CONDITION GRADES	Grade	1	2	3	4	5
	#	1	3	3	2	3

Count of each condition grade in the inspection.