



Technical Memorandum

Reference: 516025.105
Date: April 29, 2019
To: Kenny Croyle, Central Valley Regional Water Quality Control Board
From: Mike Foget, PE, SHN
Subject: **Mule Creek State Prison–CCTV Weekly Status Report (Week #3)**

This technical memorandum summarizes major findings for the closed-circuit television (CCTV) inspection of the storm drain and sanitary sewer system at Mule Creek State Prison (MCSP). The inspections summarized in this memorandum were completed from April 1, 2019, to April 5, 2019, by Nor Cal Pipeline Services.

A total of 61 segments of the sanitary sewer system and storm drain system were inspected, including 10 sewer main segments, 19 sewer lateral segments, and 32 storm drain segments. In total, approximately 5,873 lineal feet (LF) were inspected. A summary of major findings for this inspection work is included in Table 1.

Table 1. Week 3 CCTV Major Findings, April 1-5, 2019
Mule Creek State Prison, Ione, California

Segment ¹	Figure ²	Segment Type	Finding	Distance from Start of Inspection ³	Comment
SSMH207-SSMH205	14	Sewer Main	Joint Defect	166 ft	Joint separation. Appears to be out of bell and seal likely compromised.
SSMH205-SSMH204	13	Sewer Main	Deformed	55 ft	Egg shaped deformation. Seal not compromised.
B32-B216	4	Storm drain	Repair	141 ft	Repaired break in crown.
B30-B31	4	Storm drain	Joint Defect	0 ft	Pipe connection at B30 not sealed.
B31-P150	4	Storm drain	Joint Defect	38 ft	Joint offset approx. 10%. Seal likely compromised.
B27-P156	5	Storm drain	Joint Defect	39 ft	Joint deflected with offset/separation. Seal likely compromised.

Mule Creek State Prison–CCTV Weekly Status Report (Week #3)

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Table 1. Week 3 CCTV Major Findings, April 1-5, 2019**Mule Creek State Prison, Lone, California**

Segment ¹	Figure ²	Segment Type	Finding	Distance from Start of Inspection ³	Comment
JBC80-OUT-CB1	3	Storm drain	Joint Defect	86 ft	Joint separation. Appears to be out of bell and seal likely compromised.
B251-B24	5	Storm drain	Joint Defect	0 ft	Pipe connection at B251 not sealed.
GT5-SSMH16	5	Sewer Lateral	Deformed	27 ft, 29 ft, 37 ft	Minor surface deformations. Seal not compromised
GT4-SSMH13	6	Sewer Lateral	Joint Defect	34 ft	Joint offset approx. 20%. Seal likely compromised.
			Deformed	46 ft	Major deformation constricting pipe.
GT2-SSMH6	8	Sewer Lateral	Joint Defect	19 ft	Minor joint offset in crown. Seal likely intact in coupler.
GT9-SSMH101	22	Sewer Lateral	Intruding Sealing Material	11.5 ft & 14.5 ft	Gaskets intruding at building connection and coupler. Seal likely intact.
GT1-SSMH103	10	Sewer Lateral	Broken	52 ft	Elbow appears broken 9 o'clock to 12 o'clock.
C/O1-SSMH23	20	Sewer Lateral	Joint Defect	13.6 ft	Joint offset approx. 15%. Seal possibly compromised.
			Joint Defect	88 ft	Joint offset approx. 15% at transition coupler. Seal intact.
C/O5-SSMH23	20	Sewer Lateral	Joint Defect	200 ft	Joint offset with soil visible. Seal compromised.
<ol style="list-style-type: none"> 1. Segment identifiers are based on preliminary mapping from as-built drawings and survey work. Drawings are not final and will be updated as inspections verify connectivity and existence of structures. 2. Figure numbering from preliminary map set included as Appendix 1 of the CCTV Week Status Report for Week 1 dated April 15, 2019. 3. Distance from inspection report and measured from beginning of inspection. 4. ft: feet 					



Technical Memorandum

Reference: 516025.105
Date: May 6, 2019
To: Kenny Croyle, Central Valley Regional Water Quality Control Board
From: Mike Foget, PE, SHN
Subject: **Mule Creek State Prison–CCTV Weekly Status Report (Week #4)**

This technical memorandum summarizes major findings for the closed-circuit television (CCTV) inspection of the storm drain and sanitary sewer system at Mule Creek State Prison (MCSP). The inspections summarized in this memorandum were completed from April 8, 2019, to April 12, 2019, by Nor Cal Pipeline Services.

A total of 40 segments of the sanitary sewer system and storm drain system were inspected, including 20 sewer lateral segments and 20 storm drain segments. In total, approximately 4,867 lineal feet (LF) were inspected. A summary of major findings for this inspection work is included in Table 1.

Table 1. Week 4 CCTV Major Findings, April 8-12, 2019
Mule Creek State Prison, Ione, California

Segment ¹	Figure ²	Segment Type	Finding	Distance from Start of Inspection ³	Comment
JGT8-P146	23	Storm drain	Broken	34 ft ⁴	Broken with soil visible
P145-P144	12 & 23	Storm drain	Joint Defect	67 ft	Joint separated with soil visible
P142A-P142	22	Storm drain	Hole	42 ft	Hole in crown with void visible
			Deformed	50 ft - 60 ft	Pipe crown deformed with void visible
P155-P156	5	Storm drain	Deformed	19 ft	Minor deformation in crown but pipe not compromised
<p>1. Segment identifiers are based on preliminary mapping from as-built drawings and survey work. Drawings are not final and will be updated as inspections verify connectivity and existence of structures.</p> <p>2. Figure numbering from preliminary map set included as Appendix 1 of the CCTV Week Status Report for Week 1 dated April 15, 2019.</p> <p>3. Distance from inspection report and measured from beginning of inspection.</p> <p>4. ft: feet</p>					



Technical Memorandum

Reference: 516025.105
Date: May 13, 2019
To: Kenny Croyle, Central Valley Regional Water Quality Control Board
From: Mike Foget, PE, SHN
Subject: **Mule Creek State Prison–CCTV Weekly Status Report (Week #5)**

This technical memorandum summarizes major findings for the closed-circuit television (CCTV) inspection of the storm drain and sanitary sewer system at Mule Creek State Prison (MCSP). The inspections summarized in this memorandum were completed from April 16, 2019, to April 19, 2019, by Nor Cal Pipeline Services. Storm drain cleaning was performed on Monday April 15, 2019; however, no CCTV inspections were completed on that day.

A total of 55 segments of the sanitary sewer system and storm drain system were inspected, including one sewer main segment and 54 storm drain segments. In total, approximately 4,623 lineal feet (LF) were inspected. A summary of major findings for this inspection work is included in Table 1.

Table 1. Week 5 CCTV Major Findings, April 16-19, 2019
Mule Creek State Prison, Ione, California

Segment ¹	Figure ²	Segment Type	Finding	Distance from Start of Inspection ³	Comment
SSMH300-SSMH21	19	Sewer Main	Joint Defect	0.5 ft	Minor joint offset at coupler, seal likely intact
			Infiltration Stain	19.5 ft	Staining at lateral wye connection to main, indications of infiltration
			Lateral Defect	138 ft	Lateral intruding into pipe, seal possibly poor
			Joint Defect	207.5 ft	Minor joint offset at coupler, seal likely intact
P161-P162	6	Storm Drain	Joint Defect	35.1 ft	Large joint separation with gravel visible.
			Joint Defect	54.2 ft	Infiltration at joint
P162-P163	7	Storm Drain	Roots	140 ft	Fine roots in joint.

Table 1. Week 5 CCTV Major Findings, April 16-19, 2019

Mule Creek State Prison, Lone, California

Segment ¹	Figure ²	Segment Type	Finding	Distance from Start of Inspection ³	Comment
P163-P164	7	Storm Drain	Repair	42.4 ft	Repair patch in crown, may not be well sealed.
P164-MAINOUT	7	Storm Drain	Roots	40 ft	Fine roots in joint.
MAINOUT-OUT1	7	Storm Drain	Corrosion	0-70 ft	Invert has surface corrosion, but pipe wall does not appear to be compromised.
MAINOUT-OUT2	7	Storm Drain	Corrosion	0-70 ft	Invert has surface corrosion, but pipe wall does not appear to be compromised.
CB9-CB12	20	Storm Drain	Joint Defect	82.7 ft	Joint separation occurred in coupler, seal likely intact.
CB12-CB13	20	Storm Drain	Joint Defect	82.7 ft	Joint offset occurred in coupler, seal likely intact.
CB13-CB14	20	Storm Drain	Joint Defect	82.2 ft	Joint offset occurred in coupler, seal likely intact.
CB15-CB13	20	Storm Drain	Joint Defect	13.3 ft	Joint offset occurred in coupler, seal likely intact.
CB16-CB14	20	Storm Drain	Joint Defect	14 ft	Joint offset appears to be in a coupler, seal likely intact.
B29-P152	4	Storm Drain	Joint Defect	1 ft	Joint offset appears to be in coupler, seal likely intact.
A10-P166	7	Storm Drain	Joint Defect	7 ft	Joint separation, not out of bell. Seal likely intact.
A1A-P161	6	Storm Drain	Joint Defect	1.5 ft	Joint offset in coupler, seal likely intact

Table 1. Week 5 CCTV Major Findings, April 16-19, 2019

Mule Creek State Prison, Ione, California

Segment ¹	Figure ²	Segment Type	Finding	Distance from Start of Inspection ³	Comment
A4-P162	6	Storm Drain	Joint Defect	6 ft	Joint offset in coupler, seal likely intact.
A4-P162	6	Storm Drain	Joint Defect	43 ft	Joint separation in coupler, seal likely intact.
CB11-CB12	20	Storm Drain	Joint Defect	13.2 ft	Joint offset in coupler, seal likely intact.
			Infiltration	32.1 ft	Dripping infiltration through joint.
			Joint Defect	52.6 ft	Joint separated with gasket exposed, seal likely compromised.
A13-P134	8	Storm Drain	Joint Defect	9 ft	Joint separation in coupler, seal likely intact.
			Joint Defect	25.8 ft	Joint separation possibly in coupler, seal likely intact.
			Joint Defect	33.7 ft	Joint separation in coupler, seal likely intact.
A11-A12	8	Storm Drain	Joint Defect	0 ft	Pipe entrance to A12 poorly sealed
A16-A15	9	Storm Drain	Joint Defect	58.7 ft	Joint separation, seal likely compromised.
C59-OUT	11	Storm Drain	Repair	36 ft	Hole with concrete slurry visible. Seal quality unknown.
C177-C64	12	Storm Drain	Joint Defect	144.4 ft	Joint separated, gasket visible. Seal likely compromised.
C257-OUT	13	Storm Drain	Crack	1 ft	Minor crack at a joint

Table 1. Week 5 CCTV Major Findings, April 16-19, 2019
Mule Creek State Prison, Ione, California

Segment ¹	Figure ²	Segment Type	Finding	Distance from Start of Inspection ³	Comment
C207-C54	11	Storm Drain	Joint Defect	11 ft	Joint separation in coupler, seal likely intact
			Joint Defect	31 ft	Joint separation in coupler, seal likely intact.
			Joint Defect	39 ft	Joint offset, seal likely intact.
			Joint Defect	59 ft	Joint separation in coupler, seal likely intact.
			Joint Defect	79 ft	Joint separation in reducer, seal likely intact.
			Joint Defect	100 ft	Abrupt size transition, seal quality unknown.
			Joint Defect	127 ft	Joint separation, seal likely intact.
C60-C59	11	Storm Drain	Deformed	37 ft	Crown deformed, seal intact.
C56-C58	11	Storm Drain	Intruding tap	116.7 ft	Tap from roof drain intruding into pipe.
JGT9-C63	12	Storm Drain	Joint Defect	52 ft	Joint separated. Seal likely compromised.
			Joint Defect	60 ft	Joint separated. Seal likely compromised.
			Joint Defect	80 ft	Joint offset in coupler, seal likely intact.
1. Segment identifiers are based on preliminary mapping from as-built drawings and survey work. Drawings are not final and will be updated as inspections verify connectivity and existence of structures.					
2. Figure numbering from preliminary map set included as Appendix 1 of the CCTV Week Status Report for Week 1 dated April 15, 2019.					
3. Distance from inspection report and measured from beginning of inspection.					
4. ft: feet					



Technical Memorandum

Reference: 516025.105
Date: May 17, 2019
To: Kenny Croyle, Central Valley Regional Water Quality Control Board
From: Mike Foget, PE, SHN
Subject: **Mule Creek State Prison-CCTV Weekly Status Report (Week #6)**

This technical memorandum summarizes major findings for the closed-circuit television (CCTV) inspection of the storm drain and sanitary sewer system at Mule Creek State Prison (MCSP). The inspections summarized in this memorandum were completed from April 22, 2019, to April 26, 2019, by Nor Cal Pipeline Services.

A total of 39 segments of the storm drain system were inspected and no sanitary sewer segments were inspected. In total, approximately 1,523 lineal feet (LF) were inspected. All inspected storm drain segments were located in yards A and B with the exception of two segments in the A Facility "No Man's Land" area. A summary of major findings for this inspection work is included in Table 1.

Table 1. Week 6 CCTV Major Findings, April 22-26, 2019
Mule Creek State Prison, Ione, California

Segment ¹	Figure ²	Segment Type	Finding	Distance from Start of Inspection ³	Comment
Y4-A8	8	Storm Drain	Broken	28.8 ft ⁴	Break at joint in corrugated pipe, seal compromised
			Broken	33.5 ft	Corrugated pipe broken with soil visible
A239-A241	7	Storm Drain	Defective Tap	9.9 ft & 26.4 ft	Intruding taps into corrugated pipe, seal likely compromised
A240-JY5	7	Storm Drain	Joint Defect	6.6 ft	Joint separated with gaskets exposed
			Joint Defect	24.2 ft	Joint separated, seal likely compromised
A239-WYE	7	Storm Drain	Joint Defect	6 ft	Separation at wye, seal likely compromised

Table 1. Week 6 CCTV Major Findings, April 22-26, 2019
Mule Creek State Prison, Ione, California

Segment ¹	Figure ²	Segment Type	Finding	Distance from Start of Inspection ³	Comment
A238-A237	7	Storm Drain	Intruding Sealing Material	21 ft	Intruding gasket, seal likely compromised
			Broken	41 ft	Pipe broken at separated joint
A237A-A237	7	Storm Drain	Joint Defect	20.9 ft	Joint offset at material transition to corrugated pipe
			Collapse	30.9 ft	Corrugated pipe fully collapsed
			Collapse	14.2 ft ⁵	Corrugated pipe collapsed at material transition
A235-A234	7	Storm Drain	Collapse	1 ft	Corrugated pipe collapsed at material transition
WYE320-A229	8	Storm Drain	Joint Defect	8 ft	Joint offset at material transition to corrugated pipe
			Joint Defect	30.4 ft	Joints poorly sealed at corrugated wye
AEP222-A222	8	Storm Drain	Collapse	21.9 ft	Corrugated pipe 80% collapsed
A223-A225	8	Storm Drain	Joint Defect	33.2 ft	Joint separated at coupler in corrugated pipe, seal likely intact
			Collapse	36.3 ft	Corrugated pipe 80% collapsed.
A224-A225	8	Storm Drain	Deformed	1.1 ft-4.5 ft	Crown partially collapsed in corrugated pipe but no hole or break.
			Broken	7.6 ft	Corrugated pipe broken with soil visible.

Table 1. Week 6 CCTV Major Findings, April 22-26, 2019
Mule Creek State Prison, Ione, California

Segment ¹	Figure ²	Segment Type	Finding	Distance from Start of Inspection ³	Comment
AEP226-A226	8	Storm Drain	Roots	8.2 ft & 10.2 ft	Fine roots in corrugated pipe joint.
			Defective Tap	20.4 ft	Intruding corrugated lateral pipe, seal likely compromised.
A227-A229	8	Storm Drain	Holes	7.3 ft	Hole in corrugated rib, gravel visible.
			Collapse	43.2 ft	Corrugated pipe 80% collapsed
			Collapse	2.7 ft ⁵	Corrugated pipe 60% collapsed
A229-A231	8	Storm Drain	Broken	6.9 ft & 7.6 ft	Corrugated pipe broken with soil visible.
A236-WYE236	8	Storm Drain	Deformed	6.8 ft & 8.4 ft	Crown deformed in corrugated pipe but no break or hole visible.
A225A-A11	8	Storm Drain	Repair	46.6 ft	Repaired hole in crown, seal appears good.
			Intruding Sealing Material	96 ft	Gasket from bell contained in transition fitting. Seal integrity appears intact.

1. Segment identifiers are based on preliminary mapping from as-built drawings and survey work. Drawings are not final and will be updated as inspections verify connectivity and existence of structures.
2. Figure numbering from preliminary map set included as Appendix 1 of the CCTV Week Status Report for Week 1 dated April 15, 2019.
3. Distance from inspection report and measured from beginning of inspection.
4. ft: feet
5. Distance from downstream structure, inspection was performed from both directions due to obstruction or collapsed pipe.

Figure 1 provides an overview of the work completed this week. Attachment 1 includes Figures 7 and 8, which have been updated from the preliminary mapping set that was submitted with the Week 1 CCTV Status Report. These figures are updated to reflect additional pipes that were encountered during the inspections; however, they are still considered preliminary and may be further updated as needed.





Technical Memorandum

Reference: 516025.105
Date: May 24, 2019
To: Kenny Croyle, Central Valley Regional Water Quality Control Board
From: Mike Foget, PE, SHN
Subject: **Mule Creek State Prison–CCTV Weekly Status Report (Week #7)**

This technical memorandum summarizes major findings for the closed-circuit television (CCTV) inspection of the storm drain and sanitary sewer system at Mule Creek State Prison (MCSP). The inspections summarized in this memorandum were completed from April 30, 2019 to May 3, 2019 (week #7) by Nor Cal Pipeline Services. Due to equipment software updates, no CCTV inspections were performed on Monday April 29, 2019.

A total of 49 segments of the storm drain system were inspected. All inspections were located in yards B and C, and no segments of the sanitary sewer were completed. In total, approximately 2,134 lineal feet (LF) were inspected. A summary of major findings for this work is included in Table 1.

Table 1. Week 7 CCTV Major Findings, April 30-May 3, 2019
Mule Creek State Prison, Ione, California

Segment ¹	Diameter (Inches)	Pipe Material	Figure ²	Segment Type	Finding	Distance from Start of Inspection ³	Comment
INAC193-C193	4	PVC ⁵	12	Storm Drain	Deformed	0.6 ft ⁴	Deformation causing offset joint and poor seal
INBC193-C193	6	PVC	12	Storm Drain	Infiltration Stain	6.1 ft	Minor stain in crown
C193-C187	6	PVC	12	Storm Drain	Repair	38.7 ft	Repaired cutout. Repair is rough but possibly sealed.
C187-C186	6	PVC	12	Storm Drain	Defective Tap	7.7 ft & 12.6 ft	Cut-in connections are poorly sealed.
C189-C186	10	PVC	12	Storm Drain	Joint Defect	10.8 ft	Offset joint seal likely compromised
C188-UNK3	8	PVC	12	Storm Drain	Joint Defect	1.7 ft	Poor transition to corrugated pipe, seal appears compromised
					Roots	6.5 ft & 10.9 ft	Minor roots in joints
C188-UNK3	8	PVC	12	Storm Drain	Deformed	12.3 ft -17.3 ft	Deformed in corrugated pipe but not holes or breaks

Table 1. Week 7 CCTV Major Findings, April 30-May 3, 2019
Mule Creek State Prison, Ione, California

Segment ¹	Diameter (Inches)	Pipe Material	Figure ²	Segment Type	Finding	Distance from Start of Inspection ³	Comment
C198-C185	6	PVC	12	Storm Drain	Joint Defect	0.5 ft	Abrupt transition to small diameter pipe without fitting. Soil visible and transition not sealed.
C185-C184	6	PVC	12	Storm Drain	Repair	19.5 ft	Repaired cut out in crown. Pipe is blocked and appears abandoned upstream.
C184-C183	6	PVC	12	Storm Drain	Defective Tap	14.5 ft	Broken-in and intruding connection, seal appears poor
C183-C181	6	PVC	12	Storm Drain	Defective Tap	0.5 ft	Broken in connection. Seal appears poor
					Crack	12.6 ft	Possible crack 5 o'clock to 3 o'clock
					Repair	13.4 ft	Repaired cut out in crown. Seal likely poor
C181A-WYE181	12	PVC	12	Storm Drain	Joint Defect	38.2 ft	Abrupt transition to small diameter pipe without fitting. Soil visible and transition not sealed.
INB14-C171	6	PVC	12	Storm Drain	Conflicting Alignment	10.4 ft	Small diameter pipe cut through 6-inch drain line. Holes in main pipe with seal compromised.
C171-C172	6	PVC	12	Storm Drain	Broken	6.3 ft	Break in crown of perforated drain segment
C172-C173	6	PVC	12	Storm Drain	Broken	11.1 ft	Cut in hole with no connection or patch. Soil visible. Co-located with crack in pipe.
					Repair	23.8 ft	Repaired break, seal possibly intact.
1. Segment identifiers are based on preliminary mapping from as-built drawings and survey work. Drawings are not final and will be updated as inspections verify connectivity and existence of structures. 2. Figure numbering from preliminary map set included as Appendix 1 of the CCTV Week Status Report for Week 1 dated April 15, 2019.							3. Distance from inspection report and measured from beginning of inspection. 4. ft: feet 5. PVC: polyvinyl chloride



Technical Memorandum

Reference: 516025.105
Date: June 3, 2019
To: Kenny Croyle, Central Valley Regional Water Quality Control Board
From: Mike Foget, PE, SHN
Subject: **Mule Creek State Prison–CCTV Weekly Status Report (Week #8)**

This technical memorandum summarizes major findings for the closed-circuit television (CCTV) inspection of the storm drain and sanitary sewer system at Mule Creek State Prison (MCSP). The inspections summarized in this memorandum were completed from May 6, 2019, to May 10, 2019, by Nor Cal Pipeline Services.

A total of 18 segments of the sanitary sewer system and storm drain system were inspected, including 8 sanitary sewer segments and 10 storm drain segments. In total, approximately 1,455 lineal feet (LF) were inspected. A summary of major findings for this inspection work is included in Table 1.

Table 1. Week 8 CCTV Major Findings, May 6-10, 2019
Mule Creek State Prison, Ione, California

Segment ¹	Diameter (inches)	Pipe Material	Figure ²	Segment Type	Finding	Distance from Start of Inspection ³	Comment
C206-C170A ⁴	8	PVC ⁵	26 ⁶	Storm Drain	Deformed	6 ft ⁷	Minor deformation in corrugated pipe segment
					Hole	14.1 ft & 28.7 ft	Small hole in corrugated rib, rock backfill visible
					Defective Tap	66.4 ft	Intruding connection into corrugation appears poorly sealed and obstructs pipe.
C190-C206	6	PVC	13	Storm Drain	Broken	0.5 ft	Pipe entrance to catch basin is broken but not collapsed.

Mule Creek State Prison–CCTV Weekly Status Report (Week #8)

June 3, 2019

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Table 1. Week 8 CCTV Major Findings, May 6-10, 2019
Mule Creek State Prison, Ione, California

Segment ¹	Diameter (inches)	Pipe Material	Figure ²	Segment Type	Finding	Distance from Start of Inspection ³	Comment
C206-C170 ⁸	8	PVC	11 & 26	Storm Drain	Joint Defect	83.7 ft	Separated joint, likely in coupler
					Defective Tap	107.5 ft	Connection to corrugated pipe appears to be poorly sealed.
C206-C170 ⁸	8	PVC	11 & 26	Storm Drain	Joint Defect	206.3 ft	Separated joint in coupler, seal likely intact.
					Deformed	230.1 ft	Corrugated pipe deformed, co-located with break and a defective connection
					Broken	231.1 ft	Corrugated pipe broken/cracked from 9 o'clock to 5 o'clock with soil visible
					Defective Tap	232.3 ft	Connection to corrugated pipe appears poorly sealed, co-located with broken defect
GT1-SSMH103	4	PVC	10 & 11	Sanitary Sewer	Joint Defect	1.0 ft	Circumferential crack at joint
C2-1B	4	PVC	14	Sanitary Sewer	Deformed / Joint Defect/ Broken	15.1 ft - 16.4 ft	Deformation, separation and break are in PVC and are co-located at the building connection transition to cast iron pipe.

Table 1. Week 8 CCTV Major Findings, May 6-10, 2019**Mule Creek State Prison, Ione, California**

Segment ¹	Diameter (inches)	Pipe Material	Figure ²	Segment Type	Finding	Distance from Start of Inspection ³	Comment
<ol style="list-style-type: none"> 1. Segment identifiers are based on preliminary mapping from as-built drawings and survey work. Drawings are not final and will be updated as inspections verify connectivity and existence of structures. 2. Figure numbering from preliminary map set included as Appendix 1 of the CCTV Week Status Report for Week 1 dated April 15, 2019. 3. Distance from inspection report and measured from beginning of inspection. 4. Inspection completed from C206 towards C170, see Figure 26. 5. PVC: polyvinyl chloride 6. Figure 26 is a new figure added to the original map set. 7. ft: feet 8. Also inspected May 6, 2019, with segment name "C170A-C170." Re-inspected May 7, 2019, to correct segment name. Findings are from both inspections. 							

Figure 1 provides an overview of the work completed this week. Attachment 1 includes Figures 10 and 11, which have been updated from the preliminary mapping set that was submitted with the Week 1 CCTV Status Report. These figures were updated to reflect additional pipes that were encountered during the inspections; however, they are still considered preliminary and may be further updated as needed.

For the eighth week of CCTV inspections, eight segments of sanitary sewer system were inspected. Defects were only identified in segment C2-1B, which is a center corridor lateral that services the meat packing facility. Defects called out in this inspection included infiltration, deformed pipe, a separated joint, and broken pipe. All of the defects were in one location at the transition from PVC pipe material to cast iron. The cause of the defect is likely damage from the now abandoned hot loop system. From the downstream side, this segment could only be inspected up to the building connection due to the defects; therefore, it will be attempted from the upstream cleanout at a later date.

The storm drain segments that were inspected this week were located in the Facility C yard and one segment in the Plant Ops yard near building C2-3. Defects identified included: deformed pipe, holes, broken pipe, joint defects, and defective taps. Defects were primarily located in the corrugated pipe that was inspected in the C yard. As discussed in previous weekly status reports, corrugated pipe does not hold up well to vertical loading and is not very resistant to impacts or punctures; additionally, due to the corrugations, sealing of connections has not been observed to be very successful.

For informational purposes, provisional reports for the eighth week of CCTV inspection are included as Attachment 2. Due to file size restrictions, the inspection video files are submitted digitally.



Technical Memorandum

Reference: 516025.105
Date: June 10, 2019
To: Kenny Croyle, Central Valley Regional Water Quality Control Board
From: Mike Foget, PE, SHN
Subject: **Mule Creek State Prison–CCTV Weekly Status Report (Week #9)**

This technical memorandum summarizes major findings for the closed-circuit television (CCTV) inspection of the storm drain and sanitary sewer system at Mule Creek State Prison (MCSP). The inspections summarized in this memorandum were completed from May 16, 2019, to May 19, 2019, by Nor Cal Pipeline Services.

A total of 15 segments were inspected, including 9 sanitary sewer laterals, 4 grease waste laterals, and 2 storm drain segments. In total, approximately 1,430 lineal feet (LF) were inspected. A summary of major findings for this inspection work is included in Table 1.

Table 1. Week 9 CCTV Major Findings, May 16-19, 2019
Mule Creek State Prison, Ione, California

Segment ¹	Diameter (inches)	Pipe Material	Figure ²	Segment Type	Finding	Distance from Start of Inspection ³	Comment
B2-3A	4	CI ⁴ /PVC ⁵	15	Grease Waste	Joint Defect	40.4 ft ⁶	Joint offset at building connection. Seal likely intact in coupler.
C2-3C ⁷	4	CI/PVC	14	Sanitary Sewer	Joint Defect	115 ft	Joint offset in PVC; seal is possibly compromised.
					Intruding Gasket	39 ft, 70.2 ft, 95.4 ft, 104.2 ft, & 111.5 ft	Gasket material intruding at joints in CI; seals appear intact.
B/C112-WYE BC112	6	PVC	15	Storm Drain	Infiltration	0 ft	Steady infiltration through connection to catch basin.

Table 1. Week 9 CCTV Major Findings, May 16-19, 2019
Mule Creek State Prison, Ione, California

Segment ¹	Diameter (inches)	Pipe Material	Figure ²	Segment Type	Finding	Distance from Start of Inspection ³	Comment
C2-1A	4	CI/PVC	15	Grease Waste	Infiltration	79.5 ft	Infiltration through joint in CI
					Joint Defect	99.3 ft	Joint separation at building connection. In coupler, seal is likely intact.
C2-1B	4	CI/PVC	15	Sanitary Sewer	Joint Defect	114.5 ft	Joint separated at building connection. Rubber coupler visible. Seal is likely intact.
					Deformed	124 ft	PVC deformed 25%.
					Broken	124.7 ft	Broken/hole in PVC result of deformation, soil visible
					Joint Defect	133.4 ft	Joint separation at coupler, seal is likely intact.
C2-3A	4	CI/PVC	14	Grease Waste	Joint Defect	95 ft	Joint offset at building connection. In coupler, seal is likely intact.
C1-3A	4	CI/PVC	15	Sanitary Sewer	Intruding Gasket	20.4 ft	Gasket intruding at building connection; seal is likely intact.
					Corrosion	20.6 ft–127.7 ft	Pipe wall does not appear to be compromised, and invert is intact.

Table 1. Week 9 CCTV Major Findings, May 16-19, 2019
Mule Creek State Prison, Ione, California

Segment ¹	Diameter (inches)	Pipe Material	Figure ²	Segment Type	Finding	Distance from Start of Inspection ³	Comment
C1-3C	4	CI/PVC	15	Sanitary Sewer	Corrosion	6 ft–127.2 ft	Pipe wall does not appear to be compromised, and invert is intact.
B2-1C	4	CI/PVC	15	Sanitary Sewer	Corrosion	65.8 ft–130.5 ft	Pipe wall does not appear to be compromised, and invert is intact. Corrosion appears thicker than other segments.
B2-1B	4	CI/PVC	15	Sanitary Sewer	Corrosion	60.4 ft – 127.7 ft	Pipe wall does not appear to be compromised, and invert is intact. Corrosion appears thicker than other segments.
					Infiltration	62.1 ft	Active infiltration through point defect in crown of CI.
B2-2A	4	CI/PVC	15	Sanitary Sewer	Joint Defect	22.4 ft	Joint offset at building connection. In rubber coupler, seal is likely intact.

1. Segment identifiers are based on preliminary mapping from as-built drawings and survey work. Drawings are not final and will be updated as inspections verify connectivity and existence of structures.
2. Figure numbering from preliminary map set included as Appendix 1 of the CCTV Week Status Report for Week 1 dated April 15, 2019.
3. Distance from inspection report and measured from beginning of inspection.
4. CI: Cast Iron
5. PVC: Polyvinyl chloride
6. ft: feet
7. CCTV report labels inspection as "C2-C3"



Technical Memorandum

Reference: 516025.105
Date: June 17, 2019
To: Kenny Croyle, Central Valley Regional Water Quality Control Board
From: Mike Foget, PE, SHN
Subject: **Mule Creek State Prison–CCTV Weekly Status Report (Week #10)**

This technical memorandum summarizes major findings for the closed-circuit television (CCTV) inspection of the storm drain and sanitary sewer system at Mule Creek State Prison (MCSP). The inspections summarized in this memorandum were completed from May 22, 2019, to May 24, 2019, by Nor Cal Pipeline Services.

A total of 13 segments were inspected, including 10 sanitary sewer laterals and 3 storm drain segments. In total, approximately 1,193 lineal feet (LF) were inspected. A summary of major findings for this inspection work is included in Table 1.

Table 1. Week 10 CCTV Major Findings, May 22-24, 2019
Mule Creek State Prison, Ione, California

Segment ¹	Diameter (inches)	Pipe Material	Figure ²	Segment Type	Finding	Distance from Start of Inspection ³	Comment
B1-1A ⁴	6	PVC ⁵ /CI ⁶	17	Sanitary Sewer	Deformed	7.3 ft & 9.8 ft ⁷	PVC deformation is minor with no loss of seal integrity.
					Intruding Sealing Material	52.5 ft–117.4 ft	Gasket visible in all CI joints; however, seals appear intact.
					Corrosion	52.5 ft–130.3 ft	Corrosion is minor and pipe wall does not appear to be compromised. Invert intact.
A1-2B ⁸	3	PVC/CI	17	Sanitary Sewer	Corrosion	17.3 ft	Corrosion is minor and superficial.

Table 1. Week 10 CCTV Major Findings, May 22-24, 2019
Mule Creek State Prison, Ione, California

Segment ¹	Diameter (inches)	Pipe Material	Figure ²	Segment Type	Finding	Distance from Start of Inspection ³	Comment
A/B121-SDMH505 ⁹	6	PVC	17	Storm Drain	Infiltration	74.4 ft	High rate infiltration through point defect, associated with deformation in crown.
					Deformed	74.4 ft	Crown deformed 25% in PVC.
B-4	4	PVC/CI	17	Sanitary Sewer	Deformed	10.4 ft–13.4 ft, 22.2 ft, 37.4 ft–41.2 ft	Minor deformations in PVC with no seal integrity loss.
					Joint Defect	43 ft	Separated but not out of bell. Seal likely intact.
					Joint Defect	69.3 ft	Separated in rubber coupler. Seal is likely intact.
					Corrosion	71.8 ft–109.2 ft	Moderate corrosion, but invert is intact.
					Intruding Sealing Material	94.3 ft, 105 ft, 105.6 ft	Gaskets visible in joints; however, seals appear intact.
A1-2A	4	PVC	17 & 18	Sanitary Sewer	Deformed	16.6 ft, 25.5 ft–28.5ft	25%-40% deformation in PVC with no seal integrity loss.

Table 1. Week 10 CCTV Major Findings, May 22-24, 2019
Mule Creek State Prison, Ione, California

Segment ¹	Diameter (inches)	Pipe Material	Figure ²	Segment Type	Finding	Distance from Start of Inspection ³	Comment
A1-1A	4	PVC/CI	16	Sanitary Sewer	Joint Defect	0 ft	Separation with gasket is visible. Seal is likely compromised.
					Joint Defect	17.5 ft	Offset at building connection. In coupler, seal is likely intact.
					Corrosion	17.5 ft–127.3 ft	Moderate corrosion, invert appears intact.
					Intruding Sealing Material	35 ft & 54 ft	Gaskets visible in joints; however, seals appear intact.
B9	4	PVC/CI	16	Sanitary Sewer	Joint Defect	8.2 ft & 10.1 ft	Joint offset in coupler. Seal is likely intact.
					Corrosion	10.1 ft–45.2 ft	Corrosion is very minor and not compromising wall thickness
A2-2B	4	PVC/CI	18	Sanitary Sewer	Corrosion	46.5 ft–136.3 ft	Moderate corrosion, invert appears intact.
					Intruding Sealing Material	54.8 ft, 65.2 ft, 76.3 ft	Gaskets visible in joints; however, seals appear intact.
A/B119	6	PVC	18	Storm Drain	Joint Defect	6.2 ft	Joint offset, seal is possibly compromised.

Table 1. Week 10 CCTV Major Findings, May 22-24, 2019
Mule Creek State Prison, Ione, California

Segment ¹	Diameter (inches)	Pipe Material	Figure ²	Segment Type	Finding	Distance from Start of Inspection ³	Comment
A2-3A	4	PVC/CI	17 & 18	Sanitary Sewer	Corrosion	40.9 ft – 128 ft	Corrosion is minor and does not appear to compromise wall thickness.
					Intruding Sealing Material	51.7 ft – 120.6 ft	Gaskets is visible in CI joints; however, seals appear intact.
A2-2A	4	PVC/CI	18	Sanitary Sewer	Deformed	16.1 ft	Minor and not at risk of seal integrity loss.
					Joint Defect	22.8 ft	Separation at deflection, seal is possibly compromised.
					Corrosion	30 ft – 60 ft	Corrosion moderate but invert appears intact.
						60 ft – 165.1 ft	Corrosion is minor and does not appear to compromise wall thickness
					Intruding Sealing Material	69.9 ft – 152.6 ft	Gaskets visible in CI joints; however, seals appear intact.
B1-2D	4	PVC/CI	18	Sanitary Sewer	Corrosion	16.5 ft – 148.7 ft	Corrosion is moderate but invert appears intact.

Table 1. Week 10 CCTV Major Findings, May 22-24, 2019**Mule Creek State Prison, Ione, California**

Segment ¹	Diameter (inches)	Pipe Material	Figure ²	Segment Type	Finding	Distance from Start of Inspection ³	Comment
1. Segment identifiers are based on preliminary mapping from as-built drawings and survey work. Drawings are not final and will be updated as inspections verify connectivity and existence of structures. 2. Figure numbering from preliminary map set included as Appendix 1 of the CCTV Week Status Report for Week 1 dated April 15, 2019. 3. Distance from inspection report and measured from beginning of inspection. 4. Labeled as "B1-1-SSMH109" in CCTV inspection report. 5. PVC: Polyvinyl chloride 6. CI: Cast Iron 7. ft: feet 8. Labeled as "A1-2B-SSMH109" in CCTV inspection report. 9. CCTV inspection report mislabeled this segment as "AB140-SDMH505."							

For the tenth week of CCTV inspections, all segments were located in the center corridor in the A/B section. Work included 3 storm drain segments in the loading docks and 10 sewer lateral segments. Figure 1 provides an overview of the work completed this week. Inspections were attempted from the mainline with a lateral launching camera and from endline cleanouts with a push camera. Several of the laterals were not fully inspected from the mainline and are being tracked for completion from the cleanout at a later date. These segments include: A1-2A, A1-1A, A2-3A, and B1-2D.

Defects encountered in the sewer laterals included: joint separations and offsets, deformations, intruding gaskets, and corrosion. The joint defects occurring in couplers are not expected to have compromised seals. Intruding gaskets are also a low risk of seal integrity loss, and none of the intruding gaskets were observed to have infiltration. Deformation occurred only in PVC portions of the laterals and the cause is likely proximity to the now abandoned hot loop system. None of the deformations in the laterals appeared to result in holes or breaks. Corrosion was noted in nearly all of the inspected lateral segments. This corrosion occurred in the cast iron portion of the laterals, which is expected to be underneath the building slab. The degree of corrosion appeared to be generally consistent with other segments that have been inspected; however, corrosion in laterals A1-1A, B-4, A2-2B, B1-2D appeared thicker than in other segments. In all of the cast iron laterals inspected in week 10, the invert of the pipe appeared to be intact.

In the storm drain segments that were inspected this week, infiltration, deformed pipe, and a joint offset were noted. As with the deformations in the sewer laterals, the cause is likely from the now abandoned hot loop system. In segment A/B121-SDMH505, a deformation in the crown resulted in a defect that was allowing a steady flow of infiltration into the storm drain system. The joint offset was located in the segment connected from catch basin A/B119 to the storm drain main line. This defect possibly had poor seal quality; however, no active infiltration was observed.



Technical Memorandum

Reference: 516025.105
Date: July 1, 2019
To: Kenny Croyle, Central Valley Regional Water Quality Control Board
From: Mike Foget, PE, SHN
Subject: **Mule Creek State Prison–CCTV Weekly Status Report (Week #11)**

This technical memorandum summarizes major findings for the closed-circuit television (CCTV) inspection of the storm drain and sanitary sewer system at Mule Creek State Prison (MCSP). The inspections summarized in this memorandum were completed from June 5, 2019, to June 9, 2019, by Nor Cal Pipeline Services.

A total of 19 segments were inspected, including 12 sanitary sewer laterals, 4 grease waste segments, and 3 storm drain segments. In total, approximately 1,997 lineal feet (LF) were inspected. A summary of major findings for this inspection work is included in Table 1.

Table 1. Week 11 CCTV Major Findings, June 5-9, 2019
Mule Creek State Prison, Ione, California

Segment ¹	Diameter (inches)	Pipe Material	Figure ²	Segment Type	Finding	Distance from Start of Inspection ³	Comment
C1-1A ⁴	4	PVC ⁵ /CI ⁶	16	Sanitary Sewer	Corrosion	17.3 ft ⁽⁷⁾ - 155 ft	Pipe wall does not appear to be compromised; invert is intact.
					Intruding Gasket	62.9 ft-155 ft	Gasket material is intruding at most joints in CI; seal appears intact.
C1-2A	4	CI	15	Grease Waste	Corrosion	0.4 ft- 125.5 ft	Corrosion is minor to moderate, invert appears intact.
B93-B91	8	PVC	16	Storm Drain	Joint Defect	9.7 ft	Joint offset, seal is possibly compromised.
A1-1A ^{8,9}	4	CI	16	Sanitary Sewer	Corrosion	0 ft- 116.3 ft	Corrosion is minor, invert intact.

Table 1. Week 11 CCTV Major Findings, June 5-9, 2019
Mule Creek State Prison, Ione, California

Segment ¹	Diameter (inches)	Pipe Material	Figure ²	Segment Type	Finding	Distance from Start of Inspection ³	Comment
					Intruding Sealing Material	10.4 ft– 99.2 ft	Gasket material is intruding at most joints in CI; seal appears intact.
					Joint Defect	107.2 ft	Joint separation is actually a reducer from 6 in. ¹⁰ to 4 in. Seal intact.
A2-3A ⁹	4	CI	17 & 18	Sanitary Sewer	Corrosion	0 ft- 65.8 ft	Corrosion appears minor with invert intact.
					Intruding Sealing Material	14.2 ft- 49.3 ft	Gasket material intruding at most joints in CI; seal appears intact.
A2-1A ¹¹	4	PVC/CI	18	Grease Waste	Corrosion	5.9 ft- 101.6 ft	Corrosion is very minor, invert intact. Line appears inactive.
A2-1B	4	PVC/CI	18	Sanitary Sewer	Joint Defect	20 ft	Joint separated with soil visible. Callout also says broken.
					Corrosion	34.8 ft- 130.3 ft	Corrosion is very minor, invert intact.
					Intruding Sealing Material	37.4 ft- 103.6 ft	Gasket material intruding at most joints in CI; seal appears intact.
A2-1C ¹²	4	PVC/CI	18	Sanitary Sewer	Corrosion	0 ft- 97.2 ft	Corrosion is minor. Invert appears intact.

Table 1. Week 11 CCTV Major Findings, June 5-9, 2019
Mule Creek State Prison, Ione, California

Segment ¹	Diameter (inches)	Pipe Material	Figure ²	Segment Type	Finding	Distance from Start of Inspection ³	Comment
					Intruding Sealing Material	17.6 ft -88.7 ft	Gasket material intruding at most CI joints; seal appears intact.
A2-1D ¹³	4	CI	18	Sanitary Sewer	Corrosion	0 ft- 124 ft	Corrosion is minor to moderate, invert appears intact.
					Intruding Sealing Material	103.6 ft & 109.3 ft	Gasket material intruding; seal appears intact.
B1-1A ^{9,14}	4	CI	17	Sanitary Sewer	Corrosion	0 ft- 119.1 ft ¹⁵	Corrosion is very minor. Invert intact.
					Intruding Sealing Material	2.4 ft- 118.7 ft ¹⁵	Gaskets material intruding or visible at joints; seal appears intact.
B1-2A ¹⁶	4	CI/PVC	17 & 18	Sanitary Sewer	Corrosion	0 ft- 119.3 ft	Minor to moderate corrosion. Invert appears to be intact.
					Intruding Sealing Material	0.1 ft- 125.7 ft	Gasket material intruding; seal appears intact.
B1-2B ¹⁷	4	CI/PVC	17 & 18	Grease Waste	Corrosion	0 ft- 57.1 ft	Corrosion is minor, invert intact.
B1-2C	4	CI	17 & 18	Sanitary Sewer	Corrosion	0 ft – 25 ft	Corrosion appears minor to moderate.
B1-2D ⁹	4	CI	18	Grease Waste	Corrosion	0 ft- 25.2 ft	Corrosion appears moderate, invert intact.

Table 1. Week 11 CCTV Major Findings, June 5-9, 2019
Mule Creek State Prison, Ione, California

Segment ¹	Diameter (inches)	Pipe Material	Figure ²	Segment Type	Finding	Distance from Start of Inspection ³	Comment
					Intruding Sealing Material	0 ft- 25.2 ft	Gasket material exposed; seal appears intact.
B3A ⁴	4	PVC/CI	15 & 16	Sanitary Sewer	Joint Defect	63.5 ft & 64.5 ft	Minor joint offset, seal appears intact.
					Joint Defect	64.9 ft	Joint offset at coupler. Seal likely intact.
					Corrosion	74.1 ft- 133.3 ft	Corrosion appears moderate. Invert appears intact.
					Intruding Sealing Material	188.4 ft- 233.3 ft	Gasket intruding in CI pipe at most joints. Seals appear intact.

1. Segment identifiers are based on preliminary mapping from as-built drawings and survey work. Drawings are not final and will be updated as inspections verify connectivity and existence of structures.
2. Figure numbering from preliminary map set included as Appendix 1 of the CCTV Week Status Report for Week 1 dated April 15, 2019.
3. Distance measured from start of inspection unless otherwise noted.
4. Lateral inspected from both the upstream and downstream directions, distances referenced from main.
5. PVC: polyvinyl chloride
6. CI: Cast Iron
7. ft: feet
8. Labeled as "A1-1-WYEA1-1" in CCTV inspection report.
9. Partially inspected from mainline in Week 10 of CCTV inspections (May 22 through May 24, 2019).
10. in.: inches
11. Labeled as "A21A-GREASE TRAP" in CCTV inspection Report.
12. Labeled as "A2-1-WYE-A2-1" in CCTV inspection report.
13. Inspected in two runs, referred to in inspection report as "A21D-WYEA21D" and "COA21D-WYEA21D," both downstream directions.
14. Labeled as "B1-1-SSMH109" in CCTV inspection report.
15. Inspection began at cleanout of branch lateral beginning 25.9 ft from primary lateral. Distances measured from branch line cleanout.
16. Inspection done in three runs, referred to in inspections as: "B12B-GreaseTrap" (inspection report mislabels as in lateral B1-2B), "B1-2A-WYEB12A," "WYEB12A-WYEB12A1," all three were performed in downstream direction. Inspection "B1-2A-WYEB12A" used for distance reference.
17. Labeled as "GREASE TRAP-GREASE TRAP1" in CCTV inspection report.



Technical Memorandum

Reference: 516025.105
Date: July 8, 2019
To: Kenny Croyle, Central Valley Regional Water Quality Control Board
From: Mike Foget, PE, SHN
Subject: **Mule Creek State Prison–CCTV Weekly Status Report (Week #12)**

This technical memorandum summarizes major findings for the closed-circuit television (CCTV) inspection of the storm drain and sanitary sewer system at Mule Creek State Prison (MCSP). The inspections summarized in this memorandum were completed from June 12, 2019, to June 14, 2019, by Nor Cal Pipeline Services.

A total of 28 segments were inspected, including 15 sanitary sewer laterals and 13 storm drain segments. In total, approximately 1,941 lineal feet (LF) were inspected. A summary of major findings for this inspection work is included in Table 1.

Table 1. Week 12 CCTV Major Findings, June 12-14, 2019
Mule Creek State Prison, Ione, California

Segment ¹	Diameter (inches)	Pipe Material	Figure ²	Segment Type	Finding	Distance from Start of Inspection ³	Comment
Y11B	4	PVC ⁴ /CI ⁵	13	Sanitary Sewer	Corrosion	27 ft ⁶ –122.8 ft	Corrosion appears minor with invert intact.
C-YT1	6	PVC/CI	13	Sanitary Sewer	Corrosion	9.7 ft–10.7 ft	CI fitting is slightly corroded with invert intact.
					Joint Defect	13.1 ft	Joint is separated in crown; seal is likely intact.
Y12B	4	PVC/CI	12	Sanitary Sewer	Broken	36.7 ft	Field bend of pipe without fitting
					Intruding Sealing Material	39.1 ft	Gasket visible from 2 to 7 o'clock; seal is likely intact.

Table 1. Week 12 CCTV Major Findings, June 12-14, 2019
Mule Creek State Prison, Ione, California

Segment ¹	Diameter (inches)	Pipe Material	Figure ²	Segment Type	Finding	Distance from Start of Inspection ³	Comment
Y12B	4	PVC/CI	12	Sanitary Sewer	Corrosion	43.8 ft–138.7 ft	Corrosion appears minor with invert intact.
Y13B	4	PVC/CI	12	Sanitary Sewer	Crack	33.5 ft	Potential crack in crown of pipe goes from 9 to 3 o'clock.
					Corrosion	38.2 ft–130.6 ft	Corrosion appears minor with invert intact.
Y14B	4	PVC/CI	11	Sanitary Sewer	Corrosion	50.5 ft–115 ft	Corrosion is minor to moderate; invert appears intact.
Y15B	4	PVC/CI	11	Sanitary Sewer	Joint Defect	23 ft	Joint offset; seal is likely intact.
					Corrosion	45.9 ft–139 ft	Corrosion is minor to moderate; invert appears intact.
Y11A1 ^{7,8}	4	CI	13	Sanitary Sewer	Corrosion	0 ft–54.6 ft.	Corrosion appears minor with invert intact.
Y12A1 ^{7,9}	4	CI	12	Sanitary Sewer	Corrosion	0 ft–53.4 ft	Corrosion appears minor with invert intact.
Y12C1 ^{7,10}	4	CI/PVC	12	Sanitary Sewer	Corrosion	0 ft–63.9 ft	Corrosion appears minor with invert intact.
Y13A1 ^{7,11}	4	CI	12	Sanitary Sewer	Corrosion	0 ft–54.6 ft	Corrosion appears minor with invert intact.

Table 1. Week 12 CCTV Major Findings, June 12-14, 2019
Mule Creek State Prison, Ione, California

Segment ¹	Diameter (inches)	Pipe Material	Figure ²	Segment Type	Finding	Distance from Start of Inspection ³	Comment
Y14C1 ^{7,12}	4	CI	12	Sanitary Sewer	Corrosion	0 ft–39.9 ft	Corrosion appears minor with invert intact.
Y14A1 ^{7,13}	4	CI	11	Sanitary Sewer	Corrosion	0 ft–54.6 ft	Corrosion appears minor with invert intact.
Y15A1 ^{7,14}	4	CI	11	Sanitary Sewer	Corrosion	0 ft–9.9 ft	Corrosion appears minor with invert intact.
Y15D1 ^{7,15}	4	CI	11	Sanitary Sewer	Corrosion	0 ft–59.3 ft	Corrosion appears minor with invert intact.
A19-A16	6	PVC	9	Storm Drain	Joint Defect	28.3 ft & 35.1 ft	Joint is offset; seal is possibly compromised.
A8-A9	12	PVC	8	Storm Drain	Joint Defect	40.5 ft	Poorly sealed connections to drop inlet A9
B21-B22	12	PVC	5	Storm Drain	Joint Defect/ Broken	59.8 ft	Abrupt size transition without fitting. Seal is likely poor.

1. Segment identifiers are based on preliminary mapping from as-built drawings and survey work. Drawings are not final and will be updated as inspections verify connectivity and existence of structures.
2. Figure numbering from preliminary map set included as Appendix 1 of the CCTV Week Status Report for Week 1 dated April 15, 2019.
3. Distance measured from start of inspection unless otherwise noted.
4. PVC: polyvinyl chloride
5. CI: Cast Iron
6. ft: feet
7. Also inspected on Week 2
8. Labeled as "COY11A1-ATCY11A1" in the CCTV inspection report.
9. Labeled as "COY12A1-ATCY12A1" in the CCTV inspection report.
10. Labeled as "COY12C1-ATCY12A1" in the CCTV inspection report.
11. Labeled as "COY13A1-ATCY13A1" in the CCTV inspection report.
12. Labeled as "COY14C1-ATCY14C1" in the CCTV inspection report.

Table 1. Week 12 CCTV Major Findings, June 12-14, 2019**Mule Creek State Prison, Ione, California**

Segment ¹	Diameter (inches)	Pipe Material	Figure ²	Segment Type	Finding	Distance from Start of Inspection ³	Comment
13. Labeled as "COY14A1-ATCY14A1" in the CCTV inspection report.							
14. Labeled as "COY15A1-ATCY15A1" in the CCTV inspection report.							
15. Labeled as "COY15D1-SSMH102" in the CCTV inspection report.							

For the 12th week of CCTV inspections, all segments were located in No Man's Land (NML)–the area located between the housing units and the lethal electrified fence–and primarily included housing unit laterals. Figure 1 provides an overview of the work completed this week.

Inspections were attempted from the mainline with a lateral launching camera and from endline cleanouts with a push camera. All 15 housing units have identical sanitary sewer layouts with laterals running down the middle and either side of the building from the front of the building (side facing the yard) to the sewer main in NML. There are also two branched laterals that run along the back of the building from the center and connecting to the side laterals. These branched laterals have endline cleanouts accessed from the back of the building. The side laterals have cleanouts accessible on the exterior yard side of the building. The middle lateral serves a single toilet in its upper end and has an endline cleanout located in a highly restricted corridor. The end of this lateral cannot be accessed for cleaning or inspection due to significant security concerns; therefore, it is inspected from the mainline with the lateral launching camera. Due to the position of the buildings relative to the sewer main, the middle lateral ranges from approximately 100 feet to 150 feet in length and often contain multiple 45-degree bends. Due to the physical configuration of this middle lateral, approximately the last 5 feet to 20 feet of the upper end were not able to be inspected in some of the buildings.

Defects encountered in the sewer laterals included: a joint separation, an intruding gasket, a broken pipe, and corrosion. Corrosion was noted in nearly all the inspected lateral segments. This corrosion occurred in the cast iron portion of the laterals, which is underneath the housing unit building slab. The degree of corrosion appeared to be minor, and in all the laterals inspected in week 12, the invert of the pipe appeared to be intact and not worn through. The broken pipe finding for segment Y12B called out in the CCTV report was a field-made bend that did not appear to have a factory fitting. The seal quality of this defect is unknown but likely poor. The joint separation was minor with no soil visible and located in the crown of the pipe.

The 13 storm drain segments inspected this week were in NML around the inner perimeter of the A and B facility areas. Two joint defects in the segment between A19-A16 were identified that appeared to have poor seal quality but may have been contained within rubber couplers. An abandoned knockout in the side of drop inlet A9 was poorly sealed. Also, an abrupt size transition in B21-B22 appeared to have been made without a factory fitting and was likely poorly sealed.



Technical Memorandum

Reference: 516025.105
Date: July 15, 2019
To: Kenny Croyle, Central Valley Regional Water Quality Control Board
From: Mike Foget, PE, SHN
Subject: **Mule Creek State Prison–CCTV Weekly Status Report (Week #13)**

This technical memorandum summarizes major findings for the closed-circuit television (CCTV) inspection of the storm drain and sanitary sewer system at Mule Creek State Prison (MCSP). The inspections summarized in this memorandum were completed from June 17, 2019, to June 21, 2019, by Nor Cal Pipeline Services.

A total of 31 sanitary sewer segments were inspected, and no storm drain or grease waste lines were completed. In total, approximately 2,853 lineal feet (LF) were inspected. A summary of major findings for this inspection work is included in Table 1.

Table 1. Week 13 CCTV Major Findings, June 17-21, 2019
Mule Creek State Prison, Ione, California

Segment ¹	Diameter (inches)	Pipe Material	Figure ²	Segment Type	Finding	Distance from Start of Inspection ³	Comment
Y2C1 ^{4,5}	4 ⁽⁶⁾	CI ⁷ /PVC ⁸	8	Sanitary Sewer	Corrosion	0 ft ⁹ –71.3 ft	Corrosion appears minor; invert appears intact.
Y3C1 ^{10,4}	4 ⁽⁶⁾	CI	8	Sanitary Sewer	Corrosion	0 ft–58.2 ft	Corrosion appears minor; invert is intact.
Y4C1 ^{11,4}	4 ⁽⁶⁾	CI	7	Sanitary Sewer	Corrosion	0 ft–58.2 ft	Corrosion appears minor; invert is intact.
Y4A1 ^{12,4}	4 ⁽⁶⁾	CI	7	Sanitary Sewer	Corrosion	0 ft–55.9 ft	Corrosion appears minor; invert is intact.
Y5C1 ^{13,4}	4 ⁽⁶⁾	CI	7	Sanitary Sewer	Corrosion	0 ft–20.1 ft	Corrosion appears minor; invert is intact.

Table 1. Week 13 CCTV Major Findings, June 17-21, 2019
Mule Creek State Prison, Ione, California

Segment ¹	Diameter (inches)	Pipe Material	Figure ²	Segment Type	Finding	Distance from Start of Inspection ³	Comment
Y5A1 ^{14,4}	4 ⁽⁶⁾	CI	7	Sanitary Sewer	Corrosion	0 ft–54.3 ft	Corrosion appears minor, invert intact.
Y7C1 ^{15,16}	4 ⁽⁶⁾	CI	5	Sanitary Sewer	Corrosion	0 ft–20.1 ft	Corrosion appears minor, invert intact.
Y7A1 ^{17,16}	4 ⁽⁶⁾	CI	5	Sanitary Sewer	Corrosion	0 ft–20.2 ft	Corrosion appears minor, invert intact.
Y8C1 ^{18,16}	4 ⁽⁶⁾	CI	4	Sanitary Sewer	Corrosion	0 ft–20.2 ft	Corrosion appears minor, invert intact.
Y8A1 ^{19,16}	4 ⁽⁶⁾	CI	4	Sanitary Sewer	Corrosion	0 ft–20.7 ft	Corrosion appears minor, invert intact.
Y1B	4	PVC/CI	9	Sanitary Sewer	Corrosion	35.6 ft–107 ft	Corrosion appears minor to moderate, invert intact.
A3C	4	PVC	9	Sanitary Sewer	Deformed	11.4 ft	Bulged pipe 80% obstructed, no leaking apparent.
Y2A	6	PVC/CI	9	Sanitary Sewer	Corrosion	107.7 ft–145 ft	Corrosion appears minor, invert intact.
Y3B	4	PVC/CI	4	Sanitary Sewer	Corrosion	30.9 ft–144.8 ft	Corrosion appears minor to moderate, invert intact.
Y2B	4	PVC/CI	9	Sanitary Sewer	Corrosion	73.9 ft–103.9 ft	Corrosion appears minor, invert intact.

Table 1. Week 13 CCTV Major Findings, June 17-21, 2019
Mule Creek State Prison, Ione, California

Segment ¹	Diameter (inches)	Pipe Material	Figure ²	Segment Type	Finding	Distance from Start of Inspection ³	Comment
Y4B	4	PVC/CI	7	Sanitary Sewer	Corrosion	32.6 ft–101.6 ft	Corrosion appears minor to moderate; invert is intact.
Y6B	4	PVC/CI	5	Sanitary Sewer	Joint Defect	11.9 ft	Joint offset, likely in coupler.
					Corrosion	85.4 ft–135.7 ft	Corrosion appears minor; invert is intact.
Y7B	4	PVC/CI	5	Sanitary Sewer	Joint Defect	33.3 ft	Joint offset at building transition to CI pipe; gasket is visible.
					Corrosion	33.3 ft–97 ft	Corrosion appears minor; invert is intact.
Y9A ¹⁶	6	PVC/CI	4	Sanitary Sewer	Deformed	64.8 ft	Minor deformation from vertical loading
					Joint Defect	67 ft	Joint offset with gasket material is visible; seal is possibly compromised.
					Corrosion	92.4 ft–101.2 ft	Corrosion appears minor; invert is intact.
GT6	4	PVC	3	Sanitary Sewer	Infiltration	82.7 ft	Possible infiltration located in crown at joint separation.

Table 1. Week 13 CCTV Major Findings, June 17-21, 2019
Mule Creek State Prison, Ione, California

Segment ¹	Diameter (inches)	Pipe Material	Figure ²	Segment Type	Finding	Distance from Start of Inspection ³	Comment
GT6 cont'd	4	PVC	3	Sanitary Sewer	Gasket Defect	95.1 ft	Gasket material is visible; seal is likely intact.
Y10B	4	PVC/CI	3	Sanitary Sewer	Corrosion	17.1 ft–25.9 ft	Corrosion appears moderate; invert is intact.
					Intruding Sealing Material	17.1 ft	Gasket material is visible; seal is likely intact.
<div>1. Segment identifiers are based on preliminary mapping from as-built drawings and survey work. Drawings are not final and will be updated as inspections verify connectivity and existence of structures.</div> <div>2. Figure numbering from preliminary map set included as Appendix 1 of the CCTV Week Status Report for Week 1 dated April 15, 2019.</div> <div>3. Distance measured from start of inspection unless otherwise noted.</div> <div>4. Labeled as "CPY2C1-WYE2C1" in CCTV inspection report.</div> <div>5. Also inspected Week 2 (3/25/2019–3/29/2019).</div> <div>6. Construction plans indicate line size is 6-inch; CCTV report lists as 4-inch.</div> <div>7. PVC: Polyvinyl chloride</div> <div>8. CI: Cast Iron</div> <div>9. ft: feet</div> <div>10. Labeled as "COYC31-WYCY3C1" in CCTV inspection report.</div> <div>11. Labeled as "COY4C1-WYCY4C1" in CCTV inspection report.</div> <div>12. Labeled as "COY4A1-WYCY4A1" in CCTV inspection report.</div> <div>13. Labeled as "COY5C1-WYCY5C1" in CCTV inspection report.</div> <div>14. Labeled as "COY5A1-WYCY5A1" in CCTV inspection report.</div> <div>15. Labeled as "COY7C1-mH15B" in CCTV inspection report.</div> <div>16. Also inspected Week 1 (3/18/2019-3/22/2019).</div> <div>17. Labeled as "SSMH16-COY7A1" in CCTV inspection report.</div> <div>18. Labeled as "Y8C1-mH17A" in CCTV inspection report.</div> <div>19. Labeled as "Y8A1-SSMH17" in CCTV inspection report.</div>							

For the 13th week of CCTV inspections, all segments were located in No Man's Land and primarily included housing unit sewer laterals and some reinspection of side laterals for the housing units. Figure 1 provides an overview of the work completed this week. Attachment 1 includes Figure 9, which has been updated from the preliminary mapping set that was submitted with the Week 1 CCTV Status Report. This figure was updated to reflect additional pipes or alternated alignments that were encountered during the inspections; however, the figure is still considered preliminary and may be further updated as needed.



Technical Memorandum

Reference: 516025.105
Date: July 22, 2019
To: Kenny Croyle, Central Valley Regional Water Quality Control Board
From: Mike Foget, PE, SHN
Subject: **Mule Creek State Prison–CCTV Weekly Status Report (Week #14)**

This technical memorandum summarizes major findings for the closed-circuit television (CCTV) inspection of the storm drain and sanitary sewer system at Mule Creek State Prison (MCSP). The inspections summarized in this memorandum were completed from June 24, 2019, to June 28, 2019, by Nor Cal Pipeline Services.

A total of 35 segments were inspected, including 5 sanitary sewer lines, 1 grease waste lateral, and 29 storm drain segments. In total, approximately 1,508 lineal feet (LF) were inspected. A summary of major findings for this inspection work is included in Table 1.

Table 1. Week 14 CCTV Major Findings, June 24-28, 2019
Mule Creek State Prison, Ione, California

Segment ¹	Diameter (inches)	Pipe Material	Figure ²	Segment Type	Finding	Distance from Start of Inspection ³	Comment
B2-1C ^{4,5}	4	CI ⁶	15	Sanitary Sewer	Corrosion	0 ft–55.5 ft ⁷	Corrosion is minor to moderate; invert appears intact.
					Intruding Sealing Material	1.3 ft–54.5 ft	Gasket material intruding or visible at joints; seals appear intact.
B2-1B ^{5,8}	4	CI	15	Sanitary Sewer	Corrosion	0 ft–70.3 ft	Corrosion is minor to moderate; invert appears intact.
					Intruding Sealing Material	1.3 ft–51.3 ft	Gasket material is intruding or visible at joints; seal appears intact.

Table 1. Week 14 CCTV Major Findings, June 24-28, 2019
Mule Creek State Prison, Ione, California

Segment ¹	Diameter (inches)	Pipe Material	Figure ²	Segment Type	Finding	Distance from Start of Inspection ³	Comment
B2-1A ^{5,9}	4	CI	15	Grease Waste	Corrosion	0 ft–107.5 ft	Corrosion is minor; invert appears intact.
					Intruding Sealing Material	1.4 ft–83.1 ft	Gasket material is intruding or visible at joints; seal appears intact.
C1-2B ^{10,11}	4	CI	15	Sanitary Sewer	Corrosion	0 ft–108.7 ft	Corrosion is minor to moderate; invert appears intact.
SSMH209-SSMH207 ¹²	6	PVC ¹³	14	Sanitary Sewer	Joint Defect	25.3 ft	Joint offset in coupler; seal is likely intact.
B2-2A ^{5,14}	4	CI/PVC	15	Sanitary Sewer	Corrosion	0 ft–56.9 ft	Corrosion is minor to moderate; invert appears intact.
					Corrosion	72.9 ft–77.9 ft	Corrosion is minor; invert is intact.
					Intruding Sealing Material	9 ft–56.9 ft and 76 ft	Gasket material is visible at joints; seal is intact.
					Joint Defect	78 ft	Offset at material transition, seal is possibly compromised.
BC79-BC80	3	PVC	14	Storm Drain	Joint Defect	16.6 ft	Joint separated at bell connection; seal is likely compromised.

Table 1. Week 14 CCTV Major Findings, June 24-28, 2019

Mule Creek State Prison, Ione, California

Segment ¹	Diameter (inches)	Pipe Material	Figure ²	Segment Type	Finding	Distance from Start of Inspection ³	Comment
BC135-SDMH512 ¹⁵	6	PVC	14	Storm Drain	Joint Defect	1 ft and 10.4 ft	Joint separation in coupler; seals appear intact.
BC37-SDMH513 ¹⁶	6	PVC	14	Storm Drain	Joint Defect	10.5 ft	Separation in coupling; gasket is visible; seal appears intact.
B93-B91 ¹⁷	8	PVC	16	Storm Drain	Joint Defect	15.2 ft	Minor joint offset; seal is likely intact.
						20.4 ft	Joint separation, seal quality is unknown.
B89-B95	8	PVC	16	Storm Drain	Joint Defect	2.1 ft	Joint separation in coupling, seal appears intact.
B94-SDMH95 ¹⁸	8	PVC	16	Storm Drain	Intruding Sealing Material	16.8 ft	Gasket is visible; seal appears intact.
					Joint Defect	18.3 ft	Offset at coupler, seal is possibly compromised.
IN-JGT9 ¹⁹	6	PVC	22	Storm Drain	Broken/ Crack	12.6 ft	Broken and cracked at joint, seal is possibly compromised.
D110-D109	2	PVC	10	Storm Drain	Infiltration	16.1 ft	Infiltration stain
<ol style="list-style-type: none"> 1. Segment identifiers are based on preliminary mapping from as-built drawings and survey work. Drawings are not final and will be updated as inspections verify connectivity and existence of structures. 2. Figure numbering from preliminary map set included as Attachment 1 of the CCTV Week Status Report for Week 1 dated April 15, 2019. 3. Distance measured from start of inspection unless otherwise noted. 4. Labeled as "COB2-1C_WYE2-1C" in the CCTV inspection report. 							

Table 1. Week 14 CCTV Major Findings, June 24-28, 2019**Mule Creek State Prison, Ione, California**

Segment ¹	Diameter (inches)	Pipe Material	Figure ²	Segment Type	Finding	Distance from Start of Inspection ³	Comment
5. Inspected downstream portion from mainline on Week 9. 6. CI: Cast Iron 7. ft: feet 8. Labeled as "COB2-1B_WYEB2-1B" in the CCTV inspection report. 9. Labeled as "COB2-1A_ASCB2-1A" in the CCTV inspection report. 10. Labeled as "CO C1-2B_WYEC1-2B" in the CCTV inspection report. 11. Inspected downstream portion on Week 11. 12. Also inspected during 2018 CCTV efforts. 13. PVC: polyvinyl chloride 14. Labeled as "COB2-2A_WYEB2-2A" in the CCTV inspection report. 15. Segment inspected twice on June 25, 2019. 16. Defect distance from inspection done on June 28, 2019, also inspected on June 25, 2019. 17. Also inspected Week 11. 18. SDMH95 was formerly called out as JB3 in preliminary maps 19. Labeled as "JGT9A_JGT9" in the CCTV inspection report.							

For the 14th week of CCTV inspections, work was primarily completed in the middle and B/C side of the center corridor; additionally, several short storm drain segments were inspected in the No Man's Land (NML) area around Facility C. Figure 1 provides an overview of the work completed this week. Attachment 1 includes Figures 10, 14, and 16, which have been updated from the preliminary mapping set that was submitted with the Week 1 CCTV Status Report. These figures were updated to reflect additional pipes or altered alignments encountered during the inspections; however, the figures are still considered preliminary and may be further updated as needed.

Defects encountered in the sewer segments included: joint offsets, intruding gaskets, and corrosion. Corrosion was noted in the cast iron portions of the inspected segments. The degree of corrosion was primarily minor; however, lengths in segments B2-1C, B2-1B, C1-2B, and B2-2A appeared to have slightly thicker corrosion. In all the segments inspected in week 14, the invert of the pipe appeared to be intact and not worn through. Intruding gaskets were visible at the joints of the cast iron sewer segments; however, these joints are expected to be sealed. One joint offset was identified at a coupler and is also likely sealed. Segment B2-2A had an offset at a material transition which did not appear to be well sealed. An inspection was attempted on the segment from SSMH209-SSMH207; however, manhole trough geometry prevented access with the lateral launching camera equipment, and a joint offset prohibited access with a smaller tracked camera past 25.3 ft. This segment was inspected more completely during the 2018 CCTV efforts; however, deformities were encountered that prohibited full inspection.



Technical Memorandum

Reference: 516025.105
Date: July 29, 2019
To: Kenny Croyle, Central Valley Regional Water Quality Control Board
From: Mike Foget, PE, SHN
Subject: **Mule Creek State Prison–CCTV Weekly Status Report (Week #15)**

This technical memorandum summarizes major findings for the closed-circuit television (CCTV) inspection of the storm drain and sanitary sewer system at Mule Creek State Prison (MCSP). The inspections summarized in this memorandum were completed from July 1, 2019, to July 3, 2019, by Nor Cal Pipeline Services.

A total of 18 segments were inspected, including 7 sanitary sewer lines and 11 storm drain segments. In total, approximately 1,623 lineal feet (LF) were inspected. A summary of major findings for this inspection work is included in Table 1.

Table 1. Week 15 CCTV Major Findings, July 1-3, 2019
Mule Creek State Prison, Ione, California

Segment ¹	Diameter (inches)	Pipe Material	Figure ²	Segment Type	Finding	Distance from Start of Inspection ³	Comment
B90-SDMH95	12	PVC ⁴	16	Storm Drain	Joint Defect	61.3 ft ⁵	Joint offset at coupler gasket; seal is likely intact.
B2-3 ⁶	6	PVC	3	Sanitary Sewer	Joint Defect	1.1 ft ⁷	Minor joint offset; seal is likely intact.
					Deformed	16.1 ft ⁸	Slight elliptical deformation, seals are intact.
					Joint Defect	24.6 ft ⁸	Slight joint offset; gasket material is visible; seal is likely intact.
SDMH514-SDMH513 ⁹	6	PVC	14	Storm Drain	Joint Defect	3.5 ft	Joint offset in crown; seal is likely intact.

Table 1. Week 15 CCTV Major Findings, July 1-3, 2019

Mule Creek State Prison, Ione, California

Segment ¹	Diameter (inches)	Pipe Material	Figure ²	Segment Type	Finding	Distance from Start of Inspection ³	Comment
SSMH212A-SSMH211	6	PVC	19	Sanitary Sewer	Joint Defect	7.6 ft and 10.2 ft	Joint offset in coupler; gasket material is visible; seal is likely intact.
SSMH211-SSMH208	6	PVC	14	Sanitary Sewer	Joint Defect	83.5 ft	Joint offset in coupler; seal is likely intact.
SSMH214-SSMH20 ¹⁰	6	PVC	3	Sanitary Sewer	Repair	124.3 ft	Repair patch in crown, appears sealed.
B6A ¹¹	4	PVC	3	Sanitary Sewer	Intruding Sealing Material	67.6 ft ¹²	Gasket material is visible at joint; seal is likely intact.
C245-C65	12	PVC	12	Storm Drain	Intruding Tap	20.5 ft	Seal is poor and possibly compromised.
C199-C245	12	PVC	12	Storm Drain	Joint Defect	96.5 ft	Offset at rubber coupler, seal likely intact.

1. Segment identifiers are based on preliminary mapping from as-built drawings and survey work. Drawings are not final and will be updated as inspections verify connectivity and existence of structures.
2. Figure numbering from preliminary map set included as Appendix 1 of the CCTV Week Status Report for Week 1 dated April 15, 2019.
3. Distance measured from start of inspection unless otherwise noted.
4. PVC: polyvinyl chloride
5. ft: feet
6. Lateral B2-3 inspected in two sections: first inspection (labeled as COB-2B-OWSMH2B) from end of line cleanout referred to as "COB-2B" towards the oil water separator; and second inspection (labeled as OWSB2-3C-SSMH20) from SSMH20 towards the oil water separator.
7. Distance from SSMH20
8. Distance from endline cleanout labeled as "COB2-3B"
9. Labeled as "BC130_SDMH513" in the CCTV inspection report.
10. SSMH214 is a cleanout and upper end is blocked and appears to be abandoned.
11. Inspection completed in both directions from intermediate cleanout referred to as "COB6A".
12. Distance from inspection labeled "COB6-COB6A".



Technical Memorandum

Reference: 516025.105
Date: August 26, 2019
To: Kenny Croyle, Central Valley Regional Water Quality Control Board
From: Mike Foget, PE, SHN
Subject: **Mule Creek State Prison–CCTV Weekly Status Report (Week #17)**

This technical memorandum summarizes major findings for the closed-circuit television (CCTV) inspection of the storm drain and sanitary sewer system at Mule Creek State Prison (MCSP). The inspections summarized in this memorandum were completed from August 5, 2019, to August 9, 2019, by Nor Cal Pipeline Services.

A total of 35 segments were inspected, including 10 sanitary sewer lines and 25 storm drain segments. In total, approximately 1,867 lineal feet (LF) were inspected. A summary of major findings for this inspection work is included in Table 1.

Table 1. Week 17 CCTV Major Findings, August 5-9, 2019
Mule Creek State Prison, Ione, California

Segment ¹	Diameter (inches)	Pipe Material	Figure ²	Segment Type	Finding	Distance from Start of Inspection ³	Comment
COB21B-COB21A	4	CI ⁴ /PVC ⁵	18	Storm Drain	Joint Defect	43.7 ft ⁶	Joint offset at pipe diameter change, at material/pipe size change from 6" CI to 4" PVC; seal quality is unknown.
COB21-B21	6	PVC	18	Storm Drain	Deformed	40.4 ft	Small deformation at 2 o'clock, seal is intact.
B5 ⁷	4	CI	18	Sanitary Sewer	Corrosion	0 ft–131.9 ft	Corrosion is minor; invert appears intact.
GT4 ⁸	4	PVC	6	Sanitary Sewer	Deformed	17.1 ft	Bulge from invert at 6 o'clock, seal appears intact.

Table 1. Week 17 CCTV Major Findings, August 5-9, 2019
Mule Creek State Prison, Ione, California

Segment ¹	Diameter (inches)	Pipe Material	Figure ²	Segment Type	Finding	Distance from Start of Inspection ³	Comment
Y9C ⁹	4	CI	4	Sanitary Sewer	Corrosion	0 ft–102.8 ft	Corrosion is minor; invert appears intact.
Y8C ¹⁰	4	CI	4	Sanitary Sewer	Corrosion	0 ft–101 ft	Corrosion is minor; invert appears intact.
B246-CB6	8	PVC	5	Storm Drain	Broken/ Crack	3.5 ft	Circumferential crack in crown, seal appears intact.
COC5-Y15A ¹¹	4	PVC	11	Sanitary Sewer	Joint Defect	4 ft	Joint offset, seal is possibly compromised.
AEPINB14-INB14	4	PVC	11	Storm Drain	Joint Defect	4 ft	Joint offset, seal is likely compromised at pipe size change.
C202-C39A	4	C-HDPE ¹²	13	Storm Drain	Corrosion	0 ft–66.9 ft	Corrosion ID called out in CCTV field inspection, no corrosion present. Pipe is corrugated HDPE pipe with factory perforations.
					Blocked	66.9 ft	Approximately 75% of pipe diameter is blocked with debris.

Table 1. Week 17 CCTV Major Findings, August 5-9, 2019
Mule Creek State Prison, Ione, California

Segment ¹	Diameter (inches)	Pipe Material	Figure ²	Segment Type	Finding	Distance from Start of Inspection ³	Comment
D51-D41	4	HDPE ¹³	10	Storm Drain	Hole & Infiltration Drip	29.8 ft	Hole in crown with small drip infiltration, may be field cleanout or tap connection.
A42-A43	4	HDPE	9	Storm Drain	Hole	0.5 ft	Hole at 1 o'clock, may be field cleanout or tap connection.
					Infiltration Drip	1.2 ft	Infiltration drip at 11 o'clock, possible roots present.
Y6B ¹⁴	4	PVC	5	Sanitary Sewer	Joint Defect	4.3 ft	Joint offset at 4.3 ft, bulge at 3 o'clock at pipe transition, seal appears intact.
A1-2D ¹⁵	4	CI	16	Sanitary Sewer	Corrosion	0 ft–168.5 ft	Corrosion is minor to moderate; invert appears intact.
					Intruding Gasket Material	23 ft	Gasket material visible; seal is likely intact.
					Joint Defect	64.6 ft	Joint offset, gasket material is visible; seal is possibly compromised.

Table 1. Week 17 CCTV Major Findings, August 5-9, 2019
Mule Creek State Prison, Lone, California

Segment ¹	Diameter (inches)	Pipe Material	Figure ²	Segment Type	Finding	Distance from Start of Inspection ³	Comment
A1-2D ¹⁵	4	CI	16	Sanitary Sewer	Intruding Gasket Material	65.9 ft	Gasket material visible, seal likely intact.
<ol style="list-style-type: none"> Segment identifiers are based on preliminary mapping from as-built drawings and survey work. Drawings are not final and will be updated as inspections verify connectivity and existence of structures. Figure numbering from preliminary map set included as Appendix 1 of the CCTV Week Status Report for Week 1 dated April 15, 2019. Distance measured from start of inspection unless otherwise noted. CI: cast iron PVC: polyvinyl chloride ft: feet Labeled as "B5WYE_B5C/O2" in CCTV inspection report; lateral B5 also inspected in Week 4 on April 9, 2019. Labeled as "gT-4_SSMH13" in CCTV inspection report; lateral GT4 also inspected in Week 3 on April 4, 2019. Labeled as "COY9C_WY9C" in CCTV inspection report; lateral Y9C also inspected in Week 1 on March 19, 2019. Labeled as "COY8C_WY8C" in CCTV inspection report; lateral Y8C also inspected in Week 1 on March 19, 2019. Labeled as "COC5_COC5A" in CCTV inspection report; lateral segment also inspected in Week 16 on July 9, 2019. C-HDPE: corrugated high-density polyethylene HDPE: high-density polyethylene Lateral also inspected in Week 13 on June 19, 2019. Inspection done in two segments for lateral A1-2D; from end of line cleanout 91.7 ft downstream to intermediate cleanout labeled as "COA12DA_COA12DB" in CCTV inspection report, and from intermediate cleanout 76.8 ft downstream to mainline labeled as "COA12DB_COA12DC" in CCTV inspection report. Corrosion callouts occur along entire section of A1-2D from end of line cleanout to mainline (168.5 ft). Intruding gaskets and joint offset distances are measured from intermediate cleanout referred to as COA12DB in field reports, for inspection labeled "COA12DB_COA12DC." 							

For the 17th week of CCTV inspections, work occurred throughout the facility, including the yards, center corridor, and No Man's Land. The inspections consisted of segments that were not completed on the initial round through the areas. Figure 1 provides an overview of the work completed this week. Attachment 1 includes Figures 5, 7, 10-13, 17-18, and 25, which have been updated from the preliminary mapping set submitted with the Week 1 CCTV Status Report. These figures were updated to reflect additional pipes or altered alignments encountered during the inspections; however, the figures are still considered preliminary and may be further updated as needed.

Defects encountered in the sanitary sewer system included: corrosion, deformed pipe, joint offsets, intruding gaskets, and a broken cracked section. Corrosion appeared to be primarily minor and was consistent with other metal pipes that have been inspected; corrosion in segment A1-2D appeared minor to moderate. In all the inspected segments this week, the invert appeared intact and not corroded through. Joint offsets in segments COC5-Y15A and A1-2D appeared to have a possibly



Technical Memorandum

Reference: 516025.105
Date: September 3, 2019
To: Kenny Croyle, Central Valley Regional Water Quality Control Board
From: Mike Foget, PE, SHN
Subject: **Mule Creek State Prison–CCTV Weekly Status Report (Week #18)**

This technical memorandum summarizes major findings for the closed-circuit television (CCTV) inspection of the storm drain and sanitary sewer system at Mule Creek State Prison (MCSP). The inspections summarized in this memorandum were completed from August 12, 2019, to August 16, 2019, by Nor Cal Pipeline Services.

A total of 32 segments were inspected, including 12 sanitary sewer lines, 18 storm drain segments, and 2 grease waste segments. In total, approximately 2,559 lineal feet (LF) were inspected. A summary of major findings for this inspection work is included in Table 1.

Table 1. Week 18 CCTV Major Findings, August 12–16, 2019
Mule Creek State Prison, Lone, California

Segment ¹	Diameter (inches)	Pipe Material	Figure ²	Segment Type	Finding	Distance from Start of Inspection ³	Comment
Y10B ⁴	4	PVC ⁵ /CI ⁶	3	Sanitary Sewer	Joint Defect	5.6 ft ⁷	Joint offset, appears minimal, seal is likely intact.
						19.9 ft	Joint offset at transition to CI pipe, seal is possibly compromised.
					Corrosion	19.9 ft–140.6 ft	Corrosion is mostly minor, invert appears intact.

Table 1. Week 18 CCTV Major Findings, August 12–16, 2019

Mule Creek State Prison, Ione, California

Segment ¹	Diameter (inches)	Pipe Material	Figure ²	Segment Type	Finding	Distance from Start of Inspection ³	Comment
B23-P157 ⁸	12	PVC	5	Storm Drain	Joint Defect	36.5 ft	Joint offset, sealing material is visible; seal appears intact.
CBGT2-GT2OUT	12	PVC	8	Storm Drain	Blocked	74 ft	Pipe blocked with plug, appears sealed.
GT2OUT-AEPGT2 ⁹	12	C-HDPE ¹⁰	8	Storm Drain	Deformed	26.8 ft–109.8 ft	Elliptical deformation for approximately 83 feet, loss of functionality is not expected.
						209.5 ft	Minor deformation, loss of functionality is not expected.
						246.3 ft	Elliptical deformation, loss of functionality is not expected.
						(276.1 ft–319.9 ft) ¹¹	Elliptical deformation for approximately 43.8 feet, loss of functionality is not expected.
					Infiltration Stain	141.5 ft	Minor slit is near crown of pipe.

Table 1. Week 18 CCTV Major Findings, August 12–16, 2019
Mule Creek State Prison, Ione, California

Segment ¹	Diameter (inches)	Pipe Material	Figure ²	Segment Type	Finding	Distance from Start of Inspection ³	Comment
GT2OUT-AEPGT2 cont'd					Hole with Soil Visible	178.9 ft	Large hole from 3 o'clock to 9 o'clock and soil is visible.
						199.3 ft	Hole in invert from 3 o'clock to 9 o'clock and soil is visible.
						213.5 ft	Numerous holes around pipe circumference are at corrugated pipe joint.
						274.1 ft	Hole in invert from 4 o'clock to 9 o'clock and soil is visible.
						276.1 ft ¹¹	Hole from 4 o'clock to 5 o'clock present with soil visible.
						280 ft ¹¹	Hole from 2 o'clock to 5 o'clock present with soil visible.
						301.3 ft ¹¹	Hole from 7 o'clock to 9 o'clock present with soil visible.
						314.3 ft ¹¹	Hole from 2 o'clock to 3 o'clock present with soil visible.

Table 1. Week 18 CCTV Major Findings, August 12–16, 2019

Mule Creek State Prison, Ione, California

Segment ¹	Diameter (inches)	Pipe Material	Figure ²	Segment Type	Finding	Distance from Start of Inspection ³	Comment
GT2OUT-AEPGT2 cont'd						327.5 ft ¹¹	Hole from 10 o'clock to 2 o'clock, and small hole with roots is visible at 5 o'clock.
					Broken Soil Visible	224.8 ft–236.9 ft	Numerous breaks present along invert of pipe for approximately 12.1 feet.
						241 ft–243.3 ft	Numerous breaks present along invert of pipe for approximately 2.3 feet.
						251.8 ft	Small break present in invert.
						309.7 ft ¹¹	Small break in invert with roots present.
					Repair	153.9 ft–158.8 ft	PVC repair patch, approximately 5-foot section of PVC from 153.9 ft–158.8 ft.
					Broken	277.7 ft ¹¹	Small break present in invert of pipe.

Table 1. Week 18 CCTV Major Findings, August 12–16, 2019
Mule Creek State Prison, Ione, California

Segment ¹	Diameter (inches)	Pipe Material	Figure ²	Segment Type	Finding	Distance from Start of Inspection ³	Comment
SSMH212A-SSMH211 ¹²	6	PVC	19	Sanitary Sewer	Joint Defect	85.5 ft	Joint offset, sealing material visible, seal appears intact.
						87.1 ft	Joint offset, sealing material visible, seal may be compromised.
GT8 ¹³	4	CI/PVC	23	Sanitary Sewer	Corrosion	0 ft–8.6 ft	Corrosion is moderate with some tuberculation present; invert appears intact.
					Deformed	21.7 ft	Small deformation at 1 o'clock, seal appears intact.
Y9A1 ¹⁴	4	CI	4	Sanitary Sewer	Corrosion	0 ft–54.7 ft	Corrosion is minor; invert is intact.
Y9C1 ¹⁵	4	CI	4	Sanitary Sewer	Corrosion	0 ft–25.2 ft	Corrosion is mostly minor; invert appears intact.
Y10C1 ¹⁶	4	CI	3	Sanitary Sewer	Corrosion	0 ft–20.4 ft	Corrosion is minor; invert is intact.
Y10A1 ¹⁷	4	CI	3	Sanitary Sewer	Corrosion	0 ft–20.7 ft	Corrosion is minor; invert is intact.

Table 1. Week 18 CCTV Major Findings, August 12–16, 2019

Mule Creek State Prison, Ione, California

Segment ¹	Diameter (inches)	Pipe Material	Figure ²	Segment Type	Finding	Distance from Start of Inspection ³	Comment
L1-BA ¹⁸	4	CI	20	Sanitary Sewer	Corrosion	0 ft–24.2 ft	Corrosion is minor; invert is intact.
L1-AA ¹⁹	4	CI/PVC	20	Sanitary Sewer	Corrosion	0 ft–57.7 ft	Corrosion is minor; invert is intact.
					Deformed	58.3 ft	Minor deformation in invert, seal appears intact.
B33-P149	12	PVC	3	Storm Drain	Joint Defect	3 ft	Minor joint offset, seal appears intact.
						26.6 ft	Joint offset, sealing material visible, seal is likely intact.
						30.3 ft	Joint offset, sealing material visible, seal is likely intact.
P149-CBP149 ²⁰	12	PVC	20	Storm Drain	Repair	40.4 ft	Repair patch in crown from 11 o'clock to 2 o'clock, seal may be compromised.
					Joint Defect	49.7 ft	Joint offset, sealing material visible, seal may be compromised.

Table 1. Week 18 CCTV Major Findings, August 12–16, 2019

Mule Creek State Prison, Ione, California

Segment ¹	Diameter (inches)	Pipe Material	Figure ²	Segment Type	Finding	Distance from Start of Inspection ³	Comment
CBP149D-CBP149	10	PVC/C-HDPE	10	Storm Drain	Intruding Tap	71.7 ft	Intruding tap at 9 o'clock, seal may be compromised.
					Repair	239 ft	Repair patch in crown from 11 o'clock to 2 o'clock, seal may be compromised.
					Broken	254.6 ft	Broken patch in crown with wire mesh visible, possible repair. Seal may be compromised.
					Hole	269.7 ft	Small hole present in crown of pipe.
A1-2D ²¹	4	CI	16	Sanitary Sewer	Corrosion	0 ft–115.3 ft	Corrosion is mostly minor; invert appears intact.
A1-2C ²²	4	CI	16	Grease Waste	Corrosion	0 ft–69.3 ft	Corrosion is mostly minor; invert appears intact.
					Intruding Sealing Material	30.6 ft	Intruding gasket visible, seal is likely intact.
A1-2A ²³	4	CI/PVC	17	Sanitary Sewer	Corrosion	0 ft–134.2 ft	Corrosion is minor, invert intact

Table 1. Week 18 CCTV Major Findings, August 12–16, 2019

Mule Creek State Prison, Lone, California

Segment ¹	Diameter (inches)	Pipe Material	Figure ²	Segment Type	Finding	Distance from Start of Inspection ³	Comment
A1-2A cont'd					Deformed	150 ft	Deformation in crown of pipe from 10 o'clock to 2 o'clock, seal appears intact.
B1-2B ²⁴	4	CI	17	Grease Waste	Corrosion	0 ft–94.8 ft	Corrosion is minor to moderate, invert likely intact.
A2-1B ²⁵	4	CI	18	Sanitary Sewer	Corrosion	0 ft–20.4 ft	Corrosion is minor; invert is intact.

1. Segment identifiers are based on preliminary mapping from as-built drawings and survey work. Drawings are not final and will be updated as inspections verify connectivity and existence of structures.
2. Figure numbering from preliminary map set included as Appendix 1 of the CCTV Week Status Report for Week 1 dated April 15, 2019.
3. Distance measured from start of inspection unless otherwise noted.
4. Pipe segment Y10B previously inspected in Week 13 of CCTV inspections on June 21, 2019.
5. PVC: polyvinyl chloride
6. CI: cast iron
7. ft: feet
8. Pipe segment labeled as "B21_p157" in CCTV inspection video.
9. CCTV inspection done in two segments to point of similarity in inspections; the first inspection was done in downstream direction from structure "GT2OUT," the second inspection was done in upstream from structure "AEPGT2."
10. C-HDPE: corrugated high-density polyethylene
11. Distance referenced from structure "GT2OUT;" inspection done upstream from end of pipe structure "AEPGT2" towards structure "GT2OUT." Approximate total segment length of 338 feet used for segment "GT2OT-AEPGT2" in order to determine approximate distance of defects from CCTV inspection reports from structure "GT2OUT."
12. Pipe segment "SSMH212A-SSMH211" previously inspected in Week 15 on July 1, 2019, and Week 16 on July 12, 2019.
13. Pipe segment labeled as "gT-8_WYEGT8" in CCTV inspection report.
14. Pipe segment labeled as "COY9A1_WYEGT9A1" in CCTV inspection report; pipe segment "Y9A1" previously inspected in Week 1 of CCTV inspections on March 18, 2019.
15. Pipe segment labeled as "COY9C1_SSMH17" in CCTV inspection report; pipe segment "Y9C1" previously inspected in Week 1 of CCTV inspections on March 18, 2019.

Table 1. Week 18 CCTV Major Findings, August 12–16, 2019

Mule Creek State Prison, Lone, California

Segment ¹	Diameter (inches)	Pipe Material	Figure ²	Segment Type	Finding	Distance from Start of Inspection ³	Comment
16. Pipe segment labeled as "COY10C1_WYCY10C1" in CCTV inspection report; pipe segment "Y10C1" previously inspected in Week 1 of CCTV inspections on March 18, 2019. 17. Pipe segment labeled as "COY10A1_WYCY10A1" in CCTV inspection report; pipe segment "Y10A1" previously inspected in Week 1 of CCTV inspections on March 18, 2019. 18. Pipe segment labeled as "CO7A-CO7" in CCTV inspection report. 19. Pipe segment labeled as "COMH26_SSMH26" in CCTV inspection report. 20. Pipe segment labeled as "CBP149_P149" in CCTV inspection report. 21. Pipe segment inspected in two segments for lateral "A1-2D", incorrectly identified as "A1-2C" in CCTV inspection reports; first CCTV inspection downstream for upper portion of lateral from end of line cleanout was labeled as "COA12C-COA12CA", second CCTV inspection downstream for lower portion of lateral from intermediate cleanout was labeled as "COA12CA-COA12CB". Corrosion defect distances referenced from end of line cleanout towards mainline connection. Pipe segment "A1-2D" previously inspected in Week 17 of CCTV inspections on August 5, 2019. 22. Pipe segment labeled as "COA12C1-GTA12C" in CCTV inspection report. 23. Pipe segment labeled as "COA12A-SSMH403" in CCTV inspection report; pipe segment "A1-2A" previously inspected in Week 10 of CCTV inspections on May 23, 2019. 24. Pipe segment labeled as "COB12B-GTB12B" in CCTV inspection report; pipe segment "B1-2B" previously inspected twice in Week 11 of CCTV inspections on June 6, 2019 and June 7, 2019. 25. Pipe segment labeled as "COA21B-WYEA21B" in CCTV inspection report; pipe segment "A2-1B" previously inspected twice; in 2018 CCTV inspections on April 12, 2018, and in Week 11 of CCTV inspections on June 6, 2019.							

For the 18th week of CCTV inspections, work occurred throughout the facility, including the yards, center corridor, and No Man's Land. The inspections consisted of segments that were not completed on the initial round through the areas. Figure 1 provides an overview of the work completed this week. Attachment 1 includes Figures 13, 14, 17, 19, 20, and 24, which have been updated from the preliminary mapping set submitted with the Week 1 CCTV Status Report. These figures were updated to reflect additional pipes or altered alignments encountered during the inspections; however, the figures are still considered preliminary and may be further updated as needed.

Defects encountered in the sanitary sewer system included: corrosion, deformed pipe, and joint offsets. Corrosion occurred in numerous pipe segments; however, the corrosion observed appeared to be primarily minor and was consistent with other metal pipes that have been inspected. In all the inspected segments this week, the invert appeared intact and not corroded through. Segment GT8 had more significant corrosion with tuberculation present; however, the invert appeared intact. Pipe deformations occurred in segments A1-2A and L1-AA; in both instances, the pipe seal appeared intact. Segment A1-2A had a more significant deformation in the crown of the pipe that could be due to possible proximity to hot water loop, while segment L1-AA had a moderate deformation in the invert of the pipe. Joint offsets were observed in segments Y10B and SSMH212A-SSMH211. Two joint offsets



Technical Memorandum

Reference: 516025.105
Date: September 16, 2019
To: Kenny Croyle, Central Valley Regional Water Quality Control Board
From: Mike Foget, PE, SHN
Subject: **Mule Creek State Prison–CCTV Weekly Status Report (Week #19)**

This technical memorandum summarizes major findings for the closed-circuit television (CCTV) inspection of the storm drain and sanitary sewer system at Mule Creek State Prison (MCSP). The inspections summarized in this memorandum were completed from August 27, 2019, to August 30, 2019, by Nor Cal Pipeline Services.

A total of 22 segments were inspected, including 11 sanitary sewer lines and 11 storm drain segments. In total, approximately 1,596 lineal feet (LF) were inspected. A summary of major findings for this inspection work is included in Table 1.

Table 1. Week 19 CCTV Major Findings, August 27–30, 2019
Mule Creek State Prison, Ione, California

Segment ¹	Diameter (inches)	Pipe Material	Figure ²	Segment Type	Finding	Distance from Start of Inspection ³	Comment
Y9A ⁴	6	PVC ⁵	4	Sanitary Sewer	Deformed	64.3 ft ⁶	Deformation in crown of pipe near joint.
					Joint Defect	64.8 ft	Joint offset near deformed pipe, seal may be compromised.
						66 ft	Joint offset, seal appears intact. Possible repair section from previous offset.
C3B ⁷	4	CI ⁸	12	Sanitary Sewer	Corrosion	0 ft–89.8 ft	Corrosion is minor, invert intact.

Table 1. Week 19 CCTV Major Findings, August 27–30, 2019

Mule Creek State Prison, Ione, California

Segment ¹	Diameter (inches)	Pipe Material	Figure ²	Segment Type	Finding	Distance from Start of Inspection ³	Comment
C3A ⁹	4	CI	12	Sanitary Sewer	Corrosion	0 ft–61.5 ft	Corrosion is minor, invert intact.
IN-MHC244 ¹⁰	4	PVC/C-HDPE ¹¹	12	Storm Drain	Broken	6.9 ft	Broken/collapsed C-HDPE pipe from 11 o'clock to 4 o'clock at transition from PVC pipe.
IN-MHC250 ¹²	4	PVC	12	Storm Drain	Deformed	6 ft	Minor deformation at 1 o'clock, pipe seal intact.
						7.2 ft	Minor deformation at 10 o'clock, pipe seal intact.
D1A ¹³	4	CI	10	Sanitary Sewer	Corrosion	0 ft–196.9 ft	Corrosion is minor, invert intact.
					Joint Defect	93.6 ft	Minor joint offset, cannot determine seal quality.
GT6 ¹⁴	4	CI / PVC	3	Sanitary Sewer	Corrosion	0–10.9 ft	Corrosion is mostly minor, invert appears intact.
J1CO-J1WYE	4	CI	19	Sanitary Sewer	Corrosion	0–14.1 ft	Corrosion is mostly minor, invert appears intact.
						16.9–17.6 ft	Corrosion is minor, invert intact.

Table 1. Week 19 CCTV Major Findings, August 27–30, 2019

Mule Creek State Prison, Ione, California

Segment ¹	Diameter (inches)	Pipe Material	Figure ²	Segment Type	Finding	Distance from Start of Inspection ³	Comment
J1WYE-SSMH25 ¹⁵	4	CI	19	Sanitary Sewer	Corrosion	0–71.2 ft	Corrosion is mostly minor, invert appears intact.
CBP149E-CBP149D	12	PVC	19	Storm Drain	Intruding Tap	1 ft	Tap at 10 o'clock has possible loss of seal.
					Joint Defect	1.5 ft	Minor joint offset, seal appears intact.
CBP149F-CBP149E	12	PVC	19	Storm Drain	Deformed	3.5 ft	Minor deformation at 2 o'clock, seal intact.
					Saw Cuts	7.6 ft	Twelve saw cuts in crown from 12 o'clock to 2 o'clock with infiltration stains, for approximately 1 foot in length.
					Repair	109.9 ft	Approximately 1 foot of repair in crown of PVC pipe from 11 o'clock to 1 o'clock.
IN-CBP149G ¹⁶	4	PVC	19	Storm Drain	Deformed	10.7 ft	Minor elliptical deformation in perforated pipe, seal intact.

Table 1. Week 19 CCTV Major Findings, August 27–30, 2019

Mule Creek State Prison, Ione, California

Segment ¹	Diameter (inches)	Pipe Material	Figure ²	Segment Type	Finding	Distance from Start of Inspection ³	Comment
IN-CBP149G continued						16.7 ft	Minor deformation in perforated pipe invert, seal intact.
						18.4 ft	Minor elliptical deformation in perforated pipe, seal intact.
COSSMH24-SSMH24 ¹⁷	4	PVC/CI	19	Sanitary Sewer	Corrosion	4.4 ft–8 ft	Corrosion is mostly minor, invert appears intact.
C1-1A	4	CI	10	Sanitary Sewer	Corrosion	0.3 ft–40.2 ft	Corrosion is minor, invert intact.
C1-3C	4	CI	15	Sanitary Sewer	Corrosion	0 ft–27 ft	Corrosion is minor, invert intact.

1. Segment identifiers are based on preliminary mapping from as-built drawings and survey work. Drawings are not final and will be updated as inspections verify connectivity and existence of structures.
2. Figure numbering from preliminary map set included as Appendix 1 of the CCTV Week Status Report for Week 1 dated April 15, 2019.
3. Distance measured from start of inspection unless otherwise noted.
4. Pipe segment Y9A previously inspected in Week 1 and Week 13.
5. PVC: polyvinyl chloride
6. ft: feet
7. Labeled as "COC3_ATCC3B" in CCTV inspection report.
8. CI: cast iron
9. Labeled as "COC3A_ATCC3A" in CCTV inspection report.
10. Labeled as "INMH244_SDMHC244" in CCTV inspection report.
11. C-HDPE: corrugated high-density polyethylene
12. Labeled as "INMH250_SDMHC250" in CCTV inspection report.
13. Pipe segment done in two sections: as "COD1A_ATCD1A" for upper portion of lateral from end of line cleanout to intermediate cleanout, and for the lower portion of the lateral from intermediate cleanout towards the mainline labeled as "COD1A-1_ATCD1A" in CCTV inspection report; previously inspected on June 12, 2018. Defect distances are measured from the end of line cleanout towards mainline.
14. Labeled as "COGT6-ATCGT6" in CCTV inspection report; previously inspected in Week 13 on June 21, 2019.

Table 1. Week 19 CCTV Major Findings, August 27–30, 2019
Mule Creek State Prison, Ione, California

Segment ¹	Diameter (inches)	Pipe Material	Figure ²	Segment Type	Finding	Distance from Start of Inspection ³	Comment
15. Labeled as “J1WYE-SGMH25” in CCTV inspection report. 16. Labeled as “INP149G_CBP149G” in CCTV inspection report. 17. Labeled as “COC11A_WYEC11A” in CCTV inspection report; pipe segment previously inspected in Week 11 of CCTV inspections on June 9, 2019. 18. Labeled as “COC13C-WYECOC13C” in CCTV inspection report; pipe segment previously inspected in Week 9 of CCTV inspections on May 19, 2019.							

For the 19th week of CCTV inspections, work occurred throughout the facility, including the yards, center corridor, and No Man’s Land. The inspections consisted of segments that were not completed on the initial round through the areas, or segments that needed reinspection. Figure 1 provides an overview of the work completed this week. Attachment 1 includes Figures 3, 4, 10, 12, 15, and 19, which have been updated from the preliminary mapping set submitted with the Week 1 CCTV Status Report. These figures were updated to reflect additional pipes or altered alignments encountered during the inspections; however, the figures are still considered preliminary and may be further updated as needed.

Defects encountered in the sanitary sewer system included: corrosion, deformed pipe, and joint separation. Corrosion appeared to be primarily minor and was consistent with other metal pipes that have been inspected. In all the inspected segments this week, the invert appeared intact and not corroded through. Segment Y9A had an approximately 2-foot section of PVC pipe with an elliptical deformation present and joint separations at both joints, which may have been the result of a repair or coupling connection.

Defects in the storm drain system included: broken, deformed pipe; intruding tap; joint separation; a repair; and a segment with saw cuts. Segment IN-MCH244 had a broken corrugated HDPE pipe, visible by a partially collapsed crown at a transition from PVC to corrugated HDPE pipe, where the seal was likely compromised. Segments CBP149F-CBP149E, IN-CBP149G, and IN-MCH250 showed minor spot deformations and minor elliptical deformations, where seal and functionality did not appear to be compromised. Segment CBP149E-CBP149D had an intruding tap where the seal appeared to be possibly compromised and a joint separation, both defects within 1.5 feet of start of CCTV inspection at catch basin CBP149D, where the seal appeared intact. Segment CBP149F-CBP149E had 12 approximately 5-inch long saw cuts over approximately 1 foot of PVC pipe, which appear to have been intentional. Segment CBP149F-CBP149E also had an approximately 1-foot repair patch in the crown of a 12-inch diameter PVC pipe, where the seal may have been compromised, but loss of functionality was not expected.

This week concludes the planned weekly CCTV inspections, and supplementary information will be included in the final report of findings.



Technical Memorandum

Reference: 516025.105
Date: April 15, 2019
To: Kenny Croyle, Central Valley Regional Water Quality Control Board
From: Mike Foget, PE, SHN
Subject: **Mule Creek State Prison-CCTV Weekly Status Report (Week #1)**

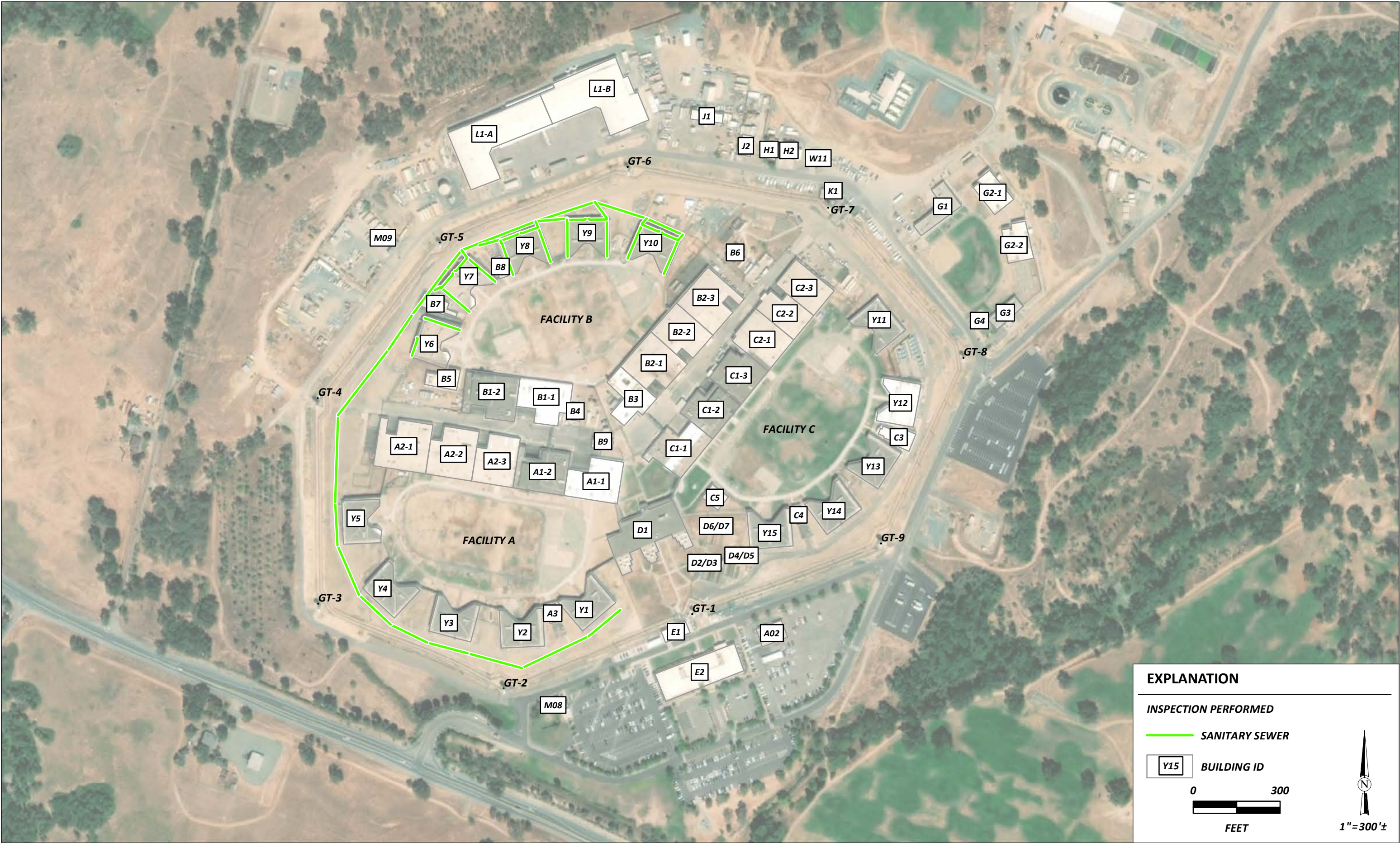
This technical memorandum summarizes major findings for the closed-circuit television (CCTV) inspection of the storm drain and sanitary sewer system at Mule Creek State Prison (MCSP). The inspections summarized in this memorandum were completed from March 18, 2019, to March 22, 2019, by Nor Cal Pipeline Services.

A total of 43 segments of the sanitary sewer system were inspected, including 19 sewer main segments and 24 sewer lateral segments. In total, approximately 6,096 lineal feet (LF) were inspected. A summary of major findings for this inspection work is included in Table 1. Figure 1 provides an overview of the work completed this week.

Table 1. Week 1 CCTV Major Findings, March 18-22, 2019
Mule Creek State Prison, Ione, California


Segment ¹	Figure ²	Segment Type	Finding	Distance from Start of Inspection ³	Comment
Y10C1-SSMH19	3	Lateral	Intruding Sealing Ring	93.5 ft ⁴	Gasket visible at building Y10 connection. Seal appears intact.
Y10A1-SSMH20	3	Lateral	Intruding Sealing Ring	92 ft	Gasket visible at building Y10 connection. Seal appears intact.
SSMH20-SSMH19	3	Main	Intruding Sealing Ring	65 ft	Rubber couplings visible in main at lateral connection for building Y10. Seal appears intact.
			Joint Offset	135 ft	Joint slightly offset at coupler 2 feet upstream of MH19. Seal likely intact.

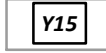
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EXPLANATION

INSPECTION PERFORMED

 SANITARY SEWER

 BUILDING ID

 0 300
FEET

 1"=300'±

SERVICE LAYER CREDITS: SOURCE: ESRI, DIGITALGLOBE, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEROGRIID, IGN, AND THE GIS USER COMMUNITY

**NOTE: PRELIMINARY LINEWORK SHOWN.
MAPPING IS NOT FINAL AND WILL BE UPDATED AS
CONNECTIVITY AND STRUCTURES ARE VERIFIED.**

Mule Creek State Prison
Stormwater Investigation
Ione, California

April 2019

Figure01_Week1

Week 1 CCTV Progress
3/18/19 to 3/22/19
SHN 516025.105

Figure 1

Mule Creek State Prison-CCTV Weekly Status Report (Week #1)

April 15, 2019

Page 2

Table 1. Week 1 CCTV Major Findings, March 18-22, 2019
Mule Creek State Prison, Ione, California

Segment ¹	Figure ²	Segment Type	Finding	Distance from Start of Inspection ³	Comment
SSMH18-Y9A	4	Lateral	Deformed	58.7 ft	Pipe deformed from vertical loading. Seal possibly compromised at joints.
Y9C1-Y9C	4	Lateral	Corrosion	19 ft	Minor surface corrosion in crown of pipe near first upstream connection.
Y7C1-MH15B	5	Lateral	Intruding Sealing Ring	98.3 ft	Gasket visible at building Y7 connection. Seal appears intact.
Y6C1-SSMH14	5	Lateral	Attached Deposits	55.4 ft	Encrusted deposits in crown. No hole or break present.
SSMH19-SSMH18	3	Main	Bulge	135 ft	Minor deformation, pipe wall intact and not compromised.
SSMH18-SSMH17	4	Main	Offset	48 ft	Joint slightly offset at rubber coupling near lateral connection. Seal likely intact.
			Offset	176 ft	Joint offset near lateral connection. Seal possibly compromised.
SSMH17-Y7D	4	Lateral	Separation	38 ft	Joint slightly separated at coupler, less than ½"
SSMH22-SSMH21	9	Main	Offset/Separation	2.5 ft	Joint separated at coupler. Seal likely intact.

**Table 1. Week 1 CCTV Major Findings, March 18-22, 2019
Mule Creek State Prison, Lone, California**

Segment ¹	Figure ²	Segment Type	Finding	Distance from Start of Inspection ³	Comment
SSMH21-SSMH6	9	Main	Offset/Separation	137 ft	Offset at rubber coupling. Seal possibly intact.
			Offset	249 ft	Joint slightly offset at coupler. Seal likely intact.
			Deformed	250 ft	Deformation in invert. No hole/break and no loss of seal integrity.
1. Segment identifiers are based on preliminary mapping from as-built drawings and survey work. Drawings are not final and will be updated as inspections verify connectivity and existence of structures.					
2. Figure numbering from preliminary map set included as Appendix 1 of this memorandum.					
3. Distance from inspection report and measured from beginning of inspection.					
4. ft: feet					

For the first week of CCTV inspections, findings included: defective joints, deformed pipe, intruding sealing material, and minor corrosion. Joint defects were located at couplers, and no soil or voids were visible. Seal integrity appeared largely intact; however, several of the joint defects may be compromised. Pipe deformation defects were not associated with breaks or holes. At one deformation, pipe joints were possibly compromised due to vertical loading. Building connections appeared to be made with rubber gasket material, and while several of the connections had gasket material intruding into the pipe, the seals appeared intact. Corrosion and minor tuberculation were present in the metal building laterals; however, the corrosion appeared to be minor and not at risk of compromising the thickness of the pipe wall.

Attachment 1 includes the preliminary mapping of the segments that are scheduled for inspection. Preliminary mapping is based on as-built drawings and survey work. The mapping is not final and will be updated as inspections verify connectivity and existence of structures. For informational purposes, provisional reports for the first week of CCTV inspection are included as Attachment 2. Due to file size restrictions, the inspection video files are submitted digitally.

Engineer's Signature:



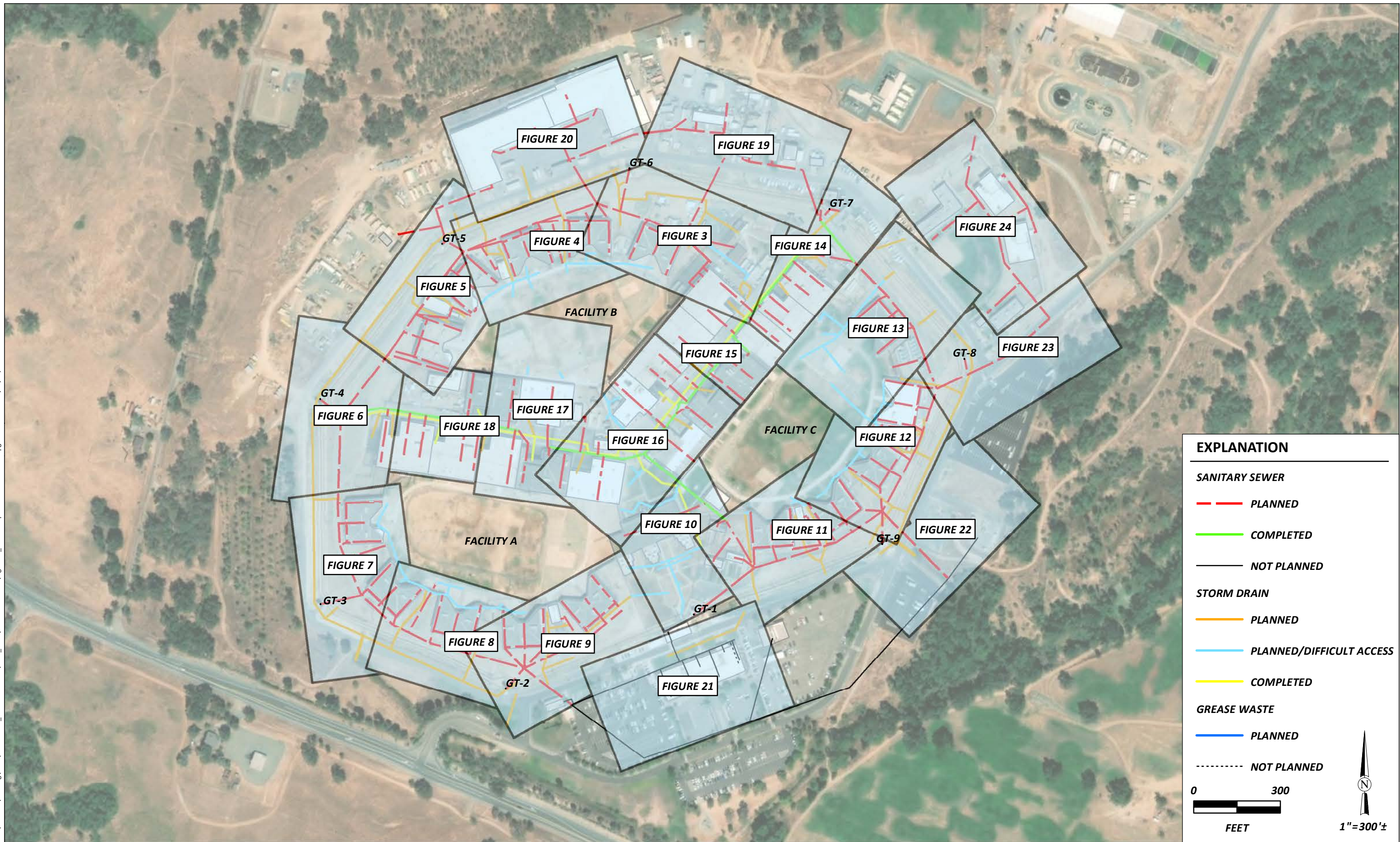
Mike Foget, PE #C54123

Attachments: 1. Preliminary Mapping
2. Inspection Reports



PRELIMINARY MAPPING 1

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SERVICE LAYER CREDITS: SOURCE: ESRI, DIGITALGLOBE, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEROGRIID, IGN, AND THE GIS USER COMMUNITY

**NOTE: PRELIMINARY LINEWORK SHOWN.
MAPPING IS NOT FINAL AND WILL BE UPDATED AS
CONNECTIVITY AND STRUCTURES ARE VERIFIED.**



Mule Creek State Prison
Stormwater Investigation
Ione, California

2019 CCTV Detail Figure Locations

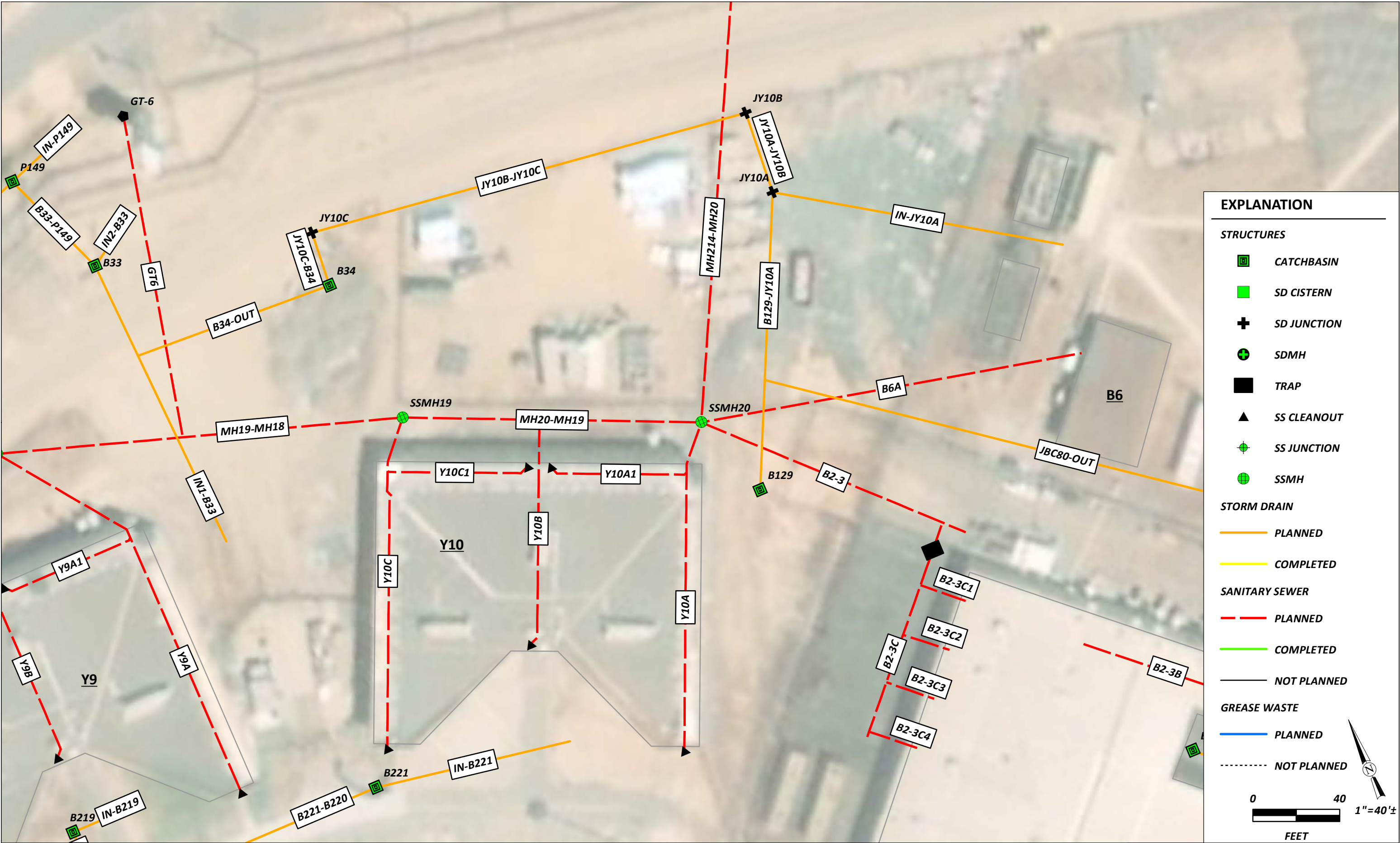
SHN 516025.105

April 2019

Figure02_CCTVViewports

Figure 2

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Mule Creek State Prison
Stormwater Investigation
Ione, California

2019 CCTV Detail 1

SHN 516025.105

April 2019

Figure03_CCTVViewport1

Figure 3

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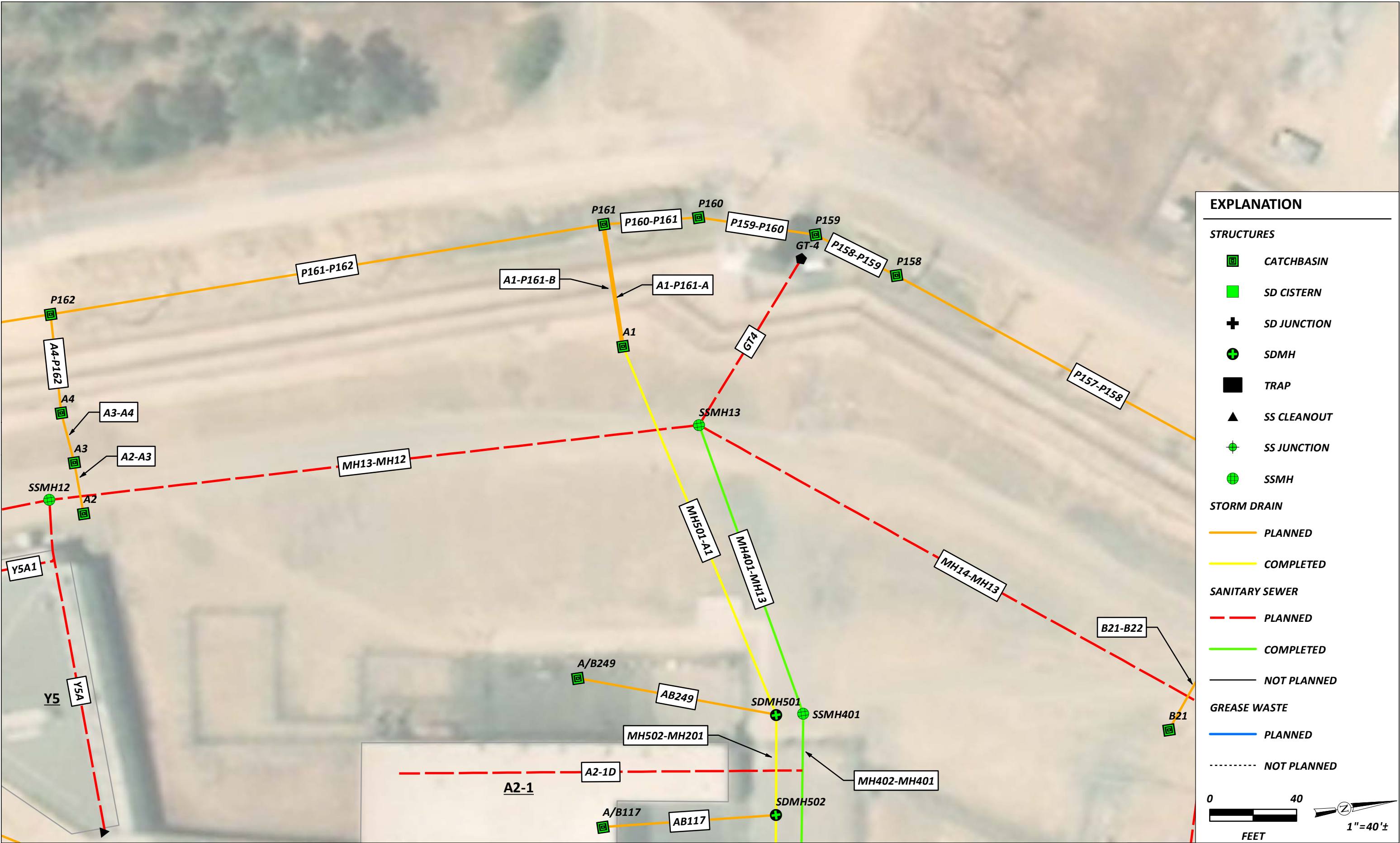


SERVICE LAYER CREDITS: SOURCE: ESRI, DIGITALGLOBE, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEROGRIID, IGN, AND THE GIS USER COMMUNITY

**NOTE: PRELIMINARY LINEWORK SHOWN.
MAPPING IS NOT FINAL AND WILL BE UPDATED AS
CONNECTIVITY AND STRUCTURES ARE VERIFIED.**



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SERVICE LAYER CREDITS: SOURCE: ESRI, DIGITALGLOBE, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEROGRIID, IGN, AND THE GIS USER COMMUNITY

**NOTE: PRELIMINARY LINEWORK SHOWN.
MAPPING IS NOT FINAL AND WILL BE UPDATED AS
CONNECTIVITY AND STRUCTURES ARE VERIFIED.**



Mule Creek State Prison
Stormwater Investigation
Ione, California

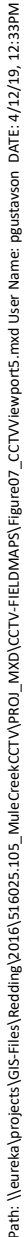
2019 CCTV Detail 4

SHN 516025.105

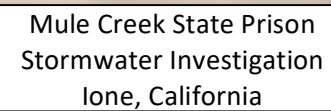
April 2019

Figure06_CCTVViewport4

Figure 6



**NOTE: PRELIMINARY LINEWORK SHOWN.
MAPPING IS NOT FINAL AND WILL BE UPDATED AS
CONNECTIVITY AND STRUCTURES ARE VERIFIED.**



SHN 516025.105

Figure 7

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SERVICE LAYER CREDITS: SOURCE: ESRI, DIGITALGLOBE, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEROGRIID, IGN, AND THE GIS USER COMMUNITY

**NOTE: PRELIMINARY LINEWORK SHOWN.
MAPPING IS NOT FINAL AND WILL BE UPDATED AS
CONNECTIVITY AND STRUCTURES ARE VERIFIED.**



Mule Creek State Prison
Stormwater Investigation
Ione, California

2019 CCTV Detail 6
SHN 516025.105

April 2019

Figure08_CCTVViewport6

Figure 8

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EXPLANATION

STRUCTURES

CATCHBASIN

SD CISTERN

SD JUNCTION

SDMH

TRAP

SS CLEANOUT

SS JUNCTION

SSMH

STORM DRAIN

PLANNED

COMPLETED

SANITARY SEWER

PLANNED

COMPLETED

NOT PLANNED

GREASE WASTE

PLANNED

NOT PLANNED

0 40
FEET

1"=40'±

SERVICE LAYER CREDITS: SOURCE: ESRI, DIGITALGLOBE, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEROGRIID, IGN, AND THE GIS USER COMMUNITY

**NOTE: PRELIMINARY LINEWORK SHOWN.
MAPPING IS NOT FINAL AND WILL BE UPDATED AS
CONNECTIVITY AND STRUCTURES ARE VERIFIED.**



Mule Creek State Prison
Stormwater Investigation
Ione, California

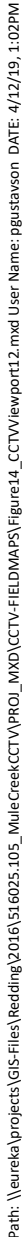
2019 CCTV Detail 11

SHN 516025.105

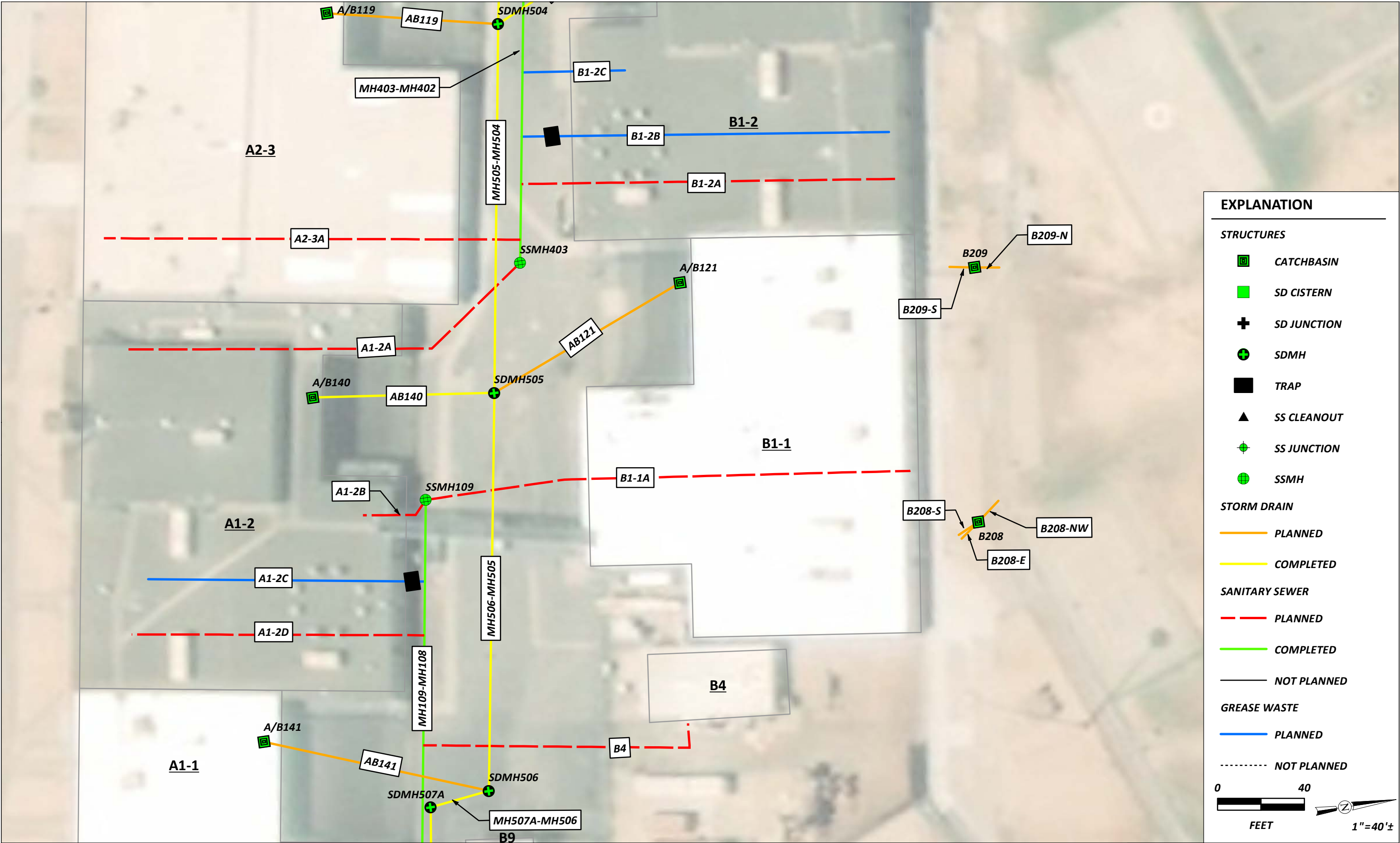
April 2019

Figure13_CCTVViewport11

Figure 13



Path: \\nureka\projects\GIS-Files\Redding\2016\516025.105_MuleCreekCCTV\PROJ_MXD\CCTV-FIELDMAPS\Figure17_CCTVViewport15.mxd User Name: pgustavson DATE: 4/12/19, 1:07PM



SERVICE LAYER CREDITS: SOURCE: ESRI, DIGITALGLOBE, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEROGRIID, IGN, AND THE GIS USER COMMUNITY

**NOTE: PRELIMINARY LINEWORK SHOWN.
MAPPING IS NOT FINAL AND WILL BE UPDATED AS
CONNECTIVITY AND STRUCTURES ARE VERIFIED.**



Mule Creek State Prison
Stormwater Investigation
Ione, California

2019 CCTV Detail 15

SHN 516025.105

April 2019

Figure17_CCTVViewport15


Figure 17


Path: \\nureka\projects\GIS-Files\Redding\2016\516025.105_MuleCreekCCTV\PROJ_MXD\CCTV-FIELDMAPS\Figure19_CCTVViewport17.mxd User Name: pguistavson DATE: 4/12/19 1:10PM





EXPLANATION


STRUCTURES


 CATCHBASIN


 SD CISTERN


 SD JUNCTION

 SDMH


 TRAP


 SS CLEANOUT

 SS JUNCTION


 SSMH


STORM DRAIN


 PLANNED

 COMPLETED


SANITARY SEWER


 PLANNED


 COMPLETED


 NOT PLANNED

GREASE WASTE

 PLANNED

 NOT PLANNED

 0 40
FEET

 1"=40'±

SERVICE LAYER CREDITS: SOURCE: ESRI, DIGITALGLOBE, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEROGRID, IGN, AND THE GIS USER COMMUNITY

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Mule Creek State Prison
Stormwater Investigation
Ione, California

2019 CCTV Detail 17

SHN 516025.105
















April 2019

Figure19_CCTVViewport17

Figure 19

Path: \\nureka\projects\GIS-Files\Redding\2016\516025.105_MuleCreekCCTV\PROJ_MXD\CCTV-FIELDMAPS\Figure20_CCTVViewport18.mxd User Name: pgustavson DATE: 4/12/19 1:11PM

EXPLANATION

STRUCTURES		TRAP	STORM DRAIN	SANITARY SEWER	GREASE WASTE
	CATCHBASIN		 PLANNED	 PLANNED	 PLANNED
	SD CISTERN		 COMPLETED	 COMPLETED	 NOT PLANNED
	SD JUNCTION			 NOT PLANNED	
	SDMH				



SERVICE LAYER CREDITS: SOURCE: ESRI, DIGITALGLOBE, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEROGRIID, IGN, AND THE GIS USER COMMUNITY

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Mule Creek State Prison
Stormwater Investigation
Ione, California

2019 CCTV Detail 18
SHN 516025.105

April 2019


Figure20_CCTVViewport18


Figure 20


Path: \\nureka\projects\GIS-Files\Redding\2016\516025.105_MuleCreekCCTV\PROJ_MXD\CCTV-FIELDMAPS\Figure21_CCTVViewport19.mxd User Name: pgustavson DATE: 4/12/19, 1:15PM


EXPLANATION


STRUCTURES


 CATCHBASIN


 SD CISTERN


 SD JUNCTION

 SDMH


 TRAP


 SS CLEANOUT

 SS JUNCTION


 SSMH


STORM DRAIN


 PLANNED

 COMPLETED


SANITARY SEWER


 PLANNED

 COMPLETED

 NOT PLANNED

GREASE WASTE


 PLANNED

 NOT PLANNED

0

40


FEET



1"=40'±

SERVICE LAYER CREDITS: SOURCE: ESRI, DIGITALGLOBE, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEROGRIID, IGN, AND THE GIS USER COMMUNITY

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CONNECTIVITY AND STRUCTURES ARE VERIFIED.



Mule Creek State Prison
Stormwater Investigation
Ione, California

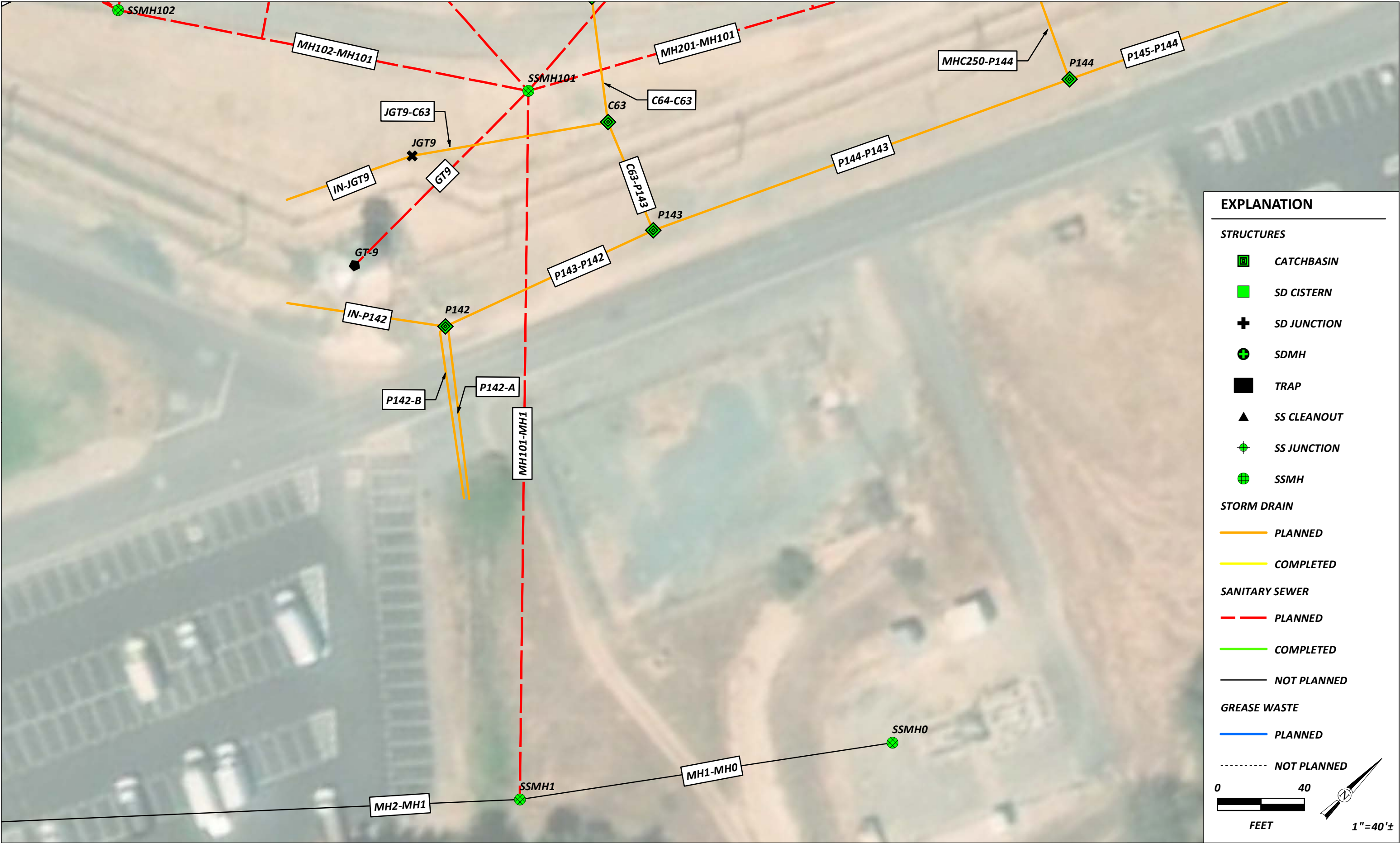
April 2019

2019 CCTV Detail 19
SHN 516025.105

Figure21_CCTVViewport19

Figure 21

Path: \\nureka\projects\GIS-Files\Redding\2016\516025.105_MuleCreekCCTV\PROJ_MXD\CCTV-FIELDMAPS\Figure22_CCTVViewport20.mxd User Name: pgustavson DATE: 4/12/19, 1:14PM



SERVICE LAYER CREDITS: SOURCE: ESRI, DIGITALGLOBE, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEROGRIID, IGN, AND THE GIS USER COMMUNITY

**NOTE: PRELIMINARY LINEWORK SHOWN.
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Mule Creek State Prison
Stormwater Investigation
Ione, California

2019 CCTV Detail 20

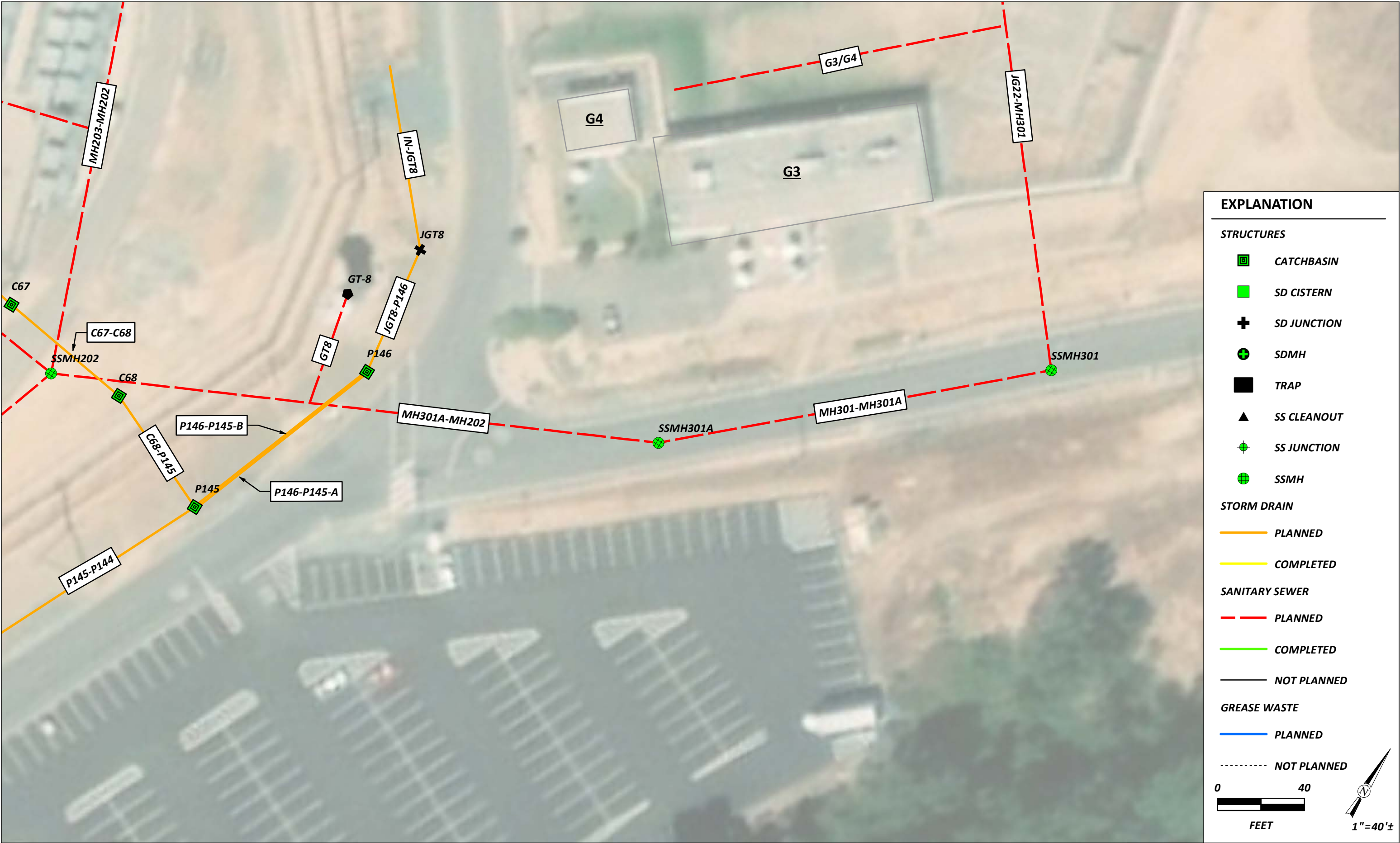
SHN 516025.105

April 2019

Figure22_CCTVViewport20

Figure 22

Path: \\nureka\projects\GIS-Files\Redding\2016\516025.105_MuleCreekCCTV\PROJ_MXD\CCTV-FIELDMAPS\Figure23_CCTVViewport21.mxd User Name: pgustavson DATE: 4/12/19, 1:16PM



SERVICE LAYER CREDITS: SOURCE: ESRI, DIGITALGLOBE, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEROGRIID, IGN, AND THE GIS USER COMMUNITY

**NOTE: PRELIMINARY LINEWORK SHOWN.
MAPPING IS NOT FINAL AND WILL BE UPDATED AS
CONNECTIVITY AND STRUCTURES ARE VERIFIED.**



Mule Creek State Prison
Stormwater Investigation
Ione, California

2019 CCTV Detail 21

SHN 516025.105

April 2019


Figure23_CCTVViewport21


Figure 23


Path: \\nureka\projects\GIS-Files\Redding\2016\516025.105_MuleCreekCCTV\PROJ_MXD\CCTV-FIELDMAPS\Figure24_CCTVViewport22.mxd User Name: pgustavson DATE: 4/12/19, 1:18PM


EXPLANATION


STRUCTURES


 CATCHBASIN


 SD CISTERN


 SD JUNCTION

 SDMH


 TRAP


 SS CLEANOUT

 SS JUNCTION


 SSMH


STORM DRAIN


 PLANNED

 COMPLETED


SANITARY SEWER


 PLANNED

 COMPLETED

 NOT PLANNED

GREASE WASTE

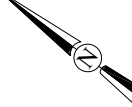
 PLANNED

 NOT PLANNED

0


40

FEET



SERVICE LAYER CREDITS: SOURCE: ESRI, DIGITALGLOBE, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEROGRIID, IGN, AND THE GIS USER COMMUNITY

NOTE: PRELIMINARY LINEWORK SHOWN.
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CONNECTIVITY AND STRUCTURES ARE VERIFIED.



Mule Creek State Prison
Stormwater Investigation
Ione, California

April 2019

2019 CCTV Detail 22
SHN 516025.105

Figure24_CCTVViewport22

Figure 24

INSPECTION REPORTS 2



CUES, Inc.
3600 Rio Vista Avenue
Orlando, FL 32805
Phone: 407-849-0190
Fax: 407-425-1569

PACP Inspections

Surveyed by: RYAN HERENDEEN		Certificate number: 0703002334		Owner: NORCAL NASSCO		Customer:		Drainage area:		P/O number:		Sheet number:	
Pipe segment ref.: Y7B_SSMH15A				Start date/time: 20190320 09:56		Street: HIGHWAY 104				City: IONE			
Location details: BUILDING Y7				Upstream MH No: Y7B				Rim to invert:		Grade to invert:		Rim to grade:	
Pipe use: SS		Direction: D		Flow control: N		Downstream MH No: SSMH15A				Rim to invert:		Grade to invert:	
Height: 6 in.		Width:		Shape: C		Material: CAS		Lining method:		Pipe joint length:		Total length:	
Length surveyed: 0.000 ft.		Year constructed:		Year renewed:		Media label:		Purpose: F		Sewer category:		Pre-cleaning: X	
Date cleaned:		Work order no.:		Weather: 1		Location code: Y		Pressure value:		Project name: 3381-CV MCSP 2019			
Additional info:													

Observations

Distance	Video Ref.	PACP Code	Continuous	S/M/L	Value Inches (mm)		%	Joint	Circumferential Location		Image Ref.	Remarks
					1st	2nd			At/From	To		
0.0 ft.		ACOH						<input type="checkbox"/>	/			Y7B
0.0 ft.		MWL					5	<input type="checkbox"/>	/			

PACP Inspections

Surveyed by: RYAN HERENDEEN		Certificate number: 0703002334		Owner: NORCAL NASSCO		Customer:		Drainage area:		P/O number:		Sheet number:	
Pipe segment ref.: Y5C1_SSMH11				Start date/time: 20190321 07:27		Street: HIGHWAY 104				City: IONE			
Location details: BUILDING Y5				Upstream MH No: Y5C1				Rim to invert:		Grade to invert:		Rim to grade:	
Pipe use: SS		Direction: D		Flow control: N		Downstream MH No: SSMH11				Rim to invert:		Grade to invert:	
Height: 6 in.		Width:		Shape: C		Material: CAS		Lining method:		Pipe joint length:		Total length:	
Media label:		Purpose: F		Sewer category:		Pre-cleaning: N		Date cleaned:		Work order no.:		Weather: 1	
Project name: 3381-CV MCSP 2019				Additional info:									
Length surveyed: 0.000 ft.		Year constructed:		Year renewed:		Location code: Y		Pressure value:					

Observations

Distance	Video Ref.	PACP Code	Continuous	S/M/L	Value Inches (mm)		%	Joint	Circumferential Location		Image Ref.	Remarks
					1st	2nd			At/From	To		
0.0 ft.		ACOH						<input type="checkbox"/>	/			Y5C1
0.0 ft.		MWL					5	<input type="checkbox"/>	/			

PACP Inspections

Surveyed by: RYAN HERENDEEN		Certificate number: 0703002334		Owner:		Customer:		Drainage area:		P/O number:		Sheet number:	
Pipe segment ref.: SSMH19_SSMH18				Start date/time: 20190318 14:39		Street: HIGHWAY 104				City: IONE			
Location details: Y10				Upstream MH No: SSMH19				Rim to invert:		Grade to invert:		Rim to grade:	
Pipe use: SS		Direction: D		Flow control: N		Downstream MH No: SSMH18				Rim to invert:		Grade to invert:	
Height: 6 in.		Width:		Shape: C		Material: PVC		Lining method:		Pipe joint length:		Total length:	
Media label:		Purpose: F		Sewer category:		Pre-cleaning: L		Date cleaned: 20190318		Work order no.:		Weather: 1	
Project name: 3381-CV MCSP 2019				Additional info:									

Observations

Distance	Video Ref.	PACP Code	Continuous	S/M/L	Value Inches (mm)		%	Joint	Circumferential Location		Image Ref.	Remarks
					1st	2nd			At/From	To		
0.0 ft.		AMH						<input type="checkbox"/>	/			SSMH19
0.0 ft.		MWL					5	<input type="checkbox"/>	/			

PACP Inspections

Surveyed by: RYAN HERENDEEN		Certificate number: 0703002334		Owner: NORCAL NASSCO		Customer:		Drainage area:		P/O number:		Sheet number:	
Pipe segment ref.: SSMH19_Y10C				Start date/time: 20190318 09:29		Street: HIGHWAY 104				City: IONE			
Location details: YARD B				Upstream MH No: Y10C				Rim to invert:		Grade to invert:		Rim to grade:	
Pipe use: SS		Direction: U		Flow control: N		Downstream MH No: SSMH19				Rim to invert:		Grade to invert:	
Height: 6 in.		Width:		Shape: C		Material: PVC		Lining method:		Pipe joint length:		Total length: 155.200 ft.	
Length surveyed: 155.200 ft.		Year constructed:		Year renewed:		Media label:		Purpose: F		Sewer category:		Pre-cleaning: N	
Date cleaned:		Work order no.:		Weather: 1		Location code: Y		Pressure value:		Project name: 3381-CV MCSP 2019			
Additional info:													

Observations

Distance	Video Ref.	PACP Code	Continuous	S/M/L	Value Inches (mm)		%	Joint	Circumferential Location		Image Ref.	Remarks
					1st	2nd			At/From	To		
0.0 ft.		AMH						<input type="checkbox"/>	/			SSMH19
0.0 ft.		MWL					5	<input type="checkbox"/>	/			
0.0 ft.	00:03:08	MMC						<input type="checkbox"/>	/		3381-CV MCSP 2019-ACOH 'Y10C'-AMH 'SSMH19'-MMC at 0.0 ft..JPG	CAST IRON
29.5 ft.	00:03:44	TFA			6.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-ACOH 'Y10C'-AMH 'SSMH19'-TFA at 0.0 ft..JPG	Y10C1
33.7 ft.	00:05:12	TFA			4.000			<input type="checkbox"/>	2 /		3381-CV MCSP 2019-ACOH 'Y10C'-AMH 'SSMH19'-TFA at 0.0 ft._1.JPG	

Observations

Distance	Video Ref.	PACP Code	Continuous	S/M/L	Value Inches (mm)		%	Joint	Circumferential Location		Image Ref.	Remarks
					1st	2nd			At/From	To		
42.0 ft.	00:06:28	TF			6.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-ACOH 'Y10C'-AMH 'SSMH19'-TF at 0.0 ft..JPG	WYE
62.7 ft.	00:09:11	TFA			4.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-ACOH 'Y10C'-AMH 'SSMH19'-TFA at 0.0 ft._2.JPG	
77.9 ft.	00:10:58	TFA			4.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-ACOH 'Y10C'-AMH 'SSMH19'-TFA at 0.0 ft._3.JPG	
93.2 ft.	00:12:18	TFA			4.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-ACOH 'Y10C'-AMH 'SSMH19'-TFA at 0.0 ft._4.JPG	
108.3 ft.	00:13:41	TFA			4.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-ACOH 'Y10C'-AMH 'SSMH19'-TFA at 0.0 ft._5.JPG	
122.6 ft.	00:15:53	TFA			4.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-ACOH 'Y10C'-AMH 'SSMH19'-TFA at 0.0 ft._6.JPG	
137.6 ft.	00:18:00	TFA			4.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-ACOH 'Y10C'-AMH 'SSMH19'-TFA at 0.0 ft._7.JPG	

Observations

Distance	Video Ref.	PACP Code	Continuous	S/M/L	Value Inches (mm)		%	Joint	Circumferential Location		Image Ref.	Remarks
					1st	2nd			At/From	To		
152.7 ft. 00:20:00		TFA			4.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-ACOH 'Y10C'-AMH 'SSMH19'-TFA at 0.0 ft._8.JPG	
155.2 ft. 00:24:14		MSA						<input type="checkbox"/>	/		3381-CV MCSP 2019-ACOH 'Y10C'-AMH 'SSMH19'-MSA at 155.2 ft..JPG	CAN'T PUSH ANYMORE

PACP Inspections

Surveyed by: RYAN HERENDEEN		Certificate number: 0703002334		Owner: NORCAL NASSCO		Customer:		Drainage area:		P/O number:		Sheet number:	
Pipe segment ref.: Y10C1_SSMH19				Start date/time: 20190318 10:12		Street: HIGHWAY 104				City: IONE			
Location details: YARD B				Upstream MH No: Y10C1				Rim to invert:		Grade to invert:		Rim to grade:	
Pipe use: SS		Direction: D		Flow control: N		Downstream MH No: SSMH19				Rim to invert:		Grade to invert:	
Height: 6 in.		Width:		Shape: C		Material: PVC		Lining method:		Pipe joint length:		Total length: 114.200 ft.	
Length surveyed: 114.200 ft.		Year constructed:		Year renewed:									
Media label:		Purpose: F		Sewer category:		Pre-cleaning: N		Date cleaned:		Work order no.:		Weather: 1	
Location code: Y		Pressure value:											
Project name: 3381-CV MCSP 2019				Additional info:									

Observations

Distance	Video Ref.	PACP Code	Continuous	S/M/L	Value Inches (mm)		%	Joint	Circumferential Location		Image Ref.	Remarks
					1st	2nd			At/From	To		
0.0 ft.		ACOH						<input type="checkbox"/>	/			Y10C1
0.0 ft.		MWL					5	<input type="checkbox"/>	/			
10.0 ft.	00:01:07	MMC						<input type="checkbox"/>	/		3381-CV MCSP 2019-ACOH 'Y10C1'-AMH 'SSMH19'-MMC at 0.0 ft..JPG	CAST IRON
20.5 ft.	00:02:17	TFA			4.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-ACOH 'Y10C1'-AMH 'SSMH19'-TFA at 0.0 ft..JPG	
35.2 ft.	00:03:38	TFA			4.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-ACOH 'Y10C1'-AMH 'SSMH19'-TFA at 0.0 ft._1.JPG	

Observations

Distance	Video Ref.	PACP Code	Continuous	S/M/L	Value Inches (mm)		%	Joint	Circumferential Location		Image Ref.	Remarks
					1st	2nd			At/From	To		
51.3 ft.	00:04:48	TFA			4.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-ACOH 'Y10C1'-AMH 'SSMH19'-TFA at 0.0 ft._2.JPG	
64.8 ft.	00:06:04	TFA			4.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-ACOH 'Y10C1'-AMH 'SSMH19'-TFA at 0.0 ft._3.JPG	
83.3 ft.	00:07:58	MGO						<input type="checkbox"/>	/		3381-CV MCSP 2019-ACOH 'Y10C1'-AMH 'SSMH19'-MGO at 0.0 ft..JPG	WYE
93.5 ft.	00:09:37	MMC						<input type="checkbox"/>	/		3381-CV MCSP 2019-ACOH 'Y10C1'-AMH 'SSMH19'-MMC at 93.5 ft..JPG	PVC
114.2 ft.	00:11:36	AMH						<input type="checkbox"/>	/		3381-CV MCSP 2019-ACOH 'Y10C1'-AMH 'SSMH19'-AMH at 114.2 ft..JPG	SSMH19

PACP Inspections

Surveyed by: RYAN HERENDEEN		Certificate number: 0703002334		Owner: NORCAL NASSCO		Customer:		Drainage area:		P/O number:		Sheet number:	
Pipe segment ref.: Y10A1_SSMH20				Start date/time: 20190318 10:29		Street: HIGHWAY 104				City: IONE			
Location details: YARD B				Upstream MH No: Y10A1				Rim to invert:		Grade to invert:		Rim to grade:	
Pipe use: SS		Direction: D		Flow control: N		Downstream MH No: SSMH20				Rim to invert:		Grade to invert:	
Height: 6 in.		Width:		Shape: C		Material: CAS		Lining method:		Pipe joint length:		Total length: 111.500 ft.	
Length surveyed: 111.500 ft.		Year constructed:		Year renewed:		Media label:		Purpose: F		Sewer category:		Pre-cleaning: N	
Date cleaned:		Work order no.:		Weather: 1		Location code: Y		Pressure value:					
Project name: 3381-CV MCSP 2019				Additional info: SHN									

Observations

Distance	Video Ref.	PACP Code	Continuous	S/M/L	Value Inches (mm)		%	Joint	Circumferential Location		Image Ref.	Remarks
					1st	2nd			At/From	To		
0.0 ft.		ACOH						<input type="checkbox"/>	/			Y10A1
0.0 ft.		MWL					5	<input type="checkbox"/>	/			
21.8 ft.	00:01:47	TFA			4.000			<input type="checkbox"/>	2 /		3381-CV MCSP 2019-ACOH 'Y10A1'-AMH 'SSMH20'-TFA at 0.0 ft..JPG	
35.7 ft.	00:03:10	TFA			4.000			<input type="checkbox"/>	2 /		3381-CV MCSP 2019-ACOH 'Y10A1'-AMH 'SSMH20'-TFA at 0.0 ft._1.JPG	
51.3 ft.	00:04:16	TFA			4.000			<input type="checkbox"/>	2 /		3381-CV MCSP 2019-ACOH 'Y10A1'-AMH 'SSMH20'-TFA at 0.0 ft._2.JPG	

Observations

Distance	Video Ref.	PACP Code	Continuous	S/M/L	Value Inches (mm)		%	Joint	Circumferential Location		Image Ref.	Remarks
					1st	2nd			At/From	To		
64.9 ft.	00:10:32	TFA			4.000			<input type="checkbox"/>	2	/	3381-CV MCSP 2019-ACOH 'Y10A1'-AMH 'SSMH20'-TFA at 0.0 ft._3.JPG	
81.0 ft.	00:11:39	MGO						<input type="checkbox"/>	/		3381-CV MCSP 2019-ACOH 'Y10A1'-AMH 'SSMH20'-MGO at 81.0 ft..JPG	WYE
91.9 ft.	00:12:53	MMC						<input type="checkbox"/>	/		3381-CV MCSP 2019-ACOH 'Y10A1'-AMH 'SSMH20'-MMC at 91.9 ft..JPG	PVC
111.5 ft.	00:14:34	AMH						<input type="checkbox"/>	/		3381-CV MCSP 2019-ACOH 'Y10A1'-AMH 'SSMH20'-AMH at 111.5 ft..JPG	SSMH20

PACP Inspections

Surveyed by: RYAN HERENDEEN		Certificate number: 0703002334		Owner: NORCAL NASSCO		Customer:		Drainage area:		P/O number:		Sheet number:	
Pipe segment ref.: SSMH20_Y10A				Start date/time: 20190318 11:07		Street: HIGHWAY 104				City: IONE			
Location details: YARD B				Upstream MH No: Y10A				Rim to invert:		Grade to invert:		Rim to grade:	
Pipe use: SS		Direction: U		Flow control: N		Downstream MH No: SSMH20				Rim to invert:		Grade to invert:	
Height: 6 in.		Width:		Shape: C		Material: PVC		Lining method:		Pipe joint length:		Total length: 166.200 ft.	
Length surveyed: 166.200 ft.		Year constructed:		Year renewed:									
Media label:		Purpose: F		Sewer category:		Pre-cleaning: N		Date cleaned:		Work order no.:		Weather: 1	
Project name: 3381-CV MCSP 2019				Additional info: SHN									

Observations

Distance	Video Ref.	PACP Code	Continuous	S/M/L	Value Inches (mm)		%	Joint	Circumferential Location		Image Ref.	Remarks
					1st	2nd			At/From	To		
0.0 ft.		AMH						<input type="checkbox"/>	/			SSMH20
0.0 ft.		MWL					5	<input type="checkbox"/>	/			
18.4 ft.	00:01:50	MMC						<input type="checkbox"/>	/		3381-CV MCSP 2019-ACOH 'Y10A'-AMH 'SSMH20'-MMC at 18.4 ft..JPG	CAST IRON
29.8 ft.	00:03:57	TFA			4.000			<input type="checkbox"/>	2 /		3381-CV MCSP 2019-ACOH 'Y10A'-AMH 'SSMH20'-TFA at 0.0 ft..JPG	
46.7 ft.	00:05:24	TFA			4.000			<input type="checkbox"/>	2 /		3381-CV MCSP 2019-ACOH 'Y10A'-AMH 'SSMH20'-TFA at 0.0 ft._1.JPG	

Observations

Distance	Video Ref.	PACP Code	Continuous	S/M/L	Value Inches (mm)		%	Joint	Circumferential Location		Image Ref.	Remarks
					1st	2nd			At/From	To		
62.0 ft.	00:06:21	TFA			4.000			<input type="checkbox"/>	2 /		3381-CV MCSP 2019-ACOH 'Y10A'-AMH 'SSMH20'-TFA at 0.0 ft._2.JPG	
77.8 ft.	00:07:24	TFA			4.000			<input type="checkbox"/>	2 /		3381-CV MCSP 2019-ACOH 'Y10A'-AMH 'SSMH20'-TFA at 0.0 ft._3.JPG	
92.8 ft.	00:08:58	TFA			4.000			<input type="checkbox"/>	2 /		3381-CV MCSP 2019-ACOH 'Y10A'-AMH 'SSMH20'-TFA at 0.0 ft._4.JPG	
106.2 ft.	00:10:24	TFA			4.000			<input type="checkbox"/>	2 /		3381-CV MCSP 2019-ACOH 'Y10A'-AMH 'SSMH20'-TFA at 0.0 ft._5.JPG	
108.0 ft.	00:11:28	TF			4.000			<input type="checkbox"/>	12 /		3381-CV MCSP 2019-ACOH 'Y10A'-AMH 'SSMH20'-TF at 0.0 ft..JPG	
121.5 ft.	00:13:17	TFA			4.000			<input type="checkbox"/>	2 /		3381-CV MCSP 2019-ACOH 'Y10A'-AMH 'SSMH20'-TFA at 0.0 ft._6.JPG	
137.3 ft.	00:14:46	TFA			4.000			<input type="checkbox"/>	2 /		3381-CV MCSP 2019-ACOH 'Y10A'-AMH 'SSMH20'-TFA at 0.0 ft._7.JPG	

Observations

Distance	Video Ref.	PACP Code	Continuous	S/M/L	Value Inches (mm)		%	Joint	Circumferential Location		Image Ref.	Remarks
					1st	2nd			At/From	To		
152.4 ft.	00:16:22	TFA			4.000			<input type="checkbox"/>	2 /		3381-CV MCSP 2019-ACOH 'Y10A'-AMH 'SSMH20'-TFA at 0.0 ft._8.JPG	
166.2 ft.	00:18:23	TFA			4.000			<input type="checkbox"/>	2 /		3381-CV MCSP 2019-ACOH 'Y10A'-AMH 'SSMH20'-TFA at 0.0 ft._9.JPG	
166.2 ft.	00:19:51	MSA						<input type="checkbox"/>	/		3381-CV MCSP 2019-ACOH 'Y10A'-AMH 'SSMH20'-MSA at 166.2 ft...JPG	POTENTIAL END OF PIPE/DEBRIS

PACP Inspections

Surveyed by: RYAN HERENDEEN		Certificate number: 0703002334		Owner: NORCAL NASSCO		Customer:		Drainage area:		P/O number:		Sheet number:	
Pipe segment ref.: SSMH20_SSMH19				Start date/time: 20190318 11:55		Street: HIGHWAY 104				City: IONE			
Location details: YARD B				Upstream MH No: SSMH20				Rim to invert:		Grade to invert:		Rim to grade:	
Pipe use: SS		Direction: D		Flow control: N		Downstream MH No: SSMH19				Rim to invert:		Grade to invert:	
Height: 6 in.		Width:		Shape: C		Material: PVC		Lining method:		Pipe joint length:		Total length: 137.500 ft.	
Length surveyed: 137.500 ft.		Year constructed:		Year renewed:		Media label:		Purpose: F		Sewer category:		Pre-cleaning: L	
Date cleaned: 20190318		Work order no.:		Weather: 1		Location code: Y		Pressure value:					
Project name: 3381-CV MCSP 2019				Additional info: SHN									

Observations

Distance	Video Ref.	PACP Code	Continuous	S/M/L	Value Inches (mm)		%	Joint	Circumferential Location		Image Ref.	Remarks
					1st	2nd			At/From	To		
0.0 ft.		AMH						<input type="checkbox"/>	/			SSMH20
0.0 ft.		MWL					25	<input type="checkbox"/>	/			
65.9 ft.	00:09:33	TFA			4.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-AMH 'SSMH20'-AMH 'SSMH19'-TFA at 65.9 ft..JPG	Y10B
66.5 ft.	00:10:47	ISSR					15	<input type="checkbox"/>	12 / 12		3381-CV MCSP 2019-AMH 'SSMH20'-AMH 'SSMH19'-ISSR at 66.5 ft..JPG	GASKET VISIBLE FULL ROTATION
137.5 ft.	00:19:17	AMH						<input type="checkbox"/>	/		3381-CV MCSP 2019-AMH 'SSMH20'-AMH 'SSMH19'-AMH at 137.5 ft..JPG	SSMH19

PACP Inspections

Surveyed by: RYAN HERENDEEN		Certificate number: 0703002334		Owner: NORCAL NASSCO		Customer:		Drainage area:		P/O number:		Sheet number:	
Pipe segment ref.: SSMH18_Y9A				Start date/time: 20190318 12:55		Street: HIGHWAY 104				City: IONE			
Location details: YARD B				Upstream MH No: Y9A				Rim to invert:		Grade to invert:		Rim to grade:	
Pipe use: SS		Direction: U		Flow control: N		Downstream MH No: SSMH18				Rim to invert:		Grade to invert:	
Height: 6 in.		Width:		Shape: C		Material: PVC		Lining method:		Pipe joint length:		Total length: 70.600 ft.	
Length surveyed: 70.600 ft.		Year constructed:		Year renewed:		Media label:		Purpose: F		Sewer category:		Pre-cleaning: N	
Date cleaned:		Work order no.:		Weather: 1		Location code: Y		Pressure value:					
Project name: 3381-CV MCSP 2019				Additional info: SHN									

Observations

Distance	Video Ref.	PACP Code	Continuous	S/M/L	Value Inches (mm)		%	Joint	Circumferential Location		Image Ref.	Remarks
					1st	2nd			At/From	To		
0.0 ft.		AMH						<input type="checkbox"/>	/			SSMH18
0.0 ft.		MWL					5	<input type="checkbox"/>	/			
58.7 ft.	00:06:10	DFBI					10	<input type="checkbox"/>	/		3381-CV MCSP 2019-ACOH 'Y9A'-AMH 'SSMH18'-DFBI at 58.7 ft..JPG	PARTIALLY DENTED IN
70.6 ft.	00:09:06	MSA						<input type="checkbox"/>	/		3381-CV MCSP 2019-ACOH 'Y9A'-AMH 'SSMH18'-MSA at 70.6 ft..JPG	BEND

PACP Inspections

Surveyed by: RYAN HERENDEEN		Certificate number: 0703002334		Owner: NORCAL NASSCO		Customer:		Drainage area:		P/O number:		Sheet number:	
Pipe segment ref.: Y9A1_WYE				Start date/time: 20190318 13:22		Street: HIGHWAY 104				City: IONE			
Location details: YARD B				Upstream MH No: Y9A1				Rim to invert:		Grade to invert:		Rim to grade:	
Pipe use: SS		Direction: D		Flow control: N		Downstream MH No: WYE				Rim to invert:		Grade to invert:	
Height: 6 in.		Width:		Shape: C		Material: CAS		Lining method:		Pipe joint length:		Total length: 104.700 ft.	
Length surveyed: 104.700 ft.		Year constructed:		Year renewed:		Media label:		Purpose: F		Sewer category:		Pre-cleaning: N	
Date cleaned:		Work order no.:		Weather: 1		Location code: Y		Pressure value:					
Project name: 3381-CV MCSP 2019				Additional info: SHN									

Observations

Distance	Video Ref.	PACP Code	Continuous	S/M/L	Value Inches (mm)		%	Joint	Circumferential Location		Image Ref.	Remarks
					1st	2nd			At/From	To		
0.0 ft.		ACOH						<input type="checkbox"/>	/			Y9A1
0.0 ft.		MWL					5	<input type="checkbox"/>	/			
19.5 ft.	00:02:37	TFA			4.000			<input type="checkbox"/>	2 /		3381-CV MCSP 2019-ACOH 'Y9A1'-AMH 'WYE'-TFA at 0.0 ft..JPG	
35.3 ft.	00:04:04	TFA			4.000			<input type="checkbox"/>	2 /		3381-CV MCSP 2019-ACOH 'Y9A1'-AMH 'WYE'-TFA at 0.0 ft._1.JPG	
51.6 ft.	00:10:45	TFA			4.000			<input type="checkbox"/>	2 /		3381-CV MCSP 2019-ACOH 'Y9A1'-AMH 'WYE'-TFA at 0.0 ft._2.JPG	

Observations

Distance	Video Ref.	PACP Code	Continuous	S/M/L	Value Inches (mm)		%	Joint	Circumferential Location		Image Ref.	Remarks
					1st	2nd			At/From	To		
67.8 ft.	00:11:57	TFA			4.000			<input type="checkbox"/>	2	/	3381-CV MCSP 2019-ACOH 'Y9A1'-AMH 'WYE'-TFA at 0.0 ft._3.JPG	
96.8 ft.	00:15:03	MMC						<input type="checkbox"/>	/		3381-CV MCSP 2019-ACOH 'Y9A1'-AMH 'WYE'-MMC at 0.0 ft..JPG	PVC
104.7 ft.	00:16:53	AJB						<input type="checkbox"/>	/		3381-CV MCSP 2019-ACOH 'Y9A1'-AMH 'WYE'-AJB at 104.7 ft..JPG	AT WYE MEETING POINT

PACP Inspections

Surveyed by: RYAN HERENDEEN		Certificate number: 0703002334		Owner: NORCAL NASSCO		Customer:		Drainage area:		P/O number:		Sheet number:	
Pipe segment ref.: Y9C1_Y9C				Start date/time: 20190318 13:54		Street: HIGHWAY 104				City: IONE			
Location details: YARD B				Upstream MH No: Y9C1				Rim to invert:		Grade to invert:		Rim to grade:	
Pipe use: SS		Direction: D		Flow control: N		Downstream MH No: Y9C				Rim to invert:		Grade to invert:	
Height: 6 in.		Width:		Shape: C		Material: CAS		Lining method:		Pipe joint length:		Total length: 84.700 ft.	
Length surveyed: 84.700 ft.		Year constructed:		Year renewed:		Work order no.:		Weather: 1		Location code: Y		Pressure value:	
Project name: 3381-CV MCSP 2019				Additional info: SHN									

Observations

Distance	Video Ref.	PACP Code	Continuous	S/M/L	Value Inches (mm)		%	Joint	Circumferential Location		Image Ref.	Remarks
					1st	2nd			At/From	To		
0.0 ft.		ACOH						<input type="checkbox"/>	/			Y9C1
0.0 ft.		MWL					5	<input type="checkbox"/>	/			
19.0 ft.	00:03:35	SZ						<input type="checkbox"/>	1 / 11		3381-CV MCSP 2019-ACOH 'Y9C1'-AMH 'Y9C'-SZ at 0.0 ft..JPG	APPEARS PIPE HAS CORROSION
20.3 ft.	00:05:28	TFA			4.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-ACOH 'Y9C1'-AMH 'Y9C'-TFA at 0.0 ft..JPG	
35.0 ft.	00:06:53	TFA			4.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-ACOH 'Y9C1'-AMH 'Y9C'-TFA at 0.0 ft._1.JPG	

Observations

Distance	Video Ref.	PACP Code	Continuous	S/M/L	Value Inches (mm)		%	Joint	Circumferential Location		Image Ref.	Remarks
					1st	2nd			At/From	To		
50.6 ft.	00:08:26	TFA			4.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-ACOH 'Y9C1'-AMH 'Y9C'-TFA at 0.0 ft._2.JPG	
66.7 ft.	00:09:42	TFA			4.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-ACOH 'Y9C1'-AMH 'Y9C'-TFA at 0.0 ft._3.JPG	
84.7 ft.	00:11:22	AJB						<input type="checkbox"/>	/		3381-CV MCSP 2019-ACOH 'Y9C1'-AMH 'Y9C'-AJB at 0.0 ft..JPG	Y9C

PACP Inspections

Surveyed by: RYAN HERENDEEN		Certificate number: 0703002334		Owner: NORCAL NASSCO		Customer:		Drainage area:		P/O number:		Sheet number:	
Pipe segment ref.: Y10C_Y10C WYE				Start date/time: 20190319 09:00		Street: HIGHWAY 104				City: IONE			
Location details: BUILDING 10				Upstream MH No: Y10C				Rim to invert:		Grade to invert:		Rim to grade:	
Pipe use: SS		Direction: D		Flow control: N		Downstream MH No: Y10C WYE				Rim to invert:		Grade to invert:	
Height: 6 in.		Width:		Shape: C		Material: CAS		Lining method:		Pipe joint length:		Total length: 157.600 ft.	
Length surveyed: 157.600 ft.		Year constructed:		Year renewed:									
Media label:		Purpose: F		Sewer category:		Pre-cleaning: L		Date cleaned: 20190319		Work order no.:		Weather: 1	
Project name: 3381-CV MCSP 2019				Additional info:									

Observations

Distance	Video Ref.	PACP Code	Continuous	S/M/L	Value Inches (mm)		%	Joint	Circumferential Location		Image Ref.	Remarks
					1st	2nd			At/From	To		
0.0 ft.		ACOH						<input type="checkbox"/>	/			Y10C
0.0 ft.		MWL					5	<input type="checkbox"/>	/			
4.5 ft.	00:02:44	DSZ					25	<input type="checkbox"/>	4 / 8		3381-CV MCSP 2019-ACOH 'Y10C'-AJB 'Y10C WYE'-DSZ at 4.5 ft..JPG	DEBRIS
20.1 ft.	00:11:39	TFA			4.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-ACOH 'Y10C'-AJB 'Y10C WYE'-TFA at 0.0 ft..JPG	
36.2 ft.	00:13:05	TFA			4.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-ACOH 'Y10C'-AJB 'Y10C WYE'-TFA at 0.0 ft._1.JPG	

Observations

Distance	Video Ref.	PACP Code	Continuous	S/M/L	Value Inches (mm)		%	Joint	Circumferential Location		Image Ref.	Remarks
					1st	2nd			At/From	To		
51.8 ft.	00:14:25	TFA			4.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-ACOH 'Y10C'-AJB 'Y10C WYE'-TFA at 0.0 ft._2.JPG	
66.9 ft.	00:15:30	TFA			4.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-ACOH 'Y10C'-AJB 'Y10C WYE'-TFA at 0.0 ft._3.JPG	
81.6 ft.	00:17:28	TFA			4.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-ACOH 'Y10C'-AJB 'Y10C WYE'-TFA at 0.0 ft._4.JPG	
96.8 ft.	00:18:28	TFA			4.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-ACOH 'Y10C'-AJB 'Y10C WYE'-TFA at 0.0 ft._5.JPG	
112.0 ft.	00:19:34	TFA			4.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-ACOH 'Y10C'-AJB 'Y10C WYE'-TFA at 0.0 ft._6.JPG	
127.2 ft.	00:20:49	TFA			4.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-ACOH 'Y10C'-AJB 'Y10C WYE'-TFA at 0.0 ft._7.JPG	
142.1 ft.	00:22:11	TFA			4.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-ACOH 'Y10C'-AJB 'Y10C WYE'-TFA at 0.0 ft._8.JPG	

Observations

Distance	Video Ref.	PACP Code	Continuous	S/M/L	Value Inches (mm)		%	Joint	Circumferential Location		Image Ref.	Remarks
					1st	2nd			At/From	To		
157.6 ft.	00:24:10	AJB						<input type="checkbox"/>	/		3381-CV MCSP 2019-ACOH 'Y10C'-AJB 'Y10C WYE'-AJB at 157.6 ft..JPG	AT WYE

PACP Inspections

Surveyed by: RYAN HERENDEEN		Certificate number: 0703002334		Owner: NORCAL NASSCO		Customer:		Drainage area:		P/O number:		Sheet number:	
Pipe segment ref.: Y10A_Y10A WYE				Start date/time: 20190319 10:14		Street: HIGHWAY 104				City: IONE			
Location details: BUILDING 10				Upstream MH No: Y10A				Rim to invert:		Grade to invert:		Rim to grade:	
Pipe use: SS		Direction: D		Flow control: N		Downstream MH No: Y10A WYE				Rim to invert:		Grade to invert:	
Height: 6 in.		Width:		Shape: C		Material: CAS		Lining method:		Pipe joint length:		Total length: 145.600 ft.	
Length surveyed: 145.600 ft.		Year constructed:		Year renewed:									
Media label:		Purpose: F		Sewer category:		Pre-cleaning: L		Date cleaned: 20190319		Work order no.:		Weather: 1	
Project name: 3381-CV MCSP 2019				Additional info:									

Observations

Distance	Video Ref.	PACP Code	Continuous	S/M/L	Value Inches (mm)		%	Joint	Circumferential Location		Image Ref.	Remarks
					1st	2nd			At/From	To		
0.0 ft.		ACOH						<input type="checkbox"/>	/			Y10A
0.0 ft.		MWL					5	<input type="checkbox"/>	/			
19.4 ft.	00:02:08	TFA			4.000			<input type="checkbox"/>	2 /		3381-CV MCSP 2019-ACOH 'Y10A'-AJB 'Y10A WYE'-TFA at 0.0 ft..JPG	
35.0 ft.	00:03:16	TFA			4.000			<input type="checkbox"/>	2 /		3381-CV MCSP 2019-ACOH 'Y10A'-AJB 'Y10A WYE'-TFA at 0.0 ft._1.JPG	
50.6 ft.	00:04:21	TFA			4.000			<input type="checkbox"/>	2 /		3381-CV MCSP 2019-ACOH 'Y10A'-AJB 'Y10A WYE'-TFA at 0.0 ft._2.JPG	

Observations

Distance	Video Ref.	PACP Code	Continuous	S/M/L	Value Inches (mm)		%	Joint	Circumferential Location		Image Ref.	Remarks
					1st	2nd			At/From	To		
65.6 ft.	00:05:21	TFA			4.000			<input type="checkbox"/>	2 /		3381-CV MCSP 2019-ACOH 'Y10A'-AJB 'Y10A WYE'-TFA at 0.0 ft._3.JPG	
77.7 ft.	00:08:05	TF			4.000			<input type="checkbox"/>	12 /		3381-CV MCSP 2019-ACOH 'Y10A'-AJB 'Y10A WYE'-TF at 0.0 ft..JPG	
81.0 ft.	00:09:06	TFA			4.000			<input type="checkbox"/>	2 /		3381-CV MCSP 2019-ACOH 'Y10A'-AJB 'Y10A WYE'-TFA at 0.0 ft._4.JPG	
96.0 ft.	00:10:16	TFA			4.000			<input type="checkbox"/>	2 /		3381-CV MCSP 2019-ACOH 'Y10A'-AJB 'Y10A WYE'-TFA at 0.0 ft._5.JPG	
110.4 ft.	00:11:33	TFA			4.000			<input type="checkbox"/>	2 /		3381-CV MCSP 2019-ACOH 'Y10A'-AJB 'Y10A WYE'-TFA at 0.0 ft._6.JPG	
125.5 ft.	00:12:50	TFA			4.000			<input type="checkbox"/>	2 /		3381-CV MCSP 2019-ACOH 'Y10A'-AJB 'Y10A WYE'-TFA at 0.0 ft._7.JPG	
140.4 ft.	00:14:53	TFA			4.000			<input type="checkbox"/>	2 /		3381-CV MCSP 2019-ACOH 'Y10A'-AJB 'Y10A WYE'-TFA at 0.0 ft._8.JPG	

Observations

Distance	Video Ref.	PACP Code	Continuous	S/M/L	Value Inches (mm)		%	Joint	Circumferential Location		Image Ref.	Remarks
					1st	2nd			At/From	To		
145.6 ft.	00:15:33	AJB						<input type="checkbox"/>	/		3381-CV MCSP 2019-ACOH 'Y10A'-AJB 'Y10A WYE'-AJB at 145.6 ft..JPG	AT Y10A WYE

PACP Inspections

Surveyed by: RYAN HERENDEEN		Certificate number: 0703002334		Owner: NORCAL NASSCO		Customer:		Drainage area:		P/O number:		Sheet number:	
Pipe segment ref.: Y9A_Y9A WYE				Start date/time: 20190319 10:45		Street: HIGHWAY 104				City: IONE			
Location details: BUILDING Y9				Upstream MH No: Y9A				Rim to invert:		Grade to invert:		Rim to grade:	
Pipe use: SS		Direction: D		Flow control: N		Downstream MH No: Y9A WYE				Rim to invert:		Grade to invert:	
Height: 6 in.		Width:		Shape: C		Material: CAS		Lining method:		Pipe joint length:		Total length: 156.100 ft.	
Length surveyed: 156.100 ft.		Year constructed:		Year renewed:		Media label:		Purpose: F		Sewer category:		Pre-cleaning: L	
Date cleaned: 20190319		Work order no.:		Weather: 1		Location code: Y		Pressure value:					
Project name: 3381-CV MCSP 2019				Additional info:									

Observations

Distance	Video Ref.	PACP Code	Continuous	S/M/L	Value Inches (mm)		%	Joint	Circumferential Location		Image Ref.	Remarks
					1st	2nd			At/From	To		
0.0 ft.		ACOH						<input type="checkbox"/>	/			Y9A
0.0 ft.		MWL					5	<input type="checkbox"/>	/			
19.6 ft.	00:01:55	TFA			4.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-ACOH 'Y9A'-AJB 'Y9A WYE'-TFA at 0.0 ft..JPG	
35.0 ft.	00:03:36	TFA			4.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-ACOH 'Y9A'-AJB 'Y9A WYE'-TFA at 0.0 ft._1.JPG	
50.9 ft.	00:04:38	TFA			4.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-ACOH 'Y9A'-AJB 'Y9A WYE'-TFA at 0.0 ft._2.JPG	

Observations

Distance	Video Ref.	PACP Code	Continuous	S/M/L	Value Inches (mm)		%	Joint	Circumferential Location		Image Ref.	Remarks
					1st	2nd			At/From	To		
66.3 ft.	00:05:43	TFA			4.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-ACOH 'Y9A'-AJB 'Y9A WYE'-TFA at 0.0 ft._3.JPG	
78.2 ft.	00:07:10	TF			4.000			<input type="checkbox"/>	12 /		3381-CV MCSP 2019-ACOH 'Y9A'-AJB 'Y9A WYE'-TF at 0.0 ft..JPG	SHOWER
81.6 ft.	00:08:05	TFA			4.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-ACOH 'Y9A'-AJB 'Y9A WYE'-TFA at 0.0 ft._4.JPG	
96.3 ft.	00:10:08	TFA			4.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-ACOH 'Y9A'-AJB 'Y9A WYE'-TFA at 0.0 ft._5.JPG	
110.6 ft.	00:12:22	TFA			4.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-ACOH 'Y9A'-AJB 'Y9A WYE'-TFA at 0.0 ft._6.JPG	
126.0 ft.	00:13:50	TFA			4.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-ACOH 'Y9A'-AJB 'Y9A WYE'-TFA at 0.0 ft._7.JPG	
140.1 ft.	00:15:45	TFA			4.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-ACOH 'Y9A'-AJB 'Y9A WYE'-TFA at 0.0 ft._8.JPG	
156.1 ft.	00:17:10	AJB						<input type="checkbox"/>	/		3381-CV MCSP 2019-ACOH 'Y9A'-AJB 'Y9A WYE'-AJB at 156.1 ft..JPG	Y9A WYE

PACP Inspections

Surveyed by: RYAN HERENDEEN		Certificate number: 0703002334		Owner: NORCAL NASSCO		Customer:		Drainage area:		P/O number:		Sheet number:	
Pipe segment ref.: Y9C_Y9C WYE				Start date/time: 20190319 11:19		Street: HIGHWAY 104				City: IONE			
Location details: BUILDING Y9				Upstream MH No: Y9C				Rim to invert:		Grade to invert:		Rim to grade:	
Pipe use: SS		Direction: D		Flow control: N		Downstream MH No: Y9C WYE				Rim to invert:		Grade to invert:	
Height: 6 in.		Width:		Shape: C		Material: CAS		Lining method:		Pipe joint length:		Total length: 146.800 ft.	
Length surveyed: 146.800 ft.		Year constructed:		Year renewed:		Media label:		Purpose: F		Sewer category:		Pre-cleaning: L	
Date cleaned: 20190319		Work order no.:		Weather: 1		Location code: Y		Pressure value:		Project name: 3381-CV MCSP 2019			
Additional info:													

Observations

Distance	Video Ref.	PACP Code	Continuous	S/M/L	Value Inches (mm)		%	Joint	Circumferential Location		Image Ref.	Remarks
					1st	2nd			At/From	To		
0.0 ft.		ACOH						<input type="checkbox"/>	/			Y9C
0.0 ft.		MWL					5	<input type="checkbox"/>	/			
15.0 ft.	00:02:17	MGO						<input type="checkbox"/>	/		3381-CV MCSP 2019-ACOH 'Y9C'-AJB 'Y9C WYE'-MGO at 15.0 ft..JPG	SAG 15-18 FT
20.7 ft.	00:03:22	TFA			4.000			<input type="checkbox"/>	2 /		3381-CV MCSP 2019-ACOH 'Y9C'-AJB 'Y9C WYE'-TFA at 0.0 ft..JPG	
36.2 ft.	00:06:39	TFA			4.000			<input type="checkbox"/>	2 /		3381-CV MCSP 2019-ACOH 'Y9C'-AJB 'Y9C WYE'-TFA at 0.0 ft._1.JPG	

Observations

Distance	Video Ref.	PACP Code	Continuous	S/M/L	Value Inches (mm)		%	Joint	Circumferential Location		Image Ref.	Remarks
					1st	2nd			At/From	To		
51.2 ft.	00:07:40	TFA			4.000			<input type="checkbox"/>	2 /		3381-CV MCSP 2019-ACOH 'Y9C'-AJB 'Y9C WYE'-TFA at 0.0 ft._2.JPG	
66.7 ft.	00:09:03	TFA			4.000			<input type="checkbox"/>	2 /		3381-CV MCSP 2019-ACOH 'Y9C'-AJB 'Y9C WYE'-TFA at 0.0 ft._3.JPG	
80.3 ft.	00:10:35	TF			4.000			<input type="checkbox"/>	12 /		3381-CV MCSP 2019-ACOH 'Y9C'-AJB 'Y9C WYE'-TF at 0.0 ft..JPG	SHOWER
82.3 ft.	00:11:13	TFA			4.000			<input type="checkbox"/>	2 /		3381-CV MCSP 2019-ACOH 'Y9C'-AJB 'Y9C WYE'-TFA at 0.0 ft._4.JPG	
97.1 ft.	00:12:17	TFA			4.000			<input type="checkbox"/>	2 /		3381-CV MCSP 2019-ACOH 'Y9C'-AJB 'Y9C WYE'-TFA at 0.0 ft._5.JPG	
112.0 ft.	00:13:31	TFA			4.000			<input type="checkbox"/>	2 /		3381-CV MCSP 2019-ACOH 'Y9C'-AJB 'Y9C WYE'-TFA at 0.0 ft._6.JPG	
127.5 ft.	00:14:52	TFA			4.000			<input type="checkbox"/>	2 /		3381-CV MCSP 2019-ACOH 'Y9C'-AJB 'Y9C WYE'-TFA at 0.0 ft._7.JPG	
141.5 ft.	00:16:04	TFA			4.000			<input type="checkbox"/>	2 /		3381-CV MCSP 2019-ACOH 'Y9C'-AJB 'Y9C WYE'-TFA at 0.0 ft._8.JPG	
146.8 ft.	00:16:53	AJB						<input type="checkbox"/>	/		3381-CV MCSP 2019-ACOH 'Y9C'-AJB 'Y9C WYE'-AJB at 146.8 ft..JPG	Y9C WYE

PACP Inspections

Surveyed by: RYAN HERENDEEN		Certificate number: 0703002334		Owner: NORCAL NASSCO		Customer:		Drainage area:		P/O number:		Sheet number:	
Pipe segment ref.: Y8A_Y8A WYE				Start date/time: 20190319 11:55		Street: HIGHWAY 104				City: IONE			
Location details: BUILDING Y8				Upstream MH No: Y8A				Rim to invert:		Grade to invert:		Rim to grade:	
Pipe use: SS		Direction: D		Flow control: N		Downstream MH No: Y8A WYE				Rim to invert:		Grade to invert:	
Height: 6 in.		Width:		Shape: C		Material: CAS		Lining method:		Pipe joint length:		Total length: 155.800 ft.	
Length surveyed: 155.800 ft.		Year constructed:		Year renewed:		Work order no.:		Weather: 1		Location code: Y		Pressure value:	
Media label:				Purpose: F		Sewer category:		Pre-cleaning: L		Date cleaned: 20190319		Project name: 3381-CV MCSP 2019	
Additional info:													

Observations

Distance	Video Ref.	PACP Code	Continuous	S/M/L	Value Inches (mm)		%	Joint	Circumferential Location		Image Ref.	Remarks
					1st	2nd			At/From	To		
0.0 ft.		ACOH						<input type="checkbox"/>	/			Y8A
0.0 ft.		MWL					5	<input type="checkbox"/>	/			
20.0 ft.	00:02:16	TFA			4.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-ACOH 'Y8A'-AJB 'Y8A WYE'-TFA at 0.0 ft..JPG	
35.4 ft.	00:04:31	TFA			4.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-ACOH 'Y8A'-AJB 'Y8A WYE'-TFA at 0.0 ft._1.JPG	
50.8 ft.	00:05:43	TFA			4.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-ACOH 'Y8A'-AJB 'Y8A WYE'-TFA at 0.0 ft._2.JPG	

Observations

Distance	Video Ref.	PACP Code	Continuous	S/M/L	Value Inches (mm)		%	Joint	Circumferential Location		Image Ref.	Remarks
					1st	2nd			At/From	To		
65.8 ft.	00:08:03	TFA			4.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-ACOH 'Y8A'-AJB 'Y8A WYE'-TFA at 0.0 ft._3.JPG	
77.7 ft.	00:09:14	TF			4.000			<input type="checkbox"/>	12 /		3381-CV MCSP 2019-ACOH 'Y8A'-AJB 'Y8A WYE'-TF at 0.0 ft..JPG	SHOWER
80.3 ft.	00:10:05	TFA			4.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-ACOH 'Y8A'-AJB 'Y8A WYE'-TFA at 0.0 ft._4.JPG	
95.6 ft.	00:11:21	TFA			4.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-ACOH 'Y8A'-AJB 'Y8A WYE'-TFA at 0.0 ft._5.JPG	
110.8 ft.	00:12:56	TFA			4.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-ACOH 'Y8A'-AJB 'Y8A WYE'-TFA at 0.0 ft._6.JPG	
125.4 ft.	00:14:35	TFA			4.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-ACOH 'Y8A'-AJB 'Y8A WYE'-TFA at 0.0 ft._7.JPG	
140.0 ft.	00:16:00	TFA			4.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-ACOH 'Y8A'-AJB 'Y8A WYE'-TFA at 0.0 ft._8.JPG	
155.8 ft.	00:20:21	AJB						<input type="checkbox"/>	/		3381-CV MCSP 2019-ACOH 'Y8A'-AJB 'Y8A WYE'-AJB at 155.8 ft..JPG	Y8A WYE

PACP Inspections

Surveyed by: RYAN HERENDEEN		Certificate number: 0703002334		Owner: NORCAL NASSCO		Customer:		Drainage area:		P/O number:		Sheet number:	
Pipe segment ref.: Y8C_Y8C WYE				Start date/time: 20190319 12:41		Street: HIGHWAY 104				City: IONE			
Location details: BUILDING Y8				Upstream MH No: Y8C				Rim to invert:		Grade to invert:		Rim to grade:	
Pipe use: SS		Direction: D		Flow control: N		Downstream MH No: Y8C WYE				Rim to invert:		Grade to invert:	
Height: 6 in.		Width:		Shape: C		Material: CAS		Lining method:		Pipe joint length:		Total length: 122.600 ft.	
Length surveyed: 122.600 ft.		Year constructed:		Year renewed:		Media label:		Purpose: F		Sewer category:		Pre-cleaning: L	
Date cleaned: 20190319		Work order no.:		Weather: 1		Location code: Y		Pressure value:		Project name: 3381-CV MCSP 2019			
Additional info:													

Observations

Distance	Video Ref.	PACP Code	Continuous	S/M/L	Value Inches (mm)		%	Joint	Circumferential Location		Image Ref.	Remarks
					1st	2nd			At/From	To		
0.0 ft.		ACOH						<input type="checkbox"/>	/			Y8C
0.0 ft.		MWL					5	<input type="checkbox"/>	/			
20.1 ft.	00:02:13	TFA			4.000			<input type="checkbox"/>	2 /		3381-CV MCSP 2019-ACOH 'Y8C'-AJB 'Y8C WYE'-TFA at 0.0 ft..JPG	
50.2 ft.	00:05:43	TFA			4.000			<input type="checkbox"/>	2 /		3381-CV MCSP 2019-ACOH 'Y8C'-AJB 'Y8C WYE'-TFA at 0.0 ft._1.JPG	
65.2 ft.	00:07:08	TFA			4.000			<input type="checkbox"/>	2 /		3381-CV MCSP 2019-ACOH 'Y8C'-AJB 'Y8C WYE'-TFA at 0.0 ft._2.JPG	

Observations

Distance	Video Ref.	PACP Code	Continuous	S/M/L	Value Inches (mm)		%	Joint	Circumferential Location		Image Ref.	Remarks
					1st	2nd			At/From	To		
77.1 ft.	00:08:21	TF			4.000			<input type="checkbox"/>	12 /		3381-CV MCSP 2019-ACOH 'Y8C'-AJB 'Y8C WYE'-TF at 0.0 ft..JPG	SHOWER
80.5 ft.	00:09:49	TFA			4.000			<input type="checkbox"/>	2 /		3381-CV MCSP 2019-ACOH 'Y8C'-AJB 'Y8C WYE'-TFA at 0.0 ft._3.JPG	
80.5 ft.	00:10:17	MGO						<input type="checkbox"/>	/		3381-CV MCSP 2019-ACOH 'Y8C'-AJB 'Y8C WYE'-MGO at 0.0 ft..JPG	DEBRIS, CAN'T CLEAN DUE TO 90
96.1 ft.	00:13:18	TFA			4.000			<input type="checkbox"/>	2 /		3381-CV MCSP 2019-ACOH 'Y8C'-AJB 'Y8C WYE'-TFA at 0.0 ft._4.JPG	
111.7 ft.	00:14:58	TFA			4.000			<input type="checkbox"/>	2 /		3381-CV MCSP 2019-ACOH 'Y8C'-AJB 'Y8C WYE'-TFA at 0.0 ft._5.JPG	
122.6 ft.	00:21:10	MSA						<input type="checkbox"/>	/		3381-CV MCSP 2019-ACOH 'Y8C'-AJB 'Y8C WYE'-MSA at 0.0 ft..JPG	DEBRIS, NO VISUAL, DIRTY

PACP Inspections

Surveyed by: RYAN HERENDEEN		Certificate number: 0703002334		Owner: NORCAL NASSCO		Customer:		Drainage area:		P/O number:		Sheet number:	
Pipe segment ref.: Y7A_Y7A WYE				Start date/time: 20190320 08:30		Street: HIGHWAY 104				City: IONE			
Location details: BUILDING Y7				Upstream MH No: Y7A				Rim to invert:		Grade to invert:		Rim to grade:	
Pipe use: SS		Direction: D		Flow control: N		Downstream MH No: Y7A WYE				Rim to invert:		Grade to invert:	
Height: 6 in.		Width:		Shape: C		Material: CAS		Lining method:		Pipe joint length:		Total length: 155.800 ft.	
Length surveyed: 155.800 ft.		Year constructed:		Year renewed:		Media label:		Purpose: F		Sewer category:		Pre-cleaning: L	
Date cleaned: 20190319		Work order no.:		Weather: 3		Location code: Y		Pressure value:					
Project name: 3381-CV MCSP 2019				Additional info:									

Observations

Distance	Video Ref.	PACP Code	Continuous	S/M/L	Value Inches (mm)		%	Joint	Circumferential Location		Image Ref.	Remarks
					1st	2nd			At/From	To		
0.0 ft.		ACOH						<input type="checkbox"/>	/			Y7A
0.0 ft.		MWL					5	<input type="checkbox"/>	/			
18.9 ft.	00:02:32	TFA			4.000			<input type="checkbox"/>	10 /			
34.5 ft.	00:04:15	TFA			4.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-ACOH 'Y7A'-AJB 'Y7A WYE'-TFA at 0.0 ft..JPG	
50.5 ft.	00:05:33	TFA			4.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-ACOH 'Y7A'-AJB 'Y7A WYE'-TFA at 0.0 ft._1.JPG	
65.6 ft.	00:06:47	TFA			4.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-ACOH 'Y7A'-AJB 'Y7A WYE'-TFA at 0.0 ft._2.JPG	

Observations

Distance	Video Ref.	PACP Code	Continuous	S/M/L	Value Inches (mm)		%	Joint	Circumferential Location		Image Ref.	Remarks
					1st	2nd			At/From	To		
77.8 ft.	00:07:58	TF			4.000			<input type="checkbox"/>	12 /		3381-CV MCSP 2019-ACOH 'Y7A'-AJB 'Y7A WYE'-TF at 0.0 ft..JPG	SHOWER
80.6 ft.	00:08:48	TFA			4.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-ACOH 'Y7A'-AJB 'Y7A WYE'-TFA at 0.0 ft._3.JPG	
95.4 ft.	00:10:08	TFA			4.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-ACOH 'Y7A'-AJB 'Y7A WYE'-TFA at 0.0 ft._4.JPG	
110.8 ft.	00:11:16	TFA			4.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-ACOH 'Y7A'-AJB 'Y7A WYE'-TFA at 0.0 ft._5.JPG	
125.3 ft.	00:12:32	TFA			4.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-ACOH 'Y7A'-AJB 'Y7A WYE'-TFA at 0.0 ft._6.JPG	
140.0 ft.	00:13:52	TFA			4.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-ACOH 'Y7A'-AJB 'Y7A WYE'-TFA at 0.0 ft._7.JPG	
155.8 ft.	00:15:27	AJB						<input type="checkbox"/>	/		3381-CV MCSP 2019-ACOH 'Y7A'-AJB 'Y7A WYE'-AJB at 155.8 ft..JPG	AT Y7A WYE

PACP Inspections

Surveyed by: RYAN HERENDEEN		Certificate number: 0703002334		Owner: NORCAL NASSCO		Customer:		Drainage area:		P/O number:		Sheet number:	
Pipe segment ref.: Y7C_Y7C WYE				Start date/time: 20190320 08:53		Street: HIGHWAY 104				City: IONE			
Location details: BUILDING Y7				Upstream MH No: Y7C				Rim to invert:		Grade to invert:		Rim to grade:	
Pipe use: SS		Direction: D		Flow control: N		Downstream MH No: Y7C WYE				Rim to invert:		Grade to invert:	
Height: 6 in.		Width:		Shape: C		Material: CAS		Lining method:		Pipe joint length:		Total length: 149.500 ft.	
Length surveyed: 149.500 ft.		Year constructed:		Year renewed:		Media label:		Purpose: F		Sewer category:		Pre-cleaning: L	
Date cleaned: 20190319		Work order no.:		Weather: 1		Location code: Y		Pressure value:					
Project name: 3381-CV MCSP 2019				Additional info:									

Observations

Distance	Video Ref.	PACP Code	Continuous	S/M/L	Value Inches (mm)		%	Joint	Circumferential Location		Image Ref.	Remarks
					1st	2nd			At/From	To		
0.0 ft.		ACOH						<input type="checkbox"/>	/			Y7C
0.0 ft.		MWL					5	<input type="checkbox"/>	/			
0.0 ft.	00:18:02	MGO						<input type="checkbox"/>	/		3381-CV MCSP 2019-ACOH 'Y7C'-AJB 'Y7C WYE'-MGO at 0.0 ft..JPG	45 BEND
4.0 ft.	00:00:55	DAZ					25	<input type="checkbox"/>	4 / 8		3381-CV MCSP 2019-ACOH 'Y7C'-AJB 'Y7C WYE'-DAZ at 4.0 ft..JPG	RAGS/DEBRIS
20.8 ft.	00:06:08	TFA			4.000			<input type="checkbox"/>	2 /		3381-CV MCSP 2019-ACOH 'Y7C'-AJB 'Y7C WYE'-TFA at 0.0 ft..JPG	

Observations

Distance	Video Ref.	PACP Code	Continuous	S/M/L	Value Inches (mm)		%	Joint	Circumferential Location		Image Ref.	Remarks
					1st	2nd			At/From	To		
36.9 ft.	00:07:13	TFA			4.000			<input type="checkbox"/>	2 /		3381-CV MCSP 2019-ACOH 'Y7C'-AJB 'Y7C WYE'-TFA at 0.0 ft._1.JPG	
52.0 ft.	00:08:28	TFA			4.000			<input type="checkbox"/>	2 /		3381-CV MCSP 2019-ACOH 'Y7C'-AJB 'Y7C WYE'-TFA at 0.0 ft._2.JPG	
67.0 ft.	00:10:18	TFA			4.000			<input type="checkbox"/>	2 /		3381-CV MCSP 2019-ACOH 'Y7C'-AJB 'Y7C WYE'-TFA at 0.0 ft._3.JPG	
78.8 ft.	00:11:21	TF			4.000			<input type="checkbox"/>	12 /		3381-CV MCSP 2019-ACOH 'Y7C'-AJB 'Y7C WYE'-TF at 0.0 ft..JPG	SHOWER
82.1 ft.	00:12:16	TFA			4.000			<input type="checkbox"/>	2 /		3381-CV MCSP 2019-ACOH 'Y7C'-AJB 'Y7C WYE'-TFA at 0.0 ft._4.JPG	
97.4 ft.	00:13:18	TFA			4.000			<input type="checkbox"/>	2 /		3381-CV MCSP 2019-ACOH 'Y7C'-AJB 'Y7C WYE'-TFA at 0.0 ft._5.JPG	
111.9 ft.	00:14:17	TFA			4.000			<input type="checkbox"/>	2 /		3381-CV MCSP 2019-ACOH 'Y7C'-AJB 'Y7C WYE'-TFA at 0.0 ft._6.JPG	
126.9 ft.	00:15:16	TFA			4.000			<input type="checkbox"/>	2 /		3381-CV MCSP 2019-ACOH 'Y7C'-AJB 'Y7C WYE'-TFA at 0.0 ft._7.JPG	
141.9 ft.	00:16:45	TFA			4.000			<input type="checkbox"/>	2 /		3381-CV MCSP 2019-ACOH 'Y7C'-AJB 'Y7C WYE'-TFA at 0.0 ft._8.JPG	

Observations

Distance	Video Ref.	PACP Code	Continuous	S/M/L	Value Inches (mm)		%	Joint	Circumferential Location		Image Ref.	Remarks
					1st	2nd			At/From	To		
149.5 ft.	00:20:49	MSA						<input type="checkbox"/>	/		3381-CV MCSP 2019-ACOH 'Y7C'-AJB 'Y7C WYE'-MSA at 149.5 ft..JPG	TOO MANY BEND, CAN'T PUSH ANYMORE

PACP Inspections

Surveyed by: RYAN HERENDEEN		Certificate number: 0703002334		Owner: NORCAL NASSCO		Customer:		Drainage area:		P/O number:		Sheet number:	
Pipe segment ref.: Y6A_Y6A WYE				Start date/time: 20190320 10:31		Street: HIGHWAY 104				City: IONE			
Location details: BUILDING Y6				Upstream MH No: Y6A				Rim to invert:		Grade to invert:		Rim to grade:	
Pipe use: SS		Direction: D		Flow control: N		Downstream MH No: Y6A WYE				Rim to invert:		Grade to invert:	
Height: 6 in.		Width:		Shape: C		Material: CAS		Lining method:		Pipe joint length:		Total length: 166.200 ft.	
Length surveyed: 166.200 ft.		Year constructed:		Year renewed:		Media label:		Purpose: F		Sewer category:		Pre-cleaning: L	
Date cleaned: 20190319		Work order no.:		Weather: 1		Location code: Y		Pressure value:					
Project name: 3381-CV MCSP 2019				Additional info:									

Observations

Distance	Video Ref.	PACP Code	Continuous	S/M/L	Value Inches (mm)		%	Joint	Circumferential Location		Image Ref.	Remarks
					1st	2nd			At/From	To		
0.0 ft.		ACOH						<input type="checkbox"/>	/			Y6A
0.0 ft.		MWL					5	<input type="checkbox"/>	/			
20.1 ft.	00:02:34	TFA			4.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-ACOH 'Y6A'-AJB 'Y6A WYE'-TFA at 0.0 ft..JPG	
36.0 ft.	00:03:50	TFA			4.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-ACOH 'Y6A'-AJB 'Y6A WYE'-TFA at 0.0 ft._1.JPG	
52.8 ft.	00:04:56	TFA			4.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-ACOH 'Y6A'-AJB 'Y6A WYE'-TFA at 0.0 ft._2.JPG	

Observations

Distance	Video Ref.	PACP Code	Continuous	S/M/L	Value Inches (mm)		%	Joint	Circumferential Location		Image Ref.	Remarks
					1st	2nd			At/From	To		
68.9 ft.	00:05:57	TFA			4.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-ACOH 'Y6A'-AJB 'Y6A WYE'-TFA at 0.0 ft._3.JPG	
81.6 ft.	00:06:58	TF			4.000			<input type="checkbox"/>	12 /		3381-CV MCSP 2019-ACOH 'Y6A'-AJB 'Y6A WYE'-TF at 0.0 ft..JPG	SHOWER
85.5 ft.	00:07:32	TFA			4.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-ACOH 'Y6A'-AJB 'Y6A WYE'-TFA at 0.0 ft._4.JPG	
101.3 ft.	00:08:26	TFA			4.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-ACOH 'Y6A'-AJB 'Y6A WYE'-TFA at 0.0 ft._5.JPG	
117.5 ft.	00:10:35	TFA			4.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-ACOH 'Y6A'-AJB 'Y6A WYE'-TFA at 0.0 ft._6.JPG	
133.8 ft.	00:11:45	TFA			4.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-ACOH 'Y6A'-AJB 'Y6A WYE'-TFA at 0.0 ft._7.JPG	
148.8 ft.	00:13:01	TFA			4.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-ACOH 'Y6A'-AJB 'Y6A WYE'-TFA at 0.0 ft._8.JPG	
166.2 ft.	00:13:20	AJB						<input type="checkbox"/>	/		3381-CV MCSP 2019-ACOH 'Y6A'-AJB 'Y6A WYE'-AJB at 166.2 ft..JPG	Y6A WYE

PACP Inspections

Surveyed by: RYAN HERENDEEN		Certificate number: 0703002334		Owner: NORCAL NASSCO		Customer:		Drainage area:		P/O number:		Sheet number:	
Pipe segment ref.: Y8C1_MH17A				Start date/time: 20190320 11:04		Street: HIGHWAY 104				City: IONE			
Location details: BUILDING Y8				Upstream MH No: Y8C1				Rim to invert:		Grade to invert:		Rim to grade:	
Pipe use: SS		Direction: D		Flow control: N		Downstream MH No: MH17A				Rim to invert:		Grade to invert:	
Height: 6 in.		Width:		Shape: C		Material: CAS		Lining method:		Pipe joint length:		Total length: 190.500 ft.	
Length surveyed: 190.500 ft.		Year constructed:		Year renewed:		Media label:		Purpose: F		Sewer category:		Pre-cleaning: N	
Date cleaned:		Work order no.:		Weather: 1		Location code: Y		Pressure value:					
Project name: 3381-CV MCSP 2019				Additional info:									

Observations

Distance	Video Ref.	PACP Code	Continuous	S/M/L	Value Inches (mm)		%	Joint	Circumferential Location		Image Ref.	Remarks
					1st	2nd			At/From	To		
0.0 ft.		AMH						<input type="checkbox"/>	/			Y8C1
0.0 ft.		MWL					5	<input type="checkbox"/>	/			
0.0 ft.	00:09:21	MGP						<input type="checkbox"/>	/		3381-CV MCSP 2019-ACOH 'Y8C1'-AMH 'MH17A'-MGP at 0.0 ft..JPG	AT Y8C WYE
21.0 ft.	00:04:45	TFA			4.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-ACOH 'Y8C1'-AMH 'MH17A'-TFA at 0.0 ft..JPG	
37.8 ft.	00:05:46	TFA			4.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-ACOH 'Y8C1'-AMH 'MH17A'-TFA at 0.0 ft._1.JPG	

Observations

Distance	Video Ref.	PACP Code	Continuous	S/M/L	Value Inches (mm)		%	Joint	Circumferential Location		Image Ref.	Remarks
					1st	2nd			At/From	To		
55.0 ft.	00:06:50	TFA			4.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-ACOH 'Y8C1'-AMH 'MH17A'-TFA at 0.0 ft._2.JPG	
70.6 ft.	00:08:02	TFA			4.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-ACOH 'Y8C1'-AMH 'MH17A'-TFA at 0.0 ft._3.JPG	
103.8 ft.	00:11:10	MMC						<input type="checkbox"/>	/		3381-CV MCSP 2019-ACOH 'Y8C1'-AMH 'MH17A'-MMC at 0.0 ft..JPG	PVC
135.1 ft.	00:13:36	TFA			4.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-ACOH 'Y8C1'-AMH 'MH17A'-TFA at 135.1 ft..JPG	
190.5 ft.	00:17:29	AMH						<input type="checkbox"/>	/		3381-CV MCSP 2019-ACOH 'Y8C1'-AMH 'MH17A'-AMH at 190.5 ft..JPG	MH17A

PACP Inspections

Surveyed by: RYAN HERENDEEN		Certificate number: 0703002334		Owner: NORCAL NASSCO		Customer:		Drainage area:		P/O number:		Sheet number:	
Pipe segment ref.: Y8A1_Y8A1 WYE				Start date/time: 20190320 11:56		Street: HIGHWAY 104				City: IONE			
Location details: BUILDING Y8				Upstream MH No: Y8A1				Rim to invert:		Grade to invert:		Rim to grade:	
Pipe use: SS		Direction: D		Flow control: N		Downstream MH No: Y8A1 WYE				Rim to invert:		Grade to invert:	
Height: 6 in.		Width:		Shape: C		Material: CAS		Lining method:		Pipe joint length:		Total length: 83.300 ft.	
Length surveyed: 83.300 ft.		Year constructed:		Year renewed:		Media label:		Purpose: F		Sewer category:		Pre-cleaning: N	
Date cleaned:		Work order no.:		Weather: 1		Location code: Y		Pressure value:					
Project name: 3381-CV MCSP 2019				Additional info:									

Observations

Distance	Video Ref.	PACP Code	Continuous	S/M/L	Value Inches (mm)		%	Joint	Circumferential Location		Image Ref.	Remarks
					1st	2nd			At/From	To		
0.0 ft.		ACOH						<input type="checkbox"/>	/			Y8A1
0.0 ft.		MWL					5	<input type="checkbox"/>	/			
19.8 ft.	00:02:25	TFA			4.000			<input type="checkbox"/>	2 /		3381-CV MCSP 2019-ACOH 'Y8A1'-AJB 'Y8A1 WYE'-TFA at 0.0 ft..JPG	
35.2 ft.	00:03:51	TFA			4.000			<input type="checkbox"/>	2 /		3381-CV MCSP 2019-ACOH 'Y8A1'-AJB 'Y8A1 WYE'-TFA at 0.0 ft._1.JPG	
51.6 ft.	00:04:58	TFA			4.000			<input type="checkbox"/>	2 /		3381-CV MCSP 2019-ACOH 'Y8A1'-AJB 'Y8A1 WYE'-TFA at 0.0 ft._2.JPG	

Observations

Distance	Video Ref.	PACP Code	Continuous	S/M/L	Value Inches (mm)		%	Joint	Circumferential Location		Image Ref.	Remarks
					1st	2nd			At/From	To		
66.9 ft.	00:05:59	TFA			4.000			<input type="checkbox"/>	2 /		3381-CV MCSP 2019-ACOH 'Y8A1'-AJB 'Y8A1 WYE'-TFA at 0.0 ft._3.JPG	
83.3 ft.	00:08:37	AJB						<input type="checkbox"/>	/		3381-CV MCSP 2019-ACOH 'Y8A1'-AJB 'Y8A1 WYE'-AJB at 83.3 ft..JPG	Y8A1 WYE

PACP Inspections

Surveyed by: RYAN HERENDEEN		Certificate number: 0703002334		Owner: NORCAL NASSCO		Customer:		Drainage area:		P/O number:		Sheet number:	
Pipe segment ref.: Y7C1_MH15B				Start date/time: 20190320 12:21		Street: HIGHWAY 104				City: IONE			
Location details: BUILDING Y7				Upstream MH No: Y7C1				Rim to invert:		Grade to invert:		Rim to grade:	
Pipe use: SS		Direction: D		Flow control: N		Downstream MH No: MH15B				Rim to invert:		Grade to invert:	
Height: 6 in.		Width:		Shape: C		Material: CAS		Lining method:		Pipe joint length:		Total length: 118.600 ft.	
Length surveyed: 118.600 ft.		Year constructed:		Year renewed:		Media label:		Purpose: F		Sewer category:		Pre-cleaning: N	
Date cleaned:		Work order no.:		Weather: 1		Location code: Y		Pressure value:					
Project name: 3381-CV MCSP 2019				Additional info:									

Observations

Distance	Video Ref.	PACP Code	Continuous	S/M/L	Value Inches (mm)		%	Joint	Circumferential Location		Image Ref.	Remarks
					1st	2nd			At/From	To		
0.0 ft.		ACOH						<input type="checkbox"/>	/			Y7C1
0.0 ft.		MWL					5	<input type="checkbox"/>	/			
20.7 ft.	00:02:45	TFA			4.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-ACOH 'Y7C1'-AMH 'MH15B'-TFA at 0.0 ft..JPG	
36.6 ft.	00:04:05	TFA			4.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-ACOH 'Y7C1'-AMH 'MH15B'-TFA at 0.0 ft._2.JPG	
52.3 ft.	00:05:09	TFA			4.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-ACOH 'Y7C1'-AMH 'MH15B'-TFA at 0.0 ft._3.JPG	

Observations

Distance	Video Ref.	PACP Code	Continuous	S/M/L	Value Inches (mm)		%	Joint	Circumferential Location		Image Ref.	Remarks
					1st	2nd			At/From	To		
68.3 ft.	00:06:12	TFA			4.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-ACOH 'Y7C1'-AMH 'MH15B'-TFA at 0.0 ft..JPG	
85.4 ft.	00:07:38	MGP						<input type="checkbox"/>	/		3381-CV MCSP 2019-ACOH 'Y7C1'-AMH 'MH15B'-MGP at 85.4 ft..JPG	AT Y7C1 WYE
98.3 ft.	00:10:09	MMC						<input type="checkbox"/>	/		3381-CV MCSP 2019-ACOH 'Y7C1'-AMH 'MH15B'-MMC at 98.3 ft..JPG	PVC
118.6 ft.	00:11:33	AMH						<input type="checkbox"/>	/		3381-CV MCSP 2019-ACOH 'Y7C1'-AMH 'MH15B'-AMH at 188.6 ft..JPG	MH15B

PACP Inspections

Surveyed by: RYAN HERENDEEN		Certificate number: 0703002334		Owner: NORCAL NASSCO		Customer:		Drainage area:		P/O number:		Sheet number:	
Pipe segment ref.: Y7A1_SSMH16				Start date/time: 20190320 12:50		Street: HIGHWAY 104				City: IONE			
Location details: BUILDING Y7				Upstream MH No: Y7A1				Rim to invert:		Grade to invert:		Rim to grade:	
Pipe use: SS		Direction: D		Flow control: N		Downstream MH No: SSMH16				Rim to invert:		Grade to invert:	
Height: 6 in.		Width:		Shape: C		Material: CAS		Lining method:		Pipe joint length:		Total length: 133.000 ft.	
Length surveyed: 133.000 ft.		Year constructed:		Year renewed:		Media label:		Purpose: F		Sewer category:		Pre-cleaning: N	
Date cleaned:		Work order no.:		Weather: 1		Location code: Y		Pressure value:		Project name: 3381-CV MCSP 2019			
Additional info:													

Observations

Distance	Video Ref.	PACP Code	Continuous	S/M/L	Value Inches (mm)		%	Joint	Circumferential Location		Image Ref.	Remarks
					1st	2nd			At/From	To		
0.0 ft.		ACOH						<input type="checkbox"/>	/			Y7A1
0.0 ft.		MWL					5	<input type="checkbox"/>	/			
19.6 ft.	00:02:15	TFA			4.000			<input type="checkbox"/>	2 /		3381-CV MCSP 2019-ACOH 'Y7A1'-AMH 'SSMH16'-TFA at 0.0 ft..JPG	
30.1 ft.	00:04:58	MGO						<input type="checkbox"/>	/		3381-CV MCSP 2019-ACOH 'Y7A1'-AMH 'SSMH16'-MGO at 30.1 ft..JPG	BACKED UP TO ESTABLISH GOOD VISUAL
36.2 ft.	00:03:55	TFA			4.000			<input type="checkbox"/>	2 /		3381-CV MCSP 2019-ACOH 'Y7A1'-AMH 'SSMH16'-TFA at 0.0 ft._1.JPG	

Observations

Distance	Video Ref.	PACP Code	Continuous	S/M/L	Value Inches (mm)		%	Joint	Circumferential Location		Image Ref.	Remarks
					1st	2nd			At/From	To		
50.4 ft.	00:06:53	TFA			4.000			<input type="checkbox"/>	2 /		3381-CV MCSP 2019-ACOH 'Y7A1'-AMH 'SSMH16'-TFA at 0.0 ft._2.JPG	
65.9 ft.	00:08:14	TFA			4.000			<input type="checkbox"/>	2 /		3381-CV MCSP 2019-ACOH 'Y7A1'-AMH 'SSMH16'-TFA at 0.0 ft._3.JPG	
82.4 ft.	00:09:26	MGP						<input type="checkbox"/>	/		3381-CV MCSP 2019-ACOH 'Y7A1'-AMH 'SSMH16'-MGP at 82.4 ft..JPG	Y7A1 WYE
94.2 ft.	00:12:28	MMC						<input type="checkbox"/>	/		3381-CV MCSP 2019-ACOH 'Y7A1'-AMH 'SSMH16'-MMC at 94.2 ft..JPG	PVC
133.0 ft.	00:16:00	AMH						<input type="checkbox"/>	/		3381-CV MCSP 2019-ACOH 'Y7A1'-AMH 'SSMH16'-AMH at 133.0 ft..JPG	SSMH16

PACP Inspections

Surveyed by: RYAN HERENDEEN		Certificate number: 0703002334		Owner: NORCAL NASSCO		Customer:		Drainage area:		P/O number:		Sheet number:	
Pipe segment ref.: Y6C1_SSMH14				Start date/time: 20190320 13:20		Street: HIGHWAY 104				City: IONE			
Location details: BUILDING Y6				Upstream MH No: Y6C1				Rim to invert:		Grade to invert:		Rim to grade:	
Pipe use: SS		Direction: D		Flow control: N		Downstream MH No: SSMH14				Rim to invert:		Grade to invert:	
Height: 6 in.		Width:		Shape: C		Material: CAS		Lining method:		Pipe joint length:		Total length: 85.300 ft.	
Length surveyed: 85.300 ft.		Year constructed:		Year renewed:		Media label:		Purpose: F		Sewer category:		Pre-cleaning: N	
Date cleaned:		Work order no.:		Weather: 1		Location code: Y		Pressure value:					
Project name: 3381-CV MCSP 2019				Additional info:									

Observations

Distance	Video Ref.	PACP Code	Continuous	S/M/L	Value Inches (mm)		%	Joint	Circumferential Location		Image Ref.	Remarks
					1st	2nd			At/From	To		
0.0 ft.		ACOH						<input type="checkbox"/>	/			Y6C1
0.0 ft.		MWL					5	<input type="checkbox"/>	/			
21.5 ft.	00:02:05	TFA			4.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-ACOH 'Y6C1'-AMH 'SSMH14'-TFA at 0.0 ft..JPG	
36.8 ft.	00:03:09	TFA			4.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-ACOH 'Y6C1'-AMH 'SSMH14'-TFA at 0.0 ft._1.JPG	
52.7 ft.	00:04:16	TFA			4.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-ACOH 'Y6C1'-AMH 'SSMH14'-TFA at 0.0 ft._2.JPG	

Observations

Distance	Video Ref.	PACP Code	Continuous	S/M/L	Value Inches (mm)		%	Joint	Circumferential Location		Image Ref.	Remarks
					1st	2nd			At/From	To		
55.4 ft.	00:05:27	DAE					15	<input type="checkbox"/>	10	2	3381-CV MCSP 2019-ACOH 'Y6C1'-AMH 'SSMH14'-DAE at 55.4 ft..JPG	
68.3 ft.	00:07:00	TFA			4.000			<input type="checkbox"/>	10	/	3381-CV MCSP 2019-ACOH 'Y6C1'-AMH 'SSMH14'-TFA at 0.0 ft._3.JPG	
85.3 ft.	00:08:38	MGP						<input type="checkbox"/>	/		3381-CV MCSP 2019-ACOH 'Y6C1'-AMH 'SSMH14'-MGP at 0.0 ft..JPG	AT Y6C WYE
85.3 ft.	00:13:30	AJB						<input type="checkbox"/>	/		3381-CV MCSP 2019-ACOH 'Y6C1'-AMH 'SSMH14'-AJB at 85.3 ft..JPG	Y6C WYE

PACP Inspections

Surveyed by: RYAN HERENDEEN		Certificate number: 0703002334		Owner: NORCAL NASSCO		Customer:		Drainage area:		P/O number:		Sheet number:	
Pipe segment ref.: Y6A1_SSMH15				Start date/time: 20190320 13:54		Street: HIGHWAY 104				City: IONE			
Location details: BUILDING Y6				Upstream MH No: Y6A1				Rim to invert:		Grade to invert:		Rim to grade:	
Pipe use: SS		Direction: D		Flow control: N		Downstream MH No: SSMH15				Rim to invert:		Grade to invert:	
Height: 6 in.		Width:		Shape: C		Material: CAS		Lining method:		Pipe joint length:		Total length: 21.200 ft.	
Length surveyed: 21.200 ft.		Year constructed:		Year renewed:		Media label:		Purpose: F		Sewer category:		Pre-cleaning: N	
Date cleaned:		Work order no.:		Weather: 1		Location code: Y		Pressure value:		Project name: 3381-CV MCSP 2019			
Additional info:													

Observations

Distance	Video Ref.	PACP Code	Continuous	S/M/L	Value Inches (mm)		%	Joint	Circumferential Location		Image Ref.	Remarks
					1st	2nd			At/From	To		
0.0 ft.		ACOH						<input type="checkbox"/>	/			Y6A1
0.0 ft.		MWL					5	<input type="checkbox"/>	/			
21.2 ft.	00:03:05	TFA			4.000			<input type="checkbox"/>	2 /		3381-CV MCSP 2019-ACOH 'Y6A1'-AMH 'SSMH15'-TFA at 0.0 ft..JPG	
21.2 ft.	00:05:51	MSA						<input type="checkbox"/>	/		3381-CV MCSP 2019-ACOH 'Y6A1'-AMH 'SSMH15'-MSA at 21.2 ft..JPG	DEBRIS, NEEDS JETTER TRAILER

PACP Inspections

Surveyed by: RYAN HERENDEEN		Certificate number: 0703002334		Owner: NORCAL NASSCO		Customer:		Drainage area:		P/O number:		Sheet number:	
Pipe segment ref.: SSMH19_SSMH18				Start date/time: 20190321 07:46		Street: HIGHWAY 104				City: IONE			
Location details: YARD 10				Upstream MH No: SSMH19				Rim to invert:		Grade to invert:		Rim to grade:	
Pipe use: SS		Direction: D		Flow control: N		Downstream MH No: SSMH18				Rim to invert:		Grade to invert:	
Height: 6 in.		Width:		Shape: C		Material: PVC		Lining method:		Pipe joint length:		Total length: 185.000 ft.	
Length surveyed: 185.000 ft.		Year constructed:		Year renewed:		Media label:		Purpose: F		Sewer category:		Pre-cleaning: H	
Date cleaned: 20190321		Work order no.:		Weather: 1		Location code: Y		Pressure value:		Project name: 3381-CV MCSP 2019			
Additional info:													

Observations

Distance	Video Ref.	PACP Code	Continuous	S/M/L	Value Inches (mm)		%	Joint	Circumferential Location		Image Ref.	Remarks
					1st	2nd			At/From	To		
0.0 ft.		AMH						<input type="checkbox"/>	/			SSMH19
0.0 ft.		MWL					5	<input type="checkbox"/>	/			
95.6 ft.	00:10:40	TFA			4.000			<input type="checkbox"/>	2 /		3381-CV MCSP 2019-AMH 'SSMH19'-AMH 'SSMH18'-TFA at 95.6 ft..JPG	
134.9 ft.	00:13:23	DFBI					5	<input type="checkbox"/>	4 /		3381-CV MCSP 2019-AMH 'SSMH19'-AMH 'SSMH18'-DFBI at 134.9 ft..JPG	BUBBLE INWARD
178.6 ft.	00:18:35	MWL					20	<input type="checkbox"/>	/		3381-CV MCSP 2019-AMH 'SSMH19'-AMH 'SSMH18'-MWL at 178.6 ft..JPG	

Observations

Distance	Video Ref.	PACP Code	Continuous	S/M/L	Value Inches (mm)		%	Joint	Circumferential Location		Image Ref.	Remarks
					1st	2nd			At/From	To		
185.0 ft.	00:19:13	AMH						<input type="checkbox"/>	/		3381-CV MCSP 2019-AMH 'SSMH19'-AMH 'SSMH18'-AMH at 185.0 ft..JPG	SSMH18

PACP Inspections

Surveyed by: RYAN HERENDEEN		Certificate number: 0703002334		Owner: NORCAL NASSCO		Customer:		Drainage area:		P/O number:		Sheet number:	
Pipe segment ref.: SSMH18_SSMH17				Start date/time: 20190321 09:29		Street: HIGHWAY 104				City: IONE			
Location details:				Upstream MH No: SSMH18				Rim to invert:		Grade to invert:		Rim to grade:	
Pipe use: SS		Direction: D		Flow control: N		Downstream MH No: SSMH17				Rim to invert:		Grade to invert:	
Height: 6 in.		Width:		Shape: C		Material: PVC		Lining method:		Pipe joint length:		Total length: 216.100 ft.	
Length surveyed: 216.100 ft.		Year constructed:		Year renewed:		Media label:		Purpose: F		Sewer category:		Pre-cleaning: H	
Date cleaned: 20181027		Work order no.:		Weather: 1		Location code: Y		Pressure value:		Project name: 3381-CV MCSP 2019			
Additional info:													

Observations

Distance	Video Ref.	PACP Code	Continuous	S/M/L	Value Inches (mm)		%	Joint	Circumferential Location		Image Ref.	Remarks
					1st	2nd			At/From	To		
0.0 ft.		AMH						<input type="checkbox"/>	/			SSMH18
0.0 ft.		MWL					5	<input type="checkbox"/>	/			
24.4 ft.	00:02:45	TFC			4.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-AMH 'SSMH18'-AMH 'SSMH17'-TFC at 24.4 ft..JPG	
45.1 ft.	00:04:07	MWL					20	<input type="checkbox"/>	/		3381-CV MCSP 2019-AMH 'SSMH18'-AMH 'SSMH17'-MWL at 45.1 ft..JPG	
48.0 ft.	00:04:30	TFA			4.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-AMH 'SSMH18'-AMH 'SSMH17'-TFA at 48.0 ft..JPG	

Observations

Distance	Video Ref.	PACP Code	Continuous	S/M/L	Value Inches (mm)		%	Joint	Circumferential Location		Image Ref.	Remarks
					1st	2nd			At/From	To		
147.9 ft. 00:10:11		MWL					30	<input type="checkbox"/>	/		3381-CV MCSP 2019-AMH 'SSMH18'-AMH 'SSMH17'-MWL at 147.9 ft..JPG	
167.7 ft. 00:11:27		MWL					5	<input type="checkbox"/>	/		3381-CV MCSP 2019-AMH 'SSMH18'-AMH 'SSMH17'-MWL at 167.7 ft..JPG	
175.7 ft. 00:12:06		TFA			4.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-AMH 'SSMH18'-AMH 'SSMH17'-TFA at 175.7 ft..JPG	
176.1 ft. 00:12:24		JSM		M				<input type="checkbox"/>	/		3381-CV MCSP 2019-AMH 'SSMH18'-AMH 'SSMH17'-JSM at 176.1 ft..JPG	
190.7 ft. 00:13:56		MWL					10	<input type="checkbox"/>	/		3381-CV MCSP 2019-AMH 'SSMH18'-AMH 'SSMH17'-MWL at 190.7 ft..JPG	
216.1 ft. 00:15:54		AMH						<input type="checkbox"/>	/		3381-CV MCSP 2019-AMH 'SSMH18'-AMH 'SSMH17'-AMH at 216.1 ft..JPG	SSMH17

PACP Inspections

Surveyed by: RYAN HERENDEEN		Certificate number: 0703002334		Owner: NORCAL NASSCO		Customer:		Drainage area:		P/O number:		Sheet number:	
Pipe segment ref.: SSMH17_SSMH16				Start date/time: 20190321 09:55		Street: HIGHWAY 104				City: IONE			
Location details:				Upstream MH No: SSMH17				Rim to invert:		Grade to invert:		Rim to grade:	
Pipe use: SS		Direction: D		Flow control: N		Downstream MH No: SSMH16				Rim to invert:		Grade to invert:	
Height: 8 in.		Width:		Shape: C		Material: PVC		Lining method:		Pipe joint length:		Total length: 58.600 ft.	
Length surveyed: 58.600 ft.		Year constructed:		Year renewed:		Media label:		Purpose: F		Sewer category:		Pre-cleaning: H	
Date cleaned: 20190321		Work order no.:		Weather: 1		Location code: Y		Pressure value:		Project name: 3381-CV MCSP 2019			
Additional info:													

Observations

Distance	Video Ref.	PACP Code	Continuous	S/M/L	Value Inches (mm)		%	Joint	Circumferential Location		Image Ref.	Remarks
					1st	2nd			At/From	To		
0.0 ft.		AMH						<input type="checkbox"/>	/			SSMH17
0.0 ft.		MWL					5	<input type="checkbox"/>	/			
18.7 ft.	00:02:24	MWL					10	<input type="checkbox"/>	/		3381-CV MCSP 2019-AMH 'SSMH17'-AMH 'SSMH16'-MWL at 18.7 ft..JPG	
24.3 ft.	00:02:53	MWL					30	<input type="checkbox"/>	/		3381-CV MCSP 2019-AMH 'SSMH17'-AMH 'SSMH16'-MWL at 24.3 ft..JPG	
35.7 ft.	00:05:36	MGO						<input type="checkbox"/>	/		3381-CV MCSP 2019-AMH 'SSMH17'-AMH 'SSMH16'-MGO at 35.7 ft..JPG	PVC PIPE IS 8IN

Observations

Distance	Video Ref.	PACP Code	Continuous	S/M/L	Value Inches (mm)		%	Joint	Circumferential Location		Image Ref.	Remarks
					1st	2nd			At/From	To		
42.4 ft.	00:06:53	MWL					40	<input type="checkbox"/>	/		3381-CV MCSP 2019-AMH 'SSMH17'-AMH 'SSMH16'-MWL at 42.4 ft..JPG	
58.6 ft.	00:10:46	MSA						<input type="checkbox"/>	/		3381-CV MCSP 2019-AMH 'SSMH17'-AMH 'SSMH16'-MSA at 58.6 ft..JPG	WATER LEVEL TOO HIGH

PACP Inspections

Surveyed by: RYAN HERENDEEN		Certificate number: 0703002334		Owner: NORCAL NASSCO		Customer:		Drainage area:		P/O number:		Sheet number:	
Pipe segment ref.: SSMH17_Y9D				Start date/time: 20190321 10:49		Street: HIGHWAY 104				City: IONE			
Location details:				Upstream MH No: Y9D				Rim to invert:		Grade to invert:		Rim to grade:	
Pipe use: SS		Direction: D		Flow control: N		Downstream MH No: SSMH17				Rim to invert:		Grade to invert:	
Height: 6 in.		Width:		Shape: C		Material: PVC		Lining method:		Pipe joint length:		Total length: 113.200 ft.	
Length surveyed: 113.200 ft.		Year constructed:		Year renewed:		Media label:		Purpose: F		Sewer category:		Pre-cleaning: H	
Date cleaned: 20190321		Work order no.:		Weather: 1		Location code: Y		Pressure value:					
Project name: 3381-CV MCSP 2019				Additional info: REVERSE INSPECTION									

Observations

Distance	Video Ref.	PACP Code	Continuous	S/M/L	Value Inches (mm)		%	Joint	Circumferential Location		Image Ref.	Remarks
					1st	2nd			At/From	To		
0.0 ft.		MWL					5	<input type="checkbox"/>	/			
0.0 ft.		AMH						<input type="checkbox"/>	/			SSMH17
37.3 ft.	00:07:37	JSM		M				<input type="checkbox"/>	/		3381-CV MCSP 2019-AJB 'Y9D'-AMH 'SSMH17'-JSM at 37.3 ft..JPG	
113.2 ft.	00:13:22	AJB						<input type="checkbox"/>	/		3381-CV MCSP 2019-AJB 'Y9D'-AMH 'SSMH17'-AJB at 113.2 ft..JPG	Y9D

PACP Inspections

Surveyed by: RYAN HERENDEEN		Certificate number: 0703002334		Owner: NORCAL NASSCO		Customer:		Drainage area:		P/O number:		Sheet number:	
Pipe segment ref.: MH17A_B8A				Start date/time: 20190321 11:21		Street: HIGHWAY 104				City: IONE			
Location details:				Upstream MH No: B8A				Rim to invert:		Grade to invert:		Rim to grade:	
Pipe use: SS		Direction: U		Flow control: N		Downstream MH No: MH17A				Rim to invert:		Grade to invert:	
Height: 6 in.		Width:		Shape: C		Material: PVC		Lining method:		Pipe joint length:		Total length: 6.300 ft.	
Length surveyed: 6.300 ft.		Year constructed:		Year renewed:		Media label:		Purpose: F		Sewer category:		Pre-cleaning: H	
Date cleaned: 20190321		Work order no.:		Weather: 1		Location code: Y		Pressure value:		Project name: 3381-CV MCSP 2019			
Additional info: REVERSE INSPECTION													

Observations

Distance	Video Ref.	PACP Code	Continuous	S/M/L	Value Inches (mm)		%	Joint	Circumferential Location		Image Ref.	Remarks
					1st	2nd			At/From	To		
0.0 ft.		AMH						<input type="checkbox"/>	/			MH17A
0.0 ft.		MWL					5	<input type="checkbox"/>	/			
6.3 ft.	00:00:52	MSA						<input type="checkbox"/>	/		3381-CV MCSP 2019-AJB 'B8A'-AMH 'MH17A'-MSA at 6.3 ft..JPG	TRACTOR WONT FIT

PACP Inspections

Surveyed by: RYAN HERENDEEN		Certificate number: 0703002334		Owner: NORCAL NASSCO		Customer:		Drainage area:		P/O number:		Sheet number:	
Pipe segment ref.: SSMH16_MH17A				Start date/time: 20190321 11:33		Street: HIGHWAY 104				City: IONE			
Location details: YARD				Upstream MH No: MH17A				Rim to invert:		Grade to invert:		Rim to grade:	
Pipe use: SS		Direction: U		Flow control: N		Downstream MH No: SSMH16				Rim to invert:		Grade to invert:	
Height: 6 in.		Width:		Shape: C		Material: PVC		Lining method:		Pipe joint length:		Total length: 1.100 ft.	
Length surveyed: 1.100 ft.		Year constructed:		Year renewed:		Media label:		Purpose:		Sewer category:		Pre-cleaning: L	
Date cleaned:		Work order no.:		Weather: 1		Location code: Y		Pressure value:					
Project name: 3381-CV MCSP 2019				Additional info: UPSTREAM									

Observations

Distance	Video Ref.	PACP Code	Continuous	S/M/L	Value Inches (mm) 1st 2nd	%	Joint	Cumferential Location At/From To	Image Ref.	Remarks
0.0 ft.		AMH					<input type="checkbox"/>	/		SSMH16
0.0 ft.		MWL				5	<input type="checkbox"/>	/		
1.1 ft.	00:03:10	MSA					<input type="checkbox"/>	/	3381-CV MCSP 2019-AMH 'MH17A'-AMH 'SSMH16'-MSA at 1.1 ft..JPG	45 BEND

PACP Inspections

Surveyed by: RYAN HERENDEEN		Certificate number: 0703002334		Owner: NORCAL NASSCO		Customer:		Drainage area:		P/O number:		Sheet number:	
Pipe segment ref.: SSMH16_SSMH15A				Start date/time: 20190321 11:42		Street: HIGHWAY 104				City: IONE			
Location details: YARD				Upstream MH No: SSMH16				Rim to invert:		Grade to invert:		Rim to grade:	
Pipe use: SS		Direction: D		Flow control: N		Downstream MH No: SSMH15A				Rim to invert:		Grade to invert:	
Height: 10 in.		Width:		Shape: C		Material: PVC		Lining method:		Pipe joint length:		Total length: 78.500 ft.	
Length surveyed: 78.500 ft.		Year constructed:		Year renewed:		Media label:		Purpose: F		Sewer category:		Pre-cleaning: L	
Date cleaned:		Work order no.:		Weather: 1		Location code: Y		Pressure value:		Project name: 3381-CV MCSP 2019			
Additional info:													

Observations

Distance	Video Ref.	PACP Code	Continuous	S/M/L	Value Inches (mm)		%	Joint	Circumferential Location		Image Ref.	Remarks
					1st	2nd			At/From	To		
0.0 ft.		AMH						<input type="checkbox"/>	/			SSMH16
0.0 ft.		MWL					10	<input type="checkbox"/>	/			
78.5 ft.	00:07:17	AMH						<input type="checkbox"/>	/		3381-CV MCSP 2019-AMH 'SSMH16'-AMH 'SSMH15A'-AMH at 78.5 ft..JPG	SSMH15A

PACP Inspections

Surveyed by: RYAN HERENDEEN		Certificate number: 0703002334		Owner: NORCAL NASSCO		Customer:		Drainage area:		P/O number:		Sheet number:	
Pipe segment ref.: SSMH15A_SSMH15				Start date/time: 20190321 12:00		Street: HIGHWAY 104				City: IONE			
Location details: YARD				Upstream MH No: SSMH15A				Rim to invert:		Grade to invert:		Rim to grade:	
Pipe use: SS		Direction: D		Flow control: N		Downstream MH No: SSMH15				Rim to invert:		Grade to invert:	
Height: 10 in.		Width:		Shape: C		Material: PVC		Lining method:		Pipe joint length:		Total length: 194.100 ft.	
Length surveyed: 194.100 ft.		Year constructed:		Year renewed:		Media label:		Purpose: F		Sewer category:		Pre-cleaning: L	
Date cleaned:		Work order no.:		Weather: 1		Location code: Y		Pressure value:		Project name: 3381-CV MCSP 2019			
Additional info:													

Observations

Distance	Video Ref.	PACP Code	Continuous	S/M/L	Value Inches (mm)		%	Joint	Circumferential Location		Image Ref.	Remarks
					1st	2nd			At/From	To		
0.0 ft.		AMH						<input type="checkbox"/>	/			SSMH15A
0.0 ft.		MWL					10	<input type="checkbox"/>	/			
194.0 ft.	00:09:38	AMH						<input type="checkbox"/>	/		3381-CV MCSP 2019-AMH 'SSMH15A'-AMH 'SSMH15'-AMH at 194.0 ft..JPG	SSMH15

PACP Inspections

Surveyed by: RYAN HERENDEEN		Certificate number: 0703002334		Owner: NORCAL NASSCO		Customer:		Drainage area:		P/O number:		Sheet number:	
Pipe segment ref.: SSMH15_SSMH14				Start date/time: 20190321 12:16		Street: HIGHWAY 104				City: IONE			
Location details: YARD				Upstream MH No: SSMH15				Rim to invert:		Grade to invert:		Rim to grade:	
Pipe use: SS		Direction: D		Flow control: N		Downstream MH No: SSMH14				Rim to invert:		Grade to invert:	
Height: 12 in.		Width:		Shape: C		Material: PVC		Lining method:		Pipe joint length:		Total length: 151.300 ft.	
Length surveyed: 151.300 ft.		Year constructed:		Year renewed:		Media label:		Purpose: F		Sewer category:		Pre-cleaning: L	
Date cleaned: 20190321		Work order no.:		Weather: 1		Location code: Y		Pressure value:					
Project name: 3381-CV MCSP 2019				Additional info:									

Observations

Distance	Video Ref.	PACP Code	Continuous	S/M/L	Value Inches (mm)		%	Joint	Circumferential Location		Image Ref.	Remarks
					1st	2nd			At/From	To		
0.0 ft.		AMH						<input type="checkbox"/>	/			SSMH15
0.0 ft.		MWL					5	<input type="checkbox"/>	/			
71.9 ft.	00:05:39	TFA			4.000			<input type="checkbox"/>	12 /		3381-CV MCSP 2019-AMH 'SSMH15'-AMH 'SSMH14'-TFA at 71.9 ft..JPG	
151.3 ft.	00:09:36	AMH						<input type="checkbox"/>	/		3381-CV MCSP 2019-AMH 'SSMH15'-AMH 'SSMH14'-AMH at 151.3 ft..JPG	SSMH14

PACP Inspections

Surveyed by: RYAN HERENDEEN		Certificate number: 0703002334		Owner: NORCAL NASSCO		Customer:		Drainage area:		P/O number:		Sheet number:	
Pipe segment ref.: SSMH14_SSMH13				Start date/time: 20190321 12:59		Street: HIGHWAY 104				City: IONE			
Location details: YARD				Upstream MH No: SSMH14				Rim to invert:		Grade to invert:		Rim to grade:	
Pipe use: SS		Direction: D		Flow control: N		Downstream MH No: SSMH13				Rim to invert:		Grade to invert:	
Height: 10 in.		Width:		Shape: C		Material: PVC		Lining method:		Pipe joint length:		Total length: 288.300 ft.	
Length surveyed: 288.300 ft.		Year constructed:		Year renewed:		Media label:		Purpose: F		Sewer category:		Pre-cleaning: L	
Date cleaned: 20190321		Work order no.:		Weather: 1		Location code: Y		Pressure value:					
Project name: 3381-CV MCSP 2019				Additional info:									

Observations

Distance	Video Ref.	PACP Code	Continuous	S/M/L	Value Inches (mm)		%	Joint	Circumferential Location		Image Ref.	Remarks
					1st	2nd			At/From	To		
0.0 ft.		AMH						<input type="checkbox"/>	/			SSMH14
0.0 ft.		MWL					5	<input type="checkbox"/>	/			
288.3 ft. 00:14:01		AMH						<input type="checkbox"/>	/		3381-CV MCSP 2019-AMH 'SSMH14'-AMH 'SSMH13'-AMH at 288.3 ft..JPG	SSMH13

PACP Inspections

Surveyed by: RYAN HERENDEEN		Certificate number: 0703002334		Owner: NORCAL NASSCO		Customer:		Drainage area:		P/O number:		Sheet number:	
Pipe segment ref.: SSMH13_SSMH12				Start date/time: 20190321 13:24		Street: HIGHWAY 104				City: IONE			
Location details: YARD				Upstream MH No: SSMH13				Rim to invert:		Grade to invert:		Rim to grade:	
Pipe use: SS		Direction: D		Flow control: N		Downstream MH No: SSMH12				Rim to invert:		Grade to invert:	
Height: 12 in.		Width:		Shape: C		Material: PVC		Lining method:		Pipe joint length:		Total length: 210.200 ft.	
Length surveyed: 210.200 ft.		Year constructed:		Year renewed:		Media label:		Purpose: F		Sewer category:		Pre-cleaning: L	
Date cleaned: 20190313		Work order no.:		Weather: 1		Location code: Y		Pressure value:					
Project name: 3381-CV MCSP 2019				Additional info:									

Observations

Distance	Video Ref.	PACP Code	Continuous	S/M/L	Value Inches (mm)		%	Joint	Circumferential Location		Image Ref.	Remarks
					1st	2nd			At/From	To		
0.0 ft.		AMH						<input type="checkbox"/>	/			SSMH13
0.0 ft.		MWL					5	<input type="checkbox"/>	/			
210.2 ft.	00:21:15	MSA						<input type="checkbox"/>	/		3381-CV MCSP 2019-AMH 'SSMH13'-AMH 'SSMH12'-MSA at 210.2 ft..JPG	DEBRIS

PACP Inspections

Surveyed by: RYAN HERENDEEN		Certificate number: 0703002334		Owner: NORCAL NASSCO		Customer:		Drainage area:		P/O number:		Sheet number:	
Pipe segment ref.: SSMH13 _ SSMH12				Start date/time: 20190322 07:05		Street: HIGHWAY 104				City: IONE			
Location details: YARD				Upstream MH No: SSMH13				Rim to invert:		Grade to invert:		Rim to grade:	
Pipe use: SS		Direction: D		Flow control: N		Downstream MH No: SSMH12				Rim to invert:		Grade to invert:	
Height: 12 in.		Width:		Shape: C		Material: PVC		Lining method:		Pipe joint length:		Total length: 301.300 ft.	
Length surveyed: 301.300 ft.		Year constructed:		Year renewed:		Media label:		Purpose: F		Sewer category:		Pre-cleaning: H	
Date cleaned: 20190322		Work order no.:		Weather: 1		Location code: Y		Pressure value:					
Project name: 3381-CV MCSP 2019				Additional info:									

Observations

Distance	Video Ref.	PACP Code	Continuous	S/M/L	Value Inches (mm)		%	Joint	Circumferential Location		Image Ref.	Remarks
					1st	2nd			At/From	To		
0.0 ft.		AMH						<input type="checkbox"/>	/			SSMH13
0.0 ft.		MWL					5	<input type="checkbox"/>	/			
212.3 ft.	00:12:52	MWL					20	<input type="checkbox"/>	/		3381-CV MCSP 2019-AMH 'SSMH13'-AMH 'SSMH12'-MWL at 212.3 ft..JPG	
219.0 ft.	00:14:14	MCU						<input type="checkbox"/>	/		3381-CV MCSP 2019-AMH 'SSMH13'-AMH 'SSMH12'-MCU at 219.0 ft..JPG	
280.4 ft.	00:20:20	MCU						<input type="checkbox"/>	/		3381-CV MCSP 2019-AMH 'SSMH13'-AMH 'SSMH12'-MCU at 280.4 ft..JPG	

Observations

Distance	Video Ref.	PACP Code	Continuous	S/M/L	Value Inches (mm)		%	Joint	Circumferential Location		Image Ref.	Remarks
					1st	2nd			At/From	To		
301.2 ft.	00:22:15	AMH						<input type="checkbox"/>	/		3381-CV MCSP 2019-AMH 'SSMH13'-AMH 'SSMH12'-AMH at 301.2 ft..JPG	SSMH12

PACP Inspections

Surveyed by: RYAN HERENDEEN		Certificate number: 0703002334		Owner: NORCAL NASSCO		Customer:		Drainage area:		P/O number:		Sheet number:	
Pipe segment ref.: SSMH12_SSMH11				Start date/time: 20190322 08:12		Street: HIGHWAY 104				City: IONE			
Location details: YARD				Upstream MH No: SSMH12				Rim to invert:		Grade to invert:		Rim to grade:	
Pipe use: SS		Direction: D		Flow control: N		Downstream MH No: SSMH11				Rim to invert:		Grade to invert:	
Height: 12 in.		Width:		Shape: C		Material: PVC		Lining method:		Pipe joint length:		Total length: 149.200 ft.	
Length surveyed: 149.200 ft.		Year constructed:		Year renewed:		Media label:		Purpose: F		Sewer category:		Pre-cleaning: H	
Date cleaned: 20190322		Work order no.:		Weather: 1		Location code: Y		Pressure value:		Project name: 3381-CV MCSP 2019			
Additional info:													

Observations

Distance	Video Ref.	PACP Code	Continuous	S/M/L	Value Inches (mm)		%	Joint	Circumferential Location		Image Ref.	Remarks
					1st	2nd			At/From	To		
0.0 ft.		AMH						<input type="checkbox"/>	/			SSMH12
0.0 ft.		MWL					5	<input type="checkbox"/>	/			
72.8 ft.	00:03:54	TFA			4.000			<input type="checkbox"/>	12 /		3381-CV MCSP 2019-AMH 'SSMH12'-AMH 'SSMH11'-TFA at 72.8 ft..JPG	
149.2 ft.	00:09:19	AMH						<input type="checkbox"/>	/		3381-CV MCSP 2019-AMH 'SSMH12'-AMH 'SSMH11'-AMH at 149.2 ft..JPG	SSMH11

PACP Inspections

Surveyed by: RYAN HERENDEEN		Certificate number: 0703002334		Owner: NORCAL NASSCO		Customer:		Drainage area:		P/O number:		Sheet number:	
Pipe segment ref.: SSMH11_ SSMH10				Start date/time: 20190322 08:32		Street: HIGHWAY 104				City: IONE			
Location details: YARD				Upstream MH No: SSMH11				Rim to invert:		Grade to invert:		Rim to grade:	
Pipe use: SS		Direction: D		Flow control: N		Downstream MH No: SSMH10				Rim to invert:		Grade to invert:	
Height: 12 in.		Width:		Shape: C		Material: PVC		Lining method:		Pipe joint length:		Total length: 187.000 ft.	
Length surveyed: 187.000 ft.		Year constructed:		Year renewed:		Media label:		Purpose: F		Sewer category:		Pre-cleaning: H	
Date cleaned: 20190322		Work order no.:		Weather: 1		Location code: Y		Pressure value:		Project name: 3381-CV MCSP 2019			
Additional info:													

Observations

Distance	Video Ref.	PACP Code	Continuous	S/M/L	Value Inches (mm)	%	Joint	Cumferential Location	Image Ref.	Remarks
					1st 2nd			At/From To		
0.0 ft.		AMH					<input type="checkbox"/>	/		SSMH11
0.0 ft.		MWL				5	<input type="checkbox"/>	/		
187.0 ft. 00:10:47		AMH					<input type="checkbox"/>	/	3381-CV MCSP 2019-AMH 'SSMH11'-AMH 'SSMH10'-AMH at 187.0 ft..JPG	SSMH10

PACP Inspections

Surveyed by: RYAN HERENDEEN		Certificate number: 0703002334		Owner: NORCAL NASSCO		Customer:		Drainage area:		P/O number:		Sheet number:	
Pipe segment ref.: SSMH10 _ SSMH9				Start date/time: 20190322 08:54		Street: HIGHWAY 104				City: IONE			
Location details: YARD				Upstream MH No: SSMH10				Rim to invert:		Grade to invert:		Rim to grade:	
Pipe use: SS		Direction: D		Flow control: N		Downstream MH No: SSMH9				Rim to invert:		Grade to invert:	
Height: 12 in.		Width:		Shape: C		Material: PVC		Lining method:		Pipe joint length:		Total length: 150.200 ft.	
Length surveyed: 150.200 ft.		Year constructed:		Year renewed:		Media label:		Purpose: F		Sewer category:		Pre-cleaning: H	
Date cleaned: 20190322		Work order no.:		Weather: 1		Location code: Y		Pressure value:		Project name: 3381-CV MCSP 2019			
Additional info:													

Observations

Distance	Video Ref.	PACP Code	Continuous	S/M/L	Value Inches (mm)		%	Joint	Circumferential Location		Image Ref.	Remarks
					1st	2nd			At/From	To		
0.0 ft.		AMH						<input type="checkbox"/>	/			SSMH10
0.0 ft.		MWL					5	<input type="checkbox"/>	/			
73.4 ft.	00:04:12	TFA			4.000			<input type="checkbox"/>	12 /		3381-CV MCSP 2019-AMH 'SSMH10'-AMH 'SSMH9'-TFA at 73.4 ft..JPG	
150.2 ft.	00:07:44	AMH						<input type="checkbox"/>	/		3381-CV MCSP 2019-AMH 'SSMH10'-AMH 'SSMH9'-AMH at 150.2 ft..JPG	SSMH9

PACP Inspections

Surveyed by: RYAN HERENDEEN		Certificate number: 0703002334		Owner: NORCAL NASSCO		Customer:		Drainage area:		P/O number:		Sheet number:	
Pipe segment ref.: SSMH9 _ SSMH8				Start date/time: 20190322 09:23		Street: HIGHWAY 104				City: IONE			
Location details: YARD				Upstream MH No: SSMH9				Rim to invert:		Grade to invert:		Rim to grade:	
Pipe use: SS		Direction: D		Flow control: N		Downstream MH No: SSMH8				Rim to invert:		Grade to invert:	
Height: 12 in.		Width:		Shape: C		Material: PVC		Lining method:		Pipe joint length:		Total length: 137.000 ft.	
Length surveyed: 137.000 ft.		Year constructed:		Year renewed:		Media label:		Purpose: F		Sewer category:		Pre-cleaning: H	
Date cleaned: 20190322		Work order no.:		Weather: 1		Location code: Y		Pressure value:		Project name: 3381-CV MCSP 2019			
Additional info:													

Observations

Distance	Video Ref.	PACP Code	Continuous	S/M/L	Value Inches (mm)		%	Joint	Circumferential Location		Image Ref.	Remarks
					1st	2nd			At/From	To		
0.0 ft.		AMH						<input type="checkbox"/>	/			SSMH9
0.0 ft.		MWL					5	<input type="checkbox"/>	/			
35.0 ft.	00:02:00	TFA			4.000			<input type="checkbox"/>	10 /		3381-CV MCSP 2019-AMH 'SSMH9'-AMH 'SSMH8'-TFA at 35.0 ft..JPG	
137.0 ft.	00:06:13	AMH						<input type="checkbox"/>	/		3381-CV MCSP 2019-AMH 'SSMH9'-AMH 'SSMH8'-AMH at 137.0 ft..JPG	SSMH8

PACP Inspections

Surveyed by: RYAN HERENDEEN		Certificate number: 0703002334		Owner: NORCAL NASSCO		Customer:		Drainage area:		P/O number:		Sheet number:	
Pipe segment ref.: SSMH8 _ SSMH7				Start date/time: 20190322 11:07		Street: HIGHWAY 104				City: IONE			
Location details: YARD				Upstream MH No: SSMH8				Rim to invert:		Grade to invert:		Rim to grade:	
Pipe use: SS		Direction: D		Flow control: N		Downstream MH No: SSMH7				Rim to invert:		Grade to invert:	
Height: 12 in.		Width:		Shape: C		Material: PVC		Lining method:		Pipe joint length:		Total length: 148.500 ft.	
Length surveyed: 148.500 ft.		Year constructed:		Year renewed:		Media label:		Purpose: F		Sewer category:		Pre-cleaning: H	
Date cleaned: 20190322		Work order no.:		Weather: 1		Location code: Y		Pressure value:		Project name: 3381-CV MCSP 2019			
Additional info:													

Observations

Distance	Video Ref.	PACP Code	Continuous	S/M/L	Value Inches (mm)		%	Joint	Circumferential Location		Image Ref.	Remarks
					1st	2nd			At/From	To		
0.0 ft.		AMH						<input type="checkbox"/>	/			SSMH8
0.0 ft.		MWL					5	<input type="checkbox"/>	/			
74.2 ft.	00:03:02	TFA			4.000			<input type="checkbox"/>	12 /		3381-CV MCSP 2019-AMH 'SSMH8'-AMH 'SSMH7'-TFA at 74.2 ft..JPG	
148.5 ft.	00:12:44	AMH						<input type="checkbox"/>	/		3381-CV MCSP 2019-AMH 'SSMH8'-AMH 'SSMH7'-AMH at 148.5 ft..JPG	SSMH7

PACP Inspections

Surveyed by: RYAN HERENDEEN		Certificate number: 0703002334		Owner: NORCAL NASSCO		Customer:		Drainage area:		P/O number:		Sheet number:	
Pipe segment ref.: SSMH7 _ SSMH6				Start date/time: 20190322 11:33		Street: HIGHWAY 104				City: IONE			
Location details: YARD				Upstream MH No: SSMH7				Rim to invert:		Grade to invert:		Rim to grade:	
Pipe use: SS		Direction: D		Flow control: N		Downstream MH No: SSMH6				Rim to invert:		Grade to invert:	
Height: 12 in.		Width:		Shape: C		Material: PVC		Lining method:		Pipe joint length:		Total length: 192.900 ft.	
Length surveyed: 192.900 ft.		Year constructed:		Year renewed:		Media label:		Purpose: F		Sewer category:		Pre-cleaning: H	
Date cleaned: 20190322		Work order no.:		Weather: 1		Location code: Y		Pressure value:		Project name: 3381-CV MCSP 2019			
Additional info:													

Observations

Distance	Video Ref.	PACP Code	Continuous	S/M/L	Value Inches (mm)		%	Joint	Circumferential Location		Image Ref.	Remarks
					1st	2nd			At/From	To		
0.0 ft.		AMH						<input type="checkbox"/>	/			SSMH7
0.0 ft.		MWL					5	<input type="checkbox"/>	/			
23.2 ft.	00:03:25	TFA			4.000			<input type="checkbox"/>	12 /		3381-CV MCSP 2019-AMH 'SSMH7'-AMH 'SSMH6'-TFA at 23.2 ft..JPG	
192.9 ft.	00:11:08	AMH						<input type="checkbox"/>	/		3381-CV MCSP 2019-AMH 'SSMH7'-AMH 'SSMH6'-AMH at 192.9 ft..JPG	SSMH6

PACP Inspections

Surveyed by: RYAN HERENDEEN		Certificate number: 0703002334		Owner: NORCAL NASSCO		Customer:		Drainage area:		P/O number:		Sheet number:	
Pipe segment ref.: SSMH22_SSMH21				Start date/time: 20190322 12:15		Street: HIGHWAY 104				City: IONE			
Location details: YARD				Upstream MH No: SSMH22				Rim to invert:		Grade to invert:		Rim to grade:	
Pipe use: SS		Direction: D		Flow control: N		Downstream MH No: SSMH21				Rim to invert:		Grade to invert:	
Height: 6 in.		Width:		Shape: C		Material: PVC		Lining method:		Pipe joint length:		Total length: 140.000 ft.	
Length surveyed: 140.000 ft.		Year constructed:		Year renewed:		Media label:		Purpose: F		Sewer category:		Pre-cleaning: H	
Date cleaned: 20190322		Work order no.:		Weather: 1		Location code: Y		Pressure value:		Project name: 3381-CV MCSP 2019			
Additional info:													

Observations

Distance	Video Ref.	PACP Code	Continuous	S/M/L	Value Inches (mm)		%	Joint	Circumferential Location		Image Ref.	Remarks
					1st	2nd			At/From	To		
0.0 ft.		AMH						<input type="checkbox"/>	/			SSMH22
0.0 ft.		MWL					5	<input type="checkbox"/>	/			
2.5 ft.	00:02:13	JOM		M				<input type="checkbox"/>	/		3381-CV MCSP 2019-AMH 'SSMH22'-AMH 'SSMH21'-JOM at 2.5 ft..JPG	SEPERATED
69.3 ft.	00:10:19	TFA			4.000			<input type="checkbox"/>	12 /		3381-CV MCSP 2019-AMH 'SSMH22'-AMH 'SSMH21'-TFA at 69.3 ft..JPG	
140.0 ft.	00:15:53	AMH						<input type="checkbox"/>	/		3381-CV MCSP 2019-AMH 'SSMH22'-AMH 'SSMH21'-AMH at 140.0 ft..JPG	SSMH21

PACP Inspections

Surveyed by: RYAN HERENDEEN		Certificate number: 0703002334		Owner: NORCAL NASSCO		Customer:		Drainage area:		P/O number:		Sheet number:	
Pipe segment ref.: SSMH21_SSMH6				Start date/time: 20190322 13:01		Street: HIGHWAY 104				City: IONE			
Location details: YARD				Upstream MH No: SSMH21				Rim to invert:		Grade to invert:		Rim to grade:	
Pipe use: SS		Direction: D		Flow control: N		Downstream MH No: SSMH6				Rim to invert:		Grade to invert:	
Height: 6 in.		Width:		Shape: C		Material: PVC		Lining method:		Pipe joint length:		Total length: 254.400 ft.	
Length surveyed: 254.400 ft.		Year constructed:		Year renewed:		Work order no.:		Weather: 1		Location code: Y		Pressure value:	
Project name: 3381-CV MCSP 2019				Additional info:									

Observations

Distance	Video Ref.	PACP Code	Continuous	S/M/L	Value Inches (mm)		%	Joint	Circumferential Location		Image Ref.	Remarks
					1st	2nd			At/From	To		
0.0 ft.		AMH						<input type="checkbox"/>	/			SSMH21
0.0 ft.		MWL					5	<input type="checkbox"/>	/			
47.3 ft.	00:05:33	MGP						<input type="checkbox"/>	/		3381-CV MCSP 2019-AMH 'SSMH21'-AMH 'SSMH6'-MGP at 47.3 ft..JPG	BURIED MH
137.0 ft.	00:13:10	JOM		M				<input type="checkbox"/>	/		3381-CV MCSP 2019-AMH 'SSMH21'-AMH 'SSMH6'-JOM at 137.0 ft..JPG	
138.1 ft.	00:14:06	TFA			4.000			<input type="checkbox"/>	2 /		3381-CV MCSP 2019-AMH 'SSMH21'-AMH 'SSMH6'-TFA at 138.1 ft..JPG	

Observations

Distance	Video Ref.	PACP Code	Continuous	S/M/L	Value Inches (mm)		%	Joint	Circumferential Location		Image Ref.	Remarks
					1st	2nd			At/From	To		
248.9 ft.	00:21:15	JOM		M				<input type="checkbox"/>	/		3381-CV MCSP 2019-AMH 'SSMH21'-AMH 'SSMH6'-JOM at 248.9 ft..JPG	
250.5 ft.	00:22:33	DFBI					15	<input type="checkbox"/>	6 / 7		3381-CV MCSP 2019-AMH 'SSMH21'-AMH 'SSMH6'-DFBI at 250.5 ft..JPG	
254.4 ft.	00:25:46	AMH						<input type="checkbox"/>	/		3381-CV MCSP 2019-AMH 'SSMH21'-AMH 'SSMH6'-AMH at 254.4 ft..JPG	SSMH6