

Appendix A
Manhole Inspection Data



Structural Information

Structure Type:	San MH
Structure Diameter (ft):	6.00
Cover Type (# = Holes):	Solid
Cover Condition:	Good
Cover Manufacturer:	EJIW
Bolt Down Cover:	No
Cover Bolted:	No
Frame Condition:	Good
Adjusting Ring Type:	DNR
Adjusting Ring Condition:	DNR
Adjusting Ring Depth (ft):	0.00
Corbel Type:	None
Corbel Condition:	DNR
Corbel Centricity:	Eccentric
Corbel Depth (ft):	0.00
Wall Type:	Brick
Wall Condition:	Fair
Channel/Bench Condition:	Good
Flow Depth (ft):	0.50
Steps Condition:	Missing
Step Material:	DNR
Structure Notes:	

Connections/Piping

Rim Depth (ft):	NA
Ring Depth (ft):	0.00
Corbel Depth (ft):	0.00
Pipe Invert Depth(s) (ft):	7.80
	7.80
Max Manhole Depth (ft):	7.80

<u>Pipe Size (in)</u>	<u>Material</u>	<u>Direction</u>	<u>Drop</u>
15	Clay	N	7.80
15		S	7.80

(Diagrams not to scale - For pipe direction only)

Hydraulic Inspection

Surface Material:	Bituminous
Surface Setting:	Road Way
Manhole Surcharge:	No
Flooding/Ponding:	No
Flow Type:	Steady
Flow Clarity:	Normal
Structure Rating:	S-3
Inflow Rating:	I-4
Infiltration Rating:	F-4

Analysis: Infiltration/Inflow and Repairs

Miscellaneous Manhole Improvements:

- _____
- _____
- _____
- _____
- _____

	Average Day (gpm)	Average Month (MCF)	Average Year (MCF)
Inflow Rating:	2.00	11.55	138.59
Structure Rating:	1.50	8.66	103.94
Infiltration Rating:	1.06	6.12	73.45
Total I/I:	4.56	26.33	315.99

Recommended I/I Rehabilitation

	<u>Cost</u>
1. Calcium Aluminate Lining	\$780.00
2. _____	
3. _____	
4. _____	
5. _____	
6. _____	
7. _____	

Total Rehab Cost:	\$858.00	Total Construction Cost:	\$780.00
Transport and Treat Costs:	\$1,140.00	10% Contingency:	\$78.00
Cost-effective to Rehab?:	YES	TOTAL COST:	\$858.00

Hydraulic Inspection Notes

Structure Notes:
Inflow Notes:
Infiltration Notes:

**This is a Category 4 Manhole
 Plan to Repair in 0-5 Years**

*DNR = Did Not Record



Structural Information

Structure Type:	San MH
Structure Diameter (ft):	6.00
Cover Type (# = Holes):	Solid
Cover Condition:	Good
Cover Manufacturer:	EJIW
Bolt Down Cover:	Yes
Cover Bolted:	No
Frame Condition:	Good
Adjusting Ring Type:	Brick/Block
Adjusting Ring Condition:	Good
Adjusting Ring Depth (ft):	0.67
Corbel Type:	Precast
Corbel Condition:	Good
Corbel Centricity:	Eccentric
Corbel Depth (ft):	4.00
Wall Type:	Precast
Wall Condition:	Good
Channel/Bench Condition:	Good
Flow Depth (ft):	0.50
Steps Condition:	Good
Step Material:	DNR
Structure Notes:	

Connections/Piping

<u>Rim Depth (ft):</u>	NA
<u>Ring Depth (ft):</u>	0.67
<u>Corbel Depth (ft):</u>	4.00
<u>Pipe Invert Depth(s) (ft):</u>	10.10
	12.30
	12.30
<u>Max Manhole Depth (ft):</u>	12.30

<u>Pipe Size (in)</u>	<u>Material</u>	<u>Direction</u>	<u>Drop</u>
8	Clay	SW	10.10
15	Clay	W	12.30
15	Clay	E	12.30

(Diagrams not to scale - For pipe direction only)

Hydraulic Inspection

Surface Material:	Bituminous
Surface Setting:	Road Way
Manhole Surcharge:	Yes
Flooding/Ponding:	No
Flow Type:	Steady
Flow Clarity:	Normal
Structure Rating:	S-2
Inflow Rating:	I-2
Infiltration Rating:	F-5

Analysis: Infiltration/Inflow and Repairs

Miscellaneous Manhole Improvements:

1. _____
2. _____
3. _____
4. _____
5. _____

	Average Day (gpm)	Average Month (MCF)	Average Year (MCF)
Inflow Rating:	0.50	2.89	34.65
Structure Rating:	0.15	0.87	10.39
Infiltration Rating:	1.54	8.89	106.72
Total I/I:	2.19	12.65	151.76

Recommended I/I Rehabilitation

	<u>Cost</u>
1. Seal Leaks	\$400.00
2. Seal Leaks	\$400.00
3. _____	
4. _____	
5. _____	
6. _____	
7. _____	

Total Rehab Cost:	\$880.00
Transport and Treat Costs:	\$547.50
Cost-effective to Rehab?:	NO

Total Construction Cost:	\$800.00
10% Contingency:	\$80.00
TOTAL COST:	\$880.00

Hydraulic Inspection Notes

Structure Notes:	
Inflow Notes:	
Infiltration Notes:	2 leaks

This is a Category 5 Manhole
 Priority Repair in less than 1 Year

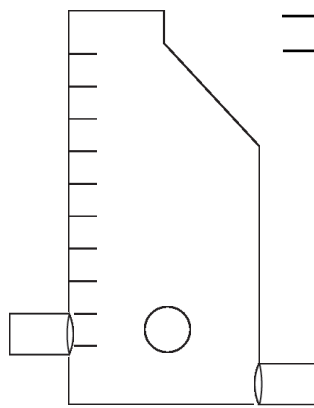
*DNR = Did Not Record



Structural Information

Structure Type: San MH
 Structure Diameter (ft): 4.00
 Cover Type (# = Holes): DNR
 Cover Condition: Good
 Cover Manufacturer: ann arbor
 Bolt Down Cover: No
 Cover Bolted: No
 Frame Condition: Good
 Adjusting Ring Type: Brick/Block
 Adjusting Ring Condition: Fair
 Adjusting Ring Depth (ft): 1.00
 Corbel Type: Block
 Corbel Condition: Fair
 Corbel Centricity: Eccentric
 Corbel Depth (ft): 6.00
 Wall Type: Brick
 Wall Condition: Fair
 Channel/Bench Condition: Good
 Flow Depth (ft): 0.50
 Steps Condition: Fair
 Step Material: DNR
 Structure Notes:

Connections/Piping



Rim Depth (ft): NA

Ring Depth (ft): 1.00

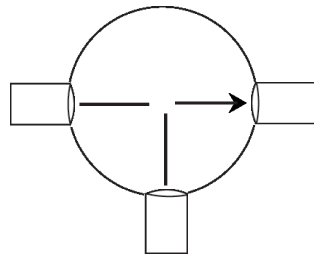
Corbel Depth (ft): 6.00

Pipe Invert Depth(s) (ft): 8.50

13.70

13.80

Max Manhole Depth (ft): 13.80



Pipe Size (in)	Material	Direction	Drop
10	Steel	S	8.50
18	Conc	W	13.70
18	Conc	E	13.80

(Diagrams not to scale - For pipe direction only)

Hydraulic Inspection

Surface Material: Bituminous
 Surface Setting: Road Way
 Manhole Surcharge: Yes
 Flooding/Ponding: Yes
 Flow Type: Steady
 Flow Clarity: Normal
 Structure Rating: S-6
 Inflow Rating: I-6
 Infiltration Rating: F-6

Analysis: Infiltration/Inflow and Repairs

Miscellaneous Manhole Improvements:

1. _____
2. _____
3. _____
4. _____
5. _____

	Average Day (gpm)	Average Month (MCF)	Average Year (MCF)
Inflow Rating:	3.50	20.21	242.54
Structure Rating:	6.00	34.64	415.78
Infiltration Rating:	2.02	11.66	139.98
Total I/I:	11.52	66.52	798.29

Recommended I/I Rehabilitation

	Cost
1. Remove and Replace Frame (Pavement)	\$540.00
2. Calcium Aluminate Lining	\$1,380.00
3. Remove and Replace Lid	\$180.00
4. _____	
5. _____	
6. _____	
7. _____	

Total Rehab Cost:	\$2,310.00
Transport and Treat Costs:	\$2,880.00
Cost-effective to Rehab?:	YES

Total Construction Cost:	\$2,100.00
10% Contingency:	\$210.00
TOTAL COST:	\$2,310.00

Hydraulic Inspection Notes

Structure Notes:

Inflow Notes:

Infiltration Notes:

**This is a Category 6 Manhole
 Immediate Priority Repair**

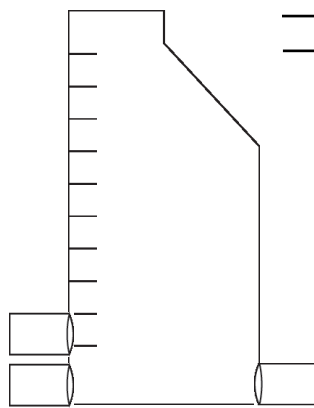
*DNR = Did Not Record



Structural Information

Structure Type: San MH
 Structure Diameter (ft): 4.00
 Cover Type (# = Holes): DNR
 Cover Condition: Good
 Cover Manufacturer: ann arbor
 Bolt Down Cover: No
 Cover Bolted: No
 Frame Condition: Good
 Adjusting Ring Type: Brick
 Adjusting Ring Condition: Fair
 Adjusting Ring Depth (ft): 1.50
 Corbel Type: Brick
 Corbel Condition: Fair
 Corbel Centricity: Eccentric
 Corbel Depth (ft): 3.00
 Wall Type: Brick
 Wall Condition: Fair
 Channel/Bench Condition: Good
 Flow Depth (ft): 0.50
 Steps Condition: Poor
 Step Material: DNR
 Structure Notes:

Connections/Piping



Rim Depth (ft): NA

Ring Depth (ft): 1.50

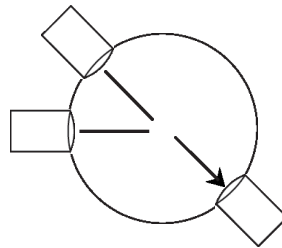
Corbel Depth (ft): 3.00

Pipe Invert Depth(s) (ft): 4.80

14.85

14.85

Max Manhole Depth (ft): 14.85



Pipe Size (in)	Material	Direction	Drop
12	Conc	W	4.80
18	Conc	NW	14.85
18	Conc	SE	14.85

(Diagrams not to scale - For pipe direction only)

Hydraulic Inspection

Surface Material: Bituminous
 Surface Setting: Road Way
 Manhole Surcharge: Yes
 Flooding/Ponding: No
 Flow Type: Steady
 Flow Clarity: Normal
 Structure Rating: S-4
 Inflow Rating: I-5
 Infiltration Rating: F-6

Analysis: Infiltration/Inflow and Repairs

Miscellaneous Manhole Improvements:

1. _____
2. _____
3. _____
4. _____
5. _____

	Average Day (gpm)	Average Month (MCF)	Average Year (MCF)
Inflow Rating:	2.75	15.88	190.56
Structure Rating:	3.00	17.32	207.89
Infiltration Rating:	2.02	11.66	139.98
Total I/I:	7.77	44.86	538.43

Recommended I/I Rehabilitation

	Cost
1. Remove and Replace Frame (Pavement)	\$540.00
2. Calcium Aluminate Lining	\$1,485.00
3. Remove and Replace Lid	\$180.00
4. _____	_____
5. _____	_____
6. _____	_____
7. _____	_____

Total Rehab Cost:	\$2,425.50	Total Construction Cost:	\$2,205.00
Transport and Treat Costs:	\$1,942.50	10% Contingency:	\$220.50
Cost-effective to Rehab?:	NO	TOTAL COST:	\$2,425.50

Hydraulic Inspection Notes

Structure Notes:

Inflow Notes:
2 holes

Infiltration Notes:

This is a Category 6 Manhole
Immediate Priority Repair

*DNR = Did Not Record



Structural Information

Structure Type:	San MH
Structure Diameter (ft):	6.00
Cover Type (# = Holes):	Solid
Cover Condition:	Good
Cover Manufacturer:	EJIW
Bolt Down Cover:	No
Cover Bolted:	No
Frame Condition:	Good
Adjusting Ring Type:	Brick
Adjusting Ring Condition:	Good
Adjusting Ring Depth (ft):	0.50
Corbel Type:	None
Corbel Condition:	DNR
Corbel Centricity:	Eccentric
Corbel Depth (ft):	0.00
Wall Type:	Block
Wall Condition:	Good
Channel/Bench Condition:	Good
Flow Depth (ft):	1.00
Steps Condition:	Good
Step Material:	DNR
Structure Notes:	

Connections/Piping

Rim Depth (ft):	NA
Ring Depth (ft):	0.50
Corbel Depth (ft):	0.00
Pipe Invert Depth(s) (ft):	7.47
	7.60
Max Manhole Depth (ft):	7.60

<u>Pipe Size (in)</u>	<u>Material</u>	<u>Direction</u>	<u>Drop</u>
36	Conc	W	7.47
36	Conc	E	7.60

(Diagrams not to scale - For pipe direction only)

Hydraulic Inspection

Surface Material:	Bituminous
Surface Setting:	Road Way
Manhole Surcharge:	No
Flooding/Ponding:	No
Flow Type:	Steady
Flow Clarity:	Normal
Structure Rating:	S-1
Inflow Rating:	I-1
Infiltration Rating:	F-1

Analysis: Infiltration/Inflow and Repairs

Miscellaneous Manhole Improvements:

1. _____
2. _____
3. _____
4. _____
5. _____

	Average Day (gpm)	Average Month (MCF)	Average Year (MCF)
Inflow Rating:	0.00	0.00	0.00
Structure Rating:	0.00	0.00	0.00
Infiltration Rating:	0.00	0.00	0.00
Total I/I:	0.00	0.00	0.00

Recommended I/I Rehabilitation Cost

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____

Total Rehab Cost:	\$0.00	Total Construction Cost:	\$0.00
Transport and Treat Costs:	\$0.00	10% Contingency:	\$0.00
Cost-effective to Rehab?: NO		TOTAL COST:	\$0.00

Hydraulic Inspection Notes

Structure Notes:
Inflow Notes:
Infiltration Notes:

**This is a Category 1 Manhole
Monitor Again in 10 Years**

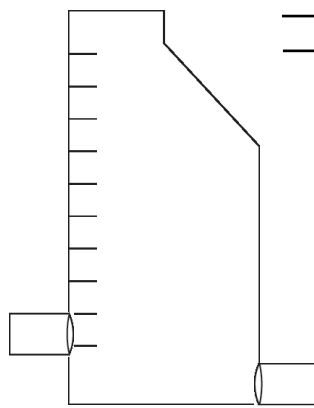
*DNR = Did Not Record



Structural Information

Structure Type: San MH
 Structure Diameter (ft): 6.00
 Cover Type (# = Holes): Solid
 Cover Condition: Good
 Cover Manufacturer: EJIW
 Bolt Down Cover: No
 Cover Bolted: No
 Frame Condition: Good
 Adjusting Ring Type: Brick
 Adjusting Ring Condition: Good
 Adjusting Ring Depth (ft): 1.00
 Corbel Type: None
 Corbel Condition: DNR
 Corbel Centricity: Eccentric
 Corbel Depth (ft): 0.00
 Wall Type: Block
 Wall Condition: Good
 Channel/Bench Condition: Poor
 Flow Depth (ft): 0.00
 Steps Condition: Good
 Step Material: DNR
 Structure Notes:

Connections/Piping



Rim Depth (ft): NA

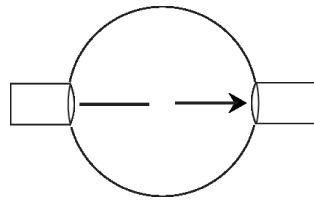
Ring Depth (ft): 1.00

Corbel Depth (ft): 0.00

Pipe Invert Depth(s) (ft): 7.45

7.80

Max Manhole Depth (ft): 7.80



Pipe Size (in)	Material	Direction	Drop
36	Conc	W	7.45
36	Conc	E	7.80

(Diagrams not to scale - For pipe direction only)

Hydraulic Inspection

Surface Material: Bituminous
 Surface Setting: Road Way
 Manhole Surcharge: Yes
 Flooding/Ponding: No
 Flow Type: Stagnant
 Flow Clarity: Scummy
 Structure Rating: S-1
 Inflow Rating: I-3
 Infiltration Rating: F-3

Analysis: Infiltration/Inflow and Repairs

Miscellaneous Manhole Improvements:

1. Debris build up in manhole; cleaning is recommended.
2. _____
3. _____
4. _____
5. _____

	Average Day (gpm)	Average Month (MCF)	Average Year (MCF)
Inflow Rating:	1.25	7.22	86.62
Structure Rating:	0.00	0.00	0.00
Infiltration Rating:	0.58	3.35	40.19
Total I/I:	1.83	10.57	126.81

Recommended I/I Rehabilitation

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____

Total Rehab Cost:	\$0.00
Transport and Treat Costs:	\$457.50
Cost-effective to Rehab?:	YES

Total Construction Cost:	\$0.00
10% Contingency:	\$0.00
TOTAL COST:	\$0.00

Hydraulic Inspection Notes

Structure Notes:

Inflow Notes:

Infiltration Notes:

This is a Category 3 Manhole
 Plan to Repair in 0-5 Years

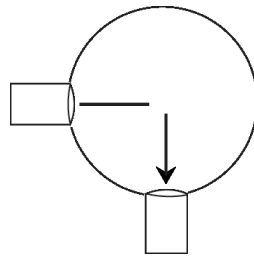
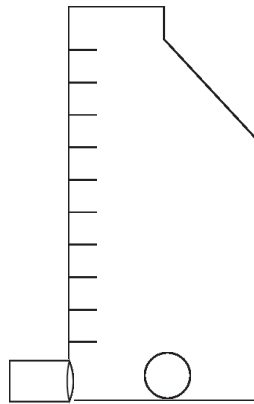
*DNR = Did Not Record



Structural Information

Structure Type: San MH
 Structure Diameter (ft): 6.00
 Cover Type (# = Holes): Solid
 Cover Condition: Good
 Cover Manufacturer: Neenah
 Bolt Down Cover: No
 Cover Bolted: No
 Frame Condition: Poor
 Adjusting Ring Type: Brick
 Adjusting Ring Condition: Poor
 Adjusting Ring Depth (ft): 1.00
 Corbel Type: None
 Corbel Condition: DNR
 Corbel Centricity: Eccentric
 Corbel Depth (ft): 0.00
 Wall Type: Block
 Wall Condition: Poor
 Channel/Bench Condition: Poor
 Flow Depth (ft): 0.00
 Steps Condition: Fair
 Step Material: DNR
 Structure Notes:

Connections/Piping



(Diagrams not to scale - For pipe direction only)

Rim Depth (ft): NA
 Ring Depth (ft): 1.00
 Corbel Depth (ft): 0.00
 Pipe Invert Depth(s) (ft): 5.70
 Max Manhole Depth (ft): 5.70

Pipe Size (in)	Material	Direction	Drop
36	Conc	W	5.70
36	Conc	S	5.70

Hydraulic Inspection

Surface Material: Vegetation
 Surface Setting: Wooded Area
 Manhole Surcharge: Yes
 Flooding/Ponding: No
 Flow Type: DNR
 Flow Clarity: DNR
 Structure Rating: S-7
 Inflow Rating: I-6
 Infiltration Rating: F-7

Analysis: Infiltration/Inflow and Repairs

Miscellaneous Manhole Improvements:

1. _____
2. _____
3. _____
4. _____
5. _____

	Average Day (gpm)	Average Month (MCF)	Average Year (MCF)
Inflow Rating:	2.50	14.44	173.24
Structure Rating:	12.50	72.18	866.20
Infiltration Rating:	2.50	14.44	173.24
Total I/I:	17.50	101.05	1,212.68

Recommended I/I Rehabilitation

- | | Cost |
|---|------------|
| 1. Remove and Reset Frame (Veg./Gravel) | \$250.00 |
| 2. Rebuild Manhole | \$8,000.00 |
| 3. _____ | _____ |
| 4. _____ | _____ |
| 5. _____ | _____ |
| 6. _____ | _____ |
| 7. _____ | _____ |

Total Rehab Cost:	\$9,075.00
Transport and Treat Costs:	\$4,375.00
Cost-effective to Rehab?:	NO

Total Construction Cost:	\$8,250.00
10% Contingency:	\$825.00
TOTAL COST:	\$9,075.00

Hydraulic Inspection Notes

Structure Notes:

Inflow Notes:

Infiltration Notes:

**This is a Category 7 Manhole
 Immediate Priority Repair**

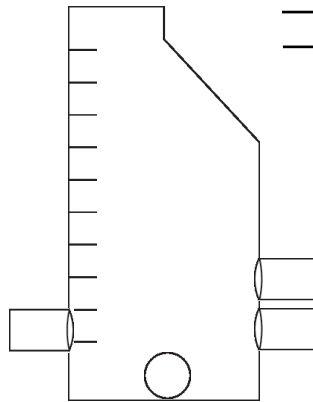
*DNR = Did Not Record



Structural Information

Structure Type: San MH
 Structure Diameter (ft): 4.00
 Cover Type (# = Holes): DNR
 Cover Condition: Good
 Cover Manufacturer: Neenah
 Bolt Down Cover: No
 Cover Bolted: No
 Frame Condition: Good
 Adjusting Ring Type: None
 Adjusting Ring Condition: DNR
 Adjusting Ring Depth (ft): 0.00
 Corbel Type: Block
 Corbel Condition: Good
 Corbel Centricity: Eccentric
 Corbel Depth (ft): 4.00
 Wall Type: Block
 Wall Condition: Good
 Channel/Bench Condition: Good
 Flow Depth (ft): 0.75
 Steps Condition: Good
 Step Material: DNR
 Structure Notes:

Connections/Piping



Rim Depth (ft): NA

Ring Depth (ft): 0.00

Corbel Depth (ft): 4.00

Pipe Invert Depth(s) (ft):

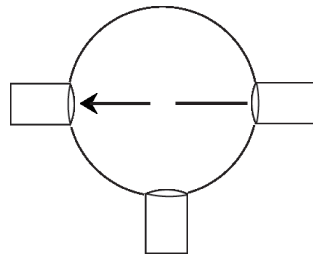
7.35

9.54

9.54

10.19

Max Manhole Depth (ft): 10.19



Pipe Size (in)	Material	Direction	Drop
12	Clay	E	7.35
36	D.I.P.	W	9.54
36	Conc	E	9.54
15	Clay	S	10.19

(Diagrams not to scale - For pipe direction only)

Hydraulic Inspection

Surface Material: Bituminous
 Surface Setting: Parking Lot
 Manhole Surcharge: No
 Flooding/Ponding: No
 Flow Type: Fast
 Flow Clarity: Normal
 Structure Rating: S-1
 Inflow Rating: I-1
 Infiltration Rating: F-2

Analysis: Infiltration/Inflow and Repairs

Miscellaneous Manhole Improvements:

1. _____
2. _____
3. _____
4. _____
5. _____

	Average Day (gpm)	Average Month (MCF)	Average Year (MCF)
Inflow Rating:	0.00	0.00	0.00
Structure Rating:	0.00	0.00	0.00
Infiltration Rating:	0.10	0.58	6.93
Total I/I:	0.10	0.58	6.93

Recommended I/I Rehabilitation

- | | Cost |
|---------------------------|----------|
| 1. Remove and Replace Lid | \$180.00 |
| 2. _____ | _____ |
| 3. _____ | _____ |
| 4. _____ | _____ |
| 5. _____ | _____ |
| 6. _____ | _____ |
| 7. _____ | _____ |

Total Rehab Cost:	\$198.00
Transport and Treat Costs:	\$25.00
Cost-effective to Rehab?:	NO

Total Construction Cost:	\$180.00
10% Contingency:	\$18.00
TOTAL COST:	\$198.00

Hydraulic Inspection Notes

Structure Notes:

Inflow Notes:

Infiltration Notes:

This is a Category 2 Manhole
 Monitor Again in 5 Years

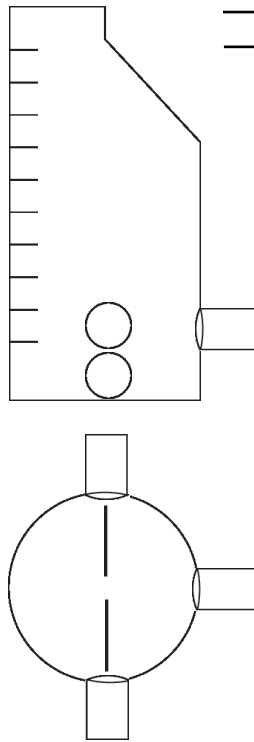
*DNR = Did Not Record



Structural Information

Structure Type: San MH
 Structure Diameter (ft): 4.00
 Cover Type (# = Holes): DNR
 Cover Condition: Good
 Cover Manufacturer: EJIW
 Bolt Down Cover: No
 Cover Bolted: No
 Frame Condition: Good
 Adjusting Ring Type: None
 Adjusting Ring Condition: DNR
 Adjusting Ring Depth (ft): 0.00
 Corbel Type: None
 Corbel Condition: DNR
 Corbel Centricity: Eccentric
 Corbel Depth (ft): 0.00
 Wall Type: Brick
 Wall Condition: Fair
 Channel/Bench Condition: Good
 Flow Depth (ft): 0.50
 Steps Condition: DNR
 Step Material: DNR
 Structure Notes:

Connections/Piping



Rim Depth (ft): NA

Ring Depth (ft): 0.00

Corbel Depth (ft): 0.00

Pipe Invert Depth(s) (ft):

8.40

8.85

9.57

Max Manhole Depth (ft): 9.57

Pipe Size (in)	Material	Direction	Drop
15	Clay	S	8.40
24	Clay	E	8.85
24	Clay	N	9.57

(Diagrams not to scale - For pipe direction only)

Hydraulic Inspection

Surface Material: Bituminous
 Surface Setting: Parking Lot
 Manhole Surcharge: No
 Flooding/Ponding: No
 Flow Type: Fast
 Flow Clarity: Normal
 Structure Rating: S-7
 Inflow Rating: I-7
 Infiltration Rating: F-6

Analysis: Infiltration/Inflow and Repairs

Miscellaneous Manhole Improvements:

1. _____
2. _____
3. _____
4. _____
5. _____

	Average Day (gpm)	Average Month (MCF)	Average Year (MCF)
Inflow Rating:	12.50	72.18	866.20
Structure Rating:	12.50	72.18	866.20
Infiltration Rating:	2.02	11.66	139.98
Total I/I:	27.02	156.01	1,872.38

Recommended I/I Rehabilitation

- | | Cost |
|---------------------------|------------|
| 1. Rebuild Manhole | \$8,000.00 |
| 2. Remove and Replace Lid | \$180.00 |
| 3. _____ | _____ |
| 4. _____ | _____ |
| 5. _____ | _____ |
| 6. _____ | _____ |
| 7. _____ | _____ |

Total Rehab Cost:	\$8,998.00	Total Construction Cost:	\$8,180.00
Transport and Treat Costs:	\$6,755.00	10% Contingency:	\$818.00
Cost-effective to Rehab?:	NO	TOTAL COST:	\$8,998.00

Hydraulic Inspection Notes

Structure Notes:

Inflow Notes:

Infiltration Notes:

**This is a Category 7 Manhole
Immediate Priority Repair**

*DNR = Did Not Record



Structural Information

Structure Type:	San MH
Structure Diameter (ft):	4.00
Cover Type (# = Holes):	Solid
Cover Condition:	Good
Cover Manufacturer:	DNR
Bolt Down Cover:	No
Cover Bolted:	No
Frame Condition:	Fair
Adjusting Ring Type:	None
Adjusting Ring Condition:	DNR
Adjusting Ring Depth (ft):	0.00
Corbel Type:	None
Corbel Condition:	DNR
Corbel Centricity:	Eccentric
Corbel Depth (ft):	0.00
Wall Type:	Brick
Wall Condition:	Fair
Channel/Bench Condition:	Good
Flow Depth (ft):	0.50
Steps Condition:	Good
Step Material:	DNR
Structure Notes:	

Connections/Piping

Rim Depth (ft):	NA
Ring Depth (ft):	0.00
Corbel Depth (ft):	0.00
Pipe Invert Depth(s) (ft):	8.64
	8.83
Max Manhole Depth (ft):	8.83

Pipe Size (in)	Material	Direction	Drop
15	Clay	S	8.64
15	Clay	N	8.83

(Diagrams not to scale - For pipe direction only)

Hydraulic Inspection

Surface Material:	Bituminous
Surface Setting:	Parking Lot
Manhole Surcharge:	No
Flooding/Ponding:	No
Flow Type:	Slow
Flow Clarity:	Normal
Structure Rating:	S-3
Inflow Rating:	I-5
Infiltration Rating:	F-5

Analysis: Infiltration/Inflow and Repairs

Miscellaneous Manhole Improvements:

1. _____
2. _____
3. _____
4. _____
5. _____

	Average Day (gpm)	Average Month (MCF)	Average Year (MCF)
Inflow Rating:	2.75	15.88	190.56
Structure Rating:	1.50	8.66	103.94
Infiltration Rating:	1.54	8.89	106.72
Total I/I:	5.79	33.43	401.22

Recommended I/I Rehabilitation

	Cost
1. Calcium Aluminate Lining	\$883.00
2. _____	
3. _____	
4. _____	
5. _____	
6. _____	
7. _____	

Total Rehab Cost:	\$971.30	Total Construction Cost:	\$883.00
Transport and Treat Costs:	\$1,447.50	10% Contingency:	\$88.30
		TOTAL COST:	\$971.30

Cost-effective to Rehab?: YES

Hydraulic Inspection Notes

Structure Notes:
Inflow Notes:
Infiltration Notes:

This is a Category 5 Manhole
Priority Repair in less than 1 Year

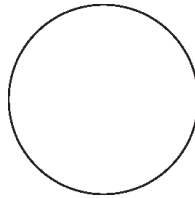
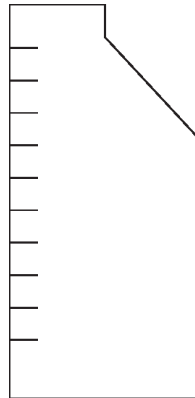
*DNR = Did Not Record



Structural Information

Structure Type: San MH
 Structure Diameter (ft): DNR
 Cover Type (# = Holes): DNR
 Cover Condition: Fair
 Cover Manufacturer: DNR
 Bolt Down Cover: DNR
 Cover Bolted: DNR
 Frame Condition: DNR
 Adjusting Ring Type: DNR
 Adjusting Ring Condition: DNR
 Adjusting Ring Depth (ft): 0.00
 Corbel Type: DNR
 Corbel Condition: DNR
 Corbel Centricity: Eccentric
 Corbel Depth (ft): 0.00
 Wall Type: DNR
 Wall Condition: DNR
 Channel/Bench Condition: DNR
 Flow Depth (ft): DNR
 Steps Condition: DNR
 Step Material: DNR
 Structure Notes:
 buried under trailer in parking lot

Connections/Piping



Rim Depth (ft): NA

Ring Depth (ft): 0.00

Corbel Depth (ft): 0.00

Pipe Invert Depth(s) (ft):

Max Manhole Depth (ft):

Pipe Size (in) Material Direction Drop

(Diagrams not to scale - For pipe direction only)

Hydraulic Inspection

Surface Material: DNR
 Surface Setting: DNR
 Manhole Surcharge: DNR
 Flooding/Ponding: DNR
 Flow Type: DNR
 Flow Clarity: DNR
 Structure Rating: DNR
 Inflow Rating: DNR
 Infiltration Rating: DNR

Analysis: Infiltration/Inflow and Repairs

Miscellaneous Manhole Improvements:

1. _____
2. _____
3. _____
4. _____
5. _____

Average Day
(gpm)

Average Month
(MCF)

Average Year
(MCF)

Inflow Rating:

Structure Rating:

Infiltration Rating:

Total I/I:

Recommended I/I Rehabilitation

Cost

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____

Hydraulic Inspection Notes

Structure Notes:

Inflow Notes:

Infiltration Notes:

This is a Category 9 Manhole
Buried

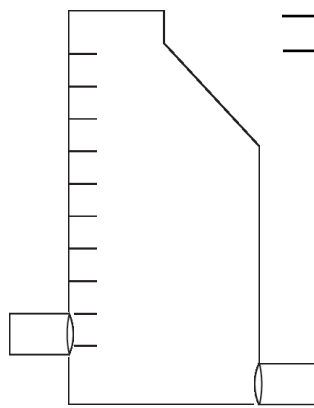
*DNR = Did Not Record



Structural Information

Structure Type: San MH
 Structure Diameter (ft): 4.00
 Cover Type (# = Holes): Solid
 Cover Condition: Good
 Cover Manufacturer: EJIW
 Bolt Down Cover: No
 Cover Bolted: No
 Frame Condition: Good
 Adjusting Ring Type: Brick
 Adjusting Ring Condition: Good
 Adjusting Ring Depth (ft): 1.00
 Corbel Type: Precast
 Corbel Condition: Good
 Corbel Centricity: Eccentric
 Corbel Depth (ft): 3.50
 Wall Type: Precast
 Wall Condition: Good
 Channel/Bench Condition: Good
 Flow Depth (ft): 0.50
 Steps Condition: Good
 Step Material: DNR
 Structure Notes:

Connections/Piping



Rim Depth (ft): NA

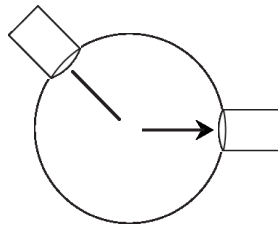
Ring Depth (ft): 1.00

Corbel Depth (ft): 3.50

Pipe Invert Depth(s) (ft): 9.40

9.60

Max Manhole Depth (ft): 9.60



Pipe Size (in)	Material	Direction	Drop
15	PVC	NW	9.40
15	PVC	E	9.60

(Diagrams not to scale - For pipe direction only)

Hydraulic Inspection

Surface Material: Vegetation
 Surface Setting: Field
 Manhole Surcharge: Yes
 Flooding/Ponding: Yes
 Flow Type: Steady
 Flow Clarity: Normal
 Structure Rating: S-1
 Inflow Rating: I-2
 Infiltration Rating: F-5

Analysis: Infiltration/Inflow and Repairs

Miscellaneous Manhole Improvements:

1. _____
2. _____
3. _____
4. _____
5. _____

	Average Day (gpm)	Average Month (MCF)	Average Year (MCF)
Inflow Rating:	0.30	1.73	20.79
Structure Rating:	0.00	0.00	0.00
Infiltration Rating:	1.54	8.89	106.72
Total I/I:	1.84	10.62	127.50

Recommended I/I Rehabilitation

- | | Cost |
|---------------|----------|
| 1. Seal Leaks | \$400.00 |
| 2. _____ | _____ |
| 3. _____ | _____ |
| 4. _____ | _____ |
| 5. _____ | _____ |
| 6. _____ | _____ |
| 7. _____ | _____ |

Total Rehab Cost:	\$440.00
Transport and Treat Costs:	\$460.00
Cost-effective to Rehab?:	YES

Total Construction Cost:	\$400.00
10% Contingency:	\$40.00
TOTAL COST:	\$440.00

Hydraulic Inspection Notes

Structure Notes:

Inflow Notes:

Infiltration Notes:
pick hole leaking

This is a Category 5 Manhole
Priority Repair in less than 1 Year

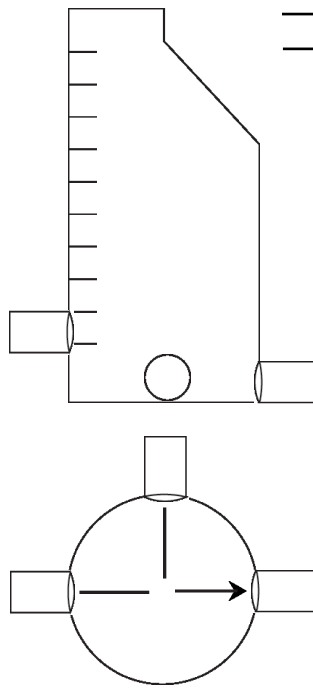
*DNR = Did Not Record



Structural Information

Structure Type: San MH
 Structure Diameter (ft): 6.00
 Cover Type (# = Holes): Solid
 Cover Condition: Good
 Cover Manufacturer: EJIW
 Bolt Down Cover: No
 Cover Bolted: No
 Frame Condition: Good
 Adjusting Ring Type: Brick/Block
 Adjusting Ring Condition: Good
 Adjusting Ring Depth (ft): 3.00
 Corbel Type: Precast
 Corbel Condition: Good
 Corbel Centricity: Eccentric
 Corbel Depth (ft): 3.00
 Wall Type: Precast
 Wall Condition: Good
 Channel/Bench Condition: Good
 Flow Depth (ft): 0.50
 Steps Condition: Good
 Step Material: DNR
 Structure Notes:

Connections/Piping



Rim Depth (ft): NA

Ring Depth (ft): 3.00

Corbel Depth (ft): 3.00

Pipe Invert Depth(s) (ft):

15.30

15.40

15.40

Max Manhole Depth (ft): 15.40

Pipe Size (in)	Material	Direction	Drop
15	PVC	W	15.30
15	PVC	E	15.40
10	PVC	N	15.40

(Diagrams not to scale - For pipe direction only)

Hydraulic Inspection

Surface Material: Vegetation
 Surface Setting: Field
 Manhole Surcharge: Yes
 Flooding/Ponding: No
 Flow Type: Steady
 Flow Clarity: Normal
 Structure Rating: S-2
 Inflow Rating: I-3
 Infiltration Rating: F-6

Analysis: Infiltration/Inflow and Repairs

Miscellaneous Manhole Improvements:

1. _____
2. _____
3. _____
4. _____
5. _____

	Average Day (gpm)	Average Month (MCF)	Average Year (MCF)
--	----------------------	------------------------	-----------------------

Inflow Rating: _____

Structure Rating: _____

Infiltration Rating: _____

Total I/I: _____

Recommended I/I Rehabilitation

	<u>Cost</u>
1. Seal Leaks	\$400.00
2. Seal Leaks	\$400.00
3. Seal Leaks	\$400.00
4. _____	
5. _____	
6. _____	
7. _____	

Total Rehab Cost:	\$1,320.00
Transport and Treat Costs:	\$460.00
Cost-effective to Rehab?:	NO

Total Construction Cost:	\$1,200.00
10% Contingency:	\$120.00
TOTAL COST:	\$1,320.00

Hydraulic Inspection Notes

Structure Notes:

Inflow Notes:

Infiltration Notes:

4 leaks

**This is a Category 6 Manhole
Immediate Priority Repair**

*DNR = Did Not Record



Structural Information

Structure Type:	San MH
Structure Diameter (ft):	4.00
Cover Type (# = Holes):	Solid
Cover Condition:	Good
Cover Manufacturer:	EJIW
Bolt Down Cover:	No
Cover Bolted:	No
Frame Condition:	Good
Adjusting Ring Type:	Brick/Block
Adjusting Ring Condition:	Good
Adjusting Ring Depth (ft):	3.00
Corbel Type:	Precast
Corbel Condition:	Good
Corbel Centricity:	Eccentric
Corbel Depth (ft):	2.00
Wall Type:	Precast
Wall Condition:	Good
Channel/Bench Condition:	Good
Flow Depth (ft):	0.50
Steps Condition:	Good
Step Material:	DNR
Structure Notes:	

Connections/Piping

<u>Rim Depth (ft):</u>	NA
<u>Ring Depth (ft):</u>	3.00
<u>Corbel Depth (ft):</u>	2.00
<u>Pipe Invert Depth(s) (ft):</u>	18.50
	18.50
<u>Max Manhole Depth (ft):</u>	18.50

<u>Pipe Size (in)</u>	<u>Material</u>	<u>Direction</u>	<u>Drop</u>
15	PVC	E	18.50
15	PVC	W	18.50

(Diagrams not to scale - For pipe direction only)

Hydraulic Inspection

Surface Material:	Vegetation
Surface Setting:	Lawn Area
Manhole Surcharge:	Yes
Flooding/Ponding:	No
Flow Type:	Steady
Flow Clarity:	Normal
Structure Rating:	S-1
Inflow Rating:	I-3
Infiltration Rating:	F-6

Analysis: Infiltration/Inflow and Repairs

Miscellaneous Manhole Improvements:

1. _____
2. _____
3. _____
4. _____
5. _____

	Average Day (gpm)	Average Month (MCF)	Average Year (MCF)
Inflow Rating:	0.85	4.91	58.90
Structure Rating:	0.00	0.00	0.00
Infiltration Rating:	2.02	11.66	139.98
Total I/I:	2.87	16.57	198.88

Recommended I/I Rehabilitation

	<u>Cost</u>
1. Seal Leaks	\$400.00
2. _____	
3. _____	
4. _____	
5. _____	
6. _____	
7. _____	

Total Rehab Cost:	\$440.00
Transport and Treat Costs:	\$717.50
Cost-effective to Rehab?:	YES

Total Construction Cost:	\$400.00
10% Contingency:	\$40.00
TOTAL COST:	\$440.00

Hydraulic Inspection Notes

Structure Notes:	
Inflow Notes:	
Infiltration Notes:	joint leak

This is a Category 6 Manhole
Immediate Priority Repair

*DNR = Did Not Record



Structural Information

Structure Type:	San MH
Structure Diameter (ft):	6.00
Cover Type (# = Holes):	Solid
Cover Condition:	Good
Cover Manufacturer:	EJIW
Bolt Down Cover:	No
Cover Bolted:	No
Frame Condition:	Good
Adjusting Ring Type:	Brick/Block
Adjusting Ring Condition:	Fair
Adjusting Ring Depth (ft):	1.33
Corbel Type:	Precast
Corbel Condition:	Good
Corbel Centricity:	Eccentric
Corbel Depth (ft):	5.00
Wall Type:	Precast
Wall Condition:	Good
Channel/Bench Condition:	Good
Flow Depth (ft):	0.50
Steps Condition:	Good
Step Material:	DNR
Structure Notes:	

Connections/Piping

Rim Depth (ft):	NA
Ring Depth (ft):	1.33
Corbel Depth (ft):	5.00
Pipe Invert Depth(s) (ft):	16.00
	16.00
Max Manhole Depth (ft):	16.00

<u>Pipe Size (in)</u>	<u>Material</u>	<u>Direction</u>	<u>Drop</u>
15	PVC	W	16.00
15	PVC	N	16.00

(Diagrams not to scale - For pipe direction only)

Hydraulic Inspection

Surface Material:	Vegetation
Surface Setting:	Lawn Area
Manhole Surcharge:	DNR
Flooding/Ponding:	No
Flow Type:	Steady
Flow Clarity:	Normal
Structure Rating:	S-2
Inflow Rating:	I-3
Infiltration Rating:	F-5

Analysis: Infiltration/Inflow and Repairs

Miscellaneous Manhole Improvements:

1. _____
2. _____
3. _____
4. _____
5. _____

	Average Day (gpm)	Average Month (MCF)	Average Year (MCF)
Inflow Rating:	0.85	4.91	58.90
Structure Rating:	0.15	0.87	10.39
Infiltration Rating:	1.54	8.89	106.72
Total I/I:	2.54	14.67	176.01

Recommended I/I Rehabilitation

1. Replace Adjusting Rings (< 2 ft. Veg./Gravel)	Cost
	\$530.00
2. _____	
3. _____	
4. _____	
5. _____	
6. _____	
7. _____	

Total Rehab Cost:	\$583.00	Total Construction Cost:	\$530.00
Transport and Treat Costs:	\$635.00	10% Contingency:	\$53.00
		TOTAL COST:	\$583.00

Cost-effective to Rehab?: YES

Hydraulic Inspection Notes

Structure Notes:	
Inflow Notes:	
Infiltration Notes:	damp

This is a Category 5 Manhole
Priority Repair in less than 1 Year

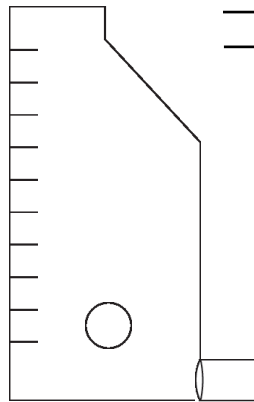
*DNR = Did Not Record



Structural Information

Structure Type: San MH
 Structure Diameter (ft): 6.00
 Cover Type (# = Holes): Solid
 Cover Condition: Good
 Cover Manufacturer: EJIW
 Bolt Down Cover: No
 Cover Bolted: No
 Frame Condition: Good
 Adjusting Ring Type: None
 Adjusting Ring Condition: DNR
 Adjusting Ring Depth (ft): 0.00
 Corbel Type: Precast
 Corbel Condition: Good
 Corbel Centricity: Eccentric
 Corbel Depth (ft): 3.00
 Wall Type: Precast
 Wall Condition: Good
 Channel/Bench Condition: Good
 Flow Depth (ft): 0.50
 Steps Condition: Good
 Step Material: DNR
 Structure Notes:

Connections/Piping



Rim Depth (ft): NA

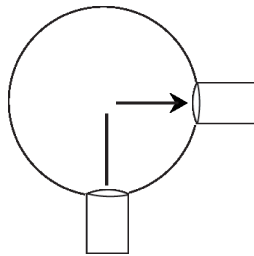
Ring Depth (ft): 0.00

Corbel Depth (ft): 3.00

Pipe Invert Depth(s) (ft): 16.10

16.40

Max Manhole Depth (ft): 16.40



Pipe Size (in)	Material	Direction	Drop
15	PVC	S	16.10
15	Clay	E	16.40

(Diagrams not to scale - For pipe direction only)

Hydraulic Inspection

Surface Material: Vegetation
 Surface Setting: Lawn Area
 Manhole Surcharge: Yes
 Flooding/Ponding: No
 Flow Type: Fast
 Flow Clarity: Normal
 Structure Rating: S-2
 Inflow Rating: I-2
 Infiltration Rating: F-5

Analysis: Infiltration/Inflow and Repairs

Miscellaneous Manhole Improvements:

1. _____
2. _____
3. _____
4. _____
5. _____

	Average Day (gpm)	Average Month (MCF)	Average Year (MCF)
Inflow Rating:	0.30	1.73	20.79
Structure Rating:	0.15	0.87	10.39
Infiltration Rating:	1.54	8.89	106.72
Total I/I:	1.99	11.49	137.90

Recommended I/I Rehabilitation

	Cost
1. Seal Leaks	\$400.00
2. Seal Leaks	\$400.00
3. Seal Leaks	\$400.00
4. _____	
5. _____	
6. _____	
7. _____	

Total Rehab Cost:	\$1,320.00
Transport and Treat Costs:	\$497.50
Cost-effective to Rehab?:	NO

Total Construction Cost:	\$1,200.00
10% Contingency:	\$120.00
TOTAL COST:	\$1,320.00

Hydraulic Inspection Notes

Structure Notes:

Inflow Notes:

Infiltration Notes:

pick holes minor leaking

This is a Category 5 Manhole
 Priority Repair in less than 1 Year

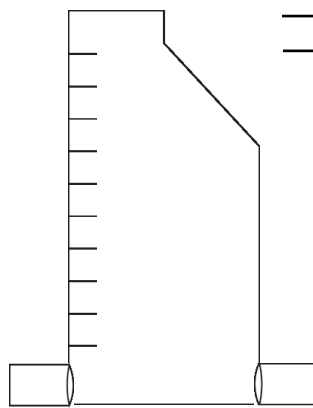
*DNR = Did Not Record



Structural Information

Structure Type: San MH
 Structure Diameter (ft): 6.00
 Cover Type (# = Holes): DNR
 Cover Condition: Good
 Cover Manufacturer: ann arbor
 Bolt Down Cover: No
 Cover Bolted: No
 Frame Condition: Good
 Adjusting Ring Type: Block
 Adjusting Ring Condition: Fair
 Adjusting Ring Depth (ft): 5.00
 Corbel Type: None
 Corbel Condition: DNR
 Corbel Centricity: Eccentric
 Corbel Depth (ft): 0.00
 Wall Type: Brick
 Wall Condition: Fair
 Channel/Bench Condition: Good
 Flow Depth (ft): 0.50
 Steps Condition: Missing
 Step Material: DNR
 Structure Notes:

Connections/Piping



Rim Depth (ft): NA

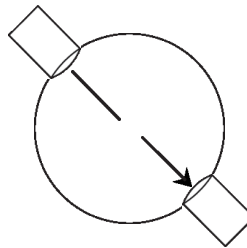
Ring Depth (ft): 5.00

Corbel Depth (ft): 0.00

Pipe Invert Depth(s) (ft): 12.00

12.00

Max Manhole Depth (ft): 12.00



Pipe Size (in)	Material	Direction	Drop
15	Clay	NW	12.00
15	Clay	SE	12.00

(Diagrams not to scale - For pipe direction only)

Hydraulic Inspection

Surface Material: Vegetation
 Surface Setting: Lawn Area
 Manhole Surcharge: Yes
 Flooding/Ponding: No
 Flow Type: Steady
 Flow Clarity: Normal
 Structure Rating: S-4
 Inflow Rating: I-2
 Infiltration Rating: F-6

Analysis: Infiltration/Inflow and Repairs

Miscellaneous Manhole Improvements:

1. _____
2. _____
3. _____
4. _____
5. _____

	Average Day (gpm)	Average Month (MCF)	Average Year (MCF)
Inflow Rating:	0.30	1.73	20.79
Structure Rating:	3.00	17.32	207.89
Infiltration Rating:	2.02	11.66	139.98
Total I/I:	5.32	30.72	368.65

Recommended I/I Rehabilitation

- | | Cost |
|-----------------------------|------------|
| 1. Calcium Aluminate Lining | \$1,200.00 |
| 2. Remove and Replace Lid | \$180.00 |
| 3. _____ | _____ |
| 4. _____ | _____ |
| 5. _____ | _____ |
| 6. _____ | _____ |
| 7. _____ | _____ |

Total Rehab Cost:	\$1,518.00
Transport and Treat Costs:	\$1,330.00
Cost-effective to Rehab?:	NO

Total Construction Cost:	\$1,380.00
10% Contingency:	\$138.00
TOTAL COST:	\$1,518.00

Hydraulic Inspection Notes

Structure Notes:

Inflow Notes:

Infiltration Notes:

at least one active leak

**This is a Category 6 Manhole
Immediate Priority Repair**

*DNR = Did Not Record



Structural Information

Structure Type:	San MH
Structure Diameter (ft):	6.00
Cover Type (# = Holes):	
Cover Condition:	Good
Cover Manufacturer:	EJIW
Bolt Down Cover:	No
Cover Bolted:	No
Frame Condition:	Good
Adjusting Ring Type:	Brick/Block
Adjusting Ring Condition:	Poor
Adjusting Ring Depth (ft):	5.50
Corbel Type:	None
Corbel Condition:	DNR
Corbel Centricity:	Eccentric
Corbel Depth (ft):	0.00
Wall Type:	Brick
Wall Condition:	Fair
Channel/Bench Condition:	Good
Flow Depth (ft):	0.50
Steps Condition:	Missing
Step Material:	DNR
Structure Notes:	

Connections/Piping

Rim Depth (ft):	NA
Ring Depth (ft):	5.50
Corbel Depth (ft):	0.00
Pipe Invert Depth(s) (ft):	6.40
	7.00
	9.20
	14.40
	14.40
Max Manhole Depth (ft):	14.40

Pipe Size (in)	Material	Direction	Drop
10	Clay	SE	6.40
15	Clay	SW	7.00
10	Clay	N	9.20
15	Clay	W	14.40
15	Clay	E	14.40

(Diagrams not to scale - For pipe direction only)

Hydraulic Inspection

Surface Material:	Bituminous
Surface Setting:	Road Way
Manhole Surcharge:	Yes
Flooding/Ponding:	No
Flow Type:	Steady
Flow Clarity:	Normal
Structure Rating:	S-5
Inflow Rating:	I-6
Infiltration Rating:	F-6

Analysis: Infiltration/Inflow and Repairs

Miscellaneous Manhole Improvements:

- _____
- _____
- _____
- _____
- _____

	Average Day (gpm)	Average Month (MCF)	Average Year (MCF)
Inflow Rating:	3.50	20.21	242.54
Structure Rating:	4.50	25.98	311.83
Infiltration Rating:	2.02	11.66	139.98
Total I/I:	10.02	57.86	694.35

Recommended I/I Rehabilitation

1. Remove and Reset Frame (Pavement)	\$345.00
2. Calcium Aluminate Lining	\$1,440.00
3. _____	
4. _____	
5. _____	
6. _____	
7. _____	

Total Rehab Cost:	\$1,963.50	Total Construction Cost:	\$1,785.00
Transport and Treat Costs:	\$2,505.00	10% Contingency:	\$178.50
Cost-effective to Rehab?:	YES	TOTAL COST:	\$1,963.50

Hydraulic Inspection Notes

Structure Notes:
Inflow Notes:
Infiltration Notes:

**This is a Category 6 Manhole
 Immediate Priority Repair**

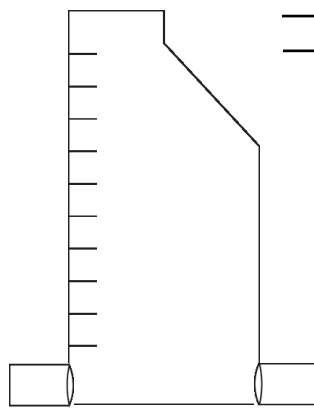
*DNR = Did Not Record



Structural Information

Structure Type: San MH
 Structure Diameter (ft): 4.00
 Cover Type (# = Holes): Solid
 Cover Condition: Good
 Cover Manufacturer: EJIW
 Bolt Down Cover: No
 Cover Bolted: No
 Frame Condition: Good
 Adjusting Ring Type: Brick/Block
 Adjusting Ring Condition: Good
 Adjusting Ring Depth (ft): 1.00
 Corbel Type: Precast
 Corbel Condition: Good
 Corbel Centricity: Eccentric
 Corbel Depth (ft): 3.00
 Wall Type: Precast
 Wall Condition: Good
 Channel/Bench Condition: Good
 Flow Depth (ft): 0.50
 Steps Condition: Good
 Step Material: DNR
 Structure Notes:

Connections/Piping



Rim Depth (ft): NA

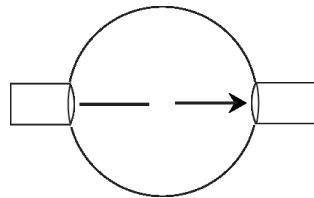
Ring Depth (ft): 1.00

Corbel Depth (ft): 3.00

Pipe Invert Depth(s) (ft): 8.40

8.40

Max Manhole Depth (ft): 8.40



Pipe Size (in)	Material	Direction	Drop
15	PVC	W	8.40
15	PVC	E	8.40

(Diagrams not to scale - For pipe direction only)

Hydraulic Inspection

Surface Material: Vegetation
 Surface Setting: Field
 Manhole Surcharge: Yes
 Flooding/Ponding: No
 Flow Type: Steady
 Flow Clarity: Normal
 Structure Rating: S-2
 Inflow Rating: I-2
 Infiltration Rating: F-3

Analysis: Infiltration/Inflow and Repairs

Miscellaneous Manhole Improvements:

1. _____
2. _____
3. _____
4. _____
5. _____

	Average Day (gpm)	Average Month (MCF)	Average Year (MCF)
--	----------------------	------------------------	-----------------------

Inflow Rating: _____

Structure Rating: _____

Infiltration Rating: _____

Total I/I: _____

Recommended I/I Rehabilitation

- | | |
|-------------------------------|----------|
| 1. Adjust Elevation (< 2 ft.) | \$530.00 |
| 2. _____ | |
| 3. _____ | |
| 4. _____ | |
| 5. _____ | |
| 6. _____ | |
| 7. _____ | |

Total Rehab Cost:	\$583.00
Transport and Treat Costs:	\$2,505.00
Cost-effective to Rehab?:	YES

Total Construction Cost:	\$530.00
10% Contingency:	\$53.00
TOTAL COST:	\$583.00

Hydraulic Inspection Notes

Structure Notes:

Inflow Notes:

Infiltration Notes:

This is a Category 3 Manhole
 Plan to Repair in 0-5 Years

*DNR = Did Not Record



Structural Information

Structure Type:	San MH
Structure Diameter (ft):	4.00
Cover Type (# = Holes):	Solid
Cover Condition:	Good
Cover Manufacturer:	EJIW
Bolt Down Cover:	No
Cover Bolted:	No
Frame Condition:	Good
Adjusting Ring Type:	ladtech
Adjusting Ring Condition:	Good
Adjusting Ring Depth (ft):	3.00
Corbel Type:	Brick
Corbel Condition:	Fair
Corbel Centricity:	Eccentric
Corbel Depth (ft):	3.00
Wall Type:	Brick
Wall Condition:	Fair
Channel/Bench Condition:	Good
Flow Depth (ft):	0.30
Steps Condition:	Missing
Step Material:	DNR
Structure Notes:	

Connections/Piping

<u>Rim Depth (ft):</u>	NA
<u>Ring Depth (ft):</u>	3.00
<u>Corbel Depth (ft):</u>	3.00
<u>Pipe Invert Depth(s) (ft):</u>	13.20
	13.20
<u>Max Manhole Depth (ft):</u>	13.20

<u>Pipe Size (in)</u>	<u>Material</u>	<u>Direction</u>	<u>Drop</u>
12		NE	13.20
12		S	13.20

(Diagrams not to scale - For pipe direction only)

Hydraulic Inspection

Surface Material:	Vegetation
Surface Setting:	Field
Manhole Surcharge:	Yes
Flooding/Ponding:	No
Flow Type:	Fast
Flow Clarity:	Normal
Structure Rating:	S-7
Inflow Rating:	I-1
Infiltration Rating:	F-4

Analysis: Infiltration/Inflow and Repairs

Miscellaneous Manhole Improvements:

1. _____
2. _____
3. _____
4. _____
5. _____

	Average Day (gpm)	Average Month (MCF)	Average Year (MCF)
Inflow Rating:	0.00	0.00	0.00
Structure Rating:	12.50	72.18	866.20
Infiltration Rating:	1.06	6.12	73.45
Total I/I:	13.56	78.30	939.65

Recommended I/I Rehabilitation

	<u>Cost</u>
1. Calcium Aluminate Lining	\$1,320.00
2. _____	
3. _____	
4. _____	
5. _____	
6. _____	
7. _____	

Total Rehab Cost:	\$1,452.00	Total Construction Cost:	\$1,320.00
Transport and Treat Costs:	\$3,390.00	10% Contingency:	\$132.00
		TOTAL COST:	\$1,452.00

Cost-effective to Rehab?: YES

Hydraulic Inspection Notes

Structure Notes:
Inflow Notes:
Infiltration Notes:

This is a Category 7 Manhole
 Monitor Again in 10 Years

*DNR = Did Not Record



Structural Information

Structure Type:	San MH
Structure Diameter (ft):	4.00
Cover Type (# = Holes):	Grate
Cover Condition:	Broken
Cover Manufacturer:	DNR
Bolt Down Cover:	No
Cover Bolted:	No
Frame Condition:	Fair
Adjusting Ring Type:	Block
Adjusting Ring Condition:	Good
Adjusting Ring Depth (ft):	2.50
Corbel Type:	None
Corbel Condition:	DNR
Corbel Centricity:	Eccentric
Corbel Depth (ft):	0.00
Wall Type:	Brick
Wall Condition:	Fair
Channel/Bench Condition:	Good
Flow Depth (ft):	1.00
Steps Condition:	Missing
Step Material:	DNR
Structure Notes:	

Connections/Piping

Rim Depth (ft):	NA
Ring Depth (ft):	2.50
Corbel Depth (ft):	0.00
Pipe Invert Depth(s) (ft):	10.60
	11.00
Max Manhole Depth (ft):	11.00

<u>Pipe Size (in)</u>	<u>Material</u>	<u>Direction</u>	<u>Drop</u>
12		N	10.60
12		SW	11.00

(Diagrams not to scale - For pipe direction only)

Hydraulic Inspection

Surface Material:	Vegetation
Surface Setting:	Wooded Area
Manhole Surcharge:	No
Flooding/Ponding:	No
Flow Type:	Steady
Flow Clarity:	Normal
Structure Rating:	S-7
Inflow Rating:	I-1
Infiltration Rating:	F-5

Analysis: Infiltration/Inflow and Repairs

Miscellaneous Manhole Improvements:

- _____
- _____
- _____
- _____
- _____

	Average Day (gpm)	Average Month (MCF)	Average Year (MCF)
Inflow Rating:	0.00	0.00	0.00
Structure Rating:	12.50	72.18	866.20
Infiltration Rating:	1.54	8.89	106.72
Total I/I:	14.04	81.07	972.92

Recommended I/I Rehabilitation

1. Remove and Replace Frame (Veg./Gravel)	\$440.00
2. Calcium Aluminate Lining	\$1,100.00
3. _____	
4. _____	
5. _____	
6. _____	
7. _____	

Total Rehab Cost:	\$1,694.00	Total Construction Cost:	\$1,540.00
Transport and Treat Costs:	\$3,510.00	10% Contingency:	\$154.00
		TOTAL COST:	\$1,694.00

Cost-effective to Rehab?: YES

Hydraulic Inspection Notes

Structure Notes:
Inflow Notes:
Infiltration Notes:

This is a Category 7 Manhole
 Priority Repair in less than 1 Year

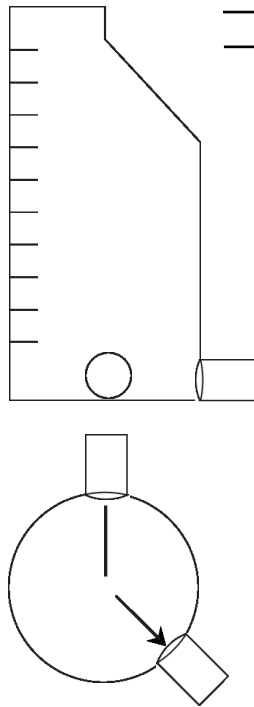
*DNR = Did Not Record



Structural Information

Structure Type: San MH
 Structure Diameter (ft): 6.00
 Cover Type (# = Holes): Solid
 Cover Condition: Good
 Cover Manufacturer: EJIW
 Bolt Down Cover: No
 Cover Bolted: No
 Frame Condition: Good
 Adjusting Ring Type: None
 Adjusting Ring Condition: Fair
 Adjusting Ring Depth (ft): 2.00
 Corbel Type: None
 Corbel Condition: DNR
 Corbel Centricity: Eccentric
 Corbel Depth (ft): 0.00
 Wall Type: Brick
 Wall Condition: Good
 Channel/Bench Condition: DNR
 Flow Depth (ft): 0.50
 Steps Condition: Fair
 Step Material: DNR
 Structure Notes:

Connections/Piping



Rim Depth (ft): NA

Ring Depth (ft): 2.00

Corbel Depth (ft): 0.00

Pipe Invert Depth(s) (ft):

0.00

6.90

6.90

Max Manhole Depth (ft): 6.90

Pipe Size (in)	Material	Direction	Drop
			0.00
30	Conc	N	6.90
30	Conc	SE	6.90

(Diagrams not to scale - For pipe direction only)

Hydraulic Inspection

Surface Material: Gravel
 Surface Setting: Wooded Area
 Manhole Surcharge: No
 Flooding/Ponding: Yes
 Flow Type: DNR
 Flow Clarity: DNR
 Structure Rating: S-2
 Inflow Rating: I-3
 Infiltration Rating: F-4

Analysis: Infiltration/Inflow and Repairs

Miscellaneous Manhole Improvements:

1. _____
2. _____
3. _____
4. _____
5. _____

	Average Day (gpm)	Average Month (MCF)	Average Year (MCF)
Inflow Rating:	1.25	7.22	86.62
Structure Rating:	0.15	0.87	10.39
Infiltration Rating:	1.06	6.12	73.45
Total I/I:	2.46	14.20	170.47

Recommended I/I Rehabilitation

- | | Cost |
|-----------------------------|----------|
| 1. Calcium Aluminate Lining | \$690.00 |
| 2. _____ | |
| 3. _____ | |
| 4. _____ | |
| 5. _____ | |
| 6. _____ | |
| 7. _____ | |

Total Rehab Cost:	\$759.00	Total Construction Cost:	\$690.00
Transport and Treat Costs:	\$615.00	10% Contingency:	\$69.00
Cost-effective to Rehab?:	NO	TOTAL COST:	\$759.00

Hydraulic Inspection Notes

Structure Notes:

Inflow Notes:

Infiltration Notes:

This is a Category 4 Manhole
 Plan to Repair in 0-5 Years

*DNR = Did Not Record



Structural Information

Structure Type:	San MH
Structure Diameter (ft):	6.00
Cover Type (# = Holes):	Solid
Cover Condition:	Good
Cover Manufacturer:	EJIW
Bolt Down Cover:	No
Cover Bolted:	No
Frame Condition:	Good
Adjusting Ring Type:	Brick
Adjusting Ring Condition:	Fair
Adjusting Ring Depth (ft):	0.50
Corbel Type:	Brick
Corbel Condition:	Fair
Corbel Centricity:	Eccentric
Corbel Depth (ft):	3.00
Wall Type:	Brick
Wall Condition:	Fair
Channel/Bench Condition:	DNR
Flow Depth (ft):	0.00
Steps Condition:	Rusty
Step Material:	DNR
Structure Notes:	

Connections/Piping

(Diagrams not to scale - For pipe direction only)

Rim Depth (ft):	NA
Ring Depth (ft):	0.50
Corbel Depth (ft):	3.00
Pipe Invert Depth(s) (ft):	7.60
	8.50
	8.70
Max Manhole Depth (ft):	8.70

<u>Pipe Size (in)</u>	<u>Material</u>	<u>Direction</u>	<u>Drop</u>
10	Clay	W	7.60
30	Conc	SE	8.50
30	Conc	N	8.70

Hydraulic Inspection

Surface Material:	Bituminous
Surface Setting:	Road Way
Manhole Surcharge:	Yes
Flooding/Ponding:	No
Flow Type:	Fast
Flow Clarity:	Normal
Structure Rating:	S-7
Inflow Rating:	I-3
Infiltration Rating:	F-7

Analysis: Infiltration/Inflow and Repairs

Miscellaneous Manhole Improvements:

- _____
- _____
- _____
- _____
- _____

	Average Day (gpm)	Average Month (MCF)	Average Year (MCF)
Inflow Rating:	1.25	7.22	86.62
Structure Rating:	12.50	72.18	866.20
Infiltration Rating:	2.50	14.44	173.24
Total I/I:	16.25	93.83	1,126.06

Recommended I/I Rehabilitation

1. Calcium Aluminate Lining	\$870.00
2. _____	
3. _____	
4. _____	
5. _____	
6. _____	
7. _____	

Total Rehab Cost:	\$957.00	Total Construction Cost:	\$870.00
Transport and Treat Costs:	\$4,062.50	10% Contingency:	\$87.00
Cost-effective to Rehab?:	YES	TOTAL COST:	\$957.00

Hydraulic Inspection Notes

Structure Notes:	
Inflow Notes:	
Infiltration Notes:	active leak

This is a Category 7 Manhole
 Plan to Repair in 0-5 Years

*DNR = Did Not Record



Structural Information

Structure Type:	San MH
Structure Diameter (ft):	4.00
Cover Type (# = Holes):	Solid
Cover Condition:	Good
Cover Manufacturer:	EJIW
Bolt Down Cover:	No
Cover Bolted:	No
Frame Condition:	Good
Adjusting Ring Type:	Brick
Adjusting Ring Condition:	Poor
Adjusting Ring Depth (ft):	1.50
Corbel Type:	Brick
Corbel Condition:	Fair
Corbel Centricity:	Eccentric
Corbel Depth (ft):	2.00
Wall Type:	Brick
Wall Condition:	Fair
Channel/Bench Condition:	Good
Flow Depth (ft):	0.40
Steps Condition:	Missing
Step Material:	DNR
Structure Notes:	

Connections/Piping

Rim Depth (ft):	NA
Ring Depth (ft):	1.50
Corbel Depth (ft):	2.00
Pipe Invert Depth(s) (ft):	2.60
	7.70
	7.70
	8.20
	8.20
Max Manhole Depth (ft):	8.20

Pipe Size (in)	Material	Direction	Drop
6	CMP	NE	2.60
12	Clay	N	7.70
12	Clay	S	7.70
12	Clay	W	8.20
12	Clay	E	8.20

(Diagrams not to scale - For pipe direction only)

Hydraulic Inspection

Surface Material:	Bituminous
Surface Setting:	Road Way
Manhole Surcharge:	No
Flooding/Ponding:	No
Flow Type:	DNR
Flow Clarity:	DNR
Structure Rating:	S-7
Inflow Rating:	I-7
Infiltration Rating:	F-4

Analysis: Infiltration/Inflow and Repairs

Miscellaneous Manhole Improvements:

1. _____
2. _____
3. _____
4. _____
5. _____

	Average Day (gpm)	Average Month (MCF)	Average Year (MCF)
Inflow Rating:	12.50	72.18	866.20
Structure Rating:	12.50	72.18	866.20
Infiltration Rating:	1.06	6.12	73.45
Total I/I:	26.06	150.47	1,805.85

Recommended I/I Rehabilitation

1. Calcium Aluminate Lining	Cost
	\$820.00
2. _____	
3. _____	
4. _____	
5. _____	
6. _____	
7. _____	

Total Rehab Cost:	\$902.00	Total Construction Cost:	\$820.00
Transport and Treat Costs:	\$6,515.00	10% Contingency:	\$82.00
		TOTAL COST:	\$902.00

Cost-effective to Rehab?:	YES
----------------------------------	------------

Hydraulic Inspection Notes

Structure Notes:
Inflow Notes:
Infiltration Notes:

This is a Category 7 Manhole
Monitor Again in 10 Years

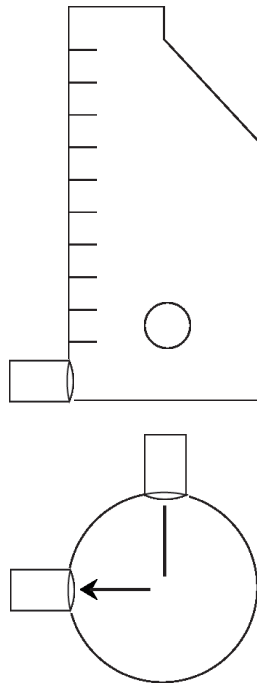
*DNR = Did Not Record



Structural Information

Structure Type: San MH
 Structure Diameter (ft): 4.00
 Cover Type (# = Holes): Solid
 Cover Condition: Good
 Cover Manufacturer: EJIW
 Bolt Down Cover: No
 Cover Bolted: No
 Frame Condition: Good
 Adjusting Ring Type: Brick/Block
 Adjusting Ring Condition: Poor
 Adjusting Ring Depth (ft): 1.33
 Corbel Type: Brick
 Corbel Condition: Poor
 Corbel Centricity: Eccentric
 Corbel Depth (ft): 2.00
 Wall Type: Brick
 Wall Condition: Fair
 Channel/Bench Condition: Good
 Flow Depth (ft): 0.50
 Steps Condition: Missing
 Step Material: DNR
 Structure Notes:
 adj/corbel damaged

Connections/Piping



Rim Depth (ft): NA
 Ring Depth (ft): 1.33

Corbel Depth (ft): 2.00
 Pipe Invert Depth(s) (ft): 8.00
 8.20

Max Manhole Depth (ft): 8.20

Pipe Size (in)	Material	Direction	Drop
10	Clay	N	8.00
12	Clay	W	8.20

(Diagrams not to scale - For pipe direction only)

Hydraulic Inspection

Surface Material: Bituminous
 Surface Setting: Road Way
 Manhole Surcharge: Yes
 Flooding/Ponding: No
 Flow Type: Fast
 Flow Clarity: Scummy
 Structure Rating: S-7
 Inflow Rating: I-7
 Infiltration Rating: F-5

Analysis: Infiltration/Inflow and Repairs

Miscellaneous Manhole Improvements:

1. _____
2. _____
3. _____
4. _____
5. _____

	Average Day (gpm)	Average Month (MCF)	Average Year (MCF)
Inflow Rating:	12.50	72.18	866.20
Structure Rating:	12.50	72.18	866.20
Infiltration Rating:	1.54	8.89	106.72
Total I/I:	26.54	153.24	1,839.12

Recommended I/I Rehabilitation

- | | Cost |
|---------------------------------|----------|
| 1. Calcium Aluminate Lining | \$820.00 |
| 2. Replace Corbel (Veg./Gravel) | \$500.00 |
| 3. _____ | _____ |
| 4. _____ | _____ |
| 5. _____ | _____ |
| 6. _____ | _____ |
| 7. _____ | _____ |

Total Rehab Cost:	\$1,452.00
Transport and Treat Costs:	\$6,635.00
Cost-effective to Rehab?:	YES

Total Construction Cost:	\$1,320.00
10% Contingency:	\$132.00
TOTAL COST:	\$1,452.00

Hydraulic Inspection Notes

Structure Notes:

Inflow Notes:

Infiltration Notes:

This is a Category 7 Manhole
 Priority Repair in less than 1 Year

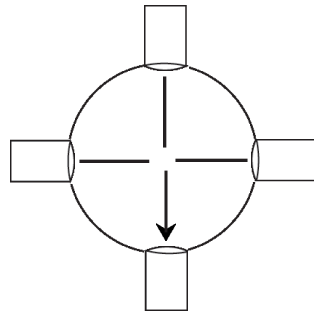
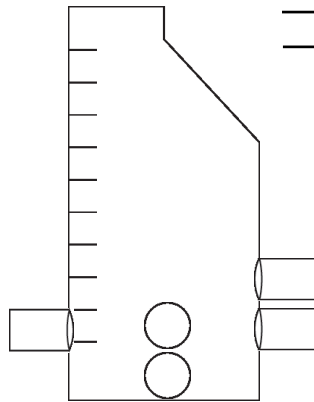
*DNR = Did Not Record



Structural Information

Structure Type: San MH
 Structure Diameter (ft): 4.00
 Cover Type (# = Holes): DNR
 Cover Condition: Good
 Cover Manufacturer: EJIW
 Bolt Down Cover: No
 Cover Bolted: No
 Frame Condition: Good
 Adjusting Ring Type: Block
 Adjusting Ring Condition: Fair
 Adjusting Ring Depth (ft): 1.50
 Corbel Type: DNR
 Corbel Condition: DNR
 Corbel Centricity: Eccentric
 Corbel Depth (ft): 0.00
 Wall Type: Brick
 Wall Condition: Fair
 Channel/Bench Condition: Good
 Flow Depth (ft): 0.70
 Steps Condition: Missing
 Step Material: DNR
 Structure Notes:

Connections/Piping



Rim Depth (ft): NA

Ring Depth (ft): 1.50

Corbel Depth (ft): 0.00

Pipe Invert Depth(s) (ft):

2.70

8.70

8.70

9.20

9.30

Max Manhole Depth (ft): 9.30

Pipe Size (in)	Material	Direction	Drop
4	Clay	E	2.70
12	Clay	E	8.70
12	Clay	W	8.70
12	Clay	N	9.20
12	Clay	S	9.30

(Diagrams not to scale - For pipe direction only)

Hydraulic Inspection

Surface Material: Bituminous
 Surface Setting: Road Way
 Manhole Surcharge: No
 Flooding/Ponding: No
 Flow Type: Steady
 Flow Clarity: Normal
 Structure Rating: S-7
 Inflow Rating: I-7
 Infiltration Rating: F-5

Analysis: Infiltration/Inflow and Repairs

Miscellaneous Manhole Improvements:

1. _____
2. _____
3. _____
4. _____
5. _____

	Average Day (gpm)	Average Month (MCF)	Average Year (MCF)
Inflow Rating:	12.50	72.18	866.20
Structure Rating:	12.50	72.18	866.20
Infiltration Rating:	1.54	8.89	106.72
Total I/I:	26.54	153.24	1,839.12

Recommended I/I Rehabilitation

- | | Cost |
|---|------------|
| 1. Remove and Replace Lid | \$180.00 |
| 2. Replace Adjusting Rings (> 2 ft. Pavement) | \$1,060.00 |
| 3. Calcium Aluminate Lining | \$930.00 |
| 4. _____ | |
| 5. _____ | |
| 6. _____ | |
| 7. _____ | |

Total Rehab Cost:	\$2,387.00	Total Construction Cost:	\$2,170.00
Transport and Treat Costs:	\$6,635.00	10% Contingency:	\$217.00
Cost-effective to Rehab?:	YES	TOTAL COST:	\$2,387.00

Hydraulic Inspection Notes

Structure Notes:

Inflow Notes:

Infiltration Notes:

This is a Category 7 Manhole
 Priority Repair in less than 1 Year

*DNR = Did Not Record



Structural Information

Structure Type:	San MH
Structure Diameter (ft):	4.00
Cover Type (# = Holes):	DNR
Cover Condition:	Good
Cover Manufacturer:	DNR
Bolt Down Cover:	No
Cover Bolted:	No
Frame Condition:	Good
Adjusting Ring Type:	Brick
Adjusting Ring Condition:	Fair
Adjusting Ring Depth (ft):	1.00
Corbel Type:	Brick
Corbel Condition:	Fair
Corbel Centricity:	Centric
Corbel Depth (ft):	2.00
Wall Type:	Brick
Wall Condition:	Fair
Channel/Bench Condition:	Good
Flow Depth (ft):	0.20
Steps Condition:	Missing
Step Material:	DNR
Structure Notes:	

Connections/Piping

Rim Depth (ft):	NA
Ring Depth (ft):	1.00
Corbel Depth (ft):	2.00
Pipe Invert Depth(s) (ft):	7.30
	8.10
	8.10
Max Manhole Depth (ft):	8.10

<u>Pipe Size (in)</u>	<u>Material</u>	<u>Direction</u>	<u>Drop</u>
8	Clay	E	7.30
12	Clay	N	8.10
12	Clay	S	8.10

(Diagrams not to scale - For pipe direction only)

Hydraulic Inspection

Surface Material:	Bituminous
Surface Setting:	Road Way
Manhole Surcharge:	No
Flooding/Ponding:	No
Flow Type:	Stagnant
Flow Clarity:	Normal
Structure Rating:	S-7
Inflow Rating:	I-5
Infiltration Rating:	F-6

Analysis: Infiltration/Inflow and Repairs

Miscellaneous Manhole Improvements:

1. _____
2. _____
3. _____
4. _____
5. _____

	Average Day (gpm)	Average Month (MCF)	Average Year (MCF)
Inflow Rating:	2.75	15.88	190.56
Structure Rating:	12.50	72.18	866.20
Infiltration Rating:	2.02	11.66	139.98
Total I/I:	17.27	99.72	1,196.74

Recommended I/I Rehabilitation

1. Remove and Replace Lid	\$180.00
2. Calcium Aluminate Lining	\$810.00
3. _____	
4. _____	
5. _____	
6. _____	
7. _____	

Total Rehab Cost:	\$1,089.00	Total Construction Cost:	\$990.00
Transport and Treat Costs:	\$4,317.50	10% Contingency:	\$99.00
Cost-effective to Rehab?:	YES	TOTAL COST:	\$1,089.00

Hydraulic Inspection Notes

Structure Notes:	
Inflow Notes:	4 holes
Infiltration Notes:	

**This is a Category 7 Manhole
Immediate Priority Repair**

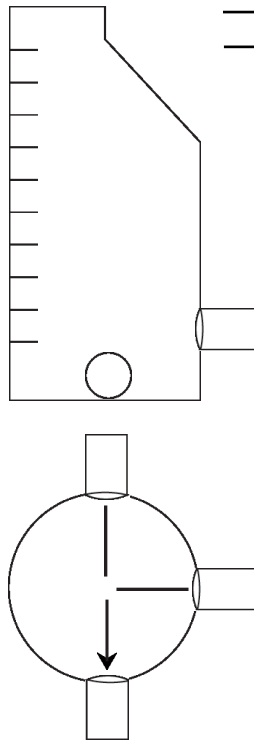
*DNR = Did Not Record



Structural Information

Structure Type: San MH
 Structure Diameter (ft): 4.00
 Cover Type (# = Holes): DNR
 Cover Condition: Good
 Cover Manufacturer: ann arbor
 Bolt Down Cover: No
 Cover Bolted: No
 Frame Condition: Good
 Adjusting Ring Type: Brick
 Adjusting Ring Condition: Fair
 Adjusting Ring Depth (ft): 2.00
 Corbel Type: Brick
 Corbel Condition: Fair
 Corbel Centricity: Eccentric
 Corbel Depth (ft): 3.00
 Wall Type: Brick
 Wall Condition: Fair
 Channel/Bench Condition: Good
 Flow Depth (ft): 0.20
 Steps Condition: Missing
 Step Material: DNR
 Structure Notes:

Connections/Piping



Rim Depth (ft): NA

Ring Depth (ft): 2.00

Corbel Depth (ft): 3.00

Pipe Invert Depth(s) (ft): 7.50

8.20

8.20

Max Manhole Depth (ft): 8.20

Pipe Size (in)	Material	Direction	Drop
8	Clay	E	7.50
12	Clay	N	8.20
12	Clay	S	8.20

(Diagrams not to scale - For pipe direction only)

Hydraulic Inspection

Surface Material: Bituminous
 Surface Setting: Road Way
 Manhole Surcharge: No
 Flooding/Ponding: No
 Flow Type: Steady
 Flow Clarity: Normal
 Structure Rating: S-7
 Inflow Rating: I-5
 Infiltration Rating: F-5

Analysis: Infiltration/Inflow and Repairs

Miscellaneous Manhole Improvements:

1. _____
2. _____
3. _____
4. _____
5. _____

	Average Day (gpm)	Average Month (MCF)	Average Year (MCF)
Inflow Rating:	2.75	15.88	190.56
Structure Rating:	12.50	72.18	866.20
Infiltration Rating:	1.54	8.89	106.72
Total I/I:	16.79	96.95	1,163.48

Recommended I/I Rehabilitation

- | | Cost |
|-----------------------------|----------|
| 1. Remove and Replace Lid | \$180.00 |
| 2. Calcium Aluminate Lining | \$820.00 |
| 3. _____ | _____ |
| 4. _____ | _____ |
| 5. _____ | _____ |
| 6. _____ | _____ |
| 7. _____ | _____ |

Total Rehab Cost:	\$1,100.00
Transport and Treat Costs:	\$4,197.50
Cost-effective to Rehab?:	YES

Total Construction Cost:	\$1,000.00
10% Contingency:	\$100.00
TOTAL COST:	\$1,100.00

Hydraulic Inspection Notes

Structure Notes:

Inflow Notes:
2 holes

Infiltration Notes:

This is a Category 7 Manhole
Priority Repair in less than 1 Year

*DNR = Did Not Record



Structural Information

Structure Type:	DNR
Structure Diameter (ft):	DNR
Cover Type (# = Holes):	DNR
Cover Condition:	DNR
Cover Manufacturer:	DNR
Bolt Down Cover:	No
Cover Bolted:	No
Frame Condition:	DNR
Adjusting Ring Type:	DNR
Adjusting Ring Condition:	DNR
Adjusting Ring Depth (ft):	0.00
Corbel Type:	DNR
Corbel Condition:	DNR
Corbel Centricity:	Eccentric
Corbel Depth (ft):	0.00
Wall Type:	DNR
Wall Condition:	DNR
Channel/Bench Condition:	DNR
Flow Depth (ft):	0.00
Steps Condition:	DNR
Step Material:	DNR
Structure Notes:	cnf

Connections/Piping

_____	Rim Depth (ft):	NA
_____	Ring Depth (ft):	0.00
_____	Corbel Depth (ft):	0.00
_____	Pipe Invert Depth(s) (ft):	0.00
_____	Max Manhole Depth (ft):	

	<u>Pipe Size (in)</u>	<u>Material</u>	<u>Direction</u>	<u>Drop</u>
				0.00

(Diagrams not to scale - For pipe direction only)

Hydraulic Inspection

Surface Material:	DNR
Surface Setting:	DNR
Manhole Surcharge:	DNR
Flooding/Ponding:	No
Flow Type:	DNR
Flow Clarity:	DNR
Structure Rating:	DNR
Inflow Rating:	DNR
Infiltration Rating:	DNR

Analysis: Infiltration/Inflow and Repairs

Miscellaneous Manhole Improvements:

1. _____
2. _____
3. _____
4. _____
5. _____

	Average Day (gpm)	Average Month (MCF)	Average Year (MCF)
Inflow Rating:	_____	_____	_____
Structure Rating:	_____	_____	_____
Infiltration Rating:	_____	_____	_____
Total I/I:	_____	_____	_____

Recommended I/I Rehabilitation Cost

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____

This is a Category 8 Manhole
Unable to locate

Hydraulic Inspection Notes

Structure Notes:

Inflow Notes:

Infiltration Notes:

*DNR = Did Not Record



Structural Information

Structure Type:	San MH
Structure Diameter (ft):	4.00
Cover Type (# = Holes):	DNR
Cover Condition:	Fair
Cover Manufacturer:	ann arbor
Bolt Down Cover:	No
Cover Bolted:	No
Frame Condition:	Good
Adjusting Ring Type:	Brick
Adjusting Ring Condition:	Fair
Adjusting Ring Depth (ft):	2.00
Corbel Type:	Brick
Corbel Condition:	Fair
Corbel Centricity:	Eccentric
Corbel Depth (ft):	2.00
Wall Type:	Brick
Wall Condition:	Fair
Channel/Bench Condition:	Good
Flow Depth (ft):	0.20
Steps Condition:	Missing
Step Material:	DNR
Structure Notes:	

Connections/Piping

<u>Rim Depth (ft):</u>	NA
<u>Ring Depth (ft):</u>	2.00
<u>Corbel Depth (ft):</u>	2.00
<u>Pipe Invert Depth(s) (ft):</u>	7.95
	8.00
<u>Max Manhole Depth (ft):</u>	8.00

<u>Pipe Size (in)</u>	<u>Material</u>	<u>Direction</u>	<u>Drop</u>
12	Clay	N	7.95
12	Clay	S	8.00

(Diagrams not to scale - For pipe direction only)

Hydraulic Inspection

Surface Material:	Bituminous
Surface Setting:	Road Way
Manhole Surcharge:	No
Flooding/Ponding:	No
Flow Type:	Steady
Flow Clarity:	Normal
Structure Rating:	S-7
Inflow Rating:	I-4
Infiltration Rating:	F-4

Analysis: Infiltration/Inflow and Repairs

Miscellaneous Manhole Improvements:

1. _____
2. _____
3. _____
4. _____
5. _____

	Average Day (gpm)	Average Month (MCF)	Average Year (MCF)
Inflow Rating:	2.00	11.55	138.59
Structure Rating:	12.50	72.18	866.20
Infiltration Rating:	1.06	6.12	73.45
Total I/I:	15.56	89.84	1,078.25

<u>Recommended I/I Rehabilitation</u>	<u>Cost</u>
1. Remove and Replace Lid	\$180.00
2. Calcium Aluminate Lining	\$800.00
3. _____	
4. _____	
5. _____	
6. _____	
7. _____	

Total Rehab Cost:	\$1,078.00	Total Construction Cost:	\$980.00
Transport and Treat Costs:	\$3,890.00	10% Contingency:	\$98.00
Cost-effective to Rehab?:	YES	TOTAL COST:	\$1,078.00

Hydraulic Inspection Notes

Structure Notes:
Inflow Notes:
Infiltration Notes:

This is a Category 7 Manhole
Monitor Again in 10 Years

*DNR = Did Not Record



Structural Information

Structure Type:	San MH
Structure Diameter (ft):	4.00
Cover Type (# = Holes):	Solid
Cover Condition:	Good
Cover Manufacturer:	EJIW
Bolt Down Cover:	No
Cover Bolted:	No
Frame Condition:	Good
Adjusting Ring Type:	Brick
Adjusting Ring Condition:	Fair
Adjusting Ring Depth (ft):	1.00
Corbel Type:	None
Corbel Condition:	DNR
Corbel Centricity:	Eccentric
Corbel Depth (ft):	0.00
Wall Type:	Brick
Wall Condition:	Fair
Channel/Bench Condition:	Fair
Flow Depth (ft):	0.40
Steps Condition:	Missing
Step Material:	DNR
Structure Notes:	

Connections/Piping

<u>Rim Depth (ft):</u>	NA
<u>Ring Depth (ft):</u>	1.00
<u>Corbel Depth (ft):</u>	0.00
<u>Pipe Invert Depth(s) (ft):</u>	8.50
	8.55
	8.70
	8.70
<u>Max Manhole Depth (ft):</u>	8.70

<u>Pipe Size (in)</u>	<u>Material</u>	<u>Direction</u>	<u>Drop</u>
6	Clay	E	8.50
6	Clay	N	8.55
6	Clay	S	8.70
6	Clay	W	8.70

(Diagrams not to scale - For pipe direction only)

Hydraulic Inspection

Surface Material:	Bituminous
Surface Setting:	Road Way
Manhole Surcharge:	Yes
Flooding/Ponding:	No
Flow Type:	Stagnant
Flow Clarity:	Scummy
Structure Rating:	S-7
Inflow Rating:	I-2
Infiltration Rating:	F-5

Analysis: Infiltration/Inflow and Repairs

Miscellaneous Manhole Improvements:

1. Debris build up in manhole; cleaning is recommended.
2. _____
3. _____
4. _____
5. _____

	Average Day (gpm)	Average Month (MCF)	Average Year (MCF)
Inflow Rating:	0.50	2.89	34.65
Structure Rating:	12.50	72.18	866.20
Infiltration Rating:	1.54	8.89	106.72
Total I/I:	14.54	83.95	1,007.56

Recommended I/I Rehabilitation

1. Calcium Aluminate Lining	Cost
	\$870.00
2. _____	
3. _____	
4. _____	
5. _____	
6. _____	
7. _____	

Total Rehab Cost:	\$957.00	Total Construction Cost:	\$870.00
Transport and Treat Costs:	\$3,635.00	10% Contingency:	\$87.00
Cost-effective to Rehab?:	YES	TOTAL COST:	\$957.00

Hydraulic Inspection Notes

Structure Notes:	
Inflow Notes:	has boot
Infiltration Notes:	

This is a Category 7 Manhole
 Priority Repair in less than 1 Year

*DNR = Did Not Record



Structural Information

Structure Type:	San MH
Structure Diameter (ft):	4.00
Cover Type (# = Holes):	Solid
Cover Condition:	Good
Cover Manufacturer:	EJIW
Bolt Down Cover:	No
Cover Bolted:	No
Frame Condition:	Good
Adjusting Ring Type:	Brick
Adjusting Ring Condition:	Fair
Adjusting Ring Depth (ft):	1.00
Corbel Type:	None
Corbel Condition:	DNR
Corbel Centricity:	Eccentric
Corbel Depth (ft):	0.00
Wall Type:	Brick
Wall Condition:	Fair
Channel/Bench Condition:	Good
Flow Depth (ft):	0.50
Steps Condition:	Missing
Step Material:	DNR
Structure Notes:	

Connections/Piping

Rim Depth (ft):	NA
Ring Depth (ft):	1.00
Corbel Depth (ft):	0.00
Pipe Invert Depth(s) (ft):	9.80
	9.90
Max Manhole Depth (ft):	9.90

<u>Pipe Size (in)</u>	<u>Material</u>	<u>Direction</u>	<u>Drop</u>
12	Clay	E	9.80
12	Clay	S	9.90

(Diagrams not to scale - For pipe direction only)

Hydraulic Inspection

Surface Material:	Gravel
Surface Setting:	Road Way
Manhole Surcharge:	Yes
Flooding/Ponding:	No
Flow Type:	Steady
Flow Clarity:	Normal
Structure Rating:	S-7
Inflow Rating:	I-4
Infiltration Rating:	F-5

Analysis: Infiltration/Inflow and Repairs

Miscellaneous Manhole Improvements:

1. _____
2. _____
3. _____
4. _____
5. _____

	Average Day (gpm)	Average Month (MCF)	Average Year (MCF)
Inflow Rating:	2.00	11.55	138.59
Structure Rating:	12.50	72.18	866.20
Infiltration Rating:	1.54	8.89	106.72
Total I/I:	16.04	92.61	1,111.51

Recommended I/I Rehabilitation

1. Calcium Aluminate Lining	Cost
	\$990.00
2. _____	
3. _____	
4. _____	
5. _____	
6. _____	
7. _____	

Total Rehab Cost:	\$1,089.00	Total Construction Cost:	\$990.00
Transport and Treat Costs:	\$4,010.00	10% Contingency:	\$99.00
		TOTAL COST:	\$1,089.00

Cost-effective to Rehab?: YES

Hydraulic Inspection Notes

Structure Notes:
Inflow Notes:
Infiltration Notes:

This is a Category 7 Manhole
 Priority Repair in less than 1 Year

*DNR = Did Not Record



Structural Information

Structure Type:	San MH
Structure Diameter (ft):	4.00
Cover Type (# = Holes):	DNR
Cover Condition:	Fair
Cover Manufacturer:	ann arbor
Bolt Down Cover:	No
Cover Bolted:	No
Frame Condition:	Good
Adjusting Ring Type:	Brick
Adjusting Ring Condition:	Fair
Adjusting Ring Depth (ft):	2.00
Corbel Type:	None
Corbel Condition:	DNR
Corbel Centricity:	Eccentric
Corbel Depth (ft):	0.00
Wall Type:	Brick
Wall Condition:	Fair
Channel/Bench Condition:	Good
Flow Depth (ft):	0.70
Steps Condition:	Missing
Step Material:	DNR
Structure Notes:	

Connections/Piping

<u>Rim Depth (ft):</u>	NA
<u>Ring Depth (ft):</u>	2.00
<u>Corbel Depth (ft):</u>	0.00
<u>Pipe Invert Depth(s) (ft):</u>	12.30
	13.00
	13.00
<u>Max Manhole Depth (ft):</u>	13.00

<u>Pipe Size (in)</u>	<u>Material</u>	<u>Direction</u>	<u>Drop</u>
6		E	12.30
12	Clay	N	13.00
12	Clay	W	13.00

(Diagrams not to scale - For pipe direction only)

Hydraulic Inspection

Surface Material:	Gravel
Surface Setting:	Road Way
Manhole Surcharge:	No
Flooding/Ponding:	No
Flow Type:	Steady
Flow Clarity:	Normal
Structure Rating:	S-7
Inflow Rating:	I-4
Infiltration Rating:	F-6

Analysis: Infiltration/Inflow and Repairs

Miscellaneous Manhole Improvements:

1. _____
2. _____
3. _____
4. _____
5. _____

	Average Day (gpm)	Average Month (MCF)	Average Year (MCF)
Inflow Rating:	2.00	11.55	138.59
Structure Rating:	12.50	72.18	866.20
Infiltration Rating:	2.02	11.66	139.98
Total I/I:	16.52	95.39	1,144.77

<u>Recommended I/I Rehabilitation</u>	<u>Cost</u>
1. Calcium Aluminate Lining	\$1,300.00
2. Remove and Replace Lid	\$180.00
3. _____	
4. _____	
5. _____	
6. _____	
7. _____	

Total Rehab Cost:	\$1,628.00	Total Construction Cost:	\$1,480.00
Transport and Treat Costs:	\$4,130.00	10% Contingency:	\$148.00
		TOTAL COST:	\$1,628.00

Cost-effective to Rehab?:	YES
----------------------------------	------------

Hydraulic Inspection Notes

Structure Notes:
Inflow Notes:
Infiltration Notes:

This is a Category 7 Manhole
Immediate Priority Repair

*DNR = Did Not Record



Structural Information

Structure Type:	San MH
Structure Diameter (ft):	4.00
Cover Type (# = Holes):	DNR
Cover Condition:	Good
Cover Manufacturer:	ann arbor
Bolt Down Cover:	No
Cover Bolted:	No
Frame Condition:	Good
Adjusting Ring Type:	Brick
Adjusting Ring Condition:	Fair
Adjusting Ring Depth (ft):	2.00
Corbel Type:	None
Corbel Condition:	DNR
Corbel Centricity:	Eccentric
Corbel Depth (ft):	0.00
Wall Type:	Brick
Wall Condition:	Fair
Channel/Bench Condition:	DNR
Flow Depth (ft):	0.40
Steps Condition:	Missing
Step Material:	DNR
Structure Notes:	

Connections/Piping

<u>Rim Depth (ft):</u>	NA
<u>Ring Depth (ft):</u>	2.00
<u>Corbel Depth (ft):</u>	0.00
<u>Pipe Invert Depth(s) (ft):</u>	6.10
	7.20
	7.70
<u>Max Manhole Depth (ft):</u>	7.70

<u>Pipe Size (in)</u>	<u>Material</u>	<u>Direction</u>	<u>Drop</u>
6	Clay	S	6.10
6	Clay	E	7.20
6	Clay	W	7.70

(Diagrams not to scale - For pipe direction only)

Hydraulic Inspection

Surface Material:	Bituminous
Surface Setting:	Parking Lot
Manhole Surcharge:	Yes
Flooding/Ponding:	No
Flow Type:	Stagnant
Flow Clarity:	Normal
Structure Rating:	S-7
Inflow Rating:	I-4
Infiltration Rating:	F-4

Analysis: Infiltration/Inflow and Repairs

Miscellaneous Manhole Improvements:

1. _____
2. _____
3. _____
4. _____
5. _____

	Average Day (gpm)	Average Month (MCF)	Average Year (MCF)
Inflow Rating:	2.00	11.55	138.59
Structure Rating:	12.50	72.18	866.20
Infiltration Rating:	1.06	6.12	73.45
Total I/I:	15.56	89.84	1,078.25

<u>Recommended I/I Rehabilitation</u>	<u>Cost</u>
1. Calcium Aluminate Lining	\$770.00
2. Remove and Replace Lid	\$180.00
3. _____	
4. _____	
5. _____	
6. _____	
7. _____	

Total Rehab Cost:	\$1,045.00	Total Construction Cost:	\$950.00
Transport and Treat Costs:	\$3,890.00	10% Contingency:	\$95.00
		TOTAL COST:	\$1,045.00

Cost-effective to Rehab?:	YES
----------------------------------	------------

Hydraulic Inspection Notes

Structure Notes:
Inflow Notes:
Infiltration Notes:

This is a Category 7 Manhole
Monitor Again in 10 Years

*DNR = Did Not Record



Structural Information

Structure Type: San MH
 Structure Diameter (ft): DNR
 Cover Type (# = Holes): DNR
 Cover Condition: DNR
 Cover Manufacturer: DNR
 Bolt Down Cover: No
 Cover Bolted: No
 Frame Condition: DNR
 Adjusting Ring Type: DNR
 Adjusting Ring Condition: DNR
 Adjusting Ring Depth (ft): 0.00
 Corbel Type: DNR
 Corbel Condition: DNR
 Corbel Centricity: Eccentric
 Corbel Depth (ft): 0.00
 Wall Type: DNR
 Wall Condition: DNR
 Channel/Bench Condition: DNR
 Flow Depth (ft): 0.00
 Steps Condition: DNR
 Step Material: DNR
 Structure Notes:
 dnf

Connections/Piping

Rim Depth (ft): NA
 Ring Depth (ft): 0.00
 Corbel Depth (ft): 0.00
 Pipe Invert Depth(s) (ft): 0.00
 Max Manhole Depth (ft): _____

Pipe Size (in)	Material	Direction	Drop
			0.00

(Diagrams not to scale - For pipe direction only)

Hydraulic Inspection

Surface Material: DNR
 Surface Setting: DNR
 Manhole Surcharge: DNR
 Flooding/Ponding: No
 Flow Type: DNR
 Flow Clarity: DNR
 Structure Rating: DNR
 Inflow Rating: DNR
 Infiltration Rating: DNR

Analysis: Infiltration/Inflow and Repairs

Miscellaneous Manhole Improvements:

- _____
- _____
- _____
- _____
- _____

	Average Day (gpm)	Average Month (MCF)	Average Year (MCF)
Inflow Rating:			
Structure Rating:			
Infiltration Rating:			
Total I/I:			

Recommended I/I Rehabilitation

- _____
- _____
- _____
- _____
- _____
- _____
- _____

Cost

Hydraulic Inspection Notes

Structure Notes:

Inflow Notes:

Infiltration Notes:

This is a Category 8 Manhole
 Unable to locate

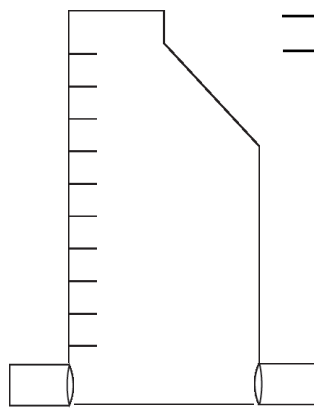
*DNR = Did Not Record



Structural Information

Structure Type: San MH
 Structure Diameter (ft): 6.00
 Cover Type (# = Holes): DNR
 Cover Condition: Good
 Cover Manufacturer: DNR
 Bolt Down Cover: No
 Cover Bolted: No
 Frame Condition: Fair
 Adjusting Ring Type: None
 Adjusting Ring Condition: DNR
 Adjusting Ring Depth (ft): 0.00
 Corbel Type: None
 Corbel Condition: DNR
 Corbel Centricity: Eccentric
 Corbel Depth (ft): 0.00
 Wall Type: Brick
 Wall Condition: Good
 Channel/Bench Condition: Good
 Flow Depth (ft): 0.80
 Steps Condition: Missing
 Step Material: DNR
 Structure Notes:

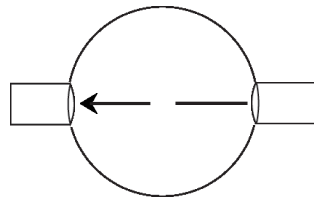
Connections/Piping



Rim Depth (ft): NA
 Ring Depth (ft): 0.00

Corbel Depth (ft): 0.00
 Pipe Invert Depth(s) (ft): 7.52
 7.52

Max Manhole Depth (ft): 7.52



Pipe Size (in)	Material	Direction	Drop
30	Conc	E	7.52
30	Conc	W	7.52

(Diagrams not to scale - For pipe direction only)

Hydraulic Inspection

Surface Material: Vegetation
 Surface Setting: Lawn Area
 Manhole Surcharge: Yes
 Flooding/Ponding: No
 Flow Type: Fast
 Flow Clarity: Normal
 Structure Rating: S-4
 Inflow Rating: I-4
 Infiltration Rating: F-4

Analysis: Infiltration/Inflow and Repairs

Miscellaneous Manhole Improvements:

1. _____
2. _____
3. _____
4. _____
5. _____

	Average Day (gpm)	Average Month (MCF)	Average Year (MCF)
Inflow Rating:	1.40	8.08	97.01
Structure Rating:	3.00	17.32	207.89
Infiltration Rating:	1.06	6.12	73.45
Total I/I:	5.46	31.53	378.36

Recommended I/I Rehabilitation

- | | Cost |
|-----------------------------|----------|
| 1. Calcium Aluminate Lining | \$752.00 |
| 2. Remove and Replace Lid | \$180.00 |
| 3. _____ | _____ |
| 4. _____ | _____ |
| 5. _____ | _____ |
| 6. _____ | _____ |
| 7. _____ | _____ |

Total Rehab Cost:	\$1,025.20
Transport and Treat Costs:	\$1,365.00
Cost-effective to Rehab?:	YES

Total Construction Cost:	\$932.00
10% Contingency:	\$93.20
TOTAL COST:	\$1,025.20

Hydraulic Inspection Notes

Structure Notes:

Inflow Notes:

Infiltration Notes:

This is a Category 4 Manhole
 Monitor Again in 10 Years

*DNR = Did Not Record



Structural Information

Structure Type:	San MH
Structure Diameter (ft):	6.00
Cover Type (# = Holes):	DNR
Cover Condition:	Good
Cover Manufacturer:	DNR
Bolt Down Cover:	No
Cover Bolted:	No
Frame Condition:	Good
Adjusting Ring Type:	Brick/Block
Adjusting Ring Condition:	Fair
Adjusting Ring Depth (ft):	1.50
Corbel Type:	None
Corbel Condition:	DNR
Corbel Centricity:	Eccentric
Corbel Depth (ft):	0.00
Wall Type:	Block
Wall Condition:	Good
Channel/Bench Condition:	Good
Flow Depth (ft):	0.50
Steps Condition:	Missing
Step Material:	DNR
Structure Notes:	

Connections/Piping

<u>Rim Depth (ft):</u>	NA
<u>Ring Depth (ft):</u>	1.50
<u>Corbel Depth (ft):</u>	0.00
<u>Pipe Invert Depth(s) (ft):</u>	5.30
	5.30
<u>Max Manhole Depth (ft):</u>	5.30

<u>Pipe Size (in)</u>	<u>Material</u>	<u>Direction</u>	<u>Drop</u>
30	Conc	E	5.30
30	Conc	NW	5.30

(Diagrams not to scale - For pipe direction only)

Hydraulic Inspection

Surface Material:	Vegetation
Surface Setting:	Lawn Area
Manhole Surcharge:	No
Flooding/Ponding:	No
Flow Type:	Fast
Flow Clarity:	Normal
Structure Rating:	S-5
Inflow Rating:	I-4
Infiltration Rating:	F-6

Analysis: Infiltration/Inflow and Repairs

Miscellaneous Manhole Improvements:

1. _____
2. _____
3. _____
4. _____
5. _____

	Average Day (gpm)	Average Month (MCF)	Average Year (MCF)
Inflow Rating:	1.40	8.08	97.01
Structure Rating:	4.50	25.98	311.83
Infiltration Rating:	2.02	11.66	139.98
Total I/I:	7.92	45.73	548.82

Recommended I/I Rehabilitation

	<u>Cost</u>
1. Calcium Aluminate Lining	\$530.00
2. Adjust Elevation (< 2 ft.)	\$530.00
3. Mortar Adjusting Rings	\$350.00
4. _____	
5. _____	
6. _____	
7. _____	

Total Rehab Cost:	\$1,551.00	Total Construction Cost:	\$1,410.00
Transport and Treat Costs:	\$1,980.00	10% Contingency:	\$141.00
		TOTAL COST:	\$1,551.00

Cost-effective to Rehab?:	YES
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Hydraulic Inspection Notes

Structure Notes:
Inflow Notes:
Infiltration Notes:

This is a Category 6 Manhole
Immediate Priority Repair

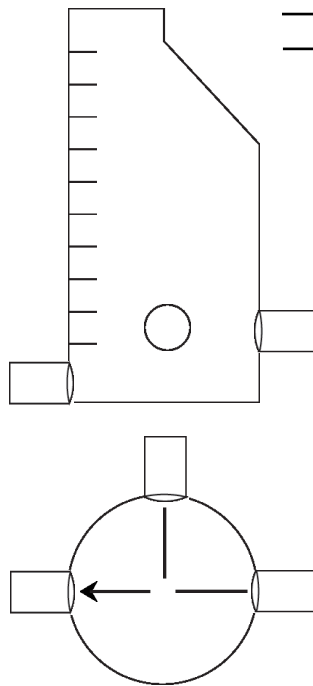
*DNR = Did Not Record



Structural Information

Structure Type: San MH
 Structure Diameter (ft): 4.00
 Cover Type (# = Holes): DNR
 Cover Condition: Good
 Cover Manufacturer: DNR
 Bolt Down Cover: No
 Cover Bolted: No
 Frame Condition: Good
 Adjusting Ring Type: None
 Adjusting Ring Condition: DNR
 Adjusting Ring Depth (ft): 0.00
 Corbel Type: None
 Corbel Condition: DNR
 Corbel Centricity: Eccentric
 Corbel Depth (ft): 0.00
 Wall Type: Block
 Wall Condition: Good
 Channel/Bench Condition: DNR
 Flow Depth (ft): 0.00
 Steps Condition: DNR
 Step Material: DNR
 Structure Notes:

Connections/Piping



Rim Depth (ft): NA

Ring Depth (ft): 0.00

Corbel Depth (ft): 0.00

Pipe Invert Depth(s) (ft): 3.40

4.80

5.40

Max Manhole Depth (ft): 5.40

Pipe Size (in)	Material	Direction	Drop
30	Conc	E	3.40
12	Clay	N	4.80
30	Conc	W	5.40

(Diagrams not to scale - For pipe direction only)

Hydraulic Inspection

Surface Material: Vegetation
 Surface Setting: Lawn Area
 Manhole Surcharge: No
 Flooding/Ponding: Yes
 Flow Type: Fast
 Flow Clarity: Normal
 Structure Rating: S-2
 Inflow Rating: I-7
 Infiltration Rating: F-3

Analysis: Infiltration/Inflow and Repairs

Miscellaneous Manhole Improvements:

1. _____
2. _____
3. _____
4. _____
5. _____

	Average Day (gpm)	Average Month (MCF)	Average Year (MCF)
Inflow Rating:	10.00	57.74	692.96
Structure Rating:	0.15	0.87	10.39
Infiltration Rating:	0.58	3.35	40.19
Total I/I:	10.73	61.96	743.55

Recommended I/I Rehabilitation

	Cost
1. Remove and Replace Frame (Veg./Gravel)	\$440.00
2. Heat Shrinkable Manhole Wrap	\$510.00
3. Mortar Adjusting Rings	\$350.00
4. _____	
5. _____	
6. _____	
7. _____	

Total Rehab Cost:	\$1,430.00
Transport and Treat Costs:	\$2,682.50
Cost-effective to Rehab?:	YES

Total Construction Cost:	\$1,300.00
10% Contingency:	\$130.00
TOTAL COST:	\$1,430.00

Hydraulic Inspection Notes

Structure Notes:

Inflow Notes:

Infiltration Notes:

This is a Category 7 Manhole
 Plan to Repair in 0-5 Years

*DNR = Did Not Record



Structural Information

Structure Type:	San MH
Structure Diameter (ft):	6.00
Cover Type (# = Holes):	DNR
Cover Condition:	Good
Cover Manufacturer:	Neenah
Bolt Down Cover:	No
Cover Bolted:	No
Frame Condition:	Good
Adjusting Ring Type:	None
Adjusting Ring Condition:	DNR
Adjusting Ring Depth (ft):	0.00
Corbel Type:	None
Corbel Condition:	DNR
Corbel Centricity:	Eccentric
Corbel Depth (ft):	0.00
Wall Type:	Block
Wall Condition:	Good
Channel/Bench Condition:	Good
Flow Depth (ft):	1.00
Steps Condition:	DNR
Step Material:	DNR
Structure Notes:	

Connections/Piping

Rim Depth (ft):	NA
Ring Depth (ft):	0.00
Corbel Depth (ft):	0.00
Pipe Invert Depth(s) (ft):	6.00
	6.00
	6.50
Max Manhole Depth (ft):	6.50

<u>Pipe Size (in)</u>	<u>Material</u>	<u>Direction</u>	<u>Drop</u>
30	Conc	E	6.00
30	Conc	W	6.00
8	PVC	NE	6.50

(Diagrams not to scale - For pipe direction only)

Hydraulic Inspection

Surface Material:	Vegetation
Surface Setting:	Lawn Area
Manhole Surcharge:	No
Flooding/Ponding:	Yes
Flow Type:	Fast
Flow Clarity:	Oily
Structure Rating:	S-1
Inflow Rating:	I-1
Infiltration Rating:	F-1

Analysis: Infiltration/Inflow and Repairs

Miscellaneous Manhole Improvements:

1. _____
2. _____
3. _____
4. _____
5. _____

	Average Day (gpm)	Average Month (MCF)	Average Year (MCF)
Inflow Rating:	0.00	0.00	0.00
Structure Rating:	0.00	0.00	0.00
Infiltration Rating:	0.00	0.00	0.00
Total I/I:	0.00	0.00	0.00

Recommended I/I Rehabilitation Cost

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____

Total Rehab Cost:	\$0.00	Total Construction Cost:	\$0.00
Transport and Treat Costs:	\$0.00	10% Contingency:	\$0.00
Cost-effective to Rehab?: NO		TOTAL COST:	\$0.00

Hydraulic Inspection Notes

Structure Notes:
Inflow Notes:
Infiltration Notes:

This is a Category 1 Manhole
Monitor Again in 10 Years

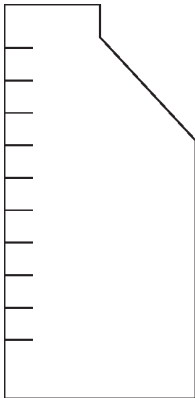
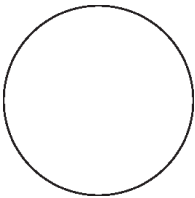
*DNR = Did Not Record



Structural Information

Structure Type:	San MH
Structure Diameter (ft):	DNR
Cover Type (# = Holes):	DNR
Cover Condition:	Good
Cover Manufacturer:	DNR
Bolt Down Cover:	DNR
Cover Bolted:	DNR
Frame Condition:	Good
Adjusting Ring Type:	DNR
Adjusting Ring Condition:	DNR
Adjusting Ring Depth (ft):	0.00
Corbel Type:	DNR
Corbel Condition:	DNR
Corbel Centricity:	Eccentric
Corbel Depth (ft):	0.00
Wall Type:	DNR
Wall Condition:	DNR
Channel/Bench Condition:	DNR
Flow Depth (ft):	DNR
Steps Condition:	DNR
Step Material:	DNR
Structure Notes:	bolted shut

Connections/Piping

Rim Depth (ft):	NA
Ring Depth (ft):	0.00
Corbel Depth (ft):	0.00
Pipe Invert Depth(s) (ft):	
Max Manhole Depth (ft):	

Pipe Size (in)	Material	Direction	Drop

(Diagrams not to scale - For pipe direction only)

Hydraulic Inspection

Surface Material:	DNR
Surface Setting:	DNR
Manhole Surcharge:	DNR
Flooding/Ponding:	DNR
Flow Type:	DNR
Flow Clarity:	DNR
Structure Rating:	DNR
Inflow Rating:	DNR
Infiltration Rating:	DNR

Analysis: Infiltration/Inflow and Repairs

Miscellaneous Manhole Improvements:

1. _____
2. _____
3. _____
4. _____
5. _____

	Average Day (gpm)	Average Month (MCF)	Average Year (MCF)
Inflow Rating:	_____	_____	_____
Structure Rating:	_____	_____	_____
Infiltration Rating:	_____	_____	_____
Total I/I:	_____	_____	_____

Recommended I/I Rehabilitation	Cost
1. _____	_____
2. _____	_____
3. _____	_____
4. _____	_____
5. _____	_____
6. _____	_____
7. _____	_____

Total Rehab Cost:	\$0.00	Total Construction Cost:	\$0.00
Transport and Treat Costs:	\$0.00	10% Contingency:	\$0.00
Cost-effective to Rehab?: NO		TOTAL COST:	\$0.00

Hydraulic Inspection Notes

Structure Notes:

Inflow Notes:

Infiltration Notes:

This is a Category 1 Manhole
Monitor Again in 10 Years

*DNR = Did Not Record



Structural Information

Structure Type:	San MH
Structure Diameter (ft):	6.00
Cover Type (# = Holes):	Solid
Cover Condition:	Good
Cover Manufacturer:	DNR
Bolt Down Cover:	No
Cover Bolted:	No
Frame Condition:	Good
Adjusting Ring Type:	None
Adjusting Ring Condition:	DNR
Adjusting Ring Depth (ft):	0.00
Corbel Type:	None
Corbel Condition:	DNR
Corbel Centricity:	Eccentric
Corbel Depth (ft):	0.00
Wall Type:	Brick
Wall Condition:	Fair
Channel/Bench Condition:	Good
Flow Depth (ft):	0.50
Steps Condition:	Good
Step Material:	DNR
Structure Notes:	

Connections/Piping

Rim Depth (ft):	NA
Ring Depth (ft):	0.00
Corbel Depth (ft):	0.00
Pipe Invert Depth(s) (ft):	7.89
	7.89
	8.12
Max Manhole Depth (ft):	8.12

<u>Pipe Size (in)</u>	<u>Material</u>	<u>Direction</u>	<u>Drop</u>
30	Conc	N	7.89
30	Conc	NW	7.89
30	Conc	S	8.12

(Diagrams not to scale - For pipe direction only)

Hydraulic Inspection

Surface Material:	Gravel
Surface Setting:	Wooded Area
Manhole Surcharge:	No
Flooding/Ponding:	Yes
Flow Type:	Fast
Flow Clarity:	Normal
Structure Rating:	S-3
Inflow Rating:	I-2
Infiltration Rating:	F-3

Analysis: Infiltration/Inflow and Repairs

Miscellaneous Manhole Improvements:

- _____
- _____
- _____
- _____
- _____

	Average Day (gpm)	Average Month (MCF)	Average Year (MCF)
Inflow Rating:	0.50	2.89	34.65
Structure Rating:	1.50	8.66	103.94
Infiltration Rating:	0.58	3.35	40.19
Total I/I:	2.58	14.90	178.78

Recommended I/I Rehabilitation

1. Remove and Replace Frame (Veg./Gravel)	Cost
2. Calcium Aluminate Lining	\$440.00
3. _____	
4. _____	
5. _____	
6. _____	
7. _____	

Total Rehab Cost:	\$1,377.20	Total Construction Cost:	\$1,252.00
Transport and Treat Costs:	\$645.00	10% Contingency:	\$125.20
		TOTAL COST:	\$1,377.20

Cost-effective to Rehab?: NO

Hydraulic Inspection Notes

Structure Notes:
Inflow Notes:
Infiltration Notes:

This is a Category 3 Manhole
 Plan to Repair in 0-5 Years

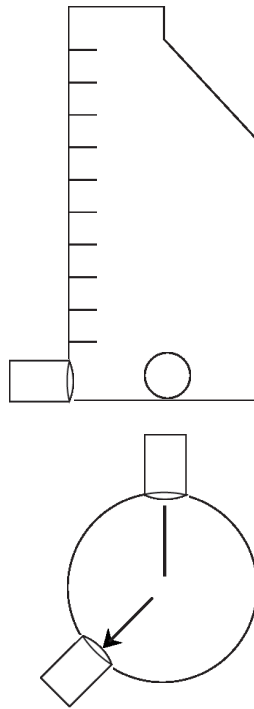
*DNR = Did Not Record



Structural Information

Structure Type: San MH
 Structure Diameter (ft): 6.00
 Cover Type (# = Holes): Solid
 Cover Condition: Good
 Cover Manufacturer: Neenah
 Bolt Down Cover: No
 Cover Bolted: No
 Frame Condition: Good
 Adjusting Ring Type: None
 Adjusting Ring Condition: DNR
 Adjusting Ring Depth (ft): 0.00
 Corbel Type: Block
 Corbel Condition: Good
 Corbel Centricity: Eccentric
 Corbel Depth (ft): 4.00
 Wall Type: Block
 Wall Condition: Good
 Channel/Bench Condition: Good
 Flow Depth (ft): 0.70
 Steps Condition: Missing
 Step Material: DNR
 Structure Notes:

Connections/Piping



Rim Depth (ft): NA
 Ring Depth (ft): 0.00

Corbel Depth (ft): 4.00
 Pipe Invert Depth(s) (ft): 8.60
 8.60

Max Manhole Depth (ft): 8.60

Pipe Size (in)	Material	Direction	Drop
30	Conc	N	8.60
30	PVC Truss	SW	8.60

(Diagrams not to scale - For pipe direction only)

Hydraulic Inspection

Surface Material: Vegetation
 Surface Setting: Wooded Area
 Manhole Surcharge: No
 Flooding/Ponding: Yes
 Flow Type: Fast
 Flow Clarity: Normal
 Structure Rating: S-3
 Inflow Rating: I-3
 Infiltration Rating: F-4

Analysis: Infiltration/Inflow and Repairs

Miscellaneous Manhole Improvements:

- _____
- _____
- _____
- _____
- _____

	Average Day (gpm)	Average Month (MCF)	Average Year (MCF)
Inflow Rating:	0.85	4.91	58.90
Structure Rating:	1.50	8.66	103.94
Infiltration Rating:	1.06	6.12	73.45
Total I/I:	3.41	19.69	236.30

Recommended I/I Rehabilitation

- | | Cost |
|---|----------|
| 1. Remove and Reset Frame (Veg./Gravel) | \$250.00 |
| 2. _____ | _____ |
| 3. _____ | _____ |
| 4. _____ | _____ |
| 5. _____ | _____ |
| 6. _____ | _____ |
| 7. _____ | _____ |

Total Rehab Cost:	\$275.00	Total Construction Cost:	\$250.00
Transport and Treat Costs:	\$852.50	10% Contingency:	\$25.00
Cost-effective to Rehab?:	YES	TOTAL COST:	\$275.00

Hydraulic Inspection Notes

Structure Notes:

Inflow Notes:

Infiltration Notes:

This is a Category 4 Manhole
 Plan to Repair in 0-5 Years

*DNR = Did Not Record



Structural Information

Structure Type:	San MH
Structure Diameter (ft):	6.00
Cover Type (# = Holes):	Solid
Cover Condition:	Good
Cover Manufacturer:	EJIW
Bolt Down Cover:	No
Cover Bolted:	No
Frame Condition:	Good
Adjusting Ring Type:	None
Adjusting Ring Condition:	DNR
Adjusting Ring Depth (ft):	0.00
Corbel Type:	None
Corbel Condition:	DNR
Corbel Centricity:	Eccentric
Corbel Depth (ft):	0.00
Wall Type:	Brick
Wall Condition:	Fair
Channel/Bench Condition:	Good
Flow Depth (ft):	0.30
Steps Condition:	Fair
Step Material:	DNR
Structure Notes:	

Connections/Piping

Rim Depth (ft):	NA
Ring Depth (ft):	0.00
Corbel Depth (ft):	0.00
Pipe Invert Depth(s) (ft):	6.70
	6.70
Max Manhole Depth (ft):	6.70

<u>Pipe Size (in)</u>	<u>Material</u>	<u>Direction</u>	<u>Drop</u>
30	Conc	N	6.70
30	Conc	S	6.70

(Diagrams not to scale - For pipe direction only)

Hydraulic Inspection

Surface Material:	Vegetation
Surface Setting:	Wooded Area
Manhole Surcharge:	No
Flooding/Ponding:	Yes
Flow Type:	Fast
Flow Clarity:	Normal
Structure Rating:	S-1
Inflow Rating:	I-2
Infiltration Rating:	F-2

Analysis: Infiltration/Inflow and Repairs

Miscellaneous Manhole Improvements:

- _____
- _____
- _____
- _____
- _____

	Average Day (gpm)	Average Month (MCF)	Average Year (MCF)
Inflow Rating:	0.30	1.73	20.79
Structure Rating:	0.00	0.00	0.00
Infiltration Rating:	0.10	0.58	6.93
Total I/I:	0.40	2.31	27.72

Recommended I/I Rehabilitation

- _____
- _____
- _____
- _____
- _____
- _____
- _____

Total Rehab Cost:	\$0.00	Total Construction Cost:	\$0.00
Transport and Treat Costs:	\$100.00	10% Contingency:	\$0.00
Cost-effective to Rehab?:	YES	TOTAL COST:	\$0.00

Hydraulic Inspection Notes

Structure Notes:
Inflow Notes:
Infiltration Notes:

This is a Category 2 Manhole
 Monitor Again in 5 Years

*DNR = Did Not Record



Structural Information

Structure Type:	San MH
Structure Diameter (ft):	6.00
Cover Type (# = Holes):	DNR
Cover Condition:	Good
Cover Manufacturer:	DNR
Bolt Down Cover:	No
Cover Bolted:	No
Frame Condition:	Good
Adjusting Ring Type:	None
Adjusting Ring Condition:	DNR
Adjusting Ring Depth (ft):	0.00
Corbel Type:	None
Corbel Condition:	DNR
Corbel Centricity:	Eccentric
Corbel Depth (ft):	0.00
Wall Type:	Brick
Wall Condition:	Good
Channel/Bench Condition:	Good
Flow Depth (ft):	0.50
Steps Condition:	Missing
Step Material:	DNR
Structure Notes:	

Connections/Piping

Rim Depth (ft):	NA
Ring Depth (ft):	0.00
Corbel Depth (ft):	0.00
Pipe Invert Depth(s) (ft):	19.40
	19.40
Max Manhole Depth (ft):	19.40

<u>Pipe Size (in)</u>	<u>Material</u>	<u>Direction</u>	<u>Drop</u>
24	Conc	E	19.40
24	Conc	W	19.40

(Diagrams not to scale - For pipe direction only)

Hydraulic Inspection

Surface Material:	Vegetation
Surface Setting:	Side Walk
Manhole Surcharge:	No
Flooding/Ponding:	No
Flow Type:	Fast
Flow Clarity:	Normal
Structure Rating:	S-7
Inflow Rating:	I-4
Infiltration Rating:	F-4

Analysis: Infiltration/Inflow and Repairs

Miscellaneous Manhole Improvements:

1. _____
2. _____
3. _____
4. _____
5. _____

	Average Day (gpm)	Average Month (MCF)	Average Year (MCF)
Inflow Rating:	1.40	8.08	97.01
Structure Rating:	12.50	72.18	866.20
Infiltration Rating:	1.06	6.12	73.45
Total I/I:	14.96	86.38	1,036.67

Recommended I/I Rehabilitation

1. Calcium Aluminate Lining	\$1,940.00
2. _____	
3. Remove and Replace Lid	\$180.00
4. _____	
5. _____	
6. _____	
7. _____	

Total Rehab Cost:	\$2,332.00	Total Construction Cost:	\$2,120.00
Transport and Treat Costs:	\$3,740.00	10% Contingency:	\$212.00
		TOTAL COST:	\$2,332.00

Cost-effective to Rehab?:	YES
----------------------------------	------------

Hydraulic Inspection Notes

Structure Notes:
Inflow Notes:
Infiltration Notes:

This is a Category 7 Manhole
Monitor Again in 10 Years

*DNR = Did Not Record



Structural Information

Structure Type:	San MH
Structure Diameter (ft):	4.00
Cover Type (# = Holes):	Solid
Cover Condition:	Good
Cover Manufacturer:	EJIW
Bolt Down Cover:	No
Cover Bolted:	No
Frame Condition:	Good
Adjusting Ring Type:	None
Adjusting Ring Condition:	DNR
Adjusting Ring Depth (ft):	0.00
Corbel Type:	None
Corbel Condition:	DNR
Corbel Centricity:	Eccentric
Corbel Depth (ft):	0.00
Wall Type:	Brick
Wall Condition:	Poor
Channel/Bench Condition:	Fair
Flow Depth (ft):	0.40
Steps Condition:	DNR
Step Material:	DNR
Structure Notes:	

Connections/Piping

Rim Depth (ft):	NA
Ring Depth (ft):	0.00
Corbel Depth (ft):	0.00
Pipe Invert Depth(s) (ft):	4.00
	4.00
Max Manhole Depth (ft):	4.00

<u>Pipe Size (in)</u>	<u>Material</u>	<u>Direction</u>	<u>Drop</u>
30	Conc	E	4.00
30	Conc	W	4.00

(Diagrams not to scale - For pipe direction only)

Hydraulic Inspection

Surface Material:	Vegetation
Surface Setting:	Lawn Area
Manhole Surcharge:	No
Flooding/Ponding:	Yes
Flow Type:	Fast
Flow Clarity:	Normal
Structure Rating:	S-7
Inflow Rating:	I-7
Infiltration Rating:	F-7

Analysis: Infiltration/Inflow and Repairs

Miscellaneous Manhole Improvements:

1. _____
2. _____
3. _____
4. _____
5. _____

	Average Day (gpm)	Average Month (MCF)	Average Year (MCF)
Inflow Rating:	10.00	57.74	692.96
Structure Rating:	12.50	72.18	866.20
Infiltration Rating:	2.50	14.44	173.24
Total I/I:	25.00	144.35	1,732.40

<u>Recommended I/I Rehabilitation</u>	<u>Cost</u>
1. Remove and Replace Frame (Veg./Gravel)	\$440.00
2. Calcium Aluminate Lining	\$400.00
3. Heat Shrinkable Manhole Wrap	\$510.00
4. _____	
5. _____	
6. _____	
7. _____	

Total Rehab Cost:	\$1,485.00		Total Construction Cost:	\$1,350.00
Transport and Treat Costs:	\$6,250.00		10% Contingency:	\$135.00
			TOTAL COST:	\$1,485.00

Cost-effective to Rehab?:	YES
----------------------------------	------------

Hydraulic Inspection Notes

Structure Notes:	
Inflow Notes:	
Infiltration Notes:	leaking major leaks

This is a Category 7 Manhole
Monitor Again in 10 Years

*DNR = Did Not Record



Structural Information

Structure Type:	San MH
Structure Diameter (ft):	6.00
Cover Type (# = Holes):	Solid
Cover Condition:	Good
Cover Manufacturer:	EJIW
Bolt Down Cover:	No
Cover Bolted:	No
Frame Condition:	Good
Adjusting Ring Type:	Brick
Adjusting Ring Condition:	Good
Adjusting Ring Depth (ft):	1.00
Corbel Type:	Precast
Corbel Condition:	Good
Corbel Centricity:	Eccentric
Corbel Depth (ft):	4.00
Wall Type:	Precast
Wall Condition:	Good
Channel/Bench Condition:	Good
Flow Depth (ft):	0.25
Steps Condition:	Good
Step Material:	DNR
Structure Notes:	

Connections/Piping

<u>Rim Depth (ft):</u>	NA
<u>Ring Depth (ft):</u>	1.00
<u>Corbel Depth (ft):</u>	4.00
<u>Pipe Invert Depth(s) (ft):</u>	13.50
	13.70
<u>Max Manhole Depth (ft):</u>	13.70

<u>Pipe Size (in)</u>	<u>Material</u>	<u>Direction</u>	<u>Drop</u>
24	Conc	NE	13.50
24	Conc	S	13.70

(Diagrams not to scale - For pipe direction only)

Hydraulic Inspection

Surface Material:	Bituminous
Surface Setting:	Drive Way
Manhole Surcharge:	No
Flooding/Ponding:	No
Flow Type:	Stagnant
Flow Clarity:	Oily
Structure Rating:	S-1
Inflow Rating:	I-1
Infiltration Rating:	F-1

Analysis: Infiltration/Inflow and Repairs

Miscellaneous Manhole Improvements:

1. Debris build up in manhole; cleaning is recommended.
2. _____
3. _____
4. _____
5. _____

	Average Day (gpm)	Average Month (MCF)	Average Year (MCF)
Inflow Rating:	0.00	0.00	0.00
Structure Rating:	0.00	0.00	0.00
Infiltration Rating:	0.00	0.00	0.00
Total I/I:	0.00	0.00	0.00

Recommended I/I Rehabilitation Cost

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____

Total Rehab Cost:	\$0.00	Total Construction Cost:	\$0.00
Transport and Treat Costs:	\$0.00	10% Contingency:	\$0.00
		TOTAL COST:	\$0.00

Cost-effective to Rehab?: NO

Hydraulic Inspection Notes

Structure Notes:	
Inflow Notes:	
Infiltration Notes:	

This is a Category 1 Manhole
Monitor Again in 10 Years

*DNR = Did Not Record



Structural Information

Structure Type:	San MH
Structure Diameter (ft):	4.00
Cover Type (# = Holes):	DNR
Cover Condition:	Good
Cover Manufacturer:	EJIW
Bolt Down Cover:	No
Cover Bolted:	No
Frame Condition:	Good
Adjusting Ring Type:	Precast
Adjusting Ring Condition:	Good
Adjusting Ring Depth (ft):	2.50
Corbel Type:	Brick
Corbel Condition:	Fair
Corbel Centricity:	Eccentric
Corbel Depth (ft):	1.50
Wall Type:	Brick
Wall Condition:	Fair
Channel/Bench Condition:	Good
Flow Depth (ft):	1.00
Steps Condition:	Missing
Step Material:	DNR
Structure Notes:	

Connections/Piping

<u>Rim Depth (ft):</u>	NA
<u>Ring Depth (ft):</u>	2.50
<u>Corbel Depth (ft):</u>	1.50
<u>Pipe Invert Depth(s) (ft):</u>	7.60
	11.10
	11.30
<u>Max Manhole Depth (ft):</u>	11.30

<u>Pipe Size (in)</u>	<u>Material</u>	<u>Direction</u>	<u>Drop</u>
8	Clay	E	7.60
36	Conc	W	11.10
36	Conc	SE	11.30

(Diagrams not to scale - For pipe direction only)

Hydraulic Inspection

Surface Material:	Vegetation
Surface Setting:	Lawn Area
Manhole Surcharge:	No
Flooding/Ponding:	No
Flow Type:	Fast
Flow Clarity:	Normal
Structure Rating:	S-7
Inflow Rating:	I-1
Infiltration Rating:	F-4

Analysis: Infiltration/Inflow and Repairs

Miscellaneous Manhole Improvements:

1. _____
2. _____
3. _____
4. _____
5. _____

	Average Day (gpm)	Average Month (MCF)	Average Year (MCF)
Inflow Rating:	0.00	0.00	0.00
Structure Rating:	12.50	72.18	866.20
Infiltration Rating:	1.06	6.12	73.45
Total I/I:	13.56	78.30	939.65

Recommended I/I Rehabilitation

	<u>Cost</u>
1. Calcium Aluminate Lining	\$1,130.00
2. Remove and Replace Lid	\$180.00
3. _____	
4. _____	
5. _____	
6. _____	
7. _____	

Total Rehab Cost:	\$1,441.00	Total Construction Cost:	\$1,310.00
Transport and Treat Costs:	\$3,390.00	10% Contingency:	\$131.00
Cost-effective to Rehab?:	YES	TOTAL COST:	\$1,441.00

Hydraulic Inspection Notes

Structure Notes:
Inflow Notes:
Infiltration Notes:

This is a Category 7 Manhole
Monitor Again in 10 Years

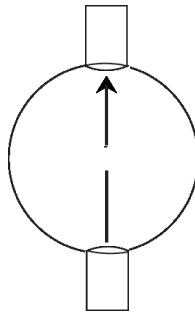
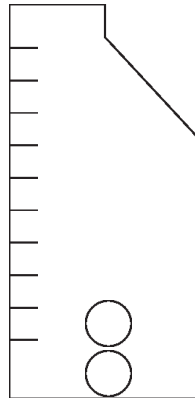
*DNR = Did Not Record



Structural Information

Structure Type: San MH
 Structure Diameter (ft): 4.00
 Cover Type (# = Holes): Solid
 Cover Condition: Good
 Cover Manufacturer: EJIW
 Bolt Down Cover: No
 Cover Bolted: No
 Frame Condition: Good
 Adjusting Ring Type: Brick/Block
 Adjusting Ring Condition: Good
 Adjusting Ring Depth (ft): 1.50
 Corbel Type: Precast
 Corbel Condition: Good
 Corbel Centricity: Eccentric
 Corbel Depth (ft): 4.00
 Wall Type: Precast
 Wall Condition: Good
 Channel/Bench Condition: Good
 Flow Depth (ft): 0.10
 Steps Condition: Good
 Step Material: DNR
 Structure Notes:

Connections/Piping



(Diagrams not to scale - For pipe direction only)

Rim Depth (ft):	NA
Ring Depth (ft):	1.50
Corbel Depth (ft):	4.00
Pipe Invert Depth(s) (ft):	8.01
	8.01
	8.64
Max Manhole Depth (ft):	8.64

<u>Pipe Size (in)</u>	<u>Material</u>	<u>Direction</u>	<u>Drop</u>
10	PVC Truss	S	8.01
10	PVC Truss	N	8.01
10	PVC Truss	N	8.64

Hydraulic Inspection

Surface Material: Bituminous
 Surface Setting: Road Way
 Manhole Surcharge: No
 Flooding/Ponding: No
 Flow Type: Steady
 Flow Clarity: Normal
 Structure Rating: S-1
 Inflow Rating: I-1
 Infiltration Rating: F-1

Analysis: Infiltration/Inflow and Repairs

Miscellaneous Manhole Improvements:

1. _____
2. _____
3. _____
4. _____
5. _____

	Average Day (gpm)	Average Month (MCF)	Average Year (MCF)
Inflow Rating:	0.00	0.00	0.00
Structure Rating:	0.00	0.00	0.00
Infiltration Rating:	0.00	0.00	0.00
Total I/I:	0.00	0.00	0.00

Recommended I/I Rehabilitation

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____

Total Rehab Cost:	\$0.00	Total Construction Cost:	\$0.00
Transport and Treat Costs:	\$0.00	10% Contingency:	\$0.00
Cost-effective to Rehab?:	NO	TOTAL COST:	\$0.00

Hydraulic Inspection Notes

Structure Notes:

Inflow Notes:

Infiltration Notes:

This is a Category 1 Manhole
 Monitor Again in 10 Years

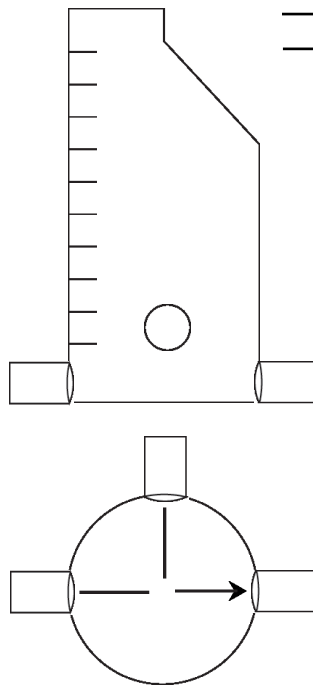
*DNR = Did Not Record



Structural Information

Structure Type: San MH
 Structure Diameter (ft): 6.00
 Cover Type (# = Holes): DNR
 Cover Condition: Good
 Cover Manufacturer: DNR
 Bolt Down Cover: No
 Cover Bolted: No
 Frame Condition: Good
 Adjusting Ring Type: Brick/Block
 Adjusting Ring Condition: Fair
 Adjusting Ring Depth (ft): 4.00
 Corbel Type: Block
 Corbel Condition: Fair
 Corbel Centricity: Eccentric
 Corbel Depth (ft): 4.00
 Wall Type: Block
 Wall Condition: Good
 Channel/Bench Condition: Good
 Flow Depth (ft): 0.20
 Steps Condition: DNR
 Step Material: DNR
 Structure Notes:

Connections/Piping



Rim Depth (ft): NA
 Ring Depth (ft): 4.00
 Corbel Depth (ft): 4.00
 Pipe Invert Depth(s) (ft): 7.90
 8.10
 8.10
 Max Manhole Depth (ft): 8.10

Pipe Size (in)	Material	Direction	Drop
10	Clay	N	7.90
10	Clay	E	8.10
10	Clay	W	8.10

(Diagrams not to scale - For pipe direction only)

Hydraulic Inspection

Surface Material: Bituminous
 Surface Setting: Drive Way
 Manhole Surcharge: No
 Flooding/Ponding: No
 Flow Type: Slow
 Flow Clarity: Normal
 Structure Rating: S-3
 Inflow Rating: I-3
 Infiltration Rating: F-2

Analysis: Infiltration/Inflow and Repairs

Miscellaneous Manhole Improvements:

1. _____
2. _____
3. _____
4. _____
5. _____

	Average Day (gpm)	Average Month (MCF)	Average Year (MCF)
Inflow Rating:	1.25	7.22	86.62
Structure Rating:	1.50	8.66	103.94
Infiltration Rating:	0.10	0.58	6.93
Total I/I:	2.85	16.46	197.49

Recommended I/I Rehabilitation

- | | Cost |
|--|----------|
| 1. Remove and Replace Frame (Pavement) | \$540.00 |
| 2. Remove and Replace Lid | \$180.00 |
| 3. _____ | _____ |
| 4. _____ | _____ |
| 5. _____ | _____ |
| 6. _____ | _____ |
| 7. _____ | _____ |

Total Rehab Cost:	\$792.00	Total Construction Cost:	\$720.00
Transport and Treat Costs:	\$712.50	10% Contingency:	\$72.00
Cost-effective to Rehab?:	NO	TOTAL COST:	\$792.00

Hydraulic Inspection Notes

Structure Notes:

Inflow Notes:

Infiltration Notes:

This is a Category 3 Manhole
 Plan to Repair in 0-5 Years

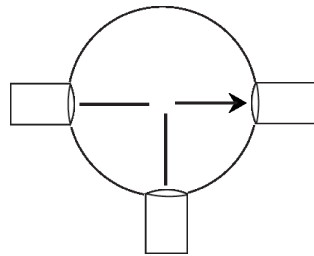
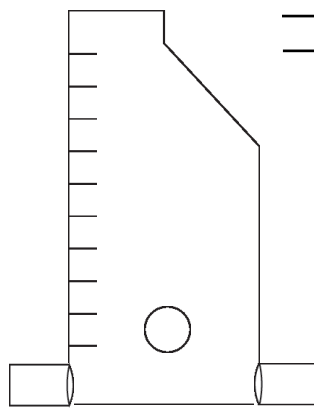
*DNR = Did Not Record



Structural Information

Structure Type: San MH
 Structure Diameter (ft): 4.00
 Cover Type (# = Holes): Solid
 Cover Condition: Broken
 Cover Manufacturer: EJIW
 Bolt Down Cover: No
 Cover Bolted: No
 Frame Condition: Good
 Adjusting Ring Type: None
 Adjusting Ring Condition: DNR
 Adjusting Ring Depth (ft): 0.00
 Corbel Type: Precast
 Corbel Condition: Good
 Corbel Centricity: Eccentric
 Corbel Depth (ft): 0.00
 Wall Type: Precast
 Wall Condition: Good
 Channel/Bench Condition: Good
 Flow Depth (ft): 0.50
 Steps Condition: Good
 Step Material: DNR
 Structure Notes:

Connections/Piping



(Diagrams not to scale - For pipe direction only)

Rim Depth (ft): NA
 Ring Depth (ft): 0.00
 Corbel Depth (ft): 0.00
 Pipe Invert Depth(s) (ft): 6.00
 6.70
 6.70
 Max Manhole Depth (ft): 6.70

Pipe Size (in)	Material	Direction	Drop
10	PVC Truss	S	6.00
15	PVC Truss	W	6.70
15	PVC Truss	E	6.70

Hydraulic Inspection

Surface Material: Bituminous
 Surface Setting: Road Way
 Manhole Surcharge: No
 Flooding/Ponding: No
 Flow Type: Fast
 Flow Clarity: Normal
 Structure Rating: S-1
 Inflow Rating: I-4
 Infiltration Rating: F-4

Analysis: Infiltration/Inflow and Repairs

Miscellaneous Manhole Improvements:

1. _____
2. _____
3. _____
4. _____
5. _____

	Average Day (gpm)	Average Month (MCF)	Average Year (MCF)
Inflow Rating:	2.00	11.55	138.59
Structure Rating:	0.00	0.00	0.00
Infiltration Rating:	1.06	6.12	73.45
Total I/I:	3.06	17.67	212.05

Recommended I/I Rehabilitation

- | | Cost |
|---------------------------|----------|
| 1. Remove and Replace Lid | \$180.00 |
| 2. Mortar Adjusting Rings | \$350.00 |
| 3. _____ | _____ |
| 4. _____ | _____ |
| 5. _____ | _____ |
| 6. _____ | _____ |
| 7. _____ | _____ |

Total Rehab Cost:	\$583.00
Transport and Treat Costs:	\$765.00
Cost-effective to Rehab?:	YES

Total Construction Cost:	\$530.00
10% Contingency:	\$53.00
TOTAL COST:	\$583.00

Hydraulic Inspection Notes

Structure Notes:

Inflow Notes:

Infiltration Notes:

This is a Category 4 Manhole
 Monitor Again in 10 Years

*DNR = Did Not Record



Structural Information

Structure Type:	San MH
Structure Diameter (ft):	4.00
Cover Type (# = Holes):	Solid
Cover Condition:	Good
Cover Manufacturer:	EJIW
Bolt Down Cover:	No
Cover Bolted:	No
Frame Condition:	Good
Adjusting Ring Type:	Brick/Block
Adjusting Ring Condition:	Fair
Adjusting Ring Depth (ft):	1.00
Corbel Type:	Precast
Corbel Condition:	Good
Corbel Centricity:	Eccentric
Corbel Depth (ft):	2.00
Wall Type:	Precast
Wall Condition:	Good
Channel/Bench Condition:	DNR
Flow Depth (ft):	1.00
Steps Condition:	Good
Step Material:	DNR
Structure Notes:	

Connections/Piping

Rim Depth (ft):	NA
Ring Depth (ft):	1.00
Corbel Depth (ft):	2.00
Pipe Invert Depth(s) (ft):	11.50
	11.50
Max Manhole Depth (ft):	11.50

<u>Pipe Size (in)</u>	<u>Material</u>	<u>Direction</u>	<u>Drop</u>
18	Conc	ESE	11.50
18	Conc	W	11.50

(Diagrams not to scale - For pipe direction only)

Hydraulic Inspection

Surface Material:	Bituminous
Surface Setting:	Road Way
Manhole Surcharge:	No
Flooding/Ponding:	No
Flow Type:	Fast
Flow Clarity:	Normal
Structure Rating:	S-1
Inflow Rating:	I-5
Infiltration Rating:	F-2

Analysis: Infiltration/Inflow and Repairs

Miscellaneous Manhole Improvements:

1. _____
2. _____
3. _____
4. _____
5. _____

	Average Day (gpm)	Average Month (MCF)	Average Year (MCF)
Inflow Rating:	_____	_____	_____
Structure Rating:	_____	_____	_____
Infiltration Rating:	_____	_____	_____
Total I/I:	_____	_____	_____

<u>Recommended I/I Rehabilitation</u>	<u>Cost</u>
1. Mortar Adjusting Rings	\$350.00
2. _____	
3. _____	
4. _____	
5. _____	
6. _____	
7. _____	

Total Rehab Cost:	\$385.00	Total Construction Cost:	\$350.00
Transport and Treat Costs:	\$765.00	10% Contingency:	\$35.00
Cost-effective to Rehab?:	YES	TOTAL COST:	\$385.00

Hydraulic Inspection Notes

Structure Notes:

Inflow Notes:

Infiltration Notes:

This is a Category 5 Manhole
 Priority Repair in less than 1 Year

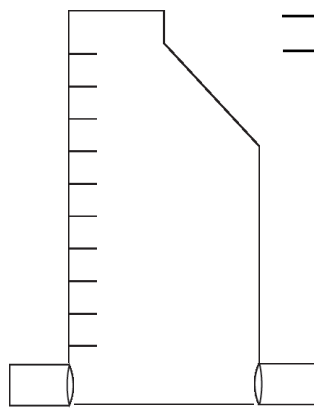
*DNR = Did Not Record



Structural Information

Structure Type: San MH
 Structure Diameter (ft): 4.00
 Cover Type (# = Holes): DNR
 Cover Condition: Good
 Cover Manufacturer: ann arbor
 Bolt Down Cover: No
 Cover Bolted: No
 Frame Condition: Good
 Adjusting Ring Type: Brick
 Adjusting Ring Condition: Poor
 Adjusting Ring Depth (ft): 1.50
 Corbel Type: Brick
 Corbel Condition: Fair
 Corbel Centricity: Centric
 Corbel Depth (ft): 4.00
 Wall Type: Brick
 Wall Condition: Fair
 Channel/Bench Condition: DNR
 Flow Depth (ft): 0.00
 Steps Condition: Fair
 Step Material: DNR
 Structure Notes:

Connections/Piping



Rim Depth (ft): NA

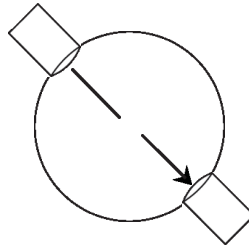
Ring Depth (ft): 1.50

Corbel Depth (ft): 4.00

Pipe Invert Depth(s) (ft): 11.00

11.00

Max Manhole Depth (ft): 11.00



Pipe Size (in)	Material	Direction	Drop
24	Conc	NW	11.00
30	Conc	SE	11.00

(Diagrams not to scale - For pipe direction only)

Hydraulic Inspection

Surface Material: Vegetation
 Surface Setting: Wooded Area
 Manhole Surcharge: Yes
 Flooding/Ponding: No
 Flow Type: Steady
 Flow Clarity: Normal
 Structure Rating: S-7
 Inflow Rating: I-7
 Infiltration Rating: F-4

Analysis: Infiltration/Inflow and Repairs

Miscellaneous Manhole Improvements:

1. _____
2. _____
3. _____
4. _____
5. _____

	Average Day (gpm)	Average Month (MCF)	Average Year (MCF)
Inflow Rating:	10.00	57.74	692.96
Structure Rating:	12.50	72.18	866.20
Infiltration Rating:	1.06	6.12	73.45
Total I/I:	23.56	136.04	1,632.61

Recommended I/I Rehabilitation

	Cost
1. Remove and Replace Frame (Veg./Gravel)	\$440.00
2. Replace Adjusting Rings (< 2 ft. Veg./Gravel)	\$530.00
3. Calcium Aluminate Lining	\$1,100.00
4. _____	
5. _____	
6. _____	
7. _____	

Total Rehab Cost:	\$2,277.00	Total Construction Cost:	\$2,070.00
Transport and Treat Costs:	\$5,890.00	10% Contingency:	\$207.00
Cost-effective to Rehab?:	YES	TOTAL COST:	\$2,277.00

Hydraulic Inspection Notes

Structure Notes:

Inflow Notes:

Infiltration Notes:

This is a Category 7 Manhole
 Monitor Again in 10 Years

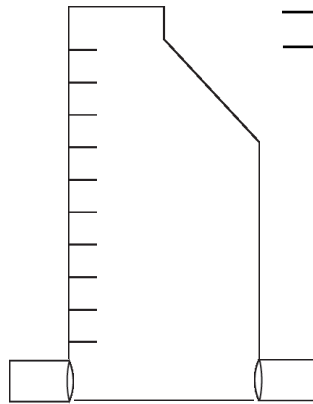
*DNR = Did Not Record



Structural Information

Structure Type: San MH
Structure Diameter (ft): 4.00
Cover Type (# = Holes): Solid
Cover Condition: Good
Cover Manufacturer: EJIW
Bolt Down Cover: No
Cover Bolted: No
Frame Condition: Good
Adjusting Ring Type: Brick
Adjusting Ring Condition: Fair
Adjusting Ring Depth (ft): 1.50
Corbel Type: Precast
Corbel Condition: Good
Corbel Centricity: Eccentric
Corbel Depth (ft): 2.00
Wall Type: Precast
Wall Condition: Good
Channel/Bench Condition: Good
Flow Depth (ft): 1.00
Steps Condition: Good
Step Material: DNR
Structure Notes:

Connections/Piping



Rim Depth (ft): NA

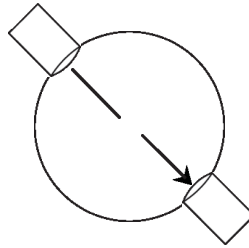
Ring Depth (ft): 1.50

Corbel Depth (ft): 2.00

Pipe Invert Depth(s) (ft): 6.50

6.50

Max Manhole Depth (ft): 6.50



Pipe Size (in)	Material	Direction	Drop
18	Conc	NW	6.50
18	Conc	SE	6.50

(Diagrams not to scale - For pipe direction only)

Hydraulic Inspection

Surface Material: Bituminous
Surface Setting: Road Way
Manhole Surcharge: No
Flooding/Ponding: No
Flow Type: Fast
Flow Clarity: Normal
Structure Rating: S-1
Inflow Rating: I-4
Infiltration Rating: F-1

Analysis: Infiltration/Inflow and Repairs

Miscellaneous Manhole Improvements:

1. _____
2. _____
3. _____
4. _____
5. _____

	Average Day (gpm)	Average Month (MCF)	Average Year (MCF)
Inflow Rating:	2.00	11.55	138.59
Structure Rating:	0.00	0.00	0.00
Infiltration Rating:	0.00	0.00	0.00
Total I/I:	2.00	11.55	138.59

Recommended I/I Rehabilitation

- | | Cost |
|---------------------------|----------|
| 1. Mortar Adjusting Rings | \$350.00 |
| 2. _____ | _____ |
| 3. _____ | _____ |
| 4. _____ | _____ |
| 5. _____ | _____ |
| 6. _____ | _____ |
| 7. _____ | _____ |

Total Rehab Cost:	\$385.00	Total Construction Cost:	\$350.00
Transport and Treat Costs:	\$500.00	10% Contingency:	\$35.00
Cost-effective to Rehab?:	YES	TOTAL COST:	\$385.00

Hydraulic Inspection Notes

Structure Notes:

Inflow Notes:

Infiltration Notes:

This is a Category 4 Manhole
Monitor Again in 10 Years

*DNR = Did Not Record



Structural Information

Structure Type:	San MH
Structure Diameter (ft):	4.00
Cover Type (# = Holes):	Solid
Cover Condition:	Good
Cover Manufacturer:	EJIW
Bolt Down Cover:	No
Cover Bolted:	No
Frame Condition:	Good
Adjusting Ring Type:	None
Adjusting Ring Condition:	DNR
Adjusting Ring Depth (ft):	0.00
Corbel Type:	Brick
Corbel Condition:	Fair
Corbel Centricity:	Eccentric
Corbel Depth (ft):	3.00
Wall Type:	Brick
Wall Condition:	Fair
Channel/Bench Condition:	DNR
Flow Depth (ft):	1.00
Steps Condition:	Poor
Step Material:	DNR
Structure Notes:	

Connections/Piping

Rim Depth (ft):	NA
Ring Depth (ft):	0.00
Corbel Depth (ft):	3.00
Pipe Invert Depth(s) (ft):	6.50
	9.50
	10.00
Max Manhole Depth (ft):	10.00

<u>Pipe Size (in)</u>	<u>Material</u>	<u>Direction</u>	<u>Drop</u>
18	Conc	NW	6.50
12		NE	9.50
18	Conc	SE	10.00

(Diagrams not to scale - For pipe direction only)

Hydraulic Inspection

Surface Material:	Bituminous
Surface Setting:	Road Way
Manhole Surcharge:	No
Flooding/Ponding:	No
Flow Type:	Fast
Flow Clarity:	Normal
Structure Rating:	S-7
Inflow Rating:	I-3
Infiltration Rating:	F-4

Analysis: Infiltration/Inflow and Repairs

Miscellaneous Manhole Improvements:

1. _____
2. _____
3. _____
4. _____
5. _____

	Average Day (gpm)	Average Month (MCF)	Average Year (MCF)
Inflow Rating:	1.25	7.22	86.62
Structure Rating:	12.50	72.18	866.20
Infiltration Rating:	1.06	6.12	73.45
Total I/I:	14.81	85.51	1,026.27

Recommended I/I Rehabilitation

1. Calcium Aluminate Lining	\$1,000.00
2. _____	
3. _____	
4. _____	
5. _____	
6. _____	
7. _____	

Total Rehab Cost:	\$1,100.00	Total Construction Cost:	\$1,000.00
Transport and Treat Costs:	\$3,702.50	10% Contingency:	\$100.00
		TOTAL COST:	\$1,100.00

Cost-effective to Rehab?: YES

Hydraulic Inspection Notes

Structure Notes:
Inflow Notes:
Infiltration Notes:

This is a Category 7 Manhole
 Plan to Repair in 0-5 Years

*DNR = Did Not Record