

# King Street Tile Drain Inspections

Inspection Report for Observation:  
**ConstructedBank1**

**Observation Location:**



**Photo 1**



**Material:** Broken concrete. Also rocks.

**Length (feet):** 20

**Location:** Left Side Facing Upstream

**Photo 1 Direction:**

**Comments:**

Left side. 20 ft. Photo upstream.

**Photo 2**

CLIENT	Saginaw County Public Works Commissioner	 <b>HUBBELL, ROTH &amp; CLARK, INC</b> CONSULTING ENGINEERS SINCE 1915	555 Hulet Drive P.O. Box 824 Bloomfield Hills, MI 48303-0824 (248) 454-6300 <a href="http://www.hrc-engr.com">http://www.hrc-engr.com</a>	DATE:	08/16/2016
				SCALE:	
NOTE				SHEET #:	
				JOB #:	20160331

# King Street Tile Drain Inspections

Inspection Report for Observation:  
**ConstructedBank2**

**Observation Location:**



**Photo 1**



**Material:** Concrete

**Length (feet):** 40

**Location:** Right Side Facing Upstream

**Photo 1 Direction:**

**Comments:**

Cnnstructed bank with pieces of broken concrete bank on right side for 40 ft. Photo facing upstream.

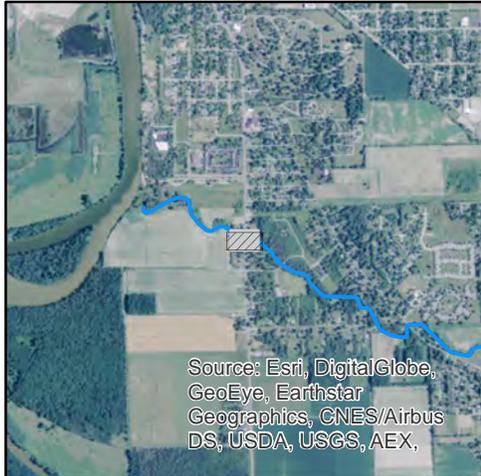
**Photo 2**

CLIENT	Saginaw County Public Works Commissioner	 <b>HUBBELL, ROTH &amp; CLARK, INC</b> CONSULTING ENGINEERS SINCE 1915	555 Hulet Drive P.O. Box 824 Bloomfield Hills, MI 48303-0824 (248) 454-6300 <a href="http://www.hrc-engr.com">http://www.hrc-engr.com</a>	DATE:	08/16/2016
				SCALE:	
NOTE				SHEET #:	
				JOB #:	20160331

# King Street Tile Drain Inspections

Inspection Report for Observation:  
**ConstructedBank3**

**Observation Location:**



**Photo 1**



**Material:** Rocks, rip rap

**Length (feet):** 0

**Location:**

**Photo 1 Direction:**

**Comments:**

Constructed bank on both sides of drain, downstream of M13 crossing for 40 ft. Photo facing downstream.

**Photo 2**

CLIENT	Saginaw County Public Works Commissioner		555 Hulet Drive P.O. Box 824 Bloomfield Hills, MI 48303-0824 (248) 454-6300 <a href="http://www.hrc-engr.com">http://www.hrc-engr.com</a>	DATE:	08/16/2016
				SCALE:	
NOTE				SHEET #:	
				JOB #:	20160331

# King Street Tile Drain Inspections

Inspection Report for Observation:  
**ConstructedBank4**

**Observation Location:**



**Photo 1**



**Material:** Rocks, rip rap

**Length (feet):** 10

**Location:**

**Photo 1 Direction:**

**Comments:**

Constructed banks on both sides for 10 ft, just upstream of M13 crossing. Photo facing north.

**Photo 2**

CLIENT	Saginaw County Public Works Commissioner		555 Hulet Drive P.O. Box 824 Bloomfield Hills, MI 48303-0824 (248) 454-6300 <a href="http://www.hrc-engr.com">http://www.hrc-engr.com</a>	DATE:	08/16/2016
				SCALE:	
NOTE				SHEET #:	
				JOB #:	20160331

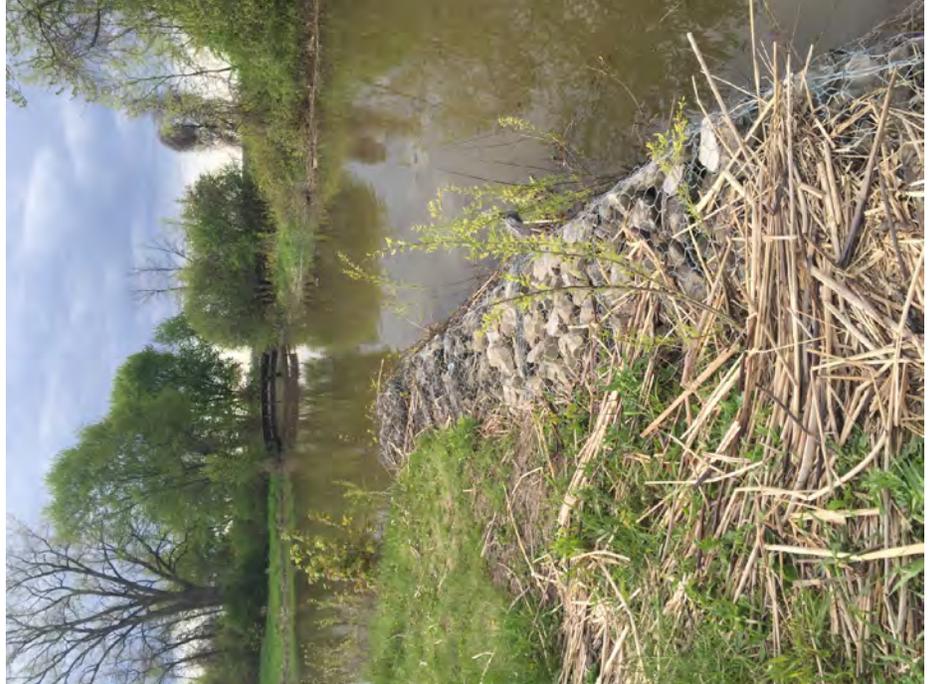
# King Street Tile Drain Inspections

Inspection Report for Observation:  
**ConstructedBank5**

**Observation Location:**



**Photo 1**



**Material:** Gabion baskets with rip rap

**Length (feet):** 0

**Location:** Left Side Facing Upstream

**Photo 1 Direction:**

**Comments:**

Left side of the drain at the outlet to the Saginaw River . Picture facing upstream

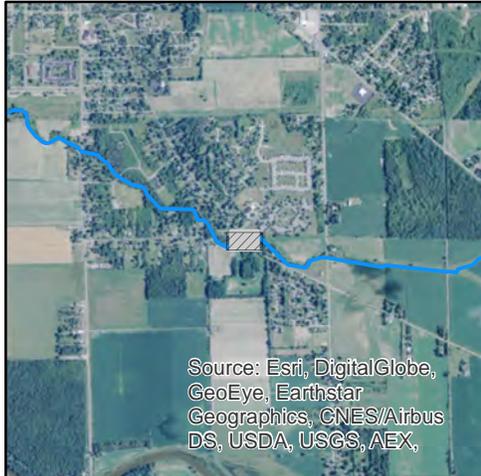
**Photo 2**

CLIENT	Saginaw County Public Works Commissioner	 <b>HUBBELL, ROTH &amp; CLARK, INC</b> CONSULTING ENGINEERS SINCE 1915	555 Hulet Drive P.O. Box 824 Bloomfield Hills, MI 48303-0824 (248) 454-6300 <a href="http://www.hrc-engr.com">http://www.hrc-engr.com</a>	DATE:	08/16/2016
				SCALE:	
NOTE				SHEET #:	
				JOB #:	20160331

# King Street Tile Drain Inspections

Inspection Report for Observation:  
**ConstructedBank6**

**Observation Location:**



**Photo 1**



**Material:** Broken concrete

**Length (feet):** 40

**Location:** Left Side Facing Upstream

**Photo 1 Direction:**

**Comments:**

Constructed bank with broken concrete. 40 ft up to washington rd. In poor condition. Falling apart and leaving debris in the drain. Causing riffle. Photo facing upstream.contains surface outlet pipe at washington rd.

**Photo 2**

CLIENT	Saginaw County Public Works Commissioner	 <b>HUBBELL, ROTH &amp; CLARK, INC</b> CONSULTING ENGINEERS SINCE 1915	555 Hulet Drive P.O. Box 824 Bloomfield Hills, MI 48303-0824 (248) 454-6300 <a href="http://www.hrc-engr.com">http://www.hrc-engr.com</a>	DATE:	08/16/2016
				SCALE:	
NOTE				SHEET #:	
				JOB #:	20160331

# King Street Tile Drain Inspections

Inspection Report for Observation:  
**ConstructedBank7**

**Observation Location:**



**Photo 1**



**Material:** Small stones.

**Length (feet):** 30

**Location:**

**Photo 1 Direction:**

**Comments:**

Constructed banks on both sides under railroad bridge. Small stones. Photo facing north.

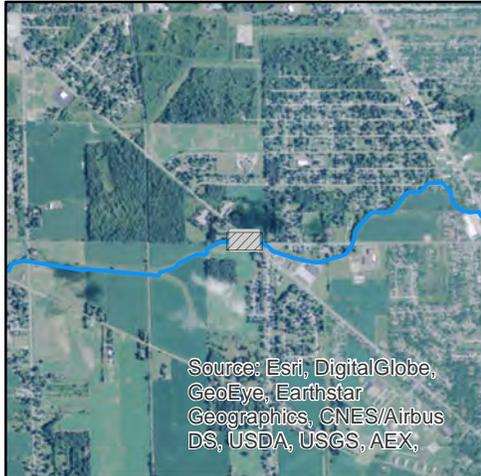
**Photo 2**

CLIENT	Saginaw County Public Works Commissioner	 <b>HUBBELL, ROTH &amp; CLARK, INC</b> CONSULTING ENGINEERS SINCE 1915	555 Hulet Drive P.O. Box 824 Bloomfield Hills, MI 48303-0824 (248) 454-6300 <a href="http://www.hrc-engr.com">http://www.hrc-engr.com</a>	DATE:	08/16/2016
				SCALE:	
NOTE				SHEET #:	
				JOB #:	20160331

# King Street Tile Drain Inspections

Inspection Report for Observation:  
**ConstructedBank8**

**Observation Location:**



**Photo 1**



**Material:** Bag riprap

**Length (feet):** 20

**Location:** Left Side Facing Upstream

**Photo 1 Direction:** Facing Upstream

**Comments:**

Bag riprap constructed bank. Serves as headwall for 19" sop on left side and extends to crossing at williamson rd.

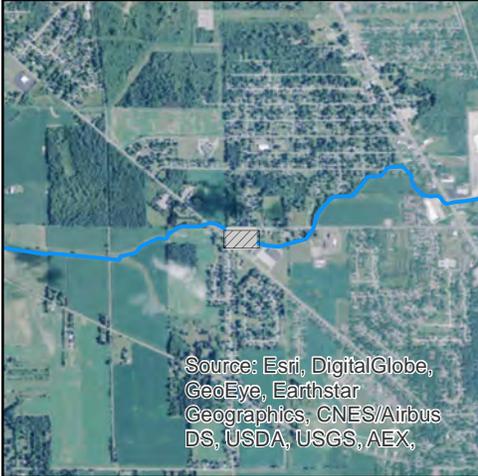
**Photo 2**

CLIENT	Saginaw County Public Works Commissioner	 <b>HUBBELL, ROTH &amp; CLARK, INC</b> CONSULTING ENGINEERS SINCE 1915	555 Hulet Drive P.O. Box 824 Bloomfield Hills, MI 48303-0824 (248) 454-6300 <a href="http://www.hrc-engr.com">http://www.hrc-engr.com</a>	DATE:	08/16/2016
				SCALE:	
NOTE				SHEET #:	
				JOB #:	20160331

# King Street Tile Drain Inspections

Inspection Report for Observation:  
**ConstructedBank9**

**Observation Location:**



**Photo 1**



**Material:** Stone

**Length (feet):** 6

**Location:** Right Side Facing Upstream

**Photo 1 Direction:** North

**Comments:**

Stone used for erosion protection on right side of drain.

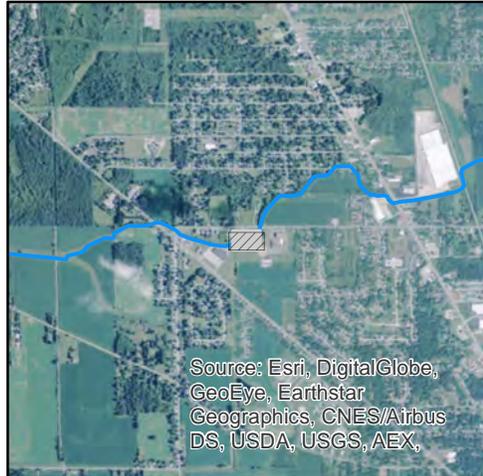
**Photo 2**

CLIENT	Saginaw County Public Works Commissioner	 <b>HUBBELL, ROTH &amp; CLARK, INC</b> CONSULTING ENGINEERS SINCE 1915	555 Hulet Drive P.O. Box 824 Bloomfield Hills, MI 48303-0824 (248) 454-6300 <a href="http://www.hrc-engr.com">http://www.hrc-engr.com</a>	DATE:	08/16/2016
				SCALE:	
NOTE				SHEET #:	
				JOB #:	20160331

# King Street Tile Drain Inspections

Inspection Report for Observation:  
**ConstructedBank10**

**Observation Location:**



**Photo 1**



**Material:** Broken concrete

**Length (feet):** 10

**Location:** Right Side Facing Upstream

**Photo 1 Direction:** Facing Upstream

**Comments:**

Constructed bank is headwall for 18" hdpe sop. In failed condition.

**Photo 2**

CLIENT	Saginaw County Public Works Commissioner		555 Hulet Drive P.O. Box 824 Bloomfield Hills, MI 48303-0824 (248) 454-6300 <a href="http://www.hrc-engr.com">http://www.hrc-engr.com</a>	DATE:	08/16/2016
				SCALE:	
NOTE				SHEET #:	
				JOB #:	20160331

# King Street Tile Drain Inspections

Inspection Report for Observation:  
**ConstructedBank11**

**Observation Location:**



**Photo 1**



**Material:** Bag riprap

**Length (feet):** 10

**Location:** Left Side Facing Upstream

**Photo 1 Direction:** North

**Comments:**

Bag riprap headwall around 30" concrete sop. In fair condition. Some erosion is visible. Just upstream of mack crossing.

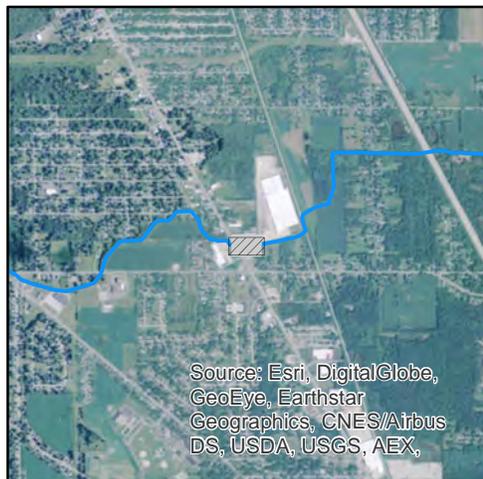
**Photo 2**

CLIENT	Saginaw County Public Works Commissioner	 <b>HUBBELL, ROTH &amp; CLARK, INC</b> CONSULTING ENGINEERS SINCE 1915	555 Hulet Drive P.O. Box 824 Bloomfield Hills, MI 48303-0824 (248) 454-6300 <a href="http://www.hrc-engr.com">http://www.hrc-engr.com</a>	DATE:	08/16/2016
				SCALE:	
NOTE				SHEET #:	
				JOB #:	20160331

# King Street Tile Drain Inspections

Inspection Report for Observation:  
**ConstructedBank12**

**Observation Location:**



**Photo 1**



**Material:** Crushed concrete bricks.

**Length (feet):** 50

**Location:** Right Side Facing Upstream

**Photo 1 Direction:** Facing Upstream

**Comments:**

5' wall on right side of drain facing upstream made of concrete bricks. Picture facing upstream.

**Photo 2**

CLIENT	Saginaw County Public Works Commissioner	 <b>HUBBELL, ROTH &amp; CLARK, INC</b> CONSULTING ENGINEERS SINCE 1915	555 Hulet Drive P.O. Box 824 Bloomfield Hills, MI 48303-0824 (248) 454-6300 <a href="http://www.hrc-engr.com">http://www.hrc-engr.com</a>	DATE:	08/16/2016
				SCALE:	
NOTE				SHEET #:	
				JOB #:	20160331

# King Street Tile Drain Inspections

Inspection Report for Observation:  
**ConstructedBank13**

**Observation Location:**



**Photo 1**



**Material:** Stones.

**Length (feet):** 6

**Location:** Left Side Facing Upstream

**Photo 1 Direction:** North

**Comments:**

Concrete blocks on left bank. Sediment deposit as well. Looks like a location of a field tile outlet, but could not be located.

**Photo 2**



CLIENT	Saginaw County Public Works Commissioner	 <b>HUBBELL, ROTH &amp; CLARK, INC</b> CONSULTING ENGINEERS SINCE 1915	555 Hulet Drive P.O. Box 824 Bloomfield Hills, MI 48303-0824 (248) 454-6300 <a href="http://www.hrc-engr.com">http://www.hrc-engr.com</a>	DATE:	08/16/2016
				SCALE:	
SHEET #:					
JOB #:	20160331				
NOTE					

# King Street Tile Drain Inspections

Inspection Report for Observation:  
**ConstructedBank14**

**Observation Location:**



**Photo 1**



**Material:** Bag rip rap

**Length (feet):** 25

**Location:** Left Side Facing Upstream

**Photo 1 Direction:** North

**Comments:**

Bag rip rap constructed bank. Possibly a headwall for ag field surface drainage. Most likely for a field tile outlet, but could not locate. Erosion.

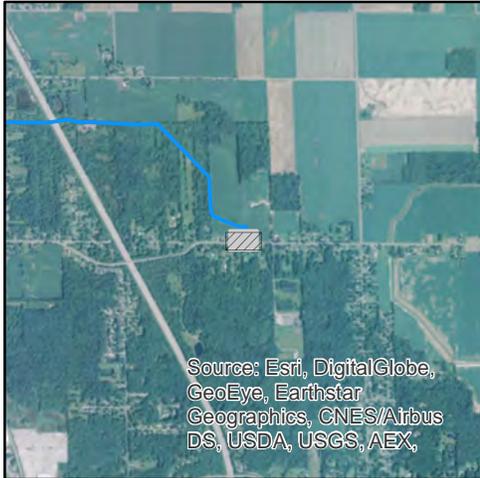
**Photo 2**

CLIENT	Saginaw County Public Works Commissioner		555 Hulet Drive P.O. Box 824 Bloomfield Hills, MI 48303-0824 (248) 454-6300 <a href="http://www.hrc-engr.com">http://www.hrc-engr.com</a>	DATE:	08/16/2016
				SCALE:	
NOTE			SHEET #:		
			JOB #:	20160331	

# King Street Tile Drain Inspections

Inspection Report for Observation:  
**ConstructedBank15**

**Observation Location:**



**Photo 1**



**Material:** Stamped concrete walls

**Length (feet):** 20

**Location:** Right Side Facing Upstream

**Photo 1 Direction:** Southwest

**Comments:**

Concrete walls on right side of drain facing upstream for 20' and approximately 5' high. Falling into drain. Picture facing southwest across drain.

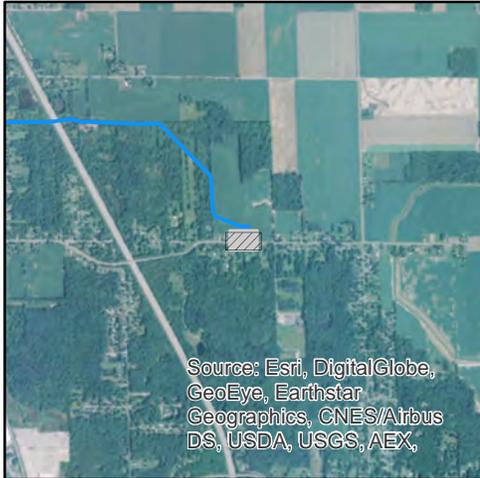
**Photo 2**

CLIENT	Saginaw County Public Works Commissioner	 <b>HUBBELL, ROTH &amp; CLARK, INC</b> CONSULTING ENGINEERS SINCE 1915	555 Hulet Drive P.O. Box 824 Bloomfield Hills, MI 48303-0824 (248) 454-6300 <a href="http://www.hrc-engr.com">http://www.hrc-engr.com</a>	DATE:	08/16/2016
				SCALE:	
NOTE				SHEET #:	
				JOB #:	20160331

# King Street Tile Drain Inspections

Inspection Report for Observation:  
**ConstructedBank16**

**Observation Location:**



**Photo 1**



**Material:** 8" poured wall

**Length (feet):** 200

**Location:** Right Side Facing Upstream

**Photo 1 Direction:** Facing Downstream

**Comments:**

8" poured conc wall approximately 25' right of drain centerline from this location approximately 200' downstream to end. Picture facing downstream

**Photo 2**

CLIENT	Saginaw County Public Works Commissioner		555 Hulet Drive P.O. Box 824 Bloomfield Hills, MI 48303-0824 (248) 454-6300 <a href="http://www.hrc-engr.com">http://www.hrc-engr.com</a>	DATE:	08/16/2016
				SCALE:	
NOTE				SHEET #:	
				JOB #:	20160331

# King Street Tile Drain Inspections

Inspection Report for Observation:  
**ConstructedBank17**

**Observation Location:**



**Photo 1**



**Material:** Concrete

**Length (feet):** 15

**Location:** Left Side Facing Upstream

**Photo 1 Direction:** Facing Downstream

**Comments:**

Approximately 20' long concrete wall sloping into drain and approximately 5' high. Picture facing downstream.

**Photo 2**

CLIENT	Saginaw County Public Works Commissioner	 <b>HUBBELL, ROTH &amp; CLARK, INC</b> CONSULTING ENGINEERS SINCE 1915	555 Hulet Drive P.O. Box 824 Bloomfield Hills, MI 48303-0824 (248) 454-6300 <a href="http://www.hrc-engr.com">http://www.hrc-engr.com</a>	DATE:	08/16/2016
				SCALE:	
NOTE				SHEET #:	
				JOB #:	20160331