



MINNESOTA DEPARTMENT OF TRANSPORTATION
WASHINGTON COUNTY PUBLIC WORKS DEPARTMENT

CONSTRUCTION PLAN FOR: GRADING, AGGREGATE BASE, BITUMINOUS SURFACING, STORM SEWER, SIGNING,
PAVEMENT MARKING, CONCRETE C&G, SIDEWALK, AND ADA IMPROVEMENTS

LOCATED ON C.S.A.H. 23 (BEACH RD./PARIS AVE.) FROM UPPER 61ST ST. TO 65TH ST. (ORLEANS ST.)



Background:

- The Preserver was specified to provide pretreatment prior to discharge to an infiltration basin.
- Drainage Area:
 - 1.94 acres, residential
 - 0.66 acres impervious (25.4%)
 - Mature tree canopy
- Structure:
 - 5' diameter
 - 3' sump depth
 - Ø15" inlet, with dissipator
 - Ø15" outlet, with skimmer



Structure located upstream of infiltration basin

2017 Year-End Performance:

- 2,418 lbs material captured, including:
 - 0.232 lbs phosphorus
 - Significant heavy metals
 - 1.50 specific gravity



Heavy leaf loading

Observations:

- Heavy leaf loading resulted in some accumulation at the inlet, which cleared following larger storm events.
- Device functioned as intended; capturing & retaining material in the structure.
- Low specific gravity of retained material likely indicates high organic content.



Freezing conditions

2017 Year-End Analysis of Material Retained in Structure

	Composite Sample, Laboratory Analysis	Total Dry Weight ¹ (lbs.)	
All Material	- Specific Gravity:	1.50	
	- Gradation (microns):		
	< 75	3.9%	
	75 - 2000	83.9%	
	> 2000	12.2%	
Priority Pollutants²	- Pollutant Concentrations (mg/l):		
	Total Phosphorus	96	0.232
	Arsenic	11	0.027
	Copper	72	0.174
	Lead	5	0.012
	Zinc	85	0.206

1) Total weight retained in structure as of the material sampling date, 10/18/17.

2) Priority pollutant weights are a portion of the "All Material" total dry weight.

Preserver Performance - C.S.A.H. 23

