

Automated Weir-Based Structures For Stormwater Systems



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Introduction

- 40 CFR 112 – Oil Pollution Prevention governs oil stored in aboveground facilities (tanks and pipelines).
- Fundamental objective is to prevent discharges of oil to waters of the United States.
- Engineering options are available for general secondary containment such as curbs, walls, liners, berms, etc.
- NSRC developed an innovative approach to protecting stormwater systems from spills

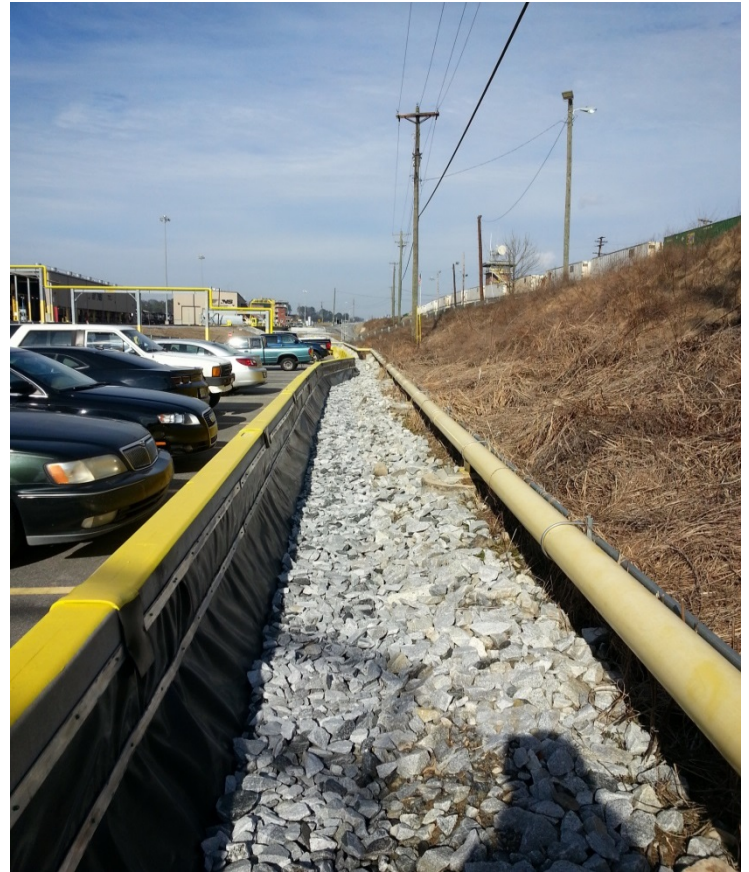
General Secondary Containment Examples

Curbing Around Fuel Piping



General Secondary Containment Examples

Wall Around Fuel Piping



Liner for Fuel Piping

General Secondary Containment Examples

Concrete Pad Protecting Fuel Piping



General Secondary Containment Examples

Rolled Curb Used for Roadways



General Secondary Containment Examples

Split Encasement Piping



General Secondary Containment Examples

Manual Valve



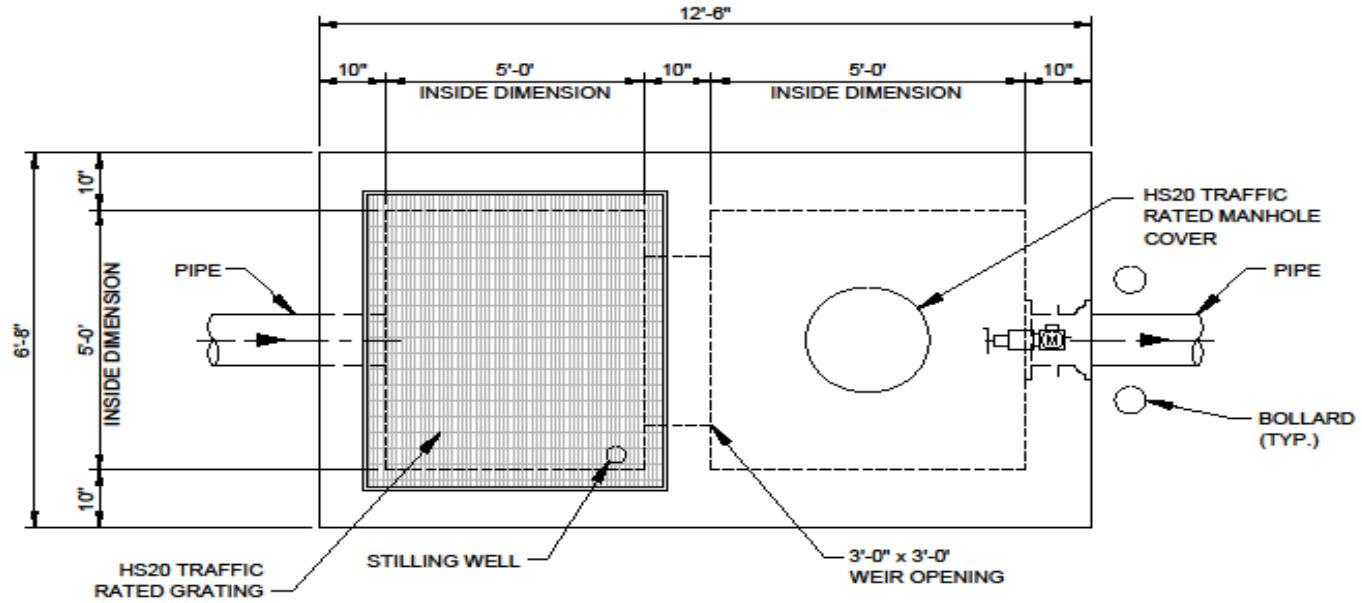
Automated Weir-Based Structure

- NSRC has implemented a unique design for possible oil leaks and spills that could migrate to a stormwater system.
- Structure is designed to be installed within the stormwater system.
- Hydraulically designed for dry and wet weather flows
- Automated to close when a leak is detected, alarms and notifies yard personnel.

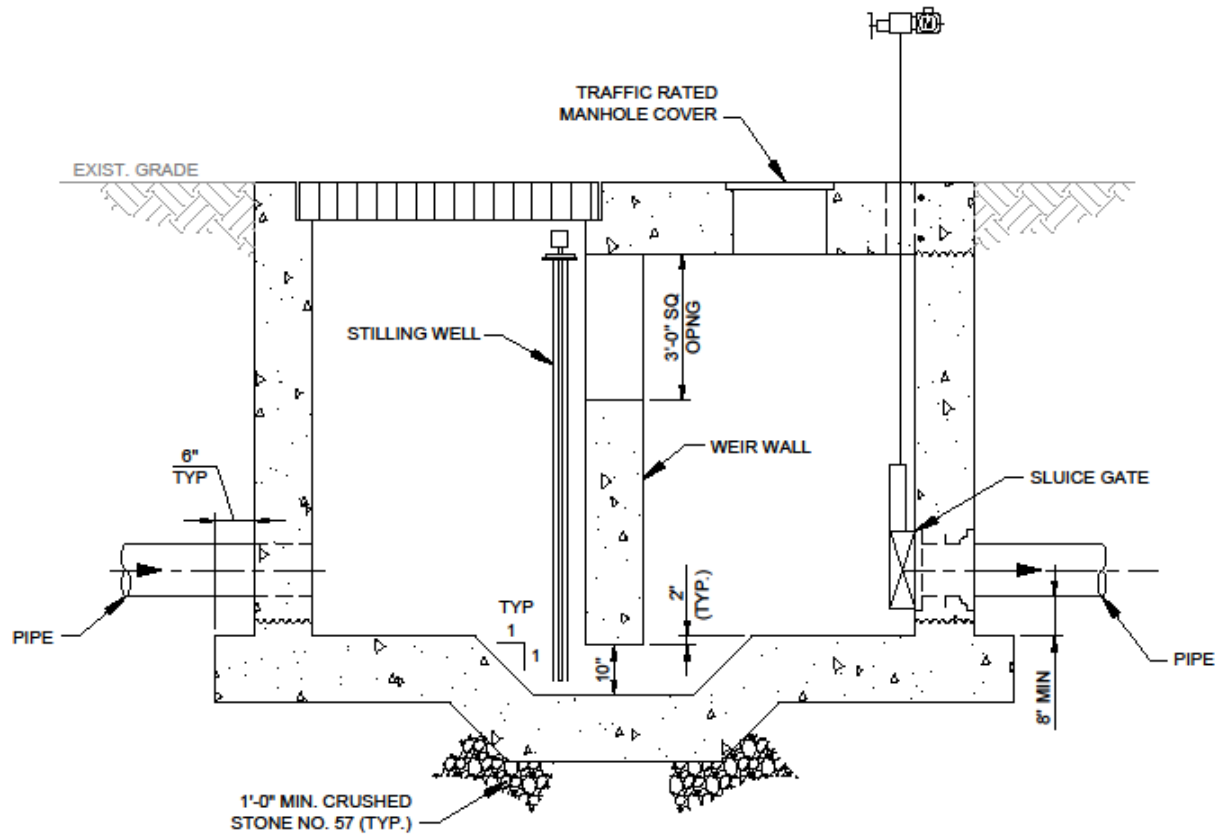
Automated Weir-Based Structure

- Structure includes the following features:
 - Actuated Gate
 - Weir Wall with underflow/overflow capabilities
 - Leak Detection Instrument
 - Control Panel
 - Alarm System
 - Auto-dialer in case of alarm
 - No need for manual monitoring

Structure Plan



Structure Section



Automated Weir-Based Structure

- Stormwater Discharge Protection



Automated Weir-Based Structure

- Stormwater Structure Installed Insitu



Automated Weir-Based Structure

- Leak Detection Instrument – Vegaflex



Conclusions

- General Secondary Containment rule applies to all aboveground fuel piping
- The automated weir-based structure can help protect from spills or releases into the stormwater system
- Automation means the system can operate 24hrs/day, 7days/week
- No manual monitoring for spills is needed

Questions

