



# TOWN OF WAKEFIELD

Department of Public Works  
William J. Lee Memorial Town Hall  
One Lafayette Street  
Wakefield, MA 01880  
781-246-6301 x4120

## Standard Operating Procedure Detention Basins

### I. PURPOSE

Detention basins are treatment Best Management Practices (BMPs) that are designed to collect, treat, and control the release rate of stormwater. They are often designed as 3 to 12 feet depressions with grass covering the entire basin other than the riprap inlets. Controlled release of stormwater is accomplished by using an outlet control structure.

### II. INSPECTION

Regular inspections are important to prevent against premature failure of detention basins. Detention basins should be inspected monthly when regular maintenance/observance such as lawn care occur. All accumulated trash should be collected at this time. The basin shall be inspected for any side-slope erosion. Any outlet control structure or overflow structure shall be monitored for sediment accumulation in their sumps and if they are clogged with vegetation or debris.

### III. MAINTENANCE

Regular maintenance shall be conducted at the following intervals to maintain detention Basins so they may operate efficiently and as designed.

| Activity  | Time of Year        | Frequency                          |
|---|---------------------|------------------------------------|
| Inspect detention basin   | Year Round          | Bi-Annually and after major storms |
| Examine outlet structure for evidence of clogging or outflow release velocities that are greater than design flow | Spring and Fall     | Bi-Annually                        |
| Mow the upper-stage, side slopes, embankment, and emergency spillway  | Spring through Fall | At least Bi-Annually               |
| Remove trash and debris   | Year Round          | Bi-Annually                        |
| Remove sediment from the basin  | Spring or Fall      | At least once every 5 years        |



IV. LOCATION OF DETENTION BASINS

- a. Harris M. Dolbeare School  
340 Lowell Street  
Wakefield, MA 01880

V. ATTACHMENTS:

- a. Maintenance Report, Detention Basins
- b. Plan, Harris M. Dolbeare School Detention Basin Plan,
- c. Cross-Section Detail, DR-12A Detention Basin X-Section

VI. REVISION

These procedures contained in the SOP are reviewed as part of the NPDES MS<sub>4</sub> Annual Report development and updated as needed.

VII. EFFECTIVE:

June 2022

SIGNED:

A handwritten signature in black ink, appearing to read "William J. Renault, Jr.", with a stylized flourish at the end.

William J. Renault, Jr., P.E.  
Town Engineer  
Engineering Division  
Wakefield Department of Public Works



# TOWN OF WAKEFIELD

DEPARTMENT OF PUBLIC WORKS

Engineering Division

## POST-CONSTRUCTION OPERATION AND MAINTENANCE LOG – DETENTION BASIN

Inspector's Name: \_\_\_\_\_ Date: \_\_\_\_\_

Location: \_\_\_\_\_

Inspection Type: ☐ Routine ☐ Spill ☐ Other: \_\_\_\_\_

☐ Post-Rainfall (Precipitation in Inches: \_\_\_\_\_)

| Activity  | Frequency                          | Comments |
|---|------------------------------------|----------|
| Inspect detention basin   | 2x per year and after major storms |          |
| Examine outlet structure for evidence of clogging or outflow release velocities that are greater than design flow | 2x per year                        |          |
| Remove trash and debris   | As needed                          |          |
| Remove sediment from the basin  | Every 5 years or as needed         |          |

Additional Comments: \_\_\_\_\_

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| Signature: |  |
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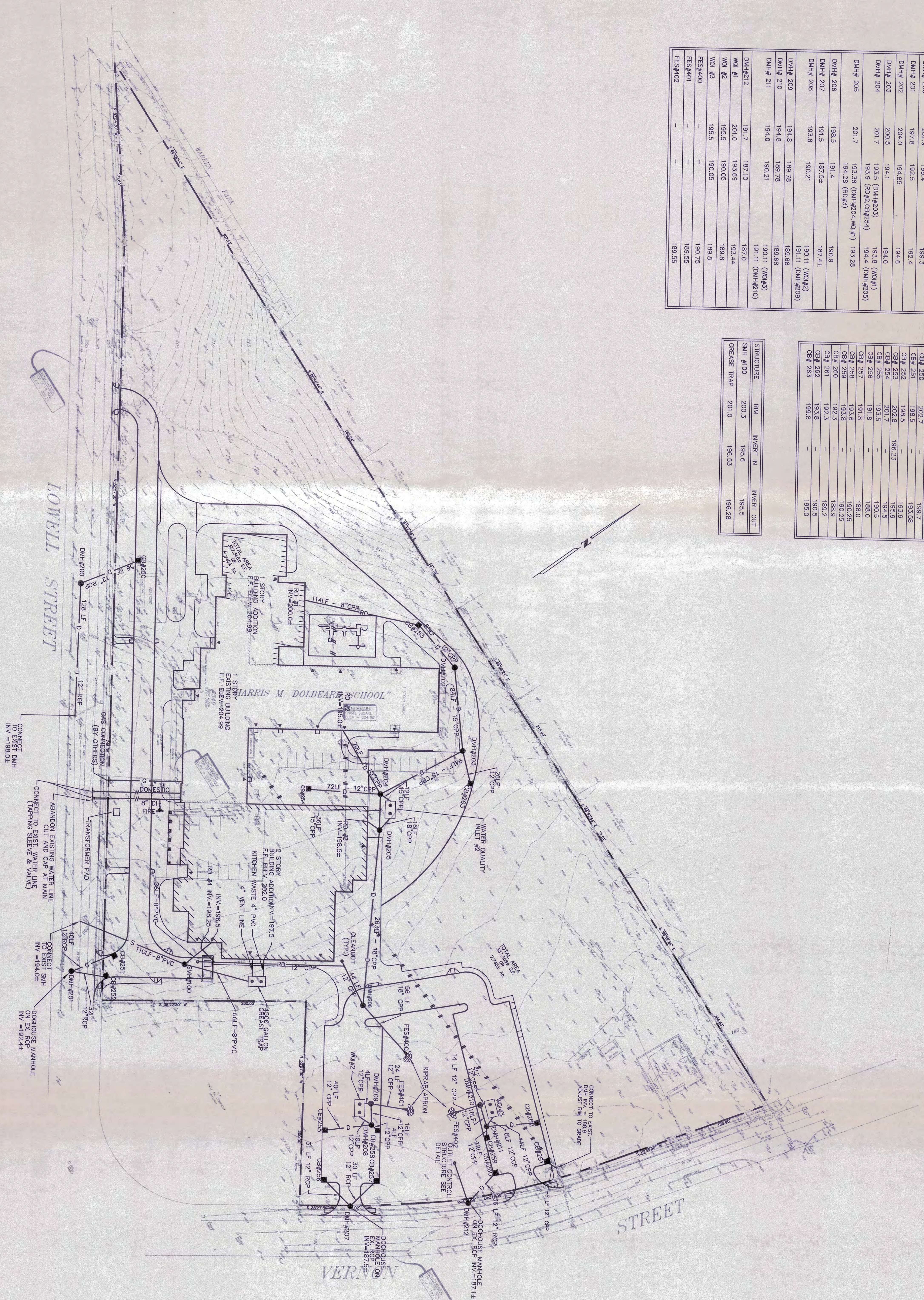


# UTILITY STRUCTURES SCHEDULES

| STRUCTURE | RIM   | INVERT IN            | INVERT OUT      |
|-----------|-------|----------------------|-----------------|
| DMH# 200  | 202.9 | 199.4                | 199.3           |
| DMH# 201  | 197.8 | 192.5                | 192.4           |
| DMH# 202  | 204.0 | 194.85               | 194.6           |
| DMH# 203  | 200.5 | 194.1                | 194.0           |
| DMH# 204  | 201.7 | 193.5 (DMH#203)      | 193.8 (WQ#1)    |
| DMH# 205  | 201.7 | 193.9 (RD#2, CB#254) | 194.4 (DMH#205) |
| DMH# 206  | 194.8 | 189.78               | 189.68          |
| DMH# 207  | 194.8 | 189.78               | 189.68          |
| DMH# 208  | 194.8 | 189.78               | 189.68          |
| DMH# 209  | 194.8 | 189.78               | 189.68          |
| DMH# 210  | 194.8 | 189.78               | 189.68          |
| DMH# 211  | 194.0 | 190.21               | 190.11 (WQ#3)   |
| DMH# 212  | 191.7 | 187.10               | 187.0           |
| WQ# 1     | 201.0 | 193.89               | 193.44          |
| WQ# 2     | 195.5 | 190.05               | 189.8           |
| WQ# 3     | 195.5 | 190.05               | 189.8           |
| FES#400   | -     | -                    | 190.75          |
| FES#401   | -     | -                    | 189.55          |
| FES#402   | -     | -                    | 189.55          |

| STRUCTURE | RIM   | INVERT IN | INVERT OUT |
|-----------|-------|-----------|------------|
| CE# 250   | 202.7 | -         | 189.2      |
| CE# 251   | 198.5 | -         | 189.28     |
| CE# 252   | 198.5 | -         | 189.5      |
| CE# 253   | 202.8 | 186.23    | 193.5      |
| CE# 254   | 201.7 | -         | 194.5      |
| CE# 255   | 193.5 | -         | 190.5      |
| CE# 256   | 191.8 | -         | 188.0      |
| CE# 257   | 191.8 | -         | 188.0      |
| CE# 258   | 193.6 | -         | 190.25     |
| CE# 259   | 193.8 | -         | 190.25     |
| CE# 260   | 192.3 | -         | 188.9      |
| CE# 261   | 192.3 | -         | 189.2      |
| CE# 262   | 193.8 | -         | 190.5      |
| CE# 263   | 193.8 | -         | 190.5      |

| STRUCTURE   | RIM   | INVERT IN | INVERT OUT |
|-------------|-------|-----------|------------|
| SMH #100    | 200.3 | 195.6     | 195.5      |
| GREASE TRAP | 201.0 | 196.53    | 196.28     |



GRAPHIC SCALE  
SCALE: 1"=40'

DOLBEARE ELEMENTARY SCHOOL  
WAKEFIELD, MASSACHUSETTS  
SITE UTILITY PLAN

Scale: 1"=40' Date: 1/27/98 Drawn: TOC Checked:



| Revision No. | Date    | Remarks      | By  |
|--------------|---------|--------------|-----|
| 1            | 4/22/98 | Entire Sheet | TOC |

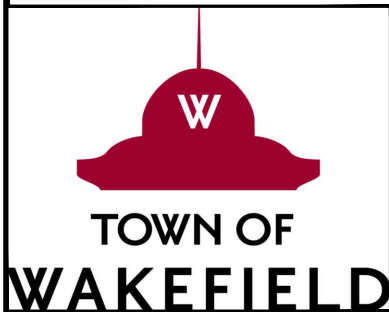
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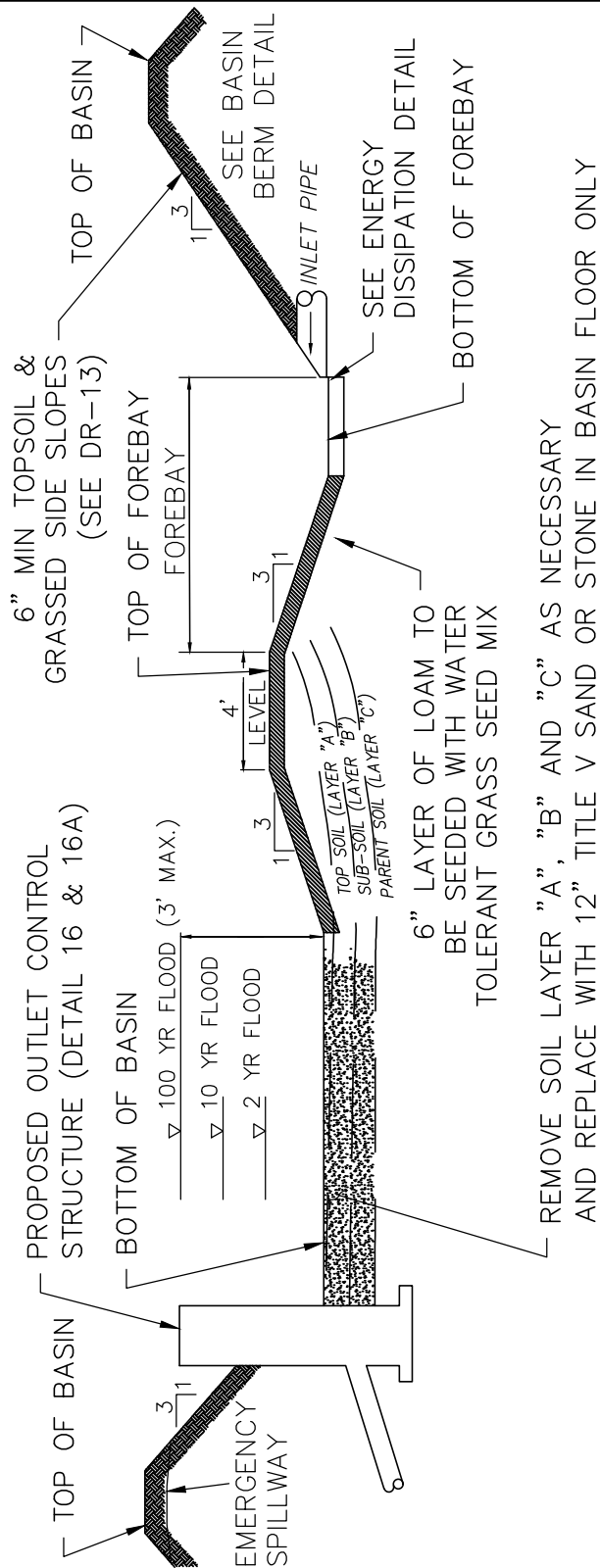
ENGINEERING DIVISION - WAKEFIELD PUBLIC WORKS

DESIGN AND CONSTRUCTION STANDARDS  
DETENTION BASIN CROSS-SECTION

SCALE: NTS

DETAIL #: DR-12A

DATE: JUN 01 2021



NOTES:

- 1.) THE BOTTOM OF THE BASIN SHALL BE SET A MINIMUM OF 2' ABOVE THE SEASONALLY HIGH GROUNDWATER TABLE.
- 2.) THE LOWEST PORTION OF THE BASIN FLOOR SHALL CONSIST OF A MINIMUM OF 12" OF TITLE V SAND OR STONE PLACED DIRECTLY OVER NATIVE "C" LAYER SOILS.