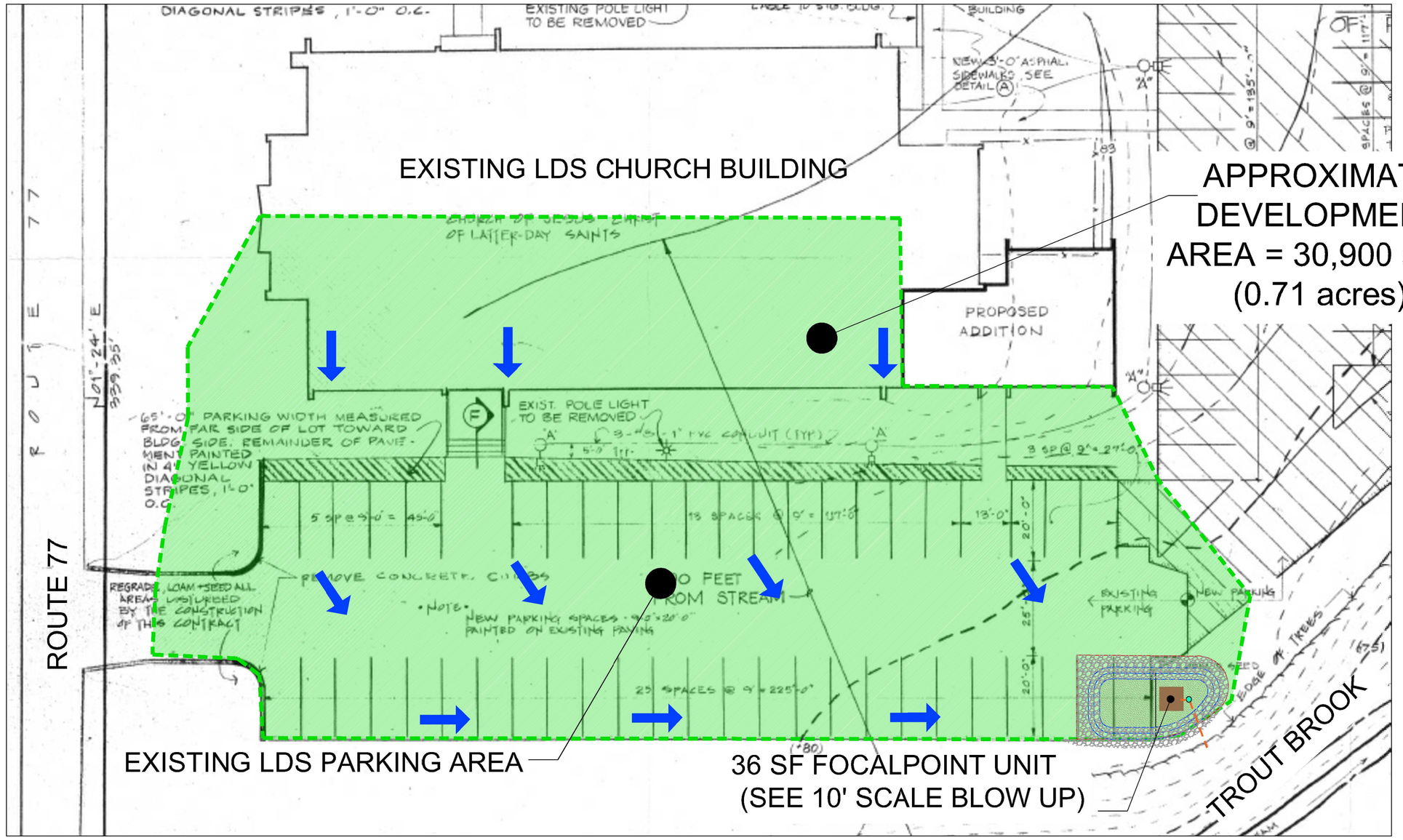
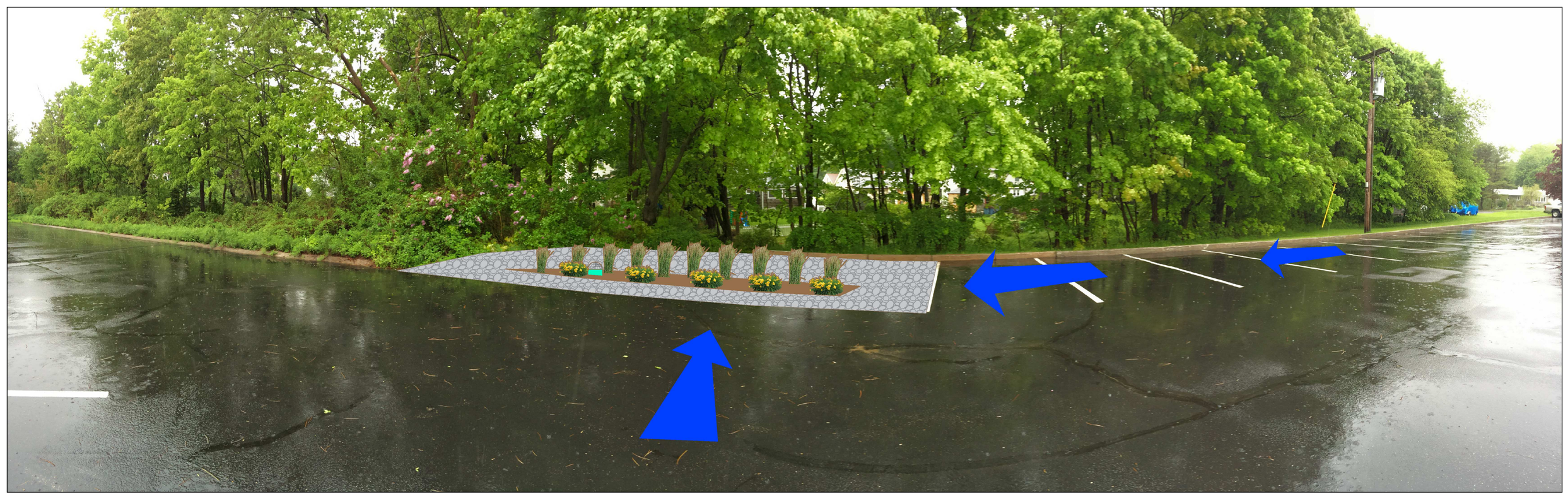
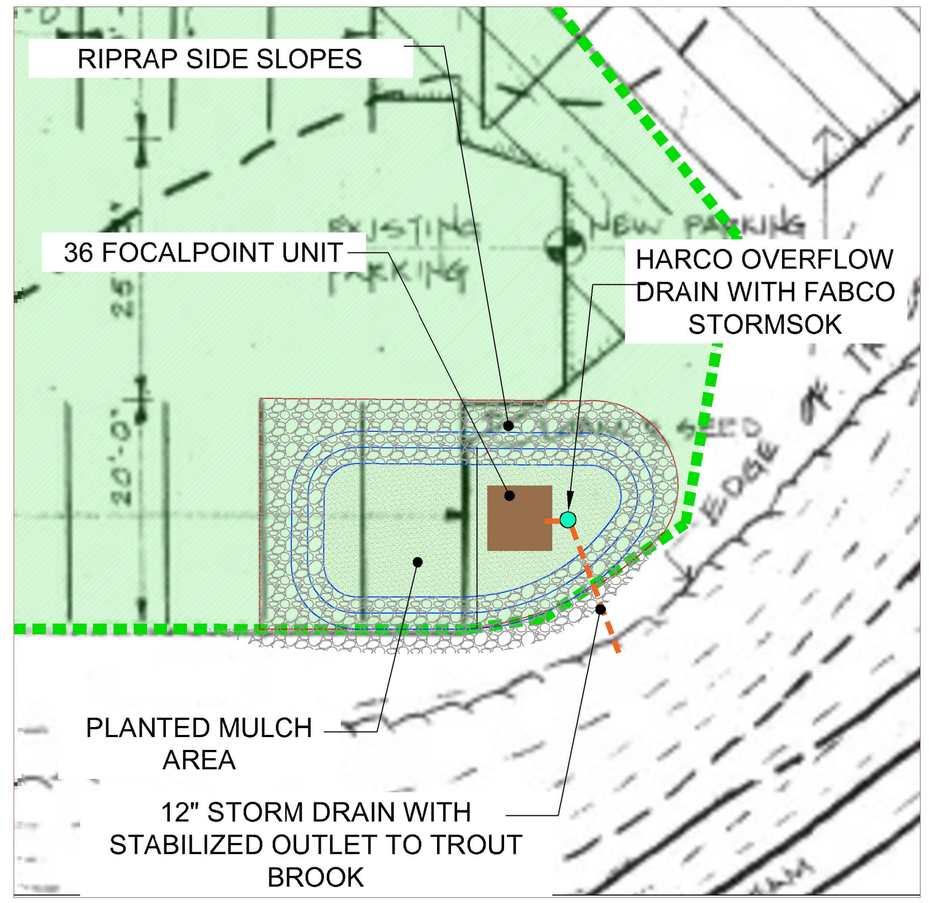



20' SCALE STORMWATER TREATMENT STRATEGY PLAN



CONCEPTUAL PHOTSIMULATION PLAN




10' SCALE PLAN EXCERPT

**FOCALPOINT SIZING AND CALCULATION SHEET**

PROJECT: TROUT BROOK – LDS PARKING

PREPARED BY: ROB WOODMAN, PE – FABCO INDUSTRIES

PREPARED FOR: CHRIS BALDWIN, PE – CCSWCD

DATE: JUNE 13, 2014

Based on the goal of treating **0.5" of runoff from impervious areas and 0.2" of runoff from pervious areas**, Fabco Industries has calculated the proposed sizing of the FocalPoint system and the ability of the system to treat the Water Quality Volume ($W_{QV}$) prior to overflow/bypass:

- Tributary Impervious Area = 24,650 sf
- Tributary Pervious Area = 6,250 sf
- Water Quality Volume ($W_{QV}$)* = 1,131 cf --- use **1,131 cf** for water quality goal -----

* The Water Quality Volume is based on treating 0.5" of runoff from impervious areas and 0.2" from pervious areas.

Using the ***ACF FP and RT Calc version 1.8***, the proposed size of the FocalPoint unit shall be **36 sf** with a minimum ponding volume of **182 cf** above the unit prior to overflow. The chart below summarizes the associated calculation and performance verification.

FocalPoint BIOFILTRATION SYSTEMS — ACF FP and RT Calc 1.8

| | | | |
|---|---|---|---|
| **Water Quality Volume and Design Event** | | | **Directions** |
| Water Quality Volume (WQv) | 1,131 | ft³ | Water Quality Volume calculated from previous Sheet |
| Design Event | 1,131 | ft³ | Total event volume calculated from previous sheet |
| **System Configuration** | | | |
| Is FocalPoint used? | Yes | | Enter Yes if FocalPoint used. Enter No if runoff flows directly into RTank and proceed to RTank Design worksheet |
| **Step 4 - FocalPoint Configuration** | | | |
| 4.1 - FocalPoint Factor of Safety | | | Enter optional factor-of-safety |
| 4.2 - FocalPoint bed area | 36 | ft² | Enter target FocalPoint footprint, 20 SF min. (See Step 4.5) |
| 4.3 - Storage volume above FocalPoint provided | 182 | ft³ | Enter available surface storage volume (See Step 4.5) |
| 4.4 - Desired treatment time | 72 | hours | Select 24, 48, 72 or 96 hrs from toggle |
| 4.5 - Water Quality Volume treated prior to overflow? | Yes | | If Yes = WQv has been treated<br>If No = larger FocalPoint bed (Step 4.2) and/or surface storage volume (Step 4.3) required |
| 4.6 - FocalPoint drain within desired time? | Yes | | If Yes = time goal has been met<br>If No = larger FocalPoint bed (Step 4.2) required |
| 4.7 - Flow in excess of storage volume above | Off site | | Select routing location for overflow/bypass vol. from toggle: Off site to disregard flow, RTank to store for retention / detention, harvesting, or infiltration |

PRELIMINARY - NOT FOR CONSTRUCTION

GRAPHIC SCALE
50 0 25 50 100
( IN FEET )
1 inch = 50 ft.

| REV | DATE | DESCRIPTION |
|---|---|---|
| 1 | 06.17.14 | SUBMITTED TO CCSWCD FOR REVIEW |

REVISIONS

PROJECT: TROUT BROOK STORMWATER QUALITY RETROFIT PROJECT LDS CHURCH, CAPE ELIZABETH, MAINE

SHEET TITLE: FOCALPOINT BIOFILTRATION CONCEPT PLAN

CLIENT: CUMBERLAND COUNTY SOIL AND WATER CONSERVATION DISTRICT

fabco Industries Inc

| | | | |
|---|---|---|---|
| DRAWN: | RJW | DATE: | JUNE 2014 |
| DESIGNED: | RJW | SCALE: | 1"=50' |
| CHECKED: | WSG | JOB NO. | 364 |
| FILE NAME: | FocalPoint.dwg | | |
| SHEET | C-1.0 | | |