



October 15, 2021

Town of Weymouth Conservation Commission
Mary Ellen Schloss, Conservation Administrator
75 Middle Street
Weymouth, MA 02189

RE: Fall 2021 Monitoring Report
Wetland and Buffer Zone Restoration
1400 Main Street, Weymouth, MA
MassDEP File #81-1216

Dear Ms. Schloss,

This report is being submitted under Condition #57 of the Order of Conditions (OOC) issued on August 1, 2018 by the Weymouth Conservation Commission (WCC) for the above referenced project. Under this Condition, *the Wetland Scientist is to monitor the wetland replication and buffer zone restoration area for a minimum of three years following planting. The Monitoring reports are to be submitted twice a year to document the spring and fall site visits and provide recommendations to meet performance goals. Monitoring is to be continued until performance goals are met and monitoring and control of invasive species is to be conducted until a Certificate of Compliance is obtained.* LE serves as the Wetland Scientist and Environmental Monitor for this condition. This fall report covers the first growing season after planting of the restoration area, and LE Weekly Monitoring Report #2, dated May 25, 2021, provided the spring monitoring report for the restoration area.

Under Condition #65 of the OOC, *the Applicant may request a Partial Certificate of Compliance for any discrete phase of the project. Before the building is occupied, the applicant must obtain a Certificate (or Certificates) of Compliance covering the storm water management system and built structures (retaining walls, buildings, parking areas, etc.). A Request for a Certificate of Compliance shall be accompanied by the most recent report of the Wetland Scientist documenting the status of the wetland replication and buffer zone restoration areas. The Applicant shall submit a Request for a Final Certificate of Compliance after the wetland replication and buffer zone mitigation areas have been monitored for at least three years and the areas have met performance goals.* This report is provided to support the Partial Certificate of Compliance for the project.

Buffer Zone Restoration Plantings

The proposed wetland replication area was not necessary for the project since direct wetland impacts were avoided during construction. As reported previously (LE Weekly Monitoring Report #1, May 18, 2021), during the pre-restoration site visit held on May 7, 2021 with the Contractor, Conservation Agent, and LE, it was determined that since there was no temporary wetland impact associated with the installation of the retaining wall, the proposed wetland replication would not be required, and instead, the area identified for wetland replication was to be restored as part of the upland buffer zone restoration.

The restoration area was graded and planted in May of 2021, as described in previously submitted LE monitoring reports. A Professional Wetland Scientist (PWS) from LE was present during the buffer zone restoration activities, which consisted primarily of removal of fill and debris from the buffer zone, removal of invasive plants, addition of top soil, planting of shrubs and trees, and seeding with an erosion control/restoration seed mix. Buffer zone restoration activities began on May 10, 2021 and planting and hydro-seeding of the restoration area was completed on May 21, 2021. On September 29, 2021, a PWS from LE conducted a site inspection to assess the status of the restoration area, adjacent wetland, restoration area plantings, soil stability, and invasive species. Photographic documentation of the site is enclosed with this report and the location of the restoration area investigated is depicted on the attached Site Plan.

Shrubs and Trees

The number and condition of planted woody vegetation identified during the inspection within the restoration area is included in Table 1. Overall survival of planted vegetation is very high, with only two (2) plants observed in poor condition (alive but with broken stems) and three (3) dead plants observed among 220 plants counted within the area investigated. Overall survival of the observed planted trees and shrubs in this area after the first growing season is approximately 98 percent. In addition, the condition of these plants is generally very good.

| TABLE 1 BUFFER ZONE RESTORATION AREA PLANT STATUS | | | | |
|--|-----------------------|------------------------|----------------------------|--|
| Species | Number Planted | Number Observed | Number Poor or Dead | Approximate Average Height (ft) |
| Red Maple (<i>Acer rubrum</i>) | 0 | 4 | 0 | 12 - 15 |
| River Birch (<i>Betula nigra</i>) | 0 | 6* | 0 | 7 - 8 |
| Eastern Red Cedar (<i>Juniperus virginiana</i>) | 23 | 23 | 0 | 4 - 5 |
| Sweet Pepperbush (<i>Clethra alnifolia</i>) | 80 | 76 | 2 Poor 3 Dead | 3 - 4 |
| Arrowwood Viburnum (<i>Viburnum dentatum</i>) | 60 | 59 | 1 Not Observed | 3 - 4 |
| Red Osier Dogwood (<i>Cornus sericea</i>) | 13 | 13 | 0 | 3 - 5 |
| Inkberry (<i>Ilex glabra</i>) | 15 | 15 | 0 | 1 - 2 |
| Virginia Sweetspire (<i>Itea virginica</i>) | 24 | 24 | 0 | 1 - 2 |

* River birch plantings generally included 4 to 5 stems at each location.

Herbaceous Vegetation & Soil Stabilization

The New England Erosion Control/Restoration Mix for Moist Sites was used for seeding the restoration area. At the time of the fall inspection, overall herbaceous cover within the restoration area was generally very good, with herbaceous cover estimated to be 80 to 90 percent within much of the area. However, there are several locations where herbaceous cover remains thin or where bare soil is present. These areas are listed under the Summary and Recommendations section of this report. No erosion issues were observed at the site during the fall inspection.

Invasive Vegetation Monitoring

As of the recent monitoring inspection on September 29, 2021, invasive vegetation within the restoration area had been significantly reduced from pre-construction conditions. Within the limit of work area, very little invasive vegetation was observed, and included some small Japanese knotweed (*Polygonum cuspidatum*) sprouts below the retaining wall between drainage outlets #2 and #3, and a fairly large clump of multiflora rose (*Rosa multiflora*), located in the southeast corner of the site. Just beyond the limit of work along the wetland edge, there still remain scattered clusters of multiflora rose as well as a number of glossy buckthorn (*Frangula alnus*) plants. The interior of the wetland was not inspected since it was flooded at the time.

Summary and Recommendations

As described in previous LE monitoring reports, the buffer zone restoration area was planted in May of 2021. This report covers the first growing season after planting of the restoration area. As of the September 29, 2021 monitoring inspection, it is LE's opinion that the mitigation area is meeting the performance goal of 75% aerial cover by a healthy mix of native species (in total for all vegetative layers combined). In addition, the majority of the restoration area is well stabilized with herbaceous cover.

However, at this time there are several locations where herbaceous cover remains thin or where bare soil is present. These locations include:

- A small area of bare soil remains at the northeast corner of the site adjacent to the northern property line (Photograph 8). This area should be stabilized by seeding/hydroseeding or by mulching as in adjacent areas. Soil accumulated along the erosion control barrier should be removed and the wattle should remain in place at this location until the soil is stabilized.
- The area between the retaining wall and the wetland near the northeast corner of the site, where herbaceous cover is approximately 40 to 50 percent, likely due to shaded conditions (Photograph 9). This area should be re-seeded/hydroseeded. The erosion control barrier should remain in place at this location until the soil is stabilized.
- A very small area of bare soil at the southeast corner of the retaining wall (Photograph 10). This area should be stabilized by seeding/hydroseeding or by mulching as in adjacent areas. Soil accumulated along the erosion control barrier should be removed and the barrier should remain in place at this location until the soil is stabilized.



500A Washington Street, Quincy, MA 02169

- Between the southern property line and the pool area, a large area of bare soil had not yet been seeded (Photograph 13). This area should be stabilized by seeding/hydroseeding. The erosion control wattle that is located along the toe of the nearby slope could be moved to the edge of the disturbed soil around this area if it is movable. If it is not, a new wattle should be placed along the edge of disturbed soil at this location. An erosion control barrier should remain in place at this location until soils are stabilized.

Other than at the locations noted above, it is LE's opinion that the erosion control barriers can be removed at this time. Prior to removal of the erosion control barriers, LE recommends that any remaining construction debris (observed in several locations) be removed from the area along the base of the retaining wall and adjacent wetland.

Invasive species have been significantly reduced within the restoration area. However, patches of invasive vegetation, including multiflora rose, glossy buckthorn, Japanese knotweed, purple loosestrife (*Lythrum salicaria*), and common reed (*Phragmites australis*), were observed beyond the limit of work erosion control barrier and within the wetland. Therefore, LE recommends continued management of invasive species at the site as detailed in the approved Vegetation Management Plan, dated September 26, 2019.

LE will continue post-construction monitoring inspections at a minimum during the early and late portions of each growing season for the three-year monitoring period and will provide the Weymouth Conservation Commission with written reporting twice a year as required under the Order of Conditions. If you have any questions regarding this report or project site conditions please do not hesitate to contact me at 617.405.4118 or jho@lucasenvironmental.net.

Sincerely,
LUCAS ENVIRONMENTAL, LLC

Joseph H. Orzel, PWS, CWS
Project Manager/Wetland Scientist

Enclosure: Photographic Documentation
Site Landscaping Plan

cc: Chris King, LT&E Properties, LLC

PHOTOGRAPHIC DOCUMENTATION

DATE: September 29, 2021



Photograph 1: Typical vegetation between the retaining wall and erosion control barrier, includes planted sweet pepperbush and a mix of herbaceous vegetation.



Photograph 2: Japanese knotweed re-sprouting below the retaining wall between outlets #2 and #3.

PHOTOGRAPHIC DOCUMENTATION

DATE: September 29, 2021



Photograph 3: Patch of common reed located at wetland edge below the retaining wall.



Photograph 4: Restoration area vegetation north of the pool/patio area.

PHOTOGRAPHIC DOCUMENTATION

DATE: September 29, 2021



Photograph 5: Restoration area vegetation east of the pool patio area.



Photograph 6: Restoration area vegetation east of the pool area

PHOTOGRAPHIC DOCUMENTATION

DATE: September 29, 2021



Photograph 7: Restoration area vegetation east of the pool area closer to the MBTA tracks.



Photograph 8: Area of bare soil at northeast corner of property.

PHOTOGRAPHIC DOCUMENTATION

DATE: September 29, 2021



Photograph 9: Typical thin herbaceous cover below retaining wall in general area north of stormwater outlet #3.



Photograph 10: Small area of bare soil at south end of retaining wall.

PHOTOGRAPHIC DOCUMENTATION

DATE: September 29, 2021



Photograph 11: Stormwater outlet #1 and erosion control barrier.



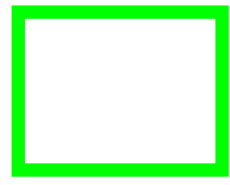
Photograph 12: Stormwater outlet #2, erosion control barrier, and construction debris.

PHOTOGRAPHIC DOCUMENTATION

DATE: September 29, 2021



Photograph 13: Area of bare soil in general area between pool and southern property line.



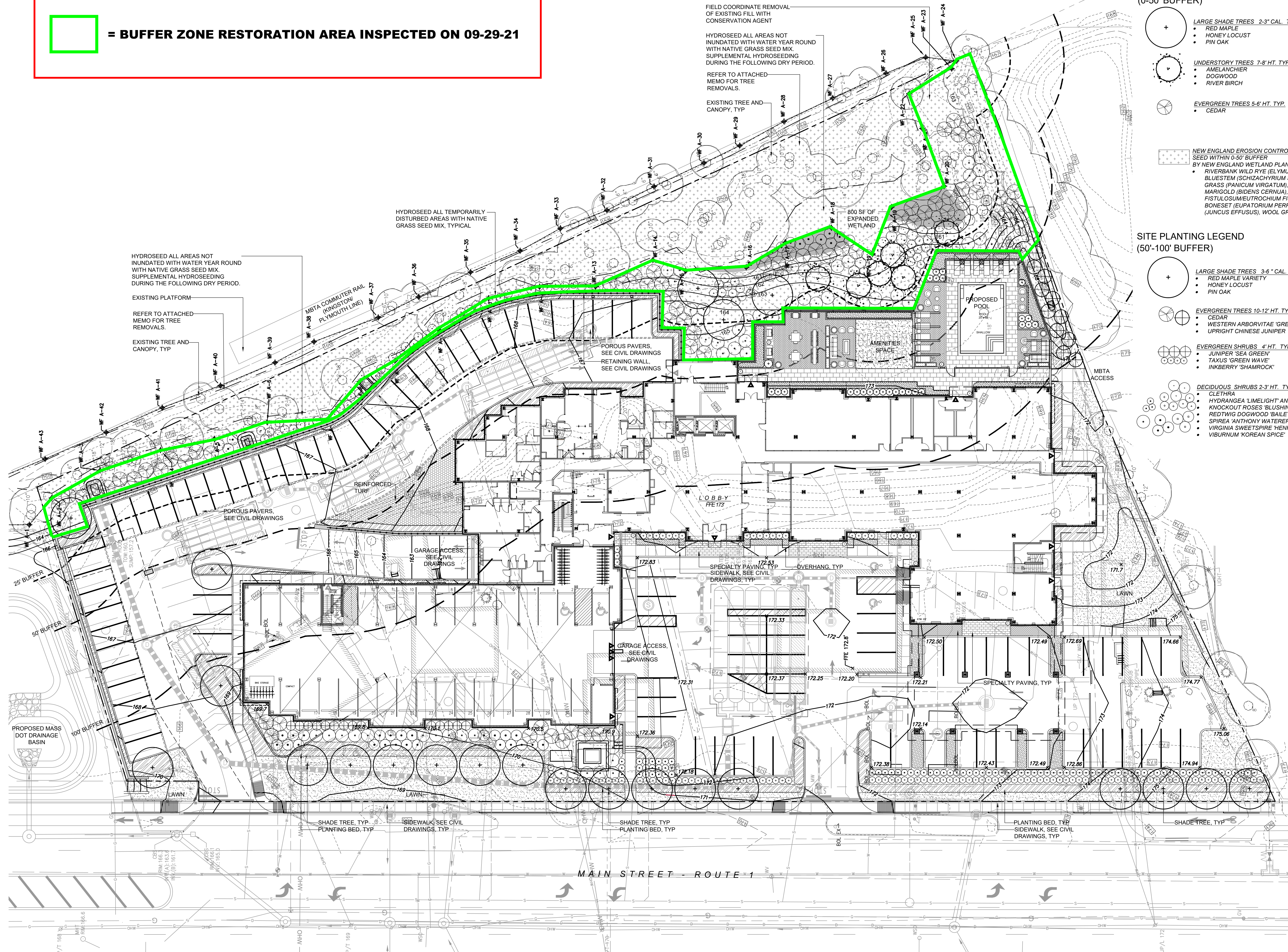
= BUFFER ZONE RESTORATION AREA INSPECTED ON 09-29-21

WETLAND RESTORATION/MITIGATION PLANTING LEGEND (0-50' BUFFER)

- LARGE SHADE TREES 2-3" CAL. TYP.
 - RED MAPLE
 - HONEY LOCUST
 - PIN OAK
- UNDERSTORY TREES 7-8' HT. TYP.
 - AMELANCHIER
 - DOGWOOD
 - RIVER BIRCH
- EVERGREEN TREES 5-6' HT. TYP.
 - CEDAR
- EVERGREEN SHRUBS 2-3 GALLON
 - INKBERRY
- DECIDUOUS SHRUBS 2-3 GALLON
 - CLETHRA
 - REDTIG DOGWOOD
 - VIRGINIA SWEETSPIRE
 - ARROWWOOD VIBURNUM
- NATIVE GRASSES 1 GAL
 - SEDGE
 - SWITCH GRASS
- NEW ENGLAND EROSION CONTROL/RESTORATION MIX FOR DETENTION BASINS AND MOIST SITES SEED WITHIN 0-50' BUFFER
 - BY NEW ENGLAND WETLAND PLANTS INC.
 - RIVERBANK WILD RYE (ELYMUS RIPARIUS), CREEPING RED FESCUE (FESTUCA RUBRA), LITTLE BLUESTEM (SCHIZACHYRIUM SCOPARIUM), BIG BLUESTEM (ANDROPOGON GERARDII), SWITCH GRASS (PANICUM VIRGATUM), UPLAND BENTGRASS (AGROSTIS PERENNANS), NODDING BUR MARIGOLD (BIDENS CERNUA), HOLLOW-STEM JOE PYE WEED (EUPATORIUM FISTULOSUM/EUTROCHIIUM FISTULOSUM), NEW ENGLAND ASTER (ASTER NOVAE-ANGLIAE), BONESET (EUPATORIUM PERFORIATUM), BLUE VERVAIN (VERBENA HASTATA), SOFT RUSH (JUNCUS EFFUSUS), WOOL GRASS (SCIRPUS CYPERINUS)

SITE PLANTING LEGEND (50'-100' BUFFER)

- LARGE SHADE TREES 3-6" CAL. TYP.
 - RED MAPLE VARIETY
 - HONEY LOCUST
 - PIN OAK
- EVERGREEN TREES 10-12' HT. TYP.
 - WESTERN ARBORVITAE 'GREEN GIANT'
 - UPRIGHT CHINESE JUNIPER
- EVERGREEN SHRUBS 4' HT. TYP.
 - JUNIPER 'SEA GREEN'
 - TAXUS 'GREEN WAVE'
 - INKBERRY 'SHAMROCK'
- DECIDUOUS SHRUBS 2-3' HT. TYP.
 - CLETHRA
 - HYDRANGEA 'LIMELIGHT' AND 'LITTLE LIME'
 - KNOCKOUT ROSES 'BLUSHING PINK'
 - REDTIG DOGWOOD 'BAILEY'
 - SPIREA 'ANTHONY WATERER'
 - VIRGINIA SWEETSPIRE 'HENRY GARNET'
 - VIBURNUM 'KOREAN SPICE'
- ORNAMENTAL GRASSES 2 GAL
 - FEATHER REED GRASS 'KARL FOERSTER'
 - FOUNTAIN GRASS 'HAMEL'
 - PRAIRIE DROP SEED
 - SEDGE
 - SWITCH GRASS 'SHENANDOAH'
- PERENNIAL MASSES AND GROUNDCOVER 1 GAL - 12-18" O.C.
 - LIRIOPE 'BIG BLUE'
 - DAYLILY
 - PURPLELEAF WINTERCREEPER
- LAWN HYDROSEED NEW LAWN OR DISTURBED AREAS



LANDSCAPE PLAN
COLONY STATION
 1400 -1430 MAIN STREET
 WEYMOUTH, MA
SEAN PAPICH
 landscape architecture
 222 north street hingham,ma 02043
 781.741.5455 www.seanpapich.com
 DATE: June 4, 2018
 June 19, 2018
 SCALE: 1" = 20'-0"
 PROJECT NO. 1804

L100

