



MUNICIPAL PAVING LOT NOTES:

1. THE 0.9 ACRE TARGET AREA IS PART OF A MUNICIPAL PARKING LOT FOR THE MUNICIPAL BUILDING OF MOORESTOWN AND THE PUBLIC LIBRARY. THIS SYSTEM IS DESIGNED TO INFILTRATE THE STORMWATER WATER RUNOFF OF A NEW JERSEY WATER QUALITY STORM (2" IN 2 HOURS).
2. THE TARGET AREA WILL GENERATE 3,440 CUBIC FEET FOR EVERY NJ WATER QUALITY STORM. THE AREA OUTLINED IN GREEN IS A SMALL 1 FOOT DEEP BIORETENTION SYSTEM FOR THE TARGET AREA. IF CURB CUTS ARE NEEDED TO ALLOW FOR THE STORMWATER TO MORE EASILY ENTER THE BIORETENTION SYSTEM. NEW JERSEY AVERAGES 42 INCHES PER YEAR. 90% OF ALL THE RAIN EVENTS IN NEW JERSEY ARE LESS THAN OR EQUAL TO THE NEW JERSEY WATER QUALITY STORM. OVER THE COURSE OF A YEAR THE BIORETENTION SYSTEM WILL INFILTRATE 2.861 AC-FT PER YEAR OR 0.9 MILLION GALLONS PER YEAR.
3. OVER THE COURSE OF A YEAR, THE TARGET AREA PRODUCES 180 LBS OF TOTAL SUSPENDED SOLIDS A YEAR. THE BIORETENTION SYSTEM WILL REMOVE 162 LBS OF TOTAL SUSPENDED SOLIDS FROM THAT 180 LBS A YEAR.
4. THIS BIORETENTION SYSTEM WILL WORK EVERY EFFICIENTLY WITH VERY LITTLE MAINTENANCE. IT IS RECOMMENDED THAT THE BIORETENTION SYSTEM RECEIVE ZERO MOWING AND BE IGNORED BY THE PROPERTY OWNER. THE SYSTEM WILL NATURALIZE AND HAVE A BEAUTIFUL AESTHETIC TO THE PARKING LOT. THE NATURALIZED SYSTEM WILL ENCOURAGE A DIVERSE GROUP OF WILDLIFE TO THE AREA.



COMMERCIAL PARKING LOT NOTES:

1. THE TARGET AREA FOR THIS DEMONSTRATION PROJECT IS A 2.5 ACRE PARKING LOT. THE STORM THAT RCE IS DESIGNING THE SYSTEM FOR IS NEW JERSEY WATER QUALITY STORM (1.25" IN 2 HOURS)
2. EVERY NEW JERSEY WATER QUALITY STORM THE PARKING LOT WILL GENERATE 9,400 CUBIC FEET OF WATER. ALONG WITH THAT WATER, IT WILL HAVE APPROXIMATELY GENERATE 500 LBS OF TOTAL SUSPENDED SOLIDS A YEAR.
3. NEW JERSEY AVERAGES 42 INCHES OF RAIN A YEAR. 90% OF ALL RAIN EVENTS THAT OCCUR IN A YEAR ARE EQUAL TO A OR LESS THAN THE NJ QUALITY STORM. THIS SYSTEM WILL INFILTRATE 7,624 AC-FT OF STORMWATER A YEAR. WHILE TREATING THIS STORMWATER IS SHOULD REMOVE APPROXIMATELY 300 LBS OF TOTAL SUSPENDED SOLIDS A YEAR.
4. THIS SYSTEM IS A DUAL BMP PROJECT. RCE PROPOSES INFILTRATE THE STORMWATER BY TURNING THE ISLANDS IN THE PARKING LOT INTO INFILTRATION ISLANDS WITH VEGETATION OR JUST STONE AS SEEN IN THE PICTURES BELOW. THE STONE INFILTRATION ISLANDS WILL NOT CLEAN THE STORMWATER RUNOFF LIKE VEGETATION CAN BUT CAN BE USED AS A WALKWAY WHILE STILL INFILTRATING. RCE PROPOSES INSTALLING POROUS PAVEMENT ON THE APRON WHERE THE ROAD MEETS THE SIDEWALK AND MAKING THE SIDEWALK POROUS PAVEMENT. THE INFILTRATION ISLANDS WILL ONLY CAPTURE ABOUT A 3/5 OF THE STORMWATER FROM THE PARKING LOT. THE REST WILL INFILTRATE THROUGH THE POROUS PAVEMENT.
5. THE MAJORITY OF PERVIOUS CONCRETE PAVEMENTS FUNCTION WELL WITH LITTLE OR NO MAINTENANCE. MAINTENANCE OF PERVIOUS CONCRETE PAVEMENT CONSISTS PRIMARILY OF PREVENTION OF GLOGGING OF THE VOID STRUCTURE. VACUUMING ANNUALLY OR MORE OFTEN MAY BE NECESSARY TO REMOVE DEBRIS FROM THE SURFACE OF THE PAVEMENTS. OTHER CLEANING OPTIONS MAY INCLUDE POWER BLOWING AND PRESSURE WASHING. PRESSURE WASHING OF A CLOGGED PERVIOUS CONCRETE PAVEMENT HAS RESTORED 80% TO 90% OF THE PERMEABILITY IN SOME CASES. IT ALSO SHOULD BE NOTED THAT MAINTENANCE PRACTICES FOR PERVIOUS CONCRETE PAVEMENTS ARE STILL BEING DEVELOPED.



LEGEND

TARGET AREA OF RETROFIT



CHRISTOPHER C. OBROPTA, Ph.D., P.E.
PROFESSIONAL ENGINEER - NJ LICENSE # 37632

DESIGNED: _____ DATE: _____
CHECKED: _____ APPROVED: _____ DATE: _____
SPW CCO

MILESTONE 4 OF REGIONAL STORMWATER MANAGEMENT PLAN FOR THE
POMPESTON CREEK
NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
MOORESTOWN MUNICIPAL BUILDING AND COMMERCIAL SITE, MOORESTOWN, NJ
INFILTRATION RETROFIT

RUTGERS
New Jersey Agricultural
Experiment Station
WATER RESOURCES PROGRAM
14 COLLEGE FARM ROAD
NEW BRUNSWICK, NJ 08901

JOB	CONCEPT SHEET #
POMP	8
BID	TOTAL
8	12

DRAFT

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE