

MEMORY PARK RAIN GARDEN PROJECT

NEW JERSEY FUTURE STRAWAY BOULEVARD, NEWTON SUSSEX COUNTY, NEW JERSEY

PROJECT DESCRIPTION:

A RAIN GARDEN IS TO BE INSTALLED IN THE GRASS AREA NORTH OF THE PARKING LOT TO CAPTURE AND INFILTRATE RUNOFF FROM THE PARKING LOT. THE RUNOFF WOULD BE COLLECTED BY IMPLEMENTING CURB CUTS IN THE EXISTING CURB. THE RUNOFF IS DIRECTED INTO THE RAIN GARDEN THROUGH THE PROPOSED BIOSWALES.

LOCATION MAP:



LEGEND:

- EXISTING FENCE
- EXISTING DRAINAGE AREA
- EXISTING TREELINE
- EXISTING TREE
- EXISTING CONTOURS
- EXISTING SPOT ELEVATIONS

SPOT ELEVATION CODES:
 EP - EDGE OF PAVEMENT TC - TOP OF CURB
 CB - CATCH BASIN UP - UTILITY POLE
 GS - GROUND SHOT

- EXISTING CENTERLINE
- EXISTING BUILDING
- EXISTING UTILITY POLE
- EXISTING CATCH BASIN
- EDGE OF PAVEMENT
- LIMIT OF WORK
- AREA TO BE DEPAVED
- PROPOSED GREEN INFRASTRUCTURE
- PROPOSED TREE

LIST OF DRAWINGS:

SHEET NAME	TITLE
COVER	COVER SHEET
P-1	EXISTING CONDITIONS AND DEMOLITION PLAN
P-2	GRADING PLAN
P-3	PROPOSED SITE PLAN
P-4	PLANTING PLAN
DT-1	RAIN GARDEN AND CURB CUT DETAILS
DT-2	BIOSWALE AND PLANTING DETAILS
DT-3	RAIN GARDEN RENDERING

CHRISTOPHER C. OBROPTA, Ph.D., P.E.
 PROFESSIONAL ENGINEER - NJ LICENSE # 37532

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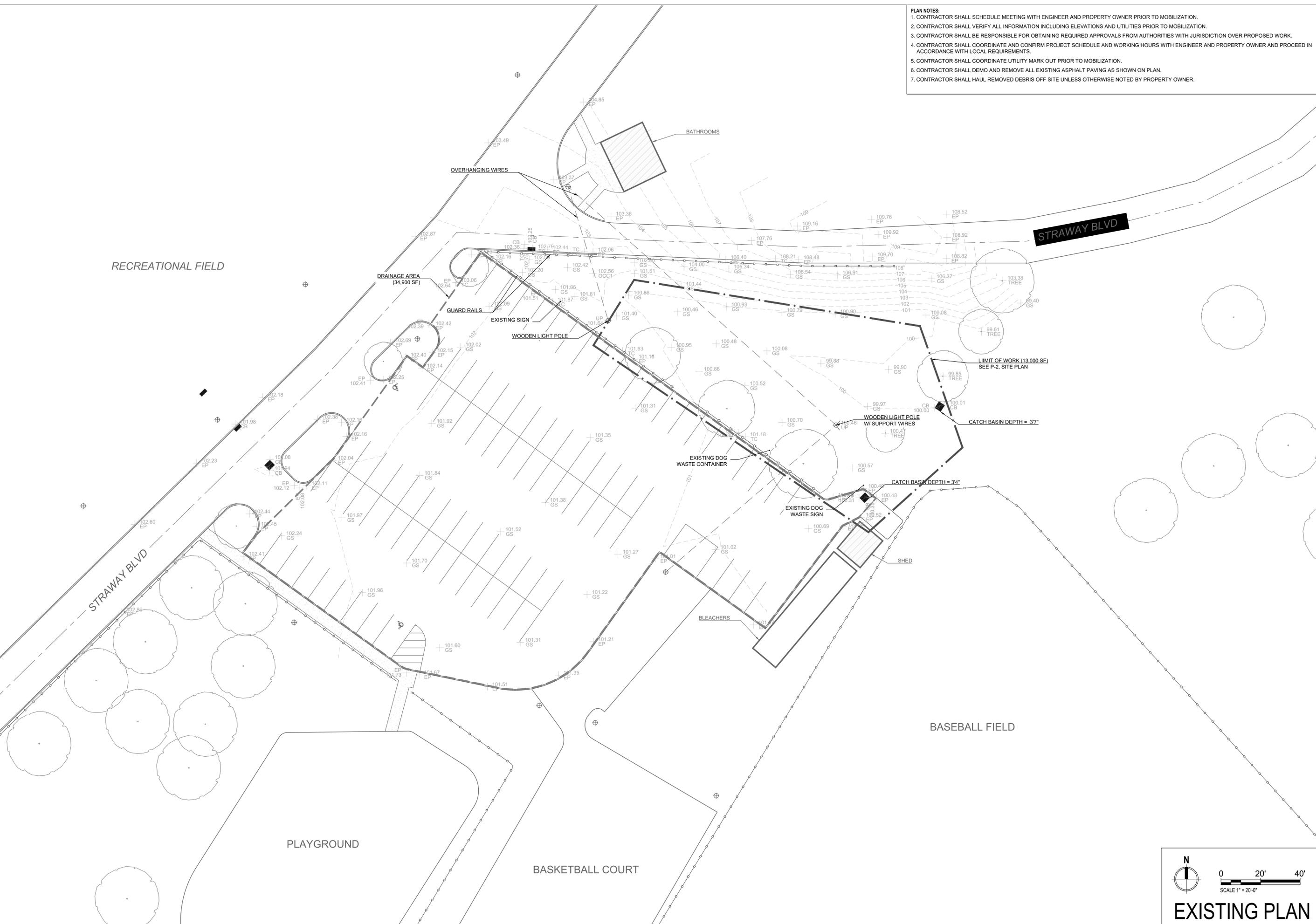
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No. DATE	

MEMORY PARK RAIN GARDEN PROJECT
 NEW JERSEY FUTURE
 STRAWAY BOULEVARD, NEWTON
 SUSSEX COUNTY, NEW JERSEY
COVER SHEET



SHEET NAME
COVER

- PLAN NOTES:**
1. CONTRACTOR SHALL SCHEDULE MEETING WITH ENGINEER AND PROPERTY OWNER PRIOR TO MOBILIZATION.
 2. CONTRACTOR SHALL VERIFY ALL INFORMATION INCLUDING ELEVATIONS AND UTILITIES PRIOR TO MOBILIZATION.
 3. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING REQUIRED APPROVALS FROM AUTHORITIES WITH JURISDICTION OVER PROPOSED WORK.
 4. CONTRACTOR SHALL COORDINATE AND CONFIRM PROJECT SCHEDULE AND WORKING HOURS WITH ENGINEER AND PROPERTY OWNER AND PROCEED IN ACCORDANCE WITH LOCAL REQUIREMENTS.
 5. CONTRACTOR SHALL COORDINATE UTILITY MARK OUT PRIOR TO MOBILIZATION.
 6. CONTRACTOR SHALL DEMO AND REMOVE ALL EXISTING ASPHALT PAVING AS SHOWN ON PLAN.
 7. CONTRACTOR SHALL HAUL REMOVED DEBRIS OFF SITE UNLESS OTHERWISE NOTED BY PROPERTY OWNER.



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MEMORY PARK RAIN GARDEN PROJECT
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 STRAWAY BOULEVARD, NEWTON
 SUSSEX COUNTY, NEW JERSEY
EXISTING CONDITIONS AND DEMOLITION PLAN



SHEET NAME
P-1



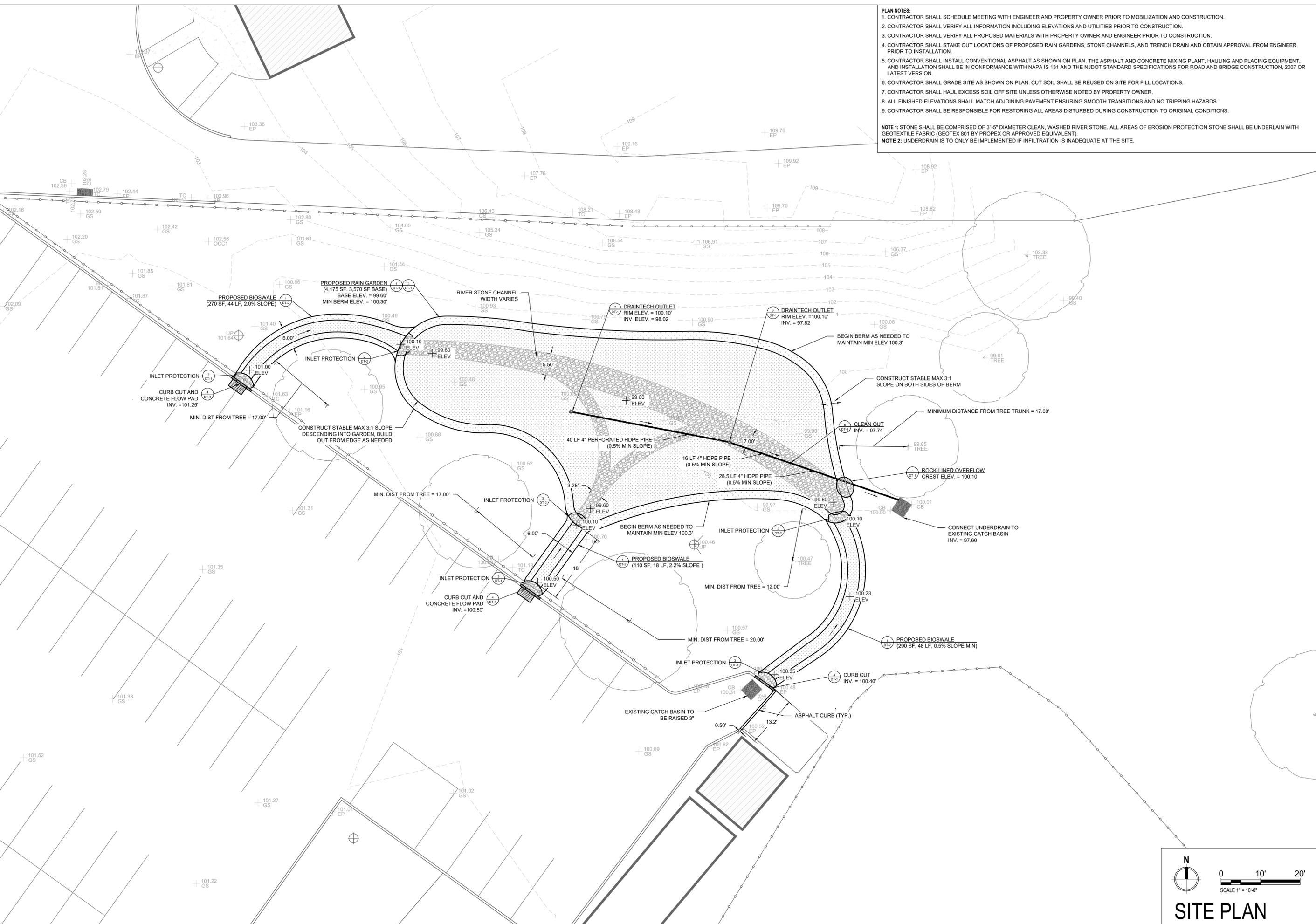
EXISTING PLAN

PLAN NOTES:

1. CONTRACTOR SHALL SCHEDULE MEETING WITH ENGINEER AND PROPERTY OWNER PRIOR TO MOBILIZATION AND CONSTRUCTION.
2. CONTRACTOR SHALL VERIFY ALL INFORMATION INCLUDING ELEVATIONS AND UTILITIES PRIOR TO CONSTRUCTION.
3. CONTRACTOR SHALL VERIFY ALL PROPOSED MATERIALS WITH PROPERTY OWNER AND ENGINEER PRIOR TO CONSTRUCTION.
4. CONTRACTOR SHALL STAKE OUT LOCATIONS OF PROPOSED RAIN GARDENS, STONE CHANNELS, AND TRENCH DRAIN AND OBTAIN APPROVAL FROM ENGINEER PRIOR TO INSTALLATION.
5. CONTRACTOR SHALL INSTALL CONVENTIONAL ASPHALT AS SHOWN ON PLAN. THE ASPHALT AND CONCRETE MIXING PLANT, HAULING AND PLACING EQUIPMENT, AND INSTALLATION SHALL BE IN CONFORMANCE WITH NAPA IS 131 AND THE NJDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2007 OR LATEST VERSION.
6. CONTRACTOR SHALL GRADE SITE AS SHOWN ON PLAN. CUT SOIL SHALL BE REUSED ON SITE FOR FILL LOCATIONS.
7. CONTRACTOR SHALL HAUL EXCESS SOIL OFF SITE UNLESS OTHERWISE NOTED BY PROPERTY OWNER.
8. ALL FINISHED ELEVATIONS SHALL MATCH ADJOINING PAVEMENT ENSURING SMOOTH TRANSITIONS AND NO TRIPPING HAZARDS
9. CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING ALL AREAS DISTURBED DURING CONSTRUCTION TO ORIGINAL CONDITIONS.

NOTE 1: STONE SHALL BE COMPRISED OF 3"-5" DIAMETER CLEAN, WASHED RIVER STONE. ALL AREAS OF EROSION PROTECTION STONE SHALL BE UNDERLAIN WITH GEOTEXILE FABRIC (GEOTEX 801 BY PROPEX OR APPROVED EQUIVALENT).

NOTE 2: UNDERDRAIN IS TO ONLY BE IMPLEMENTED IF INFILTRATION IS INADEQUATE AT THE SITE.



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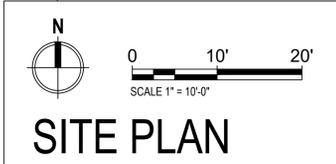
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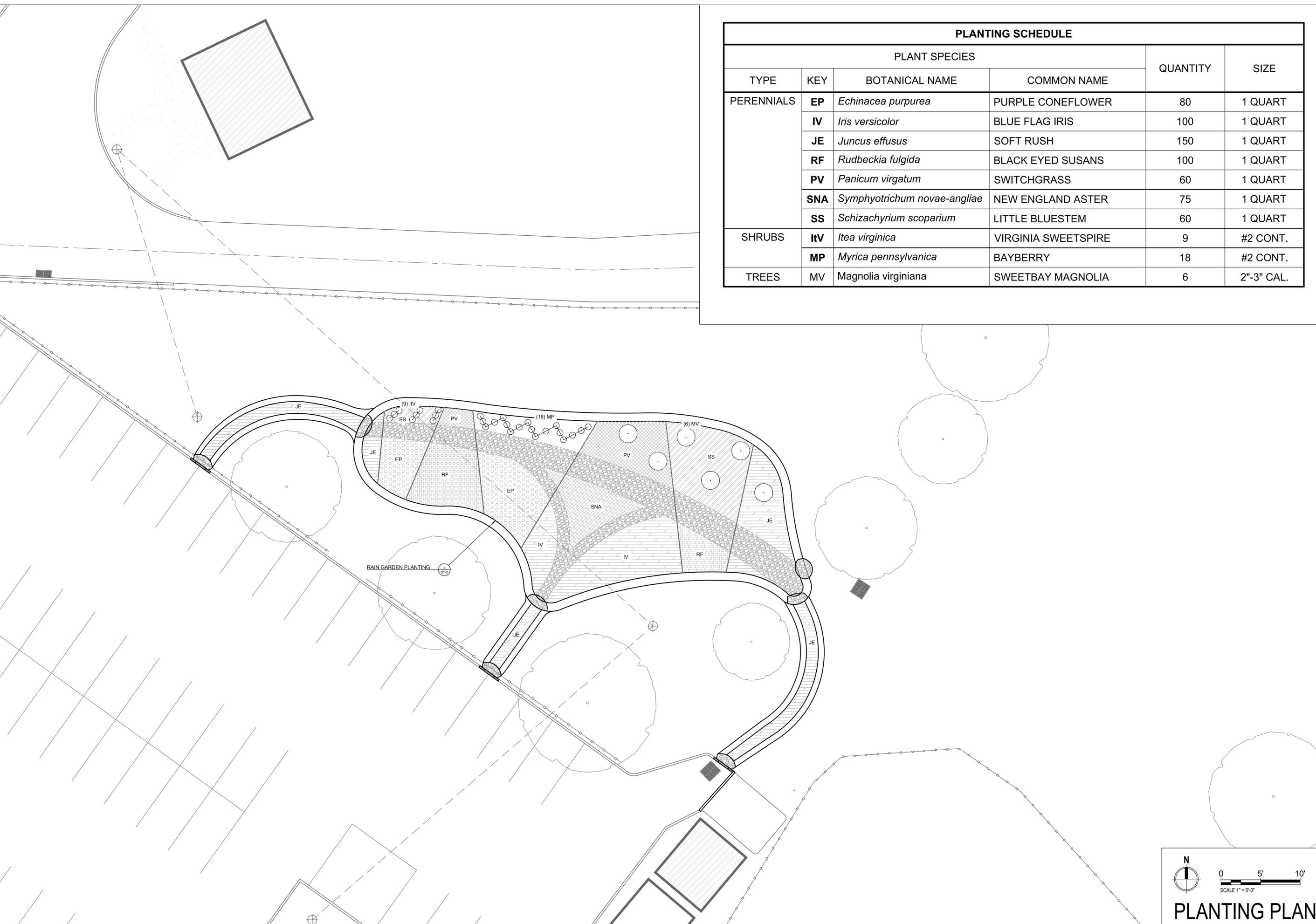
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MEMORY PARK RAIN GARDEN PROJECT
NEW JERSEY FUTURE
 STRAWAY BOULEVARD, NEWTON
 SUSSEX COUNTY, NEW JERSEY

PROPOSED SITE PLAN



SHEET NAME
P-3



PLANTING SCHEDULE					
PLANT SPECIES				QUANTITY	SIZE
TYPE	KEY	BOTANICAL NAME	COMMON NAME		
PERENNIALS	EP	<i>Echinacea purpurea</i>	PURPLE CONEFLOWER	80	1 QUART
	IV	<i>Iris versicolor</i>	BLUE FLAG IRIS	100	1 QUART
	JE	<i>Juncus effusus</i>	SOFT RUSH	150	1 QUART
	RF	<i>Rudbeckia fulgida</i>	BLACK EYED SUSANS	100	1 QUART
	PV	<i>Panicum virgatum</i>	SWITCHGRASS	60	1 QUART
	SNA	<i>Symphotrichum novae-angliae</i>	NEW ENGLAND ASTER	75	1 QUART
	SS	<i>Schizachyrium scoparium</i>	LITTLE BLUESTEM	60	1 QUART
SHRUBS	ItV	<i>Itea virginica</i>	VIRGINIA SWEETSPIRE	9	#2 CONT.
	MP	<i>Myrica pennsylvanica</i>	BAYBERRY	18	#2 CONT.
TREES	MV	<i>Magnolia virginiana</i>	SWEETBAY MAGNOLIA	6	2"-3" CAL.

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PROJECT INFORMATION
 MEMORY PARK RAIN GARDEN PROJECT
 NEW JERSEY FUTURE
 STRAWAY BOULEVARD, NEWTON
 SUSSEX COUNTY, NEW JERSEY

PLANTING PLAN

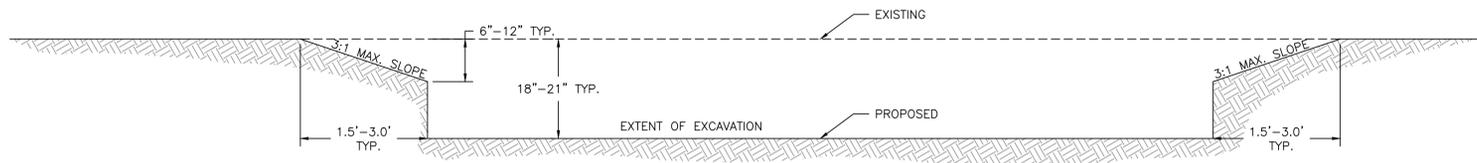
RUTGERS
 New Jersey Agricultural
 Experiment Station

SHEET NAME
 P-4

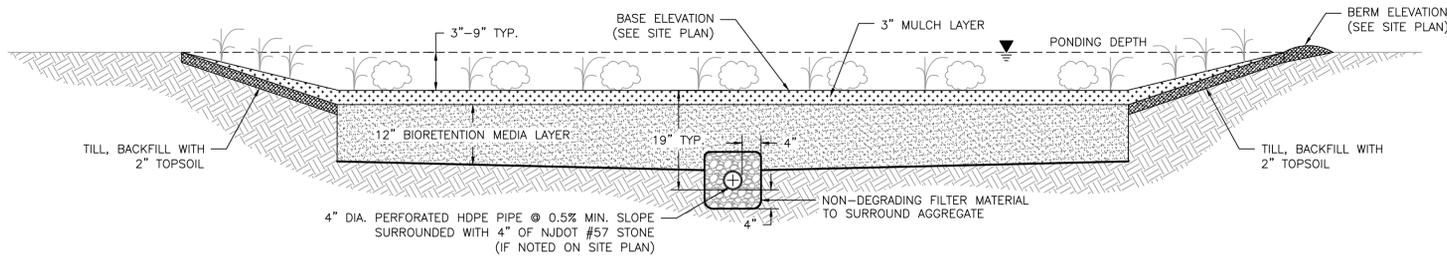
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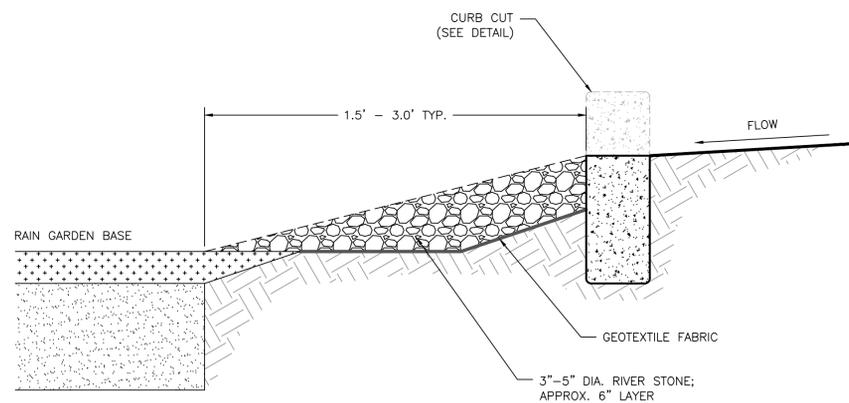
PLANTING PLAN



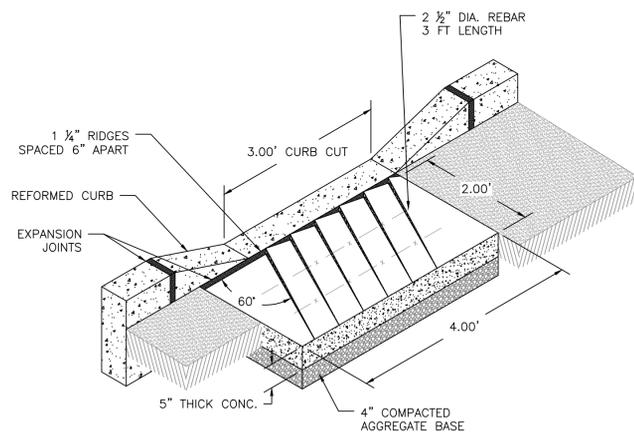
1 RAIN GARDEN EXCAVATION SECTION
DT-1 N.T.S.



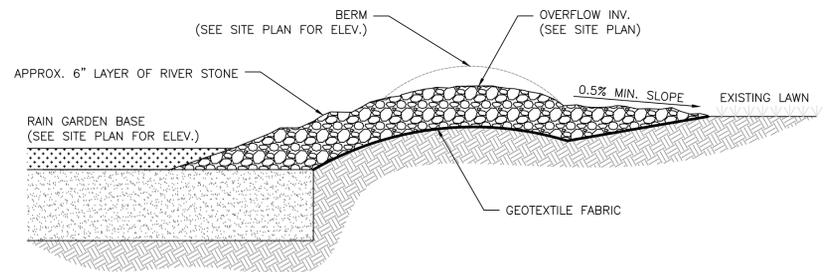
2 RAIN GARDEN CROSS-SECTION
DT-1 N.T.S.



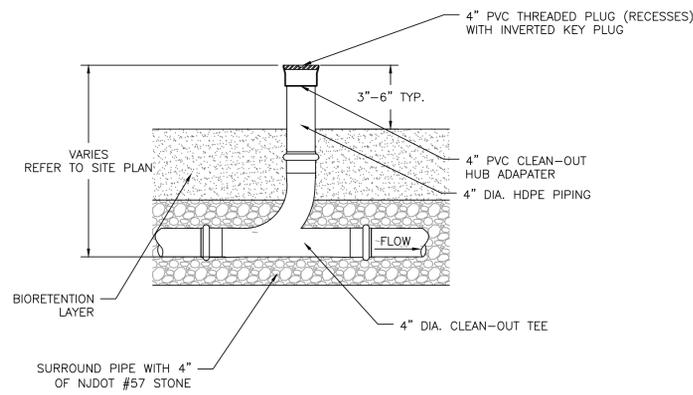
3 INLET PROTECTION WITH CURB CUT
DT-1 N.T.S.



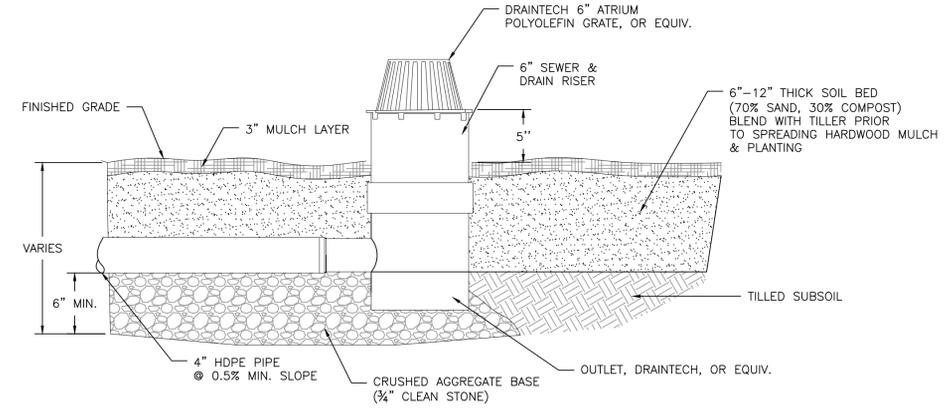
4 CURB CUT DETAIL
DT-1 N.T.S.



5 ROCK LINED OVERFLOW
DT-1 N.T.S.



6 CLEAN OUT DETAIL
DT-1 N.T.S.



7 DRAINTECH OUTLET DETAIL
DT-1 N.T.S.

CONSTRUCTION NOTES:

1. THE CONTRACTOR SHALL VERIFY ALL INFORMATION PRIOR TO EXCAVATION INCLUDING ELEVATIONS AND LOCATIONS OF EXISTING UTILITIES.
2. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY IF ANY FIELD CONDITIONS DIFFER MATERIALLY FROM THOSE REPRESENTED ON THESE DRAWINGS AND THE SPECIFICATIONS OR IF, IN THE CONTRACTOR'S OPINION, SAID CONDITIONS CONFLICT WITH THE DESIGNS SHOWN HEREON.
3. THE ENGINEER SHALL INSPECT ALL PLANTING BED AREAS BEFORE MULCHING TO INSURE THAT ADEQUATE DRAINAGE EXISTS. IF ANY AREAS TO BE MULCHED SHOW EVIDENCE OF POOR DRAINAGE, THE CONTRACTOR SHALL TAKE CORRECTIVE ACTION.
4. THE CONTRACTOR SHALL AVOID DISTURBING ALL EXISTING TREES. ANY DISTURBANCE TO TREES OR TREE ROOTS MUST BE COORDINATED WITH THE PROPERTY OWNER.
5. DIMENSIONS AND SHAPE WILL VARY. REFER TO SITE PLAN.
6. RIVER STONE PROTECTION DIMENSIONS ARE TYPICAL AND MAY VARY PER SITE. CONSULT THE ENGINEER AND SITE PLAN FOR DIMENSIONS ON A PER SITE BASIS.
7. RIVER STONE PROTECTION SHALL SLOPE TO RAIN GARDEN BASE.
8. REFER TO SITE PLAN TO DETERMINE OUTLET TYPE (ROCK-LINED OVERFLOW OR DRAINTECH RISER).
9. REFER TO SITE PLAN FOR ALL ELEVATIONS AND INVERTS.
10. THE CONTRACTOR SHALL EXCAVATE 15" LOWER THAN THE BASE ELEVATION SHOWN ON THE SITE PLANS. THE SLOPES OF THE RAIN GARDEN SHALL BE AT A 3:1 MAXIMUM.
11. THE SUBGRADE OF THE RAIN GARDEN SHALL BE LEVEL TO ENSURE PROPER DRAINAGE. CONTRACTOR SHALL OBTAIN ENGINEER APPROVAL PRIOR TO BACKFILLING WITH 12" OF BIORETENTION MEDIA.
12. THE CONTRACTOR SHALL INSTALL OVERFLOW IF SPECIFIED IN SITE PLANS PRIOR TO BACKFILLING WITH BIORETENTION MEDIA.
13. THE BIORETENTION LAYER SHALL BE LEVEL TO ENSURE PROPER DRAINAGE. CONTRACTOR SHALL OBTAIN ENGINEER APPROVAL PRIOR TO SPREADING MULCH AND PLANTING.
14. INLET AND OUTLET PROTECTION SHALL BE UNDERLAIN WITH GEOTEXTILE FABRIC.
15. INLETS AND OUTLETS SHALL NOT INHIBIT THE FLOW OF WATER FROM THE STREET. THE RIVER STONE SHALL BE PLACED BELOW THE BOTTOM OF THE PIPE.
16. THE CONTRACTOR SHALL TILL THE BERM SECTION AND BACKFILL WITH TOPSOIL.
17. ALL DISTURBED AREAS EXCLUSIVE OF RAIN GARDEN AND SLOPED BERM SHALL BE RESTORED TO ORIGINAL CONDITIONS BY CONTRACTOR.
18. THE CONTRACTOR SHALL HAVE A PRE-CONSTRUCTION MEETING WITH THE PROJECT ENGINEER PRIOR TO ANY WORK ON SITE.

SPECIFICATIONS:

1. MAX COVER OVER TOP OF PIPE IS 4 FT. CONTACT ADS IF OTHERWISE GREATER.
2. THE APPROVAL OF MATERIALS AND MIXING OF SAND, COMPOST, AND SOIL SHALL BE DONE UNDER THE SUPERVISION OF THE PROJECT ENGINEER/LANDSCAPE ARCHITECT. BIORETENTION MEDIA SHALL CONSIST OF 70% SAND AND 30% COMPOST MIXTURE.
3. SAND SHALL AT THE MINIMUM CONFORM TO THE SIEVE ANALYSIS FOR CONCRETE AGGREGATE SAND (ASTM C-33). USGA TEE/GREEN SIEVE GRADATION MIX IS PREFERABLE WHERE AVAILABLE.
4. UNDERLYING SOILS SHALL BE TILLED/SCARIFIED PRIOR TO SPREADING/MIXING OF BIORETENTION MEDIA.
5. ALL BIORETENTION MEDIA SHALL BE PLACED FROM THE SIDES OF THE FACILITIES, AND IN NO EVENT SHALL ANY TRACKED OR WHEELED EQUIPMENT BE PERMITTED TO CROSS THE RAIN GARDEN.
6. RAIN GARDEN SHALL BE CONSTRUCTED TO DIMENSIONS INDICATED ON THE SITE PLAN.
7. 3-5 INCH DELAWARE RIVER STONE SHALL BE USED FOR STONE CHANNEL AND INLET/OUTLET PROTECTION.
8. NON-DYED, TRIPLE-SHREDED HARDWOOD MULCH SHALL BE USED.
9. PLANTING OF RAIN GARDEN AND SLOPED BERM SHALL BE COMPLETED AS INDICATED ON THE SITE PLAN.
10. THE CONTRACTOR SHALL PERFORM ALL WORK IN CONFORMANCE WITH THE NJDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2007 OR LATEST VERSION.

CONSTRUCTION NOTES:

1. THE CONTRACTOR SHALL VERIFY ALL INFORMATION PRIOR TO EXCAVATION INCLUDING ELEVATIONS AND LOCATIONS OF EXISTING UTILITIES.
2. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY IF ANY FIELD CONDITIONS DIFFER MATERIALLY FROM THOSE REPRESENTED ON THESE DRAWINGS AND THE SPECIFICATIONS OR IF, IN THE CONTRACTOR'S OPINION, SAID CONDITIONS CONFLICT WITH THE DESIGNS SHOWN HEREON.
3. THE CONTRACTOR SHALL AVOID DISTURBING ALL EXISTING TREES. ANY DISTURBANCE TO TREES OR TREE ROOTS MUST BE COORDINATED WITH THE BOROUGH DEPARTMENT OF PUBLIC WORKS.
4. INLET AND OUTLET PROTECTION SHALL BE UNDERLAIN WITH GEOTEXTILE FABRIC.
5. INLET AND OUTLET CURB CUTS SHALL NOT INHIBIT THE FLOW OF WATER FROM THE STREET. THE CURB CUT SHALL BE SLIGHTLY LOWER THAN THE ROAD. THE CONCRETE SLAB SHALL BE PLACED JUST BELOW THE BOTTOM OF THE CURB CUT.
6. THE CONTRACTOR SHALL SAWCUT, REMOVE AND REPLACE A 6 FOOT SECTION OF CURB FOR THE CONCRETE FUNNEL. THE ENTIRE CURB SHALL BE REINSTALLED WITH A 3 FOOT DEPRESSED SECTION FLUSH WITH THE PAVEMENT AND ADJOINING 18" 3:1 SLOPED SECTIONS.
7. THE CONTRACTOR SHALL POUR THE CONCRETE FLOW PAD AS SHOWN WITH 60° RIDGES. THE RIDGES SHALL BE 1 1/4" IN HEIGHT.
8. ALL AREAS EXCLUSIVE FROM THE TRENCH DRAIN AND/OR CURB CUT SHALL BE RESTORED TO ORIGINAL CONDITIONS.
9. THE CONTRACTOR SHALL HAVE A PRE-CONSTRUCTION MEETING WITH THE ENGINEER PRIOR TO ANY WORK ON SITE.

SPECIFICATIONS:

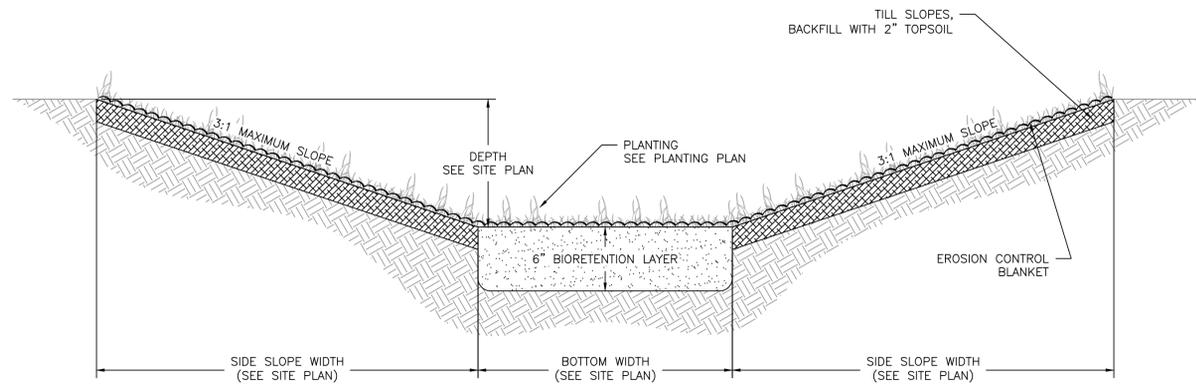
1. STONE FOR PROTECTION SHALL BE 3"-5" DIAMETER WASHED RIVER STONE.
2. THE CONTRACTOR SHALL BE PERFORMED IN CONFORMANCE WITH THE NJDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2007 OR LATEST VERSION.
3. THE CONTRACTOR SHALL ONLY USE CONCRETE WITH 4,500 PSI STRENGTH.

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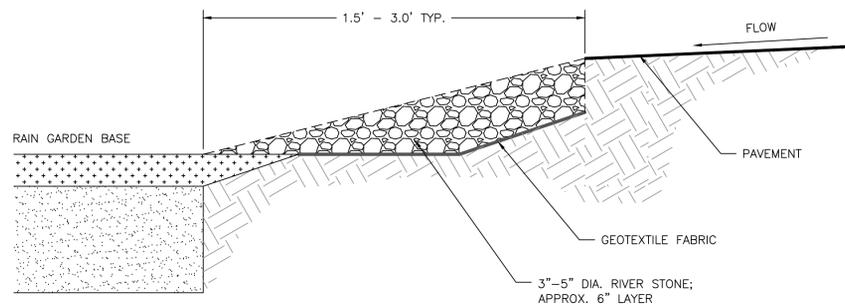
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MEMORY PARK RAIN GARDEN PROJECT
NEW JERSEY FUTURE
STRAWAY BOULEVARD, NEWTON
SUSSEX COUNTY, NEW JERSEY
RAIN GARDEN AND CURB CUT DETAILS

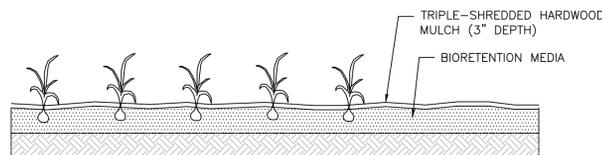
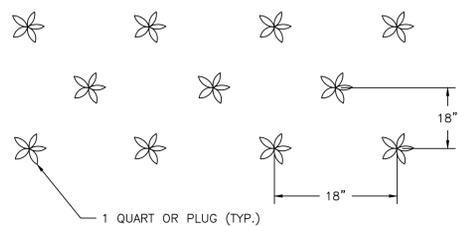




1 BIOSWALE CROSS-SECTION
DT-2 N.T.S.



2 INLET PROTECTION
DT-2 N.T.S.



3 HERBACEOUS PLUG PLANTING DETAIL
DT-2 N.T.S.

CONSTRUCTION NOTES:

1. THE CONTRACTOR SHALL VERIFY ALL INFORMATION PRIOR TO EXCAVATION INCLUDING ELEVATIONS AND LOCATIONS OF EXISTING UTILITIES.
2. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY IF ANY FIELD CONDITIONS DIFFER MATERIALLY FROM THOSE REPRESENTED ON THESE DRAWINGS AND THE SPECIFICATIONS OR IF, IN THE CONTRACTOR'S OPINION, SAID CONDITIONS CONFLICT WITH THE DESIGNS SHOWN HEREON.
3. THE ENGINEER SHALL INSPECT ALL PLANTING BED/SEEDING AREAS BEFORE PLANTING/SEEDING TO INSURE THAT ADEQUATE DRAINAGE EXISTS FOR BIOSWALES. IF ANY AREAS TO BE PLANTED/SEEDED SHOW EVIDENCE OF POOR DRAINAGE, THE CONTRACTOR SHALL TAKE CORRECTIVE ACTION.
4. THE CONTRACTOR SHALL HAVE ALL UTILITIES MARKED BEFORE ANY EXCAVATION. IF ANY UTILITIES INTERFERE WITH THE PROJECT, THE CONTRACTOR SHALL NOTIFY THE ENGINEER.
5. THE CONTRACTOR SHALL AVOID OVER COMPACTING THE EXISTING MATERIALS TO AVOID POOR INFILTRATION.
6. THE CONTRACTOR SHALL VERIFY THAT SWALE WILL CAPTURE STORMWATER RUNOFF FROM DESIRED DRAINAGE AREA.
7. THE CONTRACTOR SHALL ESTABLISH ALL ELEVATIONS AND LINES AS SHOWN ON THE SITE PLAN FOR REVIEW BY THE ENGINEER BEFORE ANY CONSTRUCTION BEGINS.
8. THE CONTRACTOR SHALL VERIFY THAT THE SUBGRADE IS CONSISTENT WITH LINE, GRADE, AND ELEVATIONS AS INDICATED ON THE SITE PLAN. ANY AREAS SHOWING EROSION OR POTENTIAL PONDING SHALL BE REGRADED BEFORE SUBBASE INSTALLATION.
9. IMMEDIATELY AFTER THE SUBGRADE IS APPROVED BY THE ENGINEER, THE CONTRACTOR SHALL BEGIN SUBBASE CONSTRUCTION WHICH INCLUDES ALL MATERIALS BELOW THE SWALE BASE AND ABOVE THE NATIVE SUBGRADE.
10. PRIOR TO BACKFILLING BIOSWALE WITH BIORETENTION MEDIA, THE CONTRACTOR SHALL SCARIFY NATIVE SOIL TO PROMOTE INFILTRATION INTO UNDERLYING SUBGRADE.
11. THE BIORETENTION MEDIA LAYER SHALL BE INSTALLED EVENLY OVER THE NATIVE SUBGRADE.
12. THE BIOSWALE SHALL HAVE AN INFILTRATION RATE SHALL BE AT LEAST 5-30 FT/DAY OR 50 % OF THE HYDRAULIC CONDUCTIVITY (D2434).
13. THE CONTRACTOR SHALL INSTALL GABION BASKET CHECK DAM (IF SPECIFIED) AS SHOWN ON SITE PLANS. A MINIMUM OF SIX INCHES OF BASKET SHALL BE BURIED BENEATH SWALE.
14. THE CONTRACTOR SHALL INSTALL EROSION CONTROL BLANKET ALONG BASE AND SIDE SLOPES OF NEWLY CONSTRUCTED SWALE FOR STABILIZATION.

SPECIFICATIONS:

1. THE BIORETENTION LAYER SHALL BE COMPRISED OF 70% SAND AND 30% COMPOST MIXTURE.
2. INLET PROTECTION FOR SWALE SHALL BE COMPRISED OF 3"-5" DIAMETER RIVER STONE. STONE SHALL BE UNDERLAIN WITH GEOTEXTILE FABRIC.
3. GABION BASKET CHECK DAM SHALL BE DURA-WELD GALVANIZED & PVC COATED BASKETS. BASKETS ARE TYPICALLY 6'X3'X1', REFER TO SITE PLAN FOR BASKET SIZE.
4. GABION STONE SHALL BE 4" - 10" DIAMETER, CLEAN.
5. SWALE SHALL BE SEEDED WITH CONTRACTOR TURF MIX UNLESS SPECIFIED OTHERWISE ON PLANS.

OPEN LAWN AND TURF AREAS

1. SEED ALL REMAINING PARK AREAS WITH TURF TYPE FALL FESCUE AND PERENNIAL RYEGRASS BLEND (LOFTS - SUMMER STRESS MIX II OR APPROVED EQUIVALENT). INSTALL AT A RATE OF 350 LBS. PER ACRE PER MANUFACTURERS SPECIFICATIONS.

TOPSOILING, SEEDING AND MULCHING NOTES

1. ANY UNDISTURBED AREA ON WHICH ACTIVITY HAS CEASED AND WHICH WILL REMAIN EXPOSED FOR MORE THAN 10 DAYS MUST BE SEEDED AND MULCHED IMMEDIATELY. DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT THE REQUIRED RATES. DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE REDISTURBED WITHIN 1 YEAR SHALL BE SEEDED AND MULCHED WITH A QUICK GROWING TEMPORARY SEEDING MIXTURE AND MULCH. DISTURBED AREAS WHICH ARE EITHER AT FINISHED GRADE OR WILL NOT BE REDISTURBED WITHIN 1 YEAR MUST BE SEEDED AND MULCHED WITH A PERMANENT SEED MIXTURE AND MULCH.
2. DIVERSIONS, CHANNELS, SEDIMENTATION BASINS, SEDIMENT TRAPS, AND STOCKPILES MUST BE SEEDED AND MULCHED IMMEDIATELY.
3. GRADED AREAS SHALL BE TEMPORARILY SEEDED AND MULCHED IMMEDIATELY FOLLOWING EARTH MOVING PROCEDURES. TEMPORARY SEED SHALL BE ANNUAL RYE GRASS APPLIED AT A RATE OF 3 LBS. PER 1000 SQ. FT.
4. AFTER SEEDING, HAY OR STRAW MULCH MUST BE APPLIED AT A RATE OF AT LEAST 3.0 TONS PER ACRE. MULCH SHALL BE ANCHORED BY EITHER CRIMPING WITH A COULTER IMPLEMENT, OR BY STAPLING BIODEGRADABLE NETTING TO THE SURFACE.
5. SITE PREPARATION TO UPLAND AREAS: APPLY 1 TON OF AGRICULTURAL-GRADE LIMESTONE PER ACRE PLUS 10-20-10 FERTILIZER AT THE RATE OF 500 LB. PER ACRE. WORK IN WHERE POSSIBLE. SEEDING OF DISTURBED UPLAND AREAS (BEYOND LIMITS OF RIPARIAN ENHANCEMENT AREA) TO BE DONE USING MIX OF FINE FESCUE AT 35 LBS/ACRE (PURE LIVE SEED) PLUS PERENNIAL RYEGRASS AT 15 LBS/ACRE (PURE LIVE SEED).
6. TOPSOIL SHALL BE A CLEAN FRIABLE LOAM WITH SUFFICIENT ORGANIC CONTENT (2.75%) TO PROMOTE PLANT VIGOR. AMENDMENTS SHALL BE ADDED AS NEEDED TO IMPROVE DEFICIENT SOILS. TOPSOIL SHALL BE RETURNED AT A LOOSE DEPTH OF FIVE INCHES TO ALLOW FOR SETTLEMENT.
7. ESTABLISH PERMANENT SEEDING AS SOON AS POSSIBLE AFTER FINAL GRADING IS COMPLETE. UNLESS OTHERWISE INDICATED, PERMANENT SEEDING SHALL BE SEED MIXTURE SPECIFIED IN TABLE.
8. SEE TABLES FOR SEED SPECIES MIXTURE AND APPLICATION RATES.
9. SEED MIXES ARE AVAILABLE AT ERNST CONSERVATION SEEDS IN MEADVILLE, PA. WEBSITE: WWW.ERNSTSEED.COM OR PHONE: 1-800-873-3321.
10. NATIVE SHRUBS AND HERBACEOUS PLUGS ARE AVAILABLE AT PINELANDS NURSERY AND SUPPLY, COLUMBUS NJ. WEBSITE: WWW.PINELANDSNURSERY.COM OR PHONE 1-800-667-2729

GENERAL LANDSCAPING NOTES

1. ALL PLANT MATERIALS SHALL CONFIRM TO THE AMERICAN ASSOCIATION OF NURSERYMEN'S AMERICAN STANDARD FOR NURSERY STOCK (LATEST EDITION)
2. INSPECTION OF PLANTING BEDS - THE LANDSCAPE ARCHITECT SHALL INSPECT ALL PLANTING AREAS BEFORE ANY TOPSOILING OR PLANTING IS BEGUN TO INSURE THAT ADEQUATE DRAINAGE EXISTS. IF ANY AREAS TO BE LANDSCAPED SHOW EVIDENCE OF POOR DRAINAGE, THE LANDSCAPE ARCHITECT SHALL NOTIFY THE OWNER IMMEDIATELY FOR CORRECTIVE ACTION
3. THE LANDSCAPE ARCHITECT SHALL APPROVE ALL PLANT MATERIAL AND STAKED PLANT LOCATIONS PRIOR TO INSTALLATION. ALL HERBACEOUS PLUG PLANTINGS SHALL BE A MINIMUM 3 INCH DEPTH. PLUGS SHALL BE PLANTED 1 FOOT O.C. AS INDICATED ON PLAN.
4. ALL TREES, SHRUBS, AND GROUNDCOVER SHALL BE PLACED IN CONTINUOUS MULCHED BEDS 4" IN DEPTH. MUCH SHALL BE TRIPLE SHREDDED HARDWOOD.
5. ALL TREES, SHRUBS, AND GROUNDCOVER SHALL BE AS SPECIFIED AND SHALL BE INSTALLED IN ACCORDANCE WITH THE DETAILS AND COMMENTS NOTED ON THE DRAWINGS.
6. TOPSOIL SHALL BE PROVIDED BY THE LANDSCAPE CONTRACTOR FOR PLANTING ACCORDING TO THE PLANS AND DETAILS.
7. PREPARED TOPSOIL FOR BACKFILLING AROUND TREE BALLS SHALL BE A MIXTURE OF VOLUME OF THE FOLLOWING MATERIALS IN QUANTITIES SPECIFIED: ½ COMPOST, ¼ TOPSOIL
8. ALL HERBACEOUS PLUG PLANTINGS SHALL BE MINIMUM 3 INCH DEPTH. PLUGS SHALL BE PLANTED 1 FOOT O.C. AS INDICATED ON PLAN.

CHRISTOPHER C. OBROPTA, PH.D., P.E.
PROFESSIONAL ENGINEER - NJ LICENSE #37532

DATE 02/28/17
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REVISIONS	NO.	DATE	DESCRIPTION

MEMORY PARK RAIN GARDEN PROJECT
NEW JERSEY FUTURE

STRAWAY BOULEVARD, NEWTON
SUSSEX COUNTY, NEW JERSEY

BIOSWALE AND PLANTING DETAILS



SHEET NAME

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DT-3

RAIN GARDEN RENDERING
N.T.S.

CHRISTOPHER C. OBROPTA, Ph.D., P.E.
PROFESSIONAL ENGINEER - NJ LICENSE # 37532
Christopher C. Obropta
DATE 02/28/17

REVISIONS	DESCRIPTION
No.	DATE

MEMORY PARK RAIN GARDEN PROJECT
NEW JERSEY FUTURE
STRAWAY BOULEVARD, NEWTON
SUSSEX COUNTY, NEW JERSEY
RAIN GARDEN RENDERING



SHEET NAME
DT-3