Abraham Lincoln School #6 Green Infrastructure Information Sheet

Location:	Site Use:
111 Palisade Avenue	School
Garfield, NJ 07026	
	Watershed Name:
	Lower Passaic River
	Lower rassare River
	Targeted Pollutants:
	total nitrogen (TN), total phosphorus (TP), and
	total suspended solids (TSS) in surface runoff
	total suspended solids (155) in surface fution
Green Infrastructure Description:	Estimated Stormwater Captured and/or
Bioretention system (rain garden)	Treated Per Year:
5 (6 /	153,000 gallons
	100,000 gallolis
Implementation Date: Fall 2018	
Green Infrastructure System: two (2) 790-squ	are-foot rain gardens (1,580 sq. ft. combined)
Drainage Area: ~6,200 sq. ft. (rooftop)	
Funding Sources:	
Passaic Valley Sewerage Commission	
Partners/Stakeholders:	
	Cooperative Extension Water Resources Program,
and Abraham Lincoln School #6	
and Abraham Encom School #0	
Appendix A: Site Photographs – Previous Cond	litions
Appendix B: Abraham Lincoln School #6 Desi	gn Plans and Rendering
Appendix C: Site Photographs – Completed Pr	oject
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Appendix A

Site Photographs – Previous Conditions

Site Photograph February 14, 2018



Site Photograph February 14, 2018



Appendix B

Abraham Lincoln School #6 Design Plans and Rendering

ABRAHAM LINCOLN SCHOOL #6 PASSAIC VALLEY SEWERAGE COMMISSION DEMONSTRATION PROJECT 111 PALISADE AVE, GARFIELD BERGEN COUNTY, NEW JERSEY

PROJECT DESCRIPTION:

TWO RAIN GARDENS ARE DESIGNED TO CAPTURE STORMWATER RUNOFF FROM THE ROOFTOP OF THE BUILDING. BOTH GARDENS USE EXISTING PIPE INFRASTRUCTURE TO CONNECT DOWNSPOUTS. NEW PIPING IS INSTALLED TO DISCHARGE STORMWATER TO EACH RAIN GARDEN.

LIST OF DRAWINGS:

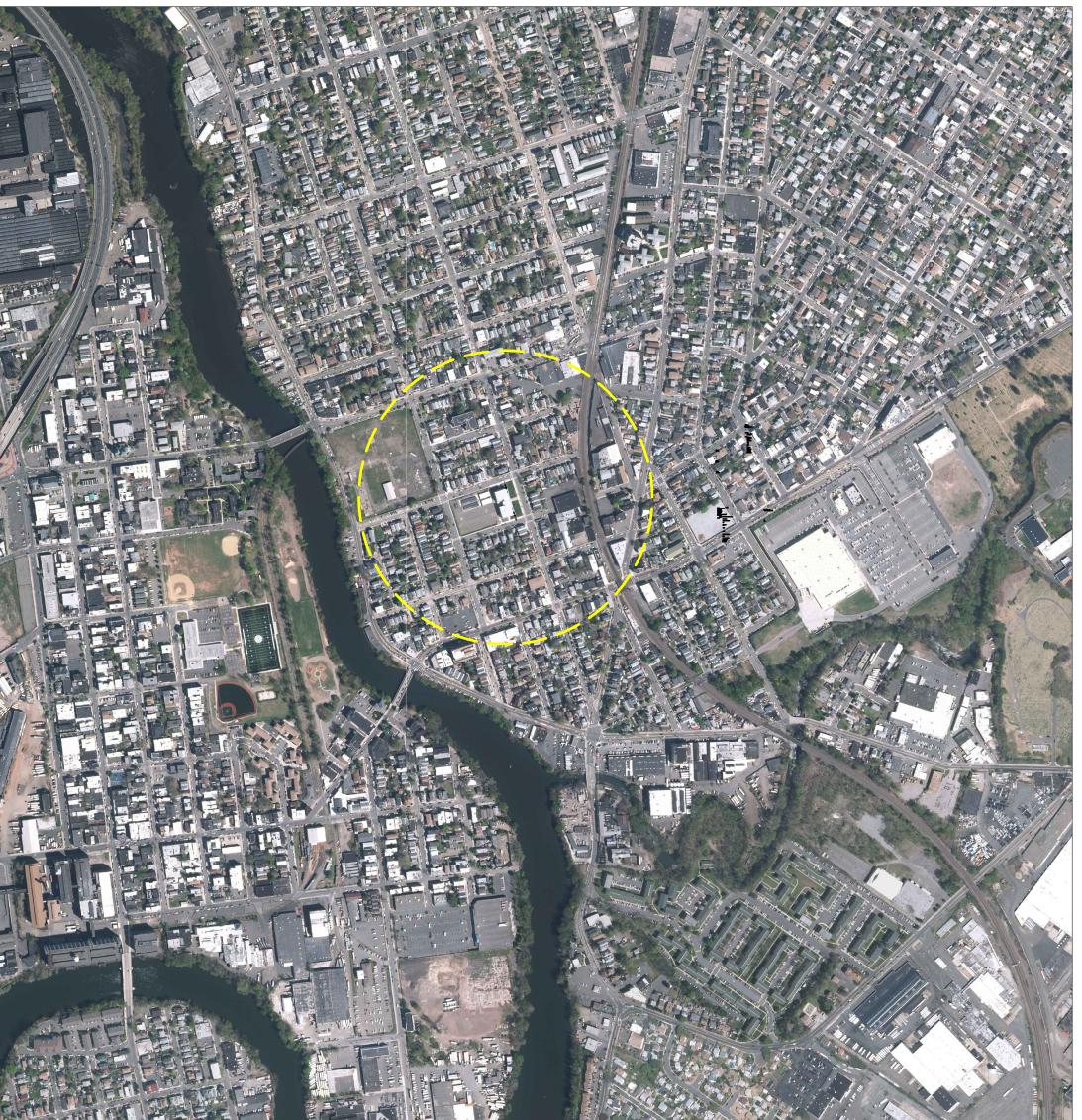
SHEET NAME	TITLE
COVER	COVER SHEET
P-1	EXISTING CONDITIONS AND DEMOLITION PLAN
P-2	PROPOSED SITE PLAN
P-3	PLANTING PLAN
DT-1	RAIN GARDEN DETAILS
DT-2	PLANTING DETAILS



GENERAL NOTES:

- SURVEY CONDUCTED BY RUTGERS COOPERATIVE EXTENSION WATER RESOURCES PROGRAM.
- 2. ANY OVERHEAD AND UNDERGROUND UTILITIES SHOWN ARE FROM FIELD OBSERVATIONS AND ARE NOT A COMPLETE REPRESENTATION. A UTILITY MARKOUT NEEDS TO BE CONDUCTED PRIOR TO MOBILIZATION. NJ ONE CALL: 811 OR 800-272-1000

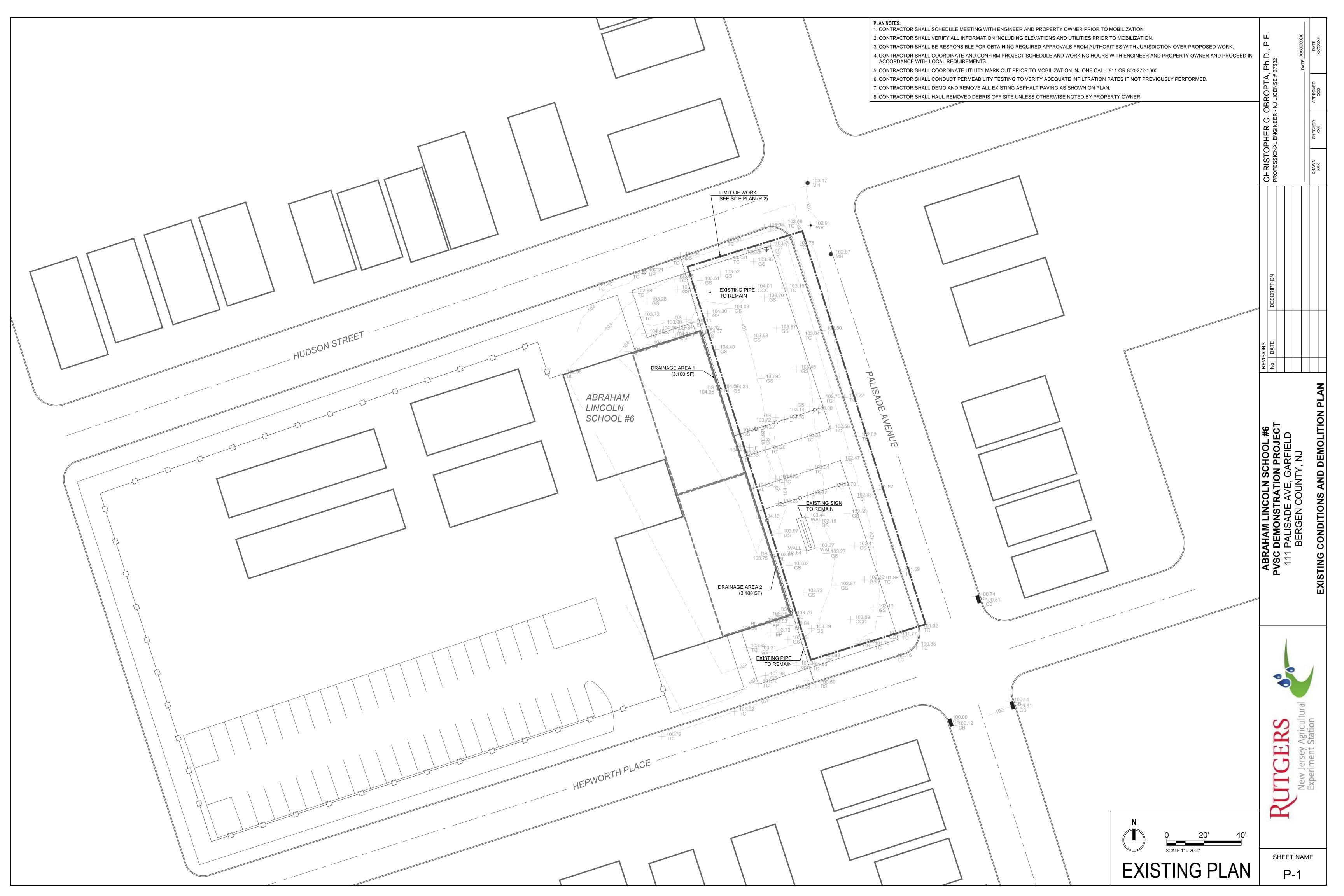
LOCATION MAP:

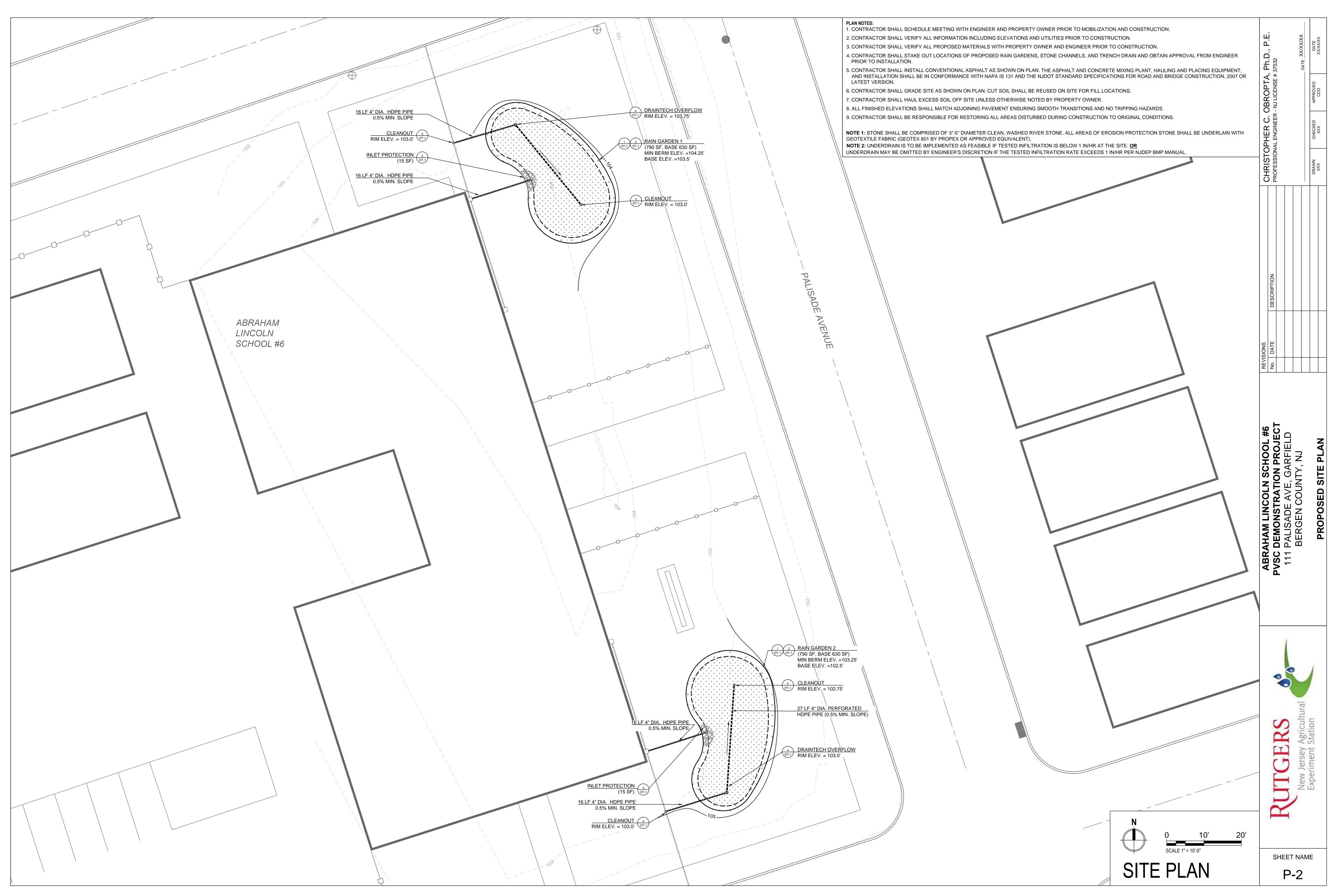


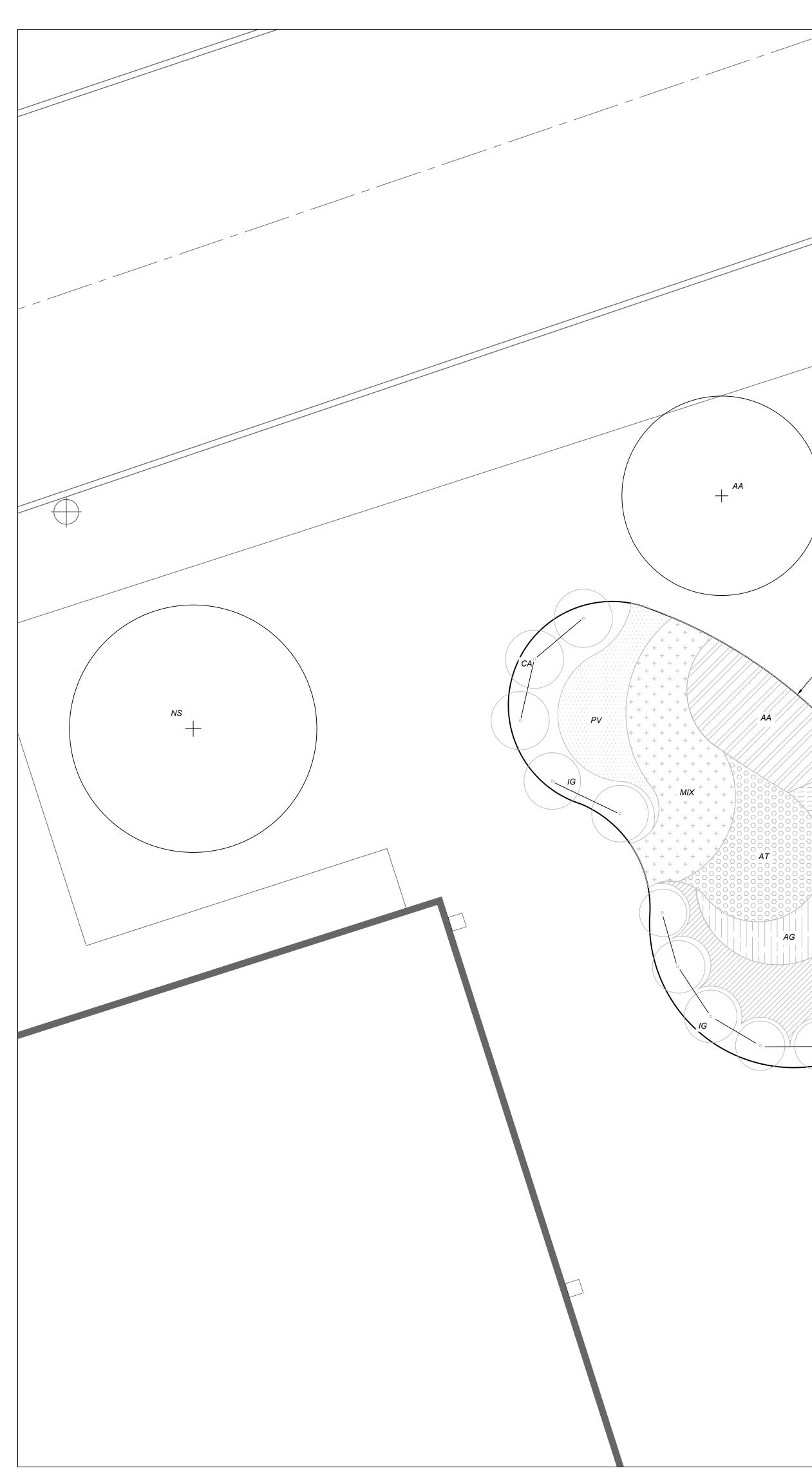
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	PROFESSIONAL ENGINEER - NJ LICENSE # 37532		PATE XX/XX/XX	DRAWN CHECKED APPROVED DATE	XXX
REVISIONS	No. DATE DESCRIPTION				
ABRAHAM LINCOLN SCHOOL #6	PVSC DEMONSTRATION PROJECT	111 PALISADE AVE, GARFIELD	BERGEN COUNTY, NJ		COVER SHEET
	BITTOFDC		New Jersey Agricultural		







	TYPE	KEY	
	PERENNIALS	AA	4
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		MIX	J
		MS	Λ Λ
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		RF AT	
	SHRUBS	CS	, ,
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	PERENNIALS	AA	4
		AG	4
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$+^{AA}$		MS	٨
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		RF AT	F 4
	SHRUBS	CS	
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		<u> </u>	
	TREES	NS	^
		AA	1

		PLAN	TING SCHEDULE		
		PLANT SPECIES			
TYPE	KEY	BOTANICAL NAME	COMMON NAME	QUANTITY	SIZE
		RA	AIN GARDEN 1		
ERENNIALS	AA	Aster novae-angliae	NEW ENGLAND ASTER	40	PLUGS
	AG	Andropogon gerardii	BIG BLUESTEM	20	PLUGS
	MIX	Juncus effusus/ Iris versicolor	SOFT RUSH/ BLUEFLAG IRIS	30	PLUGS
	MS	Monarda sp.	WILD BERGAMONT	45	PLUGS
	PV	Panicum virgatum	SWITCHGRASS	30	PLUGS
	RF	Rudbeckia fulgida	BLACK EYED SUSAN	50	PLUGS
	AT	Asclepias tuberosa	BUTTERFLY MILKWEED	20	PLUGS
SHRUBS	CS	Cornus sericea	SILKY DOGWOOD	3	#2 CONT.
	IG	llex glabra	INKBERRY HOLLY	7	#2 CONT.
		RA	AIN GARDEN 2		
ERENNIALS	AA	Aster novae-angliae	NEW ENGLAND ASTER	40	PLUGS
	AG	Andropogon gerardii	BIG BLUESTEM	20	PLUGS
	MIX	Juncus effusus/ Iris versicolor	SOFT RUSH/ BLUEFLAG IRIS	30	PLUGS
	MS	Monarda sp.	WILD BERGAMONT	45	PLUGS
	Ρ٧	Panicum virgatum	SWITCHGRASS	30	PLUGS
	RF	Rudbeckia fulgida	BLACK EYED SUSAN	50	PLUGS
	AT	Asclepias tuberosa	BUTTERFLY MILKWEED	20	PLUGS
SHRUBS	CS	Cornus sericea	SILKY DOGWOOD	3	#2 CONT.
	IG	llex glabra	INKBERRY HOLLY	7	#2 CONT.
		OTHER LA	ANDSCAPE PLANTING		
TREES	NS	Nyssa salvanica	BLACKGUM	1	#2 CONT.
	AA	Amelanchier arborea	SWAMP WHITE OAK	2	#2 CONT.

PALISADE AVENUE

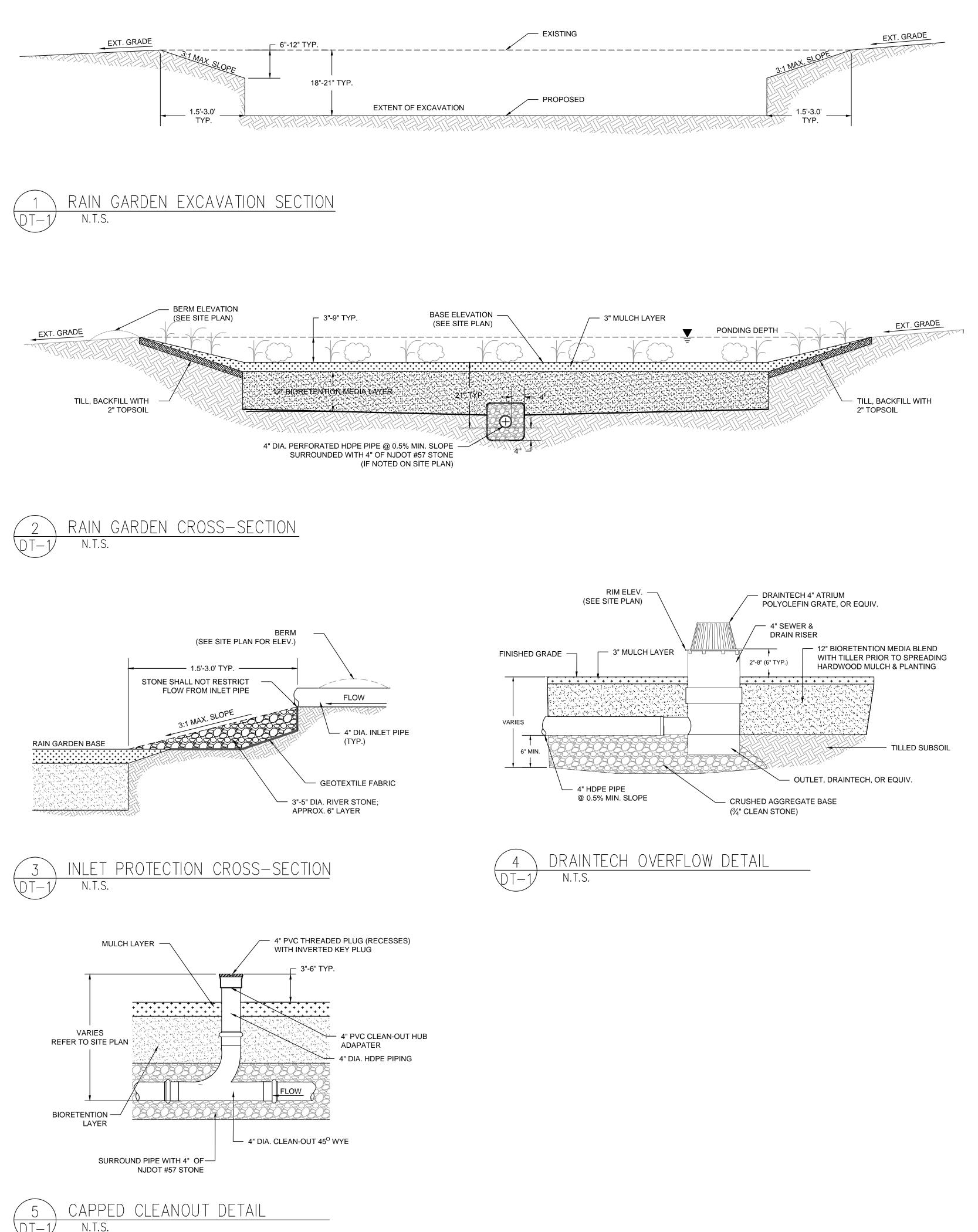
ш CHRISTOPHER C. OBROPTA, Ph.D., P. PROFESSIONAL ENGINEER - NJ LICENSE # 37532 APPROVED CCO CHECKED XXX DRAWN XXX R S ABRAHAM LINCOLN SCHOOL #6 PVSC DEMONSTRATION PROJECT 111 PALISADE AVE, GARFIELD BERGEN COUNTY, NJ AN PLANTING PL \bigcirc d. New Jersey Agricultu Experiment Station RUTGERS



10'

SCALE 1" = 5'-0"

PLANTING PLAN



CONSTRUCTION NOTES:

- OR IF, IN THE CONTRACTOR'S OPINION, SAID CONDITIONS CONFLICT WITH THE DESIGNS SHOWN HEREON.
- DRAINAGE, THE CONTRACTOR SHALL TAKE CORRECTIVE ACTION. DIMENSIONS AND SHAPE WILL VARY, REFER TO SITE PLAN.
- RIVER STONE PROTECTION SHALL SLOPE TO RAIN GARDEN BASE. REFER TO SITE PLAN TO DETERMINE OUTLET TYPE (ROCK-LINED OVERFLOW OR DRAINTECH RISER).
- 9. REFER TO SITE PLAN FOR ALL ELEVATIONS AND INVERTS.
- **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.
- 16. THE CONTRACTOR SHALL TILL THE BERM SECTION AND BACKFILL WITH TOPSOIL.
- 18. THE CONTRACTOR SHALL HAVE A PRE-CONSTRUCTION MEETING WITH THE PROJECT ENGINEER PRIOR TO ANY WORK ON SITE.

SPECIFICATIONS:

THE RESULTS.

- MAX COVER OVER TOP OF PIPES IS 4 FT. CONTACT ADS IF OTHERWISE GREATER. MEDIA SHALL CONSIST OF 70% SAND AND 30% COMPOST MIXTURE.
- AVAILABLE. 4. UNDERLYING SOILS SHALL BE TILLED/SCARIFIED PRIOR TO SPREADING/MIXING OF BIORETENTION MEDIA.
- 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-SHREDDED HARDWOOD MULCH SHALL BE USED.
- 9. PLANTING OF RAIN GARDEN AND SLOPED BERM SHALL BE COMPLETED AS INDICATED ON THE SITE PLAN.

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 3. THE ENGINEER SHALL INSPECT ALL PLANTING BED AREAS BEFORE MULCHING TO ENSURE THAT ADEQUATE DRAINAGE EXISTS. IF ANY AREAS TO BE MULCHED SHOW EVIDENCE OF POOR

4. THE CONTRACTOR SHALL AVOID DISTURBING ALL EXISTING TREES. ANY DISTURBANCE TO TREES OR TREE ROOTS MUST BE COORDINATED WITH THE PROPERTY OWNER.

RIVER STONE PROTECTION DIMENSIONS ARE TYPICAL AND MAY VARY PER SITE. CONSULT THE ENGINEER AND SITE PLAN FOR DIMENSIONS ON A PER SITE BASIS.

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

12. THE CONTRACTOR SHALL INSTALL OVERFLOW IF SPECIFIED IN SITE PLANS PRIOR TO BACKFILLING WITH BIORETENTION MEDIA.

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.

17. ALL DISTURBED AREAS EXCLUSIVE OF RAIN GARDEN AND SLOPED BERM SHALL BE RESTORED TO ORIGINAL CONDITIONS BY CONTRACTOR.

19. CONTRACTOR SHALL PERFORM REQUIRED TESTING TO DETERMINE SOIL PERMEABILITY AND SEASONAL HIGH WATER TABLE ELEVATION AT THE SITE TO VERIFY INFILTRATION CAPABILITIES. TESTING SHALL BE DONE PRIOR TO EXCAVATION AND INSTALLATION OF THE PROPOSED PROJECTS. PROJECT ENGINEER SHALL BE PRESENT DURING TESTING AND SHALL BE INFORMED OF

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

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

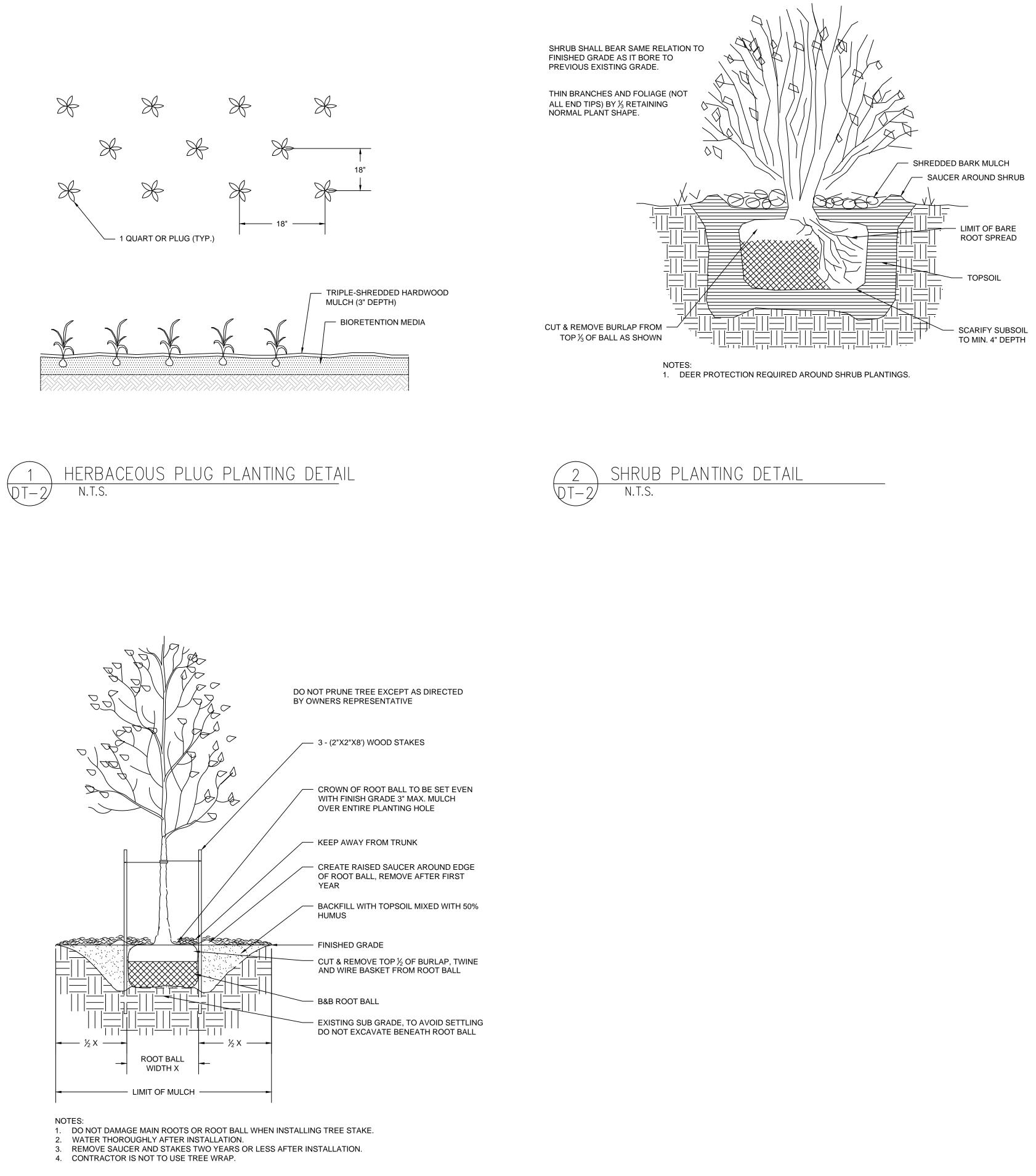
5. ALL BIORETENTION MEDIA SHALL BE PLACED FROM THE SIDES OF THE FACILITIES, AND IN NO EVENT SHALL ANY TRACKED OR WHEELED EQUIPMENT BE PERMITTED TO CROSS THE RAIN

10. THE CONTRACTOR SHALL PERFORM ALL WORK IN CONFORMANCE WITH THE NJDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2007 OR LATEST VERSION.

CHRISTOPHER C ORROPTA Ph D F	PROFESSIONAL FNGINEER - NULLCENSE # 37532				DATE ANAXAA	DRAWN CHECKED APPROVED DATE	XXX
	DESCRIPTION						
REVISIONS	No. DATE						
CHOOL #6		SIRATION PROJECT	111 PALISADE AVE, GARFIELD	BERGEN COUNTY, NJ			RAIN GARDEN DETAILS
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ABRAHAM LINCOLN S			111 PAI	BE			RA

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SHEET NAME



TREE PLANTING DETAIL N.T.S.



- 350 LBS. PER ACRE PER MANUFACTURERS SPECIFICATIONS.
- REDISTURBED WITHIN 1 YEAR MUST BE SEEDED AND MULCHED WITH A PERMANENT SEED MIXTURE AND MULCH.
- RATE OF 3 LBS. PER 1000 SQ. FT.
- BY STAPLING BIODEGRADABLE NETTING TO THE SURFACE.
- PERENNIAL RYEGRASS AT 15 LBS/ACRE (PURE LIVE SEED).
- SOILS. TOPSOIL SHALL BE RETURNED AT A LOOSE DEPTH OF FIVE INCHES TO ALLOW FOR SETTLEMENT.
- IN TABLE.
- 8. SEE TABLES FOR SEED SPECIES MIXTURE AND APPLICATION RATES.
- 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
- ACTION
- 3. THE LANDSCAPE ARCHITECT SHALL APPROVE ALL PLANT MATERIAL AND STAKED PLANT LOCATIONS PRIOR TO INSTALLATION.

- 6. TOPSOIL SHALL BE PROVIDED BY THE LANDSCAPE CONTRACTOR FOR PLANTING ACCORDING TO THE PLANS AND DETAILS.

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

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

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

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

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

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

7. ESTABLISH PERMANENT SEEDING AS SOON AS POSSIBLE AFTER FINAL GRADING IS COMPLETE. UNLESS OTHERWISE INDICATED, PERMANENT SEEDING SHALL BE SEED MIXTURE SPECIFIED

9. SEED MIXES ARE AVAILABLE AT ERNST CONSERVATION SEEDS IN MEADVILLE, PA. WEBSITE: WWW.ERNSTSEED.COM OR PHONE: 1-800-873-3321.

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 ENSURE 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

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.

7. PREPARED TOPSOIL FOR BACKFILLING AROUND TREE BALLS SHALL BE A MIXTURE OF VOLUME OF THE FOLLOWING MATERIALS IN QUANTITIES SPECIFIED: ½ COMPOST, ½ TOPSOIL

8. ALL HERBACEOUS PLUG PLANTINGS SHALL BE MINIMUM 3 INCH DEPTH. PLUGS SHALL BE PLANTED 1 FOOT O.C. AS INDICATED ON PLAN.

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	PLANTING AND LANDSCAPING DETAILS			XXX	000	XX/XX/XX

SHEET NAME

DT-2

Site Rendering



Appendix C

Site Photographs – Completed Projects

Site Photograph October 29, 2018



Site Photograph Fall 2018

