Permitting Plans

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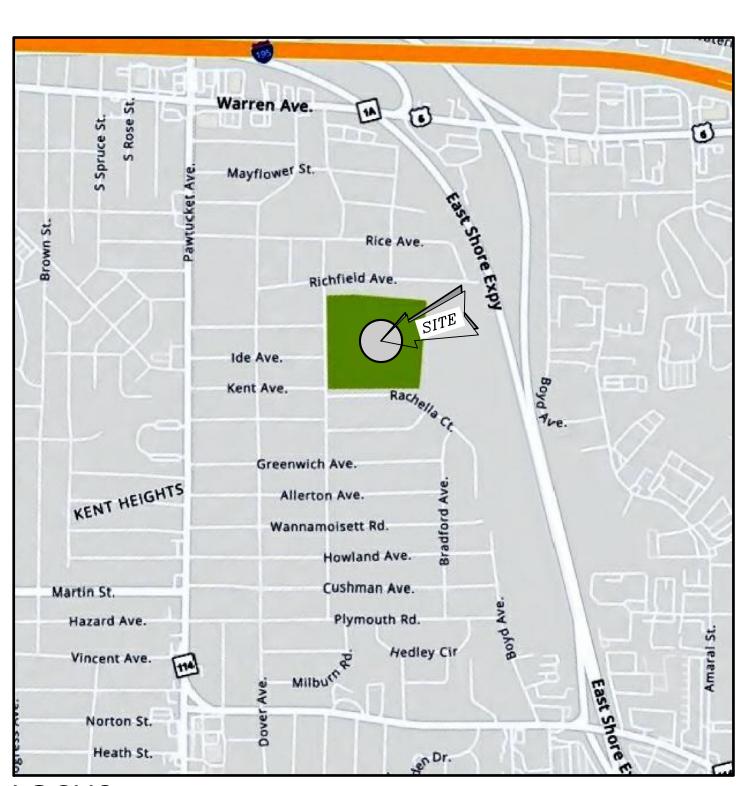
Kent Heights Recreational Facility Improvements Project

Map 408, Block 17, Parcel 16 Clyde Avenue East Providence, RI

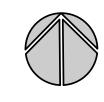
August 2023

Prepared For:

City of East Providence



LOCUS (NOT TO SCALE)





AERIAL PHOTOGRAPH (NOT TO SCALE)



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5	Soil Erosion and Sediment Control Notes and Details	9/20/2023

Owner / Applicant

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REVISED

9/20/2023

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REVISION HISTORY:

DATE 9/20/23	REVISION RIDEM COMMENTS
	-

REFERENCES:

- Plan Entitled, 'LIMITED TOPOGRAPHICAL SURVEY KENT HEIGHT PARK', Sheet 1 of 1; Dated 11/17/21, with Revisions through 2/15/23; Scale: 1"=50', as Prepared by CITY OF EAST PROVIDENCE - DEPARTMENT OF PUBLIC WORKS - ENGINEERING
- 2. Aerial Photograph Courtesy of GoogleEarthPro; Imagery Date
- 3. Locus obtained from mapquest.com

Kent Heights Recreational Facility Improvements Project

Map 408, Block 17, Parcel 16 Clyde Avenue East Providence, RI

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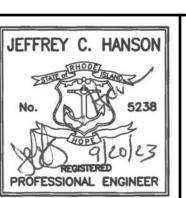


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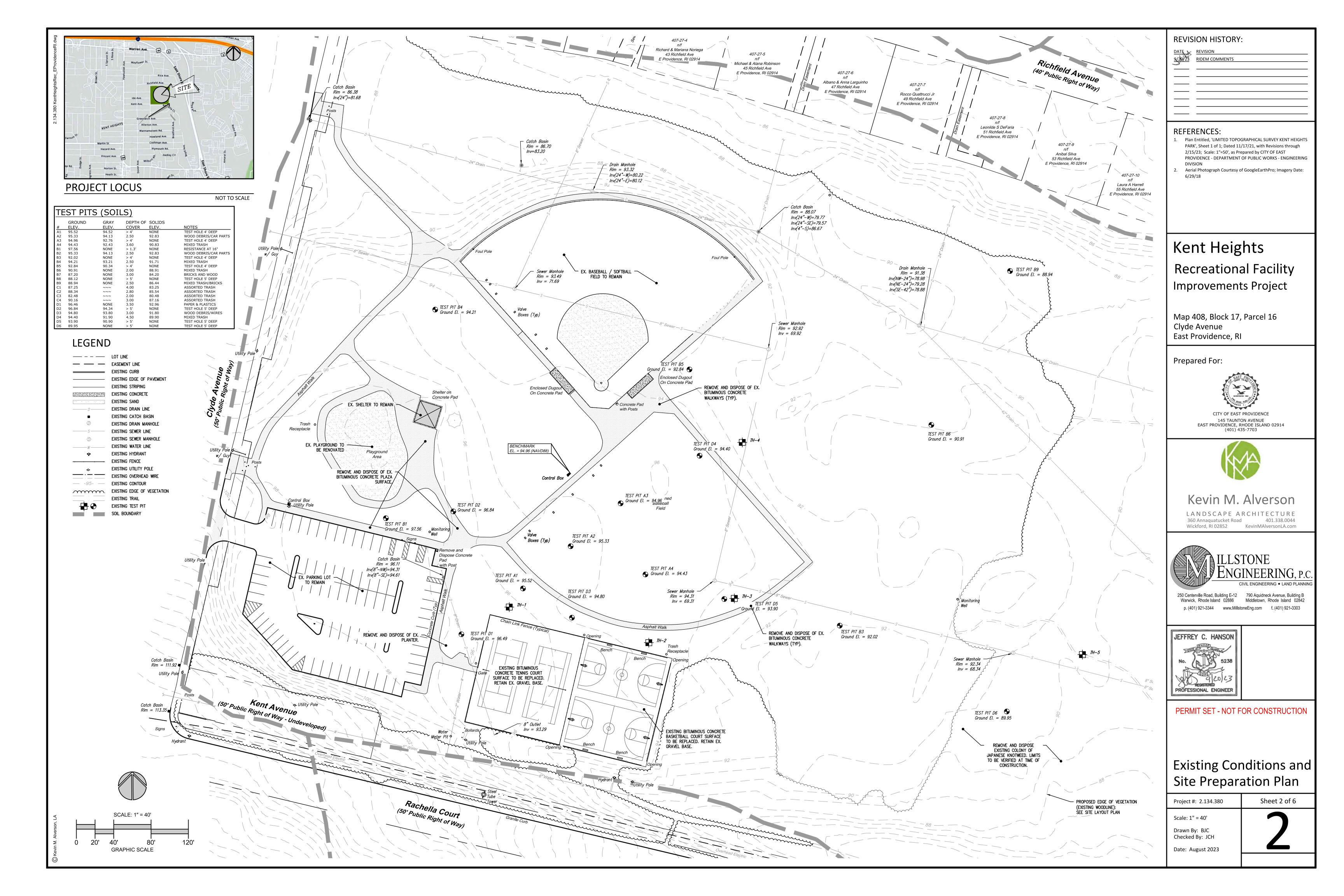
250 Centerville Road, Building E-12 790 Aquidneck Avenue, Building B Warwick, Rhode Island 02886 Middletown, Rhode Island 02842 p. (401) 921-3344 www.MillstoneEng.com f. (401) 921-3303

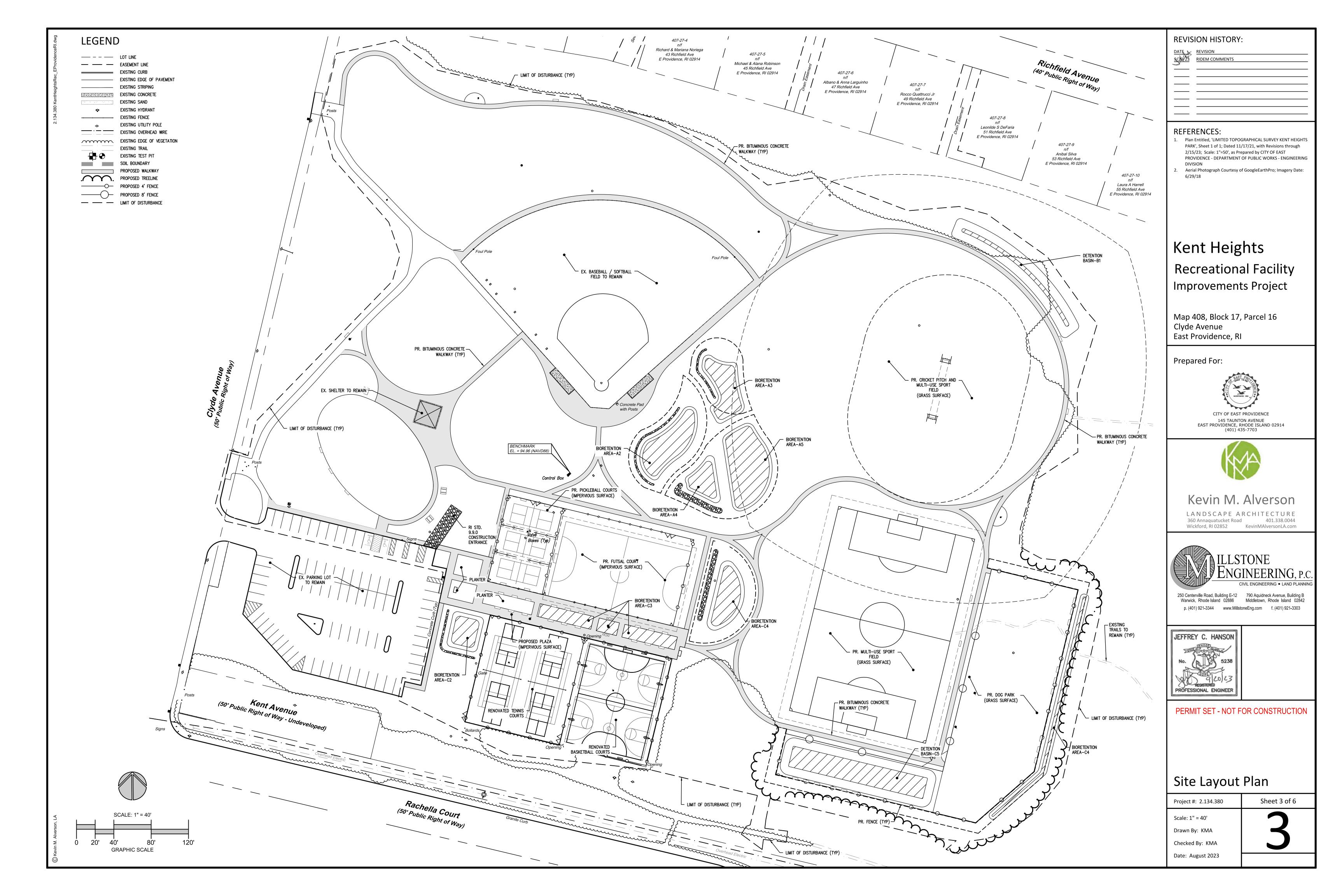


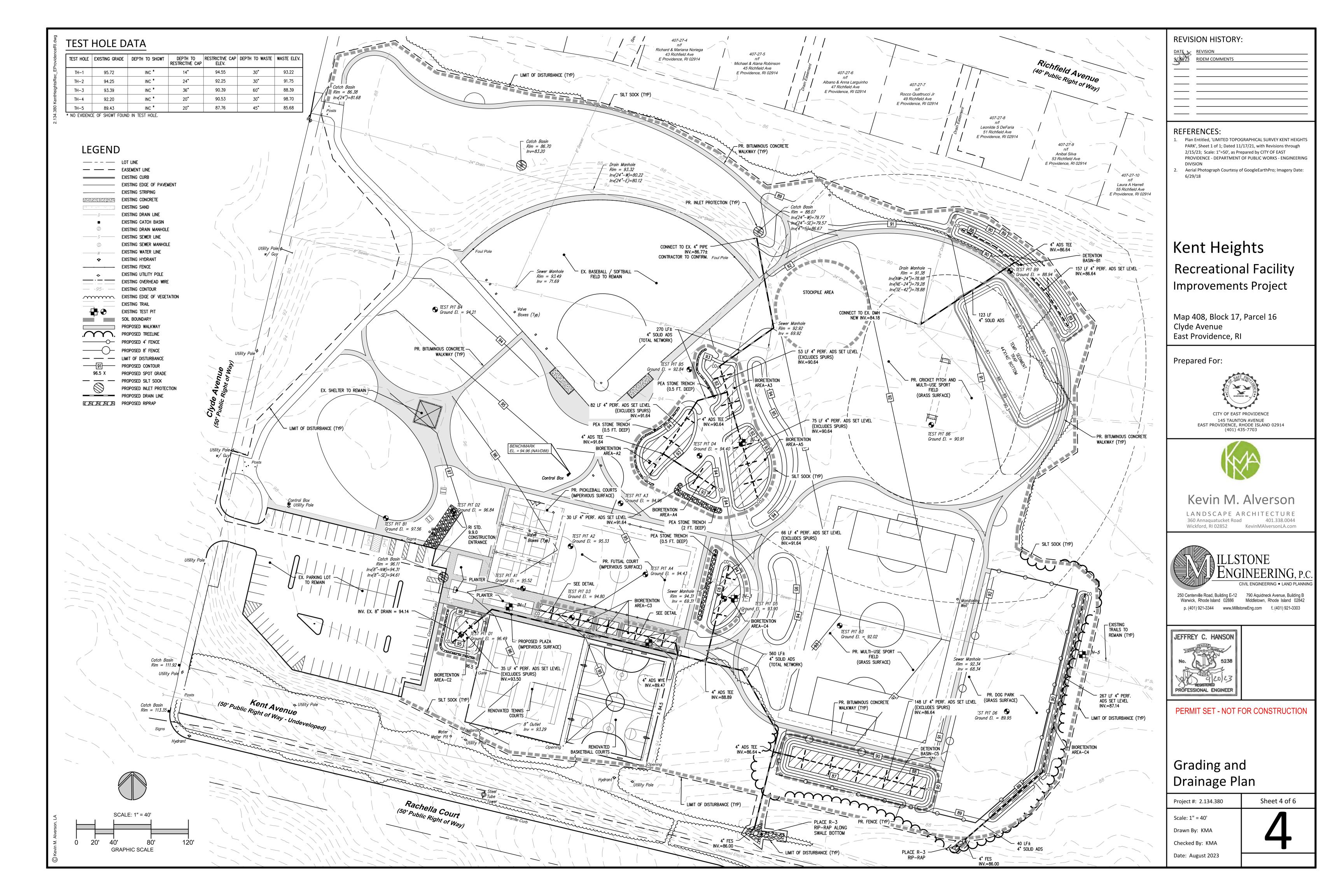
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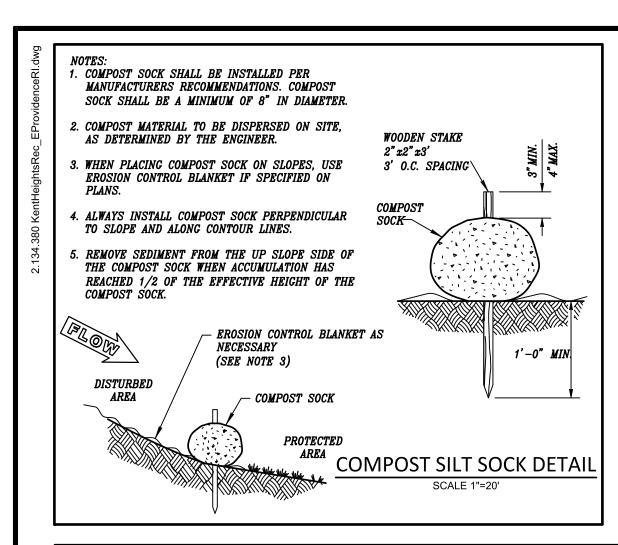
Cover Sheet

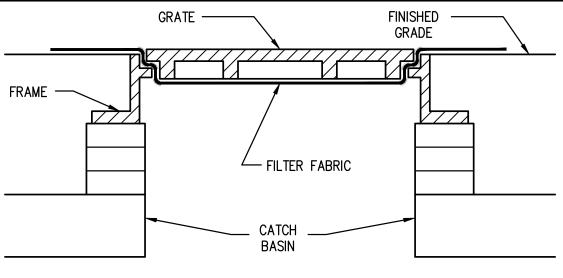
Project #: 2.134.380	Sheet 1 of 6
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Drawn By: BJC Checked By: JCH	
Date: August 2023	







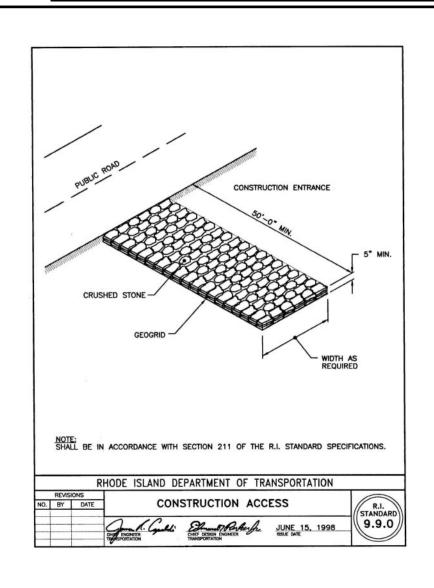


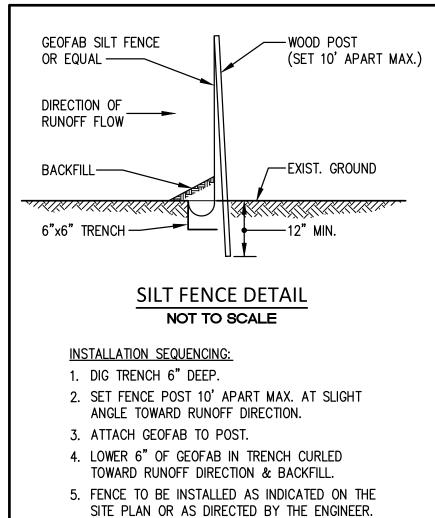


MAINTENANCE NOTE:

CATCH BASIN FILTER FABRIC SHALL BE INSPECTED AFTER EVERY RAINFALL EVENT AND REPLACED AS NECESSARY. AT THE SAME TIME THE CATCH BASIN SUMP SHALL BE CLEANED OF ACCUMULATED DEBRIS, IF NECESSARY. UNDER NO CIRCUMSTANCES SHALL THE FILTER FABRIC BE PUNCTURED.

TEMPORARY CATCH BASIN SEDIMENT CONTROL





SEDIMENTATION CONTROL PROGRAM:

- EXTREME CARE SHALL BE EXERCISED SO AS TO PREVENT ANY UNSUITABLE MATERIAL FROM ENTERING DOWNSTREAM WATERCOURSES AND STORMWATER DRAINAGE SYSTEMS.
- 2. DURING CONSTRUCTION, THE CONTRACTOR AND/OR DEVELOPER SHALL BE RESPONSIBLE FOR MAINTAINING DRAINAGE AND RUN-OFF FLOW DURING STORMS AND PERIODS OF RAINFALL.
- 3. SEDIMENTATION CONTROL DEVICES SHALL BE INSPECTED CLOSELY AND MAINTAINED PROMPTLY AFTER EACH RAINFALL.
- 4. CARE SHALL BE TAKEN SO AS NOT TO PLACE "REMOVED SEDIMENTS" WITHIN THE PATH OF EXISTING, NEWLY CREATED (BOTH TEMPORARY AND PERMANENT) OR PROPOSED WATERCOURSES OR THOSE AREAS SUBJECTED TO STORMWATER FLOWAGE.
- 5. SEDIMENTATION TRAPS SHALL BE PROVIDED AT ALL DRAINAGE STRUCTURES DURING CONSTRUCTION.
- 6. EROSION AND SEDIMENTATION CONTROLS SHALL BE INSTALLED AT THE SITE PRIOR TO THE START OF CONSTRUCTION AND BE PROPERLY MAINTAINED UNTIL ALL DISTURBED AREAS ARE STABILIZED
- A. THE INSTALLATION OF A CONTINUOUS LINE OF STAKED STRAWBALES, SILT FENCE, OR SIMILAR IN ALL LOCATIONS SHOWN ON THE APPROVED SITE PLANS AND WHERE OTHERWISE NECESSARY TO PREVENT SEDIMENTS FROM ENTERING DOWNSTREAM WATERCOURSES AND STORMWATER DRAINAGE SYSTEMS.
- B. ALL DISTURBED AREAS SHALL BE PERMANENTLY STABILIZED WITH APPROVED GROUND COVER PRIOR TO THE COMPLETION OF THE PROJECT. AREAS EXPOSED FOR EXTENDED PERIODS ARE TO BE COMPLETELY COVERED WITH SPREAD HAY MULCH.
- C. CATCH BASINS SHALL BE PROTECTED WITH STRAWBALE OR SILT SACK FILTERS THROUGHOUT THE CONSTRUCTION PERIOD AND UNTIL ALL DISTURBED AREAS ARE THOROUGHLY STABILIZED. SUMPS ARE TO BE CLEANED IMMEDIATELY FOLLOWING INSTALLATION OF PERMANENT
- D. OUTFALLS SHALL BE PROTECTED BY STRAWBALE FILTERS UNTIL DISTURBED AREAS ARE PERMANENTLY STABILIZED WITH APPROVED GROUND COVER.
- E. ALL CONTROL MEASURES SHALL BE MAINTAINED IN EFFECTIVE CONDITION THROUGHOUT THE CONSTRUCTION PERIOD.
- THE LIMITS OF ALL CLEARING, GRADING AND DISTURBANCE SHALL BE KEPT TO A MINIMUM WITHIN THE PROPOSED AREA OF CONSTRUCTION. ALL AREAS OUTSIDE OF THE LIMITS OF DISTURBANCE SHALL REMAIN TOTALLY UNDISTURBED.
- 8. IF AREAS OF 1-5 ACRES ARE TO BE DISTURBED AT ONE TIME, A TEMPORARY SEDIMENT TRAP SHALL BE DESIGNED AND SITED IN ACCORDANCE WITH THE RHODE ISLAND SOIL FROSION AND SEDIMENT CONTROL HANDBOOK, SECTION 6 AND SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR

EROSION CONTROL AND SOIL STABILIZATION PROGRAM: DENUDED SLOPES SHALL NOT BE LEFT EXPOSED FOR EXCESSIVE PERIODS OF TIME, SUCH AS THE INACTIVE WINTER SEASONS.

- CONTRACTOR TO INSTALL TEMPORARY EROSION CONTROL MAT ON ALL 2:1 SLOPES (2'H:1'V) UNTIL GRASS IS ESTABLISHED.
- TEMPORARY TREATMENTS SHALL CONSIST OF STRAW, FIBER MULCH OR PROTECTIVE COVERS SUCH AS A MAT OR FIBER LINING (BURLAP, JUTE, FIBERGLASS NETTING, EXCELSIOR BLANKETS). THEY SHALL BE INCORPORATED INTO THE WORK AS WARRANTED OR AS ORDERED BY THE ÉNGINEER. CONTRACTOR TO SUBMIT CUT SHEET OF TEMPORARY TREATMENT FOR REVIEW AND APPROVAL BY THE ENGINEER.
- 4. STRAW APPLICATIONS SHOULD BE IN THE AMOUNT OF 2000 LBS/ACRE.
- 5. ALL STRAWBALES OR TEMPORARY PROTECTION SHALL REMAIN IN-PLACE UNTIL AN ACCEPTABLE STAND OF GRASS, RIP-RAP OR APPROVED GROUND COVER IS ESTABLISHED.
- 6. THE TOPSOIL SHALL HAVE A SANDY LOAM TEXTURE RELATIVELY FREE OF SUBSOIL MATERIAL, STONES, ROOTS, LUMPS OF SOIL, TREE LIMBS, TRASH OR CONSTRUCTION DEBRIS AND SHALL CONFORM WITH RHODE ISLAND STANDARD SPECIFICATION M.18.02.
- THE DESIGN MIX UTILIZED IN ALL DISTURBED AREAS TO BE SEEDED SHALL BE COMPRISED OF THE

<u>TYPE</u> **% BY WEIGHT** CREEPING RED FESCUE ASTORIA BENTGRASS BIRDFOOT TREEFOIL PERENNIAL RYEGRASS

APPLICATION RATE

8. THE CONTRACTOR MUST REPAIR AND/OR RESEED ANY AREAS THAT DO NOT DEVELOP WITHIN THE PERIOD OF ONE YEAR, AND SHALL DO SO AT NO ADDITIONAL EXPENSE.

100 LBS/ACRE

- 9. THE NORMAL ACCEPTABLE SEASONAL SEEDING DATES ARE APRIL 1ST THROUGH OCTOBER 15TH. IRRIGATION MAY BE REQUIRED IN THE SUMMER MONTHS TO INSURE THAT VEGETATIVE COVER IS
- 10. STABILIZATION OF ONE FORM OR ANOTHER AS DESCRIBED ABOVE SHALL BE ACHIEVED WITHIN FIFTEEN (15) DAYS OF FINAL GRADING.

11. STOCKPILES OF TOPSOIL AND EARTH MATERIALS SHALL NOT BE LOCATED NEAR WATERWAYS. THEY

SHALL HAVE SIDE SLOPES NO GREATER THAN THIRTY PERCENT (30%), SHALL ALSO BE SEEDED

- AND/OR STABILIZED AND SHALL BE COMPLETELY ENCIRCLED WITH STAKED HAY BALES AND/OR SILT 12. ON BOTH STEEP AND LONG SLOPES, CONSIDERATION SHOULD BE GIVEN TO "CRIMPING" OR
- "TRACKING" TO TACK DOWN MULCH APPLICATIONS.
- 13. TREES TO BE RETAINED SHALL BE FENCED OR ROPED OFF TO PROTECT THEM FROM CONSTRUCTION EQUIPMENT. 14. ALL PROPOSED PLANTINGS AND PLACEMENT OF RIP-RAP MUST BE ACCOMPLISHED AS EARLY AS

POSSIBLE UPON COMPLETION OF GRADING AND CONSTRUCTION, AND AT LEAST PRIOR TO ANY

- 15. ALL DISTURBED AREAS MUST BE SEEDED, PLANTED OR RIP-RAPPED WITHIN THE CONSTRUCTION
- 16. TEMPORARY SEEDING MUST BE COMPLETED WITHIN ONE (1) MONTH AFTER DISTURBANCE. 17. ALL DISTURBED AREAS MUST BE PERMANENTLY SEEDED, PLANTED OR RIP-RAPPED BEFORE OCTOBER 1ST, IF NOT THEY MUST BE TEMPORARILY SEEDED.

BMP CONSTRUCTION SEQUENCES:

- GREAT CARE SHALL BE GIVEN TO THE AREAS WHERE STRUCTURES WHICH REQUIRE INFILTRATION AS A MECHANISM FOR STORMWATER TREATMENT AND/OR DISPOSAL ARE PROPOSED PRIOR TO THEIR CONSTRUCTION. NO INFILTRATION STRUCTURE SHALL BE CONSTRUCTED NOR ACCEPT RUNOFF UNTIL ALL UP-GRADIENT AREAS OF THE WATERSHED HAVE BEEN BUILT AND FULLY STABILIZED SO AS TO HAVE NO POTENTIAL FOR SEDIMENT OR SILT DEPOSITION. ALSO, ONCE THE ENTIRE SITE IS STABILIZED ALL SESC MEASURES SHALL BE REMOVED.
- THE DESIGN SEED MIX FOR ALL PERMANENT STORMWATER BASINS SHALL BE COMPRISED OF THE FOLLOWING AND PLANTED IN A MINIMUM OF A 6" DEPTH OF SANDY LOAM FREE OF SUBSOIL MATERIAL, STONES, ROOTS, LUMPS OF SOIL, TREE LIMBS, TRASH OR CONSTRUCTION

% BY WEIGHT CREEPING RED FESCUE KENTUCKY BLUEGRASS TALL FESCUE

- APPLICATION RATE 100 LBS/ACRE LIMING AND FERTILIZING AS REQUIRED TO COMPLIMENT OR UPGRADE EXISTING CONDITIONS.
- <u>DETENTION / INFILTRATION BASIN:</u>

1. EXCAVATE TO THE LINES AND GRADES OF THE DESIGN

2. INSTALL OUTLET CONTROL STRUCTURE & LEVEL SPREADER 3. LOAM AND SEED ACCORDINGLY WITH PERMANENT SEED MIXTURI

BIORETENTION AREAS:

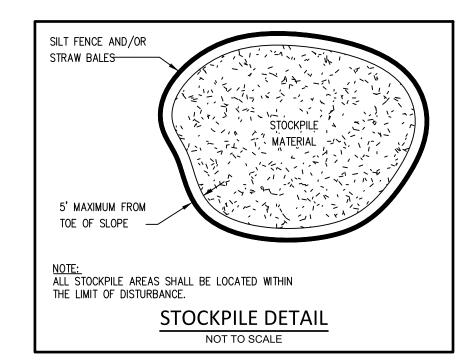
- 1. EXCAVATE TO THE LINES AND GRADES OF THE DESIGN 2. INSTALL 6" OF PEASTONE / UNDERDRAIN 3. BIORETENTION MEDIA SHALL BE USDA LOAMY SAND TO SANDY LOAM CLASSIFICATION 4. INSTALL NON-WOVEN GEOTEXTILE
- 5. INSTALL 4" WASHED CRUSHED STONE WITH DISTRIBUTION PERFORATED PIPE 6. INSTALL NON-WOVEN GEOTEXTILE 7. LOAM AND SEED PER DETAILS WITH PERMANENT SEED MIXTURE & DRAINS

CONSTRUCTION MAINTENANCE:

OWNER UPON ACCEPTANCE.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSPECTION. MAINTENANCE AND REPAIR TO ALL DRAINAGE STRUCTURES AND RELATED APPURTENANCES ON THE SITE DURING CONSTRUCTION AND FOR A MAXIMUM OF ONE (1) YEAR FOLLOWING COMPLETION OF CONSTRUCTION. AT WHICH TIME THE DRAINAGE STRUCTURES AND APPURTENANCES ARE TO BE ACCEPTED BY THE ENGINEER AND THE OWNER, AS FOLLOWS:

- 1. ALL CATCH BASINS AND STORM DRAIN PIPES SHALL BE CLEANED OF SEDIMENT. STORMWATER BASINS SHALL BE CLEANED OF SEDIMENT TO THE DESIGN GRADES INDICATED ON THE CONSTRUCTION DRAWINGS.
- INSPECTION OF THE BASINS AND ALL INLET AND OUTLET STRUCTURES SHALL BE PERFORMED ON A WEEKLY BASIS, PREFERABLY DURING A STORM EVENT TO INSPECT FOR PROPER FUNCTIONALITY OF THE FACILITY.
- GRASSES MUST BE PLANTED AROUND AND WITHIN THE STORMWATER BASIN IMMEDIATELY FOLLOWING CONSTRUCTION TO STABILIZE THE SLOPES AND PREVENT EROSION.
- 4. SEDIMENTS SHALL BE REMOVED FROM DRAINAGE STRUCTURES AND THE STORMWATER BASINS IMMEDIATELY FOLLOWING SITE STABILIZATION AND DURING THE FIRST (INITIAL)
- 5. ALL COSTS INCURRED FOR MAINTENANCE, CLEANING, AND INSPECTION ARE THE RESPONSIBILITY OF THE CONTRACTOR DURING CONSTRUCTION AND THE PROPERTY
- 6. ANY INADVERTENT OR DELIBERATE DISCHARGE OF WASTE OIL OR ANY OTHER POLLUTANT TO THE STORMWATER DISPOSAL SYSTEM REQUIRES IMMEDIATE NOTIFICATION OF THE RIDEM.
- . ALL TRASH AND LITTER AND OTHER DEBRIS SHALL BE REMOVED FROM ANY STORMWATER FACILITY DAILY, INCLUDING INLET AND OUTLET STRUCTURES.
- 8. REPAIRS OR REPLACEMENT OF INLET/OUTLET STRUCTURES, RIP-RAP CHANNELS, FENCES, OR OTHER ELEMENTS OF THE FACILITY DURING CONSTRUCTION SHALL BE DONE WITHIN 30 DAYS OF DEFICIENCY REPORTS.
- 9. PAVEMENT SWEEPING SHALL BE PERFORMED UPON COMPLETION OF THE PROJECT.
- 10. WATER SHALL BE USED TO MOISTEN EXPOSED SOIL SURFACES PERIODICALLY. AN ADEQUATE AMOUNT SHOULD BE USED TO CONTROL DUST.



EMERGENCY SPILLWAY RESIDENCE STORAGE INLET WITH ENERGY DISSIPATER PRINCIPLE SPILLWAY WET STORAGE OUTLET -PROTECTION OUTLET PIPE SEDIMENT STORAGE NOTES: TEMPORARY SEDIMENT TRAPS, WHEN REQUIRED, SHALL BE DESIGNED IN ACCORDANCE WITH THE RHODE ISLAND SOIL EROSION AND SEDIMENT TEMPORARY SEDIMENT TRAP *BOTTOM ELEVATION OF TRAP SHOULD BE 1.4-FT BELOW BASE OF OUTLET CONTROL HANDBOOK (LATEST REVISION) AND SITED BY THE CONTRACTOR. THE DESIGN SHALL *OUTLET SHOULD HAVE A HEIGHT OF 2.3-FT BE SUBMITTED TO THE ENGINEER FOR *DRY STORAGE VOLUME PROVIDED = 19.455 CF *WET STORAGE VOLUME PROVIDED = 16,808 CF POTENTIAL LOCATIONS FOR SEDIMENT TRAPS HAVE BEEN PROVIDED ON THE SITE PLANS. SEE TEMPORARY SEDIMENT TRAP CALCULATIONS FOR ADDITIONAL INFORMATION. TEMPORARY SEDIMENT TRAP DETAIL NOT TO SCALE

POLLUTION PREVENTION PLAN:

LONG-TERM MANAGEMENT OF THE POLLUTION PREVENTION PLAN SHALL BE THE RESPONSIBILITY OF THE OWNER / OPERATOR.

CITY OF EAST PROVIDENCE 145 TAUNTON AVENUE EAST PROVIDENCE, RI 02914

THE CONTRACTOR SHALL MANAGE THE POLLUTION PREVENTION PLAN DURING THE CONSTRUCTION

CONTRACTOR: TBD SOLID WASTE CONTAINMENT:

- TRASH RACKS WHERE PRACTICAL SHALL BE INSTALLED AND MAINTAINED ON ALL INLET STRUCTURES WITHIN THE DRAINAGE SYSTEM. INSPECTIONS FOR TRASH SHOULD BE ON A
- STREET SWEEPING SHALL BE PERFORMED ON AN ANNUAL BASIS.

SNOW DISPOSAL AND DEICING:

- NO SAND AND DEICING MATERIALS SHALL BE STORED ON THE SITE
- SNOW REMOVAL SHALL BE PERFORMED IN ACCORDANCE WITH RIDEM'S SNOW DISPOSAL

DRIVEWAY AND PARKING LOT SEALANTS:

- ON STANDARD ASPHALT AREAS, ONLY ASPHALT-BASED SEALANTS ARE ALLOWED, NO COAL-TAR BASED SEALANTS SHALL BE USED ON THIS SITE. **HAZARDOUS MATERIALS CONTAINMENT:**
- NO HAZARDOUS MATERIALS SHALL BE STORED OUTSIDE TO AVOID EXPOSURE TO STORMWATER. LANDSCAPE MANAGEMENT:
- GRASS CLIPPINGS FROM LAWN CARE PROCEDURES PERFORMED IN AND AROUND THE

STORMWATER FACILITY MUST BE COLLECTED AND DISPOSED OF OFF SITE.

- GENERAL LAWN HEIGHTS (EXCLUDING STORMWATER BASINS) SHALL BE KEPT AT A 4-6"
- FERTILIZER AND WATERING DEMANDS SHALL HAVE PROFESSIONAL OVERSIGHT AND BOTH USES SHALL BE MINIMIZED TO THE MAXIMUM EXTENT PRACTICAL. DOG PARK MANAGEMENT:
- DOG BAG DISPENSER AND TRASH RECEPTACLE SHALL BE PROVIDED AND MAINTAINED BY THE CITY OF EAST PROVIDENCE.
- DOG BAG DISPENSER SHALL BE INSPECTED TWICE WEEKLY AND REPLENISHED AS NEEDED.
- TRASH RECEPTACLE SHALL BE EMPTIED INSPECTED TWICE WEEKLY.

LONG-TERM MAINTENANCE SCHEDULE (O&M):

LONG-TERM MAINTENANCE OF THE DRAINAGE SYSTEM SHALL BE COMPLETED BY THE APPLICANT/OPERATOR UNDER A LEGALLY BINDING AND ENFORCEABLE MAINTENANCE AGREEMENT.

CITY OF EAST PROVIDENCE 145 TAUNTON AVENUE EAST PROVIDENCE, RI 02914

THE CONTRACTOR / OPERATOR SHALL MAINTAIN ALL DRAINAGE COMPONENTS DURING AND DIRECTLY AFTER CONSTRUCTION. ALL OPERATIONAL MAINTENANCE REQUIREMENTS WILL BE RECORDED ON THE TITLE. OPERATOR: CITY OF EAST PROVIDENCE

145 TAUNTON AVENUE EAST PROVIDENCE, RI 02914

CONTRACTOR: TBD

THE ENTIRE STORMWATER SYSTEM SHALL BE INSPECTED THROUGHOUT THE CONSTRUCTION PROCESS AND REPORTED ON THE ATTACHED CONSTRUCTION INSPECTION REPORTING FORMS.

THE ENTIRE STORMWATER MANAGEMENT SYSTEM SHALL BE INSPECTED ON A BI-ANNUAL BASIS FOR GENERAL PROBLEMS AND TO ENSURE PROPER FUNCTION AND AFTER STORM EVENTS GREATER THAN OR EQUAL TO THE 1-YR, 24-HR TYPE III PRECIPITATION EVENT (2.7"). THESE INSPECTIONS SHALL BE REPORTED ON THE ATTACHED O&M INSPECTION REPORTING FORMS.

ALL INSPECTIONS REPORTS SHALL BE KEPT ON FILE WITH THE STORMWATER MANAGEMENT OPERATION AND MAINTENANCE PLAN. PEASTONE TRENCH:

- THE SLOPES SHALL BE INSPECTED FOR EROSION AND GULLYING.
- STONE SHALL BE REINFORCED IF EROSION IS PRESENT AT OUTFALLS OR IF IT HAS BEEN COMPROMISED.
- INSPECT FOR SEDIMENT ACCUMULATION AND IT SHALL BE REMOVED IF IT REACHES 6" OR 25% OF THE STORAGE VOLUME.
- NO WOODY GROWTH SHALL EVER BE ALLOWED TO REMAIN IN AND AROUND THE TRENCHES.
- AREAS OF EROSION OR DISTURBANCE SHALL BE RE-ESTABLISHED IMMEDIATELY.
- INLETS AND OUTLETS SHALL BE CLEARED OF DEBRIS AS NEEDED.

BIORETENTION AREAS:

- THE FACILITY SHOULD BE INSPECTED ANNUALLY TO ENSURE INFILTRATION RATES ARE BEING MET. STANDING WATER IS OBSERVED FOR MORE THAN 48 HRS AFTER A RAIN EVENT, THE TOP 6" SHOULD BE ROTOTILLED AND ANY COMPACTED REMOVED. IF THIS DOESN'T SOLVE THE PROBLEM, THE TOP 6" OF THE SAND FILTER SHALL BE REMOVED AND REPLACED.
- RIPRAP SHOULD BE REINFORCED IF EROSION IS PRESENT AT OUTFALLS OR IF IT HAS BEEN COMPROMISED
- MOW GRASSES TO MAINTAIN A 4-6" STRONG STAND OF TURF, ALL CLIPPINGS SHALL BE COLLECTED AND DISPOSED OF PROPERLY
- NO WOODY GROWTH SHOULD EVER BE ALLOWED TO REMAIN IN AND AROUND THE FOREBAYS
- AREAS OF EROSION OR DISTURBANCE SHALL BE RE-ESTABLISHED IMMEDIATELY
- INLETS AND OUTLETS SHALL BE CLEARED OF DEBRIS AS NEEDED

RAIN GARDENS:

- RAIN GARDENS SHALL BE INSPECTED FOLLOWING AT LEAST THE FIRST TWO PRECIPITATION EVENTS OF AT LEAST ONE INCH TO ENSURE THEY ARE FUNCTIONING PROPERLY.
- THE RAIN GARDENS SHALL BE MONITORED AND MAINTAINED TO ASSURE PROPER FUNCTIONING, PLANT GROWTH AND SURVIVAL.
- PLANTS SHALL BE REPLACED ON AN AS-NEEDED BASIS DURING THE GROWING SEASON.
- SILT/SEDIMENT SHALL BE REMOVED FROM THE RAIN GARDENS WHEN THE ACCUMULATION EXCEEDS ONE INCH, OR WHEN WATER PONDS ON THE SURFACE FOR MORE THAN 48 HOURS. THE TOP FEW INCHES OF MATERIAL SHALL BE REMOVED AND REPLACED WITH FRESH SOIL MIXTURE AND MULCH.
- PRUNING AND REPLACEMENT OF WOODY VEGETATION SHALL OCCUR WHEN DEAD OR DYING VEGETATION IS OBSERVED.
- SOIL EROSION GULLIES SHALL BE REPAIRED WHEN THEY OCCUR.
- FERTILIZER OR PESTICIDES SHALL NOT BE APPLIED TO PLANTS WITHIN RAIN GARDENS.
- PERENNIAL PLANTS AND GROUND COVERS SHALL BE REPLACED AS NECESSARY TO MAINTAIN AN ADEQUATE VEGETATED GROUND COVER. ANNUAL PLANTS MAY ALSO BE USED TO MAINTAIN GROUND

- DETENTION BASIN: THE FACILITY SHALL BE INSPECTED ANNUALLY TO ENSURE INFILTRATION RATES ARE BEING MET. IF STANDING WATER IS OBSERVED FOR MORE THAN 48 HRS AFTER A RAIN EVENT. THE TOP 6" SHALL BE ROTOTILLED AND ANY COMPACTED REMOVED. IF THIS DOESN'T SOLVE THE PROBLEM, THE TOP 6" OF
- THE BASIN SHALL BE REMOVED AND REPLACED. THE FACILITY SHALL BE INSPECTED ANNUALLY FOR EROSION, GULLYING OR DAMAGE AND CLEANED OF
- DEBRIS AND TRASH
- RIPRAP SHALL BE REINFORCED IF EROSION IS PRESENT AT OUTFALLS OR IF IT HAS BEEN COMPROMISED MOW GRASSES TO MAINTAIN A 4-6" STRONG STAND OF TURF, ALL CLIPPINGS SHALL BE COLLECTED AND DISPOSED OF PROPERLY
- NO WOODY GROWTH SHALL EVER BE ALLOWED TO REMAIN IN AND AROUND THE FOREBAYS
- AREAS OF EROSION OR DISTURBANCE SHALL BE RE-ESTABLISHED IMMEDIATELY

INLETS AND OUTLETS SHALL BE CLEARED OF DEBRIS AS NEEDED

- CATCH BASINS AND DRAINAGE SYSTEM: ALL CATCH BASINS AND STORM DRAIN PIPES SHALL BE ANNUALLY CHECKED FOR SEDIMENT AND DEBRIS AND CLEANED / JETTED AS NECESSARY.
- ALL COSTS INCURRED FOR MAINTENANCE, CLEANING, AND INSPECTION ARE THE RESPONSIBILITY OF THE PROPERTY OWNER UPON ACCEPTANCE.

ESTIMATED O&M BUDGET & FUNDING SOURCE:

• THE PROJECT OPERATOR WILL BE THE OWNER, WHO SHALL BE RESPONSIBLE FOR FUNDING THE O&M

ESTIMATE OF O&M BUDGET:

BI-ANNUAL INSPECTIONS:	\$1000 EA	\$1, 000
BI-WEEKLY MOWING:	\$200 EA X 14	\$2,800
MISC. REPAIRS:	\$1,000	\$1,000
PAVEMENT SWEEPING	\$1,000	\$1,000
ADDITIONAL INSPECTIONS:	\$1,000 EA X 2	\$2,000
TOTAL ESTIMATE:		\$ 7,800 /

REFERENCES:

REVISION HISTORY:

RIDEM COMMENTS

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- Aerial Photograph Courtesy of GoogleEarthPro; Imagery Date: 6/29/18

Kent Heights **Recreational Facility** Improvements Project

Map 408, Block 17, Parcel 16 Clyde Avenue East Providence, RI

Prepared For:





(401) 435-7703

Kevin M. Alverson

401.338.0044

LANDSCAPE ARCHITECTURE

Wickford, RI 02852 KevinMAlversonLA.com

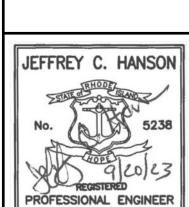
360 Annaquatucket Road



250 Centerville Road, Building E-12 790 Aquidneck Avenue, Building B

Warwick, Rhode Island 02886 Middletown, Rhode Island 02842

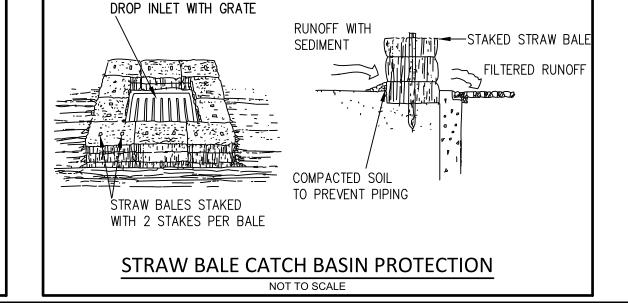
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PERMIT SET - NOT FOR CONSTRUCTION

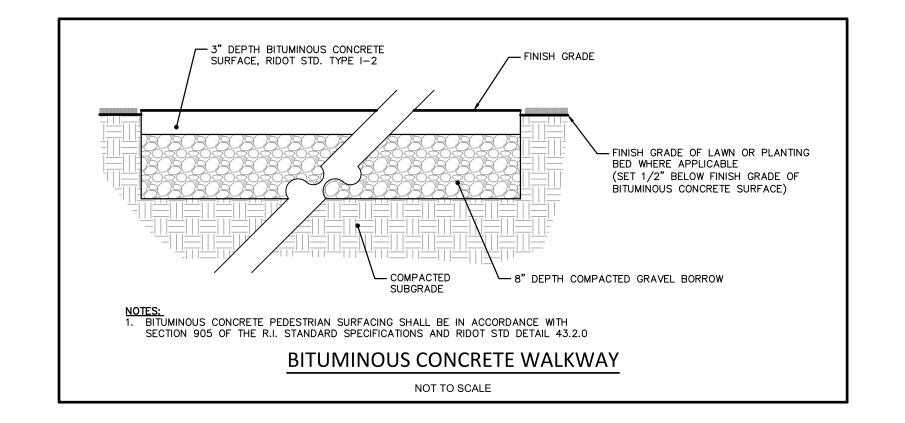
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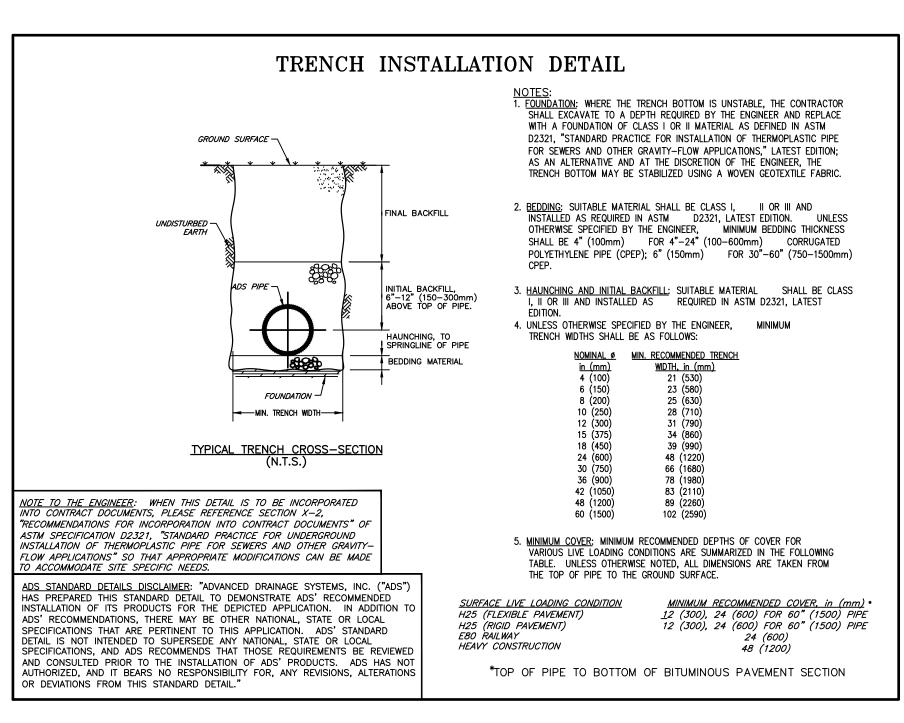
Sheet 5 of 6 Project #: 2.134.380 Scale: NTS Drawn By: KMA Checked By: KMA Date: August 2023

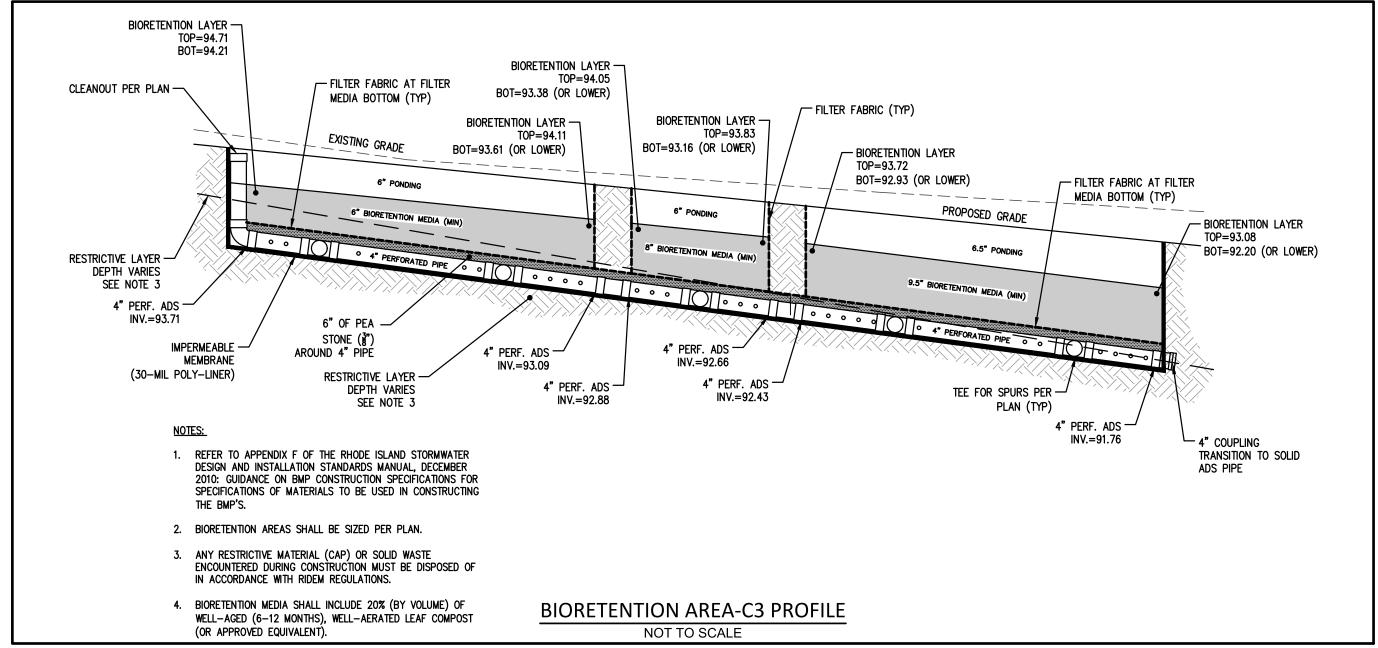


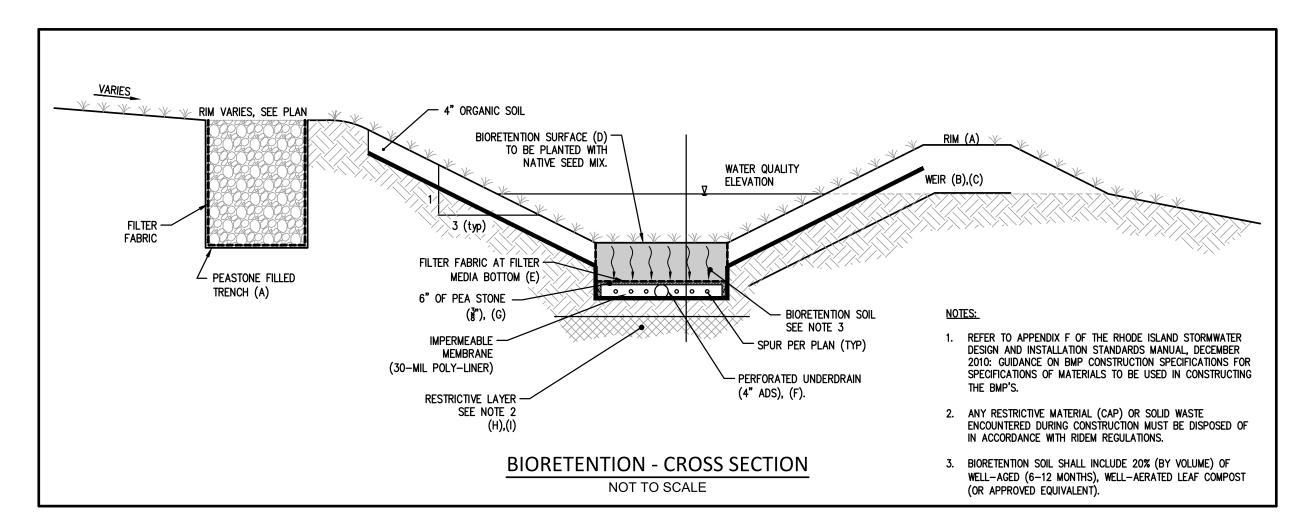
GENERAL NOTES:

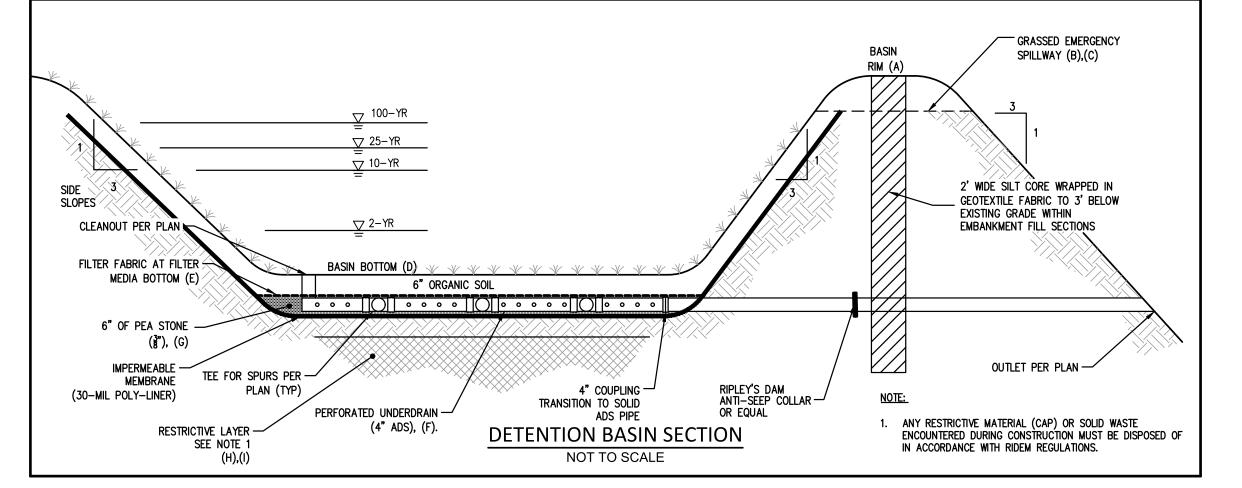
- THE MOST CURRENT EDITION OF THE STATE OF RHODE ISLAND STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE AND THE RHODE ISLAND STANDARD DETAILS CONSTRUCTION ARE MADE A PART HEREOF AS FULLY AND COMPLETELY AS IF ATTACHED HERETO. THE CURRENT VERSION OF THE STANDARD SPECIFICATIONS MAY BE OBTAINED AT THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION, DIVISION OF PUBLIC WORKS. IN ADDITION, CITY OF EAST PROVIDENCE STANDARD SPECIFICATIONS ARE MADE A PART HEREOF AS FULLY AND COMPLETELY AS IF ATTACHED HERETO.
- ALL REQUIRED SITE IMPROVEMENTS SHALL BE INSPECTED BY THE CITY ENGINEER TO ENSURE SATISFACTORY COMPLETION. IN NO CASE SHALL THE INSTALLATION OF ANY IMPROVEMENTS BE STARTED UNTIL PRIOR NOTIFICATION IS GIVEN TO THE CITY ENGINEER. AT LEAST A 48-HOUR NOTICE SHALL BE GIVEN TO THE CITY ENGINEER PRIOR TO ANY SUCH START OF CONSTRUCTION. A FINAL INSPECTION OF ALL SITE IMPROVEMENTS, UTILITIES AND GRADING WILL BE MADE TO DETERMINE WHETHER THE WORK IS SATISFACTORY AND IN SUBSTANTIAL AGREEMENT WITH THE APPROVED FINAL CONSTRUCTION DRAWING AND THE CITY
- 3. LOCATION AND DEPTH OF EXISTING UTILITIES ARE APPROXIMATE AND HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. THE CONTRACTOR SHALL CHECK AND VERIFY LOCATIONS OF ALL EXISTING UTILITIES BOTH UNDERGROUND AND OVERHEAD. ANY DAMAGE TO EXISTING UTILITIES AS SHOWN OR NOT SHOWN ON THE PLANS SHALL BE THE CONTRACTOR'S RESPONSIBILITY. COSTS OF SUCH DAMAGE SHALL BE BORNE BY THE CONTRACTOR. NO EXCAVATION SHALL BE DONE UNTIL ALL INVOLVED UTILITY COMPANIES ARE NOTIFIED 72-HOURS IN ADVANCE. THE CONTRACTOR SHALL BE RESPONSIBLE TO NOTIFY DIG-SAFE (1-888-344-7233) A MINIMUM OF 72 WORKING HOURS, EXCLUDING WEEKENDS AND HOLIDAYS, PRIOR TO THE START OF ANY EXCAVATION AND/OR BLASTING WORK. THE NAME OF THE COMPANY PERFORMING THE EXCAVATION AND/OR BLASTING WORK MUST BE SUPPLIED TO DIG-SAFE, IF IT IS DIFFERENT FROM THE CALLER.
- 4. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO OBTAIN ANY AND ALL PERMITS REQUIRED BY THE STATE OF RHODE ISLAND, FEDERAL GOVERNMENT, AND THE CITY OF EAST PROVIDENCE PRIOR TO COMMENCING ANY WORK.
- 5. CONTRACTOR TO EXCAVATE TEST PITS TO CONFIRM LOCATION AND ELEVATION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION. ANY DISCREPANCY SHALL BE REPORTED TO THE
- 6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING ALL TEMPORARY SEDIMENTATION AND EROSION CONTROLS.
- 7. STOCKPILES OF EARTH MATERIALS SHALL NOT BE LOCATED NEAR WATERWAYS, WETLAND, OR ADJACENT TO DRAINAGE STRUCTURES.
- 8. ALL MATERIAL FOR FILL SHALL BE CLEAN AND FREE OF MATTER WHICH COULD POLLUTE ANY DOWN STREAM WATERCOURSE.
- 9. FILL MATERIAL SHALL BE COMPACTED IN ONE FOOT (MAXIMUM) LIFTS TO AT LEAST 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED IN ACCORDANCE WITH ASTM D-1557 (MODIFIED PROCTOR TEST).
- 10. THE SITE LIES IN "ZONE X" AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN AS SHOWN ON THE FLOOD INSURANCE RATE MAP (FIRM) FOR WASHINGTON COUNTY, RHODE ISLAND (ALL JURISDICTIONS) PANEL 213 OF 368, MAP NUMBER 44009C0213J, MAP REVISED OCTOBER 16, 2013.
- 11. VERTICAL DATUM: NAVD 1988.
- 12. WORK SHOWN ON THE PLANS FOR WHICH THERE ARE NO PARTICULAR DETAILS OR SPECIFICATIONS DOES NOT RELIEVE THE CONTRACTOR FROM FINISHING AND INSTALLING THE WORK. THE CONTRACTOR SHALL THOROUGHLY EXAMINE THE CONTRACT DOCUMENTS AND PLANS AND INSPECT THE SITE. AND THE BID PRICE SHALL INCLUDE ALL SERVICES AND MATERIALS AS NECESSARY TO COMPLETE THE PROJECT. ANY CHANGES TO THE PROJECT OR THE INSTALLATION OF AN ITEM FOR WHICH NO PARTICULAR DETAIL OR SPECIFICATION WAS PROVIDED MUST BE REVIEWED BY AND ACCEPTABLE TO THE ENGINEER.
- 13. CONTRACTOR SHALL RECORD AND PROVIDE AS-BUILT DRAWINGS FOR ALL NEW INFRASTRUCTURE.











BMP		Rim	Wier	Wier	Bioretention /	Bottom	Underdrain	Bottom	Top Restrictive	Bottom
		Elevation (A)	Elevation (B)	Width (C)	Bottom Surface (D)	Filter Media (E)	Pipe Invert (F)	Stone (G)	Layer (H)	Restrictive Layer (I)
Bioretention	A2	94.00	93.50	5.0	93.00	92.00	91.64	91.50	91.90	89.90
Bioretention	АЗ	93.00	92.50	5.0	92.00	91.00	90.64	90.50	90.34	88.84
Bioretention	Α4	94.00	93.50	5.0	93.00	92.00	91.64	91.50	91.90	89.90
Bioretention	A5	93.00	92.50	5.0	92.00	91.00	90.64	90.50	90.53	89.70
Detention	В1	90.00	89.00	5.0	87.00	N/A	86.64	86.50	N/A	N/A
Bioretention	C2	96.00	95.50	5.0	95.00	94.00	93.50	93.50	N/A	N/A
Bioretention	on C3 See Profile									
Bioretention	C4	94.00	93.50	5.0	93.00	92.00	91.64	91.50	90.39	90.39
Detention	C5	90.00	88.75	10.0	87.00	N/A	86.64	86.50	91.90	85.00
Bioretention	C6	89.00	88.50	5.0	88.00	87.50	87.14	87.00	87.76	85.68

BIORETENTION / DETENTION BASIN DATA

REVISION HISTORY:

REFERENCES:

- Plan Entitled, 'LIMITED TOPOGRAPHICAL SURVEY KENT HEIGHTS PARK', Sheet 1 of 1; Dated 11/17/21, with Revisions through 2/15/23; Scale: 1"=50', as Prepared by CITY OF EAST PROVIDENCE - DEPARTMENT OF PUBLIC WORKS - ENGINEERING
- Aerial Photograph Courtesy of GoogleEarthPro; Imagery Date: 6/29/18

Kent Heights Recreational Facility Improvements Project

Map 408, Block 17, Parcel 16 Clyde Avenue East Providence, RI

Prepared For:



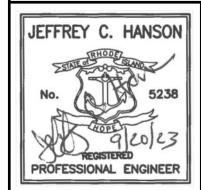


Kevin M. Alverson

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PERMIT SET - NOT FOR CONSTRUCTION

General Notes and Details

Project #: 2.134.380	Sheet 6 of 6
Scale: NTS	
Drawn By: KMA	h
Checked By: KMA	
Date: August 2023	