



Construction Plans

For:

Kent Heights Recreational Facility Improvements Project

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

October 2023

Prepared For:

City of East Providence

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Owner / Applicant

City of East Providence 145 Taunton Avenue East Providence, RI 02914 (401) 435-7703

Surveyor City of East Providence 145 Taunton Avenue East Providence, RI 02914 (401) 435-7703

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.
- 2. EXISTING CONDITIONS SHOWN ARE THE RESULT OF A FIELD SURVEY BY THE CITY OF EAST PROVIDENCE (SEE REFERENCED PLANS).
- 2.1. HORIZONTAL DATUM: RHODE ISLAND STATE PLANE COORDINATE (RISPC-NAD83)
- VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)
- BENCHMARK : NORTHERN MOST CORNER OF CONCRETE PAD FOR IRRIGATION CONTROL BOX. 2.3. VATION = 94.96. SEE EXISTING CONDITIONS AND SITE PREPARATION PLAN.
- 2.4. CONTRACTOR SHALL VERIFY ACTUAL AS-BUILT ON-SITE CONDITIONS PRIOR TO COMMENCING CONSTRUCTION PROCEDURES
- 3. SITE IS LOCATED OVER FORMER LAND FILL. ANY RESTRICTIVE MATERIAL (CAP) OR SOLID WASTE ENCOUNTERED DURING CONSTRUCTION MUST BE DISPOSED OF IN ACCORDANCE WITH RIDEM REGULATIONS. CONTRACTOR SHALL ENSURE PROPER PROTECTION AND PROTOCOLS WHEN HANDLING ANY ENCOUNTERED WASTE IN ACCORDANCE WITH ALL LOCAL. STATE, AND FEDERAL REGULATIONS
- ALL REQUIRED SITE IMPROVEMENTS SHALL BE INSPECTED BY THE CITY ENGINEER AND OWNER'S REPRESENTATIVE TO ENSURE SATISFACTORY COMPLETION IN NO CASE SHALL THE INSTALLATION OF ANY IMPROVEMENTS BE STARTED UNTIL PRIOR NOTIFICATION IS GIVEN TO THE CITY ENGINEER AND OWNER'S REPRESENTATIVE. 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 SPECIFICATIONS
- LOCATION AND DEPTH OF FXISTING UTILITIES ARE APPROXIMATE AND HAVE BEEN PLOTTED FROM TH BEST AVAILABLE INFORMATION. THE CONTRACTOR SHALL CHECK AND VERIFY LOCATIONS OF ALL EXISTING LITH THES BOTH UNDERGROUND AND OVERHEAD ANY DAMAGE TO EXISTING UTH ITIES AS SHOWN OR NOT SHOWN ON THE PLANS SHALL BE THE CONTRACTOR'S RESPONSIBILITY. COSTS OF SUCH DAMAGE SHALL BE BORNE BY THE CONTRACTOR IN O EXCAVATION SHALL BE DONE UNTIL ALL INVOLVED UTILITY COMPANIES ARE NOTIFIED 72-HOURS IN ADVANCE. THE CONTRACTOR SHALL BE RESPONSIBLE TO NOTIEV DIG-SAFE (1-888-344-7233) A MINIMUM OF 72 WORKING HOURS, EXCLUDIN WEEKENDS AND HOLIDAYS. PRIOR TO THE START OF ANY EXCAVATION AND/OR BLASTING WORK. THI NAME OF THE COMPANY PERFORMING THE EXCAVATION AND/OR BLASTING WORK MUST BE SUPPLIED TO DIG-SAFE, IF IT IS DIFFERENT FROM THE CALLER.
- 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 ENGINEER.
- 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
- 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.
- 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 INFRASTRUCTUR

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- e Layout Details 1
- E Layout Details 2
- iding and Drainage Plan
- ding, Drainage, Soil Erosion, and
- liment Control Notes and Details
- rmwater Control Details
- facing Details
- Furnishing Details
- dscape Plan
- dscape Notes and Details

Landscape Architect Kevin M. Alverson Landscape Architecture 360 Annaquatucket Road Wickford, RI 02852 (401) 338-0044 Civil Engineer Millstone Engineering, P.C.

REVISED

250 Centerville Road, Building E-12 Warwick, RI 02886 (401) 921-3344

REVISION HISTORY:

DATE	REVISION

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 DIVISION
- RIDEM Permitting Plan Set Entitled, 'Kent Heights Recreational Facility Improvements Project', Sheets 1-6 of 6, Dated: August 2023, Revised: 9/20/23; Prepared for: City of East Providence; Prepared by: Kevin M. Alverson Landscape Architecture, in conjunction with Millstone Engineering, P.C.
- Aerial Photograph Courtesy of GoogleEarthPro; Imagery Date: 6/15/22
- Locus obtained from mapquest.com

Kent Heights **Recreational Facility Improvements** Project

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

Prepared For:



145 TAUNTON AVENUE EAST PROVIDENCE, RHODE ISLAND 02914 (401) 435-7703



Kevin M. Alverson

LANDSCAPE ARCHITECTURE 360 Annaquatucket Road 401.338.0044 Wickford, RI 02852 KevinMAlversonLA.com



Cover Sheet

Project #: 2.134.380

Drawn By: KMA; BJC

Date: October 2023

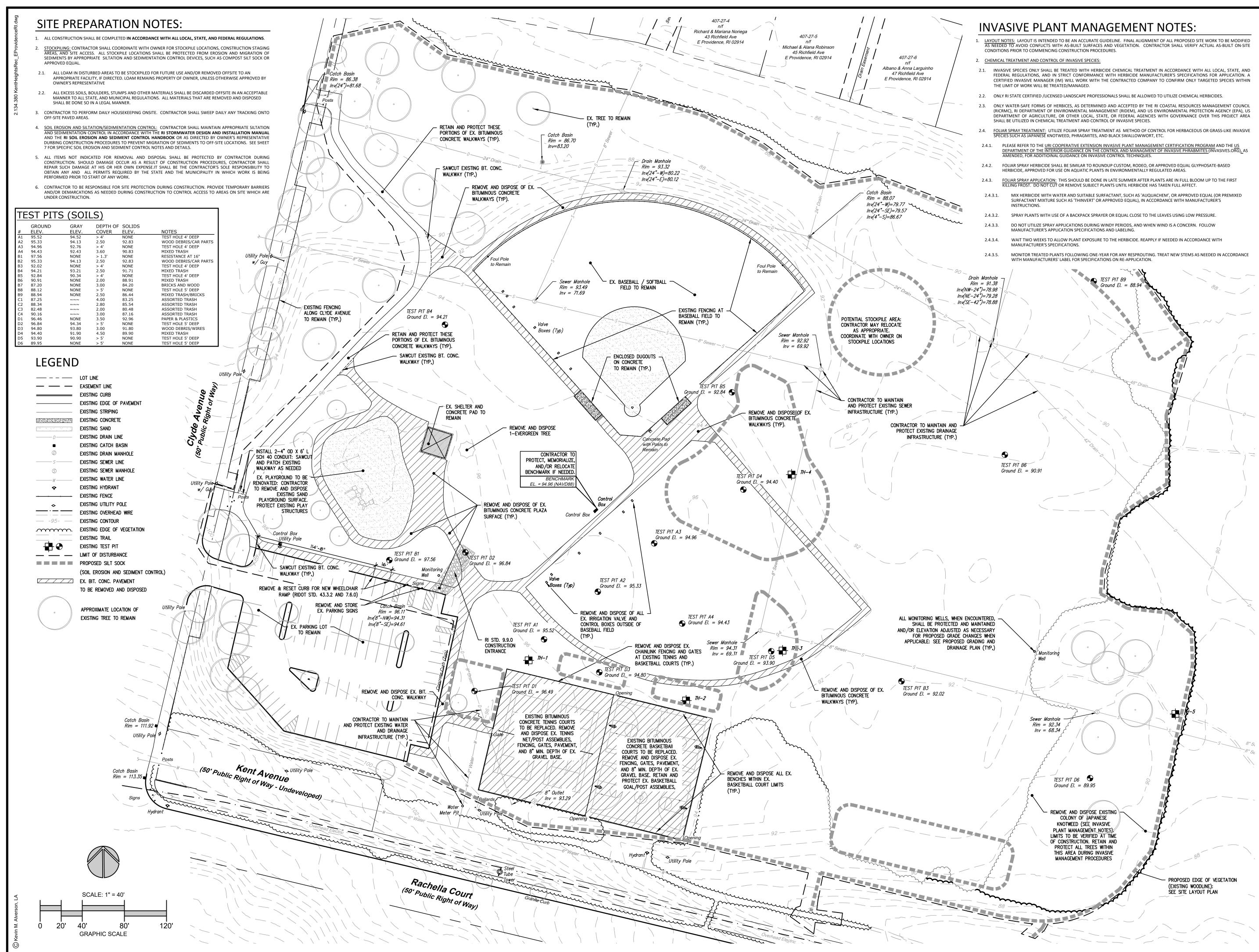
Checked By: KMA; JCH

Scale: AS NOTED



Sheet 1 of 12





REVISION HISTORY:

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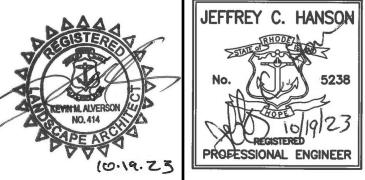


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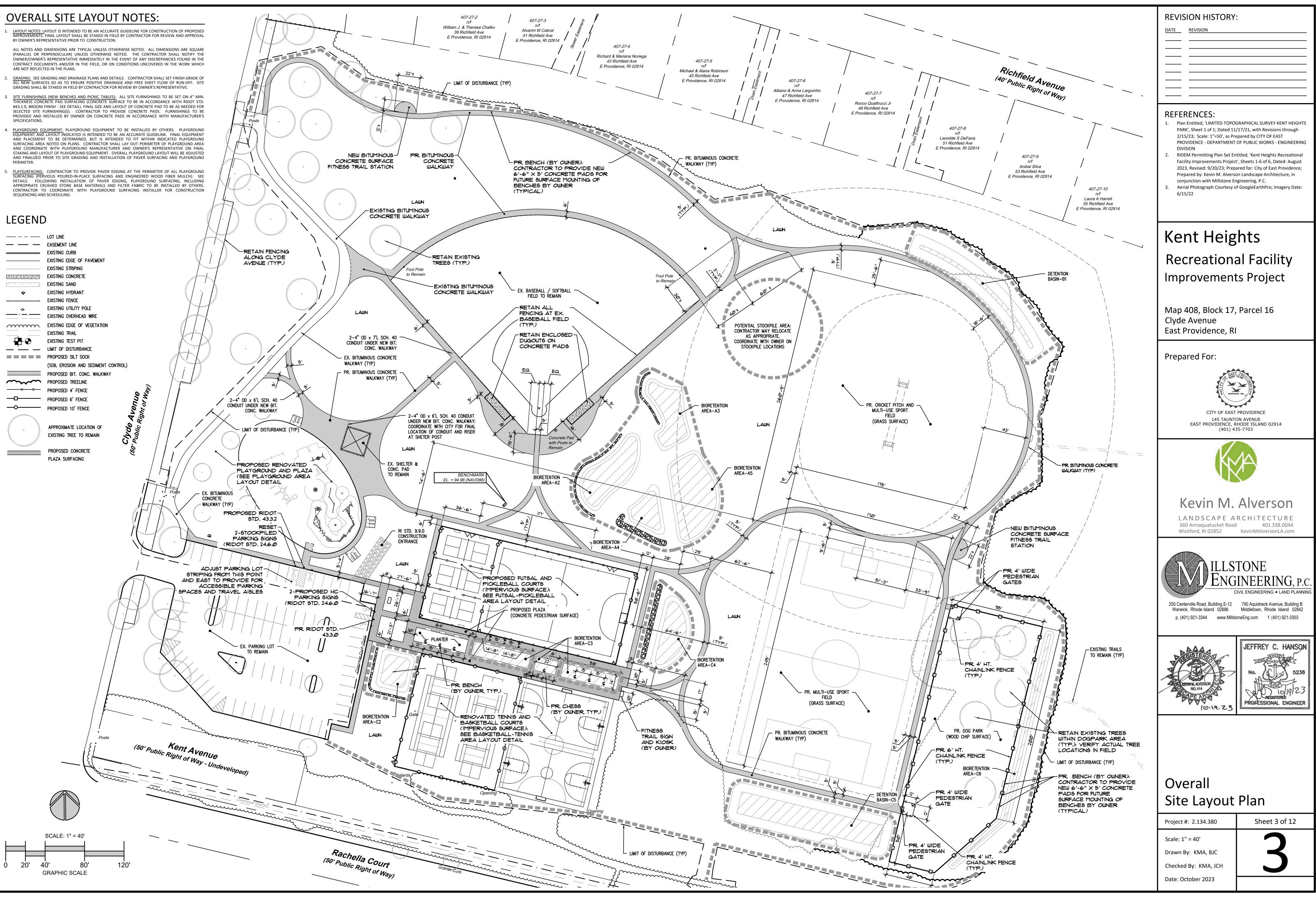


Existing Conditions & Site Preparation Plan

Project #: 2.134.380	Sheet 2 of 12
Scale: 1" = 40'	
Drawn By: KMA; BJC	
Checked By: KMAL; JCH	
Date: October 2023	



- (PARALLEL OR PERPENDICULAR) UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL NOTIFY THE OWNER/OWNER'S REPRESENTATIVE IMMEDIATELY IN THE EVENT OF ANY DISCREPANCIES FOUND IN THE CONTRACT DOCUMENTS AND/OR IN THE FIELD, OR ON CONDITIONS UNCOVERED IN THE WORK WHICH ARE NOT REFLECTED IN THE PLANS.
- #43.1.0, BROOM FINISH SEE DETAIL). FINAL SIZE AND LAYOUT OF CONCRETE PAD TO BE AS NEEDED FOR SELECTED SITE FURNISHING(S). CONTRACTOR TO PROVIDE CONCRETE PADS. FURNISHINGS TO BE PROVIDED AND INSTALLED BY OWNER ON CONCRETE PADS IN ACCORDANCE WITH MANUFACTURER'S
- AND PLACEMENT TO BE DETERMINED. BUT IS INTENDED TO FIT WITHIN INDICATED PLAYGROUND AND COORDINATE WITH PLAYGROUND MANUFACTURER AND OWNER'S REPRESENTATIVE ON FINAL STAKING AND LAYOUT OF PLAYGROUND EQUIPMENT. OVERALL PLAYGROUND LAYOUT WILL BE ADJUSTED
- DETAILS. FOLLOWING INSTALLATION OF PAVER EDGING, PLAYGROUND SURFACING, INCLUDING APPROPRIATE CRUSHED STONE BASE MATERIALS AND FILTER FABRIC TO BE INSTALLED BY OTHERS.





LEGEND

UHHTHH!

	LOT LINE
	EASEMENT LINE
	EXISTING CURB
	EXISTING EDGE OF PAVEMENT
	EXISTING STRIPING
	EXISTING CONCRETE
	EXISTING SAND
Ŷ	EXISTING HYDRANT
	EXISTING FENCE
ф	EXISTING UTILITY POLE
	EXISTING OVERHEAD WIRE
	EXISTING EDGE OF VEGETATION
	EXISTING TRAIL
	EXISTING TEST PIT
	LIMIT OF DISTURBANCE
	PROPOSED SILT SOCK
	(SOIL EROSION AND SEDIMENT CONTROL)
	PROPOSED BIT. CONC. WALKWAY
\sim	PROPOSED TREELINE
o o	PROPOSED 4' FENCE
— <u>o</u> ——	PROPOSED 6' FENCE
	PROPOSED 10' FENCE
	APPROXIMATE LOCATION OF
°	EXISTING TREE TO REMAIN

PROPOSED CONCRETE PLAZA SURFACING

ATHLETIC COURTS AND PLAYGROUND LAYOUT NOTES:

LAYOUT NOTES: LAYOUT IS INTENDED TO BE AN ACCURATE GUIDELINE FOR CONSTRUCTION OF PROPOSED IMPROVEMENTS. FINAL LAYOUT SHALL BE STAKED IN FIELD BY CONTRACTOR FOR REVIEW AND APPROVAL BY OWNER'S REPRESENTATIVE PRIOR TO CONSTRUCTION. ALL NOTES AND DIMENSIONS ARE TYPICAL UNLESS OTHERWISE NOTED. ALL DIMENSIONS ARE SQUARE

- (PARALLEL OR PERPENDICULAR) UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL NOTIFY THE OWNER/OWNER'S REPRESENTATIVE IMMEDIATELY IN THE EVENT OF ANY DISCREPANCIES FOUND IN THE CONTRACT DOCUMENTS AND/OR IN THE FIELD, OR ON CONDITIONS UNCOVERED IN THE WORK WHICH ARE NOT REFLECTED IN THE PLANS.
- <u>GRADING:</u> SEE GRADING AND DRAINAGE PLANS AND DETAILS. CONTRACTOR SHALL SET FINISH GRADE OF ALL NEW SURFACES SO AS TO ENSURE POSITIVE DRAINAGE AND FREE SHEET FLOW OF RUN-OFF. SITE GRADING SHALL BE STAKED IN FIELD BY CONTRACTOR FOR REVIEW BY OWNER'S REPRESENTATIVE.
- SITE FURNISHINGS (ATHLETIC EQUIPMENT): ALL ATHLETIC SITE FURNISHINGS TO BE SET/INSTALLED IN A SLEEVED MANNER IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS (SEE DETAILS). ALL ATHLETIC SITE FURNISHING FOUNDATIONS AND SLEEVES SHALL BE INSTALLED PRIOR TO INSTALLATION OF BITUMINOUS CONCRETE SPORT SURFACING.
- FENCING AND GATES: ALL FENCING AND GATES SHALL BE INSTALLED WITH CENTERLINE OF FENCE/GATE POSTS SET 6" INSIDE THE EDGE OF ADJACENT PAVEMENT (BITUMINOUS CONCRETE SPORT SURFACING). ALL FENCE POSTS SHALL BE INSTALLED PRIOR TO INSTALLATION OF BITUMINOUS CONCRETE SPORET SURFACING.
- 4.1. <u>FENCING LAYOUT NOTE:</u> ALL DIMENSIONS TO FENCING ARE MEASURED TO CENTERLINE OF FENCE
- ATHLETIC COURT COLOR SURFACING AND LINE MARKINGS: LAYOUT AND STRIPING/ LINES FOR TENNIS COURTS TO BE AS PER UNITED STATES TENNIS ASSOCIATION (USTA) STANDARDS. LAYOUT AND STRIPING/LINES FOR PICKLEBALL COURTS TO BE AS PER USTA, NATIONAL COLLEGIATE ATHLETIC ASSOCIATION (NCAA), AND UNITED STATES PICKLEBALL ASSOCIATION (USAPA) STANDARDS. LAYOUT AND STRIPING/LINES FOR BASKETBALL COURTS TO BE AS PER NATIONAL FEDERATION OF STATE HIGH SCHOOL ASSOCIATIONS (NFHS) STANDARDS. UNLESS OTHERWISE REQUIRED BY USTA, NCAA, NFHS, OR USAPA STANDARDS, LINE STRIPING SHALL BE 2" IN WIDTH. LAYOUT AND STRIPING/LINES FOR FUTSAL COURTS TO BE AS PER US YOUTH FUTSAL (USYF) AND FIFA STANDARDS. UNLESS OTHERWISE REQUIRED BY USYF AND FIFA STANDARDS, LINE STRIPING SHALL BE 8CM (3.12") IN WIDTH.
- 5.1. <u>TENNIS COURT STRIPING NOTE:</u> ALL DIMENSIONS TO BASELINE AND SIDELINES ARE TO OUTSIDE EDGE OF LINES. DIMENSIONS TO CENTERLINE AND SERVICE LINES ARE TO CENTER OF LINES.
- 5.2. <u>PICKLEBALL COURT STRIPING NOTE:</u> ALL DIMENSIONS TO BASELINE AND SIDELINES ARE TO OUTSIDE EDGE OF LINES. DIMENSIONS TO CENTERLINE AND NON-VOLLEY ZONE ARE TO CENTER OF LINES. 5.3. BASKETBALL COURT STRIPING NOTE: ALL DIMENSIONS TO SIDELINES AND ENDLINES TO BE TO INSIDE EDGE OF LINES. ALL DIMENSIONS TO INTERIOR STRIPING (3-POINT LINE, FOUL LINE AND BOX, JUMP BALL AREA, ETC.) TO BE TO OUTSIDE EDGE OF LINES. DIMENSIONS TO HALFCOURT LINE SHALL BE TO
- 5.4. <u>FUTSAL COURT STRIPING NOTE:</u> ALL DIMENSIONS SHALL BE IN METRIC TO THE GREATEST EXTENT POSSIBLE. DIMENSIONING OF COURT LINES SHALL BE TO CENTER OF LINES.

CENTER OF LINE.

- PLAYGROUND EQUIPMENT: PLAYGROUND EQUIPMENT TO BE INSTALLED BY OTHERS. PLAYGROUND EQUIPMENT AND LAYOUT INDICATED IS INTENDED TO BE AN ACCURATE GUIDELINE. FINAL EQUIPMENT AND PLACEMENT TO BE DETERMINED, BUT IS INTENDED TO FIT WITHIN INDICATED PLAYGROUND SURFACING AREA NOTED ON PLANS. CONTRACTOR SHALL LAY OUT PERIMETER OF PLAYGROUND AREA AND COORDINATE WITH PLAYGROUND MANUFACTURER AND OWNER'S REPRESENTATIVE ON FINAL STAKING AND LAYOUT OF PLAYGROUND EQUIPMENT. OVERALL PLAYGROUND LAYOUT WILL BE ADJUSTED AND FINALIZED PRIOR TO SITE GRADING AND INSTALLATION OF PAVER SURFACING AND PLAYGROUND PERIMETER.
- PLAYSURFACING: CONTRACTOR TO PROVIDE PAVER EDGING AT THE PERIMETER OF ALL PLAYGROUND SURFACING (PERVIOUS POURED-IN-PLACE SURFACING OR ENGINEERED WOOD FIBER MULCH): SEE DETAILS FOLLOWING INSTALLATION OF PAVER EDGING PLAYGROUND SURFACING INCLUDING APPROPRIATE CRUSHED STONE BASE MATERIALS AND FILTER FABRIC TO BE INSTALLED BY OTHERS. CONTRACTOR TO COORDINATE WITH PLAYGROUND SURFACING INSTALLER FOR CONSTRUCTION SEQUENCING AND SCHEDULING.

REVISION HISTORY:

DATE REVISION

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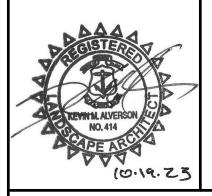


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Site Layout Details 1

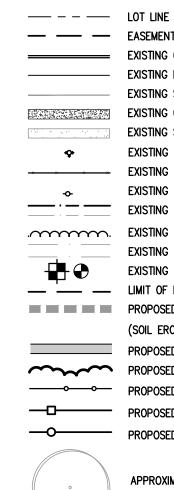
Project #: 2.134.380	Sheet 4 of 12
Scale: 1" = 20' Drawn By: KMA Checked By: KMA Date: October 2023	4







LEGEND



1944374.9444

EASEMENT LINE EXISTING CURB EXISTING EDGE OF PAVEMENT EXISTING STRIPING EXISTING CONCRETE EXISTING SAND EXISTING HYDRANT ------ EXISTING FENCE EXISTING UTILITY POLE EXISTING OVERHEAD WIRE EXISTING TRAIL EXISTING TEST PIT ____ LIMIT OF DISTURBANCE PROPOSED SILT SOCK (SOIL EROSION AND SEDIMENT CONTROL) PROPOSED BIT. CONC. WALKWAY PROPOSED TREELINE ------ PROPOSED 4' FENCE PROPOSED 6' FENCE -O----- PROPOSED 10' FENCE

> APPROXIMATE LOCATION OF EXISTING TREE TO REMAIN

PROPOSED CONCRETE PLAZA SURFACING

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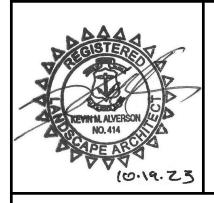


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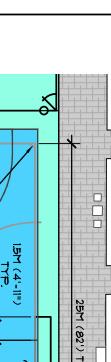


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Site Layout Details 2

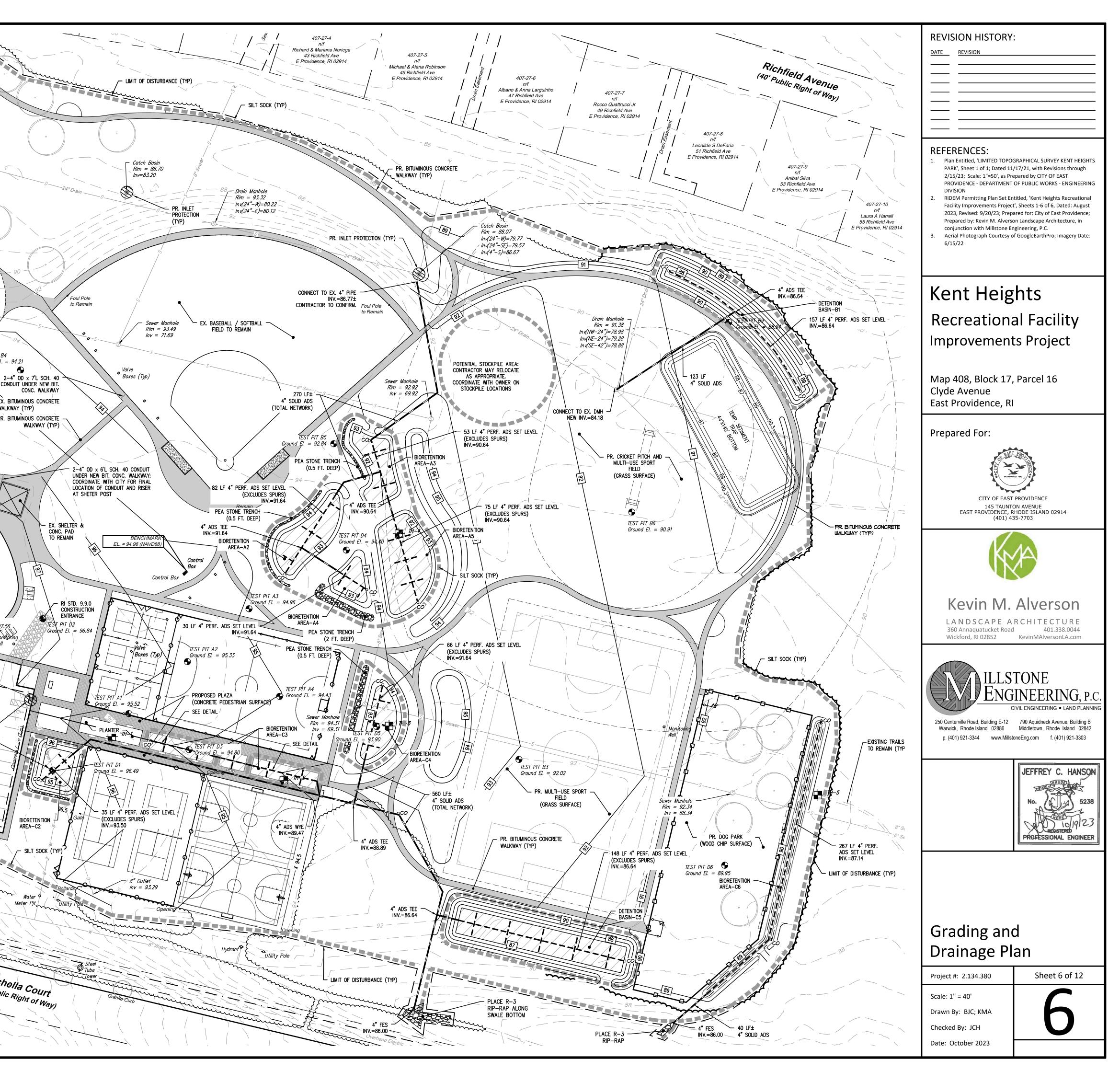
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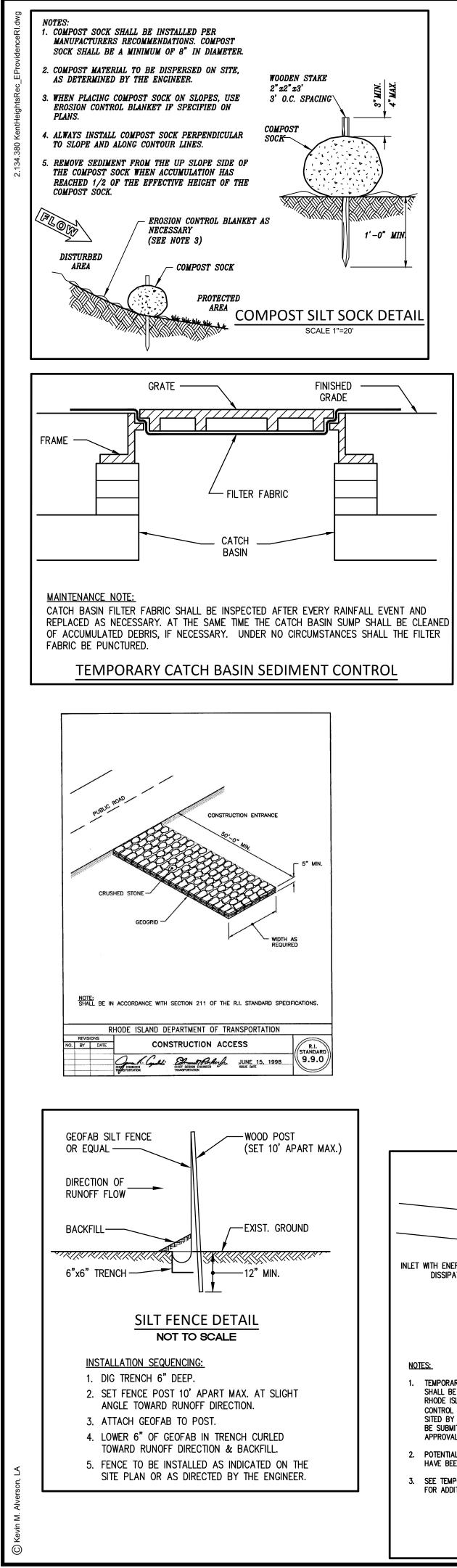


TEST HOLE DATA

TEST HOLE EXISTING GRADE DEPTH TO SHGWT DEPTH TO RESTRICTIVE CAP DEPTH TO WASTE WASTE ELEV. RESTRICTIVE CAP ELEV. TH-1 INC * 14" 94.55 30" 93.22 95.72 91.75 30" TH-2 INC * 24" 92.25 94.25 🕂 Catch Basin INC * 36" 60**"** 88.39 TH-3 90.39 93.39 Rim = 86.38 Inv(24")=81.68 INC * 20" 30" 98.70 90.53 TH-4 92.20 +44 85.68 TH-5 INC * 20" 87.86 45" 89.43 Posts * NO EVIDENCE OF SHGWT FOUND IN TEST HOLE. LEGEND ____ _ _ _ LOT LINE EASEMENT LINE _ _ _ (ISTING CURE EXISTING EDGE OF PAVEMENT EXISTING STRIPING EXISTING CONCRETE EXISTING SAND EXISTING DRAIN LINE _____ D _____ EXISTING CATCH BASIN EXISTING DRAIN MANHOLE EXISTING SEWER LINE EXISTING SEWER MANHOLE S Utility Pole EXISTING WATER LINE _____W _____ w/ Guy EXISTING HYDRANT EXISTING FENCE -x x x EXISTING UTILITY POLE ____·___ EXISTING OVERHEAD WIRE EXISTING CONTOUR — -95- — TEST PIT B4 Ground El. = 94.21 EXISTING TRAIL EXISTING TEST PIT 2-4" OD x 7'L SCH. 40 _____ ____ LIMIT OF DISTURBANCE CONDUIT UNDER NEW BIT. CONC. WALKWAY PROPOSED SILT SOCK (SOIL EROSION AND SEDIMENT CONTROL) EX. BITUMINOUS CONCRETE WALKWAY (TYP) PROPOSED BIT. CONC. WALKWAY - PR. BITUMINOUS CONCRETE -PROPOSED TREELINE Utility Pol WALKWAY (TYP) PROPOSED 4' FENCE **_**____ PROPOSED 6' FENCE -O----- PROPOSED 10' FENCE 2-4" OD x 6'L SCH. 40 CONDUIT UNDER NEW BIT. 91 PROPOSED CONTOUR AVe CONC. WALKWAY PROPOSED SPOT GRADE 96.5 X PROPOSED INLET PROTECTION LIMIT OF DISTURBANCE (TYP PROPOSED DRAIN LINE TAAAA PROPOSED RIPRAP – LIMIT OF DISTURBANCE (TYP) $^{\prime}$ APPROXIMATE LOCATION OF EXISTING TREE TO REMAIN PROPOSED CONCRETE PLAZA SURFACING EX. BITUMINOUS CONCRETE WALKWAY (TYP) Control Box 🗊 TEST PIT B1 Ground El. = = 97.56 Monitoring Well **o** Catch-Basin Rim = 96.11 Inv(8"-NW)=94.31 Inv(8"-SE)=94.61 Utility Pol PR. INLET PROTECTION (TYP) | **||** EX. PARKING LOT INV. EX. 8" DRAIN = 94.14 TO REMAIN Catch Basin Rim = 111.92 Utility Po BIORETENTION AREA-C2 Posts Kent Avenue (50' Public Right of Way - Unc SILT SOCK (TYF Catch Basin Rim = 113.35 Bollia, Water 📍 Meter Pit Rachella Court (50' Public Right of Way)

SCALE: 1" = 40' 20' **GRAPHIC SCALE**



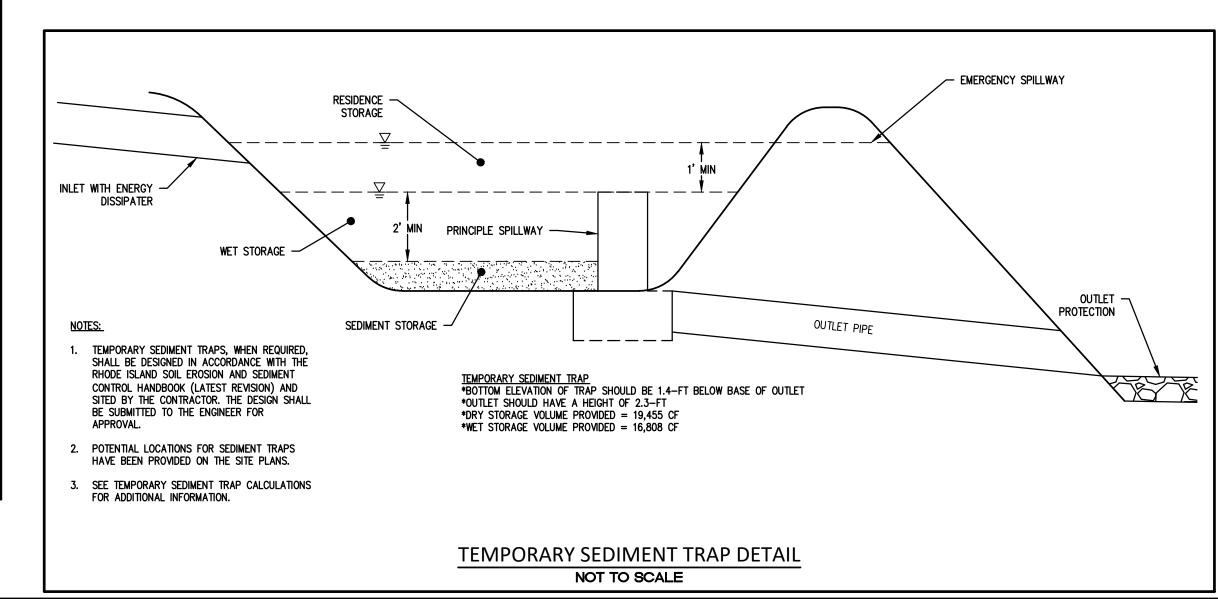


SEDIMENTATION CONTROL PROGRAM:

- 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
- INCLUDING: 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 PAVEMENT.
- 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 EROSION AND SEDIMENT CONTROL HANDBOOK, SECTION 6 AND SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO LAND DISTURBANCE.

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 ENGINEER. 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 SILT SOCKS, 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. 7. ALL DISTURBED AREAS MUST BE SEEDED, PLANTED OR RIP-RAPPED WITHIN THE CONSTRUCTION
- SEASON. 7.1. TEMPORARY SEEDING MUST BE COMPLETED WITHIN ONE (1) MONTH AFTER DISTURBANCE. ALL DISTURBED AREAS MUST BE PERMANENTLY SEEDED, PLANTED OR RIP-RAPPED BEFORE 7.2.
- OCTOBER 1ST. IF NOT THEY MUST BE TEMPORARILY SEEDED. 8. REFER TO LANDSCAPE NOTES FOR SEED MIXES USED FOR STABILIZATION OF ALL DISTURBED AREAS TO BE SEEDED
- 9. 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. 10. THE NORMAL ACCEPTABLE SEASONAL SEEDING DATES ARE APRIL 1ST THROUGH MAY 31ST OR
- AUGUST 15 THROUGH OCTOBER 15TH. IRRIGATION MAY BE REQUIRED IN THE SUMMER MONTHS TO INSURE THAT VEGETATIVE COVER IS ESTABLISHED.
- 11. STABILIZATION OF ONE FORM OR ANOTHER AS DESCRIBED ABOVE SHALL BE ACHIEVED WITHIN FIFTEEN (15) DAYS OF FINAL GRADING.
- 12. 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, SILT FENCE, AND/OR SILT SOCK. (SEE DETAIL)
- 13. ON BOTH STEEP AND LONG SLOPES, CONSIDERATION SHOULD BE GIVEN TO "CRIMPING" OR "TRACKING" TO TACK DOWN MULCH APPLICATIONS.
- 14. TREES TO BE RETAINED SHALL BE FENCED OR ROPED OFF TO PROTECT THEM FROM CONSTRUCTION EQUIPMENT
- 15. 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 ON-SITE OCCUPANCY.



EXTREME CARE SHALL BE EXERCISED SO AS TO PREVENT ANY UNSUITABLE MATERIAL FROM

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 DEBRIS:

TYPE	% by weight
CREEPING RED FESCUE	70
KENTUCKY BLUEGRASS	15
TALL FESCUE	15

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

- 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:**

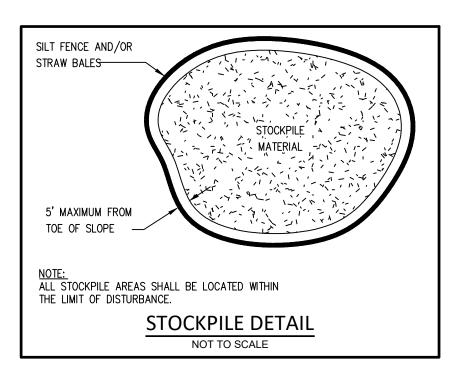
<u>GENERAL:</u>

- 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:

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.
- . SEDIMENTS SHALL BE REMOVED FROM DRAINAGE STRUCTURES AND THE STORMWATER BASINS IMMEDIATELY FOLLOWING SITE STABILIZATION AND DURING THE FIRST (INITIAL) YEAR OF OPERATION.
- 5. ALL COSTS INCURRED FOR MAINTENANCE, CLEANING, AND INSPECTION ARE THE RESPONSIBILITY OF THE CONTRACTOR DURING CONSTRUCTION AND THE PROPERTY OWNER UPON ACCEPTANCE.
- 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.



POLLUTION PREVENTION PLAN:

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

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

THE CONTRACTOR SHALL MANAGE THE POLLUTION PREVENTION PLAN DURING THE CONSTRUCTION PROCESS.

CONTRACTOR: TBD

<u>GENERAL:</u>

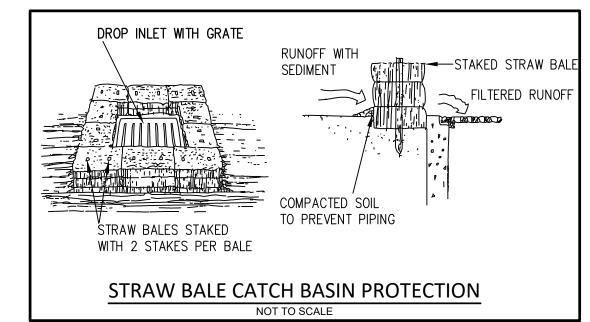
- SOLID WASTE CONTAINMENT:
- TRASH RACKS WHERE PRACTICAL SHALL BE INSTALLED AND MAINTAINED ON ALL INLET STRUCTURES WITHIN THE DRAINAGE SYSTEM. INSPECTIONS FOR TRASH SHOULD BE ON A WEEKLY BASIS.
- STREET SWEEPING SHALL BE PERFORMED ON AN ANNUAL BASIS.
- SNOW DISPOSAL AND DEICING:
- NO SAND AND DEICING MATERIALS SHALL BE STORED ON THE SITE
- SNOW REMOVAL SHALL BE PERFORMED IN ACCORDANCE WITH RIDEM'S SNOW DISPOSAL POLICY.
- 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"
- NATIVE MEADOW GRASSES PLANTED WITHIN BIORETENTION AREAS TO BE MOWED ONCE ANNUALLY IN LATE FALL AFTER FIRST FROST OR BEFORE PLANT GROWTH BEGINS IN LATE WINTER OR EARLY SPRING. ADDITIONAL MOWINGS ARE DISCOURAGED UNLESS WHEN NEEDED FOR MAINTENANCE SUCH AS REMOVAL OF SEDIMENT BUILDUP REPAIR OF EROSION, ETC.

• 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 (0&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 OWNER:

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. IF 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
- NATIVE MEADOW GRASSES PLANTED WITHIN BIORETENTION AREAS TO BE MOWED ONCE ANNUALLY IN LATE FALL AFTER FIRST FROST OR BEFORE PLANT GROWTH BEGINS IN LATE WINTER OR EARLY SPRING. ADDITIONAL MOWINGS ARE DISCOURAGED UNLESS WHEN NEEDED FOR MAINTENANCE SUCH AS REMOVAL OF SEDIMENT BUILDUP REPAIR OF EROSION, ETC.
- MOW GRASSES OUTSIDE OF BIORETENTION AREAS 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 0&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 / <u>YR</u>

REVISION HISTORY:

DATE REVISION

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 DIVISION
- RIDEM Permitting Plan Set Entitled, 'Kent Heights Recreational Facility Improvements Project', Sheets 1-6 of 6, Dated: August 2023, Revised: 9/20/23; Prepared for: City of East Providence; Prepared by: Kevin M. Alverson Landscape Architecture, in conjunction with Millstone Engineering, P.C.
- Aerial Photograph Courtesy of GoogleEarthPro; Imagery Date: 6/15/22

Kent Heights **Recreational Facility** Improvements Project

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

Prepared For:



145 TAUNTON AVENUE EAST PROVIDENCE, RHODE ISLAND 02914 (401) 435-7703

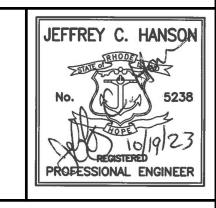


Kevin M. Alverson

LANDSCAPE ARCHITECTURE 360 Annaquatucket Road 401.338.0044 Wickford, RI 02852 KevinMAlversonLA.com

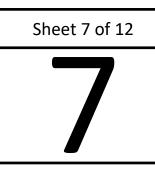


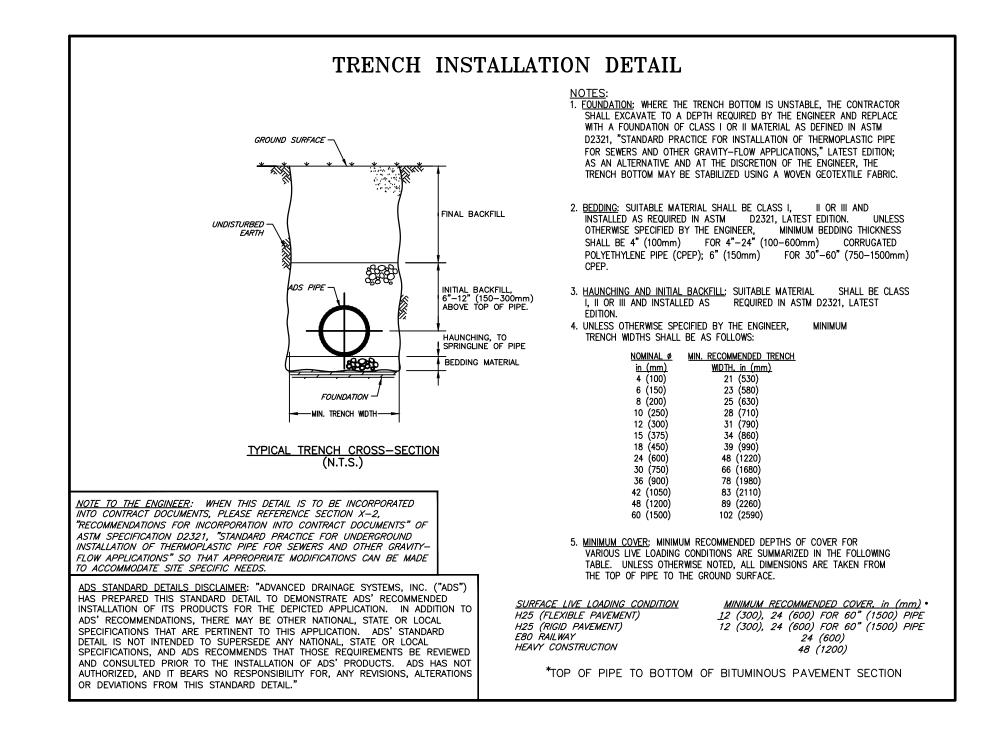
250 Centerville Road, Building E-12 790 Aquidneck Avenue, Building B Warwick, Rhode Island 02886 Middletown, Rhode Island 02842 p. (401) 921-3344 www.MillstoneEng.com f. (401) 921-3303

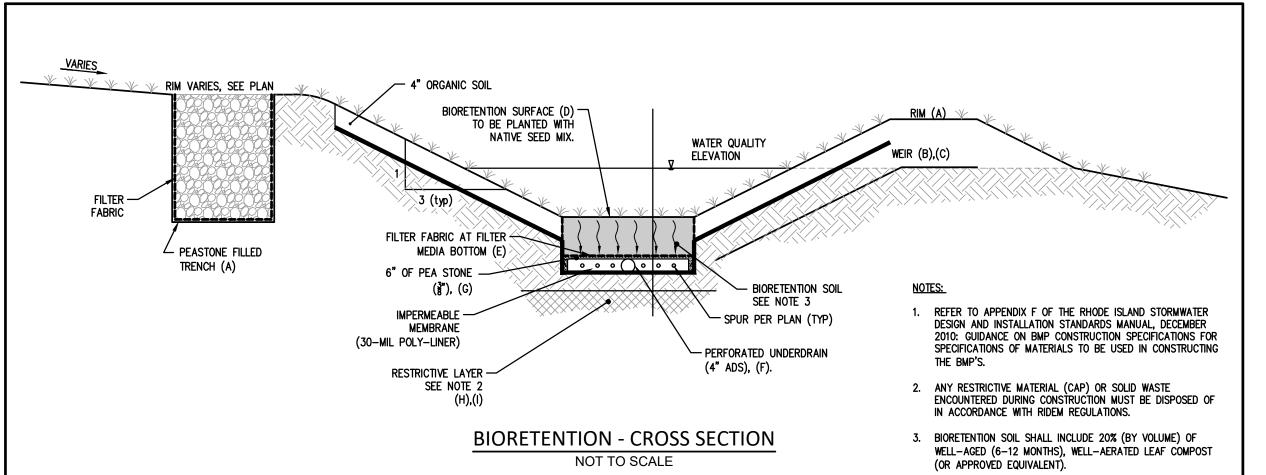


Grading, Drainage, Soil Erosion, and Sediment Control Notes and Details

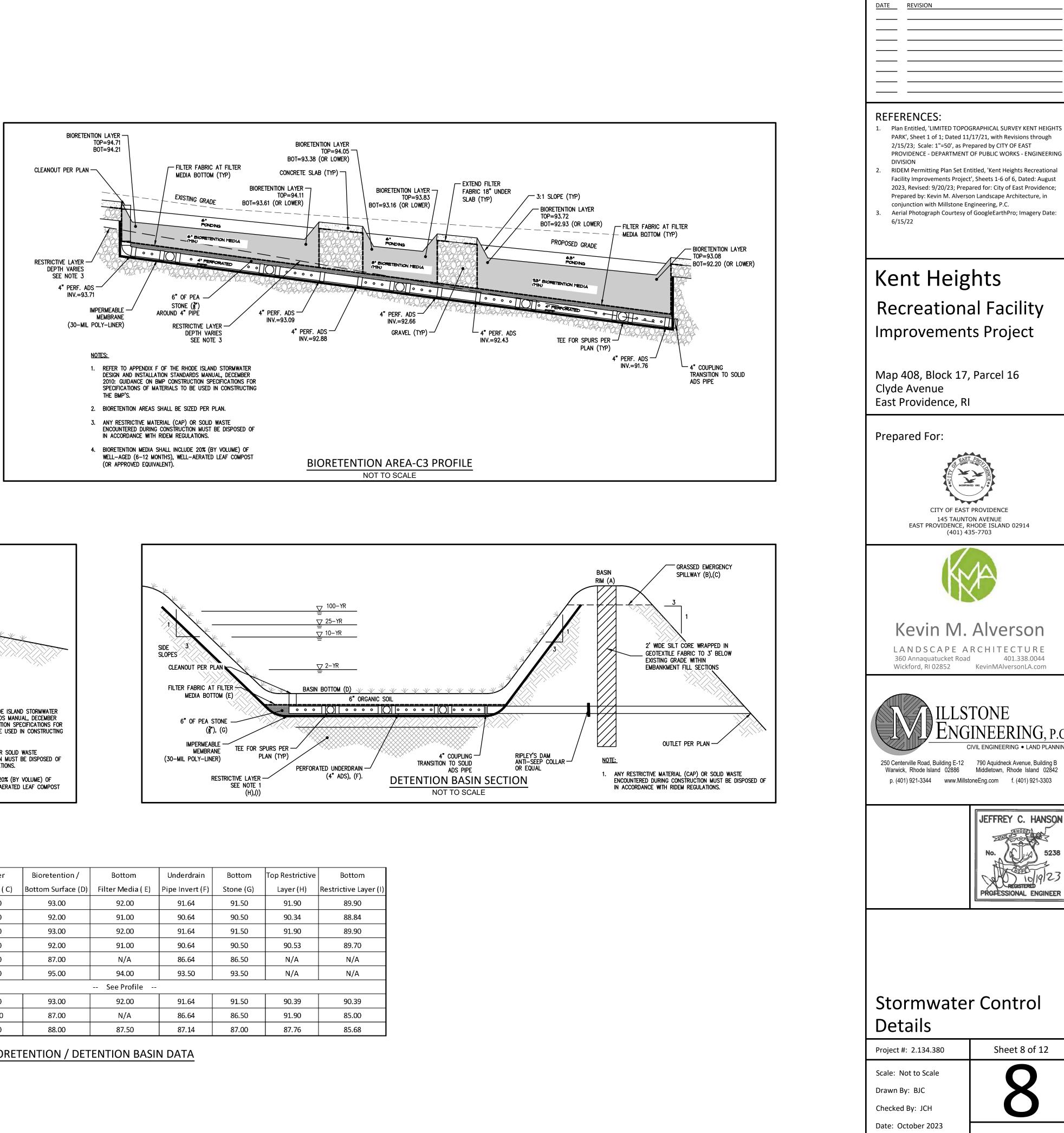
Project #: 2.134.380 Scale: Not to Scale Drawn By: BJC; KMA Checked By: JCH Date: October 2023

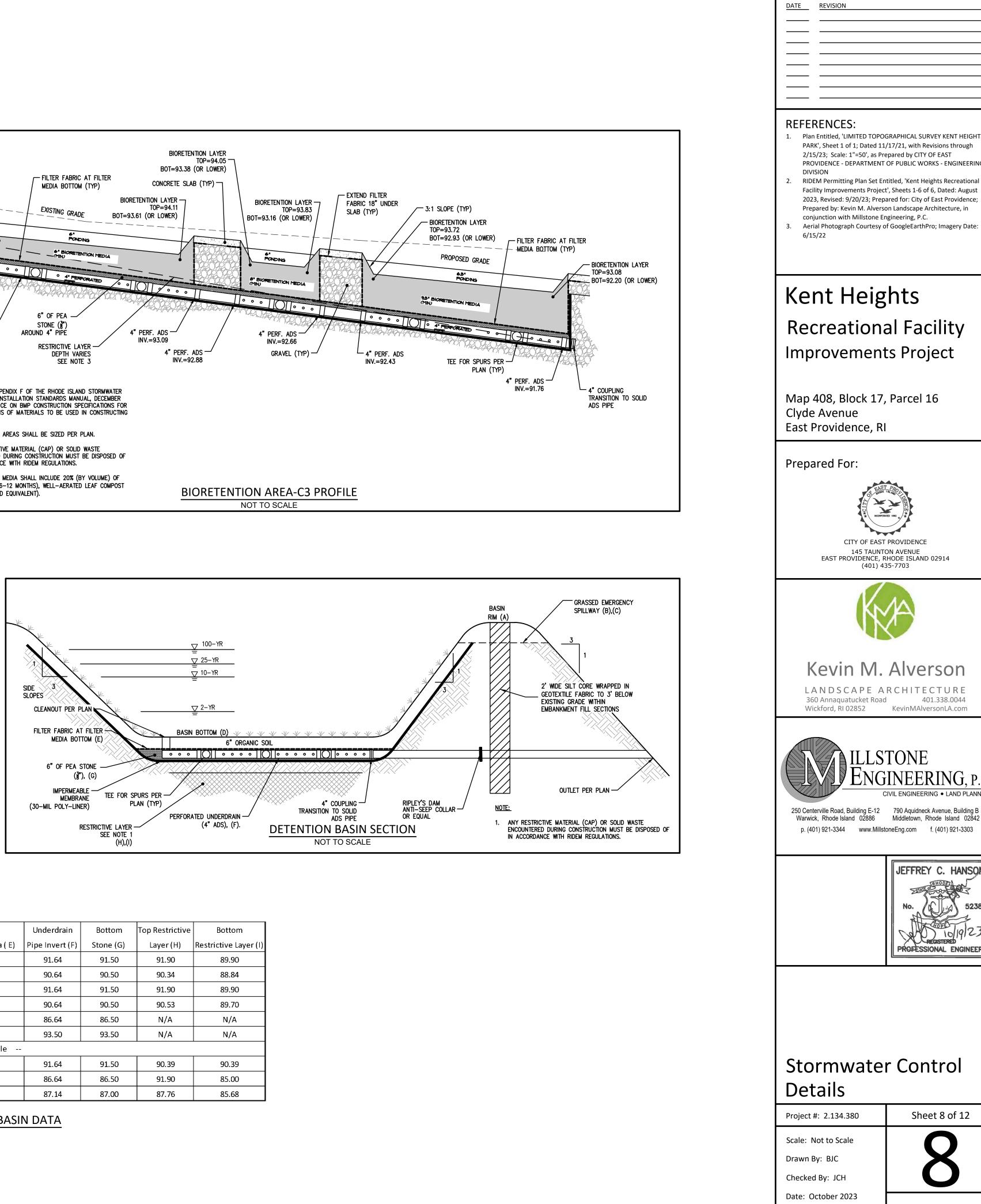






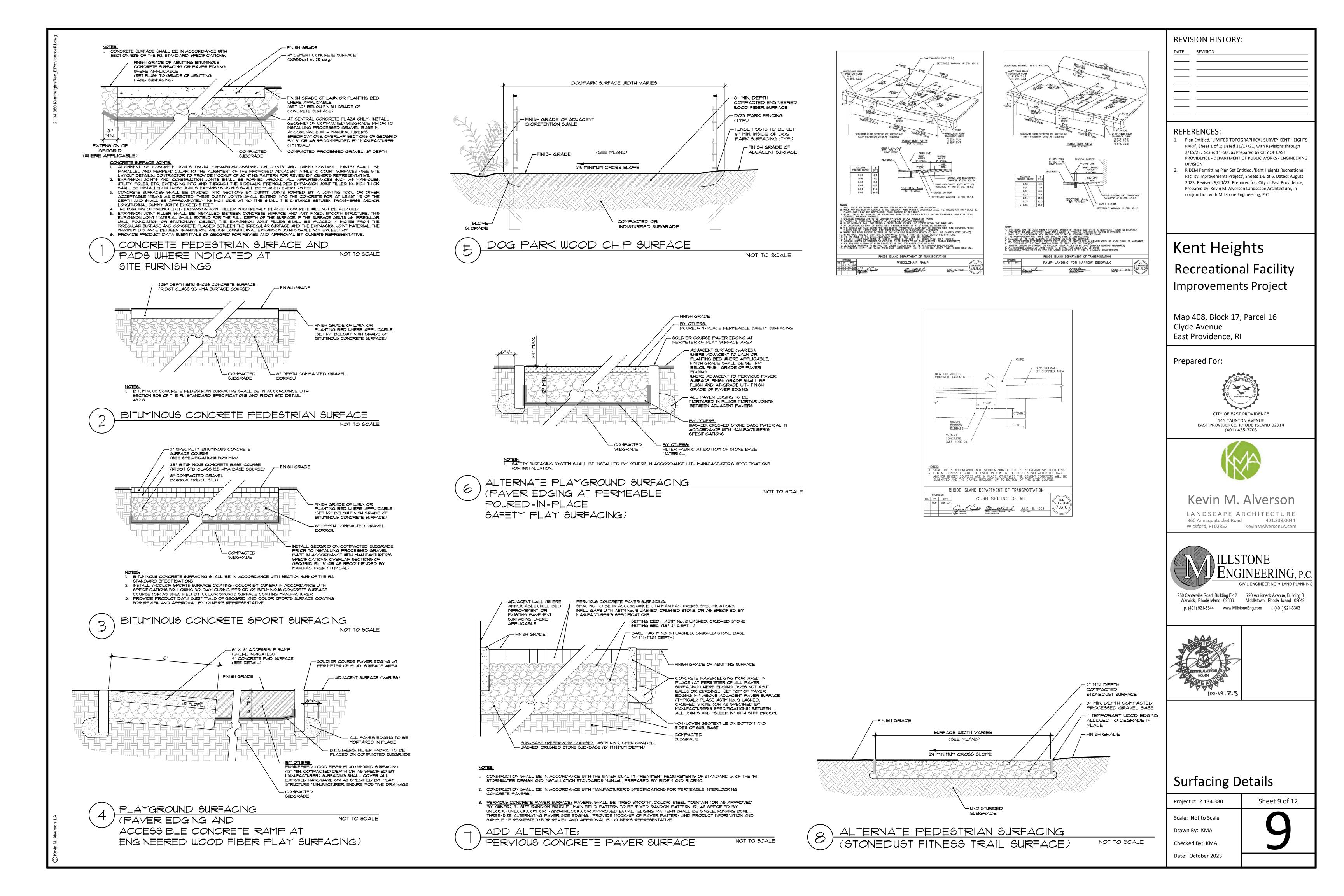
BMP		Rim	Wier	Wier	Bioretention /	Bottom	Underdrain	Bottom	Top Restrictive	Bottom
		Elevation (A)	Elevation (B)	Width (C)	Bottom Surface (D)	Filter Media (E)	Pipe Invert (F)	Stone (G)	Layer (H)	Restrictive Layer (I)
Bioretention	A2	94.00	93.50	5.0	93.00	92.00	91.64	91.50	91.90	89.90
Bioretention	A3	93.00	92.50	5.0	92.00	91.00	90.64	90.50	90.34	88.84
Bioretention	A4	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	B1	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	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

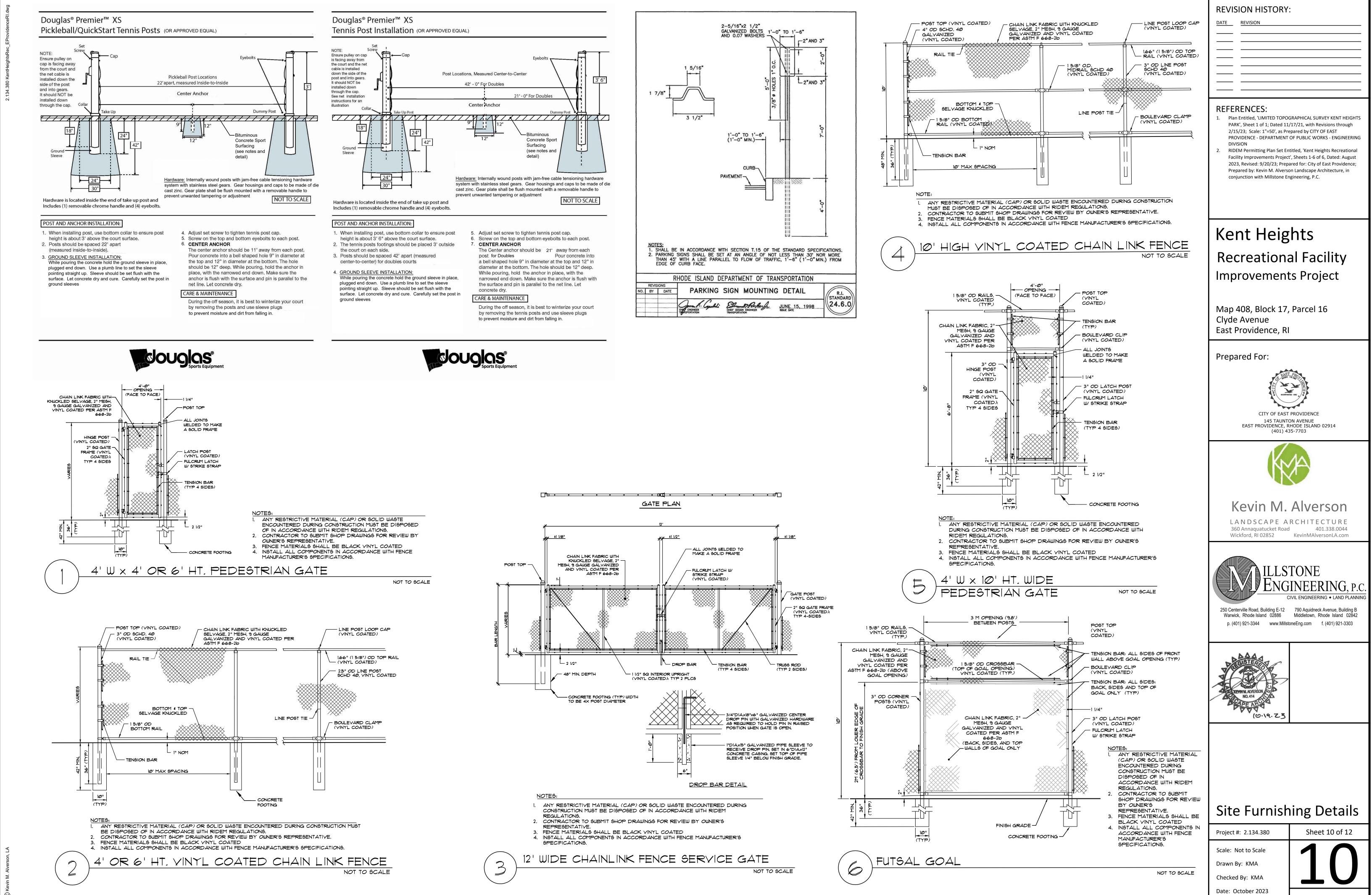


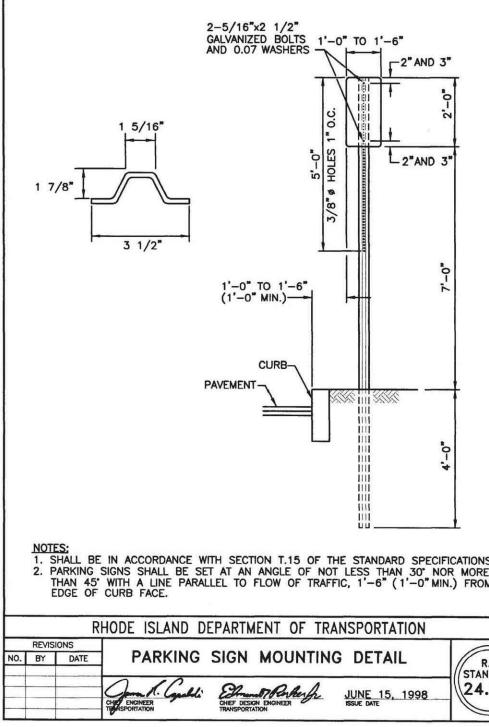


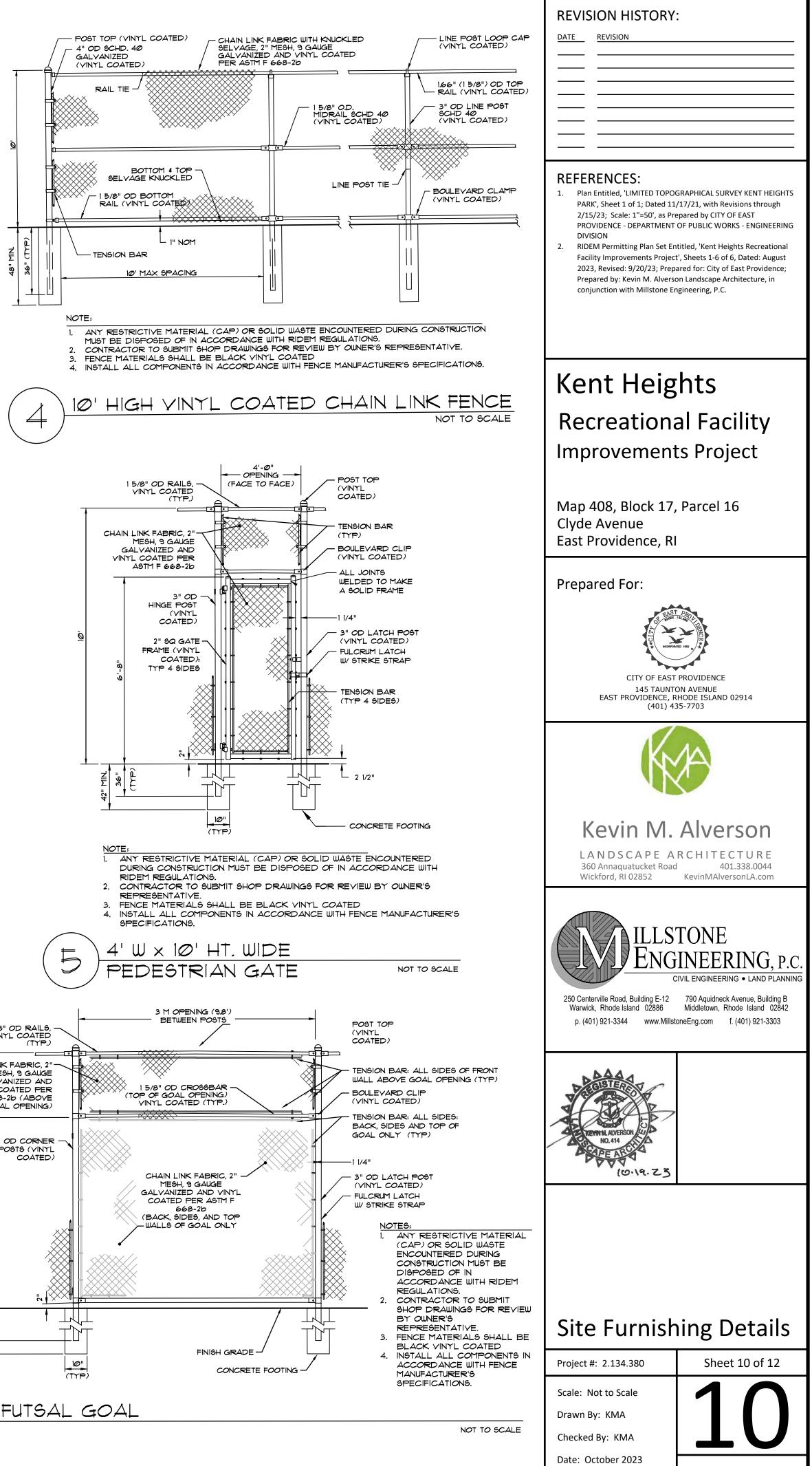
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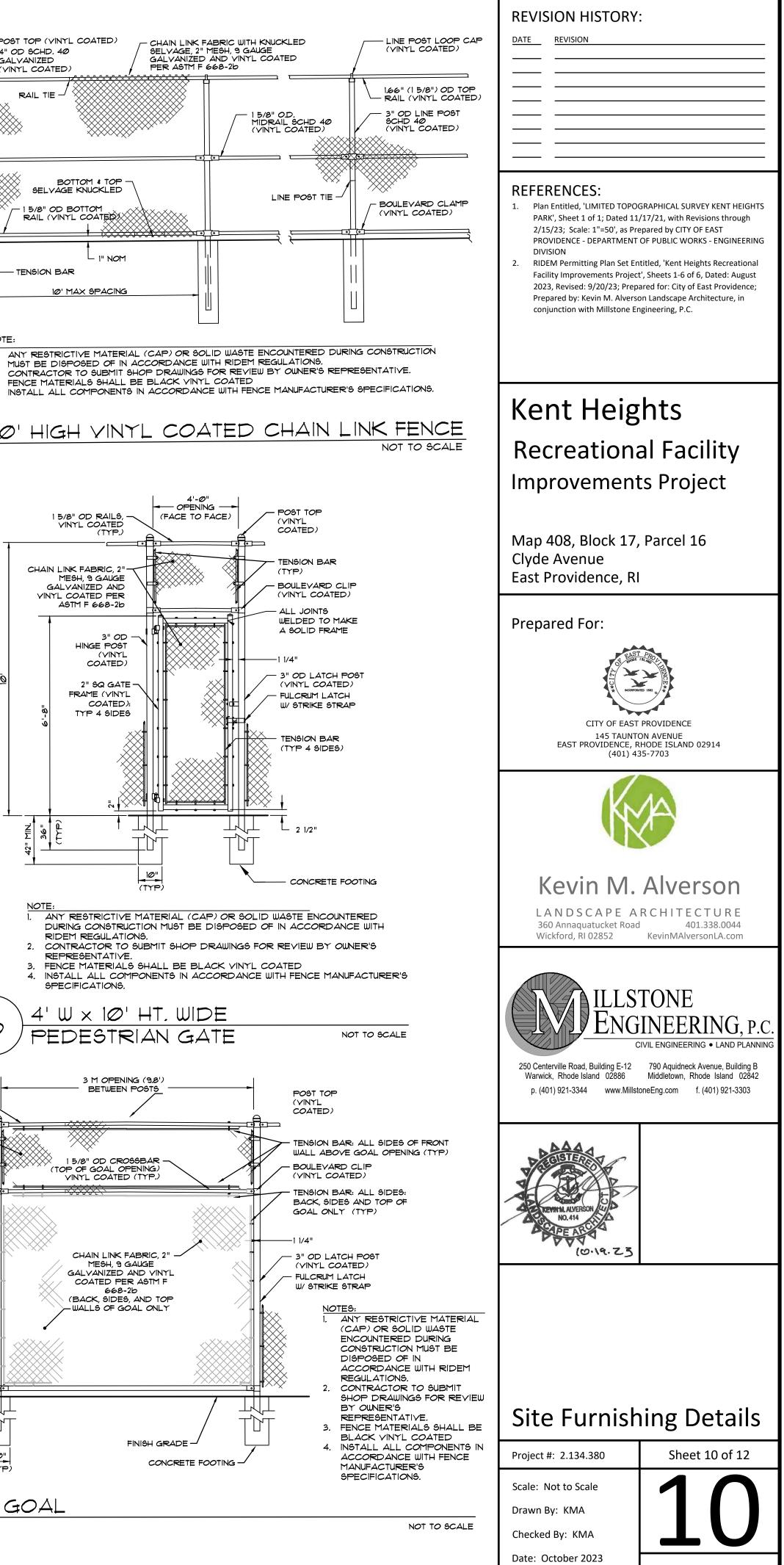
BIORETENTION / DETENTION BASIN DATA

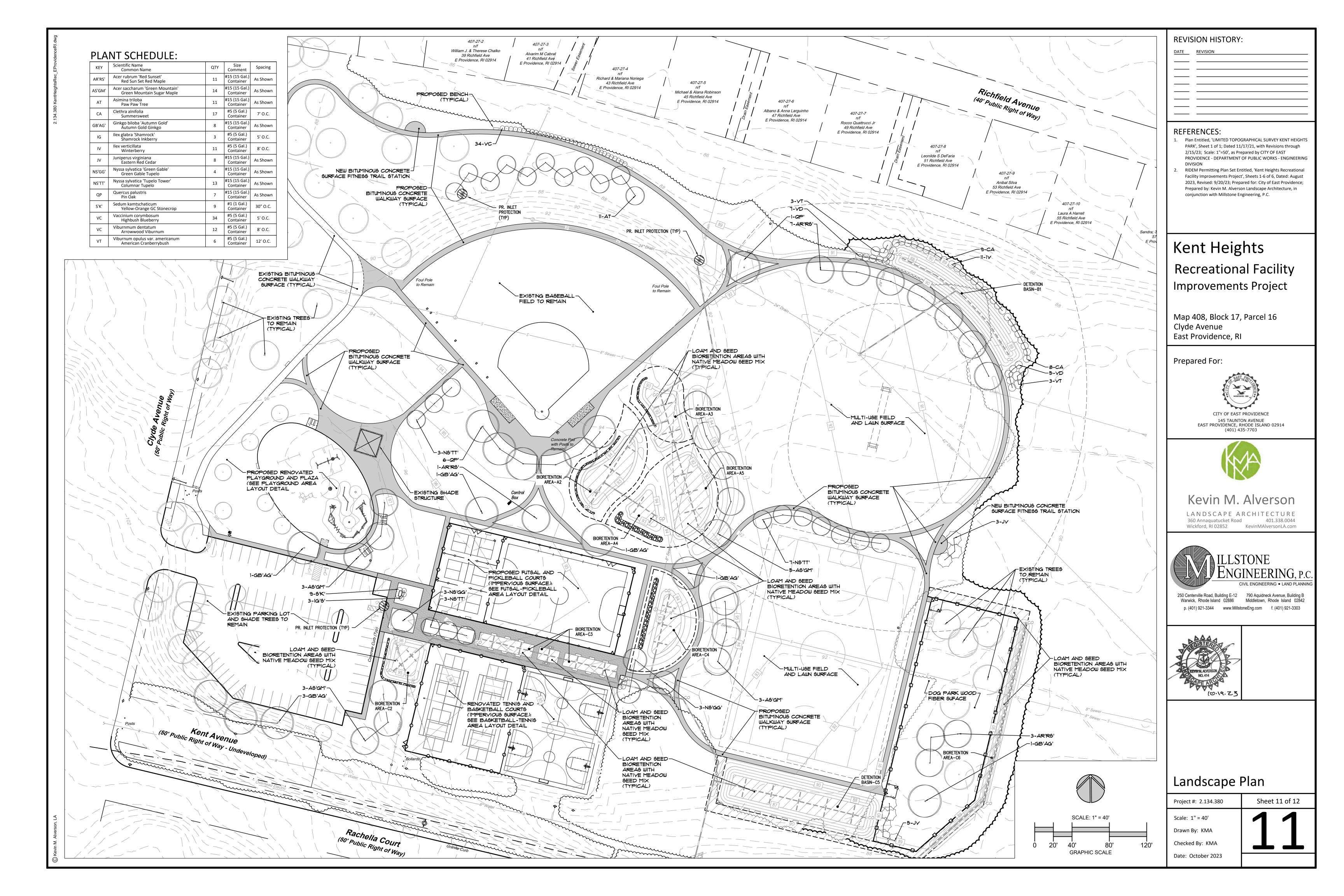












LANDSCAPE NOTES:

- 1. THE CONTRACTOR SHALL PERFORM ALL WORK IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS, AND SHALL OBTAIN ALL NECESSARY PERMITS FOR THE PROJECT.
- 2. THE CONTRACTOR SHALL INSTALL ALL PLANT MATERIAL IN CONFORMANCE WITH THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION, AND THE CURRENT PLANTING PROCEDURES ESTABLISHED BY THE AMERICAN NURSERY & LANDSCAPE ASSOCIATION. FORMERLY THE AMERICAN ASSOCIATION OF NURSERYMEN.
- 3. ALL PLANT MATERIAL SHALL MEET THE AMERICAN NURSERY & LANDSCAPE ASSOCIATION, FORMERLY THE AMERICAN ASSOCIATION OF NURSERYMEN, STANDARDS FOR NURSERY STOCK, LATEST EDITION, AND ITS AMENDMENTS. PLANT ONLY DURING SEASONS NORMAL TO THE
- 4. ALL PROPOSED PLANT MATERIAL SHALL BE AS SPECIFIED, UNLESS OTHERWISE APPROVED BY THE LANDSCAPE ARCHITECT. IN ABSOLUTELY NO CIRCUMSTANCE SHALL THERE BE ANY USE OF PLANTS LISTED ON THE RI INVASIVE SPECIES LIST FOR PLANTS AS PREPARED BY THE RHODE ISLAND
- NATURAL HISTORY SURVEY AND THE RHODE ISLAND INVASIVE SPECIES COUNCIL. 4.1. ALL PLANTINGS SHALL BE SIZED IN ACCORDANCE WITH THE SIZES INDICATED ON THE PLANT SCHEDULE, UNLESS OTHERWISE APPROVED BY
- 4.1.1. IT IS UNDERSTOOD THAT SPECIFIED PLANT VARIETIES, QUANTITIES, AND SIZES MAY BE SUBJECT TO AVAILABILITY AT TIME OF ORDERING AND INSTALLATION. ALL PLANT SUBSTITUTIONS AND/OR CHANGES IN PLANT LOCATION, QUANTITY, OR SIZE MUST BE APPROVED BY THE LANDSCAPE ARCHITECT.
- THE CONTRACTOR IS RESPONSIBLE FOR KEEPING THE SITE CLEAN OF MISCELLANEOUS DEBRIS THROUGHOUT THE CONSTRUCTION PERIOD. ALL WASTE MATERIAL IS TO BE DISPOSED OF IMMEDIATELY TO AN OFF-SITE LOCATION, UNLESS OTHERWISE INDICATED ON THE PLANS.
 MAINTENIANCE AND WARPANITY:
- 6. MAINTENANCE AND WARRANTY:

THE LANDSCAPE ARCHITEC

PARTICULAR VARIETY.

- 6.1. ALL PLANTINGS SHALL BE MAINTAINED BY THE OWNER OR CONTRACTOR FROM THE TIME OF PLANTING UNTIL THE PLANTINGS ARE ESTABLISHED. MAINTENANCE DURING THIS PERIOD SHALL INCLUDE WATERING OF PLANTINGS AS NECESSARY TO ENSURE PROPER ESTABLISHMENT OF PLANTINGS. FOLLOWING ESTABLISHMENT OF PLANTINGS, OWNER SHALL MAINTAIN ALL LANDSCAPING THROUGHOUT THE PROJECT SITE FOR THE LIFE OF THE PROJECT.
- 6.2. CONTRACTOR SHALL PROVIDE A TWO (2) YEAR WARRANTY ON ALL NEW PLANTINGS. SHOULD NEW PLANT MATERIAL DIE (OR DECLINE TO THE POINT WHERE PLANT IS EXPECTED TO DIE) WITHIN THIS WARRANTY PERIOD (OTHER THAN DUE TO NATURAL FACTORS, NATURAL DISASTER, OR NEGLECT), CONTRACTOR SHALL REMOVE THE PLANT AND REPLACE SAID PLANT MATERIAL WITH NEW PLANTINGS IN ACCORDANCE WITH THE SIZE AND VARIETY SPECIFIED. ALL REPLACEMENT PLANT MATERIAL SHALL CARRY A NEW TWO (2) YEAR WARRANTY STARTING FROM THE DATE OF REPLACEMENT. CONTRACTOR SHALL REMOVE ALL STAKES, GUY WIRES, AND TAPE FROM TREES AT THE END OF THE SPECIFIED WARRANTY PERIOD.
- 7. FINAL LOCATIONS OF ALL NEW PLANTINGS SHALL BE ADJUSTED AS NECESSARY BASED ON FINAL AS-BUILT LOCATIONS OF ALL NEW AND EXISTING UTILITIES AND OTHER SITE IMPROVEMENTS.
- EXISTING VEGETATION PROTECTION LINE: WHEN APPLICABLE, PROTECTIVE BARRIERS ARE TO BE INSTALLED ALONG THE LIMIT OF DISTURBANCE ABUTTING EXISTING VEGETATION TO REMAIN (SEE ENGINEER'S PLANS). BARRIERS SHALL NOT BE SUPPORTED BY THE PLANTS THEY ARE PROTECTING, BUT SHALL BE SELF SUPPORTING. THEY SHALL BE A MINIMUM OF THREE-FOUR FEET (3-4') HIGH AND CONSTRUCTED OF A DURABLE MATERIAL, SUCH AS SNOW OR SILT FENCE, THAT WILL LAST UNTIL CONSTRUCTION IS COMPLETED. PRUNING OF ANY DAMAGED ROOTS SHALL BE DONE IN ACCORDANCE WITH GOOD HORTICULTURAL PRACTICES, UTILIZING ONLY CLEAN SHARP TOOLS - NO AXES TO BE USED FOR PRUNING. CARE SHALL BE TAKEN NOT TO DISPOSE OF PAINT OR ANY OTHER SOLVENTS THAT MAY CHANGE THE SOIL STRUCTURE IN OR AROUND THE ROOTZONE OF VEGETATION SPECIFIED TO REMAIN.
- 8.1. FOLLOWING COMPLETION OF CONSTRUCTION PROCEDURES, ALL PROTECTION BARRIERS ARE TO BE REMOVED AND DISPOSED OF PROPERLY, OFF-SITE IN A LEGAL MANNER.
- 9. LOAM AND COMPOST: ALL LOAM USED AS PLANTABLE SOIL SHALL HAVE A SANDY LOAM TEXTURE RELATIVELY FREE OF SUBSOIL MATERIAL, STONES, ROOTS, LUMPS OF SOIL, TREE LIMBS, TRASH, CONSTRUCTION DEBRIS, OR OTHER OBJECTIONABLE MATERIAL. NEW PLANTING BEDS SHALL BE AMENDED WITH WELL-AGED COMPOST.
- 9.1. COMPOST SHALL BE A WELL DECOMPOSED, STABLE, WEED FREE ORGANIC MATTER SOURCE. IT SHALL BE DERIVED FROM AGRICULTURAL, FOOD, AND/OR YARD TRIMMINGS. THE PRODUCT SHALL CONTAIN NO SUBSTANCES TOXIC TO PLANTS AND SHALL BE REASONABLY FREE (LESS THAN 1 PERCENT BY DRY WEIGHT) OF MAN-MADE FOREIGN MATTER.
- 10. WATERING: THOROUGHLY WATER ALL PLANTS WHEN 2/3 OF BACKFILL HAS BEEN PLACED TO ENSURE ALL AIR POCKETS ARE REMOVED. FIRMLY TAMP SOIL AROUND PLANT. ENSURE PROPER WATERING OF PLANT MATERIAL UNTIL ESTABLISHMENT (ONCE PER DAY FOR 14 DAYS FOLLOWING INSTALLATION & THEN 2-3 TIMES PER WEEK UNTIL DORMANCY FOR THE FIRST YEAR OF ESTABLISHMENT, OR AS NEEDED DEPENDING ON FREQUENCY AND QUANTITY OF NATURAL RAIN FALL). MONITOR SOIL MOISTURE WITHIN ROOTZONE OF PLANTINGS PRIOR TO AND FOLLOWING EACH WATERING PROCEDURE. DO NOT OVERWATER OR SATURATE ROOTZONE OF PLANTINGS FOR PROLONGED PERIOD OF TIME.
- 11. PRUNING: ALL PLANTING MATERIAL SHALL BE PRUNED IN ACCORDANCE WITH GOOD HORTICULTURAL PRACTICES, AND IN SUCH A MANNER AS TO MAINTAIN THE NATURAL FORM OF THE PLANT. PRUNING SHALL BE COMPLETED UTILIZING ONLY CLEAN SHARP TOOLS. USE OF AXES FOR PRUNING IS UNACCEPTABLE.
- 11.1. PRUNE ALL PLANT MATERIAL TO REMOVE ANY DEADWOOD AND DAMAGED, CROSSING/RUBBING BRANCHES.
- 12. MULCH: ALL PLANTINGS SHALL BE MULCHED AS INDICATED ON DETAIL DRAWINGS. PLANTINGS INSTALLED IN CLUSTERS, OR WITHIN PLANTING BEDS SHALL BE MULCHED AS SUCH, INSTALLING MULCH THROUGHOUT THE ENTIRE PLANTING BED. MULCH TO BE 2"-3", OR AS OTHERWISE NOTED, IN DEPTH AND REDUCED TO LESS THAN 1" AT ROOT FLARE OF EACH PLANT.
- 12.1. BARK MULCH, WHERE INDICATED, SHALL BE WELL-AGED, SHREDDED BARK MULCH, NATURAL DARK BROWN IN COLOR AND NON-DYED, OR AS APPROVED BY OWNER'S REPRESENTATIVE.
 13. LOAM AND SEED:
- 13.1. LOAM AND SEED ALL DISTURBED AREAS. ALL NEW LAWN AREAS SUBJECT TO EROSION SHALL BE STABILIZED UTILIZING JUTE MESH OR APPROVED EQUAL.
- 13.2. LOAM UTILIZED FOR LAWN AREAS SHALL BE SANDY LOAM, 6" MIN. IN DEPTH, AND CONFORMING TO THE REQUIREMENTS OF THE USGA FOR LAWN PLANTINGS.
 13.3. <u>SEED MIX:</u>
- 13.3.1. SEED MIX UTILIZED FOR LAWN AREAS AND DETENTION BASINS SHALL BE SIMILAR TO 'Endophyte Enhanced Mix' AS AVAILABLE THROUGH ALLEN'S SEED , EXETER, RI, OR EQUAL, DROUGHT TOLERANT, DEEP-ROOTING GRASS SEED, CONTAINING A MINIMUM OF 30% BY WEIGHT OF TURF-TYPE TALL FESCUE:
- 13.3.1.1. IF UTILIZING SOD, SOD SHALL ALSO BE COMPRISED OF DROUGHT TOLERANT, DEEP-ROOTING TURF GRASS, CONTAINING TURF-TYPE TALL FESCUE, SIMILAR TO 'BLACK-BEAUTY' VARIETY SOD, AS AVAILABLE THROUGH SODCO, INC., EXETER, RI, OR EQUAL.
- 13.3.2. SEED MIX UTILIZED FOR BIORETENTION AREAS SHALL BE A NATIVE MEADOW MIX SIMILAR TO 'RI STATE NATIVE MIX', AS AVAILABLE THROUGH ALLEN'S SEED, EXETER, RI, OR APPROVED EQUAL:

30% Improved Perennial Rye, 30% Turf Type Tall Fescue, 30% Chewings Fescue, 10% Kentucky Bluegrass 98/85

- 30% Hard Fescue, 25% Perennial Rye, 25% Little Bluestem, 20% Switchgrass 13.4. IF INSTALLING SEED UTILIZING HYDROSEEDER DEVICE, PROVIDE HYDRO FIBER-MULCH AND STARTER FERTILIZER MIX.
- 13.5. IF BROADCAST SEEDING, TOPDRESS WITH 2" STRAW MULCH OR HYDRO FIBER-MULCH AND STARTER FERTILIZER MIX (NO SEED), FOLLOWING SPREADING OF SEED.

