



Incorporated 1910

Minor Subdivision Preliminary Plan Application

Please complete all areas of this application in black or blue ink. Submit the completed application to the Cranston Planning Department *together* with all required and supporting documents and materials. Illegible or incomplete applications will not be reviewed.

Project Info

Project Info

Project Name: R & T Estates Minor Residential Subdivision

Assessor's Plat(s): 29 Assessor's Lot(s): 2

Project Address: 300 Laten Knight Road

Contact Information

Applicant

Name: Moses Ryan Ltd. Thomas V. Moses, Esq.

Address: 40 Westminster Street, 9th Floor, Providence, RI 02903

Phone: 401-453-3600 Email: tmoses@marlawri.com

Property Owner (All owners of record must be included for all lots involved)

Name: Lawrence D. Moses, Elizabeth L. Moses

Address: _____

Phone: _____ Email: _____

(If there are more owners please check here submit an addendum with this application form)

Attorney

Name: Moses Ryan Ltd. Thomas V. Moses, Esq.

Address: 40 Westminster Street, 9th Floor, Providence, RI 02903

Phone: 401-453-3600 Email: tmoses@marlawri.com

Cranston Planning Department
869 Park Avenue Cranston, RI 02910
(401) 780-3136

Contact Information

Engineer

Name: Samuel S. Hemenway, Garofalo & Associates, Inc.

Address: 85 Corliss Street, PO 6145, Providence, RI 02940

Phone: 401-273-6000 Email: shemenway@garofaloassociates.com

Land Surveyor

Name: Samuel A. White, Garofalo & Associates, Inc.

Address: 85 Corliss Street, PO 6145, Providence, RI 02940

Phone: 401-273-6000 Email: swhite@garafaloassociates.com

Certification

Owner/Applicant Signature

I/we hereby certify that I/we own the subject property and seek Minor Subdivision and/or Minor Land Development Preliminary Plan approval as drafted in the accompanying plans for review by the City Plan Commission.

Moses Ryan Ltd.

Applicant Name & Title (please print)

Date: 11/19/24

Applicant Signature

Owner Name (if different than above) (please print)

Date: 11/19/24

Owner Signature

Moses Ryan Ltd. as attorney

Owner Name (please print)

Date: _____

Owner Signature

(If there are more owners please submit an addendum with this application form)

MINOR SUBDIVISION PRELIMINARY PLAN CHECKLIST

NAME OF PLAT: 300 Laten Knight Road, Plat 29, Lot 2

FORM COMPLETED BY: Moses Ryan Ltd

DATE: 11/19/24

Please verify applicability of items during the pre-application phase.

In addition to paper copies, ALL application documents must be submitted in digital/electronic format.

ITEM	YES	N/A	NO
<u>Required Application Documents:</u> (Submit 1 paper copy unless stipulated otherwise)			
(a) Is the application completed and signed by all owners? (original version)	X		
(b) Has the Filing Fee (\$300 + \$35 / Unit*) been submitted? (*refer to the Cranston Subdivision and Development Regulations p. 12 for how units are assessed and for other fee information)	X		
(c) Has a check made out to Beacon Communications for the advertising fees been submitted? (amount TBD at time of application)		X	
(d) Have Municipal Lien Certificates (MLCs) been filed for all applicable lots? (MLCs submitted within the last 6 months will satisfy this requirement)	X		
(e) Has a radius map and mailing list of property owners within 100' of site submitted? (for notification)	X		
(f) Has a narrative text addressing site suitability, identification of problem areas & solutions, soil qualities, drainage, land dedications (streets, detention basins, open space, etc.), deed restrictions, easements and covenants been submitted?	X		
(g) Has a site suitability/soils analysis been submitted? (3 copies)	X		
(h) Has a drainage report/analysis been submitted? (3 copies)	X		
(i) Has City Engineer memo of approval and performance guarantee amount been submitted? (this may be submitted separately prior to public hearing)		X	
(j) Have notification and copies of the subdivision been sent to public utilities, US Postal Service, and 911 system? (Provide a copy of letters/correspondence sent)		X	
(k) Have draft HOA documents been submitted? (3 copies)		X	
<u>Are the following permits/approvals attached?</u>			
(a) RIDOT – Physical Alteration Permit		X	
(b) CRMC Assent		X	
(c) RIDEM - OWTS	X		
(d) RIDEM - Wetlands	X		
(e) U.S. Army Corps of Engineers - Wetland		X	
(f) Conformance with Scituate Reservoir Watershed Management Plan		X	
(g) RIHPHC – for potential historic/archeological significant sites		X	
(h) Water Supply Board availability letter		X	
(i) Veolia Water approval for public sewer	X		

ITEM	YES	N/A	NO
<u>PRELIMINARY PLAN REQUIREMENTS</u>			
<u>Number of copies to be submitted:</u>			
(a) (9) plan sets at 24"x 36"	X		
(b) (2) plan sets at 11" x 17"	X		
<u>Items to be incorporated in the Preliminary Plan:</u>			
(a) Is the name of plat clearly indicated? (properly cited if replat of existing plat)	X		
(b) Is the plan identified as a Preliminary Plan?	X		
(c) Are the names of all applicable owners of record provided?	X		
(d) Are all revision dates provided?	X		
(e) Is the plan classified as a Class 1 boundary survey? (Class 4 will be accepted for lot mergers)	X		
(f) Is the name, stamp and signature of the surveyor provided?	X		
(g) Is the name, stamp and signature of the engineer provided?	X		
(h) Is a north arrow provided? (denote True North or Magnetic North)	X		
(i) Is a scale provided and is the plan accurate to the scale?	X		
(j) Is a vicinity map / locus map provided?	X		
(k) Is the zoning district(s) of the parcel(s) provided and are the general requirements of applicable zoning districts denoted? (setbacks, frontage, min. lot area, & max lot coverage)	X		
(l) Are the names of the abutting property owners & zoning districts shown?	X		
(m) Are notes provided referencing any previous zoning relief including conditions of approval?		X	
(n) Are notes provided referencing any relief to be required/requested from the Zoning Board of Review?		X	
(o) Are 2' topo lines provided and 10' topo lines provided in bold?	X		
(p) Is the plat boundary outlined in bold?	X		
(q) Are lot lines to be removed clearly labeled and shown as dashed lines?		X	
(r) Are primary control points shown? (at least one must be shown)	X		
(s) Are the locations of all permanent monuments shown? (at least 2 must be set or recovered for residential surveys less than 1 acre); (not less than 3 must be set or recovered for residential surveys more than 1 acre and all non-residential projects)	X		
(t) Are all lots numbered or lettered?	X		
(u) Is there a phasing plan which is clearly denoted?		X	
(v) Is the total area of the existing plat and all proposed lot areas and open space provided?	X		
(w) Is the total UPLAND area (land area excluding wetlands) of the existing plat and all proposed lot areas provided?	X		
(x) Are dimensions for all straight lines, angles, radii, arcs & angles of curves denoted?	X		
(y) Are all building setbacks labeled and drawn accurately? (dashed lines)	X		
(z) For lots with multiple fronts, is the primary frontage identified?	X		
(aa) Are all existing and proposed streets labeled and right-of-way dimensions provided?	X		

ITEM	YES	N/A	NO
(bb) Are the plan and profile of new roadways including location and size of existing and proposed water, storm drain and sewer lines on plat and adjacent properties shown?	X		
(cc) Is a street index with all applicable street names provided?	X		
(dd) Are all land area(s) to be dedicated for public use or granted for the use of residents identified?		X	
(ee) Are soil types and locations of percolation tests denoted?	X		
(ff) Are all existing improvements shown (buildings, paved areas, accessory structures, fences, retaining walls, etc.)?	X		
(gg) For structures encroaching into building setbacks, are dimensions to nearest lot lines provided?		X	
(hh) Other Existing Conditions: Location of natural & man-made features, including rock outcrop, wooded areas, structures, embankments or retaining walls, railroads, power lines, underground storage tanks, or any physical feature that may have an influence on the development of this plat?	X		
(ii) Have LOD and/or limits of tree removal been delineated?		X	
(jj) Are flood hazard zones, FIRM Map Panel Numbers, and base flood elevation provided?	X		
(kk) Are notes provided with the names of abutting record plats?	X		
(ll) Are existing and proposed easements, including width and purpose, identified and denoted as necessary?	X		
(mm) Has the proposed drainage pattern been identified?	X		
(nn) Are surface water detention facilities shown?	X		
(oo) Are the RIDEM verified wetland edges and buffers/setbacks shown?	X		
(pp) Is a note provided referencing the RIDEM wetland edge verification Letter and/or RIDEM Alteration Permit?	X		
(qq) Has the Natural Heritage Survey been checked for rare and endangered plants and animals and has a note been provided declaring such?	X		
(rr) Are locations of any environmental hazards identified or a note provided that none are present? (a certificate from an environmental engineer may be required)	X		
(ss) Where hazards exist, are appropriate federal, state and local agency approvals submitted and are notes provided referring to said approvals?		X	
(tt) Are all cemetery boundaries and associated buffers identified?		X	
(uu) Is a legend for all abbreviations and symbols provided?	X		
(vv) Has a truck circulation plan with loading areas been provided?		X	
(ww) Has a Landscape/Buffer plan been provided?		X	
(xx) Is the name, stamp and signature of the landscape architect provided?		X	
(yy) For Planned Districts - Has appropriate additional information submitted or shown?		X	

Please be aware that there may be a stenographer fee to be assessed for the public hearing.

Staff encourages plans be submitted via email for a preliminary review prior to printing full plan sets for submittal. This is not required, but offered as a courtesy to potentially reduce printing costs should revisions be required.

475.00

STORMWATER MANAGEMENT SYSTEM OPERATION AND MAINTENANCE PLAN

for:

R & T ESTATES RESIDENTIAL SUBDIVISION

**ASSESSOR'S PLAT 29, LOT 2
300 LATEN KNIGHT ROAD
CRANSTON, RHODE ISLAND**

Applicant:

**MOSES RYAN LTD
40 WESTMINSTER STREET, FLOOR 9
PROVIDENCE, RHODE ISLAND 02903**

Owner:

**LAWRENCE D. & ELIZABETH L. MOSES
380 LATEN KNIGHT ROAD
CRANSTON, RHODE ISLAND 02921**

Prepared by:



GAROFALO

Garofalo & Associates, Inc.
85 Corliss Street, Providence, RI 02940
Tel.: (401).273.6000; Fax: (401).273.1000

**May 20, 2024
Revised: August 24, 2024**

The owner shall designate a qualified professional entity or individual to perform all monitoring & maintenance of the stormwater management system. The name, address and telephone number of the entity or individual shall be provided to the RIDEM & the local D.P.W. office.

Land Use & Site Area:

The project involves the subdivision of one (1) lot into five (5) smaller lots consisting of single-family residences along a new shared private road called Robin's Lane. All shown dwellings (5 total) are designed for an impervious driveway each and will be operational by private wells and public sewer.

General:

Stormwater Management structures, facilities and permanent BMP's must be inspected in accordance with this document. All documentation on scheduled inspections, times of inspections, maintenance completed, remedial actions taken to make repairs, and any modifications or reconstruction of the stormwater management system shall be submitted to the RIDEM and the local DPW within (30) days of the inspection.

Disposal of the accumulated sediment must be in accordance with all applicable local, state, and federal guidelines and regulations. If any drainage structure or outfall indicates the presence of petroleum it shall be removed and disposed of immediately in accordance with all applicable local, state and federal regulations.

Maintenance Funding:

Funding for stormwater system inspection and maintenance shall be the responsibility of the owner.

Estimated Maintenance Budget:

- Stormwater Management System Inspection: \$500.00 per year (property wide)
- Stormwater Management System Maintenance: \$2,500.00 per year (property wide)

Emergency Contacts:

Thomas Moses, Esq. Moses Ryan Ltd
40 Westminster Street, Floor 9
Providence, Rhode Island 02903
401-453-3600

A. Maintenance Operations

Pavement Sweeping:

1. Parking lots, roads and all access ways and gutters must be swept clean of all sediment and debris on a bi-annual basis in spring and fall, or as needed and be the responsibility of the future homeowner's association.

Wet Vegetated Treatment Systems:

1. Long-term maintenance of Wet Vegetated Treatment Systems (WVTSs) is the responsibility of the future homeowners association. The WVTSs must be inspected annually and after every rain event greater than a 1-year, 24-hour, Type III event to ensure that the design infiltration rate is being met. Any accumulated sediment within the Basin system shall be removed bi-annually using lightweight equipment such as shovels and wheelbarrows and disposed off-site.
2. Vegetative Maintenance (Sediment Forebay & Basin)
 - a. First Growing Season: Whenever overall vegetative canopy height reaches 18"-24", trim the meadow to a height of 8" using a string trimmer. Trimming will reduce competition by fast-growing weeds for sunlight and nutrients needed by slow-growing perennial natives. Trimming should cease by mid-September. Problem weeds should be hand pulled or spot sprayed with an approved aquatic herbicide such as Rodeo® or Garlon® 3A.
 - b. Second Growing Season: Problem weeds, such as purple loosestrife, phragmites, Japanese knotweed and reed canary grass, should be hand pulled or spot sprayed with an approved aquatic herbicide such as Rodeo® or Garlon® 3A. Mow to desired height as needed.
3. The system operation must be monitored for a 72-hour period after every rain storm event of two inches (2") or more. If any system fails to drain to the normal pool level in a 72-hour period the Owner shall retain a qualified professional engineer to assess whether the system has failed and recommend any corrective action that is required. The corrective action determined shall be immediately implemented to restore the function of the systems to original design conditions.
4. Sediment forebay maintenance shall be performed on a minimum yearly basis, and after every rain event greater than a 1-year, 24-hour, Type III event. If sediment or organic debris build-up has limited the infiltration capabilities to below the design rate, the top 6 inches shall be removed and the surface roto-tilled to a depth of 12 inches. The forebay bottom should be restored according to original design specifications. The sediment chamber outlet devices shall be cleaned/repared when drawdown times exceed 36 hours. Trash and debris shall be removed as necessary.
5. Check inflow and outflow pipes annually for clogging and flush as necessary. Reinforce rip-rap if riprap is found to be deficient.

6. Check embankment slopes for signs of erosion and gullyng annually.

If inspection indicates the presence of petroleum, it shall be removed immediately and disposed of off-site in accordance with all applicable local, state and federal regulations.

Extended Detention:

1. Long-term maintenance of the basin is the responsibility of the future homeowner's association. During the six months immediately after construction, filtering practices should be inspected following at least the first two precipitation events of at least 1-inch to ensure that the system is functioning properly. Maintenance thereafter shall be performed at a minimum yearly basis, and after every rain event greater than a 1-year, 24-hour, Type III event. Maintenance shall include mowing of the basin three times per growing season, and/or maintaining a grass height less than 12", whichever comes first; removing accumulated sediment from the bottom of the basin using shovels and wheelbarrows.
2. Silt/sediment shall be removed from the filter bed when the accumulation exceeds one inch. When the filtering capacity of the filter diminished substantially (i.e., when water ponds on the surface of the filter bed for more than 48 hours), the top few inches of discolored material shall be removed and shall be replaced with fresh material. The removed sediments shall be disposed in an acceptable manner at an approved and permitted location.
3. Pruning or replacement of woody vegetation should occur when dead or dying vegetation is observed. Separation of herbaceous vegetation rootstock should occur when over-crowding is observed, or approximately once every 3 years. If at least 50 percent vegetation coverage is not established after two years, a reinforcement planting should be performed. The mulch layer should be replenished (to the original design depth) every other year, as directed by inspection reports. The previous mulch layer should be removed, and properly disposed of or roto-tilled into the soil surface.

Qualified Pervious Areas (QPAs):

1. Long-term maintenance of the Qualified Pervious Areas is the responsibility of the individual Owners for each lot. The QPAs and the stone spreader must be inspected quarterly during the first year following construction, and semi-annually thereafter. Any areas of erosion or gullyng caused by concentrated flows must be repaired to smooth, gentle grades. Any accumulated sediment at initial points of entry, or accumulated sediments that have resulted in grade changes, shall be removed annually at least once per year using lightweight equipment such as shovels and wheelbarrows and disposed off-site. Any areas damaged during sediment removal maintenance activities must be reseeded.
2. QPAs shall remain vegetated to the greatest extent practical and disturbance to these areas is prohibited.

B. Pollution Prevention

Solid Waste Containment:

Solid waste storage and removal shall be ongoing and the responsibility of the future homeowner's association.

Snow Disposal and Deicing:

1. Snow disposal and deicing shall be the responsibility of the future homeowner's association.
2. Snow removal shall happen in conformance with RIDEM requirements. No snow shall be placed within regulated wetlands.
3. No exterior storage or deicing materials shall be allowed at the site or at individual properties within the development area. Application of deicing materials shall be in conformance with the applicable RIDEM requirements.
4. During winter conditions salt and sand use site-wide shall be applied to the minimum extent possible to maintain safe conditions.

Good Housekeeping Operations:

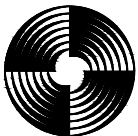
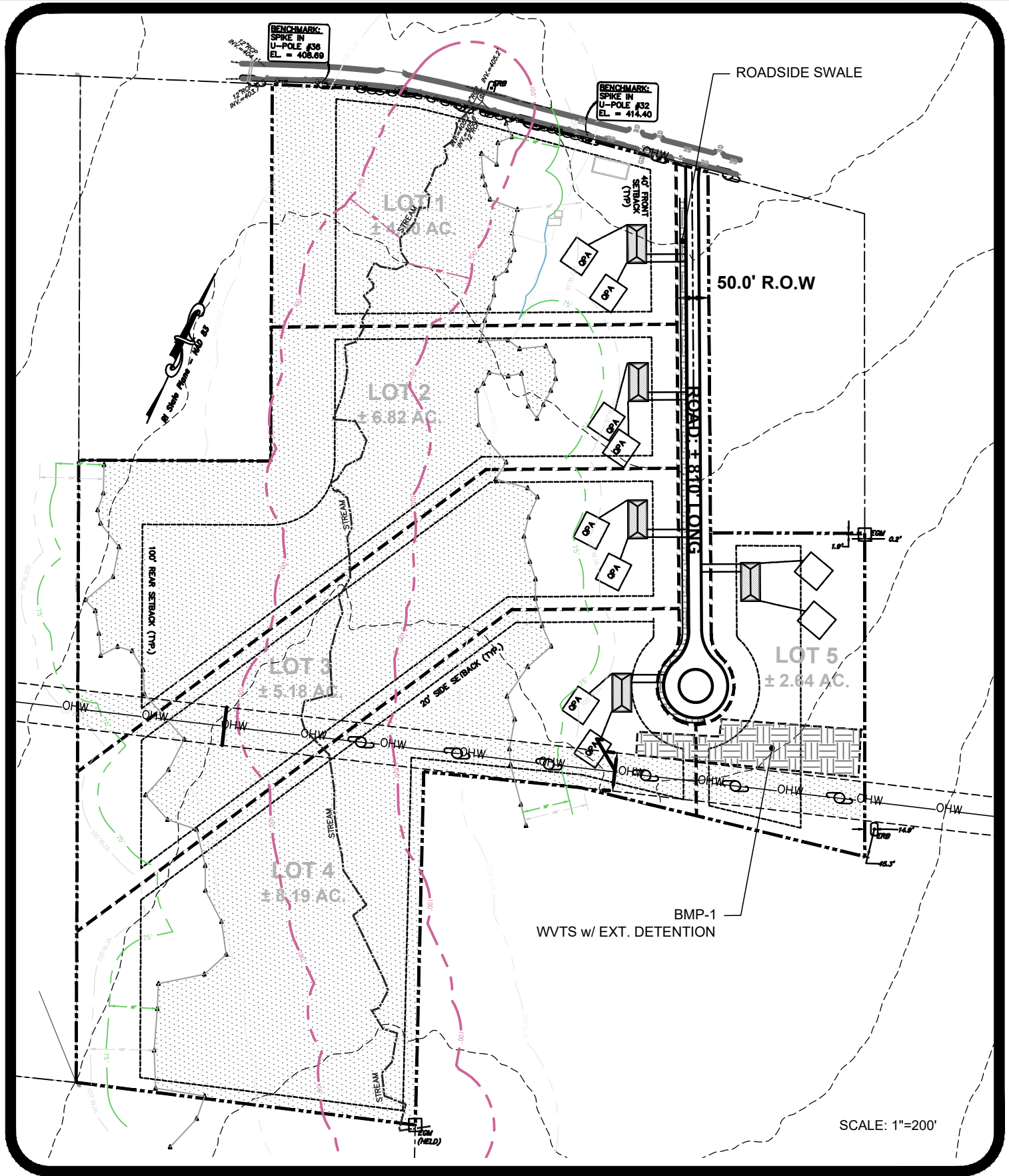
Good housekeeping and material management reduces the risk of accidental exposure of materials and substances to stormwater runoff.

1. All materials stored on-site will be stored in a neat, orderly manner in their appropriate containers and under a roof or other weatherproof enclosure.
2. Products shall be kept in their original containers with the original manufacturer's label.
3. Substances should not be mixed with one another, unless recommended by the manufacturer.
4. Whenever possible, all of a product will be used up before disposing of a container.
5. Petroleum Products:
All on-site vehicles and parking areas shall be regularly monitored for leaks and spills. Spills encountered during monitoring must be cleaned immediately.
6. Fertilizers:
 1. Fertilizers shall only be used in the minimum amounts as recommended by the manufacturer.
 2. The contents of any unused fertilizer shall be transferred to a clearly labeled, weatherproof sealable plastic bin, to avoid spillage.
7. Paints, Solvents:
 1. All paints and solvents shall be stored in the original manufacturer's containers and in a weatherproof covered location.
 2. The use of paints and solvents shall, whenever possible, be limited to service or storage bays. Where not possible, the work area shall be protected with impermeable drop clothes or tarps.

**STORMWATER MANAGEMENT
SYSTEM OPERATION AND MAINTENANCE PLAN**

APPENDIX - A

BMP LOCATION MAP



GAROFALO

GAROFALO & ASSOCIATES, INC.
85 CORLISS STREET \ P.O. BOX 6145
PROVIDENCE, RHODE ISLAND 02940

R & T ESTATES

300 LATEN KNIGHT ROAD (AP 29 LOT 2)
CRANSTON, RHODE ISLAND

**STORMWATER MANAGEMENT
SYSTEM OPERATION AND MAINTENANCE PLAN**

APPENDIX - B

BMP INSPECTION CHECKLISTS

Table F-1 Stormwater Basin/Shallow WVTS Construction Inspection Checklist

Project:

Location:

Site Status:

Date:

Time:

Inspector:

CONSTRUCTION SEQUENCE	SATISFACTORY/ UNSATISFACTORY	COMMENTS
1. Pre-Construction/Materials and Equipment		
Pre-construction meeting		
Pipe and appurtenances on-site prior to construction and dimensions checked		
1. Material (including protective coating, if specified)		
2. Diameter		
3. Dimensions of metal riser or pre-cast concrete outlet structure		
4. Required dimensions between water control structures (orifices, weirs, etc.) are in accordance with approved plans		
5. Barrel stub for prefabricated pipe structures at proper angle for design barrel slope		
6. Number and dimensions of prefabricated anti-seep collars		

CONSTRUCTION SEQUENCE	SATISFACTORY/ UNSATISFACTORY	COMMENTS
7. Watertight connectors and gaskets		
8. Outlet drain valve		
Project benchmark near basin site		
Equipment for temporary de-watering		
2. Subgrade Preparation		
Area beneath embankment stripped of all vegetation, topsoil, and organic matter		
3. Pipe Installation		
Method of installation detailed on plans		
A. Bed preparation		
Basin/WVTS excavated with specified side slopes		
Stable, uniform, dry subgrade of relatively impervious material (If subgrade is wet, contractor shall have defined steps before proceeding with installation)		
Invert at proper elevation and grade		
B. Pipe placement		
Metal/plastic pipe		
1. Watertight connectors and gaskets properly installed		
2. Anti-seep collars properly spaced and having watertight connections to pipe		

CONSTRUCTION SEQUENCE	SATISFACTORY/ UNSATISFACTORY	COMMENTS
3. Backfill placed and tamped by hand under “haunches” of pipe		
4. Remaining backfill placed in max. 8 inch lifts using small power tamping equipment until 2 ft cover over pipe is reached		
Concrete pipe		
1. Pipe set on blocks or concrete slab for pouring of low cradle		
2. Pipe installed with rubber gasket joints with no spalling in gasket interface area		
3. Excavation for lower half of anti-seep collar(s) with reinforcing steel set		
4. Entire area where anti-seep collar(s) will come in contact with pipe coated with mastic or other approved waterproof sealant		
5. Low cradle and bottom half of anti-seep collar installed as monolithic pour and of an approved mix		
6. Upper half of anti-seep collar(s) formed with reinforcing steel set		
7. Concrete for collar of an approved mix and vibrated into place		
8. Forms stripped and collar inspected for honeycomb prior to backfilling. Parge if necessary.		
C. Backfilling		

CONSTRUCTION SEQUENCE	SATISFACTORY/ UNSATISFACTORY	COMMENTS
Fill placed in maximum 8-in lifts		
Backfill taken minimum 2 ft above top of anti-seep collar elevation before traversing with heavy equipment		
4. Riser / Outlet Structure Installation		
Riser located within embankment		
A. Metal riser		
Riser base excavated or formed on stable subgrade to design dimensions		
Set on blocks to design elevations and plumbed		
Reinforcing bars placed at right angles and projecting into sides of riser		
Concrete poured so as to fill inside of riser to invert of barrel		
B. Pre-cast concrete structure		
Dry and stable subgrade		
Riser base set to design elevation		
If more than one section, no spalling in gasket interface area; gasket or approved caulking material placed securely		
Watertight and structurally sound collar or gasket joint where structure connects to pipe spillway		
C. Poured concrete structure		

CONSTRUCTION SEQUENCE	SATISFACTORY/ UNSATISFACTORY	COMMENTS
Footing excavated or formed on stable subgrade, to design dimensions with reinforcing steel set		
Structure formed to design dimensions, with reinforcing steel set as per plan		
Concrete of an approved mix and vibrated into place		
Forms stripped & inspected for "honeycomb" prior to backfilling; parge if necessary		
5. Embankment Construction		
Fill material		
Compaction		
Embankment		
1. Fill placed in specified lifts and compacted with appropriate equipment		
2. Constructed to design cross-section, side slopes and top width		
3. Constructed to design elevation plus allowance for settlement		
6. Impounded Area Construction		
Excavated / graded to design contours and side slopes		
Inlet pipes have adequate outfall protection		
Forebay(s)		
Basin benches		

CONSTRUCTION SEQUENCE	SATISFACTORY/ UNSATISFACTORY	COMMENTS
7. Earth Emergency Spillway Construction		
Spillway located in cut or structurally stabilized with riprap, gabions, concrete, etc.		
Excavated to proper cross-section, side slopes and bottom width		
Entrance channel, crest, and exit channel constructed to design grades and elevations		
8. Outlet Protection		
A. End section		
Securely in place and properly backfilled		
B. Endwall		
Footing excavated or formed on stable subgrade, to design dimensions and reinforcing steel set, if specified		
Endwall formed to design dimensions with reinforcing steel set as per plan		
Concrete of an approved mix and vibrated into place		
Forms stripped and structure inspected for "honeycomb" prior to backfilling; parge if necessary		
C. Riprap apron / channel		
Apron / channel excavated to design cross-section with proper transition to existing ground		

CONSTRUCTION SEQUENCE	SATISFACTORY/ UNSATISFACTORY	COMMENTS
Filter fabric in place		
Stone sized as per plan and uniformly placed at the thickness specified		
9. Vegetative Stabilization		
Approved seed mixture		
Proper surface preparation and required soil amendments		
Excelsior mat or other stabilization, as per plan		
10. Miscellaneous		
Drain for basins having a permanent pool		
Trash rack / anti-vortex device secured to outlet structure		
Trash protection for low flow pipes, orifices, etc.		
Fencing (when required)		
Access road		
Set aside for clean-out maintenance		
11. Shallow WVTs		
Adequate water balance		
Variety of depth zones present		
Approved pondscaping plan in place and budget for additional plantings		

CONSTRUCTION SEQUENCE	SATISFACTORY/ UNSATISFACTORY	COMMENTS
Plants and materials ordered 6 months prior to construction		
Construction planned to allow for adequate planting and establishment of plant community		
Shallow WVTS setback area preserved to maximum extent possible		

Comments:

Actions to be Taken:

Open Channel Operation, Maintenance, and Management Inspection Checklist

Project:

Location:

Site Status:

Date:

Time:

Inspector:

MAINTENANCE ITEM	SATISFACTORY/ UNSATISFACTORY	COMMENTS
1. Debris Cleanout (Annual, After Major Storms)		
Contributing areas clean of debris		
2. Check Dams or Energy Dissipators (Annual, After Major Storms)		
No evidence of flow going around structures		
No evidence of erosion at downstream toe		
Soil permeability		
Groundwater / bedrock		
3. Vegetation (Annual, After Major Storms)		
Mowing done when needed		
Minimum mowing depth not exceeded		
No evidence of erosion		
Fertilized per specification		

MAINTENANCE ITEM	SATISFACTORY/ UNSATISFACTORY	COMMENTS
4. Dewatering (Annual, After Major Storms)		
Dewaters between storms		
5. Sediment deposition (Annual, After Major Storms)		
Clean of sediment		
6. Outlet/Overflow Spillway (Annual, After Major Storms)		
Good condition, no need for repairs		
No evidence of erosion		

Comments:

Actions to be Taken:

Soil Erosion and Sediment Control Plan

For:

R & T ESTATES

300 Laten Knight Road

Cranston, Rhode Island

Assessor's Plat 29, Lot 2

Applicant:

Moses Ryan Ltd

40 Westminster Street, Floor 9

Providence, RI 02903

401-453-3600

Owner:

Lawrence D. & Elizabeth L. Moses

380 Laten Knight Road

Cranston, RI 02921

Operator:

*TO BE DETERMINED UPON
CONTRACT AWARD*

OPERATOR NAME

STREET ADDRESS

CITY/TOWN, STATE ZIP

PHONE NUMBER

Estimated Project Dates:

Start Date: March 2025

Completion Date: August 2025

SESC Plan Prepared By:

Garofalo and Associates, Inc.

Samuel Hemenway, P.E.

85 Corliss Street, P.O. Box 6145

Providence, Rhode Island 02904

(401) 273-6000

shemenway@garofaloassociates.com

RI Professional Engineer License Number: 6349

**SESC Plan
Preparation Date:**

May 20, 2024

Soil Erosion and Sediment Control Plan
R & T Estates Residential Subdivision

SESC Plan Revision

N/A

Date:

OPERATOR CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under the direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that it is the responsibility of the owner/operator to implement and amend the Soil Erosion and Sediment Control Plan as appropriate in accordance with the requirements of the RIPDES Construction General Permit.

Operator Signature:

Date

Contractor Representative: Name

Contractor Title: Title

Contractor Company Name: Company Name (if applicable)

Address: Mailing Address

Phone Number: Phone Number

Email Address: Email

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INTRODUCTION

The purpose of erosion, runoff, and sedimentation control measures is to prevent pollutants from leaving the construction site and entering waterways or environmentally sensitive areas during and after construction. This SESC Plan has been prepared prior to the initiation of construction activities to address anticipated worksite conditions. The control measures depicted on the site plan and described in this narrative should be considered the minimum measures required to control erosion, sedimentation, and stormwater runoff at the site. Since construction is a dynamic process with changing site conditions, it is the operator's responsibility to manage the site during each construction phase so as to prevent pollutants from leaving the site. This may require the operator to revise and amend the SESC Plan during construction to address varying site and/or weather conditions, such as by adding or realigning erosion or sediment controls to ensure the SESC Plan remains compliant with the RIPDES Construction General Permit. Records of these changes must be added to the amendment log attached to the SESC Plan, and to the site plans as "red-lined" drawings. Please Note: **Even if practices are correctly installed on a site according to the approved plan, the site is only in compliance when erosion, runoff, and sedimentation are effectively controlled throughout the entire site.**

It is the responsibility of the site owner and the site operator to maintain the SESC Plan at the site, including all attachments, amendments and inspection records, and to make all records available for inspection by RIDEM during and after construction. (RIPDES CGP - Part III.G)

The site owner, the site operator, and the designated site inspector are required to review the SESC Plan and sign the Party Certification pages (Section 8). The primary contractor (if different) and all subcontractors (if applicable) involved in earthwork or exterior construction activities are also required to review the SESC Plan and sign the certification pages before construction begins.

Any questions regarding the SESC Plan, control measures, inspection requirements, or any other facet of this document may be addressed to the RIDEM Office of Water Resources, at 401-222-4700 or via email: water@dem.ri.gov.

SECTION 1: SITE DESCRIPTION

1.1 *Project/Site Information*

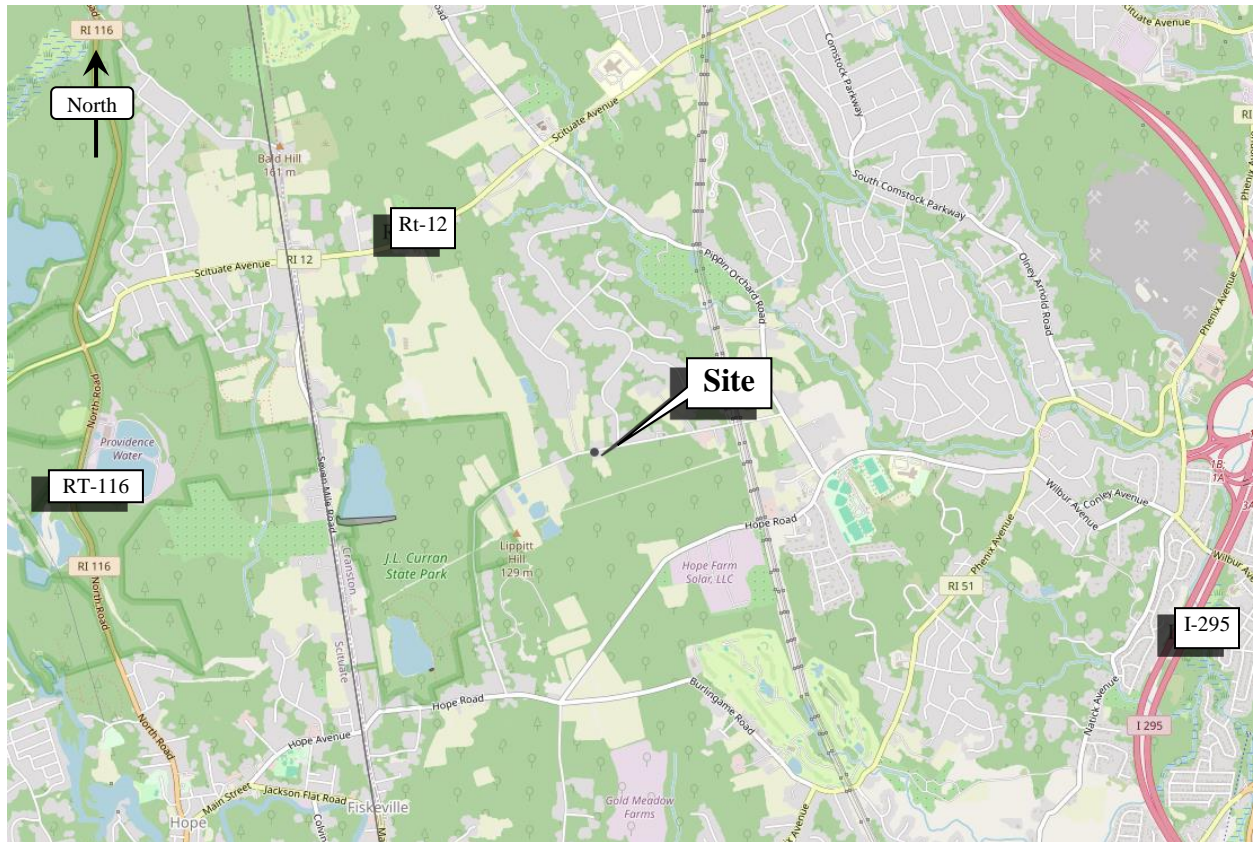
Project/Site Name: R & T Estates

The project involves the subdivision of one (1) lot into five (5) smaller lots consisting of single-family residences along a new shared private road called Robin's Lane. All shown dwellings (5 total) are designed for an impervious driveway each and will be operational by private wells and public sewer.

Soil Erosion and Sediment Control Plan R & T Estates Residential Subdivision

Project Street/Location:

- 300 Laten Knight Road – Cranston, RI



The following are estimates of the construction site area:

- Total Project Parcel Area 29 acres
- Total Project Area to be Disturbed 3.1 acres

☐ Yes ☒ No The Limits of Disturbance have been marked in the field

1.3 Natural Heritage Area Information

RIPDES CGP - Part III.H

RIDEM Rhode Island Natural Heritage Program <mailto:plan@dem.ri.gov>

Are there any Natural Heritage Areas being disturbed by the construction activity or will discharges be directed to the Natural Heritage Area as a result of the construction activity?

☐ Yes ☒ No

If yes, describe or refer to documentation which determines the likelihood of an impact on this area and the steps that will be taken to address any impacts.

- RIDEM Environmental Resource Mapping

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1.4 Historic Preservation/Cultural Resources

Are there any historic properties, historic cemeteries or cultural resources on or near the construction site?

☐ Yes ☒ No

Describe how this determination was made and summarize state or tribal review comments:

- RIDEM Environmental Resource Mapping

If yes, describe or refer to documentation which determines the likelihood of an impact on this historic property, historic cemetery or cultural resource and the steps taken to address that impact including any conditions or mitigation measures that were approved by other parties.

SECTION 2: EROSION, RUNOFF, AND SEDIMENT CONTROL

RIPDES Construction General Permit – Part III.J.1 – Erosion, Runoff, and Sediment Controls

The purpose of erosion controls is to prevent sediment from being detached and moved by wind or the action of raindrop, sheet, rill, gully, and channel erosion. Properly installed and maintained erosion controls are the primary defense against sediment pollution.

Runoff controls are used to slow the velocity of concentrated water flows. By intercepting and diverting stormwater runoff to a stabilized outlet or treatment practice or by converting concentrated flows to sheet flow erosion and sedimentation are reduced.

Sediment controls are the last line of defense against moving sediment. The purpose is to prevent sediment from leaving the construction site and entering environmentally sensitive areas.

This section describes the set of control measures that will be installed before and during the construction project to avoid, mitigate, and reduce impacts associated with construction activity. Specific control measures and their applicability are contained in Section Four: Erosion Control Measures, Section Five: Runoff Control Measures, and Section Six: Sediment Control Measures of the RI SESC Handbook. The RI SESC Handbook can be found at the following address:

<http://www.dem.ri.gov/soilerosion2014final.pdf>

2.1 Avoid and Protect Sensitive Areas and Natural Features

Areas of existing and remaining vegetation and areas that are to be protected as identified in the Section 1.6 of the SESC Plan must be clearly identified on the SESC Site Plans for each Phase of Construction. Prior to any land disturbance activities commencing on the site, the Contractor shall physically mark limits of disturbance (LOD) on the site and any areas to be protected within the site, so that workers can clearly identify the areas to be protected.

Feature Requiring Protection	Construction Phase #	Method of Protection	Sheet #
All areas adjacent to the construction activities shall be protected, with particular attention toward adjacent stormwater management facilities and storm drains	All Phases	Silt Sock / Silt Fence, construction access	C-6

2.2 Minimize Area of Disturbance

Will >5 acres be disturbed in order to complete this project?

☐ Yes ☒ No

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Will <5 acres be disturbed or will disturbance activities be completed within a six (6) month window?

☒ Yes ☐ No

Sequencing of work areas is anticipated during all phases to minimize area of disturbance.

Based on the answers to the above questions will phasing be required for this project?

☐ Yes ☒ No

3.1 acres to be disturbed.

PHASING PLAN

The following are estimates of each phase of the construction project:

Proper sequencing of construction activities is essential to maximize the effectiveness of erosion, runoff, and sediment control measures. Construction sequencing and timing of construction activities will include:

- Phase 1 - BEFORE DEMOLITION/EARTHWORK

Total Area of Phase	3 acres
Area to be Disturbed	3 acres

- Survey and stake any drainage structures, limit of disturbance, and sedimentation barriers.
- Install Construction Entrances
- Place sedimentation barriers (hay bales or silt sock) and silt sacks.
- Construct Material Stockpile area, Truck Wash-out, and Truck Refueling areas.

- Phase 2 - DURING DEMOLITION/EARTHWORK

- Total Area of Phase 3 acres
- Area to be Disturbed 3 acres

- Construct Temporary Sediment Trap
- Place sedimentation barriers (hay bales or silt sock) and silt sacks adjacent to utility corridors and on any new drainage structures immediately after installation.
- Sedimentation control structures shall be inspected and maintained promptly after rainfall events.
- Hay bales and/or silt sock shall be located as conditions warrant or as directed by the Engineer.
- Protect planned infiltration sites and/or qualifying pervious areas (QPA's) from compaction.
- Denuded areas shall be seeded and all disturbed slopes shall be treated with hay, straw, or fiber mulch.

- Phase 3 - FINAL STABILIZATION

- Total Area of Phase 3 acres
- Area to be Disturbed 3 acres

- Pavement aggregate base to stabilized subgrade.
- Temporary erosion and sedimentation control, hay bales and/or silt socks, shall be removed following vegetative establishment on all disturbed areas.

2.3 Minimize the Disturbance of Steep Slopes

Are steep slopes (>15%) present within the proposed project area?

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☐ Yes ☒ No

2.4 *Preserve Topsoil*

Site owners and operators must preserve existing topsoil on the construction site to the maximum extent feasible and as necessary to support healthy vegetation, promote soil stabilization, and increase stormwater infiltration rates in the post-construction phase of the project.

Will existing topsoil be preserved at the site?

☒ Yes ☐ No

- Topsoil shall be stripped and stockpiled for re-use. Material Stockpile Zones are identified on the *Soil Erosion and Sediment Control Site Plan* and shall be protected with linear erosion controls and stabilized in accordance with this plan. (Plan C-5)

Soil compaction must be minimized by maintaining limits of disturbance throughout construction. In instances where site soils are compacted the site owner and operator must restore infiltration capacity of the compacted soils by tilling or scarifying compacted soils and amending soils as necessary to ensure a minimum depth of topsoil is available in these areas. In areas where infiltrating stormwater treatment practices are located compacted soils must be amended such that they will comply the design infiltration rates.

- Future Infiltration Zones are identified on the *Soil Erosion and Sediment Control Site Plan* (C-5) via infiltration basin. The contractor is asked to minimize construction activity that includes heavy equipment within these zones and they are to protect the zones through the construction process.

2.5 *Stabilize Soils*

Upon completion and acceptance of site preparation and initial installation of erosion, runoff, and sediment controls and temporary pollution prevention measures, the operator shall initiate appropriate temporary or permanent stabilization practices during all phases of construction on all disturbed areas as soon as possible, but not more than fourteen (14) days after the construction activity in that area has temporarily or permanently ceased.

Any disturbed areas that will not have active construction activity occurring within 14 days must be stabilized using the control measures depicted in the SESC Site Plans, in accordance with the *RI SESC Handbook*, and per manufacturer product specifications.

Only areas that can be reasonably expected to have active construction work being performed within 14 days of disturbance will be cleared/grubbed at any one time. It is NOT acceptable to clear and grub the entire construction site if portions will not be active within the 14-day time frame. Proper phasing of clearing and grubbing activities shall include temporary stabilization techniques for areas cleared and grubbed that will not be active within the 14-day time frame.

All disturbed soils exposed prior to October 15 of any calendar year shall be seeded by that date if vegetative measures are the intended soil stabilization method. Any such areas that do not have adequate vegetative stabilization, as determined by the site operator or designated inspector, by November 15, must be stabilized through the use of non-vegetative erosion control measures. If work continues within any of these areas during the period from October 15 through April 15, care must be taken to ensure that only the area required for that day's work is exposed, and all erodible soil must be re-stabilized within 5 working days. In limited circumstances, stabilization may not be required if the intended function of a specific area of the site necessitates that it remains disturbed (i.e., construction of a motocross track).

Temporary Vegetative Control Measures

- Temporary vegetative cover will be established using hydro-seeding for areas of exposed soil, including stockpiles where construction activity will cease for more than 15 days.
- The use of temporary vegetative control shall occur in areas that have slopes steeper than 3:1 and for areas of temporary stockpiles that have not been used within 30 days.

Soil Erosion and Sediment Control Plan
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Temporary Non-Vegetative Control Measures

- The use of a temporary sediment trap will be used on the site as a sediment control measure during construction.
- Silt sock / Silt Fence siltation barrier will be installed to collect all sediment suspended in storm water runoff.
- Organic mulch will be applied to exposed soils during short periods of construction.
- Dust from the site will be controlled by applying potable water to disturbed areas.
- Immediately after formation of final grades install erosion control matting as detailed.

Permanent Vegetative Control Measures

- Paving and other site improvements will provide permanent stabilization for the project.
- Landscape plant material.

Permanent Non-Vegetative Control Measures

- All areas of disturbance will have permanent vegetative control measures. Seeding of slopes will be with non-invasive plant materials.
- Rolled erosion control matting for steep slopes (>3:1).

2.6 *Protect Storm Drain Outlets*

Temporary or permanent outlet protection must be used to prevent scour and erosion at discharge points through the protection of the soil surface, reduction in discharge velocities, and through the promotion of infiltration. Outlets often have high velocity, high volume flows, and require strong materials that will withstand the forces of stormwater. Storm drain outlet control measures also offer a last line of protection against sediment entering environmentally sensitive areas.

All stormwater outlets that may discharge sediment-laden stormwater flow from the construction site must be protected using the control practices depicted on the approved plan set and in accordance with the *R/SESC Handbook*.

Will temporary or permanent point source discharges be generated at the site as the result of construction of sediment traps or basins, diversions, and conveyance channels?

☐ Yes ☒ No

2.7 *Establish Temporary Controls for the Protection of Post-Construction Stormwater Treatment Practices*

Temporary measures shall be installed to protect permanent or long-term stormwater control and treatment measures as they are installed and throughout the construction phase of the project so that they will function properly when they are brought online.

Will long-term stormwater treatment practices be installed at the site?

☒ Yes ☐ No

- One (1) BMP location includes the combination of practices (wet vegetated treatment system, bioretention, and ditches) that will be installed on the site. Details are included in the Operation and Maintenance Manual.
- Soil Erosion and Sediment Control Site Plan (Plan C-5)

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R & T Estates Residential Subdivision

2.8 Divert or Manage Run-on from Up-gradient Areas

Is stormwater from off-site areas anticipated to flow onto the project area or onto areas where soils will be disturbed?

☐ Yes ☒ No

Pre-Construction and Construction sub-watershed maps are included for each phase in this SESC Plan submittal.

Structural control measures will be used to limit stormwater flow from coming onto the project area, and to divert and slow on-site stormwater flow that is expected to impact exposed soils for the purpose of minimizing erosion, runoff, and the discharge of pollutants from the site.

Control measures shall be installed as depicted on the approved plan set and in accordance with the <i>RI SESC Handbook</i> or the <i>RI Department of Transportation Standard Specifications for Road and Bridge Construction</i> . Run-on and Run-off Management				
Construction Phase #	On-site or Off-site Run-on?	Control measure	Identified on Sheet #	Detail(s) is/are on Sheet #
All Phases	On-Site	Silt Sock/ Fence	C-5	C-6

2.9 Retain Sediment Onsite through Structural and Non-Structural Practices

SEDIMENT BARRIERS must be installed along the perimeter areas of the site that will receive stormwater from disturbed areas. This also may include the use of sediment barriers along the contour of disturbed slopes to maintain sheet flow and minimize rill and gully erosion during construction. Installation and maintenance of sediment barriers must be completed in accordance with the maintenance requirements specified by the product manufacturer or the *RI SESC Handbook*.

Will sediment barriers be utilized at the toe of slopes and other downgradient areas subject to stormwater impacts and erosion during construction?

☒ Yes ☐ No

- Silt Sock and/or Silt Fence sediment protection is proposed at the downgradient position along the limit of proposed disturbance.

Will sediment barriers be utilized along the contour of slopes to maintain sheet flow and minimize rill and gully erosion during construction?

☐ Yes ☒ No

- Because work will be continually performed within the limit of disturbance, barriers will only be specified for the limits.

SEDIMENT BARRIERS			
Construction Phase #	Sediment Barrier Type	Sediment Barrier is Labeled on Sheet #	Detail is on Sheet #
N/A	N/A	N/A	N/A

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INLET PROTECTION will be utilized to prevent soil and debris from entering storm drain inlets. These measures are usually temporary and are implemented before a site is disturbed. ALL stormwater inlets and/or catch basins that are operational during construction and have the potential to receive sediment-laden stormwater flow from the construction site must be protected using control measures outlined in the *RI SESC Handbook*.

For more information on inlet protection refer to the *RI SESC Handbook*, Inlet Protection control measure.

Maintenance

The operator must clean, or remove and replace the inlet protection measures as sediment accumulates, the filter becomes clogged, and/or as performance is compromised. Accumulated sediment adjacent to the inlet protection measures should be removed by the end of the same work day in which it is found or by the end of the following work day if removal by the same work day is not feasible.

Do inlets exist adjacent to or within the project area that require temporary protection?

☐ Yes ☒ No

The following lists the proposed storm drain inlet types selected from Section Six of the *RI SESC Handbook*. Each row is unique for each phase and inlet protection type.

INLET PROTECTION			
Construction Phase #	Inlet Protection Type	Inlet Protection is labeled on Sheet #	Detail(s) is/are on Sheet #
N/A	N/A	N/A	N/A

CONSTRUCTION ENTRANCES will be used in conjunction with the stabilization of construction roads to reduce the amount of sediment tracking off the project. This project has avoided placing construction entrances on poorly drained soils where possible. Where poorly drained soils could not be eliminated, the detail includes subsurface drainage.

Any construction site access point must employ the control measures on the approved SESC site plans and in accordance with the *RI SESC Handbook*. Construction entrances shall be used in conjunction with the stabilization of construction roads to reduce the amount of mud picked up by construction vehicles. All construction access roads shall be constructed prior to any roadway accepting construction traffic.

The site owner and operator must:

1. Restrict vehicle use to properly designated exit points.
2. Use properly designed and constructed construction entrances at all points that exit onto paved roads so that sediment removal occurs prior to vehicle exit.
3. When and where necessary, use additional controls to remove sediment from vehicle tires prior to exit (i.e. wheel washing racks, rumble strips, and rattle plates).
4. Where sediment has been tracked out from the construction site onto the surface of off-site streets, other paved areas, and sidewalks, the deposited sediment must be removed by the end of the same work day in which the track out occurs. Track-out must be removed by sweeping, shoveling, or vacuuming these surfaces, or by using other similarly effective means of sediment removal.

Will construction entrances be utilized at the proposed construction site?

☒ Yes ☐ No

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CONSTRUCTION ENTRANCE			
Construction Phase #	Soil Type at the Entrance	Entrance is located on Sheet #	Detail is on Sheet #
All Phases	C	C-5	C-6

STOCKPILE CONTAINMENT will be used onsite to minimize or eliminate the discharge of soil, topsoil, base material or rubble, from entering drainage systems or surface waters. All stockpiles must be located within the limit of disturbance, protected from run-on with the use of temporary sediment barriers and provided with cover or stabilization to avoid contact with precipitation and wind where and when practical.

Stock pile management consists of procedures and practices designed to minimize or eliminate the discharge of stockpiled material (soil, topsoil, base material, rubble) from entering drainage systems or surface waters.

For any stockpiles or land clearing debris composed, in whole or in part, of sediment or soil, you must comply with the following requirements:

1. Locate piles within the designated limits of disturbance.
2. Protect from contact with stormwater (including run-on) using a temporary perimeter sediment barrier.
3. Where practicable, provide cover or appropriate temporary vegetative or structural stabilization to avoid direct contact with precipitation or to minimize sediment discharge.
4. NEVER hose down or sweep soil or sediment accumulated on pavement or other impervious surfaces into any stormwater conveyance, storm drain inlet, or surface water.
5. To the maximum extent practicable, contain and securely protect from wind.

STOCKPILE CONTAINMENT				
Construction Phase #	Run-on measures necessary? (yes/no)	Stabilization or Cover Type	Stockpile Containment Measure	Sheet #
All Phases	Yes	Cover as needed	Silt Sock	Sheet C-6

CONSTRUCTED SEDIMENT STRUCTURES

TEMPORARY SEDIMENT TRAPS will be utilized onsite. There will be no disturbed drainage areas greater than one acre that will be exposed for longer than six months. Design and sizing calculations in accordance with the *RI SESC Handbook*, Section Six are found in this SESC Plan. A summary of the calculations is provided below:

Are temporary sediment traps required at the site?

☐ Yes ☒ No

SEDIMENT TRAPS				
Construction Phase #	Exposed Area (acres)	Trap #	Sheet #	Detail found on Sheet#
All	3 acres	1	C-5	C-6

Soil Erosion and Sediment Control Plan
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TEMPORARY SEDIMENT BASIN(S) will be utilized onsite. Every effort must be made to prevent erosion.

Are temporary sediment basins required at the site?

☐ Yes ☒ No

- The project will not expose areas greater than five (5) acres.

2.10 Properly Design Constructed Stormwater Conveyance Channels

Are temporary stormwater conveyance practices required in order to properly manage runoff within the proposed construction project?

☒ Yes ☐ No

- Temporary diversion dike shall be utilized to direct flow to temporary sediment trap.

2.11 Erosion, Runoff, and Sediment Control Measure List

It is expected that this table and corresponding Inspection Reports will be amended as needed throughout the construction project as control measures are added or modified.

All Phases			
Location/Station	Control Measure Description/Reference	Maintenance Requirement	Phase
Project Perimeter	Filter Socks	Sediment accumulated greater than half way up sock; break through or significant strain of barrier	All Phases
Construction Vehicle Entrances	Construction Access	Contractor shall assure that placed rip-rap remain.	All Phases
Construction Vehicle Entrances	Truck Washout	Silt Socks shall be monitored and assessed throughout operation.	All Phases
Truck Entrance	Truck Refueling	Silt Socks shall be monitored and assessed throughout operation.	All Phases
Site-wide	Dust Control	Provide dust control as warranted by weather and field conditions.	All Phases
Site Wide	Material Stockpile	Silt Socks shall be monitored and assessed throughout operation.	All Phases

SECTION 3: CONSTRUCTION ACTIVITY POLLUTION PREVENTION

The purpose of construction activity pollution prevention is to prevent day to day construction activities from causing pollution.

This section describes the key pollution prevention measures that must be implemented to avoid and reduce the discharge of pollutants in stormwater. Example control measures include the proper management of waste, material handling and storage, and equipment/vehicle fueling/washing/maintenance operations.

Where applicable, include *RI SESC Handbook* or the *RI Department of Transportation Standard Specifications for Road and Bridge Construction* (as amended) specifications.

3.1 Existing Data of Known Discharges from Site

Are there known discharges from the project area?

☐ Yes ☒ No

Describe how this determination was made:

- Existing Conditions Survey

If yes, list discharges and locations:

Is there existing data on the quality of the known discharges?

☐ Yes ☒ No

If yes, provide data:

- N/A

3.2 Prohibited Discharges

The following discharges are prohibited at the construction site:

- Contaminated groundwater, unless specifically authorized by the DEM. These types of discharges may only be authorized under a separate DEM RIPDES permit.
- Wastewater from washout of concrete, unless the discharge is contained and managed by appropriate control measures.
- Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds, and other construction materials.
- Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance. Proper storage and spill prevention practices must be utilized at all construction sites.
- Soaps or solvents used in vehicle and equipment washing.
- Toxic or hazardous substances from a spill or other release.

All types of waste generated at the site shall be disposed of in a manner consistent with State Law and/or regulations.

Will any of the above listed prohibited discharges be generated at the site?

☒ Yes ☐ No

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Operation/ Location	Stormwater Pollutants
Clearing, grading, excavating, and un-stabilized areas	Sediment; Trash/Debris
Construction Entrance	Sediment
Soil Stockpiles	Sediment
Paving operations	Sediment; Trash/Debris
Concrete washout and waste	Heavy metals; pH; Trash/Debris
Structure construction/ painting/ cleaning	Nutrients; pH; Trash/Debris; Toxic chemicals
Material delivery and storage	Sediment; Nutrients; Heavy metals; pH; Pesticides/Herbicides; Oil/Grease; Trash/Debris; Toxic chemicals
Vehicle/equipment fueling and maintenance	Oil/Grease; Toxic chemicals
Landscaping operations	Sediment; Nutrients; Trash/Debris

3.3 Proper Waste Disposal

Building materials and other construction site wastes must be properly managed and disposed of in a manner consistent with State Law and/or regulations.

- A waste collection area shall be designated on the site that does not receive a substantial amount of runoff from upland areas and does not drain directly to a waterbody or storm drain.
- All waste containers shall be covered to avoid contact with wind and precipitation.
- Waste collection shall be scheduled frequently enough to prevent containers from overfilling.
- All construction site wastes shall be collected, removed, and disposed of in accordance with applicable regulatory requirements and only at authorized disposal sites.
- Equipment and containers shall be checked for leaks, corrosion, support or foundation failure, or other signs of deterioration. Those that are found to be defective shall be immediately repaired or replaced.

Is waste disposal a significant element of the proposed project?

☐ Yes

☒ No

3.4 Spill Prevention and Control

All chemicals and/or hazardous waste material must be stored properly and legally in covered areas, with containment systems constructed in or around the storage areas. Areas must be designated for materials delivery and storage. All areas where potential spills can occur and their accompanying drainage points must be described. The owner and operator must establish spill prevention and control measures to reduce the chance of spills, stop the source of spills, contain and clean-up spills, and dispose of materials contaminated by spills. The operator must establish and make highly visible location(s) for the storage of spill prevention and control equipment and provide training for personnel responsible for spill prevention and control on the construction site.

Are spill prevention and control measures required for this particular project?

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☒ Yes

☐ No

Spill Control Practices:

- Manufacturer's recommended methods shall be clearly posted for spill clean-up and site personnel shall be made aware of the procedures and the locations of clean-up information and supplies.
- Material and equipment necessary for spill clean-up will be kept on-site in a designated material storage area. Equipment will include, but not be limited to, brooms, dust pans, mops, rags, gloves, goggles, absorbent materials, sand, sawdust and plastic & metal trash containers specifically kept and labeled for this purpose.
- All spills will be cleaned-up immediately after discovery.
- Spills of toxic or hazardous materials or nature will be reported to the appropriate state, local or federal agency, as required by-law.
- The spill prevention plan will include provisions to adapt the plan to ensure that the spills will not reoccur, and how to clean up the spill if there is another one.
- Site operations and daily use shall consider the ultimate disposition of stormwater and other site-generated forms of runoff. Wash water with its combination of solvents, detergents and oil/greases should not be allowed to enter any part of the on-site drainage system.
- No vehicles will be left unattended in project areas, which in the event of a hazardous material spill, would flow into any portion of the drainage system.
- In the event of a release of hazardous material, the Contractor will take all measures to stop and/or contain the leak and without exacerbating the release, attempt to remove equipment from the areas likely to cause a discharge of hazardous materials into Water of the State. Further, site supervisors shall be contacted and, should it be determined that the spill is of reportable quantity, the State shall be notified. A licensed hazardous waste remediation contractor shall be engaged to remediate the spill in accordance with State Regulations and procedures.

3.5 Control of Allowable Non-Stormwater Discharges

Are there allowable non-Stormwater discharges present on or near the project area?

☒ Yes

☐ No

List of allowable non-stormwater discharge(s) and the associated control measure(s):

- Truck Wash-out
- Truck refueling Area

Are there any known or proposed contaminated discharges, including anticipated contaminated dewatering operations, planned on or near the project area?

☐ Yes

☒ No

3.6 Control Dewatering Practices

Site owners and operators are prohibited from discharging groundwater or accumulated stormwater that is removed from excavations, trenches, foundations, vaults, or other similar points of accumulation, unless such waters are first effectively managed by appropriate control measures.

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Examples of appropriate control measures include, but are not limited to, temporary sediment basins or sediment traps, sediment socks, dewatering tanks and bags, or filtration systems (e.g. bag or sand filters) that are designed to remove sediment. Uncontaminated, non-turbid dewatering water can be discharged without being routed to a control.

At a minimum, the following discharge requirements must be met for dewatering activities:

1. Do not discharge visible floating solids or foam.
2. To the extent feasible, utilize vegetated, upland areas of the site to infiltrate dewatering water before discharge. In no case will surface waters be considered part of the treatment area.
3. At all points where dewatering water is discharged, utilize velocity dissipation devices.
4. With filter backwash water, either haul it away for disposal or return it to the beginning of the treatment process.
5. Replace and clean the filter media used in dewatering devices when the pressure differential equals or exceeds the manufacturer's specifications.
6. Dewatering practices must involve the implementation of appropriate control measures as applicable (i.e. containment areas for dewatering earth materials, portable sediment tanks and bags, pumping settling basins, and pump intake protection.)

Is it at all likely that the site operator will need to implement construction dewatering in order to complete the proposed project?

☐ Yes

☒ No

3.7 *Establish Proper Building Material Staging Areas*

All construction materials that have the potential to contaminate stormwater must be stored properly and legally in covered areas, with containment systems constructed in or around the storage areas. Areas must be designated for materials delivery and storage. Designated areas shall be approved by the site owner/engineer. Minimization of exposure is not required in cases where the exposure to precipitation and to stormwater will not result in the discharge of pollutants, or where exposure of a specific material or product poses little risk of stormwater contamination (such as final products and materials intended for outdoor use).

- No chemicals of hazardous material shall be stored at the project site.

3.8 *Minimize Dust*

Dust control procedures and practices shall be used to suppress dust on a construction site during the construction process, as applicable. Precipitation, temperature, humidity, wind velocity and direction will determine amount and frequency of applications. However, the best method of controlling dust is to prevent dust production. This can best be accomplished by limiting the amount of bare soil exposed at one time.

Dust Control measures outlined in the *RI SESC Handbook* shall be followed. Other dust control methods include watering, chemical application, surface roughening, wind barriers, walls, and covers.

- Applying water shall be utilized to minimize dust.

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3.9 *Designate Washout Areas*

At no time shall any material (concrete, paint, chemicals) be washed into storm drains, open ditches, streets, streams, wetlands, or any environmentally sensitive area. The site operator must ensure that construction waste is properly disposed of, to avoid exposure to precipitation, at the end of each working day.

Will washout areas be required for the proposed project?

☒ Yes

☐ No

- A truck wash-out area is proposed within the project site. The contractor is cautioned that all washing of trucks shall be performed within the designated area.

3.10 *Establish Proper Equipment/Vehicle Fueling and Maintenance Practices*

Vehicle fueling shall not take place within regulated wetlands or buffer zone areas, or within 50-feet of the storm drain system. Designated areas shall be depicted on the SESC Site Plans or shall be approved by the site owner.

Vehicle maintenance and washing shall occur off-site, or in designated areas depicted on the SESC Site Plans or approved of by the site owner. Maintenance or washing areas shall not be within regulated wetlands or buffer zone areas, or within 50-feet of the storm drain system. Maintenance areas shall be clearly designated, and barriers shall be used around the perimeter of the maintenance area to prevent stormwater contamination.

Construction vehicles shall be inspected frequently for leaks. Repairs shall take place immediately. Disposal of all used oil, antifreeze, solvents and other automotive-related chemicals shall be according to applicable regulations; at no time shall any material be washed down the storm drain or in to any environmentally sensitive area.

- A truck refueling area is proposed within the project site. The contractor is cautioned that all truck refueling shall be performed within the designated area.

3.11 *Chemical Treatment for Erosion and Sediment Control*

Chemical stabilizers, polymers, and flocculants are readily available on the market and can be easily applied to construction sites for the purposes of enhancing the control of erosion, runoff, and sedimentation. The following guidelines should be adhered to for construction sites that plan to use treatment chemicals as part of their overall erosion, runoff, and sedimentation control strategy.

The U.S. Environmental Protection Agency has conducted research into the relative toxicity of chemicals commonly used for the treatment of construction stormwater discharges. The research conducted by the EPA focused on different formulations of chitosan, a cationic compound, and both cationic and anionic polyacrylamide (PAM). In summary, the studies found significant toxicity resulting from the use of chitosan and cationic PAM in laboratory conditions, and significantly less toxicity associated with using anionic PAM. EPA's research has led to the conclusion that the use of treatment chemicals for erosion, runoff, and sedimentation control requires proper operator training and appropriate usage to avoid risk to aquatic species. In the case of cationic treatment chemicals additional safeguards may be necessary.

Application/Installation Minimum Requirements

If a site operator plans to use polymers, flocculants, or other treatment chemicals during construction the SESC plan must address the following:

1. Treatment chemicals shall not be applied directly to or within 100 feet of any surface water body, wetland, or storm drain inlet.
2. Use conventional erosion, runoff, and sedimentation controls prior to and after the application of treatment chemicals. Use conventional erosion, runoff, and sedimentation controls prior to chemical addition to ensure effective treatment. Chemicals may only be applied where treated

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stormwater is directed to a sediment control (e.g. temporary sediment basin, temporary sediment trap or sediment barrier) prior to discharge.

3. Sites shall be stabilized as soon as possible using conventional measures to minimize the need to use chemical treatment.
4. Select appropriate treatment chemicals. Chemicals must be selected that are appropriately suited to the types of soils likely to be exposed during construction and to the expected turbidity, pH, and

flow rate of stormwater flowing into the chemical treatment system or treatment area. **Soil testing is essential. Using the wrong form of chemical treatment will result in some form of performance failure and unnecessary environmental risk.**

5. Minimize discharge risk from stored chemicals. Store all treatment chemicals in leak-proof containers that are kept under storm-resistant cover and surrounded by secondary containment structures (e.g., spill berms, decks, spill containment pallets), or provide equivalent measures, designed and maintained to minimize the potential discharge of treatment chemicals in stormwater or by any other means (e.g., storing chemicals in covered areas or having a spill kit available on site).
6. Use chemicals in accordance with good engineering practices and specifications of the chemical provider/supplier. You must also use treatment chemicals and chemical treatment systems in accordance with good engineering practices, and with dosing specifications and sediment removal design specifications provided by the supplier of the applicable chemicals, or document specific departures from these practices or specifications and how they reflect good engineering practice.

Will chemical stabilizers, polymers, flocculants or other treatment chemicals be utilized on the proposed construction project?

☒ Yes

☐ No

- Hydro-seeding
 1. The Contractor shall provide manufacturer's name and product name prior to application.
 2. The Contractor shall provide applicable Material Safety Data Sheets (MSDSs) or Safety Data Sheets (SDS) for hydro-seeding applications.
 3. The Contractor shall provide the results of third-party toxicity testing of the materials proposed for use at the site.
 4. The Contractor shall provide a certification from the site owner and operator that all proposed treatment chemicals are the same as those used in the toxicity tests and will not be altered in any way.
 5. The Contractor shall provide an explanation as to why conventional erosion, runoff, and sediment control measures, alone or in combination, will not be sufficient to prevent turbidity impacts and sedimentation in downstream receptors.
 6. The Contractor shall provide a plan prepared in consultation with the chemical treatment manufacturer(s) or authorized manufacturer's representative which includes the following:
 - a. Identification of the areas of the site where treatment chemicals will be applied and the name, location, and distance to all downstream receptors that have the potential to be impacted from the discharges from the treatment areas.
 - b. List the expected start and end dates or specific phases of the project during which each treatment chemical will be applied.
 - c. Provide test results for representative soils from the site, and any recommendations from the manufacturer based on the soil tests, indicating the type of treatment chemical and the recommended application rate.
 - d. List the frequency, method, and rates of application which are designed to ensure that treatment chemical concentrations will not exceed 50% of the IC25 or NOEC toxicity values, whichever is less, for each treatment chemical proposed.
 - e. Provide the frequency of inspection and maintenance of the treatment chemical application system.

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- f. List the method proposed for the collection, removal, and disposal or stabilization of settled particles to prevent resuspension.
- g. Describe the training that will be provided to all persons who will handle and use treatment chemicals at the construction site. Training must include appropriate, product-specific training and proper dosing requirements for each product.

Treatment Chemical SESC Plan Weekly Inspection Report Documentation Requirements

1. Document the type and quantity of treatment chemicals applied.
2. List the date, duration of discharge, and estimated discharge rate.
3. Provide an estimate of the volume of water treated.
4. Provide an estimate of the concentration of treatment chemicals in the discharge, with supporting calculations.

3.12 Construction Activity Pollution Prevention Control Measure List

It is expected that this table will be amended as needed throughout the construction project.

Location/Station	Control Measure Description/Reference	Maintenance Requirement
Perimeter	Filter Socks	Sediment accumulated greater than half way up sock; break through or significant strain barrier
Truck Entrances	Construction Access	Contractor shall assure that placed rip-rap remain.
Truck Entrance	Truck Washout	Filter socks shall be monitored and assessed throughout operation
Truck Entrance	Truck Refueling	Filter Socks shall be monitored and assessed throughout operation
Site Wide	Material Stockpile	Filter Socks shall be monitored and assessed throughout operation

SECTION 4: CONTROL MEASURE INSTALLATION, INSPECTION, and MAINTENANCE

4.1 Installation

Complete the installation of temporary erosion, runoff, sediment, and pollution prevention control measures by the time each phase of earth-disturbance has begun. All stormwater control measures must be installed in accordance with good judgment, including applicable design and manufacturer specifications. Installation techniques and maintenance requirements may be found in manufacturer specifications and/or the *RI SESC Handbook*.

- Installation of temporary erosion, runoff, sediment, and pollution prevention control measures are identified on the *Soil Erosion and Sediment Control Site Plan* (Sheet C-5).

4.2 Monitoring Weather Conditions

Anticipating Weather Events - Care will be taken to the best of the operator's ability to avoid disturbing large areas prior to anticipated precipitation events. Weather forecasts must be routinely checked, and in the case of an expected precipitation event of over 0.25-inches over a 24-hour period, it is highly recommended that all control measures should be evaluated and maintained as necessary, prior to the weather event. In the case of an extreme weather forecast (greater than one-inch of rain over a 24-hour period), additional erosion/sediment controls may need to be installed.

Storm Event Monitoring for Inspections - At a minimum, storm events must be monitored and tracked in order to determine when post-storm event inspections must be conducted. Inspections must be conducted and documented at least once every seven (7) calendar days and within twenty-four (24) hours after any storm event, which generates at least 0.25 inches of rainfall per twenty-four (24) hour period and/or after a significant amount of runoff or snowmelt.

The weather gauge station and website that will be utilized to monitor weather conditions on the construction site is as follows:

Cranston, RI – KRICRANS39

<https://www.wunderground.com/weather/us/ri/cranston/KRICRANS39>

Inspections

Minimum Frequency - Each of the following areas must be inspected by or under the supervision of the owner and operator at least once every seven (7) calendar days and within twenty-four (24) hours after any storm event, which generates at least 0.25 inches of rainfall per twenty-four (24) hour period and/or after a significant amount of runoff or snowmelt:

- a. All areas that have been cleared, graded, or excavated and where permanent stabilization has not been achieved;
- b. All stormwater erosion, runoff, and sediment control measures (including pollution prevention control measures) installed at the site;
- c. Construction material, un-stabilized soil stockpiles, waste, borrow, or equipment storage, and maintenance areas that are covered by this permit and are exposed to precipitation;
- d. All areas where stormwater typically flows within the site, including temporary drainage ways designed to divert, convey, and/or treat stormwater;
- e. All points of discharge from the site;
- f. All locations where temporary soil stabilization measures have been implemented;

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- g. All locations where vehicles enter or exit the site.

Reductions in Inspection Frequency - If earth disturbing activities are suspended due to frozen conditions, inspections may be reduced to a frequency of once per month. The owner and operator must document the beginning and ending dates of these periods in an inspection report.

Qualified Personnel – The site owner and operator are responsible for designating personnel to conduct inspections and for ensuring that the personnel who are responsible for conducting the inspections are “qualified” to do so. A “qualified person” is a person knowledgeable in the principles and practices of erosion, runoff, sediment, and pollution prevention controls, who possesses the skills to assess conditions at the construction site that could impact stormwater quality, and the skills to assess the effectiveness of any stormwater controls selected and installed to meet the requirements of the permit.

Recordkeeping Requirements - All records of inspections, including records of maintenance and corrective actions must be maintained with the SESC Plan. Inspection records must include the date and time of the inspection, and the inspector’s name, signature, and contact information.

General Notes

- A separate inspection report will be prepared for each inspection.
- The Inspection Reference Number shall be a combination of the RIPDES Construction General Permit No - consecutively numbered inspections. Example: Inspection reference number for the 4th inspection of a project would be: RIR10####-4
- Each report will be signed and dated by the Inspector and must be kept onsite.
- Each report will be signed and dated by the Site Operator.
- The corrective action log contained in each inspection report must be completed, signed, and dated by the site operator once all necessary repairs have been completed.
- It is the responsibility of the site operator to maintain a copy of the SESC Plan, copies of all completed inspection reports, and amendments as part of the SESC Plan documentation at the site during construction.

Failure to make and provide documentation of inspections and corrective actions under this part constitutes a violation of your permit and enforcement actions under 46-12 of R.I. General Laws may result.

4.3 Maintenance

Maintenance procedures for erosion and sedimentation controls and stormwater management structures/facilities are described on the SESC Site Plans and in the *RI SESC Handbook*.

Site owners and operators must ensure that all erosion, runoff, sediment, and pollution prevention controls remain in effective operating condition and are protected from activities that would reduce their effectiveness. Erosion, runoff, sedimentation, and pollution prevention control measures must be maintained throughout the course of the project.

Note: It is recommended that the site operator designates a full-time, on-site contact person responsible for working with the site owner to resolve SESC Plan-related issues.

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4.4 Corrective Actions

If, in the opinion of the designated site inspector, corrective action is required, the inspector shall note it on the inspection report and shall inform the site operator that corrective action is necessary. The site operator must make all necessary repairs whenever maintenance of any of the control measures instituted at the site is required.

In accordance with the *RI SESC Handbook*, the site operator shall initiate work to fix the problem immediately after its discovery, and complete such work by the close of the next work day, if the problem does not require significant repair or replacement, or if the problem can be corrected through routine maintenance.

When installation of a new control or a significant repair is needed, site owners and operators must ensure that the new or modified control measure is installed and made operational by no later than seven (7) calendar days from the time of discovery where feasible. If it is infeasible to complete the installation or repair within seven (7) calendar days, the reasons why it is infeasible must be documented in the SESC Plan along with the schedule for installing the control measures and making it operational as soon as practicable after the 7-day timeframe. Such documentation of these maintenance procedures and timeframes should be described in the inspection report in which the issue was first documented. If these actions result in changes to any of the control measures outlined in the SESC Plan, site owners and operators must also modify the SESC Plan accordingly within seven (7) calendar days of completing this work.

SECTION 5: AMENDMENTS

This SESC Plan is intended to be a working document. It is expected that amendments will be required throughout the active construction phase of the project. **Even if practices are installed on a site according to the approved plan, the site is only in compliance when erosion, runoff, and sedimentation are effectively controlled throughout the entire site for the entire duration of the project.**

The SESC Plan shall be amended within seven (7) days whenever there is a change in design, construction, operation, maintenance or other procedure which has a significant effect on the potential for the discharge of pollutants, or if the SESC Plan proves to be ineffective in achieving its objectives (i.e. the selected control measures are not effective in controlling erosion or sedimentation).

In addition, the SESC Plan shall be amended to identify any new operator that will implement a component of the SESC Plan.

All revisions must be recorded in the Record of Amendments Log Sheet, which is contained in Attachment G of this SESC Plan, and dated red-lined drawings and/or a detailed written description must be appended to the SESC Plan. Inspection Forms must be revised to reflect all amendments. Update the Revision Date and the Version # in the footer of the Report to reflect amendments made.

All SESC Plan Amendments, except minor non-technical revisions, must be approved by the site owner and operator. Any amendments to control measures that involve the practice of engineering must be reviewed, signed, and stamped by a Professional Engineer registered in the State of RI.

The amended SESC plan must be kept on file at the site while construction is ongoing and any modifications must be documented.

Attach a copy of the Amendment Log.

- Refer to Attachment G

SECTION 6: RECORDKEEPING

RIPDES Construction General Permit – Parts III.D, III.G, III.J.3.b.iii, & V.O

It is the site owner and site operator's responsibility to have the following documents available at the construction site and immediately available for RIDEM review upon request:

- A copy of the fully signed and dated SESC Plan, which includes:
 - A copy of the General Location Map
INCLUDED AS ATTACHMENT A
 - A copy of all SESC Site Plans
INCLUDED AS ATTACHMENT B
 - A copy of the RIPDES Construction General Permit *(To save paper and file space, do not include in DEM/CRMC submittal, for operator copy only)*
INCLUDED AS ATTACHMENT C
 - A copy of any regulatory permits (RIDEM Freshwater Wetlands Permit, CRMC Assent, RIDEM Water Quality Certification, RIDEM Groundwater Discharge Permit, RIDEM RIPDES Construction General Permit authorization letter, etc.)
INCLUDED AS ATTACHMENT D
 - The signed and certified NOI form or permit application form *(if required as part of the application, see RIPDES Construction General Permit for applicability)*
INCLUDED AS ATTACHMENT E
 - Completed Inspection Reports w/Completed Corrective Action Logs
INCLUDED AS ATTACHMENT F
 - SESC Plan Amendment Log
INCLUDED AS ATTACHMENT G

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SECTION 7: PARTY CERTIFICATIONS

RIPDES Construction General Permit – Part V.G

All parties working at the project site are required to comply with the Soil Erosion and Sediment Control Plan (SESC Plan including SESC Site Plans) for any work that is performed on-site. The site owner, site operator, contractors and sub-contractors are encouraged to advise all employees working on this project of the requirements of the SESC Plan. A copy of the SESC Plan is available for your review at the following location: 332 Douglas Pike, Smithfield, RI or may be obtained by contacting the site owner or site operator.

The site owner and site operator and each subcontractor engaged in activities at the construction site that could impact stormwater must be identified and sign the following certification statement.

I acknowledge that I have read and understand the terms and conditions of the Soil Erosion and Sediment Control (SESC) Plan for the above designated project and agree to follow the control measures described in the SESC Plan and SESC Site Plans.

Site Owner:

Alfonso and Moses LTD
380 Laten Knight Road
Cranston, RI 02921
401-453-3600

signature/date

Site Operator:

Insert Company or Organization Name
Insert Name & Title
Insert Address
Insert City, State, Zip Code
Insert Telephone Number, Insert Fax/Email

signature/date

Designated Site Inspector:

Insert Company or Organization Name
Insert Name & Title
Insert Address
Insert City, State, Zip Code
Insert Telephone Number, Insert Fax/Email

signature/date

Sub-Contractor SESC Plan Contact:

Garofalo & Associates, Inc.
Samuel Hemenway, PE
85 Corliss Street
Providence, RI 02940
401.273.6000, shemenway@garofaloassociates.com

signature/date

LIST OF ATTACHMENTS

Attachment A - General Location Map

Attachment B - SESC Site Plans

**Attachment C - Copy of RIPDES Construction General Permit and
Authorization to Discharge**

<http://www.dem.ri.gov/programs/benviron/water/permits/swcoord/pdf/cpg092618.pdf>

Attachment D - Copy of Other Regulatory Permits

Attachment E - Copy of RIPDES NOI

<http://www.dem.ri.gov/pubs/regs/regs/water/sms4noi.pdf>

Attachment F - Inspection Reports w/ Corrective Action Log

Attachment G - SESC Plan Amendment Log

SESC Plan Inspection Report

Project Information			
Name			
Location			
DEM Permit No.			
Site Owner	Name	Phone	Email
Site Operator	Name	Phone	Email
Inspection Information			
Inspector Name	Name	Phone	Email
Inspection Date		Start/End Time	
Inspection Type <input type="checkbox"/> Weekly <input type="checkbox"/> Pre-storm event <input type="checkbox"/> During storm event <input type="checkbox"/> Post-storm event <input type="checkbox"/> Other			
Weather Information			
Last Rain Event Date: Duration (hrs): Approximate Rainfall (in):			
Rain Gauge Location & Source:			
Weather at time of this inspection:			

Check statement that applies then sign and date below:

☐ I, as the designated Inspector, certify that this site has been inspected as required by regulation and I have determined that maintenance and corrective actions are not required at this time.

☐ I, as the designated Inspector, certify that this site has been inspected as required by regulation and I have made the determination that the site requires corrective actions. The required corrective actions are noted within this inspection report.

Inspector:	Print Name	Signature	Date
<p>The Site Operator acknowledges by his/her signature, the receipt of this SESC Plan inspection report and its findings. He/she acknowledges that all recommended corrective actions must be completed and documentation of all such corrective actions must be made in this inspection report per applicable regulations.</p>			
Operator:	Print Name	Signature	Date

PROJECT:**INSPECTION DATE:****Site-specific Control Measures**

Number the structural and non-structural stormwater control measures identified in the SESC Plan and on the SESC Site Plans and list them below (add as necessary). Bring a copy of this inspection form and any applicable SESC Site Plans with you during your inspections. This list will assist you to inspect all control measures at your site.

FILL THIS TABLE USING THE SESC PLAN TABLES 2.11 & 3.12.

	Location/Station	Control Measure Description	Installed & Operating Properly?	Assoc. Photo/ Figure #	Corrective Action Needed (Yes or No; if 'Yes', please detail action required)
1	Example 1: Eastern Parcel – Slope No. 4 Adjacent to I-95. Straw Wattles	Straw Wattle. Section Six, Sediment Control Measures, Straw Wattles, Compost Tubes and Fiber Rolls - <i>RI</i> <i>SESC Handbook</i> .	<input type="checkbox"/> Yes <input type="checkbox"/> No		
2	Example 2: Western Parcel – Green Street Construction Entrance	Stone Stabilized Pad. Section Six: Sediment Control Measures – Construction Entrances – <i>RI</i> <i>SESC Handbook</i> .	<input type="checkbox"/> Yes <input type="checkbox"/> No		
3	Example 3: Hospital Main Footings – Excavation Area – SESC Site Plan Sheet No. 3.	Pump Intake Protection Using Stone Filled Sump with Standpipe. Section Six: Sediment Control Measures, Pump Intake Protection, <i>RI</i> <i>SESC Handbook</i> .	<input type="checkbox"/> Yes <input type="checkbox"/> No		
4	Example 4: Bridge Abutment Construction Southbound Bridge Abutment, Bridge No. 244 – SESC Site Plan Sheet No. 18.	Prefabricated Concrete Washout Container with Ramp. Used to contain concrete washout during concrete pouring operations. Section Three: Pollution Prevention and Good Housekeeping, Concrete Washouts, <i>RI SESC</i> <i>Handbook</i> .	<input type="checkbox"/> Yes <input type="checkbox"/> No		
5	INSERT TEXT	INSERT TEXT	<input type="checkbox"/> Yes <input type="checkbox"/> No		
6	Attention Operator:	You must modify this inspection form as the project progresses, control measure locations change, and amendments to the SESC Plan are instituted in the field.	<input type="checkbox"/> Yes <input type="checkbox"/> No		
7			<input type="checkbox"/> Yes <input type="checkbox"/> No		
8			<input type="checkbox"/> Yes <input type="checkbox"/> No		

PROJECT:**INSPECTION DATE:**

	Location/Station	Control Measure Description	Installed & Operating Properly?	Assoc. Photo/ Figure #	Corrective Action Needed (Yes or No; if 'Yes', please detail action required)
9			<input type="checkbox"/> Yes <input type="checkbox"/> No		
10			<input type="checkbox"/> Yes <input type="checkbox"/> No		
11			<input type="checkbox"/> Yes <input type="checkbox"/> No		
12			<input type="checkbox"/> Yes <input type="checkbox"/> No		
13			<input type="checkbox"/> Yes <input type="checkbox"/> No		
14			<input type="checkbox"/> Yes <input type="checkbox"/> No		
15			<input type="checkbox"/> Yes <input type="checkbox"/> No		
16			<input type="checkbox"/> Yes <input type="checkbox"/> No		
17			<input type="checkbox"/> Yes <input type="checkbox"/> No		
18			<input type="checkbox"/> Yes <input type="checkbox"/> No		
19			<input type="checkbox"/> Yes <input type="checkbox"/> No		
20			<input type="checkbox"/> Yes <input type="checkbox"/> No		
21			<input type="checkbox"/> Yes <input type="checkbox"/> No		
22			<input type="checkbox"/> Yes <input type="checkbox"/> No		
23			<input type="checkbox"/> Yes <input type="checkbox"/> No		
24			<input type="checkbox"/> Yes <input type="checkbox"/> No		

PROJECT:

INSPECTION DATE:

	Location/Station	Control Measure Description	Installed & Operating Properly?	Assoc. Photo/ Figure #	Corrective Action Needed (Yes or No; if 'Yes', please detail action required)
25			<input type="checkbox"/> Yes <input type="checkbox"/> No		
26			<input type="checkbox"/> Yes <input type="checkbox"/> No		
27			<input type="checkbox"/> Yes <input type="checkbox"/> No		
28			<input type="checkbox"/> Yes <input type="checkbox"/> No		
29			<input type="checkbox"/> Yes <input type="checkbox"/> No		
30			<input type="checkbox"/> Yes <input type="checkbox"/> No		

(add more as necessary)

General Site Issues

Below are some general site issues that should be assessed during inspections. Please **customize** this list as needed for conditions at the site.

	Compliance Question		Assoc. Photo/ Figure #	Corrective Action Needed (If 'Yes', please detail action required and include location/station)
1	Have all control measures been installed as specified in the RISESC Handbook and prior to any earth disturbing activities?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
2	Are appropriate limits of disturbance (LOD) established?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
3	Are controls that limit runoff from exposed soils by diverting, retaining, or detaining flows (such as check dams, sediment basins, etc.) in place?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
4	Are all temporary conveyance practices installed correctly and functioning as designed?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
5	Has maintenance been performed as required to ensure continued proper function of all temporary conveyances practices?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
6	Were all exposed soils seeded by October 15 th ?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
7	Have soils been stabilized where earth disturbance activities have permanently or temporarily ceased on any portion of the site and will not resume for more than 14 days?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
8	In instances where adequate vegetative stabilization was not established by November 15 th , have non-vegetative erosion control measures must be employed?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
9	If work is to continue from October 15 th through April 15 th , are steps taken to ensure that only the day's work area will be exposed and all erodible soil is stabilized within 5 working days?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
10	Have inlet protection measures (such as fabric drop inlet protection, curb drop inlet protection, etc.) been properly installed?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
11	Has the operator cleaned and maintained inlet protection measures when needed?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
12	Has the operator removed accumulated sediment adjacent to inlet protection measures within 24 hours of detection?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		

	Compliance Question		Assoc. Photo/ Figure #	Corrective Action Needed (If 'Yes', please detail action required and include location/station)
13	Has the operator properly installed outlet protection (such as riprap, turf mats, etc.) at all temporary and permanent discharge points?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
14	Are all outlet protection measures functioning properly in order to reduce discharge velocity, promote infiltration, and eliminate scour?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
15	Have all discharge points been inspected to ensure the prevention of scouring and channel erosion?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
16	Have sediment controls been installed along perimeter areas that will receive stormwater from earth disturbing activities?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
17	Is the operator maintaining sediment controls in accordance with the requirements in the <i>RI SESC Handbook</i> ?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
18	Have temporary sediment barriers been installed around permanent infiltration areas (such as bioretention areas, infiltration basins, etc.)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
19	Have staging areas and equipment routing been implemented to avoid compaction where permanent infiltration areas will be located?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
20	Are surface outlet structures (such as skimmers, siphons, etc.) installed for each temporary sediment basin? [Exception: frozen conditions]	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
21	Have all temporary sediment basins or traps been inspected and maintained as required to ensure proper function?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
22	Does the project include the use of polymers, flocculants, or other chemicals to control erosion, sedimentation, or runoff from the site?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
23	Are all chemicals being managed in accordance with Appendix J of the <i>RI SESC Handbook</i> and current best management practices?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
24	Has the site operator taken steps to prohibit the following pollutant discharges on the site?			
a	Contaminated groundwater.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		

	Compliance Question		Assoc. Photo/ Figure #	Corrective Action Needed (If 'Yes', please detail action required and include location/station)
b	Wastewater from washout of concrete; unless properly contained, managed, and disposed of.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
c	Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds, and other construction products.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
d	Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
e	Soaps or solvents used in vehicle and equipment washing.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
f	Toxic or hazardous substances from a spill or other release.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
25	Is the operator using properly constructed entrances/exits to the site so sediment removal occurs prior to vehicles exiting?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
26	If needed, are additional controls (such as rumble strips, rattle plates, etc.) in place to remove sediment from tires prior to exiting?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
27	Is sediment track-out being removed by the end of the same workday in which it occurs (via sweeping, shoveling, or vacuuming)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
28	Are all wastes generated at the site being managed and properly disposed of by the end of each workday?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
29	Are all chemicals and hazardous waste materials stored properly in covered areas and surrounded by containment control systems?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
30	Has the operator established highly visible locations for the storage of spill prevention and control equipment on the construction site?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
31	Are allowable non-stormwater discharges being managed properly with adequate controls?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
32	Is the site operator properly managing groundwater or stormwater that is removed from excavations, trenches, or similar points of accumulation?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
33	Are proper procedures and controls in place for the storage of materials that may discharge pollutants if	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		

PROJECT:**INSPECTION DATE:**

	Compliance Question		Assoc. Photo/ Figure #	Corrective Action Needed (If 'Yes', please detail action required and include location/station)
	exposed to stormwater?			
	Are stockpiles located within the limits of disturbance?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
	Are stockpiles being protected from contact with stormwater using a temporary sediment barrier?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
	Where needed, has cover or appropriate temporary vegetative or structural stabilization been utilized for stockpiles?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
	Is the operator effectively managing the generation of dust through the use of water, chemicals, or minimization of exposed soil?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
	Are designated washout areas (such as wheel washing stations, washout for concrete, paint, stucco, etc.) clearly marked on the site?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
	Are vehicle fueling and maintenance areas properly located to prevent pollutants from impacting stormwater and sensitive receptors?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
	(Other)			

(add more as necessary)

PROJECT:

INSPECTION DATE:

General Field Comments:

PROJECT:

INSPECTION DATE:

Photos:

(Associated photos – each photo should be dated and have a unique identification # and written description indicating where it is located within the project area. If a close up photo is required, it should be preceded with a photo including both the detail area and some type of visible fixed reference point. Photos should be annotated with Station numbers and other identifying information where needed.)

Photo #:	Station:
(insert Photo here)	Description:

Photo #:	Station:
(insert Photo here)	Description:

Photo #:	Station:
(insert Photo here)	Description:

Photo #:	Station:
(insert Photo here)	Description:

Photo #:	Station:
(insert Photo here)	Description:

Photo #:	Station:
(insert Photo here)	Description:

(add more as necessary)

PROJECT: _____ **INSPECTION DATE:** _____

INSPECTION DATE:

Corrective Action Log

TO BE FILLED OUT BY SITE OPERATOR

Describe repair, replacement, and maintenance of control measures, actions taken, date completed, and note the person that completed the work.

	Location/Station	Corrective Action	Date Completed	Person Responsible
Operator Signature:			Date:	

PROJECT:

Amendment Log

TO BE FILLED OUT BY SITE OPERATOR

Describe amendment(s) to be made to the SESC Plan, the date, and the person/title making the amendment. ALL amendments must be approved by the Site Owner.

#	Date	Description of Amendment	Amended by: Person/Title	Site Owner Must Initial
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

Add more lines/pages as necessary

PRELIMINARY PLAN SUBMISSION

FOR

R AND T ESTATES MINOR RESIDENTIAL SUBDIVISION

SITUATED ON:
300 LATEN KNIGHT ROAD
CRANSTON, RHODE ISLAND 02921
A.P. 29, LOT 2

APPLICANT:

MOSES RYAN Ltd.

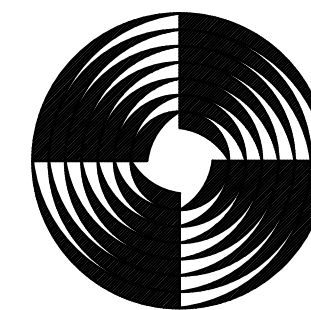
40 WESTMINSTER STREET (FLOOR 9)
PROVIDENCE, RI 02903

OWNER:

LAWRENCE D. & ELIZABETH L. MOSES

300 LATEN KNIGHT ROAD
CRANSTON, RI 02921

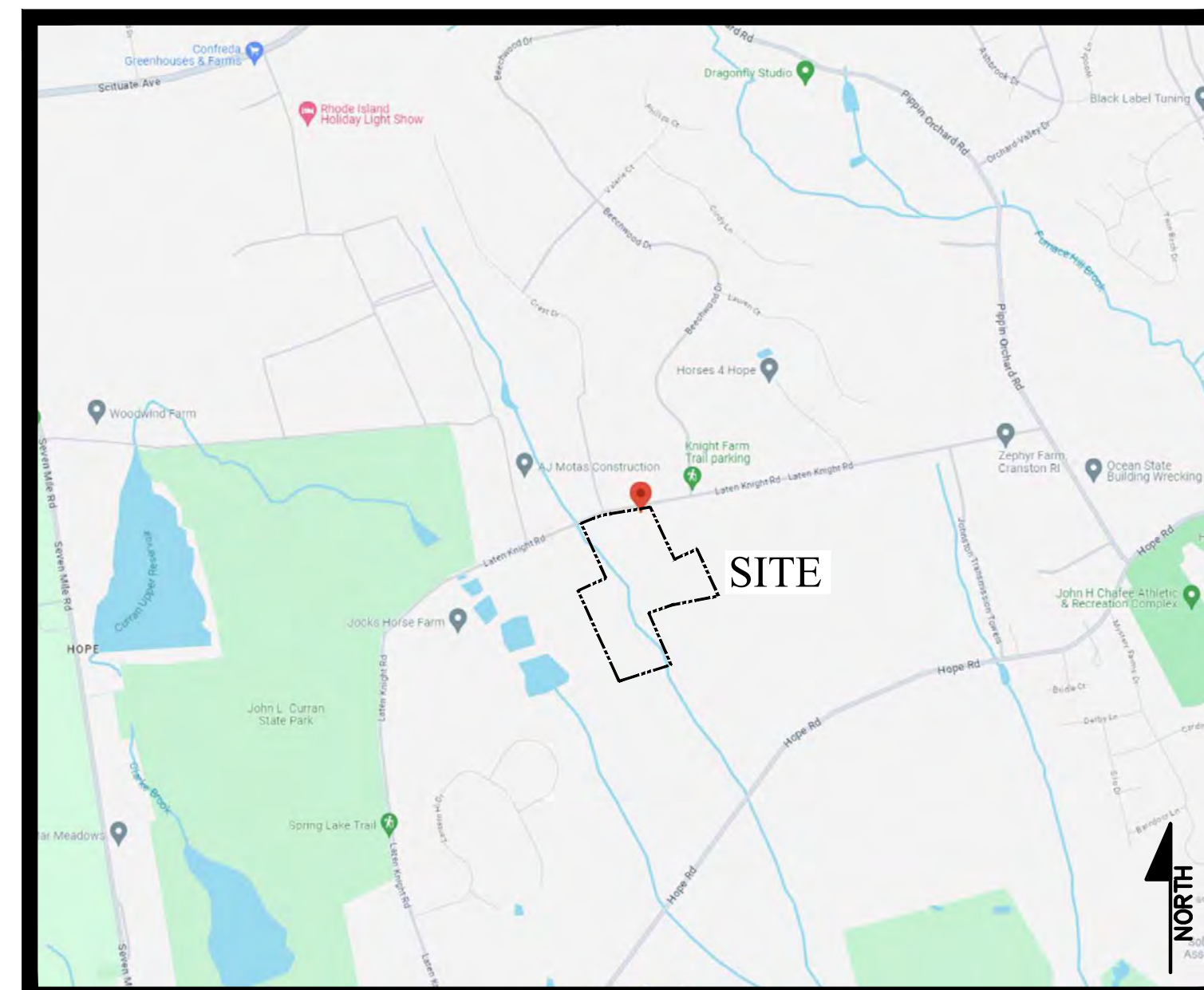
PREPARED BY:



GAROFALO

GAROFALO & ASSOCIATES, INC.
CIVIL & STRUCTURAL ENGINEERS/SURVEYORS
LAND PLANNERS/ENVIRONMENTAL SCIENTISTS
85 CORLISS STREET, P.O. BOX 6145, PROVIDENCE, RI 02940
(PH) 401-273-6000 (FX) 401-273-1000

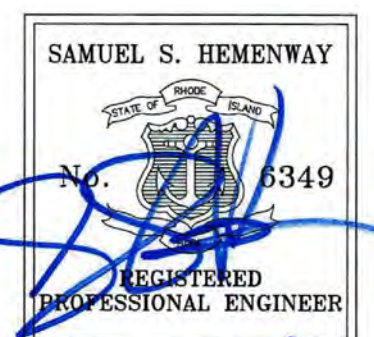
NOVEMBER 15, 2024



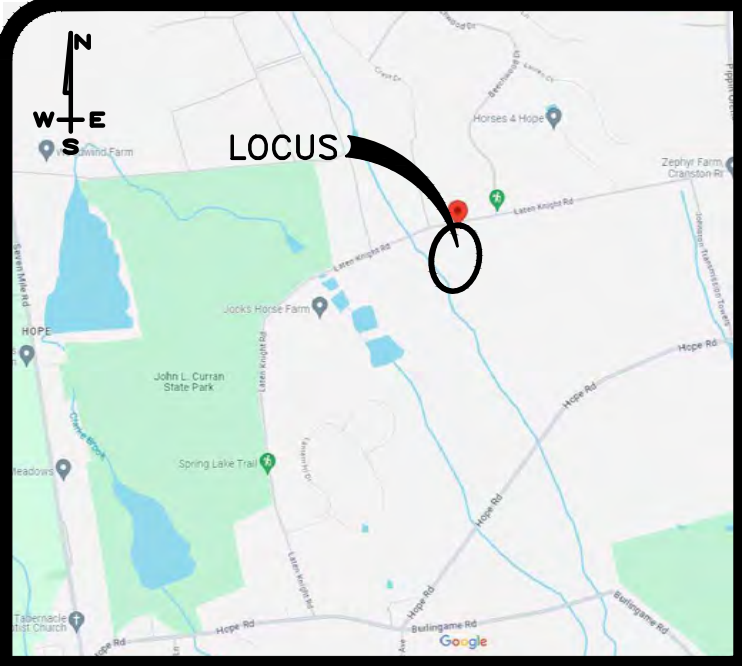
LOCUS MAP
SCALE: 1"=1500'

SHEET INDEX:

<u>TITLE</u>	<u>REVISION</u>
- COVER SHEET	-
ECS EXISTING CONDITIONS SURVEY	-
REC RECORD PLAN	-
C-1 GENERAL NOTES & LEGEND	-
C-2 OVERALL PLAN	-
C-3 GRADING & DRAINAGE PLAN	-
C-4 ROAD PROFILE PLAN	-
C-5 SOIL & EROSION SEDIMENT CONTROL PLAN	-
C-6 DETAILS - 1	-
C-7 DETAILS - 2	-



11-15-24
JN: 7482-00
1 OF 10 SHEETS



LOCUS MAP N.T.S.

ZONING DATA

RESIDENTIAL DISTRICT A-80
MIN. LOT SIZE: 80,000 S.F.
MAX. LOT COVERAGE: 10%
MIN. FRONTAGE: 200'
MIN. FRONT YARD: 40'
MIN. SIDE YARD: 20'
MIN. REAR YARD: 100'
MAX. BLDG. HEIGHT: 35'

* PLEASE REFER TO ZONING REGS.
FOR ADDITIONAL INFORMATION.

PARCEL DATA

AP 29 LOT 2
N/F
LAWRENCE D. &
ELIZABETH L. MOSES
BK 5622 PG 314
#300 LATEN KNIGHT ROAD
LOT AREA:
1,252,450 S.F.± OR
28.75 ACRES±

PLAN REFERENCES:

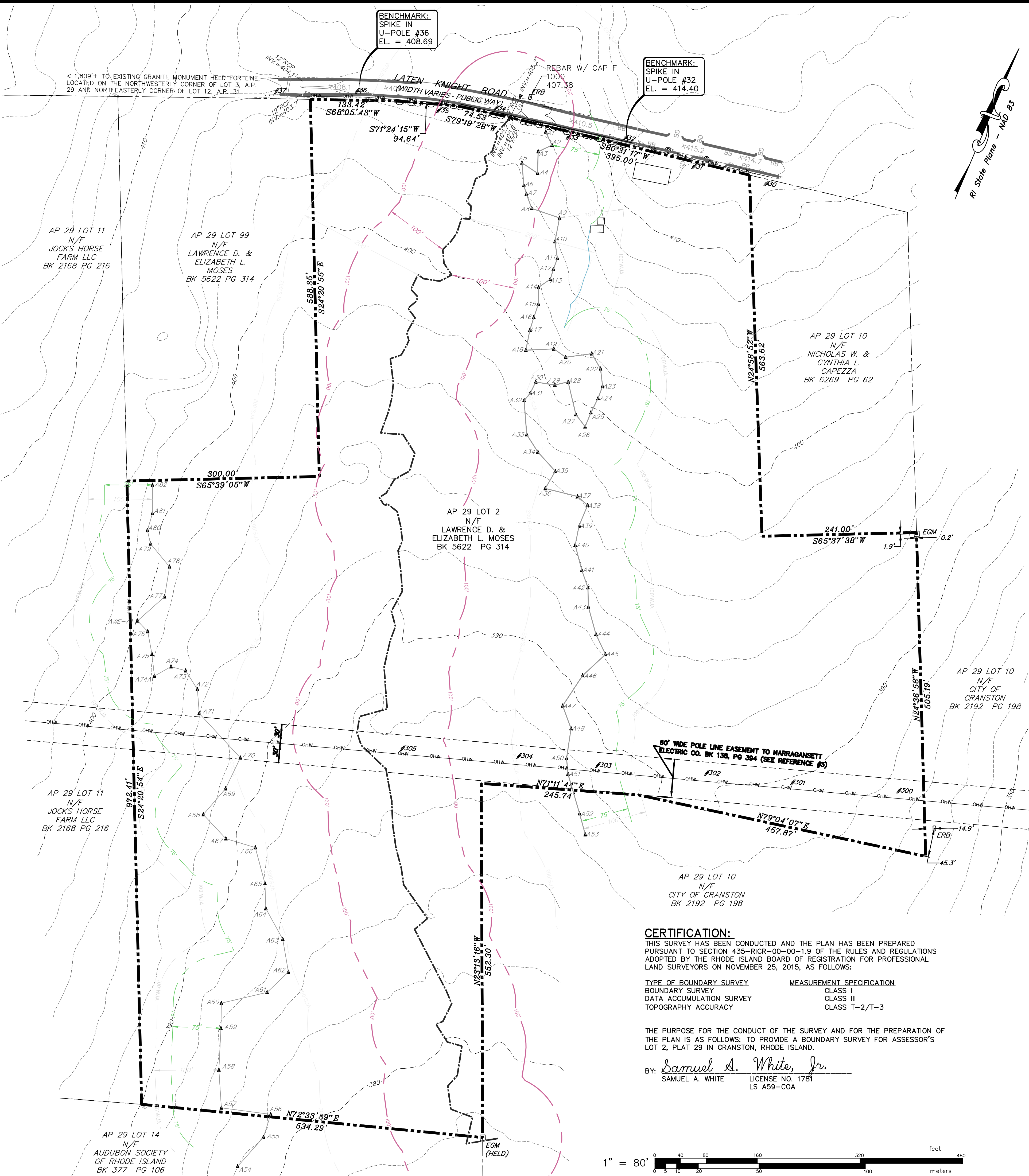
- "LAWRENCE AND ELIZABETH MOSES MINOR SUBDIVISION RECORD PLAT PLAN AP 29 LOT 2 LATEN KNIGHT ROAD, CRANSTON, RI OWNER BY LAWRENCE & ELIZABETH MOSES 261 CHESHIRE DRIVE CRANSTON, RI 02921", BY HUDSON PLACE ASSOCIATES CIVIL AND ENVIRONMENTAL ENGINEERING, DATED FEBRUARY 2009, PLAT CARD 787, MAP 674.
- "JOCK'S HORSE FARM ADMINISTRATIVE SUBDIVISION FOR MICHAEL J. CAPARCO SR. (LOT 11) FEDOROWICZ FAMILY LLC. (LOT 3) LOCATION LATEN KNIGHT ROAD CRANSTON, RHODE ISLAND DATE JAN. 15, 2003 A.P. 29 LOT 11 A.P. 29 LOT 3" BY MARTIN G. CANAVAN P.L.S., PLAT CARD 694, MAP 436.
- "SURVEY PLAN OF THE ROBERT L. KNIGHT PROPERTY PLAT 29, LOTS 1 & 9 PLAT 23, LOT 13 TO BE CONVEYED TO STATE OF RHODE ISLAND DEPT. OF ENVIRONMENTAL MANAGEMENT CRANSTON, RHODE ISLAND" APRIL 16, 2003, BY MARC N. NYBERG ASSOCIATES, INC., LAND SURVEYORS AND PLANNERS. PLAT CARD 696, MAP 443 (SHEET 4 OF 4).
- "SURVEY PLAN OF THE ROBERT L. KNIGHT PROPERTY PLAT 31, LOT 12 TO BE CONVEYED TO STATE OF RHODE ISLAND DEPT. OF ENVIRONMENTAL MANAGEMENT CRANSTON, RHODE ISLAND" APRIL 16, 2003, BY MARC N. NYBERG ASSOCIATES, INC., LAND SURVEYORS AND PLANNERS. PLAT CARD 696, MAP 443 (SHEET 2 OF 4).
- LPFM PART 1 SHEET 67 TO 72, LATEN KNIGHT ROAD CRANSTON, RHODE ISLAND PREPARED FOR CITY OF CRANSTON - DEPARTMENT OF PUBLIC WORKS 869 PARK AVENUE CRANSTON, RI 02920", REVISED 2-15-218, BY DIPRETE ENGINEERING.
- WETLAND DELINEATION PLAN 380 LATEN KNIGHT ROAD, ASSESSOR'S :PLAT 29 LOT 2 CRANSTON, RHODE ISLAND PREPARED FOR: MR. TOM MOSES C/O MOSES RYAN, LTD, 40 WESTMINSTER STREET 9TH FLOOR, PROVIDENCE, RHODE ISLAND 02903" DATED 07-24-2023, BY DIPRETE ENGINEERING.

NOTES:

- THE PROJECT SITE IS LOCATED WITHIN ZONE "X" (AREA OF MINIMAL FLOODING) AS SHOWN ON F.E.M.A. FLOOD INSURANCE RATE MAP FOR THE CITY OF CRANSTON, PROVIDENCE COUNTY, RHODE ISLAND, COMMUNITY MAP NO. 44007C0295G, HAVING AN EFFECTIVE DATE OF MARCH 2, 2009 AND COMMUNITY MAP NO. 44007C0294H, HAVING AN EFFECTIVE DATE OF OCTOBER 2, 2015.
- THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. (PLEASE CONTACT DIGSAFE PRIOR TO CONSTRUCTION @ 1-888-344-7233)
- HORIZONTAL DATUM: RHODE ISLAND STATE PLANE - NAD 83
VERTICAL DATUM: NAVD 88*
*DATUM WAS DERIVED BY OBSERVED GPS ORTHOMETRIC HEIGHTS
VARIATIONS BETWEEN LOCAL BENCHMARKS MAY APPLY.
- TOPOGRAPHY ON THE STREET WAS PREPARED FROM ON THE GROUND DATA. TOPOGRAPHY ON THE SUBJECT LOT WAS TAKEN FROM RHODE ISLAND GEOGRAPHIC INFORMATION SYSTEM, 2011 STATEWIDE LIDAR.
- WETLAND TAKEN FROM PLAN ENTITLED "WETLAND DELINEATION PLAN 380 LATEN KNIGHT ROAD, ASSESSOR'S :PLAT 29 LOT 2 CRANSTON, RHODE ISLAND" BY DIPRETE ENGINEERING.

GENERAL LEGEND & ABBREVIATIONS

	ASSESSORS LINE
	LOCUS PROPERTY LINE
	GUARD RAIL - METAL
	STONE WALL
	APPROXIMATE STREAM
	WETLAND LINE & FLAG
	200' STREAM JURISDICTIONAL AREA
	100' WETLAND JURISDICTIONAL AREA
	50' BUFFER ZONE
	75' BUFFER ZONE
	100' STREAM BUFFER ZONE
	DRAIN LINE
	OVERHEAD WIRES
	SEWER LINE
	CONTOUR MAJOR (RIGIS)
	CONTOUR MINOR (RIGIS)
	CATCH BASIN
	DRAIN MANHOLE
	SEWER MANHOLE
	UTILITY POLE
	AC. ACRES
	BB BITUMINOUS BERM
	BD BITUMINOUS DRIVEWAY
	BK PG BOOK PAGE
	EL. ELEVATION
	GD GRAVEL DRIVEWAY
	N/F NOW OR FORMERLY
	RIGIS RHODE ISLAND GEOGRAPHIC INFORMATION SYSTEM
	S.F. SQUARE FEET
	W/ WITH
	EGM EXISTING GRANITE MONUMENT
	ERB EXISTING REBAR



CERTIFICATION:

THIS SURVEY HAS BEEN CONDUCTED AND THE PLAN HAS BEEN PREPARED PURSUANT TO SECTION 435-RICR-00-00-1.9 OF THE RULES AND REGULATIONS ADOPTED BY THE RHODE ISLAND BOARD OF REGISTRATION FOR PROFESSIONAL LAND SURVEYORS ON NOVEMBER 25, 2015, AS FOLLOWS:

TYPE OF BOUNDARY SURVEY
BOUNDARY SURVEY
DATA ACCUMULATION SURVEY
TOPOGRAPHY ACCURACY

MEASUREMENT SPECIFICATION
CLASS I
CLASS III
CLASS T-2/T-3

THE PURPOSE FOR THE CONDUCT OF THE SURVEY AND FOR THE PREPARATION OF THE PLAN IS AS FOLLOWS: TO PROVIDE A BOUNDARY SURVEY FOR ASSESSOR'S LOT 2, PLAT 29 IN CRANSTON, RHODE ISLAND.

BY: Samuel A. White, Jr.
SAMUEL A. WHITE LICENSE NO. 1781
LS A59-COA

1" = 80' 0 40 80 160 320 480 feet
0 5 10 20 50 100 meters

EXISTING CONDITIONS SURVEY

FOR

AP 29 LOT 2

SITUATED AT

300 LATEN KNIGHT ROAD
CRANSTON, RHODE ISLAND

PREPARED FOR

MOSES RYAN LTD.

GAROFALO

GAROFALO & ASSOCIATES, INC.
CIVIL & STRUCTURAL ENGINEERS/SURVEYORS
LAND PLANNERS/ENVIRONMENTAL SCIENTISTS

85 CORLISS STREET

P.O. BOX 6145

PROVIDENCE, R.I. 02940

TEL. 401-273-6000

Garofalo & Associates, Inc.
These drawings are the property of the engineer/surveyor and have been prepared for the specific project at this site and are not to be used for any other purpose, location or owner without written directors.

JOB NO.

7482.00

DWG. NO.

7482-ECS.DWG

SCALE:

1" = 80'

DRAWN BY

RSE

CALCS BY

RSE

APPROVED

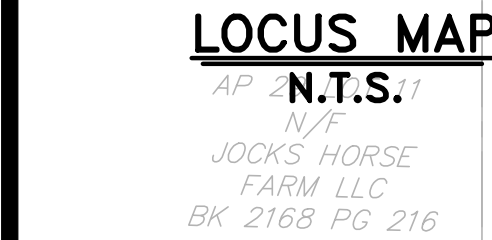
SAW

DATE: DECEMBER 2023

SHEET

ECS

2 OF 10 SHEETS



Re	RIDGEBURY FINE SANDY LOAM, 0 TO 3 PERCENT SLOPES.
Rf	RIDGEBURY LEICESTER, AND WHITMAN SOILS, 0 TO 8 PERCENT SLOPES, EXTREMELY STONY.
StB	SUTTON FINE SANDY LOAM, 3 TO 8 PERCENT SLOPES.
WhA	WOODBIDGE FINE SANDY LOAM, 0 TO 3 PERCENT SLOPES.
WhB	WOODBIDGE FINE SANDY LOAM, 3 TO 8 PERCENT SLOPES.
WoB	WOODBIDGE FINE SANDY LOAM, 0 TO 8 PERCENT SLOPES, VERY STONY.

TABLE NOTE:

* PER CITY OF CRANSTON'S CODE OF ORDINANCE ZONING CHAPTER 17.20.120

STREET INDEX
LATEN KNIGHT ROAD BEECHWOOD DRIVE

ZONING DATA
<u>RESIDENTIAL DISTRICT A-80</u>
MIN. LOT SIZE: 80,000 S.F.
MAX. LOT COVERAGE: 10%
MIN. FRONTAGE: 200'
MIN. FRONT YARD: 40'
MIN. SIDE YARD: 20'
MIN. REAR YARD: 100'
MAX. BLDG. HEIGHT: 35'
* PLEASE REFER TO ZONING REGS. FOR ADDITIONAL INFORMATION.

PARCEL 2 DATA
N/F LAWRENCE D. & ELIZABETH L. MOSES LATEN KNIGHT ROAD LOT AREA: 297,224 S.F.± OR 6.82 ACRES± UPLAND AREA: 81,441 S.F.± OR 1.87 AC.±

EX. PARCEL DATA

AP 29 LOT 2
N/F
LAWRENCE D. &
ELIZABETH L. MOSES
BK 5622 PG 314
#300 LATEN KNIGHT ROAD
LOT AREA:
1,252,450 S.F.± OR
28.75 ACRES±

PARCEL 3 DATA

N/F
LAWRENCE D. &
ELIZABETH L. MOSES
LATEN KNIGHT ROAD
LOT AREA:
225,568 S.F.± OR
5.18 ACRES±

UPLAND AREA:
86,645 S.F.± OR 1.99 AC.±

PARCEL 1 DATA

N/F
LAWRENCE D. &
ELIZABETH L. MOSES
LATEN KNIGHT ROAD
LOT AREA:
208,937 S.F.± OR
4.80 ACRES±

UPLAND AREA:
80,026 S.F.± OR 1.84 AC.±

PARCEL 4 DATA

N/F
LAWRENCE D. &
ELIZABETH L. MOSES
LATEN KNIGHT ROAD
LOT AREA:
356,602 S.F.± OR
8.19 ACRES±

UPLAND AREA:
105,576 S.F.± OR 2.42 AC.±

PARCEL 5 DATA

N/F
LAWRENCE D. &
ELIZABETH L. MOSES
LATEN KNIGHT ROAD
LOT AREA:
115,020 S.F.± OR
2.64 ACRES±

UPLAND AREA:
99,100 S.F.± OR 2.28 AC.±

LAND UNSUITABLE FOR DEVELOPMENT PER CITY OF CRANSTON'S SUBDIVISION REGULATIONS: SECTION IV(E)-WETLAND AND UTILITY EASEMENT. (±17.18 AC.)

1. THE PROJECT SITE IS LOCATED WITHIN ZONE "X" (AREA OF MINIMAL FLOODING) AS SHOWN ON F.E.M.A. FLOOD INSURANCE RATE MAP FOR THE CITY OF CRANSTON, PROVIDENCE COUNTY, RHODE ISLAND, COMMUNITY MAP NO. 4400702955, HAVING AN EFFECTIVE DATE OF MARCH 2, 2015, AND COMMUNITY MAP NO. 4400702944, HAVING AN EFFECTIVE DATE OF OCTOBER 2, 2015.
2. THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE EXACTLY LOCATED AND DIMENSIONS. HOWEVER, HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED UNDERGROUND UTILITIES. (PLEASE CONTACT DISSAFE PRIOR TO CONSTRUCTION @ 1-888-344-7233)
3. HORIZONTAL DATUM: RHODE ISLAND STATE PLANE - NAD 83
VERTICAL DATUM: NAVD 88*
*DATUM WAS DERIVED BY OBSERVED GPS ORTHOMETRIC HEIGHTS
VARIATIONS BETWEEN LOCAL BENCHMARKS MAY APPLY.
4. TOPOGRAPHY ON THE STREET WAS PREPARED FROM ON THE GROUND DATA BY GAROFALO & ASSOCIATES INC. TOPOGRAPHY ON THE SUBJECT LOT WAS TAKEN FROM RHODE ISLAND GEOGRAPHIC INFORMATION SYSTEM, 2011 STATEWIDE LIDAR.
5. WETLAND TAKEN FROM PLAN ENTITLED "WETLAND DELINEATION PLAN 380 LATEN KNIGHT ROAD, ASSESSOR'S: PLAT 29 LOT 2 CRANSTON, RHODE ISLAND" BY DIPRETE ENGINEERING.

THIS SURVEY HAS BEEN CONDUCTED AND THE PLAN HAS BEEN PREPARED PURSUANT TO SECTION 435-RICR-00-00-1.9 OF THE RULES AND REGULATIONS ADOPTED BY THE RHODE ISLAND BOARD OF REGISTRATION FOR PROFESSIONAL LAND SURVEYORS ON NOVEMBER 25, 2015, AS FOLLOWS:

<u>TYPE OF BOUNDARY SURVEY</u>	<u>MEASUREMENT SPECIFICATION</u>
COMPREHENSIVE BOUNDARY SURVEY	CLASS I
DATA ACCUMULATION SURVEY	CLASS III
TOPOGRAPHY ACCURACY	CLASS T-2/T-4

THE PURPOSE FOR THE CONDUCT OF THE SURVEY AND FOR THE PREPARATION OF THE PLAN IS AS FOLLOWS: TO PROVIDE A MINOR SUBDIVISION OF 5 LOTS FOR ASSESSOR LOT 2, PLAT 29 IN CRANSTON, RHODE ISLAND.

BY: SAMUEL A. WHITE LICENSE NO. 1781
LS A59-COA

PRELIMINARY PLAN
RECORD PLAN
FOR
R & T ESTATES I
(A.P. 29, LOT 2)
SITUATED AT
LATEN KNIGHT ROAD
CRANSTON, RI
PREPARED FOR
MOSES RYAN LTD.

[illegible]

*This plan is a "DRAFT" version and has been prepared for the purpose of review and commenting and is not legal without the official stamp, signature and date of a Professional Land Surveyor registered in the State of Rhode Island.
(RI General Laws § 5-8.1-12)*

Garofalo & Associates © These drawings are the property of the engineer/surveyor and have been prepared for the owner, for this project at this site and are not to be used for any other purpose, location or owner without written consent of this owner or one of its directors.

85 CORLISS STREET
P.O. BOX 6145
PROVIDENCE, R.I. 02940
TEL. 401-273-6000

GAROFALO

GAROFALO & ASSOCIATES, INC.
CIVIL & STRUCTURAL ENGINEERS|SURVEYORS
LAND PLANNERS|ENVIRONMENTAL SCIENTISTS

JOB NO. 7482-00 DWG. NO. 7482-00-SUB_PRELIMINARY	DRAWN BY K.Y.Y. CHECK BY S.A.W. APPROVED S.A.W. DATE: JUNE, 2024
SCALE: AS SHOWN	

SHEET

REC

3 OF 10 SHEETS

L:\7482-00_300 Laten Knight Road (Moses Ryan) - Cranston, RI\dwg\01--Current\Preliminary\7482-00_Cover & Notes_Preliminary.dwg 11/19/2024 kyngang 13:40

GENERAL CONSTRUCTION NOTES:

- AN APPROVED SET OF PLANS AND ALL APPLICABLE PERMITS MUST BE AVAILABLE AT THE CONSTRUCTION SITE. TRAILER AT ALL TIMES. DEVIATIONS OR CHANGES WILL NOT BE ALLOWED UNLESS BY WRITTEN APPROVAL FROM THE ENGINEER.
- SITEWORK CONSTRUCTION SHALL NOT COMMENCE UNTIL ALL APPROVALS FROM THE CITY OF CRANSTON HAVE BEEN SECURED. CONTRACTOR SHALL BE RESPONSIBLE FOR PERMITS OBTAINED FOR ALL SITE WORK.
- ALL IMPROVEMENTS INDICATED HEREON MUST COMPLY WITH THE 'AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINE (ADAAG)'. NOTE THAT THE DETAIL CONTAINED WITHIN THIS PLAN MAY NOT SHOW THE DETAIL NECESSARY TO CONSTRUCT WALKWAYS, RAMPS AND SPACES TO COMPLY WITH THE ADAAG REQUIREMENTS BUT THE CONTRACTOR IS RESPONSIBLE TO PROVIDE THE LEVEL OF CARE NECESSARY TO BE CERTAIN THAT THE CONSTRUCTED PRODUCT MEETS THESE STANDARDS.
- THE CONTRACTOR MUST RETAIN THE SERVICES OF A REGISTERED LAND SURVEYOR IN THE STATE OF RHODE ISLAND TO LAYOUT ALL NEW ELEMENTS OF WORK. IF ANY WORK IS INSTALLED PRIOR TO THE ABOVE REQUIREMENT AND IF ANY WORK IS NOT SATISFACTORY TO THE ENGINEER, THE CONTRACTOR MUST REPLACE THE WORK AT NO ADDITIONAL COST TO THE OWNER.
- THE CONTRACTOR SHALL VERIFY THE PROPOSED LAYOUT WITH ITS RELATIONSHIP TO THE EXISTING SITE SURVEY. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, SITE CONDITIONS AND MATERIAL SPECIFICATIONS AND SHALL NOTIFY THE OWNER AND ENGINEER OF ANY ERRORS, OMISSIONS OR DISCREPANCIES BEFORE COMMENCING, INSTALLING OR PROCEEDING WITH WORK.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES AND TO TAKE WHATEVER NECESSARY MEASURES NEEDED TO PROVIDE FOR THEIR PROTECTION. THE ENGINEER HAS DILIGENTLY ATTEMPTED TO LOCATE AND INDICATE ALL EXISTING UNDERGROUND UTILITIES AND FACILITIES ON THE DRAWINGS; HOWEVER, THE INFORMATION SHOWN IS FOR THE CONTRACTORS CONVENIENCE ONLY. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE LOCATIONS OF UTILITIES SHOWN OR NOT SHOWN. THE CONTRACTOR SHALL MAKE EXPLORATORY EXCAVATIONS AND LOCATE ANY EXISTING UTILITIES SUFFICIENTLY AHEAD OF CONSTRUCTION, VERIFY ALL DIMENSIONS, SITE CONDITIONS AND MATERIALS. THE CONTRACTOR MUST CONTACT THE LOCAL UTILITY COMPANIES FOR EXACT LOCATION OF UTILITIES PRIOR TO THE START OF ANY CONSTRUCTION AND SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES BEFORE START OF ANY WORK. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR AND REPLACE ANY AND ALL DAMAGE MADE TO UTILITIES BY THE CONTRACTOR.
- THE CONTRACTOR MUST NOTIFY OPERATORS WHO MAINTAIN UNDERGROUND UTILITIES IN THE AREA OF PROPOSED CONSTRUCTION, EXCAVATION OR BLASTING AT LEAST THREE WORKING DAYS, BUT NOT MORE THAN TEN WORKING DAYS PRIOR TO THE START OF ANY CONSTRUCTION, EXCAVATION OR BLASTING. ALL WATER, SEWER, GAS AND ALL OTHER UTILITIES MUST BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION.
- METHODS AND MATERIALS USED IN THE CONSTRUCTION OF IMPROVEMENTS SHALL CONFORM TO THE CURRENT CONSTRUCTION STANDARDS AND SPECIFICATIONS FOR THE CITY OF CRANSTON AND THE STATE OF RHODE ISLAND DEPARTMENT OF TRANSPORTATION. THE STATE OF RHODE ISLAND STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2023 EDITION WITH ALL REVISIONS AND ADDENDA, AND THE RHODE ISLAND STANDARD DETAILS 1998 EDITION (AMENDED JUNE 2019) WITH ALL REVISIONS ARE MADE A PART HEREOF, AS IF ATTACHED HERETO.
- THE CONTRACTOR IS RESPONSIBLE FOR REPLACING ANY PAVEMENT, DRIVEWAYS, SIDEWALKS, WALL, CURBS, ETC. DAMAGED DURING CONSTRUCTION WITH MATCHING MATERIALS.
- THE CONTRACTOR AGREES THAT HE WILL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR THE PROJECT SITE CONDITIONS THROUGHOUT CONSTRUCTION INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED IN CONJUNCTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT.
- ALL MATERIALS USED FOR CONSTRUCTION MUST BE NEW AND FREE OF DEFECTS. USED OR SALVAGED MATERIAL WILL NOT BE ALLOWED UNLESS WRITTEN APPROVAL FROM THE OWNER IS OBTAINED BY THE CONTRACTOR.
- NECESSARY BARRICADES, LIGHTS, SIGNS AND OTHER TRAFFIC CONTROL METHODS AS MAY BE NECESSARY FOR THE PROTECTION AND SAFETY OF THE PUBLIC MUST BE PROVIDED AND MAINTAINED THROUGHOUT CONSTRUCTION BY THE CONTRACTOR.
- ALL RI HIGHWAY BOUNDS AND PERMANENT SURVEY MARKERS SHALL BE PROTECTED THROUGHOUT CONSTRUCTION.
- ALL TRAFFIC CONTROL SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES 2009 INCLUDING ALL REVISIONS.
- REFER TO ARCHITECTURAL, STRUCTURAL, AND MECHANICAL PLANS FOR ALL BUILDING INFORMATION, AND FOR SITEWORK WITHIN 5'-0" OF BUILDING. .
- ALL CURB RADII ARE 3' UNLESS OTHERWISE NOTED ON THE SITE PLAN.
- PRIOR TO THE START OF CONSTRUCTION THE CONTRACTOR IS REQUIRED TO DEVELOP AND IMPLEMENT A PLAN FOR THE TEMPORARY CONTROL OF VEHICULAR AND PEDESTRIAN TRAFFIC FOR WORK WITHIN PUBLIC STREET RIGHT-OF-WAY AT THE SITE EGRESS. CONTRACTOR SHALL OBTAIN APPROVAL OF SAID PLAN FROM APPROPRIATE STATE AND COMMUNITY PUBLIC SAFETY OFFICIALS.
- WHEN IT IS NECESSARY TO CLOSE OFF A STREET, THE FIRE DEPARTMENT AND POLICE DEPARTMENT SHALL BE NOTIFIED BY THE CONTRACTOR.
- SHOP DRAWINGS OF PRECAST STRUCTURES SHALL BE REVIEWED BY THE ENGINEER AND APPROVED BEFORE USE.
- IF ANY EXISTING STRUCTURES AND/OR UTILITIES TO REMAIN ARE DAMAGED DURING CONSTRUCTION, EITHER ON THE PROJECT SITE, ADJACENT PROPERTIES, OR WITHIN STATE RIGHT-OF-WAY, IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO REPAIR AND/OR REPLACE THE EXISTING STRUCTURE AS NECESSARY TO RETURN IT TO EXISTING CONDITIONS OR BETTER.
- ALL TRAFFIC CONTROL SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), 2009 EDITION, INCLUDING ALL REVISIONS.

ROAD PREPARATION NOTES:

- METHODS AND MATERIALS USED FOR ONSITE ROAD CONSTRUCTION SHALL CONFORM TO THE CURRENT CONSTRUCTION STANDARDS AND SPECIFICATIONS OF THE CITY OF CRANSTON AND THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION.
- GRAVEL BORROW SHALL CONFORM TO STANDARD SPECIFICATION SUBSECTION M.01.0; TABLE 1, COLUMN 1B.
- SUB-SOIL FILLS SHALL BE COMPRISED OF SELECT GRANULAR MATERIALS, CLASSIFIED AS SM OR MORE GRANULAR BY ASTM D 2487 AND PLACED IN 12-INCH MAXIMUM LIFTS AND SHALL BE COMPACTED TO 98% OF THE MAXIMUM STANDARD PROTECTOR DENSITY AS DETERMINED BY THE MOISTURE-DENSITY RELATIONSHIP TEST METHOD ASTM D689.

SURVEY REFERENCE :

- THE EXISTING CONDITIONS INDICATED ARE BASED UPON A SURVEY TITLED "EXISTING CONDITIONS SURVEY". PREPARED FOR ALFONSO & MOSES LTD. SURVEY OF AP 29, LOT 2, 300 LATEN KNIGHT ROAD ZONE A-80. DECEMBER, 2023 BY GAROFALO & ASSOCIATES, INC.
- THE EXISTING WETLANDS INDICATED ARE BASED UPON A SURVEY TITLED "WETLAND DELINEATION PLAN 380 LATEN KNIGHT ROAD" PREPARED BY DIPRETE ENGINEERING. DATED JULY 24, 2023.

GENERAL GRADING NOTES:

- CONTRACTOR SHALL ASSURE POSITIVE DRAINAGE AWAY FROM BUILDINGS FOR ALL NATURAL AND PAVED AREAS.
- ALL GRATES AND COVERS IN PAVED AREAS SHALL BE FLUSH WITH PAVEMENT, AND SHALL HAVE TRAFFIC BEARING RING & COVERS. MANHOLES IN UNPAVED AREAS SHALL BE 3" ABOVE FINISH GRADE.
- CONTRACTOR SHALL ADJUST AND/OR CUT EXISTING PAVEMENT AS NECESSARY TO ASSURE A SMOOTH FIT AND CONTINUOUS GRADE.
- ALL UNSURFACED AREAS DISTURBED BY GRADING OPERATION SHALL RECEIVE 4 INCHES OF TOPSOIL. CONTRACTOR SHALL APPLY STABILIZATION FABRIC TO ALL SLOPES 3H:1V OR STEEPER. CONTRACTOR SHALL GRASS DISTURBED AREAS IN ACCORDANCE WITH THE CITY OF PROVIDENCE SPECIFICATIONS UNTIL A HEALTHY STAND OF GRASS IS OBTAINED.

GENERAL UTILITY NOTES:

- THE CONTRACTOR SHALL NOTIFY DIG-SAFE (1-888-344-7233) AND ALL LOCAL AUTHORITIES & UTILITY COMPANIES TO VERIFY LOCATIONS OF UTILITIES WITHIN THE AREA 72 HOURS PRIOR TO BEGINNING ANY EXCAVATION OR DEMOLITION FOR THE PURPOSE OF COORDINATING THE MARKING OF UNDERGROUND UTILITIES. LOCATION AND DEPTHS OF EXISTING UTILITIES SHOWN ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY, LOCATE AND PROTECT EXISTING UTILITIES IN THE FIELD WHETHER OR NOT SHOWN ON THE DRAWINGS.
- ALL WORK SHALL BE IN COMPLETE ACCORDANCE WITH ALL APPLICABLE STATE, FEDERAL AND LOCAL CODES, AND ALL NECESSARY LICENSES AND PERMITS SHALL BE OBTAINED BY THE CONTRACTOR AT HIS EXPENSE UNLESS PREVIOUSLY OBTAINED BY THE OWNER/DEVELOPER.
- THE CONTRACTOR SHALL COORDINATE LOCATION AND INSTALLATION OF ALL UNDERGROUND UTILITIES AND APPURTENANCES TO MINIMIZE DISTURBANCE OF CURBING, PAVING AND COMPACTED SUBGRADE. THE CONTRACTOR SHALL NOTIFY THE TOWN ENGINEER & ALL LOCAL UTILITY COMPANIES 48 HOURS BEFORE EACH PHASE OF CONSTRUCTION. THE CONTRACTOR SHALL IMMEDIATELY INFORM THE ENGINEER OF ANY DISCREPANCIES OR ERRORS DISCOVERED IN THE PLANS.
- BEDDING REQUIREMENTS SPECIFIED HEREIN ARE TO BE CONSIDERED AS MINIMUMS FOR RELATIVELY DRY, STABLE EARTH CONDITIONS. ADDITIONAL BEDDING SHALL BE REQUIRED FOR ROCK TRENCHES AND WET AREA. CONTRACTOR SHALL HAVE THE RESPONSIBILITY TO PROVIDE SUCH ADDITIONAL BEDDING AS MAY BE REQUIRED TO PROPERLY CONSTRUCT THE WORK.
- THE CONTRACTOR SHALL REMOVE ANY ABANDONED FOUNDATIONS, UTILITY STRUCTURES, BURIED DEBRIS ETC. WHICH INTERFERE WITH THE INSTALLATION OF THE UTILITY WORK. ALL SUCH STRUCTURES SHALL BE COMPLETELY REMOVED AND THE EXCAVATED AREA SHALL BE BACKFILLED WITH COMPACTED GRAVEL IN 6" LIFTS TO 95% COMPACTION TO 6" BELOW THE BOTTOM OF THE UTILITY AND PIPE.
- COMPACTION OF THE BACKFILL OF ALL TRENCHES SHALL BE COMPACTED TO THE DENSITY OF 95% OF THE THEORETICAL MAXIMUM DRY DENSITY (ASTM D698). BACKFILL MATERIAL SHALL BE FREE FROM ROOTS, STUMPS OR OTHER FOREIGN DEBRIS AND SHALL BE PLACED IN LIFTS NOT TO EXCEED ONE FOOT IN COMPACTED FILL THICKNESS. CORRECTION OF ANY TRENCH SETTLEMENT WITHIN A YEAR FROM THE DATE OF PROJECT APPROVAL WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- ALL PIPING LAYOUT INDICATED ON THESE PLANS IS DIAGRAMMATIC ONLY AND DOES NOT SHOW ALL THE REQUIRED FITTINGS FOR PROPER ALIGNMENT. THE CONTRACTOR SHALL PROVIDE ALL REQUIRED FITTINGS TO OBTAIN PROPER ALIGNMENT AND FOR EXISTING UTILITY CONNECTIONS BASED UPON FIELD CONDITIONS.
- WHENEVER UTILITIES ARE TO BE INSTALLED WITHIN THE PUBLIC OR PRIVATE RIGHT OF WAYS, THE TRENCH MUST BE BACKFILLED WITH GRANULAR FILL. ALL AREAS OF ROADWAY PAVEMENT & WALKWAYS DISTURBED DURING CONSTRUCTION SHALL BE RE-PAVED PER THE CITY AND STATE STANDARDS AND SPECIFICATIONS.
- ALL SANITARY SEWER CONSTRUCTION SHALL BE INSPECTED BY THE VEOLIA WATER NORTH AMERICA COLLECTIONS SYSTEM DEPARTMENT. (VEOLIA-CRANSTON WPCF).
- GAS SERVICE FACILITIES SHALL BE DESIGNED BY OTHERS. CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE UTILITY INSTALLATIONS AS REQUIRED TO ENSURE ADEQUATE GAS SERVICE IS PROVIDED AND SHALL BE RESPONSIBLE FOR ALL INSTALLATION PROCEDURES (TRENCHING, LAYING PIPE, ETC.) AS ARE REQUIRED BY THE GAS COMPANY FOR COMPLETE AND IN PLACE CONSTRUCTION.
- ELECTRIC SERVICE FACILITIES SHALL BE DESIGNED BY OTHERS. ELECTRIC SERVICE AND TRANSFORMER PAD SHALL CONFORM TO THE REQUIREMENTS OF THE ELECTRIC COMPANY. CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING ADEQUATE ELECTRIC SERVICE IS PROVIDED AND SHALL BE RESPONSIBLE FOR ALL INSTALLATION PROCEDURES (TRENCHING, LAYING PIPE, ETC.) AS ARE REQUIRED BY THE ELECTRIC COMPANY FOR COMPLETE AND IN PLACE CONSTRUCTION. REFER TO ELECTRICAL DRAWINGS FOR ALL UNDERGROUND ELECTRIC.

PLAN NOTE:

- SHOP DRAWINGS FOR ALL DRAINAGE STRUCTURES SHOWN HEREIN SHALL PROVIDED TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO FABRICATION. FINAL DRAINAGE LAYOUT TO BE APPROVED BY ENGINEER PRIOR TO CONSTRUCTION.
- THE PROJECT IS NOT LOCATED WITHIN A NATURAL HERITAGE AREA.

STORMWATER SYSTEM MAINTENANCE NOTES:

- THE DRAINAGE SYSTEMS ARE TO BE MONITORED THROUGHOUT THE ENTIRE CONSTRUCTION PERIOD BY THE CONTRACTOR. UPON COMPLETION OF THE PROJECT THE CONTRACTOR MUST DO A FINAL FULL MAINTENANCE & CLEAN UP OF THE STORMWATER MANAGEMENT SYSTEM AND THE SITE. UPON COMPLETION OF THE CONTRACTOR'S FINAL MAINTENANCE & CLEAN UP OF THE PROJECT, MONITORING OF THE STORMWATER MANAGEMENT SYSTEM SHALL BE THE RESPONSIBILITY OF THE OWNER. INDIVIDUAL LOT OPA LOCATIONS MAY BE ADJUSTED WITHIN EACH RESPECTIVE LOT PER INDIVIDUAL HOMEOWNER, HOWEVER SHALL NOT ENCRGOACH INTO BUFFER ZONES AS SHOWN HEREIN. PROPER INFILTRATION SHALL BE MAINTAINED PROCEEDING CONSTRUCTION FOLLOWING NOTES, PRACTICES, AND PROTECTION METHODS LISTED HEREIN.

CONSTRUCTION MONITORING/MAINTENANCE PROCEDURES SHALL BE AS FOLLOWS:
(RESPONSIBILITY OF CONTRACTOR)

- SILT BARRIER:
MONITOR SILT BARRIER ON A WEEKLY BASIS AND AFTER EVERY RAIN STORM EVENT AND REPAIR OR REPLACE ANY DAMAGED AREAS IMMEDIATELY. IMMEDIATELY CLEAN THE SILT BARRIER IF SIX INCHES OR MORE OF SEDIMENT HAS ACCUMULATED ON THE HAYBALE & SILT BARRIER.
- PAVED AREAS:
PARKING LOTS, PUBLIC & PRIVATE ROADWAYS AND GUTTERS SHALL BE SWEEPED CLEAN OF ALL SEDIMENT & DEBRIS. SWEEPING & REMOVAL OF DEBRIS SHALL BE PERFORMED ON A WEEKLY BASIS AT A MINIMUM.
- STORMWATER BMPS:
NO CONSTRUCTION RUNOFF SHALL BE DIRECTED TO STORMWATER BMPS UNTIL UPGRADIENT AREAS ARE STABILIZED.

POST CONSTRUCTION MONITORING/MAINTENANCE PROCEDURES SHALL BE AS FOLLOWS:
(RESPONSIBILITY OF OWNER)

- STORMWATER MANAGEMENT FACILITIES – REFER TO OPERATIONS AND MAINTENANCE PLAN UNDER SEPARATE COVER. (NOTE: A LEGALLY ENFORCEABLE MAINTENANCE AGREEMENT SHALL BE EXECUTED IF THE PROPERTY OWNER IS NOT THE PARTY RESPONSIBLE FOR BMP MAINTENANCE AS PRESCRIBED)

INFILTRATION AREA CONSTRUCTION PROTECTION

FOR THE LONG-TERM FUNCTION OF THE INFILTRATING SYSTEMS, CARE MUST BE TAKEN IN THIS AREA DURING CONSTRUCTION. THE CONTRACTOR SHALL EMPLOY THE FOLLOWING MINIMUM BEST MANAGEMENT PRACTICES (BMP'S):

- THE INFILTRATION AREAS SHALL NOT BE USED AS A CONSTRUCTION SEDIMENTATION SYSTEM.
- CONSTRUCTION EQUIPMENT, VEHICULAR TRAFFIC, PARKING OF VEHICLES, AND STOCKPILING OF CONSTRUCTION AND EARTH MATERIALS SHALL BE OUTSIDE THE LIMITS OF THE INFILTRATION AREA UNTIL INSTALLATION IS COMPLETED. THE SUBGRADE BENEATH THE SYSTEM SHALL NOT BE COMPACTED.
- EXCAVATION FOR CONSTRUCTION OF THE INFILTRATION AREAS SHALL BE PERFORMED MANUALLY OR BY HYDRAULIC EXCAVATOR OR SOME OTHER SIMILAR MEANS TO ENSURE THAT THE EQUIPMENT IS NOT IN DIRECT CONTACT WITH THE NATURAL INFILTRATION EARTH MATERIAL AND DOES NOT CAUSE COMPACTION OF THE MATERIAL AND THE ENTIRE AREA IS TO BE SCARIFIED PRIOR TO INSTALLATION.
- THE CONTRACTOR SHALL INSTALL TEMPORARY CONSTRUCTION FENCING AND EROSION CONTROLS AROUND THE PERIMETER OF THE INFILTRATION AREA TO PREVENT THE USE OF THIS AREA FOR ALL ACTIVITIES THAT MIGHT DAMAGE THE INFILTRATION CAPABILITIES OF THE AREA. THIS FENCING MAY BE REMOVED FOR BACKFILLING AND FINAL CONSTRUCTION.

SITE PLAN LEGEND (RIDOT):

	BITUMINOUS CONCRETE DRIVEWAYS
	BITUMINOUS CONCRETE PAVEMENT
	REMOVE AND DISPOSE BITUMINOUS CURB
	REMOVE AND DISPOSE FLEXIBLE PAVEMENT
	CUT AND MATCH PAVEMENT
	BITUMINOUS BERM
	PAVED WATERWAY
	CONSTRUCTION ENTRANCE
	4-INCH DOUBLE YELLOW PAVEMENT MARKINGS
	6-INCH WHITE PAVEMENT MARKINGS
	12-INCH WHITE PAVEMENT MARKINGS

SITE LEGEND

EXISTING	NEW	DESCRIPTION
		CENTERLINE (LAYOUT)
		STORM DRAIN
		ELECTRIC (UNDERGROUND)
		FIRE SERVICE
		FOOTING DRAIN
		GAS
		OVERHEAD WIRE
		PROPERTY LINE
		SANITARY SEWER
		SITE LIGHTING SERVICE
		TELEPHONE
		WATER
		CONTOUR
		SPOT GRADE
		SPOT GRADE (BOT. OF CURB)
		SPOT GRADE (TOP OF CURB)
		SPOT GRADE (BOT. OF WALL)
		SPOT GRADE (TOP OF WALL)
		PRECAST CONC. CURB
		CHAINLINK FENCE (CLF)
		STOCKADE FENCE (STKF)
		BORING LOCATION
		CATCH BASIN
		DOUBLE GRATE CATCH BASIN
		CONCRETE THRUST BLOCK
		DRAIN MANHOLE
		FLARED END STRUCTURE
		SEWER MANHOLE
		WATER SERVICE
		UTILITY POLE
		FIRE HYDRANT
		GATE VALVE AND CURB BOX
		HANDICAP SYMBOL (PRKG. SPACE)
		SIGN
		WETLAND
		SOIL EVALUATION LOCATION
		TEST PIT LOCATION
		FIRE DEPARTMENT CONNECTION
		POST INDICATOR VALVE (PIV)
		ELECTRIC MANHOLE (EMH)
		TELEPHONE MANHOLE (TMH)
		TRANSFORMER PAD
		GENERATOR PAD
		GROUND CLEANOUT
		SIGHT LIGHT POLE
		TRAFFIC FLOW DIRECTION
		LIMIT OF DISTURBANCE
		COMPOST SILT SOCKS
		PAVEMENT SAWCUT & MATCH TO EXISTING
		RIDOT STD DETAIL REFERENCE

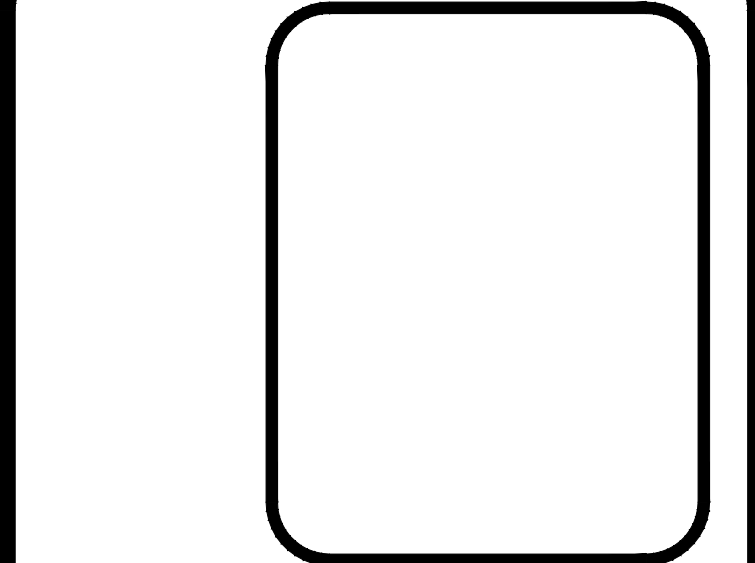
ABBREVIATIONS

AC.	ACRE/ACRES	INV.	INVERT
AD.	AREA DRAIN	I.P.	IRON PIPE
ADJ.	ADJUST	I.R.	IRON ROD
A.P.	ASSESSORS PLAT	LP	LIGHT POLE
APPROX.	APPROXIMATE	LOD	LIMIT OF DISTURBANCE
ARCH.	ARCHITECT/ARCHITECTURAL	LOE	LIMIT OF EXCAVATION
BB.	BITUMINOUS BERM	MIN.	MINIMUM
BIT.	BITUMINOUS	MAX.	MAXIMUM
BK.	BOOK	N/F	NOW OR FORMERLY
BLDG.	BUILDING	OLF	ORNAMENTAL LIGHT POLE
BMP.	BEST MANAGEMENT PRACTICES	PG.	PAGE
BND.	BOUND	PL	PROPERTY LINE
BW.	BITUMINOUS CONCRETE SIDEWALK	PROP.	PROP.
CB.	CATCH BASIN	PVC.	POLYVINYL CHLORIDE PIPE
CC.	CONCRETE CURB	PVMT.	PAVEMENT
CEM.	CEMENT	REM.	REMOVE
CI.	CAST IRON PIPE	RET.	RETAINING
CLDI.	CEMENT LINED DUCTILE IRON PIPE	R&D	REMOVE AND DISPOSE
CLF.	CHAIN-LINK FENCE	R&R	REMOVE AND RELOCATE
CONC.	CONCRETE	R&S	REMOVE AND SALVAGE/STOCKPILE
CP.	CONCRETE PAD	R	RADIUS/RADI
CW.	CONCRETE SIDEWALK	RC	REINFORCED CONCRETE PIPE
DH.	DRILL HOLE	R.I.H.B.	RHODE ISLAND HIGHWAY BOUND
DI.	DUCTILE IRON PIPE	R.O.W.	RIGHT-OF-WAY
DIA.	DIAMETER	S-	SLOPE EQUALS
DMH.	DRAINAGE MANHOLE	SDWK.	SIDEWALK
DRN.	DRAIN/DRAINAGE	S.F.	SQUARE FOOT/FEET
ELEC.	ELECTRIC/ELECTRICAL	STD.	STANDARD
ELEV.	ELEVATION	STN.	STONE
ETR.	EXISTING TO REMAIN	SW.	SOLID WHITE LINE
EX.	EXISTING	TYP.	TYPICAL
F&I.	FURNISH AND INSTALL	VF	VERIFY IN FIELD
FFE.	FINISHED FLOOR ELEVATION	VLV.	VALVE
FP.	FLAG POLE	WF.	WETLAND FLAG
G.	GAS GATE	WG.	WATER GATE
HOPE.	HIGH DENSITY POLYETHYLENE PIPE	WSD.	WATER SHUT-OFF
HYD.	HYDRANT	WQS.	WATER QUALITY STRUCTURE

GENERAL NOTES & LEGEND

FOR
R & T ESTATES
(A.P. 29, LOT 2)
SITUATED AT
300 LATEN KNIGHT ROAD
CRANSTON, RI
PREPARED FOR
MOSES RYAN LTD.

NO.	REVISION	BY	DATE



GAROFALO & ASSOCIATES, INC.
CIVIL & STRUCTURAL ENGINEERS
SURVEYORS
LAND PLANNERS
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DWG. NO. 7482-00-COVER & NOTES, PRELIMINARY	CHECK BY S.S.H.
SCALE: AS SHOWN	APPROVED S.S.H.
	DATE: NOVEMBER, 2024

SHEET

C-1

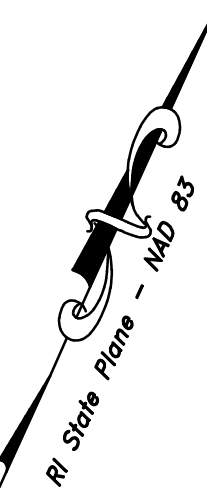



TABLE NOTE:

* PER CITY OF CRANSTON'S CODE OF ORDINANCE ZONING CHAPTER 17.20.120

SITE CONSTRAINT LEGEND:

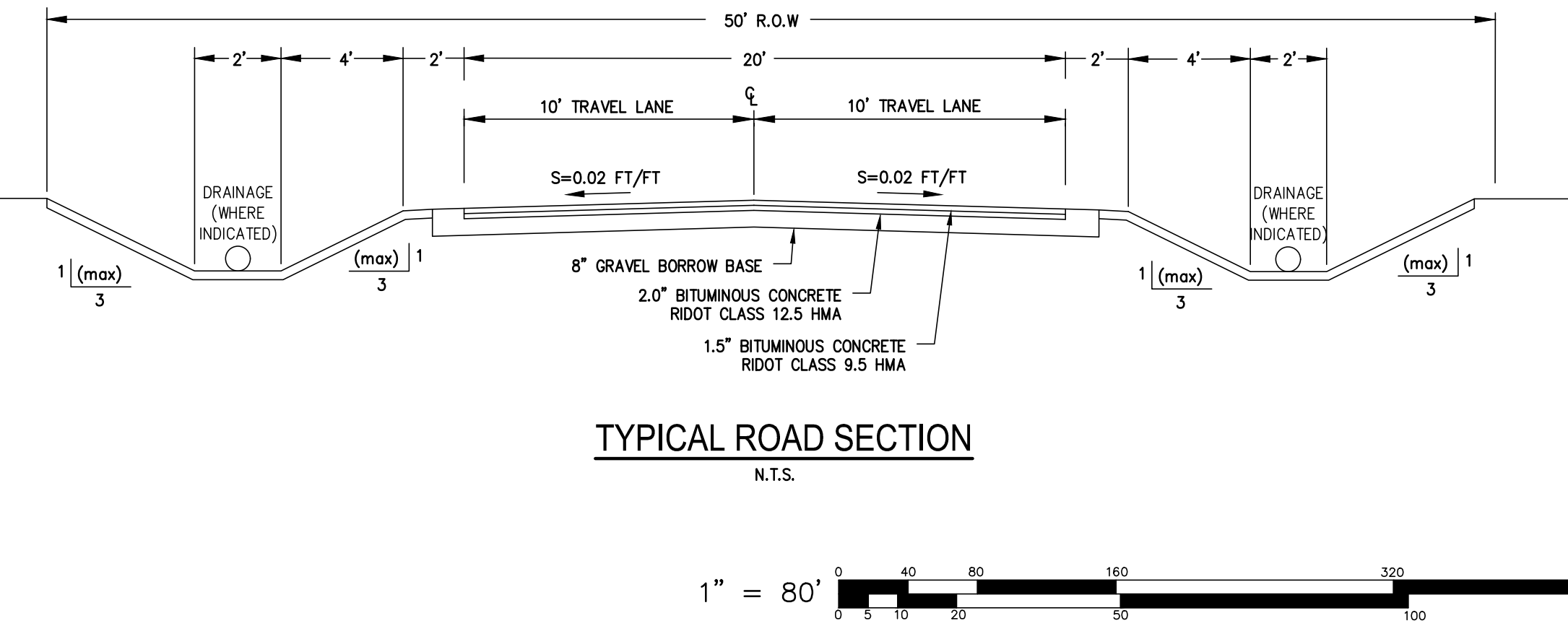
	LAND UNSUITABLE FOR DEVELOPMENT PER CITY OF CRANSTON'S SUBDIVISION REGULATIONS: SECTION IV(E)—WETLAND AND UTILITY EASEMENT.
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SUMMARY OF SUITABLE LAND BY PROPOSED LOT

LOT 1:	80,027 SF
LOT 2:	81,435 SF
LOT 3:	86,630 SF
LOT 4:	107,679 SF
LOT 5:	99,075 SF

SHEET NOTES:

1. SEE SHEET C-1 FOR NOTES & LEGEND.
2. THE PROPOSED ROAD IS PRIVATE.
3. WETLAND DELINEATION BY DIPRETE ENGINEERING.



OVERALL PLAN
FOR
R & T ESTATES
(A.P. 29, LOT 2)
SITUATED AT
300 LATEN KNIGHT ROAD
CRANSTON, RI
PREPARED FOR
MOSES RYAN LTD.

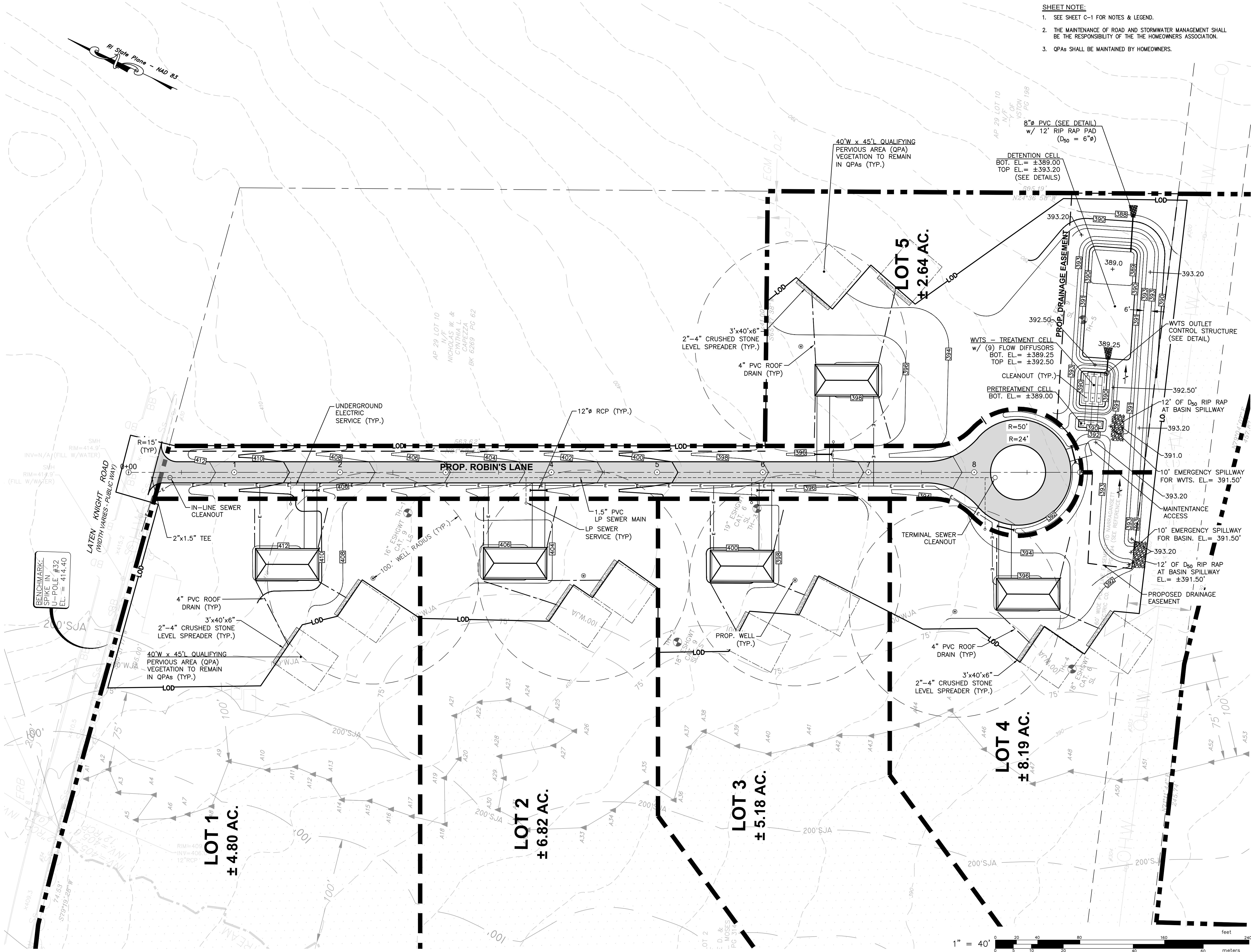
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C-2

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- SHEET NOTE:**
- SEE SHEET C-1 FOR NOTES & LEGEND.
 - THE MAINTENANCE OF ROAD AND STORMWATER MANAGEMENT SHALL BE THE RESPONSIBILITY OF THE HOMEOWNERS ASSOCIATION.
 - QPAS SHALL BE MAINTAINED BY HOMEOWNERS.

GRADING & DRAINAGE PLAN

FOR
R & T ESTATES
(A.P. 29, LOT 2)
SITUATED AT
300 LATEN KNIGHT ROAD
CRANSTON, RI
PREPARED FOR
MOSES RYAN LTD.

NO.	REVISION	BY	DATE

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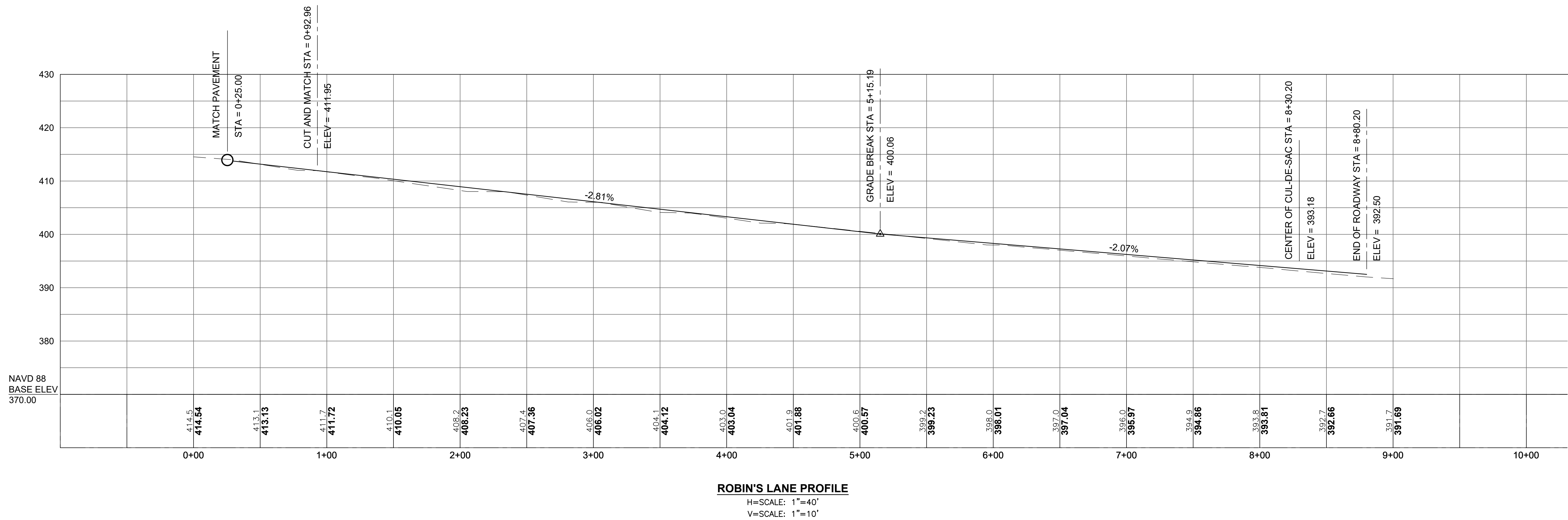
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SHEET

C-3

6 OF 10 SHEETS

L:\7482-00 300 Laten Knight Road (Moses Ryan) - Cranston, RI\dwg\01-Current\Preliminary\7482-00-Base_Preliminary.dwg 11/19/2024 kyingyang 13:42



SHEET NOTE:

1. SEE SHEET C-1 FOR NOTES & LEGEND.
2. SEE SHEET C-2 FOR ROADWAY TYPICAL SECTION.
3. SEE SHEET C-3 FOR DRAINAGE & UTILITY PLAN.

ROAD PROFILE PLAN

FOR
R & T ESTATES
(A.P. 29, LOT 2)
SITUATED AT
300 LATEN KNIGHT ROAD
CRANSTON, RI
PREPARED FOR
MOSES RYAN LTD.

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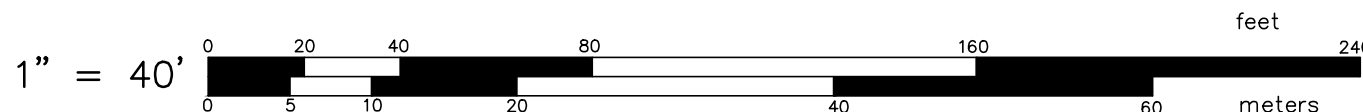
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SHEET

C-4

7 OF 10 SHEETS



1. DENUDED SLOPES SHALL NOT BE LEFT EXPOSED FOR EXCESSIVE PERIODS OF TIME.
2. ALL DISTURBED SLOPES EITHER NEWLY CREATED OR EXPOSED PRIOR TO OCTOBER 15, SHALL BE SEEDDED OR PROTECTED BY THAT DATE FOR ANY WORK COMPLETED DURING EACH CONSTRUCTION YEAR.
3. TEMPORARY TREATMENTS SHALL CONSIST OF A HAY, STRAW, OR 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.
4. HAY OR STRAW APPLICATIONS SHOULD BE IN THE AMOUNT OF 2000 LBS/ACRE.
5. ALL HAYBALES OR TEMPORARY PROTECTION SHALL REMAIN IN PLACE UNTIL AN ACCEPTABLE STAND OF GRASS 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.
7. THE SEED MIX SHALL BE INOCULATED WITHIN TWENTY FOUR (24) HOURS, BEFORE MIXING AND PLANTING, WITH APPROPRIATE INOCULUM FOR EACH VARIETY.
8. THE DESIGN MIX FOR TEMPORARY EROSION CONTROL AND SOIL STABILIZATION SHALL BE COMPRISED OF THE FOLLOWING:

TYPE	% BY WEIGHT
CREEPING RED FESCUE	70
ASTORIA BENTGRASS	5
BIRDSFOOT TREEFOIL	15
PERENNIAL RYEGRASS	10

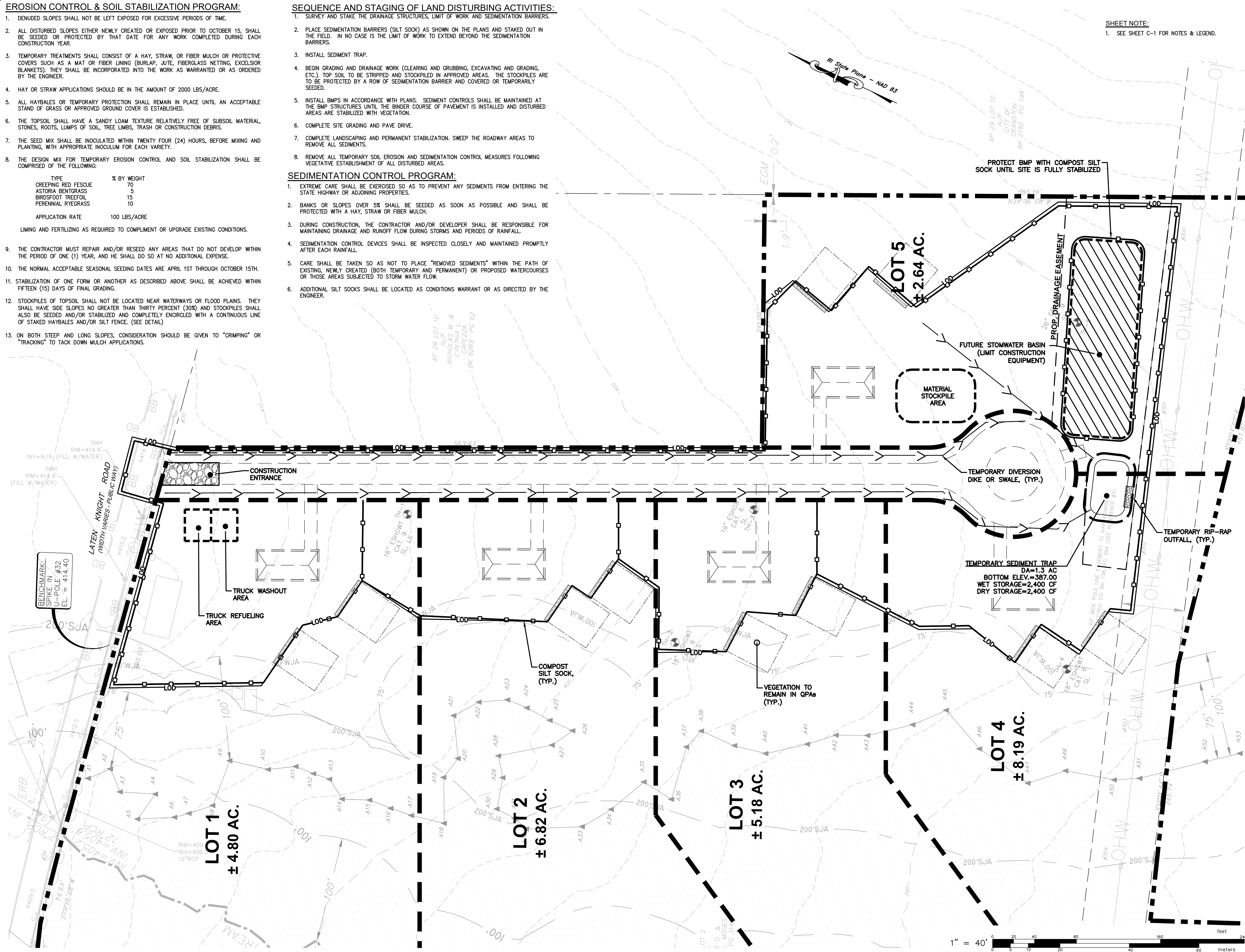
APPLICATION RATE 100 LBS/ACRE

LIMING AND FERTILIZING AS REQUIRED TO COMPLIMENT OR UPGRADE EXISTING CONDITIONS.

9. THE CONTRACTOR MUST REPAIR AND/OR RESEED ANY AREAS THAT DO NOT DEVELOP WITHIN THE PERIOD OF ONE (1) YEAR, AND HE SHALL DO SO AT NO ADDITIONAL EXPENSE.
10. THE NORMAL ACCEPTABLE SEASONAL SEEDING DATES ARE APRIL 1ST THROUGH OCTOBER 15TH.
11. STABILIZATION OF ONE FORM OR ANOTHER AS DESCRIBED ABOVE SHALL BE ACHIEVED WITHIN FIFTEEN (15) DAYS OF FINAL GRADING.
12. STOCKPILES OF TOPSOIL SHALL NOT BE LOCATED NEAR WATERWAYS OR FLOOD PLAINS. THEY SHALL HAVE SIDE SLOPES NO GREATER THAN THIRTY PERCENT (30%) AND STOCKPILES SHALL ALSO BE SEEDDED AND/OR STABILIZED AND COMPLETELY ENCLOSED WITH A CONTINUOUS LINE OF STAKED HAYBALES AND/OR SILT FENCE. (SEE DETAIL)
13. ON BOTH STEEP AND LONG SLOPES, CONSIDERATION SHOULD BE GIVEN TO "CRIMPING" OR "TRACKING" TO TACK DOWN MULCH APPLICATIONS.

1. SURVEY AND STAKE THE DRAINAGE STRUCTURES, LIMIT OF WORK AND SEDIMENTATION BARRIERS
2. PLACE SEDIMENTATION BARRIERS (SILT SOCK) AS SHOWN ON THE PLANS AND STAKED OUT IN THE FIELD. IN NO CASE IS THE LIMIT OF WORK TO EXTEND BEYOND THE SEDIMENTATION BARRIERS.
3. INSTALL SEDIMENT TRAP.
4. BEGIN GRADING AND DRAINAGE WORK (CLEARING AND GRUBBING, EXCAVATING AND GRADING, ETC.) THAT SOILS BE STRIPPED AND STOCKPILED IN APPROVED AREAS. THE STOCKPILES ARE TO BE PROTECTED BY A ROW OF SEDIMENTATION BARRIER AND COVERED OR TEMPORARILY SEEDED.
5. INSTALL BMPs IN ACCORDANCE WITH PLANS. SEDIMENT CONTROLS SHALL BE MAINTAINED AT THE BMP STRUCTURE UNTIL THE BINDER COURSE OF PAVEMENT IS INSTALLED AND DISTURBED AREAS ARE STABILIZED WITH VEGETATION.
6. COMPLETE SITE GRADING AND PAVE DRIVE.
7. COMPLETE LANDSCAPING AND PERMANENT STABILIZATION. SWEEP THE ROADWAY AREAS TO REMOVE ALL SEDIMENTS.
8. REMOVE ALL TEMPORARY SOIL EROSION AND SEDIMENTATION CONTROL MEASURES FOLLOWING VEGETATIVE ESTABLISHMENT OF ALL DISTURBED AREAS.

1. EXTREME CARE SHALL BE EXERCISED SO AS TO PREVENT ANY SEDIMENTS FROM ENTERING THE STATE HIGHWAY OR ADJOINING PROPERTIES.
2. BANKS OR SLOPES OVER 5% SHALL BE SEEDED AS SOON AS POSSIBLE AND SHALL BE PROTECTED WITH A HAY, STRAW OR FIBER MULCH.
3. DURING CONSTRUCTION, THE CONTRACTOR AND/OR DEVELOPER SHALL BE RESPONSIBLE FOR MAINTAINING DRAINAGE AND RUNOFF FLOW DURING STORMS AND PERIODS OF RAINFALL.
4. SEDIMENTATION CONTROL DEVICES SHALL BE INSPECTED CLOSELY AND MAINTAINED PROMPTLY AFTER EACH RAINFALL.
5. 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 SUBJECT TO STORM WATER FLOW.
6. ADDITIONAL SILT SOCKS SHALL BE LOCATED AS CONDITIONS WARRANT OR AS DIRECTED BY THE ENGINEER.



SHEET NOTE:
1. SEE SHEET C-1 FOR NOTES & LEGEND.

SOIL & EROSION SEDIMENT
CONTROL PLAN
FOR
R & T ESTATES
(A.P. 29, LOT 2)
SITUATED AT
300 LATEN KNIGHT ROAD
CRANSTON, RI
PREPARED FOR
MOSES RYAN LTD.

[illegible]

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GAROFALO & ASSOCIATES, INC.
CIVIL & STRUCTURAL ENGINEERS/SURVEYORS
LAND PLANNERS/ENVIRONMENTAL SCIENTISTS

Garofalo & Associates ©
These drawings are the property of the engineer/surveyor and have been prepared for the owner, for this project at this site and are not to be used for any other purpose, location or owner without written consent of this owner or one of its directors.

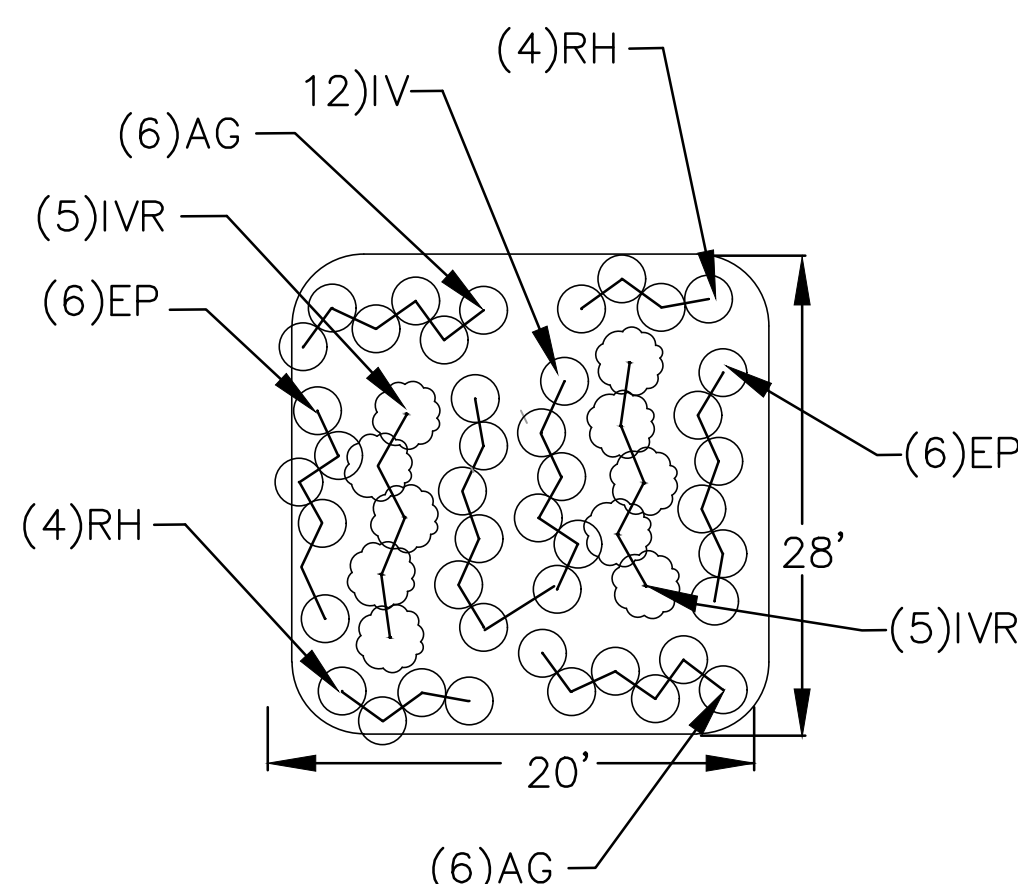
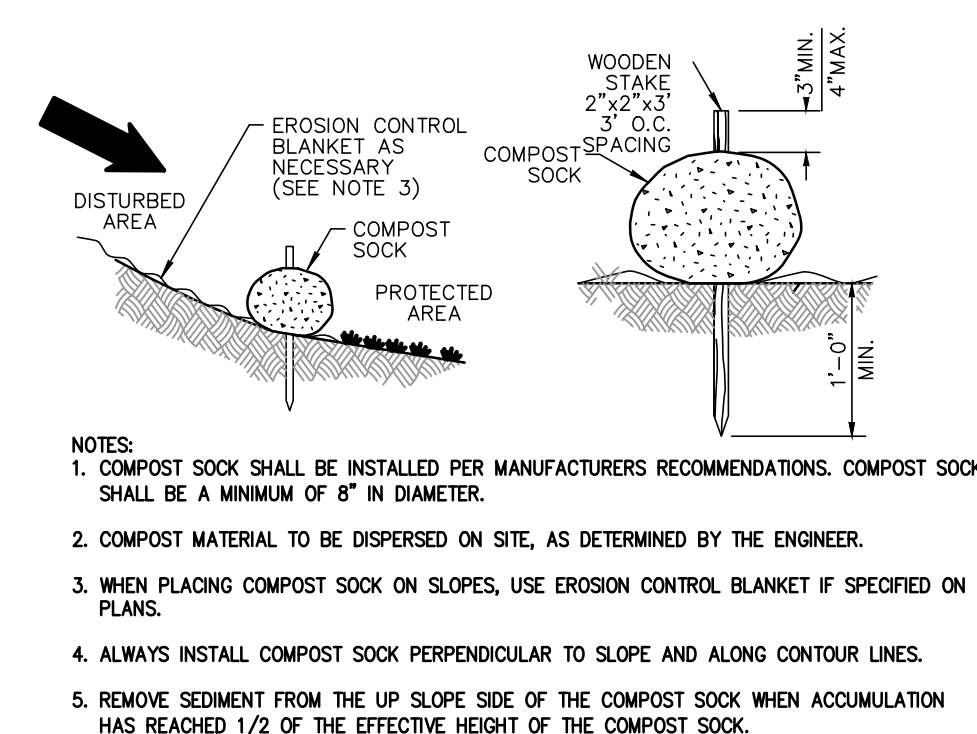
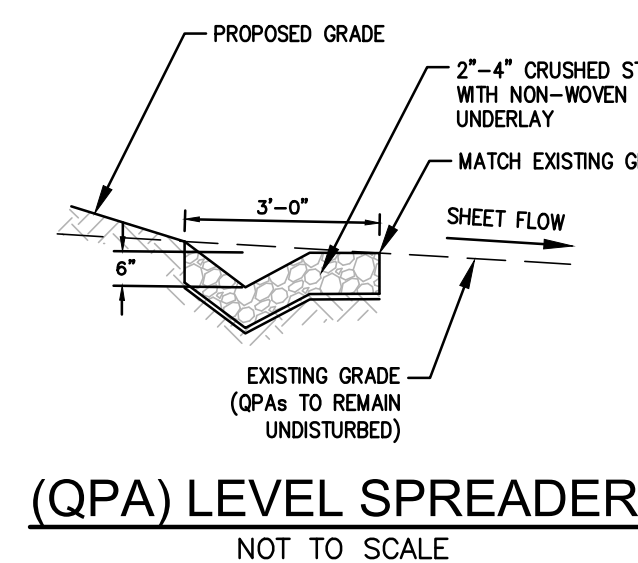
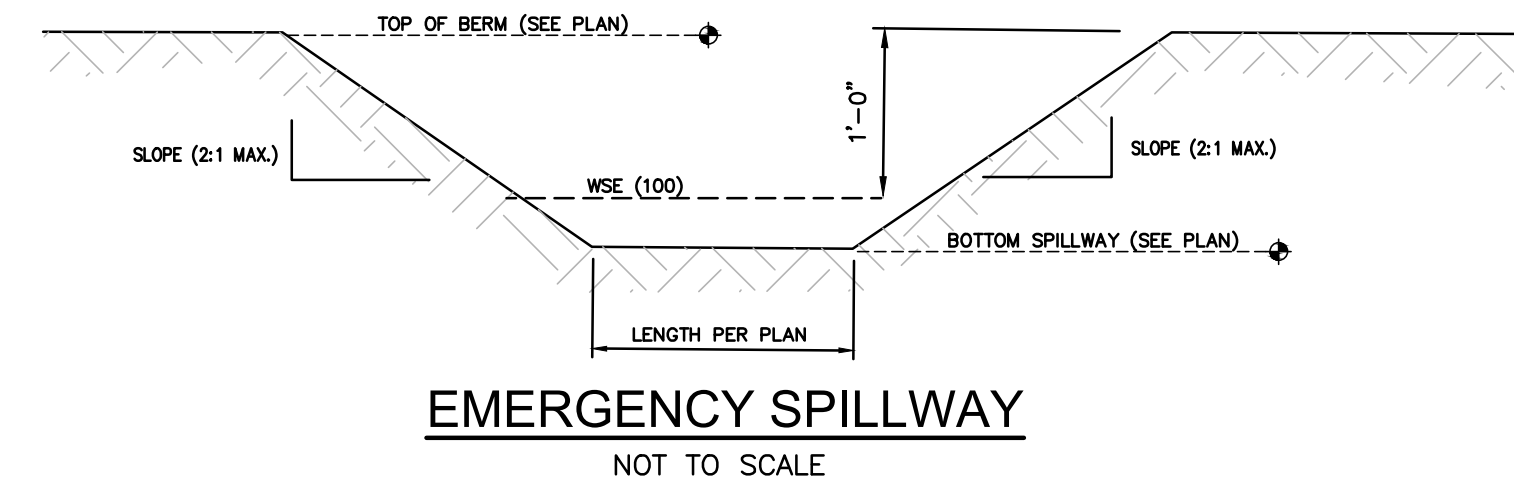
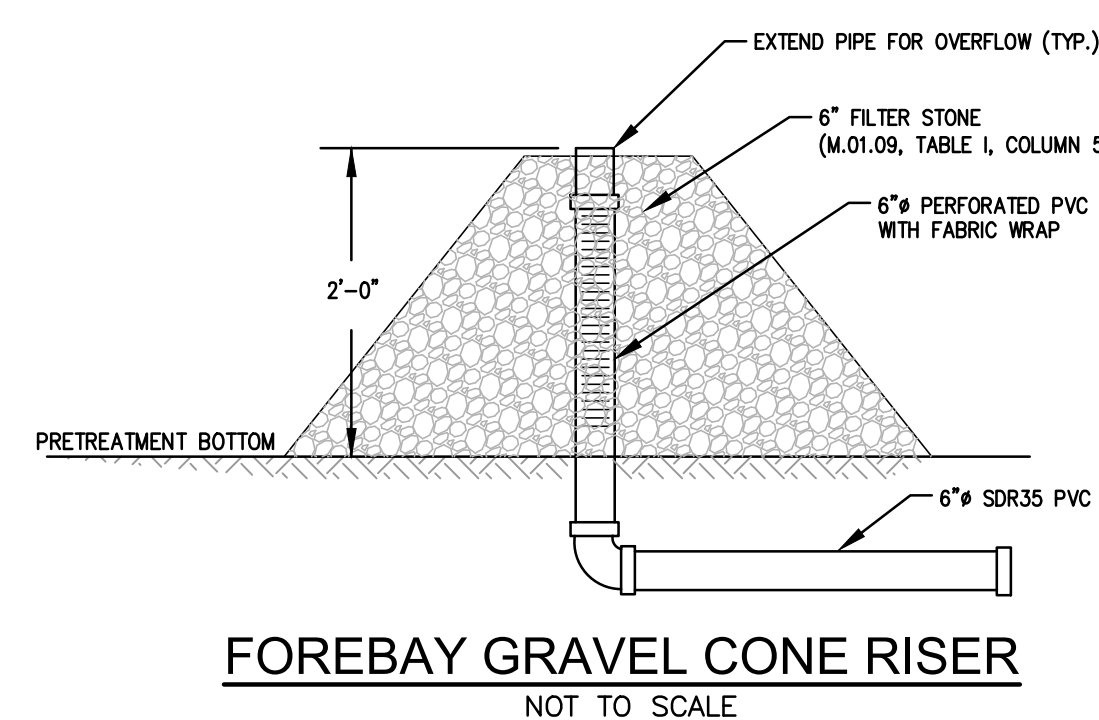
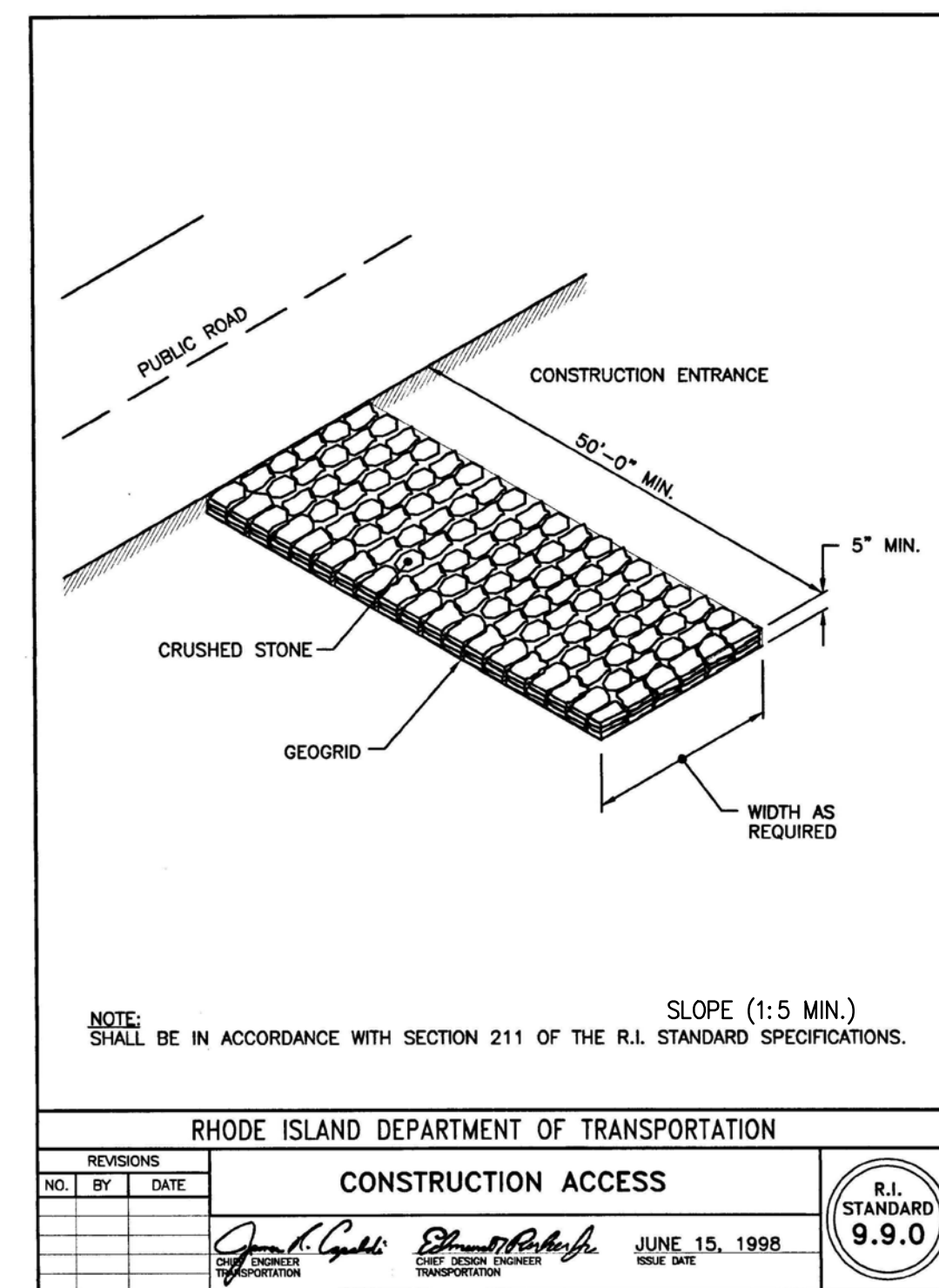
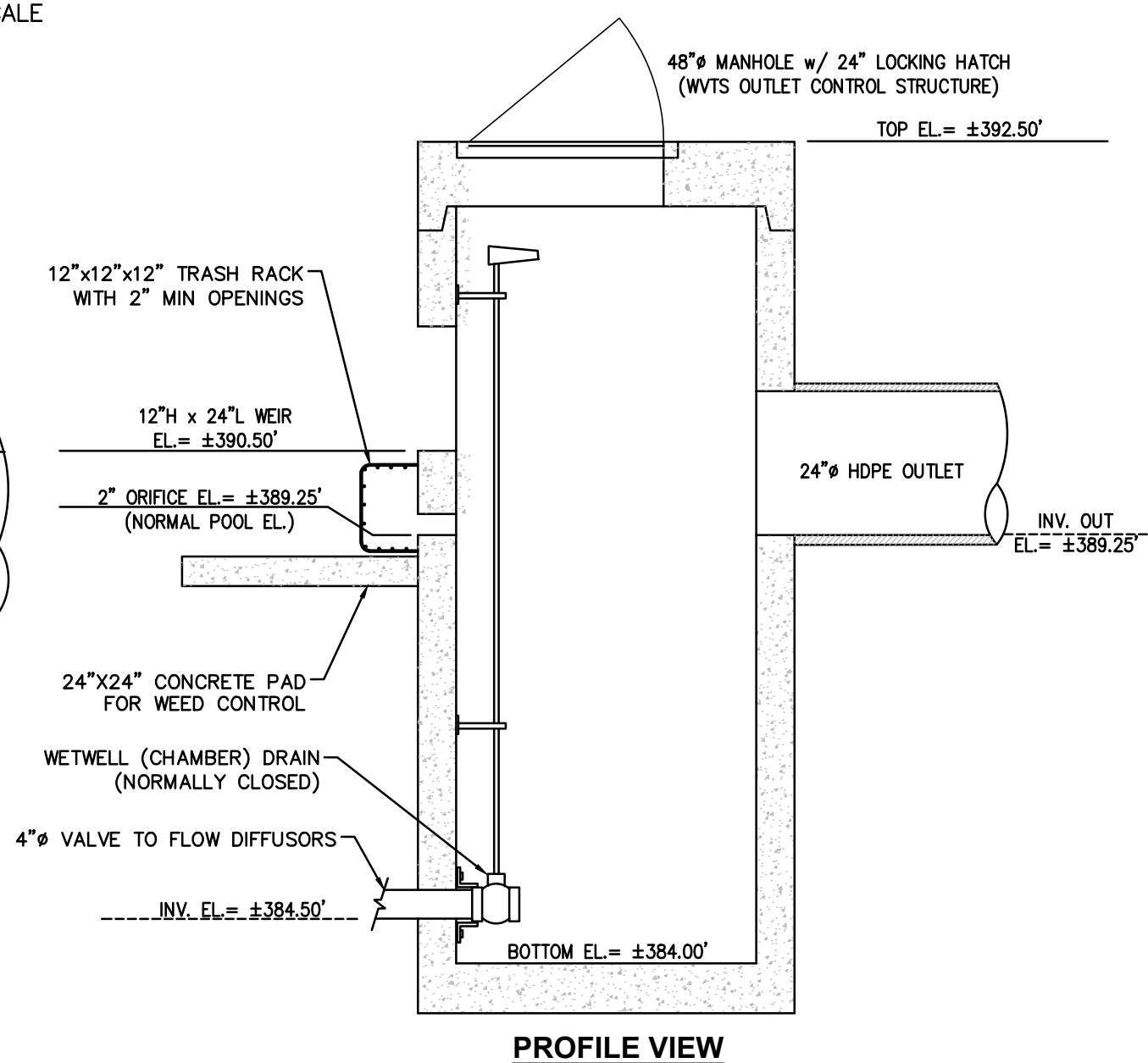
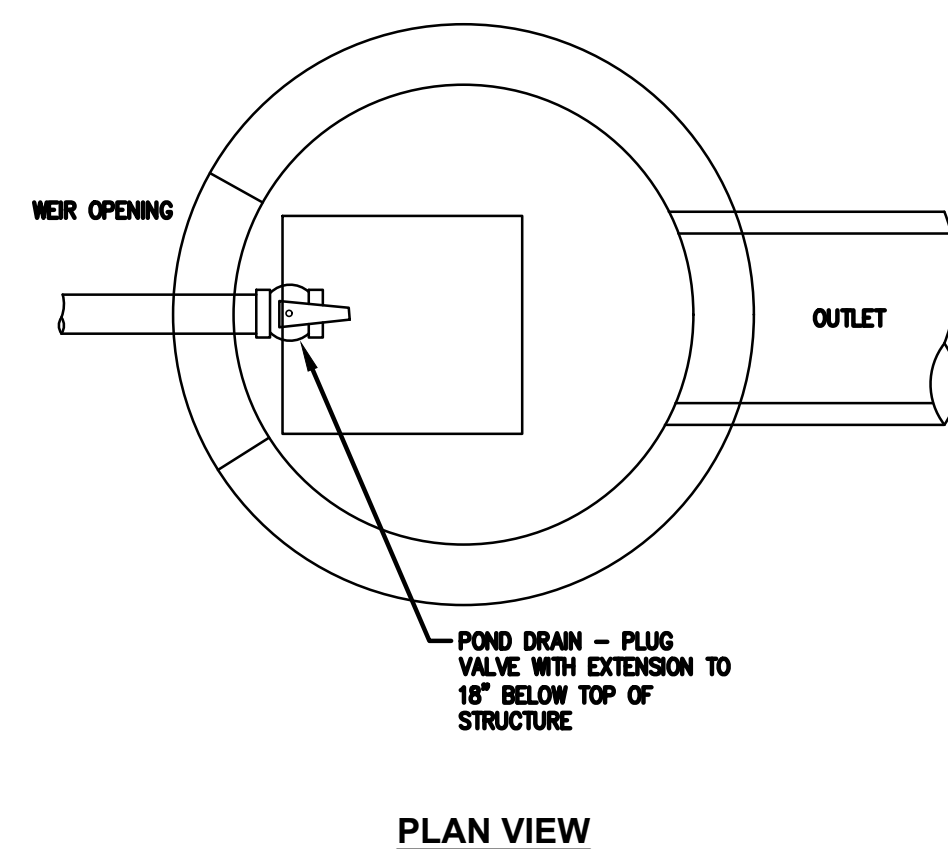
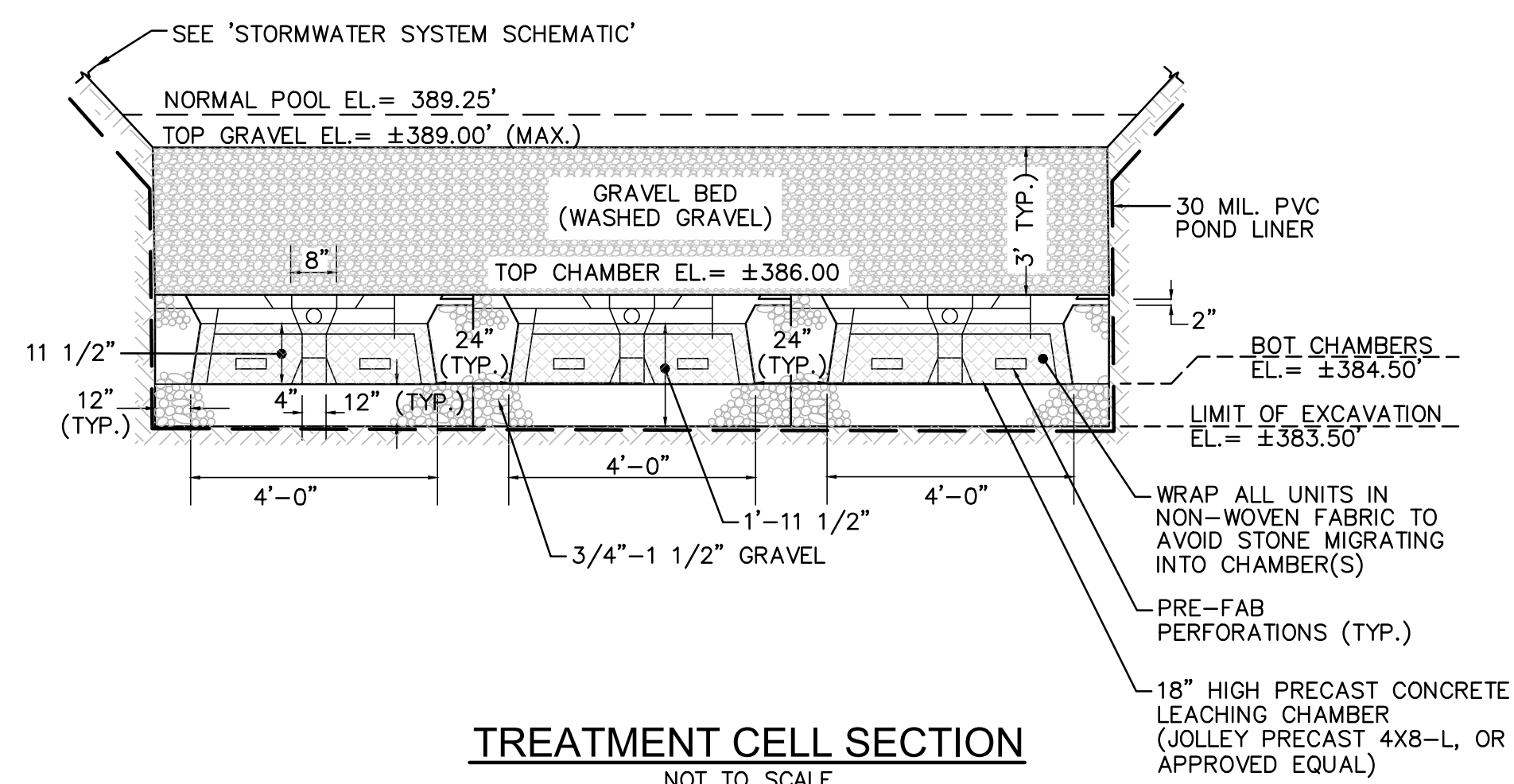
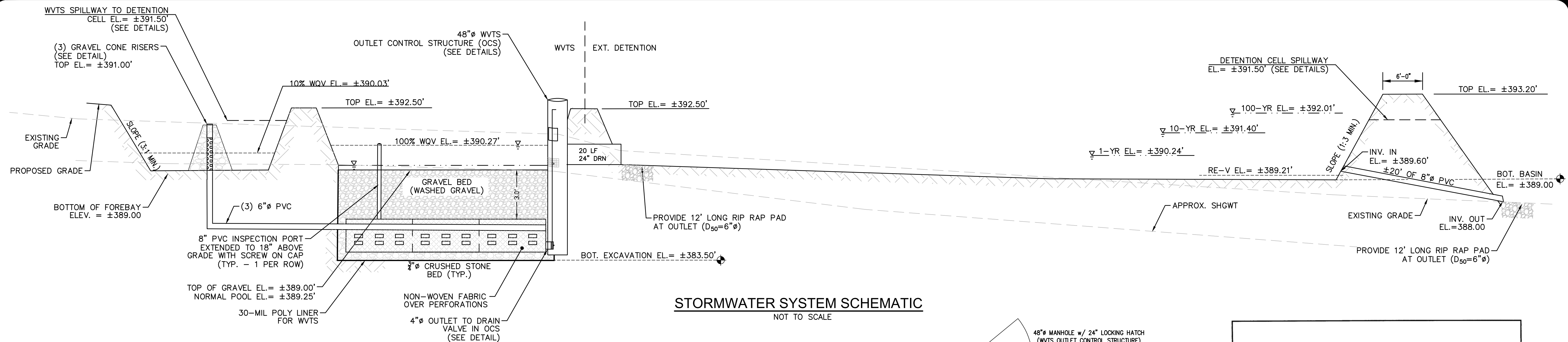
85 CORLISS STREET
P.O. BOX 6145
PROVIDENCE, R.I. 02940
TEL. 401-273-6000

JOB NO. 7482-00 DWG. NO. 7482-00-BASE_PRELIMINARY	DRAWN BY K.J.A./J.R.M. CHECK BY S.S.H.
SCALE: AS SHOWN	APPROVED S.S.H. DATE: NOVEMBER, 2024

SHEET

C-5

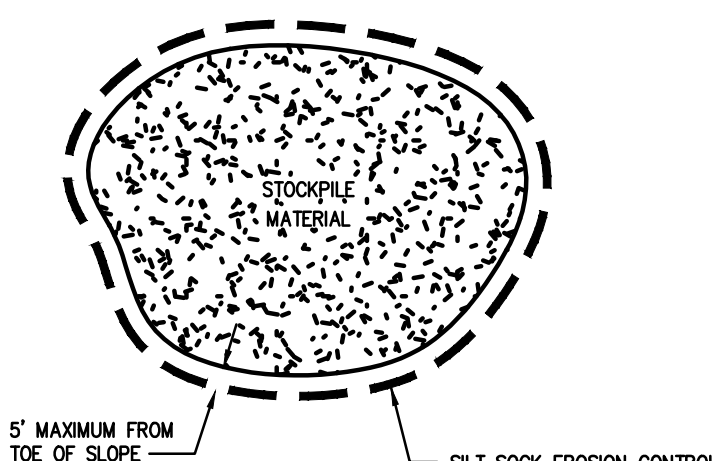
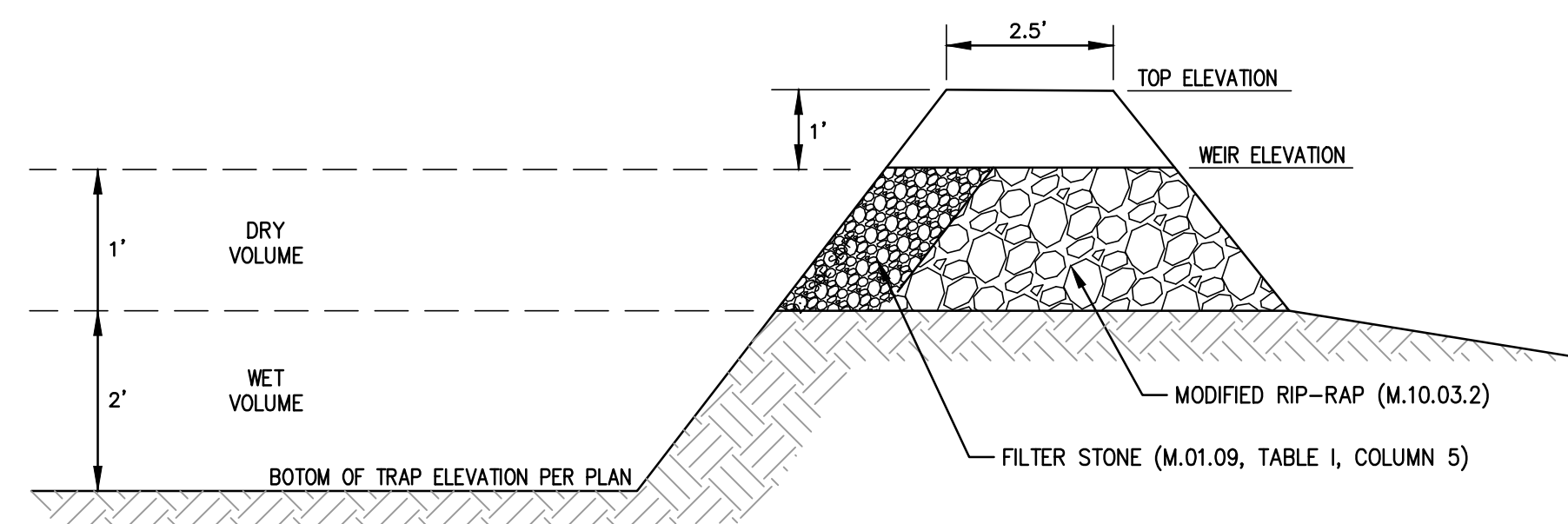
8 OF 10 SHEETS



SHRUB				
KEY	BOTANICAL NAME COMMON NAME	QTY.	SIZE	NOTE
IVR	ILEX VERTICILLATA 'RED SPRITE' RED SPRITE WINTER BERRY	10	#2 CONTAINER	

GROUNDCOVERS, PERENNIALS, AND VINES				
KEY	BOTANICAL NAME COMMON NAME	QTY.	SIZE	NOTE
AG	ANDROPOGON GLIOSTEROS BUSHY BURNING	12	#1 CONTAINER	
EP	ECINACEA PURPUREA PURPLE CONEFLOWER	12	#1 CONTAINER	
IV	IRIS VERSICOLOR BLUE FLAG	12	#1 CONTAINER	
R11	RUDBECKIA HIRTZA BLACK EGG SUSAN	8	#1 CONTAINER	

RECOMMENDED BIORETENTION PLANT LIST BASED ON A
TYPICAL 200s.f. BOTTOM AREA, OR AS PROVIDED BY
LANDSCAPE SPECIALIST.



CONSTRUCTION DETAILS - 1

FOR
R & T ESTATES
(A.P. 29, LOT 2)

SITUATED AT
3300 LATEN KNIGHT ROAD
CRANSTON, RI
PREPARED FOR
MOSES RYAN LTD.

[illegible]

GAROFALO
GAROFALO & ASSOCIATES, INC.
CIVIL & STRUCTURAL ENGINEERS
SURVEYORS
LAND PLANNERS
ENVIRONMENTAL SCIENTISTS

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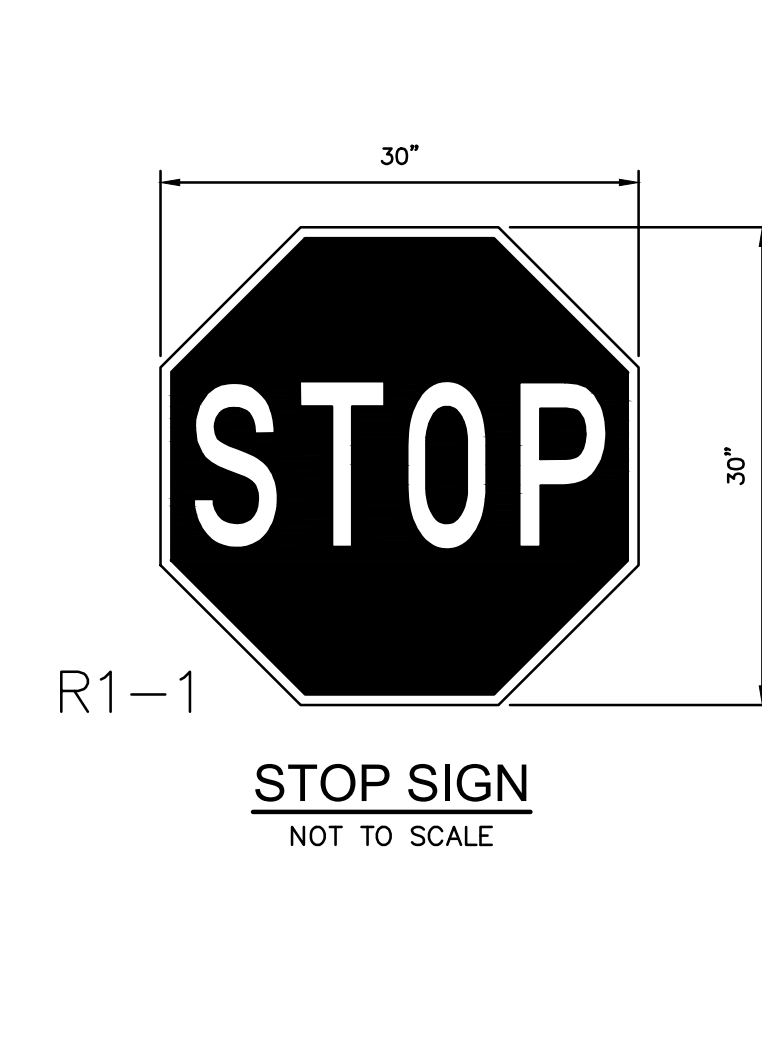
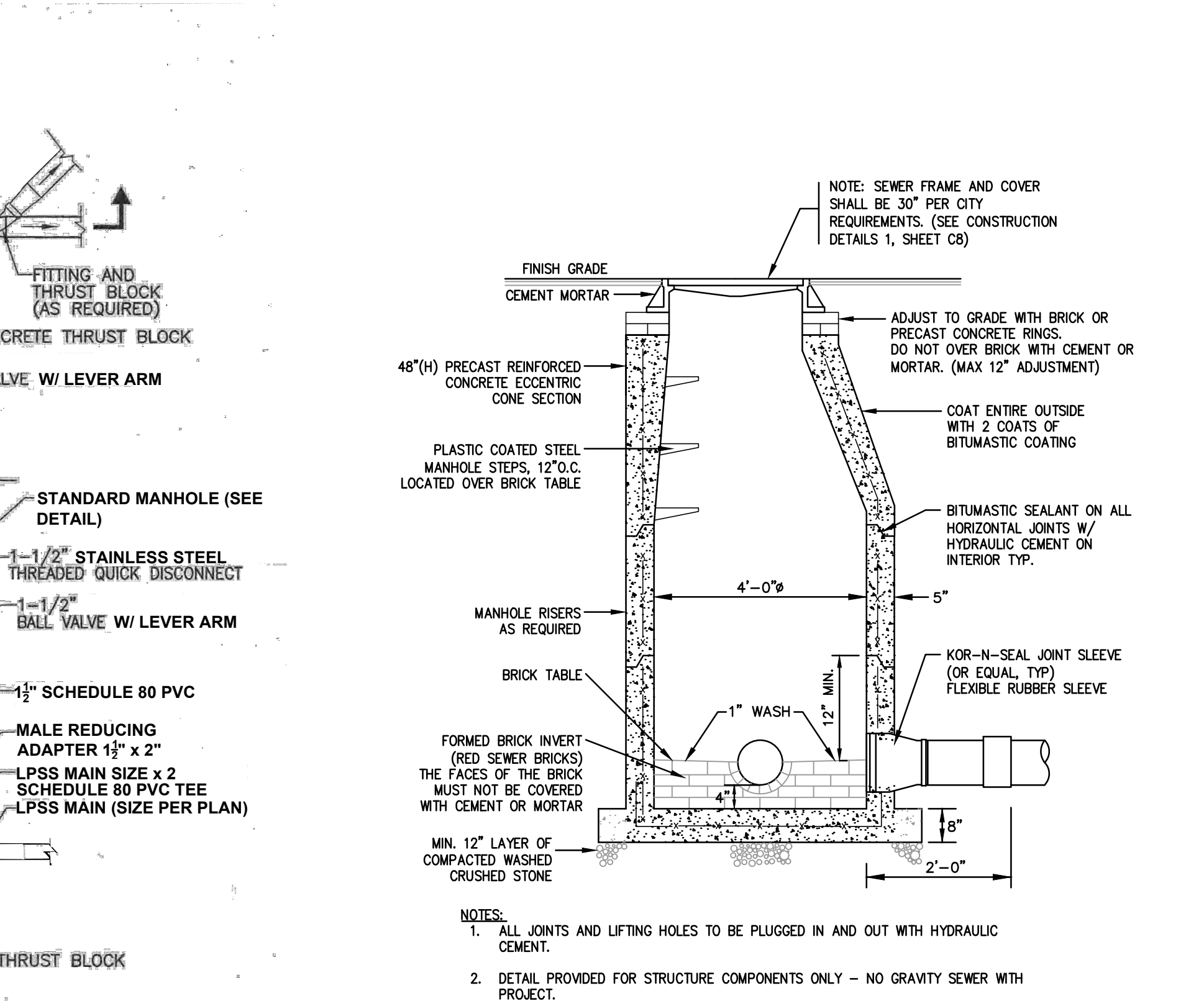
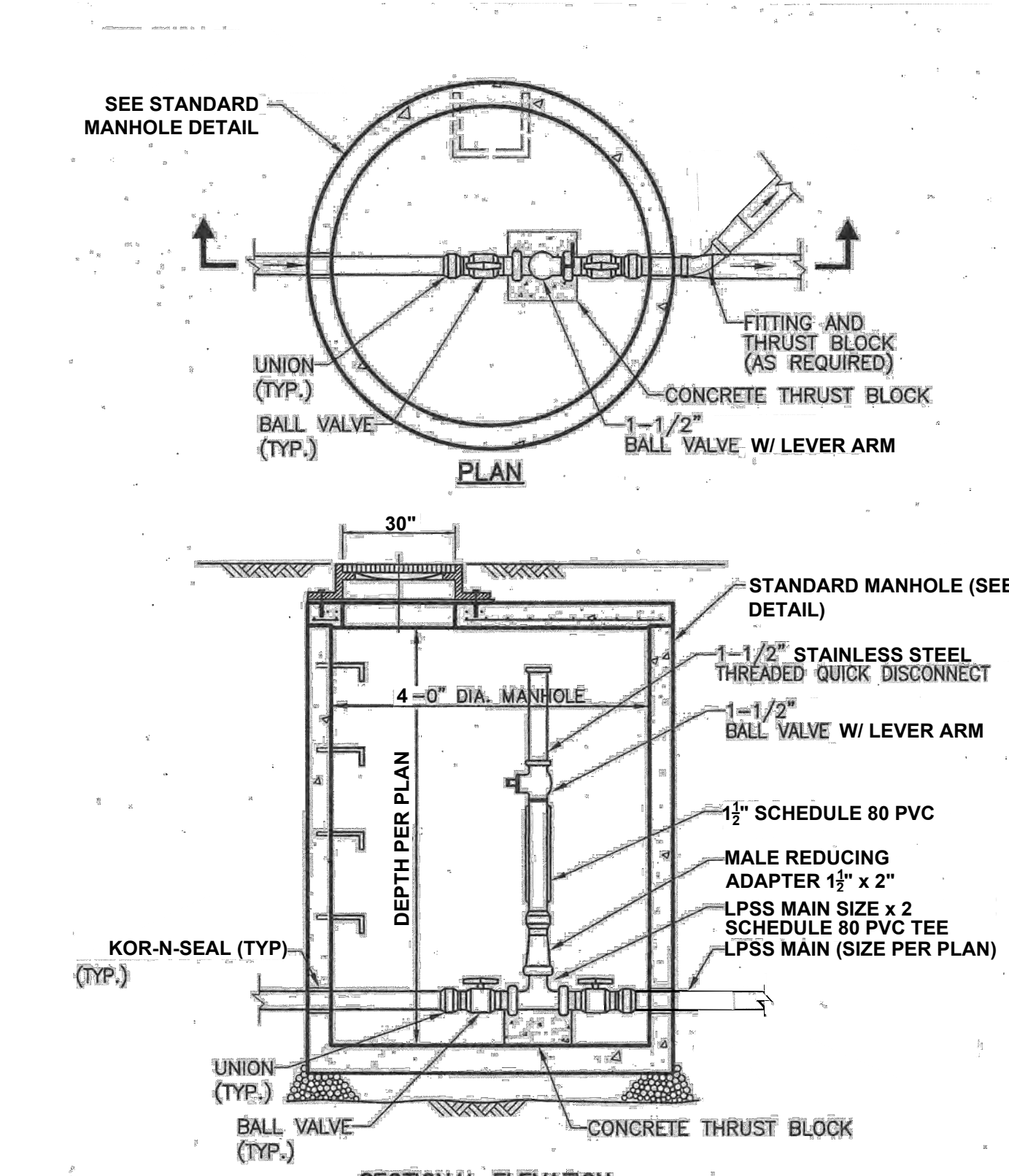
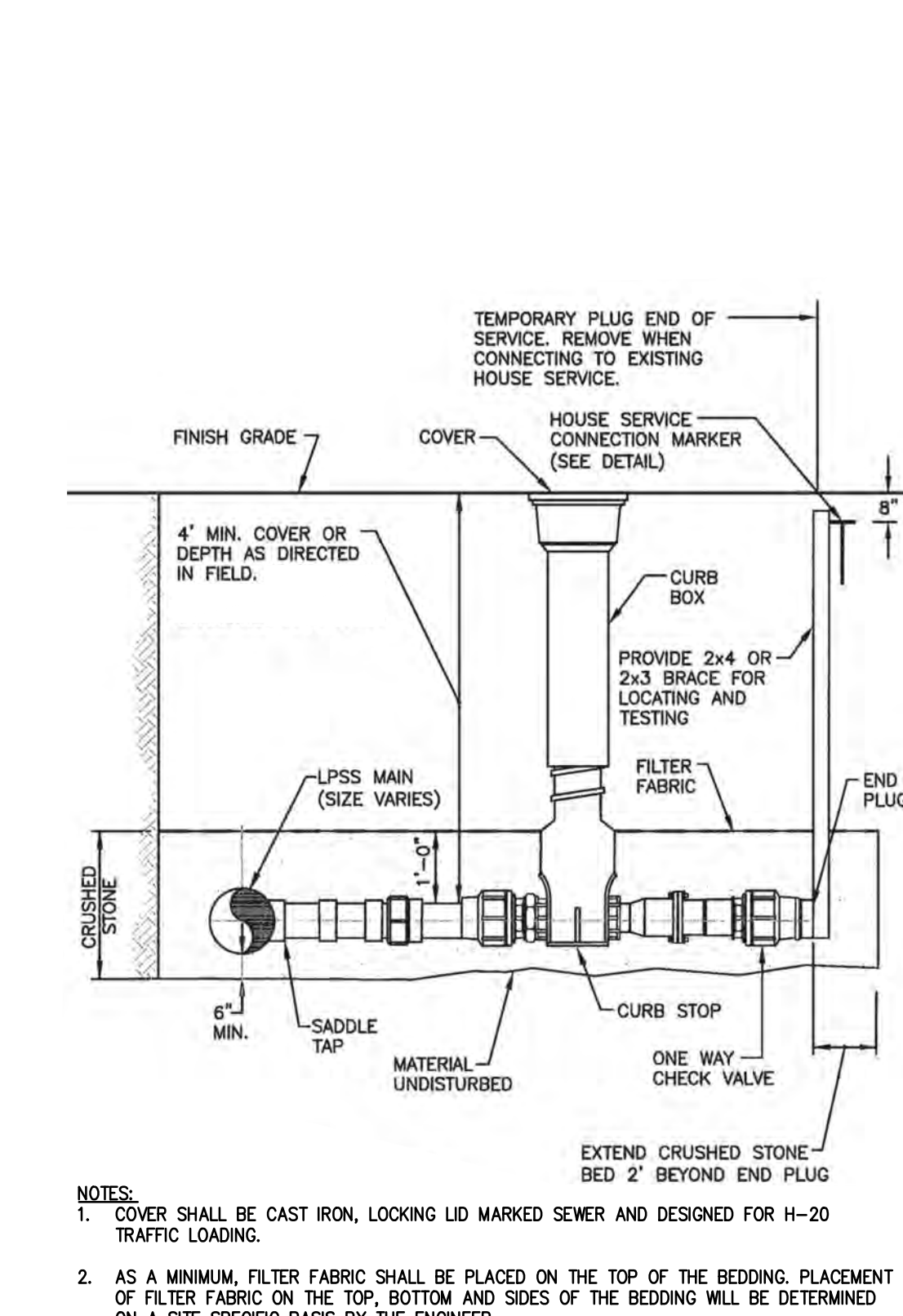
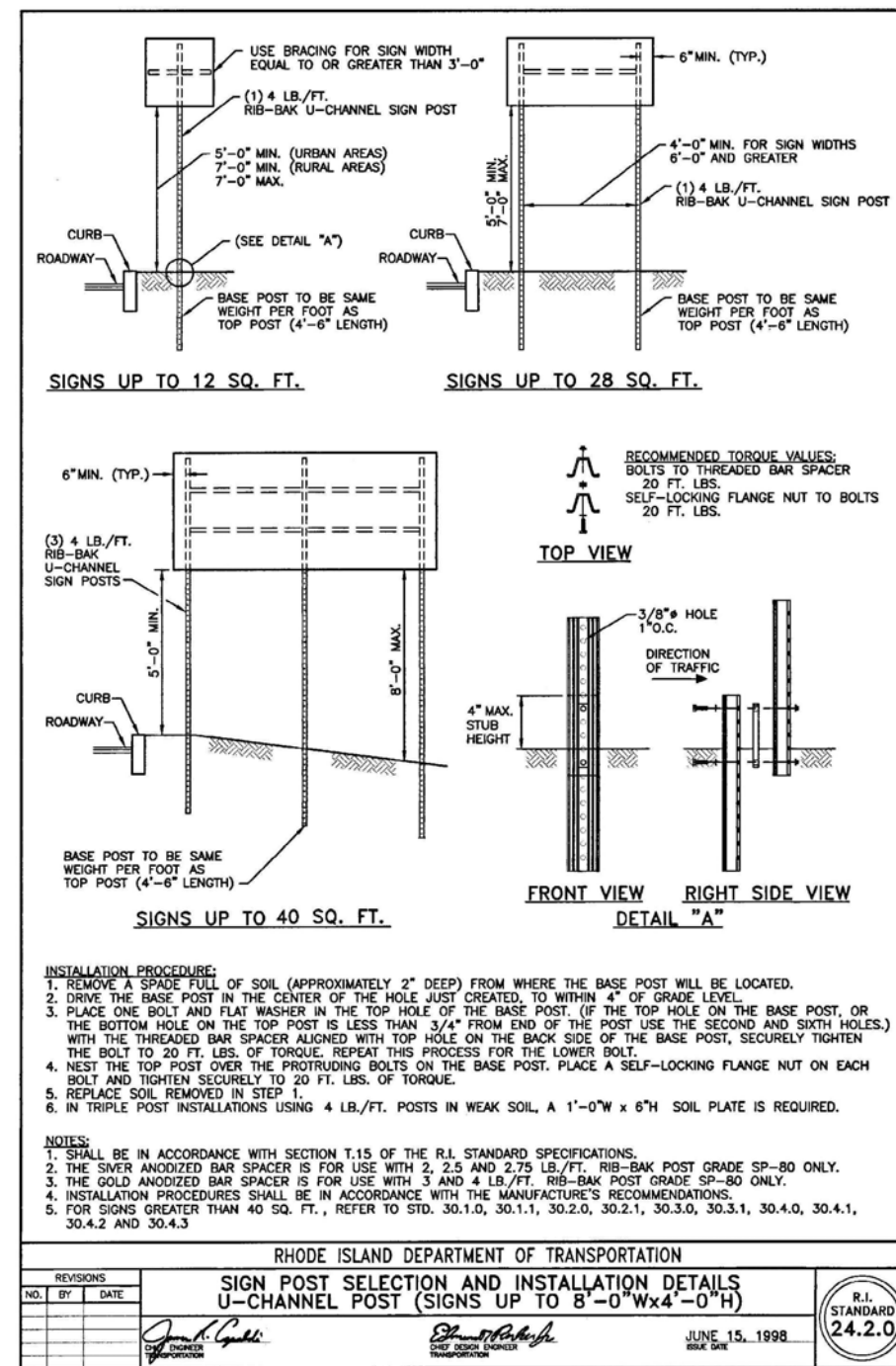
35 CORLISS STREET
P.O. BOX 6145
PROVIDENCE, R.I. 02940
TEL. 401-273-6000

JOB NO. 7482-00 DWG. NO. 482-00_DETAILS_PRELIMINARY	DRAWN BY K.J.A./J.R.M. CHECK BY S.S.H.
SCALE: AS SHOWN	APPROVED S.S.H. DATE: NOVEMBER, 2024

SHEET

C-6

9 OF 10 SHEETS

[illegible]

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LAND PLANNERS/ENVIRONMENTAL SCIENTISTS

JOB NO. 7482--00 DWG. NO. 482-00_DETAILS_PRELIMINARY	DRAWN BY K.J.A./J.R.M. CHECK BY S.S.H.
SCALE: AS SHOWN	APPROVED S.S.H. DATE: NOVEMBER, 2024

C-7

10 OF 10 SHEETS

PRELIMINARY NARRATIVE

GAI PN 7482-00

RE: Preliminary Submission
R & T Estates - Minor Residential Subdivision
Map 29, Lot 2
300 Laten Knight Road - Cranston, Rhode Island

DATE: November 15, 2024

This Narrative has been developed on behalf of the applicant, Moses Ryan Ltd., to outline the conditions associated with a proposed Minor Residential Subdivision of Assessor's Plat 29 Lot 2 in the City of Cranston. The project consists of a single lot being subdivided into a total of five (5) lots with access through a new private road, stemming from Laten Knight Road.

The project area consists of approximately 29-acres and is located on the south side of Laten Knight Road. The property is in the Residential District, A-80 and does not fall within any overlay zones. The property currently contains a residential dwelling and associated yard about two (2) acres in size as the remainder of the property is undeveloped and wooded. Grades are fairly gentle and generally run south through the site. DiPrete Engineering has delineated the wetlands located on-site

The *Soil Survey of Rhode Island* prepared by the US Department of Agriculture, Soil Conservation Service depicts the underlying soils on the site to be primarily comprised of Woodbridge fine sandy loams (WhA and WoB). The Hydrologic Soil Group classification for both soil types is C/D, however, both noted to be moderately well drained. On-site soils are generally considered suitable for development, with the main limitations being the estimated groundwater table elevation. A limited number of soil evaluations have been performed to confirm these general conditions.

The proposed Minor Subdivision includes the creation of a single dead-end road and a total of five wholly compliant residential lots. In accordance with city and zoning regulations, each lot contains a total of 80,000 sf of suitable land area. An Overall Plan is included in the civil plan set to clearly depict the geometry of each lot and the roadway.

The new road is proposed to be a 20' wide private road. The project will be served by private wells and public sewer. The Veolia Sewer Municipality has reviewed the project and their correspondence is attached. Proposed power and telephone are anticipated to be underground with Narragansett Electric. The drainage for the project has been designed in a manner consistent with the goals of the latest update of Rhode Island Department of Environmental Management (RIDEM) Stormwater Management Guidelines and includes a drainage easement for the shared maintenance for the system. Specifically, stormwater management for the proposed development lots incorporates surface retention/infiltration



measures. Best management practices are also employed to control temporary discharges associated with construction activities in accordance with the standards outlined in the Rhode Island Soil and Erosion Sediment Control Handbook.

RIDEM approval has been obtained for Stormwater and Freshwater Wetlands. A copy of those permits are attached to this application for reference.

END OF NARRATIVE





RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
235 Promenade Street
Providence, Rhode Island 02908

October 31, 2024

Lawrence Moses
40 Westminster Street, 9th Floor
Providence, RI, 02903

Freshwater Wetlands Permit

Re: Application No. 24-0135 for the property and project located:

At 300 Laten Knight Road, 300 feet south of Laten Knight Road, 550 feet southwest of the nearest intersection with Beechwood Drive, near Utility Pole No. 31, Assessor's Plat (A.P.) 29, Lot 2, Cranston, RI.

Dear Mr. Moses:

Kindly be advised that the Department of Environmental Management's ("DEM") Freshwater Wetlands Program ("Program") has completed its review of your **Application for a Freshwater Wetlands Permit** as described in Section 3.11 of the Rules and Regulations Governing the Administration and Enforcement of the Fresh Water Wetlands Act, 250-RICR-150-15-3 ("Rules"). This review included a site inspection of the above referenced property ("subject property") and an evaluation of the proposed five-lot subdivision with single-family dwellings, impervious driveways, underground electrical connections, private wells, sewer connections, lighting, landscaping, grade changes, stormwater management and associate work as illustrated and detailed on site plans submitted with your application. These site plans were received by the DEM on October 11, 2024.

Our observations of the subject property, review of the site plans and evaluation of the proposed project reveals that alterations of jurisdictional areas are proposed. However, pursuant to Section 3.7 of the Rules, this project meets all Standards, and a **Freshwater Wetlands Permit** may be issued under the following terms and conditions:

Terms and Conditions for Wetlands Application No. 24-0135: and RIPDES No. RIR102666:

1. This letter is the DEM's permit for this project under the R.I. Fresh Water Wetlands Act, R.I. Gen. Laws § 2-1-18 et seq.
2. This determination also includes your final authorization to discharge storm water associated with construction activity under the **2020 RIDPES General Permit for Stormwater Discharge During Construction Activity ("CGP")**. For future references and inquiry, your permit authorization number is RIPDES No. **RIR102666**. This **RIPDES CGP** permit is not transferable to any person except after written notice to the Director, in the form of a Permit Transfer Form available on the RIDEM Stormwater Construction Permitting website.

3. This permit is specifically limited to the project, site alterations and limits of disturbance as detailed on the site plans submitted with your application and received by the DEM on October 11, 2024. A copy of the site plans stamped approved by the DEM is enclosed. Changes or revisions to the project that would alter freshwater wetlands are not authorized without a permit from the DEM.
4. Where the terms and conditions of the permit conflict with the approved site plans, these terms and conditions shall be deemed to supersede the site plans.
5. You must notify this Program in writing of the anticipated start date, and of your contractor's contact information, by submitting the Notice of Start of Construction Form prior to commencement of any permitted site alterations or construction activity. You must also notify this Program in writing upon completion of the project. The Start of Construction Form can be found on the webpage: dem.ri.gov/stormwaterconstruction.
6. A copy of the stamped approved site plans and a copy of this permit must be kept at the site at all times during site preparation, construction, and final stabilization. Copies of this permit and the stamped approved plans must be made available for review by any DEM or City representative upon request.
7. Within ten (10) days of the receipt of this permit, you must record this permit in the land evidence records of the City of Cranston and supply this Program with written documentation obtained from the City showing this permit was recorded.
8. The effective date of this permit is the date this letter was issued. This permit expires five (5) years from the date of this letter unless renewed pursuant to the Rules.
9. Any material utilized in this project must be clean and free of matter that could pollute any jurisdictional area.
10. Prior to commencement of site alterations, you shall erect or post a sign resistant to the weather and at least twelve (12) inches wide and eighteen (18) inches long, which boldly identifies the initials "DEM" and the application number of this permit. This sign must be maintained at the site in a conspicuous location until such time that the project is complete.
11. Both the owner and the contractor retained to undertake the construction activity are required to comply with all terms and conditions of the CGP. This includes maintaining the Soil Erosion and Sediment Control (SESC) Plan, performing the required inspections and maintenance of the selected Best Management Practices (BMPs), and retaining inspection records. Further information on the requirements of the CGP is available at:
<http://www.dem.ri.gov/programs/benviron/water/permits/ripdes/pdfs/cgp092620.pdf>.
12. Temporary erosion and sediment controls detailed or described on the approved site plans shall be properly installed at the site prior to or commensurate with site alterations. Such controls shall be properly maintained, replaced, supplemented, or modified as necessary throughout the life of this project to minimize soil erosion and to prevent sediment from being deposited in any freshwater wetland, buffer, floodplain, area subject to storm flowage, or area subject to flooding or other jurisdictional areas not subject to disturbance under this permit.
13. Upon permanent stabilization of all disturbed soils, temporary erosion and/or sediment controls must be removed.

14. You are responsible for the proper installation, operation, maintenance and stability of any mitigative features, stormwater treatment facilities, and systems of treatment and control that are installed or used in compliance with this permit to prevent harm to adjacent freshwater wetland, buffer or floodplain, area subject to storm flowage, or area subject to flooding or other jurisdictional areas until documentation is provided that this responsibility has been assigned to another entity. The long-term operation and maintenance plan shall be strictly followed. The long-term O & M Plan shall be that entitled "Stormwater Management System Operation and Maintenance Plan for: R&T Estates Residential Subdivision Assessor's Plat 29, Lot 2 – 300 Laten Knight Road – Cranston, Rhode Island" submitted initially on May 31, 2024, revised on September 3, 2024, and then revised again on October 11, 2024, by Garofalo & Associates, Inc. located at 85 Corliss Street in Providence, RI 02940.
15. You are obligated to install, utilize and follow all best management practices detailed or described on the approved site plans in the construction of the project to minimize or prevent adverse impacts to any adjacent freshwater wetland, buffer or floodplain, area subject to storm flowage or area subject to flooding or jurisdictional areas and the functions and values provided by such freshwater wetlands, buffer or floodplain, area subject to storm flowage or area subject to flooding.
16. Artificial lighting must be directed away from all vegetated wetland and buffer areas. Where this is not possible, the use of deflectors to concentrate lighting away from vegetated wetlands must be employed.
17. You must provide written certification from a registered land surveyor or registered professional engineer that the stormwater drainage system including any and all basins, piping systems, catch basins, culverts, swales and any other stormwater management control features have been constructed/installed in accordance with the site plans approved by this permit. This written certification must be submitted to this Program within twenty (20) days of its request or upon completion of the project.

Pursuant to the provisions in 250-RICR-150-15-3.8.13 and 250-RICR-150-15-3.14.4(A), as applicable, any properly recorded and valid Freshwater Wetlands Permit is automatically transferred to the new owner upon sale of the property.

Please be aware that the RIDEM's Rules and Regulations Governing the Establishment of Various Fees (250-RICR-30-00-1) require that RIPDES CGP permit holders to pay an Annual Fee of \$100.00. An invoice will be sent to the owner on record in May/June of each year if the construction was still active as of December 31st of the previous year. The owner will be responsible for the Annual Fee until the construction activity has been completed, the site has been properly stabilized, and a completed Notice of Termination (NOT) has been received by the RIPDES Program.

You are required to comply with the terms and conditions of this permit and to carry out this project in compliance with the Rules at all times. Failure to do so may result in an enforcement action by this Department.

In permitting the proposed alterations, the DEM assumes no responsibility for damages resulting from faulty design or construction.

Kindly be advised that this permit is not equivalent to a verification of the type or extent of freshwater wetlands on site. Should you wish to have the types and extent of freshwater wetlands verified, you may submit the appropriate application in accordance with 250-RICR-150-15-3.9.3.

This permit does not remove your obligation to obtain any local, state, or federal approvals or permits required by ordinance or law and does not relieve you from any duties owed to adjacent landowners with specific reference to any changes in drainage.

Please contact Ryan Corvese of this office (telephone: 401-537-4245) should you have any questions regarding this letter.

Sincerely,



Nancy L. Freeman, Environmental Scientist III
Office of Water Resources
Freshwater Wetlands Program

NLF/RKC/rkc

Enclosure: Approved site plans

cc: Neal Personeus, RIDEM Stormwater Program, Environmental Engineer III
Christopher Dill, RIDEM, Environmental Engineer II
Sam Hemenway, PE, Project Manager, Garofalo & Associates, Inc.
David Rodio, Building Official, City of Cranston

PROPERTY OWNERS WITHIN 100'

A.P. 29, LOT 2

Warwick, Rhode Island

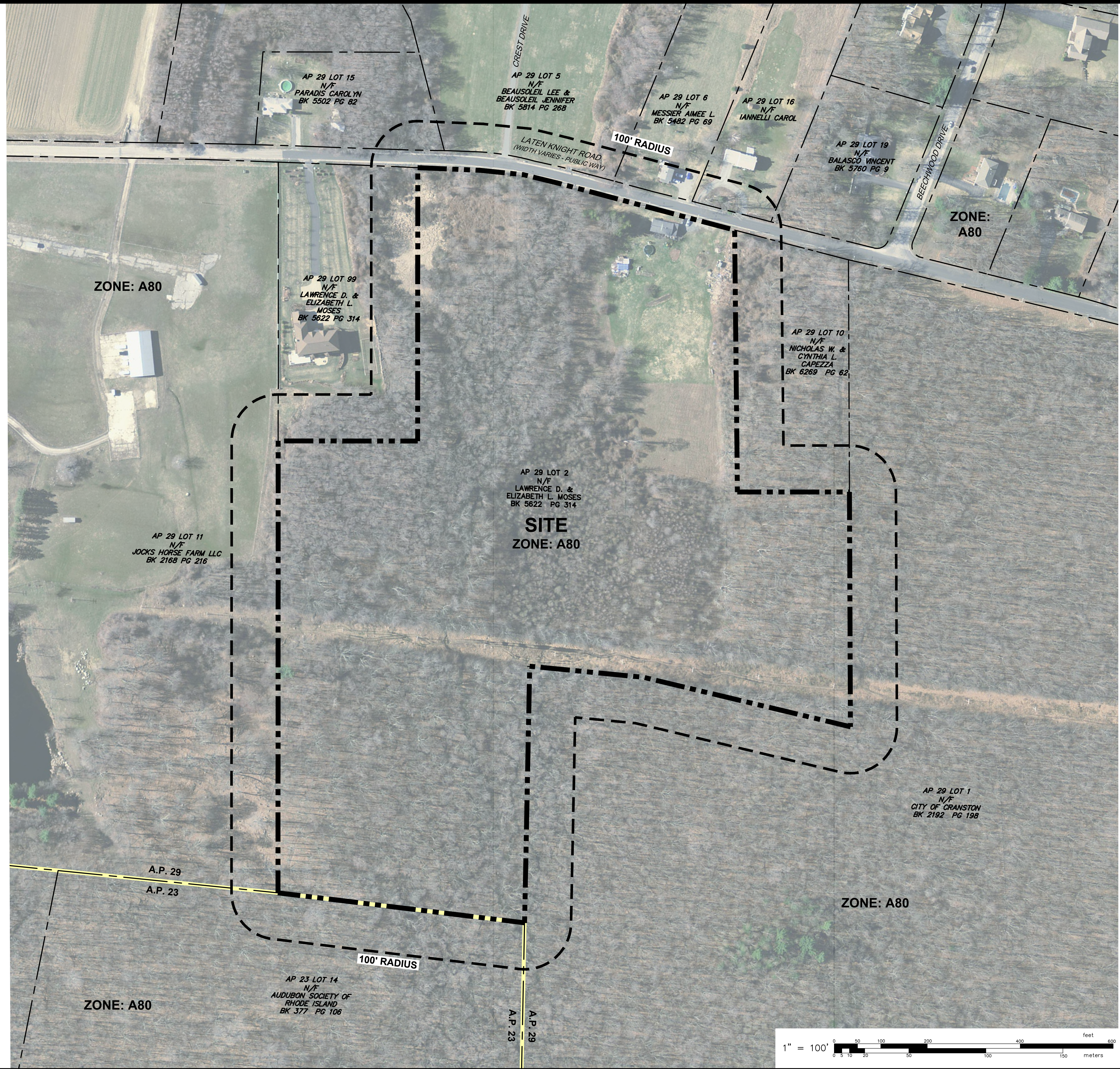
Project No. 7482-00

Date of Research: July 2, 2024

<u>Plat</u>	<u>Lot</u>	<u>Condo</u>	<u>Owner/ Name/ Address/</u>
23	14		AUDUBON SOCIETY OF RI 12 SANDERSON ROAD SMITHFIELD, RI 02917
29	1		CITY OF CRANSTON 869 PARK AVE CRANSTON, RI 02910
29	2 & 99		LAWRENCE D. & ELIZABETH L. MOSES 380 LATEN KNIGHT RD CRANSTON, RI 02921
29	5		LEE & JENNIFER BEAUSOLEIL 341 LATEN KNIGHT RD CRANSTON, RI 02921
29	6		AIMEE L. MESSIER 321 LATEN KNIGHT RD CRANSTON, RI 02921
29	10		NICHOLAS W. & CYNTHIA L. CAPEZZA 745 LATEN KNIGHT ROAD CRANSTON, RI 02921
29	11		JOCK'S HORSE FARM LLC 55 HOLLY HILL LN CRANSTON, RI 02921
29	15		PARADIS CAROLYN 385 LATEN KNIGHT ROAD CRANSTON, RI 02921
29	16		CAROL IANNELLI 305 LATEN KNIGHT RD CRANSTON, RI 02921
29	19		VINCENT BALASCO 255 BEECHWOOD DRIVE CRANSTON, RI 02921

* Mailing addresses obtained from the City of Warwick Assessor's Tax Map, recent update.





PRELIMINARY PLAN
100' RADIUS MAP
FOR
R & T ESTATES I
(A.P. 29, LOT 2)
SITUATED AT
300 LATEN KNIGHT ROAD
CRANSTON, RI
PREPARED FOR
MOSES RYAN LTD

[illegible]

CAROFALO
GAROFALO & ASSOCIATES, INC.
CIVIL & STRUCTURAL ENGINEERS/SURVEYORS
LAND PLANNERS/ENVIRONMENTAL SCIENTISTS

Garofalo & Associates (C) These drawings are the property of the engineer/surveyor and have been prepared for the owner, for this project at this site and are not to be used for any other purpose, location or owner without written consent of this owner or one of its directors.

85 CORLISS STREET
P.O. BOX 6145
PROVIDENCE, R.I. 02940
TEL. 401-273-6000

JOB NO. 7482-00 DWG. NO. 7482-00-VICINITY MAP SCALE: AS SHOWN	DRAWN BY K.Y.Y. CHECK BY S.S.H.
	APPROVED S.S.H. DATE: JUNE, 2024

SHEET

R-1

1 OF 1 SHEET

CURRENT OWNER		TOPO		UTILITIES		STRT / ROAD		LOCATION		CURRENT ASSESSMENT				5403 CRANSTON, RI VISION								
MOSES LAWRENCE D MOSES ELIZABETH L 380 LATEN KNIGHT RD CRANSTONRI02921-3210		1	Level	5	Well	1	Paved	2	Suburban	Description	Code	Appraised Value	Assessed Value									
				7	Electric					RESIDENTL	0100	153,100	153,100									
								RES LND	0100	376,800	376,800											
SUPPLEMENTAL DATA																						
		GIS ID29-2																				
		PROP ID29-2-0																				
										Total		529,900	529,900									
RECORD OF OWNERSHIP		BK-VOL/PAGE		SALE DATE		Q/U		V/I		SALE PRICE		VC		PREVIOUS ASSESSMENTS (HISTORY)								
MOSES LAWRENCE D MOSES LAWRENCE D MOSES LAWRENCE D MOSES LAWRENCE D MOSES LAWRENCE D		5622	0314	07-13-2018						0				Year	Code	Assessed	Year	Code	Assessed V	Year	Code	Assessed
		0	0	07-15-2014						0				2023	0100	153,100	2022	0100	153,100	2022	0100	153,100
		0	0	02-11-2009						0					0100	376,800		0100	376,800		0100	376,800
		3978	0147	01-14-2009						0												
		3779	0177	11-15-2007						0												
										Total		529,900	Total	529,900	Total	529,900	Total	529,900				
EXEMPTIONS				OTHER ASSESSMENTS				This signature acknowledges a visit by a Data Collector or Assessor														
Year	Code	Description		Amount		Code	Description		Number	Amount		Comm Int										
Total				0.00																		
ASSESSING NEIGHBORHOOD														APPRaised VALUE SUMMARY								
Nbhd		Sub		Nbhd Name		B		Tracing		Batch		Appraised Bldg. Value (Card)						153,100				
0060		A										Appraised Xf (B) Value (Bldg)						0				
												Appraised Ob (B) Value (Bldg)						0				
												Appraised Land Value (Bldg)						376,800				
												Special Land Value						0				
												Total Appraised Parcel Value						529,900				
												Valuation Method						C				
												Total Appraised Parcel Value						529,900				
BUILDING PERMIT RECORD														VISIT / CHANGE HISTORY								
Permit Id	Issue Date	Type	Description	Amount	Insp Date	% Comp	Date Comp	Comments		Date	Id	Type	Is	Cd	Purpose/Result							
1111	08-25-2003	RS	Residential	4,450	12-31-2003	100		STRIP-RE/ROOF		10-23-2020	DM			11	Reviewed							
1433	12-14-1999	RE	Remodel	1,000	12-31-2000	50	12-31-2001	INT/RENO		10-12-2017	DM			11	Reviewed							
										10-23-2014	DM			11	Reviewed							
										07-24-2014	WD			02	Measur+2Visit							
										07-24-2014	WD			01	Measur+1Visit							
										07-09-2011	DM			11	Reviewed							
										11-26-2008	KE			BP	Building Permit							
LAND LINE VALUATION SECTION																						
B	Use Code	Description	Zone	Land Type	Land Units	Unit Price	Size Adj	Site Index	Cond.	Nbhd.	Nbhd. Adj	Notes		Location Adjustment		Adj Unit P	Land Value					
1	1010	SINGLE FAM M	A80		87,120	SF	1.29	1.00000	5	1.00	0060	1.400	AREA DEC SEE LOT 99		1.0000	1.81	157,300					
1	1010	SINGLE FAM M	A80		2.000	AC	12,000.00	1.00000	5	1.00	0060	1.400			1.0000	16,800	33,600					
1	1010	SINGLE FAM M	A80		25.000	AC	12,000.00	1.00000	5	0.40	0060	1.400	TOPO/LOW		1.0000	6,720	168,000					
1	1010	SINGLE FAM M	A80		800.000	FF	40.00	1.00000	0	0.40	0060	1.400	TOPO/LOW		1.0000	22.4	17,900					
Total Card Land Units					29.00	AC	Parcel Total Land Area			29.00	AC			Total Land Value			376,800					

The diagram shows a three-story building layout. The leftmost section is a small red-outlined box labeled '6 WDK' at the top, with '8' on the left and '6' at the bottom. To its right is a large blue-outlined rectangle divided into three vertical sections. The top section is labeled 'BAS' and '11' at the top left and '11' at the bottom left. The middle section is labeled 'EAU', 'BAS', and 'UBM' at the top left and '23' at the bottom left. The right section is labeled 'BAS' and 'UBM' at the top right and '23' at the bottom right. The number '26' appears in the middle of each of the three vertical sections. The number '8' is also present in the middle of the first section.



VEOLIA WATER NORTH AMERICA
140 Pettaconsett Avenue
Cranston, RI 02920

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Fax : 401-781-5260
www.veoliawatema.com

November 14, 2024

Mr. Edward Tally
Environmental Program Manager
City of Cranston
869 Park Avenue
Cranston, Rhode Island 02910

Re: Availability of Sewer Service Letter
300 Laten Knight Road
Assessor's Plat 29 Lot 2

Dear Mr. Tally,

Veolia Water, Cranston, Rhode Island (VW) has received a correspondence from Joshua Morrow from Garofalo and Associates on November 8, 2024 requesting an availability of sewer service for the above referenced address. The proposed site is located at 300 Laten Knight Road at approximately station 39+63 and is intended to be a 5 lot residential subdivision connected to the city's 2.0" low pressure force main (LPFM) on the south side of the street and subsequently into the Rhode Island State Energy (RISE) line.

At this time, sewer is available. If this project moves forward, a complete set of plans and supporting hydraulic calculations will be required. Considerations as to an adequate hydraulic capacity will be required prior to connecting.

Please note that this is not an approval of a sewer service connection. Any new connection requirement shall be through the City of Cranston's approval process. If a new sewer lateral connection is needed, we will require a fee of \$5,500 payable Universal Excavating to install the tap and shutoff and a \$825 inspection fee must be paid prior to scheduling of work.

If you have any questions, you can reach me at (401) 824-0064.

Sincerely,
Veolia Water

A handwritten signature in blue ink that reads 'John C. Arruda Jr.'.

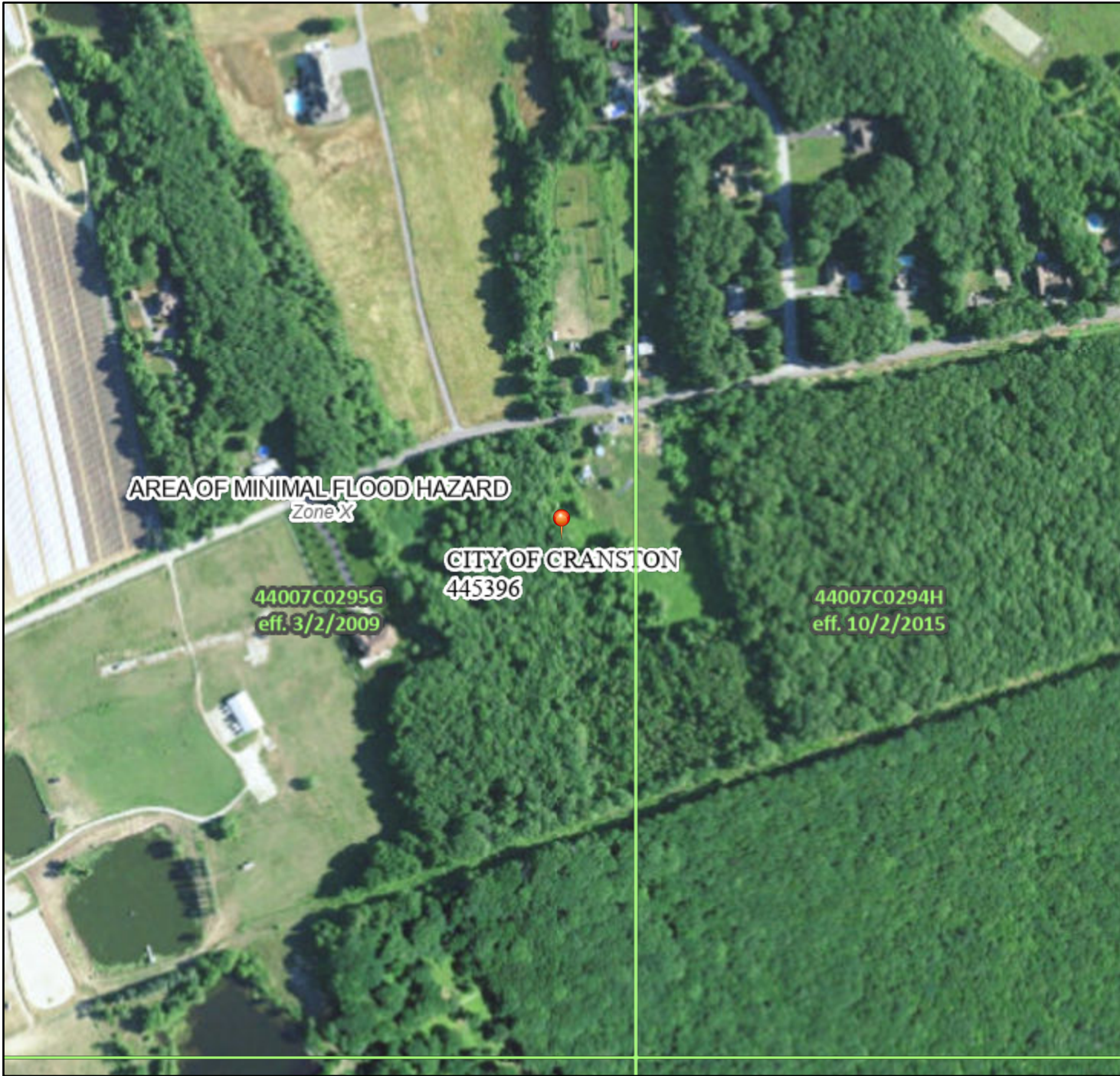
John C. Arruda Jr.
Civil Engineer - Underground Asset Manager

xc: Earl Salisbury, Veolia Project Manager
James Thomas, Veolia Collections Systems Supervisor

National Flood Hazard Layer FIRMMette



71°32'14"W 41°45'26"N



0 250 500 1,000 1,500 2,000 Feet

1:6,000

71°31'36"W 41°45'N

Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) Zone A, V, A99
		With BFE or Depth Zone AE, AO, AH, VE, AR
		Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee. See Notes. Zone X
		Area with Flood Risk due to Levee Zone D
OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard Zone X
		Effective LOMRs
		Area of Undetermined Flood Hazard Zone D
GENERAL STRUCTURES		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall
OTHER FEATURES		20.2 Cross Sections with 1% Annual Chance Water Surface Elevation
		17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
		Coastal Transect Baseline
MAP PANELS		Digital Data Available
		No Digital Data Available
		Unmapped



The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on **1/4/2024 at 10:49 AM** and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.