QUALIFYING PERVIOUS AREA (QPA)

1. TO PREVENT COMPACTION OF THE SOIL IN THE QPA, CONSTRUCTION VEHICLES MUST NOT BE ALLOWED TO DRIVE OVER THE AREA. IF IT BECOMES COMPACTED, THE SOIL MUST BE SUITABLY AMENDED, TILLED, AND RE-VEGETATED ONCE CONSTRUCTION IS COMPLETE TO RESTORE INFILTRATION CAPACITY.
2. APPROVED NATIVE PLANTS FROM THE RI COASTAL PLANT GUIDE (WWW.URI.EDU/CELS/CEOC/COASTALPLANTS/COASTALPLANTGUIDE.HTM) OR APPENDIX B OF THE RI STORMWATER DESIGN AND INSTALLATION STANDARDS MANUAL SHALL BE USED FOR THE QPA. ADDITIONAL PLANTING GUIDANCE CAN BE FOUND IN THE CRMC COASTAL BUFFER ZONE PLANTING GUIDE (HTTP://WWW.CRMC.RI.GOV/COASTALLANDSCAPES/COASTAL_BUFFER_PLANTING_GUIDE.PDF).
3. FOR MAINTENANCE THE QPA MUST BE INSPECTED AND MAINTAINED AT LEAST YEARLY TO REMOVE DEPOSITED SEDIMENT AND ADDRESS ANY PONDING OR EROSION, AND REPLANT VEGETATION WITHIN THE QPA THAT HAS DIED.

VEGETATED SWALE

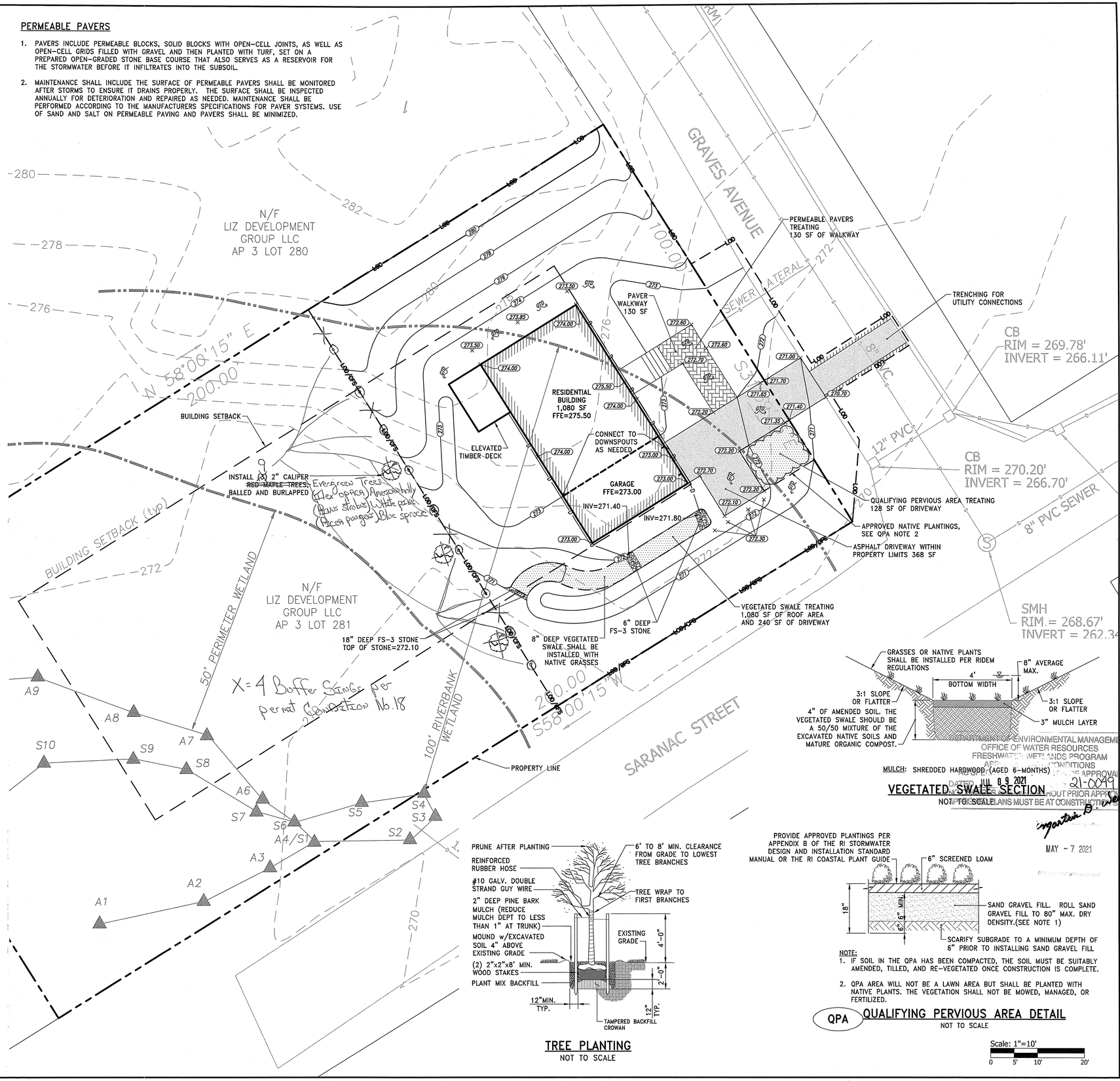
1. TO PREVENT COMPACTION OF THE SOIL IN THE VEGETATED SWALE, CONSTRUCTION VEHICLES MUST NOT BE ALLOWED TO DRIVE OVER THE AREA. IF IT BECOMES COMPACTED, THE SOIL MUST BE SUITABLY AMENDED, TILLED, AND RE-VEGETATED ONCE CONSTRUCTION IS COMPLETE TO RESTORE INFILTRATION CAPACITY.
2. VEGETATED SWALES SHALL BE INSPECTED ANNUALLY AND SHOULD BE INSPECTED AFTER LARGE STORM EVENTS.
3. ERODED SIDE SLOPES AND CHANNEL BOTTOMS SHALL BE STABILIZED AS NECESSARY.
4. IF THE SURFACE OF THE DRY SWALE BECOMES CLOGGED TO THE POINT THAT STANDING WATER IS OBSERVED ON THE SURFACE 48 HOURS AFTER PRECIPITATION EVENTS, THE BOTTOM SHALL BE ROTO-TILLED OR CULTIVATED TO BREAK UP ANY HARD-PACKED SEDIMENT, AND THEN RESEEDED.
5. VEGETATION IN DRY SWALES SHALL BE MOWED AS REQUIRED TO MAINTAIN MINIMUM GRASS HEIGHTS IN THE 4-6 INCH RANGE.
6. EVERY FIVE YEARS, THE CHANNEL BOTTOM OF DRY SWALES SHOULD BE SCRAPED TO REMOVE SEDIMENT AND TO RESTORE ORIGINAL CROSS SECTION AND INFILTRATION RATE, AND SHOULD BE SEEDED TO RESTORE GROUND COVER, WHERE NECESSARY.

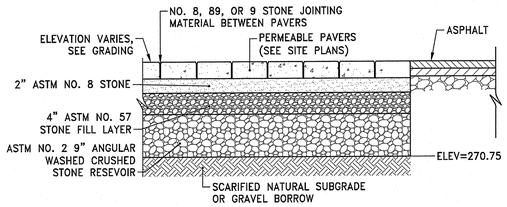
LEGEND

- LOD — LIMIT OF DISTURBANCE
- LOD/CFS — LIMIT OF DISTURBANCE/COMPOST FILTER SOCK
- GTD — GRADE TO DRAIN

PERMEABLE PAVERS

1. PAVERS INCLUDE PERMEABLE BLOCKS, SOLID BLOCKS WITH OPEN-CELL JOINTS, AS WELL AS OPEN-CELL GRIDS FILLED WITH GRAVEL AND THEN PLANTED WITH TURF, SET ON A PREPARED OPEN-GRADED STONE BASE COURSE THAT ALSO SERVES AS A RESERVOIR FOR THE STORMWATER BEFORE IT INFILTRATES INTO THE SUBSOIL.
2. MAINTENANCE SHALL INCLUDE THE SURFACE OF PERMEABLE PAVERS SHALL BE MONITORED AFTER STORMS TO ENSURE IT DRAINS PROPERLY. THE SURFACE SHALL BE INSPECTED ANNUALLY FOR DETERIORATION AND REPAIRED AS NEEDED. MAINTENANCE SHALL BE PERFORMED ACCORDING TO THE MANUFACTURERS SPECIFICATIONS FOR PAVER SYSTEMS. USE OF SAND AND SALT ON PERMEABLE PAVING AND PAVERS SHALL BE MINIMIZED.





NOTES:

1. PERMEABLE PAVERS SHALL BE SOLID BLOCKS WITH OPEN-CELL JOINTS WITH A SURFACE AREA GREATER THAN 15%. THIS TYPE OF PAVER SURFACE INCLUDES INTERLOCKING IMPERMEABLE SOLID BLOCKS OR OPEN GRID CELLS THAT MUST CONTAIN PERMEABLE VOID AREAS (BETWEEN THE IMPERMEABLE BLOCKS) EXCEEDING 15% OF THE SURFACE AREA OF THE PAVING SYSTEM.
2. PAVERS INCLUDE PERMEABLE BLOCKS, SOLID BLOCKS WITH OPEN-CELL JOINTS, AS WELL AS OPEN-CELL GRIDS FILLED WITH GRAVEL AND THEN PLANTED WITH TURF, SET ON A PREPARED OPEN-GRADED STONE BASE COURSE THAT ALSO SERVES AS A RESERVOIR FOR THE STORMWATER BEFORE IT INFILTRATES INTO THE SUBSOIL.
3. PAVERS SHALL MEET THE MINIMUM MATERIAL AND PHYSICAL PROPERTIES SET FORTH IN ASTM C 936, STANDARD SPECIFICATION FOR INTERLOCKING CONCRETE PAVING UNITS.
4. CONTRACTOR SHALL PROVIDE A PAVER MATERIAL SAMPLE FOR REVIEW BY THE OWNER.
5. APPLY THE JOINT MATERIAL TO THE SURFACE AND SWEEP INTO THE JOINTS AND VOIDS. FILL JOINTS AND VOIDS THEN SWEEP OFF EXCESS MATERIAL BEFORE VIBRATING THE MATERIAL DOWN INTO THE JOINTS USING A PLATE COMPACTOR. THIS WILL TYPICALLY REQUIRE TWO TO THREE PASSES WITH THE PLATE COMPACTOR. DO NOT COMPACT WITHIN 6 FEET OF UNRESTRAINED EDGES OF THE PAVING UNITS.
6. PAVERS SHOULD BE PROFESSIONALLY INSTALLED IN ACCORDANCE WITH THE MANUFACTURES SPECIFICATIONS. ADDITIONAL INFORMATION ON PAVER SYSTEMS INCLUDING A LIST OF APPROVED INSTALLERS CAN BE FOUND AT INTERLOCKING CONCRETE PAVEMENT INSTITUTE WEBSITE AT: WWW.ICPI.ORG.

PERMEABLE PAVERS
NOT TO SCALE

TREE PLANTING
NOT TO SCALE

MULCH: SHREDDED HARDWOOD (AGED 6-MONTHS)

VEGETATED SWALE SECTION
NOT TO SCALE

PROVIDE APPROVED PLANTINGS PER APPENDIX B OF THE RI STORMWATER DESIGN AND INSTALLATION STANDARD MANUAL OR THE RI COASTAL PLANT GUIDE

NOTE:
1. IF SOIL IN THE QPA HAS BEEN COMPACTED, THE SOIL MUST BE SUITABLY AMENDED, TILLED, AND RE-VEGETATED ONCE CONSTRUCTION IS COMPLETE.
2. QPA AREA WILL NOT BE A LAWN AREA BUT SHALL BE PLANTED WITH NATIVE PLANTS. THE VEGETATION SHALL NOT BE MOWED, MANAGED, OR FERTILIZED.

QPA **QUALIFYING PERVIOUS AREA DETAIL**
NOT TO SCALE

Scale: 1"=10'
0 5' 10' 20'

PARE
PARE CORPORATION
ENGINEERS - SCIENTISTS - PLANNERS
8 BLACKSTONE VALLEY PLACE
LINCOLN, RI 02865
401-334-4100

SCALE ADJUSTMENT GUIDE
0" 1"
BAR IS ONE INCH ON ORIGINAL DRAWING

SINGLE FAMILY HOME

AP 3 Lot 281
Graves Avenue
North Smithfield, RI

VICTORIA HOWLAND
No. 12076
REGISTERED P.E.
PROFESSIONAL ENGINEER (CIVIL)

RIDEM
OFFICE OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
DATED JUL 09 2021 21-0049
THESE PLANS MUST BE AT CONSTRUCTION SITE
MAY - 7 2021

REVISIONS:

1	05-06-2021	RIDEM RTC

PROJECT NO.:	20054.00
DATE:	FEBRUARY 2, 2021
SCALE:	1"=10'
DESIGNED BY:	ACB
CHECKED BY:	VH
DRAWN BY:	AKL
APPROVED BY:	BBL

DRAWING TITLE:
RIDEM PERMITTING PLAN

DRAWING NO.: C1

SHEET NO. 1 OF 1

Z:\JOBS\20_Jobs\20054.00 RID - Graves Ave Wetland Consulting-VB\DWGS\12 Stormwater Plan.dwg