

LOCATION PLAN SCALE: 1"=2000'±

NOTES

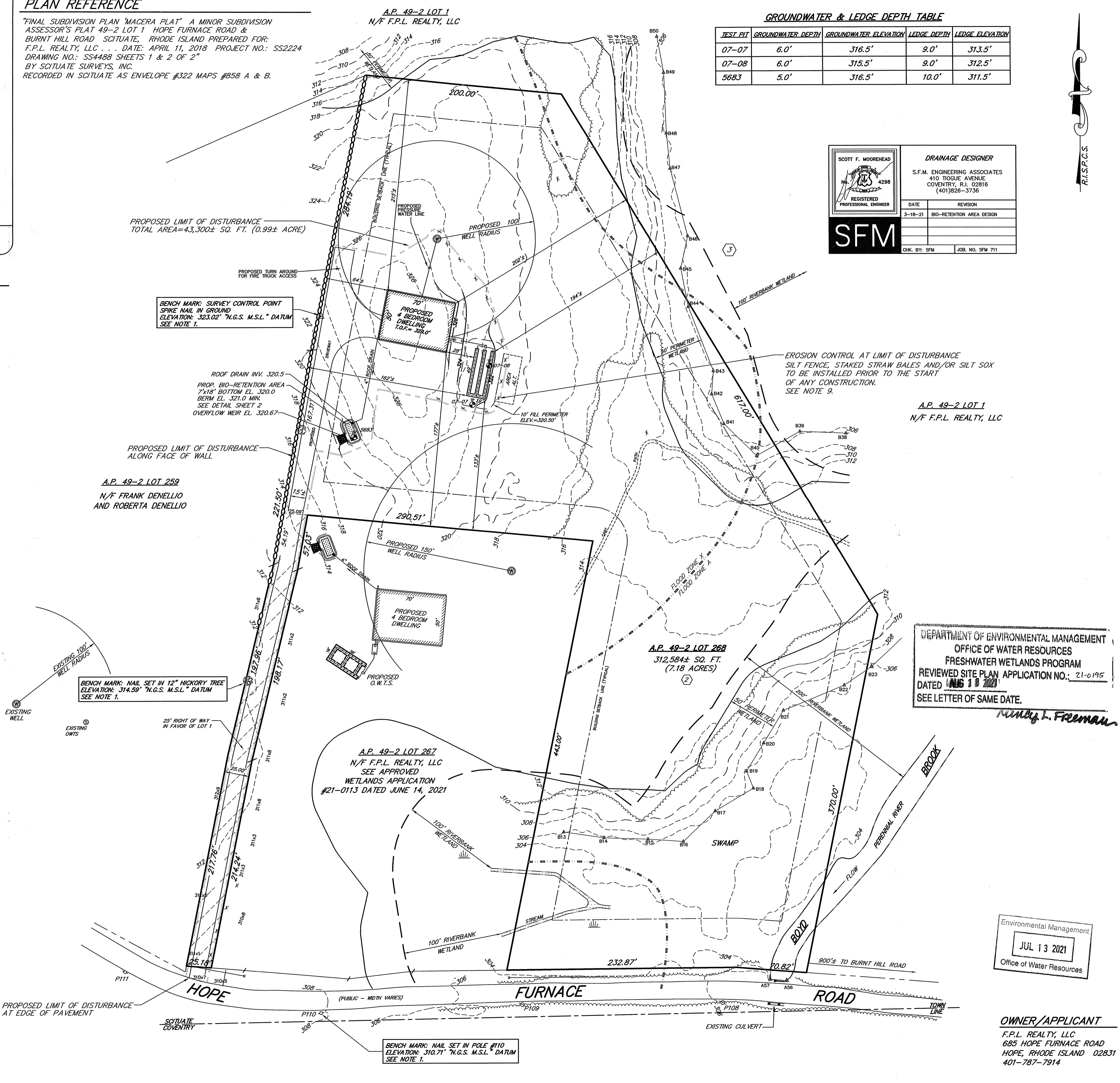
- THE TOPOGRAPHICAL INFORMATION SHOWN ON THIS PLAN WAS COMPILED FROM AN AERIAL PHOTOGRAMMETRIC SURVEY; THE MAXIMUM POSSIBLE VERTICAL ERROR IS 1/2 THE CONTOUR INTERVAL. THE HORIZONTAL DATUM IS BASED UPON NAD 83 COORDINATES AND WAS OBTAINED USING GLOBAL POSITIONING SYSTEM DATA WITH A MAXIMUM POSSIBLE ERROR OF 1.5". THE BENCH MARK USED FOR THE SURVEY WAS A RAILROAD SPIKE FOUND IN POLE #103 AT THE CORNER OF HOPE FURNACE ROAD AND BURNT HILL ROAD. IT ORIGINATED FROM A PLAN ENTITLED "BOUNDARY & TOPOGRAPHIC MAP OF LAND . . . OWNED BY MACERA REALTY, INC. . . . PREPARED BY LUNAR MAPPING LTD." THE PLAN REFERENCED THE BENCH MARK AS "N.G.S. M.S.L. DATUM". THE CONTOUR INTERVALS ARE TWO FEET.
- SEE APPROVED WETLANDS APPLICATION #07-0340 DATED DECEMBER 12, 2007.
- SEE APPROVED O.W.T.S. APPLICATION #1830-0184 DATED FEBRUARY 16, 2018.
- THE DEVELOPMENT AREA IS LOCATED WITHIN FLOOD HAZARD ZONE X (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD PLAIN). THE PORTION OF THE SITE ADJACENT TO THE WETLANDS IS LOCATED WITHIN ZONE A (BASE FLOOD ELEVATION NOT DETERMINED. SEE FLOOD INSURANCE RATE MAP FOR PROVIDENCE COUNTY, RHODE ISLAND NUMBER 440070385G DATED MARCH 2, 2009).
- THERE ARE NO EXISTING OR PROPOSED PUBLIC WATER SUPPLY SOURCES WITHIN 500' OF PROPOSED LOT OTHER THAN THOSE SHOWN ON PLAN.
- THERE ARE NO EXISTING OR PROPOSED SEWAGE DISPOSAL SYSTEMS WITHIN 100' OF THE PROPOSED WELL OTHER THAN THOSE SHOWN ON THE PLAN.
- THERE ARE NO EXISTING OR PROPOSED INDIVIDUAL WATER SUPPLIES WITHIN 200' OF THE PROPOSED ONSITE WASTEWATER TREATMENT SYSTEM OTHER THAN THOSE SHOWN ON THE PLAN.
- EXCEPT WHERE INDICATED SITE IS ENTIRELY WOODED.
- STRAW BALE EROSION CHECK (R.I. STANDARD 9.1.0), SILT FENCE AND /OR SILT SOX SHALL BE INSTALLED PRIOR TO EARTH DISTURBING ACTIVITIES AND SHALL BE MAINTAINED UNTIL ALL DISTURBED AREAS ARE PERMANENTLY STABILIZED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING ALL TEMPORARY SEDIMENTATION AND EROSION CONTROLS.
- ALL DISTURBED AREAS SHALL BE STABILIZED WITH 4" LOAM AND SEED OR SOD, PROPOSED SLOPES SHALL BE 3:1 (MAXIMUM).
- EXISTING UTILITY LOCATIONS ARE APPROXIMATE ONLY. DIG SAFE AND APPROPRIATE UTILITY COMPANIES SHALL BE NOTIFIED PRIOR TO ANY CONSTRUCTION FOR ACCURATE UTILITY LOCATIONS.
- ALL WORK SHALL BE PERFORMED IN STRICT CONFORMANCE WITH THE REQUIREMENTS AND SPECIFICATIONS OF ALL STATE AND LOCAL PERMITS.
- ALL IMPROVEMENTS SHALL BE ACCURATELY LOCATED AND STAKED PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- EACH STAGE OF CONSTRUCTION OF THE ONSITE WASTEWATER TREATMENT SYSTEM MUST BE SUPERVISED BY THE SYSTEM DESIGNER.
- NO SEWAGE DISPOSAL FACILITIES ARE PROPOSED WITHIN 150' OF THE EDGE OF ANY POND OR STREAM. NO STRUCTURES ARE WITHIN 75' OF THE EDGE OF ANY POND OR STREAM PER TOWN OF SCITUATE ZONING REGULATIONS SECTION 7.
- THE SITE IS NOT WITHIN THE SCITUATE RESERVOIR WATERSHED CRITICAL RESOURCE AREA.
- THE WETLANDS DELINEATION FLAGS WERE ORIGINALLY LOCATED IN THE FIELD BY SCITUATE SURVEYS, INC. IN MARCH AND APRIL 2007 USING GLOBAL POSITIONING SYSTEM DATA. DELINEATION WAS CONDUCTED BY NATURAL RESOURCE SERVICES, INC. IN FEBRUARY, 2007. THEIR REPORT IDENTIFIED A WOODED SWAMP (A & B-SERIES), SEVERAL WATERCOURSES LESS THAN 10 FEET WIDE (WITHIN THE SWAMP) AND ONE RIVER GREATER THAN 10 FEET WIDE (BOYD BROOK). THE JURISDICTIONAL SETBACKS INCLUDE 50' FOR THE SWAMP, 100' FOR THE SMALL STREAM CHANNELS AND 200' FOR BOYD BROOK. ALL WERE VERIFIED BY THE RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT (SEE NOTE 2 ABOVE), IN FEBRUARY 2021 SCITUATE SURVEYS, INC. RE-ESTABLISHED THE RELEVANT FLAG LOCATIONS FOR THIS APPLICATION.

**LEGEND**

A.P.	ASSESSOR'S PLAT
SQ. FT.	SQUARE FEET
⊕	SOIL EVALUATION PIPE
---	EXISTING CONTOUR
---	PROPOSED CONTOUR
310.7	EXISTING SPOT ELEVATION
W	WATER LINE/MAIN
▲ B4	FRESHWATER WETLANDS DELINEATION FLAG
x x x	PROPOSED EROSION CONTROL
⊖	STONE WALL
⊖	STONE WALL REMAINS
⊖	EXISTING TREE/VEGETATION LINE
⊕	PROPOSED/EXISTING WELL
⊕	UTILITY POLE
②	RECORD LOT NUMBER

PLAN REFERENCE

"FINAL SUBDIVISION PLAN 'MACERA PLAT' A MINOR SUBDIVISION ASSESSOR'S PLAT 49-2 LOT 1 HOPE FURNACE ROAD & BURNT HILL ROAD SCITUATE, RHODE ISLAND PREPARED FOR: F.P.L. REALTY, LLC . . . DATE: APRIL 11, 2018 PROJECT NO.: SS2224 DRAWING NO.: SS4488 SHEETS 1 & 2 OF 2" BY SCITUATE SURVEYS, INC. RECORDED IN SCITUATE AS ENVELOPE #322 MAPS #858 A & B.



**GROUNDWATER & LEDGE DEPTH TABLE**

TEST PIT	GROUNDWATER DEPTH	GROUNDWATER ELEVATION	LEDGE DEPTH	LEDGE ELEVATION
07-07	6.0'	316.5'	9.0'	313.5'
07-08	6.0'	315.5'	9.0'	312.5'
5683	5.0'	316.5'	10.0'	311.5'

**SCOTT F. MOOREHEAD**  
REGISTERED PROFESSIONAL ENGINEER  
4288  
SFM

**DRAINAGE DESIGNER**  
S.F.M. ENGINEERING ASSOCIATES  
410 TIOGUE AVENUE  
COVENTRY, R.I. 02816  
(401)826-3736

DATE: 3-18-21  
REVISION: BIO-RETENTION AREA DESIGN

CHK. BY: SFM  
JOB. NO. SFM 711

A.P. 49-2 LOT 1  
N/F F.P.L. REALTY, LLC

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
REVIEWED SITE PLAN APPLICATION NO.: 21-0195  
DATED **JUL 13 2021**  
SEE LETTER OF SAME DATE.

*Nancy L. Freeman*

Environmental Management  
JUL 13 2021  
Office of Water Resources

**OWNER/APPLICANT**  
F.P.L. REALTY, LLC  
685 HOPE FURNACE ROAD  
HOPE, RHODE ISLAND 02831  
401-787-7914

PLAN OF PROPOSED IMPROVEMENTS TO  
**ASSESSOR'S PLAT 49-2**  
**LOT 268**  
RECORD LOT 2 ~ MACERA PLAT  
HOPE FURNACE ROAD  
SCITUATE, RHODE ISLAND  
PREPARED FOR: F.P.L. REALTY, LLC

PROJECT NO.: SS2224  
DRAWING NO.: SS4483

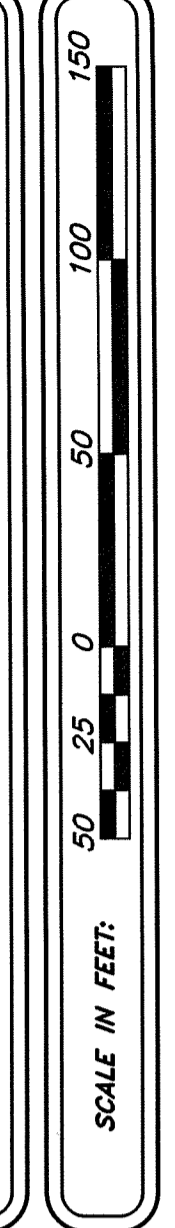
DATE: JULY 7, 2021 REVISION:  
SCALE: 1"=50'

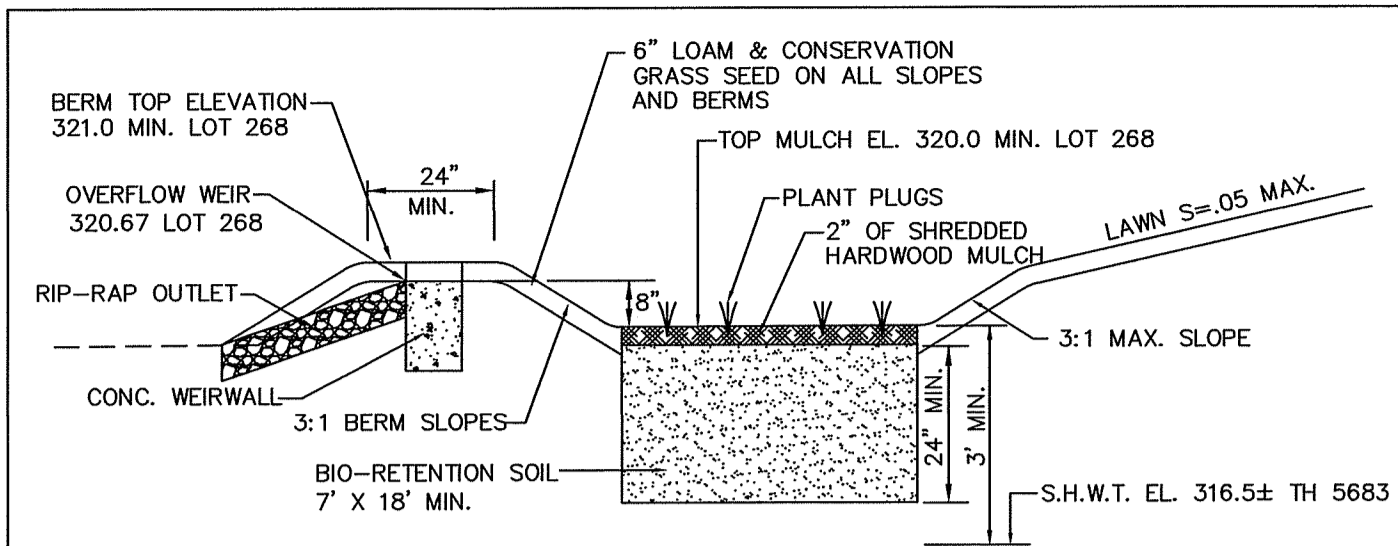
SHEET 1 OF 2

SCITUATE SURVEYS, INC.  
410 TIOGUE AVENUE  
COVENTRY, RHODE ISLAND 02816  
401-821-8101  
LAND SURVEYING / MAPPING / SITE PLANNING

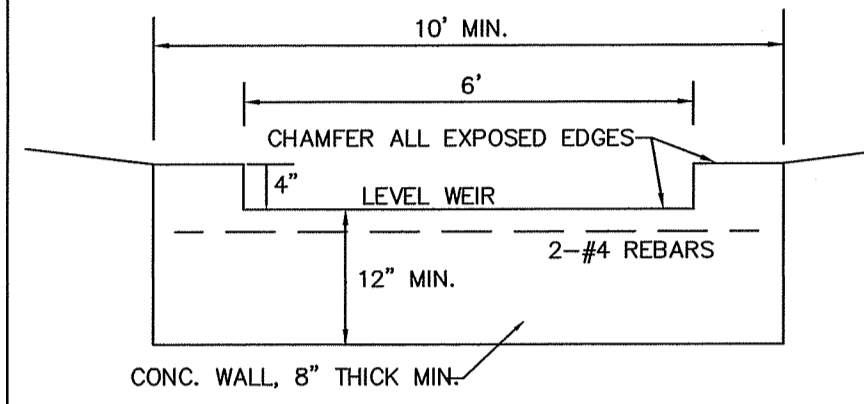
MEASUREMENT: Spheroidal  
N/A  
MEASUREMENT: Spheroidal  
CLASS: II  
VERTICAL CONTROL STANDARD: N-3  
POSITIONING SYSTEM: GNSS L1+2  
ADJUSTMENT: SURVEY ACCURACY L1+2  
SCALE OF ENLARGE: AS SHOWN  
AND PHYSICAL FEATURE LOCATION DATA FOR SITE DEVELOPMENT DESIGN.

ANGELO M. RAIMONDI  
1762  
PROFESSIONAL  
LAND SURVEYOR





**BIO-RETENTION AREA CROSS-SECTION**  
NOT TO SCALE



**BIO-RETENTION AREAS**  
BIO-RETENTION AREA BOTTOM DIMENSION TO BE 7' X 18' AT TOP OF MULCH

EL.	AREA
BOTTOM	126 S.F.
8" DEPTH	246 S.F.
12" DEPTH	306 S.F.

**CONC. OVERFLOW WEIR DETAIL**  
NOT TO SCALE

**BIO-RETENTION AREA NOTES**

- BIO-RETENTION AREAS SHALL BE PROTECTED FROM COMPACTION PRIOR TO AND DURING CONSTRUCTION.
- ALL LOAM & SUBSOIL SHALL BE STRIPPED AND THE AREA EXCAVATED TO DESIGN BOTTOM GRADE. BIO-RETENTION SOIL SHALL BE PLACED TO A DEPTH OF 24" AND COVERED WITH 2" OF MULCH.
- MULCH SHALL BE SHREDDED HARDWOOD MULCH.
- BOTTOM OF BIO-RETENTION AREA SHALL BE PLANTED WITH AN EQUAL MIXTURE OF BLUEFLAG IRIS, WOOL GRASS AND PICKEREL WEED PLUGS AT 18" ON CENTER. PLANTINGS SHALL COMPLY WITH APPENDIX B.9.3 OF THE R.I. STORMWATER DESIGN AND INSTALLATION STANDARDS MANUAL (MARCH 2015).
- BIO-RETENTION AREA PLANTINGS SHALL BE INSTALLED BY A LANDSCAPE CONTRACTOR. SURVIVAL SHALL BE GUARANTEED FOR ONE YEAR.
- BIO-RETENTION SOIL SHALL HAVE A LOAMY SAND TEXTURE AND CONFORM TO THE FOLLOWING GRADATION:  
SAND 85 - 88%  
SILT 8 - 12%  
CLAY 0 - 2%  
ADD ORGANIC MATTER (LEAF COMPOST) TO LOAMY SAND, 3%-5% BY VOLUME.

**BIO-RETENTION AREA MAINTENANCE PLAN**

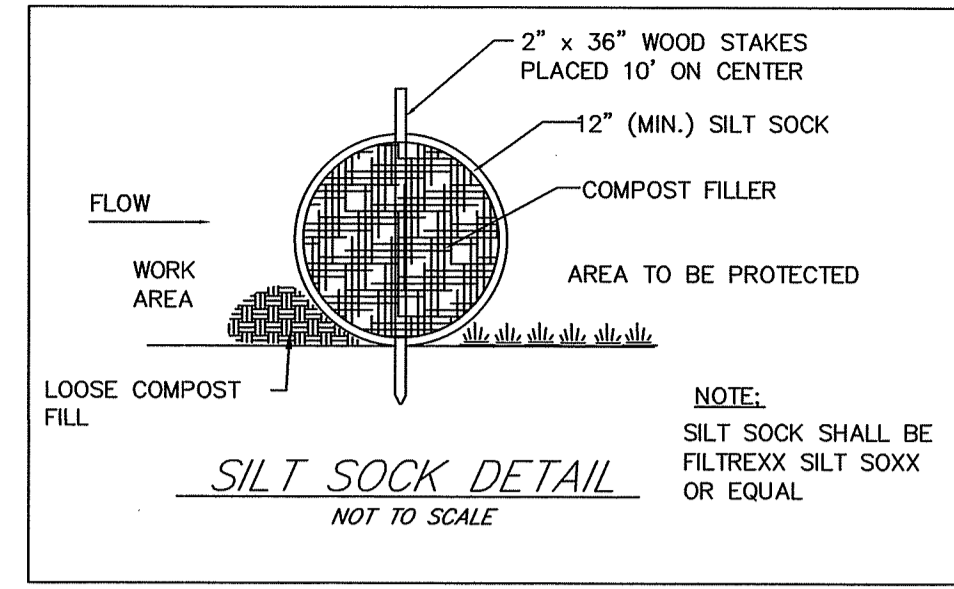
- BIO-RETENTION AREA SHALL BE MAINTAINED BY THE CONTRACTOR UNTIL FINAL APPROVAL OF CONSTRUCTION. AFTER FINAL APPROVAL THE AREA SHALL BE MAINTAINED BY THE OWNER.
- DURING THE SIX MONTHS IMMEDIATELY AFTER CONSTRUCTION, BIO-RETENTION AREA SHALL BE INSPECTED FOLLOWING THE FIRST TWO RAIN EVENTS EQUAL TO OR GREATER THAN THE 1-YEAR, 24 HOUR TYPE III STORM EVENT. AFTER THAT PERIOD, IT SHALL BE INSPECTED TWICE PER YEAR.
- SOIL EROSION GULLIES SHALL BE REPAIRED WHEN THEY OCCUR.
- IF STANDING WATER REMAINS 48 HOURS AFTER A RAINFALL EVENT, THE BOTTOM SHALL BE ROTO-TILLED THEN RE-SEEDED.
- MULCH LAYER SHALL BE REPLENISHED TO ORIGINAL DEPTH EVERY OTHER YEAR. PREVIOUS MULCH LAYER SHALL BE REMOVED.
- PRUNING OR REPLACEMENT OF VEGETATION SHOULD OCCUR WHEN DEAD OR DYING VEGETATION IS OBSERVED.
- SILT & DEBRIS SHALL BE REMOVED WHEN ACCUMULATION EXCEEDS 1".
- GRASS & PLANTINGS SHALL BE MOWED THREE TIMES BETWEEN THE MONTHS OF MAY AND OCTOBER. MOWED HEIGHT OF VEGETATION SHALL NOT BE LESS THAN TWO INCHES. CLIPPINGS SHALL BE REMOVED.

**BIO-RETENTION AREA SIZING NOTES**

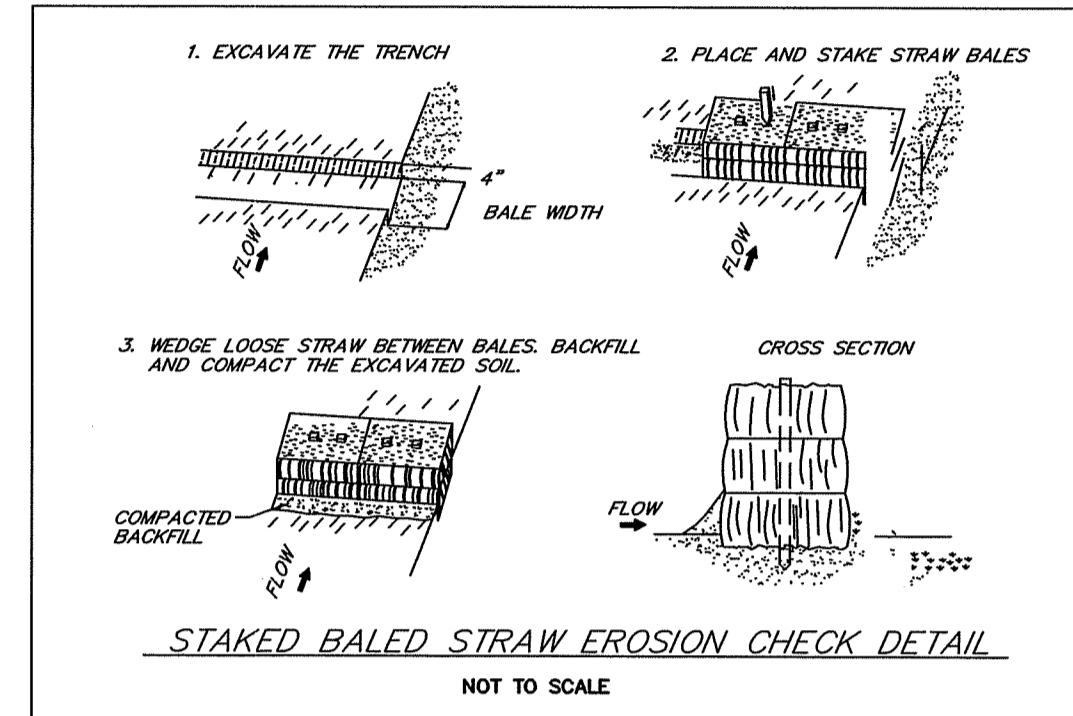
- BIO-RETENTION AREA SHALL BE 144 S.F. MINIMUM BASED ON A 3,810 S.F. IMPERVIOUS ROOF AREA. AREA SHALL BE PROPORTIONATELY RE-SIZED IF THE ROOF AREA IS DIFFERENT.
- THE HOME SITE MAY HAVE MORE THAN ONE BIO-RETENTION AREA, EACH SERVING A PROPORTIONATE IMPERVIOUS AREA.
- BIO-RETENTION AREA LENGTH SHALL BE TWICE THE WIDTH (MIN.) WITH THE LENGTH ORIENTED PARALLEL TO SURFACE CONTOURS AND SHAPED TO CONFORM WITH EXISTING SLOPES.
- BIO-RETENTION AREAS SHALL BE LOCATED AT LEAST 25' FROM OWTS AND 15' FROM HOUSE.

**BIO-RETENTION AREA SIZING**

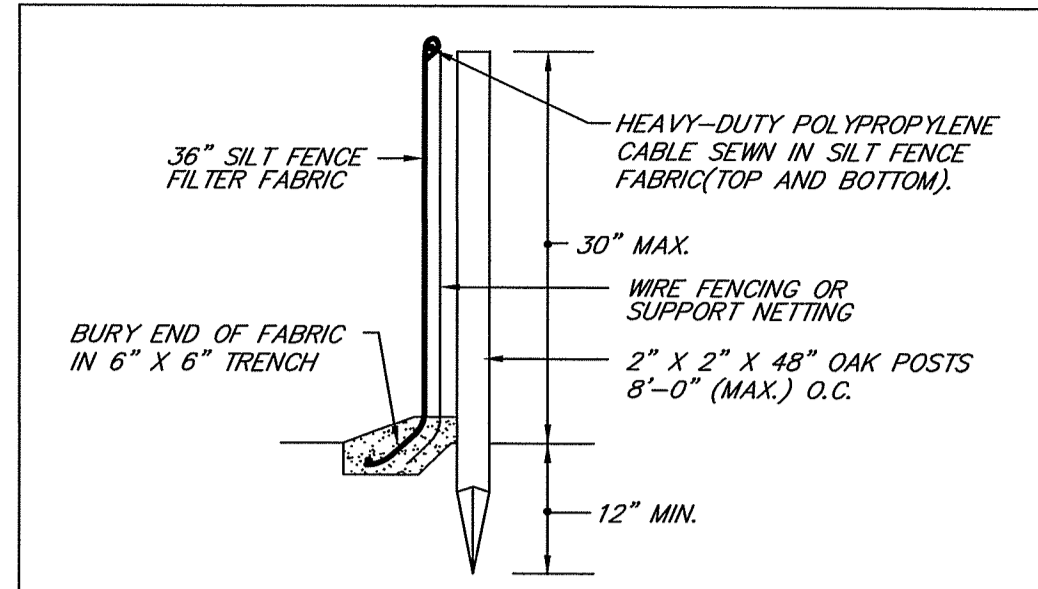
BIO-RETENTION SYSTEM BASED ON PROP. ROOF AREA OF 3,500 S.F.  
REQ'D. WATER TREATMENT VOL. = 3,500 S.F. X 1"/12" = 291.7 C.F.  
PER RISDISM BIO-RET. AREA =  $(WQ)(D)/((k)(H+D)(T))$   
REQ'D. AREA =  $(291.7)(2)/(1)(2.33)(2) = 125.2$  S.F.  
PROVIDED AREA = 7' X 18' = 126 S.F.



**SILT SOCK DETAIL**  
NOT TO SCALE



**STAKED BALED STRAW EROSION CHECK DETAIL**  
NOT TO SCALE



**INSTALLATION NOTES:**

- SET POSTS MINIMUM DEPTH 12" AND EXCAVATE 6" X 6" TRENCH UPSLOPE ALONG LINE OF POSTS.
- STAPLE WIRE FENCING TO THE POSTS.
- ATTACH THE FILTER FABRIC TO THE WIRE FENCE AND EXTEND TO TRENCH.
- BACKFILL AND COMPACT THE EXCAVATED SOIL.
- BARRIER HEIGHT NOT TO EXCEED 30". LOCATE 6 FEET FROM TOE OF SLOPE. OVERLAP FILTER FABRIC 6" AT POSTS. POST SPACING MAXIMUM 8 FEET.

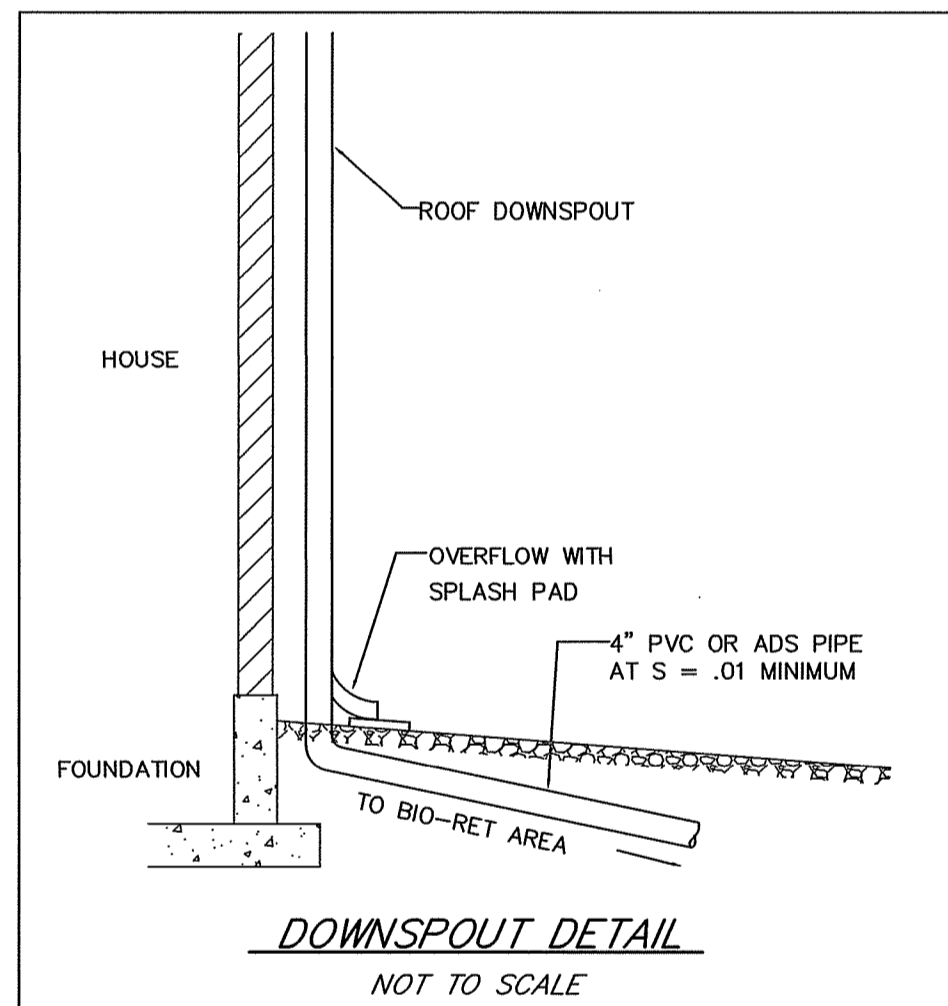
**SILT FENCE DETAIL**  
NOT TO SCALE

**SEDIMENTATION CONTROL PROGRAM**

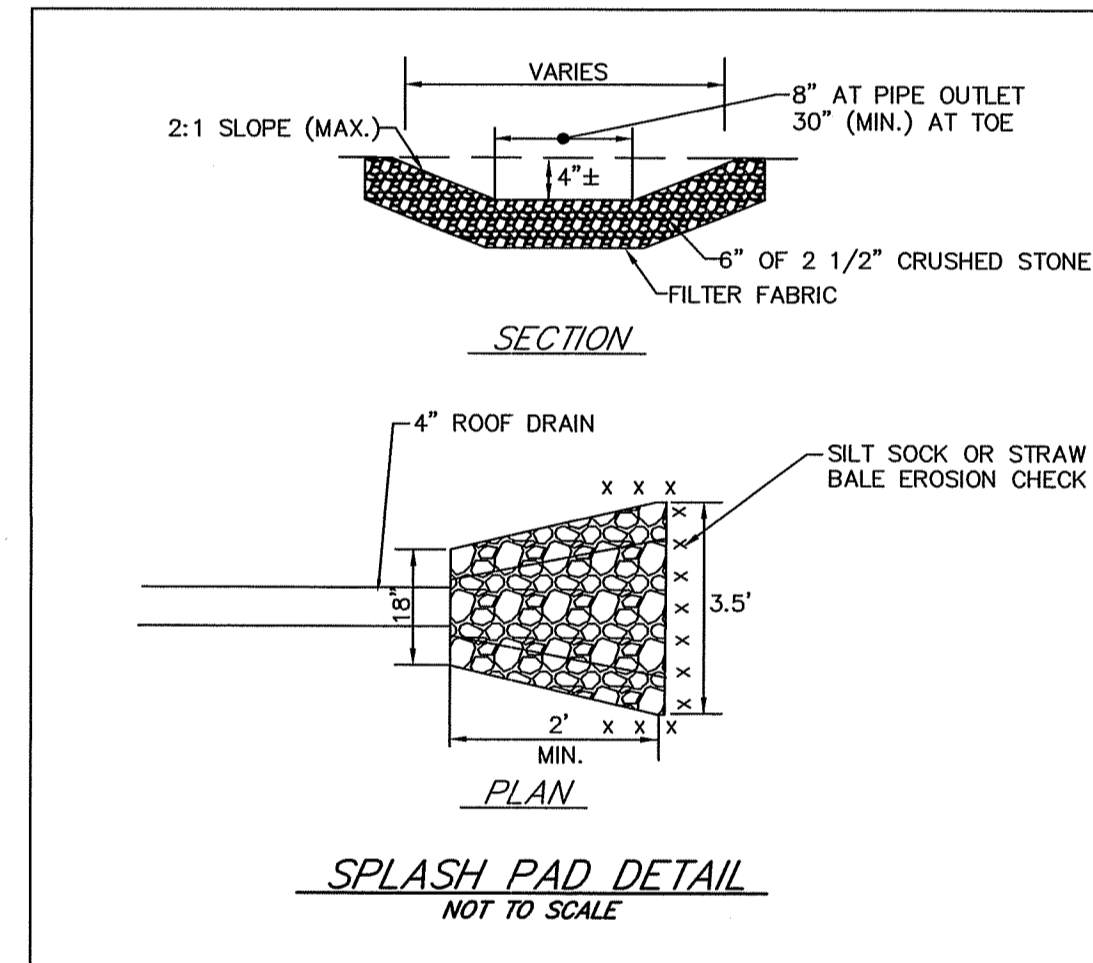
- EXTREME CARE SHALL BE EXERCISED SO AS TO PREVENT ANY SEDIMENTS FROM ENTERING THE WETLANDS OR ADJOINING PROPERTIES.
- BANKS OR SLOPES OVER 5 PERCENT SHALL BE SEEDED AS SOON AS POSSIBLE AND SHALL BE PROTECTED WITH A HAY, STRAW OR FIBER MULCH.
- DURING CONSTRUCTION, THE CONTRACTOR AND/OR DEVELOPER SHALL BE RESPONSIBLE FOR MAINTAINING DRAINAGE AND RUNOFF FLOW DURING STORMS AND PERIODS OF RAINFALL.
- SEDIMENTATION CONTROL DEVICES SHALL BE INSPECTED CLOSELY AND MAINTAINED PROMPTLY AFTER EACH RAINFALL.
- CARE SHALL BE TAKEN SO NOT TO PLACE "REMOVED SEDIMENTS" WITHIN THE PATH OF EXISTING, NEWLY CREATED (BOTH TEMPORARY AND PERMANENT) OR PROPOSED WATERCOURSES OR THOSE AREAS SUBJECTED TO STORM WATER FLOW.
- ADDITIONAL HAYBALES, SILT FENCE OR SANDBAGS SHALL BE LOCATED AS CONDITIONS WARRANT OR AS DIRECTED BY THE ENGINEER.
- REFERENCE THE "R.I. EROSION AND SEDIMENT CONTROL HANDBOOK" PREPARED BY THE U.S. DEPT. OF AGRICULTURE, SOIL CONSERVATION SERVICE, 1989, AS A GUIDE.

**ORDER OF PROCEDURE**

- PRIOR TO ANY CONSTRUCTION OR EXCAVATION, HAYBALES OR SILT FENCE SHALL BE INSTALLED AT THE PROPERTY LINE OR LIMIT OF DISTURBANCE. TEMPORARY HAYBALES OR SILT FENCE SHALL BE INSTALLED AT THE LIMIT OF WORK ACTIVITY IF CONSTRUCTION IS TO BE DONE IN PHASES.
- ALL EROSION AND SEDIMENTATION CONTROL STRUCTURES SHALL BE PERIODICALLY MAINTAINED AS PER THE RESPECTIVE PROGRAMS FOR TEMPORARY CONTROL.
- IF WORK PROGRESS IS TO BE INTERRUPTED AT ANY TIME, REFERENCE EROSION AND SEDIMENTATION PROGRAMS FOR TEMPORARY CONTROL.
- TEMPORARY HAYBALES AND SANDBAGS ALONG AND AT THE ENDS OF ROADWAYS MAY ALSO BE REMOVED AFTER FINAL SOIL STABILIZATION HAS BEEN ACHIEVED AND APPROVED.
- HAY BALES MUST REMAIN UNTIL SUCH A DESIRABLE STAND OF GRASS OR GROUND COVER HAS BEEN ESTABLISHED, AND THE PROJECT RECEIVES A FAVORABLE APPROVAL FOR FINAL ACCEPTANCE FROM THE ENGINEER.

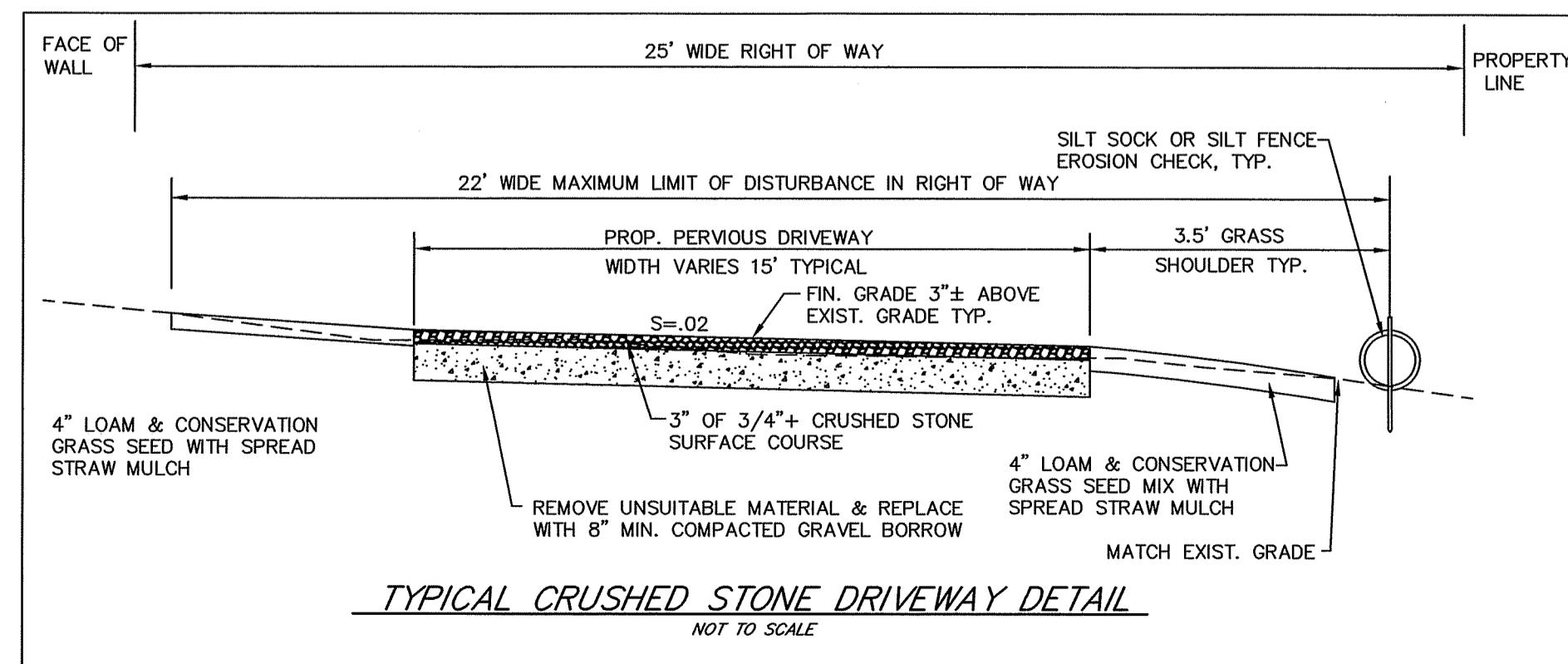


**DOWNSPOUT DETAIL**  
NOT TO SCALE



**SPLASH PAD DETAIL**  
NOT TO SCALE

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
REVIEWED SITE PLAN APPLICATION NO.: 21-0195  
DATED AUG 18 2021  
SEE LETTER OF SAME DATE.  
*Andy L. Freeman*



**TYPICAL CRUSHED STONE DRIVEWAY DETAIL**  
NOT TO SCALE

	<b>SCOTT F. MOOREHEAD</b>	
	<b>DRAINAGE DESIGNER</b>	
S.F.M. ENGINEERING ASSOCIATES 410 TIOGUE AVENUE COVENTRY, R.I. 02816 (401)826-3736		
DATE	REVISION	
3-18-21	BIO-RETENTION AREA DESIGN	
CHK. BY: SFM      JOB. NO. SFM 711		

**OWNER/APPLICANT**

F.P.L. REALTY, LLC  
685 HOPE FURNACE ROAD  
HOPE, RHODE ISLAND 02831  
401-787-7914

PLAN OF PROPOSED IMPROVEMENTS TO  
ASSESSOR'S PLAT 49-2

LOT 268

RECORD LOT 2 ~ MAGERA PLAT  
HOPE FURNACE ROAD  
SCITUATE, RHODE ISLAND  
PREPARED FOR: F.P.L. REALTY, LLC

PROJECT NO.: SS2224  
DRAWING NO.: SS4853

SHEET  
2 OF 2

SCITUATE SURVEYS, INC.  
410 TIOGUE AVENUE  
COVENTRY, RHODE ISLAND 02816  
401-821-8101  
LAND SURVEYING/MAPPING/SITE PLANNING

SCALE IN FEET: 1" = 40'

THIS SURVEY HAS BEEN CONDUCTED AND THE PLAN HAS BEEN PREPARED PURSUANT TO SECTION 9 OF THE RULES AND REGULATIONS OF THE BOARD OF REGISTRATION FOR PROFESSIONAL LAND SURVEYORS ON NOVEMBER 20, 2016, AS FOLLOWS:  
TYPE OF BOUNDARY SURVEY: N/A  
MEASUREMENT TECHNIQUE: N/A  
CLASS OF SURVEY: N/A  
TYPE OF SURVEY: N/A  
DATA ACCUMULATION SURVEY: N/A

ANGELO M. RAINONDI  
1762  
PROFESSIONAL  
LAND SURVEYOR

SCALE: AS NOTED DATE: JULY 7, 2021 REVISION: