

- NOTES:**
1. TOPOGRAPHY AND ELEVATIONS SHOWN ARE FROM AN ON-SITE SURVEY PERFORMED IN JANUARY 2017. PLANIMETRICS AND WETLAND DELINEATION FLAGS WERE SURVEY LOCATED IN FEBRUARY 2016.
 2. THE FORESTED WETLAND AND RIVER DEPICTED HEREON WAS DELINEATED IN THE FIELD BY NATURAL RESOURCE SERVICES, INC. OF HARRISVILLE, R.I. IN JANUARY 2016. IT WAS LOCATED IN THE FIELD BY SCITUATE SURVEYS, INC. USING CONVENTIONAL (TOTAL STATION) SURVEY METHODS IN FEBRUARY 2016. THE DELINEATION IS SUBJECT TO VERIFICATION BY THE RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT.
 3. THE DEVELOPMENT AREA LIES WITHIN FLOOD HAZARD ZONE X (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD PLAIN) AND ZONE Y (SHADED) (AREAS OF 0.2% ANNUAL CHANCE FLOOD). FLOOD HAZARD ZONES OUTSIDE THE DEVELOPMENT AREA INCLUDE ZONE AE (BASE FLOOD ELEVATIONS DETERMINED -ELEV. 96-98) AND A FLOOD WAY. SEE FLOOD INSURANCE RATE MAP NUMBER 4407030303N DATED OCTOBER 2, 2015.
 4. A CONTINUOUS LINE OF STRAW BALE, SILT FENCE OR SILT SOCK EROSION CHECKS SHALL BE INSTALLED AT ALL LIMITS OF DISTURBANCE PRIOR TO EARTH DISTURBING ACTIVITIES AND SHALL BE MAINTAINED BY THE CONTRACTOR UNTIL ALL DISTURBED AREAS ARE PERMANENTLY STABILIZED.
 5. NO WORK IS ALLOWED WITHIN STATE REGULATED WETLANDS EXCEPT AS SPECIFICALLY SHOWN. NO WORK IS PROPOSED WITHIN JURISDICTIONAL WETLANDS.
 6. ALL IMPROVEMENTS SHALL BE ACCURATELY LOCATED AND STAKED PRIOR TO COMMENCEMENT OF CONSTRUCTION.
 7. DISTURBED AREAS SHALL BE STABILIZED WITH 4" LOAM AND SEED OR SOO, PROPOSED SLOPES SHALL BE 3:1 (MAXIMUM).
 8. ALL WORK SHALL BE PERFORMED IN STRICT CONFORMANCE WITH THE REQUIREMENTS OF THE D.E.M. O.W.T.S. AND WETLANDS PERMITS AND IN COMPLIANCE WITH ALL TOWN REGULATIONS.
 9. THE SITE IS AN UNDEVELOPED INDUSTRIAL LOT.
 10. ALL STAGES OF CONSTRUCTION MUST BE SUPERVISED BY THE SYSTEM DESIGNER.
 11. THE DATUM USED FOR THE SURVEY IS NAVD 88. IT WAS ESTABLISHED USING GLOBAL POSITIONING TECHNOLOGY.
 12. PRIOR TO COMMENCEMENT OF ANY SITE ALTERATIONS, PERMANENT BUFFER ZONE MARKERS MUST BE INSTALLED ALONG THE LIMIT OF DISTURBANCE AT THE LOCATIONS INDICATED AS "PM" ON THE APPROVED SITE PLANS, IN ORDER TO PROVIDE PERMANENT REFERENCE POINTS ON SITE THAT ARE CLEAR TO PRESENT AND FUTURE PROPERTY OWNERS. A PERMANENT-TYPE TAG OR SIGN LABELED "RIDEEM BUFFER ZONE" MUST BE PLACED ON EACH MARKER. NO ALTERATIONS OF ANY KIND ARE PERMITTED BEYOND THESE MARKERS WITHOUT FIRST OBTAINING THE NECESSARY PERMIT FROM RIDEM.
 13. SURFACE EVIDENCE OF PUBLIC AND PRIVATE UTILITIES IS BASED UPON SURVEY LOCATION OF VISIBLE FEATURES. SUBSURFACE EVIDENCE IS BASED UPON MAPS AND RECORDS PROVIDED BY MUNICIPALITIES, UTILITY COMPANIES, AND OTHER SOURCES, TOGETHER WITH SUCH REASONABLE ASSUMPTIONS AS MAY BE DRAWN FROM THE FIELD AND RECORD DATA. UTILITY INFORMATION MAY NOT BE ACCURATE OR COMPLETE, AND IS SUBJECT TO SUCH CHANGES AS ADDITIONAL DATA MAY DISCLOSE. ALL EXCAVATION MUST BE PRECEDED BY CONTACTING "DIG-SAFE" FOR A MORE RELIABLE LAYOUT OF EXISTING UTILITIES.
THE SITE IS TO BE SERVED BY MUNICIPAL WATER. UTILITY INSTALLATIONS SHALL CONFORM WITH UTILITY AUTHORITY RULES AND SPECIFICATIONS.
 14. ALL WORK WITHIN THE TOWN RIGHT OF WAY SHALL BE DONE IN ACCORDANCE WITH TOWN DPW STANDARDS AND SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY THE TOWN OF JOHNSTON.
 15. BUILDING TO BE SERVED BY AN ON-SITE WASTEWATER TREATMENT SYSTEM. AN APPLICATION FOR AN O.W.T.S. PERMIT TO BE FILED UPON OBTAINING A WETLAND PERMIT.
 16. NO FILLING IS ALLOWED WITHIN THE 100 YEAR FLOOD HAZARD ZONE AE. ANY SITE DISTURBANCE WITHIN THE FLOOD ZONE SHALL BE RESTORED TO ORIGINAL GRADE.
 17. SEE SHEET 2 FOR SITE CONSTRUCTION DETAILS.

LEGEND

A.P.	ASSESSOR'S PLAT
N/F	NOW OR FORMERLY
SQ. FT.	SQUARE FEET
BFE	BASE FLOOD ELEVATION
□	UTILITY POLE
▲ A9	WETLANDS DELINEATION FLAG
W 9	PROPOSED WATER SHUT-OFF VALVE
W	CONCRETE BLOCK RETAINING WALL
W	EXISTING WATER MAIN
LOD	EROSION CHECK / LIMIT OF DISTURBANCE
---	EXISTING CONTOUR ELEVATION
---	PROPOSED CONTOUR ELEVATION
98x7	EXIST. SPOT ELEVATION
100x8	PROPOSED SPOT ELEVATION
PM	SOIL EVALUATION TEST HOLE
PM	PROPOSED 4"x4" PRESSURE TREATED POST, 24" (MINIMUM) ABOVE GROUND

ZONING DATA

ZONE: INDUSTRIAL I

MIN. LOT AREA: N/A

MIN. FRONTAGE: N/A

MIN. YARDS: FRONT 50'

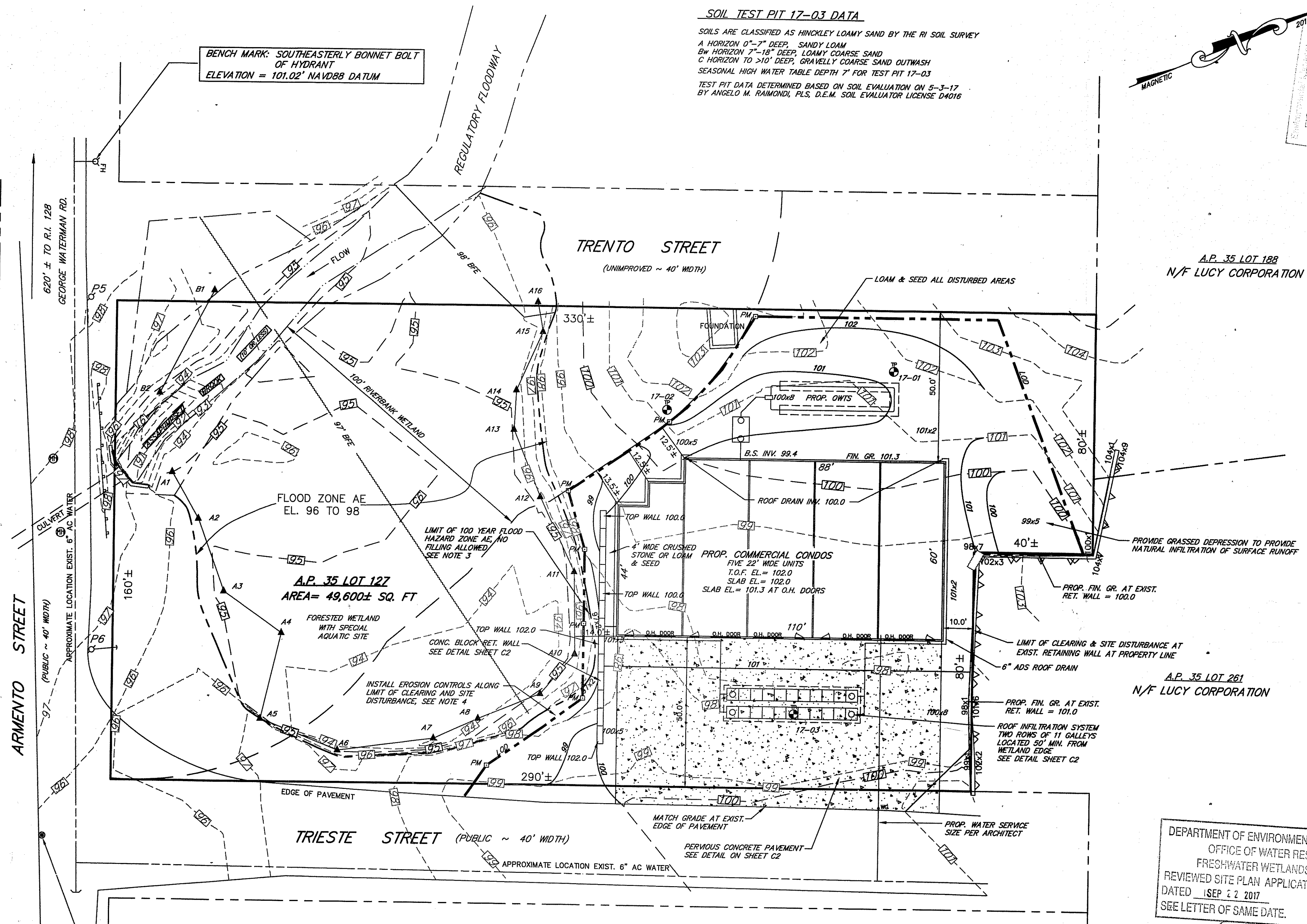
SIDE 50'

REAR 50'

MAX. BUILDING HEIGHT: 40'

MAX. BUILDING COVERAGE: 40%

OFF STREET PARKING REQUIREMENTS:
INDUSTRIAL AND WHOLESALE USE
ONE CAR SPACE FOR EVERY TWO EMPLOYEES



SOIL TEST PIT 17-03 DATA

SOILS ARE CLASSIFIED AS HINCKLEY LOAMY SAND BY THE RI SOIL SURVEY

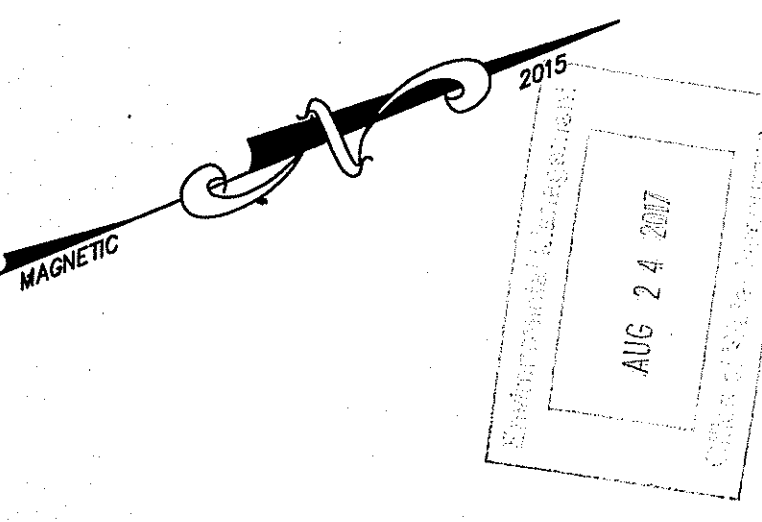
A HORIZON 0"-7" DEEP, SANDY LOAM

Bw HORIZON 7"-18" DEEP, LOAMY COARSE SAND

C HORIZON TO >10' DEEP, GRAVELLY COARSE SAND OUTWASH

SEASONAL HIGH WATER TABLE DEPTH 7' FOR TEST PIT 17-03

TEST PIT DATA DETERMINED BASED ON SOIL EVALUATION ON 5-3-17 BY ANGELO M. RAIMONDI, PLS. D.E.M. SOIL EVALUATOR LICENSE D4016



SCITUATE SURVEYS, INC.

410 TIQUOUE AVENUE
COVENTRY, RHODE ISLAND 02816
401-826-8101

LAND SURVEYING/MAPPING/SITE PLANNING

ANGELO M. RAIMONDI
1162
PROFESSIONAL
LAND SURVEYOR

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
REVIEWED SITE PLAN APPLICATION NO. 17-0187
DATED 1 SEP 22 2017
SEE LETTER OF SAME DATE.

SCOTT F. MOOREHEAD
REGISTERED PROFESSIONAL ENGINEER
4298

DRAINAGE DESIGNER

S.F.M. ENGINEERING ASSOCIATES
410 TIQUOUE AVENUE
COVENTRY, R.I. 02816
(401)826-3736

DATE	REVISION

CHK. BY: SFM JOB. NO. SFM846

OWNER/APPLICANT

LJ ENTERPRISES, LLC
100 ARMENTO STREET
JOHNSTON, RHODE ISLAND 02919
TEL: (401) 255-8300

PLAN OF PROPOSED IMPROVEMENTS TO

ASSESSOR'S PLAT 35 LOT 127

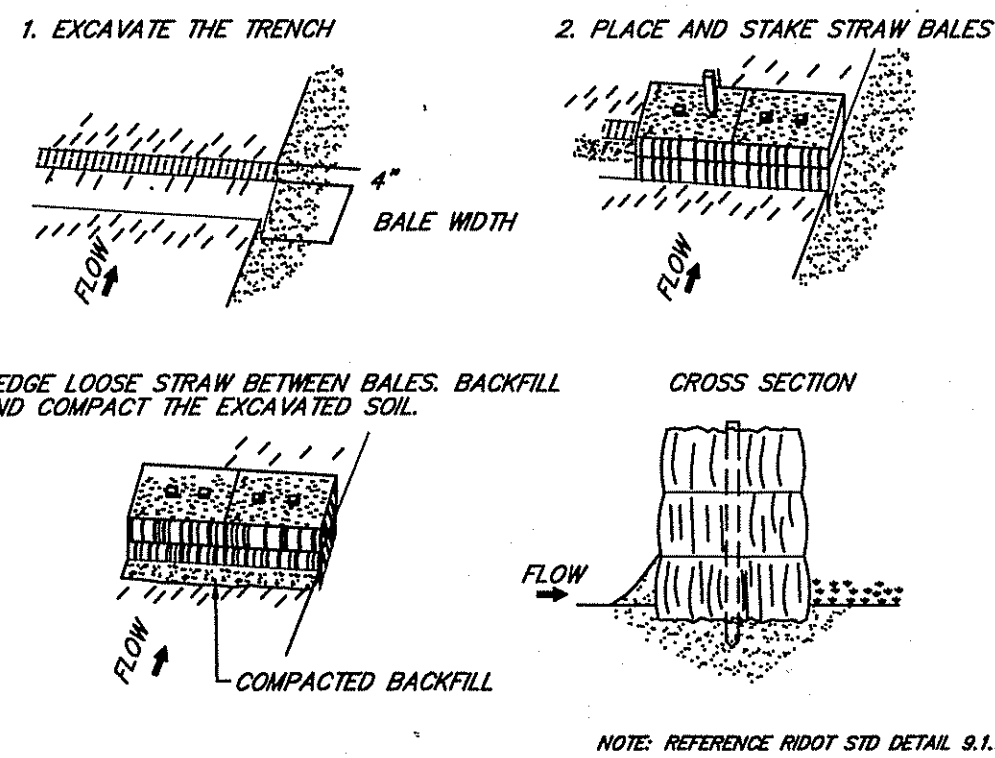
TRIESTE STREET, ARMENTO STREET & TRENTO STREET

JOHNSTON, RHODE ISLAND

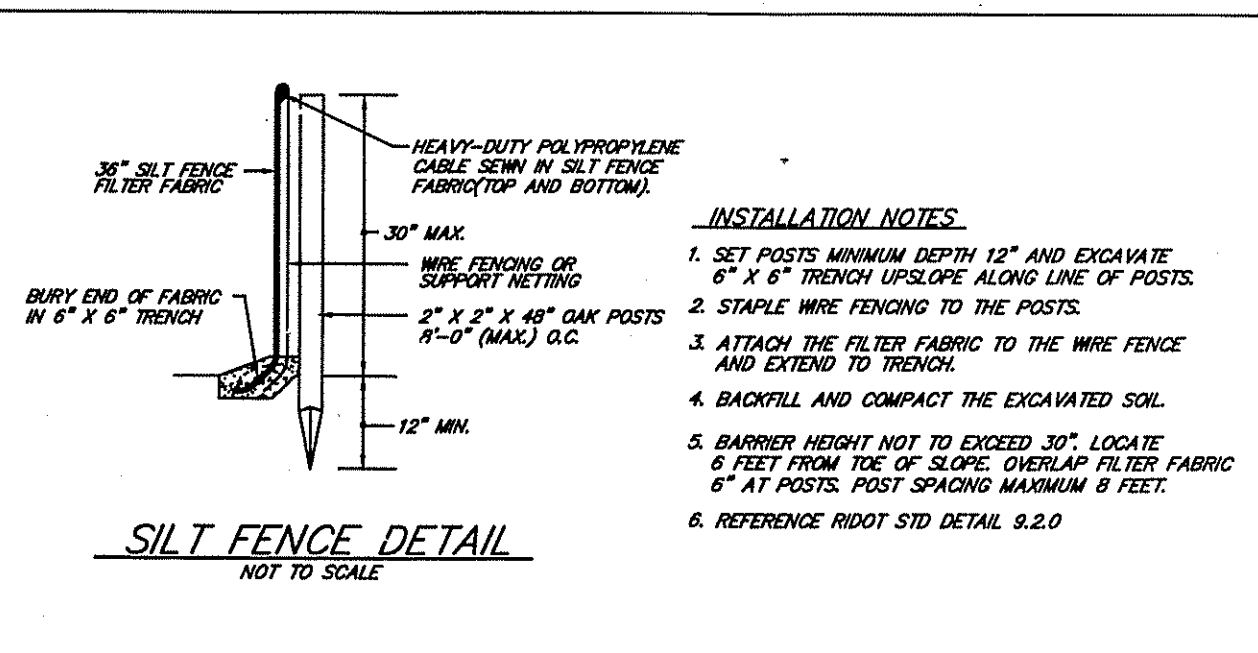
PREPARED FOR: LJ ENTERPRISES, LLC

SCALE: 1" = 20' DATE: JANUARY 9, 2017 REVISION:

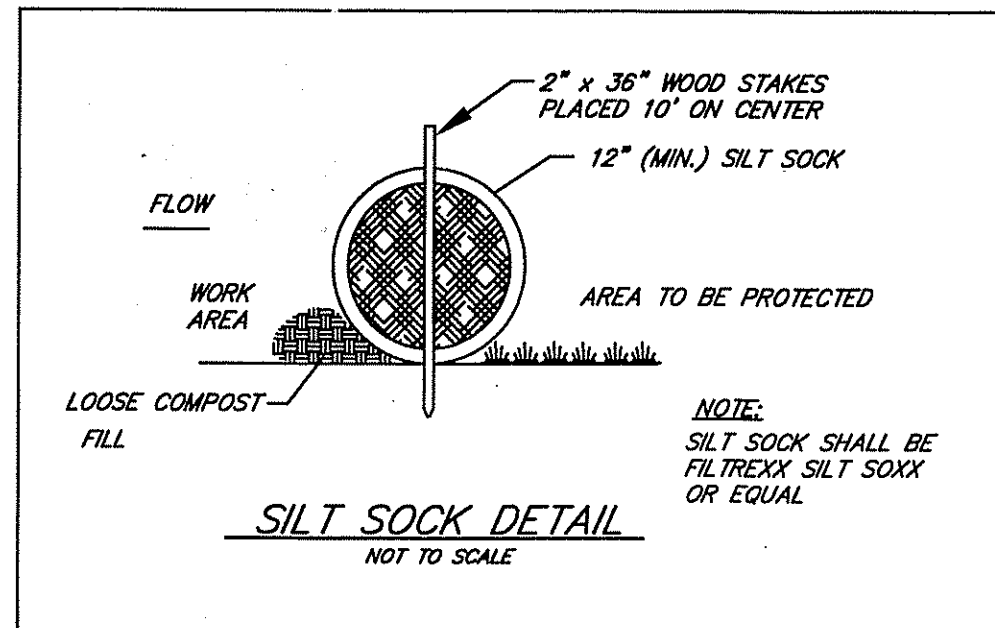
PROJECT NO.: 55988 SHEET 1 OF 2
DRAWING NO.: 554351



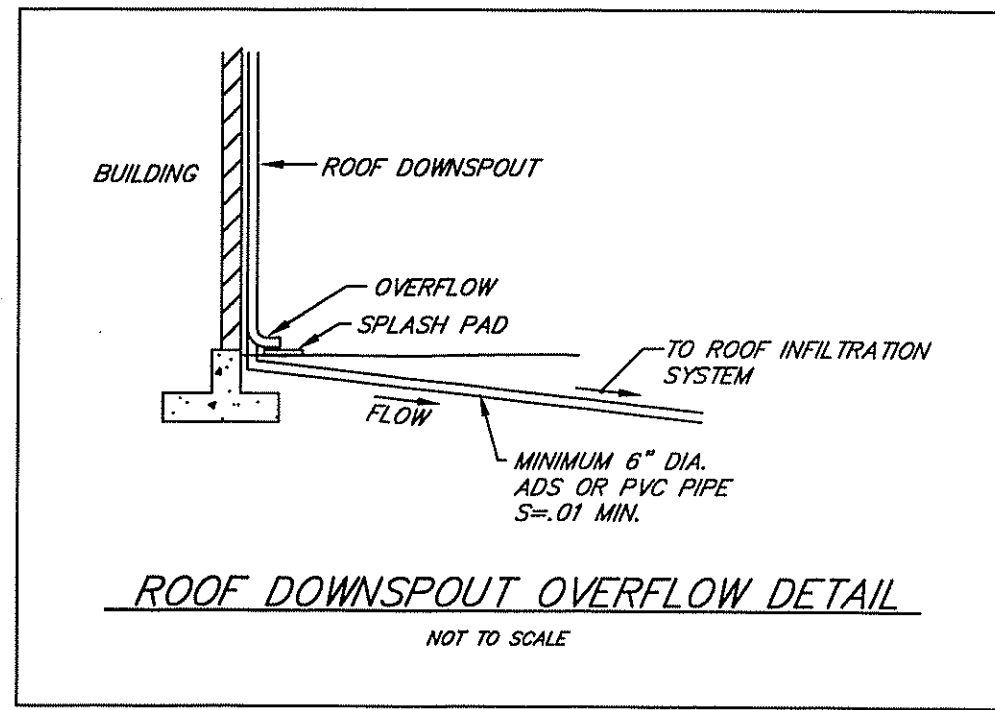
STAKED STRAW BALE EROSION CHECK DETAIL
NOT TO SCALE



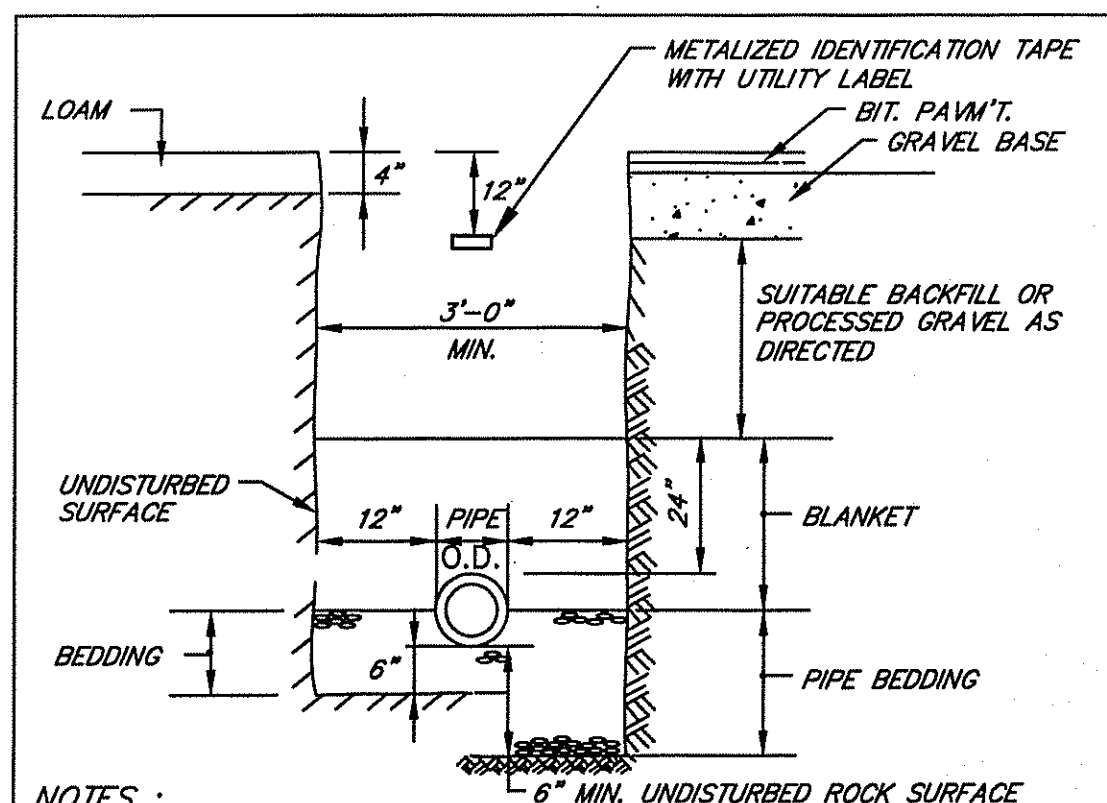
SILT FENCE DETAIL
NOT TO SCALE



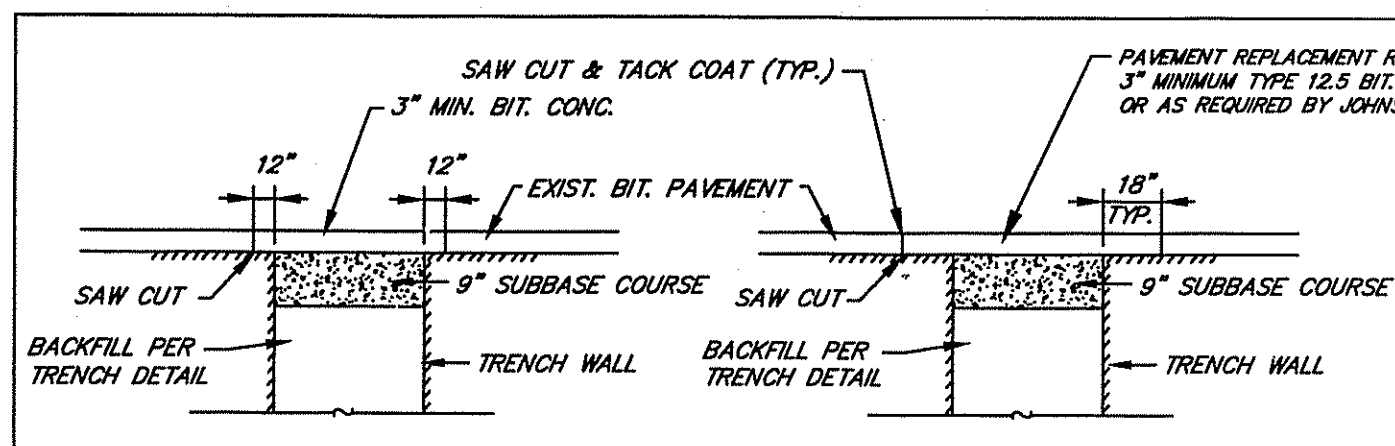
SILT SOCK DETAIL
NOT TO SCALE



ROOF DOWNSPOUT OVERFLOW DETAIL
NOT TO SCALE

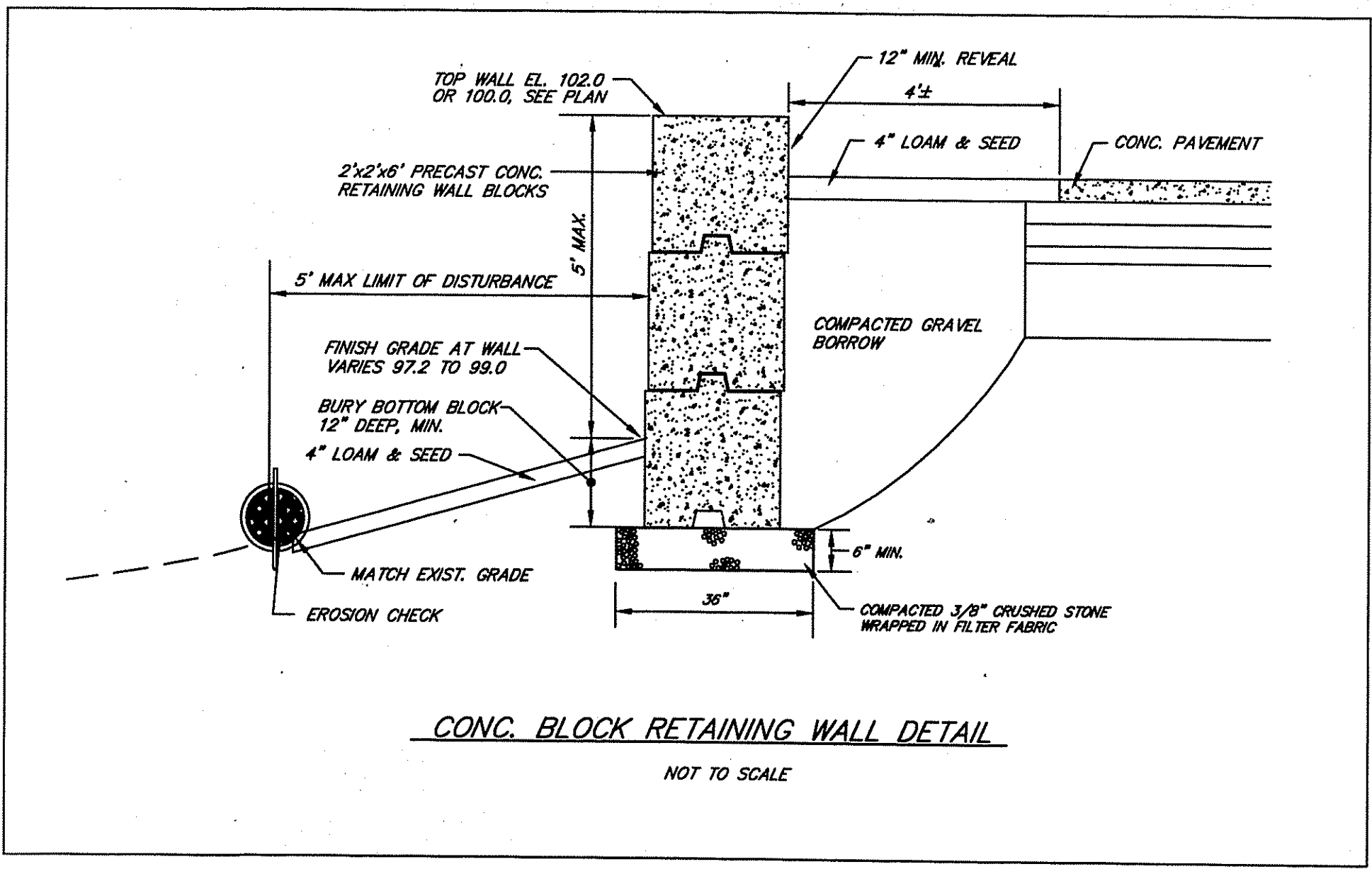


UTILITY TRENCH DETAIL
NOT TO SCALE

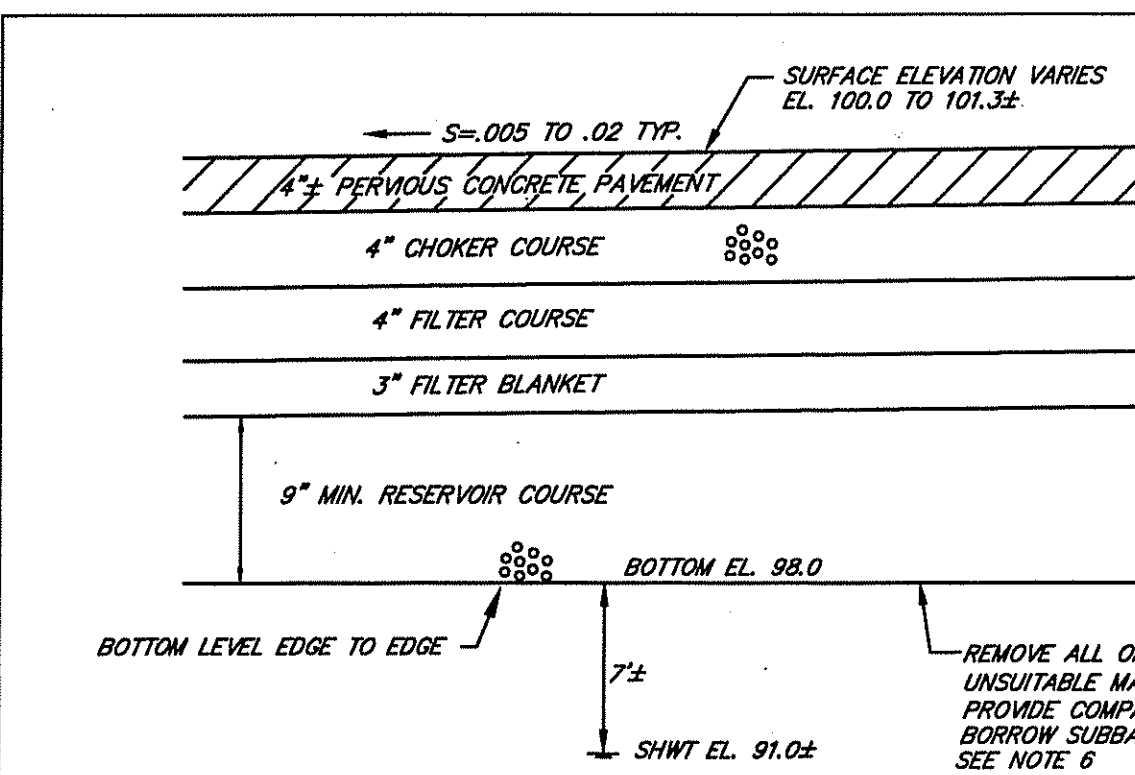


TEMPORARY TRENCH PATCH **PERMANENT TRENCH PATCH**
NOT TO SCALE NOT TO SCALE

- NOTES:**
- ALL SAWCUT PAVEMENT EDGES SHALL BE TACK COATED.
 - RESAWCUT EXIST. BIT. PAVMT. 18" BEYOND ACTUAL TRENCH WIDTH PRIOR TO PLACEMENT OF PERMANENT TRENCH PATCH.
 - TOTAL PAVEMENT THICKNESS SHALL MATCH EXISTING PAVEMENT COURSES INCLUDING BIT. BASE COURSES.
 - TRENCH COMPACTION, TRENCH PATCH, MILLING AND OVERLAYS SHALL COMPLY WITH DPW REQUIREMENTS AND SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY JOHNSTON DPW.
 - AFTER THE CITY DPW HAS DETERMINED ADEQUATE SETTLING HAS OCCURRED, THE TEMPORARY TRENCH PATCH AREAS SHALL BE SAWCUT AND MILLED TO THE LIMITS REQUIRED BY DPW AND THE PERMANENT TRENCH PATCH SHALL BE INSTALLED.



CONC. BLOCK RETAINING WALL DETAIL
NOT TO SCALE

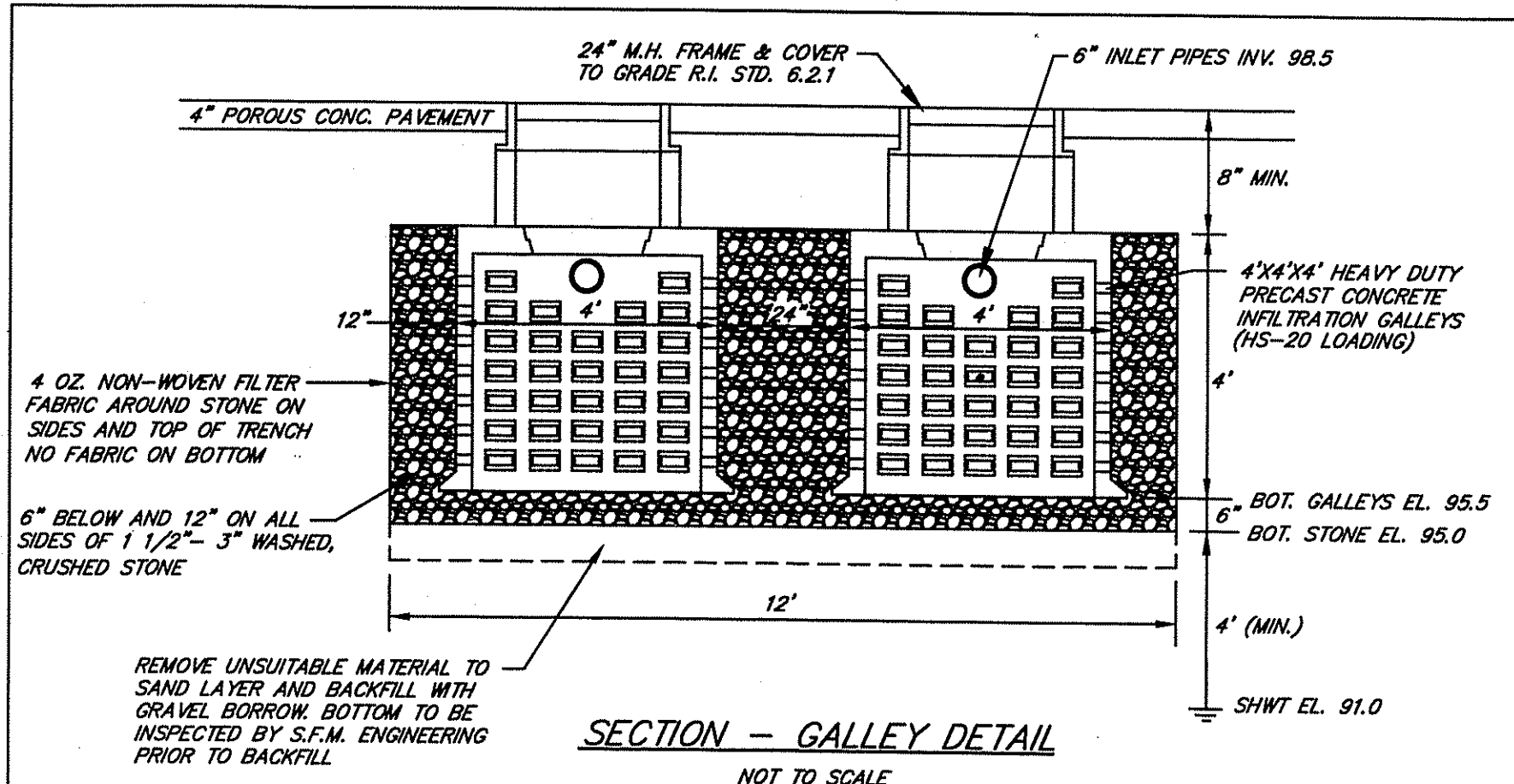


PERVIOUS CONC. PAVEMENT SECTION
NOT TO SCALE

- PERVIOUS CONCRETE SPECIFICATIONS**
- MATERIALS AND INSTALLATION OF PERVIOUS CONCRETE PAVEMENT SHALL MEET THE REQUIREMENTS OF SEC. F.4.2 OF THE RI STORMWATER DESIGN AND INSTALLATION STANDARDS MANUAL, MARCH 2015.
 - ALL MATERIALS AND WORK SHALL COMPLY WITH THE REQUIREMENTS OF ACI 522R-10 SPECIFICATIONS FOR PERVIOUS CONCRETE PAVEMENT.
 - THE FINAL VOID RATIO OF THE CONCRETE SHALL BE BETWEEN 15 AND 20 PERCENT. TESTING SHALL COMPLY WITH ASTM C1688 AND ASTM C1754.
 - THE PERVIOUS CONCRETE SURFACE AND ALL AGGREGATE LAYERS SHALL BE PROTECTED FROM DAMAGE AND SILTATION DURING ALL PHASES OF INSTALLATION.
 - THE FULL PERMEABILITY OF THE PAVEMENT SURFACE SHALL BE TESTED BY APPLICATION OF CLEAN WATER PER ASTM C1701 STANDARD TEST METHOD FOR INFILTRATION RATE OF IN-PLACE PERVIOUS CONCRETE. OR ALTERNATIVELY BY THE APPLICATION BY HOSE OF CLEAN WATER AT THE RATE OF AT LEAST 5 GPM OVER THE SURFACE. ALL APPLIED WATER SHALL INFILTRATE DIRECTLY WITHOUT LARGE PUDDLE FORMATION OR SURFACE RUNOFF, AND SHALL BE OBSERVED BY THE ENGINEER.
 - ALL FILL DEBRIS AND UNSUITABLE MATERIAL UNDER THE PAVEMENT AREAS SHALL BE REMOVED TO THE NATURAL SAND LAYER. COMPACTED GRAVEL BORROW BACKFILL SHALL BE PROVIDED TO THE BOTTOM OF THE RESERVOIR COURSE AS REQUIRED.
 - TESTING AND INSPECTION: AN INSPECTION FIRM ACCEPTABLE TO THE OWNER AND ENGINEER SHALL BE RETAINED TO PERFORM SOIL INSPECTION SERVICES, MATERIALS TESTING AND INSPECTION, AND PAVEMENT INSTALLATION INSPECTION. THE INSPECTION SCHEDULE AND LISTS OF TESTS SHALL BE REVIEWED AND APPROVED IN WRITING BY THE ENGINEER PRIOR TO CONSTRUCTION. ALL THE TEST REPORTS MUST BE SIGNED BY A LICENSED ENGINEER.

PERVIOUS PAVEMENT MAINTENANCE NOTES:

- PAVEMENT AND CRUSHED STONE SHALL NOT BE INSTALLED UNTIL THE SITE IS READY FOR CONCRETE PAVEMENT INSTALLATION AND ALL UPGRADIENT AREAS ARE STABILIZED WITH TURF OR MULCH.
- PERVIOUS PAVEMENT AREAS SHALL BE PROTECTED AT ALL TIMES FROM EROSION AND SILTATION UNTIL THE SITE IS PERMANENTLY STABILIZED.
- PAVEMENT SURFACES SHALL BE INSPECTED AFTER RAIN EVENTS BY MAINTENANCE PERSONNEL. ACCUMULATED DEBRIS AND SEDIMENTS SHALL BE REMOVED AS SOON AS POSSIBLE.
- THE USE OF DE-ICING SALT SHALL BE KEPT TO THE MINIMUM NECESSARY. THE USE OF SAND FOR DE-ICING IS STRONGLY DISCOURAGED.
- PAVEMENT SURFACES SHALL BE VACUUM CLEANED WITH PAVEMENT SWEEPERS THREE TIMES PER YEAR AT END OF WINTER, MID-SUMMER AND AFTER AUTUMN LEAF DROP.
- IF PONDING ON THE SURFACE OCCURS AND ROUTINE CLEANING DOES NOT RESTORE INFILTRATION, THEN RECONSTRUCTION OF THE AREA OF FAILURE SHALL BE REQUIRED. POROUS PAVEMENT SHALL BE REMOVED, CRUSHED STONE CLOGGED WITH SILTS SHALL BE REPLACED AND PERVIOUS PAVEMENT REINSTALLED.
- MAINTENANCE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR UNTIL FINAL ACCEPTANCE OF THE PROJECT BY THE OWNER. AFTER FINAL ACCEPTANCE, MAINTENANCE AND REPAIR SHALL BE THE RESPONSIBILITY OF THE OWNER.



SECTION - GALLEY DETAIL
NOT TO SCALE

ROOF INFILTRATION NOTES:

- ROOF INFILTRATION SYSTEM AREA SHALL BE PROTECTED PRIOR TO COMMENCEMENT OF CONSTRUCTION TO PREVENT COMPACTION OF BOTTOM AREA.
- INFILTRATION SYSTEM LOCATIONS AND ELEVATIONS MUST BE SET AND VERIFIED BY THE PROJECT ENGINEER PRIOR TO INSTALLATION.
- INFILTRATION SYSTEM INSTALLATION MUST BE INSPECTED BY THE PROJECT ENGINEER.
- INFILTRATION SYSTEM CHAMBERS SHALL BE 4'x4'x4' HEAVY DUTY (HS20) PRECAST CONCRETE GALLEY CHAMBERS FOUR REQUIRED PER HOUSE.
- STONE AROUND GALLEYS SHALL BE 1 1/2" TO 3" WASHED, CRUSHED STONE.
- FILTER FABRIC LINER SHALL BE MIRAF 180-N 4 OR AMOCO 4552 OR EQUAL.
- ROOF DRAINS SHALL BE 4" PVC OR ADS AT S=01 (MIN.).
- INFILTRATION SYSTEMS SHALL BE LOCATED A MINIMUM OF 10' FROM FOUNDATIONS AND PROPERTY LINES.

MAINTENANCE NOTES:

- THE INFILTRATION CHAMBERS SHALL BE PERIODICALLY INSPECTED AND MAINTAINED DURING CONSTRUCTION AND A MINIMUM OF TWICE PER YEAR UPON COMPLETION OF CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSPECTION AND MAINTENANCE OF ALL DRAINAGE FACILITIES UNTIL FINAL ACCEPTANCE BY THE OWNER.
- UPON FINAL ACCEPTANCE, THE OWNER SHALL BE RESPONSIBLE FOR ALL DRAINAGE INSPECTION AND MAINTENANCE.
- ANY INADVERTENT OR DELIBERATE DISCHARGE OF WASTE OIL OR ANY OTHER POLLUTANT TO THE STORMWATER DISPOSAL SYSTEM REQUIRES IMMEDIATE NOTIFICATION OF THE RIDEM-UC PROGRAM.
- ANY INCIDENT OF GROUNDWATER CONTAMINATION RESULTING FROM THE IMPROPER DISCHARGE OF CONTAMINANTS TO THE DISPOSAL SYSTEM SHALL BE THE RESPONSIBILITY OF THE PROPERTY OWNER. THE RIDEM WILL REQUIRE THE PROPERTY OWNER TO REMEDIATE ANY INCIDENTS THAT MAY ADVERSELY IMPACT THE QUALITY OF THE GROUNDWATER.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
REVIEWED SITE PLAN APPLICATION NO.: 17-0197
DATED SEP 22 2017
SEE LETTER OF SAME DATE.

Yarvis D. Wences

AUG 24 2017

SCOTT F. MOOREHEAD
REGISTERED PROFESSIONAL ENGINEER

OWNER & APPLICANT:
LJ ENTERPRISES, LLC
100 ARMENTO STREET
JOHNSTON, RI 02919
401-255-8300

PROPOSED LOT DEVELOPMENT
TRISTE AND ARMENTO STREETS
ASSESSOR'S PLAT 35 LOT 127
JOHNSTON, RI

SITE CONSTRUCTION DETAILS

S.F.M. ENGINEERING ASSOCIATES
410 TIOGUE AVENUE
COVENTRY, RI 02816
PHONE: 401-826-3736
FAX: 401-826-1771
SCOTT@SFM.NECCOMAIL.COM

SFM
DRN. BY: SFM
CHK. BY: JZL
SCALE: AS NOTED
DATE: AUG. 9, 2017
DWG: SFMB46-CD
SHEET 2 OF 2
DEM PERMITTING SUBMISSION