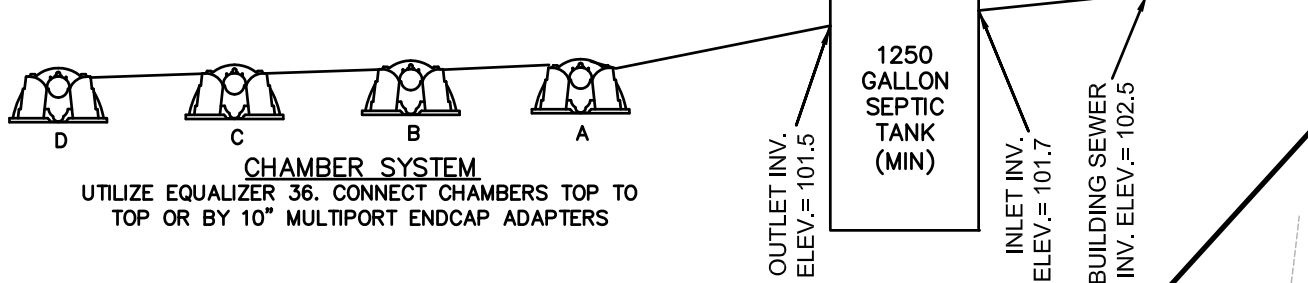
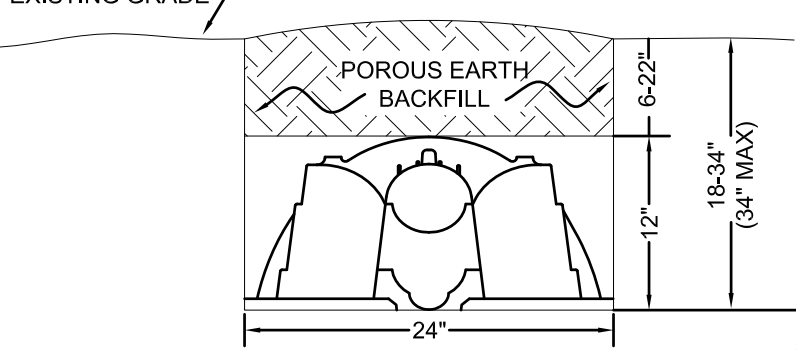


**SEPTIC SYSTEM SIDE PROFILE
(NOT TO SCALE)**

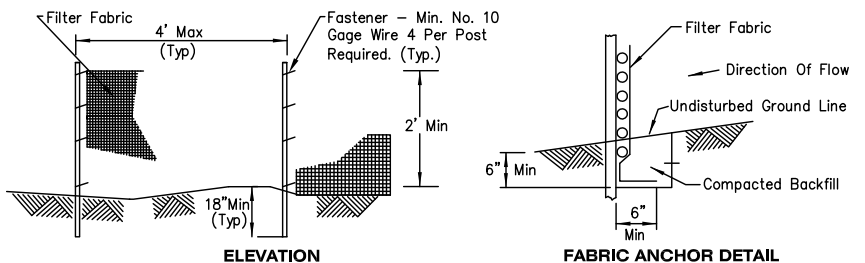


**TRENCH DETAIL
(NOT TO SCALE)**



BOTTOM OF TRENCH ELEVATIONS

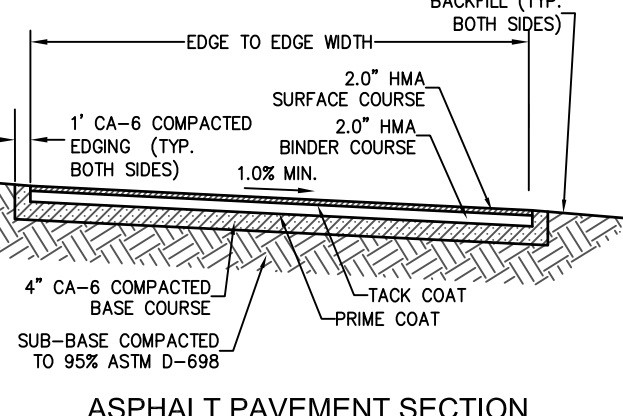
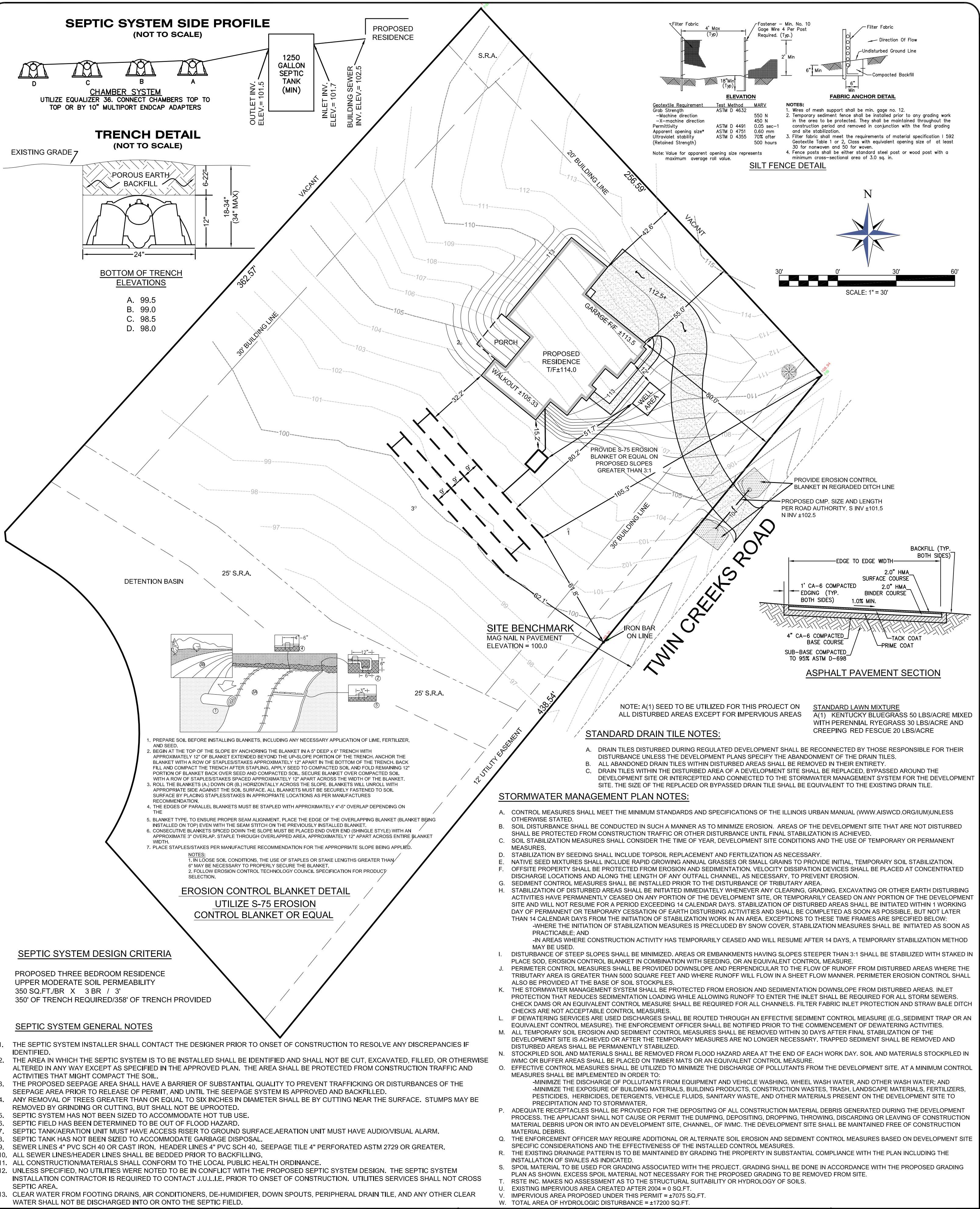
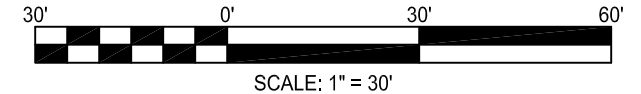
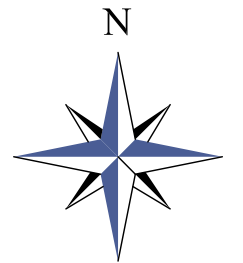
- A. 99.5
- B. 99.0
- C. 98.5
- D. 98.0



Geotextile Requirement	Test Method	MARV
Grab Strength	ASTM D 4632	550 N
-Machine direction		450 N
-X-machine direction		0.05 sec-1
Permeability	ASTM D 4491	0.60 mm
Apparent opening size*	ASTM D 4751	70% after 500 hours
Ultraviolet stability (Retained Strength)	ASTM D 4355	

- NOTES:**
1. Wires of mesh support shall be min. gage no. 12.
 2. Temporary sediment fence shall be installed prior to any grading work in the area to be protected. They shall be maintained throughout the construction period and removed in conjunction with the final grading and site stabilization.
 3. Filter fabric shall meet the requirements of material specification 1 592 Geotextile Table 1 or 2, Class with equivalent opening size of at least 30 for nonwoven and 50 for woven.
 4. Fence posts shall be either standard steel post with a minimum cross-sectional area of 3.0 sq. in.

SILT FENCE DETAIL



1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6\"/>

**EROSION CONTROL BLANKET DETAIL
UTILIZE S-75 EROSION CONTROL BLANKET OR EQUAL**

STANDARD DRAIN TILE NOTES:

- A. DRAIN TILES DISTURBED DURING REGULATED DEVELOPMENT SHALL BE RECONNECTED BY THOSE RESPONSIBLE FOR THEIR DISTURBANCE UNLESS THE DEVELOPMENT PLANS SPECIFY THE ABANDONMENT OF THE DRAIN TILES.
- B. ALL ABANDONED DRAIN TILES WITHIN DISTURBED AREAS SHALL BE REMOVED IN THEIR ENTIRETY.
- C. DRAIN TILES WITHIN THE DISTURBED AREA OF A DEVELOPMENT SITE SHALL BE REPLACED, BYPASSED AROUND THE DEVELOPMENT SITE OR INTERCEPTED AND CONNECTED TO THE STORMWATER MANAGEMENT SYSTEM FOR THE DEVELOPMENT SITE. THE SIZE OF THE REPLACED OR BYPASSED DRAIN TILE SHALL BE EQUIVALENT TO THE EXISTING DRAIN TILE.

STORMWATER MANAGEMENT PLAN NOTES:

- A. CONTROL MEASURES SHALL MEET THE MINIMUM STANDARDS AND SPECIFICATIONS OF THE ILLINOIS URBAN MANUAL (WWW.AISWCD.ORG/IUM) UNLESS OTHERWISE STATED.
- B. SOIL DISTURBANCE SHALL BE CONDUCTED IN SUCH A MANNER AS TO MINIMIZE EROSION. AREAS OF THE DEVELOPMENT SITE THAT ARE NOT DISTURBED SHALL BE PROTECTED FROM CONSTRUCTION TRAFFIC OR OTHER DISTURBANCE UNTIL FINAL STABILIZATION IS ACHIEVED.
- C. SOIL STABILIZATION MEASURES SHALL CONSIDER THE TIME OF YEAR, DEVELOPMENT SITE CONDITIONS AND THE USE OF TEMPORARY OR PERMANENT MEASURES.
- D. STABILIZATION BY SEEDING SHALL INCLUDE TOPSOIL REPLACEMENT AND FERTILIZATION AS NECESSARY.
- E. NATIVE SEED MIXTURES SHALL INCLUDE RAPID GROWING ANNUAL GRASSES OR SMALL GRAINS TO PROVIDE INITIAL, TEMPORARY SOIL STABILIZATION.
- F. OFFSITE PROPERTY SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION. VELOCITY DISSIPATION DEVICES SHALL BE PLACED AT CONCENTRATED DISCHARGE LOCATIONS AND ALONG THE LENGTH OF ANY OUTFALL CHANNEL, AS NECESSARY, TO PREVENT EROSION.
- G. SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE DISTURBANCE OF TRIBUTARY AREA.
- H. STABILIZATION OF DISTURBED AREAS SHALL BE INITIATED IMMEDIATELY WHENEVER ANY CLEARING, GRADING, EXCAVATING OR OTHER EARTH DISTURBING ACTIVITIES HAVE PERMANENTLY CEASED ON ANY PORTION OF THE DEVELOPMENT SITE, OR TEMPORARILY CEASED ON ANY PORTION OF THE DEVELOPMENT SITE AND WILL NOT RESUME FOR A PERIOD EXCEEDING 14 CALENDAR DAYS. STABILIZATION OF DISTURBED AREAS SHALL BE INITIATED WITHIN 1 WORKING DAY OF PERMANENT OR TEMPORARY CESSATION OF EARTH DISTURBING ACTIVITIES AND SHALL BE COMPLETED AS SOON AS POSSIBLE, BUT NOT LATER THAN 14 CALENDAR DAYS FROM THE INITIATION OF STABILIZATION WORK IN AN AREA. EXCEPTIONS TO THESE TIME FRAMES ARE SPECIFIED BELOW:
 - WHERE THE INITIATION OF STABILIZATION MEASURES IS PRECLUDED BY SNOW COVER, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE; AND
 - IN AREAS WHERE CONSTRUCTION ACTIVITY HAS TEMPORARILY CEASED AND WILL RESUME AFTER 14 DAYS, A TEMPORARY STABILIZATION METHOD MAY BE USED.
- I. DISTURBANCE OF STEEP SLOPES SHALL BE MINIMIZED. AREAS OR EMBANKMENTS HAVING SLOPES STEEPER THAN 3:1 SHALL BE STABILIZED WITH STAKED IN PLACE SOD, EROSION CONTROL BLANKET IN COMBINATION WITH SEEDING, OR AN EQUIVALENT CONTROL MEASURE.
- J. PERIMETER CONTROL MEASURES SHALL BE PROVIDED DOWNSLOPE AND PERPENDICULAR TO THE FLOW OF RUNOFF FROM DISTURBED AREAS WHERE THE TRIBUTARY AREA IS GREATER THAN 5000 SQUARE FEET AND WHERE RUNOFF WILL FLOW IN A SHEET FLOW MANNER. PERIMETER EROSION CONTROL SHALL ALSO BE PROVIDED AT THE BASE OF SOIL STOCKPILES.
- K. THE STORMWATER MANAGEMENT SYSTEM SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION DOWNSLOPE FROM DISTURBED AREAS. INLET PROTECTION THAT REDUCES SEDIMENTATION LOADING WHILE ALLOWING RUNOFF TO ENTER THE INLET SHALL BE REQUIRED FOR ALL STORM SEWERS. CHECK DAMS OR AN EQUIVALENT CONTROL MEASURE SHALL BE REQUIRED FOR ALL CHANNELS. FILTER FABRIC INLET PROTECTION AND STRAW BALE DITCH CHECKS ARE NOT ACCEPTABLE CONTROL MEASURES.
- L. IF DEWATERING SERVICES ARE USED DISCHARGES SHALL BE ROUTED THROUGH AN EFFECTIVE SEDIMENT CONTROL MEASURE (E.G. SEDIMENT TRAP OR AN EQUIVALENT CONTROL MEASURE). THE ENFORCEMENT OFFICER SHALL BE NOTIFIED PRIOR TO THE COMMENCEMENT OF DEWATERING ACTIVITIES.
- M. ALL TEMPORARY SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL STABILIZATION OF THE DEVELOPMENT SITE IS ACHIEVED OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NECESSARY. TRAPPED SEDIMENT SHALL BE REMOVED AND DISTURBED AREAS SHALL BE PERMANENTLY STABILIZED.
- N. STOCKPILED SOIL AND MATERIALS SHALL BE REMOVED FROM FLOOD HAZARD AREA AT THE END OF EACH WORK DAY. SOIL AND MATERIALS STOCKPILED IN IWMC OR BUFFER AREAS SHALL BE PLACED ON TIMBER MATS OR AN EQUIVALENT CONTROL MEASURE.
- O. EFFECTIVE CONTROL MEASURES SHALL BE UTILIZED TO MINIMIZE THE DISCHARGE OF POLLUTANTS FROM THE DEVELOPMENT SITE. AT A MINIMUM CONTROL MEASURES SHALL BE IMPLEMENTED IN ORDER TO:
 - MINIMIZE THE DISCHARGE OF POLLUTANTS FROM EQUIPMENT AND VEHICLE WASHING, WHEEL WASH WATER, AND OTHER WASH WATER; AND
 - MINIMIZE THE EXPOSURE OF BUILDING MATERIALS, BUILDING PRODUCTS, CONSTRUCTION WASTES, TRASH, LANDSCAPE MATERIALS, FERTILIZERS, PESTICIDES, HERBICIDES, DETERGENTS, VEHICLE FLUIDS, SANITARY WASTE, AND OTHER MATERIALS PRESENT ON THE DEVELOPMENT SITE TO PRECIPITATION AND TO STORMWATER.
- P. ADEQUATE RECEPTACLES SHALL BE PROVIDED FOR THE DEPOSITING OF ALL CONSTRUCTION MATERIAL DEBRIS GENERATED DURING THE DEVELOPMENT PROCESS. THE APPLICANT SHALL NOT CAUSE OR PERMIT THE DUMPING, DEPOSITING, DROPPING, THROWING, DISCARDING OR LEAVING OF CONSTRUCTION MATERIAL DEBRIS UPON OR INTO AN DEVELOPMENT SITE, CHANNEL, OF IWMC. THE DEVELOPMENT SITE SHALL BE MAINTAINED FREE OF CONSTRUCTION MATERIAL DEBRIS.
- Q. THE ENFORCEMENT OFFICER MAY REQUIRE ADDITIONAL OR ALTERNATE SOIL EROSION AND SEDIMENT CONTROL MEASURES BASED ON DEVELOPMENT SITE SPECIFIC CONSIDERATIONS AND THE EFFECTIVENESS OF THE INSTALLED CONTROL MEASURES.
- R. THE EXISTING DRAINAGE PATTERN IS TO BE MAINTAINED BY GRADING THE PROPERTY IN SUBSTANTIAL COMPLIANCE WITH THE PLAN INCLUDING THE INSTALLATION OF SWALES AS INDICATED.
- S. SPOIL MATERIAL TO BE USED FOR GRADING ASSOCIATED WITH THE PROJECT. GRADING SHALL BE DONE IN ACCORDANCE WITH THE PROPOSED GRADING PLAN AS SHOWN. EXCESS SPOIL MATERIAL NOT NECESSARY FOR THE PROPOSED GRADING TO BE REMOVED FROM SITE.
- T. RSTE INC. MAKES NO ASSESSMENT AS TO THE STRUCTURAL SUITABILITY OR HYDROLOGY OF SOILS.
- U. EXISTING IMPERVIOUS AREA CREATED AFTER 2004 = 0 SQ.FT.
- V. IMPERVIOUS AREA PROPOSED UNDER THIS PERMIT = ±7075 SQ.FT.
- W. TOTAL AREA OF HYDROLOGIC DISTURBANCE = ±17200 SQ.FT.

SEPTIC SYSTEM DESIGN CRITERIA

PROPOSED THREE BEDROOM RESIDENCE
UPPER MODERATE SOIL PERMEABILITY
350 SQ.FT./BR X 3 BR / 3'
350' OF TRENCH REQUIRED/358' OF TRENCH PROVIDED

SEPTIC SYSTEM GENERAL NOTES

1. THE SEPTIC SYSTEM INSTALLER SHALL CONTACT THE DESIGNER PRIOR TO ONSET OF CONSTRUCTION TO RESOLVE ANY DISCREPANCIES IF IDENTIFIED.
2. THE AREA IN WHICH THE SEPTIC SYSTEM IS TO BE INSTALLED SHALL BE IDENTIFIED AND SHALL NOT BE CUT, EXCAVATED, FILLED, OR OTHERWISE ALTERED IN ANY WAY EXCEPT AS SPECIFIED IN THE APPROVED PLAN. THE AREA SHALL BE PROTECTED FROM CONSTRUCTION TRAFFIC AND ACTIVITIES THAT MIGHT COMPACT THE SOIL.
3. THE PROPOSED SEEPAGE AREA SHALL HAVE A BARRIER OF SUBSTANTIAL QUALITY TO PREVENT TRAFFICKING OR DISTURBANCES OF THE SEEPAGE AREA PRIOR TO RELEASE OF PERMIT, AND UNTIL THE SEEPAGE SYSTEM IS APPROVED AND BACKFILLED.
4. ANY REMOVAL OF TREES GREATER THAN OR EQUAL TO SIX INCHES IN DIAMETER SHALL BE BY CUTTING NEAR THE SURFACE. STUMPS MAY BE REMOVED BY GRINDING OR CUTTING, BUT SHALL NOT BE UPROOTED.
5. SEPTIC SYSTEM HAS NOT BEEN SIZED TO ACCOMMODATE HOT TUB USE.
6. SEPTIC FIELD HAS BEEN DETERMINED TO BE OUT OF FLOOD HAZARD.
7. SEPTIC TANK/AERATION UNIT MUST HAVE ACCESS RISER TO GROUND SURFACE. AERATION UNIT MUST HAVE AUDIO/VISUAL ALARM.
8. SEPTIC TANK HAS NOT BEEN SIZED TO ACCOMMODATE GARBAGE DISPOSAL.
9. SEWER LINES 4\"/>

DATE 6-21-19	SEPTIC SYSTEM DESIGN TWIN CREEKS ROAD GREENWOOD, ILLINOIS	REVISIONS	
Job Number 19039	CLIENT: BRAD PETERSON	DATE	DESCRIPTION
	LEGAL: LOT 54 TWIN CREEK ESTATES 1ST AMENDMENT		
	SCALE: 1" = 30'		
	PIN: 08-10-151-010		
John M. Raber L.E.H.P. Lic.No. 0183-000258 Exp 4-30-20		RST ENGINEERING, INC. 597 MIDNIGHT PASS ANTIOCH, IL 60002 Ph: (815) 790-0251 or (847) 838-1179	