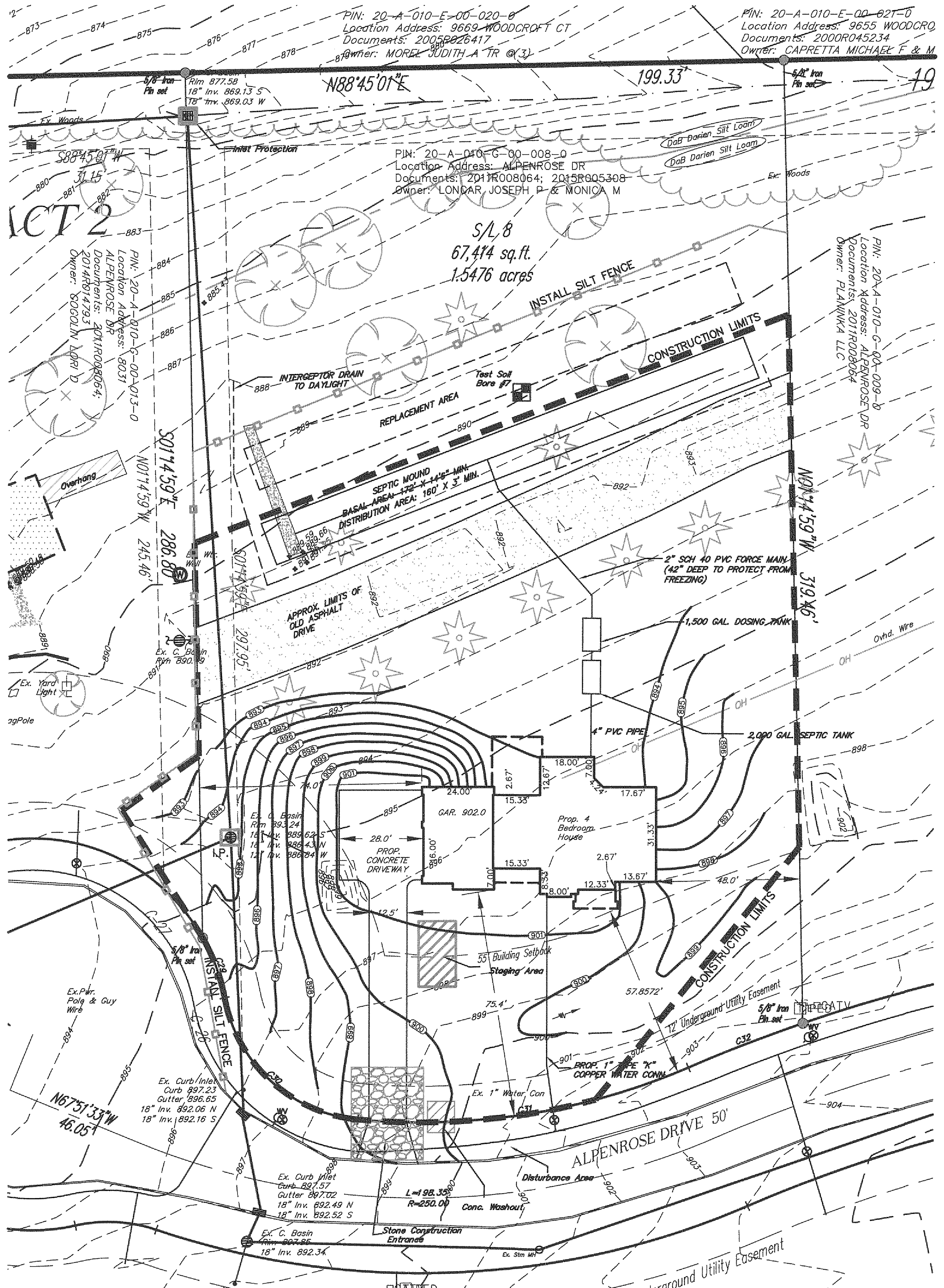
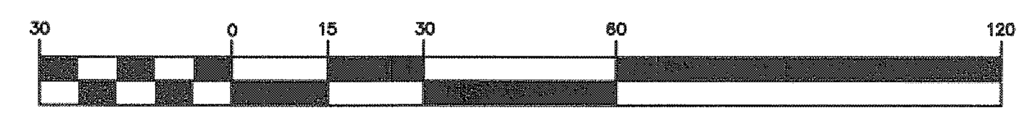
Approved
File # LC SL 15096
Date 6/24/15
Lake SWCD

Stormwater Management Plan
Approved as shown and/or noted
JAMES R. GILLS, P.E.
County Drainage Engineer
By GJH Date 6/24/15



CURVE TABLE						
C29	21.34'	65.00'	18°48'41"	21.24'	N20°09'18"W	10.77'
C30	64.48'	50.00'	73°53'11"	60.10'	S47°41'33"E	37.60'
C31	112.64'	225.00'	28°40'58"	111.46'	N81°01'22"E	57.53'
C32	40.87'	525.00'	4°27'39"	40.86'	S68°54'42"W	20.45'

GRAPHIC SCALE



(IN FEET)
1 inch = 30 ft.

SEPTIC DESIGN DATA:
- Linear Loading Rate =3.0 Gal/Day/Ft
- Infiltration Loading Rate = 0.6 Gal/Day/Ft.Sq'd.
- Perched Seasonal Water Table 12"
- Bedrock >37"
- 4 Bedroom House = 480 Gal/Day
- (See Mound Calculations For Additional Information)

House Grading Summary

Elevations Used To Establish
House Floor Grades:
- Gar.Flr.+1'0"=Top/Wall
- Top/Wall+1'0"=Frst.Flr.
- Top/Wall-8'8"=Top/Ftr. (13 Course Bsmt Wall)
- Top/Ftr.+4"(0.33')=Bsmt.Flr.

FIRST FLR. 904.00
TOP WALL 903.00
GAR. FLR. 902.00
BSMT FLR. 894.66
TOP FLR. 894.33
(13 Course)

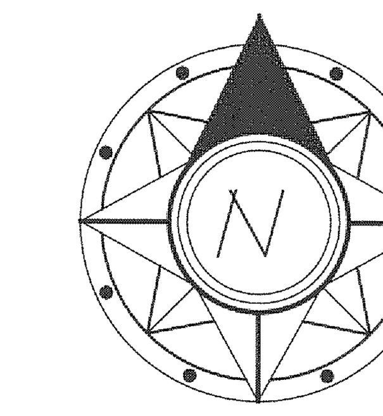
NOTES:
- DOWNSPOUTS AND CURTAIN DRAIN TO BE PIPED TO EXISTING STORM CONN.
- GRINDER PUMP REQUIRED FOR BASEMENT PLUMBING

PERMANENT SEEDING SPECIFICATIONS

Seed Mix	lb./ac.	lb. / 1000sqft	Notes:
General Use			
Creeping Red Fescue	20-40	1/2-1	
Domestic Ryegrass	10-20	1/4-1/2	
Kentucky Bluegrass	10-20	1/4-1/2	
Tall Fescue	40	1	
Dwarf Fescue	40	1	
Steep Banks or Cut Slopes			
Tall Fescue	40	1	
Crown Vetch	10	1/4	Do not seed later than August.
Tall Fescue	20	1/2	
Flat Pea	20	1/2	Do not seed later than August.
Tall Fescue	20	1/2	
Road Ditches and Swales			
Tall Fescue	40	1	
Dwarf Fescue	90	2 1/4	
Kentucky Bluegrass	5		
Lawns			
Kentucky Bluegrass	60	1 1/2	
Perennial Ryegrass	60	1 1/2	
Kentucky Bluegrass	60	1 1/2	For Shaded areas.
Creeping Red Fescue	60	1 1/2	
Note: other approved seed species may be substituted.			

Mulching

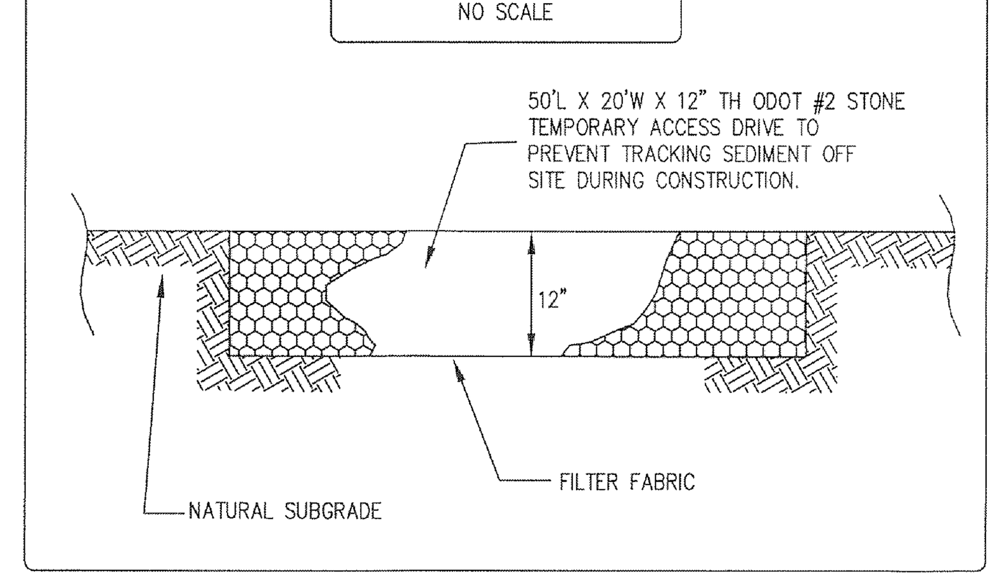
Straw mulch shall be unrotted small-grain straw applied at the rate of 2 tons/ac. or 90 lb./1,000 sq. ft. (two to three bales). The mulch shall be spread uniformly by hand or mechanically so the soil surface is covered. For uniform distribution of hand-spread mulch, divide area into approximately 1,000 sq. ft. sections and spread two 45-lb. bales of straw in each section.



EXISTING UNDERGROUND UTILITIES NOTE:
THE SIZE AND LOCATION, BOTH HORIZONTAL AND VERTICAL OF THE UNDERGROUND UTILITIES SHOWN HEREON, HAVE BEEN OBTAINED BY A SEARCH OF AVAILABLE RECORDS. VERIFICATION BY FIELD OBSERVATION HAS BEEN CONDUCTED WHERE PRACTICAL. HOWEVER, POLARIS ENGINEERING & SURVEYING, INC. DOES NOT GUARANTEE THE COMPLETENESS NOR ACCURACY THEREOF.

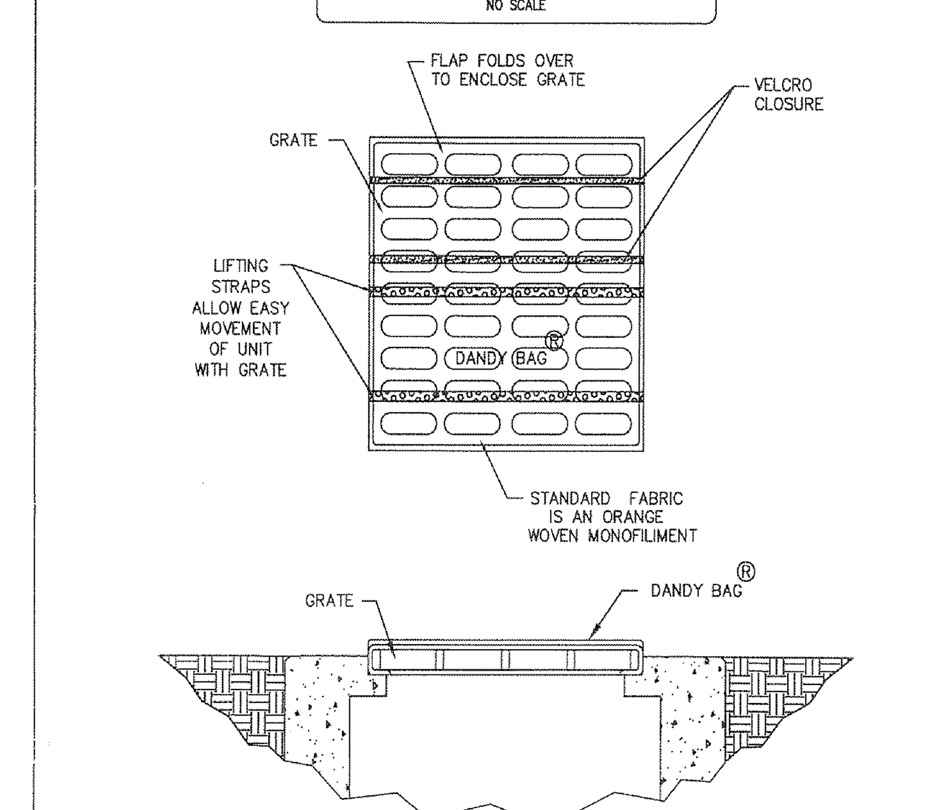
NOTE: THIS SURVEY SUBJECT TO CHANGE UPON RECEIPT OF ANY ADDITIONAL AVAILABLE UNDERGROUND UTILITY INFORMATION.

STONE CONSTRUCTION ENTRANCE
NO SCALE



DANDY BAG® DETAIL
NO SCALE

August 2006



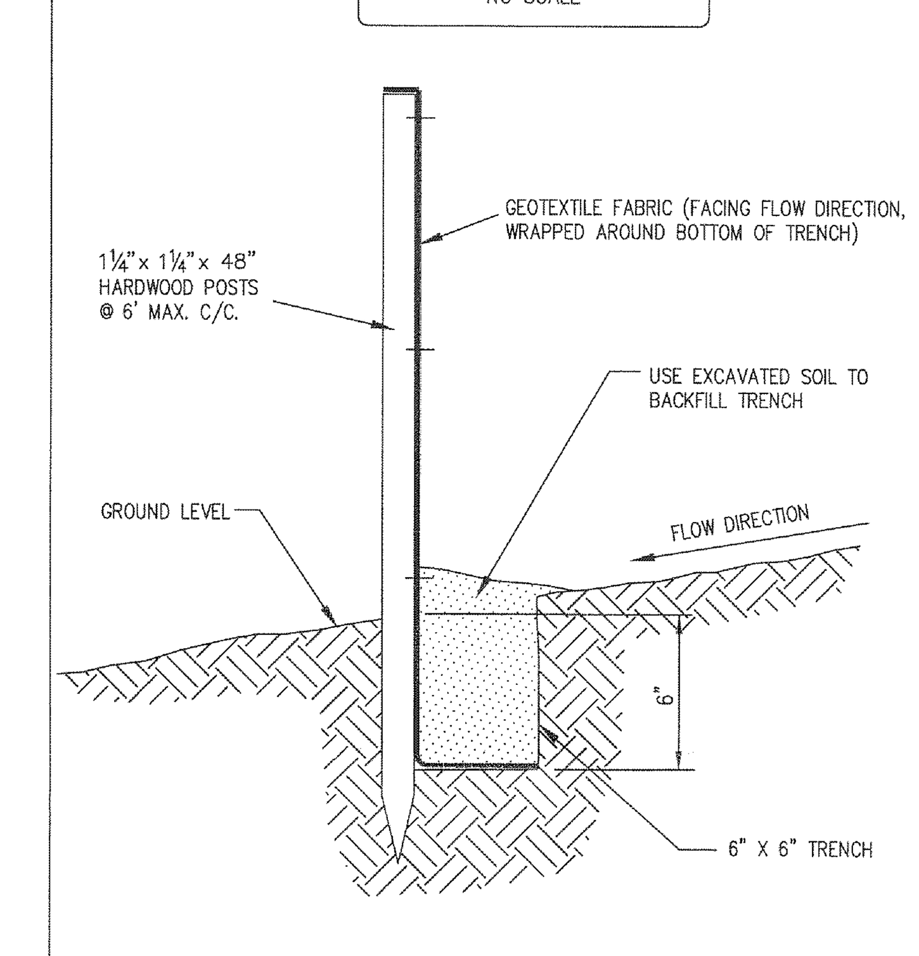
Installation and Maintenance Guidelines

Installation: The empty Dandy Bag® should be placed over the grate as the grate stands on end. If using optional oil absorbents; place absorbent pillow in pouch, on the bottom (below-grade side) of the unit. Attach absorbent pillow to tether loop. Tuck the enclosure flap inside to completely enclose the grate. Holding the lifting devices (do not rely on lifting devices to support the entire weight of the grate), place the grate into its frame.

Maintenance: Remove all accumulated sediment and debris from surface and vicinity of unit after each storm event. Remove sediment that has accumulated within the containment area of the Dandy Bag® as needed. If using optional oil absorbents; remove and replace absorbent pillow when near saturation.

SILT FENCE DETAIL
NO SCALE

September 19, 2003



TYPICAL CROSS SECTION

\STORM & EROSION DETAILS\SILT FENCE DETAIL

SWP3 LEGEND

Symbol	Description
	PROPOSED CLEARING/ DISTURBANCE LIMITS
	SILT FENCE/EARTH DISTRUBING LIMITS
	INLET PROTECTION
	AREAS REQUIRING TEMPORARY SEEDING
	STONE CONSTRUCTION ENTRANCE
	MISC. BMP (Waste Disposal/Dumpster/Conc. Washout/Fuel Tanks)
	PROPOSED CONTOUR
	EXISTING CONTOUR

SWP3 SITE DESCRIPTION:

CURRENT USE:	VACANT LOT
CONSTRUCTION ACTIVITY:	RESIDENTIAL HOME
TOTAL SITE ACREAGE:	1.5476 AC.
DISTURBANCE AREA:	0.97 ACRES
PRE-DEVELOPEMENT PERVIOUS AREA:	1.5476 ACRES (100%)
PRE-DEVELOPEMENT IMPERVIOUS AREA:	0 ACRES (0%)
PRE-DEVELOPMENT CURVE NUMBER:	74
POST-DEVELOPMENT PERVIOUS AREA:	1.4276 ACRES (92.25%)
POST-DEVELOPMENT IMPERVIOUS AREA:	0.12 ACRES (7.75%)
POST-DEVELOPMENT CURVE NUMBER:	78
FIRST RECEIVING WATER BODY:	UNNAMED TRIBUTARY
SUBSEQUENT RECEIVING WATER BODY:	CHAGRIN RIVER
PREDOMINANT SOIL GROUP:	Darien Fine Loam (DaB)
WATER RESOURCES WITHIN 200':	NO

Erosion and Sediment Control Schedule

General
Any sediment-laden groundwater encountered during construction shall be treated prior to discharge.

Ingress-Egress
A stone access drive complete with under lying geo-textilefabric (20 feet wide and 50 feet long) for ingress and egress at the site shall be installed if there is not already an existing access drive. This drive shall be the only entrance and exit to the site.

Silt Fence
All silt fence shall be installed prior to any earthwork activities at the site in the locations shown on the site plan as well as along the front of any lot that slopes towards the street.

Temporary Seeding
Disturbed areas of the site that are to remain idle for more than thirty (30) days shall be properly seeded and straw mulched within seven (7) days of completion of initial grading. Temporary seeding and mulching of a thirty (30) foot strip of the entire front of the lot shall be maintained on the site once initial grading is complete.

Stabilization of critical areas within fifty (50) feet of any stream or wetland shall be complete within two (2) days of the disturbance if the site is to remain inactive for longer than fourteen (14) days.

Mulching
Straw-mulch shall be applied at a rate of 1 bale per every ten (10) feet of curb, at a width of thirty (30) feet of the entire length of the lot. Wood chips may also be used but must be spread at a minimum depth of four inches over the thirty-foot
width and must be accompanied by a properly installed silt fence.

Maintenance
Erosion and sediment controls shall be inspected every seven (7) days or within 24 hours of a 0.5" or greater rainfall event. Necessary repairs shall be made at this time.

Note:
All erosion and sediment control specifications, applications, and timetables are based on the descriptions and standards of The Ohio Department of Natural Resources Rainwater and Land Development Manual".

The specified erosion and sediment control standards are the general guidelines and shall not limit the right of the county to impose, at any time, additional, more stringent requirements. Nor shall the standards limit the right of the county to
waive, in writing, individual requirements.

STATE OF OHIO
RICHARD A. THOMPSON JR.
7388
REGISTERED
PROFESSIONAL SURVEYOR

SURVEYOR CERTIFICATION:

This Plat represents a Survey which meets the minimum standards for a Boundary Survey in The State of Ohio as specified in the Ohio Administrative Code Chapter 4733-37 Surveyed on March 13, 2014 by Dave Leinweber under the supervision of Richard Thompson, P.S. # 7388. All iron pins shown hereon were either found or set as noted.

Richard A. Thompson Jr. P.S.# 7388 Date: 6/8/15
RICHARD A. THOMPSON, JR.

The topography, indicated by 1' contours, and elevations shown hereon, represent an actual field survey made by Dave Leinweber on the 13th day of March, 2014. The elevations were taken at appropriate intervals and as of the above date they existed as indicated hereon.

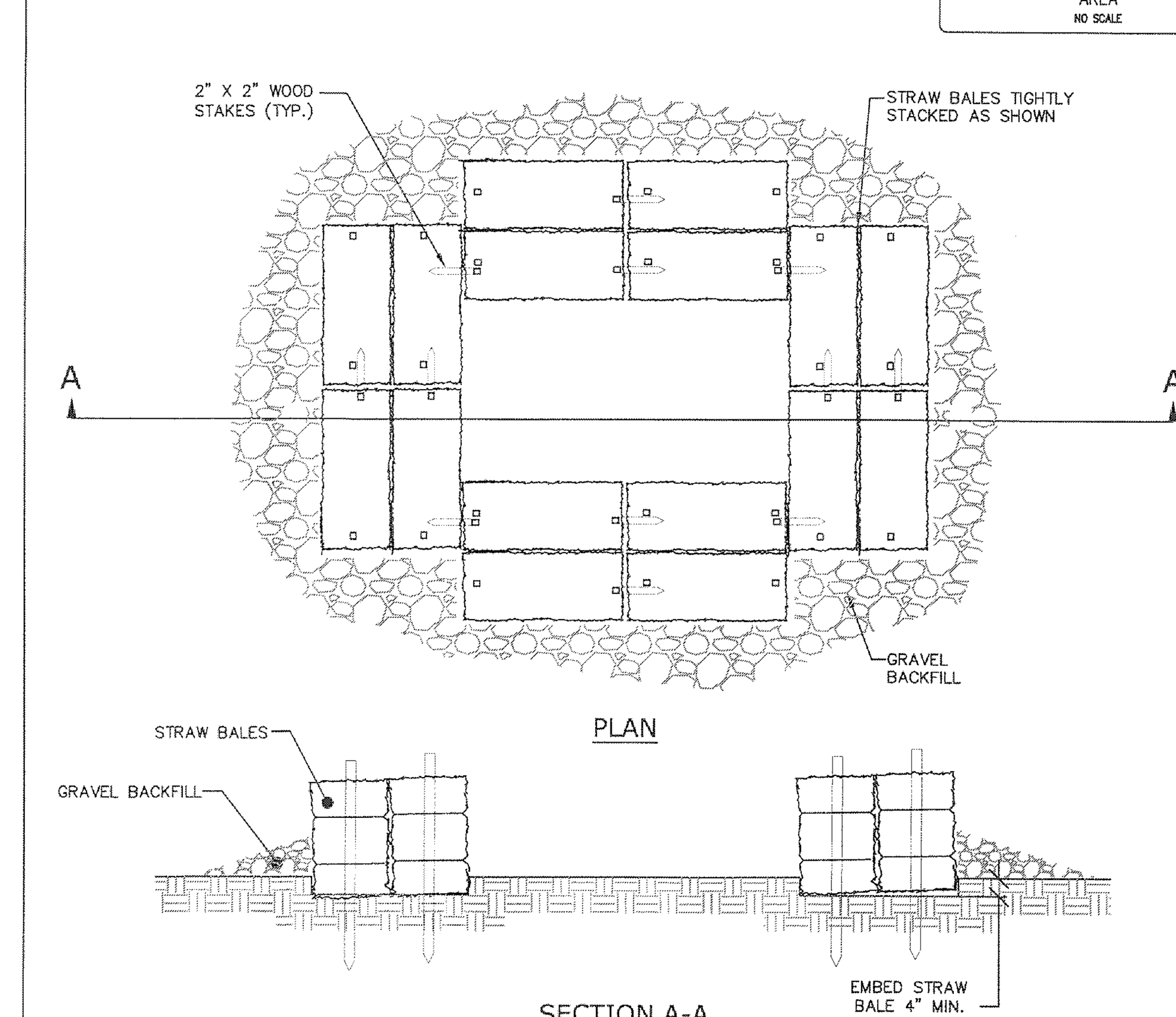
Richard A. Thompson Jr. P.S.# 7388 Date: 6/18/15
RICHARD A. THOMPSON, JR.

Temporary Seeding Specifications

Seeding Dates	Species	Lb. / 1000sqft	Per Acre
March 1 to August 15	Oats Tall Fescue Annual Ryegrass	3 1 1	4 bushel 40 lb. 40 lb.
	Perennial Ryegrass Tall Fescue Annual Ryegrass	1 1 1	40 lb. 40 lb. 40 lb.
August 16 to November 1	Rye Tall Fescue Annual Ryegrass	1 1 1	2 bushel 40 lb. 40 lb.
	Wheat Tall Fescue Annual Ryegrass	1 1 1	40 lb. 40 lb. 40 lb.
	Perennial Ryegrass Tall Fescue Annual Ryegrass	1 1 1	40 lb. 40 lb. 40 lb.
November 1 to Spring Seeding	Use mulch only, sodding practices or dormant seeding		

Note: other approved seed species may be substituted.

CONCRETE WASHOUT AREA
NO SCALE



3. CONCRETE WASH OUT AREAS:

THE RESIDUE OR CONTENTS OF ALL CONCRETE MIXERS, DUMP TRUCKS, OTHER CONVEYANCE EQUIPMENT AND FINISHING TOOLS SHALL BE WASHED INTO CONCRETE CLEAN-OUT STRUCTURES CONSISTING OF A STRAW BALE BARRIER WITH GRAVEL BACKFILL. THE LENGTH AND WIDTH OF THESE STRUCTURES SHALL BE AS DETERMINED BY THE CONTRACTOR TO FACILITATE THE PARTICULAR EQUIPMENT USED. THESE STRUCTURES SHALL BE CONSTRUCTED ON LEVEL GROUND AT LEAST 100' FROM THE NEAREST WATERCOURSE, DRAINAGE SWALE OR INLET. AT NO TIME SHALL THE STRUCTURE BE ALLOWED TO BE MORE THAN 50 % FULL. THE CONTRACTOR SHALL MAINTAIN THESE PONDS UNTIL ALL CONCRETE PLACEMENT IS COMPLETE FOR THE PROJECT.

EMBED THE STRAW BALES 4" INTO THE SOIL. PROVIDE TWO ROWS OF BALES, AS SHOWN ON THE DETAIL, WITH ENDS AND CORNERS TIGHTLY ABUTTING. ORIENT THE STRAW BALES LENGTHWISE WITH BINDINGS AROUND THE SIDES OF THE BALES SO THE WIRE DOES NOT CONTACT THE SOIL. DRIVE 2"X2" WOOD STAKES THROUGH EACH BALE, TO SECURELY ANCHOR THE BALE AND CONNECT ADJACENT BALES. GRAVEL BACKFILL SHALL BE PROVIDED AND TAMPED AROUND THE OUTSIDE PERIMETER OF THE BALES TO PREVENT EROSION AND FLOW AROUND THE BALES.

THE INTENT OF THESE STRUCTURES IS TO COLLECT ALL CONCRETE WASH OUT WATER AND ALLOW IT TO DRY TO A SOLID MATERIAL. AFTER DRYING, THE SOLID MATERIAL CAN BE REMOVED WITH A LOADER OR EXCAVATOR FOR PROPER DISPOSAL. WASH OUT WILL NOT BE PERMITTED IN ANY OTHER AREAS.

USE THE MINIMUM AMOUNT OF WATER TO WASH THE VEHICLES AND EQUIPMENT. NEVER DISPOSE OF WASH OUT INTO THE STREET, STORM INLET, DRAINAGE SWALE OR WATERCOURSE. DISPOSE OF SMALL AMOUNTS OF EXCESS DRY CONCRETE, GROUT AND MORTAR IN THE TRASH. ANY SOAPS THAT ARE UTILIZED SHALL BE PHOSPHATE-FREE AND BIODEGRADABLE.

ADDITIONAL CONCRETE CLEAN-OUT STRUCTURES SHALL BE CONSTRUCTED WITHIN THE SPECIFIED AREA AS NEEDED BASED UPON THE VOLUME OF WASH OUT GENERATED DAILY.

2 WORKING DAYS
BEFORE YOU DIG
CALL 8-1-1
OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS MUST BE CALLED DIRECT

REV. No.		DATE	BY

STATE OF OHIO
DUSTIN R. KEENEY
E-65515
REGISTERED
PROFESSIONAL ENGINEER

DATE: 06/08/15
SCALE: HOR. 1"= 30'
VERT. NA
FOLDER: DWG
FILENAME: SITE PLAN
TAB: SITE PLAN
DRAWN: SRV

ALPENROSE SUBDIVISION
SUBLOT 8

City of Kirtland - Lake County - Ohio

polaris
Engineering & Surveying

POLARIS ENGINEERING & SURVEYING, INC.
34600 CHARDON ROAD - SUITE D
WILLOUGHBY HILLS, OHIO 44094
(440) 944-4433 (440) 944-3722 (Fax)
www.polaris-es.com

SITE PLAN

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CONTRACT No.
15118

SHEET	OF
01	02