

RECORDER OF DEEDS
MONTGOMERY COUNTY PENNSYLVANIA
Jeanne Sorg

One Montgomery Plaza
Swede and Airy Streets ~ Suite 303
P.O. Box 311 ~ Norristown, PA 19404
Office: (610) 278-3289 ~ Fax (610) 278-3869

**I hereby certify that the following is a true and correct
copy of the original document
recorded in Montgomery County, PA**



Jeanne Sorg

Jeanne Sorg, Recorder of Deeds

RECORD PLAN LEGEND

EXISTING PROPERTY LINE	---
LEGAL RIGHT-OF-WAY	---
EXISTING CENTERLINE	---
EXISTING EASEMENT	---
EXISTING EASEMENT TO BE REMOVED	---
ULTIMATE RIGHT-OF-WAY	---
PROPOSED LOT LINE	---
PROPOSED CENTERLINE	---
PROPOSED STORMWATER BASIN	---
PROPOSED BUILDING SETBACK	---
PROPOSED MONUMENT	---
PROPOSED IRON PIN	---

WAIVERS GRANTED 09/18/2017 BY THE DOUGLASS TOWNSHIP BOARD OF SUPERVISORS

SECTION 406.3.C - A WAIVER TO PERMIT THE EXTENSION OF THE EXISTING 700 FOOT CUL-DE-SAC STREET (HUNTSVILLE DRIVE) BY APPROXIMATELY 165 FEET.

SECTION 406.4.C - A WAIVER TO PERMIT THE EXTENSION OF THE TEMPORARY CUL-DE-SAC AS A PERMANENT CUL-DE-SAC STREET, SUBJECT TO SUCH AGREEMENTS AND OR DOCUMENTATION NECESSARY BETWEEN THE AFFECTED PROPERTY OWNERS, ADJACENT DEVELOPER AND APPLICANT IN FORM SATISFACTORY TO THE TOWNSHIP SQUIRTER AND ENGINEER.

SECTION 411.8.D - A PARTIAL WAIVER TO PERMIT THE BASIN DESIGN OF 1 FOOT OF ELEVATION BETWEEN THE 100- YEAR STORM ELEVATION AND THE EMERGENCY SPILLWAY ELEVATION, AS WELL AS 1 FOOT OF FREEBOARD FROM THE TOP OF BASIN ELEVATION TO THE TOP OF THE WATER ELEVATION OF THE 100- YEAR STORM PASSING THROUGH THE EMERGENCY SITUATION. ALL BASIN SLOPES SHALL BE 4:1 WITH A 100- YEAR STORM PONDING DEPTH OF LESS THAN 3 FEET.

SECTION 411.9.F - A WAIVER TO PERMIT HOPE PILING.

SECTION 420.3.C - A PARTIAL WAIVER TO PERMIT THE REDUCTION TO HALF THE PLANT MATERIAL REQUIRED WITH THE SECOND HALF TO BE PROVIDED IN THE FORM OF A FEE-IN-LEND OF THE REQUIRED PLANTINGS IN THE AMOUNT OF \$16,925.00.

SECTION 424.1.A - A PARTIAL WAIVER TO EXTEND THE EXISTING SIDEWALK ALONG THE NORTHERN SIDE OF HUNTSVILLE DRIVE ONLY; SIDEWALK WILL NOT BE REQUIRED ALONG THE SOUTHERN SIDE OF HUNTSVILLE DRIVE WHERE NO SIDEWALK EXISTS IN THE ADJOINING DEVELOPMENT.

SECTION 426.3.C - A PARTIAL WAIVER TO PERMIT THE SNOW REMOVAL EASEMENT TO BE LOCATED AT THE END OF THE PROPOSED CUL-DE-SAC, EXTENDING THE ENTIRE WIDTH OF THE PROPOSED RIGHT-OF-WAY AND APPROXIMATELY 18.75 FEET DEEP.

SECTION 405 - A WAIVER OF THE GROUNDWATER RECHARGE REQUIREMENT DUE TO SOIL TYPE LIMITATIONS.

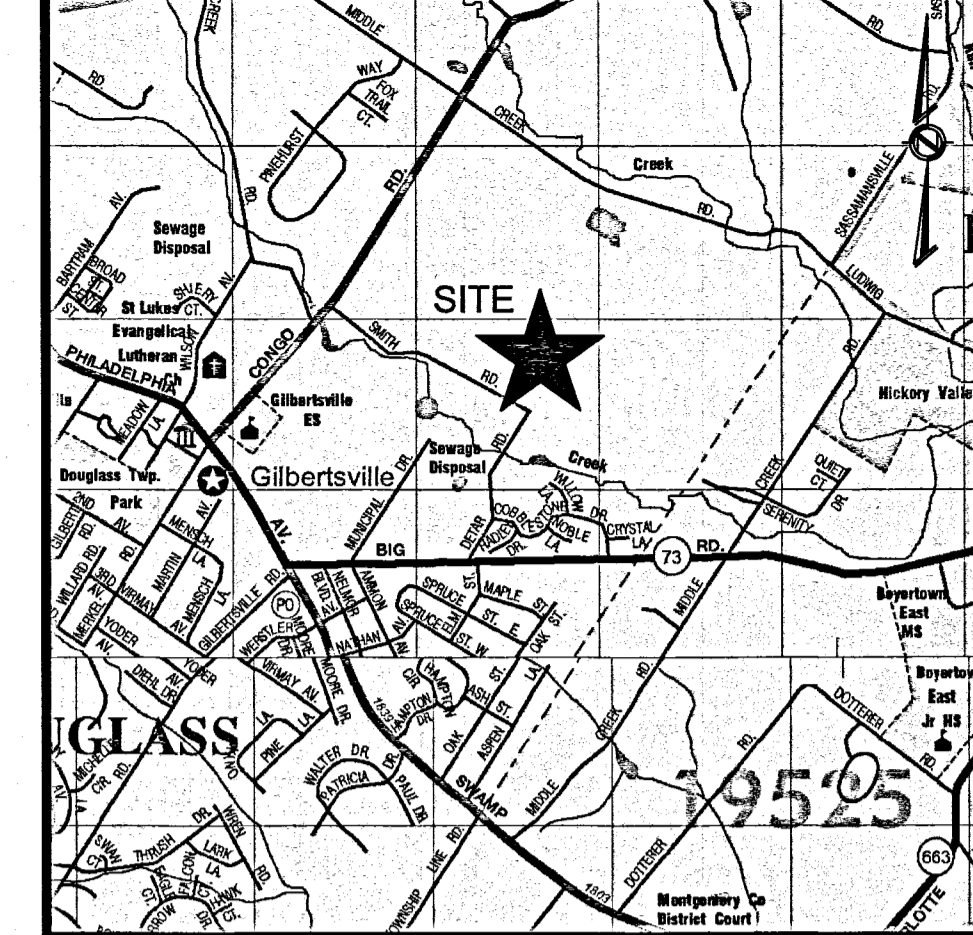
SECTION 407 - A WAIVER FROM THE REQUIREMENT TO PROVIDE A MINIMUM 24-HOUR DISCHARGE FOR THE 1-YEAR STORM AND THE REQUIREMENT FOR THE 2-YEAR, 24-HOUR STORM PEAK FLOW SHALL BE RELEASED TO THE EXISTING CONDITIONS 1-YEAR STORM PEAK FLOW.

GENERAL NOTES

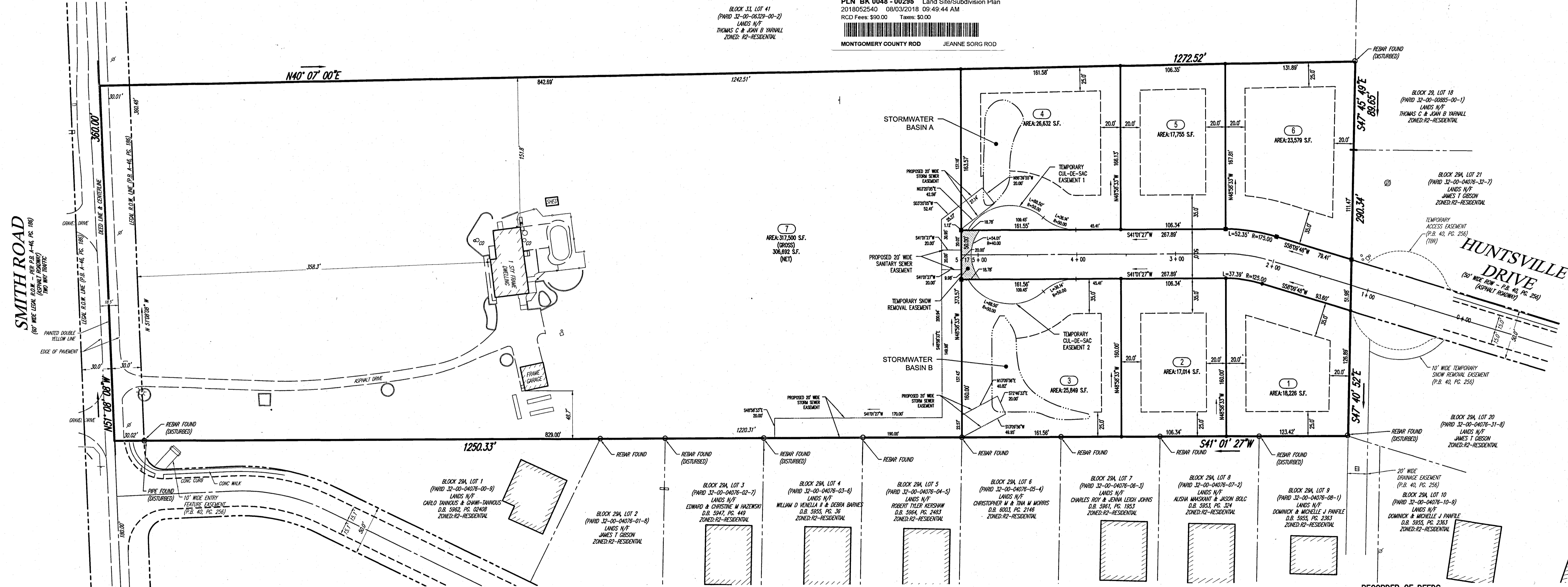
- APPLICANT: MIKELEN, LLC 400 NORRISTOWN ROAD, SUITE 110 BLUE BELL, PA 19422
- OWNER: LOUIS J. STAFY & JOAN C. STAFY 165 SMITH ROAD GILBERTSVILLE, PA 19525
- THIS PLAN REFERENCE: A SURVEY BY JOSEPH J. WRIGHT, P.A.S., # 037828-R BLUE MARSH ASSOCIATES, INC. 2385 TABATHA DRIVE WARRINGTON, PA 18978 PROJECT NO: 15-4055-155 LAST DATED: 7/22/2016
- PROPERTY KNOWN AS BLOCK 33, LOT 42 (PARC 32-00-06328-50-7) AS IDENTIFIED ON THE OFFICIAL TAX MAPS OF MONTGOMERY COUNTY, DOUGLASS TOWNSHIP, COMMONWEALTH OF PENNSYLVANIA.
- AREA TO TITLE LINE = 466,517 S.F. OR 10,710 AC. AREA TO LEGAL R.O.W. LINE = 455,010 S.F. OR 10,462 AC.
- ZONING DATA: DOUGLASS TOWNSHIP, MONTGOMERY COUNTY, PA ZONED: R-2 RESIDENTIAL DISTRICT USE: 6 PROPOSED SINGLE FAMILY LOTS

CRITERIA	REQUIRED	PROPOSED
MIN. LOT AREA	15,000 SF	16,000 SF
MIN. LOT WIDTH	100 FT	100 FT
MIN. FRONT YARD	35 FT	35 FT
MIN. SIDE YARD	20 FT	20 FT
MIN. REAR YARD	25 FT	25 FT
MAX. BUILDING COVERAGE	15%	11.6%
MAX. BUILDING HEIGHT	35 FT	< 35 FT

- THIS PLAN IS BASED ON INFORMATION PROVIDED BY A SURVEY PREPARED IN THE FIELD BY BLUE MARSH ASSOCIATES, INC. AND OTHER REFERENCE MATERIAL AS LISTED HEREON. THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A TITLE CURATIVE REPORT.
- THE SITE IS TO BE SERVICED BY PUBLIC WATER AND PUBLIC SEWER.
- THE LOCATIONS OF ALL EXISTING AND PROPOSED SERVICES SHOWN ON THIS PLAN ARE BASED ON FIELD SURVEYS AND LOCAL UTILITY COMPANY RECORDS AND ARE APPROXIMATE. IT SHALL BE THE CONTRACTOR'S FULL RESPONSIBILITY TO CONTACT THE VARIOUS UTILITY COMPANIES TO LOCATE THEIR FACILITIES PRIOR TO STARTING CONSTRUCTION IN ACCORDANCE WITH PENNSYLVANIA ACT 38, "ONE CALL" SYSTEM. NO EXTRA COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR DAMAGE AND REPAIR TO THESE FACILITIES CAUSED BY HIS WORK FORCE.
- THE EXISTENCE OF UNDERGROUND STORAGE TANKS, IF ANY, WAS NOT KNOWN AT THE TIME OF THE FIELD SURVEY.
- THIS PROPERTY SUBJECT TO RESTRICTIONS, COVENANTS AND/OR EASEMENTS, WRITTEN OR IMPLIED.
- ELEVATIONS ARE BASED UPON (NAVD 80) DATUM ESTABLISHED ON-SITE UTILIZING GLOBAL POSITIONING SYSTEM DATA COLLECTION.
- ENCROACHMENTS AND VAULTS, IF ANY, BELOW SURFACE NOT SHOWN HEREON.
- ALL DIMENSIONS AND GRADES SHOWN ON THE PLANS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY OWNER OR GRAD ENGINEER IF ANY DISCREPANCIES EXIST PRIOR TO PROCEEDING WITH CONSTRUCTION FOR NECESSARY PLAN OR GRADE CHANGES. NO EXTRA COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR WORK HAVING TO BE REDONE DUE TO DIMENSIONS OR GRADES SHOWN INCORRECTLY ON THESE PLANS IF SUCH NOTIFICATION HAS NOT BEEN GIVEN. ENGINEER RESERVES THE RIGHT TO CORRECT THESE DRAWINGS.
- REFER TO ARCHITECTURAL DRAWINGS FOR EXACT BUILDING DIMENSIONS.
- REFER TO ARCHITECTURAL DRAWINGS FOR EXACT BUILDING UTILITY CONNECTION LOCATIONS. SERVICE SIZES TO BE DETERMINED BY ARCHITECT.
- THE PROPOSED ROADS ARE HEREBY OFFERED FOR DEDICATION TO THE AGENCY HAVING JURISDICTION.
- THE PROPOSED SANITARY SEWER SYSTEM IS HEREBY OFFERED FOR DEDICATION TO THE BERKS-MONTGOMERY MUNICIPAL AUTHORITY.
- LOT PINS HAVE BEEN SHOWN ON THIS RECORD PLAN AT ALL LOT CORNERS AND CHANGES OF DIRECTION. MARKERS SHALL BE PERMANENTLY LOCATED AND SHALL BE AT LEAST FIVE-EIGHTS (5/8) INCH METAL PIN WITH A MINIMUM LENGTH OF TWENTY-FOUR (24) INCHES, LOCATED IN THE GROUND TO FINISHED GRADE.
- CONSTRUCTION DETAILS AND SPECIFICATION FOR RETAINING WALLS AND TIMBER RECREATIONAL BRIDGES TO BE PREPARED BY A PENNSYLVANIA REGISTERED STRUCTURAL ENGINEER AND SUBMITTED TO THE TOWNSHIP ENGINEER FOR REVIEW AND APPROVAL, PRIOR TO CONSTRUCTION.
- RESIDENTS SHALL NOT BE PERMITTED TO PARK, STORE, LOAD, PREP OR MAINTAIN ANY RECREATIONAL VEHICLE (RV) AS SO DEFINED UNDER THE DOUGLASS TOWNSHIP ZONING CODE, AS AMENDED, WITHIN THE DEVELOPMENT OR ON A ROADWAY OF THE DEVELOPMENT FOR A PERIOD GREATER THAN SEVENTY-TWO (72) CONSECUTIVE HOURS OR FOR MORE THAN THREE (3) DAYS WITHIN ANY TEN (10) DAY PERIOD. THE TEN (10) DAY PERIOD SHALL BE COUNTED FROM THE FIRST DAY OF PARKING DURING THE SEVENTY-TWO (72) HOUR PERIOD AND FOR NINE DAYS THEREAFTER.
- THE PROPOSED LINEAR FEET OF NEW STREET IS AS FOLLOWS: HUNTSVILLE DRIVE: 399 LF
- THE PROPOSED BUILDING SIZE IS APPROXIMATELY 1,800 S.F.
- ALL WATER, SEWER, GAS, ELECTRIC, AND COMMUNICATION MAINS AND SERVICES SHALL BE INSTALLED UNDERGROUND. ELECTRIC AND COMMUNICATION LINES SHALL BE INSTALLED A MINIMUM OF THREE (3) FEET DEEP.
- WATER MAIN LOCATION WITHIN HUNTSVILLE DRIVE SHOWN PER PHASE 1 (REVISED) & PHASE 2 & 3 SUBDIVISION AND DEVELOPMENT, EROSION & SEDIMENT POLLUTION CONTROL PLAN PREPARED BY WILKINSON & ASSOCIATES, INC. LAST DATED 5/11/15. CONTRACTOR SHALL LOCATE WATER MAIN IN THE FIELD PRIOR TO STARTING CONSTRUCTION.
- PARKING SHALL BE ALLOWED ONLY ON ONE SIDE OF STREET AS DEPICTED BY NO PARKING SIGNAGE SHOWN ON THE PLANS.
- THE STORMWATER MANAGEMENT FACILITIES, INCLUDING BUT NOT LIMITED TO THE BASINS, BASIN OUTLET STRUCTURES AND PIPING, AND THE DOWNSPOUT/ROOF LEADER COLLECTION SYSTEM, ARE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY WHERE SAID FACILITIES ARE LOCATED. DOUGLASS TOWNSHIP WILL HAVE THE RIGHT TO ENTER THE PROPERTY TO MAINTAIN/REPAIR THE FACILITIES AT THE OWNER'S EXPENSE. THE STORMWATER MANAGEMENT FACILITIES, INCLUDING BUT NOT LIMITED TO THE BASINS, BASIN OUTLET STRUCTURES AND PIPING, AND THE DOWNSPOUT/ROOF LEADER COLLECTION SYSTEM, AND THE GRADING AS SHOWN ON THE APPROVED PLAN CANNOT BE ALTERED IN THE FIELD DURING CONSTRUCTION OR ANY TIME IN THE FUTURE WITHOUT FIRST OBTAINING PERMISSION FROM THE TOWNSHIP AND/OR COUNTY CONSERVATION DISTRICT/PAGE.
- THE INITIAL LOT OWNER, AND EACH SUBSEQUENT OWNER, SHALL OWN AND MAINTAIN THE GRINDER PUMP AND ALL RELATED PIPING, ACCESSORIES, ETC. FROM THE DWELLING TO THE CURB STOP LOCATED AT OR NEAR THE PROPERTY LINE/RIGHT-OF-WAY LINE OF THE PROPOSED/EXTENDED HUNTSVILLE DRIVE.



RECORDING NOTE
THIS PLAN ALONG WITH SHEETS 15-18 IS TO BE RECORDED WITH THE MONTGOMERY COUNTY RECORDER OF DEEDS AS A COMPLETE RECORD PLAN SET.



OWNER'S CERTIFICATION
COMMONWEALTH OF PENNSYLVANIA
COUNTY OF MONTGOMERY
ON THE 2ND DAY OF August 2018, before me, the undersigned officer, personally appeared LOUIS J. STAFY and JOAN C. STAFY, known to me to be the persons whose names are subscribed to the foregoing instrument and acknowledged to me that they executed the same for the purposes and consideration therein contained. In witness whereof, I have hereunto set my hand and seal.
Notary Public
KRISTINA A. HOLSHOUSER, Notary Public
My Commission Expires September 26, 2021
Commission Number 122049

OWNER ACKNOWLEDGEMENT
I, LOUIS J. STAFY and JOAN C. STAFY, being duly sworn, depose and say that we are the owners of the above described property and that we have read and understand the contents of the foregoing instrument and that we have executed the same for the purposes and consideration therein contained. In witness whereof, I have hereunto set my hand and seal.
Date: 8/2/18
Notary Public
KRISTINA A. HOLSHOUSER, Notary Public
My Commission Expires September 26, 2021
Commission Number 1057113

TOWNSHIP SUPERVISOR'S CERTIFICATION
THIS PLAN HAS BEEN APPROVED BY THE DOUGLASS TOWNSHIP BOARD OF SUPERVISORS THIS 16th DAY OF August, A.D. 2018.
Notary Public
MONTGOMERY COUNTY COMMISSIONERS REGISTRY
32-00-06328-50-7 DOUGLASS
165 SMITH RD
STAFY LOUIS J & JOAN C
B 033 U 042 L 12 1101 DATE: 08/02/2018 \$15.00

SURVEYOR'S CERTIFICATION
I HEREBY CERTIFY THAT THE PLAN SHOWN AND DESCRIBED HEREON, AS WELL AS ALL OTHER DRAWINGS WHICH ARE A PART OF THE PLAN SET, ARE TRUE AND CORRECT TO THE ACCURACY REQUIRED BY THE DOUGLASS TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCE, AND WERE PREPARED BY ME OR UNDER MY DIRECTION FOR WHICH I ACCEPT FULL RESPONSIBILITY AND REPRESENTS A FIELD SURVEY PERFORMED BY ME OR UNDER MY DIRECTION. EXISTING PERMETER MONUMENTS SHOWN HEREON HAVE BEEN LOCATED AS PART OF THE SURVEY AND ALL OTHER PROPOSED PERMETER MONUMENTS SHALL BE SET.
Date: 8/2/2018
Professional Engineer
ROLPH A. GRAF
No. 451614

APPLICANT'S ENGINEER'S CERTIFICATION
I, ROLPH GRAF, A PENNSYLVANIA PROFESSIONAL ENGINEER, HEREBY CERTIFY THAT THE SUBDIVISION AND/OR LAND DEVELOPMENT SHOWN HEREON COMPLIES WITH ALL APPLICABLE REGULATIONS INCLUDING, BUT NOT LIMITED TO, THE TOWNSHIP ZONING AND SUBDIVISION & LAND DEVELOPMENT REGULATIONS.
Date: 8/2/2018
Professional Engineer
ROLPH A. GRAF
No. 451614

RECORDER OF DEEDS
RECORDED IN THE OFFICE OF THE RECORDER OF DEEDS FOR MONTGOMERY COUNTY AT NORRISTOWN, PENNSYLVANIA IN PLAN BOOK _____ PAGE _____ PLAN NUMBER _____ ON THIS _____ DAY OF _____ A.D. 20__

CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES A WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE - STOP CALL.

R. A. GRAF
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE NO. 041946
1-800-245-1776

REV.	DATE	COMMENT
1	3/21/2017	PER TOWNSHIP ENGINEER COMMENTS
2	6/22/2017	PER TOWNSHIP STATE LETTER DATED 4/5/2017
3	9/02/17	PER TOWNSHIP ENGINEER COMMENTS
4	9/29/17	INPES SUBMISSION
5	11/09/17	PER WCD COMMENTS
6	12/20/17	PER SEWER AUTHORITY COMMENTS
7	02/07/2018	PER WCD & SANITARY REVIEW COMMENTS
8	08/15/2018	PER TOWNSHIP ENGINEER'S COMMENTS
9	07/25/2018	PER TOWNSHIP ENGINEER'S COMMENTS

MIKELEN LLC
LAND DEVELOPMENT CONSULTING

GRAF ENGINEERING LLC
LAND DEVELOPMENT CONSULTING
410 WEST MAIN STREET, SUITE 202
P.O. BOX 110
LANSDALE, PA 19446
TEL: (267) 263-2054

RECORD PLAN
STAFY TRACT

SCALE: 1" = 50'
DRAWN BY: LEM
CHECKED BY: RAG
DATE: 01/06/2017
PROJECT NO.: C016.004
OF 18

48-295-296

DRAWING LEGEND

PROPERTY LINE	---	LIMITS OF DISTURBANCE	---
EXISTING CONTOUR/ELEVATION	---246---	NPDES BOUNDARY	---
EXISTING PASDA INDEX CONTOUR	---	BASIN DRAINAGE AREA	---
EXISTING PASDA INTERVAL CONTOUR	---	PROPOSED GRADES	---
EXISTING SANITARY SEWER	---	PROPOSED BUILDING	---
EXISTING STORM SEWER	---	PROPOSED TREES (BMP 6.7.2)	---
EXISTING ELECTRIC	---	AREA SOIL AMENDMENT	---
EXISTING TELEPHONE	---	PROPOSED TREES NOT FOR NPDES VOLUME CREDIT	---
EXISTING WATER	---	PROPOSED SPILLWAY TURF REINFORCED MATTING	---
EXISTING GAS	---	NATURALIZED BASIN BOTTOM EXIST SEED MIX ERMA-183	---
EXISTING TREETLINE	---		
EXISTING TREETLINE TO BE REMOVED	---		
PROPOSED TREETLINE	---		
SOIL BOUNDARY	---		
PROPOSED CURBS	---		
PROPOSED EDGE OF PAVEMENT	---		
EXISTING INLET	---		
EXISTING MANHOLE	---		
EXISTING UTILITY POLE	---		
EXISTING BUILDING	---		

NOTE: PASDA CONTOURS AND ELEVATION DATA TAKEN FROM THE PENNSYLVANIA SPATIAL DATA ACCESS WEBSITE (www.psdas.pa.gov). PAMAP LIDAR ELEVATION DATA WERE COLLECTED FROM 2006 THROUGH 2008.

NONSTRUCTURAL BMP 5.8.1 DISCONNECT ROOF LEADERS		
UNITS FOR ROOFTOP DISCONNECT		
REAR 1/4 OF UNITS (470 SF EACH)	1/2 OF BUILDING (900 SF)	3/4 OF BUILDING (1410 SF)
3, 4	6	1, 2, 5

OWNER'S ACKNOWLEDGEMENT

THE LANDOWNER AGREES TO ALL ABOVE REQUIREMENTS ON THIS 21ST DAY OF July 2018 AND ACKNOWLEDGES THAT ANY REVISION TO THE APPROVED STORMWATER MANAGEMENT PLAN MUST BE APPROVED BY THE TOWNSHIP. ADDITIONALLY, A REVISED EROSION AND SEDIMENT CONTROL PLAN MUST BE SUBMITTED TO THE CONSERVATION DISTRICT. A FINAL RECORD DRAWING (I.E. AS-BUILT) SHALL BE CREATED FOR ALL STORMWATER MANAGEMENT FACILITIES AND PROVIDED TO THE TOWNSHIP PRIOR TO REZONING.

PROPERTY OWNER SIGNATURE: *[Signature]*
 ATTEST: *[Signature]*

RECEIVING SURFACE WATERS

THE SITE IS WITHIN THE SWAMP/PERENNIAL WATERSHED VIA SWAMP CREEK. THE CHAPTER 93 CLASSIFICATION IS TSP (ROUT STOCKING) AND WF (MIGRATORY FISH).

DESIGN ENGINEER STATEMENT

I ROLPH A. GRAF ON THIS DATE July 21 2018 HEREBY CERTIFY THAT THE PROPOSED CONSTRUCTION STORMWATER MANAGEMENT PLAN MEETS ALL DESIGN STANDARDS AND PRESENTS THE DOUGLASS TOWNSHIP STORMWATER MANAGEMENT ORDINANCE.

SIGNATURE: *[Signature]* DATE: 7-21-18
 ROLPH A. GRAF
 REGISTERED PROFESSIONAL ENGINEER
 No. 41814-E

MAINTENANCE RESPONSIBILITY OF BMPs

DURING CONSTRUCTION AND DURING THE MAINTENANCE PERIOD, THE MAINTENANCE OF ALL STORMWATER BMPs AS SHOWN ON PLAN SHEETS 15-18 OF 18, AS LAST REVISED, SHALL BE THE RESPONSIBILITY OF THE DEVELOPER. UPON THE SALE OF EACH INDIVIDUAL LOT AND COMPLETION OF THE MAINTENANCE PERIOD, THE MAINTENANCE OF THE BMPs SHALL BE THE RESPONSIBILITY OF THE INDIVIDUAL LOT OWNER ON WHICH THE BMP IS LOCATED.

GENERAL NOTES:

- APPLICANT: MIKELLEN, LLC
460 HORSSTOWN ROAD, SUITE 110
BLUE BELL, PA 19422
- PROPERTY KNOWN AS BLOCK 33, LOT 42 (PAR 32-00-06328-50-7) AS IDENTIFIED ON THE OFFICIAL TAX MAPS OF MONTGOMERY COUNTY, DOUGLASS TOWNSHIP, COMMONWEALTH OF PENNSYLVANIA.

PCSM PLANNING & DESIGN 102.8(b)

- PCSM PLAN WILL PRESERVE THE INTEGRITY OF STREAM CHANNELS AND MAINTAIN AND PROTECT THE PHYSICAL, BIOLOGICAL AND CHEMICAL QUALITIES OF THE RECEIVING.
- PCSM PLAN WILL PREVENT AN INCREASE IN THE RATE OF STORMWATER RUNOFF.
- PCSM PLAN WILL MINIMIZE ANY INCREASE IN STORMWATER RUNOFF VOLUME.
- PCSM PLAN WILL MINIMIZE IMPERVIOUS AREAS.
- PCSM PLAN WILL MAINTAIN THE PROTECTION OF EXISTING DRAINAGE FEATURES AND EXISTING VEGETATION.
- PCSM PLAN WILL MINIMIZE LAND CLEARING AND GRADING.
- PCSM PLAN WILL MINIMIZE SOIL COMPACTION.
- PCSM PLAN WILL UTILIZE OTHER STRUCTURAL OR NONSTRUCTURAL BMPs THAT PREVENT OR MINIMIZE CHANGES IN STORMWATER RUNOFF.

POST CONSTRUCTION STORMWATER MANAGEMENT NOTES

- STORMWATER FACILITIES WERE DESIGNED TO MITIGATE THE INCREASED RUNOFF VOLUME FROM THE 2-YEAR 24 HOUR RAINFALL EVENT. AS A RESULT THE VOLUME OF RUNOFF LEAVING THE SITE FOR THE 2-YEAR STORM WAS EQUAL TO OR LESS THAN IN THE PREDEVELOPMENT CONDITION. THE STORMWATER MANAGEMENT FACILITIES WERE DESIGNED TO REDUCE THE RUNOFF RATE LEAVING THE SITE FOR THE 2-YEAR THROUGH 100-YEAR STORM EVENT.
- THE SITE WAS DESIGNED TO LIMIT THE AMOUNT OF IMPERVIOUS AREA THAT NEEDS TO BE INSTALLED FOR THIS PROJECT AND MAXIMIZE OPEN SPACE. THE MAXIMUM ALLOWED BUILDING COVERAGE IS 15% FOR THIS ZONING. THE DEVELOPMENT WAS CLUSTERED NEAREST TO THE EXISTING CUL-DE-SAC THEREBY MINIMIZING IMPERVIOUS AREAS BY SHORTENING ROADWAY AND DRIVEWAY LENGTHS. SEDIMENT IS PROPOSED ALONG ONLY ONE SIDE OF THE PROPOSED ROADWAY.
- THE STORM BASIN IS DESIGNED TO PROMOTE INFILTRATION AND FILTERING OF RUNOFF PRIOR TO DISCHARGING. ROOF TOPS AND PAVED AREAS WERE DISCHARGED ACROSS GRASS AREAS WHEREVER POSSIBLE TO PROMOTE INFILTRATION AND FILTERING PRIOR TO THE RUNOFF ENTERING THE STORMWATER MANAGEMENT FACILITY. THE CURRENT VEGETATION ON THE SITE CONSISTS PRIMARILY OF WEEDS, AND OTHER UNDESIRABLE VEGETATION. THE PROPOSED DESIGN WILL PROMOTE THE GROWTH OF HEALTHY LAWN, MEADOW AND LANDSCAPED AREAS WHICH WILL PROMOTE INFILTRATION OF RUNOFF AND FILTERING PRIOR TO RUNOFF ENTERING THE STORMWATER MANAGEMENT FACILITIES. ADDITIONALLY, PROPOSED TREES WILL INCREASE EVAPOTRANSPIRATION BENEFITS.
- THIS SITE IS CURRENTLY MOSTLY OVERGROWN BRUSH AND MINIMAL CLEARING IS ANTICIPATED AS PART OF THIS PROJECT. THE PROPOSED GRADING OF THE SITE WAS DESIGNED IN A MANNER THAT KEEPS EXCESS CUTS AND FILLS TO A MINIMUM.
- THE SITE DESIGN WAS PREPARED IN A MANNER THAT SHOULD KEEP SOIL COMPACTION TO A MINIMUM IN AREAS THAT WILL NOT REQUIRE ANY EARTHMOVING CONSTRUCTION ACTIVITIES.
- ROOFDRAINS AND SUMP PUMPS SHALL DISCHARGE TO STORMWATER OR VEGETATIVE BMPs.
- ALL STORMWATER FACILITIES ON THE SITE ARE THE RESPONSIBILITY OF THE PROPERTY OWNER. SHOULD THE PROPERTY OWNER FAIL TO MAINTAIN SUCH FACILITIES, DOUGLASS TOWNSHIP WILL HAVE THE RIGHT TO ENTER THE PROPERTY TO MAINTAIN/REPAIR THE FACILITIES AT THE OWNER'S EXPENSE. THE GRADING AS SHOWN ON THE APPROVED PLAN CANNOT BE ALTERED IN THE FIELD DURING CONSTRUCTION OR ANY TIME IN THE FUTURE WITHOUT FIRST OBTAINING WRITTEN PERMISSION FROM THE TOWNSHIP.
- ALL DISTURBANCE AREAS WITHIN THE DEVELOPMENT SITE THAT ARE PROPOSED TO REMAIN PERVIOUS SHALL HAVE THE SOIL AMENDED PRIOR TO FINAL STABILIZATION WITH VEGETATION.
- NO PERSON SHALL MODIFY, REMOVE, FILL, LANDSCAPE, OR ALTER ANY EXISTING STORMWATER CONTROL OR BMP UNLESS IT IS A PART OF AN APPROVED MAINTENANCE PROGRAM WITHOUT THE WRITTEN APPROVAL OF THE MUNICIPALITY.
- NO PERSON SHALL PLACE ANY STRUCTURE, FILL, LANDSCAPING, OR VEGETATION INTO A STORMWATER CONTROL OR BMP WITHIN A DRAINAGE EASEMENT THAT WOULD LIMIT OR ALTER THE FUNCTIONING OF THE STORMWATER CONTROL OR BMP WITHOUT THE WRITTEN APPROVAL OF THE MUNICIPALITY.

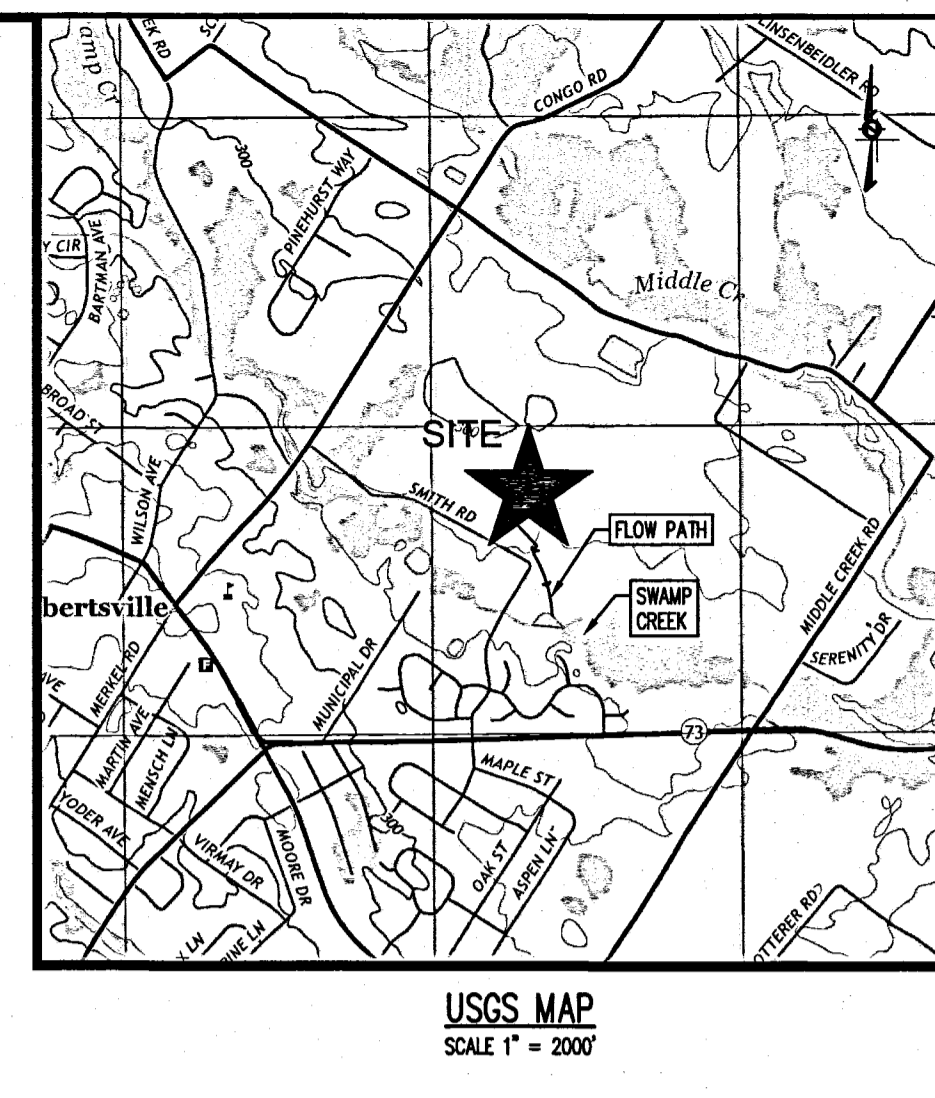
BMP MAINTENANCE PROGRAM

GENERAL NOTES:
 THE STORMWATER MANAGEMENT FACILITIES SHOWN HEREON ARE PERMANENT BMP STRUCTURES AND ARE NOT TO BE REMOVED, ALTERED OR RECONFIGURED IN ANY WAY WITHOUT THE APPROVAL OF THE APPLICABLE MUNICIPALITY AND/OR THE LOCAL COUNTY CONSERVATION DISTRICT AND THE PADEP.
 ALL BMPs SUCH AS THESE BASINS AND CONVEYANCE SYSTEMS REQUIRE REGULAR INSPECTION AND MAINTENANCE, AS OUTLINED BELOW, TO ENSURE THE BMPs ARE FUNCTIONING AS DESIGNED. MAINTENANCE OF THE SYSTEM WILL INCLUDE THE REMOVAL OF ANY DEBRIS AND FLUSHING OF THE SYSTEM. AN INSPECTION REPORT SHOULD BE PROVIDED BY A CREDITABLE ENGINEERING FIRM UNDER THE DIRECTION OF A LICENSED ENGINEER. THE OWNERS, THEIR SUCCESSORS, OR ITS ASSIGNS, SHALL ASSUME ALL RESPONSIBILITY FOR THE COST ASSOCIATED WITH THE INSPECTION, CLEANING OF THE SYSTEM, ENGINEERING FEES AND ULTIMATELY ANY COSTS ASSOCIATED WITH RECOMMENDED REPAIRS, AND/OR REPLACEMENT OF SAID FACILITIES. COPIES OF THE INSPECTION REPORT SHALL BE FORWARDED TO THE APPLICABLE MUNICIPALITY FOR REVIEW AND RECORDKEEPING IN ACCORDANCE WITH STATE REGULATIONS.
 INSPECTION AND MAINTENANCE OF ALL BMP FACILITIES IS THE RESPONSIBILITY OF THE PROPERTY OWNER.

MAINTENANCE NOTES & SCHEDULE

- MAINTENANCE OF BASIN AREAS (SEMI-ANNUALLY)
 BEDS AND LEADERS SHALL BE INSPECTED FOR DEBRIS AND/OR SEDIMENT ACCUMULATION ON AN ANNUAL BASIS. AFTER A SIGNIFICANT RUNOFF EVENT OR AS DIRECTED BY THE TOWNSHIP ENGINEER, MAINTENANCE OF THE SYSTEM WILL INCLUDE THE REMOVAL OF ANY DEBRIS AND FLUSHING OF THE SYSTEM. INSPECTIONS SHOULD ASSESS VEGETATION, EROSION, FLOW CHANNELIZATION, BANK STABILITY, INLET/OUTLET CONDITIONS, AND SEDIMENT/DEBRIS ACCUMULATION. UNDESIRABLE SPECIES SHOULD BE REMOVED AND DESIRABLE SPECIES PLANTED, AS NECESSARY. MAINTAIN BASIN PLANTINGS PER ERMA-183 MAINTENANCE NOTES. AFTER THE FIRST YEAR, TREES, SHRUBS AND PLANTINGS HEALTH SHALL BE INSPECTED TWICE PER YEAR AND REPLACED/MAINTAINED AS REQUIRED. BURENATION AREAS SHALL DRAIN WITHIN 72 HOURS. REMEDIAL ACTION INCLUDING REPAIRS OR REPLACEMENT MAY BE NECESSARY IF FACILITY DOES NOT DRAIN WITHIN 72 HOURS. ENGINEERED SOIL MEDIA MAY NEED REPLACEMENT, AS NECESSARY DUE TO EXCESSIVE SEDIMENT ACCUMULATION OR LOSS OF FRACTION.
- MAINTENANCE OF THE BASIN OUTLET STRUCTURES (AFTER EACH RUNOFF EVENT)
 THE OWNER, OR ITS ASSIGNS, SHALL BE RESPONSIBLE TO ENSURE THAT THE BASIN OUTLET STRUCTURE IS FREE AND CLEAR OF ANY DEBRIS THAT WOULD IMPEDE OUTFLOW FROM THE BASIN. THE OUTLET STRUCTURE SHALL BE INSPECTED AFTER EACH RUNOFF EVENT AND CLEANED AS REQUIRED.
- MAINTENANCE OF THE STORM SEWER COLLECTION SYSTEM (AFTER EACH RUNOFF EVENT)
 THE OWNER, OR ITS ASSIGNS, SHALL BE RESPONSIBLE TO ENSURE THAT THE STORM SEWER COLLECTION SYSTEM IS FREE AND CLEAR OF ANY DEBRIS. THE SYSTEM SHALL BE INSPECTED AFTER EACH RUNOFF EVENT AND CLEANED IF REQUIRED.
- MAINTENANCE OF THE DOWNSPOUT & ROOF LEADER COLLECTION SYSTEM (QUARTERLY)
 THE OWNER, OR ITS ASSIGNS, SHALL BE RESPONSIBLE TO ENSURE THAT THE DOWNSPOUT AND ROOF LEADER COLLECTION SYSTEM IS FREE AND CLEAR OF ANY DEBRIS. THE SYSTEM SHALL BE INSPECTED AFTER EACH RUNOFF EVENT AND CLEANED IF REQUIRED. QUARTERLY FLUSHING OF THE SYSTEM SHALL BE DONE TO ENSURE THE SYSTEM IS FREE AND CLEAR OF ANY SEDIMENT AND DEBRIS.
- STORMWATER MANAGEMENT BMPs SHOULD BE INSPECTED BY THE LANDOWNER OR THE OWNER'S DESIGNEE ACCORDING TO THE FOLLOWING LIST OF MINIMUM FREQUENCIES:
 A. ANNUALLY FOR THE FIRST 3 YEARS FOLLOWING CONSTRUCTION.
 B. ONCE EVERY 3 YEARS THEREAFTER.
 C. DURING OR IMMEDIATELY AFTER CESSATION OF A 10-YEAR OR GREATER STORM.

DOUGLASS TOWNSHIP PCSM NOTES:
 ADHERENCE TO AN APPROVED STORMWATER CONTROL AND BMP OPERATIONS AND MAINTENANCE PLAN:
 IT SHALL BE UNLAWFUL TO ALTER OR REMOVE ANY PERMANENT STORMWATER CONTROL AND BMP REQUIRED BY AN APPROVED STORMWATER CONTROL AND BMP OPERATIONS AND MAINTENANCE PLAN OR TO ALLOW THE PROPERTY TO REMAIN IN A CONDITION WHICH DOES NOT CONFORM TO AN APPROVED STORMWATER CONTROL AND BMP OPERATIONS AND MAINTENANCE PLAN.
 ALTERATION OF BMPs:
 A. NO PERSON SHALL MODIFY, REMOVE, FILL, LANDSCAPE, OR ALTER ANY EXISTING STORMWATER CONTROL OR BMP UNLESS IT IS A PART OF AN APPROVED MAINTENANCE PROGRAM WITHOUT THE WRITTEN APPROVAL OF DOUGLASS TOWNSHIP.
 B. NO PERSON SHALL PLACE ANY STRUCTURE, FILL, LANDSCAPING, OR VEGETATION INTO A STORMWATER CONTROL OR BMP WITHIN A DRAINAGE EASEMENT THAT WOULD LIMIT OR ALTER THE FUNCTIONING OF THE STORMWATER CONTROL OR BMP WITHOUT THE WRITTEN APPROVAL OF DOUGLASS TOWNSHIP.



CALL BEFORE YOU DIG!
 PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE - STOP CALL
 PA1
 1-800-942-1776
 PROFESSIONAL ENGINEER
 PENNSYLVANIA LICENSE NO. 041814-E

R. A. GRAF
 PROFESSIONAL ENGINEER
 PENNSYLVANIA LICENSE NO. 041814-E

REV.	DATE	COMMENT
1	3/21/2017	PER TOWNSHIP ENGINEER COMMENTS
2	6/22/2017	PER TOWNSHIP STAFF LETTER DATED 6/12/2017
3	8/02/17	PER TOWNSHIP ENGINEER COMMENTS
4	9/25/2017	NPDES SUBMISSION
5	11/29/17	PER MCD COMMENTS
6	12/20/2017	PER OWNER AUTHORITY COMMENTS
7	2/07/2018	PER MCD & SANITARY REVIEW COMMENTS

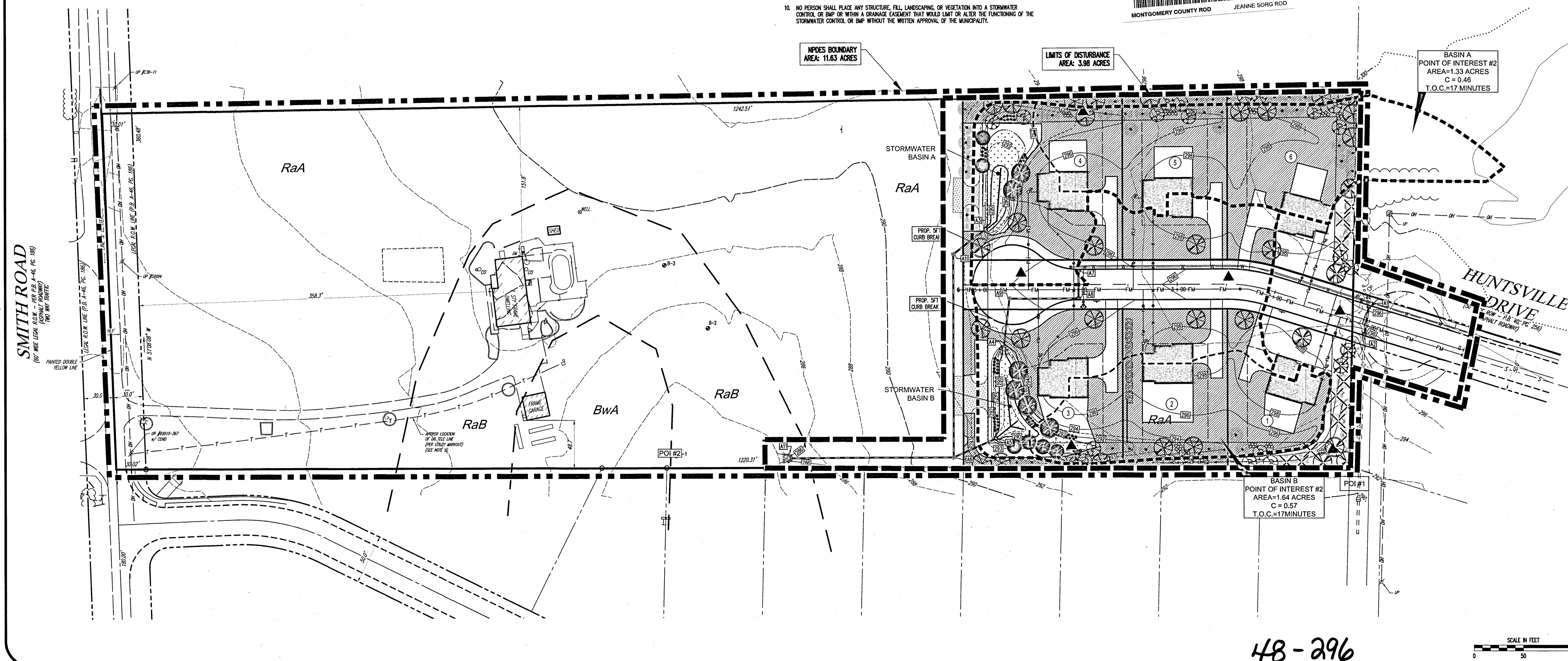
MIKELLEN LLC
 PARCEL 32-00-06328-50-7
 DOUGLASS TOWNSHIP,
 MONTGOMERY COUNTY,
 PENNSYLVANIA.

GRAF ENGINEERING, LLC
 LAND DEVELOPMENT CONSULTING
 410 WEST MAIN STREET, SUITE 202
 P.O. BOX 110
 LANSDALE, PA 19446
 TEL. (267) 263-2054

SHEET TITLE:
 OVERALL
 POST-CONSTRUCTION
 STORMWATER
 MANAGEMENT PLAN

STAFY TRACT

SCALE(H): 1" = 50'
 SCALE(V):
 DRAWN BY: LEM
 CHECKED BY: RAG
 DATE: 01/06/2017
 PROJECT No.: G016.004
 SHEET No.: 15
 OF 18



48-296