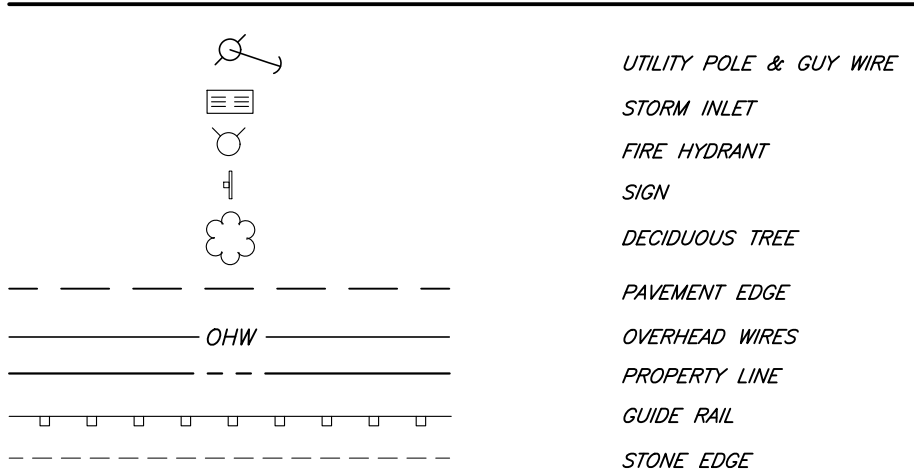
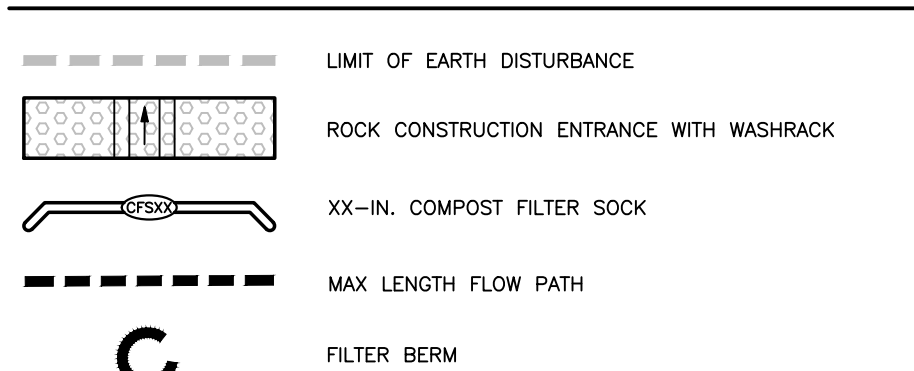


**LEGEND**



**ESPC LEGEND**

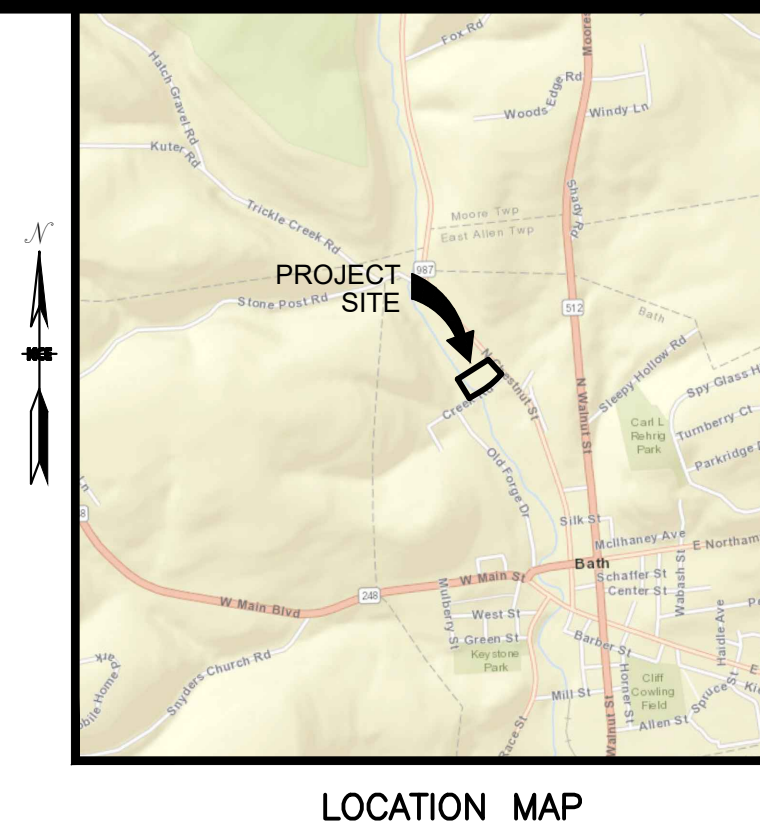
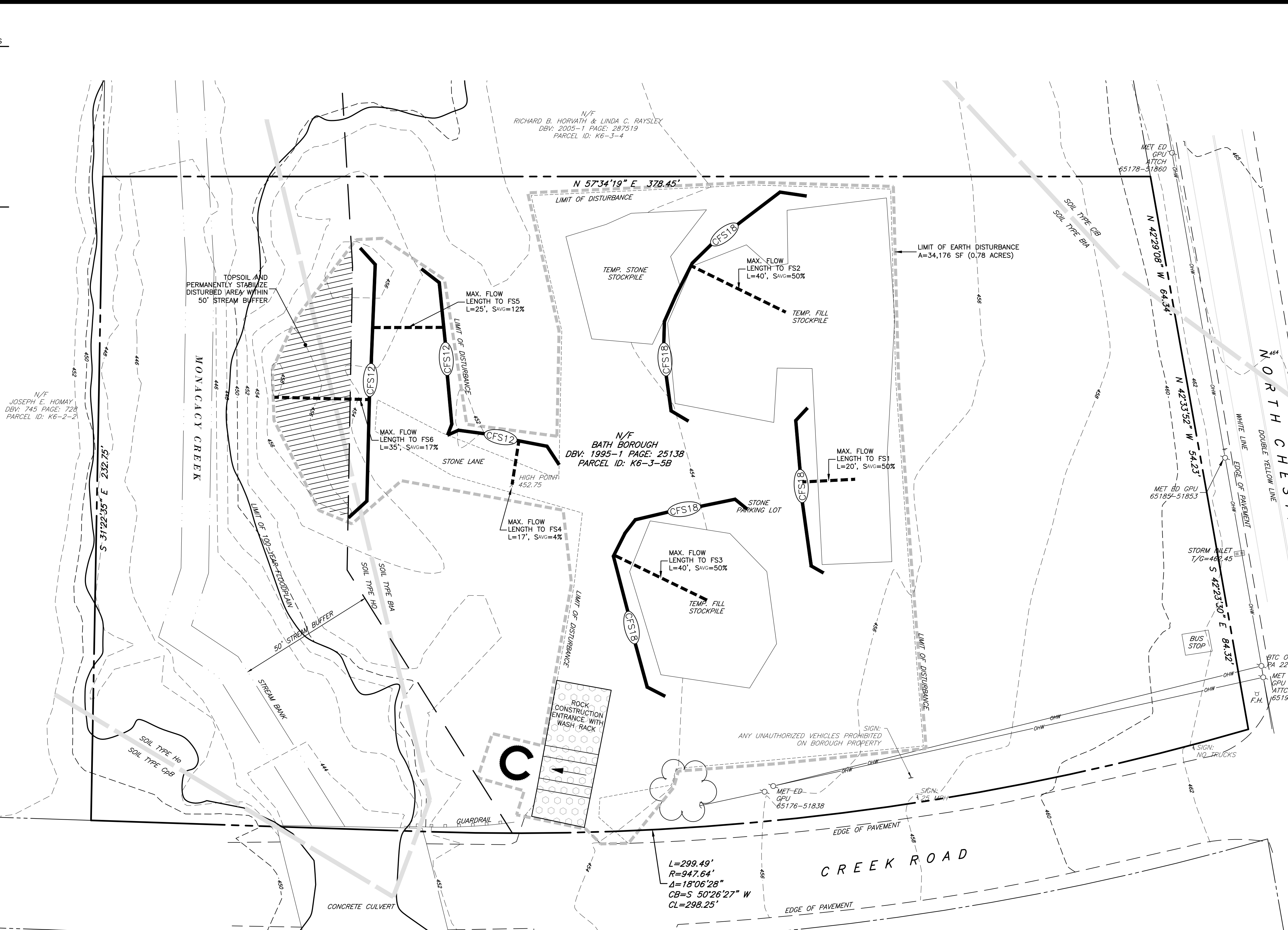


**SURVEY NOTES**

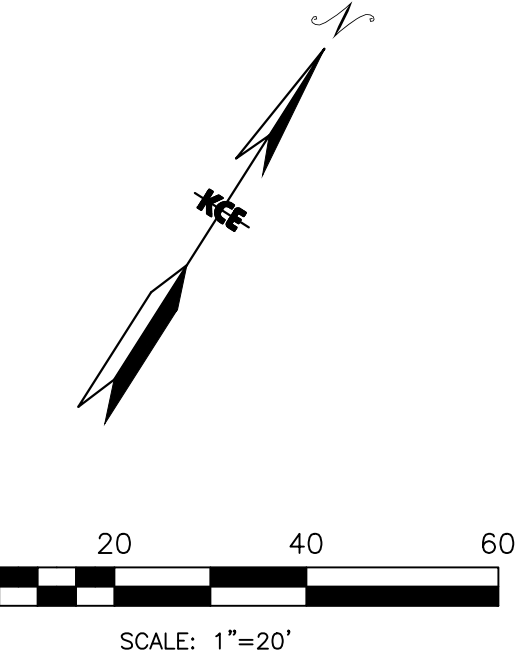
1. THIS PLAN IS BASED UPON A FIELD SURVEY CONDUCTED AS OF SEPTEMBER 7, 2019 BY KEYSTONE CONSULTING ENGINEERS INC. USING A SPECTRA SP80 GPS WITH KEYNET.
2. UTILITY LOCATIONS DEPICTED HEREON ARE APPROXIMATE AND ARE BASED ON FIELD LOCATION OF OBVIOUS ABOVE-GROUND EVIDENCE. UNDERGROUND LINES WHOSE PRESENCE IS NOT IMPLIED ON THE SURFACE BY MARKINGS OR STRUCTURES MAY NOT HAVE BEEN SHOWN. THIS PLAN DOES NOT GUARANTEE THAT ADDITIONAL UTILITIES DO NOT EXIST.
3. THE EXISTENCE AND LOCATIONS OF UNDERGROUND UTILITIES ON THE SITE SHALL BE VERIFIED BY THE CONTRACTOR IN ACCORDANCE WITH PA ACT 187 AND 121 PRIOR TO COMMENCING ANY EXCAVATION WORK.
4. PROPERTY OWNER NAME, DEED AND TAX PARCEL IDENTIFIER INFORMATION AS SHOWN IS BASED UPON LEHIGH COUNTY TAX MAP RECORDS AND IS SUBJECT TO THE ACCURACIES OR INACCURACIES THEREOF.
5. LINES AS SHOWN WITH BEARINGS AND DISTANCES OR CURVE INFORMATION INDICATE LINES PLOTTED USING RECORD INFORMATION. THE PLAN IS NOT TO BE CONSIDERED A BOUNDARY RETRACEMENT SURVEY.
6. BEARINGS AND COORDINATES AS SHOWN HEREON ARE BASED ON PA SOUTH ZONE STATE PLANE COORDINATE SYSTEM IN US FEET. DISTANCES AS SHOWN ARE GROUND MEASUREMENTS (NO GRID SCALE FACTOR HAS BEEN APPLIED).
7. ELEVATIONS AND CONTOURS AS SHOWN HEREON ARE BASED UPON GPS OBSERVATIONS USING A TRIMBLE R-8 WITH KEYNET AND ARE ACCURATE WITHIN 0.15' OF USGS NORTH AMERICAN VERTICAL DATUM OF 1988.
8. THIS SURVEY AND PLAN HAS BEEN PREPARED WITHOUT THE BENEFIT OF A TITLE SEARCH AND IS THEREFORE SUBJECT TO ANY EASEMENTS OR OTHER PERTINENT FACTS WHICH SUCH MIGHT DISCLOSE.
9. SUBJECT PROPERTY LIES WITHIN THE LIMITS OF THE SPECIAL FLOOD HAZARD AREA ZONE AE MORE FULLY SHOWN ON FEMA FLOOD MAP 42095C0232E EFFECTIVE ON 07/16/2014.

**WATERSHED NOTE**

THE PROJECT AREA DISCHARGES TO THE MONACACY CREEK, WHICH IS DESIGNATED AS A HIGH QUALITY COLD WATER FISHES (HQ-CWF) AND MIGRATORY FISHES (MF).



**PROTECT YOURSELF**



**SOILS DATA:**

THE FOLLOWING INFORMATION WAS TAKEN FROM THE NATURAL RESOURCES CONSERVATION SERVICE'S WEB SOIL SURVEY:

BIA - BRINKERTON-COMLY SILT LOAMS, 0 TO 3 PERCENT SLOPES  
Ho - HOLLY SILT LOAM  
CIB - CLARKSBURG SILT LOAM, 3 TO 8 PERCENT SLOPES

SOILS	LIMITATIONS (IF ENCOUNTERED)	RESOLUTION #
BRINKERTON-COMLY	1. CUTBANKS MAY CAVE	1.
	2. HYDRIC INCLUSIONS	11.
	3. SHALLOW DEPTH TO SEASONAL HIGH WATER TABLE	3.
	4. EASILY ERODIBLE	4.
	5. SLOW PERCOLATION	3. & 5.
	6. POSES A PIPING HAZARD	6.
	7. SUBJECT TO FROST ACTION	12.
	8. SUBJECT TO SHRINK-SWELL	13.
	9. POOR SOURCE OF TOPSOIL	10.
	10. DROUGHTY	10.
HOLLY	1. CUTBANKS MAY CAVE	1.
	2. EASILY ERODIBLE	4.
	3. SHALLOW DEPTH TO SEASONAL HIGH WATER TABLE	3.
	4. PRONE TO LANDSLIDES	4.
	5. SLOW PERCOLATION	3. & 5.
	6. HYDRIC INCLUSIONS	11.
	7. POOR SOURCE OF TOPSOIL	10.
	8. POSES A PIPING HAZARD	6.
	9. LANDSLIDE PRONE	8.
	10. SUBJECT TO WETNESS	3.
CLARKSBURG	1. CUTBANKS MAY CAVE	1.
	2. EASILY ERODIBLE	4.
	3. SHALLOW DEPTH TO SEASONAL HIGH WATER TABLE	3.
	4. HYDRIC INCLUSIONS	11.
	5. LANDSLIDE PRONE	4.
	6. SLOW PERCOLATION	3. & 5.
	7. PIPING HAZARD	6.
	8. POOR SOURCE TOPSOIL	10.
	9. FROST ACTION	12.
	10. SUBJECT TO SHRINK-SWELL	13.
	11. POTENTIAL SINKHOLE	8.

- RESOLUTIONS:**
1. ALL APPLICABLE OSHA STANDARDS AND REGULATIONS MUST BE IMPLEMENTED AT ALL TIMES.
  2. PROPER BEDDING AND BACKFILL SHALL BE PROVIDED FOR UNDERGROUND STEEL AND CONCRETE.
  3. DEWATERING SHALL BE PERFORMED IN ACCORDANCE WITH THE APPROVED EROSION & SEDIMENT CONTROL PLAN.
  4. EROSION CONTROL MATTING SHALL BE UTILIZED ON ALL SLOPES 3:1 OR GREATER.
  5. PROVIDE POSITIVE DRAINAGE THROUGHOUT CONSTRUCTION.
  6. UTILIZE ANTI-SLEEP COLLARS WHERE APPLICABLE.
  7. SUITABLE STONE BASE SHALL BE PLACED BENEATH IMPERVIOUS SURFACES.
  8. IN THE EVENT A SINKHOLE SHOULD OCCUR, A PROFESSIONAL ENGINEER OR PROFESSIONAL GEOLOGIST SHALL BE CONTACTED. SINKHOLES SHALL BE REPAIRED AS DIRECTED BY THE PROFESSIONAL ENGINEER OR PROFESSIONAL GEOLOGIST.
  9. APPROVED EROSION AND SEDIMENT CONTROL BMP'S SHALL BE IMPLEMENTED THROUGHOUT CONSTRUCTION.
  10. IMPORT TOPSOIL AS NECESSARY.
  11. MINIMIZE IMPACT TO HYDRIC SOILS.
  12. EXCAVATE ONLY WHEN TEMPERATURE IS ABOVE THE FREEZING POINT OF WATER.
  13. ADD APPROPRIATE SOIL MIXTURES TO REDUCE EFFECT OF SHRINK SWELL.

**KEYSTONE CONSULTING ENGINEERS, INC.**  
Engineering firm of choice since 1972  
2870 EMRICKBOULEVARD, BETHLEHEM, PA 18020 610-865-4555  
East Office: Bethlehem, West Office: Wescosville, North Office: Kresgeville  
www.KCEinc.com

**KEYSTONE CONSULTING ENGINEERS**

**EROSION & SEDIMENTATION CONTROL PLAN**

**LANDS OF BATH BOROUGH**  
PARCEL ID: K6-3-5B  
BATH BOROUGH  
NORTHAMPTON COUNTY, PENNSYLVANIA

DESIGNED BY: AJM  
DRAWN BY: DBH  
CHECKED BY: DDH  
DATE: SEPT. 9, 2019  
SCALE: 1" = 20'  
JOB NUMBER: BATH-19-013  
SHEET: 1 OF 2